



Energy & Materials Flow and Cost Tracker (EMFACT) Procedure Guide

Fundamentals of EMFACT

EMFACT offers a comprehensive tool to assist the small and medium size enterprise in managing their fuel, water and materials usage. Using EMFACT, companies can track air emissions, wastewater, solid/hazardous waste, and related costs associated with the day-to-day operations of their business.

The purpose of this guide is to provide an overview of EMFACT, describe various maintenance requirements, as well as review EMFACT's standard features and functionality.

This guide contains the following topics. If you are viewing this guide electronically, you can click the page number to advance to that topic.

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Fundamentals of EMFACT

Dashboard Orientation

The **EMFACT Dashboard** window is the home page for EMFACT. The dashboard is divided into seven parts: Setup, Define, Link, Input, Output, Reminders and Reports.

1 Dashboard

The order of the dashboard coincides with the order of the business process. Users will begin at the left and then move across the window until product and non-product Output is computed.

- A. Setup** contains the following button:
- **Admin** allows you to edit user and facility information, and add your facility's buildings and departments. This is also where you maintain the drop down lists found throughout the application.
- B. Define** contains the following buttons:
- **EHS Objects** allows you to maintain the details related to equipment, production units, air emission sources, discharge points and waste types used in this application.
 - **Materials** is where you maintain the required details related to the Chemical Abstract Society (CAS) number listing, chemical constituents, synonyms/aliases, container sizes for this application.
 - **Permits** allows you to set up and maintain relevant permits, orders, registrations or certificates.
 - **Product** allows you to maintain distinct products produced by the company as well as distinct sub/intermediate products included in each product.
- C. Link** contains the following button:
- **Relate** allows you to describe the various inputs and outputs related to equipment and production units.
- D. Input** contains the following buttons:
- **Purchases** allows you to import purchased materials data from an electronic file or enter this data manually.
 - **Usage** allows you to input estimated chemical, water, paint and fuel usage.
- E. Output** contains the following buttons:
- **Product** allows you to allocate intermediate products to material data.
 - **Air, Wastewater** and **Waste** allow you to compute/document paint & fuel (air) emissions, compute/document wastewater discharge and document the details related to waste shipments.
- F & G. Reports** and **Reminders** buttons are available on this page to help you run reports and set up/view calendar events.
- H.** The **Help** link at the bottom of the window advances you to the **EMFACT Help** page, which provides the available documentation.
- I.** The bottom left corner of the **Dashboard** indicates the **User** and **Facility Location**.



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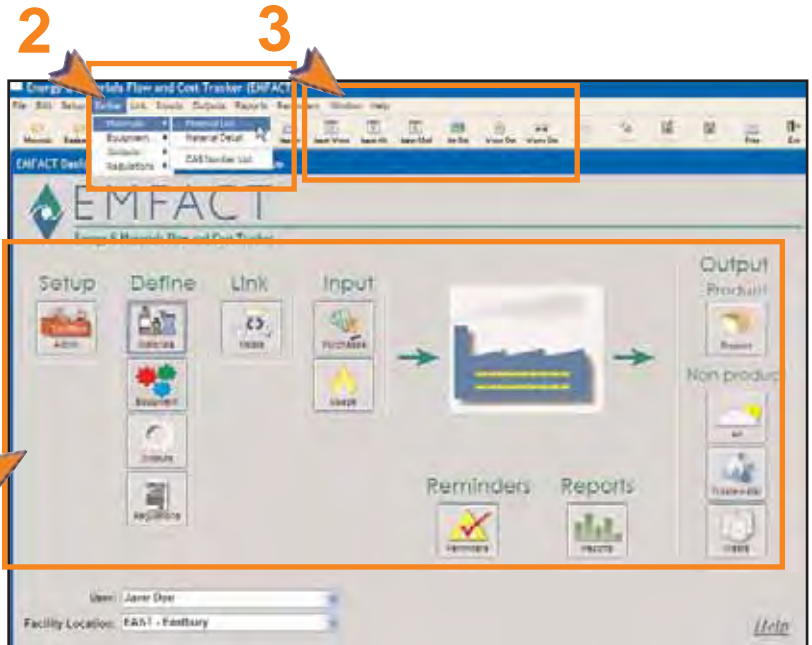
Accessing EMFACT Windows

Every EMFACT window can be accessed two (and in some cases three) ways.

2 Access to Windows

The following represents the various ways that EMFACT windows are accessed.

- 1 > The **EMFACT Dashboard** window has seven sections: Setup, Define, Link, Input, Output, Reports, and Reminders. Each section contains at least one button. When you click these buttons, it opens up either a Cue Card window (discussed on the next page) or a data entry window.
- 2 > Every window can be accessed from the main menu.
- 3 > The toolbar contains buttons for many of the key windows.



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Cue Cards

Most EMFACT sections have cue cards associated with them. Cue Cards are designed to guide users through the EMFACT process, and are used for maintenance as well as initial setup.

3 Cue Cards

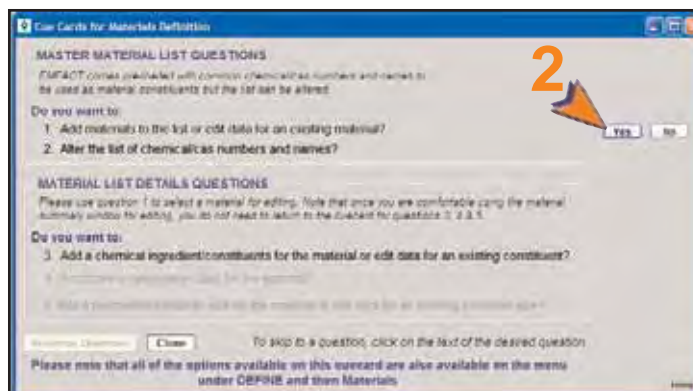
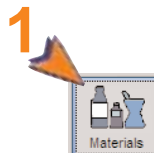
Each Cue Card contains a series of questions. Users click **Yes** or **No** to the questions. When answering **Yes**, the appropriate EMFACT window will display. If answering **No**, the prompt advances to the next question.

- 1 > Cue Cards are accessed by clicking an icon on the **EMFACT Dashboard**. The Cue Card for that function will display.

Note: If a Cue Card is not set up for a particular function, the appropriate window will display instead.

- 2 > Answering **Yes** or **No** to specific questions brings the user to the correct data entry window.

Using the Cue Card is optional, since every window available through the Cue Card is also accessed from the main menu. Users may elect to access windows directly from the main menu, instead of the Cue Card, once they are more experienced using the EMFACT application.



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Basic vs. Advanced User Fields

There are two permission levels in EMFACT: *Basic* and *Advanced*. The same windows are used for both permission levels, however only the required fields will be enabled for the Basic user, while required and optional fields are enabled for the Advanced user.

4 Basic vs. Advanced User Fields

Advanced Users have access to more fields on the EMFACT windows than the Basic User. However, Basic Users can temporarily enable themselves as an Advanced User.

- 1 > Click the **Enable Advanced Fields** checkbox. The advanced user fields will change from gray to white.

Basic User

Material ID	Material Name	Material Type	Manufacturer Name	Density	VOC %	Mfr Written Date	Mfr Re
FUEL	Sample Fuel Oil	Fuel	Unknown	7.1	0.00	00/00/0000	00/00/00
OTHER	Sample Other Material	Composite	Unknown	19.0	0.00	00/00/0000	00/00/00
PAINT	Sample Paint	Paint	Unknown	10.84	0.00	00/00/0000	00/00/00
WATER	Water - Do Not Delete	Water	Unknown	8.3	0.00	00/00/0000	00/00/00

1 of 4 Records

Advanced User

Material ID	Material Name	Material Type	Manufacturer Name	Density	VOC %	Mfr Written Date	Mfr Re
FUEL	Sample Fuel Oil	Fuel	Unknown	7.1	0.00	00/00/0000	00/00/00
OTHER	Sample Other Material	Composite	Unknown	19.0	0.00	00/00/0000	00/00/00
PAINT	Sample Paint	Paint	Unknown	10.84	0.00	00/00/0000	00/00/00
WATER	Water - Do Not Delete	Water	Unknown	8.3	0.00	00/00/0000	00/00/00

1 of 4 Records

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Creating New Rows of Data

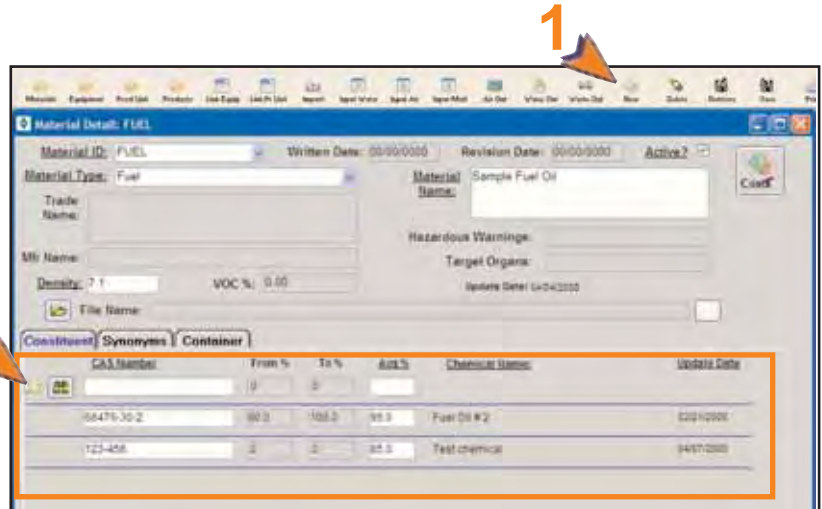
Many of the EMFACT windows are designed so that data can be added and maintained in list form.

5

Creating New Rows of Data

Many of the EMFACT windows are made so that rows of data can be added, such as this example where rows of constituents are listed for this Material ID.

- 1 > When adding data, you must click **New** in the toolbar.
- 2 > Sometimes, this **New** button is disabled. To enable the button, simply click your cursor in the active window where you want to add the new row. In this example, you would click your cursor anywhere on the **Constituent** tab.



Dropdown Lists of Data

Many of the EMFACT windows are designed so that data can be added and maintained in list form.

6

Standard Dropdowns

There are two types of dropdown lists.

User Defined List

EMFACT uses dropdown lists from which users select a choice. Some lists were defined during the Define process (e.g., Material ID, Production Unit/Equipment ID, etc.).

Standard EMFACT List

Other lists are standard lists within EMFACT (e.g., . Please refer to the separate document entitled, User Guide, (Admin Setup module) for adding to this list.

User Defined List

Material ID:	
FUEL	Sample Fuel Oil
OTHER	Sample Other Material
PAINT	Sample Paint
WATER	Water - Do Not Delete

Standard List

Frequency
Per Day
Per Month
Per Quarter
Per Year

Energy & Materials Flow and Cost Tracker (EMFACT) Procedure Guide

Access to the Documentation

EMFACT offers a comprehensive Procedure Flows and Procedure Guides to help users utilize EMFACT to its fullest potential.

7 Documentation

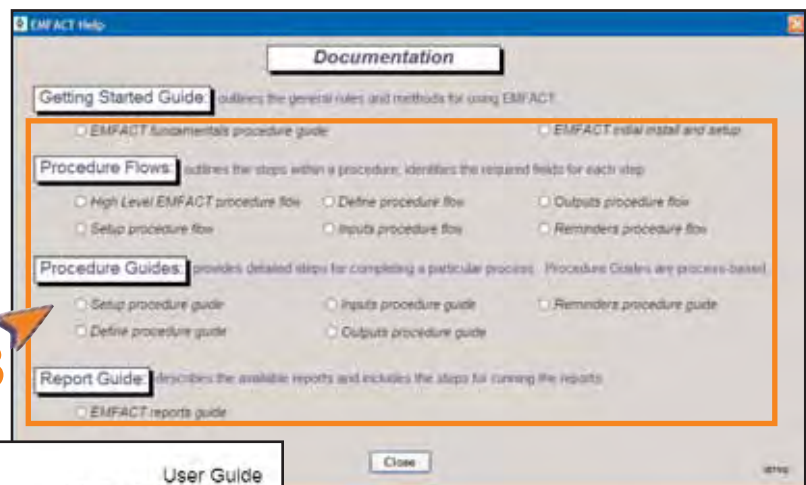
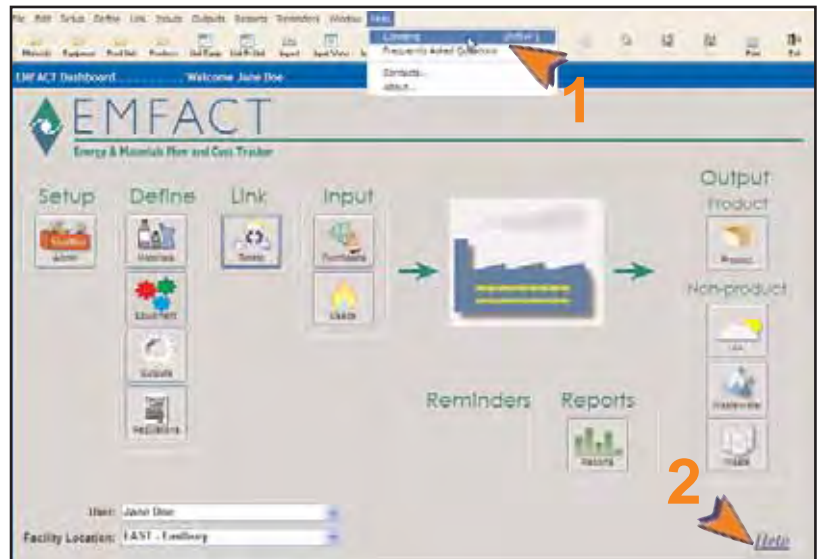
There are two types of EMFACT documentation:

Procedure Flows outline the steps within a procedure and identify the required fields for each step. Flows do not include optional steps, so consult the Procedure Guides for additional, optional details.

Procedure Guides provide the details steps for completing a particular process. They will sometimes include optional steps based on the business process.

To access the documentation:

- 1 > Select **Help > Contents** from the main menu. The **EMFACT Help** window will open.
- or
- 2 > Click **Help** on the **EMFACT Dashboard**. The **EMFACT Help** window will open.
- 3 > Click on one of the links. The corresponding document in PDF format will display for you to either print or save.





Energy & Materials Flow and Cost Tracker (EMFACT) Procedure Guide

Types of Windows

There are two types of windows used for adding and maintaining data in EMFACT: (1) the List Window and (2) the Detail Window.

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Types of Windows

The **“List”** window displays a listing of information for that category. When opening this window, it will autopopulate with the data from your facility location.

It also provides a **Filter Data** section if you are searching for a particular set of data.

A **More Detail...** button is available, which opens a Detail window for the selected item.

Below: List Window

Air Source ID	State Source ID	Air Source Category	Exhaust Flow (ACFM)	Exit Direction	Permit No	Building Code	Air Source Height
127	023A	Air Intake		1Vertical		200	3.0
ABC	ABC - Stack	Tank Breather Vents		1Vertical			1.0
STACK1	2007-01	Air Intake		1Vertical	12345	100	1.0
STACK2		Tank Breather Vents		5Horizontal			5.0

The **“Detail”** window provides additional fields to help you maintain the item. Detail windows will sometimes have tabs where you can add rows of data.

Below: Detail Window without “tabs”

Constituent	Synonyms	Container
Chemical ID	From %	To %
7954-41-7	20.0000	40.0000

Above: Detail Window with “tabs”

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Changing Your User Permission Level

There are two permission levels in EMFACT: *Basic* and *Advanced*. The same windows are used for both permission levels, however only the required fields will be enabled for the Basic user, while required and optional fields will be available for the Advanced user.

9 Changing Your Permission

Each time a user logs on to EMFACT, he is granted the permission level specified during ADMIN setup.

There are two ways to change a permission level.

Temporary Change

To temporarily change your permission level on a window:

- 1 > Click **Enable Advanced Fields**. The optional fields will turn white to indicate they are enabled (editable).

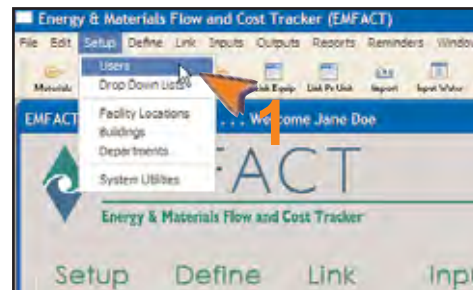
Note: This change applies to the current window only.

1

Permanent Change

When EMFACT was installed, you provided a User ID, User Name and User Type. That information can be edited using the following steps:

- 1 > Select **Setup > Users** from the main menu. The **User List** window will open.
- 2 > Click the appropriate radio button next to the **User Type** field.
- 3 > Click **Save**.



User ID	User Name	User Type
123456	Jane Doe	<input checked="" type="radio"/> Basic <input type="radio"/> Advanced

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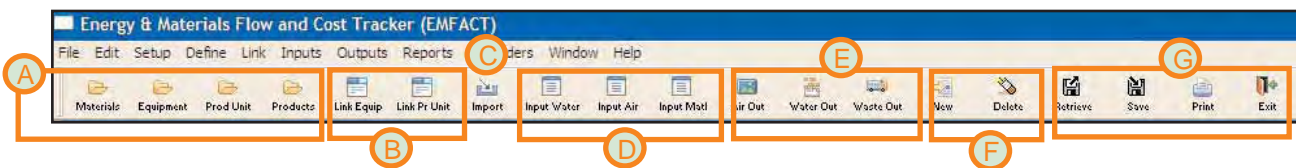
Standard Toolbar




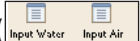

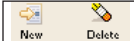

The EMFACT toolbar is similar to toolbars in other applications in that it provides shortcuts to common functions (e.g., save and delete). In addition, this toolbar provides shortcuts to commonly-used windows.

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Standard Toolbar Buttons

Below is a brief description of each button located on the toolbar (moving from left to right). Refer to the module's specific documentation for additional details.



- A > Yellow Folder Buttons** (): Clicking one of the yellow folder icons will open the corresponding **List** window (i.e., **Materials List**, **Equipment List**, **Production Unit List**, **Product List**) for that item. The windows are used to maintain a list of materials, equipment, production units, and products at your facility.
- B > Link Buttons** (): Clicking the **Link Equip** button or **Link Pr Unit** button opens the **Equipment Links** window or **Production Unit Links** window. These windows are used to characterize your equipment and production units by associating related materials, products, air sources, emission sources, pollutants and waste types.
- C > Import Button** (): Clicking on the **Import** button opens the **Import Data from a File** window. This window is used for importing electronic files of materials purchased data.
- D > Input Buttons** (): Clicking one of the **Input** buttons opens the corresponding data entry window (i.e., **Enter Water Usage**, **Enter Material Usage**, **Enter Material Usage with Air Emissions**) for entering usage.
- E > Out Buttons** (): Clicking one of the **Out** buttons opens the window for viewing/maintaining output data for that item (air emissions, wastewater discharge, waste management activity).
- F > New and Delete** (): Clicking **New** allows you to make a new row when entering lists of data. Clicking **Delete** allows you to delete a row of data.
- G > Typical Toolbar Buttons** (): There are also standard buttons on the toolbar, which are used for the following:
- Retrieve** is used to access data or records from the database.
 - Save** is used to commit your changes to the database
 - Print** is a shortcut used for printing data a report or window in EMFACT.
 - Exit** button closes all open windows within the module. If you have made any changes, you will be prompted to save your data.

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New and Delete Buttons

Almost every module contains **New** and **Delete** buttons. These buttons are located in the EMFACT toolbar and are used to add and remove rows of user-defined data related to a record.

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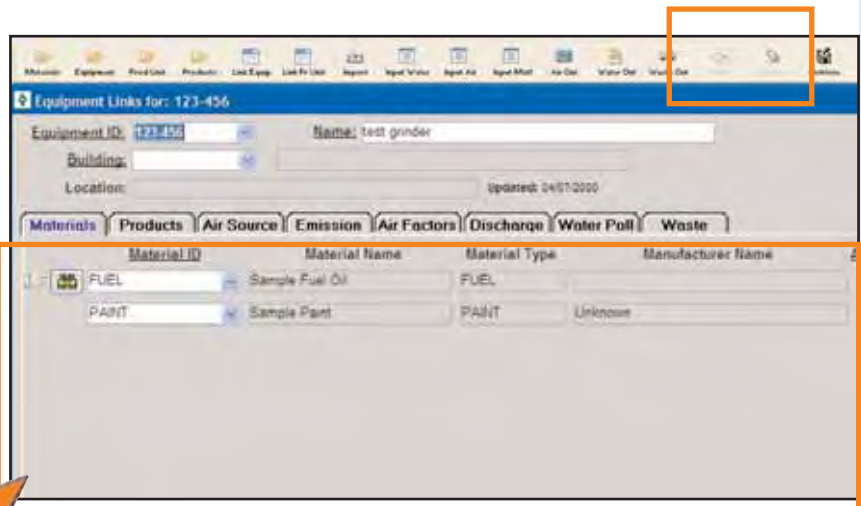
Using the New & Delete Buttons

The **New** and **Delete** buttons are not always enabled. Subsequently, if you click on one of the buttons, it will not work. The image to the right shows the buttons when they are disabled and appear faded.

Activating the New & Delete Buttons

Follow these steps to activate the **New** and **Delete** buttons:

- 1 > Click anywhere in the window where you will be adding or deleting the row. The **New** and/or **Delete** buttons will change to color, indicating that they are enabled.



Adding a Row

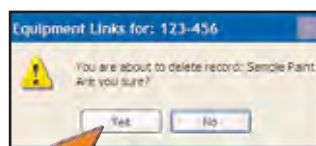
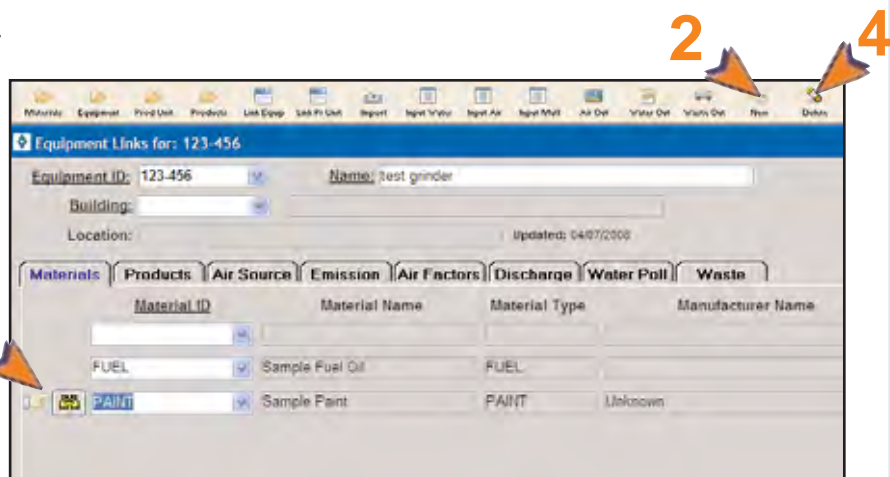
Most modules allow you to add multiple rows of data. To add a row:

- 2 > Click **New**. A blank row will display for you to complete. New rows display above the row that is currently selected.

Deleting a Row

You also have the option of deleting a row. To delete an unwanted row:

- 3 > Select the row you want to delete by clicking on it. The hand icon will point to the row once it has been selected.
- 4 > Click **Delete**.
- 5 > Click **Yes**. The row will disappear from the tab.



Energy & Materials Flow and Cost Tracker (EMFACT) Procedure Guide

Yellow Binoculars

The **Yellow Binoculars** icon is found throughout EMFACT. It allows you to search for a material or piece of equipment.

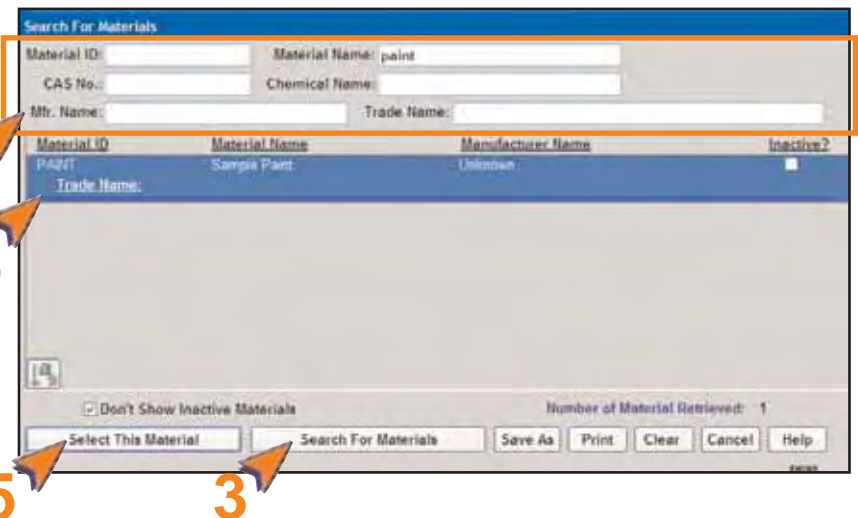
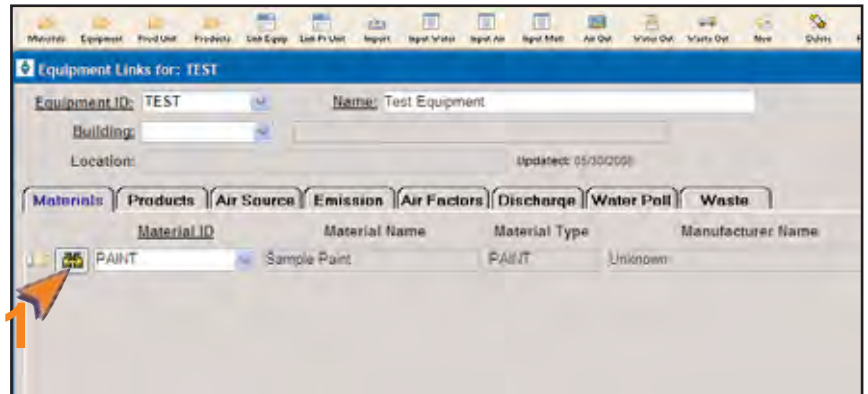
12

Using the Yellow Binoculars

Fields that are “searchable” will have the Yellow Binoculars icon (🔍) next to them.

To launch the search process:

- 1 > Click the **Yellow Binoculars** icon. The appropriate **Search** window will open. In this example, the **Search For Materials** window is launched.
- 2 > Complete at least one of the filter fields. Filter fields will vary depending on the type of search. Completing more fields will narrow your search, while fewer fields will broaden your search.
- 3 > Click the appropriate **Search** button. In this case, it is the **Search for Materials** button. The window will refresh listing the data within the search parameters.
- 4 > Click on and highlight the appropriate selection.
- 5 > Click the appropriate **Select** button. In this case, it is the **Select this Material** button. The **Search** window will close.



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Searching

EMFACT allows you to perform searches on your data. A flexible set of search criteria is available to help narrow the search results.

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Searching

Windows that have a **Filter Data** section at the top indicate that you can perform a search.

- 1 > Complete at least one field in the **Filter Data** section. More fields will narrow your search, while fewer fields will broaden it.
- 2 > Click **Refresh Data** or **Retrieve**. A list matching the search parameters will display.
- 3 > To perform another search, click **Clear Filters**.

The screenshot shows the 'Material List' window in EMFACT. At the top, there is a 'Filter Data' section with several input fields: 'Material ID', 'Material Name' (containing 'Laminar Glass'), 'Material Type' (containing 'Paint'), 'Synonym', 'Manufacturer Name' (containing 'Lithosun'), and 'CAS Number'. To the right of these fields are buttons for 'Refresh Data', 'Clear Filter', and 'More Detail'. Below the filter section is a table with the following columns: 'Material ID', 'Material Name', 'Material Type', 'Manufacturer Name', 'Density', 'VOC', and 'Written'. The table contains one row of data: 'PART', 'Laminar Glass', 'Paint', 'Lithosun', '12.84', '6', and '6/00/0000'. Three orange arrows with numbers 1, 2, and 3 point to the filter fields, the 'Refresh Data' button, and the 'Clear Filter' button, respectively.

Material ID	Material Name	Material Type	Manufacturer Name	Density	VOC	Written
PART	Laminar Glass	Paint	Lithosun	12.84	6	6/00/0000

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Fundamentals of EMFACT

Sorting

The ability to sort your search results is located throughout EMFACT. Data can be sorted on only one field or multiple fields.

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Sorting Data

To use this feature you must have already performed a search and there must be search results in the bottom half of the window.


A. Sorting on One Field

This method is used when needing to sort on only one field (e.g., date, ID, etc.).

- 1 > Click the heading of the column you wish to sort by. The search results data will sort on that column in ascending order. Click the column heading again to sort in descending order.

B. Sorting on Multiple Fields

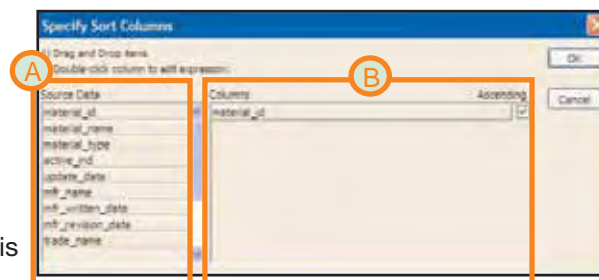
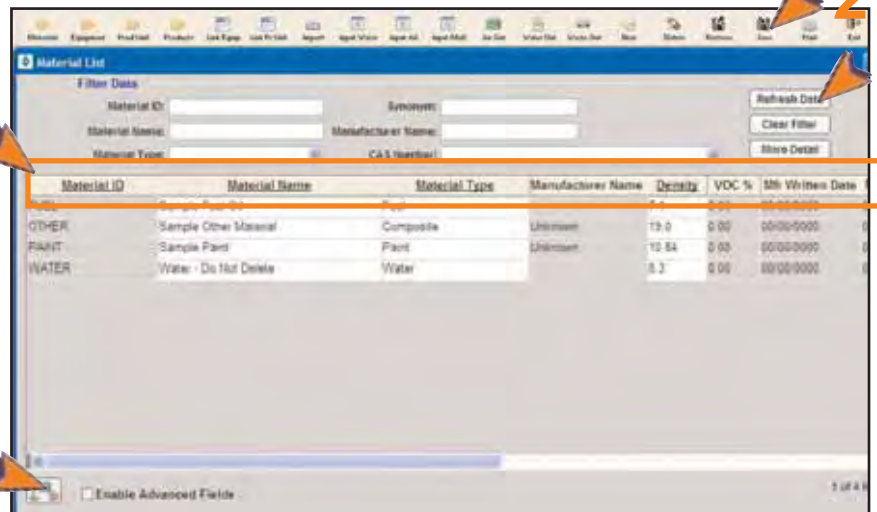
This method is used when needing to sort first on one field and then on another, and so on.

- 2 > Click the **Sort** button (). The **Specify Sort Columns** window will display.

A. The **Source Data** section displays every field on which the data can be sorted.

B. The **Columns** section displays the field(s) on which the data is currently sorted and defaults to ascending order. When there are multiple rows in this column, the sort order is first on the first row, secondarily on the second row, etc.

- 3 > Find the field you want to sort by. Click on, drag and drop the field into the **Columns** section.
- 4 > Click **OK**. The window will close and the data on the search window will display in the selected order.





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Comments Button

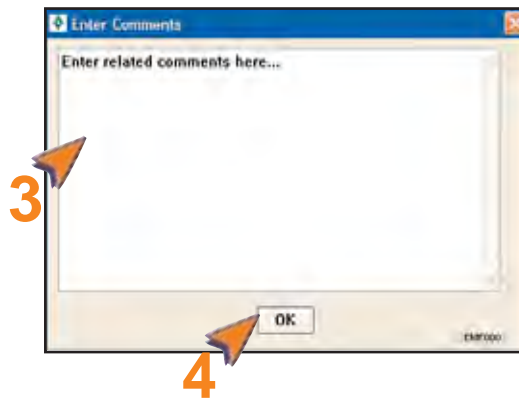
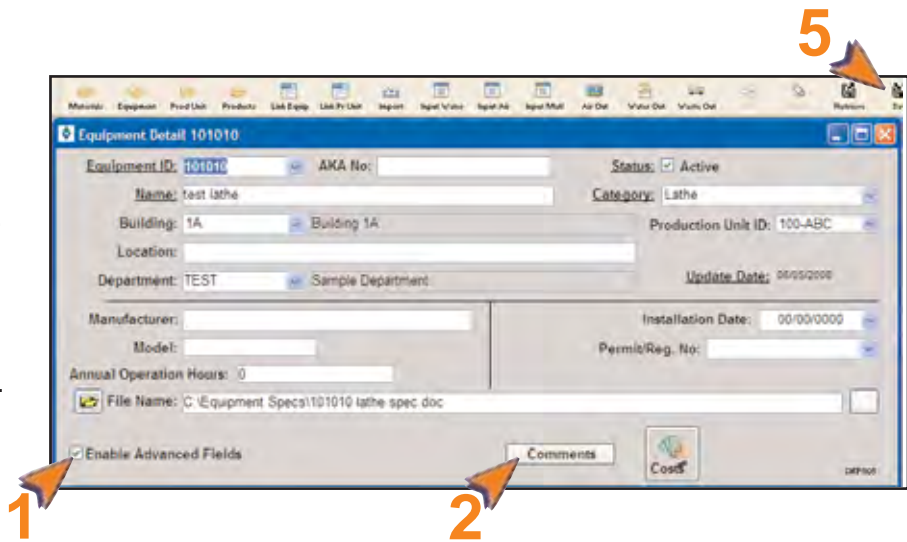
The **Comments** feature is located throughout the EMFACT application. It allows users to store large amounts of freeform text related a record.

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Adding Comments

The **Comments** button is generally located at the bottom of the window. To use this feature:

- 1 > If you are not an Advanced User, click the **Enable Advanced Fields** button.
- 2 > Click the **Comments** button. The **Enter Comments** popup will display.
- 3 > Enter freeform text into the window.
- 4 > Click the **X**. The popup will close.
- 5 > Click **Save**.





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Attaching Files

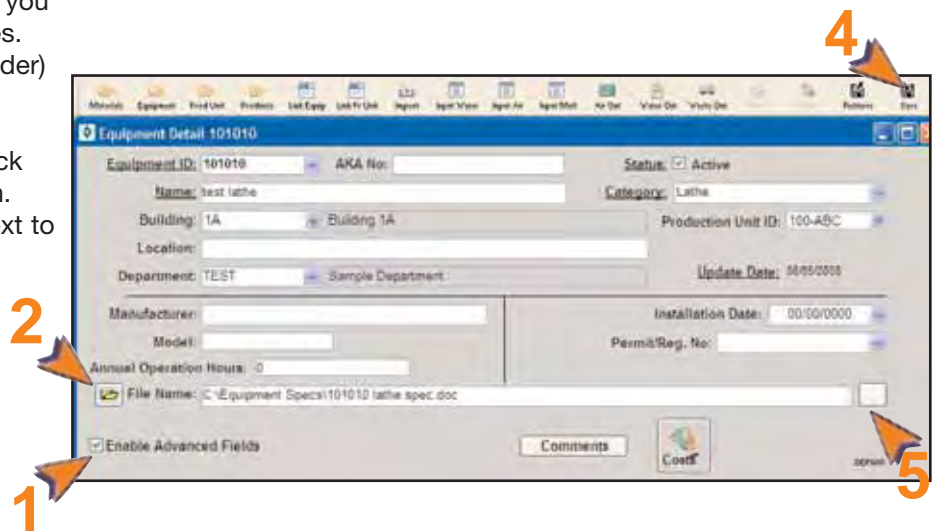
Some windows offer the option of identifying and linking electronic files (e.g., documents or pictures) to the record. When using this feature, files are not actually attached to the EMFACT record, rather the path is identified and there is a dynamic link to the file(s).

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Attaching Files

You have two choices when attaching files. You can attach one file or you can attach a folder containing several files. Before starting, ensure that the file (or folder) is located on a shared network drive.

- 1 > If you are not an Advanced User, click the **Enable Advanced Fields** button.
- 2 > Click the **yellow folder icon** (📁) next to the **File Name** field. The **Select File Name** popup will open.
- 3 > Navigate to and select the correct file, then click **Open**. The **File Name** field will fill with the file path.
- 4 > Click **Save**.
- 5 > To open an attached file, click **GO**.



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Printing and Saving

EMFACT offers a few options for printing and saving your data.

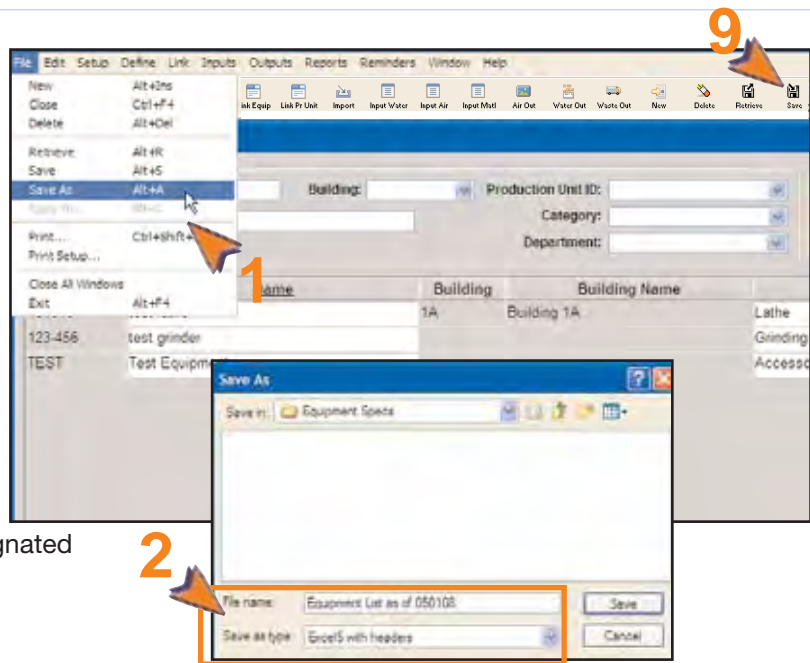
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Saving & Printing

Saving

Most **List** windows allow you save your data to another format such as Excel™ or a Text file. While on the **List** window:

- 1 > Select **File > Save As** from the main menu. The **Save As** popup will open.
- 2 > Complete the **Filename** field and make a selection from the **Save as type** dropdown. The most common choices are CSV (comma separated values), Excel with headers, and Text with headers.
- 3 > Click **Save**. The file will save in the designated directory.



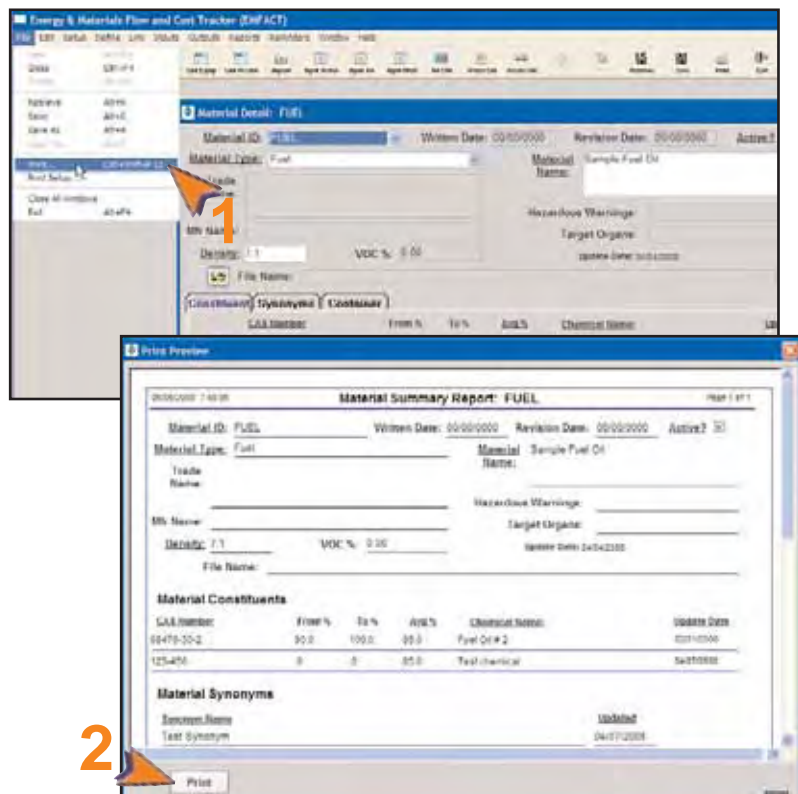
Printing

Some windows* have summary reports that you can print.

- 1 > Select **File > Print** from the main menu. A **Print Preview** window will display. Click the **Print** button.
- 2 > Click **Print**. The report will print to your default printer.

*Windows offering summary reports are:

Material Detail
Equipment Links
Production Unit Links





Energy & Materials Flow and Cost Tracker (EMFACT) Procedure Guide

Backing Up and Restoring the Database

As with any software, there is a minute possibility that the EMFACT program becomes corrupt, causing loss of data. To keep the amount of data loss to a minimum, backing up your data is recommended at least weekly and maybe even daily, depending on the amount of data entered in a particular day.

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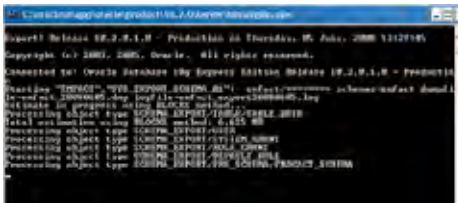
Backing Up/Restoring

Backing up your data involves making a copy of your database and storing it on another computer or storage medium.

Part 1: Backing Up Data

Use the following steps to back up your database:

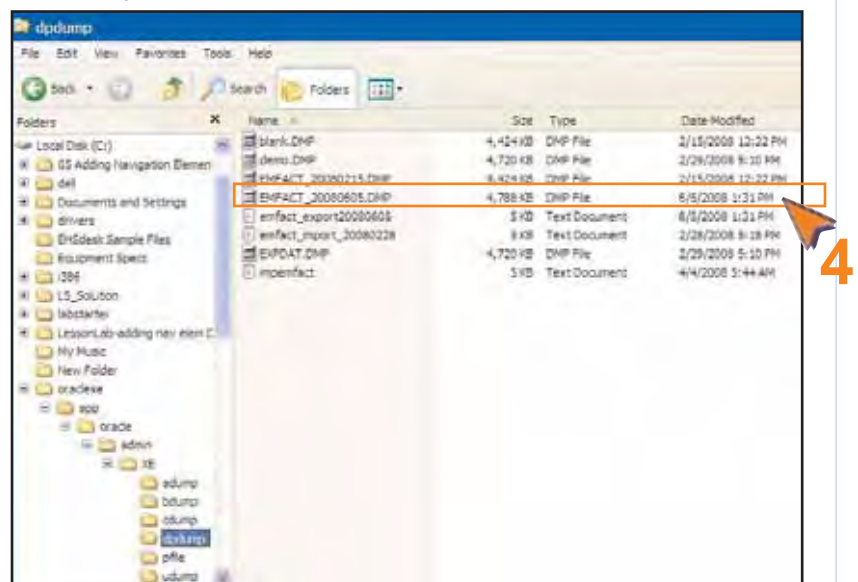
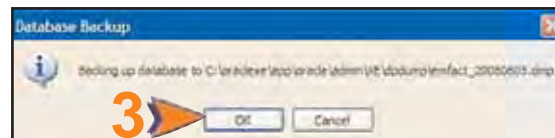
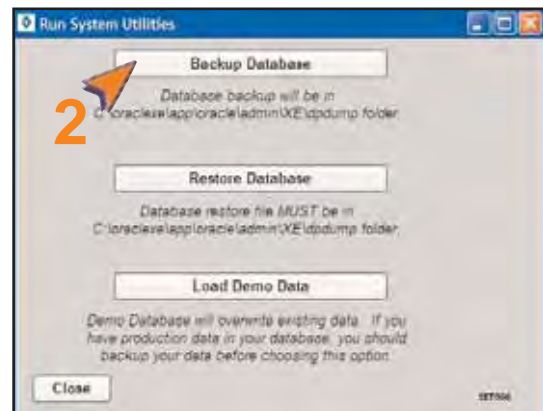
- 1 > Select **Setup > System Utilities** from the main menu. The **Run System Utilities** window will open.
- 2 > Click **Backup Database**. The **Database Backup** popup will display.
- 3 > Click **OK**. A black window will display. It may take several minutes, but this window will close on its own when the backup is complete.



- 4 > Use Windows Explorer, use the following file path to navigate to the correct file:

c:\oraclexe\app\oracle\admin\XE\dpdump\emfact_date.dmp

- 5 > Copy the file onto another storage medium such as an external hard drive or rewritable CD or DVD.



Energy & Materials Flow and Cost Tracker (EMFACT) Procedure Guide

Fundamentals of EMFACT

Backing Up/Restoring, continued

Part 2: Restoring the Database:

Use the following steps should the need arise to restore the database.

Before starting, copy the backup file (.DMP file) that you are using to restore the database, from your storage medium to the **dmdmp** directory using the file path noted in **Part 1**.

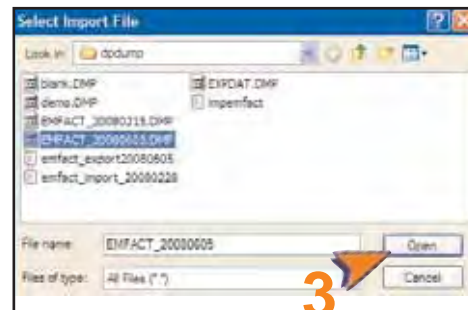
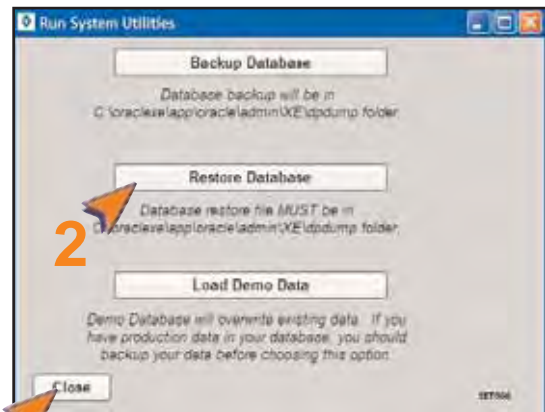
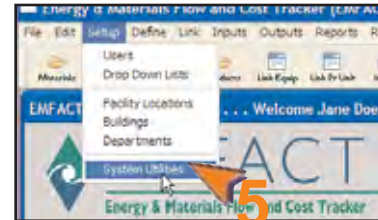
- 1 > Select **Setup > System Utilities** from the main menu. The **Run System Utilities** window will open.
- 2 > Click **Restore Database**. The **Select Import File** popup will open directly to the **dmpdump** folder containing the backup files
- 3 > Click on the restore file and click **Open**. A black window will display. As in **Part 1**, it may take several minutes, but this window will close on its own when the restore is complete.

```

Import: Release 10.2.0.1.0 - Production on Thursday, 05 June 2008 13:55:34
Copyright (C) 2001, 2002, Oracle. All rights reserved.
Connected to Oracle Database 10g Express Edition Release 10.2.0.1.0 - Production
Import table "EMFACT"."SYS_IMPORT_SCHEMA_01" successfully loaded.
Import table "EMFACT"."SYS_IMPORT_SCHEMA_02" successfully loaded.
Import table "EMFACT"."SYS_IMPORT_SCHEMA_03" successfully loaded.
Import table "EMFACT"."SYS_IMPORT_SCHEMA_04" successfully loaded.
Import table "EMFACT"."SYS_IMPORT_SCHEMA_05" successfully loaded.
Import table "EMFACT"."SYS_IMPORT_SCHEMA_06" successfully loaded.
Import table "EMFACT"."SYS_IMPORT_SCHEMA_07" successfully loaded.
Import table "EMFACT"."SYS_IMPORT_SCHEMA_08" successfully loaded.
Import table "EMFACT"."SYS_IMPORT_SCHEMA_09" successfully loaded.
Import table "EMFACT"."SYS_IMPORT_SCHEMA_10" successfully loaded.
Import table "EMFACT"."SYS_IMPORT_SCHEMA_11" successfully loaded.
Import table "EMFACT"."SYS_IMPORT_SCHEMA_12" successfully loaded.
Import table "EMFACT"."SYS_IMPORT_SCHEMA_13" successfully loaded.
Import table "EMFACT"."SYS_IMPORT_SCHEMA_14" successfully loaded.
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Import table "EMFACT"."SYS_IMPORT_SCHEMA_16" successfully loaded.
Import table "EMFACT"."SYS_IMPORT_SCHEMA_17" successfully loaded.
Import table "EMFACT"."SYS_IMPORT_SCHEMA_18" successfully loaded.
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Import table "EMFACT"."SYS_IMPORT_SCHEMA_40" successfully loaded.
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Import table "EMFACT"."SYS_IMPORT_SCHEMA_75" successfully loaded.
Import table "EMFACT"."SYS_IMPORT_SCHEMA_76" successfully loaded.
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Import table "EMFACT"."SYS_IMPORT_SCHEMA_85" successfully loaded.
Import table "EMFACT"."SYS_IMPORT_SCHEMA_86" successfully loaded.
Import table "EMFACT"."SYS_IMPORT_SCHEMA_87" successfully loaded.
Import table "EMFACT"."SYS_IMPORT_SCHEMA_88" successfully loaded.
Import table "EMFACT"."SYS_IMPORT_SCHEMA_89" successfully loaded.
Import table "EMFACT"."SYS_IMPORT_SCHEMA_90" successfully loaded.
Import table "EMFACT"."SYS_IMPORT_SCHEMA_91" successfully loaded.
Import table "EMFACT"."SYS_IMPORT_SCHEMA_92" successfully loaded.
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Import table "EMFACT"."SYS_IMPORT_SCHEMA_97" successfully loaded.
Import table "EMFACT"."SYS_IMPORT_SCHEMA_98" successfully loaded.
Import table "EMFACT"."SYS_IMPORT_SCHEMA_99" successfully loaded.
Import table "EMFACT"."SYS_IMPORT_SCHEMA_100" successfully loaded.

```

- 4 > Click **Close** on the **Run System Utilities** window.



Introduction to ADMIN

ADMIN contains the basic setup of the user and facility location. It includes identifying the facility's buildings and departments, as well as editing the standard dropdown lists found throughout EMFACT.

This guide contains the following section(s). Click on the section title to advance to that section:

Set Up Admin

This section outlines the optional steps for editing user information and standard dropdown lists, as well as how to update facility detail. This is also where buildings and departments are identified (required).

Set Up Admin

This section contains the following:

1. Accessing the ADMIN Cue Card
2. Editing User Information
3. Editing Standard Drop Down Lists (optional)
4. Adding Detail to Your Facility Location (optional)
5. Adding Costs (optional)
6. Adding a Building
7. Adding a Department


The steps in this guide are for initial setup of ADMIN; however, the same steps are used for maintenance.

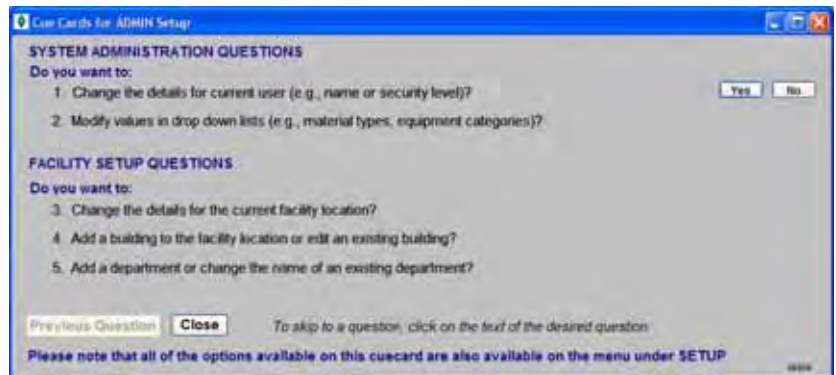
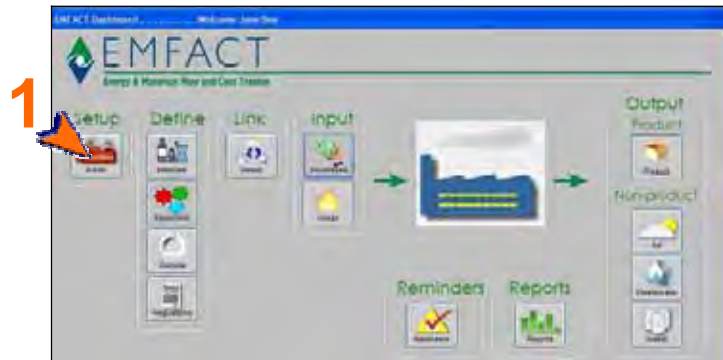
Please review the Quick Start Guide section before starting.

1 Optional: Accessing the ADMIN Cue Card

Using the Cue Card is optional, since every window available through the Cue Card is also accessed from the **Setup** option in the main menu.

To access the cue card for ADMIN Setup:

- 1 > Click the **Admin** button () on the **EMFACT Dashboard**. The **Cue Cards for ADMIN Setup** window will open.



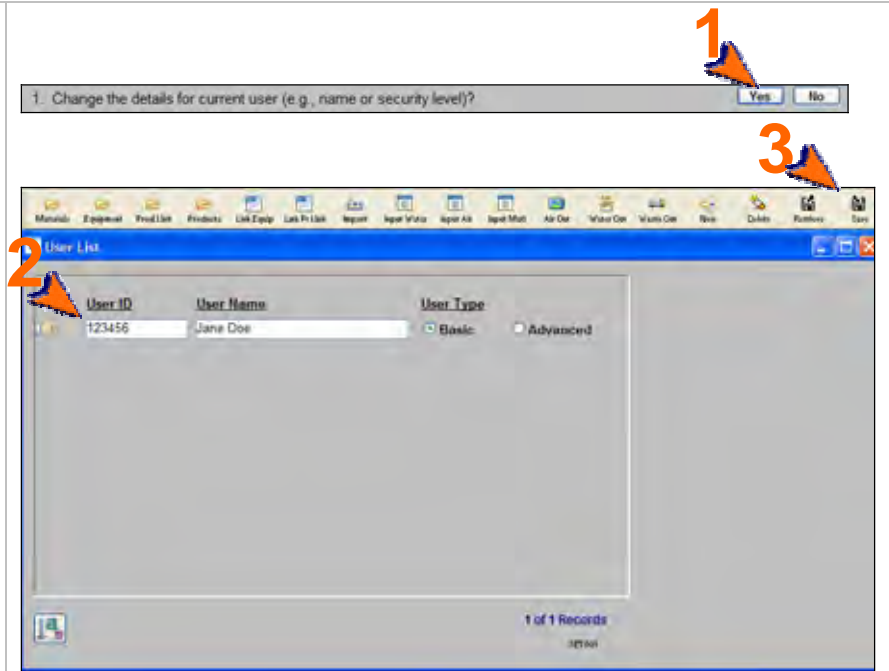
Set Up Admin, cont.

2 Optional: Editing User Information

When EMFACT was installed, you provided a User ID, User Name and User Type. That information can be edited using the following steps:

- 1 > Click **Yes** for the first cue card question. The **User List** window will open.
- 2 > Make changes to the existing data as necessary.

*Note: A **Basic** User will have limited access to the fields on the windows. An **Advanced** User will have more access to the various fields.*
- 3 > Click **Save**.

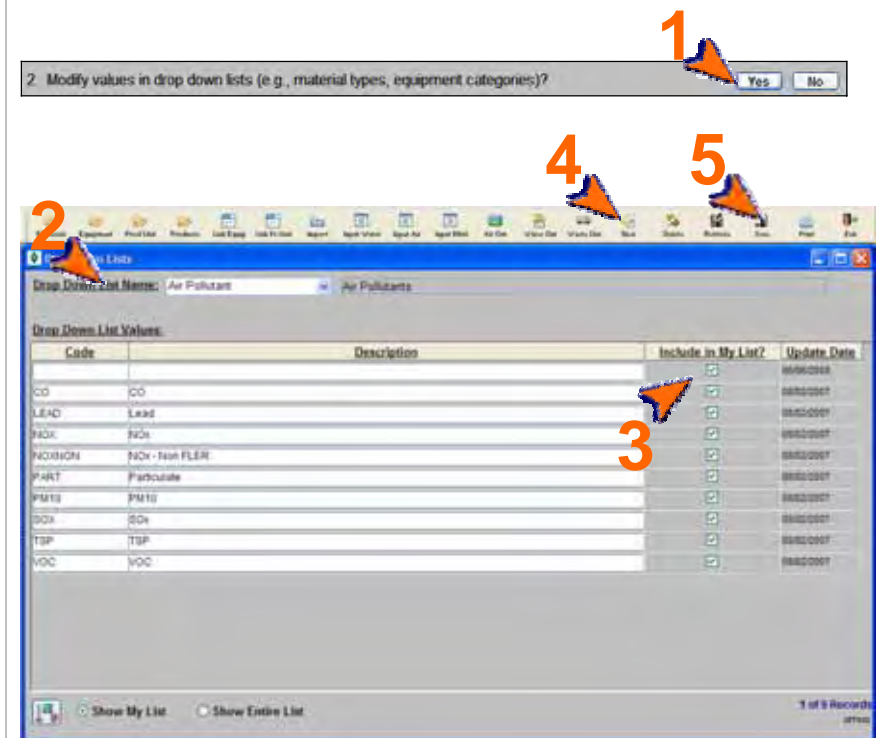


3 Optional: Editing Standard Drop Down Lists

EMFACT is preloaded with recommended values in the dropdown lists. You may, however, exclude values from the dropdown lists or add to the list. **This is advisable ONLY after using EMFACT and becoming a proficient user.**

- 1 > Click **Yes** for the second cue card question. The **Drop Down Lists** window will open.
- 2 > Select the list name from the **Drop Down List Name** dropdown. The window will update to include the values for that dropdown list.
- 3 > To exclude a value from a list, locate the value and uncheck the **Include in My List?** checkbox.
- 4 > To add a value, click **New**. A blank row will display for you to complete.
- 5 > Click **Save**.

Use the **Show My List** and **Show Entire List** radio buttons at the bottom of the window as needed to display the list values.

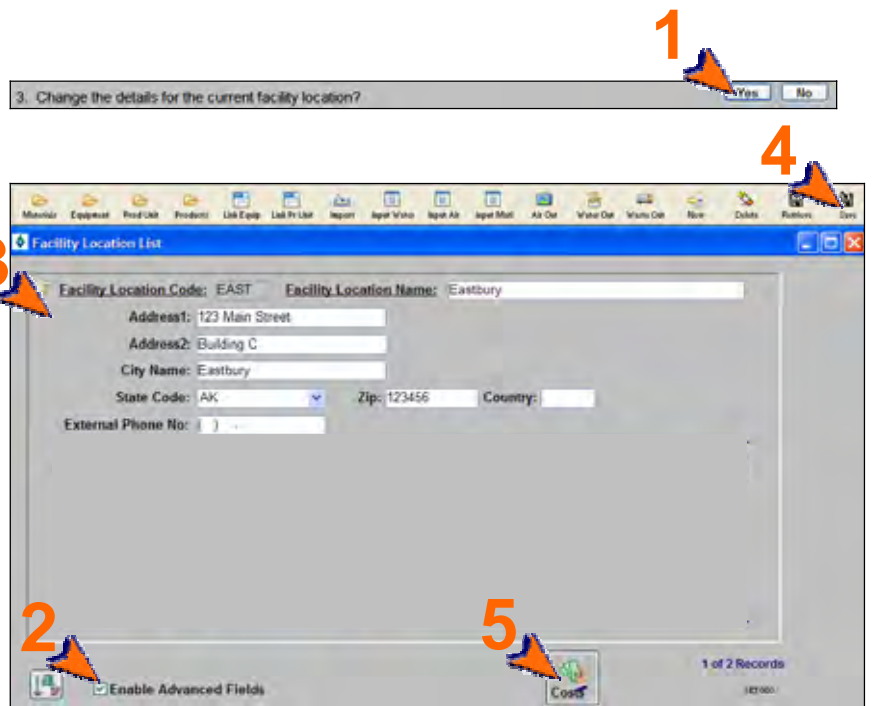


Set Up Admin, cont.

4 Optional: Adding Detail to Your Facility Location

When EMFACT was installed, a Facility Location Code and Name was identified. To add additional details (i.e., address and phone information) for your Facility Location:

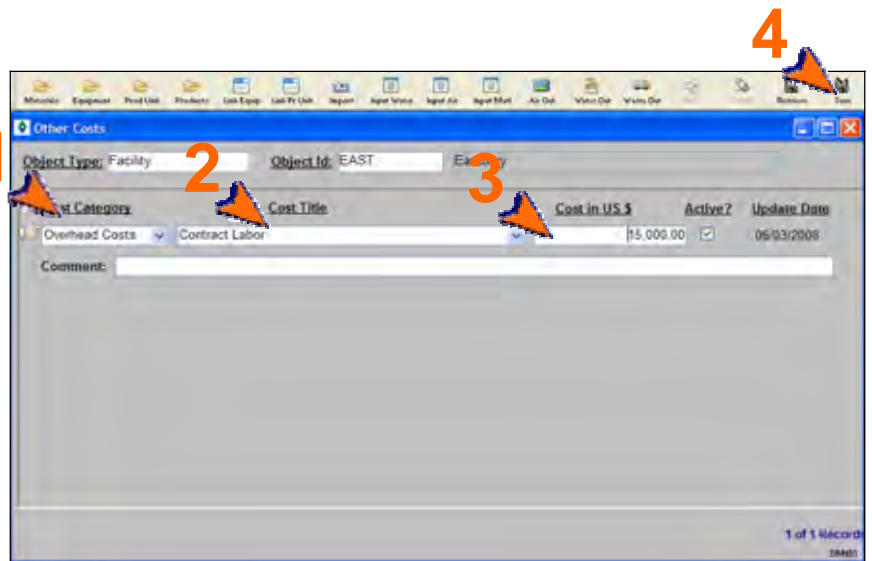
- 1 > Click **Yes** for the third cue card question. The **Facility Location List** window will open.
- 2 > If the window cannot be edited, click **Enable Advanced Fields**.
- 3 > Complete window with the necessary details.
- 4 > Click **Save**.
- 5 > Optional: Click the **Costs** button to maintain costs associated with the facility. The **Other Costs** window will open (see next step).



5 Optional: Adding Costs

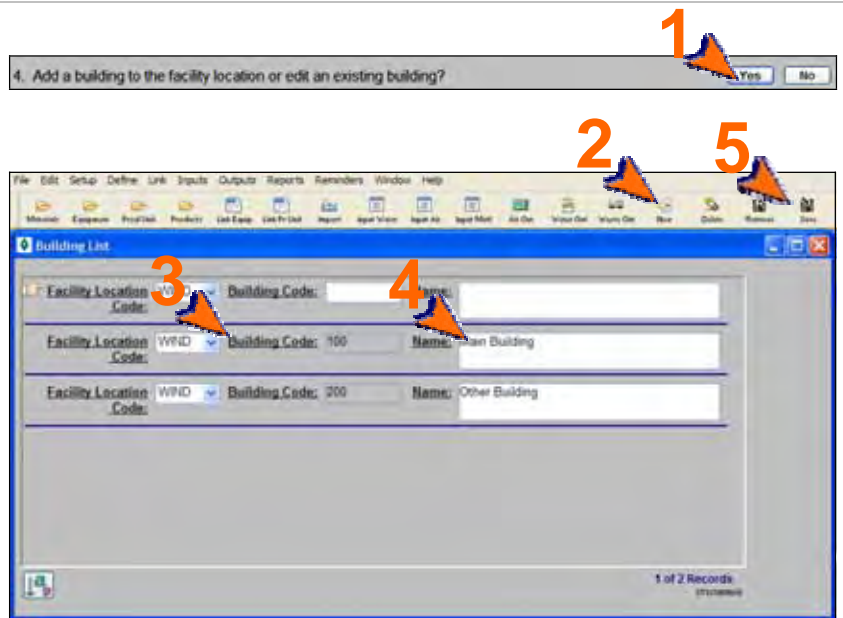
Use the following costs to track various costs associated with the location.

- 1 > Make a selection from the **Cost Category** dropdown.
- 2 > Make a selection from the **Cost Title** dropdown. If a suitable choice is not available, type in a cost title.
- 3 > Complete the **Costs in US \$** field.
- 4 > Click **Save**.

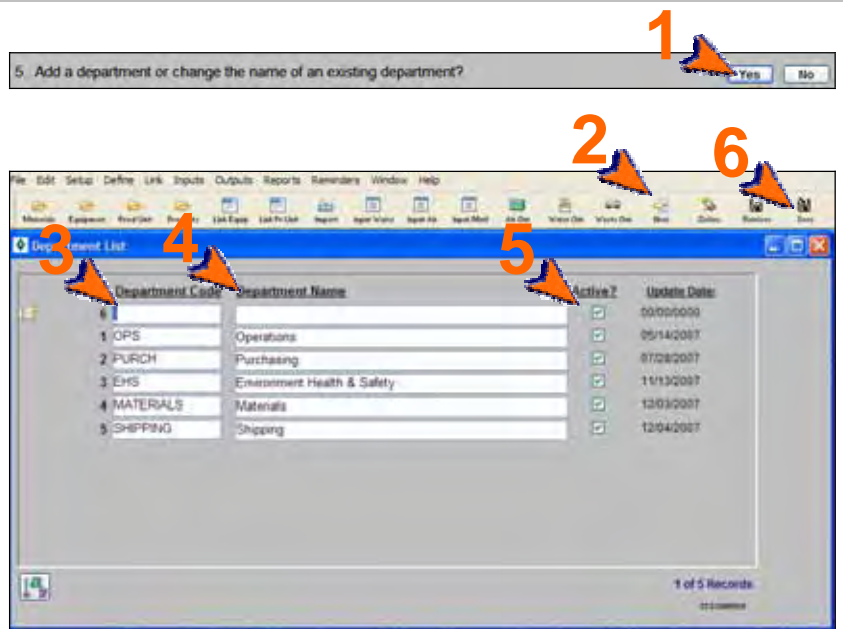


Set Up Admin, cont.

- 6 Adding a Building**
Use the following steps to identify the buildings at your facility.
- 1 > Click **Yes** for the fourth cue card question. The **Building List** window will open.
- For each new building:*
- 2 > Click **New** to display a blank row if necessary.
 - 3 > Complete the **Building Code** field.
 - 4 > Complete the **Name** field.
- Repeat this steps until all buildings are added.*
- 5 > Click **Save**.



- 7 Adding a Department**
Use the following steps to identify the departments at your facility.
- 1 > Click **Yes** for the fifth cue card question. The **Department List** window will open.
- For each new department:*
- 2 > Click **New** to display a blank row if necessary.
 - 3 > Complete the **Department Code** field.
 - 4 > Complete the **Department Name** field.
 - 5 > The **Active?** field defaults to checked and should be changed when it is appropriate.
- Repeat this process until all departments are added.*
- 6 > Click **Save**.



<end of section>

Introduction to Define

Master Data Sources refer to tables (lists) of information that are shared throughout the EMFACT application. They include materials, equipment/production units, outputs (product/intermediate product; air sources, water discharge points, waste types), and regulations. Setting up these data sources correctly promotes consistency by providing standard lists (usually in the form of a dropdown) to choose from when using EMFACT.

Once master data is set up, equipment/production units can be “characterized”. This means that for each piece of equipment, you can identify everything that goes into it and everything that comes out of it. This includes the ability to link the permit number to the equipment, if necessary.

This guide contains the following sections. Click on the title to advance to that section.

Section 1. Define Materials

This section outlines how to set up and maintain the materials that your company uses. This includes MSDS materials (such as paints, thinners, etc.), as well as non-MSDS materials (such as cloth, cardboard, etc.). This section also includes identifying chemical constituents for the material and identifying details about the shipping containers.

Section 2. Define Equipment/Production Units

This section defines the process for identifying the individual pieces of equipment (e.g., surface grinder, vertical lather, etc.) used within your company. Once equipment are added, production units can be identified, if appropriate.

Section 3. Define Outputs

Outputs are the things that are either produced or released at the equipment. They include products/intermediate products, air emissions, water discharge and waste. This section will help you set up your products/intermediate products, air emission sources (stacks), water discharge points, and waste types.

Section 4. Define Regulations

This section will help you maintain a list of permits, orders, registrations and certificates for your facility. The expiration and renewal dates trigger events in the Reminders section of EMFACT.

Section 5. Link Equipment/Production Unit

This section defines the process for characterizing each piece of equipment that was set up in Section 2. This includes identifying each material used, assigning which product/intermediate product is produced, relating the air source and air emission detail, identifying air emission factors for each pollutant, relating discharge points and water pollutants, and identifying the waste that is generated. Linking the equipment/production unit this way allows users the ability to input material usage and then track the outputs (product, air, wastewater, waste) by equipment/production unit.

1. Define Materials

This section contains the following:


1. Accessing the Materials Cue Card (optional)
2. Adding Materials
3. Adding Chemicals
4. Defining Constituents for the Material
5. Associating Synonyms
6. Adding Container Details

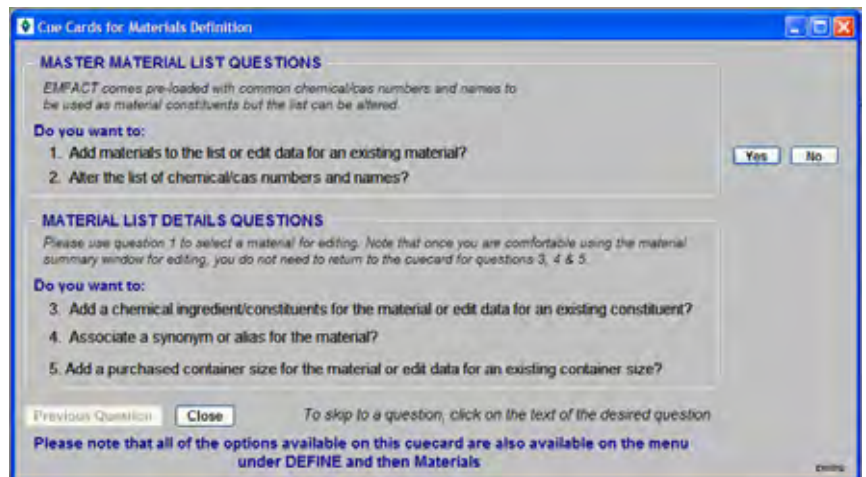
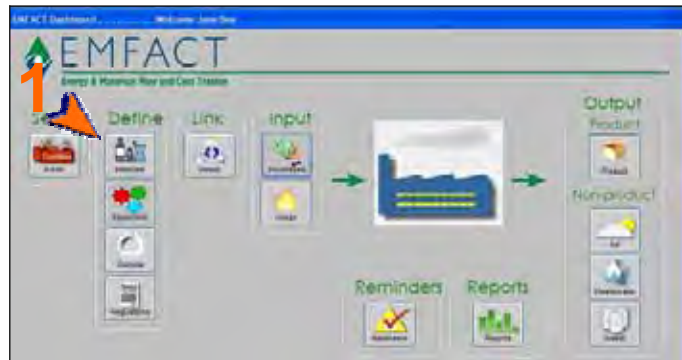
The steps in this guide are for initial setup of materials; however, the same steps are used to maintain materials once they are set up.

Please review the Quick Start Guide section before starting.

1 Optional: Accessing the Materials Cue Card

Using the Cue Card is optional, since every window available through the Materials Cue Card is also accessed from the main menu (**Define > Materials**). To access the cue card for defining materials:


- 1 > Click the Materials button  on the **EMFACT Dashboard**. The **Cue Cards for Materials Definition** window will open.



Define Materials, cont.

2 Adding Materials

A material is anything that can end up as waste. This includes MSDS materials (e.g., paints, thinners, etc.). This window is also used to maintain a list of other non-MSDS materials (e.g. metals, cloths, cardboard, etc.). Follow these steps to add materials:

- 1 > Click **Yes** for the first cue card question. The **Material List** window will open. A shortcut to this window is also available by clicking the Material icon () in the toolbar.

For each material:

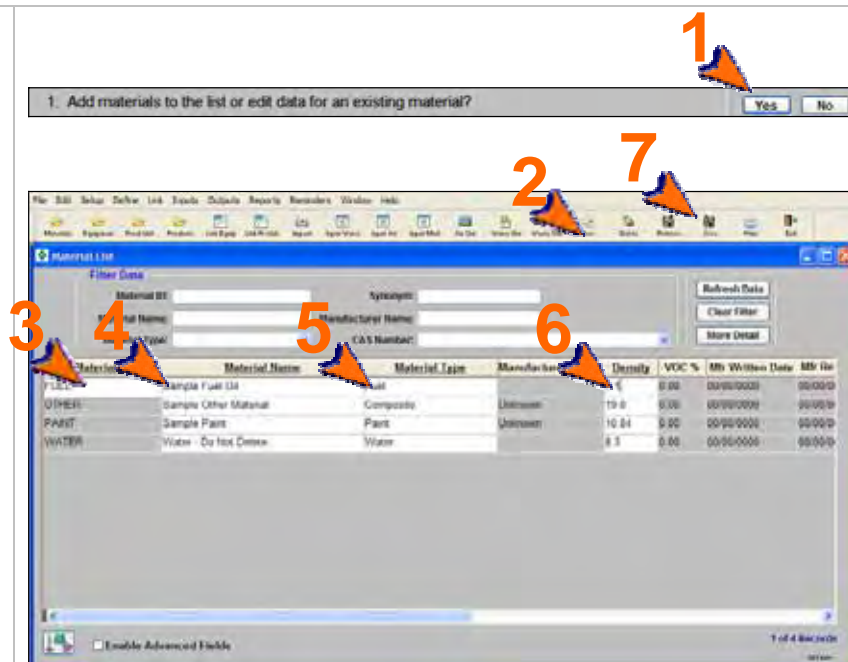
- 2 > Click **New**. A blank row will display for you to complete. You may need to click your cursor in the active window to enable the **New** button.
- 3 > Complete the **Material ID** field.
- 4 > Complete the **Material Name** field.
- 5 > Make a selection from the **Material Type** dropdown.
- 6 > Complete the **Density** field.

Repeat this process until all materials are added.

- 7 > Click **Save**.

If you are making a change to an existing material, search for the material by completing at least one field in the **Filter Data** section then click **Refresh Data**.

*Note: Click **More Detail** to access the **Material Detail** window and add/maintain constituents, synonyms, and container detail. This is reviewed in steps 4-6 of this guide.*



Define Materials, cont.

3 Adding Chemicals (as needed)
EMFACT is loaded with a substantial list of CAS numbers. To check that the CAS numbers used at your facility are already loaded:

- 1 > Click **Yes** for the second cue card question. The **Chemical List** window will open.

For each CAS Number you are checking:

- 2 > Complete one of the fields in the **Filter Data** section.
- 3 > Click **Retrieve**. The window will update with the data matching the search criteria.

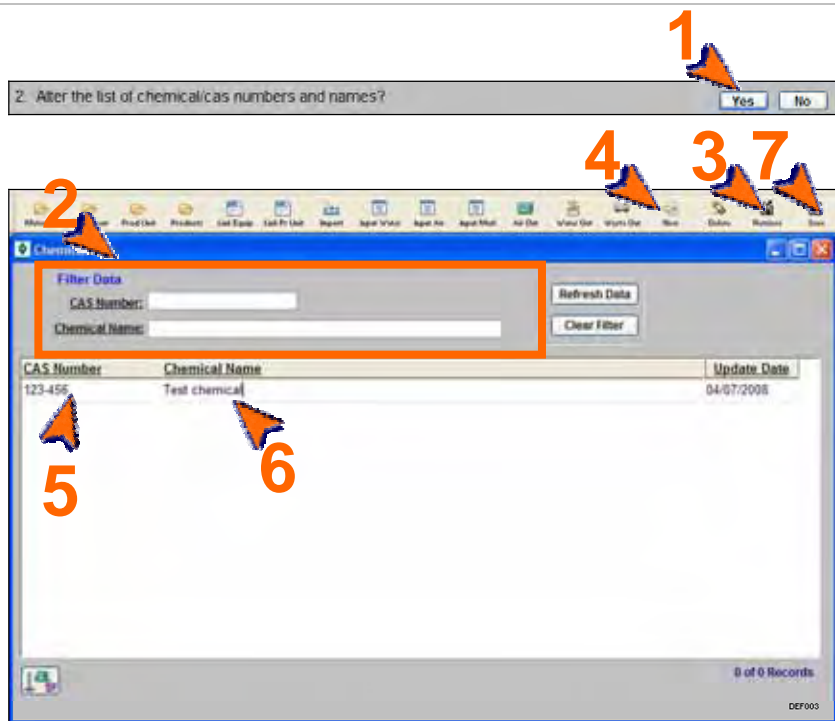
If the CAS Number is not in the search results, it can be added.

For each chemical you want to add:

- 4 > Click **New**. A blank row will display for you to complete.
- 5 > Complete the **CAS Number** field.
- 6 > Complete the **Chemical Name** field.

Repeat this process until all chemicals are added.

- 7 > Click **Save**.



Define Materials, cont.

4 Defining Constituents for the Material

Use the following steps to add chemical ingredients/constituents for the material. The chemical must exist on the Chemical List.

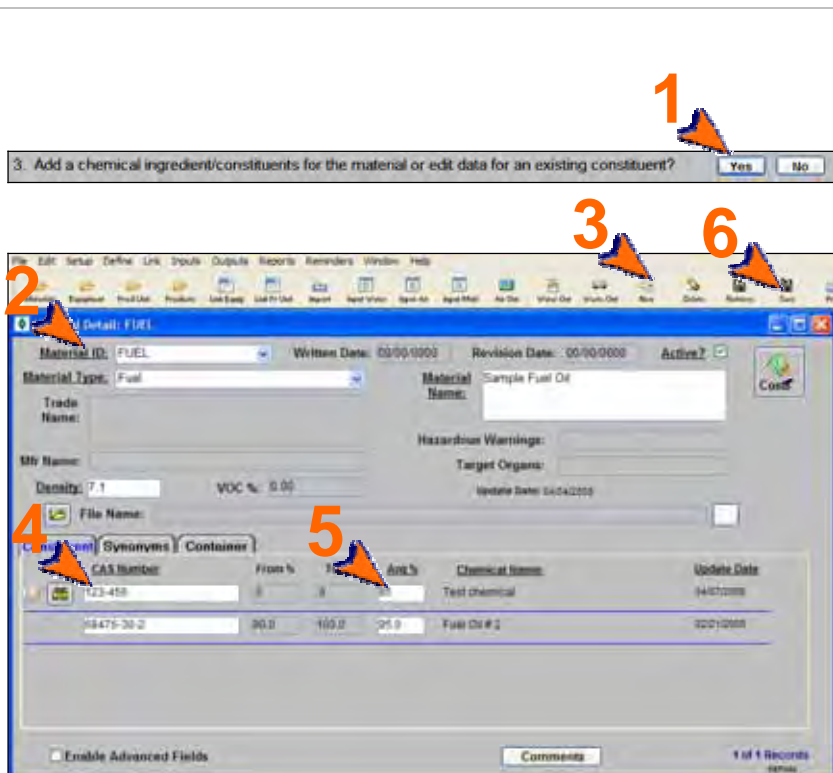
- 1 > Click **Yes** for the third cue card question. The **Material Detail** window will open and display the **Constituent** tab.
- 2 > Make a selection from the **Material ID** dropdown. This dropdown is populated by...

For each constituent:

- 3 > If a blank row does not display on the **Constituent** tab, click **New**.
- 4 > Complete the **CAS Number** field and click **Tab** on your keyboard. If you don't know the CAS Number, click the binoculars icon (🔍) to launch the search process.
- 5 > Complete the **Avg %** field.

Repeat this process until all constituents are added.

- 6 > Click **Save**.



5 Associating Synonyms (as needed)

Follow these steps to associate a synonym or alias with the material:

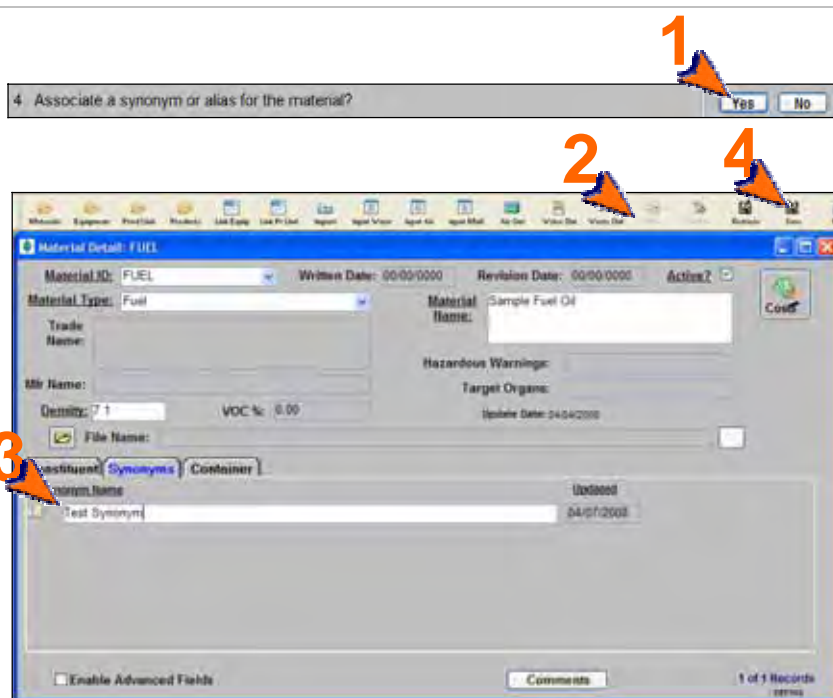
- 1 > Click **Yes** for the fourth cue card question. The **Material Detail** window will open and display the **Synonyms** tab.

For each synonym:

- 2 > If a blank row does not display on the **Synonyms** tab, click **New**.
- 3 > Complete the **Synonym Name** field.

Repeat this process until all synonyms are added.

- 4 > Click **Save**.



Define Materials, cont.

6 Adding Container Detail

Follow these steps to add size/weight container detail (as it is purchased) for the material.

Note: This step is only necessary if you will be documenting material purchases.

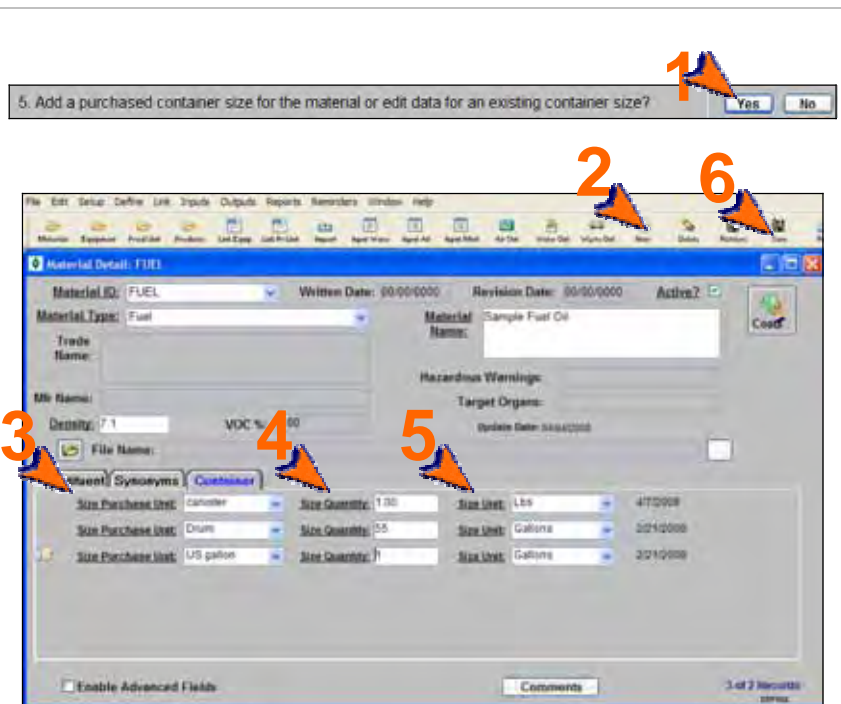
- 1 > Click **Yes** for the fifth cue card question. The **Material Detail** window will open and display the **Container** tab.



For each container you are adding:

- 2 > If a blank row does not display, click **New**.
- 3 > Make a selection from the **Size Purchase Unit** field.
- 4 > Enter a number in the **Size Quantity** field.
- 5 > Select **Gallons** or **Lbs** from the **Size Unit** field.

Repeat this process until all containers are added.

- 6 > Click **Save**.



You can reopen and update these windows as often as it is necessary. Use the **New** () and **Delete** () buttons in the toolbar to add or remove detail. Be sure to click **Save** when you are done.

<end of section>

2. Define Equipment/Production Units


This section contains the following:

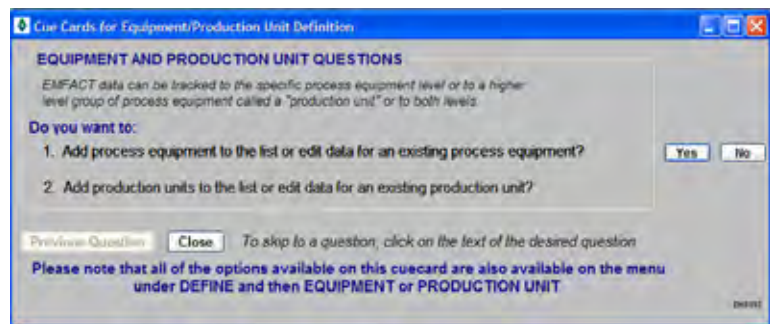
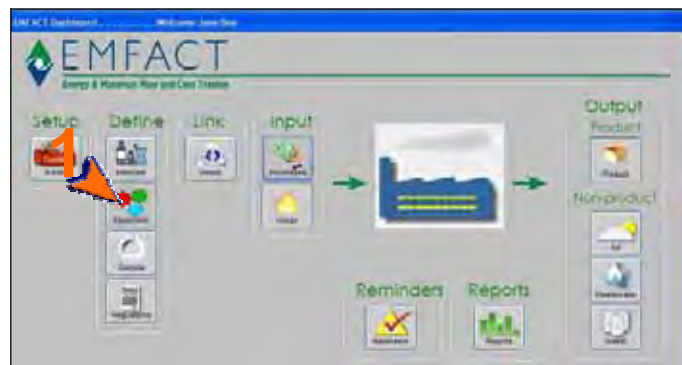
1. Accessing the Equipment/Production Unit Cue Card
2. Adding a New Piece of Equipment
3. Adding Equipment Details
4. Maintaining Equipment Costs (optional)
5. Setting up Production Units

The steps in this guide are for initial setup of equipment/productions units; however, the same steps are used for maintenance once they are set up.

1 Optional: Accessing the Equipment/Production Unit Cue Card

Using the Cue Card is optional, since every window available through the Cue Card is also accessed from the main menu (Define > Equipment).


- 1 > Click the **Equipment** button () on the **EMFACT Dashboard**. The **Cue Cards for Equipment/Production Unit Definition** window will open.



Define Equipment/Production Units, continued

2 Adding a New Piece of Equipment

Use the following steps to add equipment:

- 1 > Click **Yes** for the first cue card question. The **Equipment List** window will open. A shortcut to this window is available by clicking the **Equipment button** () in the toolbar.

For each piece of equipment:

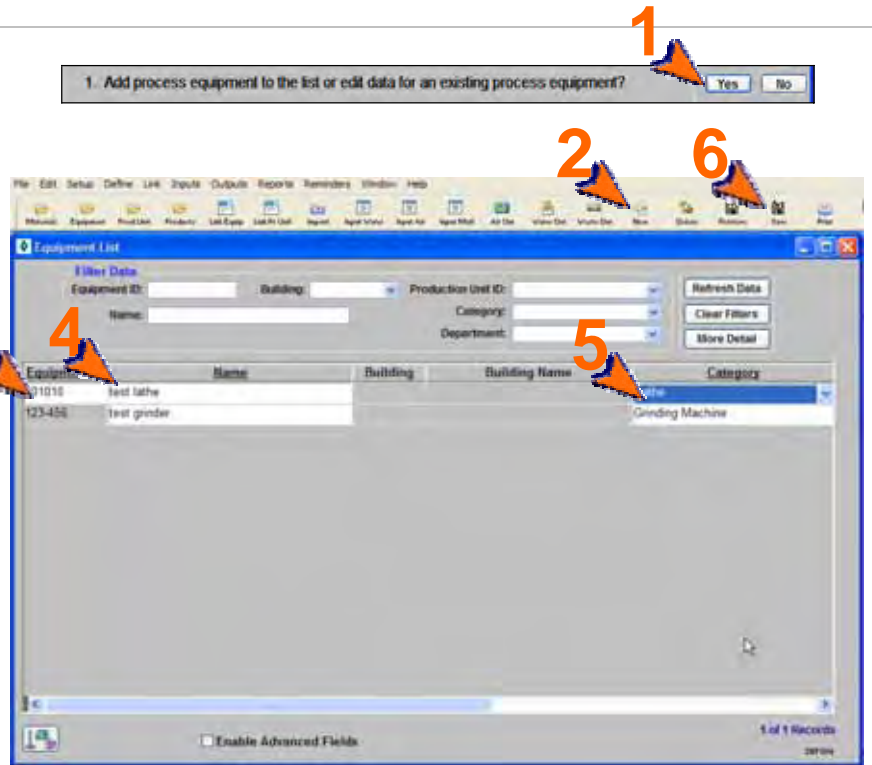
- 2 > Click **New**. A blank row will display for you to complete.
- 3 > Complete the **Equipment ID** field.
- 4 > Complete the **Name** field.
- 5 > Make a selection from the **Category** dropdown.

Repeat this process until all pieces of equipment are added.

- 6 > Click **Save**.

*Note: If you are making a change to an existing equipment id, search for it by completing at least one field in the **Filter Data** section then click **Refresh Data**.*

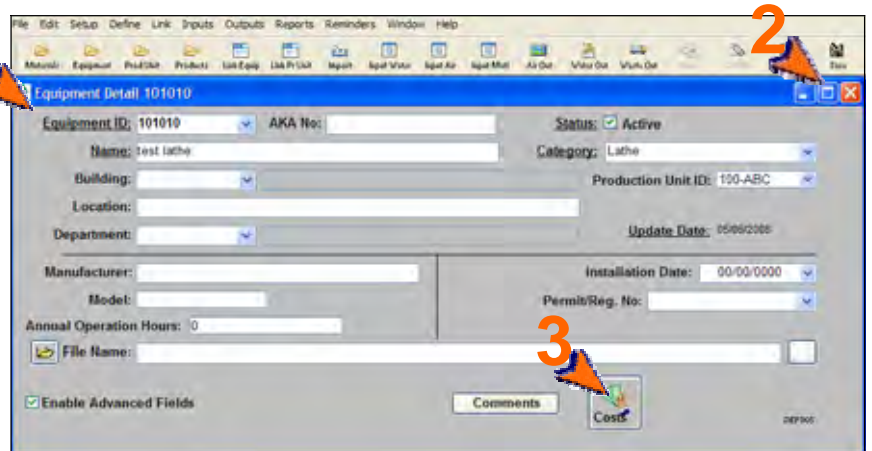
- 7 > *Optional:* Click **More Detail** to maintain additional optional details about the equipment. The **Equipment Detail** window will open (see Step 3).



3 Adding Equipment Details (optional)

Follow these steps to add optional details about an Equipment ID. *You must be an Advanced User or click the **Enable Advanced Fields** checkbox to perform this step.*

- 1 > Review the window and complete the desired fields.
- 2 > Click **Save**.
- 3 > *Optional:* Click the **Costs** button to maintain costs about the equipment. The **Other Costs** window will open (see next step).

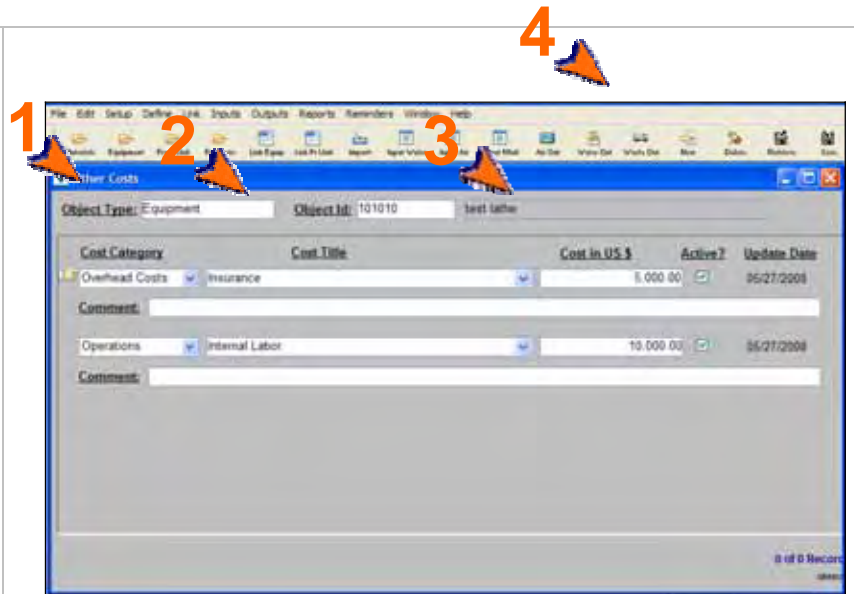


Define Equipment/Production Units, continued

4 Adding Equipment Costs (optional)

Follow these steps to maintain costs associated with the equipment.

- 1 > Make a selection from the **Cost Category** dropdown.
- 2 > Make a selection from the **Cost Title** dropdown. If a suitable choice is not available, type in a cost title.
- 3 > Complete the **Costs in US \$** field.
- 4 > Click **Save**.




Define Equipment/Production Units, continued

5 Setting Up Production Units

Setting up production units requires you to give the unit a unique ID and name. Once that is done, you can identify which pieces of equipment belong to the production unit.

Use the following steps to set up a production unit:


- 1 > Click **Yes** for the second cue card question. The **Production Unit List** window will open. Alternatively, click the **Prod Unit icon** () in the toolbar.

For each production unit:

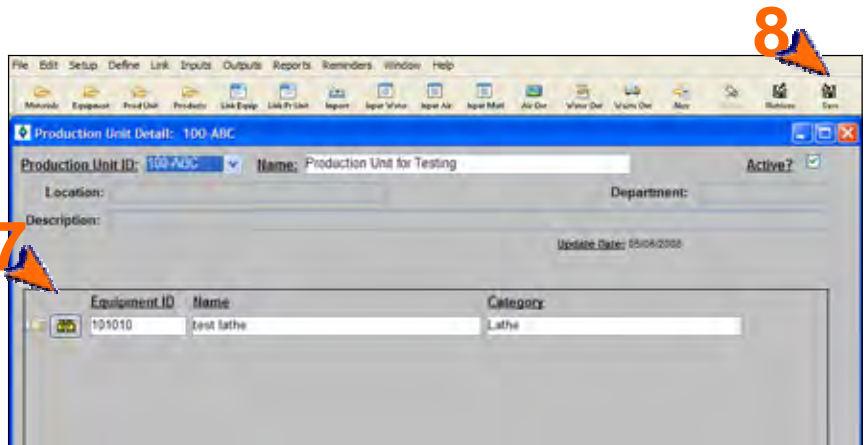
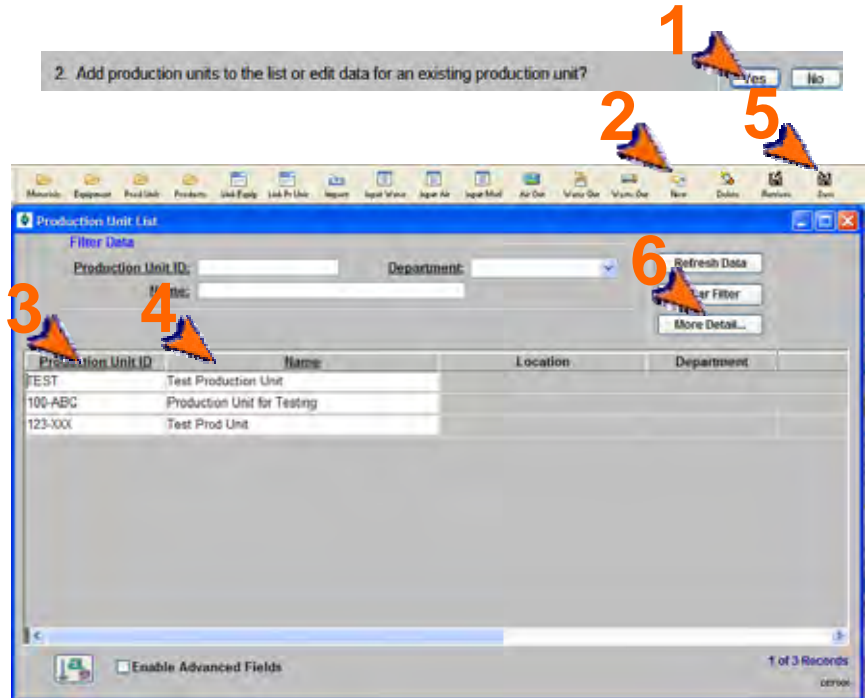
- 2 > Click **New**. A blank row will display for you to complete.
- 3 > Enter a **Production Unit ID**.
- 4 > Complete the **Name** field.
- 5 > Click **Save**.



*Note: If you are making a change to an existing production unit, search for it by completing at least one field in the **Filter Data** section then click **Refresh Data**.*

To identify which equipment belong to the production unit:

- 6 > Click **More Detail**. The **Production Unit Detail: (prod unit id)** window will display.
- 7 > Complete the **Equipment ID** field. If you don't know the Equipment Id, click the binoculars icon () to launch the search process.
- 8 > Click **Save**.

Repeat this process until all production units are added.



You can reopen and update these windows as often as it is necessary. Use the **New** () and **Delete** () buttons in the toolbar to add or remove detail. Be sure to click **Save** when you are done.

<end of section>

3. Define Outputs


This section contains the following:

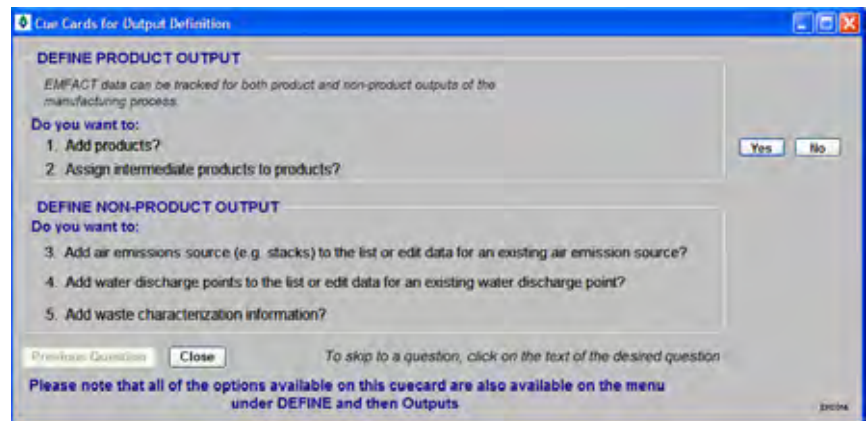
1. Accessing the Outputs Cue Card (optional)
2. Adding Products
3. Adding Intermediate Products
4. Adding Air Emissions Sources (stacks)
5. Adding Air Source Detail (optional)
6. Adding Water Discharge Points
7. Adding Waste Types
8. Relating EPA Codes to the Waste Types (optional)
9. Maintaining Product, Air Emissions Source and Discharge Point Costs (optional)

The steps in this guide are for initial setup of outputs; however, the same steps are used for maintenance once they are set up.

1 Optional: Accessing the Output Cue Card

Using the Cue Card is optional, since every window available through the Cue Card is also accessed from the main menu (**Define > Outputs**). Users may elect to access windows directly from the main menu (or toolbar if applicable), rather than use the Cue Card, once they are more experienced using the EMFACT application.


- 1 > Click the Outputs button () on the **EMFACT Dashboard**. The **Cue Cards for Output Definition** window will open.



Define Outputs, cont.

2 Adding Products

Use the following steps to document distinct products produced by the company:

- 1 > Click **Yes** for the 1st cue card question. The **Product List** window will open. Alternatively, click the Products icon () in the toolbar.

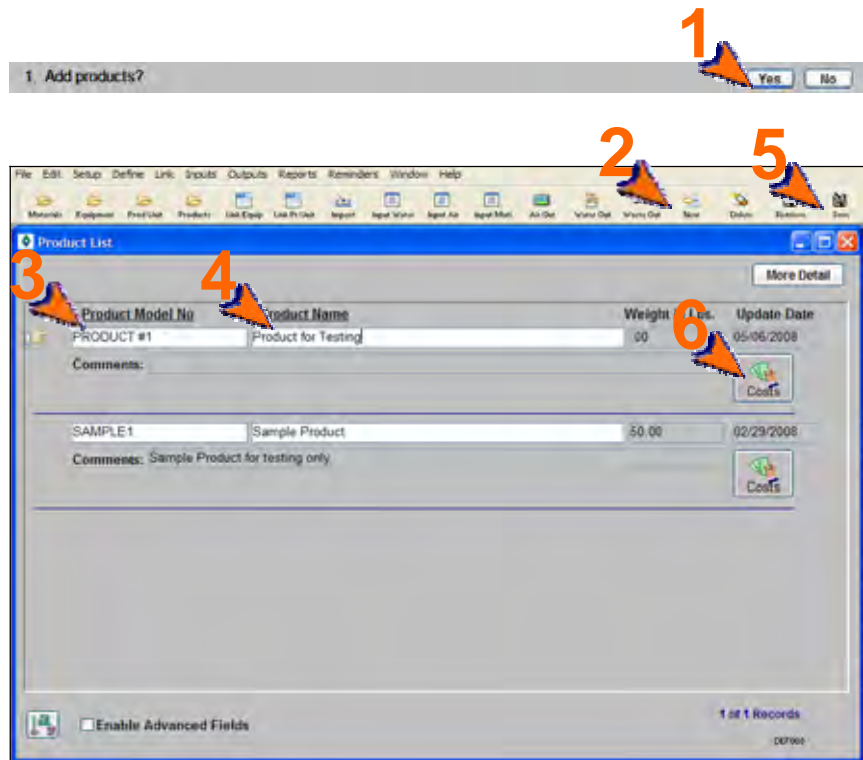
For each product:

- 2 > Click **New**. A blank row will display for you to complete.
- 3 > Complete the **Product Model No** field.
- 4 > Complete the **Product Name** field.

*Note: The **Weight in Lbs** field is necessary if you plan on entering product output volume.*

Repeat this process until all products are added.

- 5 > Click **Save**.
- 6 > *Optional:* Click the **Costs** button to maintain costs about the product. The **Other Costs** window will open (see step 9).



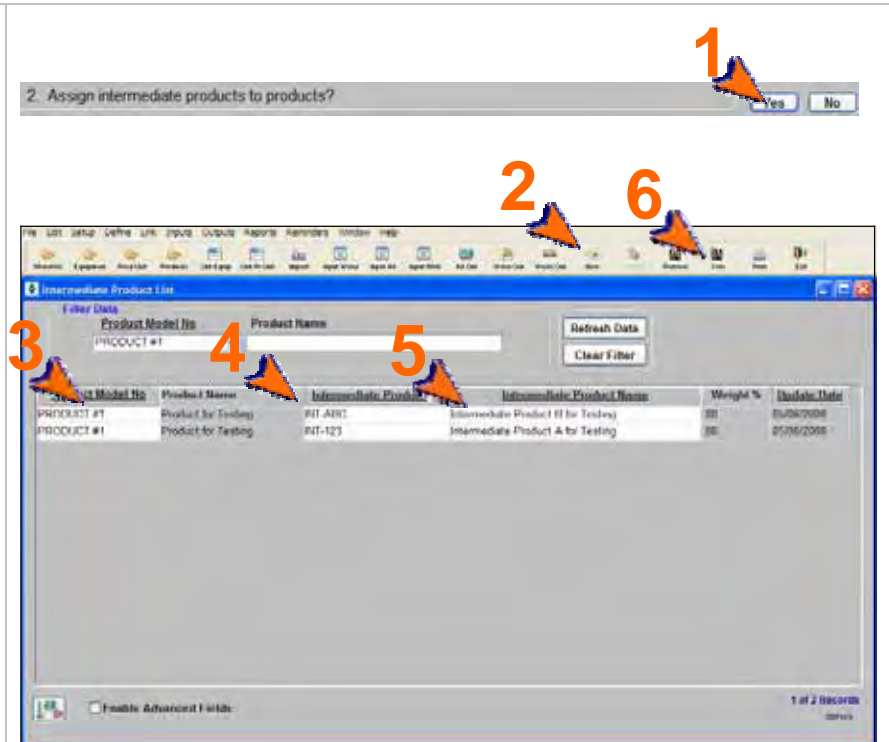
Define Outputs, cont.

3 Adding Intermediate Products

Use the following steps to document distinct sub/intermediate products included in each product.

- 1 > Click **Yes** for the 2nd cue card question. The **Intermediate Product List** window will open. Alternatively, click **More Detail** on the **Product List** window (*not shown*).
 - 2 > Click **New** to display a blank row.
 - 3 > Make a selection from the **Product Model No** dropdown. This dropdown is populated with products entered on the **Product List** window.
 - 4 > Complete the **Intermediate Product No** field.
 - 5 > Complete the **Intermediate Product Name** field.
- Repeat this process until all products are added.*
- 6 > Click **Save**.

*Note: If you are making a change to an existing product, search for it by completing at least one field in the **Filter Data** section then click **Refresh Data**.*



Define Outputs, cont.

4 Adding Air Emissions Sources

Follow these steps to maintain the list of air emission sources.

- 1 > Click **Yes** for the 3rd cue card question. The **Air Source List** window will open.

For each air emissions source:

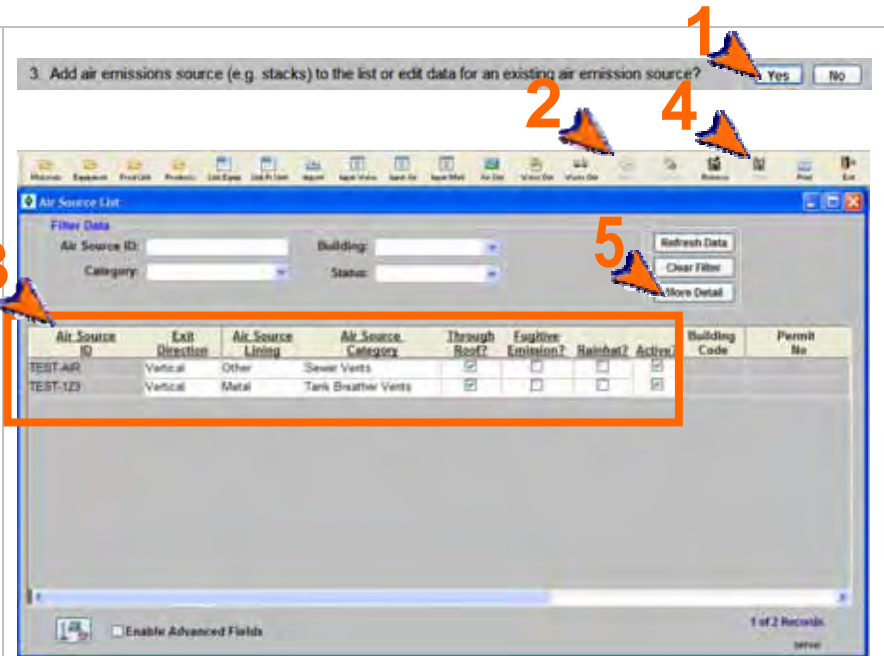
- 2 > Click **New**. A blank row will display for you to complete.
- 3 > Perform the following:
 - Complete the **Air Source ID** field.
 - The **Exit Direction** defaults to **Vertical** and should be changed if necessary.
 - Make a selection from the **Air Source Lining** dropdown.
 - Make a selection from the **Air Source Category** dropdown.
 - The **Through Roof?** field is checked and should be unchecked if appropriate.
 - Check the **Fugitive Emission?** and **Rainhat?** checkboxes if appropriate.
 - The **Active** checkbox defaults to checked and should be unchecked when necessary.

Repeat this process until all products are added.

- 4 > Click **Save**.

*Note: If you are making a change to an existing air source, search for it by completing at least one field in the **Filter Data** section then click **Refresh Data**.*

- 5 > *Optional:* Click **More Detail** to maintain optional details about the source. The **Air Source Detail** window will open (see next step).



Define Outputs, cont.

5 Optional: Adding Air Source Detail

Follow these steps to add additional details about an Air Source ID. *You must be an Advanced User or click the **Enable Advanced Fields** checkbox to perform this step.*

- 1 > Review the window and complete the desired fields.
- 2 > Click **Save**.
- 3 > *Optional:* Click the **Costs** button to maintain costs about the air source. The **Other Costs** window will open (see step 9).

6 Adding Discharge Points

Follow these steps to maintain a list of water discharge points.

- 1 > Click **Yes** for the 4th cue card question. The **Water Discharge Point List** window will open.

For each discharge point:

- 2 > Click **New**. A blank row will display for you to complete.
- 3 > Enter the Discharge Serial Number in the **DSN** field.
- 4 > Complete the **Description** field.
- 5 > Make a selection from the **Discharge Point Type** dropdown.
- 6 > The **Active** checkbox defaults to being checked and should be unchecked when appropriate.

Repeat this process until all products are added.

- 7 > Click **Save**
- 8 > *Optional:* Click the **Costs** button to maintain costs about the equipment. The **Other Costs** window will open (see step 9).

*Note: Discharge Points can be associated with a **Permit Nbr** (you must enable advanced fields) once permits are set up (see section in User Guide on Defining Regulations).*

Define Outputs, cont.

7 Adding Waste Types
Follow these steps to maintain a list of waste types.

1 > Click **Yes** for the 5th cue card question. The **Waste Type List** window will open.

For each new waste type:

2 > Click **New**. A blank row will display for you to complete.

3 > Make a selection from the **Waste Type** dropdown. If you are unable to find a suitable waste type, click your cursor in the **Waste Type** field and type an entry.

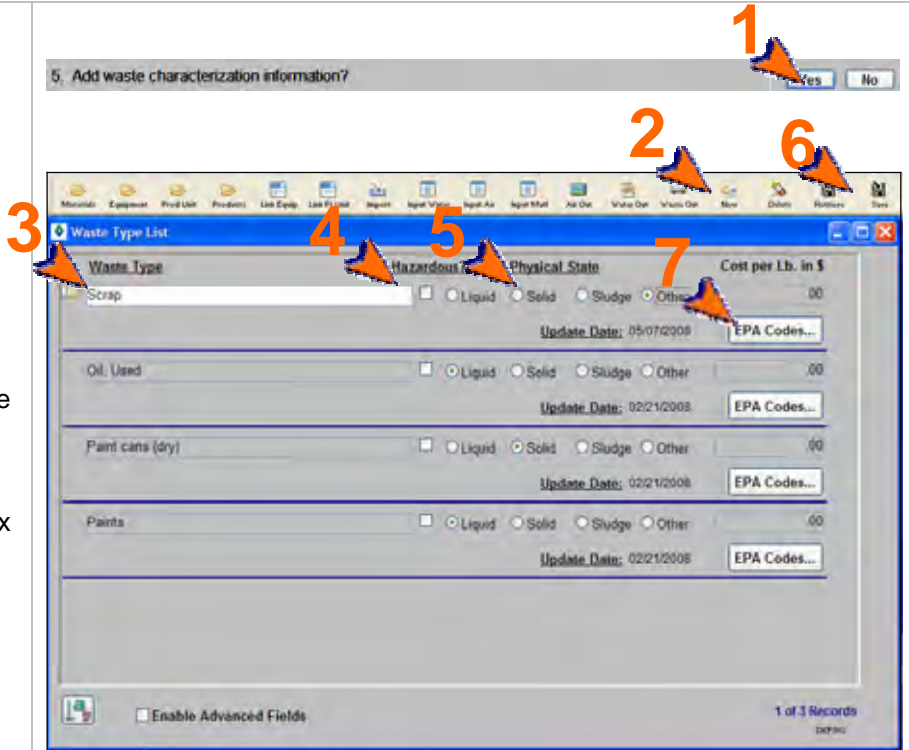
4 > Check the **Hazardous?** checkbox if it is appropriate.

5 > Make a selection from the **Physical State** choices.

Repeat this process until all products are added.

6 > Click **Save**.

7 > *Optional:* Click **EPA Codes...** to relate one to many EPA codes to the waste type, The **Waste Type – EPA Codes** window will open (see next step).



8 Optional: Relating EPA Codes to the Waste Type

Follow these steps to relate one to many EPA codes to the waste type:

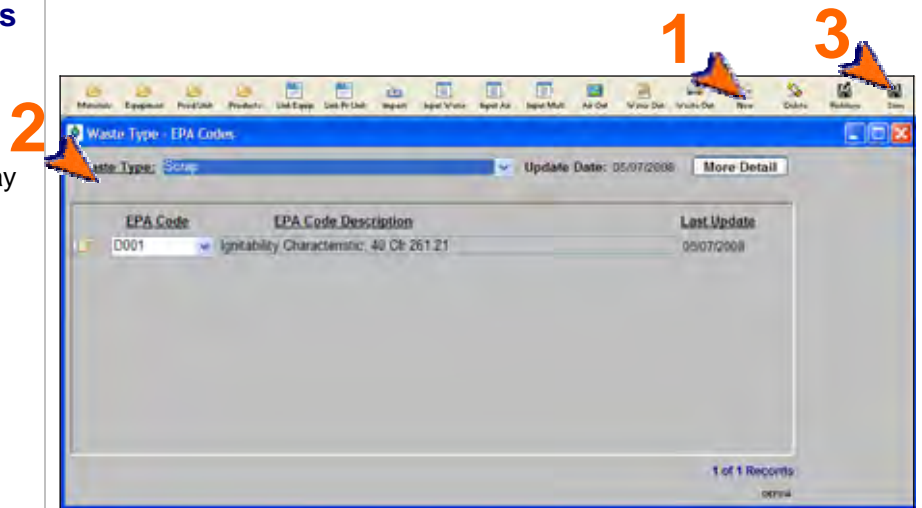
1 > If necessary, click **New** to display a blank row.

2 > Make a selection from the **EPA Code** dropdown.

3 > Click **Save**.

Repeat this process until all products are added.

*Note: The **More Detail** button brings you back to the **Waste Type List** window.*



Define Ouputs, cont.

9 Optional: Maintaining Product, Air Emissions Source, and Discharge Point Costs

The same window is used to maintain costs for a product, air emission source, or discharge point (show here for a Discharge Point).



- 1 > Make a selection from the **Cost Category** dropdown.
- 2 > Make a selection from the **Cost Title** dropdown. If a suitable choice is not available, type in a cost title.
- 3 > Complete the **Costs in US \$** field.
- 4 > Click **Save**.

The screenshot shows a software window titled "Other Costs" with a toolbar at the top. The window contains the following fields and controls:

- Object Type:** A dropdown menu set to "Discharge Point".
- Object Id:** A text field containing "ABC-123".
- Discharge Point for Testing:** A text field.
- Cost Category:** A dropdown menu set to "Overhead Costs".
- Cost Title:** A dropdown menu set to "insurance".
- Cost in US \$:** A text field containing "1,200.00".
- Active?:** A checkbox that is checked.
- Update Date:** A text field containing "05/15/2008".
- Comment:** A large text area.

Four orange callout boxes with arrows point to the following elements:

- 1: Points to the "Object Type" dropdown.
- 2: Points to the "Cost Category" dropdown.
- 3: Points to the "Cost in US \$" field.
- 4: Points to the "Save" button in the toolbar.

You can reopen and update these windows as often as it is necessary. Use the **New** () and **Delete** () buttons in the toolbar to add or remove detail. Be sure to click **Save** when you are done.

<end of section>

4. Defining Regulations

This section contains the following:

1. Adding Permits
2. Adding Regulatory References (optional)
3. Viewing Events & Related EMFACT Data

The steps in this guide are for initial setup of regulations (e.g., permits, orders, etc.); however, the same steps are used for maintenance once they are set up.

*Note: A Cue Card is not available for defining regulations. Instead, windows can be accessed directly from the **Define > Regulations** option on the main menu as well as the **Regulations** button on the **EMFACT Dashboard** window.*

1 Adding Permits

Use the following steps to maintain the list of permits, orders, registrations, and certificates at your facility.

- 1 > Click the **Regulations** icon (). The **Permit List** window will open.

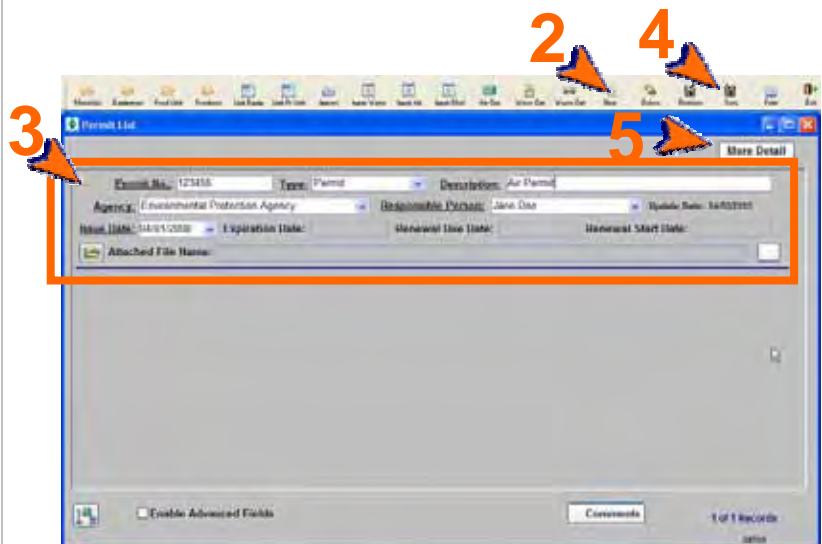
For each permit:

- 2 > Click **New**. A blank row will display for you to complete.
- 3 > Perform the following:
 - Complete the **Permit No** field.
 - Make a selection from the **Type** dropdown.
 - Complete the **Description** field.
 - Make a selection from the **Agency** dropdown.
 - Make a selection from the **Responsible Person** dropdown.
 - Enter the **Issue Date**.

Repeat this process until all products are added.

- 4 > Click **Save**.
- 5 > *Optional:* Click **More Detail** to document regulatory references and/or citations for the permit. The **Permit Detail** window will open (see next step).

*Note: **Expiration Date**, **Renewal Due Date**, and **Renewal Start Date** trigger events in the Reminders list. You must enable **Advanced Fields** to access these fields.*



Defining Regulations, cont.

2 Optional: Adding Regulatory References

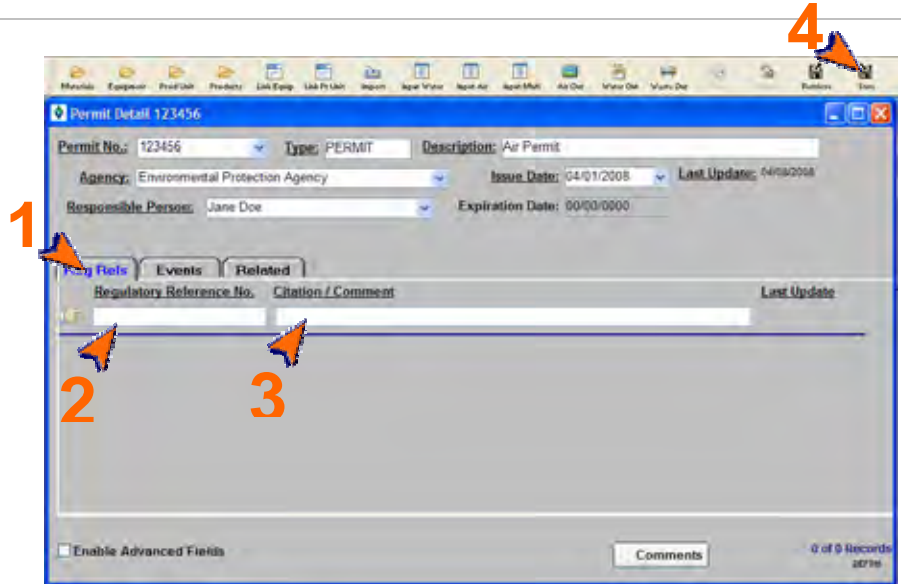
On the **Permit Detail** window:

To add regulatory references:

- 1 > Click the **Reg Refs** tab.
- 2 > Complete the **Regulatory Reference No.** field.
- 3 > Complete the **Citation/Comment** field.

Repeat this process until all references are added.

- 4 > Click **Save**.



3 Viewing Events & Related EMFACT Data


On the **Permit Detail** window:

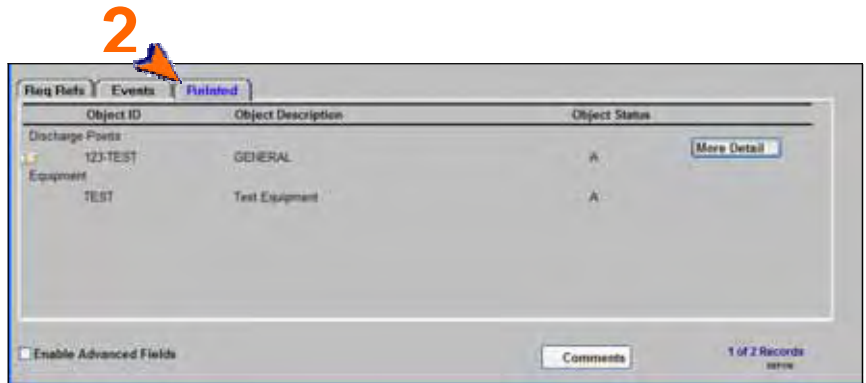
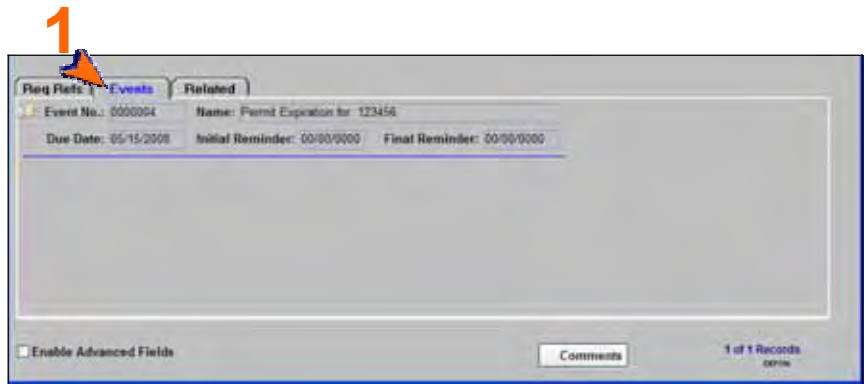
To add view permit reminders:

- 1 > Click the **Events** tab. A list of events related to the permit will display on the tab. Data is read-only and cannot be edited.

To view a list of data that has previously been associated with the permit:

- 2 > Click the **Related** tab. EMFACT data (inventory equipment, inventory air sources, and inventory water sources) that have been related to the permit will display. Data is read-only and cannot be edited.

*Note: Click **More Detail** on the **Related** tab to go to the window for the object to which the hand () is pointing.*



<end of section>

5. Link Equipment & Production Units


This section contains the following:

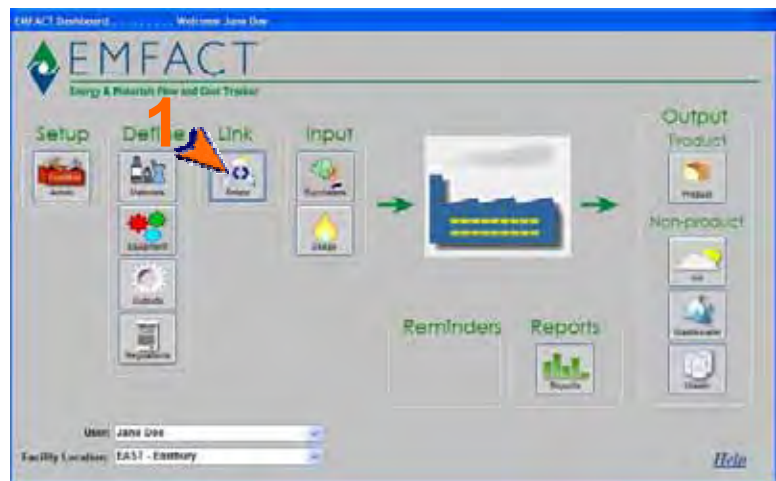
1. Accessing the Cue Card for Characterization Setup
2. Locating the Equipment ID/Production Unit ID
3. Linking Materials
4. Linking Products/Intermediate Products
5. Linking Air Sources
6. Linking Emission Details
7. Linking Air Emissions Factors
8. Linking Discharge Points
9. Linking Water Pollutants
10. Linking Waste Types

The steps in this guide are for linking equipment/productions units for the first time; however, the same steps are used for maintenance once they are set up.

1 Optional: Accessing the Cue Card for Characterization Setup

Using the Cue Card is optional, since every window available through the Cue Card is also accessed from the main menu (**Link > Equipment** or **Link > Production Unit**).

- 1 > Click the **Relate** button () on the **EMFACT Dashboard**. The **Cue Cards for Characterization Setup** window will open.





Link Equipment & Production Units, cont.

2 Locating the Equipment ID or Production Unit ID

Use the following steps to search for the piece of equipment or production unit.

- 1 > Click **Yes** for the 1st or 9th cue card question (depending on whether you're characterizing a piece of equipment or production unit).

For equipment, the **Equipment Links for:** window will open. A shortcut to this window is also available by clicking the **Link Equip** icon () in the toolbar.

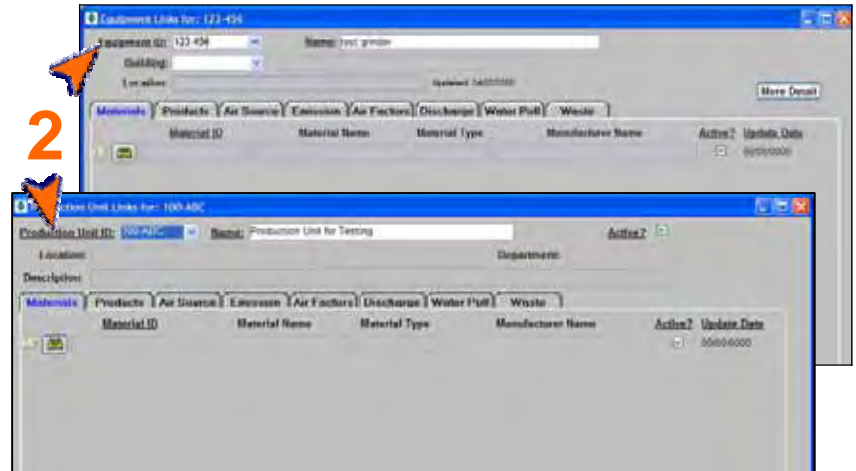
For production units, the **Production Unit Links for:** window will open. A shortcut to this window is also available by clicking the **Link Pr Unit** icon () in the toolbar.

- 2 > Make a selection from the **Equipment ID** dropdown (or **Production Unit ID** dropdown). Only equipment/production units that have been set up in EMFACT will display in the dropdown.

*Note: The **More Detail** button on the **Equipment Links for:** window opens the **Equipment Detail** window for this Equipment ID. Refer to Module2; Section 2 (Defining Equipment/Production Units) for more information on these windows.*

Do you want to relate the following to equipment:
1. Materials

Do you want to relate the following to production unit:
9. Materials



The remaining instructions explain the characterization of an Equipment ID, however, the same instructions are used for characterizing a Production Unit ID.

Link Equipment & Production Units, cont.

3 Linking Materials
 Follow these steps to identify the material(s) being used at the equipment. Materials must be defined prior to performing this step.

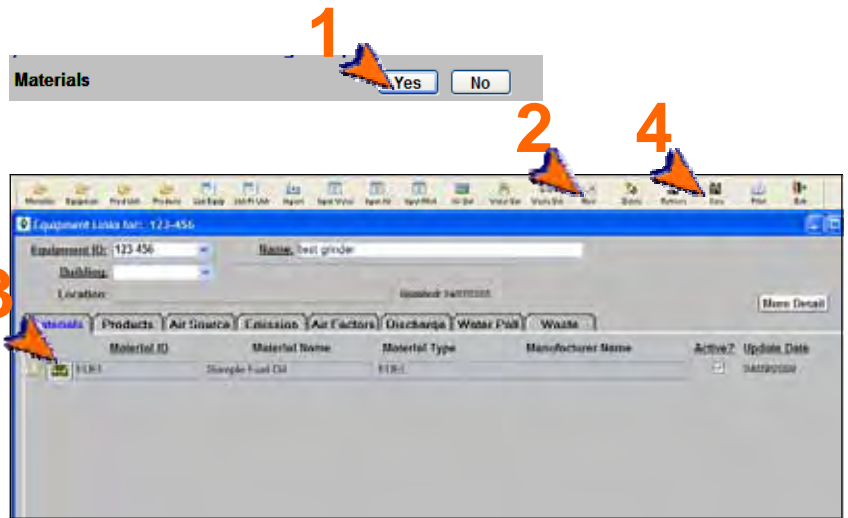
- 1 > If the **Equipment Links for: (Id number)** window is not open, click **Yes** for the **Materials** question on the cue card. The **Materials** tab on the **Equipment Links for: (Id number)** window will display.

For each material:

- 2 > Click **New** to display a blank row (if necessary). You may need to click your cursor in the active window to enable the **New** button.
- 3 > Make a selection from the **Material ID** field. If necessary, click the yellow binoculars icon to launch the search process.

Repeat this process until all materials are identified.

- 4 > Click **Save**.



4 Linking Products/Intermediate Products

Follow these steps to assign product/intermediate products to the equipment. Products must be set up prior to performing this step.

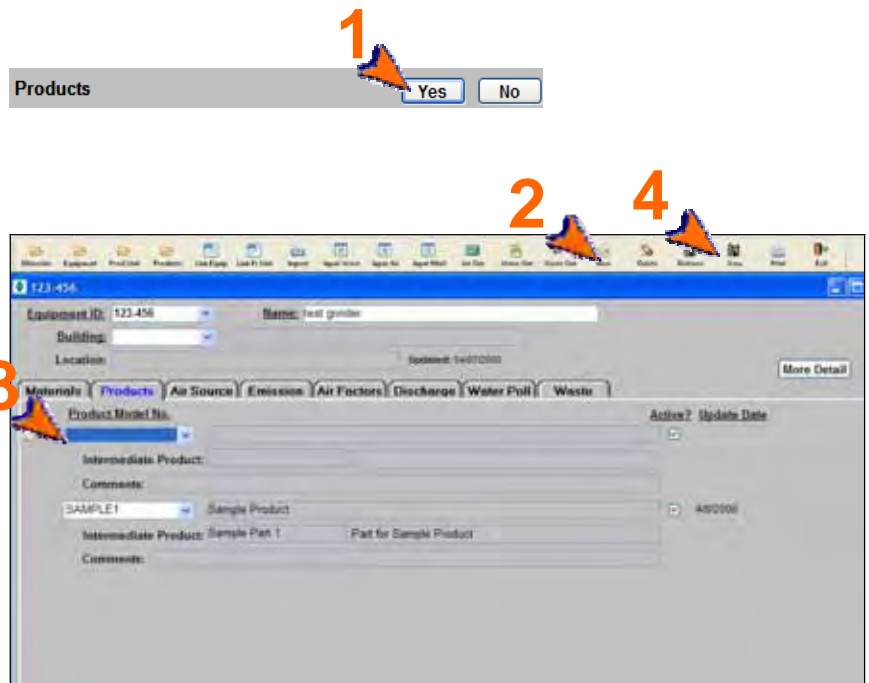
- 1 > Click **Yes** for the **Products** question on the cue card. The **Products** tab on the **Equipment Links for: (Id number)** window will display.

For each product:

- 2 > Click **New** to display a blank row (if necessary).
- 3 > Make a selection from the **Product Model No.** dropdown.

Repeat this process until all products are identified.

- 4 > Click **Save**.



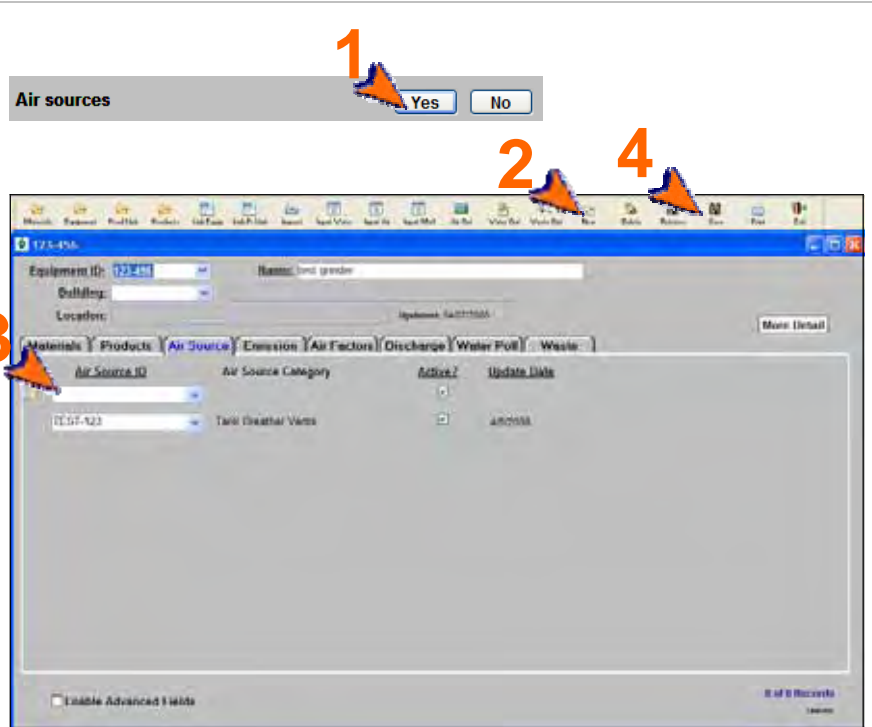
Link Equipment & Production Units, cont.

5 Linking Air Sources
 Follow these steps to relate the air source to the equipment id. Air sources must be set up prior to performing this step. On the **Equipment Links for: (Equipment ID)** window:

- 1 > Click **Yes** for the **Air source** question on the cue card. The **Air Source** tab on the **Equipment Links for: (Id number)** window will display.

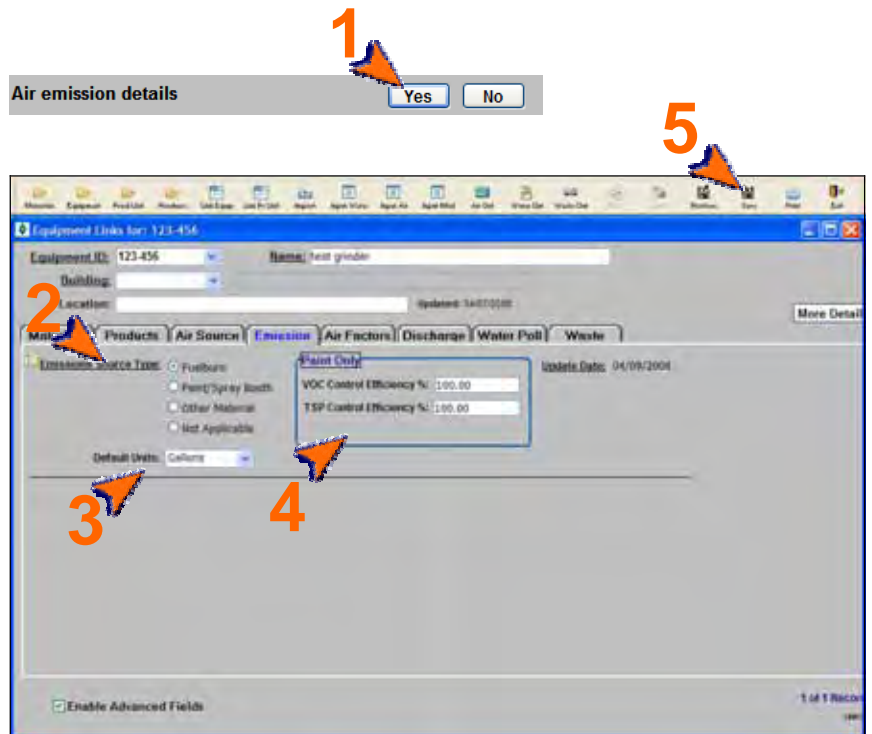
For each air source:

- 2 > Click **New** to display a blank row (if necessary).
- 3 > Make a selection from the **Air Source ID** dropdown.
Repeat this process until all air sources are identified.
- 4 > Click **Save**.



6 Linking Emission Details (if applicable)
 Complete these steps if the equipment or production unit produces air emissions. You must be an Advanced User or check the **Enable Advanced Fields** checkbox to perform this step.

- 1 > Click **Yes** for the **Air emission details** question on the cue card. The **Emission** tab on the **Equipment Links for: (Id number)** window will display.
- 2 > Select an **Emissions Source Type** radio button.
- 3 > Make a selection from the **Default Units** dropdown.
- 4 > Complete the **Paint Only** section if appropriate.
- 5 > Click **Save**.



Link Equipment & Production Units, cont.

7 Linking Air Emission Factors

Before starting, you will need to calculate the emission factor and pollutant content (if appropriate) for each of the material's pollutants. You must be an Advanced User or check the **Enable Advanced Fields** checkbox to perform this step.

Use the following steps to enter air emission factors for materials used at this equipment. Note that depending on the emission type (i.e., fuel burn, paint, other air source), not all steps are required.

- 1 > Click **Yes** for the **Air emission factors** question on the cue card. The **Air Factors** tab on the **Equipment Links for: (Id number)** window will display.

For each emission factor:

- 2 > Click **New** to display a blank row (if necessary).
- 3 > Make a selection from the **Material ID** dropdown. Only materials identified on the **Materials** tab will display.
- 4 > Make a selection from the **Pollutant** dropdown. Click the yellow binoculars icon to launch a search if necessary. *Note: This is a standard list within EMFACT. Refer to the module on Admin Setup for adding to this list.*
- 5 > Complete the **Emission Factor** field. *Skip this step for paint emission sources.*
- 6 > Make a selection from the **Units** dropdown. *Skip this step for paint emission sources.*
- 7 > If this is a paint emission source, then enter the **Pollutant Content** in the **Paint Only** section.
- 8 > If the Emission Source Type is something other than paint or fuel burn, then make a selection from the **Air Source** dropdown.

Repeat this process until all emission factors for all pollutants are identified.

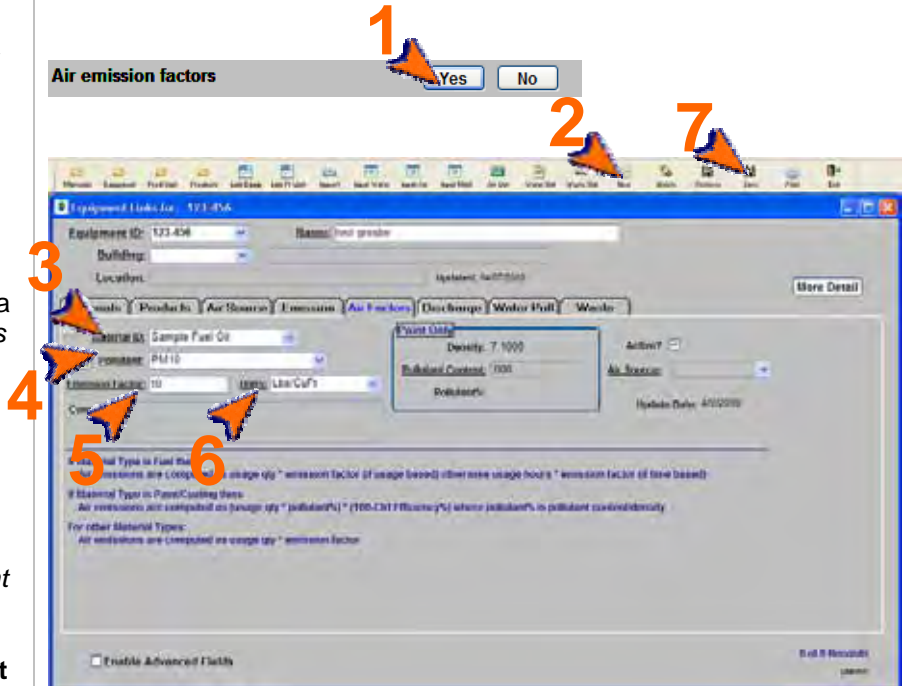
- 9 > Click **Save**.

About Emission Factors...

For fuel burning emissions, the emission factor is the number to multiply the usage by to compute emissions in Lbs. Factors can also be based on the hours used if the unit is Lbs/Hour.

If the source is painting, the Pollutant Content is divided by the Density to compute the Pollutant%. The Pollutant % is the number to multiply the usage by to compute emissions in Lbs. (also optionally factoring in Control Efficiency listed on the **Emission** tab).

If the source is something other than fuel burning or painting, the emission factor is the number to multiply the usage by to compute emissions in Lbs.



Link Equipment & Production Units, cont.

8 **Linking Discharge Points**
Use the following steps to relate a water discharge point to the Equipment ID. Discharge Points must be defined prior to performing this step.

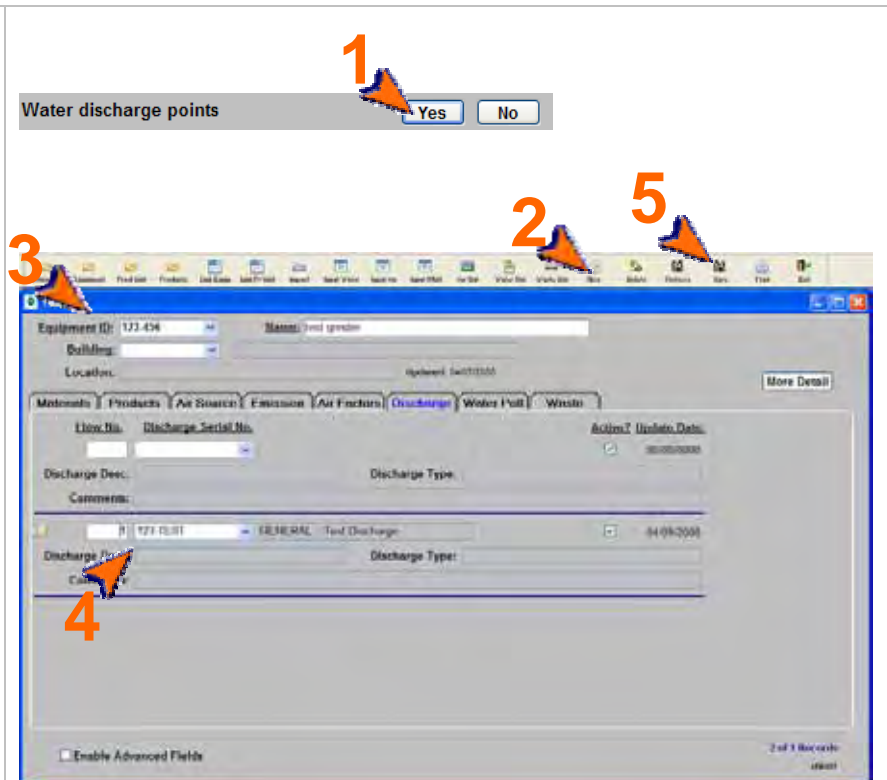
- 1 > Click **Yes** for the **Water discharge points** question on the cue card. The **Discharge** tab on the **Equipment Links for: (Id number)** window will display.

For each discharge point:

- 2 > Click **New** to display a blank row (if necessary).
- 3 > Complete the **Flow No.** field. These numbers cannot be duplicated; generally they are sequential numbers (e.g., the first one is 1; the second is 2, etc.).
- 4 > Make a selection from the **Discharge Serial No.** dropdown.

Repeat this process until all discharge points are identified.

- 5 > Click **Save**.



Link Equipment & Production Units, cont.

9 Linking Water Pollutants

Use these steps to allocate concentrations per discharge (i.e., the percentage of pollutant content).

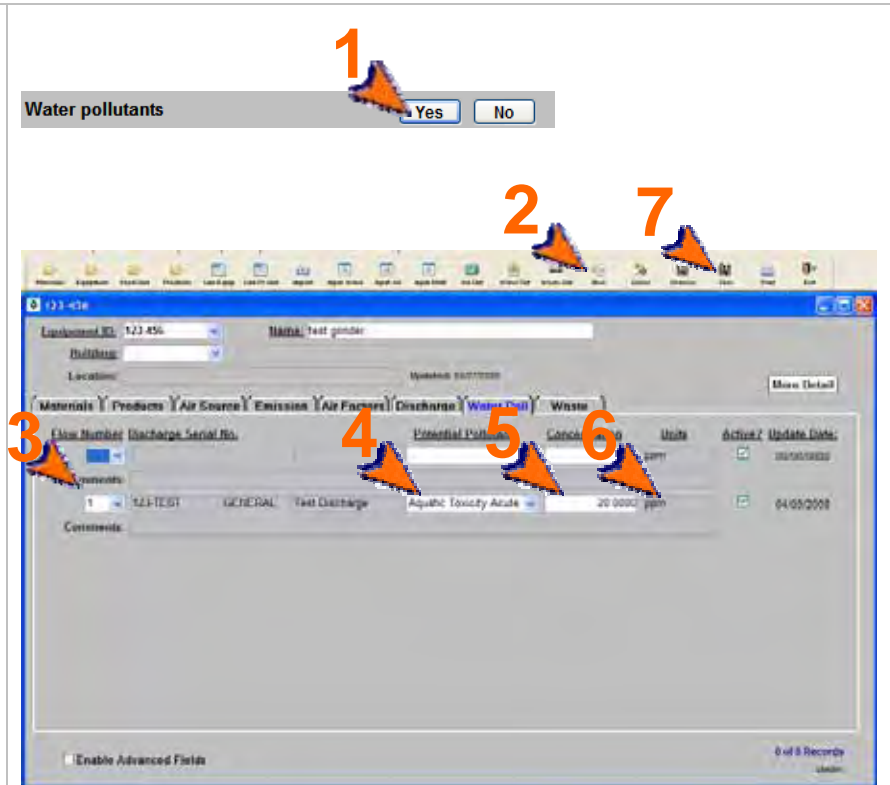
- 1 > Click **Yes** for the **Water pollutants** question on the cue card. The **Water Poll** tab on the **Equipment Links for: (Id number)** window will display.

For each water pollutant:

- 2 > Click **New** to display a blank row (if necessary).
- 3 > Make a selection from the **Flow Number** dropdown. Only discharge points identified on the **Discharge** tab will display here.
- 4 > Make a selection from the **Potential Pollutant** dropdown.
Note: This is a standard list within EMFACT. Refer to the module on Admin Setup for adding to this list.
- 5 > Enter the **Concentration**.
- 6 > **Units** defaults to **ppm** (parts per million) and cannot be changed.

Repeat this process until all water pollutants are identified.

- 7 > Click **Save**.



Link Equipment & Production Units, cont.

10 Linking Waste Types

Use these steps to identify the kinds of waste generated at the equipment. Waste types must be defined prior to performing this step.

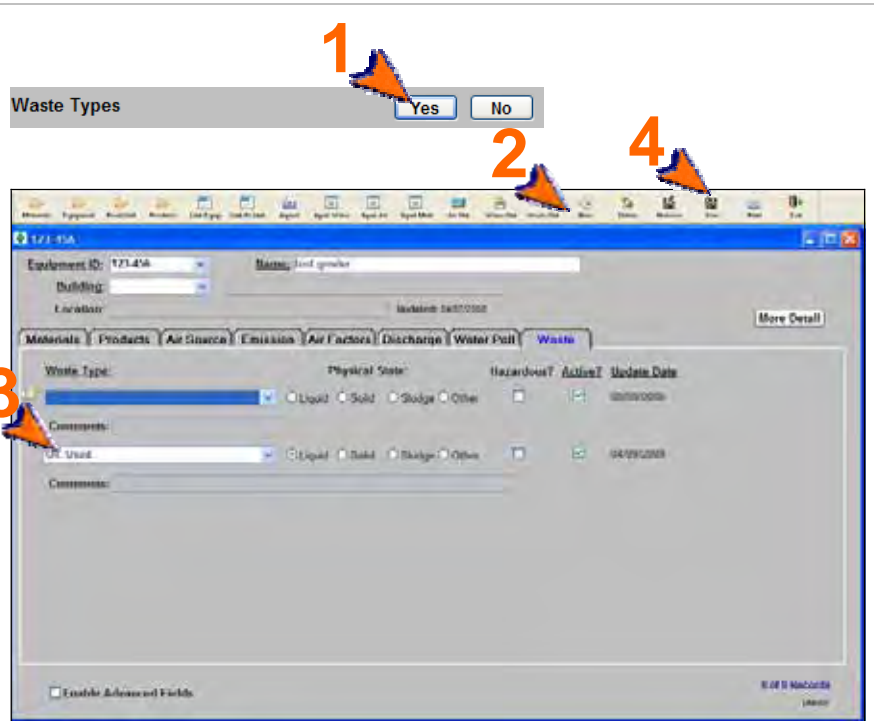
- 1 > Click **Yes** for the **Waste Types** question on the cue card. The **Waste** tab on the **Equipment Links for: (Id number)** window will display.



For each waste type:

- 2 > Click **New** to display a blank row (if necessary).
- 3 > Make a selection from the **Waste Type** dropdown. The **Physical State** and **Hazardous?** fields will update appropriately and cannot be edited.

Repeat this process until all waste types are identified.

- 4 > Click **Save**.



You can reopen and update these windows as often as it is necessary. Use the **New** () and **Delete** () buttons in the toolbar to add or remove detail. Be sure to click **Save** when you are done.

<end of section>

Introduction to Inputs

The Inputs section of EMFACT enables users to track the materials and costs that go into a piece of equipment or production unit.

This guide contains the following sections. Click on the title to advance to that section.

Section 1. Entering Materials Purchased

This section outlines the steps for entering material purchase data into EMFACT, both electronically (using the automatic import feature) or manually (data entry). Once purchase data is entered, EMFACT converts it to pounds for reporting purposes. There are also steps on how to troubleshoot data that did not convert properly.

Section 2. Entering Materials Used

This section defines the process for documenting the amount of material used at a piece of equipment or production unit. This includes water, material with air emissions (i.e., stack, paint, fuelburn), and material without air emissions (i.e. other chemical usage).

1. Materials Purchased

This section contains the following:

1. Preparing Electronic Purchase Data File
2. Importing/Converting Purchase Data (Electronically)
3. Repairing Bypassed Records
4. Reviewing Imported/Converted Data
5. Repairing Data that Failed to Convert
6. Entering Purchase Data Manually

Please review the Quick Start Guide section before starting.

*Note: A Cue Card is not available for Inputs (Purchases). Instead, windows are accessed directly from the **Inputs** option on the main menu, as well as the **Inputs** buttons on the **EMFACT Dashboard** window.*

Materials Purchased, cont.

1 Preparing Electronic Purchase Data File

A file to collect electronic materials purchased data is provided. It is called:

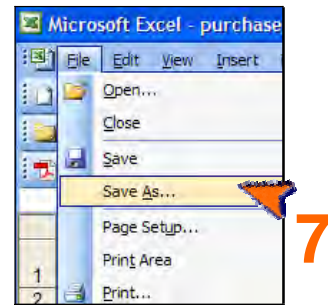
c:\program files\SYS Technologies\
EMFACT\purchase_import_template.xls

Prior to using the Import feature, obtain electronic data from purchasing and put it in the spreadsheet listed above and save to a new name in a new folder.

Complete each column as follows:

- 1 > **Column A:** Enter the **Material ID** for the purchase. Material IDs must be set up in EMFACT or the entry will be bypassed.
- 2 > **Column B:** Enter the **Purchase Date** of the purchase. The format is mm/dd/yyyy.
- 3 > **Column C:** Enter the **Purchase Unit**. This is the **Size Purchase Unit** established for the Material ID (**Container** tab on the **Material Detail** window) in EMFACT (e.g., bucket, drum, etc).
- 4 > **Column D:** Enter the **Purchase Quantity**. This is the number of the Material ID units that were purchased.
- 5 > **Column E:** Enter the **Purchase Cost**. This the total cost of the line item (not unit cost). Enter 0 (zero) if this is not known or is not being tracked.
- 6 > **Column F:** Enter the **Department ID**. Department IDs must be set up in EMFACT. Enter one blank space if not known.
- 7 > Once the file is complete, select **File > Save As** to save the file to a Tab-delimited text file (*filename.TXT*).
- 8 > If a **Microsoft Excel** popup displays, click **Yes**.


	1	2	3	4	5	6
	A	B	C	D	E	F
1	Material ID	Purchase Date	Purchase Unit	Purchase Quantity	Purchase Cost	Department ID
2	003	4/24/2008	Each	1	50	OPS
3	GLIDDEN1	4/24/2008	Case	3	1000	OPS
4						
5						



Materials Purchased, cont.

2 Import Purchase Data File Electronically

Electronic materials purchased data can be automatically imported into EMFACT when it is put into the EMFACT template.

- 1 > Click on the **Purchases** button () on the **EMFACT Dashboard**.
- 2 > Choose **Purchasing** from the **Data Source** dropdown. Refer to the Module 1 of the User Guide (Set Up Admin, Editing Standard Drop Down Lists) for instructions on how to create additional company specific data sources for future use.
- 3 > Click **Load Purchase Data**. The **Material Purchase File Format Verification** popup will open. .
- 4 > Click **OK**. The **Select Import File** window will open.
- 5 > Navigate to and click on the TXT file saved from Step 1 of this procedure.
- 6 > Click **Open**. The **Material Purchase load process is completed** popup will display and a .log file is created on your C drive.

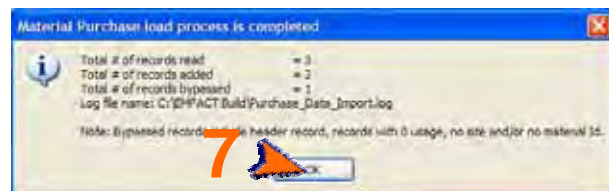
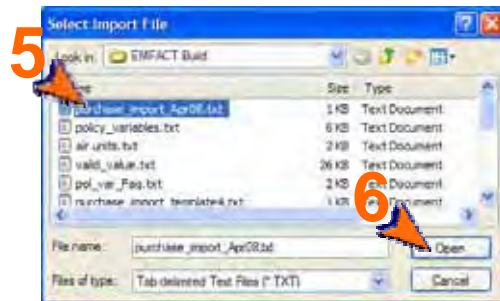
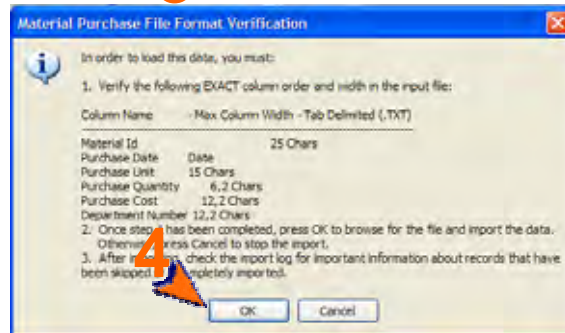
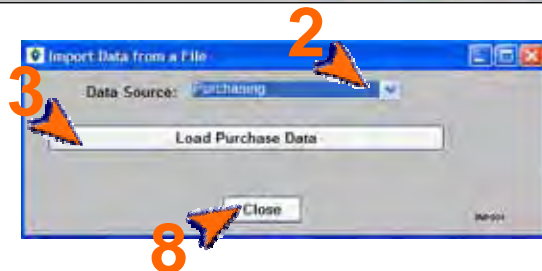
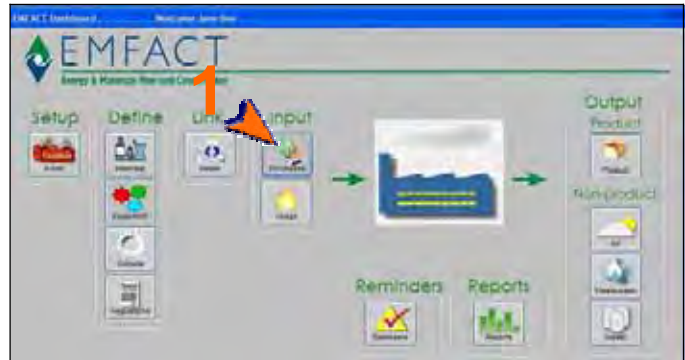
Note: Review the popup information to determine the status of the import, including the number of records read, added and bypassed. Make a note of the .log file's location, as you will need to access this file to fix any bypassed records.

In this example, one record was bypassed (the header record) and the two records were processed.

- 7 > Click **OK**.
- 8 > Click **Close** on the **Import Data from a File** popup.

Proceed to the next step if any usage records were bypassed.* Otherwise, proceed to Step 5.

Note: EMFACT attempts to load every line in the usage file, including the header (column names). Therefore, if the import file contains a header, it will count as one bypassed record.



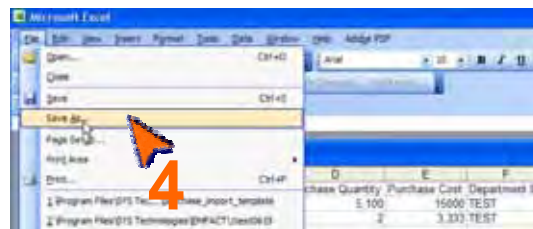
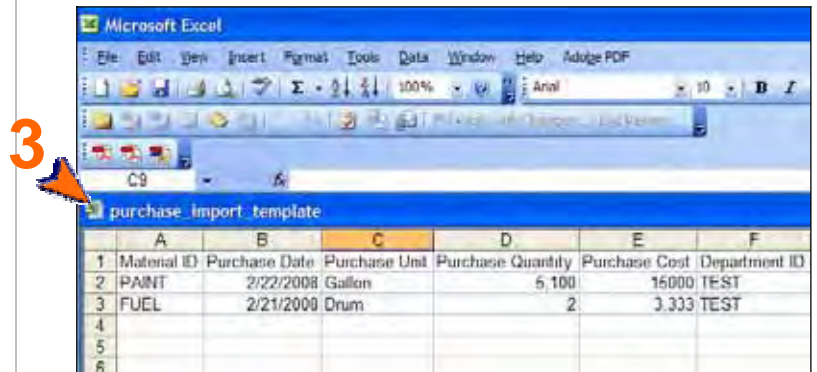
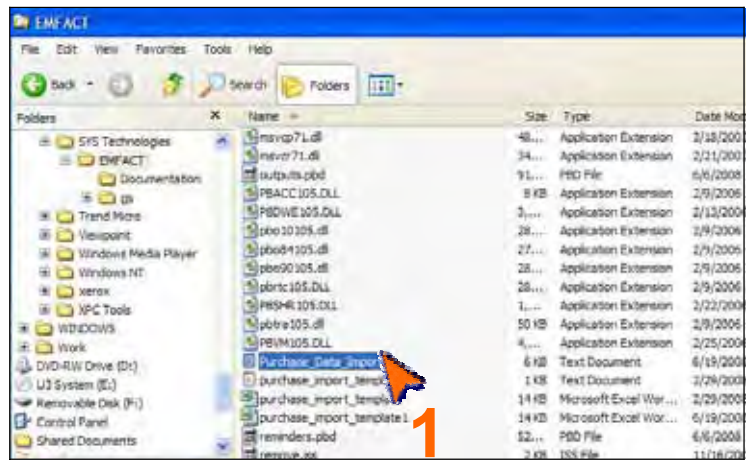
Materials Purchased, cont.

3 Repairing Bypassed Records (as needed)

A .log file is created each time the usage data is loaded into EMFACT. In the last step, you were instructed to make a note of the file's path. These files are stored in the same location each time.

- 1 > Navigate to the directory containing the .log file and double-click on the file. The file will open in Microsoft Notepad.
- 2 > Review the file to determine which records failed and why.
- 3 > Open the original import file and locate the record(s) that were bypassed. Correct the errors.
- 3 > Delete all other records so that the only records remaining in the import file are the ones that were bypassed and now fixed. Then select **File > Save As** from the main menu; and save the file with a new name.

Go back to Step 2 and reload the new file.



Materials Purchased, cont.

4 Reviewing Imported/Converted Data

It is recommended that after importing data from a file, that the imported data is reviewed to make sure the data has imported as expected.

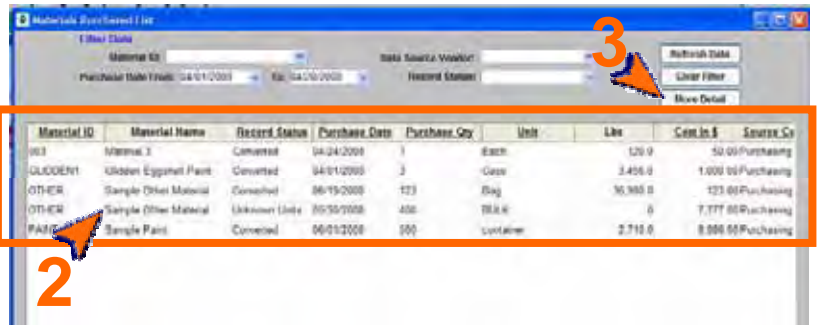
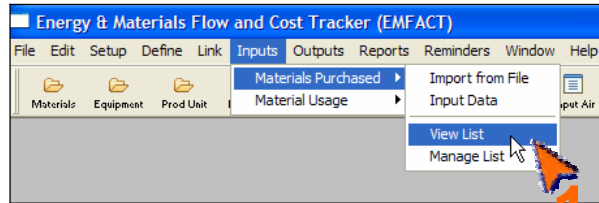
The conversion from original container size to Lbs. can be reviewed. The container size conversion takes the size quantity established during material setup multiplied by the purchase qty.

The result will be in the size unit. If the size unit is gallons, then the result is multiplied again by density to arrive at the Purchase Lbs.

- 1 > Select **Inputs > Materials Purchased > View List** from the main menu. The **Material Purchased List** will open and display data for the last 30 days..
- 2 > Review the imported/converted purchase data.

*Note: Complete the fields in the **Filter Data** section in any combination to review more data; then click **Refresh Data** to display the data that meets the new filter criteria.*

- 3 > *Optional:* Click **More Detail** to view and make changes to the materials purchased data. The **Manage Materials Purchased** window will open (see next step).



Materials Purchased, cont.

5 Locating/Repairing Data that Failed to Convert (as needed)

It is possible for data to import, but not convert. Purchase data records that did not convert properly will display something other than **Converted** in the **Record Status** field. On the **Materials Purchased List** window:

1 > Search the **Record Status** column for records that are not **Converted**. Below are possible values:

- **Unknown Material** – The **Material ID** does not exist in EMFACT and must be added on the **Material List** window. *
- **Unknown Units** - The **Size Purchase Unit** established for the Material ID (**Container** tab on the **Material Detail** window) does not match the one on the import file. Go to 2 > below.
- **Unknown Density** – The **Density** on the **Material List** window is 0 and therefore, the purchase quantity cannot be converted to pounds. *

2 > If the **Record Status** is **Unknown Units**, click on the row containing the unconverted entry (the row will not highlight).

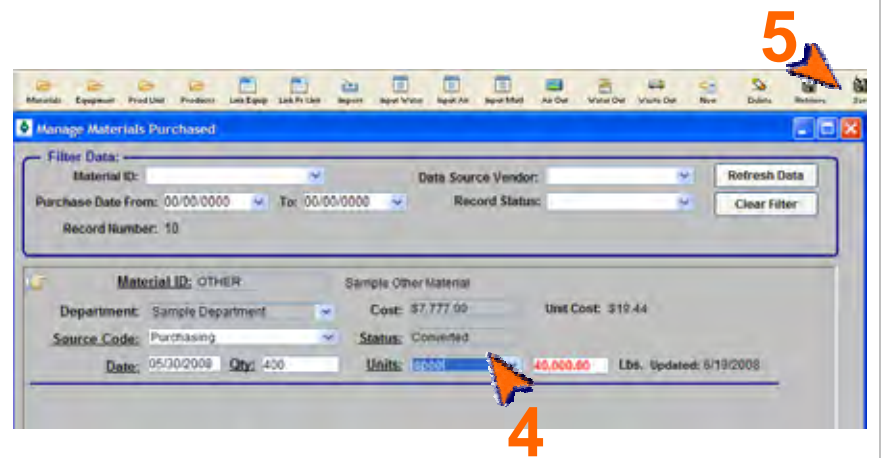
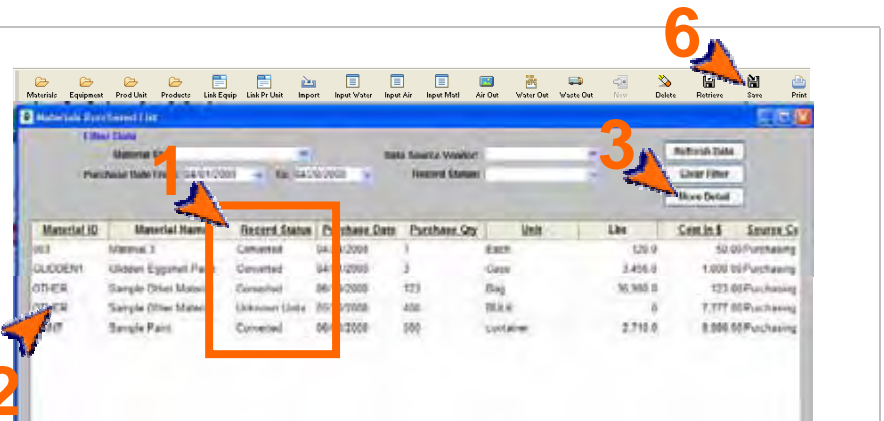
3 > Click **More Detail**. The **Manage Materials Purchased** window opens and displays the details of the purchase.

4 > Make a selection from the **Units** dropdown. This dropdown, is populated by information added on the **Material Detail** window, **Container** tab.

5 > Click **Save** and close the window.

6 > Click **Retrieve** on the **Materials Purchased List** window. The **Record Status** will change to **Converted** (not shown).

* Refer to the User Guide (Module 2: Define Master Data) for instructions on adding materials.

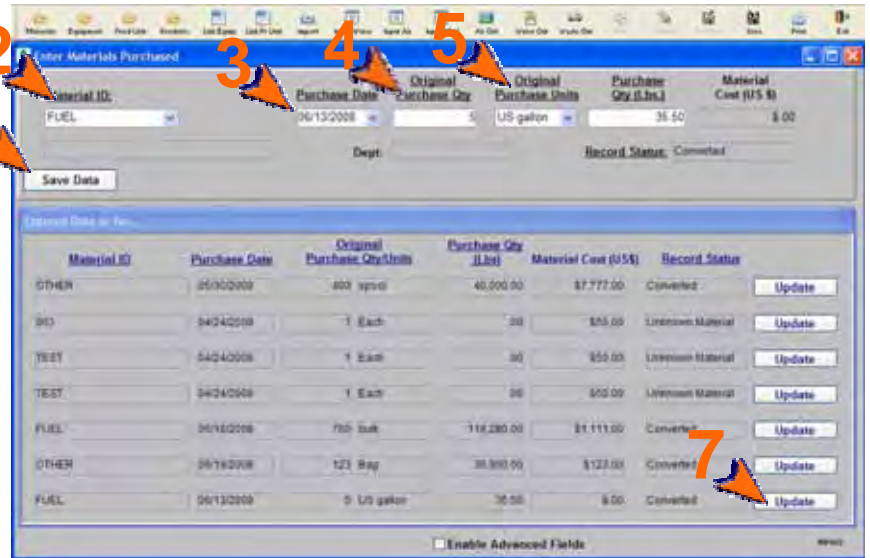
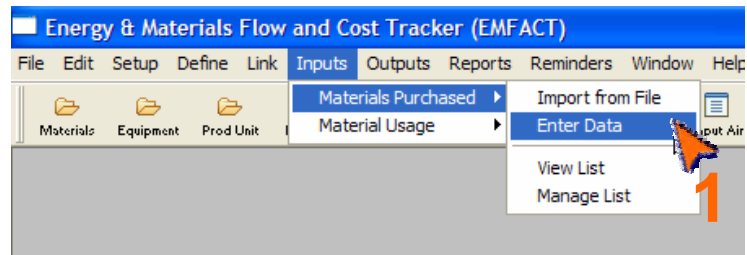


Materials Purchased, cont.

6 Entering Purchase Data Manually

Follow these steps to enter purchase data manually:

- 1 > Select **Inputs > Materials Purchased > Enter Data** from the main menu. The **Enter Materials Purchased** window will open and display and data entered or imported today.
- 2 > Make a selection from the **Material ID** dropdown.
- 3 > Complete the **Purchase Date** field.
- 4 > Complete the **Original Purchase Qty** field.
- 5 > Make a selection from the **Original Purchase Units** dropdown. The **Purchase Qty (Lbs.)** field will calculate and display.
- 6 > Click **Save Data**. The new entry will display in the **Entered Data so far...** section.
- 7 > To edit or delete data for a particular usage entry, click the corresponding **Update** button. The **Manage Materials Purchased** window (not shown) will open.



<end of section>

2. Materials Used


This section contains the following:

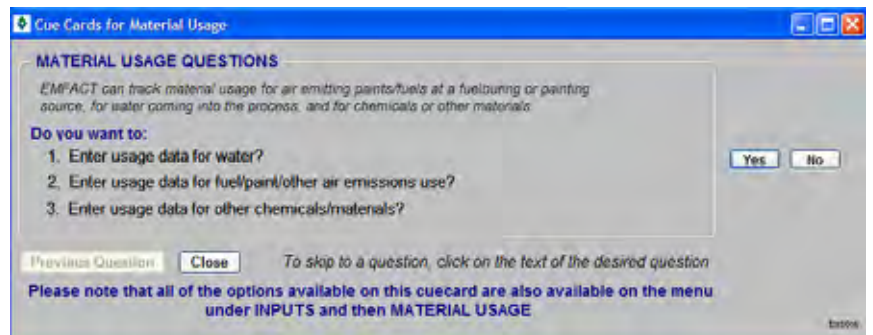
1. Accessing the Material Usage Cue Card (optional)
2. Enter Water Usage
3. Manage Water Usage Details
4. Enter Material Usage with Air Emissions
5. Manage Air Emissions Details
6. Enter Other Material Usage (Without Air Emissions)
7. Manage Material Usage Details
8. View Material Usage List

Please review the Quick Start Guide section before starting.

1 Optional: Accessing the Material Usage Cue Card
Using the Cue Card is optional, since every window available through the Material Usage Cue Card is also accessed from the main menu (**Inputs > Material Usage**), and sometimes through shortcut buttons on the toolbar.

To access the cue card for entering material usage:


- 1 > Click the Usage button () on the **EMFACT Dashboard**. The **Cue Cards for Material Usage** window will open.



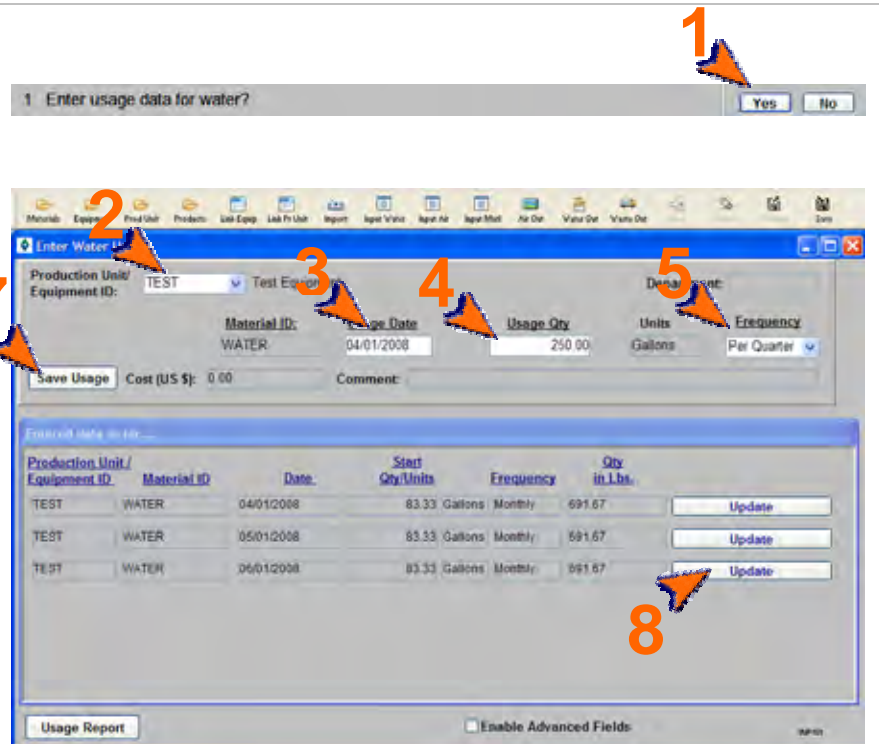
Materials Used, cont.

2 Enter Water Usage

Use the following steps to enter material usage (in gallons) for water:

- 1 > Click **Yes** for the 1st question on the **Cue Cards for Material Usage** window. The **Enter Water Usage** window will open. A shortcut to this window is also available by clicking the **Input Water** button () in the toolbar.
- 2 > Make a selection from the **Production Unit/Equipment ID** dropdown.
- 3 > Enter a **Usage Date**.
- 4 > Complete the **Usage Qty** field.
- 5 > Make a selection from the **Frequency** dropdown. If selecting **Quarterly** or **Yearly** as the **Frequency**, the **Input Water Usage** popup will display.
- 6 > If the **Input Water Usage** popup displayed, click **Yes** to have EMFACT automatically calculate monthly records beginning on the **Usage Date** entered in 3 >, going forward. Click **No** to cancel and create monthly records manually. (Example to the right shows monthly records automatically created by EMFACT.)
- 7 > Click **Save Usage**. The usage will calculate and display in the **Entered Data so far...** section of the window. The data in this section displays for one day and then it is reset.
- 8 > To edit or delete data for a particular usage entry, click the corresponding **Update** button. The **Manage Material Usage** window will open (see next step).

*Note: Click the **Usage Report** button at the bottom of the window to run the **Usage (Water): Weight per Material Report**.*



1 Enter usage data for water? Yes No

Enter Water Usage

Production Unit/Equipment ID: TEST Test Equip

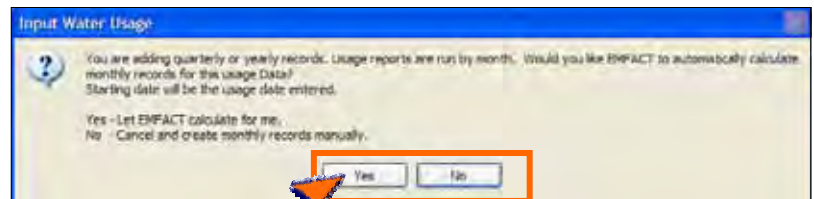
Material ID: WATER Usage Date: 04/01/2008 Usage Qty: 250.00 Units: Gallons Frequency: Per Quarter

Save Usage Cost (US \$): 0.00 Comment:

Entered Data so far...

Production Unit / Equipment ID	Material ID	Date	Start Qty/Units	Frequency	Qty in Lbs.	
TEST	WATER	04/01/2008	83.33 Gallons	Monthly	691.67	Update
TEST	WATER	05/01/2008	83.33 Gallons	Monthly	691.67	Update
TEST	WATER	06/01/2008	83.33 Gallons	Monthly	691.67	Update

Usage Report Enable Advanced Fields



Input Water Usage

You are adding quarterly or yearly records. Usage reports are run by month. Would you like EMFACT to automatically calculate monthly records for this usage data? Starting date will be the usage date entered.

Yes - Let EMFACT calculate for me.
No - Cancel and create monthly records manually.

Yes No

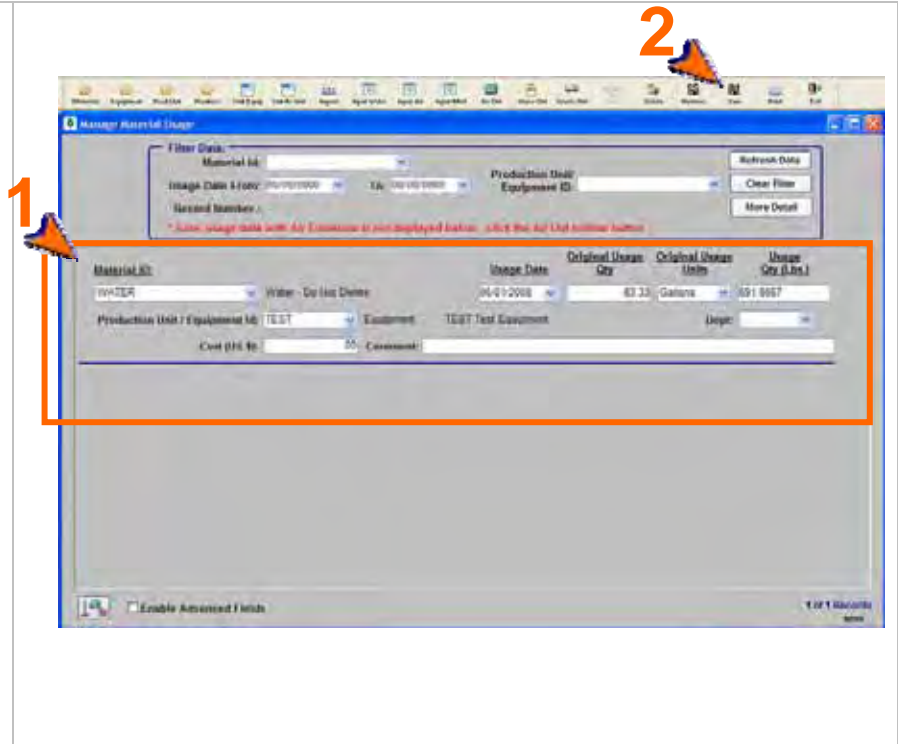
Materials Used, cont.

3 Manage Water Usage Details (optional)

To view or make changes to water usage:

- 1 > Review the information for the water entry on the **Manage Material Usage** window. Make any necessary changes.
- 2 > If making changes, click **Save**.


*Note: To review other data, click **Clear Filter** (to clear the **Record Number** field); complete the fields in the **Filter Data** section in any combination; then click **Refresh Data** to display the data that meets the new filter criteria.*



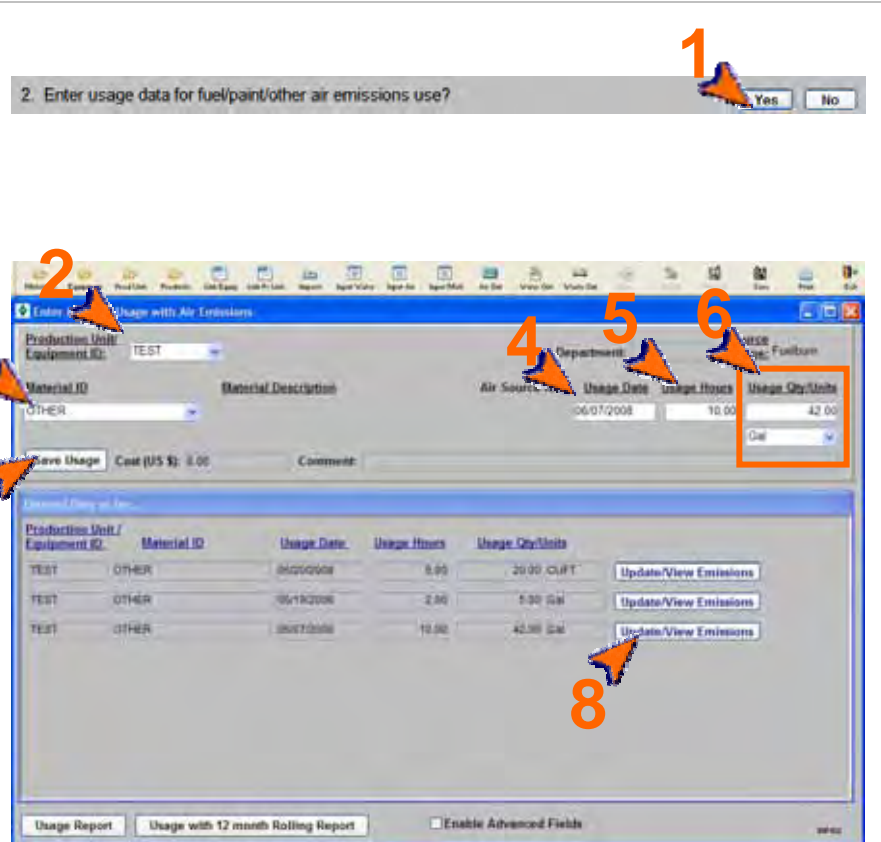
Materials Used, cont.

4 Enter Material Usage with Air Emissions

Use the following steps to enter material usage for stack, paint/spray and fuelburn usage.

- 1 > Click **Yes** for the 2nd question on the **Cue Cards for Material Usage** window. The **Enter Material Usage with Air Emissions** window will open. A shortcut to this window is also available by clicking the **Input Air** button  in the toolbar.
- 2 > Make a selection from the **Production Unit/Equipment ID** dropdown.
- 3 > Make a selection from the **Material ID** dropdown. This dropdown is populated with materials set up on the **Air Factors** tab of the **Equipment** (or Prod Unit) **Links** window.
- 4 > Enter a **Usage Date**.
- 5 > Complete the **Usage Hours** field. This is required for fuelburn; otherwise it is optional).
- 6 > Enter the **Usage Qty** and select a **Unit** from the dropdown.
- 7 > Click **Save Usage**. The usage will calculate and display in the **Entered Data so far...** section of the window. The data in this section displays for one day and then it is reset.
- 8 > To view, edit or delete data for a particular usage entry, click the corresponding **Update/View Emissions** button. The **Air Emissions** window will open (see next step).

*Note: Click the **Report** buttons at the bottom of the window to run the **Usage (Air): Weight per Material Report** and the **Usage (Air): Weight per Material with 12 month Rolling Report**.*



2. Enter usage data for fuel/paint/other air emissions use?

Enter Material Usage with Air Emissions

Production Unit/Equipment ID: TEST

Material ID: OTHER

Usage Date: 06/07/2008

Usage Hours: 10.00

Usage Qty/Units: 42.00

Unit: Gal

Save Usage Cost (US \$): 8.00 Comment:

Entered Data so far...

Production Unit/Equipment ID	Material ID	Usage Date	Usage Hours	Usage Qty/Units	
TEST	OTHER	06/06/2008	8.00	20.00 CUFT	Update/View Emissions
TEST	OTHER	06/18/2008	2.00	5.00 Gal	Update/View Emissions
TEST	OTHER	06/07/2008	10.00	42.00 Gal	Update/View Emissions

Usage Report Usage with 12 month Rolling Report Enable Advanced Fields

Materials Used, cont.

5 Manage Air Emissions Details (optional)

To view or make changes to material usage:

- 1 > Review the information for the usage entry on the **Air Emissions** window. Make any necessary changes.
- 2 > If making changes, click **Save**.

*Note: To review other data, click **Clear Filters** (to clear the **Usage Record No.** field); complete the fields in the **Filter Data** section in any combination; then click **Refresh Data** to display the data that meets the new filter criteria.*

*Note: Click the **Report** buttons at the bottom of the window to run the **Usage (Air): Weight per Material Report**, **Usage (Air): Weight per Material with 12 month Rolling Report**, and **Air Emissions: Weight per Pollutant with 12 Month Rolling Report**.*


The screenshot shows the 'Air Emissions' window. A red arrow labeled '1' points to the 'Filter Data' section, and another red arrow labeled '2' points to the 'Clear Filters' button. The table below shows the following data:

Pollutant	Emission (Lbs.)	Start Date/Time
VOC	210.00	06/07/2008 00:00

Materials Used, cont.

6 Enter Other Material Usage (Without Air Emissions)

Use the following steps to enter usage for other chemicals/materials.

1 > Click **Yes** for the 3rd question on the **Cue Cards for Material Usage** window. The **Enter Material Usage** window will open. A shortcut to this window is also available by clicking the **Input Matl** button  in the toolbar.

2 > Make a selection from the **Material ID** dropdown.

3 > Enter a **Usage Date**.

4 > Complete the **Original Usage Qty** field.

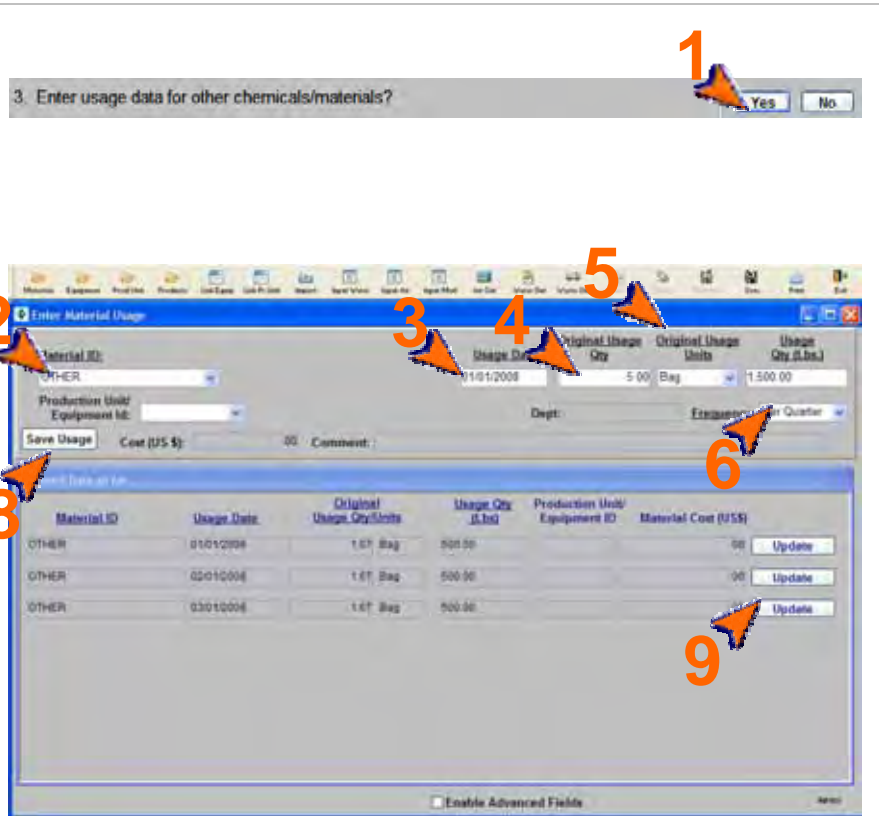
5 > Make a selection from the **Original Usage Units** dropdown. The **Usage Qty (Lbs.)** field will calculate.

6 > Make a selection from the **Frequency** dropdown. If selecting **Quarterly** or **Yearly** as the **Frequency**, the **Input Material Usage** popup will display.

7 > If the **Input Material Usage** popup displays, click **Yes** to have EMFACT automatically calculate monthly records beginning on the **Usage Date** entered in 3 >, going forward. Click **No** to cancel and create monthly records manually. (Example to the right shows monthly records automatically created by EMFACT.)

8 > Click **Save Usage**. The usage will calculate and display in the **Entered Data so far...** section of the window. The data in this section displays for one day and then it is reset.

9 > To view, edit or delete data for a particular usage entry, click **Update**. The **Manage Material Usage** window will open (see next step).



3. Enter usage data for other chemicals/materials?

Enter Material Usage

Material ID: OTHER
Usage Date: 11/01/2008
Original Usage Qty: 5.00
Original Usage Units: Bag
Usage Qty (Lbs.): 1,500.00

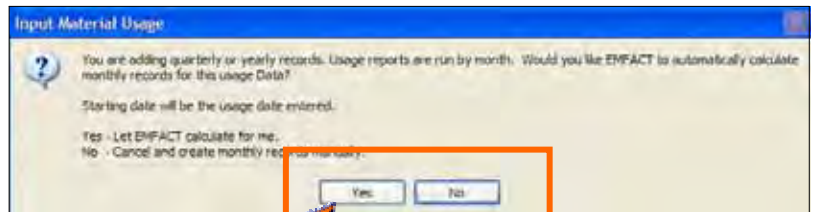
Production Unit:
Equipment ID:
Dept:
Frequency: Quarterly

Save Usage Cost (US \$): 00 Comment:

Entered Data so far...

Material ID	Usage Date	Original Usage Qty/Units	Usage Qty (Lbs)	Production Unit/ Equipment ID	Material Cost (US\$)	
OTHER	01/01/2008	1.00 Bag	500.00		00	<input type="button" value="Update"/>
OTHER	02/01/2008	1.00 Bag	500.00		00	<input type="button" value="Update"/>
OTHER	03/01/2008	1.00 Bag	500.00		00	<input type="button" value="Update"/>

Enable Advanced Fields



Input Material Usage

You are adding quarterly or yearly records. Usage reports are run by month. Would you like EMFACT to automatically calculate monthly records for this usage data?
Starting date will be the usage date entered.

Yes - Let EMFACT calculate for me.
No - Cancel and create monthly records manually.

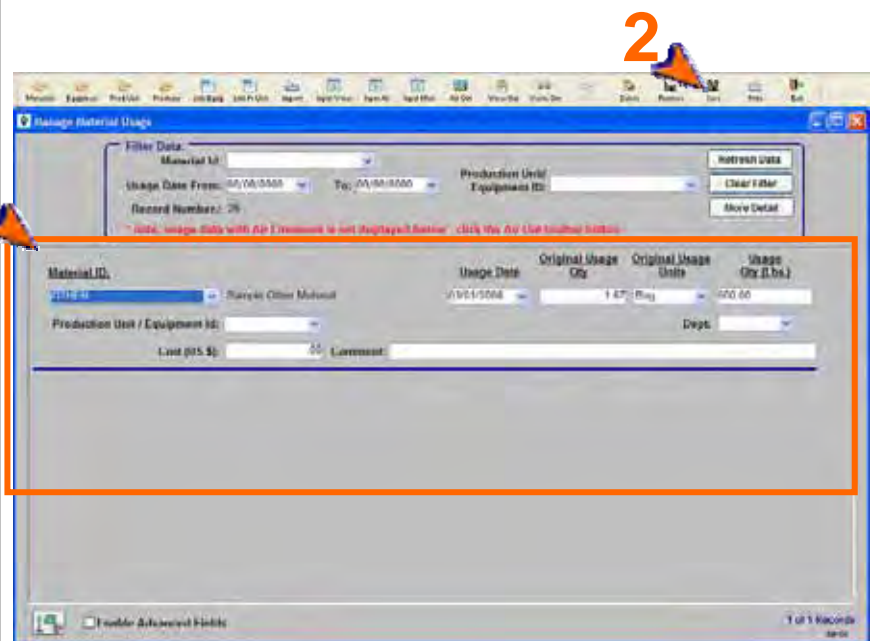
Materials Used, cont.

7 Manage Material Usage Details (optional)

To view or make changes to material usage:

- 1 > Review the information for the usage entry on the **Manage Material Usage** window. Make any necessary changes.
- 2 > If making changes, click **Save**.

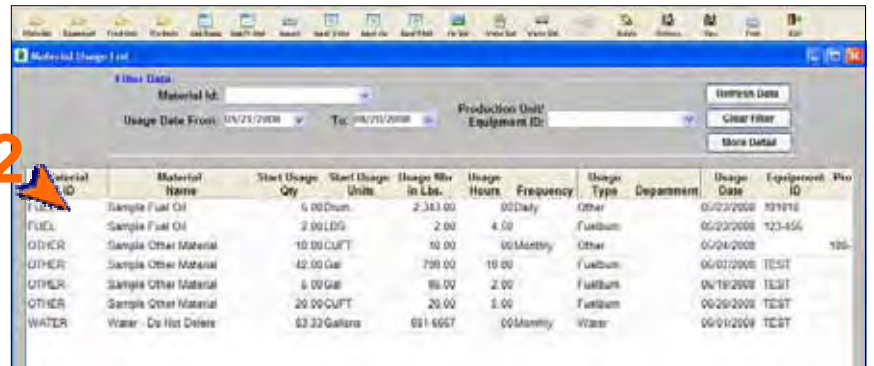
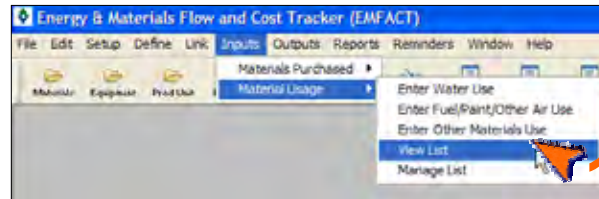
*Note: To review other data, click **Clear Filter** (to clear the **Record Number** field); complete the fields in the **Filter Data** section in any combination; then click **Refresh Data** to display the data that meets the new filter criteria.*



8 View Material Usage List

A window is available to view the materials usage data using various filters.

- 1 > Select **Inputs > Material Usage > View List** from the main menu. The **Material Usage List** window will open and display all usage data entered for the last 30 days. This window is *read-only* and cannot be edited.
- 2 > Double-click on a row to access the details of that entry; or click on the row and click **More Detail**. The **Air Emissions** or **Manage Material Usage** window will open (Refer to Steps 3, 5 or 7 for more information on these windows).



<end of section>

Introduction to Outputs

The Outputs section of EMFACT enables users to track goods that are produced at a piece of equipment or production unit, along with air emissions and wastewater discharge associated with the production of the goods. The success of the Outputs feature depends greatly on whether the specific materials and outputs have been set up and linked to the equipment or production unit, whether emission factors are set up, and whether material usage has been input correctly.

This guide contains the following sections. Click on the title to advance to that section.

Section 1. Entering Product Outputs

This section outlines the steps for documenting the volume/quantity of goods produced during a given timeframe and calculating the output in Lbs.

Section 2. Entering Non-Product Outputs

This section defines the process for reviewing material usage/air emissions data, entering wastewater discharge data and documenting waste management activity.

1. Enter Product Outputs

This section contains the following:


1. Entering Product Output Volume
2. Managing Product Volume (Optional)

Note: A Cue Card is not available for entering product volume/quantity. Instead, windows are accessed directly from the **Outputs** option on the main menu as well as the **Product** button on the **EMFACT Dashboard** window.

Please review the Quick Start Guide section before starting.

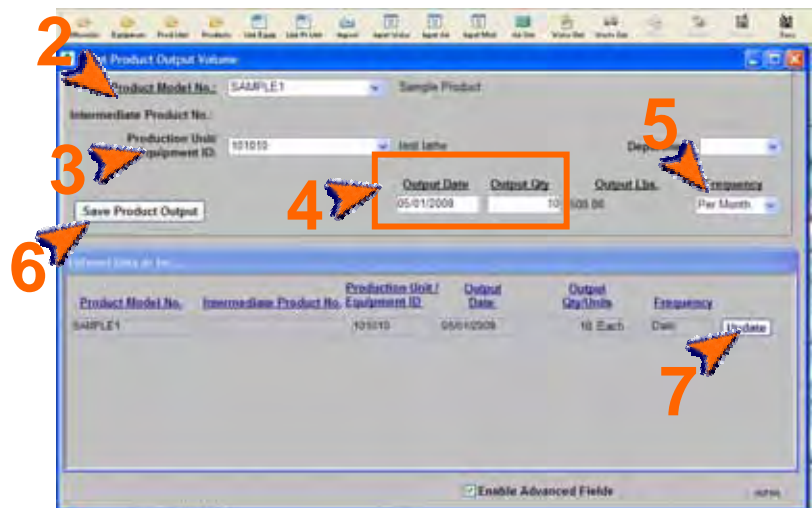
1 Entering Product Output Volume

Use the following steps to document the volume/quantity of product and/or intermediate product produced during a given timeframe. Products and their weight in lbs must be set up before performing this step.

- 1 > Click the **Product** icon (). The **Input Product Output Volume** window will open.
- 2 > Make a selection from the **Product Model No.** dropdown for the Product Model and optionally for the **Intermediate Product No.**
- 3 > If appropriate, make a selection from the **Production Unit/Equipment ID** field. Otherwise, volume will be associated with the entire site.
- 4 > Complete the **Output Date** and **Output Qty** fields.
- 5 > Make a selection from the **Frequency** dropdown.
- 6 > Click **Save Product Output**. The **Entered Data so far...** section at the bottom of the window will display the calculated amount. This section resets daily.

Repeat these steps until all product output data is entered.

- 7 > To view and/or change the output product volume data for a specific entry click the corresponding **Update** button. The **Manage Product Volume** window will open (see next step).



Enter Product Outputs, cont.

2 Optional: Managing Product Volume

Use the following steps to view, edit or delete the output volume data. On the **Manage Product Volume** window:

- 1 > View and make any necessary changes.
- 2 > Click **Save**.
- 3 > Optional: Complete one of the fields in the **Filter Data** section
- 4 > Click **Retrieve**. The window will update with the data matching the search criteria.

The screenshot shows the 'Manage Product Volume' window. It features a 'Filter Data' section at the top with fields for 'Product Model No.', 'Intermediate Product No.', 'Output Date From', 'To', 'Production Unit/Equipment ID', and 'Record Number'. Below this is a data entry section with fields for 'Product Model No.' (SAMPLE1), 'Intermediate Product No.', 'Production Unit/Equipment ID' (10110), 'Equipment' (10110 test lathe), and 'Department'. A table below shows output data for '05/01/2008' with 'Output Qty' of 10 and 'Output Lbs.' of 60. The bottom right corner indicates '1 of 1 Records'.

Callout 1 points to the 'Production Unit/Equipment ID' field in the data entry section.

Callout 2 points to the 'Retrieve' button in the 'Filter Data' section.

Callout 3 points to the 'Filter Data' section header.

Callout 4 points to the 'Save' button in the top right corner of the window.

<end of section>

2. Enter Non-Product Outputs

This section contains the following:

1. Reviewing Air Emissions
2. Entering Wastewater Discharge Data
3. Optional: Managing Wastewater Discharge Data
4. Documenting Waste Management Activity Details
5. Optional; Management Waste Activity

Please review the Quick Start Guide section before starting.

Note: A Cue Card is not available for entering non-product volume/quantity. Instead, windows are accessed directly from the **Outputs** option on the main menu as well as the **Non-product** buttons (Air, Wastewater, Waste) on the **EMFACT Dashboard** window.


1 Reviewing Air Emissions

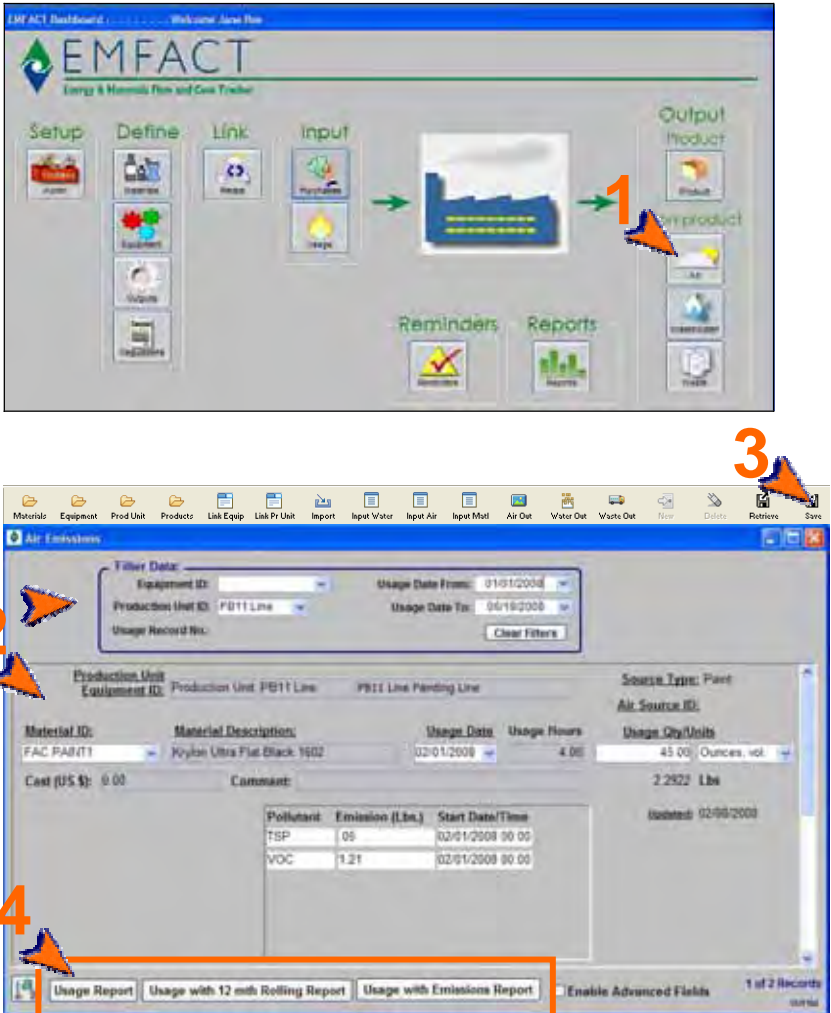
Use the following steps to review material usage data or check that emissions are being calculated correctly.

Note: You must have previously entered material usage data (**Inputs > Material Usage > Enter Fuel/Paint/Other Air Use**) to continue.

As data was recorded on the **Enter Material Usage with Air Emissions** window, emissions per pollutant were calculated in Lbs based on the emission factors.

The factors must be set up on the **Equipment Links** window or **Production Unit Links** window (**Link > Equipment** or **Link > Production Unit** from the main menu) on the **Air Factors** tab. Refer to the **Air Factors** tab for a description of emissions algorithms.

- 1 > Click **Air** (). The **Air Emissions** window will open and display usage for the last month.
- 2 > Review the data listed or use the **Filter Data** fields to search for different data.
- 3 > As appropriate, alter the original material usage data and click **Save**. The data in the pollutant/emissions box will recalculate.
- 4 > Click the **Report** buttons at the bottom of the page to run reports as needed. Refer to the Report Guide for descriptions of these reports.



The screenshot shows the EMFACT Dashboard with the 'Air' button highlighted. Below it is the 'Air Emissions' window. The 'Filter Data' section includes fields for Equipment ID, Production Unit ID, Usage Date From, and Usage Date To. The main table displays material usage data:

Material ID	Material Description	Usage Date	Usage Hours	Usage Qty/Units
FAC PAINT1	Kykon Ultra Flat Black 1602	02/01/2008	4.00	45.00 Ounces vol
Cost (US \$)	0.00	Comment:		2.2922 Lbs

Below the table is a 'Pollutant' table:

Pollutant	Emission (Lbs.)	Start Date/Time
TSP	05	02/01/2008 00:00
VOC	1.21	02/01/2008 00:00

At the bottom of the window, there are buttons for 'Usage Report', 'Usage with 12 mth Rolling Report', and 'Usage with Emissions Report'.

Above: Example with painting usage


Enter Non-Product Outputs, cont.

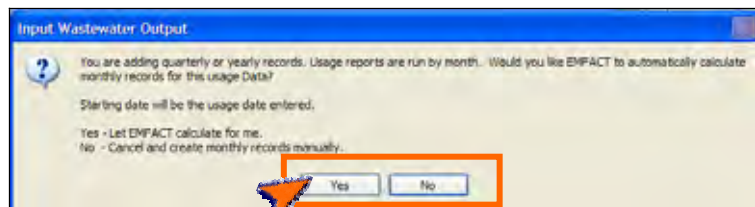
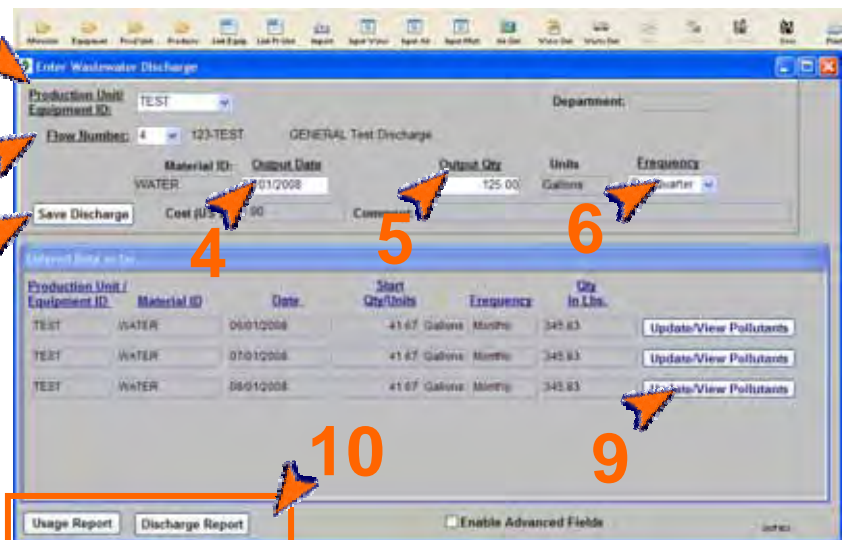
2 Entering Wastewater Discharge Data

Use the following steps to enter material usage for water with emissions and compute Wastewater Pollutants based on Flow/Factors.

As data is recorded on this window, discharge/pollutant is calculated in Lbs.

The discharge information must be linked on the **Discharge** and **Water Poll** tabs* of the **Equipment Links** window or **Production Unit Links** window (**Link > Equipment** or **Link > Production Unit**) to use this feature.

- 1 > Click **Wastewater** (). The **Enter Wastewater Discharge** window opens.
- 2 > Select a **Production Unit/ Equipment ID** from the dropdown.
- 3 > Select a **Flow Number**.
- 4 > Enter an **Output Date**.
- 5 > Complete the **Output Qty** field.
- 6 > Make a selection from the **Frequency** dropdown. If selecting **Quarterly** or **Yearly** as the **Frequency**, the **Input Wastewater Output** popup will display.
- 7 > If the **Input Wastewater Output** popup displayed, click **Yes** to have EMFACT automatically calculate monthly records beginning on the **Usage Date** entered in 4 >, going forward. Click **No** to cancel and create monthly records manually. *(Example to the right shows monthly records created automatically.)*
- 8 > Click **Save Discharge**. The output (in Lbs) will calculate and display in the **Entered Data so far...** section of the window. The data in this section displays for one day and then resets.
- 9 > To edit or delete data for a particular usage entry, click the corresponding **Update/View Pollutants** button. The **Wastewater Discharge with Pollutants** window opens (step 3).
- 10 > Click the **Report** buttons to run reports as needed. Refer to the Report Guide for descriptions.



* The **Water Poll** tab is optional (if pollutants are not identified, emissions will not be tracked).

Enter Non-Product Outputs, cont.

3 Optional: Managing Wastewater Discharge Data

Use the following steps to view, edit or delete the calculated pollutant discharge data. On the **Wastewater Discharge with Pollutants** window:

- 1 > View and make any necessary changes to the original entry.
- 2 > Click **Save**. Any changes will recalculate.
- 3 > Optional: Complete one of the fields in the **Filter Data** section
- 4 > Click **Retrieve**. The window will update with the data matching the search criteria.
- 5 > Click the **Report** buttons at the bottom of the page to run reports as needed. Refer to the Report Guide for descriptions of these reports.

The screenshot shows the 'Discharge with Pollutants' window. At the top, there is a 'Filter Data' section with fields for Equipment ID, Production Unit ID, Usage Date From, and Usage Date To. Below this, the 'Production Unit' is identified as 'BOILER 1' with equipment ID 'BOILER 1 Boiler in NW cost'. The 'Flow Number' is 1 and the 'Flow ID' is 123-456. The discharge is for 'NPDES Water Discharge'. A table shows the discharge data for 'WATER' on '02/01/2008' with a frequency of 'Monthly', a cost of '2,500.00' US \$, and a usage of '3,450.00 Gallons' and '28,635.00 Lbs.'. A 'Pollutant' table lists 'ALUMINIUM' and 'CADMIUM' with their respective discharge amounts and dates. At the bottom, there are 'Usage Report' and 'Discharge Report' buttons. Numbered callouts (1-5) indicate the steps: 1 points to the 'Filter Data' section, 2 points to the 'Save' button, 3 points to the 'Filter Data' section, 4 points to the 'Retrieve' button, and 5 points to the 'Usage Report' and 'Discharge Report' buttons.


Material ID	Usage Date	Frequency	Usage Qty/Units
WATER	02/01/2008	Monthly	3,450.00 Gallons

Pollutant	Discharge (Lbs.)	Date
ALUMINIUM	69091	02/01/2008
CADMIUM	2.82123	02/01/2008

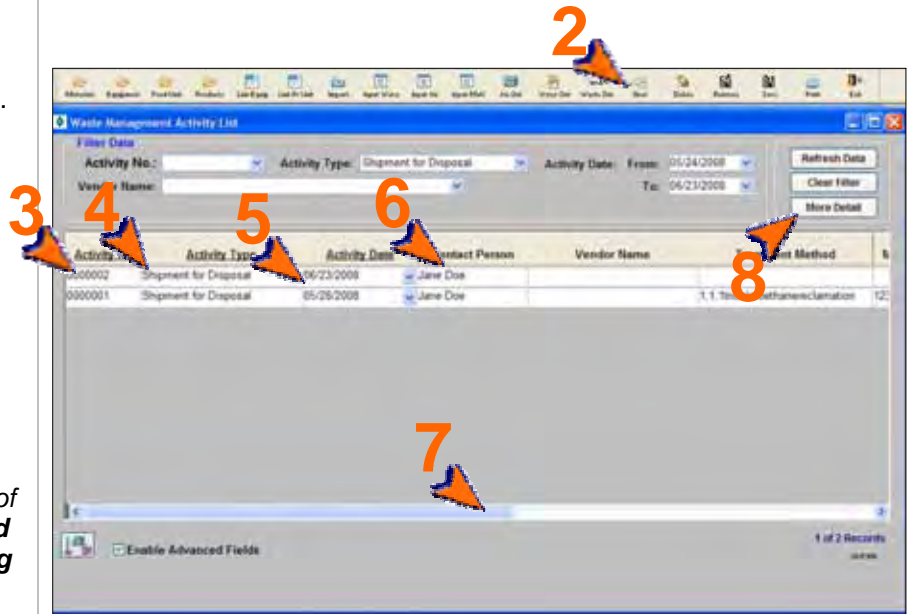
Enter Non-Product Outputs, cont.

4 Documenting Waste Management Activity

Use the following steps to document waste shipments, treatments and recycling.

- 1 > Click **Waste** (). The **Waste Management Activity List** window will open and display activity for the last month.
- 2 > Click **New**. A new line will display on the page.
- 3 > The **Activity No** defaults to the next sequential number.
- 4 > The **Activity Type** defaults to **Shipment for Disposal** and can be changed if it is appropriate.
- 5 > The **Activity Date** defaults to the current date and can be changed.
- 6 > The **Contact Person** defaults to the currently logged on user.
- 7 > Use the scroll bar to view and complete the remaining fields as needed.
- 8 > To add additional optional details about the waste activity, click **More Detail**. The **Waste Management for Activity No.** window will open (see next step).

*Note: When manifest information is entered, EMFACT tracks the number of days outstanding (**Days Not Returned** field) until the **Manifest Returned Flag** field is checked.*



Enter Non-Product Outputs, cont.

5 Optional: Managing Waste Activity Details

Use the following steps to document waste amounts/costs per waste type for each shipment. On the **Waste Management for Activity No.** window.

Note: Waste Types must be set up (Define > Outputs > Waste Type List) before using this window.

1 > View and make any necessary changes to the waste activity and manifest detail.

2 > Optional: Complete the fields on the **Waste** tab.

Note: Negative costs and weights can be entered.

*The waste must be linked to the equipment/production unit on the **Equipment Links** window or **Production Unit Links** window (Link > Equipment or Link > Production Unit) in order to select the Equipment/Production Unit ID on the **Waste** tab.*

2 > Click **Save**.

Note: When manifest information is entered, EMFACT tracks the number of days outstanding (Days Not Returned field) until the Manifest Returned Flag field is checked.

Waste Type	Weight in Lbs.	Internal Cost in \$	Vendor Cost in \$	Total Cost in \$
Scrap	500	100.00	0.00	
Equipment/Production Unit ID				Last Update: 06/23/2008

<end of section>

Introduction to Reminders

The Reminders feature enables users to track the renewal and expiration dates of permits, regulations, etc. When permits and regulations are first set up, you have the option of entering the Issue, Expiration, Renewal Due and Renewal Start Dates. When this is done, it automatically creates calendar events and reminders in EMFACT. You can also set up independent calendar events for other reasons (e.g. audit reminders, etc.).

This guide contains the following sections. Click on the title to advance to that section.

Section 1. Calendar Events

This section provides a brief description of the Reminder/Calendar Event feature in EMFACT.

Section 2. Managing Calendar Events Coming Due

This section describes the process for accessing calendar events that are overdue or coming due within 30 days. This section also explains how to close an event.

Section 3. Setting Up Independent Calendar Events

This section will help you set up events that are not triggered by permit expiration dates.

Section 4. Adding Event Detail

This section describes how to add optional event details, as well as how to make the same event recur at a set frequency (e.g., weekly, monthly, etc.).

Section 5. Parent-Child Relationship of Events

This section describes the relationship between “parent” events and “child” events, once recurrence is established.

Section 6. Closing Out an Event

This section explains how to close out an event.

Calendar Events

This section contains the following:

1. Calendar Events
2. Managing Calendar Events Coming Due
3. Setting Up Independent Calendar Events
4. Adding Event Detail (including how to create recurring events)
5. Parent-Child Relationship of Events
6. Closing an Event

Please review the Quick Start Guide section before starting.

Note: A Cue Card is not available for reminders. Instead, windows are accessed directly from the **Reminders** option on the main menu, as well as the **Reminders** button on the **EMFACT Dashboard** window.

1 Calendar Events

When permits and regulations are set up on the **Permit List** window (shown to the right), the **Issue, Expiration, Renewal Due** and **Renewal Start Dates** automatically schedule calendar events and reminders in EMFACT. Refer to the module on defining permits and regulations for more information.


You can also set up your own independent events. Refer to Step 3 for more information.



Calendar Events, cont.

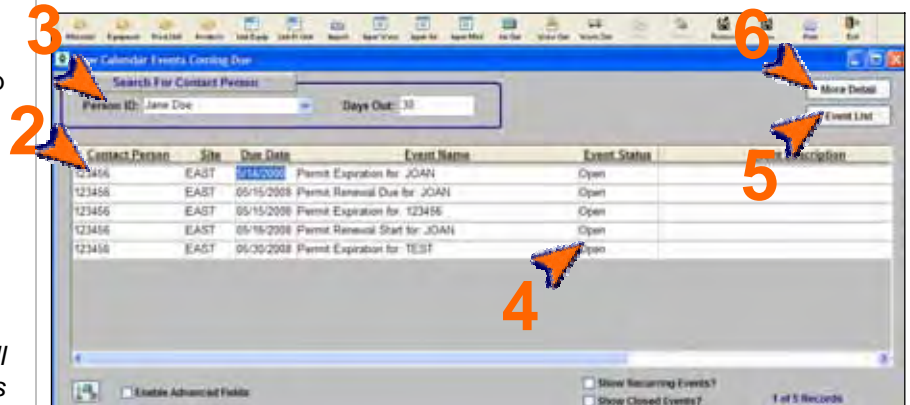
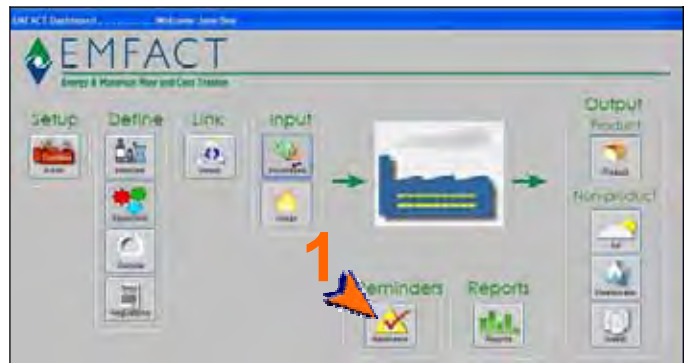
2 Managing Calendar Events Coming Due (as needed)

You will know when there is a calendar event that is either overdue or coming due within the next 30 days because the **Reminders** button on the EMFACT Dashboard will flash.

- 1 > Click **Reminders** (). The **View Calendar Events Coming Due** window will open and display any overdue/coming due events with the **Event Status = Open**.
- 2 > Review the details of the events.
- 3 > *Optional:* Use the filters at the top of the window to change the **Contact Person** or number of **Days Out**.
- 4 > To close a calendar event, select **Closed** from the **Event Status** dropdown. Refer to Step 6 for more information if necessary.

*Note: Closed calendar events will not display on this window unless the **Show Closed Events?** checkbox at the bottom of the window is checked.*

- 5 > To add a new event that is not associated with a permit, click **Event List**. The **Calendar Event List** window will open (see next step).
- 6 > *Optional:* Click **More Detail** to maintain additional details about the event. The **Calendar Event Detail** window will open (see Step 4).



Calendar Events, cont.

3 Setting Up Independent Events

In addition to calendar events that are driven by permit renewal dates, any type of calendar event can be set up in EMFACT.

- 1 > Select **Reminders > Calendar Reminder List** from the main menu. Or, click **Event List** on the **View Calendar Events Coming Due** window. The **Calendar Event List** window will open and display all events where the **Event Status** is **Open**.
- 2 > Click **New**. A blank row will display.
- 3 > Complete the **Due Date** field.
- 4 > Complete the **Event Name** field.
- 5 > The **Init Reminder** and **Final Reminder** fields default to 30 days and 10 days before the **Due Date** (respectively).

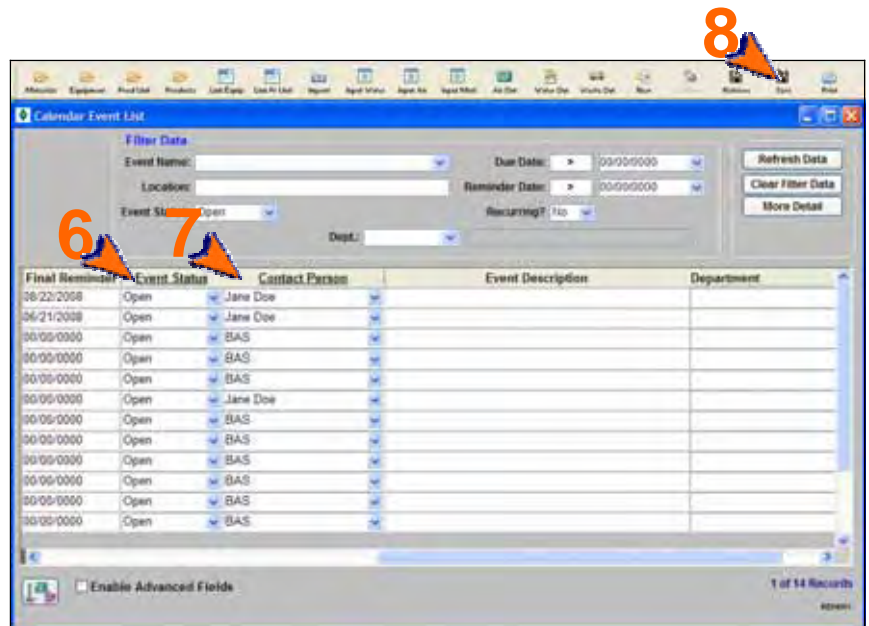
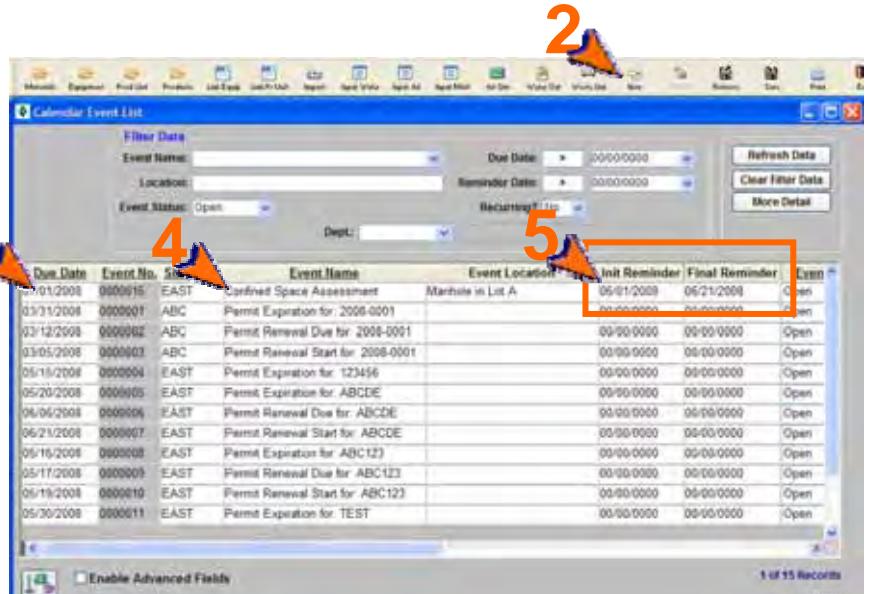
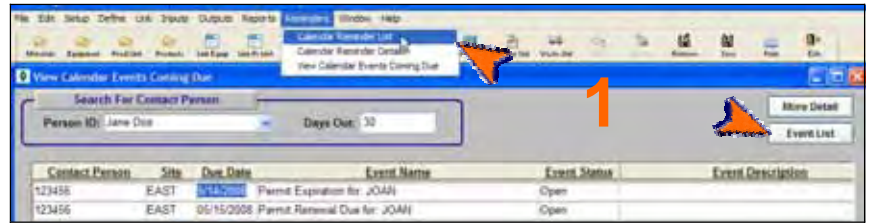
Use the scroll bar to view the following:

- 6 > The **Event Status** defaults to **Open** and should be closed when it is appropriate.
- 7 > The **Contact Person** defaults to the currently logged on user.

Complete the remaining optional fields as needed.

- 8 > Click **Save**. The **Event No.** field will fill.

*Note: If you are making a change to an existing event, search for it by completing at least one field in the **Filter Data** section then click **Refresh Data**.*



Calendar Events, cont.

4 Adding Event Detail

Follow these steps to add optional details about a calendar event.

- 1 > Click your cursor on the event and then click **More Detail** on either the **View Calendar Events Coming Due** window or the **Calendar Event List** window. The **Calendar Event Detail** window for the highlighted event will display.

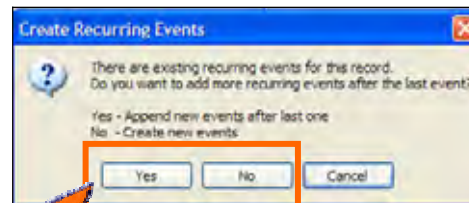
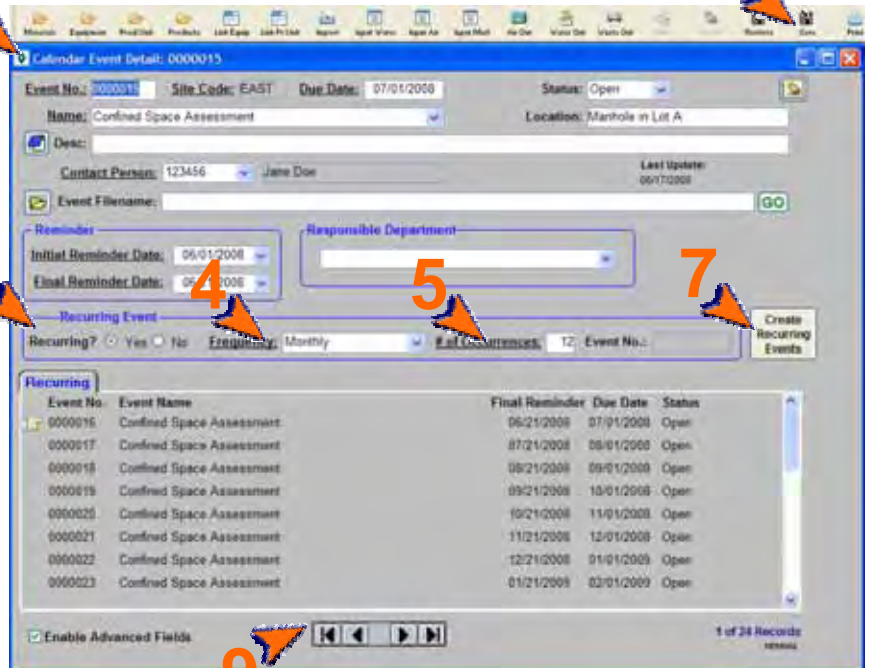
*Note: Alternatively, you can select **Reminders > Calendar Reminder Details** from the main menu; complete the **Event No.** field on the **Calendar Event List** window; and click **Retrieve** in the toolbar.*

*You must be an Advanced User or click the **Enable Advanced Fields** checkbox to perform the remainder of this step.*

- 2 > Make any necessary changes to the window.

To make same event recur at a set frequency (e.g., weekly, monthly, etc.):

- 3 > Check **Yes** for the **Recurring?** field.
- 4 > Make a selection from the **Frequency** dropdown.
- 5 > Enter a **# of Occurrences**.
- 6 > Click **Save**.
- 7 > Click **Create Recurring Events**. The **Create Recurring Events** popup displays.
- 8 > Click **Yes** or **No** depending on whether you want to append new events after the existing event or create new events. The **Recurring** tab will populate with the new events.
- 9 > Use the VCR buttons to advance to the new event (or type the number in the **Event No.** field).



Calendar Events, cont.

5 Parent-Child Relationship of Events

Once you establish recurrence for an event, a “parent-child” relationship is formed. The “parent” record contains a “child” events, and it contains the specifications (reminders, number of recurrences, etc.) for the child event(s). A “child” record, however, contains information for that “child” event only.

When on the **Calendar Event Detail** window for a child event number (A), there is a cross-reference for the parent event number (B). When on the **Calendar Event Detail** window for a parent event number (C), you can view the recurring child events on the **Recurring** tab (D).

Child Event:

Calendar Event Detail: 0000016

Event No.: 0000016 Site Code: EAST Due Date: 07/01/2008 Status: Open

Location: Manhole in Lot A

Contact Person: 123456 Jane Doe Last Update: 06/17/2008

Event Filename: [GO]

Reminder: Initial Reminder Date: 06/01/2008 Final Reminder Date: 06/21/2008 Responsible Department: []

Recurring Event: Recurring? Yes No Frequency: Monthly # of Occurrences: 12 Event No.: 0000015

Event No.	Event Name	Final Reminder	Due Date	Status
0000016	Confined Space Assessment	06/21/2008	07/01/2008	Open
0000017	Confined Space Assessment	07/21/2008	08/01/2008	Open
0000018	Confined Space Assessment	08/21/2008	09/01/2008	Open
0000019	Confined Space Assessment	09/21/2008	10/01/2008	Open
0000020	Confined Space Assessment	10/21/2008	11/01/2008	Open
0000021	Confined Space Assessment	11/21/2008	12/01/2008	Open
0000022	Confined Space Assessment	12/21/2008	01/01/2009	Open
0000023	Confined Space Assessment	01/21/2009	02/01/2009	Open

Parent Event:

Calendar Event Detail: 0000015

Event No.: 0000015 Site Code: EAST Due Date: 07/01/2008 Status: Open

Location: Manhole in Lot A

Contact Person: 123456 Jane Doe Last Update: 06/17/2008

Event Filename: [GO]

Reminder: Initial Reminder Date: 06/01/2008 Final Reminder Date: 06/21/2008 Responsible Department: []

Recurring Event: Recurring? Yes No Frequency: Monthly # of Occurrences: 12 Event No.: []

Event No.	Event Name	Final Reminder	Due Date	Status
0000016	Confined Space Assessment	06/21/2008	07/01/2008	Open
0000017	Confined Space Assessment	07/21/2008	08/01/2008	Open
0000018	Confined Space Assessment	08/21/2008	09/01/2008	Open
0000019	Confined Space Assessment	09/21/2008	10/01/2008	Open
0000020	Confined Space Assessment	10/21/2008	11/01/2008	Open
0000021	Confined Space Assessment	11/21/2008	12/01/2008	Open
0000022	Confined Space Assessment	12/21/2008	01/01/2009	Open
0000023	Confined Space Assessment	01/21/2009	02/01/2009	Open

1 of 24 Records

Calendar Events, cont.

6 Closing an Event

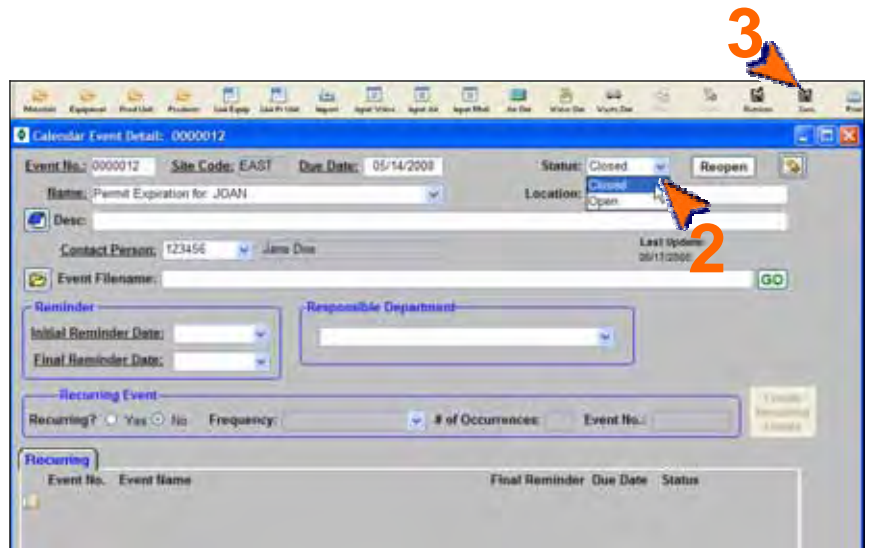
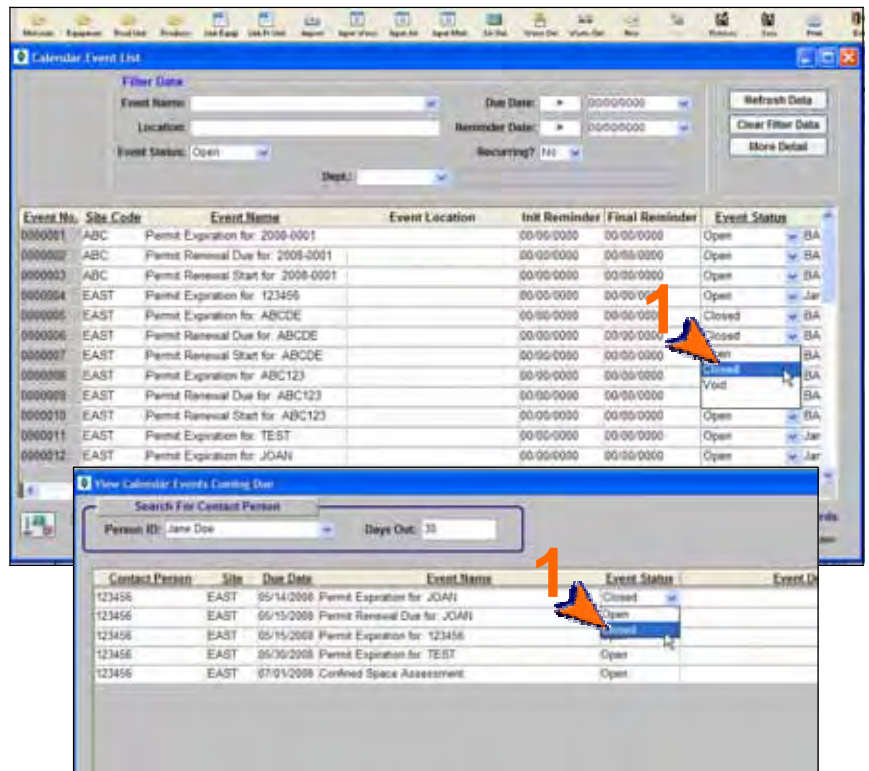
When it is time to close out an event, it is done on any of the event windows.

- 1 > On the **Calendar Event List** window or the **View Calendar Events Coming Due** window, locate the event and select **Closed** from the **Event Status** dropdown.

or

- 2 > On the **Calendar Event Detail** window, select **Closed** from the **Status** dropdown.

- 3 > Click **Save**.



<end of section>

EMFACT Reports

There are 21 reports to help track your air, water, waste activities. This section outlines the steps for creating the following reports:

Material

1. **Materials Defined List** - Displays a distinct list of CAS numbers and Materials that have been set up in EMFACT. There is no date range and it does not factor in materials purchased or used. It can be sorted by CAS Number or Material.
2. **Materials Purchased by Department** - Displays a distinct list of materials purchased per department for a defined date range; no weights or costs are displayed.
3. **Materials Purchased: Weight per Material** - Displays a report of the materials purchased for the facility for a defined date range. The report shows purchases summing up LBS and cost. This report bumps up against the material purchased list. This report is available with detail or summarized.
4. **Materials Purchased: Weight per CAS Number** - Displays a report of chemicals related to materials that were purchased for the facility for a defined date range. The report shows purchases summing up LBS and cost. The report is grouped by CAS number and then sorted on material and is available with detail or summarized. This report bumps up against the material purchased list.
5. **Materials Used by Department** - Similar to the **Materials Purchased by Department** report (#2 above), but for material usage data.
6. **Materials Used: Weight per Material** - Similar to the **Materials Purchased: Weight per Material** (#3 above), but for material usage data.
7. **Materials Used: Weight per CAS Number** - Similar to the **Materials Purchased: Weight per CAS Number** (#4 above), but for material usage data.
8. **Material Summary Report** – Displays the details for a specific material, as it is maintained in EMFACT.

Equipment/Production Unit

9. **Equipment Link Report / Production Unit Report** – Displays a summary of all related EMFACT data (i.e., materials, products, air source, emission, air factor, discharge, water pollutant, waste) for a specific piece of equipment or production unit.

Product

10. **Product Recipe: Weight per CAS Number** - Displays a report of the available chemicals related to materials that are on a product/intermediate product. The report sums up LBS from the product recipe based on the percentage of material relative to the product or intermediate product weight. It is grouped by CAS number and then sorted on material; and is available with detail or summarized. The same report is available filtered on a chemical list of concern such that only chemicals on the list will be displayed in the report. The lists can be regulatory or created by the user.
11. **Product Output: Weight per Material** - Displays the sum of LBS of the available materials on a product/intermediate product based on % of material relative to the product/intermediate product weight, for a defined date range. This report bumps up against product output volume multiplied by the % that the material is called out by the recipe. This report is available with detail or summarized.

EMFACT Reports, cont.

Air

12. **Usage (Air): Weight per Material** - Displays the sum of LBS and cost of paint and fuelburn usage data for a selected Equipment ID/Production Unit and date range. This report can be displayed as either daily or monthly, and is grouped by month. This report is often used to check that data was entered correctly.
13. **Usage (Air): Weight per Material with 12 Month Rolling Report** - Displays the sum of LBS and cost of the paint and fuelburn usage data for a selected Equipment ID/Production Unit and date range. This report is grouped and summed by month with 12 month running totals displayed and is often used to verify any 12 month permit totals. This report can be daily or monthly.
14. **Air Emissions: Weight per Pollutant with 12 Month Rolling Report** - Similar to **Usage (Air): Weight per Material with 12 Month Rolling Report** (#13 above), but for air emissions, including the number of hours and computed emissions by pollutant. This is available as a monthly report only.
15. **Air Emissions: by MSDS VOC% Report** - Displays the sum of LBS and cost of available chemicals related to materials used for a defined date range. This report is grouped by CAS number and then sorted on material, and is available where the %VOC percent is greater than zero. The report multiplies the usage in LBS by the % VOC. This report bumps up against the material usage list.

Water

16. **Usage (Water): Weight per Material** - Displays the sum of LBS and cost of water usage data for a selected Equipment ID/Production Unit and date range. This report can be displayed as either daily or monthly, and is grouped by month. This report is often used to check that data was entered correctly.
17. **Wastewater Discharge: Weight per Material Report** - Displays the sum of LBS and cost of water usage data (*water output discharge*) for a selected Equipment ID/Production Unit and date range. This report is grouped and summed by month with 12 month running totals displayed and is often used to verify any 12 month permit totals. This report can be daily or monthly.
18. **Wastewater Discharge: Weight per Pollutant with 12 Month Rolling Report** - Similar to **Wastewater Discharge: Weight per Material Report** (#17 above) but for wastewater emissions, including the number of hours and computed emissions by pollutant. This is available as a monthly report only.

Waste

19. **Waste Management Report - Chargeback Costs** - Calculates waste activity cost data using waste type chargeback rates for a defined date range. This report is grouped by waste type.
20. **Waste Management Report - Activity Costs** - Similar to the **Chargeback Costs** report (above), but displays cost data associated with the shipment.

Comprehensive

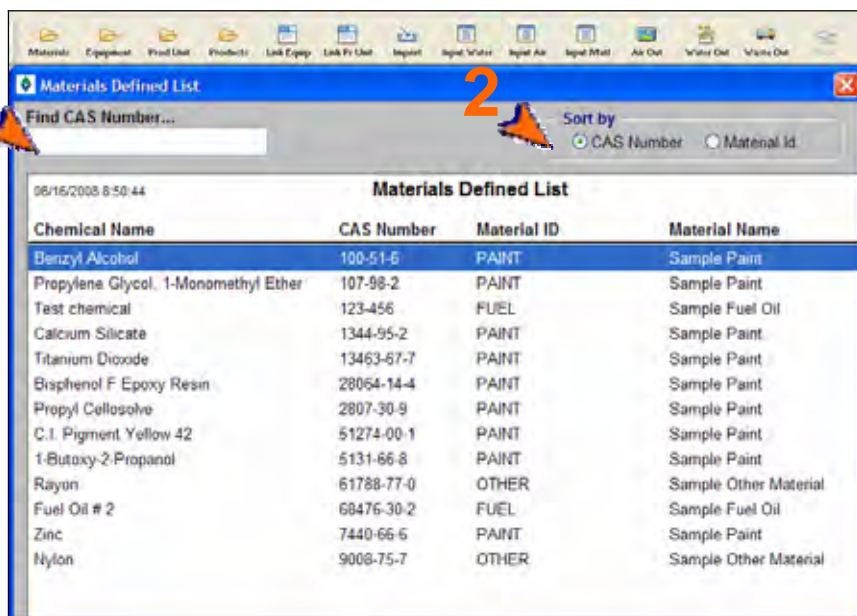
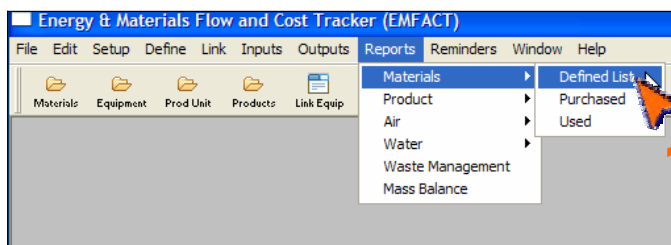
21. **Mass Balance Purchased (or Usage) Report** - Displays the sum of LBS and cost of inputs and outputs data for a selected Equipment ID/Production Unit and date range. The Mass Balance Purchased Report shows the inputs derived from materials purchased. The Mass Balance Usage Report shows the inputs derived from material input usage (water, materials, etc.). The outputs are the same for both reporting options and come from air emissions, wastewater discharge, waste activity, and product volume.

1. Materials Defined List

Follow these steps to create the Materials Defined List:

- 1 > Select **Reports > Materials > Defined List** from the main menu. The **Materials Defined List** window will open and it will display all chemicals and related materials that are set up in EMFACT.
- 2 > The **Sort by** section defaults to **CAS Number** and can be changed to **Material Id** if desired.
- 3 > To locate a specific CAS Number in the list, complete the **Find CAS Number...** field and click **Enter** on your keyboard.

*Note: If sorting by Material Id, the field name is **Find Material Id...***



Printing and Saving

To print the report to your default printer, select **File > Print** from the main menu.

To convert your report to a PDF, choose a PDF printer (File > Print Setup) before clicking Print.

To save your report to another file format such as an Excel or text file, choose **File > Save As** from the main menu.

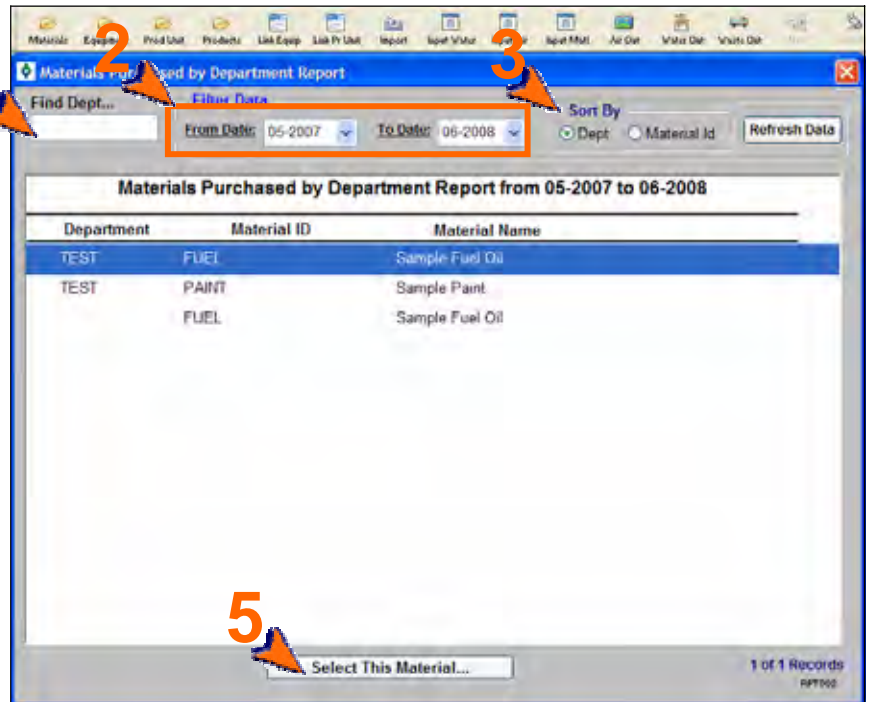
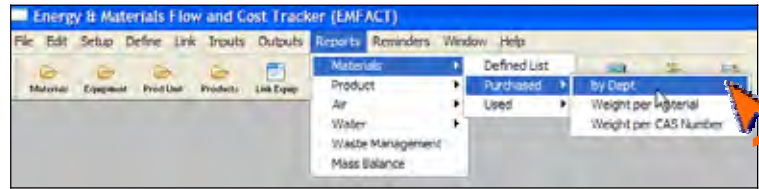
2. Materials Purchased by Department Report

Follow these steps to create the Materials Purchased by Department Report:

- 1 > Select **Reports > Materials > Purchased > by Dept** from the main menu. The **Materials Purchased by Department Report** window will open and it will display data for the last month.
- 2 > The **From Date** and **To Date** default to the last month and current month, and can be changed. (Click the **Refresh Data** button after identifying a new date range.)
- 3 > The **Sort by** section defaults to **Dept** and can be changed to **Material Id** if desired.
- 4 > To locate a specific department in the list, complete the **Find Dept...** field and click **Enter** on your keyboard.

*Note: If sorting by Material Id, the field name is **Find Material...***

- 5 > To go to the **Material Detail** window for a specific material in the list, click on it, then click **Select This Material...**



Printing and Saving

To print the report to your default printer, select **File > Print** from the main menu.

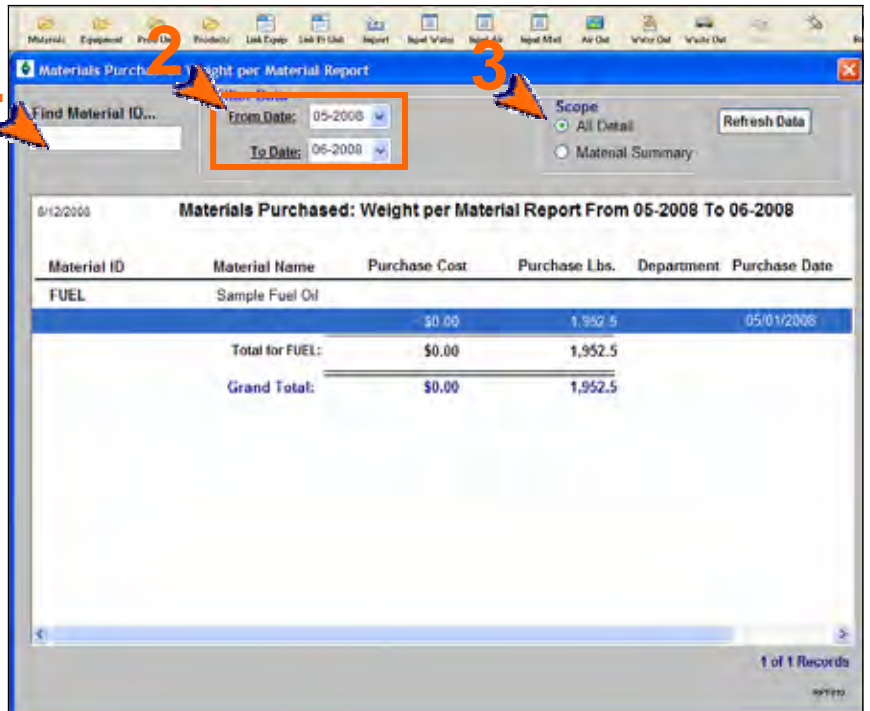
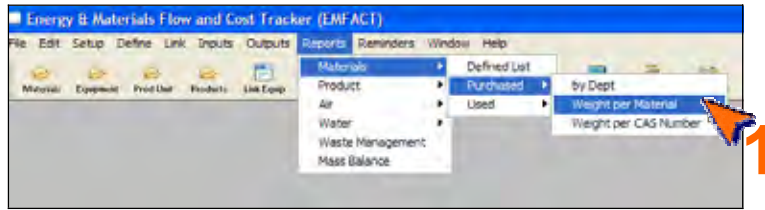
To convert your report to a PDF, choose a PDF printer (File > Print Setup) before clicking Print.

To save your report to another file format such as an Excel or text file, choose **File > Save As** from the main menu.

3. Materials Purchased: Weight per Material Report

Follow these steps to create the Materials Purchased: Weight per Material Report:

- 1 > Select **Reports > Materials > Purchased > Weight per Material** from the main menu. The **Materials Purchased: Weight per Material Report** window will open and it will display all data for the previous month.
- 2 > The **From Date** and **To Date** default to the last month and current month, and can be changed. (Click the **Refresh Data** button after identifying a new date range.)
- 3 > The **Scope** section defaults to **All Detail** and can be changed to **Material Summary** if desired.
- 4 > To locate a specific material in the list, complete the **Find Material ID...** field and click *Enter* on your keyboard.



Printing and Saving

To print the report to your default printer, select **File > Print** from the main menu.

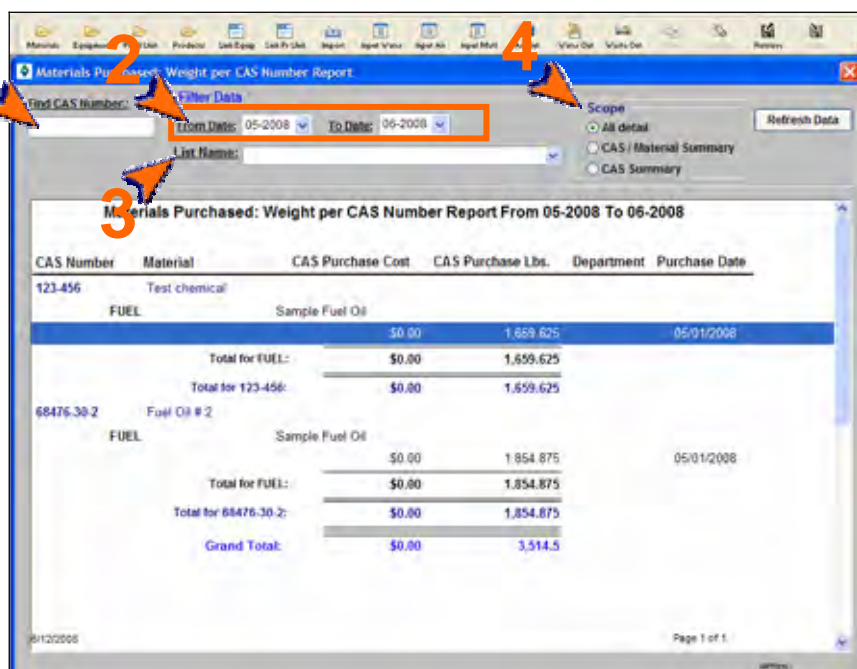
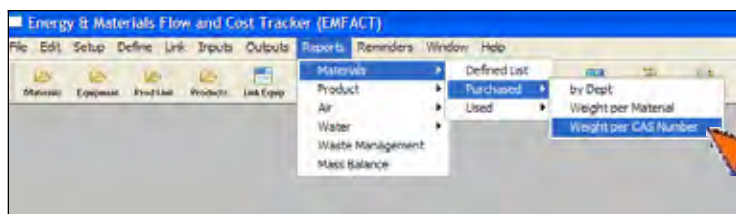
To convert your report to a PDF, choose a PDF printer (File > Print Setup) before clicking Print.

To save your report to another file format such as an Excel or text file, choose **File > Save As** from the main menu.

4. Materials Purchased: Weight per CAS No. Report

Follow these steps to create the Materials Purchased: Weight per CAS No. Report:

- 1 > Select **Reports > Materials > Purchased > Weight per CAS Number** from the main menu. The **Materials Purchased: Weight per CAS Number Report** window will open and it will display all data for the previous month.
- 2 > The **From Date** and **To Date** default to the last month and current month, and can be changed. (Click the **Refresh Data** button after identifying a new date range.)
- 3 > To filter on a particular chemical list of concern, make a selection from the **List Name** dropdown. (Click the **Refresh Data** button after identifying a list.)
- 3 > The **Scope** section defaults to **All detail** and can be changed to **CAS/Material Summary** or **CAS Summary** if desired.
- 4 > To locate a specific chemical in the list, complete the **Find CAS Number...** field and click **Enter** on your keyboard.



Printing and Saving

To print the report to your default printer, select **File > Print** from the main menu.

To convert your report to a PDF, choose a PDF printer (File > Print Setup) before clicking Print.

To save your report to another file format such as an Excel or text file, choose **File > Save As** from the main menu.

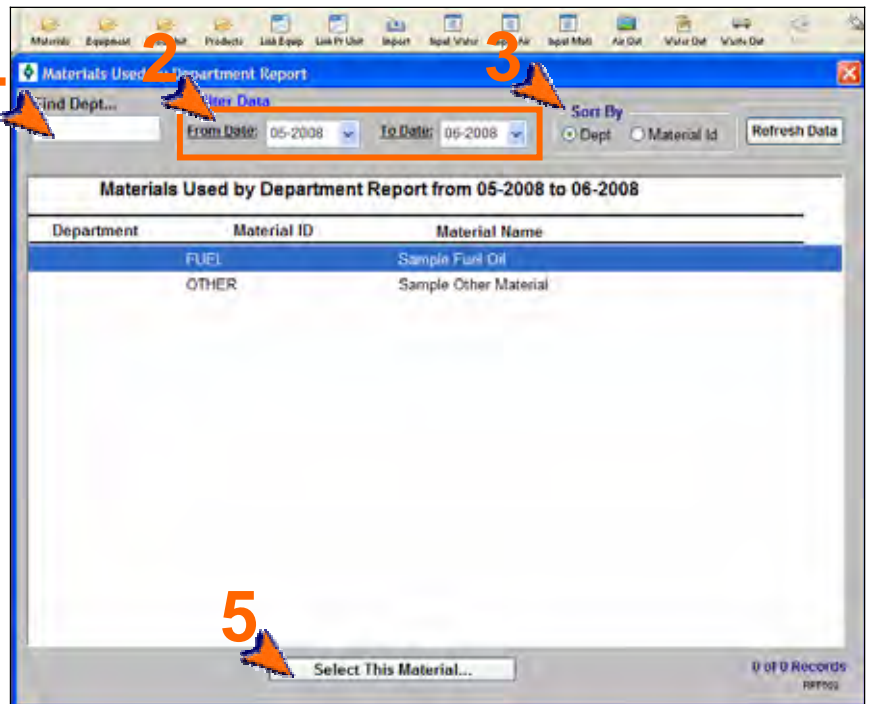
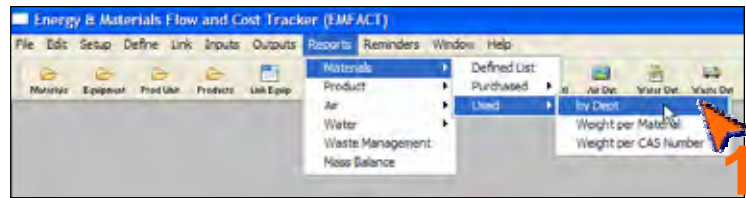
5. Materials Used by Department Report

Follow these steps to create the Materials Used by Department Report:

- 1 > Select **Reports > Materials > Used > by Dept** from the main menu. The **Materials Used by Department Report** window will open and it will display all data for the previous month
- 2 > The **From Date** and **To Date** default to last month and this month and can be changed. (Click the **Refresh Data** button after identifying a new date range.)
- 3 > The **Sort by** section defaults to **Dept** and can be changed to **Material Id** if desired.
- 4 > To locate a specific department in the list, complete the **Find Dept...** field and click **Enter** on your keyboard.

*Note: If sorting by Material Id, the field name is **Find Material...***

- 5 > To go to the **Material Detail** window for a specific material in the list, click on it, then click **Select This Material...**



Printing and Saving

To print the report to your default printer, **File > Print**.

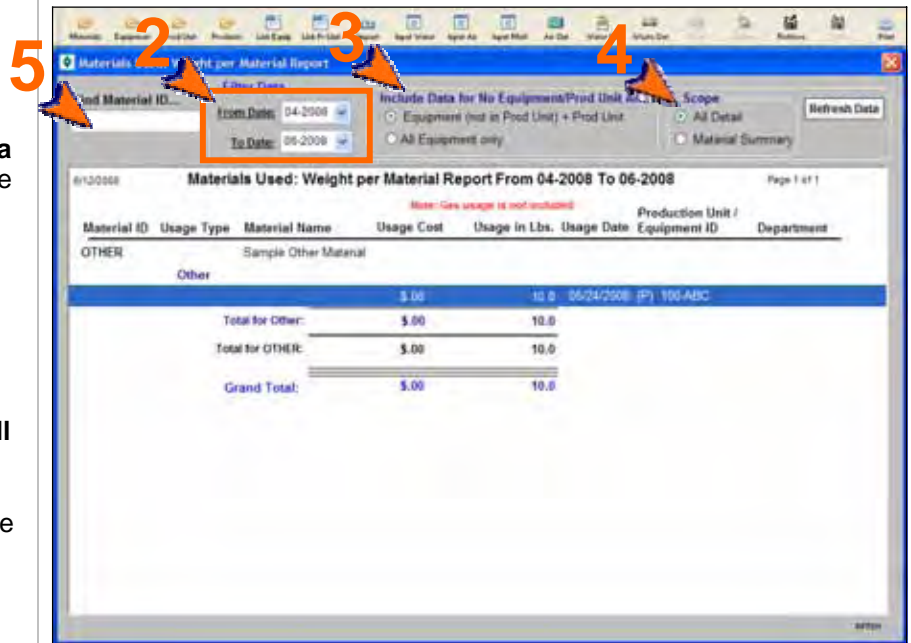
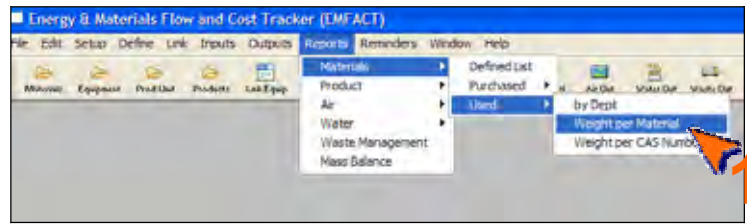
To convert your report to a PDF, choose a PDF printer (File > Print Setup) before clicking Print.

To save your report to another file format such as an Excel or text file, choose **File > Save As** from the main menu.

6. Materials Used: Weight per Material Report

Follow these steps to create the Materials Used: Weight per Material Report:

- 1 > Select **Reports > Materials > Used > Weight per Material** from the main menu. The **Materials Used: Weight per Material Report** window will open and it will display data for the previous month.
- 2 > The **From Date** and **To Date** default to the last month and current month and can be changed. (Click the **Refresh Data** button after identifying a new date range.)
- 3 > The **Include Data for No Equipment/Prod Unit AND** section defaults to **Equipment (not in Prod Unit) + Prod Unit** and can be changed to **All Equipment only** if desired. **
- 4 > The **Scope** section defaults to **All Detail** and can be changed to **Material Summary** if desired.
- 5 > To locate a specific material in the list, complete the **Find Material ID...** field and click *Enter* on your keyboard.



** Note: Data can be entered for a piece of equipment or for a production unit. If you have a production unit with related equipment, then it is important that the data is counted EITHER where it is entered for the production unit OR where it is entered for the equipment within the production unit, BUT NOT BOTH.

For example: If you had a Production Unit ID 123456 containing Equipment IDs 00011 and 00022. If you use the inputs and outputs window to type all data in for the Production Unit 123456 and report on it that way, that is fine. If you also put the same data in for Equipment IDs 00011 and 00011 and report on it, you would be double counting.

This **Filter Data** option allows the user to enter inputs and outputs data in both ways (as a production unit and equipment) and not double count when reporting.

Printing and Saving

To print the report to your default printer, select **File > Print** from the main menu.

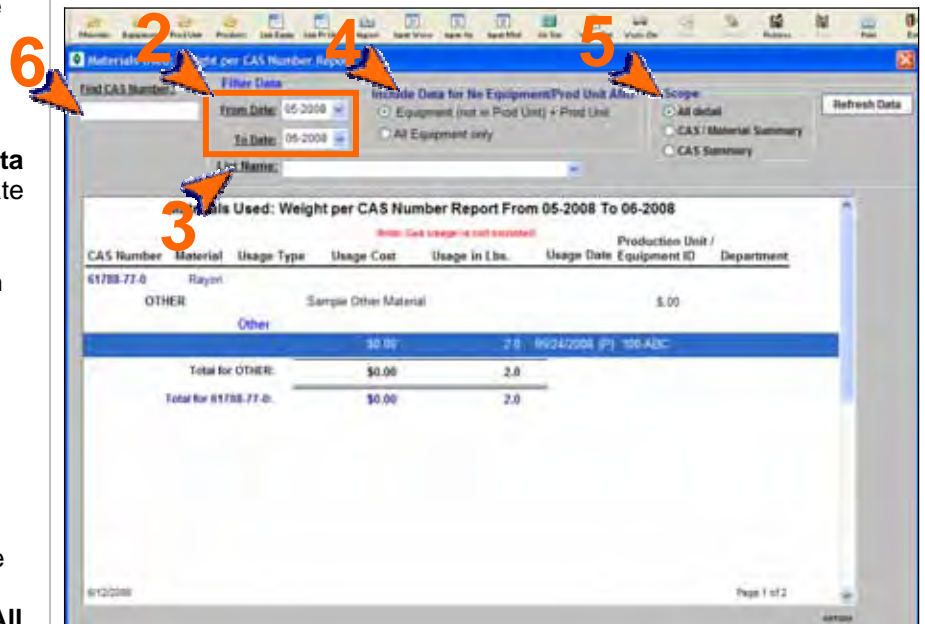
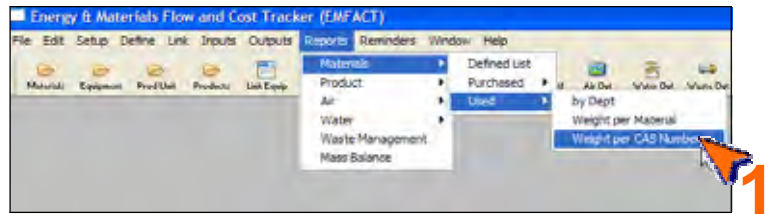
To convert your report to a PDF, choose a PDF printer (File > Print Setup) before clicking Print.

To save your report to another file format such as an Excel or text file, choose **File > Save As** from the main menu.

7. Materials Used: Weight per CAS Number Report

Follow these steps to create the Materials Used: Weight per CAS Number Report:

- 1 > Select **Reports > Materials > Used > Weight per CAS Number** from the main menu. The **Materials Used: Weight per CAS Number Report** window will open and it will display all data for the previous month.
- 2 > The **From Date** and **To Date** default to the last month and current month, and can be changed. (Click the **Refresh Data** button after identifying a new date range.)
- 3 > To filter on a particular chemical list of concern, make a selection from the **List Name** dropdown. (Click the **Refresh Data** button after identifying a list.)
- 4 > The **Include Data for No Equipment/Prod Unit AND** section defaults to **Equipment (not in Prod Unit) + Prod Unit** and can be changed to **All Equipment only** if desired. See Note for Report #6.
- 5 > The **Scope** section defaults to **All Detail** and can be changed to **CAS/Material Summary** or **CAS Summary** if desired.
- 6 > To locate a specific chemical in the list, complete the **Find CAS Number...** field and click **Enter** on your keyboard.



Printing and Saving

To print the report to your default printer, **File > Print**.

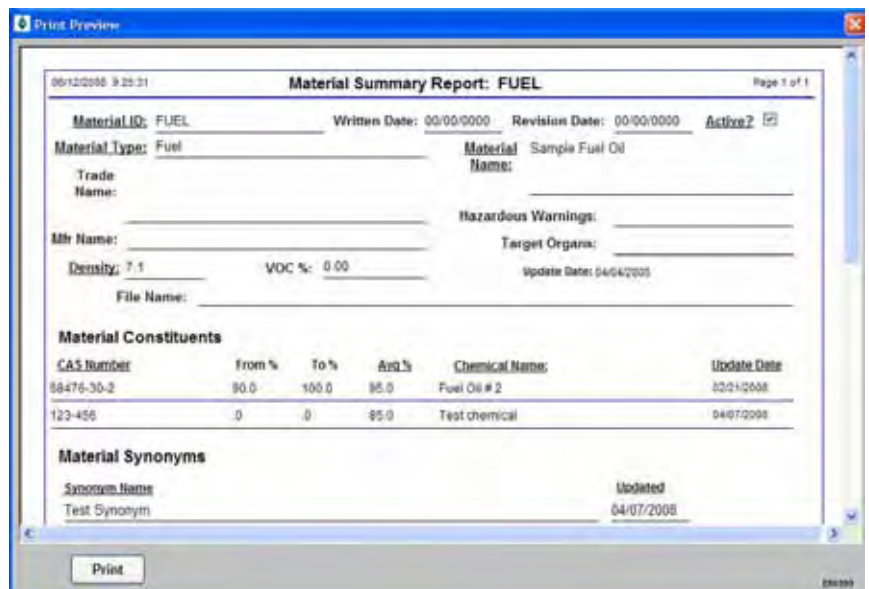
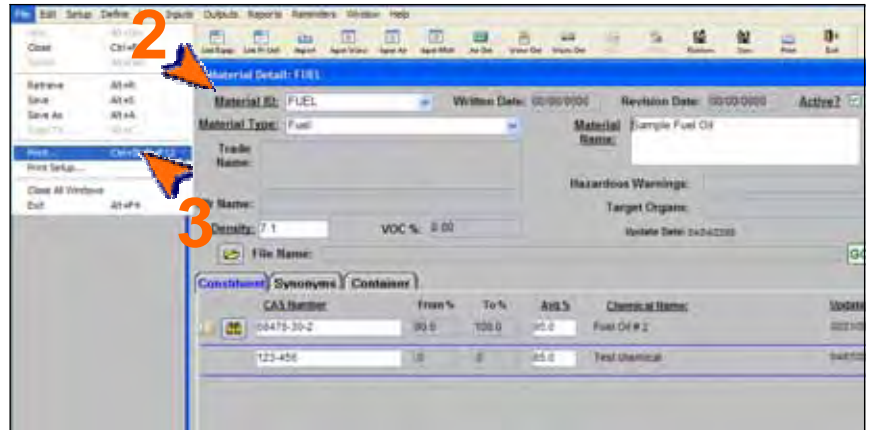
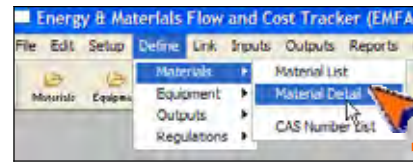
To convert your report to a PDF, choose a PDF printer (File > Print Setup) before clicking Print.

To save your report to another file format such as an Excel or text file, choose **File > Save As** from the main menu.

8. Material Summary Report

Follow these steps to create the Material Summary Report:

- 1 > Select **Define > Materials > Material Detail** from the main menu. The **Material Detail** window will open.
- 2 > Make a selection from the **Material ID** field.
- 3 > Select **File > Print** from the main menu. The **Print Preview** window will display.



Printing and Saving



To print the report to your default printer, click the **Print** button on the **Print Preview** window.

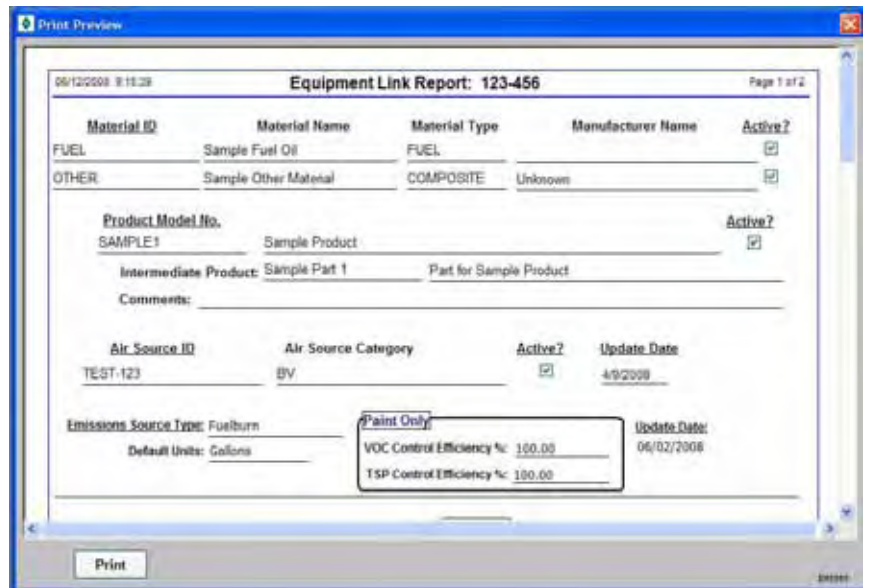
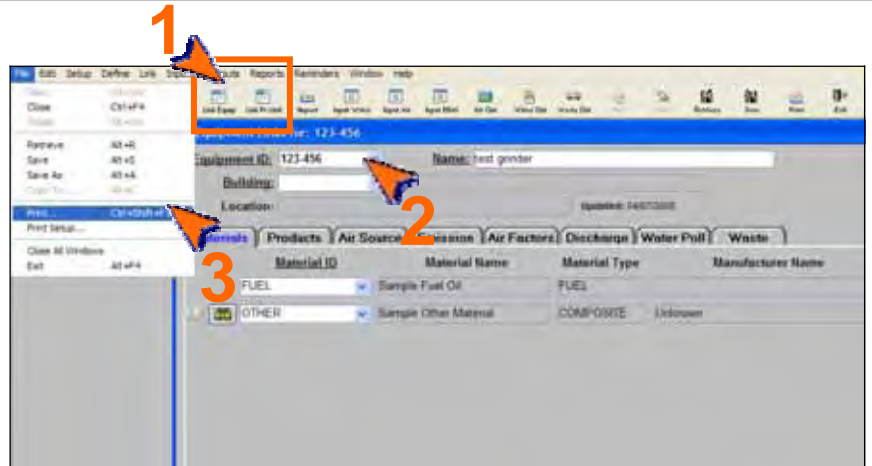
To convert your report to a PDF, choose a PDF printer (File > Print Setup) before clicking Print.

To save your report to another file format such as an Excel or text file, choose **File > Save As** from the main menu.

9. Equipment/Production Unit Link Report

Follow these steps to create the Equipment Link Report or the Production Unit Link Report:

- 1 > Select the **Link Equip** or **Link Pr Unit** button ( ) in the toolbar. The **Equipment Links** or **Production Unit Links** window will open.
- 2 > Make a selection from the **Equipment ID** or **Production Unit ID** field.
- 3 > Select **File > Print** from the main menu. The **Print Preview** window will display.



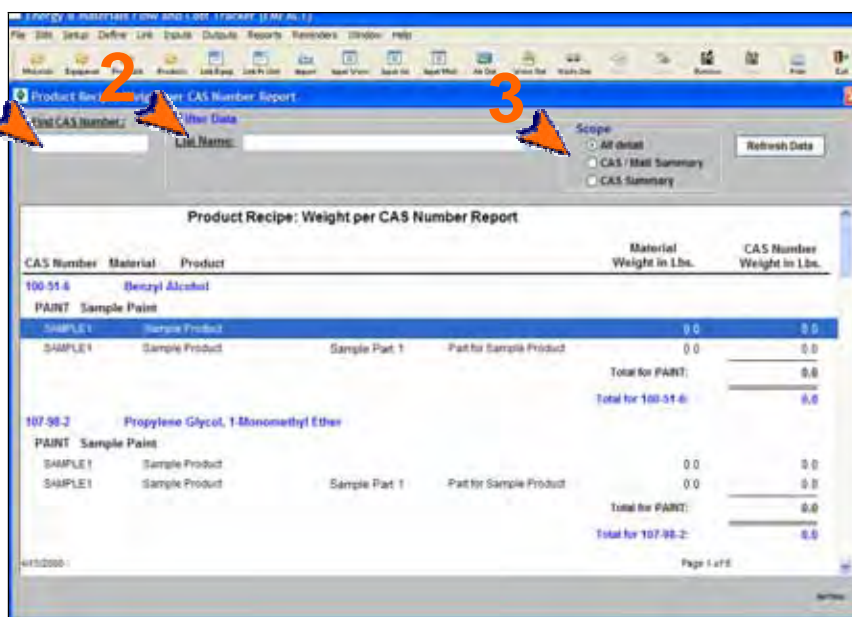
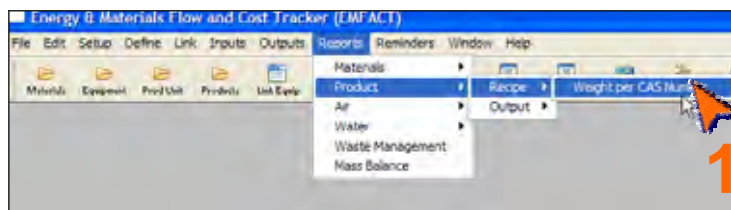
Printing and Saving

To print the report to your default printer, click the **Print** button on the **Print Preview** window.
To convert your report to a PDF, choose a PDF printer (File > Print Setup) before clicking Print.
To save your report to another file format such as an Excel or text file, choose **File > Save As** from the main menu.

10. Product Recipe: Weight per CAS Number Report

Follow these steps to create the Product Recipe: Weight per CAS Number Report:

- 1 > Select **Reports > Product > Recipe > Weight per CAS Number** from the main menu. The **Product Recipe: Weight per CAS Number Report** window will open and it will display all xxx
- 2 > To filter on a particular chemical list of concern; make a selection from the **List Name** dropdown. (Click the **Refresh Data** button after identifying a list.)
- 3 > The **Scope** section defaults to **All Detail** and can be changed to **CAS/Matl Summary** or **CAS Summary** if desired.
- 4 > To locate a specific chemical in the list, complete the **Find CAS Number...** field and click **Enter** on your keyboard.



Printing and Saving

To print the report to your default printer, select **File > Print** from the main menu.

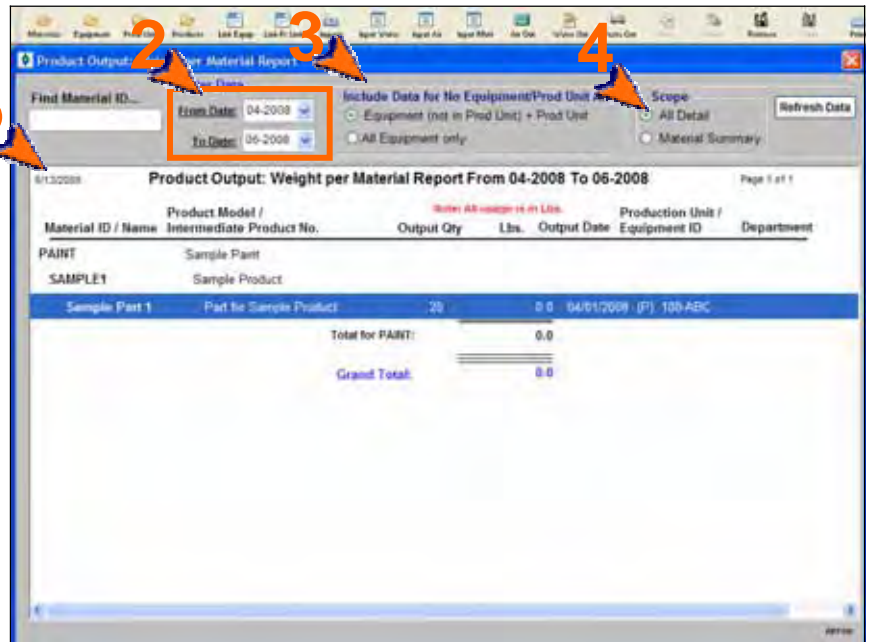
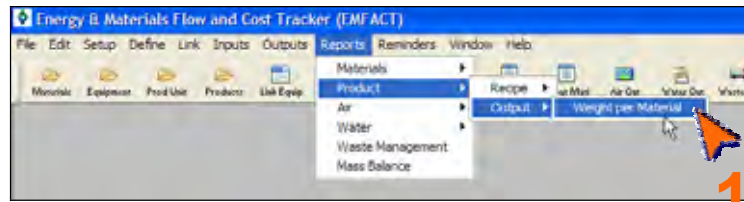
To convert your report to a PDF, choose a PDF printer (File > Print Setup) before clicking Print.

To save your report to another file format such as an Excel or text file, choose **File > Save As** from the main menu.

11. Product Output: Weight per Material

Follow these steps to create the Product Output: Weight per Material Report:

- 1 > Select **Reports > Product > Output > Weight per Material** from the main menu. The **Product Output: Weight per Material Report** window will open and it will display current data.
- 2 > The **From Date** and **To Date** default to the last month and the current month, and can be changed. (Click the **Refresh Data** button after identifying a new date range.)
- 3 > The **Include Data for No Equipment/Prod Unit AND** section defaults to **Equipment (not in Prod Unit) + Prod Unit** and can be changed to **All Equipment only** if desired. See Note for Report #6.
- 4 > The **Scope** section defaults to **All Detail** and can be changed to **Material Summary** if desired.
- 5 > To locate a specific material in the list, complete the **Find Material ID...** field and click *Enter* on your keyboard.



Printing and Saving

To print the report to your default printer, select **File > Print** from the main menu.

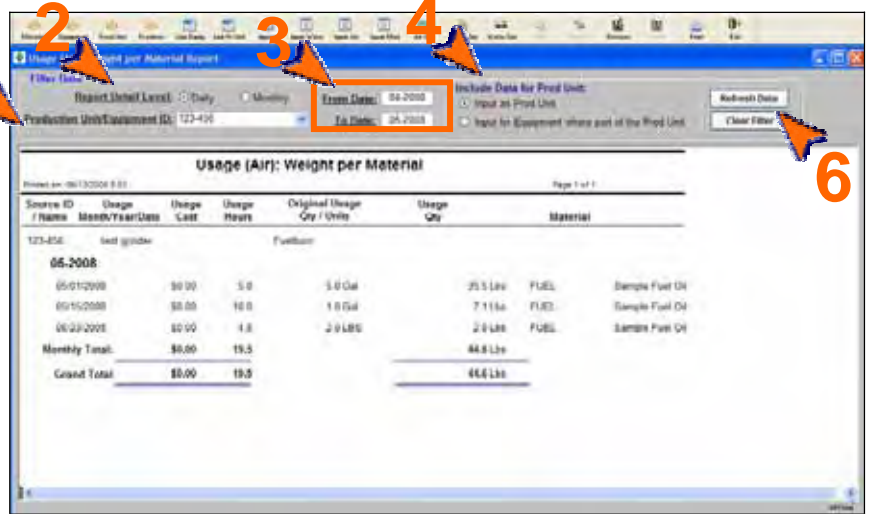
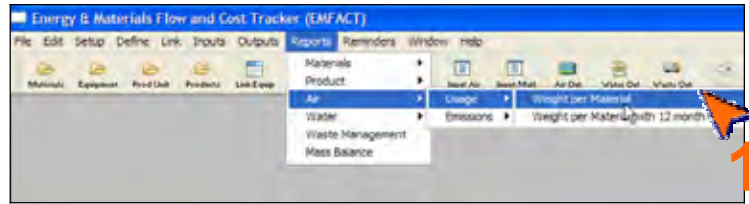
To convert your report to a PDF, choose a PDF printer (File > Print Setup) before clicking Print.

To save your report to another file format such as an Excel or text file, choose **File > Save As** from the main menu.

12. Usage (Air): Weight per Material Report

Follow these steps to create the Usage (Air): Weight per Material Report:

- 1 > Select **Reports > Air > Usage > Weight per Material** from the main menu. The **Usage (Air): Weight per Material Report** window will open.
- 2 > The **Report Detail Level** defaults to **Daily** and can be changed to **Monthly**.
- 3 > Make a selection from the **Production Unit/Equipment ID** dropdown. The window will refresh to include any current data.
- 4 > The **From Date** and **To Date** default to the last month and the current month, and can be changed. (Click the **Refresh Data** button after identifying a new date range.)
- 5 > The **Include Data for Prod Unit** section defaults to **Input as Prod Unit** and can be changed to **Input for Equipment where part of the Prod Unit** if desired. See Note for Report #6.
- 6 > To reset the report parameters, click **Clear Filter**.



Printing and Saving

To print the report to your default printer, select **File > Print** from the main menu.

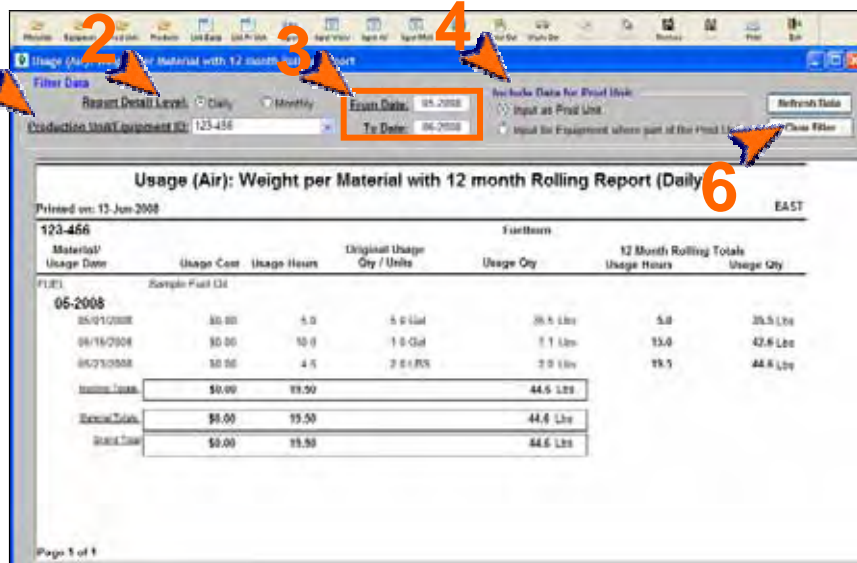
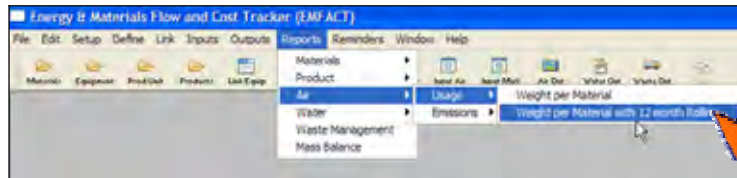
To convert your report to a PDF, choose a PDF printer (File > Print Setup) before clicking Print.

To save your report to another file format such as an Excel or text file, choose **File > Save As** from the main menu.

13. Usage (Air): Weight per Material with 12 Month Rolling Report

Follow these steps to create the Usage (Air): Weight per Material with 12 Month Rolling Report:

- 1 > Select **Reports > Air > Usage > Weight per Material with 12 month Rolling** from the main menu. The **Usage (Air): Weight per Material with 12 month Rolling Report** window will open and it will display current data.
- 2 > The **Report Detail Level** defaults to **Daily** and can be changed to **Monthly**.
- 3 > The **Production Unit/Equipment ID** field defaults to **All**, or you can select a specific ID from the dropdown. The window will refresh to include any current data.
- 4 > The **From Date** and **To Date** default to the last month and current month, and can be changed. (Click the **Refresh Data** button after identifying a new date range.)
- 5 > The **Include Data for Prod Unit** section defaults to **Input as Prod Unit** and can be changed to **Input for Equipment where part of the Prod Unit** if desired. See Note for Report #6.
- 6 > To reset the report parameters, click **Clear Filter**.



Printing and Saving

To print the report to your default printer, select **File > Print** from the main menu.

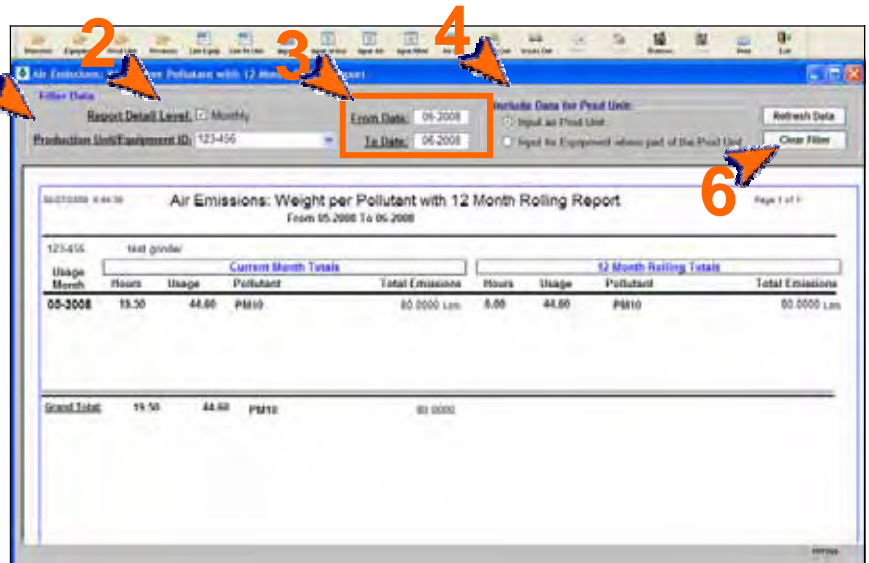
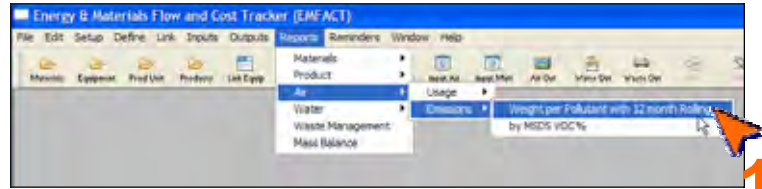
To convert your report to a PDF, choose a PDF printer (File > Print Setup) before clicking Print.

To save your report to another file format such as an Excel or text file, choose **File > Save As** from the main menu.

14. Air Emissions: Weight per Pollutant with 12 Month Rolling Report

Follow these steps to create the Air Emissions: Weight per Pollutant with 12 Month Rolling Report:

- 1 > Select **Reports > Air > Emissions > Weight per Pollutant with 12 month Rolling** from the main menu. The **Air Emissions: Weight per Pollutant with 12 Month Rolling Report** window will open and it will display any current data.
- 2 > The **Report Detail Level** defaults to **Monthly** and cannot be changed.
- 3 > The **Production Unit/Equipment ID** field defaults to **All**, or you can select a specific ID from the dropdown. If selecting a new ID, the window will refresh to include any current data.
- 4 > The **From Date** and **To Date** default to the last month and the current month, and can be changed. (Click the **Refresh Data** button after identifying a new date range.)
- 5 > The **Include Data for Prod Unit** section defaults to **Input as Prod Unit** and can be changed to **Input for Equipment where part of the Prod Unit** if desired. See Note for Report #6.
- 6 > To reset the report parameters, click **Clear Filter**.



Printing and Saving

To print the report to your default printer, select **File > Print** from the main menu.

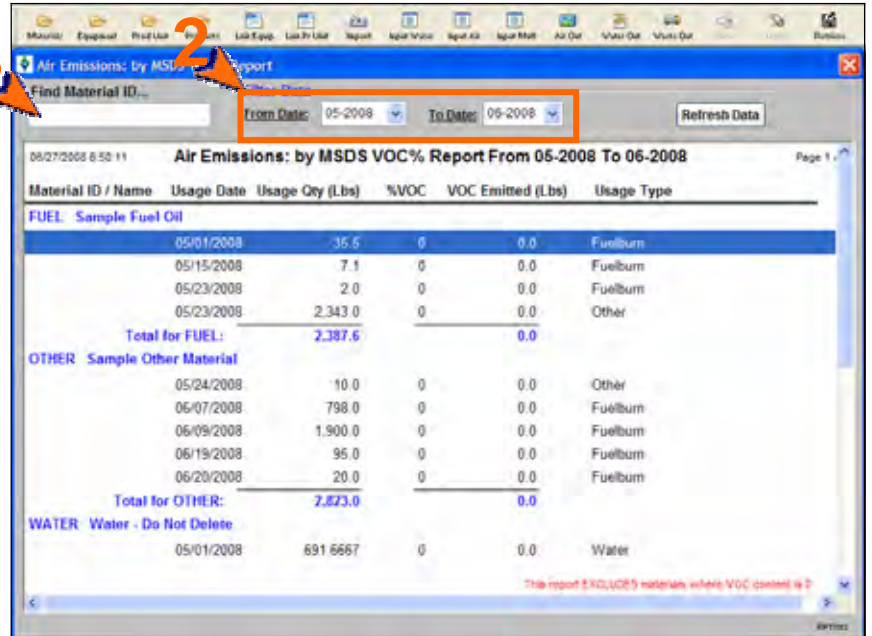
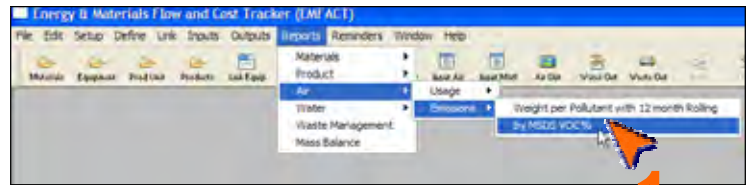
To convert your report to a PDF, choose a PDF printer (File > Print Setup) before clicking Print.

To save your report to another file format such as an Excel or text file, choose **File > Save As** from the main menu.

15. Air Emissions: by MSDS VOC% Report

Follow these steps to create the Air Emissions: by MSDS VOC % Report:

- 1 > Select **Reports > Air > Emissions > by MSDS VOC%** from the main menu. The **Air Emissions: by MSDS VOC% Report** window will open and it will display any current data.
- 2 > The **From Date** and **To Date** default to the last month and current month, and can be changed. (Click the **Refresh Data** button after identifying a new date range.)
- 3 > To locate a specific material in the list, complete the **Find Material ID...** field and click *Enter* on your keyboard.



Printing and Saving

To print the report to your default printer, select **File > Print** from the main menu.

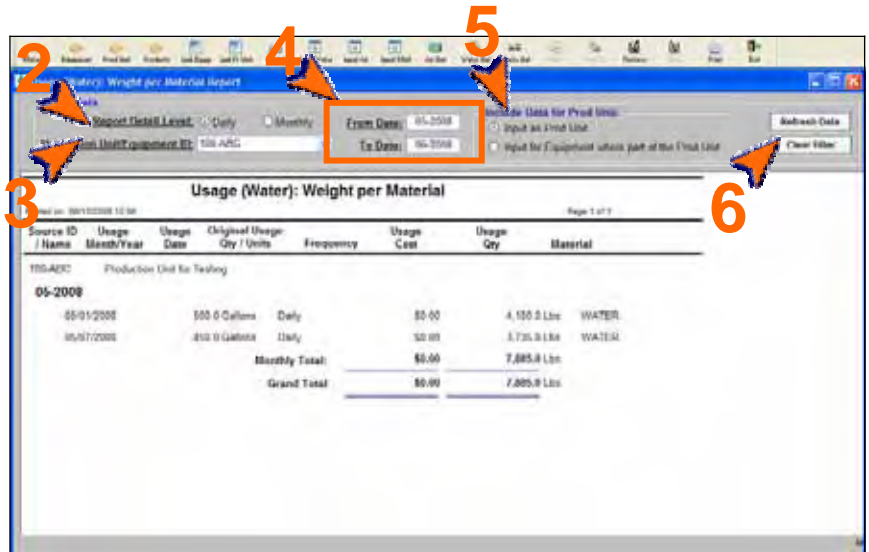
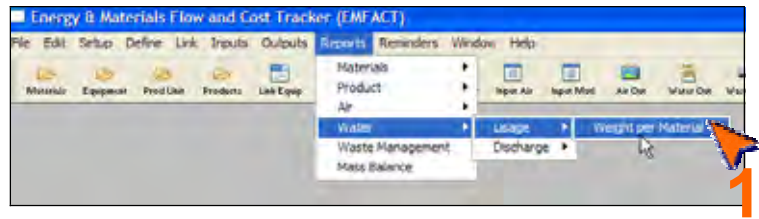
To convert your report to a PDF, choose a PDF printer (File > Print Setup) before clicking Print.

To save your report to another file format such as an Excel or text file, choose **File > Save As** from the main menu.

16. Usage (Water): Weight per Material Report

Follow these steps to create the Usage (Water): Weight per Material Report:

- 1 > Select **Reports > Water > Usage > Weight per Material** from the main menu. The **Usage (Water): Weight per Material Report** window will open.
- 2 > The **Report Detail Level** defaults to **Daily** and can be changed to **Monthly** if desired.
- 3 > Make a selection from the **Production Unit/Equipment ID** dropdown. The window will refresh to include any current data.
- 4 > The **From Date** and **To Date** default to the previous month and the current month, and can be changed. (Click the **Refresh Data** button after identifying a new date range.)
- 5 > The **Include Data for Prod Unit** section defaults to **Input as Prod Unit** and can be changed to **Input for Equipment where part of the Prod Unit** if desired. See Note for Report #6.
- 6 > To reset the report parameters, click **Clear Filter**.



Printing and Saving

To print the report to your default printer, select **File > Print** from the main menu.

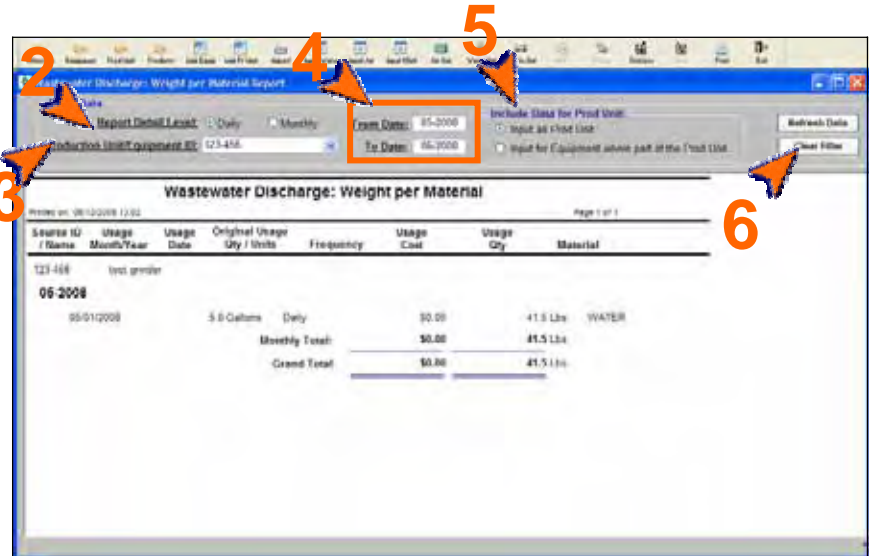
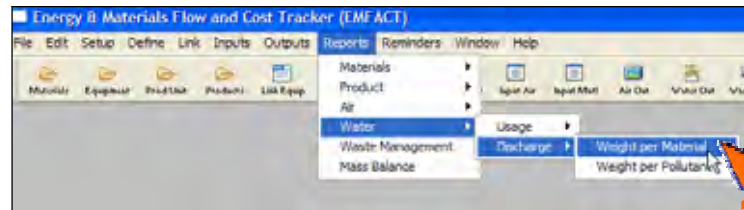
To convert your report to a PDF, choose a PDF printer (File > Print Setup) before clicking Print.

To save your report to another file format such as an Excel or text file, choose **File > Save As** from the main menu.

17. Wastewater Discharge: Weight per Material Report

Follow these steps to create the Wastewater Discharge: Weight per Material Report:

- 1 > Select **Reports > Water > Discharge > Weight per Material** from the main menu. The **Wastewater Discharge: Weight per Material Report** window will open.
- 2 > The **Report Detail Level** defaults to **Daily** and can be changed to **Monthly** if desired.
- 3 > Make a selection from the **Production Unit/Equipment ID** dropdown. The window will refresh to include any current data.
- 4 > The **From Date** and **To Date** default to last month and the current month, and can be changed. (Click the **Refresh Data** button after identifying a new date range.)
- 5 > The **Include Data for Prod Unit** section defaults to **Input as Prod Unit** and can be changed to **Input for Equipment where part of the Prod Unit** if desired. See Note for Report #6.
- 6 > To reset the report parameters, click **Clear Filter**.



Printing and Saving

To print the report to your default printer, select **File > Print** from the main menu.

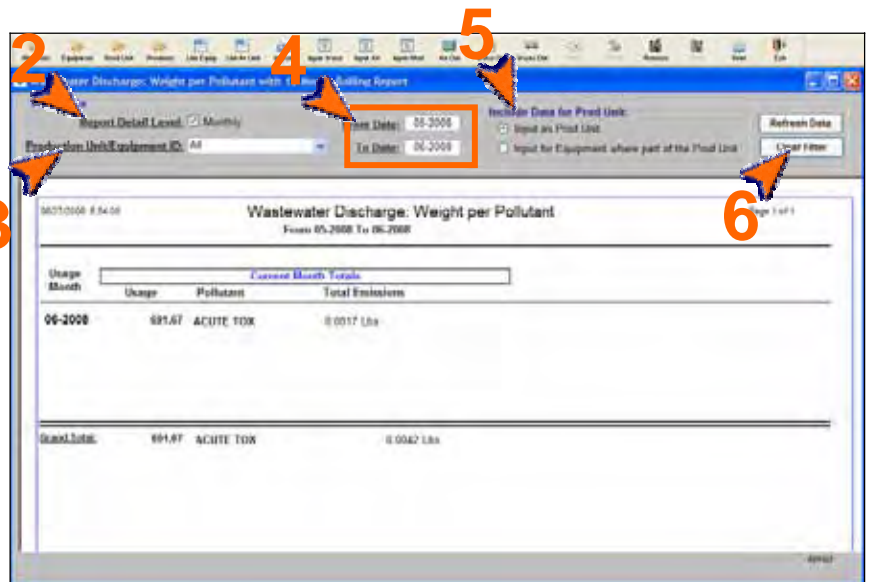
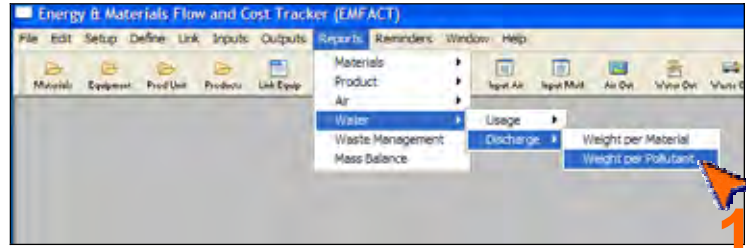
To convert your report to a PDF, choose a PDF printer (File > Print Setup) before clicking Print.

To save your report to another file format such as an Excel or text file, choose **File > Save As** from the main menu.

18. Wastewater Discharge: Weight per Pollutant with 12 Month Rolling Report

Follow these steps to create the Wastewater Emissions: Weight per Pollutant with 12 Month Rolling Report:

- 1 > Select **Reports > Water > Discharge > Weight per Pollutant** from the main menu. The **Wastewater Discharge: Weight per Pollutant with 12 Month Rolling Report** window will open and it will display any current data.
- 2 > The **Report Detail Level** defaults to **Monthly** and cannot be changed.
- 3 > The **Production Unit/Equipment ID** field defaults to **All**, or you can select a specific ID from the dropdown. See #14
- 4 > The **From Date** and **To Date** default to the last month and the current month, and can be changed. (Click the **Refresh Data** button after identifying a new date range.)
- 5 > The **Include Data for Prod Unit** section defaults to **Input as Prod Unit** and can be changed to **Input for Equipment where part of the Prod Unit** if desired. See Note for Report #6.
- 6 > To reset the report parameters, click **Clear Filter**.



Printing and Saving

To print the report to your default printer, select **File > Print** from the main menu.

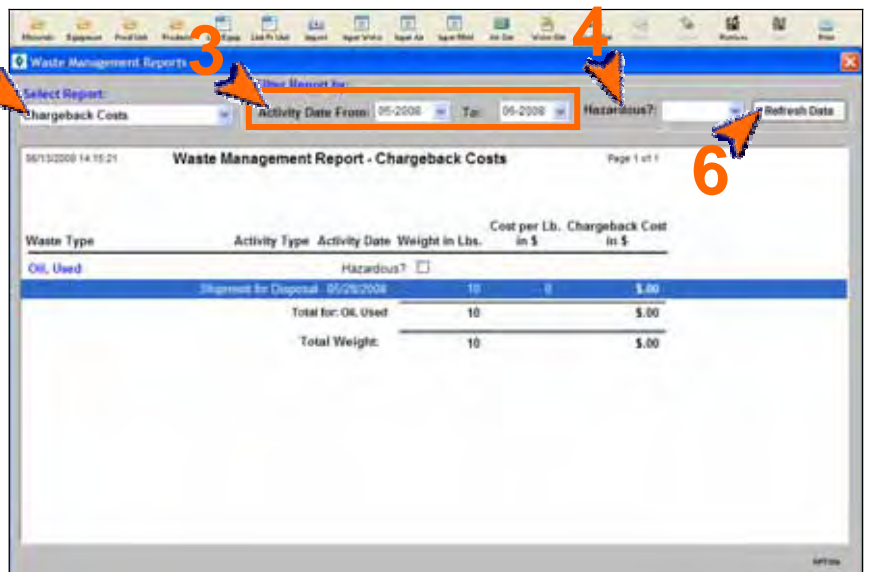
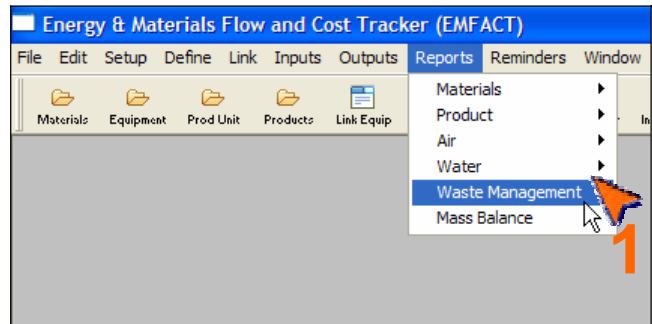
To convert your report to a PDF, choose a PDF printer (File > Print Setup) before clicking Print.

To save your report to another file format such as an Excel or text file, choose **File > Save As** from the main menu.

19. Waste Management Report – Chargeback Costs

Follow these steps to create the Wastewater Management Report – Chargeback Costs:

- 1 > Select **Reports > Waste Management** from the main menu. The **Waste Management Reports** window will open and display the **Waste Management Report - Activity Costs** report.
- 2 > Select **Chargeback Costs** from the **Select Report** dropdown. The report name changes to **Waste Management Report – Chargeback Costs** and it will display any current data.
- 3 > The **Activity Date From** and **To** default to the previous month and the current month, and can be changed. (Click the **Refresh Data** button after identifying a new date range.)
- 4 > Optionally, make a selection from the **Hazardous** dropdown. (Click the **Refresh Data** button.)



Printing and Saving

To print the report to your default printer, select **File > Print** from the main menu.

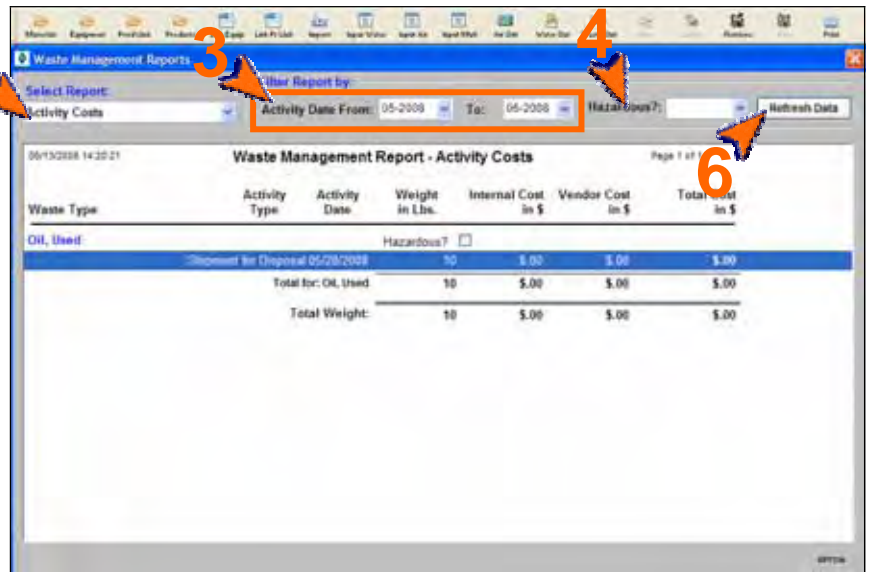
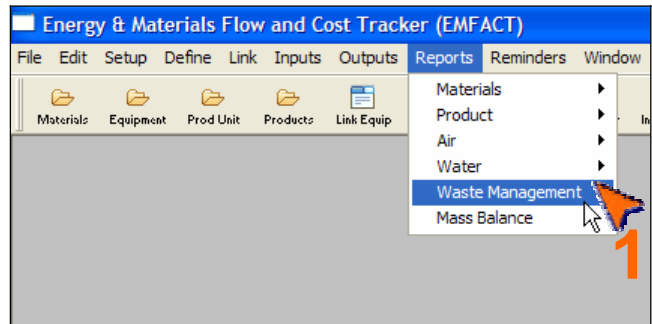
To convert your report to a PDF, choose a PDF printer (File > Print Setup) before clicking Print.

To save your report to another file format such as an Excel or text file, choose **File > Save As** from the main menu.

20. Waste Management Report – Activity Costs

Follow these steps to create the Wastewater Management Report – Activity Costs:

- 1 > Select **Reports > Waste Management** from the main menu. The **Waste Management Reports** window will open and display the **Waste Management Report - Activity Costs** report.
- 2 > Ensure that **Activity Costs** is selected from the **Select Report** dropdown.
- 3 > The **Activity Date From** and **To** default to the previous month and the current month, and can be changed. (Click the **Refresh Data** button after identifying a new date range.)
- 4 > Optionally, make a selection from the **Hazardous** dropdown.



Printing and Saving

To print the report to your default printer, select **File > Print** from the main menu.

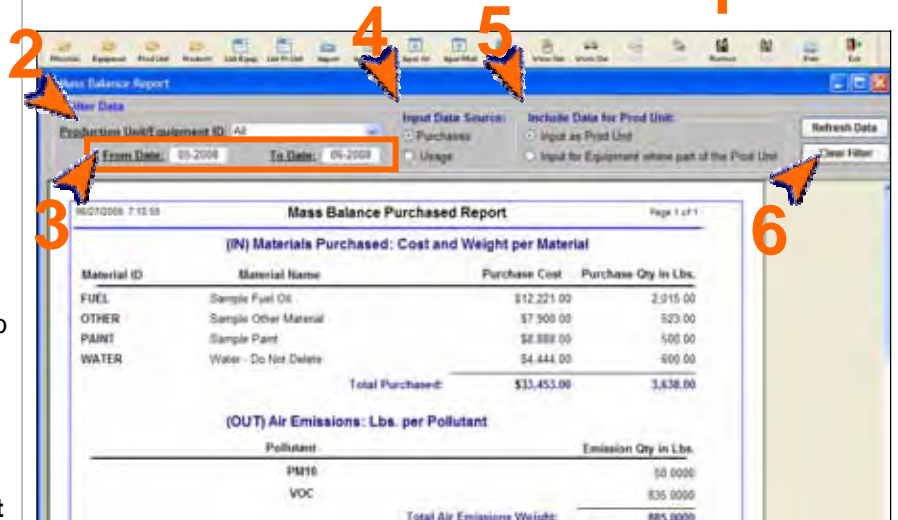
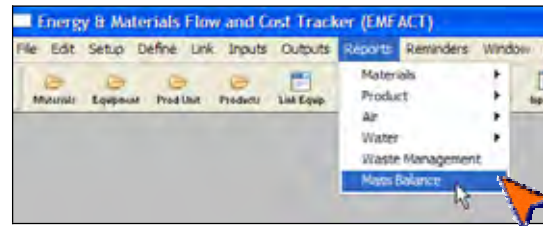
To convert your report to a PDF, choose a PDF printer (File > Print Setup) before clicking Print.

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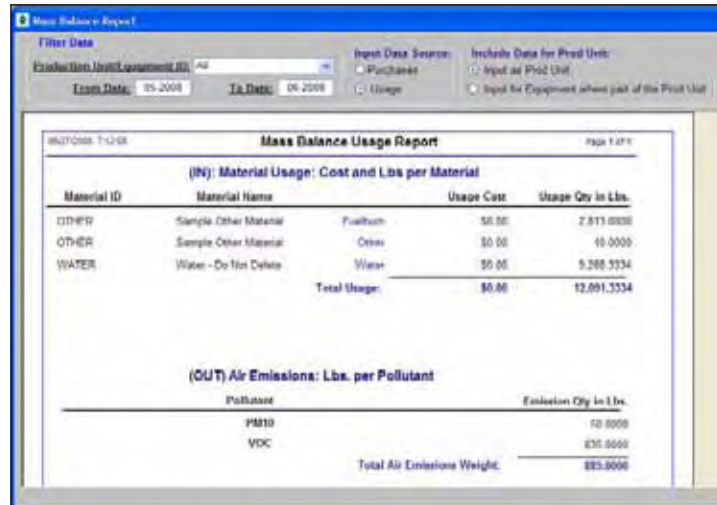
21. Mass Balance Purchased Report

Follow these steps to create the Mass Balance Purchased Report or Mass Balance Usage Report:

- 1 > Select **Reports > Mass Balance** from the main menu. The **Mass Balance Report** window will open and it will display current data for purchases.
- 2 > The **Production Unit/Equipment ID** field defaults to **All**, or you can select a specific ID from the dropdown. See #14
- 3 > The **From Date** and **To Date** default to the last month and the current month, and can be changed. (Click the **Refresh Data** button after identifying a new date range.)
- 4 > The **Input Data Source** defaults to **Purchases** and can be changed to **Usage** to view the **Mass Balance Usage Report**.
- 5 > The **Include Data for Prod Unit** section defaults to **Input as Prod Unit** and can be changed to **Input for Equipment where part of the Prod Unit** if desired. See Note for Report #6.
- 6 > To reset the report parameters, click **Clear Filter**.



Above: Mass Balance Purchased Report



Above: Mass Balance Usage Report

Printing and Saving

To print the report to your default printer, select **File > Print** from the main menu.

To convert your report to a PDF, choose a PDF printer (File > Print Setup) before clicking Print.

To save your report to another file format such as an Excel or text file, choose **File > Save As** from the main menu.

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