IndustrySafe Analysis Grid User Guide - Advanced Features

January 2018

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Getting Started

Introduction

The purpose of the analysis grid reports in IndustrySafe is to provide a complete package of data analysis capabilities so that IndustrySafe users can create powerful reports and dashboards.

All of the IndustrySafe Analysis Grid reports consist of separate panels for controls, configuration, tables, charts, and crosstabs. Users can manipulate the controls, creating data analysis and presentations on the fly.

To access any of the analysis grid reports, log into IndustrySafe, select the related module, select Reports & Analysis, and choose the analysis grid report that you wish to view.

This guide will help users better understand the advanced features for all of the following reports:

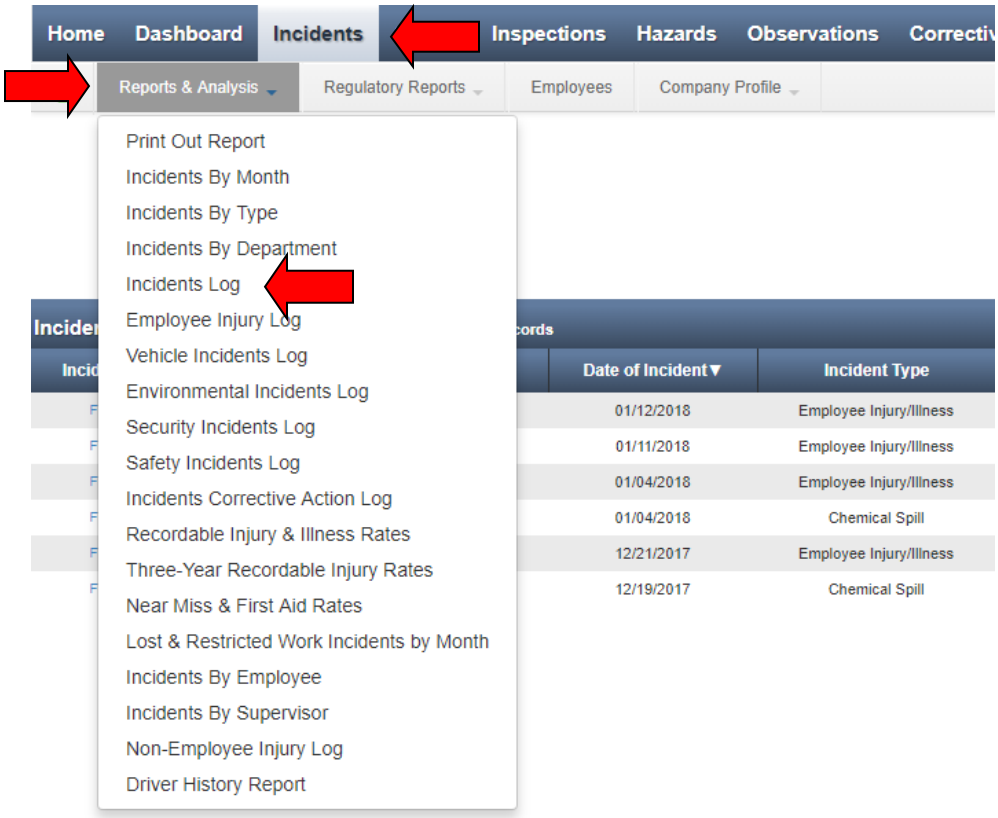
Module	Report
Home	Tasks Log
	Events Log
Incidents	Incidents Log
	Employee Injury Log
	Vehicle Incidents Log
	Environmental Incidents Log
	Security Incidents Log
	Safety Incidents Log
	Incidents Corrective Action Log
Claims	Claims Log
	Claim Payments Log
Inspections	Inspections Log
	Inspection Details Log
Hazards	Hazards Log
	Hazards Corrective Action Log
Observations	Observations Log
	Observations Details Log
	Observations Corrective Actions Log
Corrective Actions	Corrective Actions Log

Training	Training Activity Log
	Required Training Log
	Training Compliance Log
	Required Training by Job Title Log
	Required Training by Profile Log
	Employee Information Log
Industrial Hygiene	Exposure Assessment Log
	Sampling Log
Job Safety Analysis	JSA Log
	JSA Hazards Log
	JSA Reviewer Log
	JSA Feedback Log

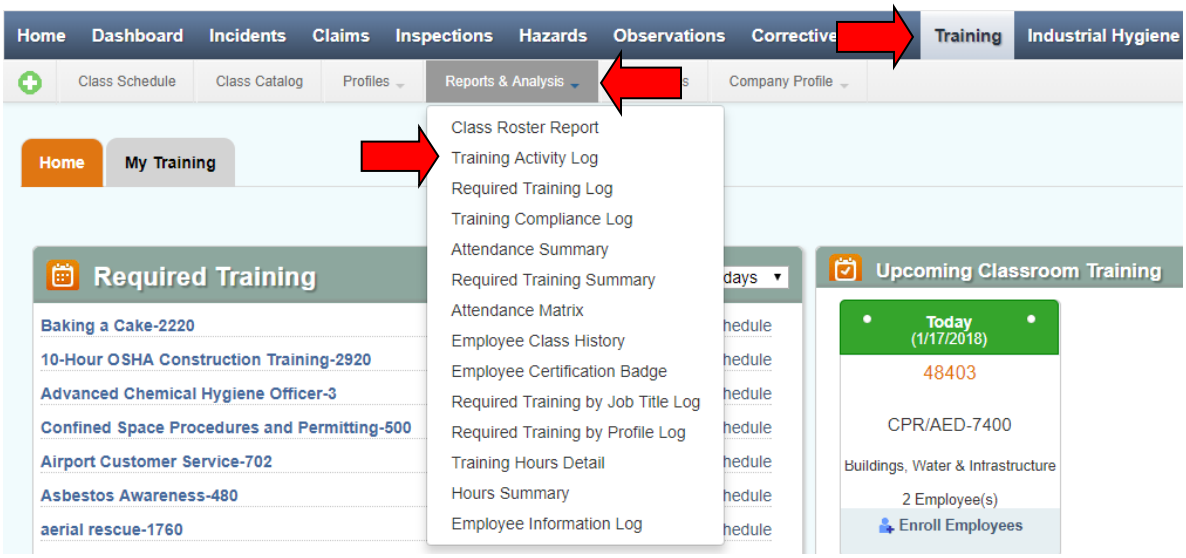
Select Your Report

Select the Tab, Reports & Analysis, and then the report you wish to view.

For example: Incidents > Reports & Analysis > Incidents Log.

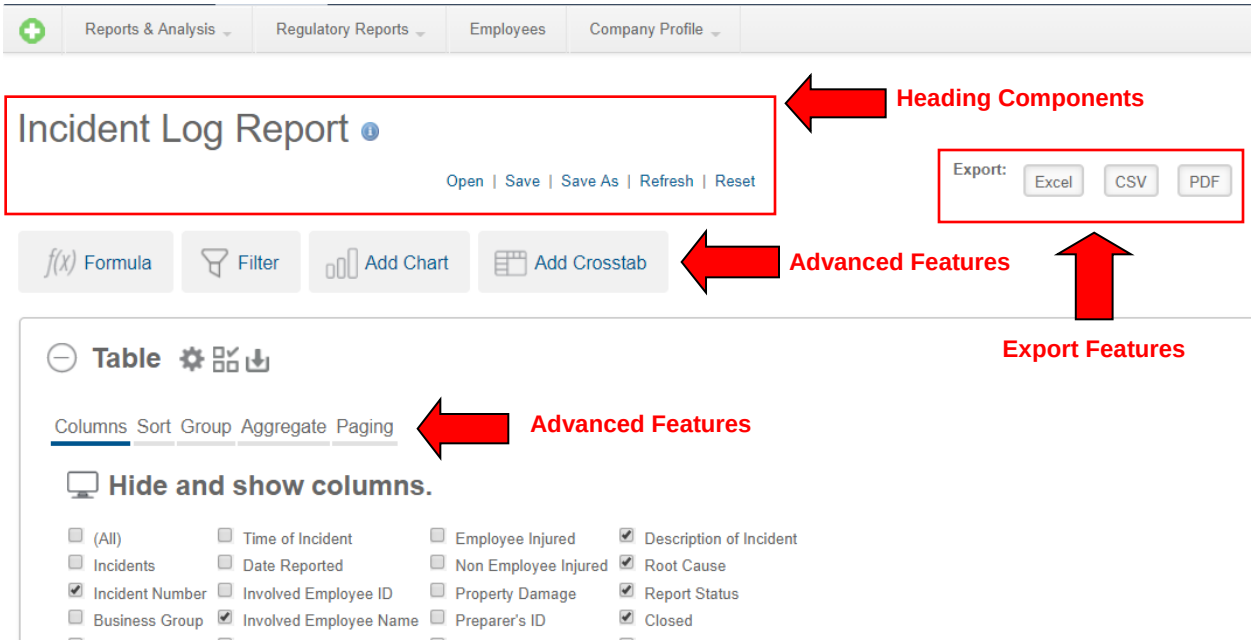


For example: Training > Reports & Analysis > Training Activity Log



Overview of Components

The Analysis Grid has multiple components and feature functionality as follows.



Heading Components

Information Icon

Displays basic information about the log upon hover over including the default settings of the report.

Default Settings

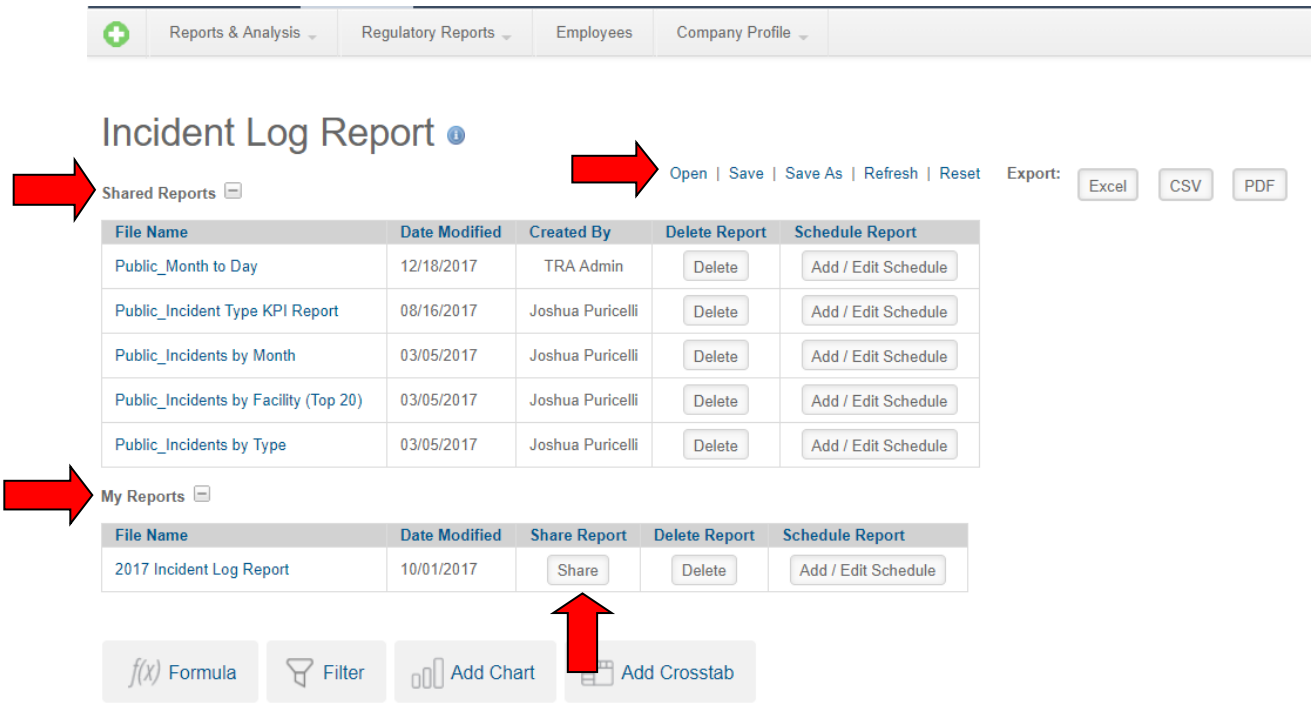
The Analysis Grid defaults with multiple columns that can contain Incident Numbers, Employee Names, Facilities, Dates, etc. The default columns are based on standard items that would need to be viewed quickly.

Open

Opens a menu that lets the user open their saved reports and reports shared by administrators.

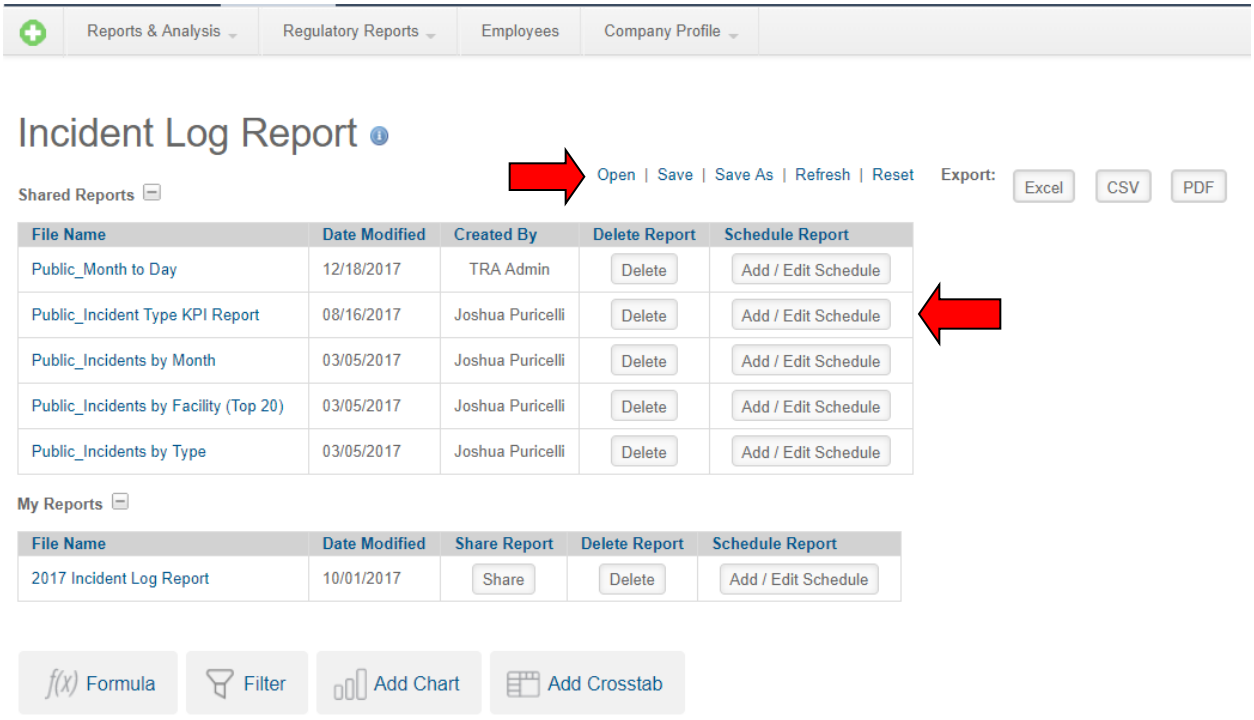
Sharing Reports

The Share option is available under the Open menu that allows administrators to share reports with other users as well as view shared reports. Saved reports will initially be shown under the My Reports section. Once a report has been shared, a Public version of the report will appear in the Shared Reports section.



Scheduling Reports

The Add/Edit Schedule option is available under the Open menu that allows administrators to schedule a recurring distribution of saved reports, which can be sent directly to desired user email addresses.



Save

Saves the user's analysis grid customizations to file so they may be recalled later (in a different session).

Save As

Saves the user's analysis grid customizations to a file as a new report to be recalled later (in a different session)

Refresh

Refreshes the grid data without losing any of the user's grid customizations made during the session.

Reset

User settings are automatically retained during their sessions; use this link to clear those settings.

Export Features

The Analysis Grid includes three buttons that allow you to export **Table** data to: **Excel**, **CSV**, and **PDF.** Note: The export to Excel, and export to CSV features only include table data. The export to PDF feature will also include charts and graphs associated with the report.

Excel

Exports displayed columns and records to Excel spreadsheet.

CSV

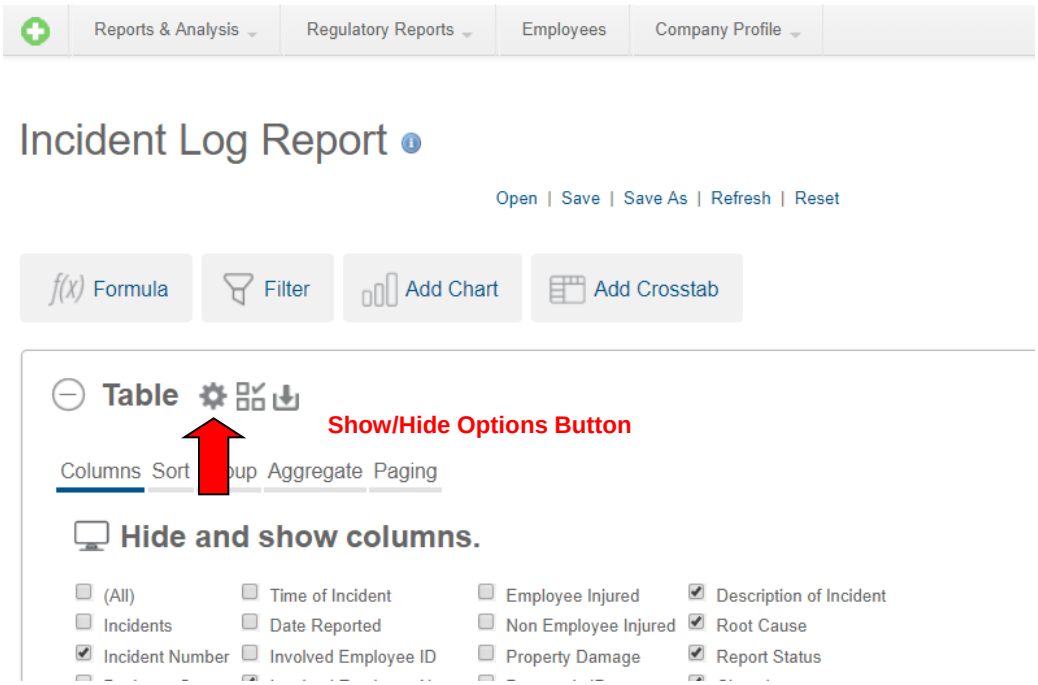
Exports displayed columns and records to CSV file.

PDF

Exports displayed columns and records to PDF in a landscape view. Your logo can display on the top right corner of the PDF but must be uploaded by your organization's IndustrySafe System Administrator in the System Function Logo Area of the application.

Advanced Features

The control panel includes the Formula, Columns, Sort, Filter, Group, Aggregate, Add Chart, Add Crosstab, and Paging features. Please note, the Columns, Sort, Group, Aggregate, and Paging functions are located within the Table menu. These options are not displayed by default, but can be accessed by clicking the Show/Hide Options gear icon within the Table menu.



Formula

This feature allows users to add **Formula** (calculated) **Columns** to the data table. New columns are appended to the right of the last column but can be relocated using the Columns feature or by dragging them at runtime.

Columns

This feature allows users to select which columns to display in the table. Users can also select the display order of columns by dragging column headings to the desired location.

Sort

This feature allows users to set the **initial sort order** of the grid columns. Cascading sort orders can be conducting using this feature.

Filter

This feature allows users to **narrow results** from the display grid using a variety of criteria.

Group

This feature allows users to **group** and **sub-group** data in the display grid using a variety of criteria.

Aggregate

This feature allows users to **aggregate** data in the display grid using a variety of aggregation methods, including: Sum, Average, Standard Deviation, Count, Distinct Count, Minimum, and Maximum.

Add Chart

This feature allows users to add **charts** to their display. Charts will appear as new panels, below the table panel.

Add Crosstab

This feature allows users to add a **Crosstab** (also called a Pivot) table to their display. Crosstabs will appear as new sections, below the data grid. Two buttons (- and +) allow the sections (including the data grid) to be made hidden or visible but the order of the sections **cannot be changed** (data grid will always be first).

Paging

This feature allows users to determine how many **rows of data** will appear in the data table.

Advanced Feature Examples

Formulas

Overview of Formula Components:

Click the **Formula** button to open the Formula Column configuration panel. The following steps are used to add a new Formula column to the grid.

1. Enter the **Name** for the column to be added to the grid.
2. If desired, select an **available column** and insert it into the **Formula**. Analysis Grid Column attributes allow you to exclude columns from this list.
3. Enter the formula by typing; to prevent spelling errors, columns can be inserted by selecting them from the column list (2). Column names are enclosed within square brackets [ ] and typical math operator symbols, such as + - * / are used.
4. Indicate the **Data Type** and **Display Format**. Formatting options include numeric and date formats and in-cell bar gauges and cell coloring (shown). Click **Add** to create the new column.
5. As formula columns are created, they're added to the Formula Columns list. Use the adjacent **Replace** and **Remove** buttons to manage the list. Columns that have been added are now included in the list of available columns (2) for use in other formulas.

The resulting column is **appended to the right** of existing columns. Click the **Formula** button to hide the panel.

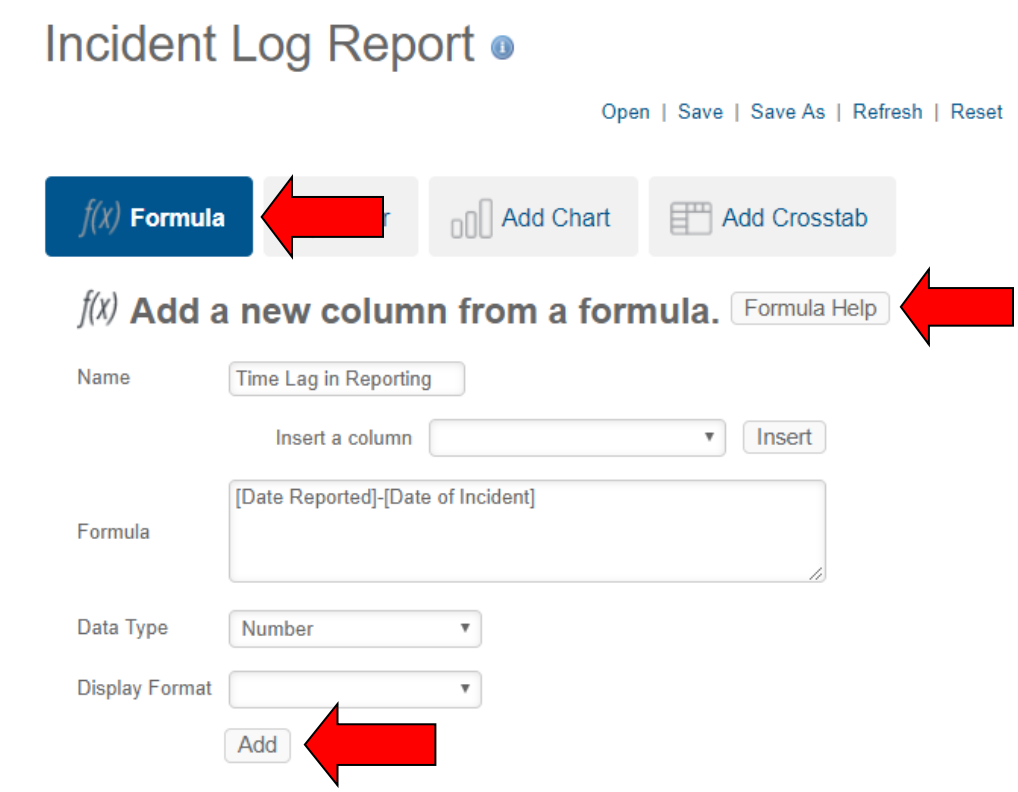
A Formula Help button is included within the Formula panel, which provides an overview of the various functions available within the Formula feature. If additional assistance is needed to build a specific Formula, please contact the IndustrySafe Support Team.

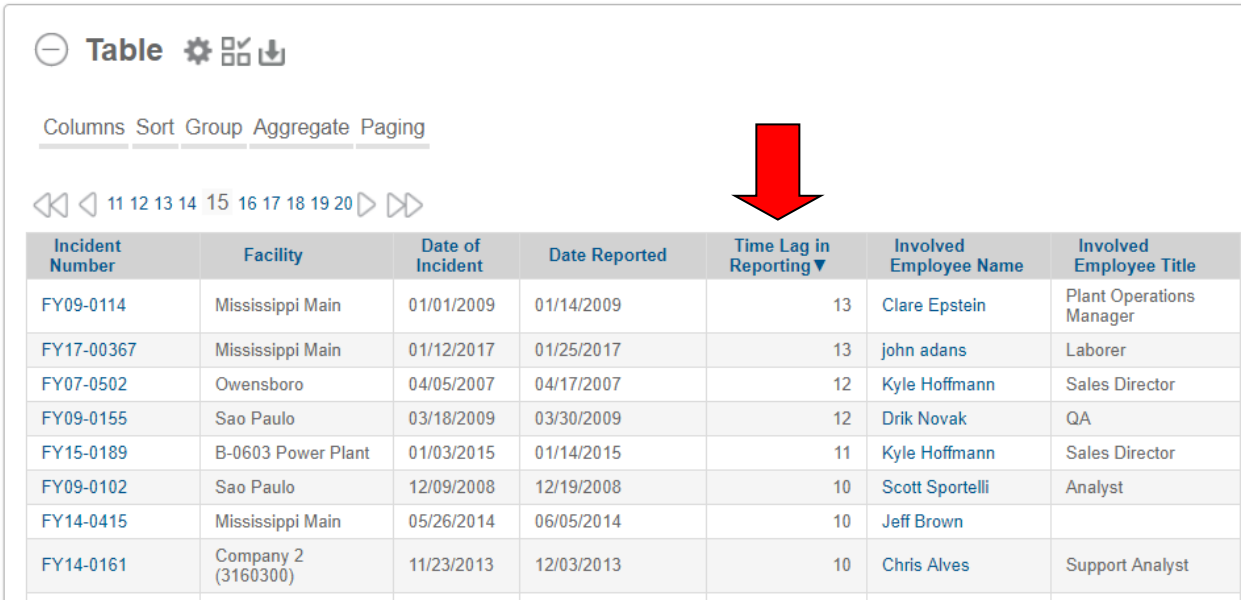
Formula Example: Time Lag in Reporting

For example, to calculate how long it is taking to report a time lag into IndustrySafe complete the following steps

1. Select Formula from Advanced Feature Bar to show Formula panel
2. Selecting Formula Help can provide some standard functions for calculating data.
3. Enter “Time Lag in Reporting” in the Name Field
4. Select the Date of Incident value in the Insert Column drop-down, and click Insert.
5. Enter a minus sign (-) after the [Date of Incident] value in the Formula box.
6. Select the Date Reported value in the Insert Column drop-down, and click Insert.
7. Select Add

A new column Time Lag in Reporting will now display as the last column in the table. This column will display the difference between the Incident Date and the Date the Incident was Reported.





Incident Number	Facility	Date of Incident	Date Reported	Time Lag in Reporting▼	Involved Employee Name	Involved Employee Title
FY09-0114	Mississippi Main	01/01/2009	01/14/2009	13	Clare Epstein	Plant Operations Manager
FY17-00367	Mississippi Main	01/12/2017	01/25/2017	13	john adans	Laborer
FY07-0502	Owensboro	04/05/2007	04/17/2007	12	Kyle Hoffmann	Sales Director
FY09-0155	Sao Paulo	03/18/2009	03/30/2009	12	Drik Novak	QA
FY15-0189	B-0603 Power Plant	01/03/2015	01/14/2015	11	Kyle Hoffmann	Sales Director
FY09-0102	Sao Paulo	12/09/2008	12/19/2008	10	Scott Sportelli	Analyst
FY14-0415	Mississippi Main	05/26/2014	06/05/2014	10	Jeff Brown	
FY14-0161	Company 2 (3160300)	11/23/2013	12/03/2013	10	Chris Alves	Support Analyst

Filter

Overview of Filter Components

1. Click the **Filter** button to open the Row Filter configuration panel.
2. Select a **Filter Column** from the drop-down menu.

3. Set the filtering criteria by selecting a **Comparison** operator from the list, then enter a comparison **Value** and click **Add**.
4. As filters are created, they're added to the filter list. Use the adjacent **Replace** and **Remove** buttons to manage the list.
5. Click the **Filter** button to hide the panel.

Comparison operators include =, <, <=, >=, >, Not =, In List, Not In List, Starts With, Contains, Not Starts With, Not Contains, Date Range, Range.

The **Starts With** and **Contains** operators are useful for finding values at the beginning or within data (analogous to SQL WHERE clause operators LIKE and CONTAINS) and will work with both text and numeric data. They **do not support wildcard** characters.

You can add **multiple filters** which are initially linked together using **AND** logic. Clicking the **AND** link to the left of a filter in the Filters list will cause the relationship to change to **OR**. If multiple filters are set on the same column, **OR** logic is automatically applied. If two or more filters are created, a set of **Up** and **Down arrows** appear next to the filter. These arrows can be clicked to **re-order** the precedence of the filters. Further, to the right of the Up and Down arrows will be Plus (+) and Minus (-) signs, which can be used to group filters together. Clicking the Plus sign will place the open parenthesis on the filter above, and the closed parenthesis on the filter where you clicked the Plus sign.

Filtering by Dates

If the Filter Column selected is a **date type** column, the interface presents different value controls:

You may choose to filter on a **Specific Date** and enter it or, as shown below, you can filter using a **Sliding Date** value and select from a long list of relative dates (*Last Month Start*, *90 Days Ago*, etc.)

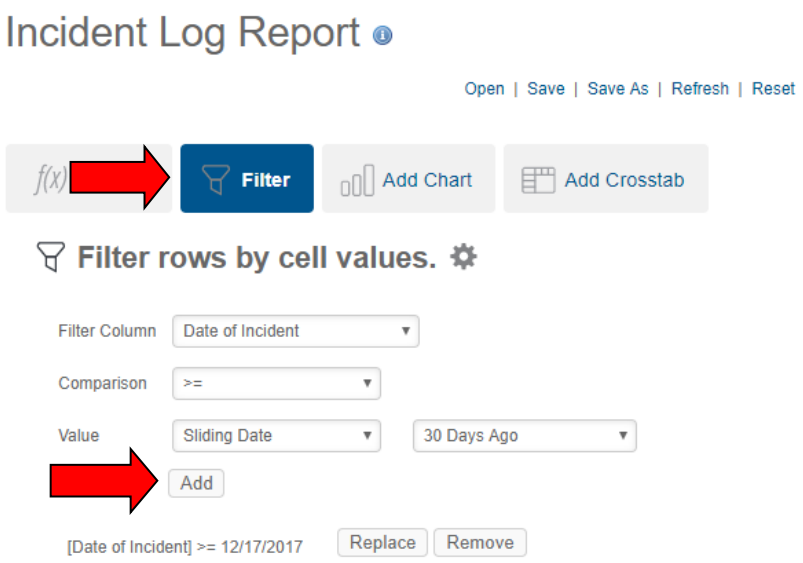
When scheduling recurring reports, or adding reports to the IndustrySafe Dashboard, it is recommended to utilize the Sliding Date filter criteria. This will ensure the recurring report or Dashboard panel will include updated data through the course of time.

In addition, the interface includes the **Date Range** comparison option and different value controls, for Starting and Ending dates, which can be used in a variety of combinations.

The filter column will generate the list based on the available columns in the module you are in. For instance, if you are in the Hazard Analysis Grid, then there would be Hazard Evaluation in the dropdown menu which would not be seen in the Incident Analysis Grid.

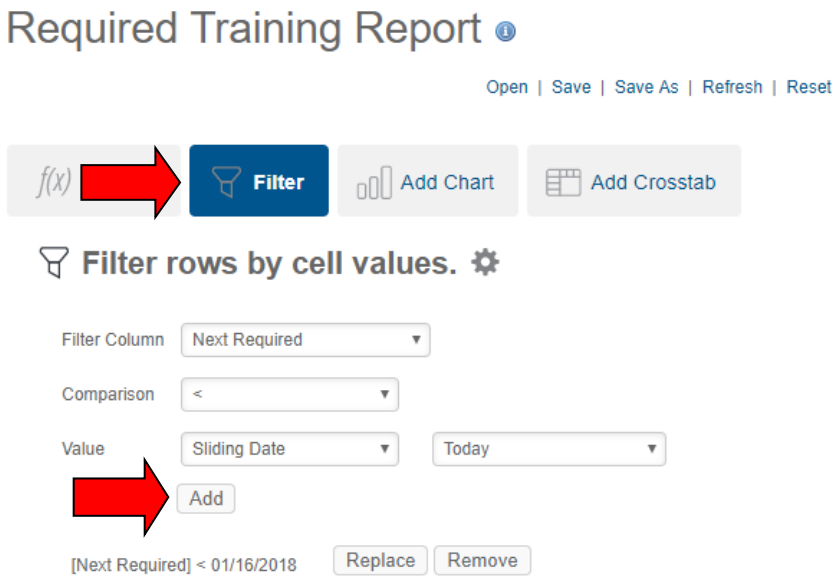
Filter Example: All Incidents in the last 30 Days

1. Click the Filter button to open the Filter configuration panel.
2. Select Date of Incident as the Column to be filtered from the column list.
3. Set **Comparison >=** from drop down
4. Select **Value** as **Sliding Date**
5. Select **30 Days Ago** as value from drop down
6. Select **Add**



Filter Example: Required Training Log

1. Click the Filter button to open the Filter rows by cell values configuration panel.
2. Select **Next Required** from the **Filter Column.**
3. Set **Comparison <** from drop down
4. Select **Value** as **Sliding Date**
5. Select **Today** as the **Sliding Date**
6. Select **Add**



Add Chart

Overview of Chart Components

1. Click the Add **Chart** button to open the Add Chart configuration panel.
2. A toolbar with different charts and gauges will open in the configuration panel. By selecting a chart, a new section will appear in the configuration panel. Available charts and gauges are: Pie, Bar, Line, Curved Line, Scatter Plot, Heatmap, and Gauge. The chart will default to a Bar chart, but any of the previously referenced charts can be created by clicking the corresponding button in the configuration panel.
3. Assuming a **Bar** chart is desired, select the **Label Column**. This provides data for the X-axis of the chart.
4. Select the **Data Column** (Y-axis data, the "height" of each bar) and the **Data Aggregation** function. Aggregating options include: Sum, Average, Standard Deviation, Count, Distinct Count, Minimum, and Maximum. As you make the column selections above, the chart will update automatically to reflect your selections.
5. As charts are created, they're added to the Charts list. Use the adjacent **Remove** button to manage the list.
6. The **Add to Dashboard** button on the top of the chart will allow you to add the chart to the Dashboard. This chart will appear in the top left corner of your active Dashboard tab. This chart will not be able to be viewed by other Dashboard users unless you contact the IndustrySafe support team to enable this chart for you. Please note, if adding a chart to the Dashboard, the filters applied at the time the chart is added to the Dashboard will remain in affect for the Dashboard panel. The Dashboard panel will not update to reflect new filters, even if new filters are added within the originating log-style report.

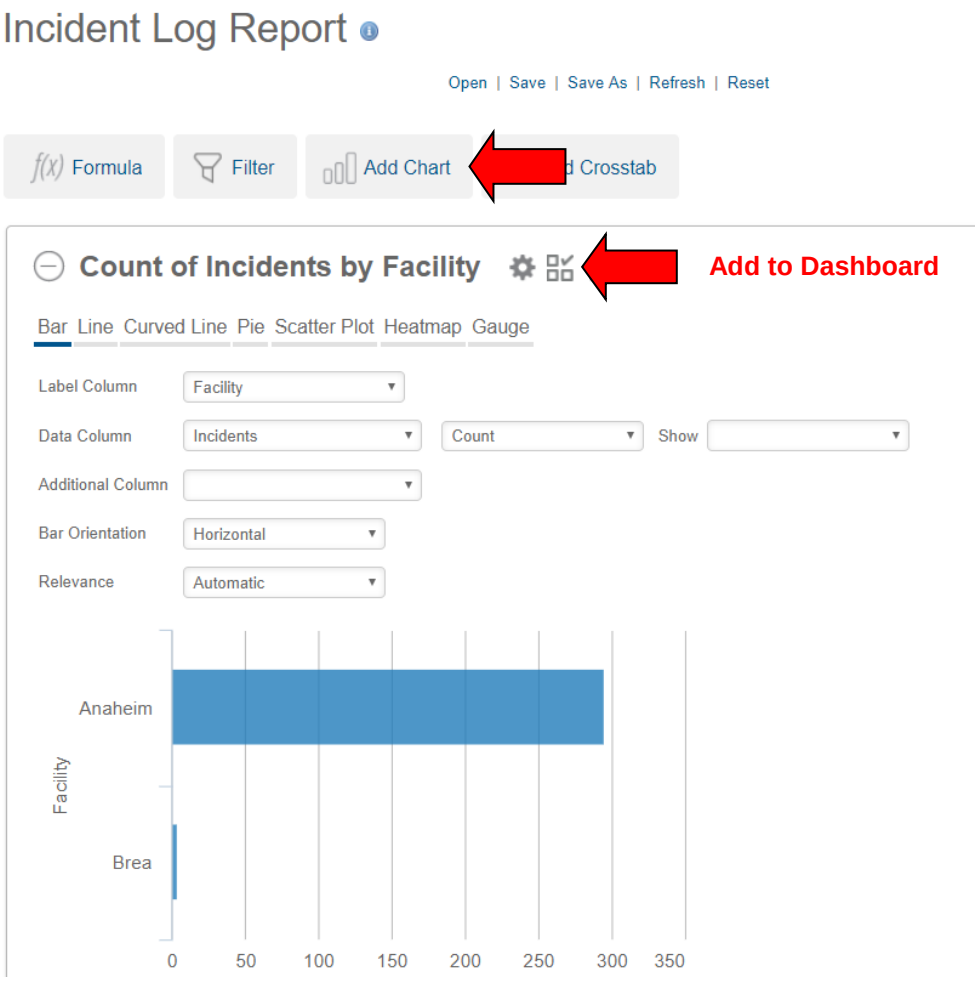
Note that the chart has "resizer handles" around it; you can click and drag them to resize the chart. If you have a large number of values in your Label column, it will automatically group the values with the least amount of data into an “Other” category until the chart is expanded.

Once again note that the example below uses Incidents but this example still applies in the Analysis Grids within other modules.

Chart Example: Number of Incidents per Facility

1. Click the Add **Chart** button to open the Charts configuration panel.
2. Select **Bar** Chart as the type of chart.
3. Select the **Label Column** as **Facility**. This provides data for the X-axis of the chart.
4. Select the **Data Column** as **Incidents (**Note: Incidents will be the only choice available for the data column. This provides data for the Y-axis of the chart).
5. Select **Count** as the **Data Aggregation** function.
6. Once your **Label Column**, **Data Column**, and **Aggregation** functions have been selected, the chart will refresh, and will be updated based on your selections.
7. The **Add to Dashboard** button on the top of the chart will allow you to add the chart to the Dashboard. This chart will appear in the top left corner of your active Dashboard

tab. This chart will not be able to be viewed by other Dashboard users unless you contact the IndustrySafe support team to enable this chart for you.



Add Crosstab

Overview of Crosstab Components

1. Click the Add **Crosstab** button to open the Add Crosstab configuration panel.
2. Select the column that will provide the values to be shown **horizontally**, as columns, across the top of the crosstab table. Additional controls may appear depending on the data type of the selected column.
3. Select the column the will provide the values to the shown **vertically**, as rows, down the left side of the crosstab table.
4. Select the column that will be **aggregated** to produce the **values** in the crosstab table.
5. Select the aggregating function (Sum, Average, Standard Deviation, or Count) to be applied to the values selected in Step 3.

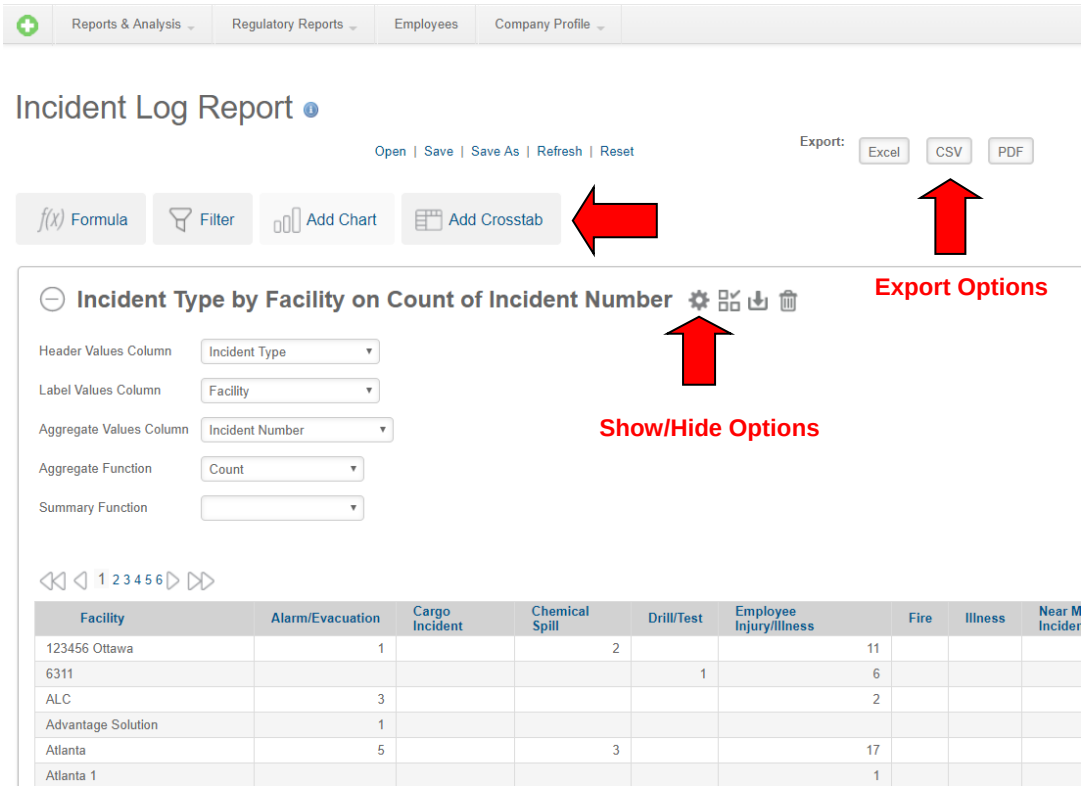
6. As the selections above are made, the crosstab table will refresh automatically to reflect the selections.
7. As crosstabs are created, they're added to the Crosstab list. Use the adjacent **Remove** button to manage the list.
8. Click the **Show/Hide Options** button to hide the configuration panel.

The below example teaches Crosstab within the Incident Log Report. Please note this can be done in all Analysis Grids.

Crosstab Example: Incidents per Incident Type per Facility

1. Click the Add **Crosstab** button to open the Crosstabs configuration panel.
2. Select Incident Type as the **Header Values Column**
3. Select **Facility** as the **Label Values Column**.
4. Select **Incident Number** as the **Aggregate Values Column**
5. Select **Count** as the **Aggregate Function**
6. As you make your Header Values, Label Values, and Aggregate selections above, the Crosstab will refresh, and will be updated to reflect your selections.
7. Click the **Show/Hide Options** button to hide the configuration panel.

The Export Functions (CSV, EXCEL, PDF) are available on the top right of the Crosstab Table.



Columns

Overview of Columns Components

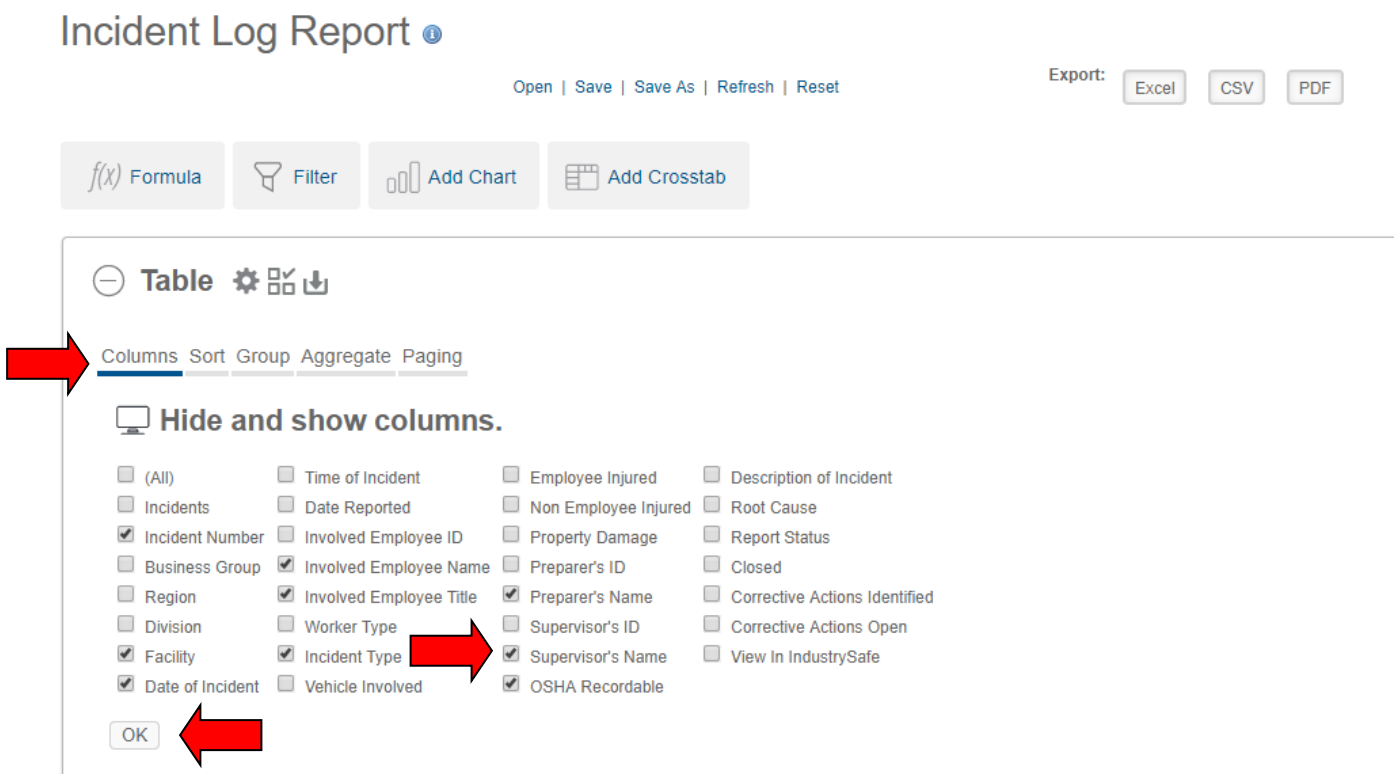
The Columns component allows users to select which columns to display in the table simply by checking the columns they would like to include. The order the fields display in the Columns list is also the default order the columns will appear in the table.

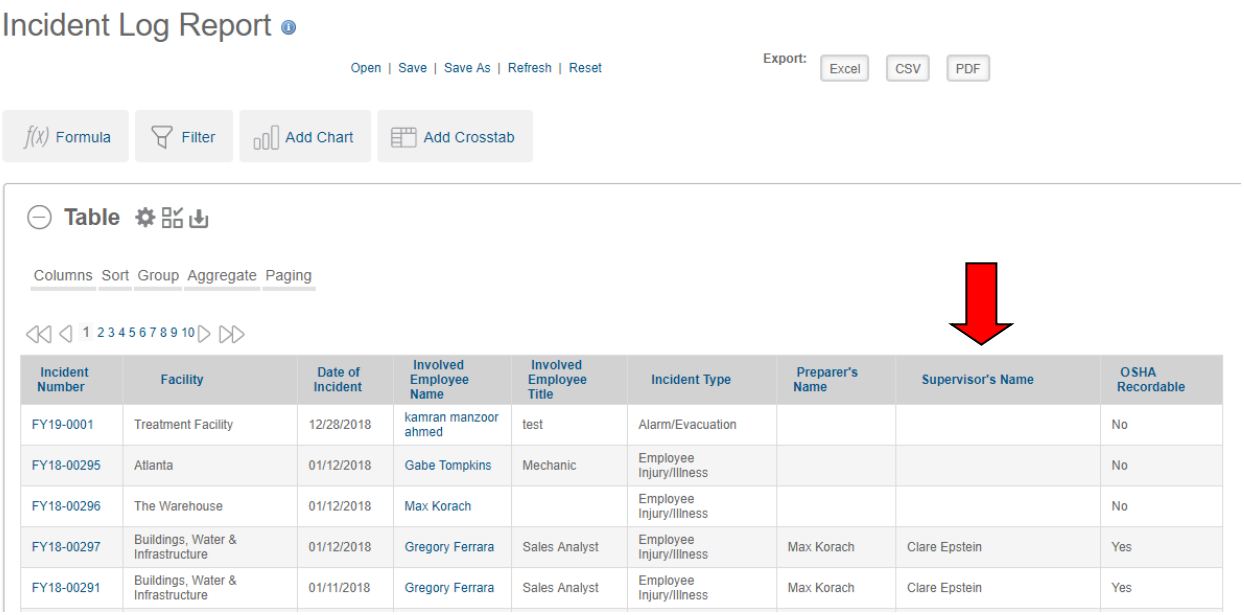
In addition, users can move columns by dragging and dropping the column with the mouse.

The columns that appear in the Columns component differ from Analysis Grid to Analysis Grid, however the Columns component functions the same way in all the Analysis Grids.

Columns Example: Including the Supervisor Field in the Table

1. Click the Show/Hide Options gear icon in the Table menu.
2. Select Columns from the menu to display the column options available on this log report.
3. Select the check-box to the left of the Supervisor Name field.
4. Select Ok
5. Click the Columns button to hide the Columns panel.
6. Use the Drag Feature on the left side of the Supervisor Name column to reorder as needed.





Incident Number	Facility	Date of Incident	Involved Employee Name	Involved Employee Title	Incident Type	Preparer's Name	Supervisor's Name	OSHA Recordable
FY19-0001	Treatment Facility	12/28/2018	kamran manzoor ahmed	test	Alarm/Evacuation			No
FY18-00295	Atlanta	01/12/2018	Gabe Tompkins	Mechanic	Employee Injury/Illness			No
FY18-00296	The Warehouse	01/12/2018	Max Korach		Employee Injury/Illness			No
FY18-00297	Buildings, Water & Infrastructure	01/12/2018	Gregory Ferrara	Sales Analyst	Employee Injury/Illness	Max Korach	Clare Epstein	Yes
FY18-00291	Buildings, Water & Infrastructure	01/11/2018	Gregory Ferrara	Sales Analyst	Employee Injury/Illness	Max Korach	Clare Epstein	Yes

Sort

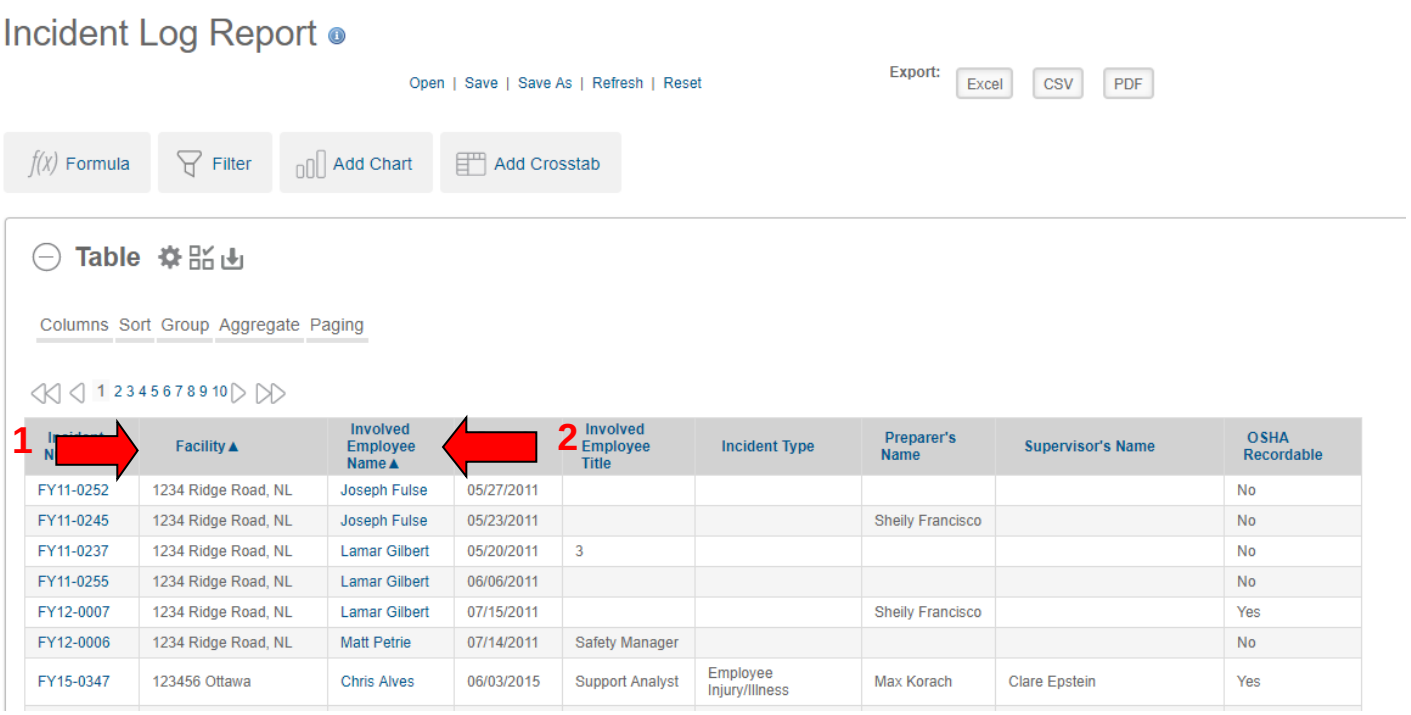
Overview of Sort Components

1. Click the **Sort** button to open the Sort Order configuration panel. The following steps are used to create initial sort order columns:
2. Select a **data column** and an **order direction** from the selection lists, and click **Add** to add the sort. Repeat as desired.
3. As Sort Order columns are created, they're added to the list of sorts. Use the adjacent **Replace** and **Remove** buttons to manage the list.
4. Click the **Sort** button to hide the panel.

The columns are displayed initially in the sort order created. Sorting on individual columns is still available, by clicking their column titles

Sort Example: Sorting by Facility and then Employee Name

1. Click the **Sort** button to open the Sort Order configuration panel.
2. Select **Data Column** as Facility and **Sort Order** as Ascending (sort #1)
3. Click **Add**
4. Select **Data Column** as Involved Employee Name and **Sort Order** as Ascending (sort #2)
5. Click **Add**
6. Click the **Sort** button to hide the Sort Order configuration panel



Group

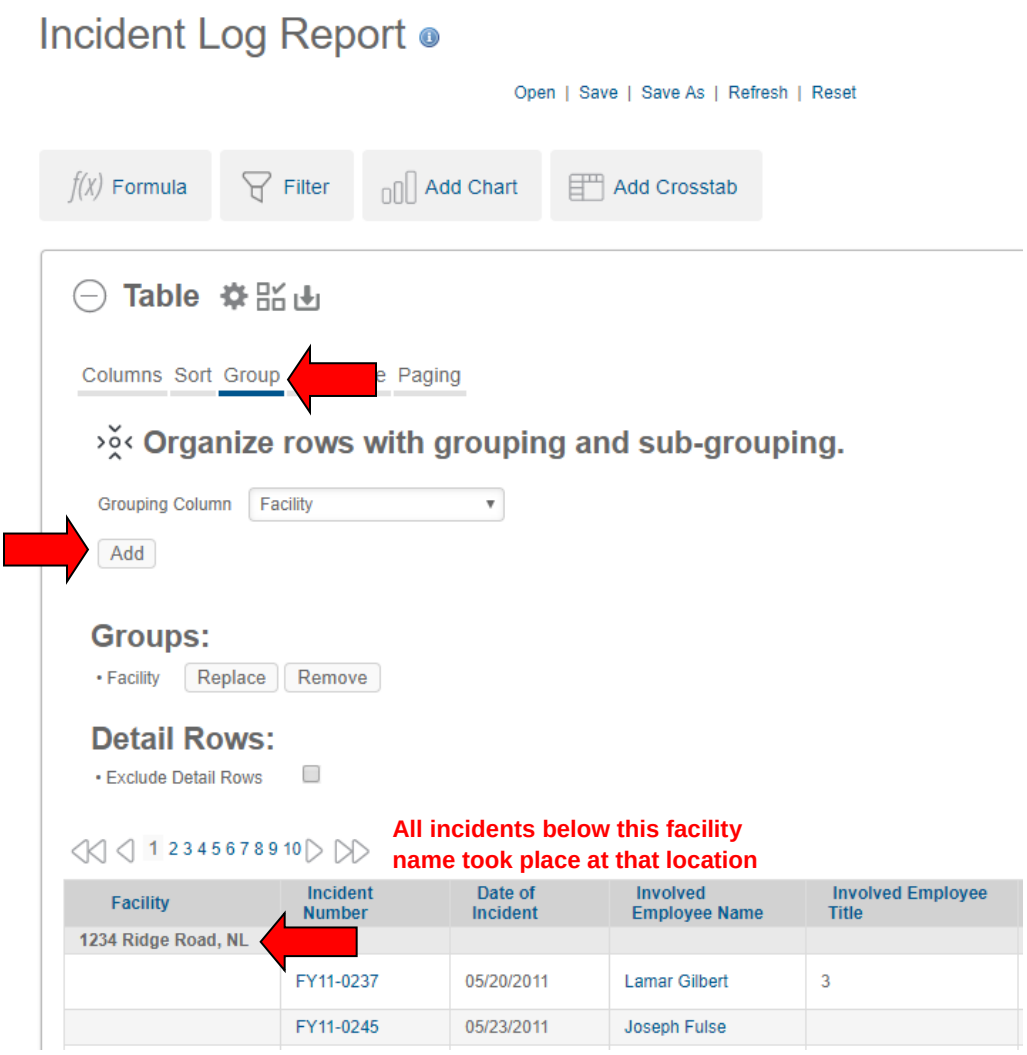
Overview of Group Components

1. Click the Group button to open the Row Grouping control panel.
2. Select the **Grouping Column** for the first level of grouping from the list of columns. Click **Add** to group the data and redisplay the grid. Repeat as desired to create sub-groups.
3. As groups and sub-groups are created, they're added to the Group list. Use the adjacent **Remove** and **Replace** buttons to manage the list.
4. The **Exclude Detail Rows** checkbox can be used to hide the rows that have been grouped, "collapsing" each group into a single row in the grid's data table.
5. Click the **Group** button to hide the panel.

Specifying a grouping on a column containing date-type data makes a control visible that allows you to select whether the grouping should be based on the *Year*, *Quarter*, *Month*, or *Day* parts of the data.

Group example: Grouping Incidents by Facility

1. Click the Show/Hide Options gear icon in the Table menu.
2. Within the menu, click the Group button to open the Group control panel.
3. Select the **Grouping Column** as **Facility**
4. Click **Add** to group the data and redisplay the grid.
5. Click the **Group** button to hide the Group panel.



Aggregate

Overview of Aggregate Components

1. Click the Aggregate button to open the Aggregate configuration panel.
2. Select the **Data Column** to be aggregated from the column list.
3. Select the **Aggregate Function**. Options include: Sum, Average, Standard Deviation, Count, Distinct Count, Minimum, and Maximum. Click **Add** to aggregate the data and re-display the grid.
4. As aggregates are created, they're added to the Aggregates list. Use the adjacent **Remove** button to manage the list.
5. Click the **Aggregate** button to hide the panel.

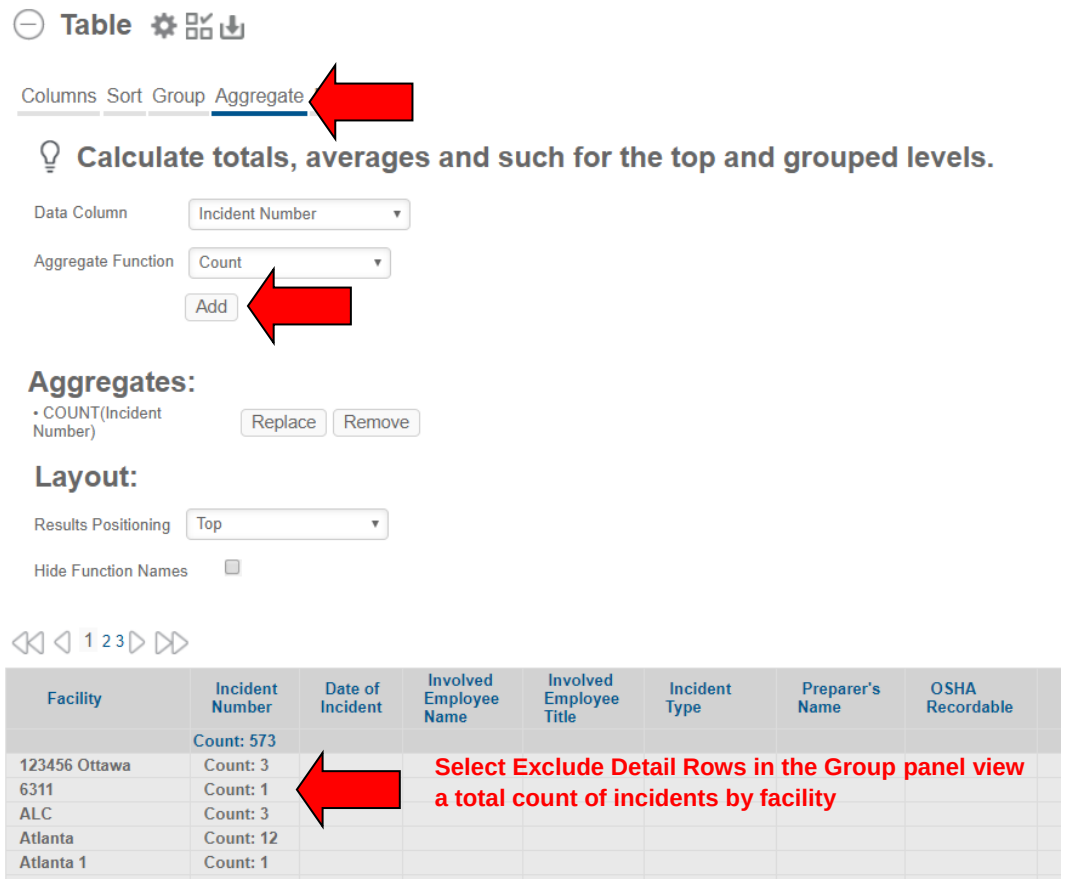
If **Grouping** is in effect, aggregate values will also appear at each **grouping level** in the data grid

The aggregate example below counts Incidents by Facility. Keep in mind that what is being aggregated depends on the analysis grid you are looking at. For example, incidents would not be in a Hazards Log. The tool functions the same way.

Aggregate Example: Counting Incidents by Facility

1. Complete Steps 1 to 4 in the Grouping by Facility Example Above
2. Click the Aggregate button to open the Aggregate configuration panel.
3. Select **Incident Number** as the **Data Column** to be aggregated from the column list.
4. Select the **Aggregate Function: Count**
5. Click **Add** to aggregate the data and re-display the grid.
6. Click the **Aggregate** button to hide the panel.

The table will now display the number of incidents by facility. Select **Exclude Detail Rows** in the Group panel to only view a total count of incidents by facility.

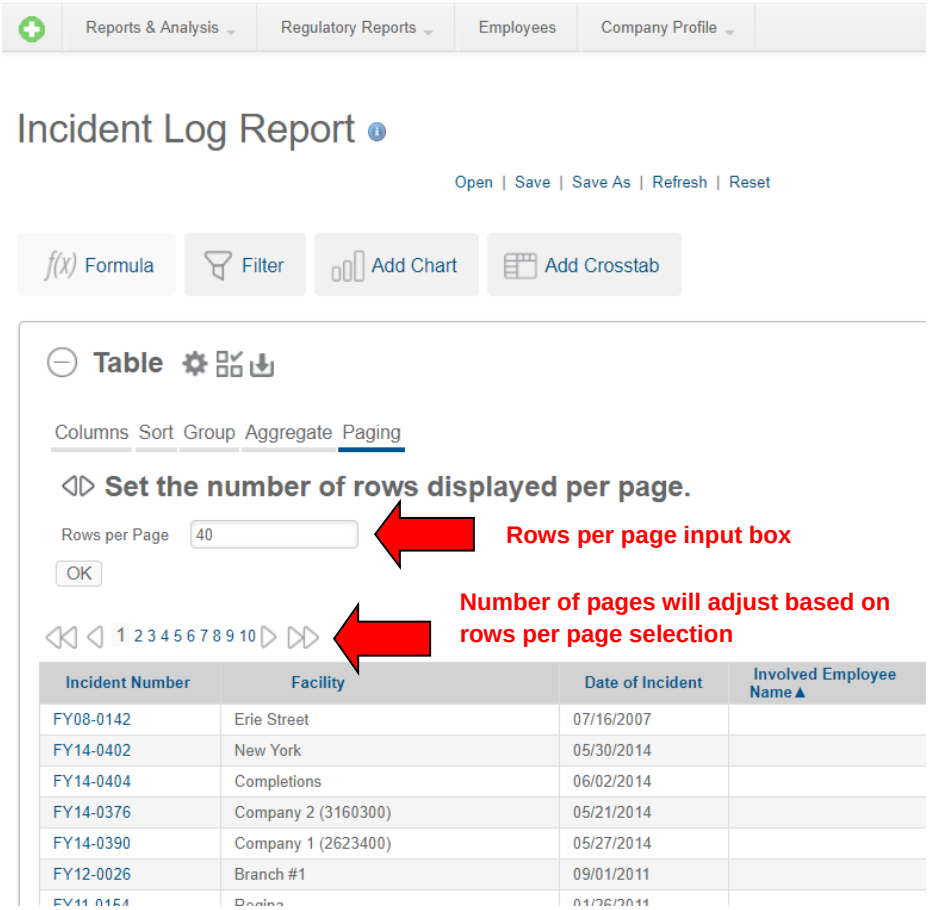


Paging

Overview of Paging Component

1. Click the **Paging** button to open the Paging configuration panel.

2. In the **Rows per Page** box that will display in the configuration, however many rows per page that need to be viewed can be entered.
3. Click **OK** to refresh the display.
4. Click the **Paging** button to close the Paging configuration panel.

Paging Example: Displaying 40 Rows

1. Click the **Paging** button to open the Paging configuration panel.
2. Input 40 into the **Rows per Page** box
3. Click **OK** to refresh the display.
4. Click the **Paging** button to close the Paging configuration panel
5. Note the paging controls on top of the Table allow you to navigate pages within the Table.