Using a Route

This section explains how to work with a route. The information is intended for users with *SysAdmin*, *User*, and *Read Only* permissions. Topics in this section include those in the following list:

- What is a Route?
- Quick Start (page 382)
- Creating a Route (page 386)
- Changing the Order of Facilities (page 389)
- Preparing a Route for an Averaged Reading Survey (page 390)
- Preparing a Route for Inspection GPS Fields (page 407)
- Working with Themes and Filter Groups (page 421)
- Previewing a Route (page 446)
- Exporting and Importing a Route (page 449)
- Using a Route in PCS Axis (page 451)

What is a Route?

A route is a user-created list of facilities for inspection. You can include facilities for one or more facility types in the same route, such as test points, valves, and atmospherics. The main advantage in a route is the ability to arrange facilities in a particular order that is more suitable in a survey. For example, you can arrange facilities in survey order instead of numerically by ROW Code and milepost number.

Routes are used in several areas of PCS Axis. You can view inspection records in a grid based on a route; transfer a survey to the Allegro Field PC based on a route; and generate reports based on a route.

Quick Start

Information in this section assumes one or more routes have previously been created. If no routes exist, skip this section and begin with *Creating a Route* (page 386).

The following procedure explains how to display and set properties in a route. Property settings include selection of a layout and sort theme. Both of these themes determine how PCS Axis displays facility records in a route.

As an option, you can also set up one or more filter groups that apply only to the current session. A filter group filters data in a route by including or excluding certain facility records. It allows you to work with a subset of facility records for the currently selected ROW based on filter selection criteria.

Complete the following steps:

- Select one or more pipeline segments in the Select ROWs window. Select pipeline segment(s) with facilities you want to include in the route. Click Save to close the window.
- 2 Click Data Entry > Define Routes to open the Define Routes window.

| 3 | Click the down arrow in Routes and select a route in the selection list (Figure 8-1) |). |
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Figure 8-1. Define Routes Selection List

4 Click the **Options** tab **Options** to open the options page (Figure 8-2).

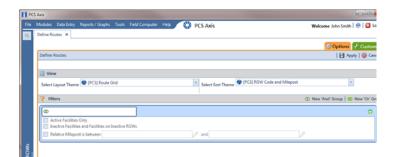


Figure 8-2. Options

- Select a layout and sort theme. Click the down arrow in the field Select Layout
 Theme and select a layout theme. Then click the down arrow in the field Select
 Sort Theme and select a sort theme.
- 6 If you want to filter records in the grid and route, complete the following steps. Otherwise, click Apply to save and apply changes. PCS Axis closes the options page and returns to the *Define Routes* window.

Clicking **S Cancel** allows you to close the options page without saving and applying changes.

IMPORTANT: Filter settings in the options page of *Define Routes* apply only to the current session and are not saved. See *Working with Themes and Filter Groups* (page 421) for information about saving filter settings in a theme.

a Click the check box of one or more options in *Filters* and then click Apply.
 For example, click Currently Active Facilities Only to only include active facilities (Figure 8-3).

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Figure 8-3. Filters

A check mark inside a check box indicates a selection. To clear a selection, click the check box again to remove the check mark.

b If you want to add a filter, click the Add button and then use filter selection fields to set up filter criteria. Select a PCS Axis field, operator, and one or more filter conditions. Then click Apply to save and apply changes.

PCS Axis closes the options page and returns to the Define Routes window.

- **c** If you want to add a new AND or OR filter group, continue with one of the following steps:
 - To add a new AND filter group continue with **step 7**.
 - To add a new OR filter group continue with **step 8**.
- 7 If you want to add a new AND filter group, complete the following steps. With an AND filter group, PCS Axis includes a subset of records that meet *all* filter conditions defined for the filter group. Records are filtered in the grid and in the route (Figure 8-4).

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Figure 8-4. New 'And' Filter Group

- a Click () New 'And' Group to open the filter properties group box.
- **b** Use filter selection fields to set up filter criteria. Select a PCS Axis field, operator, and one or more filter conditions.

When adding a date filter, such as *Last Inspection Date Is Between*, set a date range using one of the following methods:

- **1)** Type a date in the start and end date fields. Enter a start and end date using the format M/DD/YYYY to indicate the month, day, and year.
- 2) To set a date range using a calendar, click the down arrow in the start date field to open a calendar and select a start date. Then click the down arrow in the end date field to open a calendar and select an end date.

3) To set a date range using dynamic start and end dates, click the calculator button in the start date field and set up dynamic date properties. Repeat this step for the end date field. Clicking the calculator button opens and closes dynamic date property fields.

NOTE: Clicking the ∇ toggle button in the (i) information bar displays important information related to required settings.

- **c** Click **Apply** to save and apply changes. PCS Axis closes the options page and returns to the *Define Routes* window.
- 8 If you want to add a new OR filter group, complete the following steps. With an OR filter group, PCS Axis includes a subset of records that meet *any* filter condition defined for the filter group. Records are filtered in the grid and in the route:
 - a Click () New 'Or' Group to open a filter properties group box (Figure 8-5).

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Figure 8-5. New 'Or Filter Group

b Use filter selection fields to set up filter criteria. Select a PCS Axis field, operator, and one or more filter conditions.

When adding a date filter, such as *Last Inspection Date Is Between*, set a date range using one of the following methods:

1) Type a date in the start and end date fields. Enter a start and end date using the format M/DD/YYYY to indicate the month, day, and year.

Clicking the ∇ toggle button in the (i) information bar displays important information related to required settings.

2) To set a date range using a calendar, click the down arrow in the start date field to open a calendar and select a start date. Then click the down arrow in the end date field to open a calendar and select an end date.

- 3) To set a date range using dynamic start and end dates, click the calculator button in the start date field and set up dynamic date properties. Repeat this step for the end date field. Clicking the calculator button opens and closes dynamic date property fields.
- **c** Click **Apply** to save and apply changes. PCS Axis closes the options page and returns to the *Define Routes* window.

Creating a Route

The following information explains how to create a route with a list of facilities for inspection. Facilities for inspection are based on the pipeline segment(s) you select in the *Select ROWs* window.

Complete the following steps:

1 Click the **Select ROWs** button is to open the *Select ROWs* window (Figure 8-6). Select one or more pipeline segments with facilities you want to include in the route. Click Save to close the window.

NOTE: A check mark inside a check box indicates a selection. To clear a selection, click the check box again to remove the check mark. A shaded check box indicates selection of some, not all, child folders, ROWs, and pipelines.

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Figure 8-6. Select ROWs

- 2 Click Data Entry > Define Routes.
- If this is the first route to be created, the *Add New Route* dialog box opens. Type a name for the new route in the field Enter Route Name. Then click OK (Figure 8-7).

| Add New Route | × |
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| Enter Route Name | |
| My Route_1 | |
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Figure 8-7. Add New Route

- **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 8-8).

| | | Facility | y Types | |
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| Facility Type Theme | \rightarrow | IPCS] Rectifier S | urvey | - |
| Selection List | | 🔘 Ad Hoc Theme | | |
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| | | 🔲 Galvanic Anode | | |
| | | Tank | | |

Figure 8-8. Facility Type Theme Option

b To select multiple facility types, click the option button **Ad Hoc Theme** and then click the check box for one or more facility types, such as *Test Point*, *Rectifier*, and *Foreign Bond* (Figure 8-9, page 388).

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.

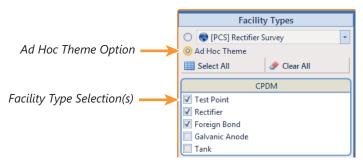


Figure 8-9. Ad Hoc Theme Option

- 5 Complete the following steps in the *Facilities Available* grid (Figure 8-10):
 - Select which facilities to include in the route. To include all facilities, click
 Add All and then click Yes when the Add All message opens.

To only include facilities you select, click the check box for each facility in the *Facilities Available* grid. Or double-click each facility.

NOTE: Selected facilities display in the *Facilities in Route* grid.

b Click **Save** to save changes. Continue with the next section to change the order of facilities in the route.

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| | (D) PCS] Rectifier Survey | • | Facilities in Ro | ute | | | | Selected | Facilities 🧈 Remo | ove |
| | Ad Hoc Theme Select All Gear | AII I | ROW Code and Pipe | Milepost | Relative Milepost | Facility ID | Facility Active | Facility Type | Address | |
| | | | T-1401 | 0.001 | 0.001 | R-200 | 1 | Rectifier | | |
| | CPDM | | T-1401 | 8.800 | 8.800 | R-201 | 2 | Rectifier | | |
| | Test Point | | T-1401 | 21.919 | 21.919 | R-202 | 1 | Rectifier | | |
| | Rectifier Foreign Bond | | T-1401 | 34,935 | 34.935 | R-204 | 1 | Rectifier | | |
| ŝ | VM Valve ACM | | | | | | | | | |
| ted ROWs | ACM Atmospheric ICM | | 4 | | | | | | Row Cou | nt |
| elected ROWs | Coupon | | | bla | | | | 1.0.400 | | |
| Selected ROWs | ACM Atmospheric ICM | | Facilities Availa | | | | | | able Facilities 🔿 A | |
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| Selected ROWs | Valve ACM ACM ACM Admospheric ICM Coupon Samples Probe Inhibitor bijector LSM Lesk Survey Electric Meters Tandomens Power Poles | | Facilities Availa ROW 4 ✓ T-1401 ✓ T-1401 ✓ T-1401 ✓ T-1401 ✓ T-1401 ✓ T-1401 ✓ T-1401 | | 0.001 8.800 21.919 31.183 34.935 39.089 | Celative Milepost 0.001 8.800 21.919 31.183 34.935 39.089 | Facility ID R-200 R-201 R-202 R-203 R-204 | Facility Active | bble Facilities 🔷 A Facility Type Rectifier Rectifier Rectifier Rectifier Rectifier | |
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Figure 8-10. Define Routes

Changing the Order of Facilities

The order of facilities shown in the *Facilities in Route* grid identifies the facility order used in a route. You can easily change the order of facilities by dragging and dropping one or more grid rows to a different location in the grid. Changing the order allows you to arrange facilities based on particular criteria, such as arranging facilities in the order a survey is taken.

To change the order of facilities in a route, follow these steps:

- 1 If the *Define Routes* window is not open, complete the following steps:
 - a Select one or more pipeline segments in the *Select ROWs* window (Figure 8-11). Click **Save** to close the window.

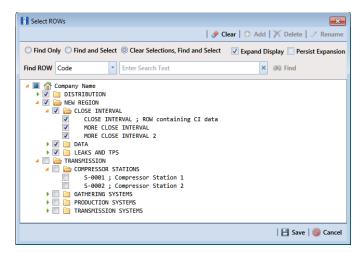


Figure 8-11. Select ROWs

- **b** Click **Data Entry** > **Define Routes**, then click the down arrow in **Routes** and select a route (Figure 8-1, page 382).
- **2** Arrange the order of facilities listed in the *Facilities in Route* grid as needed using any of the following methods (Figure 8-12):
 - To move a single grid row, select the row, then drag and drop the row in a different location in the grid. Click Save to save changes.

NOTE: A message displays when moving selected grid rows to confirm the new location in the grid (Figure 8-12, page 390).

- To move a group of consecutive grid rows, click the first row, press and hold the Shift key, then click the last row. Drag and drop selected rows in a different location in the grid. Click Save to save changes.
- To move a group of non-consecutive grid rows, press and hold the **Ctrl** key, then click each row you want to select. Drag and drop selected rows in a different location in the grid. Click **Save** to save changes.

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| CPDM | | T-140 | | 0.001 | 0.001 | R-200 | ×. | Rectifier | | |
| Test Point | | T-140 | | 8.800 | 8.800 | R-201 | 2 | Rectifier | | _ |
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| ACM Atmospheric ICM Coupon Samples Probe Inhibitor Injector | | Facilitie | ROW Cos T-1401 | | Milepost 0.001 | Relative Milepost | Facility ID R-200 | Facility Active | ble Facilities 🔿 Ac Facility Type Rectifier | |
| ACM Atmospheric ICM Coupon Samples Probe Inhibitor Injector LSM | | Facilitie | ROW Col T-1401 T-1401 | | Milepost 0.001 8.800 | Relative Milepost 0.001 8.800 | Facility ID R-200 R-201 | Facility Active | ble Facilities 🔿 Ac Facility Type Rectifier Rectifier | |
| ACM Atmospheric ICM Coupon Samples Probe Inhibitor Injector Leak Survey MCPE MCPE | | Facilitie | ROW Coo T-1401 T-1401 T-1401 | | Milepost 0.001 8.800 21.919 | Relative Milepost 0.001 8.800 21.919 | Facility ID R-200 R-201 R-202 | Facility Active | ble Facilities 🔿 Ac Facility Type Rectifier Rectifier Rectifier | |
| ACM Atmospheric Coupon Samples Probe Inhibitor Injector Leak Survey | | Facilitie | ROW Cod T-1401 T-1401 T-1401 T-1401 | | Milepost 0.001 8.800 21.919 31.183 | # Relative Milepost 0.001 8.800 21.919 31.183 | Facility ID R-200 R-201 R-202 R-202 R-203 | Facility Active | ble Facilities 🔷 Ac Facility Type Rectifier Rectifier Rectifier Rectifier | |
| ACM Atmospheric ICM Coupon Samples Probe Inhibitor injector LSM Leak Survey MCPE Electric Meters | | Facilitie | ROW Co T-1401 T-1401 T-1401 T-1401 T-1401 | | Milepost 0.001 8.800 21.919 31.183 34.935 | Relative Milepost 0.001 8.000 21.919 31.183 34.935 | Facility ID R-200 R-201 R-202 R-203 R-204 | Facility Active | ble Facilities 🔷 Ac Facility Type Rectifier Rectifier Rectifier Rectifier Rectifier | |
| ACM Acmospheric ICM Coupon Simples Probe Inhibitor Injector LSM Lask Survey MCPE Electric Meters Transformers | | Facilitie | ROW Coo T-1401 T-1401 T-1401 T-1401 T-1401 T-1401 | | Milepost 0.001 8.000 21.919 31.183 34.935 39.089 | Relative Milepost 0.001 8.200 21.919 31.183 34.935 39.099 | Facility ID R-200 R-201 R-202 R-203 R-204 | Facility Active | ble Facilities C Ac Facility Type Rectifier Rectifier Rectifier Rectifier Rectifier | |
| ACM Atmospheric ICM Coupon Simples Probe Inhibitor injector IsSM Leak Survey NCP Ilectric Merse Transformers Transformers Prove Polis Circuit Breakers | | Facilitie | ROW Cod T-1401 T-1401 T-1401 T-1401 T-1401 T-1401 T-1401 | | Milepost 0.001 8.000 21.919 31.183 34.835 39.089 0.000 | Relative Milepost 0.001 8.800 21.919 31.183 34.935 39.089 0.000 | Facility ID R-200 R-201 R-202 R-203 R-204 | Facility Active | ble Facilities C Ac Facility Type Rectifier Rectifier Rectifier Rectifier Rectifier Test Point | |
| ACM ACM ACM ACM ACM ACM ACM Compension COM Compension COM Compension Compensi | | Facilitie | ROW Col T-1401 T-1401 T-1401 T-1401 T-1401 T-1401 T-1401 T-1401 | | Milepost 0.001 21.919 31.183 39.099 0.000 1.500 | Relative Milepost 0.001 8.800 21.919 31.183 34.915 39.099 0.000 1.500 | Facility ID R-200 R-201 R-202 R-203 R-204 | Facility Active | ble Facilities 🔷 Ac Facility Type Rectifier Rectifier Rectifier Rectifier Rectifier Test Point Test Point | |

Figure 8-12. Arranging the Order of Facilities

Preparing a Route for an Averaged Reading Survey

This section applies only to the CPDM module. It explains how to prepare and send a survey to the Allegro based on a route with facilities in an averaged reading survey. Facilities for inspection are also set up with timed reading fields in the *Test Point Information* and *Inspection* data entry grid.

Topics in this section include those in the following list:

- Adding Timed Reading Fields in the Information Grid
- Adding Timed Reading Fields in the Inspection Grid (page 395)
- Editing a Route for an Averaged Reading Survey (page 397)
- Sending a Survey to the Allegro Based on a Route (page 399)

NOTE: See the *Allegro User Guide* for information about taking an averaged reading survey using the Periodic Survey software on the Allegro.

Adding Timed Reading Fields in the Information Grid

Timed reading fields are added in the *Test Point Information* data entry grid to allow data entry of inspection readings in the *Test Point Inspection* data entry grid for an averaged reading survey. Information in this section explains how to add timed reading fields in a layout theme and then apply the theme to the *Information* data entry grid.

Complete the following steps:

Select one or more pipeline segments in the Select ROWs window (Figure 8-13). Select pipeline segments with facilities you plan to include in the route. Click Save to close the window.

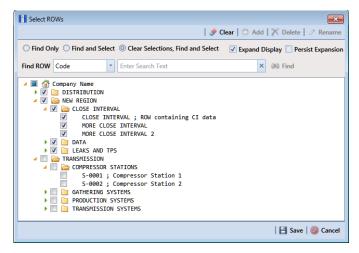


Figure 8-13. Select ROWs

- 2 Click Data Entry > Edit CPDM Data.
- **3** Click the **Test Point** button **Test Point**, then the **Information** tab **Information** to open the *Test Point Information* data entry grid (Figure 8-14).

| Test Po | | | | | | | | ost | 🗘 Options 🧬 | Custom |
|----------------|-------------------------|----------------------|-----------------|-----------------------------------|---------------------------|------------------------|-------------------------|---------------------------|----------------------|---------|
| | aint Rectil | fier Foreign Bond | Galvanic Anode | Tank | | | | | • | Based (|
| 88 Find | | | | | | | | 🔿 Add 🏹 | 🔨 Delete 🧐 Refrest | 🗟 Pi |
| | / Code Pipe Milepost | Location Description | Facility Active | Test Point Protection Criteria | Activate Structure P/S | Activate Casing P/S | Activate Foreign P/S | Activate Insulator P/S | Effective Date | Perm |
| , T-140 | 0.000 | Bethel Station | V | .85 On | 2 | | | | | |
| T-140 | 1 0.001 | Rectifier R-200 | ×. | .85 On | 2 | | | | | |
| T-140 | 1 1.000 | Alderman #1 | 1 | .85 On | 1 | | 1 | | | |
| T-140 | 1 1.500 | Williford E #1 | 1 | .85 On | 1 | | 1 | | | |
| T-140 | 1 1.627 | FM 321 | ×. | .85 On | V | V | | | 12/10/2013 | |
| T-140 | 1 1.750 | Park Rd. 64 | 1 | .85 On | 1 | 4 | | | | |
| T-140 | 1 2.000 | Texas 84 | 1 | .85 On | 1 | 1 | | | | |
| T-140 | 1 2.250 | County Rd. | 2 | .85 On | 1 | | | | | |
| T-140 | 1 2.500 | Fryer B | 1 | .85 On | 1 | | 1 | | | |
| T-140 | 1 3.000 | Whitaker #1 | 1 | .85 On | 1 | | 1 | | | |
| T.140 | | | | 85.04 | 19 | - | - | - | | |

Figure 8-14. Test Point Information Data Entry Grid

4 Click the **Customize** tab **Customize** to open the *Layouts* page (Figure 8-15).

| Noticette (instruction) Maintenance) Construction) Const | e Modules Data Entry Reports / Graphs Tools Field Compute Edit CPDM Data X | | Cathodic Protection Data Manager (CPDM) | iohn Smith 🔨 🔀 Log |
|---|---|-------------|--|--|
| PCS) Ter Point Information Point PCS) Ter Point Information PCS) PCS Personal Information Fields PCS Personal Informatinformation PCS Personal Information PCS Personal Informati | Layouts: Test Point Information | Save and | Close 💾 Save 🗿 Add 🗡 Delete 🗠 Revert 🔍 New Base | Layouts |
| Angement Sheet Number | Search For Field. | × × • | Conception Conception Facility Active Test Noire Protection Criteria Activate Broccure P(5 Activate Broccure P(5 Activate Broccure P(5 Activate Mon P(5 Activate Mon P(5 Activate Mon P(5 Activate Mon P(5 Activate Caling P(5 Broccure Data Broccure Comments | Filters Forms |

- 5 Select a data entry grid layout theme. Click the down arrow in Select LayoutTheme and select a theme in the selection list.
- 6 Double-click **Fest Point Information Fields** in the left pane of the window to view a list of fields available for selection (Figure 8-16).

| ROW Code and Pipe Gim Mespot Location Decryption | Filters |
|--|---|
| | |
| | Activate Structure P/S Activate Casing P/S Activate Forging P/S Activate Foundate P/S Permanent Comments Address - Apartment |

Figure 8-16. Test Point Information Fields

- 7 Add the following list of timed reading fields in the layout theme. To add fields, double-click each timed reading field listed in the left pane of the *Layouts* page to move fields to the right pane. Add other fields as required. The data entry grid layout theme includes all fields listed in the right pane of the *Layouts* page.
 - Activate Average P/S
 - Activate Max P/S
 - Activate Min P/S
 - Activate P/S Sample Time

8 Click **Save**, then click the **Options** tab **Options** to open the options page (Figure 8-17).

| ľ | Edit CPDM Data × | | | | () Outing | f Custom |
|---|--|-----|-------------------|-----------------------------|---------------------|----------------|
| | Test Point Information | | | | | Apply 🕲 Canc |
| | 🗄 Based On | | | | | |
| | Selected ROWs Route Schedule | | | | | |
| | 🔛 View | | | | 🔘 🔠 Grid 🔘 🚨 Form 🔍 | Crid And Fo |
| | Select Layout Theme 🚭 (PCS) Test Point Information | | Select Sort Theme | (PCS) ROW Code and Milepost | • | |
| | Select Form Theme | • | Sort Dates | Oldest First O Newest First | | |
| | ② Options | | | | | |
| | Only the most recent information record for each facility | | | | | |
| 1 | Y Filters | | | | O New 'And' Group | O New 'Or' Gro |
| | | | | | | 0 |
| | Active Facilities Only | | | | | |
| | Inactive Facilities and Facilities on Inactive ROWs Relative Milepost is between | 1.0 | and | | 0 | |
| | Kelative Milepost is between | | and | | | |

Figure 8-17. Options

- **9** Apply the layout theme to the data entry grid. Click the down arrow in the field **Select Layout Theme** and select the layout theme with timed reading fields.
- **10** Click **Apply** to save and apply changes. PCS Axis closes the options page and returns to the *Test Point Information* data entry grid.
- **11** In each column labeled with an "activate" timed reading field, click the check box associated with the facility you plan to record Allegro timed readings (Figure 8-18).

| | Test | Doint | | | | | | | | | Option: | |
|------------------|-------------------------|-------------------|-------------------------|----------------------|-------------------|-----------------------------------|---------------------------|-------------------------|---------------------|-------------------------|-----------------------------|------------------------|
| | | - onn | Rectifier | Foreign Bond | Galvanic Anode | Tank | | | | | | B Based |
| | ss Fin | d | | | | | | _ | | 10.00 | X au Lo | Refresh 😣 |
| | | W Code nd Pipe | Milepost | Location Description | Facility Active | Test Point Protection Criteria | Activate Structure P/S | Activate Average P/S | Activate Max P/S | Activate Min P/S | Activate P/S Sample Time | Activate Casing P/S |
| tivate Timed 🗕 📥 | - | 14.1 | | | | AF 6 | | | | | | |
| adiu a Fielda | T-1 | 401 | 0.001 | Rectifier R-200 | V | .85 On | | V | V. | | V | |
| ading Fields | 1-1 | | 1.000 | Alderman #1 | × | .85 On | 2 | 2 | R. | ×. | ×. | |
| - | T-1 | | 1.500 | Williford E #1 | 2 | .85 On | 2 | | | | | |
| | T-1 | | 1.627 | FM 321 | 7 | .85 On | 1 | | | | | 1 |
| | T-1 | | 1.750 | Park Rd. 64 | ¥. | .85 On | V | | | | | V |
| | T-1 | | 2.000 | Texas 84 | 1 | .85 On | 1 | | | | | 1 |
| | T-1 | | 2.250 | County Rd. | 2 | .85 On | V | | | | | |
| 4 | T-1 | | 2.500 | Fryer B | V | .85 On | V | | | | | |
| | T-1 | | 3.000 | Whitaker #1 | ¥ | .85 On | 1 | | | | | |
| | T-1 | | 3.218 | County Road | V | .85 On .85 On | V | | | | | |
| | 14 14 | | 3.250 | Old Meter Riser | 2 | .85 On | ¥ | | | | | |
| | | 401 | 3.500 | Old Meter Riser | 2 | -00 CD | V | | | | | |
| | Facilit | ty Level Ov | | | | | | | | | | Row Count: 3 |
| | | Selected | Scheduling Type Name | Last Inspection Date | Due Dates | | Delinquent D | | Date in Method | Time Between Surveys | Target Month | Target Yea |
| | 1. | Yes | Test Point | 3/22/2006 | 12/2013 [Del 05/2 | 2/2007], 1/2014, 1/2015 | 5 6/22/2007 | Targets | | 12 Months | January | N/A |

Figure 8-18. Test Point Information Data Entry Grid

12 Continue with the next section, *Adding Timed Reading Fields in the Inspection Grid* (page 395).

Adding Timed Reading Fields in the Inspection Grid

Complete the following steps to add timed reading fields in a layout theme and then apply the theme to the *Test Point Inspection* data entry grid:

- 1 If the *Test Point Inspection* data entry grid is not visible, click the **Test Point** button **Test Point** and then the **Inspection** tab **Inspection**.
- 2 Click the **Customize** tab **Customize** to display the Layouts page.
- **3** Select a layout theme. Click the down arrow in **Select Layout Theme** and select a theme in the selection list.
- 4 Double-click **Fest Point Inspection Fields** in the left pane of the window to view a list of fields available for selection (Figure 8-19).

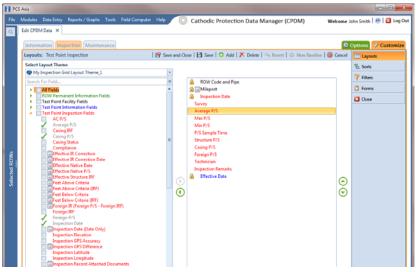


Figure 8-19. Layouts

- **5** Add the following list of timed reading fields in the layout theme. To add a field, double-click a timed reading field listed in the left pane to move the field to the right pane. Add other fields as required. The layout theme includes all fields listed in the right pane of the *Layouts* page.
 - Average P/S
 - Max P/S
 - Min P/S
 - P/S Sample Time

6 Click **Save**, then click the **Options** tab **Options** to open the options page (Figure 8-20).

| Tet Model: Data Extry Reports/ Graphs Tests Test | PCS | |) x |
|--|------|--|------------|
| Information Impection Maintenance Image: Content interaction Image: Content interaction Image: Content interaction Image: Content interaction Image: Content interaction Image: Content interaction Image: Content interaction Image: Content interaction Image: Content interaction Image: Content interaction Image: Content interaction Image: Content interaction Image: Content interaction Image: Content interaction Image: Content interaction Image: Content interaction Image: Content interaction Image: Content interaction Image: Content interaction Image: Content interaction Image: Content interaction Image: Content interaction Image: Content interaction Image: Content interaction Image: Content interaction Image: Content interaction Image: Content interaction Image: Content interaction Image: Content interaction Image: Content interaction Image: Content interaction Image: Content interaction Image: Content interaction Image: Content interaction Image: Content interaction Image: Content interaction Image: Content interaction Image: Content interaction Image: Content interaction Image: Content interaction Image: Content interactinteraction < | | Catholic Protection Data Manager (Cr.D.M) Wetchie John Small 1 @ 1 | Log O |
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| | | nformation Inspection Maintenance | omize |
| Selected ROWs Socie Socied So | | est Point Inspection 🛛 🗎 Apply 🚳 C | ancel |
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| Select Sort Theme • [PCS] Test Paint Inspections Select Sort Theme • [PCS] ROW Code and Mitepott Options • Oldest First Options • One most recent inspection during the reporting time period Filter Option: • Inspection start meet the filter criteria • All inspections that meet the filter criteria • New 'And' Group • Filters • New 'And' Group • Converting Filters and Facilities on Inactive ROWs and • Relative Milepost is between • and • Inspection Date is between • and • Periodic Survey is equal to • Periodic Survey Year is equal to | | A Manu Cold O D Tana O D Cold Au | d Earm |
| Select form Theme Sort Dates Sort Dates Soldest First Newest First Soldest First Soldest Soldest Soldest First So | | | aronn |
| Options Options Options Only include facilities with inspections during the reporting time period First options: All impections that meet the filter criteria All impections that meet the filter criteria All impections that meet the filter criteria has been met Term of the most recent impection found within report timeframe Term of the most recent impection found within report ti | | Select Layout Theme Select Sort Theme Select Sor | |
| V Only include facilities with inspections during the reporting time paried Filter Option: V Initian pacinos that meet the filter citeria Apply other filters to the most recent inspection found within report timeframe V The most recent inspection after the filter citeria has been met V Inter S V Inter | | | |
| File Option: File option: Apply other filters to the most recent inspection found within report timeframe The most recent inspection after the filter criteria Filters Iters </td <th></th> <td></td> <td></td> | | | |
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| Active Facilities on Inactive ROWs Inactive Rollities and Facilities on Inactive ROWs Relative Milepost is between and Impection Date is between Periodic Survey is equal to | Sele | 7 Filters ① New 'And' Group ③ New 'Or | Group |
| | | | 5 |
| Relative Milepost is between And And And And And And And | | | |
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| Periodic Survey Year is equal to | | | |
| | | | |
| Technician is equal to | | Periodic Survey Year is equal to | |
| | | Technician is equal to | |
| | | | |

Figure 8-20. Options

- 7 Apply the layout theme to the data entry grid. Click the down arrow in the fieldSelect Layout Theme and select the layout theme with timed reading fields.
- 8 Click Apply to save and apply changes. PCS Axis closes the options page and returns to the *Test Point Inspection* data entry grid.
- **9** Click the x close icon to close the *Edit CPDM Data* window. Continue with the next section, *Editing a Route for an Averaged Reading Survey* (page 397).

Editing a Route for an Averaged Reading Survey

Complete the following steps to set up a route with facilities for inspection in an averaged reading survey:

Select one or more pipeline segments in the Select ROWs window (Figure 8-21). Select pipeline segments with facilities you plan to include in a route for an averaged reading survey. Click Save to close the window.

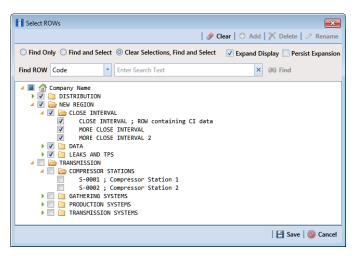


Figure 8-21. Select ROWs

- 2 Open the *Define Routes* window and select a route. Click **Data Entry** > **Define Routes**. Then click the down arrow in **Routes** and select a route in the selection list.
- Click the down arrow in Facility Types and select [PCS] Test Point Survey.Or, select Ad Hoc Theme and then click the Test Point check box.
- 4 Select which facilities to include in the route. To include all facilities, click **G** Add All and then click **Yes** when the *Add All* message opens.

To only include facilities you select, click the check box for each facility in the *Facilities Available* grid. Or double-click each facility.

NOTE: Selected facilities display in the *Facilities in Route* grid.

- **5** Arrange the survey order of facilities listed in the *Facilities in Route* grid as needed using any of the following methods:
 - To move a single grid row, select the row, then drag and drop the row in a different location in the grid.

NOTE: A message displays when moving selected grid rows to confirm the new location in the grid (Figure 8-12, page 390).

• To move a group of consecutive grid rows, click the first row, press and hold the **Shift** key, then click the last row. Drag and drop selected rows in a different location in the grid.

- To move a group of non-consecutive grid rows, press and hold the **Ctrl** key, then click each row you want to select. Drag and drop selected rows in a different location in the grid.
- 6 Click Save to save changes and then click the close icon x to close the *Define Routes* window.
- **7** Continue with the next section *Sending a Survey to the Allegro Based on a Route* (page 399).

Sending a Survey to the Allegro Based on a Route

Information in this section explains how to send a survey to the Allegro based on a route with facilities in an averaged reading survey. The process includes adding a theme with prompts for timed reading fields. Prompts are data entry fields in an Allegro survey file that require survey data, such as an inspection reading at each facility location.

Complete the following steps:

- **1** Verify the Allegro is connected to your computer. If needed, refer to the *Allegro User Guide* for information about how to connect the device.
- 2 Select one or more pipeline segments in the Select ROWs window (Figure 8-22). Select pipeline segments with facilities you plan to include in an averaged reading survey. Click Save to close the window.

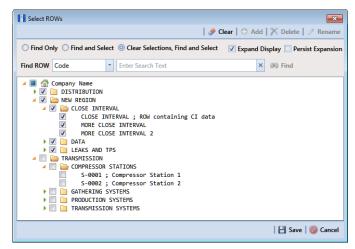


Figure 8-22. Select ROWs

3 Click **Field Computer** > **Send** to open the *Field Computer Send* window (Figure 8-23).

| ſ | Field Computer Send | | | | El Anniv | Customize |
|---|--|---------------------------------|---|-------------------------------------|--|------------------|
| | ∇ (i) It appears that you have some invalid opt | ions, please correct the follow | ine (1) | | 1 🖬 1999 | E sens [] coper |
| | Selected ROWs Selected ROWs Selected ROWs Selected ROWs Selected ROWs Ad Hoc Ti Select All Select All Select All | | CPDM GPoint V Foreign Bond Rectifier V Galvanic Anode | Tank VM ACM | ic Coupon V Probe Samples Inhibitor Inj | ector |
| | View | | | | | |
| | Select Prompt [PCS] Field Computer Prompt | | ayout Theme 5) Field Computer Survey | Select Sort Theme - 😵 (PCS) ROW Cod | e and Milepost | |
| | Options | | | | | |
| | Output File All Facility Types.dat Open Maintenance Items | Send to Allegro Send to disk | Output Directory Select a file location | | | |

Figure 8-23. Field Computer Send

4 Click the **Customize** tab **Customize**, then the **Prompts** button **Prompts** to open the **Prompts** page (Figure 8-24).

| Field Computer Send X | | |
|---|--|--|
| | | of Custor |
| Prompts: Field Computer Send | 🛿 🖶 Save and Close 🛛 🗃 Save 🔷 Add 🏹 De | elete 🖘 Revert 😳 New Baseline 🕲 Cancel 🚼 Prompts |
| Select Prompt | | 4 5 6 7 8 Elyouts |
| [PCS] Field Computer Prompt for SelectedROW Select Facility Type | Pages | Vi Sorts |
| Atmospheric | | 4 5 6 7 8 |
| Facility, Information and ROW Fields | | Close |
| Search For Field | × | Сору |
| Al Folds Route Parameter Information Folds Route Parameter Information Folds Atmospheric Facility Folds Atmospheric Information Folds | POW Code and Pipe MApoot Cection Description | 0 |
| Inspection and Maintenance Fields Search For Field | × | Li Copy |
| All Fields Advection Fields Annospheric Pagettion Fields Annospheric Maintenance Fields | Costing Condition Constant Ingestion Remarks Technician | |

Figure 8-24. Prompts

5 Click 🛟 Add to open the *New Prompt* dialog box (Figure 8-25).

| Enter Theme N | ame: |
|----------------|---------------------------------|
| My Allegro Tim | ed Reading Prompts_1 |
| V Public V C | |
| (PCS) Field | Computer Prompt for SelectedROW |

Figure 8-25. New Prompt

- **6** Type a name for the theme in the field **Enter Theme Name**. Required fields are identified with the **8** icon and must be completed to continue.
- 7 If you want to create a *public* theme, click the **Public** check box to place a check mark inside the check box. When the check box is empty, the theme saves as a *private* theme.
- 8 If you want to copy fields from an existing theme, click the **Copy Content** check box to place a check mark inside the check box. Then click the down arrow in the field **Copy Fields From Theme** and select a theme in the selection list.

If you do not want to copy fields from an existing prompt theme, clear the check mark inside the *Copy Content* check box by clicking the check box.

- 9 Click **W** to save changes and return to the *Prompts* page.
- **10** Verify the name of the new theme displays in the **Select Prompt** field. If not, click the down arrow and select the theme in the selection list.
- 11 Click the down arrow in Select Facility Type and select Test Point.
- **12** To add information prompts, follow these steps:
 - a Click All Fields in *Facility, Information and ROW Fields* to view a list of fields available for selection.
 - **b** Double-click one or more fields in the selection list to move fields to the right pane. All fields listed in the right pane are included in the prompt theme.
- **13** To add timed reading prompts, follow these steps:
 - a Click | All Fields in Inspection and Maintenance Fields.
 - **b** Double-click the following timed reading fields to move the fields to the right pane:
 - Average P/S
 - Max P/S
 - Min P/S
 - P/S Sample Time

NOTE: If you want to remove information, inspection, or maintenance fields, double-click a field listed in the right pane to move it back to the left pane.

- **14** Complete the following steps to add site string prompts that help identify one facility from another when using the Allegro. Site string prompts are included with each facility and can be viewed in the Allegro *Site List* window.
 - a Click the Site String tab to view a list of fields available for selection (Figure 8-26).

| Prompts: Field Computer Send | PP Save | e and Oose 💾 Save 😋 Add 🗙 Delete 🔍 Revent 🖓 New Baselins 🎯 Cancel | Prompts |
|--|---------|---|---|
| elect Prompt | 10 | 12343678 | Layouts |
| PRouteTheme | + | | and the second se |
| ielect Facility Type | | Pages . 22243620 | Sorts |
| Test Point | | 00000000 | Pilters |
| acility, Information and ROW Fields | | | 🔀 Close |
| Search For Field | × | 2 Copy | |
| Address - Suffix | 60 | ROW Code and Pipe | |
| Alignment Sheet Number City Creation Date Days Until Delinquent | 10 | Milepost Location Description | |
| Creation Date | 0 | | |
| C C Days Until Delinquent | - | Effective Date | |
| inspection and Maintenance Fields | | 1 Test Point Detail Inspection Records | |
| Search For Field | × | Copy | |
| 🖌 Insulator P/S | | Structure P/S | |
| Insolator Status Max P/S | | Carlos B/S | |
| Min P/S | 10 | Foreign P/S | |
| Notive Date | - | Insulator P/S | |
| Site String | | | |
| Search For Field | × | ROW Code and Pipe | |
| All Fields | | Miepost | |
| ROW Permanent Information Fields | | Facility ID | |
| Eacility Fields | ۲ | 0 | |
| | | 0 | |
| | 0 | \odot | |

Figure 8-26. Site String Fields

- b Double-click one or more fields in the selection list to move fields to the right pane. For example, double-click Facility ID and Location Description. Click the Site String tab again to close the pane.
- 15 If you want to add another page of prompts, click Copy and then double-click one or more fields as needed in the left pane of *Inspection and Maintenance Fields*. When you have multiple pages of prompts, clicking a page number icon, such as (2), displays prompts for the selected page.

NOTE: Information fields in *Facility, Information, and ROW Fields* automatically copy to each page of prompts.

- **16** Click **Save and Close** to save changes and return to the *Field Computer Send* window.
- 17 Click the **Route** option and select a route in the selection box. Then clickApply to update the grid (Figure 8-27).

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|--------|--------------------------------------|-----------------------|------------------|---|----------------|---------|----------------------------|
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| | | | | | | | of Cus |
| Fiel | id Computer Send | | | | | | 📔 Apply 🖂 Send 📄 |
| • | Based On | | | | | | |
| | Selected ROWs | My Route 14 | | | | | |
| | Route | My Route_15 | | | | | |
| |) Schedule) Import Exported List | My Route_16 | | | | | |
| | View | | | | | | |
| Sele | ect Prompt | | Select I | | | | t Sort Theme |
| ۲ | My Allegro Timed Read | ling Prompts_2 | - 😵 (PC | [S] Field Computer Survey 🔹 😵 (PCS) Route Order | | | |
| ٢ | Options | | | | | | |
| Ou | rtput File | (| Send to Allegro | Output Directory | | | |
| M | ly Route_15.dat | | Send to disk | C:\Users\John.Si | mith\Documents | | |
| | Open Maintenance Ite | ms | | | | | |
| \sim | 💎 Filters | | | | | | |
| | Route Name and Ord | er ROW Code and Pipe | Milepost | Relative Milepost | Facility ID | Address | Location Description |
| 1 | My Route_15 - 1 | T-1401 | 0.001 | 0.001 | R-200 | | Bethel Comp. Station |
| 2 | My Route_15 - 2 | T-1401 | 8,800 | 8,800 | R-201 | _ | Big Brown Plant |
| 3 | My Route_15 - 3 | T-1401 | 21.919 | 21.919 | R-202 | _ | Reed Station |
| 4 | My Route 15 - 4 | T-1401 | 34.935 | 34.935 | R-204 | | Co Line Rd |
| 1 | | | | | | | |

Figure 8-27. Field Computer Send

- **18** Click the down arrow in **Select Prompt** and select a theme with timed reading fields.
- **19** Select a layout and sort theme as follows:
 - **a** Click the down arrow in the field **Select Layout Theme** and select a theme in the list.
 - **b** Click the down arrow in the field **Select Sort Theme** and select a theme in the list.
- **20** If you want to rename the survey file, type a name in the **Output File** field making sure to include the *.dat* file extension.
- 21 Select the option Send to Allegro.
- **22** If the check box **Open Maintenance Items** is available for selection, click the check box if you want to include open maintenance records in the survey file.

NOTE: When the selected prompt theme includes maintenance prompts, the check box *Open Maintenance Items* is available for selection. It is disabled and unavailable for selection when maintenance prompts are not included in the currently selected prompt theme.

- **23** Click the **Filters** button to open the *Filters* panel (Figure 8-28).
- **24** If you want to filter records in the grid and in the route sent to the Allegro, select one or more options in *Filters*. For example, click *Active Facilities Only* to only include active facilities.

IMPORTANT: Filter settings in *Field Computer Send* apply only to the current session and are not saved. See *Working with Themes and Filter Groups* (page 421) for information about saving filter settings in a theme.

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| Ope 7 7 | n Maintenance Iter Filters | ms | Send to disk | C. Weers yern am | th Documents | | (1) New 'And' Group (2) New 'C |
| Ope | n Maintenance Iter Filters tive Facilities Only | ms Facilities on Inactive ROI |] | C. Walta yone, and | LINU OCUMENTS | | Thew 'And' Group Thew 'S |
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| Cope Cope Cope Cope Cope Cope Cope Cope | n Maintenance Iter Filters tive Facilities Only totive Facilities and lative Milepost is b ute Name and Ord (Roote, 15 - 1 (Roote, 15 - 2 | IF acilities on Inactive ROI etween r ROW Code and Pip T-1401 T-1401 | Ns Mlepost 0,001 8,800 | Relative Milepost 0.001 8.800 | Facility ID R-200 R-201 | Address | Lecation Description Bethel Comp. Station Big Brown Plant |
| Cope Cope Cope Cope Cope Cope Cope Cope | n Maintenance Iter Filters tive Facilities Only active Facilities and lative Milepost is b ute Name and Ord (Route_15 - 1 | Facilities on Inactive RO4 etween r ROW Code and Pip T-1401 | Ns MBepost 0.001 | Relative Milepost | Facility ID R-200 | Address | Lecation Description Bethel Comp. Station |

Figure 8-28. Filters

If you want to add a new AND or OR filter group, continue with **step 25** or **step 26**.

- **25** To filter records in the grid and in the route sent to the Allegro based on a subset of records that meet *all* filter conditions, complete the following steps to add a new AND filter group:
 - a Click () New 'And' Group to open the filter properties group box (Figure 8-29).

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| Field Computer Send | | | | | | 🗄 Apply 🖂 | |
| ♥ (i) It appears that you h | ave some invalid options, pl | ease correct the follow | ring (1) | | | | |
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| Route | My Route_15 | | | - | | | |
| Schedule Import Exported List | My Route_16 | | | | | | |
| 🔡 View | | | | | | | |
| Select Prompt | | | ayout Theme | | | et Theme | |
| My Allegro Timed Read | ling Prompts_2 | 🔹 🐨 (PC | S] Field Computer Surv | ey | • 🗣 (PCS) | Route Order | |
| Options | | | | | | | |
| Output File My Route_15.dat | | Send to Allegro Send to disk | Output Directory | | | | |
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| | | 1 | | | | New 'And' Group | |
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| Active Facilities Only | |] | | | | | |
| Active Facilities Only Inactive Facilities and | d Facilities on Inactive ROW | 5 | | | | | |
| Active Facilities Only | d Facilities on Inactive ROW | 5 | g? and | | | - | |
| Active Facilities Only Inactive Facilities and | d Facilities on Inactive ROW |) » | / and | | | | |
| Active Facilities Only Inactive Facilities and Relative Milepost is b | d Facilities on Inactive ROW |) | / and | | • and | V | |
| Active Facilities Only Inactive Facilities and Relative Milepost is b | s Facilities on Inactive ROW vetween • • Is Betw |) réen | | Facility ID | • and | Location Description | |
| Active Facilities Only Inactive Facilities and Relative Milepost is b | s Facilities on Inactive ROW vetween • • Is Betw |) réen | , | Facility ID R-200 | | Location Description Bethel Comp. Station | |
| Active Facilities Only Inactive Facilities and Relative Mileport is b Last Inspection Date Route Name and Ord My Route, 13 - 1 My Route, 15 - 2 | s Facilities on Inactive ROW retween set view is Betw er ROW Code and Pipe |) veen Milepost | * Relative Milepost | | | | |
| Active Facilities Only Inactive Facilities and Relative Mileport is b Relative Mileport in b Route Name and Ord My Route, 15 - 1 My Route, 15 - 2 My Route, 15 - 3 | e Balties on Inactive ROW | Milepost 0.001 8.800 21.919 | Relative Mileport 0.001 8.800 21.919 | R-200 R-201 R-202 | | Bethel Comp. Station Big Brown Plant Reed Station | |
| Active Facilities Only Inactive Facilities and Relative Mileport is b Last Inspection Date Route Name and Ord My Route, 13 - 1 My Route, 15 - 2 | 4 Facilities on Inactive ROW eletween | Milepost 0.001 8.800 | Relative Milepost 0.001 8.800 | R-200 R-201 | | Bethel Comp. Station Big Brown Plant | |

Figure 8-29. New 'And' Filter Group

b Use filter selection fields to set up filter criteria. Select a PCS Axis field, operator, and one or more filter conditions.

When adding a date filter, such as *Last Inspection Date Is Between*, set a date range using one of the following methods:

- **1)** Type a date in the start and end date fields. Enter a start and end date using the format M/DD/YYYY to indicate the month, day, and year.
- 2) To set a date range using a calendar, click the down arrow in the start date field to open a calendar and select a start date. Then click the down arrow in the end date field to open a calendar and select an end date.
- 3) To set a date range using dynamic start and end dates, click the according to the start date field and set up dynamic date properties. Repeat this step for the end date field. Clicking the calculator button opens and closes dynamic date property fields.

NOTE: Clicking the ∇ toggle button in the (i) information bar displays important information related to required settings (Figure 8-29).

- **26** To filter records in the grid and in the route sent to the Allegro based on a subset of records that meet *any* filter condition, complete the following steps to add a new OR filter group:
 - a Click () New 'Or' Group to open a filter properties group box (Figure 8-30).

| _ | Nodules Data Entry Repo | rts / Graphs Tools | Field Computer Help | PCS Axi | 5 | | Welcome John Sm | ith 😕 🔀 la | | |
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| I | | My Route 16 | | | | | | | | |
| | Import Exported List | , | | | | | | | | |
| 🔃 View | | | | | | | | | | |
| I | Select Prompt | | Select | Layout Theme | | Select | t Sort Theme | | | |
| | 😵 My Allegro Timed Readi | ng Prompts_2 | - 😵 [Pi | PCS] Field Computer Survey | | | CS] Route Order | | | |
| I | Options | | | | | | | | | |
| ſ | Output File | | Send to Allegro | Output Directory | | | | | | |
| | My Route_15.dat | | Send to disk | C:Wserstjohn.smi | th/Documents | | | | | |
| | Open Maintenance Item | 14 | Q 1000 00 000 | | | | | | | |
| | 0 | | | | | | New 'And' Group | New 'Or' Gr | | |
| | Active Facilities Only | | | | | | | | | |
| | Inactive Facilities and | Facilities on Inactive P | OWs | | | | | | | |
| | 🔲 Relative Milepost is be | tween | | 🥖 and | | | 9 | | | |
| I | <u></u> | | | | | | | | | |
| | Include records that n | natch any of these cor | vditions | | | | | ٢ | | |
| | Last Inspection Date | • b | Between | • | | 💌 🖬 and | | • • × | | |
| | Route Name and Orde | r ROW Code and I | ipe Milepost | Relative Milepost | Facility ID | Address | Location Description | | | |
| | 1 My Route_15 - 1 | T-1401 | 0.001 | 0.001 | R-200 | | Bethel Comp. Station | | | |
| | 2 My Route_15 - 2 | T-1401 | 8,800 | 8.800 | R-201 | | Big Brown Plant | | | |
| | 3 My Route_15 + 3 | T-1401 | 21.919 | 21.919 | R-202 | | Reed Station | | | |
| | | T-1401 | 34,935 | | R-204 | | Co Line Rd | | | |
| | 4 My Route_15 - 4 | 112492 | | | | | | | | |

Figure 8-30. New 'Or' Filter Group

b Use filter selection fields to set up filter criteria. Select a PCS Axis field, operator, and one or more filter conditions.

When adding a date filter, such as *Last Inspection Date Is Between*, set a date range using one of the following methods:

- **1)** Type a date in the start and end date fields. Enter a start and end date using the format M/DD/YYYY to indicate the month, day, and year.
- 2) To set a date range using a calendar, click the down arrow in the start date field to open a calendar and select a start date. Then click the down arrow in the end date field to open a calendar and select an end date.
- 3) To set a date range using dynamic start and end dates, click the according to the start date field and set up dynamic date properties. Repeat this step for the end date field. Clicking the calculator button opens and closes dynamic date property fields.
- 27 Click the **Filters** button to close the *Filters* panel. Then click **H** Apply to update the grid.
- **28** Click **Send** to send the survey file to the Allegro.
- **29** When a message displays confirming the send process is complete, click **V OK** to close the message (Figure 8-31). PCS Axis sends the survey file to the *PSData* folder on the Allegro.

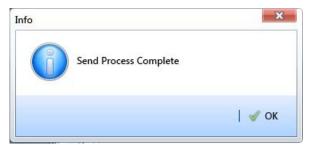


Figure 8-31. Send Process Complete

Preparing a Route for Inspection GPS Fields

This section explains how to prepare and send a survey to the Allegro based on a route with inspection GPS fields. Facilities for inspection are also set up in the *Inspection* data entry grid with inspection GPS fields.

Including inspection GPS fields in a survey allows you to capture GPS location data for each facility inspection reading. These fields also allow you to verify inspection readings are taken at the correct location.

Information in this section applies to all PCS Axis modules. Examples are based on the CPDM module. Topics in this section include those in the following list:

- Adding Inspection GPS Fields in the Inspection Grid (page 407)
- Editing a Route with Facilities for Inspection (page 410)
- Sending a Survey to the Allegro Based on a Route (page 412)

Adding Inspection GPS Fields in the Inspection Grid

The procedure in this section explains how to add inspection GPS fields in a layout theme and then apply the theme to an *Inspection* data entry grid. The procedure uses the *Test Point Inspection* data entry grid as an example.

Complete the following steps:

Select one or more pipeline segments in the Select ROWs window (Figure 8-32).
 Select pipeline segments with facilities you plan to include in a route. Click Save to close the window.

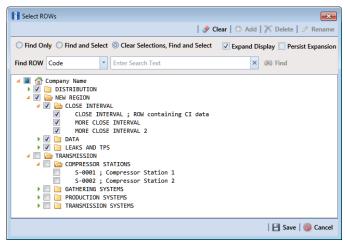


Figure 8-32. Select ROWs

2 Open the *Inspection* data entry grid for a facility type.

For example, click **Data Entry** > **Edit CPDM Data**. Click the **Test Point** button **Test Point**, then the **Inspection** tab **Inspection** to open the *Test Point Inspection* data entry grid (Figure 8-33).

| Ed | it CPDM Data 🗙 | | | | | ection Data Ma | | | |
|----|----------------------|---------------|-----------------|--------------------|------------------------|----------------------|---------------------|-----------------------|----------------|
| ſ | Information | spection Main | ntenance | E Selected ROWs | [PCS] Test Point Inspe | ections 🛚 🖞 (PCS) RC | W Code and Milepo | a 🗘 Opt | ions 📌 Cust |
| | Test Point | Rectifier | Foreign Bond | Galvanic Anode | Tank | | | | 🖬 Base |
| | ** Find | | | | | | 3. Build Survey | 🕽 Add 🗡 Delete | 😘 Refresh 😓 |
| ſ | ROW Code and Pipe | Milepost | Inspection Date | Survey | Structure P/S (Volts) | Casing P/S (Volts) | Foreign P/S (Volts) | Insulator P/S (Volts) | Effective Date |
| | T-1401 | 0.000 | 3/22/2006 | 2006 Annual Survey | -1.141 | | | | |
| ľ | T-1401 | 0.001 | 3/22/2006 | 2006 Annual Survey | -1.150 | | | | |
| ľ | T-1401 | 1.000 | 3/22/2006 | 2006 Annual Survey | -1.173 | | -0.428 | | |
| l | T-1401 | 1.500 | 3/22/2006 | 2006 Annual Survey | -0.963 | | -1.410 | | |
| ľ | T-1401 | 1.627 | 3/22/2006 | 2006 Annual Survey | -0.922 | -0.298 | | | |
| ľ | T-1401 | 1.750 | 3/22/2006 | 2006 Annual Survey | -0.895 | -0.412 | | | |
| ľ | T-1401 | 2.000 | 3/22/2006 | 2006 Annual Survey | | -0.635 | | | |
| ľ | T-1401 | 2.250 | 3/22/2006 | 2006 Annual Survey | -1.091 | | | | |
| l | T-1401 | 2.500 | 3/22/2006 | 2006 Annual Survey | -0.996 | | -0.739 | | |
| E | T-1401 | 3.000 | 3/22/2006 | 2006 Annual Survey | -0.717 | | -0.852 | | |
| ľ | T-1401 | 3.218 | 3/22/2006 | 2006 Annual Survey | -1.492 | | | | |
| | T-1401 | 3.250 | 3/22/2006 | 2006 Annual Survey | -1.118 | | | | |
| | T-1401 | 3.500 | 3/22/2006 | 2006 Annual Survey | -0.694 | | -0.184 | | |
| | T-1401 | 4.000 | 3/22/2006 | 2006 Annual Survey | -0.685 | | -0.707 | | |
| | T-1401 | 5.000 | 3/22/2006 | 2006 Annual Survey | -1.116 | | -0.665 | | |
| | T-1401 | 5.275 | 3/22/2006 | 2006 Annual Survey | -1.451 | | -1.339 | | |
| | T-1401 | 6.000 | 3/22/2006 | 2006 Annual Survey | -1.024 | | -0.954 | | |
| | T-1401 | 7.000 | 3/22/2006 | 2006 Annual Survey | -1.094 | | -0.648 | | |
| | T-1401 | 8.000 | 3/22/2006 | 2006 Annual Survey | -0.831 | | -0.862 | | |
| | T-1401 | 8.500 | 3/22/2006 | 2006 Annual Survey | -1.020 | | -0.638 | | |
| | T-1401 | 8.717 | 3/22/2006 | 2006 Annual Survey | -1.080 | | | | |
| | T-1401 | 8.800 | 3/22/2006 | 2006 Annual Survey | -1.720 | | | | |
| | 4 | | | | | | | | |

Figure 8-33. Test Point Inspection Data Entry Grid

3 Click the **Customize** tab **A** customize to view the *Layouts* page (Figure 8-34, page 409).

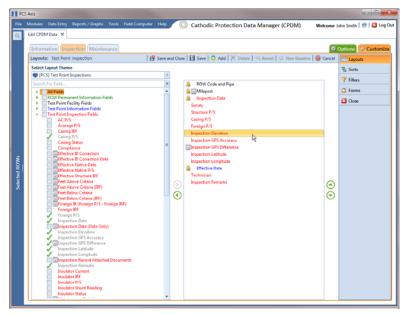


Figure 8-34. Layouts

- 4 Select a data entry grid layout theme. Click the down arrow in **Select Layout Theme** and select a theme in the selection list.
- 5 Double-click the *Inspection Fields* category in the left pane of the window to view a list of fields available for selection. For example, double-click > Test Point Inspection Fields.
- 6 Add the following inspection GPS fields in the layout theme. To add a field, double-click a inspection GPS field in the left pane to move the field to the right pane. Add other fields as required. The layout theme includes all fields listed in the right pane.
 - Inspection Elevation
 - Inspection GPS Accuracy
 - Inspection GPS Difference
 - Inspection Latitude
 - Inspection Longitude

Click Save, then click the Options tab coptions to open the options page (Figure 8-35).

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| | | | | | | | | | | |
| | Information Inspection Maintenance | | | | Options | | | | | |
| | Test Point Inspection | | | | 1 El Ap | ppły 🛛 🏐 Car | | | | |
| Н | Based On | | | | | | | | | |
| | Selected ROWs Route | | | | | | | | | |
| Ш | © Schedule | | | | | | | | | |
| H | | | | | | | | | | |
| Н | Ulew View | | - | | 🛞 🔠 Grid 🔘 🚨 Form 🔘 | 🕅 Grid And F | | | | |
| | Select Layout Theme 🐨 My TP Grid Layout_1 | * | Select Sort Theme | (PCS) ROW Code and Milepost | * | | | | | |
| 11 | Select Form Theme | - | Sort Dates | Oldest First O Nevest First | | | | | | |
| Options | | | | | | | | | | |
| | All inspections that meet the filter criteria Apply other filters to the most recent inspection | on found within report timeframe | | | | | | | | |
| | | | | | | | | | | |
| | Apply other filters to the most recent inspecti | | | | (i) New 'And' Group | New 'Or' Gr | | | | |
| | Apply other filters to the most recent inspecti The most recent inspection after the filter crit | | | | () New 'And' Group | New 'Or' Gr | | | | |
| | Apply other filters to the most recent inspectio The most recent inspection after the filter cit Filters Active Facilities Only | eria has been met | | | 🗶 New 'And' Group 🧉 | | | | | |
| | Apply other filters to the most recent inspectio The most recent inspection after the filter ont The most recent inspection after the filter ont The Active Facilities Only Inscrive Facilities and Facilities on Inactive ROI | eria has been met | | | (1) New 'And' Group | | | | | |
| | Apply other filters to the most recent inspect The most recent inspection after the filter cit There | oria has been met | and | | New'And' Group | | | | | |
| | Apply other filters to the most recent inspectio The most recent inspection after the filter ont The most recent inspection after the filter ont The Active Facilities Only Inscrive Facilities and Facilities on Inactive ROI | ofia hais been met | and | | (D) New 'And' Group (| | | | | |
| | Apply other filters to the most recent inspect The most recent inspection after the filter cit There | oria has been met | | | ① New Yord Group] @ | | | | | |
| | Apply other fibers to the most recent inspection The most recent inspection after the filter oil The most recent inspection after the filter oil the second seco | ofia hais been met | | 100 | ① New 'And' Group | | | | | |
| | Apply other fibers to the most recent inspection The most recent inspection after the fiber of it Active Facilities Only Active Facilities and Facilities on Inactive ROI Instactive RoIII beta is between Inspection Date is between Survey is equal to | ofia hais been met | | 100 | (b) New Yord' Group (c) | | | | | |

Figure 8-35. Options

- 8 Apply the layout theme to the data entry grid. Click the down arrow in **Select Layout Theme** and select the theme with inspection GPS fields.
- 9 Click 💾 Apply.

PCS Axis saves and applies changes, then closes the options page and returns to the *Test Point Inspection* data entry grid.

10 Click the **x** close icon to close the *Edit CPDM Data* window. Continue with the next section, *Editing a Route with Facilities for Inspection* (page 410).

Editing a Route with Facilities for Inspection

Complete the following steps to set up a route with facilities for inspection that include inspection GPS fields:

Select one or more pipeline segments in the Select ROWs window (Figure 8-36). Select pipeline segments with facilities you plan to include in the route. Click Save to close the window.

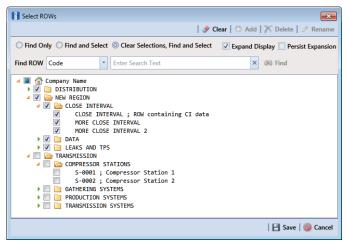


Figure 8-36. Select ROWs

- 2 Open the *Define Routes* window and select a route. Click **Data Entry** > **Define Routes**. Then click the down arrow in **Routes** and select a route in the selection list.
- 3 Click the down arrow in Facility Types and select a facility type theme. Or, selectAd Hoc Theme and then click the check box for one or more facility types.
- 4 Select which facilities to include in the route. To include all facilities, click **S Add All** in the *Facilities Available* grid.

To only include facilities you select, click the check box for each facility in the *Facilities Available* grid. Or double-click each facility.

Note: Selected facilities display in the *Facilities in Route* grid.

- **5** Arrange the survey order of facilities listed in the *Facilities in Route* grid as needed using any of the following methods:
 - To move a single grid row, select the row, then drag and drop it in a different location in the grid.

NOTE: A message displays when moving selected grid rows to confirm the new location in the grid (Figure 8-12, page 390).

• To move a group of consecutive grid rows, click the first row, press and hold the **Shift** key, then click the last row. Drag and drop selected rows in a different location in the grid.

- To move a group of non-consecutive grid rows, press and hold the **Ctrl** key, then click each row you want to select. Drag and drop selected rows in a different location in the grid.
- 6 Click **Save** to save changes. Then click the close icon **x** to close the *Define Routes* window.
- **7** Continue with the next section *Sending a Survey to the Allegro Based on a Route* (page 412).

Sending a Survey to the Allegro Based on a Route

Information in this section explains how to send a survey to the Allegro based on a route with facilities that include inspection GPS fields. The process includes adding a prompts theme with prompts for inspection GPS fields. Prompts are data entry fields in an Allegro survey file that require survey data, such as GPS data for each facility inspection reading.

Complete the following steps:

- **1** Verify the Allegro is connected to your computer. If needed, refer to the *Allegro User Guide* for information about how to connect the device.
- Select one or more pipeline segments in the *Select ROWs* window (Figure 8-37).
 Select pipeline segments with facilities you plan to survey. Click Save to close the window.

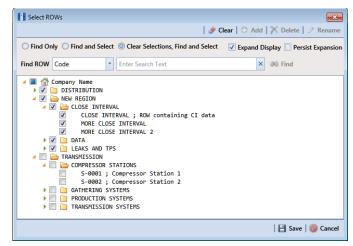


Figure 8-37. Select ROWs

3 Click **Field Computer** > **Send** to open the *Field Computer Send* window (Figure 8-38).

| | Field Computer Send | | | | | | | Apply S | Customize | | |
|---|---|--|---------------------------------|---|--|-------------|------------------------------------|---|-----------|--|--|
| ∇ (i) It appears that you have some invalid options, please correct the following (1) | | | | | | | | | | | |
| | Selected ROWs Zelected ROWs Schedule Propert Exported List | PCS) A Ad Hoc The Select All | | - | CPDM Test Point V Foreign Bond V Tank Rectifier V Galvanic Anode | VM Valve | ACM Atmospheric | ICM Coupon V Probe Samples V Inhibitor Inject | or LSM | | |
| | | | | ayout Theme 5] Field Computer Survey | | | ect Sort Theme [PCS] ROW Code a | nd Milepost | × | | |
| | Output File All Facility Types.dat | | Send to Allegro Send to disk | | put Directory ect a file location | | | | | | |

Figure 8-38. Field Computer Send

4 Click the **Customize** tab **Customize**, then the **Prompts** button **Prompts** to open the **Prompts** page (Figure 8-39).

| FI PC | CS Axis | | - C -×- |
|---------------|---|----------|----------------------------|
| file | Modules Data Entry Reports / Graphs Tools Field Computer Help PCS Axis | Welcome | lohn Smith 😬 🔀 Log Out |
| Q | Field Computer Send 🗙 | | |
| | | | 📌 Customize |
| | Prompts: Reld Computer Send 🛛 🖗 Save and Close 🛛 Save 🖉 Save 🖉 Add 🔀 Delete 🔍 Revert 💭 New Baseline | 🔞 Cancel | B Prompts |
| | Select Prompt (1) (2) (3) (4) (5) (6) (7) (8) | | Tayouts |
| | PICS Field Computer Prompt for Route Seter Taching Type Tach Data Pages 2 3 3 3 6 7 8 | | 🐁 Sorts |
| | Test Point - 1 2 3 4 5 6 7 8 | | P Filters |
| | Facility, Information and ROW Fields | | 🛛 Close |
| | | Сору | |
| | All Fields ROW Code and Pipe | | |
| | ROW Permanent Information Fields Test Point Facility Fields | | |
| | Test Point Information Fields | | |
| s, | • | \odot | |
| 81 | | | |
| Selected ROWs | | | |
| Set | | | |
| | Inspection and Maintenance Fields | | |
| | | Copy | |
| | All Fields Structure P/S Test Point Inspection Fields Casing P/S | | |
| | Test Point Maintenance Fields Foreign P/S | | |
| | Disulator P/S | | |
| | Inspection Remarks Technician | \odot | |
| | - Connear | | |
| | | | |
| | site String | | |
| | Site string | | |

Figure 8-39. Prompts

5 Click the Add button to open the *New Prompt* dialog box (Figure 8-40).Required fields are identified with the icon and must be completed to continue.

| Enter Theme Name: | |
|-----------------------------|--|
| 0 | |
| Public 🗸 Copy Content | |
| Copy Fields From Theme: | |
| [PCS] Field Computer Prompt | |

Figure 8-40. New Prompt

6 Type a name for the theme in the field **Enter Theme Name** (Figure 8-41).



Figure 8-41. New Prompt

- 7 If you want to create a public theme, click the **Public** check box to place a check mark inside the check box. When the check box is empty, the theme saves as a private theme.
- 8 If you want to copy fields from an existing theme, click the **Copy Content** check box to place a check mark inside the check box. Then click the down arrow in the field **Copy Fields From Theme** and select a theme in the selection list.

If you do not want to copy fields from an existing prompt theme, remove the check mark inside the *Copy Content* check box by clicking the check box.

- **9** Click **V OK** to save changes and return to the *Prompts* page.
- **10** Verify the name of the new theme displays in the **Select Prompt** field. If not, click the down arrow and select the theme in the selection list (Figure 8-42).
- **11** Click the down arrow in **Select Facility Type** and select a facility type in the selection list. For example, select *Test Point*.

| FI PCS | Axis | | | | C C X |
|---------------|---|----------------|---|--------|---------------------------|
| File | Modules Data Entry Reports / Graphs Tools Field Computer Help | 0 | PCS Axis Wekor | ne Jo | shn Smith 😢 🔀 Log Out |
| 9 | Field Computer Send 🗙 | | | | |
| | | | | | 📌 Customize |
| | Prompts: Field Computer Send 🛛 😰 S | ive and Cl | ose 💾 Save 🔿 Add 🗡 Delete 🕾 Revert 🔅 New Baseline 🚳 Can | cel | B Prompts |
| | Select Prompt | _ | 12345678 | | Layouts |
| | Wy Inspection GPS Prompts_1 | - | Pages | | Sorts |
| | Select Facility Type Test Point | | 12345678 | | P Filters |
| | Facility, Information and ROW Fields | | | | Close |
| | Facility, Information and ROW Helds | ¥ | Copy | - | |
| | TAll Fields | - | ROW Code and Pipe | | |
| | ROW Permanent Information Fields Test Point Facility Fields | | Ta Milepost | | |
| | Test Point Information Fields | € | Location Description | 3 | |
| s | | ĕ | | ĕ | |
| Selected ROWS | | | | 9 | |
| | | | | | |
| Sele | | | | | |
| | Inspection and Maintenance Fields | | | | |
| | Search For Field | × | Copy | - | |
| | All Fields | Π. | Structure P/S | | |
| | Test Point Inspection Fields Test Point Maintenance Fields | | Casing P/S | | |
| | | (\mathbf{b}) | Foreign P/S Insulator P/S | 3 | |
| | | | Inspection Remarks (| ē | |
| | | | Technician | \sim | |
| | | | | | |
| | | | | | |
| | Site String | | | | |
| | | _ | | _ | |

Figure 8-42. Prompts

12 To add information prompts, follow these steps (Figure 8-42):

- **a** Double-click All Fields in *Facility, Information and ROW Fields* to view a list of fields available for selection.
- **b** Double-click one or more fields in the selection list to move fields to the right pane. All fields listed in the right pane are included in the prompt theme.
- **13** To add inspection GPS prompts, follow these steps:
 - a Double-click **All Fields** in *Inspection and Maintenance Fields*.
 - **b** Double-click the following inspection GPS fields to move the fields to the right pane:
 - Inspection Elevation
 - Inspection GPS Accuracy
 - Inspection GPS Difference
 - Inspection Latitude
 - Inspection Longitude

NOTE: If you want to remove information, inspection, or maintenance fields, double-click a field listed in the right pane to move it back to the left pane.

- **14** Complete the following steps to add site string prompts that help identify one facility from another when using the Allegro. Site string prompts are included with each facility and can be viewed in the Allegro *Site List* window.
 - a Click the Site String and then double-click All Fields in the left pane to view a list of fields available for selection (Figure 8-42, page 414).
 - b Double-click one or more fields in the left pane to move fields to the right pane. For example, double-click Facility ID and Facility Location. Click the Site String button again to close the pane.
- 15 If you want to add another page of prompts, click Copy and then double-click one or more fields as needed in the left pane of Inspection and Maintenance Fields. Information fields in *Facility, Information, and ROW Fields* automatically copy to each page of prompts (Figure 8-42, page 414).

16 Click 💾 Save.

17 If you have multiple pages of prompts, clicking a page number icon displays prompts for the selected page. For example, clicking (2) displays prompts set up in page 2 as shown in the following example (Figure 8-43).

| Modules Data Entry Reports / Graphs Tools Field Compu Field Computer Send X | der Help 🤅 👸 | PCS Axis | Welcome | ohn Smith 😢 🔀 |
|--|--------------|---|------------|-------------------|
| | | | | 🕂 Custo |
| Prompts: Field Computer Send | Bave and Cl | sse 🗄 Save 🔿 Add 🗡 Delete 🔍 Revert 🔅 New Baseline | 🚳 Cancel | 2 Prompts |
| Select Prompt | | 12345678 | | TTT Layouts |
| My Inspection GPS Prompts_1 | | Dages | | W Sorts |
| Select Facility Type | | Pages 2345678 | | 7 Filters |
| Test Point | | | | 4 |
| Facility, Information and ROW Fields | | | | Close Close |
| El AF Fields Text Perior Information Fields Text Perior Facility Fields Text Perior Facility Fields Text Perior Information Fields |) (| ROW Code and Pipe | (A) | |
| Search For Field Pipeline Current On Regulated Scheduling Facility Type Reported Scheduling Facility Type Reported Scheduling Facility | × () | 2) (Caning P/S Foreign P/S Touclater P/S | iopy () | |

Figure 8-43. Prompts

- **18** Click **Close** to return to the *Field Computer Send* window.
- **19** Click the **Route** option and select a route in the selection box. Then click **Apply** to update the grid (Figure 8-44).
- **20** Complete the following steps to select a prompt, layout, and sort theme:
 - **a** Click the down arrow in **Select Prompt** and select the prompt theme with inspection GPS fields.
 - **b** Click the down arrow in **Select Layout Theme** and select a layout theme in the selection list.
 - c Click the down arrow in **Select Sort Theme** and select a sort theme in the selection list.
- 21 If you want to rename the survey file, type a name in the field Output File.
- 22 Select Send to Allegro to send the survey file to the Allegro.
- **23** If the check box **Open Maintenance Items** is available for selection, click the check box if you want to include open maintenance records in the survey file.

NOTE: When the selected prompt theme includes maintenance prompts, the check box *Open Maintenance Items* is available for selection. It is disabled when maintenance prompts are not included in the currently selected prompt theme.

| | omputer Send 🗙 | | Field Computer Help | O PCS / | Axis | | Wekome | e John Smith 😁 |
|---------|-------------------------|-------------------|---------------------|----------------------|-----------------|---------|----------------------|------------------|
| Field C | | | | | | | | |
| Field C | | | | | | | | of Cu |
| | Computer Send | | | | | | 181 4 | pply 🖂 Send 🛛 🗗 |
| 1) Ba | ased On | | | | | | | |
| | selected ROWs | My Route_14 | | | | | | |
| © R | Route Schedule | My Route_15 | | | | | | |
| | mport Exported List | My Route_16 | | | | | | |
| View | | | | | | | | |
| | t Prompt | | | t Layout Theme | | | lect Sort Theme | |
| 😍 My | ly Inspection GPS Pro | impts_2 | - 😒 (Pi | CS] Field Computer S | urvey | - 0 | [PCS] Route Order | |
| @ Op | ptions | | | | | | | |
| Outpu | put File | | Send to Allegro | Output Directory | / | | | |
| My 8 | Route_15.dat | | Send to disk | C\Users\John.S | imith\Documents | | | |
| 0 O | Open Maintenance Ite | ims | | | | | | |
| ~ 7 | 🝸 Filters | | | | | | | |
| F | Route Name and Order | ROW Code and Pipe | Milepost | Relative Milepost | Facility ID | Address | Location Description | |
| 1 1 | My Route_15 - 1 | T-1401 | 0.001 | 0.001 | R-200 | | Bethel Comp. Station | |
| | My Route_15 - 2 | T-1401 | 8.800 | 8.800 | R-201 | | Big Brown Plant | |
| | My Route_15 - 3 | T-1401 | 21.919 | 21.919 | R-202 | _ | Reed Station | |
| 4 1 | My Route 15 - 4 | T-1401 | 34.935 | 34.935 | R-204 | | Co Line Rd | |

Figure 8-44. Field Computer Send

24 If you want to filter records in the grid and in the route sent to the Allegro, complete the following steps.

IMPORTANT: Filter settings in *Field Computer Send* apply only to the current session and are not saved. See *Working with Themes and Filter Groups* (page 421) for information about saving filter settings in a theme.

a Click the Filters tab to open the *Filters* panel (Figure 8-44).

| _ | | | | | | | | + Custor |
|---------|---|--|--|--|--|---------|--|------------|
| Fiel | ld Computer Send | | | | | | 🛛 💾 Apply 🖂 Sen | d 🗿 Ex |
| | Based On | | | | | | | |
| | Selected ROWs | My Route 14 | | | | | | |
| | Route 👔 | Ay Route_15 | | | | | | |
| | Schedule | My Route_16 | | | | | | |
| - | View | | | | | | | |
| | lect Prompt | | | Layout Theme | | | t Sort Theme | |
| 1 | My Allegro Timed Readin | ig Prompts_2 | - 🐨 (PC | CS] Field Computer Surv | ty | - 🐨 B | PCS] Route Order | |
| | | | | | | | | |
| 4 | Options | | | | | | | |
| - | utput file | 0 | Send to Allegro | Output Directory | | | | |
| 0 | | |) Send to Allegro) Send to disk | Output Directory C:Wsers1john.sml | mDocuments | | | |
| 0 | utput File | 0 | | | D)Documents | | | |
| Ot M | utput File Ay Route_15.dat Open Maintenance Item | 0 | | | th'Documents | | | |
| Ot M | utput File Ay Route_15.dat | 0 | | | Documents | | | |
| Ot M | utput File Ay Route_15.dat Open Maintenance Item | 0 | | | UhiDocumente | | (1) New 'And' Group (1) 1 | New 'Or' G |
| | utput File Ay Route_15.dat Open Maintenance Item | 0 | | | DiDocuments | | New 'And' Group 1 | New 'Or' G |
| | utput File Ay Route_15.dat Open Maintenance Item Y Filters D X Active Facilities Only | s O |) Send to disk | | DiDocuments | | New 'And' Group 6 1 | |
| | utput File Ay Route_15.dat Open Maintenance Item Y Filters D X Active Facilities Only | 0 |) Send to disk | | UhiDocuments | | I New Yord' Group 👁 I | |
| | utput File Ay Route_15.dat Open Maintenance Item Y Filters D X Active Facilities Only | s Facilities on Inactive ROWs |) Send to disk | | UhiDocuments | | T New And Group T | |
| | utput File dy Route_15.dat Open Maintenance Item Filters Active Facilities Only Inactive Facilities and F | s Facilities on Inactive ROWs |) Send to disk | C: Waers (john.sm) | DiDecuments | | 1 New And Group 1 | |
| | utput File dy Route_15.dat Open Maintenance Item Y Filters Active Facilities Only Inactive Facilities Only Relative Milepott is bet Route Name and Order | s Facilities on Inactive ROWs tween ROWs ROWs ROWs ROWs ROWs ROWs ROWs ROWs |) Send to disk | C:UsersYohn.smi | Facility ID | Address | Location Description | |
| | utput File Ay Route, 15.6at Open Maintenance Item Filters Active Facilities and Inactive Facilities and Relative Milepoots is bet Route Name and Order My Route, 15 - 1 | s facilities on Inactive ROWs tween T ROW Code and Pipe T-1401 |) Send to disk s Milepost 0.001 | C:Wserstjohn.smi | Facility 10 R-200 | Address | Location Description Bethel Comp. Station | |
| | urput File dy Booke 35 dat Open Maintenance Item Filters difference Relative Facilities Only Inscribe Facilities and File Relate Mileport is bet My Roote 15 – 21 | s Vacilities on Inactive ROWs tween T-1401 T-1401 T-1401 |) Send to disk Milepost 0.001 8.800 | C:Usersijahn smi and Relative Milepost 0.001 8.800 | Facility ID R-200 R-201 | Address | Location Description Bethel Comp. Station Big Brown Plant | |
| | vrput file ył Roste 25 dat Open Maintenance laem y filters 2 Artive Facilities and Pathite Milopoti is bel Roste Name and Order My Roste;35 - 1 My Roste;35 - 2 | acilities on Inactive ROWs tweete 7-1401 7-1401 7-1401 7-1401 |) Send to disk Milepost 0.001 8.800 21.919 | C:UsersYohn am | Facility 10 R-200 R-201 R-202 | Address | Location Description Bethal Comp. Station Big Brown Plant Red Station | |
| | urput File dy Booke 35 dat Open Maintenance Item Filters difference Relative Facilities Only Inscribe Facilities and File Relate Mileport is bet My Roote 15 – 21 | s Vacilities on Inactive ROWs tween T-1401 T-1401 T-1401 |) Send to disk Milepost 0.001 8.800 | C:Usersijahn smi and Relative Milepost 0.001 8.800 | Facility ID R-200 R-201 | Address | Location Description Bethel Comp. Station Big Brown Plant | |

Figure 8-45. Filters

- Select one or more options in *Filters*. For example, click Currently Active
 Facilities Only to only include active facilities in the grid and in the route sent to the Allegro (Figure 8-45).
- c If you want to add a new AND or OR filter group, continue with one of the following steps. Otherwise continue with **step 27**.
 - To add a new AND filter group continue with **step 25**.
 - To add a new OR filter group continue with **step 26**.
- **25** If you want to add a new AND filter group, complete the following steps. With an AND filter group, PCS Axis includes a subset of records that meet *all* filter conditions defined for the filter group. Records are filtered in the grid and in the route sent to the Allegro (Figure 8-46).
 - a Click () New 'And' Group to open the filter properties group box.
 - **b** Use filter selection fields to set up filter criteria. Select a PCS Axis field, operator, and one or more filter conditions.

When adding a date filter, such as *Last Inspection Date Is Between*, set a date range using one of the following methods:

- Type a date in the start and end date fields. Enter a start and end date using the format M/DD/YYYY to indicate the month, day, and year.
- To set a date range using a calendar, click the down arrow in the start date field to open a calendar and select a start date. Then click the down arrow in the end date field to open a calendar and select an end date.

• To set a date range using dynamic start and end dates, click the calculator button in the start date field and set up dynamic date properties. Repeat this step for the end date field. Clicking the calculator button opens and closes dynamic date property fields.

NOTE: Clicking the ∇ toggle button in the (i) information bar displays important information related to required settings.

| odules Data Entry Rep eld Computer Send 🗙 | | | PCS 🔅 | axis | | Welcome A | hn Smith 🛛 😢 🛛 |
|--|--|----------------------------------|-----------------------|----------------------|---------------------|---|----------------|
| | | | | | | | f Cu |
| ield Computer Send | | | | | | PI App | y 🖸 Send 🗍 |
| 7 (i) It appears that you I | ave some invalid ontine | nlease correct the follo | owing (1) | | | | / 1 |
| Selected ROWs | My Route 14 | | | | | | |
| Route | My Route_15 | | | | | | |
| Schedule Import Exported List | My Route_16 | | | | | | |
| View | | | | | | | |
| Select Prompt | | | t Layout Theme | | | Sort Theme | |
| My Inspection GPS Pro | mpts_2 | - 😵 (F | PCS] Field Computer 9 | urvey | - 🐨 (PC | [5] Route Order | |
| Options | | | | | | | |
| Output File | | Send to Allegro | Output Director | | | | |
| | | | | | | | |
| My Route_15.dat | | Send to disk | C\Users\John3 | mith\Documents | | | |
| | ms | Send to disk | C:\Users\John 1 | mith\Documents | | | |
| My Route 35.dat Open Maintenance Ite | ms | O Send to disk | C\Users\John 3 | mith\Documents | | New 'And' G | roup 🙁 New 1 |
| My Route_15.dat Open Maintenance Ite | | O Send to disk | C\Users\John 3 | mith\Documents | | New 'And' G | roup 💿 New 1 |
| My Route_15.dat Open Maintenance Ite If Filters | | | C\Users\John 3 | mith\Documents | | I New 'And' G | roup 🕲 New 1 |
| My Route_15.dat Open Maintenance Ite If Filters | , d Facilities on Inactive R | | C\Users\John 3 | | | © New And G | roup 🛛 🚳 New 1 |
| My Route_35.dat Open Maintenance Ite Filters | , d Facilities on Inactive R | | | | | © New 'And' G | roup 🚳 New ' |
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| My Route, 35.det Open Maintenance Ite Y Filters Active Facilities Only Inscrive Facilities only Relative Milepost is I | / I Facilities on Inactive R Setween | 0W5 | Jer an | | lon Elsi | @ New And G | |
| My Route, 15.det Open Maintenance lite Y Filters Active Facilities Only Inactive Facilities and Relative Milepost is I | / I Facilities on Inactive R Setween | | | | e and | © New And G | |
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| My Route_15.det Open Multistrance like Press Active Facilities and Relative Milepost is 1 C C C C C C C C C C C C C | Facilities on Inactive R setween e s facilities of facilit | OWs Detween | an | a [| | J Location Description Bethel Comp. Station | |
| My Rourd, 35.ad Open Ministrance In Open Ministrance In Priless M Active Facilities an Institute Facilities an Relative Milepott is I Co Last Inspection Dat Route Name and Order My Route, 15- 1 | f Facilities on Inactive R etween e s for set of the se | OWs Detween Milepost 0.001 | Relative Milepost | Facility ID R-200 | | Location Description | |

Figure 8-46. New 'And' Filter Group

- **26** If you want to add a new OR filter group, complete the following steps. With an OR filter group, PCS Axis includes a subset of records that meet *any* filter condition defined for the filter group. Records are filtered in the grid and in the route sent to the Allegro (Figure 8-47):
 - a Click () New 'Or' Group to open a filter properties group box.
 - **b** Use filter selection fields to set up filter criteria. Select a PCS Axis field, operator, and one or more filter conditions.

When adding a date filter, such as *Last Inspection Date Is Between*, set a date range using one of the following methods:

- Type a date in the start and end date fields. Enter a start and end date using the format M/DD/YYYY to indicate the month, day, and year.
- To set a date range using a calendar, click the down arrow in the start date field to open a calendar and select a start date. Then click the down arrow in the end date field to open a calendar and select an end date.

• To set a date range using dynamic start and end dates, click the calculator button in the start date field and set up dynamic date properties. Repeat this step for the end date field. Clicking the calculator button opens and closes dynamic date property fields.

NOTE: Clicking the ∇ toggle button in the (i) information bar displays important information related to required settings.

| eld Computer Send 🗙 | ports / Graphs Tools | Field Computer Hel | PCS. | Axis | | Welcome John | n Smith 😁 |
|---|--|---|------------------------|----------------------|---|---|--------------|
| | | | | | | | + C |
| ield Computer Send | | | | | | B Apply | Send g |
| 7 (i) It appears that you | have some invalid options | , please correct the follo | owing (1) | | | | |
| C Selected ROWs | My Route_14 | | | | | | |
| Route | My Route_15 | | | | | | |
| O Schedule | My Route_16 | | | | | | |
| Import Exported List | | | | | | | |
| View | | | | | | | |
| Select Prompt | | | t Layout Theme | | | t Sort Theme | |
| My Inspection GPS Pro | /mpts_2 | - 🐨 (P | CS] Field Computer ! | survey | - 🐨 (P | CS] Route Order | |
| Options | | | | | | | |
| Output File | | Send to Allegro | Output Director | Y | | | |
| My Route 15.dat | | Send to disk | C:\Users\John: | Smith\Documents | | | |
| Open Maintenance Ite | tms | - | | | | | |
| Open Maintenance Ite | ems | | | | | ③ New 'And' Gro | up 💿 New |
| Open Maintenance Ite | ems | | | | | New 'And' Gro | up 💷 New |
| Open Maintenance Ite | | | | | | O New 'And' Gro O | up 🙁 New |
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| Open Maintenance Ine Filters | y d Facilities on Inactive R between t match any of these con te | ditions Between | • | | | | |
| Cpen Ministenance In 7 Filters 1 Active Facilities Only 1 Institute Facilities and 1 Institute Facilities and | y d'actifites en lanctive R between t match any of these con te i [61] ROW Code and Pipe | ditions Detween Milepost | • Relative Milepost | Facility ID | | Location Description | |
| Open Maintenance he Filters | y d facilities on Inactive R between tratch any of these con te ROW Code and Pipe T-1401 | ditions Between Milepost 0.001 | Relative Milepost | Facility ID R-200 | | Location Description Bethel Comp. Station | |

Figure 8-47. New 'Or' Filter Group

- 27 Click the **Filters** tab to close the *Filters* panel. Then click **Apply** to update the grid.
- **28** Click **Send** to send the survey file to the Allegro.
- **29** Click **V OK** when the message *Send Process Complete* displays (Figure 8-48). PCS Axis sends the survey file to the *PSData* folder on the Allegro.

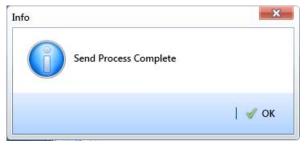


Figure 8-48. Send Process Complete

Working with Themes and Filter Groups

A theme is a group of named settings saved for later use, such as a grid layout or sort theme. Themes are either public or private. A public theme is available for use by all PCS Axis users. A private theme is available only to the user who creates it.

Several installed themes are provided with the PCS Axis software installation. PCS Axis installed themes are public themes available to all PCS Axis users. These themes are identified with a globe icon and PCS in brackets [PCS], such as **(PCS)** Route Grid.

NOTE: Only public themes for layouts, sorts, and reports are available for selection. If you would like to use a private theme, your company's system administrator must make your private theme a public one.

A filter group is a named set of one or more filters that affect the data output in the *Define Routes* grid and subsequently the route itself. PCS Axis provides two types of filter groups you can define. These include the AND and OR filter groups.

When you add a filter group, you define filter conditions that determine which records to include or exclude in the *Define Routes* grid and the route. Adding an AND filter group produces a subset of records that meet *all* filter conditions. Adding an OR filter group produces a subset of records that meet *any* filter condition. When you apply a filter group, PCS Axis processes filters in descending order beginning with the filter at the top of the group.

The following sections describe how to add a layout theme, sort theme, and one or more optional filter groups. Topics include those in the following list:

- Working with a Layout Theme
- Working with a Sort Theme (page 430)
- Adding an AND Filter Group (page 438)
- Adding an OR Filter Group (page 441)
- Editing and Arranging Filters and Filter Groups (page 444)

Working with a Layout Theme

A layout theme is a named set of fields that are present when working in the route grid. A layout theme also determines which fields are included when printing a route.

Two types of layout themes are available for use. They include *installed* and *addition* layout themes. An installed layout theme is one that has been installed during the PCS Axis software installation, such as *[PCS] Route Grid*. A layout theme addition is one that you create.

Topics in this section explain how to work with a layout theme and include those in the following list:

- Editing an Installed Layout Theme
- Adding a Layout Theme Addition (page 425)
- Editing a Layout Theme Addition (page 427)

Editing an Installed Layout Theme

An installed layout theme includes [PCS] in the name of the theme, such as **S** [**PCS**] **Route Grid**. A layout theme determines which fields are present when viewing or printing a route. The procedure in this section explains how to complete the following tasks to edit a PCS Axis installed layout theme:

- add fields in an installed layout theme
- remove fields in an installed layout theme
- revert an installed layout theme

To edit a PCS Axis installed layout theme, follow these steps:

Select one or more pipeline segments in the Select ROWs window (Figure 8-49).
 Click Save to close the window.

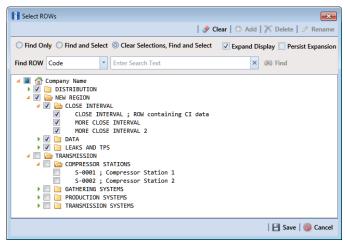
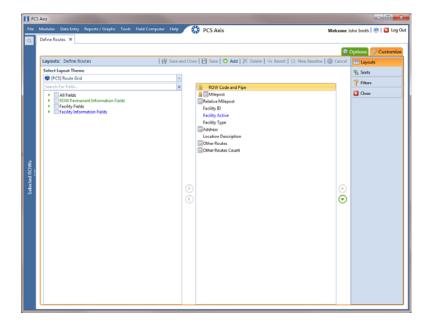


Figure 8-49. Select ROWs

2 Click **Data Entry** > **Define Routes** to open the *Define Routes* window. Click the down arrow in the **Routes** field and select a route in the list (Figure 8-50).

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| Z Rectifi | | T-19 | 03 | 125.873 | 125.873 | | 1 | Test Point | |
| Foreig | Bond | T-19 | 03 | 123.608 | 123.608 | | 1 | Test Point | |
| Galvar | ic Anode | T-19 | 03 | 123.599 | 123.599 | | 1 | Foreign Bond | |
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Figure 8-50. Define Routes



3 Click the **Customize** tab **Customize** to view the Layouts page (Figure 8-51).

Figure 8-51. Layouts

- 4 Select a PCS Axis installed layout theme. Click the down arrow in **Select Layout Theme** and select a theme in the selection list, such as **[PCS] Route Grid**.
- 5 Click the toggle arrow b for a field category in the left pane to view a list of fields available for selection, such as All Fields.
- 6 Click the check box for each field you want to include in the theme. Then click the top arrow button ➡ to move selected fields to the right pane. The theme includes all fields listed in the right pane.

NOTE: Double-clicking a field in the left pane also moves it to the right pane.

- 7 To remove fields in an installed layout theme:
 - Select one or more fields listed in the right pane, then click the bottom arrow button .

NOTE: Double-clicking a field in the right pane also moves it back to the left pane. Fields with a lock icon **a** are required and cannot be removed from the theme, such as **a Milepost**.

- 8 Click **B** Save to save changes.
- **9** To revert an installed theme and restore settings prior to editing, click **Gevert**, then click **Yes** when the *Confirm Revert* message displays.
- **10** Click **Save and Close** to save changes and return to the *Define Routes* window.

Adding a Layout Theme Addition

Complete the following steps to add a layout theme addition:

Select one or more pipeline segments in the Select ROWs window (Figure 8-52).
 Click Save to close the window.

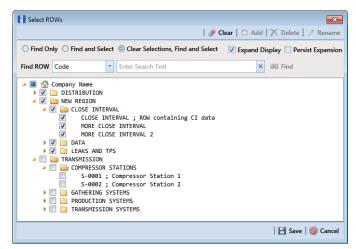


Figure 8-52. Select ROWs

- 2 Click Data Entry > Define Routes to open the Define Routes window. Click the down arrow in the Routes field and select a route in the selection list (Figure 8-50, page 423).
- **3** Click the **Customize** tab **Customize** to view the Layouts page (Figure 8-51).
- 4 Click 🛟 Add to open the New Layout Theme dialog box (Figure 8-53).

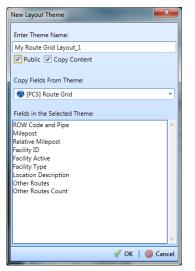


Figure 8-53. New Layout Theme

- 5 Type a name for the theme in the field **Enter Theme Name**.
- 6 Select the **Public** check box if you want the new theme available to all PCS Axis users. When a theme is not public, it is a private theme available only to the user who creates it.

Note: Creating public themes is a function available only to users assigned the SysAdmin user role. Private themes can be created by users assigned the User, Read Only, or SysAdmin user role. See *System Security* (page 855) for more information.

- 7 Select a layout theme with fields you want to copy to the new layout theme. Click the Copy Content check box and then click the down arrow in Copy Fields From Theme and select a theme in the selection list.
- 8 Click **V** OK to save changes and return to the *Layouts* page.
- **9** Verify the name of the new layout theme displays in the field *Select Layout Theme*. If not, click the down arrow in **Select Layout Theme** and select the new theme in the selection list.
- **10** Add and remove fields in the new layout theme as required. If needed, refer to *Editing a Layout Theme Addition* (page 427). When you finish, click ease.
- **11** To apply the new layout theme in the *Define Routes* grid, follow these steps:
 - a Click the **Options** tab Options to open the options page (Figure 8-54).

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Figure 8-54. Options

- **b** Click the down arrow in **Select Layout Theme** and select the new layout theme in the selection list.
- c Click 💾 Apply to apply changes and return to the grid in *Define Routes*.

NOTE: Clicking **O Cancel** allows you to close the *Options* page without saving changes.

Editing a Layout Theme Addition

Information in this section explains how to perform the following tasks when working with a layout theme addition:

- add or remove fields in a layout theme addition
- revert a layout theme addition
- create a new baseline layout theme addition
- delete a layout theme addition

Complete the following steps:

Select one or more pipeline segments in the Select ROWs window (Figure 8-55).
 Click Save to close the window.

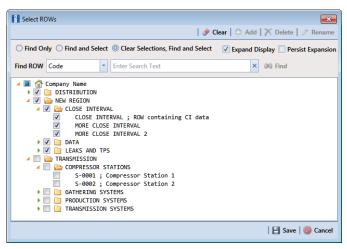


Figure 8-55. Select ROWs

- 2 Click Data Entry > Define Routes to open the Define Routes window. Click the down arrow in the Routes field and select a route in the selection list (Figure 8-50, page 423).
- **3** Click the **Customize** tab **Customize** to view the *Layouts* page (Figure 8-51, page 424).
- 4 Click the down arrow in **Select Layout Theme** and select a layout theme in the selection list.
- **5** To add fields in a layout theme addition:
 - a Click the toggle arrow ▶ for a field category in the left pane to view a list of fields available for selection, such as ▶ All Fields.
 - Click the check box for each field you want to include in the theme. Then click the top arrow button is to move selected fields to the right pane. The theme includes all fields listed in the right pane.

NOTE: Double-clicking a field in the left pane also moves it to the right pane.

c Click **B** Save to save changes.

- 6 To remove fields in a layout theme addition:
 - Select one or more fields listed in the right pane of the window, then click the bottom arrow button

To multi-select fields in the right pane, press the *Ctrl* key when selecting fields in non-consecutive order; or press the *Shift* key when selecting fields in consecutive order.

7 Click **Save** to save changes. The layout theme includes all fields listed in the right pane (Figure 8-56).

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Figure 8-56. Layouts

- 8 To revert a layout theme addition and restore settings prior to editing, click **Revert**, then click **Yes** when the *Confirm Revert* message displays.
- 9 To save current settings as new baseline settings, click **Wew Baseline**. When future changes are made and then reverted, PCS Axis restores the theme with baseline settings.
- **10** To delete a layout theme addition:
 - **a** Click the down arrow in **Select Layout Theme** and select a layout theme addition.
 - **b** Click \mathbf{X} **Delete**, then click **Yes** when the *Confirm Delete* message displays.
- **11** Click **Close** to close the *Layouts* page and return to the *Define Routes* window.

Working with a Sort Theme

A sort theme is a named set of one or more fields that indicate the sorting order of grid rows in the route grid. A sort theme also determines the sorting order when printing a route.

Two types of sort themes are available for use. They include *installed* and *addition* sort themes. An installed sort theme is one that has been installed during the PCS Axis software installation, such as *[PCS]* Address, *[PCS]* Facility *ID*, and *[PCS]* ROW Code and *Milepost*. A sort theme addition is one that you create.

Topics in this section explain how to work with a sort theme and include those in the following list:

- Editing an Installed Sort Theme
- Adding a Sort Theme Addition (page 432)
- Editing a Sort Theme Addition (page 435)

Editing an Installed Sort Theme

An installed sort theme includes [PCS] in the name of the theme, such as **S** [PCS] Facility *ID*. The procedure in this section explains how to complete the following tasks to edit an installed layout theme:

- add fields in an installed sort theme
- remove fields in an installed sort theme
- revert an installed sort theme

To edit an installed sort theme, follow these steps:

Select one or more pipeline segments in the Select ROWs window (Figure 8-57).
 Click Save to close the window.

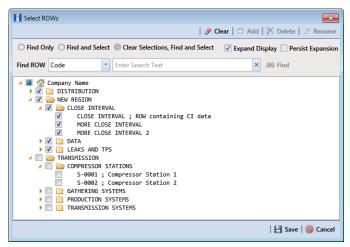


Figure 8-57. Select ROWs

- 2 Click Data Entry > Define Routes to open the *Define Routes* window. Click the down arrow in the Routes field and select a route in the selection list (Figure 8-50, page 423).
- 3 Click the **Customize** tab *Customize*, then the **Sorts** button **Sorts** to open the *Sorts* page (Figure 8-58, page 432).
- 4 Click the down arrow in **Select Sort Theme** and select a PCS Axis installed sort theme, such as **(PCS) Facility ID**.
- 5 Click the toggle arrow b for a field category in the left pane to view a list of fields available for selection, such as b All Fields.
- 6 Click the check box for each field you want to include in the theme. Then click the top arrow button ➡ to move selected fields to the right pane. The theme includes all fields listed in the right pane.

NOTE: Double-clicking a field in the left pane also moves it to the right pane.

- 7 Select a sort method for each field listed in the right pane. To sort grid rows in ascending order, click the toggle button to select ASC ASC . To sort in descending order, click the toggle button to select DESC DESC.
- 8 To change the order of fields listed in the right pane and subsequently in the grid, click and drag a field to a new position in the list. Or, select a field and then click the up () or down () button.
- 9 Click 💾 Save.

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Figure 8-58. Sorts

- **10** To apply the sort theme in the grid, follow these steps:
 - a Click the **Options** tab **Options** to open the options page.
 - **b** Click the down arrow in **Select Sort Theme** and select the sort theme in the selection list.
 - c Click e Apply to apply changes and return to the grid in *Define Routes*.

NOTE: Clicking **O Cancel** allows you to close the *Options* page without saving changes.

Adding a Sort Theme Addition

Complete the following steps to add a sort theme addition:

Select one or more pipeline segments in the Select ROWs window (Figure 8-59).
 Click Save to close the window.

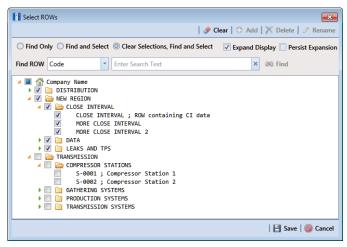


Figure 8-59. Select ROWs

- 2 Click Data Entry > Define Routes to open the Define Routes window. Click the down arrow in the Routes field and select a route in the selection list (Figure 8-50, page 423).
- 3 Click the **Customize** tab *F* **Customize**, then the **Sorts** button **[™]** Sorts to open the *Sorts* page (Figure 8-58, page 432).
- 4 Click C Add to open the New Sort Layout dialog box (Figure 8-60).

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| Enter Theme Name: | |
| My Sorting Theme_1 | |
| Public Copy Content | |
| Copy Fields From Theme: | |
| 😵 [PCS] Address | • |
| Fields in the Selected Theme: ROW Code | |
| Milepost RFID | |
| Pipe | |
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| L | 💞 OK 🔞 Cancel |

Figure 8-60. New Sort Layout

5 Type a name for the theme in the field **Enter Theme Name**.

6 Select the **Public** check box if you want the new theme available to all PCS Axis users. When a theme is not public, it is a private theme available only to the user who creates it.

NOTE: Creating public themes is a function available only to users assigned the SysAdmin user role. Private themes can be created by users assigned the User, Read Only, or SysAdmin user role. See *System Security* (page 855) for more information.

- 7 Select a layout theme with fields you want to copy to the new layout theme. Click the Copy Content check box and then click the down arrow in Copy Fields From Theme and select a theme in the selection list.
- 8 Click **V** OK to save changes and return to the Sorts page.
- **9** Verify the name of the new sort theme displays in the field *Select Sort Theme*. If not, click the down arrow in **Select Sort Theme** and select the new theme in the selection list (Figure 8-61, page 435).
- **10** Add and remove fields in the new theme as required. If needed, refer to *Editing a Layout Theme Addition* (page 427).
- 11 Select a sorting method for each field listed in the right pane. To sort grid records in ascending order, click the toggle button to select ASC ASC. To sort in descending order, click the toggle button to select DESC.
- 12 To change the order of fields listed in the right pane and subsequently in the grid, click and drag a field to a new position in the list. Or, select a field and then click the up () or down () button.
- **13** Click **B** Save to save changes.
- **14** To apply the sort theme in the grid, follow these steps:
 - a Click the **Options** tab **Options** to open the options page (Figure 8-61).

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Figure 8-61. Options

- **b** Click the down arrow in **Select Sort Theme** and select the sort theme in the selection list.
- c Click 💾 Apply to apply changes and return to the grid in *Define Routes*.

NOTE: Clicking **O Cancel** allows you to close the *Options* page without saving changes.

Editing a Sort Theme Addition

The following procedure explains how to perform the following tasks to edit a sort theme addition:

- add or remove one or more sort fields
- revert a sort theme addition
- delete a sort theme addition

Complete the following steps:

Select one or more pipeline segments in the Select ROWs window (Figure 8-62).
 Click Save to close the window.

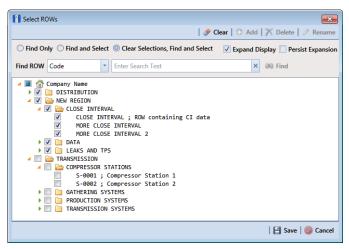


Figure 8-62. Select ROWs

- 2 Click Data Entry > Define Routes to open the *Define Routes* window. Click the down arrow in the Routes field and select a route in the selection list (Figure 8-50, page 423).
- 3 Click the **Customize** tab *F* **Customize**, then the **Sorts** button **Sorts** to open the *Sorts* page (Figure 8-63).

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Figure 8-63. Sorts

- 4 Click the down arrow in **Select Sort Theme** and select a sort theme addition.
- **5** To add fields and select a sort order:
 - a Click the toggle arrow ▶ for a field category in the left pane to view a list of fields available for selection, such as ▶ All Fields.

Click the check box for each field you want to include in the theme. Then click the top arrow button is to move selected fields to the right pane. The theme includes all fields listed in the right pane.

NOTE: Double-clicking a field in the left pane also moves it to the right pane.

- c Select a sorting method for each field listed in the right pane. To sort grid rows in ascending order, click the toggle button to select **ASC**. To sort in descending order, click the toggle button to select **DESC**.
- **d** To change the order of fields listed in the right pane and subsequently in the grid, click and drag a field to a new position in the list. Or, select a field and then click the up () or down () button.
- e Click 💾 Save to save changes.
- **6** To remove fields in the sort theme addition:
 - Select one or more fields listed in the right pane of the window, then click the bottom arrow button (). Click Save to save changes. The sort theme includes all fields listed in the right pane.

To multi-select fields in the right pane, press the *Ctrl* key when selecting fields in non-consecutive order; or press the *Shift* key when selecting fields in consecutive order.

- 7 To revert a sort theme addition and restore settings prior to editing:
 - Click 🧠 Revert, then click Yes when the Confirm Revert message displays.
- **8** To delete a sort theme addition:
 - a Click the down arrow in **Select Sort Theme** and select a sort theme addition.
 - **b** Click \mathbf{X} **Delete**, then click **Yes** when the *Confirm Delete* message displays.
- **9** To apply a sort theme addition in the grid, follow these steps:
 - a Click the **Options** tab **Options** to open the options page (Figure 8-61, page 435).
 - **b** Click the down arrow in **Select Sort Theme** and select the sort theme in the selection list.

c Click 💾 Apply to apply changes and return to the grid in *Define Routes*.

NOTE: Clicking **O Cancel** allows you to close the *Options* page without saving changes.

Adding an AND Filter Group

An AND filter group is a named set of one or more filters that affect the data output in a route selected in *Define Routes*. Adding an AND filter group produces a subset of records that meet *all* filter conditions. PCS Axis processes filters in a filter group in descending order beginning with the filter at the top of the filter group.

To add an AND filter group, follow these steps:

 Select one or more pipeline segments in the Select ROWs window (Figure 8-64). Click Save to close the window.

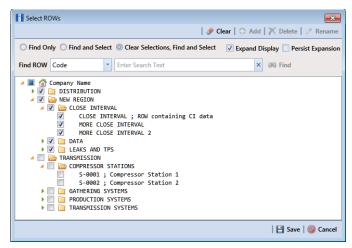


Figure 8-64. Select ROWs

- 2 Click Data Entry > Define Routes to open the *Define Routes* window. Then click the down arrow in Routes and select a route in the selection list (Figure 8-50, page 423).
- 3 Click the **Customize** tab **Customize**, then the **Filters** button **Filters** to open the *Filters* page.
- 4 Click () New 'And' Group to open a filter properties group box (Figure 8-65).

- 5 Type a name for the filter group in the field **Filter Group Caption**.
- **6** Use filter selection fields to set up filter criteria. Select a PCS Axis field, operator, and one or more filter conditions.

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Figure 8-65. Filters

- 7 If you want the filter to remain on for all sessions when working with the selected route, click the check box **Filter is Always On**. When this check box is not selected, toggle the filter on and off in the options page using the filter's check box.
- 8 Type a name for the filter in the field **Enter Custom Filter Caption**.
- **9** If you want to set up additional filter criteria for the filter group:
 - a Click **C** Add to open another filter properties group box. Then click the *P* edit icon to display selection fields.
 - **b** Type a name for the filter in the field **Enter Custom Filter Caption**. Repeat **step 6** through **step 8** to set up filter criteria.
- **10** To move a filter to a different position in the filter group or a filter group to a different position in a group of filters:
 - **a** Point the mouse at the filter handle to change the cursor to a vertical resize cursor **1**.

b Drag and drop the filter or the filter group to a new location.

NOTE: PCS Axis processes filters in descending order beginning with the filter at the top of the filter group.

11 Click 💾 Save.

NOTE: Clicking the *P* edit icon for a particular filter opens that filter's property settings allowing you to change settings as needed.

- **12** To apply one or more filters to the selected route and the *Define Routes* grid (Figure 8-66):
 - a Click the **Options** tab **Options** to open the options page.
 - **b** Click the check box for each filter you want to apply. Then click **Apply** to save changes and return to the *Define Routes* grid.

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Figure 8-66. Options

Adding an OR Filter Group

An OR filter group is a named set of one or more filters that affect the data output of a route selected in *Define Routes*. Adding an OR filter group produces a subset of records that meet any filter condition. PCS Axis processes filters in a filter group in descending order beginning with the filter at the top of the filter group.

To add an OR filter group, follow these steps:

Select one or more pipeline segments in the Select ROWs window (Figure 8-67).
 Click Save to close the window.

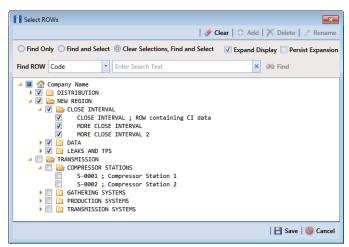


Figure 8-67. Select ROWs

- 2 Click Data Entry > Define Routes to open the *Define Routes* window. Then click the down arrow in Routes and select a route in the selection list (Figure 8-50, page 423).
- 3 Click the **Customize** tab **Customize**, then the **Filters** button **Filters** to open the *Filters* page.

| ilters: Define Routes | | | | 100.000 | Options 👉 🕻 |
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| Filter Group Caption | | | | 0 X | T Filters |
| Active Facilities Only | | | | | Close |
| / Inactive Facilities and Facilitie | es on Inactive ROWs | | | | |
| 🖋 Relative Milepost Is between | [] and [] | | | | |
| | | | | | |
| Include records that match an | y of these conditions | | | ♦ 10 | |
| Account Contains [] | | | | | |
| Filter Is Always On | | | | × | |
| Account | * Contains | * | ge e | | |
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4 Click (() New 'Or' Group to open a filter properties group box (Figure 8-68).

Figure 8-68. Filters

- **5** Type a name for the filter group in the field **Include records that match any of these conditions**.
- **6** Use filter selection fields to set up filter criteria. Select a PCS Axis field, operator, and one or more filter conditions.
- 7 If you want the filter to remain on for all sessions when working with the selected route, click the check box **Filter is Always On**. When this check box is not selected, toggle the filter on and off in the options page using the filter's check box.
- 8 Type a name for the filter in the field Enter Custom Filter Caption.
- **9** If you want to set up additional filter criteria for the filter group:
 - a Click **C** Add to open another filter properties group box. Then click the *P* edit icon to display filter selection fields.
 - **b** Repeat **step 5** through **step 8step 8** to set up the filter group.

- **10** To move a filter to a different position in the filter group or a filter group to a different position in a group of filters:
 - **a** Point the mouse at the filter handle to change the cursor to a vertical resize cursor $\hat{\mathbf{I}}$.
 - **b** Drag and drop the filter or the filter group to a new location.

NOTE: PCS Axis processes filters in descending order beginning with the filter at the top of the filter group.

11 Click 💾 Save.

NOTE: Clicking the *P* edit icon for a particular filter opens that filter's property settings allowing you to change settings as needed.

- **12** To apply one or more filters to the selected route and the *Define Routes* grid (Figure 8-69):
 - a Click the **Options** tab **Options** to open the options page.
 - **b** Click the check box for each filter you want to apply. Then click **Apply** to save changes and return to the *Define Routes* grid.

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Figure 8-69. Options

Editing and Arranging Filters and Filter Groups

PCS Axis processes filters in a filter group in descending order beginning with the filter at the top of the filter group. Filter groups are processed similarly. Information in this section explains how to edit filter property settings and how to arrange filters and filter groups.

Complete the following steps:

Select one or more pipeline segments in the Select ROWs window (Figure 8-70).
 Click Save to close the window.

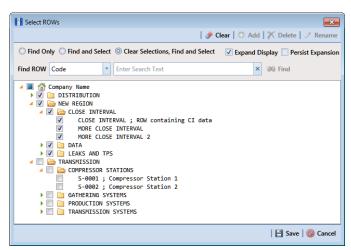


Figure 8-70. Select ROWs

- 2 Click **Data Entry** > **Define Routes** to open the *Define Routes* window. Then click the down arrow in **Routes** and select a route in the selection list (Figure 8-50, page 423).
- 3 Click the **Customize** tab **Customize**, then the **Filters** button **Filters** to open the *Filters* page.

4 Click the edit icon 🥜 to display a filter's property settings (Figure 8-71).

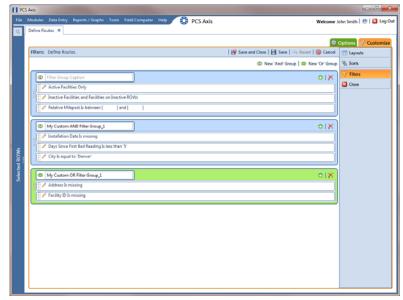


Figure 8-71. Filters

- 5 To delete a filter in a filter group, click the filter's X delete button. Then click
 ✓ OK when the *Delete* message displays.
- 6 To rename a filter, type a description in the filter's name field.
- **7** To change filter criteria, use filter selection fields to select a PCS Axis field, operator, and one or more filter conditions.
- 8 To enable a filter for all sessions of the data entry grid, click the check box Filter is Always On to place a check mark inside the check box. When this check box is not selected, toggle the filter on and off in the options page using the filter's check box.
- 9 Click the 🔀 close button to close the filter's property settings group box.

- **10** To move a filter to a different position in a filter group, or to move a filter group to a different position, follow these steps:
 - **a** Point the mouse at the handle of a filter or filter group to display a vertical resize cursor $\hat{\mathbb{T}}$.
 - **b** Drag and drop the filter or filter group to a new location.

NOTE: PCS Axis processes filters in descending order beginning with the filter at the top of the filter group.

- 11 Click 💾 Save.
- **12** To apply filter changes to the selected route and the *Define Routes* grid:
 - a Click the **Options** tab **Options** to open the options page.
 - **b** Click **H** Apply to apply filter changes and return to the *Define Routes* grid.

Previewing a Route

Information in this section describes how to view, print, and export a route with selected or available facilities.

Selected facilities are those included in the route. These facilities are also listed in the *Facilities in Route* grid of the *Define Routes* window (Figure 8-73, page 448). Available facilities are linked to the current ROW selection, but are *not* included in the route. Available facilities are listed in the *Facilities Available* grid of the *Define Routes* window.

Complete the following steps:

Select one or more pipeline segments in the Select ROWs window (Figure 8-72).
 Click Save to close the window.

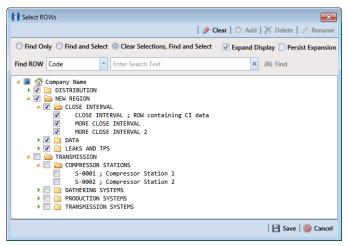


Figure 8-72. Select ROWs

- 2 Click **Data Entry** > **Define Routes** to open the *Define Routes* window. Click the down arrow in the **Routes** field and select a route in the selection list.
- **3** To view selected facilities in a *Print Preview* window (Figure 8-73), click the **Selected Facilities** button in the *Facilities in Route* grid.

To view available facilities in a Print Preview window, click the Available Facilities button in the Facilities Available grid.

Clicking Selected Facilities allows you to view a report with facilities included in the route. Clicking Available Facilities opens a report with facilities listed in the Facilities Available grid.

- 4 Click the Print button to open the *Print* dialog box and select a printer to print the route. Or, click the Quick Print button to print the route using the default printer set up in Windows.
- 5 If you want to export the route, click the **Export Document** button and select any of the following file formats: PDF, HTML, MHT, RTF, XLS, XLSX, CSV, TXT, IMG, and XPS.

6 Click the X **Close** button to close the *Print Preview* window and return to the *Define Routes* window.

| | | | Fac | My Pipeline Comp clitics in Route "My Ri | | | | | |
|------------------|------------------|-------------------|------------------|---|-----------------|---------------|---------|------------------------------|--|
| | | | | | | | | | |
| ROW C | | | | | | | | Location | |
| and Pig | | Relative Milepost | Facility ID RFID | Serial Number | Facility Active | Facility Type | Address | Description | |
| T-1401 | 73.180 | 73.180 | | | True | Test Point | | Lake Creek Pint | |
| T-1401 T-1401 | 73.179 | 73.179 72.863 | | | True | TP | | Rectifier F-73 Plant Road | |
| T-1401 T-1401 | 72.863 | 72.863 | | | True | TP TP | | | |
| T-1401 T-1401 | 71.500 | 71.500 | | | True | TP | | PL Crossing Texas 6 & RR | |
| T-1401 | 68,744 | 68,744 | | | True | TP | | Texas 6 & RK Texas 164 | |
| T-1401 | 68,700 | 68,700 | | | True | TP | | RV-F6 | |
| T-1401 | 67.717 | 67.717 | | | True | TP | | Rectifier F-68 | |
| T-1401 | 65.309 | 65.309 | | | True | TP | | County Road | |
| T-1401 | 64,909 | 64,909 | | | True | TP | | County Road | |
| T-1401 | 63.327 | 63.327 | | | True | TP | | County Road | |
| T-1401 | 61,610 | 61.610 | | | True | TP | | FM 939 | |
| T-1401 | 63,604 | 61.604 | | | True | TP | | Rectifier F-62 | |
| T-1401 | 59.786 | 59.786 | | | True | TP | | Fence Row | |
| T-1401 | 59.486 | 59.486 | | | True | TP | | | |
| T-1401 | 58.164 | 58.164 | | | True | TP | | Kirk Station | |
| T-1401 | 55.471 | 55.471 | | | True | TP | | County Road | |
| T-1401 | 54.631 | 54.631 | | | True | TP | | FM 339 | |
| T-1401 | 53.757 | 53.757 | | | True | TP | | County Road | |
| T-1401 | 51.532 | 51.532 | | | True | TP | | County Road | |
| T-1401 | 48.243 | 48.243 | | | True | TP | | FM 1245 | |
| T-1401 | 46.925 | 46.925 | | | True | TP | | Thelma Sta. (New) | |
| T-1401 | 46.915 | 46.915 | | | True | TP | | Valve | |
| T-1401 T-1401 | 46.615 | 45.615 | | | True | TP | | Pvt. Rd. (Test Sta.) | |
| T-1401 T-1401 | 46.515 45.088 | 45.515 45.088 | | | True | TP TP | | Rectifier F-47 | |
| T-1401 T-1401 | 45.088 44.348 | 45.068 | | | True | тр | | County Road FM 1633 | |
| T-1401 T-1401 | 44,348 43,144 | 43,144 | | | True | TP | | FM 1633 FM 2705 | |
| T-1401 | 41.291 | 41.291 | | | True | тр | | County Road | |
| 1.2402 | 41.271 | 41.131 | | | 1000 | 19 | | County Koad | |
| | | | | Page 1/3 | | | | | |
| | | | | | | | | | |

Figure 8-73. Print Preview

Exporting and Importing a Route

The following information explains how to import or export a defined route in either Microsoft Excel (.xls) or CSV (.csv) format. Facilities for inspection are based on the pipeline segment(s) you select in the *Select ROWs* window.

Complete the following steps:

1 Click the Select ROWs button P to open the Select ROWs window (Figure 8-74). Select one or more pipeline segments with facilities you want to include in the route. Click Save to close the window.

NOTE: A check mark inside a check box indicates a selection. To clear a selection, click the check box again to remove the check mark. A shaded check box indicates selection of some, not all, child folders, ROWs, and pipelines.

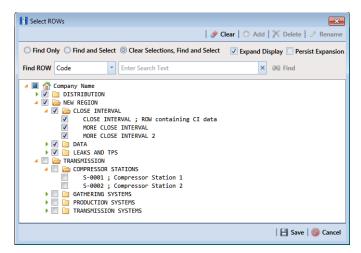


Figure 8-74. Select ROWs

2 Click **Data Entry** > **Define Routes** to open the *Define Routes* window. Click the down arrow in the **Routes** field and select a route in the list (Figure 8-75).

| Define Routes X | y Reports/Graphs Tools | | | PCS Axis | | | | felcome John Smith | |
|---------------------|------------------------|-----------|-------------------------|----------|---------------|-----------------------|-----------------|---------------------|------------|
| | | | | 8 | | | | Options of | F Custom |
| | Facility Types | Routes | Route1020 | | • IB | 🛿 Save 🛛 🔾 Add 🛛 🥓 Re | name 🗡 Delete | 🛞 Cancel 🚺 Impo | et 😹 Exp |
| 🛞 😨 [PCS] All F | | * Facilit | e MyRoutel1 | | | | 18 | Selected Facilities | Remove |
| Ad Hoc Theme | | RO | MyRoute924 Route1020 | | Milepost | Facility ID | Facility Active | Facility Type | Address |
| Select All | 🥜 Clear All | | Route626 | | 302 | | V | Test Point | |
| | CPDM | T-1 | 903 1 | 28.788 | 128.788 | | 2 | Test Point | |
| V Test Point | Crow | 7.4 | 903 1 | 26.863 | 126.863 | | 2 | Test Point | |
| Rectifier | | T-1 | 903 1 | 25.873 | 125.873 | | 1 | Test Point | |
| Foreign Bond | | T-1 | 903 1 | 23.608 | 123.608 | | 1 | Test Point | |
| Galvanic Anode | | T-1 | 903 1 | 23.599 | 123.599 | | 1 | Foreign Bond | |
| Tank Tank | | | | | | | | | |
| | VM | | | | | | | | |
| Valve | | | | | | | | | |
| | ACM | | | | | | | | |
| Atmospheric | AL.III | | | | | | | | Row Count: |
| | ICM | Facilit | Facilities Available | | | | | | |
| Coupon | | | ROW Code and Pipe | Milepost | Relative Mile | epost Facility ID | Facility Active | | Ar |
| Samples | | 1 | | 1 | 1 | NEW RECT TEST | | Rectifier | |
| | | | T-1400 | 0.000 | 0.000 | | 2 | Test Point | |
| | | - 0 | T-1400 | 0.500 | 0.500 | | 7 | Test Point | |
| Inhibitor Injecto | LSM | _ | T-1400 | 0.669 | 0.669 | | 2 | Test Point | |
| Inhibitor Injecto | | | T-1400 | 1.000 | 1.000 | | 1 | Test Point | |
| | | | T-1400 | 1.028 | 1.028 | | V | Test Point | |
| Inhibitor Injecto | | 13 | | 1.100 | 1.100 | | × | Test Point | |
| Inhibitor Injecto | | | T-1400 | | | | | | |
| Inhibitor Injecto | | | T-1400 T-1400 | 2.000 | 2.000 | | 2 | Test Point | |
| ✓ Inhibitor Injecto | | | | | 2.000 | _ | V | Test Point | |

Figure 8-75. Define Routes

If you have not defined any routes, refer to *Creating a Route* for instructions on creating a route.

- **3** To add a facility to the *Facilities in Route* grid, double-click the name of the facility in the *Facilities Available* grid.
- 4 Click 💾 Save to save the changes.
- **5** To export the route, click **Export**.
- 6 Click **Yes** in the *Confirm Export* dialog box (Figure 8-76).

| Confirm Export | | × |
|------------------------------|-----------------|--------------|
| Are you sure you want to exp | ort the 'Route! | 1020' route? |
| | 🛛 🖋 Yes | No 🛛 |

Figure 8-76. Confirm Export

- **a** Choose an export file type. Click the down arrow in the **Save as type** field and select one of the following file types:
 - Excel files (*.xlsx)
 - Text files (*.csv)
- 7 When the file has been created, the Info dialog box displays (Figure 8-77). Click OK.

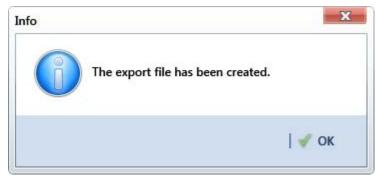


Figure 8-77. Export File Created

- 8 To import a saved file, follow these steps:
 - **a** Click the down arrow in the **Routes** field and select a route. This route will be replaced by the route to be imported.
 - b Click 🍟 Import.
- **9** Navigate to the file and click **Open**. The file is loaded in the *Facilities in a Route* grid, and replaces the route previously shown.

Using a Route in PCS Axis

You can use a route in PCS Axis to perform any of the following tasks:

- View inspection records in a grid based on a route. Refer to *Viewing Records Based on a Schedule* (page 257).
- Transfer a survey to the Allegro Field PC based on a route. Refer to *Using Field Computer* (page 595).