

Managing the Database

Information in this section explains how to manage the PCS Axis database. The information is intended for the PCS Axis Administrator or a user with *SysAdmin* permissions. Topics in this section include those in the following list:

- *Running Database Integrity Check*
- *Running Reindex Database* (page 795)
- *Using Data Modification Utility* (page 796)

Running Database Integrity Check

In the unlikely event data becomes corrupted in the database, use *Database Integrity Check* to identify and resolve instances of data inconsistencies. The process performs an audit of the database searching for issues that may prevent PCS Axis from loading or performing basic functions. Its purpose is to clean up data issues that may cause problems for users. For example, database issues the auditing process detects and corrects include:

- Orphan records.
- Invalid hierarchy nodes.
- Outdated or incorrect derived fields. See *Working with Derived Fields* (page 226) for information about derived fields.
- Invalid field characters, hierarchy nodes, or folders outside hierarchy levels.
- Duplicate or missing right-of-ways (ROWs) and pipes.
- Blank hierarchy level names and empty or missing hierarchy folders.
- Missing base effective dates (facilities and pipelines).
- Invalid foreign keys in database tables. (A foreign key is a field in a database table that refers to a record in another database table.)

To run *Database Integrity Check*:

- Click **File > Database Integrity Check** to open the *Data Auditor* window (Figure 18-1). Then click  **Run**.

The message *Running* displays during the database audit process.

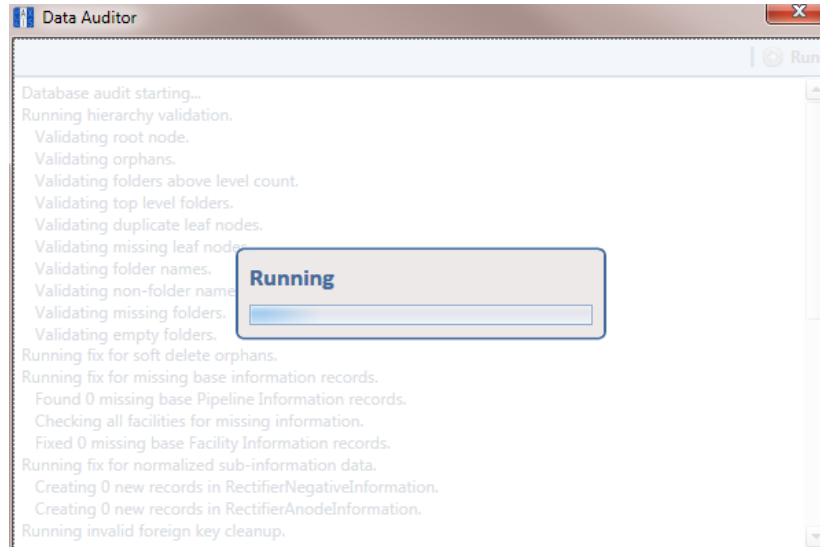


Figure 18-1. Data Auditor

When the process completes, the results of the database audit display in the *Data Auditor* window (Figure 18-2). You can select and then copy text in the window to the Windows clipboard. The copied text can then be pasted in another software program such as Microsoft Excel or Word.

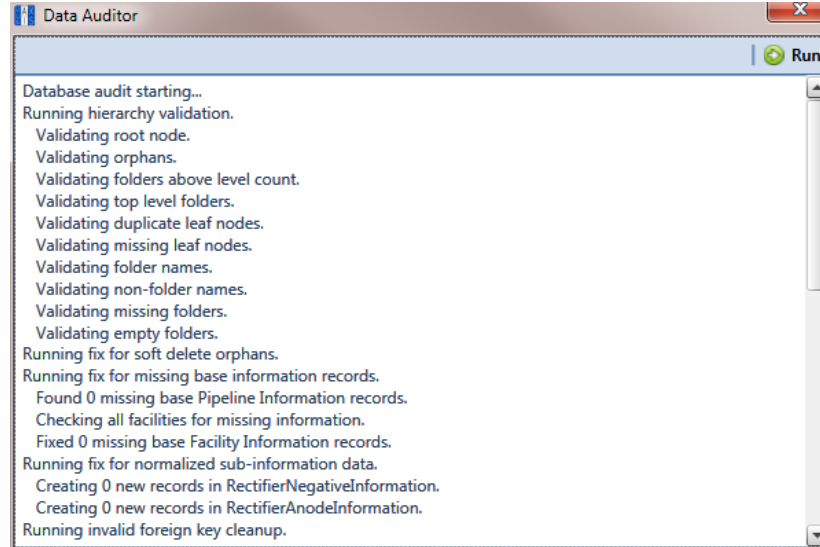


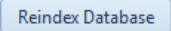
Figure 18-2. Database Integrity Check Completed

Running Reindex Database

The PCS Axis database uses indexes to accelerate the process of locating records in the database. As you add and delete records, these indexes become fragmented which in turn slow down database performance. The *Reindex Database* process restores database efficiency by updating the indexes.

IMPORTANT: Before running *Reindex Database*, it is recommended that you make a backup of the PCS Axis database using Microsoft SQL Server Management Studio (SSMS). For more information about SSMS, see the AI document entitled *PCS Axis Database Backup and Restore*.

To run *Reindex Database*:

- 1 Click **Tools** > **Job Service Viewer** to open the *Job Service Console* window (Figure 18-3).
- 2 Click  **Reindex Database**.

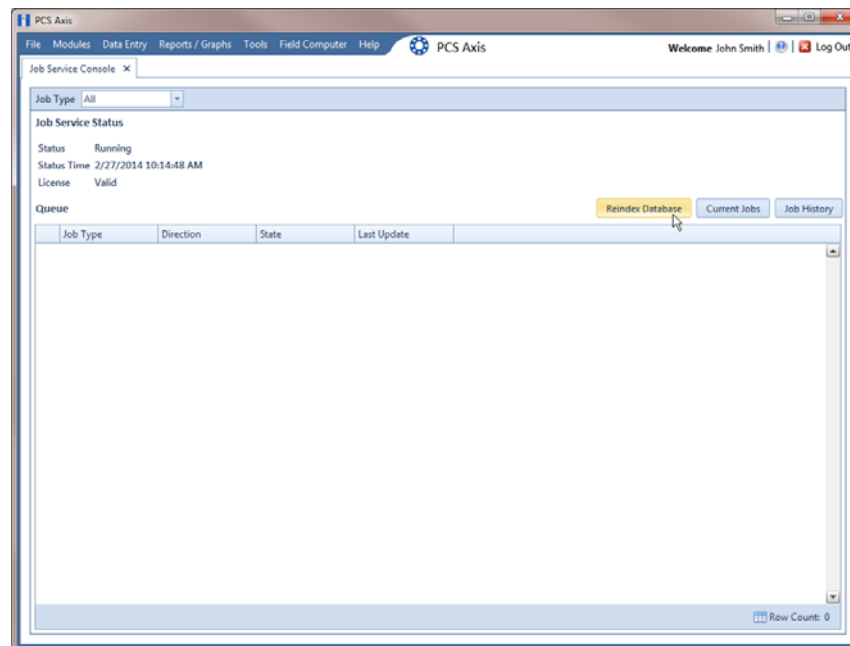



Figure 18-3. Job Service Console

- 3 When a warning message opens, click  **Yes** to continue the reindexing process (Figure 18-4).

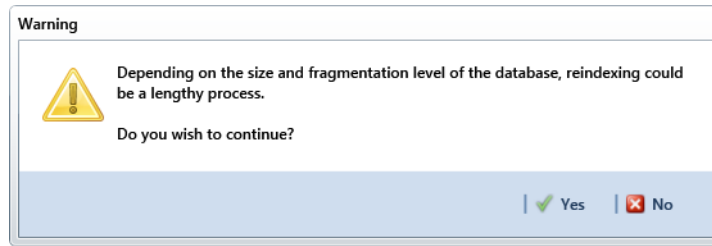


Figure 18-4. Warning Message

Status information displays in the queue while running *Reindex Database* (Figure 18-5). When the process completes, status information then displays in the *Job History* panel.

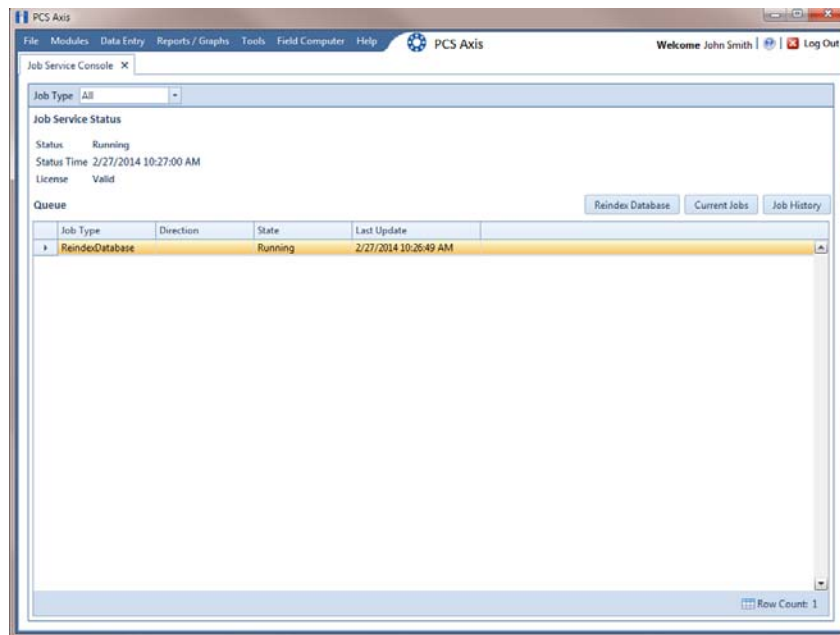


Figure 18-5. Reindex Database Running

Using Data Modification Utility

Data Modification Utility is a stand-alone feature that allows you to permanently move pipeline ROW records, including subfacility, inspection, and maintenance records, from one facility to another facility. Use this feature when splitting or combining pipeline segments.

IMPORTANT: Only users with SysAdmin privileges will be able to access and use the Data Modification Utility.

Topics in this section include those in the following list and are intended for users with *SysAdmin* permissions:

- *Moving Facility Records*
- *Moving Sub Facility Records* (page 801)
- *Moving Inspections Records* (page 803)
- *Moving Maintenance Records* (page 806)

Moving Facility Records

Information in this section explains how to move facility records from one ROW to another ROW.

Complete the following steps:

- 1 Click **Tools > Data Modification Utility** to open the *Data Modification Utility* window (Figure 18-6).

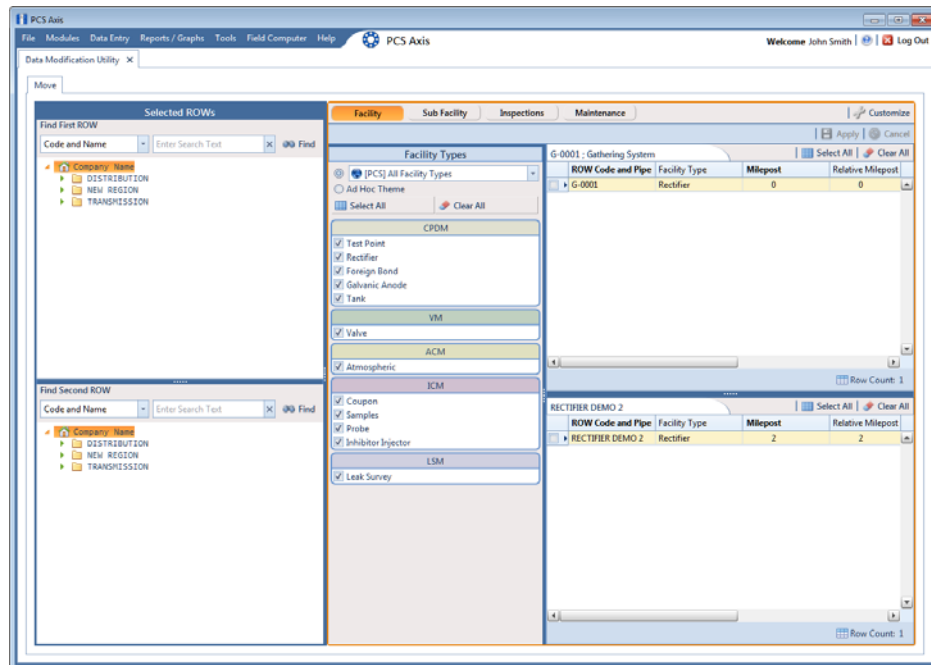



Figure 18-6. Data Modification Utility - Facility

- 2 Select a ROW in the top *Select ROWs* panel that will be moved to another ROW. This is the source ROW.
- 3 Select a ROW in the lower *Select ROWs* panel where the records will be moved. This is the target ROW. The records from the top panel are moved to the ROW selected in the lower panel.

NOTE: You cannot select the same ROW that was selected in the top panel.

- 4 Select the facility type(s) you want to work with using the method described in either **step a** or **step b**:
 - a To select a facility type, click the facility type option button and then click the down arrow and select a facility type in the list, such as  **[PCS] Rectifier Survey** (Figure 18-7).

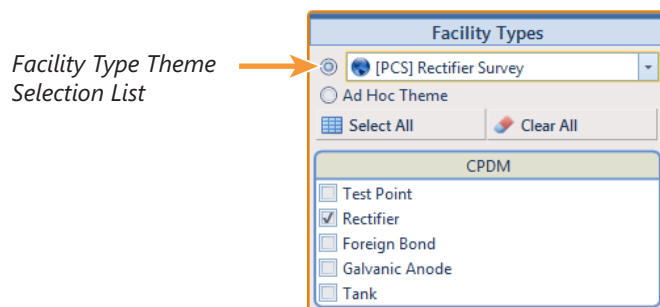




Figure 18-7. Facility Type Theme Option

- b To select multiple facility types, click the **Ad Hoc Theme** option button and then click the check box for one or more facility types, such as *Test Point*, *Rectifier*, and *Foreign Bond* (Figure 18-8).
 - 1) Click  **Select All** to select all the facilities. Click  **Clear All** to clear all facilities.

NOTE: An *Ad Hoc Theme* only applies to the current session and is not saved. A facility type is selected when a check mark appears inside the check box. To clear the check mark, click the check box again.

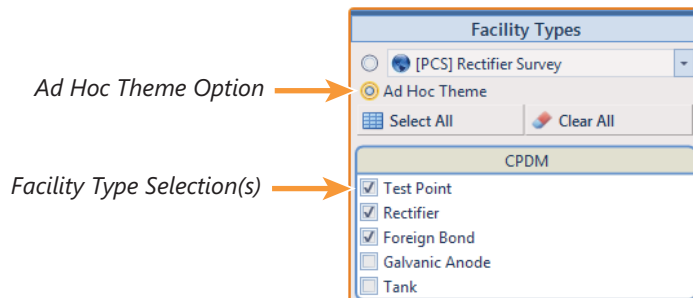


Figure 18-8. Ad Hoc Theme Option

- 5 Click the *Select ROWs* and *Facility Types* bars to close these panels (Figure 18-9).

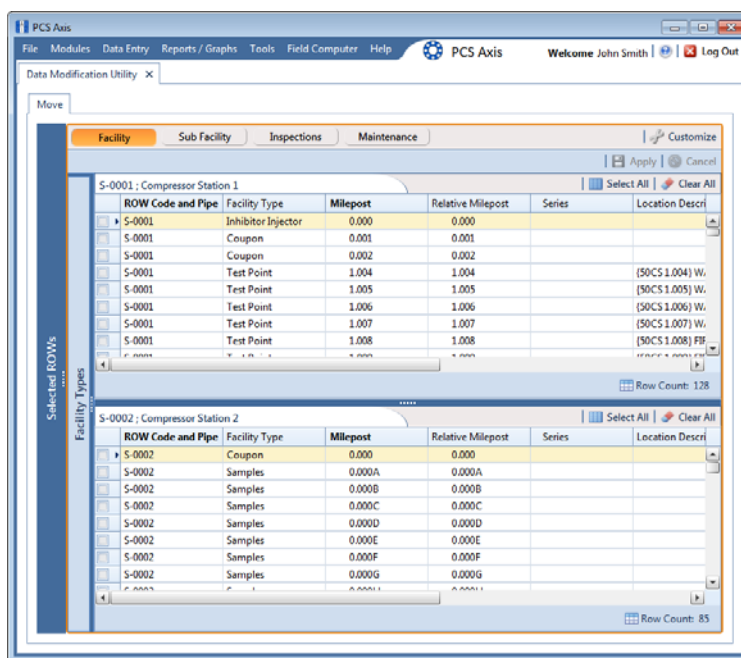


Figure 18-9. Facility Move Panels

- 6 To customize the layout of the facility move panels, click **Customize**.
 - a Add or remove fields as desired.
 - b Click **OK** to save changes and close *Edit Layout* dialog box.
- 7 Move records from the top panel to the lower panel in any of the following ways:
 - a Double-click the name of the record.
 - b Click the check box next to the name of the record.
 - c Click **Select All** to select all the records.

The records are moved to the lower panel and are highlighted in green (Figure 18-10).

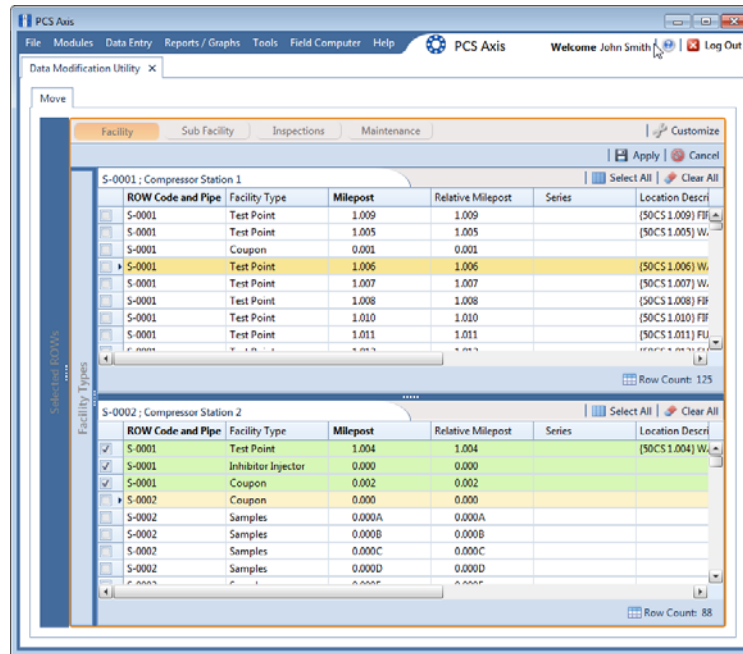






Figure 18-10. Moved Records

- 8 Move records from the lower panel back to the top panel in any of the following ways:
 - a Double-click the name of the record.
 - b Click the check box next to the name of the record.
 - c Click  **Select All** to select all the records.
 - d Click  **Clear All** to clear all records.

The records are moved back to the top panel and are highlighted in green.

- 9 To save the changes and permanently move the records, click  **Apply**.
- 10 Click  **Yes** in the *Warning* dialog box (Figure 18-11) to complete the move.

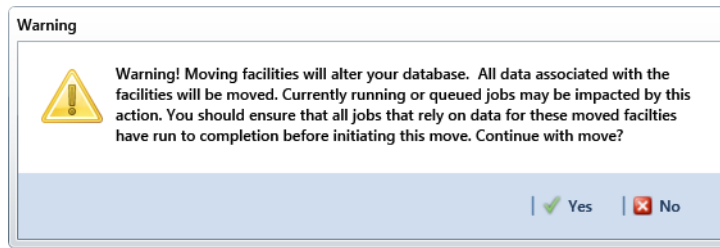


Figure 18-11. Warning Message

Moving Sub Facility Records

Information in this section explains how to move sub facility records from one ROW facility to another.

Complete the following steps:

- 1 Click **Tools > Data Modification Utility** to open the *Data Modification Utility* window (Figure 18-6).

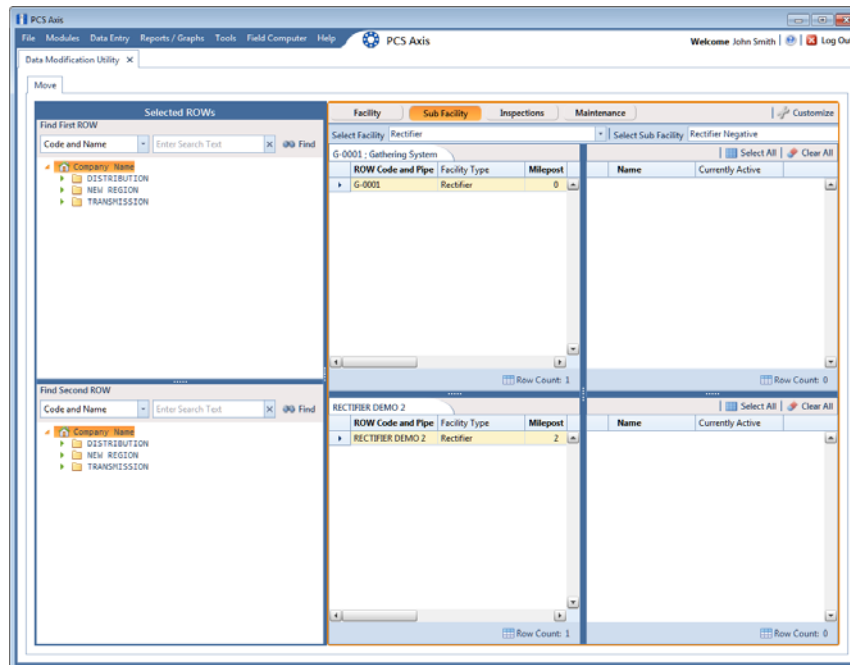


Figure 18-12. Data Modification Utility - Sub Facility

- 2 Select a ROW in the top *Select ROWs* panel with the subfacility records that will be moved to another facility. This is the source ROW.

- 3 Select a ROW in the lower *Select ROWs* panel where the subfacility records will be moved. This is the target ROW. The records from the top panel are moved to the subfacility selected in the lower panel.
- 4 Click the *Select ROWs* bar to close this panel (Figure 18-13).

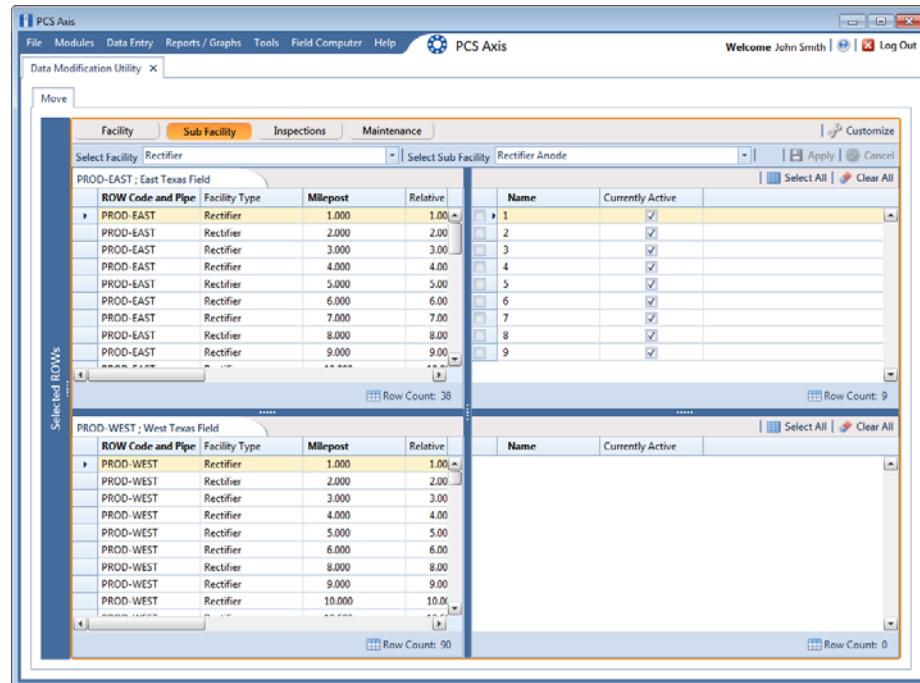









Figure 18-13. Sub Facility Move

- 5 To customize the layout of the subfacility move panels, click  **Customize**.
 - a Add or remove fields as desired.
 - b Click  **OK** to save changes and close *Edit Layout* dialog box.
- 6 Select a facility type from the **Facility** drop-down menu.
- 7 Select a subfacility type from the **Sub Facility** drop down menu.
- 8 Move subfacility records from the top right panel to the lower right panel in any of the following ways:
 - a Double-click the name of the record.
 - b Click the check box next to the name of the record.
 - c Click  **Select All** to select all the records.

The records are moved to the lower right panel and are highlighted in green.

- 9 Move subfacility records from the lower right panel back to the top right panel in any of the following ways:
 - a Double-click the name of the record.
 - b Click the check box next to the name of the record.
 - c Click  **Select All** to select all the records.
 - d Click  **Clear All** to clear all records.

The records are moved back to the top right panel and are highlighted in green.

- 10 To save the changes and permanently move the records, click  **Apply**.
- 11 Click  **Yes** in the *Warning* dialog box to complete the move.

Moving Inspections Records

Information in this section explains how to move inspections records from one ROW to another.

Complete the following steps:

- 1 Click **Tools** > **Data Modification Utility** to open the *Data Modification Utility* window (Figure 18-6).

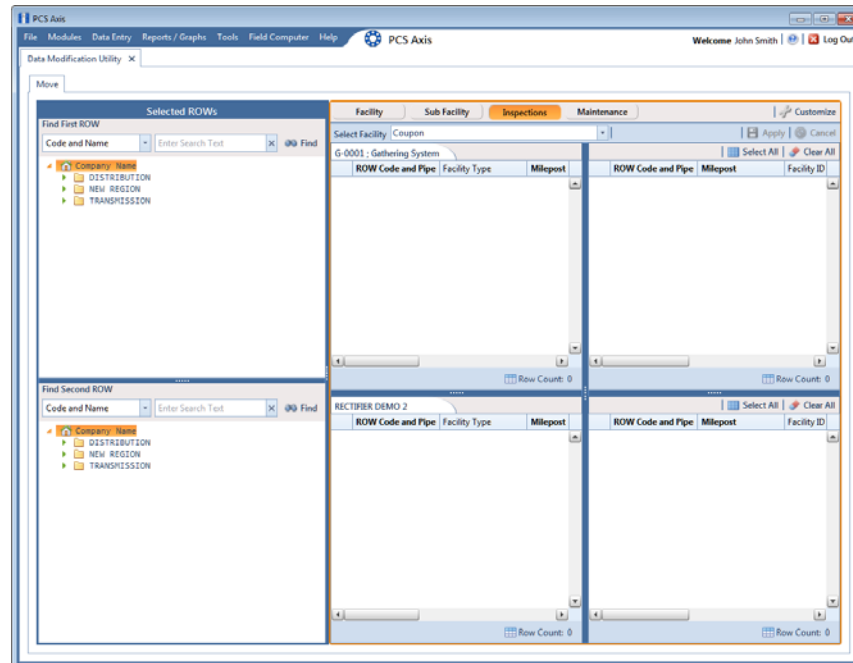


Figure 18-14. Data Modification Utility - Inspections

- 2 Select a ROW in the top *Select ROWs* panel with the inspection records that will be moved. This is the source ROW.
- 3 Select a ROW in the lower *Select ROWs* panel where the records will be moved. This is the target ROW. The records from the top panel are moved to the ROW selected in the lower panel.
- 4 Click the *Select ROWs* bar to close this panel (Figure 18-15).

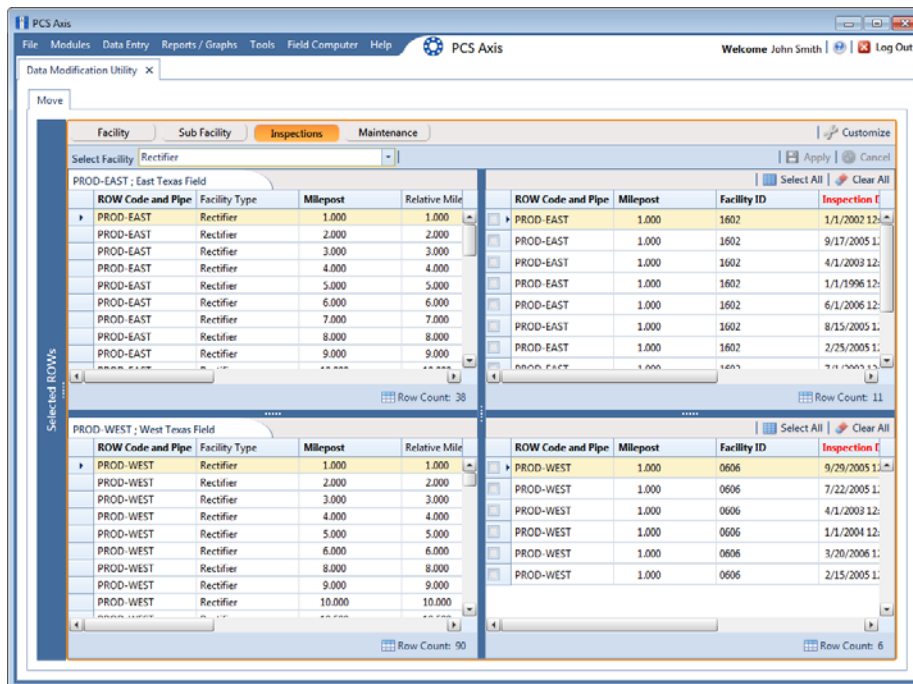









Figure 18-15. Inspections Move

- 5 To customize the layout of the inspections move panels, click  **Customize**.
 - a Add or remove fields as desired.
 - b Click  **OK** to save changes and close *Edit Layout* dialog box.
- 6 Select a facility type from the **Facility** drop-down menu.
- 7 Move inspection records from the top right panel to the lower right panel in any of the following ways:
 - a Double-click the name of the record.
 - b Click the check box next to the name of the record.
 - c Click  **Select All** to select all the records.

The records are moved to the lower right panel and are highlighted in green.
- 8 Move inspection records from the lower right panel back to the top right panel in any of the following ways:
 - a Double-click the name of the record.
 - b Click the check box next to the name of the record.

- c Click  **Select All** to select all the records.
- d Click  **Clear All** to clear all records.

The records are moved back to the top right panel and are highlighted in green.

- 9 To save the changes and permanently move the records, click  **Apply**.
- 10 Click  **Yes** in the *Warning* dialogs box to complete the move.

Moving Maintenance Records

Information in this section explains how to move maintenance records from one ROW to another.

Complete the following steps:

- 1 Click **Tools > Data Modification Utility** to open the *Data Modification Utility* window (Figure 18-6).

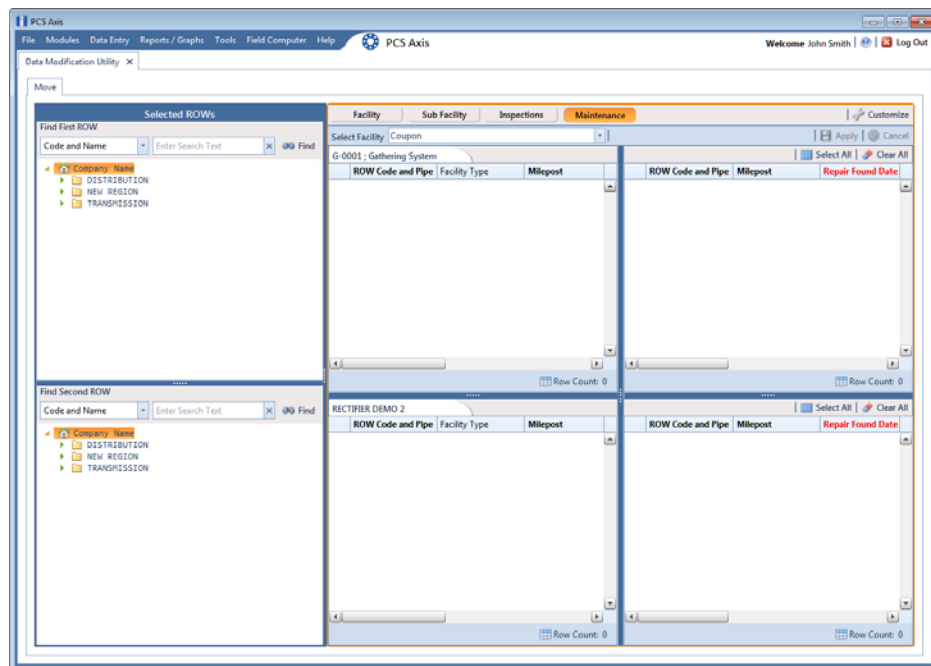


Figure 18-16. Data Modification Utility - Maintenance

- 2 Select a ROW in the top *Select ROWs* panel with the maintenance records that will be moved. This the source ROW.

- 3 Select a ROW in the lower *Select ROWs* panel where the records will be moved. This is the target ROW. The records from the top panel are moved to the ROW selected in the lower panel.
- 4 Click the *Select ROWs* bar to close this panel (Figure 18-17).

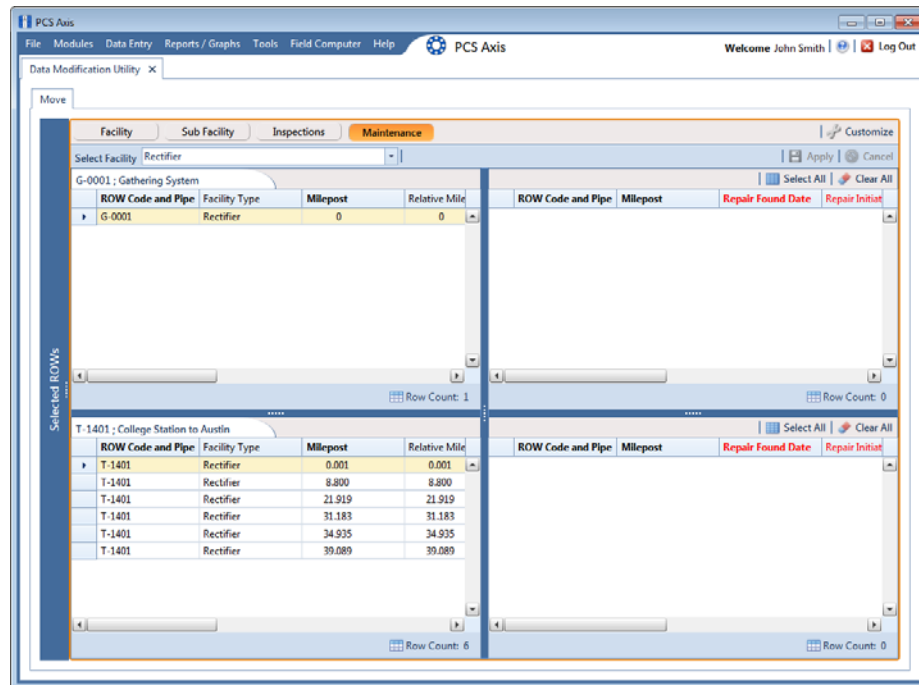




Figure 18-17. Inspections Move

- 5 To customize the layout of the inspections move panels, click **Customize**.
 - a Add or remove fields as desired.
 - b Click **OK** to save changes and close *Edit Layout* dialog box.
- 6 Select a facility type from the **Facility** drop-down menu.
- 7 Move inspection records from the top right panel to the lower right panel in any of the following ways:
 - a Double-click the name of the record.
 - b Click the check box next to the name of the record.
 - c Click **Select All** to select all the records.


The records are moved to the lower right panel and are highlighted in green.

8 Move inspection records from the lower right panel back to the top right panel in any of the following ways:

- a** Double-click the name of the record.
- b** Click the check box next to the name of the record.
- c** Click  **Select All** to select all the records.
- d** Click  **Clear All** to clear all records.

The records are moved back to the top right panel and are highlighted in green.

9 To save the changes and permanently move the records, click  **Apply**.

10 Click  **Yes** in the *Warning* dialog box to complete the move.

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