CHEMATIX[™]

Chemical Management Software

Waste Management Module Version 11



CHEMATIX[™] Manuals and Guides

The full list of comprehensive step-by-step instructional manuals includes:

CHEMATIX[™] User Manual

CHEMATIX[™] Environmental Health & Safety User Manual

CHEMATIX[™] Store Management Manual

CHEMATIX[™] Super User / System Administrator Manual

CHEMATIX[™] Glossary



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Preface

CHEMATIX[™] is an inventory tracking system that uses barcodes as a unique identifier to track chemical containers.

Once a chemical container and its Chemical Abstract Database (CAD) are associated, unique barcodes for each chemical container are generated, printed, and affixed to each container. In addition, each barcoded container is assigned a specific location. These barcoded chemical containers are utilized as the inventory system's method of tracking the container and its contents from cradle to grave. This permits users to track, inventory, and monitor the status of chemicals and their containers. Users only have access to inventory chemicals in their locations, with the exception of Environmental Health & Safety personnel, who have access to all locations. Barcodes are printed on adhesive labels that come in various sizes to accommodate different sizes of containers.

This Waste Management Module enables a CHEMATIXTM user who has successfully completed HMTF (<u>Hazardous Materials Treatment Training</u>) to perform waste management duties that include, but are not limited to, creating Waste Cards and submitting Pick-Up Worksheets.

Waste materials are collected in waste containers in a lab. All such containers have their own unique identifying label, attached to each waste container, called a Waste Card. A Waste Card describes the chemical constituents of the waste in the container as well as other required information including, but not limited to, the waste container's barcode, creator, place of origin, and CAS#. The Waste Card is then added to a Pickup Worksheet, which is a notification for Hazardous Material personnel to collect the waste from a lab and to transport such wastes to treatment or disposal facilities.

The proper handling of reaction by-products; surplus and waste chemicals; and contaminated materials is an important part of laboratory safety procedures. As a result, this Waste Management Module is a critical component of environmental health and safety and assists in the assurance that your institution is in regulatory compliance with all local, regional, state, and federal governing authorities. Types of chemical waste generated include, but are not limited to, unwanted laboratory reagent chemicals; waste mixtures generated from laboratory research and education; glassware and trash contaminated with chemicals; chemical spill clean-up debris; oils; paints; maintenance cleaners; gas containers, and pesticides. For the proper procedures for handling and disposing of chemical waste, contact your institution's Department of Environmental Health & Safety.

(The availability of functionalities within CHEMATIX[™] is optional and is determined by your institution. Not all functions will be available to all users.)

Printer Considerations

Before generating and printing barcodes or Waste Cards, it is advised that you adjust your printer settings for optimum results. To correctly configure your printer, set the resolution to at least 600 dpi. Depending on your printer, this is usually "Best" or "Normal". This quality is a better option than "Draft" or a lower resolution.

NOTE:

• A PDF program, like <u>Adobe Acrobat Reader</u>, is required to generate and print barcodes.

• You must enable popups to run CHEMATIX™.

То	enter	the	Waste	Management	Module,	click	the	Waste	button	at	the	top	of	the
СН	EMATI	Х™	screen:											

Home	Procurement	Inventory	Waste	Fiscal	Resources	Help
------	-------------	-----------	-------	--------	-----------	------



1 Introduction

Welcome to **CHEMATIX**[™], the first full-spectrum chemical management solution available in North America, with the full-featured capability of tracking chemicals from point of entry as inventory to point of exit as waste, as well as every point in between, with tremendous detail. With powerful modules to facilitate Inventory Management, Waste Management, Resource Management, Financial Management and Web Procurement, **CHEMATIX**[™] is at the cutting edge of research management by providing the most rigorous and robust environment in which to track controlled substances and maintain compliance with all governmental regulations and mandates.

This comprehensive, web-based solution is comprised of five management modules:

Inventory Management

The essential management module, which allows **CHEMATIX**[™] to store detailed information about every substance in the system, providing the foundation for regulatory compliance, environmental safety, and inventory, research and budget control is built. All substances are tracked via scanning (or manual entry) of barcodes attached to each item upon acceptance into the system at point of entry. Storage locations, including warehouses, laboratories, and specific shelves, are also assigned barcodes and associated with a chemical inventory. A complete history of each bar coded item is maintained from point of entry to elimination as waste. The big picture view of chemical tracking and the ability to manage various aspects of warehouse and laboratory inventory of both chemical and non-chemical items is also facilitated. Detailed inventory item profiles of all tracked materials are uploaded to the system upon receipt of order utilizing data captured during the procurement process. A multitude of user-configurable reports and views can be generated to view specific location inventories, hazardous chemical counts, historical profiles, etc.

Web Procurement

The Web Procurement module empowers researchers to procure scientific chemicals and supplies via the web, from virtually any web-enabled device anywhere in the world. Users have access to instant purchasing, can search inventories and online catalogues, order supplies, manage existing orders and generate a variety of reports. Hazardous material purchases can be monitored and controlled, along with the strict regulation of possession limits and registration/approval processes for select agents within this module.

Waste Management

The Waste Management module enables laboratory and regulatory personnel to manage all aspects of chemical disposal. All waste and its corresponding status can be tracked in detail at any point in the system. This module is a critical component of environmental health and safety, assisting in the assurance that each institution is in regulatory compliance with all local, regional, state and federal governing authorities.

Fiscal Management

The Financial Management module provides access to a complete accounting system, capable, in part, of generating invoices, tracking payment, tracking account numbers against each purchase, accommodating credit card purchases, tracking and charging applicable sales tax, generating monthly billing for all customer orders and allowing for issuance of credits. Interfacing with existing accounting systems, this module provides account administrators with the ability to fully manage all fiscal responsibilities.

Resource Management

Resource Management provides and restricts access to all levels of the system. User profiles are created for varying levels of access including individual users, departments, vendors and customers. User administration is constructed hierarchically to ensure maximum system security.

1.1 CHEMATIX™ Process Flow Diagram

The following is a diagram displaying the process flow of chemicals within the system. The shaded areas represent the different modules, displaying the processes encompassed by each. Note that the diagram is intended to provide a general overview; comprehensive complexity or full system feature detail is not intended.





2 Generate Reports for Hazards in My Area

This functionality permits PI's and Lab users to generate lists of hazardous chemicals in their labs. Hazards are defined by your institution and are marked as such in CAD by your Department of Environmental Health & Safety. This functionality is available to all PI's and Lab Users.

1.	To access t	his functionality, c	lick the Was	ste	button	at the top	of the CHEMA	ΓIX™ scre	een:
	Home	Procurement	Inventory	W	aste	Fiscal	Resources	Help	

- 2. You will now see the opening page for availability of this functionality is optional and determined by your institution). [WM402]. (The
- 3. Scroll down to the Generate Hazards in My Area Report link, and click on it. You will now be transferred to page [WM476]:



This list of chemical hazards is a configurable option defined by your institution and can be added to, changed, or modified by a CHEMATIX[™] System Administrator. If you have any questions about Hazards in Your Area, contact your Environmental Health and Safety personnel. The following is an explanation of some of the monitored hazards:

PEC (<u>P</u>otentially <u>E</u>xplosive <u>C</u>hemicals). Most chemicals that are used in research and teaching laboratories are stable and non-explosive at the time of purchase. Over time, some chemicals can oxidize, become contaminated, dry out, or otherwise destabilize to become Potentially Explosive Chemicals (for example, isopropyl ether, sodium amide, and picric acid). PEC's are particularly dangerous because they may explode if they are subjected to heat, light, friction, or mechanical shock.

Peroxide Formers (peroxidizable materials) can form peroxides in storage, generally when in contact with the air. These peroxides present their most serious risk when the peroxide-contaminated material is heated or distilled, but they may also be sensitive to mechanical shock. Many of these are time sensitive.



Fetal Agents are those chemical substances that can affect the health and well-being of the fetus.

Teratogens are chemicals that may cause non-inheritable genetic mutations or malformations in the developing fetus (= birth defects). Teratogens may halt the pregnancy outright.

Mutagens are agents that change the hereditary, genetic material that is a part of every living cell. Such mutations are probably an early step in the sequence of events that ultimately lead to the development of cancer.

Controlled substances are drugs or chemical substances whose possession and use are regulated under the Controlled Substances Act.

Bioagents (biological agents) are viral, bacterial, fungal, or parasitic substances that cause disease and/or illness.

Flammable 1 and **Flammable 2** are institution specific. Contact your Department of Environmental Health & Safety for specifics.

The same procedures are used to generate reports of all hazardous chemicals in your labs. In the following example, the <u>PEC</u> link was clicked.

1. A list of all PEC chemicals in your lab locations is generated on page [WM478], for example:

Hazards in M	y Area: PEC			A (1)	ŕ	R (1)
						at the
Barcode	<u>CAS #</u>	Conta	ainer Description	<u>Container</u> <u>Size</u>	<u>Content</u> <u>Size</u>	Expiration Date
NMEC001CIX	7722-84-1 Hydroge	n peroxide, aqueous solutions	(40% to 60%)	0.50 L	0.50 L	12/25/05
NMEC001CJ3	7601-90-3 Perchlor	ic acid with more than 50% bu	t not more than 72% acid, by mass	250.00 mL	250.00 mL	12/25/05
Click the ch	emical's	Barcode to vi	ew this container's che	mical details on	page [S	C430].

Scroll down to the bottom of page [SC430], and click Print to print this container's chemical details.

- 2. Click the chemical's to view CAD information.
- 3. To print the list of hazards generated on page [WM478], click <u>File</u> on your browser. On the drop-down menu, scroll down to <u>Print...</u> and click. You can now print through your browser.
- 4. When finished, check the CHEMATIX[™] menu bar at the top of the page for more functionalities.



3 Register for HMTF Training

This functionality permits all CHEMATIX[™] users to register for HMTF (<u>H</u>azardous <u>M</u>aterials <u>T</u>reatment <u>F</u>acility) training. Users who have successfully completed HMTF training are usually the only individuals authorized to perform waste management duties including, but not limited to, creating Waste Cards and submitting Pick-Up Worksheets. This training option is available based on institutional business rules. Please contact your CHEMATIX[™] System Administrator for more details.

1. To access this functionality, click the Waste button at the top of the CHEMATIX™ screen:

Home	Procurement	Inventory	Waste	Fiscal	Resources	Help
						4

- 2. You will now see the opening page for availability of this functionality is optional and determined by your institution). [WM402]. (The
- 3. The registration for HMTF training is a configurable option that varies based on your institution. The following outlines some possible ways in which you may complete your registration:
- Option 1: **Register for training via Chematix.** Selecting the link <u>Register for HMTF Training</u> will take you to page [WM181]. Follow Step 4. below in this user manual to continue.
- Option 2: **Register for training online via your university's website** Selecting the <u>Hazardous Waste Training</u> link will take you to your university's website where you can sign up for the training.

Option 3: Use SIVCO's Training Record Management System which can be integrated with CHEMATIX[™].

This application will be available in the near future.

4. You will now be transferred to page [WM181]:

our	HMTF Training expi	ires: 10/07/2	2006			
ease	e select a training date	e and click ' Re	egister' for that session.			
	T.					
	Date	Time	Room Number	Lab Name	Building	Status
,	Date 10/12/2005	Time 08:30	Room Number 207	Lab Name Safety Training 1	Building Safety Commons	Status AVAILABLE
))	Date 10/12/2005 10/28/2005	Time 08:30 12:30	Room Number 207 147	Lab Name Safety Training 1 Training Center A	Building Safety Commons Safety Commons	Status AVAILABLE AVAILABLE

5. Click on a radio button 💽 to select an appropriate HMTF training date, time, and site.

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Click Register to register for your selected HMTF training date and time.

Click Reset to cancel your selection of radio button.

6. To cancel your registration for HMTF training, click on the radio button 💽 to select the HMTF training date and time that you wish to delete. Thereafter, click Cancel Registration. Your registration for HMTF training at that date and time is now cancelled.



4 Manage Laboratory Waste

These functionalities permit users to perform waste management duties within CHEMATIX[™], including but not limited to, creating Waste Cards and submitting Pick-Up Worksheets. Based on institutional business rules, some institutions may require hazardous waste training before these functionalities can be used. Please contact your CHEMATIX[™] System Administrator for more details. Also, please contact your institution's Department of Environmental Health & Safety for the proper procedures for handling and disposing of chemical waste.

1. To access this functionality, click the Waste button at the top of the CHEMATIX[™] screen:

Home	Procurement	Inventory	Waste	Fiscal	Resources	Help

- Waste Management
- 2. You will now see the opening page for [WM402]. (The availability of this functionality is optional and determined by your institution and your level or permission).
- 3. Scroll down to



There are five options under this heading:

- Option 1: <u>4.1 Create Waste Card</u> permits PI's and Lab Users to create Waste Cards. Waste materials are collected in waste containers in a lab. A Waste Card is an identifying label attached to a waste container. Once generated, a Waste Card is then added to a Pickup Worksheet. Hazardous Material personnel then collect the waste from the labs and transport such wastes to treatment or disposal facilities. This functionality also permits users to create Waste Card Templates of chemical mixtures.
- Option 2: <u>4.2 Edit Waste Card</u> permits PI's and Lab Users to view, modify, and print previously generated Waste Cards.
- Option 3: <u>4.3 Waste Card Hotlist</u> The Waste Card Hotlist is a list of Waste Card Templates. Templates provide a shortcut to create new Waste Cards. If a template is saved to the Hotlist, the next time a user needs to create a similar Waste Card, he or she can select a template from the Hotlist and create a new Waste Card based on information in the template. This option also permits users to create a new Waste Card from a Waste Card Template, to modify a Waste Card name, and to remove a Hotlist entry.

- Option 4: <u>4.4 Create Pickup Worksheet</u> permits users to create Pickup Worksheets. A Pickup Worksheet notifies Hazardous Material personnel that there are wastes that they are required to collect and transport to treatment or disposal facilities. A Pickup Worksheet is created after the waste chemical container is ready and after a Waste Card for that waste chemical container is generated, printed, and affixed to the waste container.
- Option 5: <u>4.5 List Worksheets Submitted for Pickup</u> permits users to list and view the Pickup Worksheets submitted for pickup.



4.1 Create Waste Card

This function permits users to create Waste Cards. A Waste Card is a unique identifying label attached to a waste container. A Waste Card describes the chemical constituents of the waste in the container as well as other required information including, but not limited to, the waste container's barcode, creator, place of origin, and CAS#. The Waste Card is then added to a Pickup Worksheet, which is a notification for Hazardous Material personnel to collect the waste from the labs and to transport such wastes to treatment or disposal facilities.

- 1. To access this functionality, click the Waste button at the top of the CHEMATIX™ screen:
 - Home Procurement Inventory Waste Fiscal Resources Help
- 2. You will now see the opening page for availability of this functionality is optional and determined by your institution and level of permission).
- 3. Scroll down to
 Create Waste Card
 Edit Waste Card
 Waste Card
 Waste Card Hot List
 Create Pickup Worksheet
 1 Worksheets Submitted for Pickup
- 4. Click on the link Create Waste Card .
- 5. You will now be transferred to page [WM450]:

Create Waste Card			
Chemical Mixture by Percentage			
<u>Chemical Mixture by Quantity</u>			
Pure Chemicals in Individual Containers			
Recyclable Materials			
Paint and Paint Related Materials			
Oil and Antifreeze			
Aerosols			
<u>Gas Cylinders</u>			
Photo Chemicals			
Contaminated Materials			

This list of functionalities to generate Waste Cards is determined by your institution. The list can be specialized for your institution's needs. Contact your CHEMATIX[™] System Administrator for more information.

On this example page, there are nine choices:

4.1.1 Chemical Mixture Percentage

This choice creates a waste chemical mixture whose constituents are calculated by percentage.

4.1.2 Chemical Mixture by Quantity

This choice creates a waste chemical mixture whose constituents are calculated by quantity (that is, by L, mL, g, kg, fl oz, gal, lb, etc.).

4.1.3 Pure Chemicals in Individual Containers

This choice creates individual waste containers whose waste chemical is pure (= unmixed with any other chemical). Multiple waste containers containing pure chemicals can be created at the same time. This is typically used for chemicals in their original waste containers.

4.1.4 Recyclable Materials

This choice is for recyclable materials, including, but not limited to, ink cartridges, fluorescent light tubes, and batteries.

4.1.5 Paint and Paint Related Materials

This choice is for paint and paint related materials, including, but not limited to, paints, stains, varnish, shellac, thinners, paint removers, and adhesives.

4.1.6 Oil and Antifreeze

This choice is for oils and antifreeze.

4.1.7. Aerosols (Spray Cans)

This choice is for, but not limited to, flammable, corrosive, and poisonous aerosols.

4.1.8 Gas Cylinders

This choice is for liquefied, non-liquefied, and dissolved compressed gases stored in non-reusable cylinders.

4.1.9 Photo Chemicals

This choice is for chemicals used by photo labs including, but not limited to, fixers and developers.

4.1.10 Contaminated Materials

This choice is for materials that have been contaminated.



4.1.1 Chemical Mixture by Percentage

This choice creates a Waste Card for a waste chemical mixture whose constituents are calculated by percentage.

1. To access this functionality, click the Waste button at the top of the CHEMATIX™ screen:



- 2. You will now see the opening page for [WM402]. availability of this functionality is optional and determined by your institution).
- 3. Scroll down to



- 4. Click on the link Create Waste Card .
- 5. You will now be transferred to page [WM450]:



- 6. Click Chemical Mixture by Percentage .
- 7. You will now be transferred to page [WM110]:

(The

Create Waste Card				
General Information Created By: Department Name: Accumulation Start Date: Container Size/Unit: Physical State: Chemical Information To add a chemical: • Scan a container, enter the constitut • Search for a chemical by selecting to click "Generate Waste Card"	Nick Gardner Biology 9/7/05 0.0 / L Liquid the "Select A Chemical" button, ent	Phone Numbe Laboratory: Lab Barcode: Container Typ PH Level: %), select "Calculate", Once com er the constituent % (container	r: 555-666-77 Select Loc Glass Select Select	27 ration
Chem	nical Name	CAS Number	Barcode	Percent (%)
		Total 0.0	0.00 0.00 0.00 0.00 0.00 0.00	SelectChemical SelectChemical SelectChemical SelectChemical SelectChemical

8. Select the Accumulation Start Date:, Laboratory:, Container Size/Unit:, Container Type:, Physical State:, and the PH Level:

There are two methods to select chemicals (availability is optional and determined by your institution).

- 1. Enter the barcode of the chemical container.
- 2. Search for and select a chemical by clicking SelectChemical.

Option 1: Enter the barcode of the chemical container.

- 1. For each chemical, scan or enter the container's barcode.
- 2. Enter the percentage of this chemical in the mixture.
- 3. Go on to Step 9. below.

Option 2: Search for and select a chemical by clicking SelectChemical

4. After clicking SelectChemical, you will now be transferred to page [WM111]:

Developed by SIVCO

Search for a Chemical	
 Enter all or part of a chemical nam Add a chemical to the waste card If needed, add a new chemical to 	ne and select "Search". by selecting a chemical name from the list. the CAD by selecting "Add New Chemical"
Chemical Name:	
CAS#:	● begins with C contains
Search Add New Chemical	
Return	

5. Enter the Chemical Name or the CAS# into the appropriate fields.

NOTE:

- a. When using a chemical name to search CAD, remember that singular and plural forms of certain chemicals may refer to different chemicals.
- b. To refine your Chemical Name: or CAS#: search in CAD, click egins with,
- 6. Click Return to return to page [WM110] without making any search or selection.
- 7. Click Search to search for your Chemical Name or CAS# in CAD.
- 8. If the chemical name or CAS# IS NOT in CAD, click Add New Chemical. You will now be transferred to page [IM572] where you can create a new CAD listing. See Appendix A for details on how to add a chemical to CAD.

If the chemical name IS in the CAD database, a generated list will appear at the bottom of page [WM111], as in the following example:

earch for a Chemical	10		a 2				
 Enter all or part of a chemical name a Add a chemical to the waste card by a If needed, add a new chemical to the 	and select "Searc selecting a chem CAD by selectin	ch". iical name from ig "Add New Chi	the list. emical"				
Chemical Name: hydrochloric acid	• begins with	C contains	exact				
CAS#: Search Add New Chemical	€ begins with	C contains					
Return							
Search Results: Found 3 items.							
CAS Number			Chemical N	ame			
7647-01-0 Hydrochloric acid			csincuria				
the second the second sec	and a second second second second	LUCCE OF ALL	udeo 1 4 dibudeouu	0.10 anthropped	lione and 1.4 dibys	Iroxy-0-10-apthra	cener

9. Click a **CAS Number** (for example, 7647-01-0) to view page [IM575]:



The <u>Chemical Abstract and MSDS Details</u> include chemical description; health, physical, and fire hazard ratings; physical characteristics; as well as links for additional MSDS information. (MSDS = <u>Material Safety Data Sheet</u>)

- 10. Click the **Chemical Name** from the generated list (for example, <u>Hydrochloric acid</u>) to add this chemical to your Waste Card.
- 11. You will now return to page [WM110]:

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Create Waste Card	-					
General Information						
Created By:	Stevens, Tyler		Phone Number:	555-392-3885		
Department Name:	Biology		Laboratory:	426/177/Hazard 1	Testing 💌	
Accumulation Start Date:	7/31/06		Container Type:	Glass 🔻		
Container Size/Unit: Physical State:			pH Level:	3-5 💌		
Chemical Information						
To add a chemical:						
 Search for a chemical t Enter the constituent % When complete, select 	to add by selecting "S (the total MUST add "Generate Waste Car	elect Chemical". I up to 100% EXACTLY rd"	'), select "Calculate".			
	Chemic	al Name		CAS N	umber	Percent (%)
O Hydrochloric acid					7647-01-0 0.00	Change
0					0.00	Select Chemica
0					0.00	Select Chemica
					0.00	Select Chemica
(O)						
0 4 4					0.00	Select Chemica
C To generate waste cards, pop	-ups must be enabled	N AN		Tota	0.00	Select Chemica Calculate

12. Click Reset to erase all data fields.

Click Add More Rows to add more rows to the form.

Click the radio button entry in the chemical name. Then, click Remove Row to remove the selected row and delete its contents.

13. Click Calculate if all of the information on this page is correct and if you are ready to generate your Waste Card. CHEMATIX[™] now calculates the percentages of chemical in the mixture to ensure that the percentage of chemicals in the mixture totals 100.00%:

Total 100.00 Percent:

- 14. Click Generate Waste Card to view and print your Waste Card in PDF format. See Appendix B for details on how to print a PDF file from Adobe Reader.
- 15. You have now finished creating your Waste Card.

Create a Waste Card Template for Chemical Mixtures

After your Waste Card (See 4.1.1, Step 12. above) has been generated and printed, scroll down to

the bottom of page [WM116]:	Create Waste Card	
		68 L

To save the waste card to	the hotlist:	
 Input the name of Click "Save To Hot 	the hotlist item(Optional). list" button	
Hotlist Item Name:		Save To Hotlist
1 1 V		

You can now create a Waste Card Template for this waste chemical mixture. A Waste Card Template contains all the information necessary to create a Waste Card for chemical mixtures that are declared waste on a regular basis in your lab. Templates provide a shortcut to create new Waste Cards. This function is especially useful if you need to create many Waste Cards containing similar information. The list of Waste Card Templates is called a Hotlist:

- 1. To access this functionality, enter the name for this chemical mixture into the **Hotlist Item Name** field. This is the **Template Name** field.
- 2. Click Save To Hotlist
- 3. You will now be returned to page [WM402] where the following message will appear:



Access your Hotlist

This functionality will enable you to create a new Waste Card for a chemical mixture from a Waste Card Template in the Hotlist.

- 1. To access this functionality, click the Waste button at the top of the CHEMATIX™ screen: Home Procurement Inventory Waste Fiscal Resources Help
- 2. You will now see the opening page for availability of this functionality is optional and determined by your institution). [WM402]. (The



3. Scroll down to



- 4. Click on the link Waste Card Hot List .
- 5. You will now be transferred to page [WM118]:

Waste Card Hot List		A
Select a hot listed item from the list an	d do one of the following:	
 To create new waste card from t To change the name, click"Modif To remove from the hot list, clic 	the hot list item, click"Create New fy Hot List Name". k "Remove".	Waste Card".
Global Waste Card Hotlist		
C 1. Saved: Global 02/28/2006		
C 2. Solvent Waste		
O 3. Geza's Global Solvent		
C 4. Saved: 03/15/2006		
O 5. Peter's Explosive		
C 6. Nitrogen-Qty		
O 7. Acetone April 2006	<u>.</u> [].	
Waste Card Hotlist		
C 1. Diluted HCI (10%)		
C 2. Solvent Waste		
C 3. Petrofied bile		
Create New Waste Card Modif	y Hot List Name Remove	10

- 6. Click on the radio button of the chemical for which you wish to generate a Waste Card, for example:
 I. Diluted HCl (10%)
- 7. Click Create New Waste Card
- 8. You will now be transferred to page [WM110]:

Create Waste Card					
General Information					
Created By:	Stevens, Tyler	Phone Number:	555-392-3885		
Department Name:	Biology	Laboratory:	426/177/Hazard Te	esting 💌 🤍 🛒	
Accumulation Start Date:	8/1/06	Container Type:	Glass 💌		
Container Size/Unit:	1.0 / L 💌	pH Level:	3-5 🔹		
Physical State:	Liquid 🔹				
Chemical Information					
 Search for a chemical t Enter the constituent % When complete, select 	to add by selecting "Select Ch o (the total MUST add up to 1 "Generate Waste Card"	nemical". 00% EXACTLY), select "Calculate".			
	Chemical Nar	ne	CAS	Number	Percent (%)
O Hydrochloric acid				7647-01-0 10.00	Change
O Water				Z008581 90.00	Change
To generate waste cards, pop	-ups must be enabled.		T	otal Percent: 100.00	Calculate
Generate Waste Card	Remove Row Add Mo	re Rows Reset			

This is your Waste Card Template. This Template will enable you to easily create a new Waste Card.

- 1. Change and modify this Waste Card Template as necessary in order to create a new Waste Card.
- 2. When you are satisfied that the information in the Template is correct, click Generate Waste Card to generate, view, and print your Waste Card in PDF file format. See Appendix B. for details on how to print a PDF file from **MAdobe Reader**.
- 3. Affix the Waste Card to the correct container and notify your institution's Department of Environmental Health & Safety for pickup.
- 4. You have now finished creating a Waste Card from a Template in your Hotlist.
- 5. For more detailed information on Hotlists (including how to remove a Hotlist card or how to modify a Hotlist name, please refer to <u>4.3 Waste Card Hotlist</u> in this **Waste Management Module User Manual**.

4.1.2 Chemical Mixture by Quantity

This choice creates a Waste Card for a waste chemical mixture whose constituents are calculated by quantity (that is, by L, mL, g, kg, fl oz, gal, lb, etc.).

1. To access this functionality, click the Waste button at the top of the CHEMATIX™ screen:



You will now see the opening page for of this functionality is optional and determined by your institution). [WM402]. (The availability

2. Scroll down to

94	Manage Laboratory Waste
	Create Waste Card
	Edit Waste Card
	Waste Card Hot List
	Create Pickup Worksheet
	1 Worksheets Submitted for Pickup

- 3. Click on the link Create Waste Card .
- 4. You will now be transferred to page [WM450]:

Create Waste Card
at The
Chemical Mixture by Percentage
Chemical Mixture by Quantity
Pure Chemicals in Individual Containers
Recyclable Materials
Paint and Paint Related Materials
Oil and Antifreeze
Aerosols
Gas Cylinders
Photo Chemicals

- 5. Click Chemical Mixture by Quantity .
- 6. You will now be transferred to page [WM451]:



silennear witxtu	re by Quanti	ty Waste Card	, A	J.		
						set /
General Informatio	n 🔏 🕗					5
Created By:	Nick Gardner		Phone Number:	555-666-777	7	1.00
Department Name:	Biology		Laboratory:	Select Loca	ation 🔽	21/5
Accumulation Start	9/8/05		Lab Barcode:	lana.		
Container Size:	0.0	-	Container Type:	Glass		
Physical State:	Liquid		PH Level:	Select -	et A	int /
Chaminal Informati						_ <u>_</u>
Chemical mormau						9 2
To add a chemical:						1.5
 Scan a container, Search for a chen Card" Enter the chemica 	enter the constitue nical by selecting th I's name and CAS#	ent's quantity, select "C ne "Select A Chemical" #, enter the constituent	alculate". Once comple button, enter the cons [:] 's quantity, select "calc	ite click "Generate s ituent's quantity, se sulate". Once compl	Waste Card" elect calculate, Once comp ete, click "Generate Waste	ete click "Generate Waste Card"
Chemical (Name	CAS Number	Barcode			
				Quantity	94/10	st /
			[0	Quantity .00 Select	 Select Chemical 	
			[0	Quantity .00 Select .00 Select	Select Chemical Select Chemical	
			[0 [0 [0]	Quantity .00 Select .00 Select .00 Select	 Select Chemical Select Chemical Select Chemical 	
			م المحالي المحالي المحالي المحالي المحالي	Quantity .00 Select .00 Select .00 Select .00 Select .00 Select	 Select Chemical Select Chemical Select Chemical Select Chemical 	
			 	Quantity .00 Select .00 Select .00 Select .00 Select .00 Select .00 Select	 Select Chemical Select Chemical Select Chemical Select Chemical Select Chemical Select Chemical 	
			Total Yolume: 0 Total Mass: 0	Quantity .00 Select	 Select Chemical Select Chemical Select Chemical Select Chemical Select Chemical 	
			Total Yolume: 0 Total Mass: 0	Quantity .00 Select .00 Select	 Select Chemical Select Chemical Select Chemical Select Chemical Select Chemical 	

7. Select the Accumulation Start Date:, Laboratory:, Container Size/Unit:, Container Type:, Physical State:, and the PH Level:

There are two methods to select chemicals (availability is optional and determined by your institution).

Option 1: Enter the barcode of the chemical container.

Option 2: Search for and select a chemical by clicking SelectChemical

Option 1: Enter the barcode of the chemical container.

- 1. For each chemical, scan or enter the container's barcode.
- 2. Enter the percentage of this chemical in the mixture.
- 3. Go on to Step 11 below.

Option 2: Search for and select a chemical by clicking SelectChemical

1. After clicking <u>SelectChemical</u>, you will now be transferred to page [WM453]:

Search for a Chemical			6
 Enter all or part of a chemical n Add a chemical to the waste can 	name and select "Searc rd by selecting a chem	h". ical name fro	m the list.
 If needed, add a new chemical 	to the CAD by selectin	g Add New (Linemical
Chemical Name:	🖸 🕑 begins with	C contains	C exact
CAS#:	● begins with	O contains	
Search Add New Chemical			

- 2. Enter the Chemical Name or the CAS# into the appropriate fields.
- 3. NOTE:
- a. When using a chemical name to search CAD, remember that singular and plural forms of certain chemicals may refer to different chemicals.
- b. To refine your Chemical Name: or CAS#: search in CAD, click
- 4. Click Return to return to page [WM110] without making any search or selection.
- 5. Click Search to search for your Chemical Name or CAS# in CAD.
- 6. If the chemical name or CAS# IS NOT in CAD, click Add New Chemical. You will now be transferred to page [IM572] where you can create a new CAD listing. See Appendix A for details on how to add a chemical to CAD.

If the chemical name IS in the CAD database, a generated list will appear at the bottom of page [WM111], as in the following example:



7. Click a **CAS Number** (for example, 7647-01-0) to view page [IM575]:

Chemical Abstract and MSDS Details

- 8. The <u>Chemical Abstract and MSDS Details</u> include chemical description; health, physical, and fire hazard ratings; physical characteristics; as well as links for additional MSDS information. (MSDS = <u>Material Safety Data Sheet</u>)
- 9. Click the <u>Chemical Name</u> from the generated list (for example, <u>Hydrochloric acid</u>) to add this chemical to your Waste Card.
- 10. You will now return to page [WM451]:

Chomical Mixturo k	w Quantity Masto Ca	rd A				
chemical wixture t	by whatter waste wa	iu a				11 1
General Information						1 11 4 6
Created By:	Stevens, Tyler	Phone Numb	er: 555-392-3885			
Department Name:	Biology	Laboratory:	Select Location	-		r.
Accumulation Start Date:	8/1/06	Container T	ype: Glass 💌			AL
Container Size:	0.0 Select 💌	pH Level:	Select 💌			
Physical State:	Liquid					La Ale
Chemical Information						
To add a chemical:						
Card" • Enter the chemical's na	ame and CAS#, enter the constit	tuent's quantity, select "Calo	culate". Once complete, cli	ck "Generate Wast	te Card"	J.
Hydrochloric acid	7647-01-0		Change			
		0.00 Select	Salact Chamical			
		U.UU Select •	Select Chemical			· ·
		0.00 Select 💌	Select Chemical			禹 [4]
		0.00 Select 💌	Select Chemical			
						- 685
		Total ¥olume: Total Mass:	0.00 L 0.00 kg			La A
		Total Volume: Total Mass:	0.00 L 0.00 kg Calculate			La Al
To generate waste cards, pop	-ups must be enabled.	Total ¥olume: Total Mass:	0.00 L 0.00 kg Calculate			

11. Click Reset to erase all data fields.

Click Add More Rows to add more rows to the form.

Click the radio button • next to the chemical name. Then, click Remove Row to remove the selected row and delete its contents.

- 12. Click Calculate if all of the information on this page is correct and if you are ready to generate your Waste Card. CHEMATIX[™] now calculates the volume and the mass of the chemicals in the mixture.
- 13. Click Generate Waste Card to view and print your Waste Card in PDF format. See Appendix B for details on how to print a PDF file from Adobe Reader.
- 14. You have now finished creating your Waste Card.

Create a Waste Card Template for Chemical Mixtures

After your Waste Card (See <u>3.1.2, Step 14. above</u>) has been generated and printed, scroll down to the bottom of page [WM451]: .



To save the waste	card to the hotlist:	et A
 Input the n Click "Save 	ame of the hotlist item(Optional).	
Hotlist Item Nan	ne:	Save To Hotlist
· 九二	1. T	A TRUE

You can now create a Waste Card Template for this waste chemical mixture. A Waste Card Template contains all the information necessary to create a Waste Card for chemical mixtures that are declared waste on a regular basis in your lab. Templates provide a shortcut to create new Waste Cards. This function is especially useful if you need to create many Waste Cards containing similar information. The list of Waste Card Templates is called a Hotlist:

- 8. To access this functionality, enter the name for this chemical mixture into the **Hotlist Item Name** field. This is the **Template Name** field.
- 9. Click Save To Hotlist
- For information on how to access your Hotlist, create a waste card from a template, and edit your waste card hotlist, refer to the section <u>4.3 Waste Card Hotlist</u>.



4.1.3 Pure Chemicals in Individual Containers

This choice creates Waste Cards for waste containers whose waste chemical is pure (unmixed with any other chemical). This functionality permits you to generate Waste Cards for single or multiple containers.

1. To access this functionality, click the Waste button at the top of the CHEMATIX™ screen:

Inventory

Fiscal

Resources

Help

- 2. You will now see the opening page for availability of this functionality is optional and determined by your institution). [WM402]. (The
- 3. Scroll down to

Home



- 4. Click on the link Create Waste Card .
- 5. You will now be transferred to page [WM450]:

Procurement



6. Click Pure Chemicals in Individual Containers .

7. You will now be transferred to page [WM467]:

Fulle villennu	al Waste C	ard	32	P.	12				
General Informa	ation								
Created By:	Nick Ga	rdner		Phone Number:	555-666-	7777			
Department Name	: Biology			Laboratory:	SelectL	ocation 💌			
Accumulation Star Date:	rt 10/11/0	5		Lab Barcode:	131	A			
Chemical Inform	nation								
onennearmon	Induorr								
For each pure chemi	ical container:								
Do DNE of th	- fallentin -								
• DO DINE OF UI	e tollowing:			woods then colort 'De	funch				
 Do BNE or di Contai Contai 	e following: iner with barcod iner missing bar	e: Enter/scar code: Select	n the container ba 'Search' to look i	arcode, then select 'Re up the chemical inform	fresh' ation, change th	e quantity, cont	ainer type &	physical state,	then selec
 Do BNE of the ortal Contai Contai 'Refree Once complet 	e following: iner with barcod iner missing bar sh' te, select 'Gener	e: Enter/scar code: Select rate Waste Ca	n the container ba 'Search' to look i ard'	arcode, then select 'Re up the chemical inform	fresh' nation, change th	e quantity, cont	ainer type &	physical state,	then selec
Ontai Contai Contai 'Refree Once complet	e following: iner with barcod iner missing bar sh' te, select 'Gener	e: Enter/scar code: Select rate Waste Co	n the container ba 'Search' to look o ard'	arcode, then select 'Re up the chemical inform	fresh' hation, change th	e quantity, cont	ainer type &	physical state,	then selec
O Once Contai Contai Contai Contai Contai Contai Container 1	e following: iner with barcod iner missing bar sh' te, select 'Gener Size Cor	e: Enter/scar code: Select rate Waste Co ntainer Type	n the container ba 'Search' to look i ard' e Physical Stat	arcode, then select 'Re up the chemical inform ce Chemical Name (fresh' hation, change th CAS Number	e quantity, cont Barcode	ainer type & Qu	physical state, antity	, then selec
Container s Container s Container s	e following: iner with barcod iner missing bar sh' te, select 'Gener Size Cor Select v Se	e: Enter/scar code: Select rate Waste Co ntainer Typ elect v	n the container ba 'Search' to look ard' e Physical Stat Select	arcode, then select 'Re up the chemical inform te Chemical Name (fresh' hation, change th CAS Number	e quantity, cont Barcode	ainer type & Qu 0.00	physical state, antity Select 💌	then select
Container Container Container Container Container O.0 O.0 O.0	ner with barcod iner missing bar sh' ste, select 'Gener Size Con Select ▼ Se Select ▼ Se	e: Enter/scar code: Select ate Waste C. ntainer Typ elect v elect v	n the container ba 'Search' to look i ard' e Physical Stat Select Select	arcode, then select 'Re up the chemical inform C Chemical Name (fresh' ation, change th CAS Number	e quantity, cont Barcode	ainer type & Qu 0.00 0.00	physical state, aantity Select 💌	then selec Search Search
Contai Contai Contai Contai Refres Once complet Once c	stelect v Select	e: Enter/scar code: Select rate Waste C. ntainer Typ elect v elect v elect v	h the container by 'Search' to look of ard' e Physical Stat Select Select	arcode, then select 'Re up the chemical inform Chemical Name (Chemical Name (fresh' hation, change th CAS Number	e quantity, cont Barcode	ainer type & Qu 0.00 0.00	antity Select v Select v	then select Search Search Search
Container 9 Container 9 Container 9 Container 9 Container 9 O.0 O.0 O.0 O.0 O.0 O.0 O.0 O.0 O.0	e following: iner with barcod iner missing bar sh' te, select 'Gener Size Cou Select V Se Select V Se Select V Se	e: Enter/scar code: Select rate Waste C. ntainer Typ elect v elect v elect v elect v	h the container ba 'Search' to look i ard' Select Select Select Select	arcode, then select 'Re up the chemical inform e Chemical Name (• •	fresh' ation, change th CAS Number	e quantity, cont Barcode	ainer type & Qu 0.00 0.00 0.00 0.00	antity Select V Select V Select V Select V	then select Search Search Search Search
Container Container Container Container Once complet Once comp	stimer with barcod iner missing barcod sh' Select 'Gener Select V Se Select Select Se Select Se Select Se Select Se	e: Enter/scar code: Select rate Waste C. ntainer Typ elect V elect V elect V elect V	the container ba 'Search' to look i ard' Select Select Select Select Select	arcode, then select 'Re up the chemical inform Ce Chemical Name (fresh' ation, change th CAS Number	e quantity, cont Barcode	ainer type & Qu 0.00 0.00 0.00 0.00	physical state, Select V Select V Select V Select V	then select Search Search Search Search Search
Container Container Container Container Container O.0 O.0	stimer with barcod iner with barcod sh' ste, select 'Gener Size Con Select V Se Select Select Se Select Se Select Se Select Se	e: Enter/scar code: Select rate Waste C. ntainer Type elect v elect v elect v elect v elect v elect v	n the container ba 'Search' to look of ard' e Physical Stat Select Select Select Select Select	arcode, then select 'Re up the chemical inform C Chemical Name (C C	fresh' ation, change th	e quantity, cont Barcode	ainer type & Qu 0.00 0.00 0.00 0.00 0.00	antity Select V Select V Select V Select V Select V	then select Search Search Search Search Search Search
Container 9 Container 9 Container 9 Container 9 Container 9 O.0 O	e rollowing: iner with barcod iner missing bar sh' select 'Gener Select ▼ Se Select ▼ Se Select ▼ Se Select ▼ Se Select ▼ Se	e: Enter/scar code: Select ate Waste C. Intainer Type elect V elect V elect V elect V elect V	n the container by 'Search' to look of ard' e Physical Stat Select Select Select Select Select	arcode, then select 'Re up the chemical inform C Chemical Name (C	fresh' hation, change th	e quantity, cont Barcode	ainer type & Qu 0.00 0.00 0.00 0.00	antity Select V Select V Select V Select V Select V Select V	then select Search Search Search Search Search
Container 9 Container 9 Container 9 Container 9 Container 9 O.0 O	e rollowing: iner with barcod iner missing bar sh' Select 'Gener Select Select Se Select Select Se Select Se Select Se Select Se	e: Enter/scar code: Select rate Waste C. ntainer Typ elect V elect V elect V elect V	n the container ba 'Search' to look i ard' Select Select Select Select Select Select	arcode, then select 'Re up the chemical inform Ce Chemical Name (C	fresh' ation, change th	e quantity, cont Barcode	ainer type & Qu 0.00 0.00 0.00 0.00 0.00 0.00 0.00	physical state, Select V Select V Select V Select V Select V Select V	then select Search Search Search Search Search
Container s Container s Container s Container s Once complet Once	rollowing: iner with barcod iner missing bar sh' Select ▼ Se Select ▼ Se Select ▼ Se Select ▼ Se Select ▼ Se Select ▼ Se Select ▼ Se	e: Enter/scar code: Select rate Waste C- ntainer Type elect V elect V elect V elect V elect V elect V	the container ba 'Search' to look i ard' Physical Stat Select Select Select Select Select	arcode, then select 'Re up the chemical inform Ce Chemical Name (C	fresh' ation, change th	e quantity, cont Barcode	ainer type & Qu 0.00 0.00 0.00 0.00	physical state, Select V Select V Select V Select V Select V Select V	then select Search Search Search Search Search

- 8. Select the Accumulation Start Date: and the Laboratory: Or the Lab Barcode: .
- 9. This page permits you to generate Waste Cards for single or multiple containers containing pure (= unmixed) chemicals. This is typically used for chemicals in their original containers.
- 10. Each line is for one container of waste chemical only.
- 11. There are two methods to select pure chemicals: Option 1: Enter the barcode of the chemical container.

Option 2: Select a chemical by clicking Search

Option 1. Enter the barcode of the chemical container.

1. Enter the **Container Size** and unit, **Container Type**, **Physical State**, **Barcode**, and **Quantity** of chemical in the container and unit, for example:

Container Size	Container Type	Physical State	Chemical Name CAS Number	Barcode	Quantity
🗆 2.0 🛛 🗌 🗖	Glass 💌	Liauid 💽	AT THE	NMEC001DY6	1 L 💌

2. Go on to Step 8 below.

Option 2. Select a chemical by clicking Search

1. After clicking Search , you will now be transferred to page [WM453]:

 Enter a combination of let 	ters that it may contain and click "Search"
 Under search results, click To add new chemical,click 	< on the chemical name < "Add"
1.2	
Chemical Name:	
CAS#:	
Search Add	
Return	

2. Enter the Chemical Name or the CAS# into the appropriate field.

NOTE:

- a. When using a chemical name to search CAD, remember that singular and plural forms of certain chemicals may refer to different chemicals.
- b. To refine your Chemical Name: or CAS#: search in CAD, click
- 3. Click Return to return to page [WM467] without making any search or selection.
- 4. Click Search to search for your Chemical Name or CAS# in CAD.
- 5. If the chemical name or CAS# IS NOT in CAD, click Add. You will now be transferred to page [IM572] where you can create a new CAD listing. See <u>Appendix A</u> for details on how to add a chemical to CAD.



If the chemical name IS in the CAD database, a generated list will appear at the bottom of the page, as in this example:

Search for a Chemical	馬し		1		13		
 Enter a combination of letters that it n Under search results, click on the cher To add new chemical,click "Add" 	nay contain and mical name	click "Search"					
Chemical Name: hydrochloric acid	🖲 begins with	O contains O e	xact				
CAS#:	• begins with	C contains					
Search Add							
Return							
Search Results: Found 3 items							
具 标准							
CAS Number			Chemical Nan	ne			
7647-01-0 Hydrochloric acid							
68987-74-6 Hydrochloric acid, reaction	n products with	aniline, 2,3-dihydr	o-1,4-dihydroxy-9	10-anthracenedic	one and 1,4-dihyc	iroxγ-9,10-anthra	cenedion
68132-38-7 Hydrochloric acid salt of	olymerized trie	thanolamine partia	tall oil acid ester	(and-or salt); Pol	ymerized triethar	<u>iolamine, tall oil a</u>	<u>cid ester</u>
and/or salt, hydrochloric	aciu saic						

6. Click a **CAS Number** (for example, 7647-01-0) to view page [IM575]:

Chemical Abstract and MSDS Details

The <u>Chemical Abstract and MSDS Details</u> include chemical description; health, physical, and fire hazard ratings; physical characteristics; as well as links for additional MSDS information. (MSDS = <u>Material Safety Data Sheet</u>)

Click the **Chemical Name** from the generated list (for example, <u>Hydrochloric acid</u>) to return to page [WM467]. Your selected chemical will be added to a list for generating Waste Cards.

7. Enter the **Container Size**, **Container Type**, **Physical State**, and **Quantity** of the chemical in the container, for example:

l	500	mL	🔹 Glass 💌	Liquid	Hydrochloric acid 7647-01-0	250	mL	•

8. Page [WM467] will now appear as in the following example:



Container Size	Container Type	Physical State	Chemical Name	CAS Number	Barcode	Qua	ntity	
🗆 2.0	Fiber 💌	Liquid 🔽	Nitric acid	7697-37-2	NMEC001DY6	2.00		Change
🗆 500 mL 💌	Glass 💌	Liquid 💌	Hydrochloric acid	7647-01-0		250	mL 💌	Change
D 0.0 Select 💌	Select 💌	Select 💌				0.00	Select 💌	Search
D.0 Select 🗸	Select 💌	Select 💌				0.00	Select 💌	Search
0.0 Select 💌	Select 💌	Select 💌				0.00	Select 💌	Search
	Å						Refresh	
Generate Waste Card	Remove Add	More Rows						

9. Click <u>Refresh</u> to refresh the screen and bring it up-to-date.

Click Add More Rows to add more rows to the form.

To remove a row and its contents, click the check box(es) on the left next to the container size. Then, click Remove.

- 10. Click Generate Waste Card
- 11. The information for the Waste Card will now be generated. You will now be transferred to page [WM468]:

Pure Chemi	cal W	aste Card	312		1		
General Inform	ation						
Created By: Department Nam	e:	Nick Gardner Biology		Phone Laborat	Number: tory:	555-666-77 426/401/Te	77 st Lab 3
Accumulation Sta Date:	art	10/7/05		Lab Bar	rcode:	NMEL00005	A
Container Size (Contain	ner Type Physica	l State Chen	nical Name CAS N	umber Chemic Barcod	al e Quantity	
2.0 L 0	Glass	Liquid	Nitric	acid 7697-3	7-2	2.00 L	<u>View pdf</u>

- 12. Click <u>View pdf</u> to view and print a copy of this Waste Card in PDF format. See <u>Appendix B</u>. for details on how to print a PDF file from <u>Adobe Reader</u>.
- 13. Affix the printed Waste Card to the correct container and notify your institution's Department of Environmental Health & Safety for pickup.
- 14. You have now finished creating Waste Card(s) for a pure, unmixed chemical.

4.1.4 Recyclable Materials

This choice is for recyclable materials, including, but not limited to, ink cartridges, fluorescent light tubes, and batteries.

1. To access this functionality, click the Waste button at the top of the CHEMATIX[™] screen:

Home	Procurement	Inventory	Waste	Fiscal	Resources	Help
------	-------------	-----------	-------	--------	-----------	------

- 2. You will now see the opening page for availability of this functionality is optional and determined by your institution). [WM402]. (The
- 3. Scroll down to



- 4. Click on the link Create Waste Card .
- 5. You will now be transferred to page [WM450]:



- 6. Click Recyclable Materials .
- 7. You will now be transferred to page [WM463]:


General Information	AR			
Created By:	Nick Gardner		Phone Number:	555-666-7777
Department Name:	Biology		Laboratory:	Select Location
Accumulation Start	9/8/05		Lab Barcode:	
Chemical Information To add a chemical item, p	on please:	Decify the waste t		
o add a chemical item, p Select from the lis Enter quantity(nur Once complete, cli	on blease: t of options to s nbers only) ck "Generate W	pecify the waste t	type	
o add a chemical item, p o add a chemical item, p • Select from the lis • Enter quantity(nur • Once complete, cli Contents	on blease: t of options to s nbers only) ck "Generate W	pecify the waste t aste Card" Quantity	type Description	
o add a chemical item, p • Select from the lis • Enter quantity(nur • Once complete, cli Contents Select	on blease: t of options to s nbers only) ck "Generate W	pecify the waste t aste Card" Quantity	type Description	
o add a chemical item, p o add a chemical item, p • Select from the lis • Enter quantity(nur • Once complete, cli <u>Contents</u> Select Select	on blease: t of options to s nbers only) ck "Generate W 0 0 0 0	pecify the waste t 'aste Card" Quantity	type Description	
Chemical Information o add a chemical item, p • Select from the lis • Enter quantity(nur • Once complete, clip Contents Select Select	on blease: t of options to s nbers only) ck "Generate W 0 0 0 0 0 0	pecify the waste t aste Card" Quantity	type Description	
Chemical Information o add a chemical item, p • Select from the lis • Enter quantity(nur • Once complete, cli Contents Select Select Select	on blease: t of options to s nbers only) ck "Generate W (0 0 0 0 0 0 0 0	pecify the waste t 'aste Card" Quantity	type Description	
Chemical Information To add a chemical item, p Select from the lis Enter quantity(nur Once complete, cli Contents Select Select Select Select Select	on blease: t of options to s nbers only) ck "Generate W 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	pecify the waste t 'aste Card" Quantity	type Description	

- 8. Select the Accumulation Start Date: and Laboratory:
- 9. Select the **Contents** of the recyclable materials, **Quantity** (as a number only), and **Description** for example:

Contents	Quantit	y Description
Toner Cartridge	5	old and disused

- 10. Click Add More Rows to add more rows to the form.
- 11. Click Generate Waste Card to view and print your Waste Card in PDF format. See Appendix
 <u>B</u>. for details on how to print a PDF file from Adobe Reader.
- 12. Affix the Waste Card to the correct container and notify your institution's Department of Environmental Health & Safety for pickup.
- 13. You have now finished creating a Waste Card for recyclable material.

4.1.5 Paint and Paint Related Materials

This choice is for paint and paint related materials, including, but not limited to, paints, stains, varnish, shellac, thinners, paint removers, and adhesives.

1. To access this functionality, click the Waste button at the top of the CHEMATIX™ screen:





You will now see the opening page for [WM402]. (The availability of this functionality is optional and determined by your institution).

- 2. Scroll down to Manage Laboratory Waste <u>Create Waste Card</u> <u>Edit Waste Card</u> <u>Waste Card Hot List</u> <u>Create Pickup Worksheet</u> <u>1 Worksheets Submitted for Pickup</u>
- 3. Click on the link Create Waste Card .
- 4. You will now be transferred to page [WM450]:

Create Waste Card
at 1
Chemical Mixture by Percentage
Chemical Mixture by Quantity
Pure Chemicals in Individual Containers
Recyclable Materials
Paint and Paint Related Materials
Oil and Antifreeze
Aerosols
Gas Cylinders
Photo Chemicals
E-at E-a

5. Click Paint and Paint Related Materials .



6. You will now be transferred to page [WM455]:

	Material Wa	aste Card			
Genera	al Information				
Created	By:	Stevens, Tyler	Phone Number:	555-392-3885	
Departr	nent Name:	Biology	Laboratory:	Select Location	•
Accumu Date: Chemi	lation Start cal Informatio	7/31/06 n			
• •	elect from the list	of options to specify the waste type			
• Er • 0	nter the size and u nce complete, clic F	unit information k "Generate Waste Card" Contents	Description	L.S.	
• Er • O • O	nter the size and unce complete, clic tainer Size	unit information k "Generate Waste Card" Contents	Description	La St	
• Er • O Con 0.00	tainer Size Select V	unit information k "Generate Waste Card" Contents Select	Description		
• Er • 0 0.00 0.00	tainer Size Select V Select V	unit information k "Generate Waste Card" Contents Select Select	Description		
Con Con Con Con C.00 C.	tainer Size Select V Select V Select V	Init information k "Generate Waste Card" Select Select Select	Description		
En Con Con 0.00 0.00 0.00 0.00 0.00 0.00	tainer Size Select • Select • Select •	unit information k "Generate Waste Card" Contents Select Select Select Select Select	Description		
 En O Con 0.00 0.00 0.00 0.00 0.00 0.00 0.00 To gene 	nter the size and unce complete, clic tainer Size Select • Select • Select • Select • Select •	unit information k "Generate Waste Card" Select Select Select Select Select Select	Description		

- 7. Select the Accumulation Start Date: and Laboratory:
- 8. Select the **Contents** of the paint material, **Container Size**, and **Description** for example:

Contain	er Size	Contents	Description	
5.00	L	Paint (oil based)	✓ Dried up	

- 9. Click Add More Rows to add more rows to the form.
- 10. Click Generate Waste Card to view and print your Waste Card in PDF format. See Appendix B. for details on how to print a PDF file from Adobe Reader.
- 11. Affix the Waste Card to the correct container and notify your institution's Department of Environmental Health & Safety for pickup.
- 12. You have now finished creating a Waste Card for paint and paint related material.

4.1.6 Oil and Antifreeze

This choice is for oils and antifreeze.

- 1. To access this functionality, click the Waste button at the top of the CHEMATIX™ screen:

 Home
 Procurement

 Inventory
 Waste

 Fiscal
 Resources
- 2. You will now see the opening page for availability of this functionality is optional and determined by your institution). [WM402]. (The
- 3. Scroll down to



- 4. Click on the link Create Waste Card .
- 5. You will now be transferred to page [WM450]:



- 6. Click Oil and Antifreeze .
- 7. You will now be transferred to page [WM457]:





- 8. Select the Accumulation Start Date: and Laboratory: .
- 9. Select the **Contents** of the oil and antifreeze materials, **Container Size**, and **Description**.
- 10. Click Add More Rows to add more rows to the form.
- 11. Click Generate Waste Card to view and print your Waste Card in PDF format. See <u>Appendix</u> <u>B</u>. for details on how to print a PDF file from <u>Adobe Reader</u>.
- 12. Affix the Waste Card to the correct container and notify your institution's Department of Environmental Health & Safety for pickup.
- 13. You have now finished creating a Waste Card for oil and antifreeze material.

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4.1.7 Aerosols

This choice is for, but not limited to, flammable, corrosive, and poisonous aerosols.

1. To access this functionality, click the <u>Waste</u> button at the top of the CHEMATIX™ screen:

Home	Procurement	Inventory	Waste	Fiscal	Resources	Help



You will now see the opening page for [WM402]. (The availability of this functionality is optional and determined by your institution).

2. Scroll down to



- 3. Click on the link Create Waste Card .
- 4. You will now be transferred to page [WM450]:



- 5. Click Aerosols .
- 6. You will now be transferred to page [WM459]:



Jel /	N.	Ja Ne	et /		
General Inform	ation				
Created By:	Nick Gardne	er	Phone Number:	555-666-7777	
Department Name	e: Biology		Laboratory:	Select Location	
ate:	rt 9/8/05	員 人前	Lab Barcode:		
o add a chemical it	em, please:		AN		
o add a chemical if • Select from t • Enter the size • Once comple	em, please: he list of options to : and unit informatio te, click "Generate V	specify the waste typ on Waste Card"			
o add a chemical if • Select from t • Enter the size • Once comple Container Siz 0.00 Select	tem, please: the list of options to : e and unit informatio te, click "Generate V :e (t Select	specify the waste typ on Waste Card" Contents	Description		
o add a chemical if • Select from t • Enter the size • Once comple Container Siz 0.00 Select	tem, please: the list of options to : e and unit informatio te, click "Generate V :e (ct Select ct Select	specify the waste typ on Waste Card" Contents	De Description		
o add a chemical if Select from t Enter the size Once comple Container Siz 0.00 Select 0.00 Select 0.00 Select	tem, please: the list of options to : e and unit informatio te, click "Generate V :e (ct) Select ct) Select ct) Select	specify the waste typ in Waste Card" Contents	Description		
o add a chemical if • Select from t • Enter the size • Once comple Container Siz 0.00 Select 0.00 Select 0.00 Select 0.00 Select	tem, please: the list of options to : and unit informatio te, click "Generate V :e t Select t Select t Select t Select t Select	specify the waste typ on Waste Card" Contents	Description		
o add a chemical if Select from t Enter the size Once comple Container Siz 0.00 Select 0.00 Select 0.00 Select 0.00 Select 0.00 Select 0.00 Select	tem, please: the list of options to : a and unit informatio te, click "Generate V :e t Select t Select t Select t Select t Select t Select t Select	specify the waste typ on Waste Card" Contents	Description		
Fo add a chemical if Select from t Enter the size Once comple Container Siz 0.00 Select 0.00 Select 0.00 Select 0.00 Select 0.00 Select	tem, please: the list of options to : a and unit informatio te, click "Generate V :e t Select t Select t Select t Select t Select t Select t Select	specify the waste typ on Waste Card" Contents	Description		

- 7. Select the Accumulation Start Date: and Laboratory:
- 8. Select the **Contents** of the oil and antifreeze materials, **Container Size**, and **Description**.
- 9. Click Add More Rows to add more rows to the form.
- 10. Click Generate Waste Card to view and print your Waste Card in PDF format. See Appendix <u>B</u>. for details on how to print a PDF file from **Adobe Reader**.
- 11. Affix the Waste Card to the correct container and notify your institution's Department of Environmental Health & Safety for pickup.
- 12. You have now finished creating a Waste Card for aerosols.

4.1.8 Gas Cylinders

This choice is for liquefied, non-liquefied, and dissolved compressed gases stored in non-refillable cylinders.

1. To access this functionality, click the Waste button at the top of the CHEMATIX[™] screen:



- 2. You will now see the opening page for availability of this functionality is optional and determined by your institution). [WM402]. (The
- 3. Scroll down to



- 4. Click on the link Create Waste Card .
- 5. You will now be transferred to page [WM450]:



- 6. Click Gas Cylinders .
- 7. You will now be transferred to page [WM465]:



Gas Cylinder Wa	ste Card			5	
General Information Created By: Department Name: Accumulation Start Date:	Nick Gardner Biology 9/8/05		hone Number: 5 aboratory: [ab Barcode: [55-666-7777 Select Location	
Chemical Informatio To add a chemical item, pl • Select from the list • Enter the diameter, • Once complete, clic	N ease: of options to spe height, descriptio k "Generate Was	cify the waste type on of contents and manufact te Card"	urer information		
Container Type	Diameter	(Inch) Height(Inch)	Contents	Ma	anufacturer
Select	0.0	0.0	E DE L'ESSE		1 11 1 1 1 1
Select	▼ 0.0	0.0			L BRA ANNO A
Select	▼ 0.0	0.0			
Select	▼ 0.0	0.0			لحر
Select	• 0.0	0.0			
at Ne	Le Re	et.		Un Ce	
Generate Waste Card	Add More Ro	ws			

- 8. Select the Accumulation Start Date: and Laboratory: and/or Lab Barcode:
- 9. Enter or select the <u>Container Type</u>, <u>Diameter(Inch)</u>, <u>Height(Inch)</u>, <u>Contents</u>, and <u>Manufacturer</u>.
- 10. Click Add More Rows to add more rows.
- 11. Click Generate Waste Card to view and print your Waste Card in PDF format. See <u>Appendix</u> <u>B</u>. for details on how to print a PDF file from <u>Adobe Reader</u>.
- 12. Affix the Waste Card to the correct cylinder and notify your institution's Department of Environmental Health & Safety for pickup.
- 13. You have now finished creating Waste Card(s) for non-refillable gas cylinders.

4.1.9 Photo Chemicals

This choice is for chemicals used by photo labs including, but not limited to, fixers and developers.

Waste 1. To access this functionality, click the button at the top of the CHEMATIX[™] screen: Home Procurement Inventory Fiscal Resources Help Waste Management 2. You will now see the opening page for [WM402]. (The availability of this functionality is optional and determined by your institution). Manage Laboratory Waste 3. Scroll down to Create Waste Card Edit Waste Card Waste Card Hot List Create Pickup Worksheet

1 Worksheets Submitted for Pickup

- 4. Click on the link Create Waste Card .
- 5. You will now be transferred to page [WM450]:

Create Waste Card
at The
Chemical Mixture by Percentage
Chemical Mixture by Quantity
Pure Chemicals in Individual Containers
Recyclable Materials
Paint and Paint Related Materials
Oil and Antifreeze
Aerosols
<u>Gas Cylinders</u>
Photo Chemicals

- 6. Click Photo Chemicals .
- 7. You will now be transferred to page [WM461]:



Genera	I Information	る長					
reated	By:	Nick Gardner	r	Phone Numbe	r: 555-666	-7777	
epartm	ent Name:	Biology		Laboratory:	Select	Location	٦
ccumul	ation Start	9/8/05	i ja	Lab Barcode:	Jan 1		
bemic o add a • Se • En	chemical item, p lect from the list ter the size and	DN vlease: t of options to s unit information	specify the waste ty	rpe 📇 🛃			
chemic o add a • Se • En • On	chemical item, p lect from the list ter the size and ce complete, cli	DD please: t of options to s unit information ck "Generate W	specify the waste ty n Vaste Card"				
chemic o add a • Se • En • On Con 0.0	chemical item, p lect from the list ter the size and ce complete, cli tainer Size	DD Dease: t of options to s unit information ck "Generate W C Select	specify the waste ty n Vaste Card" Contents	rpe	tion	[-] 4∐ ²	
Con 0 add a • Se • En • On <u>Con</u> 0.0	chemical item, p lect from the list ter the size and ce complete, cli tainer Size Select V	on blease: t of options to s unit information ck "Generate W Select Select	specify the waste ty n Vaste Card" Contents	rpe Descript	tion		
Con 0 add a • Se • En • On 0.0 0.0 0.0 0.0	chemical item, p lect from the list ter the size and ce complete, cli tainer Size Select Select	on olease: t of options to s unit information ck "Generate W Select Select Select	pecify the waste ty n Vaste Card" Contents	rpe Descript	tion		
Con Con Con Con 0 .0 0 .0 0 .0 0 .0 0 .0	chemical item, p lect from the list ter the size and ce complete, cli tainer Size Select • Select •	on olease: t of options to s unit information ck "Generate W Select Select Select Select	pecify the waste ty n Vaste Card"	rpe Descript	tion		
Chemic o add a • Se • En • On 0.0 0.0 0.0 0.0 0.0	chemical item, p lect from the list ter the size and ce complete, cli tainer Size Select • Select • Select •	on olease: t of options to s unit information ck "Generate W Select Select Select Select Select	pecify the waste ty n Vaste Card"	rpe Descript	tion		

- 8. Select the Accumulation Start Date: and Laboratory:
- 9. Select the **Contents** of the photo chemicals, **Container Size**, and **Description**.
- 10. Click Add More Rows to add more rows to the form.
- 11. Click Generate Waste Card to view and print your Waste Card in PDF format. See <u>Appendix</u>
 <u>B</u>. for details on how to print a PDF file from <u>Adobe Reader</u>.
- 12. Affix the Waste Card to the correct container and notify your institution's Department of Environmental Health & Safety for pickup.
- 13. You have now finished creating a Waste Card for photo chemicals.

4.1.10 Contaminated Materials

This choice is for chemicals used by photo labs including, but not limited to, fixers and developers.

Waste 14. To access this functionality, click the button at the top of the CHEMATIX[™] screen: Home Procurement Inventory Fiscal Resources Help Waste Management 15. You will now see the opening page for [WM402]. (The availability of this functionality is optional and determined by your institution). Manage Laboratory Waste 16. Scroll down to Create Waste Card Edit Waste Card Waste Card Hot List Create Pickup Worksheet 1 Worksheets Submitted for Pickup

17. Click on the link Create Waste Card .

18. You will now be transferred to page [WM450]:

Create Waste Card
Chemical Mixture by Percentage
<u>Chemical Mixture by Quantity</u>
Pure Chemicals in Individual Containers
Recyclable Materials
Paint and Paint Related Materials
Oil and Antifreeze
Aerosols
Gas Cylinders
Photo Chemicals
Contaminated Materials

19. Click Contaminated Materials

20. You will now be transferred to page [WM497]:



Contaminated Material Waste Card		
General Information		
Created By: Stevens, Tyler	Phone Number:	555-392-3885
Department Name: Biology	Laboratory:	Select Location
Accumulation Start Date: Contamination Type Chemical Biological Radioactive		
Contaminated Material Information		
Contaminated Materials	Contam	inated By

21. Select the Accumulation Start Date: and Laboratory:

22. Select the **Contamination Type** by clicking on one of the checkboxes below:

\checkmark	Chemical	Biological	Radioactive	
--------------	----------	------------	-------------	--

- 23. Enter the name of the contaminated material(s) (in the **Contaminated Materials** field) and the materials that it was contaminated by (in the **Contaminated By** field).
- 24. Click Generate Waste Card to view and print your Waste Card in PDF format. See Appendix <u>B</u>. for details on how to print a PDF file from **Adobe Reader**.
- 25. Affix the Waste Card to the correct container and notify your institution's Department of Environmental Health & Safety for pickup.
- 26. You have now finished creating a Waste Card for contaminated materials.

4.2 Edit a Waste Card

This function permits PI's and Lab Users to view, modify, and print previously generated Waste Cards. All Waste Cards must be generated prior to pickup.

1. To access this functionality, click the Waste button at the top of the CHEMATIX™ screen:



You will now see the opening page for [WM402]. (The availability of this functionality is optional and determined by your institution).

2. Scroll down to

Manage Laboratory Waste
Create Waste Card
Edit Waste Card
Waste Card Hot List
Create Pickup Worksheet
1 Worksheets Submitted for Pickup

- 3. Click on the link Edit Waste Card .
- 4. You will now be transferred to page [WM113]:

red	Edit a Waste Card
	ante ante
	To edit an existing waste card:
	• Type or scan in the waste card barcode below and click "Search" To view a list of existing waste cards:
	• Leave the search field blank and click "Search"
	Search Reset

4.2.1 Search for an existing Waste Card

From this page, there are two choices to search an existing Waste Card:

- Option 1: Enter a waste barcode into the data field and click Search Continue to <u>4.2.2 Edit Waste Card</u>.
- Option 2: Leave the search field blank and click Search .

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The list of Waste Cards in your lab(s) will be generated at the bottom of page [WM113]:

Edit a W	aste Card					
			di/X		21/5	
o edit an o	existing waste	card:				
• Type o view a li	or scan in the wa ist of existing (aste card barc waste cards:	ode below and	click "Search"		
• Leave	e the search field	blank and clic	ck "Search"			
Search	Reset					
Vaste Card	is Not Schedule	ed For Picku	p			
Start Date	Building	Name	Room Numb	er <u>Lab Name</u>	Waste Card Number C	ontainer Size
9/28/05	CRS Building		100	Warehouse Room 100	NMEW00004P	500.0 ml
9/28/05	CRS Building		100	Warehouse Room 100	<u>NMEW00004V</u>	500.0 g

- The Waste Cards can be sorted in ascending order by column. To do this, click on the name of the column. For example, clicking on the column heading <u>Start Date</u> will arrange all of the Waste Cards by date from the oldest to the most recent and clicking on the column heading <u>Building Name</u> will arrange all of the Waste Cards by building beginning with the letter A and ending with Z, etc.
- 2. Click on a Waste Card Number to edit, view, and print that Waste Card.

4.2.2 Edit Waste Card

There are two types of waste cards that can be edited:

- Option 1: If the Waste Card is for a pure chemical.
- Option 2: If the Waste Card is for a chemical mixture, recyclable materials, paint and paint related materials, oil and antifreeze, aerosols, gas cylinders, photo chemicals, or contaminated materials.

Option 1: If the Waste Card is for a pure chemical, your options to edit this card are limited, as in the following example:

After clicking Search , you will now be transferred to [WM475]:

	u waste Card	a Ne			
General Information					
NMEW00002E					
Created By: Department Name: Accumulation Start Date:	Scrimm, Angus Biology 9/6/05		Phone Number: Laboratory: Lab Barcode:	555-352-6934 426/369/Test Lab 4 NMEL00005F	4
Container Size Containe	r Type Physical Sta	ate Chemical Na	ame CAS Number Ba	emical Code Quantity	
3.0 L Glass		Nitric acid	7697-37-2 NMEC	001DT7 3.00 L <u>Viev</u>	<u>w pdf</u>
Remove Waste Card	Back				

On this page, you have four alternatives:

1. Print this page.

To print this page, click <u>File</u> on your browser. On the drop-down menu, scroll down to <u>Print...</u> and click <u>Print...</u>. You can now print this page through your browser.

2. View PDF

Click <u>View pdf</u> to view and print this Waste Card in PDF format. See <u>Appendix B</u>. for details on how to print a PDF file from <u>Adobe Reader</u>.

3. Back

Click Back to return to page [WM113]:

Edit a Waste Card

4. Remove Waste Card

Click Remove Waste Card to remove this Waste Card from your list of Waste Cards.

This Waste Card will now be deleted from your lab. "Deleted" in this case means, "rendered inactive" to your lab. CHEMATIX[™] will always retain records of this Waste Card for future tracking purposes.

You will now be transferred to page [WM113]:

Edit a Waste Card

Option 2: If the Waste Card is for a chemical mixture (that is, not a pure chemical), recyclable materials, paint and paint related materials, oil and antifreeze, aerosols, gas cylinders, photo chemicals, or contaminated materials, you can change all previously inputted Waste Card information, for example for a Chemical Mixture:

After clicking	Search	, you will now be transferred to [WM114]:
----------------	--------	---

Edit Waste Card	A 4				
General Information					
NMEW00002G					
Principal Investigator	Gardper, Nick				
Created By:	Gardner, Nick	Phone N	umber: 555-	666-777	
Department Name:	Biology	Laborat	ory: 426	/401/TestLab 3 💌	
Accumulation Start Date:	9/7/05	Lab Bar	ode: NM	EL00005A	
Container Size/Unit:	3.0 / L	▼ Containe	er Type: Gla	ss 🔽 🤐	
Physical State:	Liquid 🔽	PH Leve	l: Sel	ect 🔽	
			92	Col / C	
Chemical Information					
To edit a chemical:					
 Scan a container, enter the const Search for a chemical by selectin click "Regenerate Waste Card" 	ituent % (container total mu g the "Select A Chemical" bi	ust = 100%), select "Calculate". On utton, enter the constituent % (con	ce complete click "Regener tainer total must = 100%),	ate Waste Card" select calculate, One	ce complete
CI	nemical Name	CAS Nu	mber Barcode	Percent (%)	
C Nitric acid		7697-37-2	2 4	25.00	Change
C Hydrochloric acid		7647-01-0)	75.00	Change
			Total P	ercent: 100.00	Calculate
Reprint Waste Card Remove	Add More Rows Bac	sk l			

You can update or change all of the inputted information on this page.

- 1. Change and modify the information in the following fields as necessary: Laboratory: or Lab Barcode:, Container Size/Unit: , Container Type: , Physical State: , and the PH Level: .
- 2. Under Chemical Information, click Change to change the chemical in this row.
- 3. You will now be transferred to page [WM111] where you can search for a chemical in CAD by chemical name or by CAS#:

Search for a Chemical

4. For information on how to search for a chemical in CAD, please see <u>4.1.1 Chemical Mixture</u> <u>by Percentage, Option 2.</u>

Change and modify the constituent percentage as necessary. Click <u>Calculate</u>. CHEMATIX[™] now totals the chemical percentages in the mixture or the quantities of the mixture. If by percentage, the total **must** add up to 100% **exactly**:

Total Percent:	100.00
-------------------	--------

- 5. Click Add More Rows to add more rows to the form.
- 6. To delete a row and its contents, click the radio button 💽 next to the chemical name. Then, click Remove.
- 7. Click Back to return to page [UM113] Edit a Waste Card without making any changes:
- 8. Click Add More Rows to add more rows to the form.
- Click Reprint Waste Card to view and print your Waste card in PDF format. See Appendix
 B. for details on how to print a PDF file from Adobe Reader.

10. You have now finished editing a created Waste Card for a chemical mixture.

If you wish to edit a Waste Card for recyclable materials, paint and paint related materials, oil and antifreeze, aerosols, gas cylinders, photo chemicals, or contaminated materials, you can change all previously inputted Waste Card information. First, Search and Select the waste card (as explained in <u>4.2.1</u>). Next, edit the waste card. For a detailed explanation on how to edit specific types of waste cards (i.e. aerosols), see the section <u>4.1 Create Waste Card</u>.



4.3 Waste Card Hotlist

This function permits users to create a new Waste Card for chemical mixtures from a Waste Card Template, to modify a Waste Card name, and to remove a Hotlist entry. The Waste Card Hotlist is a list of Waste Card Templates. Templates are a convenient way for users to create Waste Cards that contain similar information. Each user can have his or her own unique Hotlist. This functionality is available only for chemical mixtures.

To create a Waste Card Template, see Create a Waste Card Template for Chemical Mixtures in 4.1.1 Chemical Mixture by Percentage above.

Waste. button at the top of the CHEMATIX[™] screen: 1. To access this functionality, click the

	Home P	rocurement	Inventory	Waste	Fiscal	Resources	Help	
2.	You will now availability of the	see the ope his functionality	ning page fo / is optional an	r Wast	t e Mana ed by your	gement [V institution).	VM402].	(The
3.	Scroll down to	Manage <u>Creat</u> Edit V	e Laboratory W e Waste Card Vaste Card	aste 9				

- 4. Click on the link Waste Card Hot List .
- 5. You will now be transferred to page [WM118]:

Waste Card Hot List

Create Pickup Worksheet

1 Worksheets Submitted for Pickup



NOTE: The Global Waste Card Hotlist is created by a Hazardous Waste Operator and can be viewed by all users. In contrast, the Waste Card Hotlist is the templates that the user has created.

There are three choices on this page:

- Option 1: 4.3.1 Create a Waste Card from a Template
- Option 2: 4.3.2 Remove a Hotlist Waste Card
- Option 3: 4.3.3 Modify a Hotlist Name

4.3.1 Create a Waste Card from a Template

- 1. Click on the radio button of the Template from which you wish to create a Waste Card for a chemical mixture.
- 2. Click on the Create New Waste Card button.
- 3. You will now be transferred to page [WM110]:



Create Waste Card					
General Information	Nick Gardner	Phone Number:	555-666	-7777	
Department Name:	Biology	Laboratory:	426/40	I/TestLab 3	•
Accumulation Start Date:	9/12/05	Lab Barcode:	NMEL0	0005A	T is is
Container Size/Unit:	3.0 / L	Container Type:	Glass	•	
Physical State:	Liquid 💌	PH Level:	Select	•	
To add a chemical:	stituent % (container total must = 1 ing the "Select A Chemical" button,	100%), select "Calculate". Once comple enter the constituent % (container tota	ate click "Generate W al must = 100%), sel	aste Card" ect calculate,	Once complete
	Chemical Name	CAS Number	Barcode	Per	cent (%)
 Chlorinated paraffins (C12, 6 	0% Chlorine)	108171-26-2		20.00	Change
 Sulfides, tetra-, di-C20-24-all 	(yl	69155-37-9		20.00	Change
C Petroleum distillates (naphtha		8002-05-9		40.00	Change
 C Sulfurized lard oil, tall oil fatt acids methyl esters 	y acids methyl esters; Sulfurized lar	rd oil, tall oil fatty 68938-28-3		20.00	Change
A 4		Total 10 Percent:	00.00	Calculate	
Generate Waste Card Berro	ve Bow Add More Bows	Reset			
denerate waste oard					

This is your Waste Card Template. This Template will enable you to easily create a new Waste Card.

- 4. Change and modify the Template as necessary in order to create a new Waste Card.
- 5. When you are satisfied that the information in the Template is correct, click Generate Waste Card to generate, view and print your Waste Card in PDF file format. See Appendix B. for details on how to print a PDF file from **MAdobe Reader**.
- 6. Affix the Waste Card to the correct container and notify your institution's Department of Environmental Health & Safety for pickup.
- 7. You have now finished creating a Waste Card from a Template in your Hotlist.

4.3.2 Remove a Hotlist Waste Card

- 1. Click on the radio button 💽 of the Hotlist name that you wish to remove.
- 2. Click on the Remove button.

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3. The chosen Hotlist template is removed from your Hotlist:



4.3.3 Modify a Hotlist Name

- 1. Click on the radio button of the Hotlist name that you wish to modify, for example:
- 2. Click Modify Hot List Name
- 3. You will now be transferred to page [WM119], for example:

15		
 Make a proper change to the na 	me and click "Save"	
lotlist Display Name: ACETIC ACIE	D WM 001	
lotlist Display Name: ACETIC ACIE	D WM 001	
lotlist Display Name: ACETIC ACIE	CAS Number	Percentage(%)
Iotlist Display Name: ACETIC ACIE Chemical Name Acetic acid, glacial	CAS Number <u>64-19-7</u>	Percentage(%) 10.00
Iotlist Display Name: ACETIC ACIE Chemical Name Acetic acid, glacial Water	CAS Number <u>64-19-7</u> <u>2008581</u>	Percentage(%) 10.00 90.00

- 4. Modify the Hotlist Display Name.
- 5. Click Save when you are satisfied with the new Hotlist name.
- 6. The following message will be generated:

Waste Card Hot List	A	6
Waste Card Hot list item was saved suc	cessfully	



4.4 Create Pickup Worksheet

This function permits users to create Pickup Worksheets.

Once the waste chemical container is ready for disposal and once a Waste Card for that waste chemical container is generated, printed, and affixed to the container, a Pickup Worksheet is created. A Pickup Worksheet is a notification for Hazardous Material personnel to collect the waste from the lab. Such wastes will then be transported to treatment or disposal facilities.

1. To access this functionality, click the ^{Waste} button at the top of the CHEMATIX[™] screen:

Home	Procurement	Inventory	Waste	Fiscal	Resources	Help
		I		a 1.2		
			Maste N	lanaden	nent	

You will now see the opening page for [WM402]. (The availability of this functionality is optional and determined by your institution).

2. Scroll down to



- 3. Click on the link Create Pickup Worksheet .
- 4. You will now be transferred to page [WM200]:

Created By: Department: Phone: Email Address:	Gardner, Nick Biology 555-666-7777 chemuser@sivco.com	
Location:	426/401/Test Lab 3 💌 7	
Pickup Contact:	Gardner, Nick	
Diskup Contact Dhanas	555-666-7777	
Pickup contact Phone:		
Instructions:		
Instructions:		
Instructions: Start Date	Waste Card	Container Size
Start Date Waste Card Number:	Waste Card Add to Worksheet	Container Size
Start Date Waste Card Number:	Waste Card Add to Worksheet Save Worksheet Save & Submi	Container Size

The major areas of functionalities on this page are:

- Option 1: 4.4.1 Add Waste Cards to the Pickup Worksheet by using the Waste Card Number
- Option 2: 4.4.2 Add Waste Cards to the Pickup Worksheet from a Waste Card List
- Option 3: 4.4.3 Manage the Pickup Worksheet
- Option 4: 4.4.4 Save & Submit the Pickup Worksheet
- Option 5: 4.4.5 View Submitted Pickup Worksheets

4.4.1 Add Waste Cards to the Pickup Worksheet by using the Waste Card Number

1. Enter the Waste Card number into the Waste Card Number: field, for example:



- 2. Click Add to Worksheet
- 3. This Waste Card is now added to your Pickup Worksheet, as in this example:

He Alexandre	S 247 NO		1
Start Date		Waste Card	Container Size
O 9/14/05		<u>NMEW00003W</u>	3.0 L
Waste Card Number:	A	dd to Worksheet	

4.4.2 Add Waste Cards to the Pickup Worksheet from a Waste Card List

- 1. Click List Waste Cards at the bottom of page [WM200].
- 2. A generated list of Waste Cards will appear at the bottom of this page:

List Waste Cards	1.2			
Start Date	Location	<u>Waste Card</u>	<u>Container Size</u> <u>Wor</u>	<u>In a</u> ksheet
□ 9/6/05	426/401/Test Lab 3	NMEW00002F	1.0000 L	
□ _{9/7/05}	426/401/Test Lab 3	<u>NMEW00002G</u>	3.0000 L	
9/7/05	426/401/Test Lab 3	<u>NMEW00002H</u>	3.0000 L	

- a. Click either <u>Start Date</u>, <u>Location</u>, <u>Waste Card</u>, <u>Container Size</u>, or <u>Worksheet</u> to arrange the Waste Cards in these columns in ascending order.
- b. Click a waste Card barcode to view the general information for that Waste Card, for example:



Image: Select A Chemical Name CAS Number Select Cad Yetro acid Yetro acid Yetro acid	General Information		a 7	
Principal Investigator: Gardner, Nick Phone Number: 555-666-7777 Department Name: Biology Laboratory: 426/401/Test Lab 3 Accumulation Start Date: 9/7/05 Lab Barcode: NMEL00005A Container Size/Unit: 3.0 / Container Type: Glass Physical State: Liquid PH Level: Select > Chemical Information Select in the constituent % (container total must = 100%), select "Calculate", Once complete click "Regenerate Waste Card" Select and the select in the constituent % (container total must = 100%), select "Calculate", Once complete click "Regenerate Waste Card" • Scan a container, enter the constituent % (container total must = 100%), select "Calculate", Once complete click "Regenerate Waste Card" Select and the select on	NMEW/00002H			
Created By: Gardner, Nick Phone Number: 555-666-7777 Department Name: Biology Laboratory: 426/401/TestLab 3 Accumulation Start Date: 9/7/05 Lab Barcode: NMEL00005A Container Size/Unit: 30 / Container Type: Glass Physical State: 10010 / Container Type: Glass Chemical Information Select Select Select Select To edit a chemical: . . . Select . • Scan a container, enter the constituent % (container total must = 100%), select "Calculate". Once complete click "Regenerate Waste Card" • . • Scan a container, enter the constituent % (container total must = 100%), select "Calculate". Once complete click "Regenerate Waste Card" • • Scan a container, enter the constituent % (container total must = 100%), select "Calculate". Once complete click "Regenerate Waste Card" • • Scan a container, enter the constituent % (container total must = 100%), select "Calculate". Once complete click "Regenerate Waste Card" • • Scan a container, enter the constituent % (container total must = 100%), select "Calculate". Once complete click "Regenerate Waste Card" • • Scan a container at waste Card" 7697-37-2 • <th>Principal Investigator:</th> <th>Gardner, Nick</th> <th></th> <th></th>	Principal Investigator:	Gardner, Nick		
Department Name: Biology Laboratory: 426/401/Test Lab 3 Accumulation Start Date: 9/7/05 Lab Barcode: NMEL00005A Container Size/Unit: 3.0 / Container Type: Glass Select Physical State: Liquid / Container Type: Glass Select Select Chemical Information Container total must = 100%), select "Calculate". Once complete click "Regenerate Waste Card" Search for a chemical by selecting the "Select A Chemical" button, enter the constituent % (container total must = 100%), select "Calculate". Once complete click "Regenerate Waste Card" • Search for a chemical by selecting the "Select A Chemical" button, enter the constituent % (container total must = 100%), select calculate, Once click "Regenerate Waste Card" • Search for a chemical by selecting the "Select A Chemical" button, enter the constituent % (container total must = 100%), select calculate, Once click "Regenerate Waste Card" • Search for a chemical du to	Created By:	Gardner, Nick	Phone Number:	355-666-7777
Accumulation Start Date: 9/7/05 Lab Barcode: NMEL00005A Container Size/Unit: 30 / Container Type: Glass Physical State: Iguid PH Level: Select Chemical Information To edit a chemical: Scan a container, enter the constituent % (container total must = 100%), select "Calculate". Once complete click "Regenerate Waste Card" Select acculate, Once click "Regenerate Waste Card" • Scan a container, enter the constituent % (container total must = 100%), select "Calculate". Once complete click "Regenerate Waste Card" Once container total must = 100%), select "Calculate". Once complete click "Regenerate Waste Card" • Search for a chemical by selecting the "Select A Chemical" button, enter the constituent % (container total must = 100%), select calculate, Once click "Regenerate Waste Card" • Search for a chemical by selecting the "Select A Chemical" button, enter the constituent % (container total must = 100%), select calculate, Once click "Regenerate Waste Card" • Mitric acid 7697-37-2 Mitric acid 7697-37-2 Hydrochloric acid 7647-01-0	Department Name:	Biology	Laboratory:	426/401/Test Lab 3 💌
Container Size/Unit: 30 / Container Type: Glass Physical State: Iguid PH Level: Select Select Chemical Information PH Level: Select Select Select To edit a chemical: • Scan a container, enter the constituent % (container total must = 100%), select "Calculate". Once complete click "Regenerate Waste Card" • Search for a chemical by selecting the "Select A Chemical" button, enter the constituent % (container total must = 100%), select calculate, Once click "Regenerate Waste Card" • Search for a chemical by selecting the "Select A Chemical" button, enter the constituent % (container total must = 100%), select calculate, Once click "Regenerate Waste Card" • Search for a chemical by selecting the "Select A Chemical" button, enter the constituent % (container total must = 100%), select calculate, Once click "Regenerate Waste Card" • Mitric acid 7697-37-2 6000000000000000000000000000000000000	Accumulation Start Date:	9/7/05	Lab Barcode:	NMEL00005A
Physical State: I und P PH Level: Select P Chemical Information To edit a chemical: • Scan a container, enter the constituent % (container total must = 100%), select "Calculate". Once complete click "Regenerate Waste Card" • Search for a chemical by selecting the "Select A Chemical" button, enter the constituent % (container total must = 100%), select calculate, Once click "Regenerate Waste Card" • Scarch for a chemical by selecting the "Select A Chemical" button, enter the constituent % (container total must = 100%), select calculate, Once click "Regenerate Waste Card" • Mitric acid Ph Level: CAS Number Barcode Nitric acid 7697-37-2	Container Size/Unit:		Container Type:	Glass
Chemical Information To edit a chemical: • Scan a container, enter the constituent % (container total must = 100%), select "Calculate". Once complete click "Regenerate Waste Card" • Search for a chemical by selecting the "Select A Chemical" button, enter the constituent % (container total must = 100%), select calculate, Once click "Regenerate Waste Card" • Search for a chemical by selecting the "Select A Chemical" button, enter the constituent % (container total must = 100%), select calculate, Once click "Regenerate Waste Card" • Mitric acid 7697-37-2 Hydrochloric acid 7647-01-0	Physical State:	Liquid 🔽	PH Level:	Select 🔽
Chemical Information To edit a chemical: • Scan a container, enter the constituent % (container total must = 100%), select "Calculate". Once complete click "Regenerate Waste Card" • Search for a chemical by selecting the "Select A Chemical" button, enter the constituent % (container total must = 100%), select calculate, Once click "Regenerate Waste Card" • Search for a chemical by selecting the "Select A Chemical" button, enter the constituent % (container total must = 100%), select calculate, Once click "Regenerate Waste Card" • Search for a chemical by selecting the "Select A Chemical" button, enter the constituent % (container total must = 100%), select calculate, Once click "Regenerate Waste Card" • Search for a chemical by selecting the "Select A Chemical" button, enter the constituent % (container total must = 100%), select calculate, Once click "Regenerate Waste Card" • Search for a chemical by selecting the "Select A Chemical" button, enter the constituent % (container total must = 100%), select calculate, Once click "Regenerate Waste Card" • Search for a chemical by selecting the "Select A Chemical" button, enter the constituent % (container total must = 100%), select calculate, Once click "Regenerate Waste Card" • Search for a chemical by selecting the "Select A Chemical" button, enter the constituent % (container total must = 100%), select calculate, Once click "Regenerate Waste Card" • Search for a chemical by selecting the "Select A Chemical" button, enter the constituent % (container total must = 100%), select calculate, Once click "Regenerate Waste Card" • Search for a chemical by selecting the "Select A Chemical" button, enter the constituent % (container total must = 100%), select calculate, Once click "Regenerate Waste Card" • Nitric acid • Nitric acid • Total •				
Scan a container, enter the constituent % (container total must = 100%), select "Calculate". Once complete click "Regenerate Waste Card" Search for a chemical by selecting the "Select A Chemical" button, enter the constituent % (container total must = 100%), select calculate, Once click "Regenerate Waste Card" Chemical Name CAS Number Barcode Nitric acid T697-37-2 Hydrochloric acid	Chemical Information			
Chemical Name CAS Number Barcode Nitric acid 7697-37-2	 Scan a container, enter the co Search for a chemical by selection click "Regenerate Waste Card 	instituent % (container total must = 100% cting the "Select A Chemical" button, ente "	6), select "Calculate". Once complete click "Req er the constituent % (container total must = 10	enerate Waste Card" 1%), select calculate, Once complete
Nitric acid 7697-37-2 Hydrochloric acid 7647-01-0		Chemical Name	CAS Num	er Barcode Percent (%)
Hydrochloric acid 7647-01-0	Nitric acid		7697-37-2	25.00
	Hydrochloric acid		7647-01-0	75.00
Total Percent:				Total Percent: 100.00
Reprint Waste Card Close	Reprint Waste Card Close			

- c. Click Reprint Waste Card (or <u>View pdf</u>, depending upon the page format) to view and print the Waste Card in PDF format. See <u>Appendix B</u>. for details on how to print a PDF file from **Adobe Reader**.
- d. Click <u>Close</u> to close this page and return to page [WM200]:

Hazardous Materials Pickup Worksheet

3. Scroll down to the bottom of the generated Waste Cards on page [WM200]:

□ 9/12/05	426/401/Test Lab 3		<u>NMEW000037</u>	2.0000 L	-
/ 🗆 9/12/05	426/401/Test Lab 3		NMEW000038	3.0000 L	_
Toggle					
Add Selection(s) to	Worksheet View De	tails Repr	rint Waste Card PDF		

The explanation for the functionalities of these buttons is as follows:

Toggle

Click	Toggle	to check 🔽	or uncheck	all of the check	boxes next to the	Start Date
on ea	ch row.					

Add Selection	(s) to	Worksheet
Add Delection	(3)(0)	VYOINSHEE(

Click on one or more check boxes Add Selection(s) to Worksheet to add the selected Waste Cards to the Worksheet. The selected Waste Card(s) will be added to your Worksheet.

View Details

Click <u>View Details</u> to view the details of all Waste Cards. You will now be transferred to page [WM481], for example:

Building Name: Laboratory: Lab Supervisor: Container State:	INEWOUUU38	Department Name: PI Name: Container Type: Container Size;	Biology <mark>Gardner, Nick</mark> GLASS 3.0 L
De	scription	CAS#	Content Size/Unit
Chlorinated paraffins (C12, 60% Chlorin	e)	108171-26-2	20.0 %
Petroleum distillates (naphtha)	gi le gi	008002-05-9	40.0 %
Sulfides, tetra-, di-C20-24-alkyl		069155-37-9	20.0 %
Sulfurized lard oil, tall oil fatty acids met acids methyl esters	hyl esters; Sulfurized lard oil, tall oil fatty	068938-28-3	20.0 %

From this page, you can review and select which Waste Cards you wish to add to your Worksheet.

- a. To add Waste Cards to your Worksheet, click the check box(es) next to the Waste Card number.
- b. Scroll down to the bottom of page [WM481] and click Add Selection(s) to Worksheet The selected Waste Card(s) will be added to your Worksheet.

Reprint Waste Card PDF

- a. Click the check box(es) rot select Waste Card(s).
- b. Click Reprint Waste Card PDF to view and print the selected Waste Cards in PDF file format. See Appendix B. for details on how to print a PDF file from Adobe Reader.
- 4. When the Waste Cards have been added to your Worksheet, your Pickup Worksheet will look like the following example on page [WM200]:



Creato Depar Phone Imail .ocati Pickuj	ed By: tment: : Address: on: o Contact:	Gardner Biology 555-666 chemuse 426/401 Gardne	, Nick -7777 er@sivco.com 1/Test Lab 3 ▼ r, Nick			
netw	466	- I - I - I - I - I - I - I - I - I - I	CRAFT COLUMN AND COMPANY		And Section	
				ASS -		
	Start Date		aste Card	Containe	er Size	
0	Start Date 9/8/05		aste Card <u>MEW000031</u>	Containe 3.0	er Size L	_et_
0	Start Date 9/8/05 9/8/05		Yaste Card MEW000031 MEW000033	Containe 3.0 0.0 E	e r Size L	Let A
	Start Date 9/8/05 9/8/05 9/8/05		Vaste Card MEW000031 MEW000033 MEW000035	Containe 3.0 0.0 E 0.0 E	er Size L EA	Let A
O O O Vaste	Start Date 9/8/05 9/8/05 9/8/05 9/8/05 Card Number:	NI Add to We	Vaste Card MEW000031 MEW000035 Orksheet	Containe 3.0 0.0 E 0.0 E	er Size L EA	
O O Vaste Rem	Start Date 9/8/05 9/8/05 9/8/05 Card Number:	W NI NI Add to Wo Save Worksheet	Vaste Card MEW000031 MEW000033 MEW000035 orksheet Save & Subm	Containe 3.0 0.0 E 0.0 E	er Size L EA	4

You can now manage your Pickup Worksheet.

4.4.3 Manage the Pickup Worksheet

7.7 No		97 /	97/	5.9 1
	Start Date	Wa	ste Card	Container Size
0	9/8/05	NME	W00002N	500.0 mL
0	9/8/05	<u>NME</u>	W00002U	0.0 EA
0	9/8/05	<u>NME</u>	W00002Y	3.0 L
Waste	Card Number:	Add to Wor	ksheet	
Ren	nove From Worksheet	Save Worksheet	Save & Submit for	Pickup
100	Same			S

There are three functions to manage your Pickup Worksheet:



- 1. Add to Worksheet
- 2. Remove from Worksheet
- 3. Save Worksheet

Add to Worksheet

a. To add one Waste Card to your Worksheet, scan or enter the Waste Card barcode number into the following data field:

Waste Card Number:	NMEW00002Q	Add to Worksheet	

b. Click Add to Worksheet to add this Waste Card to your Worksheet.

Remove From Worksheet

- a. Click a radio button 💽 next to a **Start Date** to select a Waste Card.
- b. Click Remove From Worksheet to remove this Waste Card from your Worksheet.

Save Worksheet

This function permits you to save your Pickup Worksheet for later improvements, updates, and additions.

- a. Click Save Worksheet to access this function.
- b. The text *New pickup worksheet was created successfully.* will appear at the top of page [WM200]:



c. To retrieve this saved Pickup Worksheet, click the Waste button at the top of the CHEMATIX™ screen:

Home	Procurement	Inventory	Waste	Fiscal	Resources	Help

d. You will now see the opening page for availability of this functionality is optional and determined by your institution). (The

e. Scroll down to



- f. Click on the link 1 Worksheet Waiting To Submit for pickup .
- g. You will now be transferred to page [WM126]:

	1 Saved Worksheets
	AN C
0/0	Worksheets waiting to be submitted for pickup
3	Location: 426/401/Test Lab 3 Dept: Biology WORKSHEET#30

- h. Click on the link WORKSHEET#30, for example:
- i. You will now be transferred back to page [WM200] where you can continue to edit your saved Pickup Worksheet:



Create Depart Phone Email .ocatio	d By: tment: : Address: on:	Gardner, Nick Biology 555-666-7777 chemuser@sivco.com 426/401/Test Lab 3		
Pickup	Contact:	Gardner, Nick	人人	
Pickup	Contact Phone:	555-666-7777		
		5		
	Start Date	Waste Card	Container Size	Les T
الم م د	Start Date 9/12/05	Waste Card NMEW000037	Container Size 2.0 L	4
0 0	Start Date 9/12/05 9/12/05	Waste Card NMEW000037 NMEW000038	Container Size 2.0 L 3.0 L	
000	Start Date 9/12/05 9/12/05 9/12/05	Waste Card NMEW000037 NMEW000038 NMEW000036	Container Size 2.0 L 3.0 L 2.0 L	_st _
O O O Waste	Start Date 9/12/05 9/12/05 9/12/05 9/12/05 Card Number:	Waste Card NMEW000037 NMEW000038 NMEW000036 Add to Worksheet	Container Size 2.0 L 3.0 L 2.0 L	
O O O Waste (Start Date 9/12/05 9/12/05 9/12/05 Card Number:	Waste Card NMEW000037 NMEW000038 NMEW000036 Add to Worksheet Save Worksheet	Container Size 2.0 L 3.0 L 2.0 L	

NOTE: If you save a worksheet in a CHEMATIX[™] session but not submit that worksheet for pickup (See section **4.4.4 Save & Submit the Pickup Worksheet** below), it will appear on the on the CHEMATIX[™] home screen on your next login to as a safety reminder that you have waste that has not yet been submitted for pickup.

4.4.4 Save & Submit the Pickup Worksheet

- 1. On page [WM200], correct or modify the Pickup Worksheet's Location: , Pickup Contact: , and Pickup Contact Phone: ______.
- 2. In the **Instructions:** data field, write the pickup instructions for the Hazardous Material pickup person (for example, when the lab will be open, who to contact to pick up the waste containers, and any special instruction, etc.).



- 3. Click Save & Submit for Pickup when you are satisfied with all of the information on the Pickup Worksheet.
- 4. Your Pickup Worksheet has been submitted to your institution's Department of Environmental Health & Safety for processing.

4.4.5 View Submitted Pickup Worksheets

1. To View Worksheets submitted for Pickup, click the ^{Waste} button at the top of the CHEMATIX[™] screen:

Home	Procurement	Inventory	Waste	Fiscal	Resources	Help
				· 」		

2. You will now see the opening page for availability of this functionality is optional and determined by your institution). (The

Manage Laboratory Waste
Create Waste Card
Edit Waste Card
Waste Card Hot List
Create Pickup Worksheet
4 Worksheets Submitted for Pickup

- 4. Click on the link Worksheets Submitted for Pickup .
- 5. You will now be transferred to page [WM125]:
- Click on the Worksheet # link to view any of these Worksheets (for example, <u>WORKSHEET#2005-0014</u>).

4 Submitted Worksheets
Worksheets submitted for pickup:
Location: 426/401/Test Lab 3 Dept: Biology
Submitted Date: 9/21/05 WORKSHEET#2005-0014
Location: 426/401/Test Lab 3 Dept: Biology Submitted Date: 9/21/05
WORKSHEET#2005-0015
Location: 426/401/Test Lab 3 Dept: Biology
Submitted Date: 9/21/05 WORKSHEET#2005-0016
Location: 426/401/Test Lab 3 Dept: Biology
Submitted Date: 9/21/05 WORKSHEET#2005-0019



4.5 List Worksheets Submitted for Pickup

This function permits users to view and print the Worksheets submitted for pickup.

1. To access this functionality, click the ^{Waste} button at the top of the CHEMATIX[™] screen:



You will now see the opening page for [WM402]. (The availability of this functionality is optional and determined by your institution).

2. Scroll down to



3. Click on the link Worksheets Submitted for Pickup .

4.	You will now be transferred to page [WM125] where a	4 Submitted Morksheets
	list of all submitted Worksheets will be displayed:	T OUDITILECU PTOTRETICOLE
		Worksheets submitted for pickup:
		Location: 426/401/Test Lab 3 Dept: Biology Submitted Date: 9/21/05 <u>WORKSHEET#2005-0014</u>
5.	Click the <u>WORKSHEET#</u> link (for example, <u>WORKSHEET#2005-0014</u>).	Location: 426/401/Test Lab 3 Dept: Biology Submitted Date: 9/21/05 <u>WORKSHEET#2005-0015</u>
		Location: 426/401/Test Lab 3 Dent: Biology
		Submitted Date: 9/21/05 WORKSHEET#2005-0016
6.	The contents of the Worksheet will now appear on page [WM128], for example:	Location: 426/401/Test Lab 3 Dept: Biology Submitted Date: 9/21/05 <u>WORKSHEET#2005-0019</u>

Hazardous Materials Pic	kup Worksheet		He		
Worksheet Number: Principal Investigator: Created By: Department: Telephone: E-mail Address:	2005-0014 Gardner, Nick Gardner, Nick Biology 555-666-7777 chemuser@sivco.com				
Location: Pickup Contact: Pickup Contact Phone:	Test Lab 3 Gardner, Nick 555-666-7777				
Waste Card Barcode	START DATE	Container Size	Container Type	Container State	PH Level
NMEW00003T	9/14/05	3.0 L	GLASS	LIQUID	
NMEW000048	9/21/05	1.0 L	GLASS		
NMEW000047	9/21/05	5.0 L	GLASS		
NMEW00003S	9/14/05	5.0 EA			
NMEW000046	9/21/05	5.0 L	GLASS		
NMEW000045	9/21/05	2.0 L	GLASS		
Reprint Waste Card PDF					

You have two choices on this page:

1. Print this page.

To print this page, click *Eile* on your browser. On the drop-down menu, scroll down to *Erint...* and click *Erint...*. You can now print this page through your browser.

2. Print all Waste Cards

Click Reprint Waste Card PDF to view and print all of the Waste Cards listed on this page in PDF format. See Appendix B. for details on how to print a PDF file from Adobe Reader.



Appendix A: How to Add a Chemical to CAD

The search for a chemical name or CAS# usually begins with a page that looks like this (in this example, page [WM114]):

Search for a Chemic	al 📇 😼 🛛 📇
a ne	
 Enter a combination of letters th Under search results, click on th To add new chemical, click "Add" 	nat it may contain and click "Search" ie chemical name
Chemical Name:	 e begins with C contains C exact e begins with C contains
Search Add	
Return	

When searching for a chemical in CAD, it may be possible that the chemical is not listed in CAD for two reasons: either the inputted name or CAS# is incorrect or the chemical name is new to CAD.

First, check and correct any typos. If your inputted chemical name and CAS# is correct, you can add a new entry to CAD.

NOTE:

All new CAD entries are flagged for review and approval by your Department of Environmental Health & Safety.

- 1. To add a new entry to CAD, click Add on a page similar to page [WM114]. Alternatively, click Add a Chemical on a page similar to page [IM535].
- 2. You will now be transferred to page [IM572] where you can create a new CAD listing.

Chemical Abstract								
		- C.						
Required Field	- To w	f a s						
Full Chemical Name:			Environmental Law:					
			CERCLA RQ:			[pounds]		
			Clean Water Act RQ Units:		_	[pounds]		
Add new Synonym:			P Listed:		_			
A stat			U Listed:		_			
	0.00	austa 7 blumban	D Listed:		_			
CAS Number:	Gen	erale z Number	F Listed:					
EC Number:			K Listed:					
Chemical Formula:								
			Exposure Limits		TWA	STEL	Ce	iling ()
				- P	pm mg/m,	ppm mg/m ³	ppm	mg/m ³
MSDS URL:		TestMODQUDI	IDLH (in ppm):	OSHA				
Active Inventory:	0 containers on campus.	TESUMODO UNL	Primary Hazard:	NIOSH				
Previously Used:	0 containers on campus.		Comission Chattan					
NFPA Hazard Rating (U = "Unknown"):			Cardinogen status:	ACGIN				
Health	U		Skin Designation:	CANADA				
. Flammability			-	-				
Reactivity			Carcinogen Status:			_		
			MTD Defee:			_		
Potentially Explosive Chemical upon expiry: Normal	No		NIP Rading:			_		
PEC (Time Sensitive)			Risk Phrases:	I				
Peroxide Formers (Time Sensitive)			Safety Phrases:					
Fetal Agents			Maintain Risk Phrases Maintai	in Safety Phrases				
Teratogen			Physical Characteristics:					
Mutagen			Molecular Weight:					
Controlled substance			Specific Gravity:					
Bioagent			Melting/Freezing Point:		°C °F			
Flammable 1			Boiling Point:		°C °F			
	L		Flash Point:		°C °F			
DOT Hazardous Material Data			Vapor Pressure:		mmHg at Ter	nperature:	°C °F	
Symbol:			Normal State	unsn	ecified 💌			
Division:				Turop				
I.D.#:			Search Existing Chemical Abstract					
Packing Group:			Source Existing Chemical Abstract					
Label Code:			Save & Request Review Res	et				

In creating your Chemical Abstract, all Required Fields have a bar next to them, as in the following example:

Required Field

Step 1: Enter Chemical Information

1. Scroll down to the following data fields:

Chemical Full Name:	
Add new Synonym:	•
Add	
CAS Number:	Generate Z Number
EC Number:	
Chemical Formula:	×
MSDS URL:	▲ Zest MSDS URL
Active Inventory:	D containers on campus.
Previously Used:	0 containers on campus.
CHEMATIX™ Waste Management Module User Manual

2. Enter the Chemical Full Name:

Chemical Full Name:	

Alternately, you ca	n scroll down to the link	Search Existing Chemical Abstr	to search you	ur
chemical in CAD.	This will permit you to en	ter the Chemical Full Name: ,	CAS Number: , an	١d
Chemical Formula:	(for example) from the Che	emical Abstract.		

3. If there is a synonym for the full chemical name, enter that into the Add new Synonym: field.



- 4. Click Add to add this synonym to your full chemical name.
- 5. Each chemical in CHEMATIX[™] must have a CAS#, so that every chemical can be linked without ambiguity to CAD.
- 6. Enter the CAS Number:

CAS Number:

7. If your chemical has no CAS#, click <u>Generate Z Number</u>. A pseudo-CAS# will now be generated by CHEMATIX[™] (for example, Z00078067). In CHEMATIX[™], these pseudo-CAS#'s are called Z-numbers, as in the following example:

CAS Number:	Z00078067	Generate Z Number
8. Enter the EC Number: :		
EC Number:		

EC Numbers (Enzyme Commission Numbers) are a numerical classification scheme for enzymes, based on the chemical reactions that they catalyze.



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9. Enter the Chemical Formula:		
Chemical Formula:		* *
10. Enter the MSDS URL: :		
MSDS URL:	▲ ▼	Test MSDS URL

An **MSDS** (<u>Material Safety Data Sheet</u>) contains details of the hazards associated with a chemical and gives information on its safe use.

A **URL** (<u>Uniform Resource Locator</u>) is a web address where more information can be obtained about this chemical. Enter the web site for the MSDS for this chemical.

11. Click <u>Test MSDS URL</u> to test the MSDS web address. Through time, many web addresses change. Make sure that your MSDS is current.

Step 2: NFPA Hazard Rating

Scroll down	to the			following
select	the	NFPA Hazard Rating (U = "Unknown"):		anu
appropriate	hazard	Health	U 🗸	ratings:
		. Flammability	U 🗸	
		Reactivity	U 🕶	

NFPA (the National Fire Protection Association) is the leading authoritative source of technical background, data, and consumer advice on fire protection, problems, and prevention. The NFPA is responsible for classifying substances according to their fire and explosion hazard. In the NFPA drop-down menus, U = Unknown. 0 is the least severe hazard while 4 is the most severe hazard. The exact guidelines by which you can place a chemical into one of these categories are available in the NFPA standard. The NFPA homepage is: <u>http://www.nfpa.org</u>.

Step 3: General Hazards including PEC

1. Scroll down to the following click boxes to indicate general hazards:

	Potentially Explosive Chemical upon expiry: Normal	No V
	PEC (Time Sensitive)	
This list is institutional specific and is	Peroxide Formers (Time Sensitive)	
used as an example only. Contact your	Fetal Agents	
CHEMATIX To System Administrator for details	Teratogen	
	Mutagen	
	Controlled substance	
	Bioagent	
	Flammable 1	
	Flammable 2	

2. Click the click boxes 🔽 for all the hazards that apply.

The default is Normal which means that there is no "unusual" hazard with this chemical. However, all chemicals should be treated with care and all safety regulations observed.

PEC (Potentially Explosive Chemicals). Most chemicals that are used in research and teaching laboratories are stable and non-explosive at the time of purchase. Over time, some chemicals can oxidize, become contaminated, dry out, or otherwise destabilize to become Potentially Explosive Chemicals (for example, isopropyl ether, sodium amide, and picric acid). PEC's are particularly dangerous because they may explode if they are subjected to heat, light, friction, or mechanical shock.

Peroxide Formers (= peroxidizable materials) can form peroxides in storage, generally when in contact with the air. These peroxides present their most serious risk when the peroxidecontaminated material is heated or distilled, but they may also be sensitive to mechanical shock. Many of these are time sensitive.

Fetal Agents are those chemical substances that can affect the health and well-being of the fetus.

Teratogens are chemicals that may cause non-inheritable genetic mutations or malformations in the developing fetus (= birth defects). Teratogens may halt the pregnancy outright.

Mutagens are agents that change the hereditary, genetic material that is a part of every living cell. Such mutations are probably an early step in the sequence of events that ultimately lead to the development of cancer.

Controlled substances are drugs or chemical substances whose possession and use are regulated under the Controlled Substances Act.

Bioagents (= biological agents) are viral, bacterial, fungal, or parasitic substances that cause disease and/or illness.

Flammable 1 and **Flammable 2** are institution specific and defined by your institution's' CHEMATIX[™] administrator. For details, contact your institution's CHEMATIX[™] System Administrator for details.

Step 4: DOT Hazardous Material Data

Scroll down to the next area and fill in the appropriate fields for DOT Hazardous Material:

DOT Hazardous Material Data	
Symbol:	
Division:	
I.D.#:	
Packing Group:	
Label Code:	

The **DOT**'s (<u>Department of Transportation</u>) Office of Hazardous Materials Safety has, as its mission, the minimization of the risks to life and property inherent in the commercial transportation of hazardous materials. The DOT homepage is at <u>http://hazmat.dot.gov</u>.

Step 5: Environmental Law

Scroll down and fill in the following fields regarding Environmental Law:

Environmental Law:	
CERCLA RQ:	[pounds]
Clean Water Act RQ Units:	[pounds]
P Listed:	
U Listed:	
D Listed:	
F Listed:	
K Listed:	

CERCLA RQ (the <u>C</u>omprehensive <u>E</u>nvironmental <u>R</u>esponse, <u>C</u>ompensation, and <u>L</u>iability <u>A</u>ct – <u>R</u>eportable <u>Q</u>uantity). This is the maximum quantity of a CERCLA hazardous substance that can



be released into the environment without notification to the EPA (the Environmental Protection Agency). Each CERCLA hazardous substance has an individual RQ assigned by the EPA. The CERCLA RQ's range from one pound to 5,000 pounds.

The **Clean Water Act** (CWA) is the cornerstone of surface water quality protection in the United States. The CWA sets water quality standards for all contaminants in surface waters. RQ Units (Reportable Quantity Units) are the maximum quantity of a pollutant from a point source that can be released into surface waters without notification to the EPA (the Environmental Protection Agency).

The **EPA** (the <u>Environmental Protection Agency</u>) is the US federal agency responsible for regulating environmental hazards. The EPA has predetermined that certain wastes are hazardous. These wastes are classified as P Listed, U Listed, D Listed, F Listed, and K Listed, among others. A laboratory chemical becomes a "waste" when you no longer intend to use it, regardless of whether or not it has been used or contaminated. The EPA homepage is: <u>http://www.epa.gov</u>.

Step 6: Exposure Limits

Scroll down to the next group of data fields. These deal with exposure to hazardous substances. Fill in the appropriate fields:

	Exposure Limits		TV	YA	SI	FEL	Cei	iling
			ppm	mg/m³	ppm	mg/m³	ppm	mg/m³
	IDLH (in ppm):	OSHA						
á.	Primary Hazard:	NIOSH						
	Carcinogen Status:	ACGIH						
	Skin Designation:	CANADA						

IDLH (Immediately Dangerous to Life or Health) refers to a concentration, formally specified by a regulatory value, and defined as the maximum exposure concentration of a given chemical in the workplace from which one could escape within 30 minutes without any escape-impairing symptoms or any irreversible health effects. This value is normally referred to in respirator selection.

Primary Hazard refers to the major or most important reason why this chemical is hazardous.

Carcinogen Status is the likelihood for a chemical to cause cancer in humans.

Skin Designation refers to the danger of a chemical substance to be absorbed through the skin.

TWA (<u>Time Weighted Average</u>) is a term used in the specification of Occupational Exposure Limits (OEL's) to define the average concentration of a chemical to which it is permissible to expose a worker over a period of time, typically 8 hours.

STEL (<u>Short Term Exposure Limit</u>) is the maximum permissible concentration of a material, generally expressed in ppm in air, for a defined, short period of time (typically 5 or 15 minutes, depending upon the country) that a person can be exposed to a certain chemical. This "concentration" is generally a time-weighted average (TWA) over the period of exposure. These values, which may differ from country to country, are often backed up by regulation and therefore may be legally enforceable.

Ceiling Level or **Ceiling Value** is the maximum permissible concentration of a hazardous material in the working environment. This level should not be exceeded at any time. It is usually (but not invariably) set somewhat above the relevant time-weighted average for the chemical.

OSHA (Occupational Safety and Health Administration) is a part of the U.S. Department of Labor. OSHA's mission is to assure the safety and health of America's workers by setting and enforcing standards; providing training, outreach, and education; establishing partnerships; and encouraging continual improvement in workplace safety and health. The OSHA homepage is: http://www.osha.gov.

NIOSH (The <u>National Institute for Occupational Safety and Health</u>) is the federal agency responsible for conducting research and making recommendations for the prevention of work-related injury and illness. The NIOSH website is: <u>http://www.cdc.gov/niosh/homepage.html</u>.

ACGIH (The <u>American Conference of Governmental Industrial Hygienists</u>) is a member-based organization and community of professionals that advances worker health and safety through education and the development and dissemination of scientific and technical knowledge. One of its principal tasks is to recommend TLV's for workplace exposure to chemicals. The ACGIH homepage is: <u>http://www.acgih.org/home.htm</u>.

TLV (<u>Threshold Limit Value</u>) is the maximum permissible concentration of a material, generally expressed in parts per million in the air for some defined period of time (often 8 hours, but sometimes for 40 hours per week over an assumed working lifetime).

Canada refers to Canadian government regulations.

Step 7: Carcinogen Status

The following data fields deal with the status of your chemical as a carcinogen. A carcinogen is a chemical that causes or that may cause cancer.

Carcinogen Status:	
IARC Rating:	
NTP Rating:	
OSHA Carcinogen:	
Risk Phrases: Safety Phrases:	
Maintain Risk Phrases Maintain Safety Phras	es

IARC (International Agency for Research in Cancer) is part of WHO (the World Health Organization). The IARC coordinates and conducts research on the causes of human cancer, the mechanisms of carcinogenesis, and develops scientific strategies for cancer control. The IARC home page is: <u>http://www.iarc.fr</u>.

NTP (the National <u>Toxicology Program</u>) tests chemicals and reviews evidence relating to the possibility that a chemical may act as a carcinogen. The NTP identifies toxicants and tries to understand and minimize the potential impacts of their exposures on human health. The NTP home page is: <u>http://ntp-server.niehs.nih.gov</u>.

OSHA (<u>O</u>ccupational <u>Safety and Health Administration</u>) is a part of the U.S. Department of Labor. OSHA's mission is to assure the safety and health of America's workers by setting and enforcing standards; providing training, outreach, and education; establishing partnerships; and encouraging continual improvement in workplace safety and health. The OSHA homepage is: http://www.osha.gov.

Step 8: Risk Phrases

The EU (<u>E</u>uropean <u>U</u>nion) requires risk phrases on all MSDS's. That is why users may see them listed. The Risk Phrases indicate only the risk of the material, not the safety precautions users need to take.

1. Scroll down and click Maintain Risk Phrases to associate risk phrases with this chemical. Clicking this button will transfer you to page [IM582]:

Maintain Risk Phras	ses	Ą
et		
R1 Explosive when dry		
R2 Risk of explosion by shock, friction	on, fire or other sources of igni	tion
R3 Extreme risk of explosion by sho	ck, friction, fire or other source	es of ignition.

2. There are 68 risk phrases from which to choose. Click the click boxes 🔽 for all phrases that apply.



- 3. Click Submit to associate the selected risk phrases with your chemical.
- 4. Click Reset to clear this form of all checked boxes. You can now begin to re-select the appropriate risk phrases.

Step 9: Safety Phrases

The EU (<u>European Union</u>) requires safety phrases on all MSDS's. That is why users may see them listed. The Safety Phrases indicate the safety precautions users need to take, not the risk of the material.

1. Click Maintain Safety Phrases to associate safety phrases with this chemical. You will be transferred to page [IM583]:



- 2. There are 64 safety phrases from which to choose. Click the click boxes 🔽 for all phrases that apply.
- 3. Click Submit to associate the selected safety phrases with your chemical.
- 4. Click Reset to clear this form of all checked boxes. You can now begin to re-select the appropriate safety phrases.

Step 10: Physical Characteristics

Enter the physical characteristics of your chemical into the final group of data fields:

Physical Characteristics:	
Molecular Weight:	
Specific Gravity:	
Melting/Freezing Point:	°C °F
Boiling Point:	°C °F
Flash Point:	°C °F
Vapor Pressure:	mmHg at Temperature: °C °F
Normal State	unspecified 💌



Step 11: To Finish

When you have finished filling in the appropriate	Chemical Abstract	fields, scroll down to			
the bottom of the page where you will see the following buttons:					

Save & Request Review Reset

You now have two options:

Option 1: Reset

- 1. Click Reset to clear this form of all inputted data, except for the data that you uploaded from the Chemical Abstract page [IM573] (for example, the Chemical Full Name: , CAS Number: and Chemical Formula: fields).
- 2. You can now begin to fill in the Chemical Abstract form again.
- 3. Go back to Step 1. Enter Chemical Information section of this instruction manual for help in

completing the empty fields on this	Chemical Abstract	paga [IM572]
		page [iivi5/2].

Option 2: Save & Request Review

1. Click Save & Request Review to save the data entered in this form and to request a review of this data by your institution's Department of Environmental Health & Safety.

NOTE: All newly created Chemical Abstracts in CAD will be flagged for review by your institution's Department of Environmental Health & Safety.

2. You will now be transferred to page [IM111]:

Add Chemical Containers	to your Inventory
Lookup chemical information	
The CAD has been created successfully.	

3. Your new CAD entry has been created successfully.



Appendix B: How to Print a PDF File from Acrobat Reader

1. After the appropriate button is clicked, the PDF file will open in the **Adobe Reader** window, for example:

Adobe Reader - [NMEW000038.pdf]									
🔁 Fi	🔂 File Edit View Document Tools Window Help								
	8		0	IÞ		•	•	++	۲
Pages	HAZARDOUS WASTE EPA and University regulations prohibit improper disposal.								
	If found, contact the GIT Environmental Health and Safety								
	dep	artment at	t (404) 894-504	12 or th	e local po	lice d	epartme	nt.	
	NMEW000038								
	Accumul	Accumulation Start Date: 2005-09-12 Received Date:							
	Created E	By: Gardne	r, Nick	PI:	Gardner,	Nick			
	Departme	ent	Building	Name	Room No. Phone				
1	Biology		Life Sci	ences	401				
	Chemical Name CAS # %								
(g)	Chlorinated paraffins (C12, 60% Chlorine) 108171-26-2 20.00								
men	Petroleum distillates (naphtha) 8002-05-9 40.00								
tach	Sulfides, tetra-, di-C20-24-alkyl 69155-37-9 20.00								
Att	Sulfurized lard oil, tall oil fatty acids 68938-28-3 20.00								
7	Signature	Signature: Container Size: 3.0 L							
0									

2. To print, click the printer icon in the menu bar at the top of the **Adobe Reader** page.

Alternately, click File in the menu bar at the top of the screen and choose room from the pull-down menu.

3. The print popup window will now appear (as in the following example from Windows):

Print	?×
Printer	Properties
	Commente and Former
Status: Ready	Comments and Points.
Type: HP LaseDet 451	
Print Range ⓒ All	Preview
C Current view	*
O Current page	BLORDON MICH. Understandigt optimiser die state in der state
O Pages from: 1 to: 1	
Subset: All pages in range Reverse pages Page Handling	New York Constant Section 2014
Copies: 1 🗧 🗖 Collate	11
Page Scaling: Reduce to Printer Margins 💌	
Auto-Rotate and Center	
Choose Paper Source by PDF page size	
Print to file	Units: Inches Zoom: 94%
	1/1 (1)
Printing Tips Advanced	OK Cancel

- 4. Adjust the resolution of your printer to 600 dpi or better. Depending on your printer, this is usually "Best" or "Normal". This quality is a better option than "Draft" or a lower resolution.
- 5. Select your printer properties and other options.
- 6. Click OK to begin printing or click Cancel to abort.
- 7. You have now finished printing a PDF file in **Adobe Reader**



Appendix E Environmental Safety Suite



Appendix E: Environmental Safety Suite

SIVCO has taken on the responsibility of protecting human health and the environment through the ongoing development of software products for the environmental health and safety industry. All components of the Environmental Safety Suite are designed as web-enabled, enterprise applications built upon J2EE technology. This allows each solution to be easily integrated with other systems and for all solutions to be fully implemented in conjunction as one complete Environmental Safety Enterprise Solution. Each innovative solution within the Environmental Safety Suite also has the unique ability to be implemented and operated individually, providing precise solutions for specific mandates relating to Chemical Management, Bioagent Material and Research Permit Management, OSHA Reporting, Hazardous Training Management, etc.

Each of the Environmental Safety Suite software products is:

- scalable
- fully customizable
- able to integrate with existing authentication systems
- fully integrated with CHEMATIX[™] and the each of the other Environmental Safety Suite applications

We invite you to review the currently available software solutions as well as the upcoming products currently under development. If protecting the environment and ensuring community safety according to governmental mandates through accurate reporting, complete record management and comprehensive inventory control of all scientific materials throughout their entire system life-cycle is your business, let SIVCO assist you in meeting your needs with the most innovative and comprehensive suite of Environmental Safety Solutions available.

SIVCO's **Environmental Safety Suite** features the following innovative products:

BIOLOGISTIX™

BIOLOGISTIX[™] is at the forefront of research management by providing the most rigorous and robust environment in which to track controlled substances and maintain compliance with all governmental regulations and mandates. Widely considered the premier solution on the market today, **BIOLOGISTIX[™]** provides a comprehensive approach to chemical management throughout the entire lifecycle of chemical, biological, radioactive and hazardous substances within large-scale university and corporate research environments.

Comprised of seven major management modules, **BIOLOGISTIX™** easily facilitates:

- Biological Material Tracking
- Inventory Management and Control
- Biosafety Permit and Inspection Governance
- Biosafety Labs and Cabinet Regulation
- <u>Resource Management and System Security</u>

The ultimate goal is to provide universities and research firms with the ability to:

- make bioagent inventory management an effortless and simple process by reducing the amount of labor and frustration involved in tracking biological material inventory
- fully govern the issuance and management of biosafety permits for biological substances
- efficiently manage biosafety labs, cabinets, autoclave licensing and inspections
- empower users with information presented in a well organized, concise and highly usable manner
- reduce overall labor, administration, paper and surplus costs resulting in significant annual savings



• readily facilitate regulatory compliance by providing the frame work in which all governing agencies can monitor and control biological inventory

With broad functionality to facilitate Biological Material Tracking, Inventory Management, Biosafety Permit and Inspection Governance, Biosafety Labs, Cabinet Regulation and Resource Management, **BIOLOGISTIX**[™] is at the forefront of research management by providing the most rigorous and robust environment in which to track controlled substances and maintain compliance with governmental regulations and mandates. The main modules include:

Biological Material Inventory Management

Biological Material Inventory Management is the essential management module, which allows **BIOLOGISTIX™** to store detailed information about every regulated substance in the system. This detail provides the foundation for regulatory compliance, environmental safety, and inventory, research, and budget control. All substances are tracked via unique identifiers associated with approved biosafety permits, research project approval and responsible owner certification. Storage location including laboratories, biosafety cabinets, freezers, autoclaves and specific shelves are also associated with biological inventory. A complete history of each regulated agent is maintained from point of entry to elimination as waste. This module also provides the big picture view of biological material tracking and the ability to manage various aspects of regulated laboratory inventory of controlled substances. A multitude of user-configurable reports and views can be generated to view specific location inventories, hazardous material counts, historical profiles, inspection histories, etc. The scope of this module includes:

- tracking of biological material description, bioagent class, risk group, select agent status, associated strain, associated insert(s), container size, origin, specimen source, responsible owner, storage location (shipping address, building name and number, laboratory room number, specific storage location (cabinet, shelf, freezer, etc.), vendor (manufacturer) name, purchase (receipt) date and quantity
- ability to associate bioagent, principal investigator, and location to bioagent profiles from pre-populated drop-down lists
- maintenance of a master list of regulated bioagents by Environmental Health and Safety with associated class, description, strain and insert(s)
- instant access to real-time inventories for every campus location containing biological material inventory tracked by the system, complete with location address and responsible owner
- comprehensive and user-defined report generation of inventory summaries for campuswide, departmental and individual laboratory bioagent inventory records by associated personnel (administrators, faculty, staff, graduate students, etc.) and Environmental Health and Safety regulators searchable by item description, bioagent class, risk group and selected agent status
- pre-loaded list of biological material supply vendors and manufacturers available as a dropdown list for association with new and/or existing inventory
- ability of users to associate biological agents with new manufacturers/vendors with automatic addition of new entries to existing lists
- strict control of bioagent inventory through mandatory association with biosafety permits, approved research projects, licensed biosafety cabinets and training certification for users and principal investigators.

Biosafety Permit Control

Biosafety Permit Control allows regulatory officials to comprehensively oversee the issuance, review, and regulation of biosafety permits required for the acquisition, control, and storage of regulated biological substances for use in scientific research. Biosafety Committee management as related to biosafety permits is also facilitated. Some of the highlights include:



- tracking of all biosafety permits according to permit number, permit type, principal investigator, approved bioagents (bioagent class, risk group and selected agent status), associated research project, associated usage locations, storage location, approved users, animals involved in research (IACUC number), associated biosafety cabinets, approval date, expiry date, permit status, description, associated amendments, contingencies and modifications, review date, inspection date, biosafety committee actual review date and audit frequency
- capacity to sort and print biosafety permit reports based on permit type, permit status, review date, biosafety committee actual review date, expiration date, principal investigator, bioagent description, bioagent class, risk group and select agent status
- ability to add principal investigators, permit types, permit status, bioagents, locations, users and research animals to biosafety permits from pre-populated drop-down lists
- ability of biosafety committee members to modify, amend and add contingencies to permits
- maintenance of all biosafety committee members as users in the system
- capacity to generate biosafety committee agendas from existing and newly submitted biosafety permits
- email notification to all biosafety committee members of upcoming agendas with references to be reviewed and/or approved

Biosafety Cabinet Regulation

Biosafety Cabinet Regulation consists of complete management over the licensing and inspections of biosafety cabinets, autoclaves and laboratories used for the proper handling of biological materials. Detailed information about each cabinet registered in the system as well as associated inspection history is captured according to:

- biosafety cabinet profile, including cabinet ID, responsible principal investigator(s), permit number, permit expiry, serial number, make/model, manufacturer, location, class, UV light status and cabinet description
- ability to associate location, manufacturer, make/model and class with biosafety cabinet profile from pre-populated drop-down lists
- biosafety cabinet inspection profile, including inspection date, inspector name, UV light reading, approved status and comments/recommendations
- control of biosafety cabinet master list by Environmental Health and Safety personnel
- user-configurable report generation of biosafety cabinet information sortable by location, principal investigator, permit expiry, class, status, inspection date and permit number
- comprehensive biosafety cabinet inspection history report generation

Resource Management

Resource Management provides and restricts access to all levels of the **BIOLOGISTIX™** system. User profiles are created for varying levels of access including individual users, departments, regulators and committee members. User administration is constructed hierarchically to ensure maximum system security. The highlights of this module are:

- username and password access to system
- hierarchical chain of command system security with broadest range of access and control granted to primary levels
- superuser administration with ability to add/modify user profile and restrict access to system
- maintenance of emergency contact information including name and phone number
- departmental (or multiple departmental) association with users and locations
- designation of principal investigators responsible for bioagent inventory and locations
- designation of Active Permit Authority status for all users, which grants / restricts viewable inventory privileges and outlines specific privileges regarding the handling of regulated biological materials and proper waste disposal

CHEMATIX™ Waste Management Module User Manual

- complete management of all biological material handling and safety training, including class enrolment. scheduling, certified status and access authority
- accommodation of different levels of security for administrative personnel
- access to all areas of the system governed by specific administrative personnel
- emergency response team access to all biological inventory and hazardous materials in critical situations, with the ability of transmitting biological inventory information to handheld web-enabled devices of responders
- ability for all users to modify personal profile and password
- ability to integrate with campus authentications system

Radioactive Material Manager

Designed to comprehensively track and manage radioactive material purchase, possession, use and disposal, this innovative solution has full functionality to:

- universally track detailed profiles of radioactive material inventory, equipment and radiation emitting devices
- manage online submission of authorization requests and isotope permits required for the procurement, possession, use and disposal of radioactive substances
- associate all radioactive materials inventory with approved protocols, possession limits, requisitions, required user training, equipment certification and lab registration
- comprehensively track and manage generation and disposal of all radioactive waste
- maintain detailed profiles, associated registration information and inspection histories for equipment, devices and approved laboratories in which radioactive materials will be handled and stored
- manage inspections and incidents for laboratories, storage devices, leak tests and instrument calibration with maintenance of detailed histories
- control possession limits of radioactive materials for PIs, labs, buildings and departments through association of physical inventory with all isotope requisitions pending approval
- create a broad variety of standard and ad-hoc reports for radioactive material inventory, isotope permits and possession authorizations, equipment, registered labs, waste accumulation and disposal, user training profiles and possession limits
- maintain detailed training information for users requiring certification to possess and use radioactive materials
- track contamination, area monitoring and leak tests
- facilitate procurement of radioactive materials with strict, hierarchical approval process and association with possession and use permits
- ability to interface with existing financial management systems to process radioactive material order information



Online Accident Reporting System (OARS)

The **Online Accident Reporting System (OARS)** has been developed to make reporting easier, provide consistency in reporting data, assess trends and ultimately contribute to injury prevention. Originally developed in conjunction with leading research institutions, the intention of the system is to electronically automate the process of reporting work-related injuries and illnesses on campus through an offering of mandatory forms via online access.

OARS features:

- online submission of accident and near miss reporting
- the processing and updating of OSHA forms
- the ability to track, review and modify existing reports
- access for Environmental Health & Safety personnel to review and modify submitted reports
- the processing of the OSHA 300 log form
- the processing of OSHA 300 summary Worksheets
- the ability to connect with university ID and authentication systems
- e-mail notification for report submission and review

Accurate and timely reporting of work-related injuries, illnesses and near misses is critical to providing a safe and healthful work environment. **OARS** has been developed to comply with the new OSHA record keeping rules.

Scientific Material Questionnaire

An innovative web-enabled application designed to allow Environmental Health & Safety personnel to quickly assess detailed scientific material inventory according to researcher, research protocol, laboratory, risk level, location, etc., in compliance with governmental regulations and mandates.

Training Records Manager

The Training Records Management System provides web-enabled access to all employee and student training records pertaining to all required certifications necessary to ensure community and personal safety as well as safe work practices.

This comprehensive system will provide user access to existing certification levels, pending expiry dates, training course descriptions, specific employment requirements, online class sign-up, and training history in compliance with local, state and federal requirements for radiation, chemical, biological, hazardous waste, and environmental safety.

