

## Introduction to Define

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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.

### **Section 6. Link Materials to Products**

This section defines the process for identifying which materials and the amount of each material are used on each product/intermediate product.

## 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

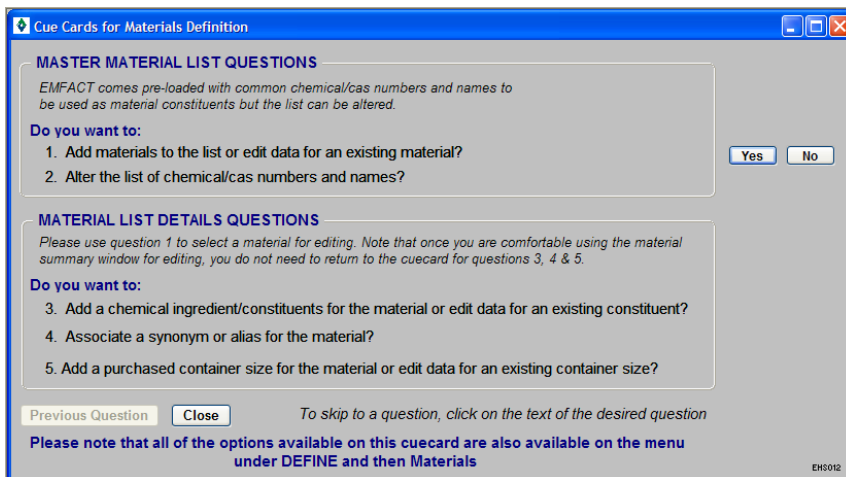
The steps in this guide are for initial setup of materials; however, the same steps are used to maintain materials once they are set up.

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:*

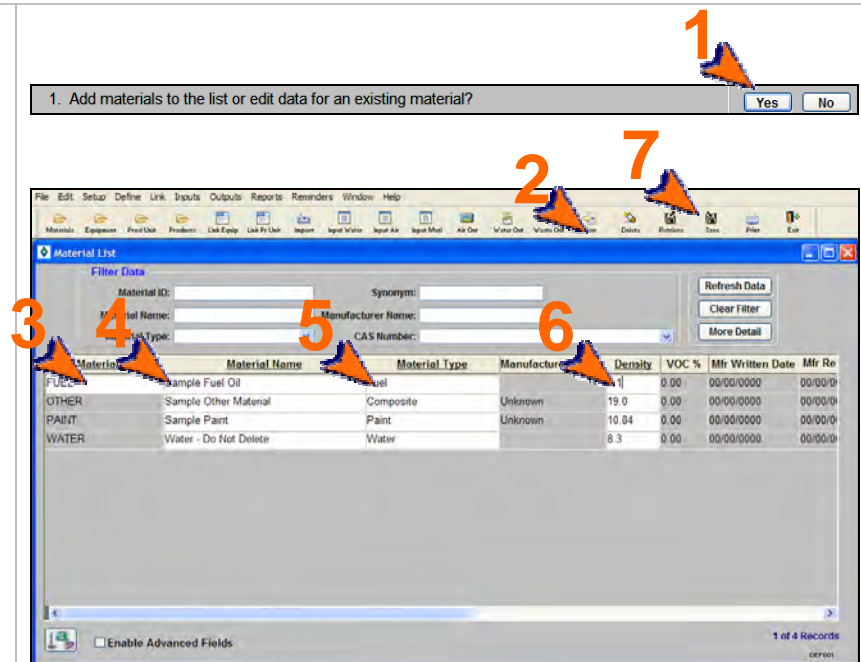
- 2 > Click **New**. A blank row will display for you to complete. You may need to click your cursor in the active window to enable the **New** button.
- 3 > Complete the **Material ID** field.
- 4 > Complete the **Material Name** field.
- 5 > Make a selection from the **Material Type** dropdown.
- 6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

The screenshot shows the EMFACT software interface. At the top, a cue card asks "2. Alter the list of chemical/cas numbers and names?" with "Yes" and "No" buttons. Below this is the "Chemical List" window. The window has a menu bar with options like "Print", "Prod Unit", "Products", "Link Equip", "Link Pr Unit", "Import", "Input V/Star", "Input Air", "Input Mat", "Air Out", "V/Star Out", "V/Star Out", "New", "Delete", "Retrieve", and "Save". The "Filter Data" section contains "CAS Number:" and "Chemical Name:" input fields, with "Refresh Data" and "Clear Filter" buttons. A table below shows one record: "123-456" under "CAS Number" and "Test chemical" under "Chemical Name", with an "Update Date" of "04/07/2008". The bottom right of the window shows "0 of 0 Records" and "DEF003".

Numbered callouts in the image:

- 1: Points to the "Yes" button on the cue card.
- 2: Points to the "Filter Data" section.
- 3: Points to the "Retrieve" button.
- 4: Points to the "New" button in the menu bar.
- 5: Points to the "CAS Number" input field.
- 6: Points to the "Chemical Name" input field.
- 7: Points to the "Save" button in the menu bar.


## 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**.

5. Add a purchased container size for the material or edit data for an existing container size? Yes No

Material ID: FUEL Written Date: 00/00/0000 Revision Date: 00/00/0000 Active?

Material Type: Fuel Material Name: Sample Fuel Oil



Trade Name: Hazardous Warnings: Target Organs: Update Date: 04/04/2008

Mfr Name: Density: 7.1 VOC %: .00

File Name:

Item	Synonyms	Container
Size Purchase Unit:	canister	Size Quantity: 1.00 Size Unit: Lbs 4/7/2008
Size Purchase Unit:	Drum	Size Quantity: 55 Size Unit: Gallons 2/21/2008
Size Purchase Unit:	US gallon	Size Quantity: 1 Size Unit: Gallons 2/21/2008

Enable Advanced Fields Comments 3 of 2 Records of 0002

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:

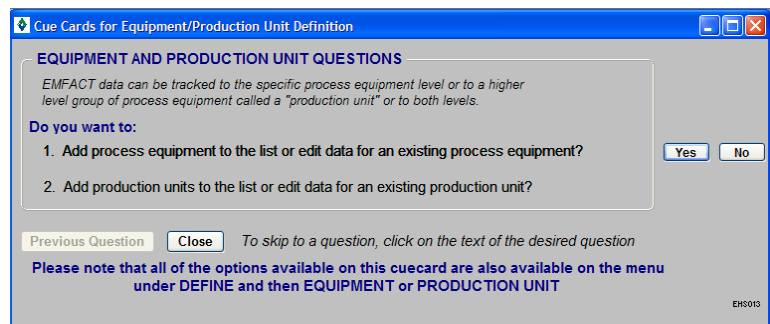
1. Accessing the Equipment/Production Unit Cue Card
2. Adding a New Piece of Equipment
3. Adding Equipment Details
4. Maintaining Equipment Costs (optional)
5. Setting up Production Units

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:

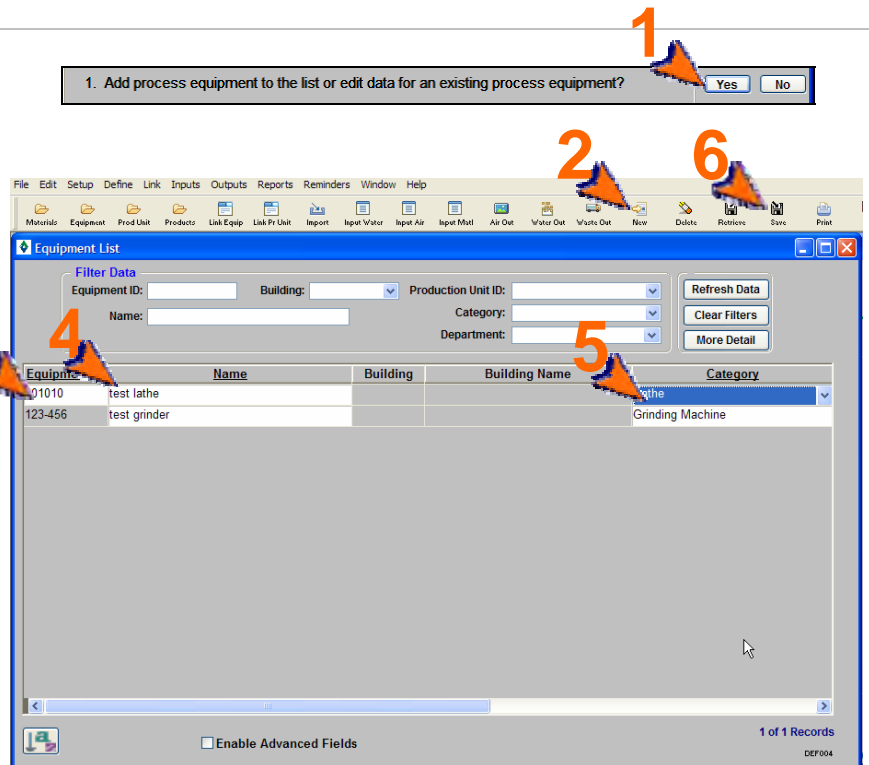
- 2 > Click **New**. A blank row will display for you to complete.
- 3 > Complete the **Equipment ID** field.
- 4 > Complete the **Name** field.
- 5 > Make a selection from the **Category** dropdown.

*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**.*

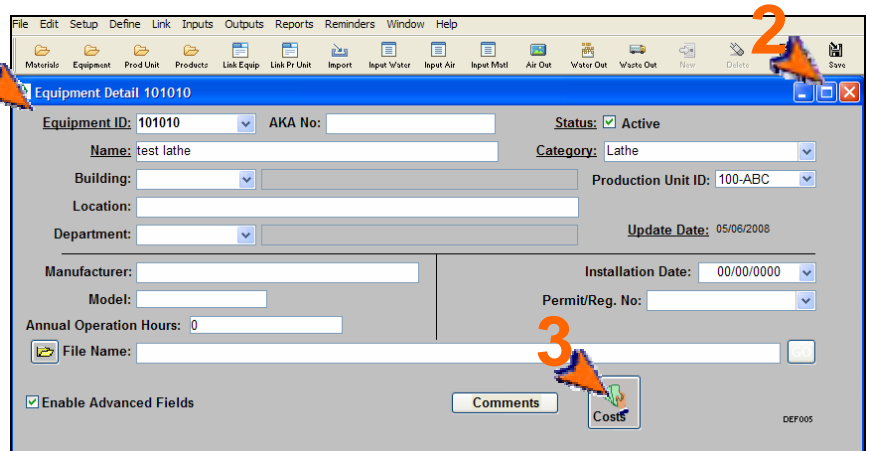
- 7 > *Optional:* Click **More Detail** to maintain additional optional details about the equipment. The **Equipment Detail** window will open (see Step 3).



### 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**.

1 2 3 4

Cost Category	Cost Title	Cost in US \$	Active?	Update Date
Overhead Costs	Insurance	5,000.00	<input checked="" type="checkbox"/>	05/27/2008
Comment:				
Operations	Internal Labor	10,000.00	<input checked="" type="checkbox"/>	05/27/2008
Comment:				


0 of 0 Records

## 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:

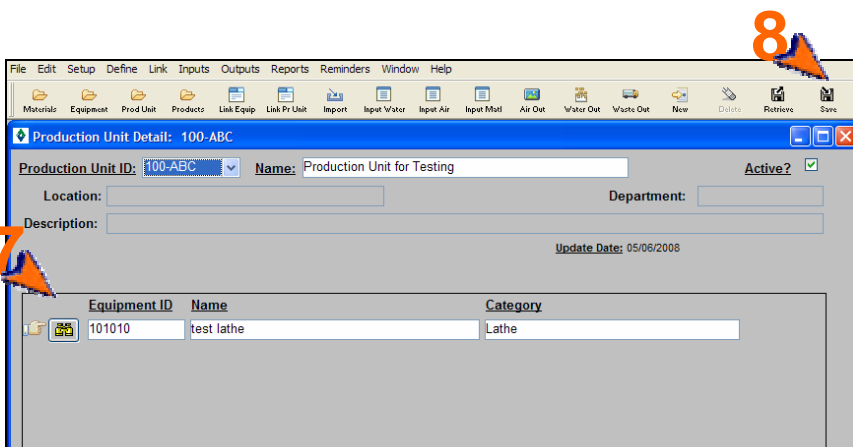
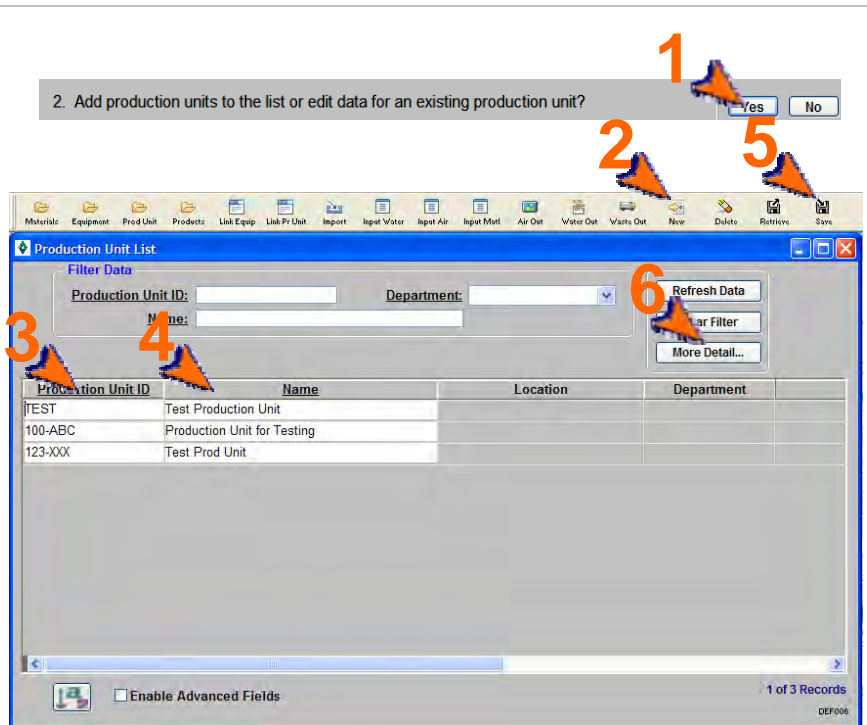
- 2 > Click **New**. A blank row will display for you to complete.
- 3 > Enter a **Production Unit ID**.
- 4 > Complete the **Name** field.
- 5 > Click **Save**.



*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:

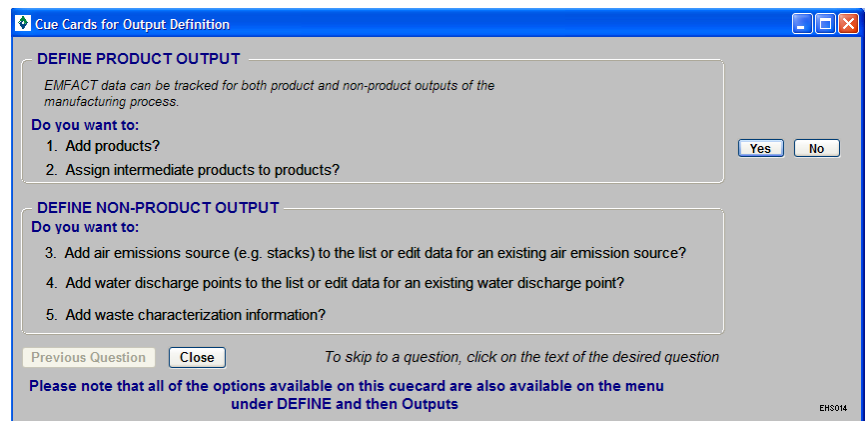
1. Accessing the Outputs Cue Card (optional)
2. Adding Products
3. Adding Intermediate Products
4. Adding Air Emissions Sources (stacks)
5. Adding Air Source Detail (optional)
6. Adding Water Discharge Points
7. Adding Waste Types
8. Relating EPA Codes to the Waste Types (optional)
9. Maintaining Product, 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 1<sup>st</sup> cue card question. The **Product List** window will open. Alternatively, click the Products icon (  ) in the toolbar.

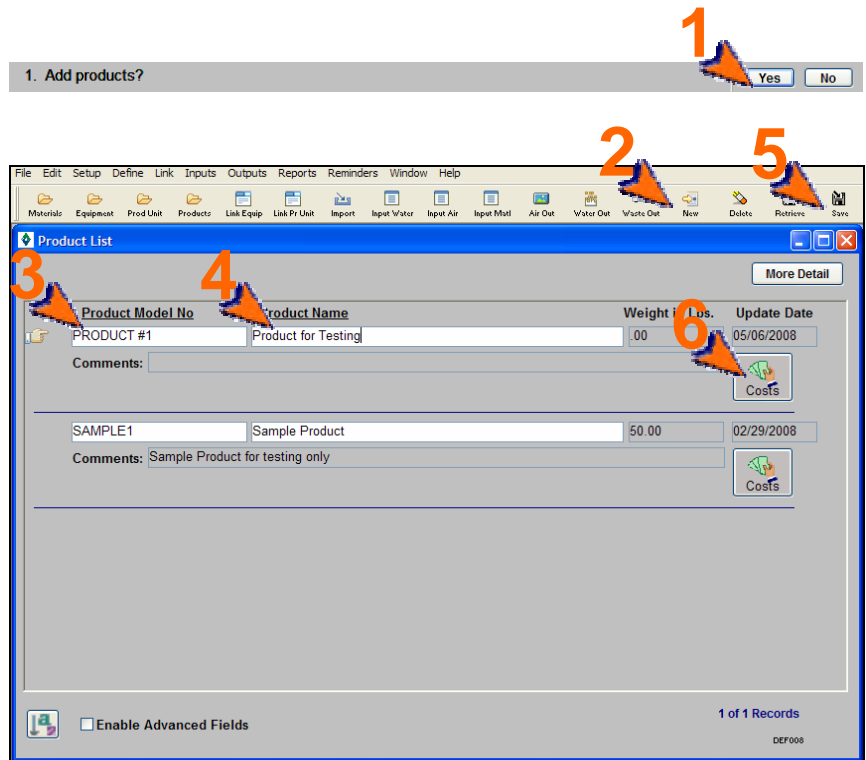
*For each product:*

- 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

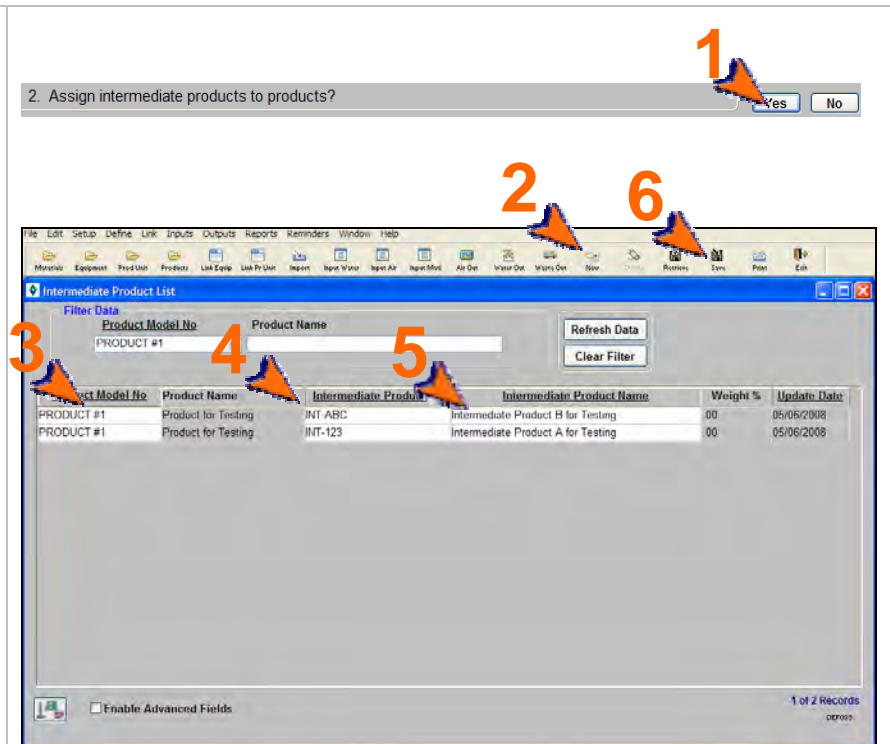
Use the following steps to document distinct sub/intermediate products included in each product.

- 1 > Click **Yes** for the 2<sup>nd</sup> 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 3<sup>rd</sup> 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).

3. Add air emissions source (e.g. stacks) to the list or edit data for an existing air emission source? Yes No

**Air Source List**

Filter Data

Air Source ID: \_\_\_\_\_ Building: \_\_\_\_\_

Category: \_\_\_\_\_ Status: \_\_\_\_\_

Refresh Data  
Clear Filter  
More Detail

Air Source ID	Exit Direction	Air Source Lining	Air Source Category	Through Roof?	Fugitive Emission?	Rainhat?	Active?	Building Code	Permit No
TEST-AIR	Vertical	Other	Sewer Vents	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
TEST-123	Vertical	Metal	Tank Breather Vents	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		

1 of 2 Records

Enable Advanced Fields

## 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 4<sup>th</sup> 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.

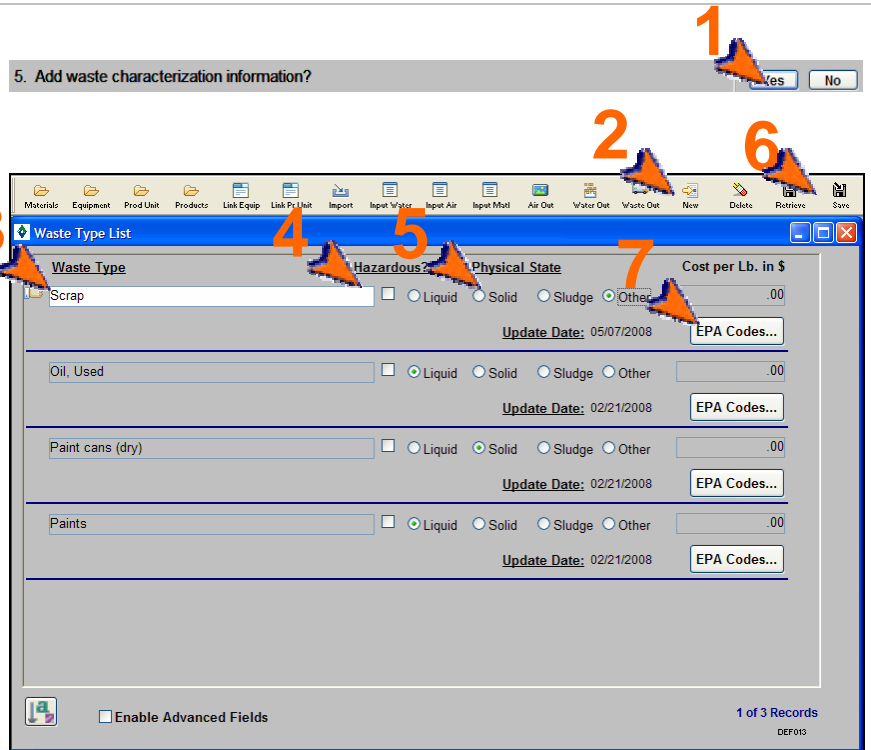
- 1 > Click **Yes** for the 5<sup>th</sup> cue card question. The **Waste Type List** window will open.

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).



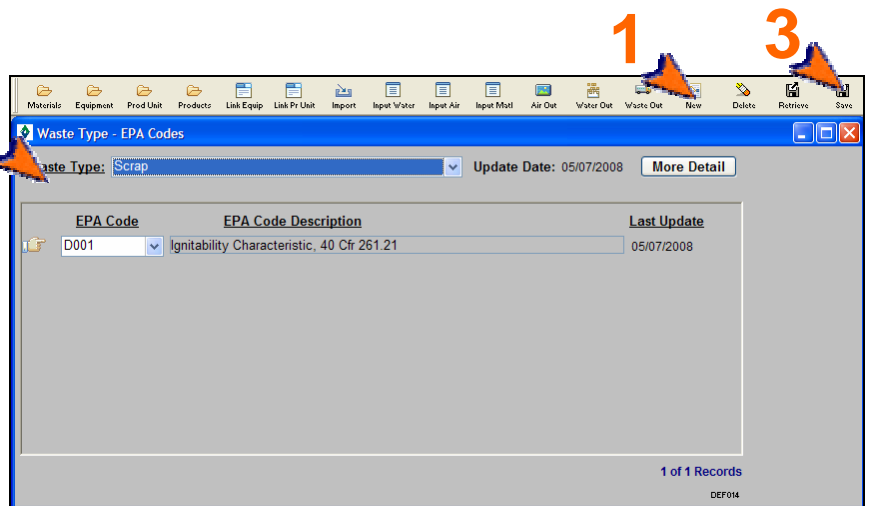
### 8 Optional: Relating EPA Codes to the Waste Type

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 the 'Other Costs' window with the following data:

Cost Category	Cost Title	Cost in US \$	Active?	Update Date
Overhead Costs	Insurance	1,200.00	<input checked="" type="checkbox"/>	05/16/2008

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.

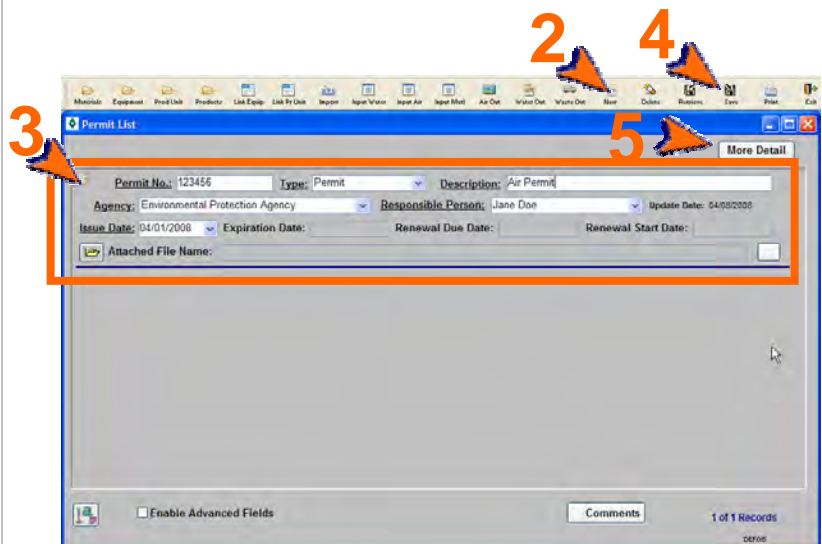
*For each permit:*

- 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

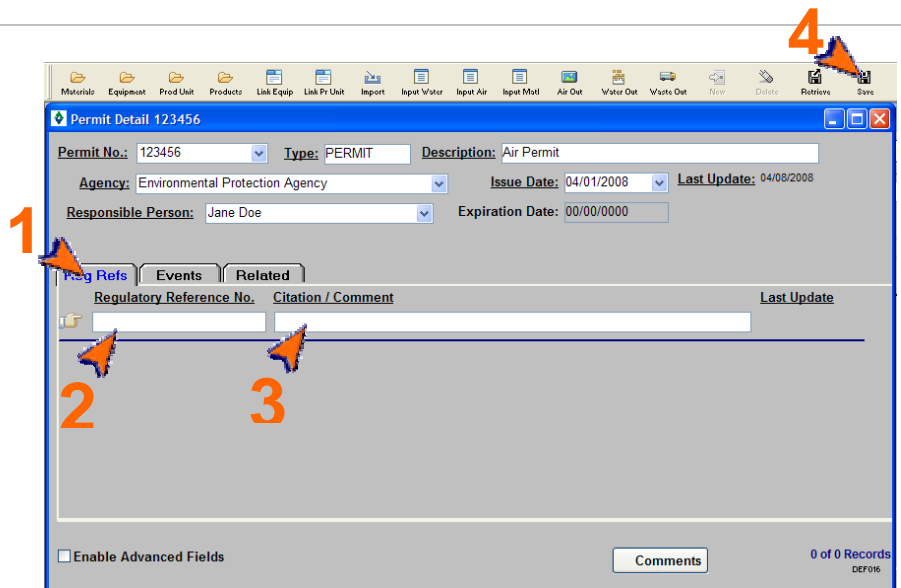
On the **Permit Detail** window:

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:

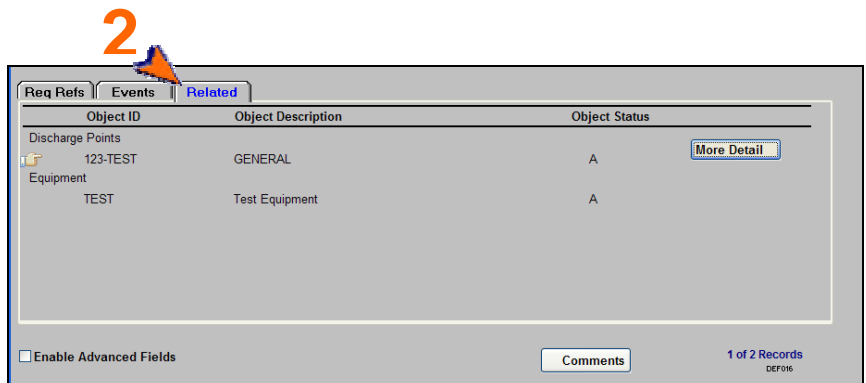
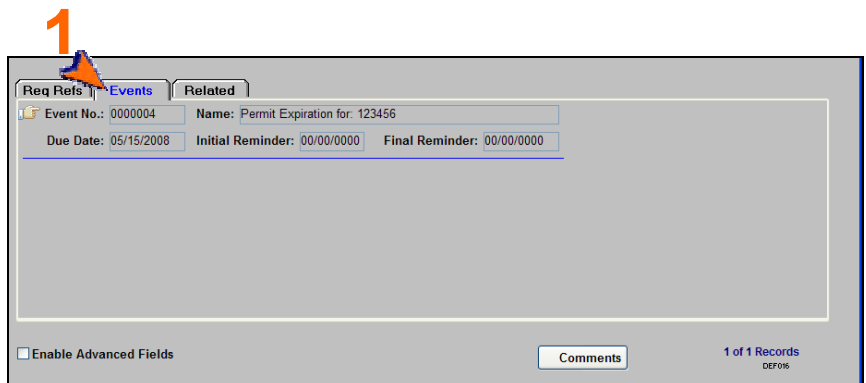
To add view permit reminders:

- 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>

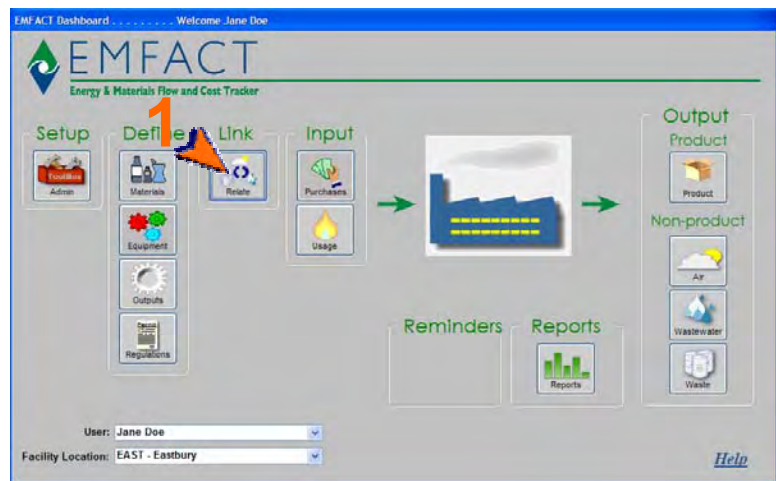
## 5. Link Equipment & Production Units

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/production 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 1<sup>st</sup> or 10<sup>th</sup> 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.

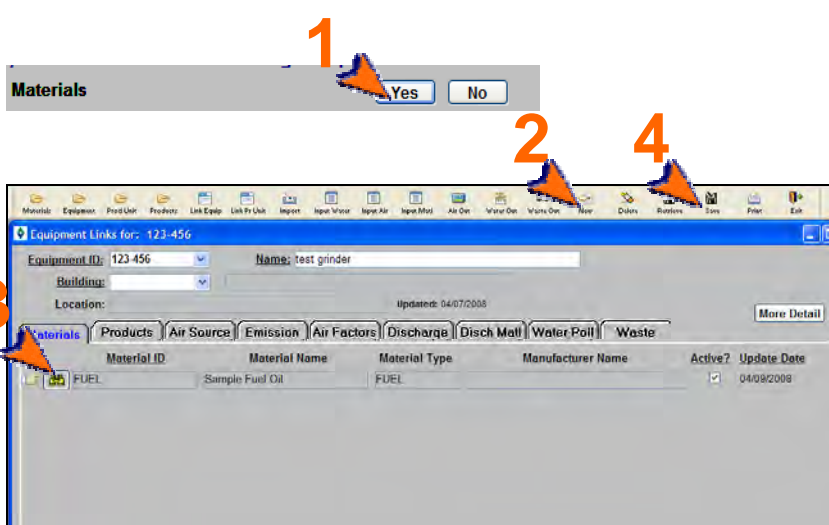
- 1 > If the **Equipment Links for: (Id number)** window is not open, click **Yes** for the **Materials** question on the cue card. The **Materials** tab on the **Equipment Links for: (Id number)** window will display.

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.

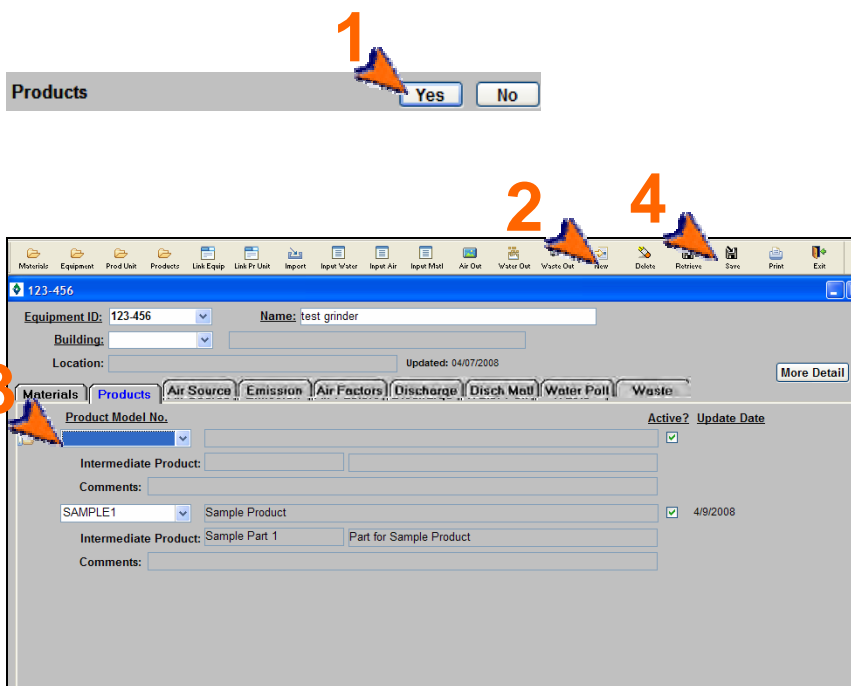
- 1 > Click **Yes** for the **Products** question on the cue card. The **Products** tab on the **Equipment Links for: (Id number)** window will display.

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**.



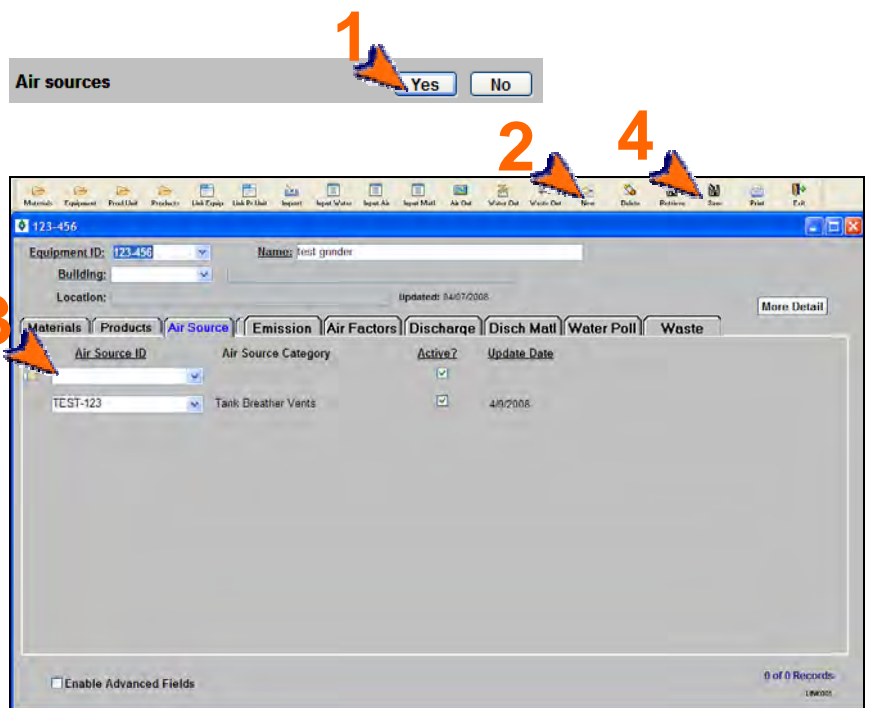
## Link Equipment & Production Units, cont.

**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.

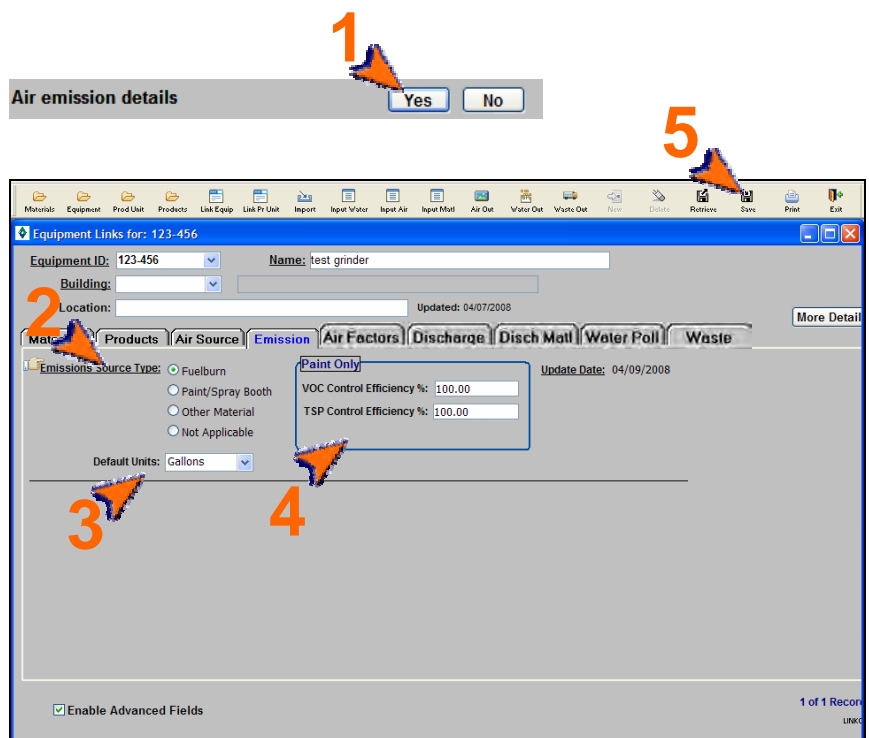
For each air source:

- 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.*

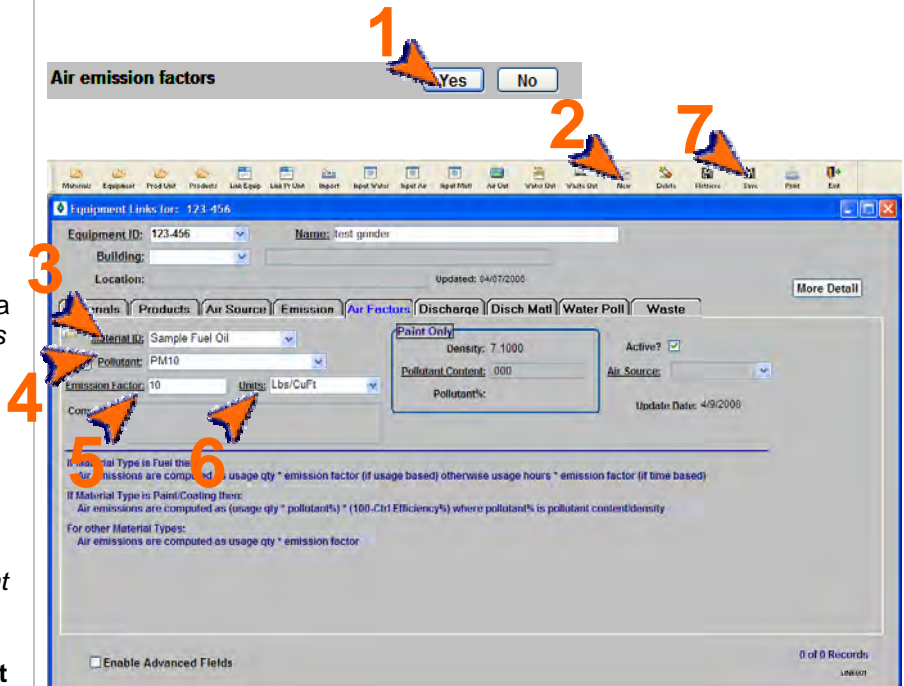
- 9 > Click **Save**.

#### 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

Follow these steps to relate a water discharge point to the Equipment ID and then identify the percentage allocation of each incoming material in the outgoing wastewater discharge. 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 (1,2,3 etc.).
- 4 > Make a selection from the **Discharge Serial No.** dropdown.

*Repeat this process until all discharge points are identified.*

- 5 > Click **Save**.

To allocate each incoming material in the outgoing wastewater discharge:

- 6 > Either click **Yes** for the **Discharge materials** question on the cue card or click the **Disch Matl** tab. One row for each **Flow No.** listed on the **Discharge** tab will display. The **Material ID** defaults to **WATER** and the **Material Weight %** defaults to **100**.

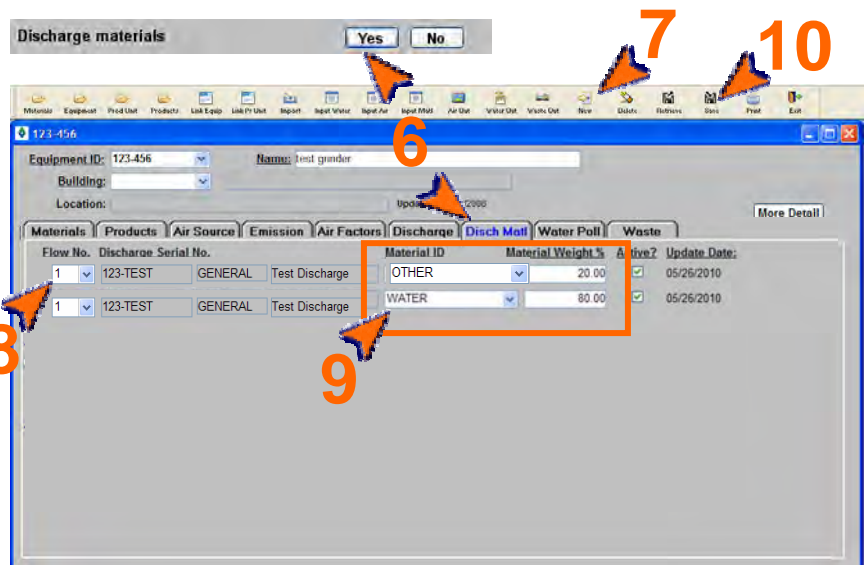
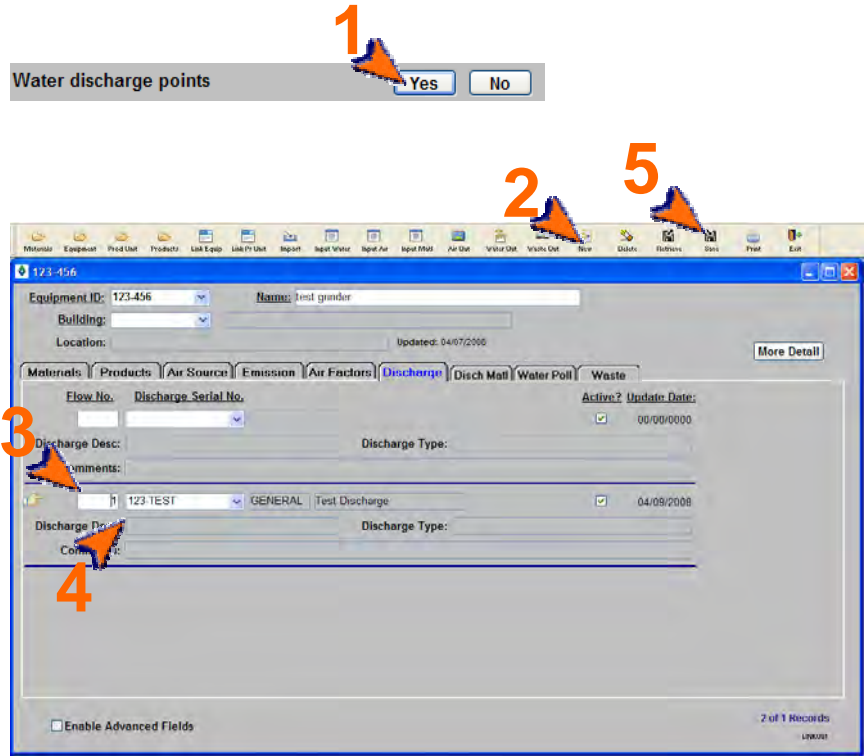
- 7 > Click **New**. A blank row displays. *Note: If more than two rows are necessary for this Flow No, continue to click New until you have enough rows.*

- 8 > Select the **Flow No** from the dropdown(s).

- 9 > For each row, select the correct **Material ID** and the **Material Weight %**. *Note: Only materials listed on the Materials tab display in the Material ID dropdown.*

*Repeat this process for each Flow No.*

- 10 > 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**.

The screenshot shows the EMFACT software interface. At the top, a cue card titled "Water pollutants" has a "Yes" button highlighted with a red arrow labeled "1". Below this, the "Equipment Links for: (Id number)" window is open, showing the "Water Poll" tab. The window title is "123-456" and the name is "test grinder". The "Discharge" tab is active, showing a table with columns: "Flow Number", "Discharge Serial No.", "Potential Pollutant", "Concentration", "Units", "Active?", and "Update Date". A red arrow labeled "2" points to the "New" button. A red arrow labeled "3" points to the "Flow Number" dropdown menu. A red arrow labeled "4" points to the "Potential Pollutant" dropdown menu. A red arrow labeled "5" points to the "Concentration" input field. A red arrow labeled "6" points to the "Units" dropdown menu. A red arrow labeled "7" points to the "Save" button. The table contains one row with the following data: Flow Number: 1, Discharge Serial No.: 123-TEST, Potential Pollutant: GENERAL Test Discharge, Concentration: 20,000, Units: ppm, Active?: checked, Update Date: 04/09/2008.

## Link Equipment & Production Units, cont.

### 10 Linking Waste Types

Use these steps to identify the kinds of waste generated at the equipment and then identify the percentage allocation of each incoming material in the outgoing waste. 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.
- 4 > To allocate each incoming material in the outgoing waste, select the correct **Material ID** and the **Material Weight %**. Note: Only materials identified on the **Materials** tab will display in the **Material ID** dropdown.

Repeat this process until all waste types are identified.

- 4 > Click **Save**.

Waste Types

Equipment Links for: TEST

Equipment ID: TEST Name: Paint Booth

Building: Location: Updated: 04/07/2008



Materials Products Air Source Emission Air Factors Discharge Disch Matl Water Poll Waste

Waste Type:	Physical State:	Hazardous?	Active?	Update Date
FAC PAINT1	Liquid	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	05/26/2010
Paint cans (dry)	Liquid	<input type="checkbox"/>	<input checked="" type="checkbox"/>	05/26/2010

Material ID: FAC PAINT1 Material Weight %: 90.00

Material ID: FAC PAINT1 Material Weight %: 10.00

Enable Advanced Fields 0 of 0 Records

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>

## 6. Link Products & Materials

This section contains the following:

1. Linking Materials to Products

The steps in this guide are for initial setup; however, the same steps are used to maintain product allocation once it is set up.

*Note: A Cue Card is not available for this process. Instead, windows are accessed directly from the main menu.*

*Please review the Quick Start Guide section before starting.*

### 1 Link Materials to Products

Follow these steps to identify which materials are used on each product/intermediate product, and then identify how much of the material is used. Materials and Products must be set up prior to performing this step.

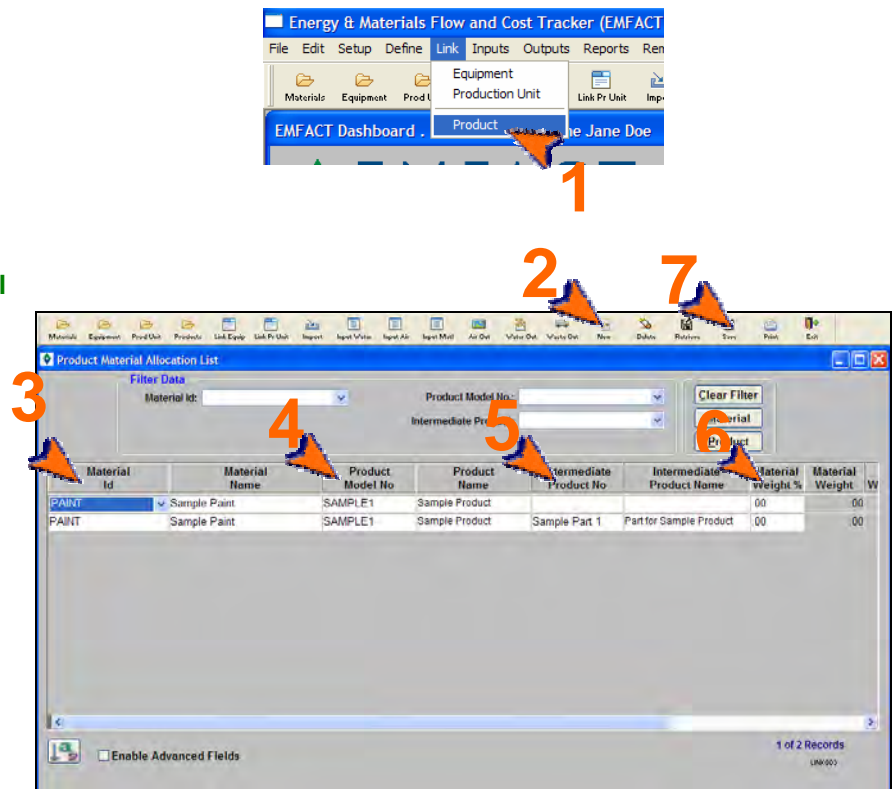
- 1 > Select **Link > Product** from the main menu. The **Product Material Allocation List** window will open.

*For each material:*

- 2 > Click **New** to display a blank row (if necessary).
- 3 > Make a selection from the **Material Id** dropdown. The associated **Name** field will fill.
- 4 > Make a selection from the **Product Model No** dropdown.
- 5 > If appropriate, make a selection from the **Intermediate Product No** dropdown.
- 6 > Complete the **Material Weight %** field.

*Repeat this process until all materials and products are linked.*

- 7 > Click **Save**.



<end of section>