ENVIRONMENTAL MANAGEMENT SYSTEMS (EMS)

EMS Reporting

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Contents

Introduction ......................................................................................................................... 1

Crystal Reports ..................................................................................................................... 1
  Reporting on a Selection of Data ...................................................................................... 2
  Reporting on a Single Record of Data ........................................................................... 3
  Reporting on a Date Range of Data .............................................................................. 3

Ad-hoc Reports .................................................................................................................... 4
  Filtering Reports by Group ............................................................................................ 5
  How to Print a Management Report ............................................................................ 5
  Ad-hoc Report Builder .................................................................................................. 5
    How to Edit/Modify an Existing Management Report .............................................. 5
    How to Create a New Management Report ............................................................. 9

Advanced Reporting Features ........................................................................................... 13
  Summary Tab .................................................................................................................. 13
  Chart Tab ...................................................................................................................... 13
  Gauge Tab ..................................................................................................................... 13
  Misc Tab ....................................................................................................................... 13
  Style Tab ...................................................................................................................... 13
  Filters Tab ..................................................................................................................... 14
  Preview ......................................................................................................................... 14
  Ad hoc Report Troubleshooting ................................................................................... 14

QuickStart Favorite Reports Configuration ......................................................................... 15
Introduction

EMS utilizes two distinct reporting systems- Crystal Reports and ad hoc reports. Both of these contain preconfigured, preformatted report templates that are integrated with the EMS database. When launched they are populated with data from the database in real time and an on-screen preview of the report is displayed which you can send to the printer of your choice.

Ad hoc reports have an integrated design interface within EMS that allows users to create and modify reports quickly and easily. Crystal Reports allows for more complex reports, however, if you want to modify a Crystal Reports template, you will need to contact Chemical Safety’s Technical Support department for assistance. In most cases, this is a service that is covered by the Annual Support fee. Both ad hoc reports and Crystal Reports can be designed for any EMS module including Chemical Inventory, Waste, etc. When installed, they are seamlessly integrated into the menu options for each module.

Crystal Reports

There are several classes of EMS Crystal Reports:

- Default Reports: when you have a record open in any module, a dropdown list of standard default reports is launched when you click either the Tools\Print menu or the printer icon. From there you can opt to send the report to a printer. The list of available reports changes depending on the module you are in. The data is filtered by the search criteria for the module.

- Quick Reports: when you have a record open in any module, a dropdown list of customized Quick Reports is presented when you click the Tools\Reports menu where you can select a report to launch the preview window. From there you can send it to a printer. The list of available reports changes depending on the module and new reports can be added to the list. The data is limited to the records that were returned when you specified the search criteria for the module.

- Date Range Reports: when you have a record open in any EMS module, a dropdown list of date range reports is presented when you click the Action\Date Range Report menu. Select a report and a date range to launch the preview window. From there you can opt to send it to a printer. Like the default reports and the quick reports, the list of available reports will vary from module to module and new reports can be added to the list. Date Range reports differ from Quick Reports in the way the data is filtered. The data is preconfigured, sometimes including a combination of database tables, and it is filtered by the date range specified by the user when launching the report. It is independent of the search criteria for the module.
Reporting on a Selection of Data

Open the EMS module that contains the data you are interested in viewing. In this example, we will use the Waste Drum. You will be presented with an opportunity to filter your search. The search results are called the **boundary**. When you run a report, you will be asked if you want to run the report on just a single record or “all in boundary. From the search results page, you can print a default report by selecting Navigate\Print. You can print a Quick Report by selecting Navigate\Reports:

Select a particular report from the dropdown list; it will preview the report using all of the data within the boundary.

From the preview window, you can print or zoom.
Reporting on a Single Record of Data

If you only want to run the report for a single record, you need to open that record. You can print a Default Report by selecting Tools\Print. You can print a Quick Report by selecting Tools\Reports.

This time the Print options box allows you to specify if you want to report on the active record only, or on the entire boundary of search results.

Reporting on a Date Range of Data

Open a particular record and select Actions\Date Range Report.

You can select a report and the date range to report on. These reports combine records from the Waste Drum table and the Waste Item table. Date Range Reports are independent of the boundary.
Ad-hoc Reports

The Adhoc Reports module allows users to quickly and easily create custom reports, using any data field in EMS, including user-defined fields (UDF’s). The Adhoc Reports module can be accessed either by clicking on Adhoc Reports on the left side of the screen or by clicking on the Report Center button on the lower right side of the screen:

Under the Report Center button, you will see a list of reports. These are reports that you can select as your favorite reports, and you will always see them when you log in to EMS. To run any of them, just click on the report’s name and a report preview window will open. Click the x on the top right of the report preview window to close the preview.

To see a list of all Ad-hoc reports, click the Report Center header and you will see a list of existing reports.

- To preview a report, click on the name of the report.
- To edit a report, click the “Menu” link next to the report, then select “Edit”.
- To delete a report, click the Menu link next to the report, then select Delete.
- To create a new report, click the “Add New Report” link on the right side of the screen.
From the report preview window you can select common functions including return to report list, print, export (Excel, Word, CSV, XML, and RTF), send via email, results per page, and open in designer (edit mode).

Filtering Reports by Group
Click on any of the listed groups under filtering. The Adhoc system will list only the reports under that grouping. You can add a report to a group when you name it (or rename it).

How to Print a Management Report
Click Ad-hoc Reports from the main menu (or click on the Report Center button from the Quick Start page). Select the appropriate report from the list to launch a preview window. From there you can select print from the report preview menu.

Ad-hoc Report Builder
The Ad-hoc Reports Module includes a full-featured report builder that gives you access to every field within the EMS database. Users can build new reports from the ground up or they can use existing reports as a starting point to create new reports (by modifying an existing report).

How to Edit/Modify an Existing Management Report
- Click on Ad-hoc Reports from the main menu
- Click on Menu, then Edit to open the report you wish to clone
- Click the Save As button
- Type in a name and category for your new report and click Ok.
To open a report for editing (and copying/cloning to create a new report), select the **Menu** button (to the right side of the report) and then select **Edit** from the submenu that opens.

The report customization screen will open to the **Fields** tab, as shown below. This view allows you to see which fields are in the report.

Before moving forward, select **Save As** to give your report a new name. This will ensure that the original report remains unchanged for later use. Type in a unique name for your new report and then click the down arrow to select a category so you can easily find this report later. Click the **Ok** button when done.

To add a new field to a report, click the down arrow next to the blank field at the bottom of the **Field** column, and select the field you wish to add. In the **Description** column you will see the column header that will print on the report. You can change this if you wish. To delete a field from the report, click the delete button to the right of the field. Similarly, to insert a field above or below another field, use the **Insert Field Above** and **Insert Field Below** buttons.
Another option to easily add fields to a report you are creating or editing is the **Quick Add** button as shown below.
When you click the Quick Add button, a list of fields will display. They are listed under their database table names. For example, the fields from the BUILDING database table are listed under the word “BUILDING”. If you don’t see the field that you want, you should create a new report from scratch and select the “Extended” view of the fields. The basic view shows only the most common fields. The extended view shows all of the fields. Check the fields you want to add and then click **Ok** at the bottom of the **Quick Add** form. You can rearrange the field order as you desire and save the report.

![Field List](image.png)

To change the query search/criteria for a report, click the **Filters** tab (see the illustration below):

![Filter Configuration](image.png)

Select a field for the Query by clicking the down-arrow in the **Filter Field** column. In this example we’ll use the Building Name field. Select an operator (for example: “Equals”) by clicking the down-arrow in the **Operator** column. Enter the value(s) to query for in the **Values** column—Warehouse in this example. Click the Save button (or the **Save As** button to save the report under another name). You can then click the **Preview** button or tab to preview your new report.
How to Create a New Management Report

- Click on Ad-hoc Reports from the main menu
- Click the **Add new report...** link to launch the report wizard
- Select the Category and Data Source. Based on the Category you selected, you will see a list of data sources in the right column. Data sources are groups of related data tables that have been connected together for you. When you create a new ad hoc report, you can select from basic or extended data sources. Basic data sources are a short list of the ones that you use most often (this list is user configurable). Extended data sources are a complete list of all data sources in the category. Click the down-arrow at the top of the Data Sources column to toggle between the two. You can also select Extended from the **Fields to show** drop-down menu to see the extended list of fields on the next screen of the report wizard. Click the **Continue** button when done.

- To add a new field to a report, click the down arrow next to the blank field in the Field column, and select the first field for your report by clicking on its name in the dropdown list. In the Description column you will see the column header that will print on the report. You can change this if you wish. To delete a field from the report, click the delete button (x) to the right of the field. Similarly, to insert a field above or below another field, use the Insert Field Above and Insert Field Below buttons.
As demonstrated earlier, another option to easily add fields to a report you are creating (or editing) is the Quick Add button shown below.

When you click the Quick Add button, a list of fields will display. Check the fields you want to add and then click Ok at the bottom of the Quick Add form. You can rearrange the field order as you desire and save the report.

After you have selected a field, you can use the fields below to define how your field will appear in the report:

- **Description**: Allows you to change the name of the field that will appear in your report
- **Sort checkbox**: Sort the results by this field in ascending order
• **VG (Visual Group) checkbox**: Allows you to organize data into multiple grids. When you check this box, you can change the formatting of the groups on the report by going to the Style table. Scroll down until you see the Visual Group Style dropdown. Select Multilevel with Labels.

• **A (Arithmetic) checkbox**: Click multibox to perform an arithmetic operation on the previous value. Allows you to add, subtract, multiply, or divide by the selection in the row above.

• **Function**: Allows you to perform a function on the selected field:

![Function](image1)

• **Format**: Allows you to change the format of the selected field:

![Format](image2)

• To delete the specific field from the report, click the Delete button:

• To insert a field above or below this specific field, click the Insert button:

• To customize the format of a field, click the advanced settings button:

![Advanced Settings](image3)

Adjust the field width by specifying a value in pixels (px):
The field wrapping happens automatically:

- Make your changes and then click the OK button to return to the Field Selection screen.
- To change the order of the fields on the report, click the Order button.
- To Preview your new report, click the Preview button at the bottom of the list of fields.
- To SAVE your new report, click the Save icon button at the top of the Report Design window.

- To see a list of all reports, click the Report List button.
- To create new report, click the New button.
- To save your report as another report name, click the Save As button.
- To print your report, click the Print button.
- To view the SQL for this report, click the SQL button.

- These buttons allow you to export the report to other formats:
  - Click this button to Email the report:
  - Click this button to view Administrative Settings:
  - Use the results dropdown arrow to select the number of records you wish to see on each page:

- Click the ? button to see help for the Report Design tab where you are working.
Advanced Reporting Features

Summary Tab
Allows you to view a summary of the fields tab selections.

Chart Tab
Allows you to insert a chart into your report.

Click the down-arrow next to “Chart Type” to select the type of Chart you wish to use:

Types of charts:
- **Trend:** Select the Date and its corresponding function and the Value and its corresponding function. Click Sort A to indicate which one to sort by.
- **Pie:** Select the Label and its corresponding function and the Value and its corresponding function. Click Sort A to indicate which one to sort by. Show as a 3D graphic, explode the largest slice, and select between a pie or a doughnut.
- **Plot:** Select the X and Y values and click Sort A to indicate which one to sort by.
- **Bar chart:** Select the Label and its corresponding function and the Value and its corresponding function. Click Sort A to indicate which one to sort by.

Gauge Tab
Allows you to build dashboards and helps you visualize critical performance data.

Misc Tab
Allows you to add a title, report description, header, and footer to your report.

Style Tab
Allows you to set colors for the report border, header, and data records. Click the Restore Default button to restore system defaults. If you select “Show Page Numbers” or “Show date and time”, this will only work for PDF output.
Filters Tab
Allows you to create a query to select only the data you wish to see on the report. First choose the field you want to use for the filtering, then select the logical operator (for example: Begins With, Contains, etc.).

- **Filter Field**: Lists the available fields.
- **Operator**: Lists the operations available for the above field.
- **Value(s)**: Allows you to input conditions for the operation.
- **Blank**: Check the box to return results with the value or a blank (null).
- **Param**: Check the box to allow users to modify the parameter from the report viewer.

Preview
- Allows you to preview the report. When you preview your report, click on the column headings to sort in either Ascending or Descending order.

Ad hoc Report Troubleshooting
If your report does not show the data that you expect, select the SQL button and it will produce a file that specifies the SQL Select statement that was used. Look for the file to appear in the lower left part of the screen. You can print it out or email it to Chemical Safety’s Technical Support department if you want help troubleshooting your report.
QuickStart Favorite Reports Configuration

Administrators can configure the default favorite reports that will be displayed on a particular QuickStart screen for both groups and users. Favorite reports can also be configured by EMS users on their own by selecting Settings -> User Preferences -> Quickstart Favorite Reports. Begin by selecting the QuickStart Screen for which favorite reports are to be added. In the example below, we have added Favorite Reports for the Chemist QuickStart screen.

A maximum of six QuickStart Favorite reports can be listed.

- To remove an existing report, check the checkbox next to it and click Delete.
- To add a report, click on the dropdown for Ad-hoc Report and select one of the existing Ad-hoc (management) reports. Once selected, enter the name that you want this report to show as in the Label field. If a report you would like to add is not available, you will first need to create it in EMS’ Ad-hoc reports module before you can select it here. To add Crystal reports, click on the Crystal Reports dropdown and select one of the existing Crystal Reports that have been applied to your installation. Once selected, enter the name that you want this report to display as in the Label field. You can contact EMS Technical Support if you wish to modify or add a Crystal Report. (This work is covered by your annual support agreement with Chemical Safety).