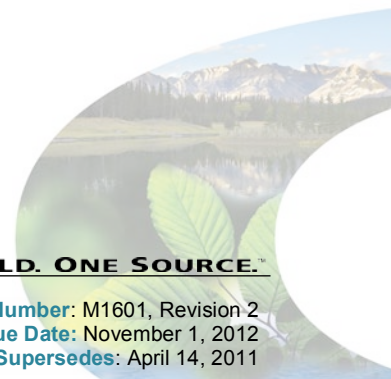


# SiteSentinel<sup>®</sup> *i*Site<sup>™</sup>

## INTEGRATED MONITORING SYSTEM *Configuration Manual*





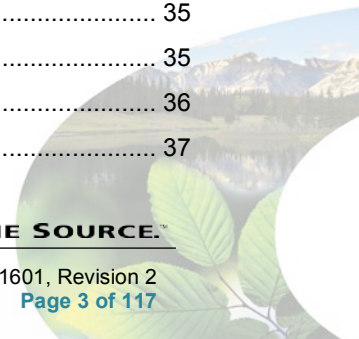
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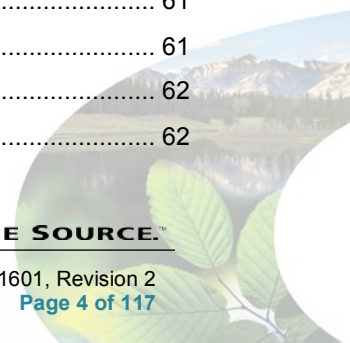


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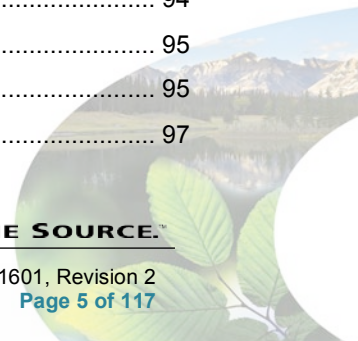


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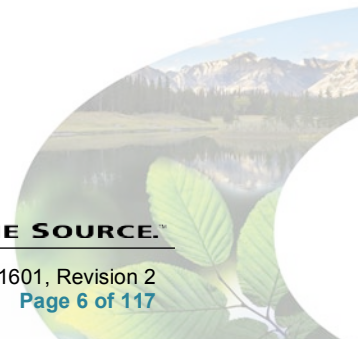




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## 1 Getting Started

When first booting up the SiteSentinel® iSite™ system, the default user will automatically be logged in. The default user has minimal rights to the system, which allows one to view the Home screen and change user preferences. To change any other settings within the system, the user must login as the administrator to begin (see 1.1 Login to learn how to login as administrator).

The following information within this manual will guide you through the configuration process.

### 1.1 Login

The login screen allows users to login to the system and make changes or view information based on their security access level. The default administrator login has full rights to the system.



Figure 1-1 Login

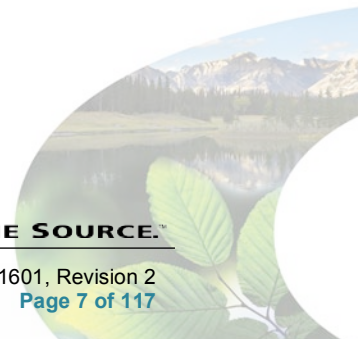
The default **Username** is Administrator for all systems.

The default **Password** is \*.

It is suggested that users change the default administrator password after configuration is complete, as well as enter any additional Usernames you wish to create.

To access the login screen, users must first logout of the default user and login using the administrator login.

Configuration operations may be completed using the touchscreen keyboard. To access this keyboard, press the Keyboard button to activate the keyboard.



## 1.2 Introduction

Upon logging into your SiteSentinel® iSite™ system, you will be greeted by the default **Home Page**, which may also be viewed by clicking the **Home** Button located on the bottom right of the configuration screen. This will take you to screen that is divided into four (4) quadrants, this is the **System Events & Information** screen where the current inventory, run rate and time until fuel runs out for each installed tank is displayed.

There are three (3) **Home Screen** layout views to choose from:

- **Inventory + Delivery:** Layout option for viewing only Inventories and Deliveries.
- **Home Screen Option B:** Layout option for viewing Inventories, Deliveries, Active Compliance & System Alarms and Site Status (i.e., active alarms).
- **Home Screen Option C:** Layout option for viewing Inventories, Deliveries, Compliance & System Alarms and all Site Statuses (i.e., active and non-active components).

The Home Screen layout can be changed at any time within the **User Preferences** screen.

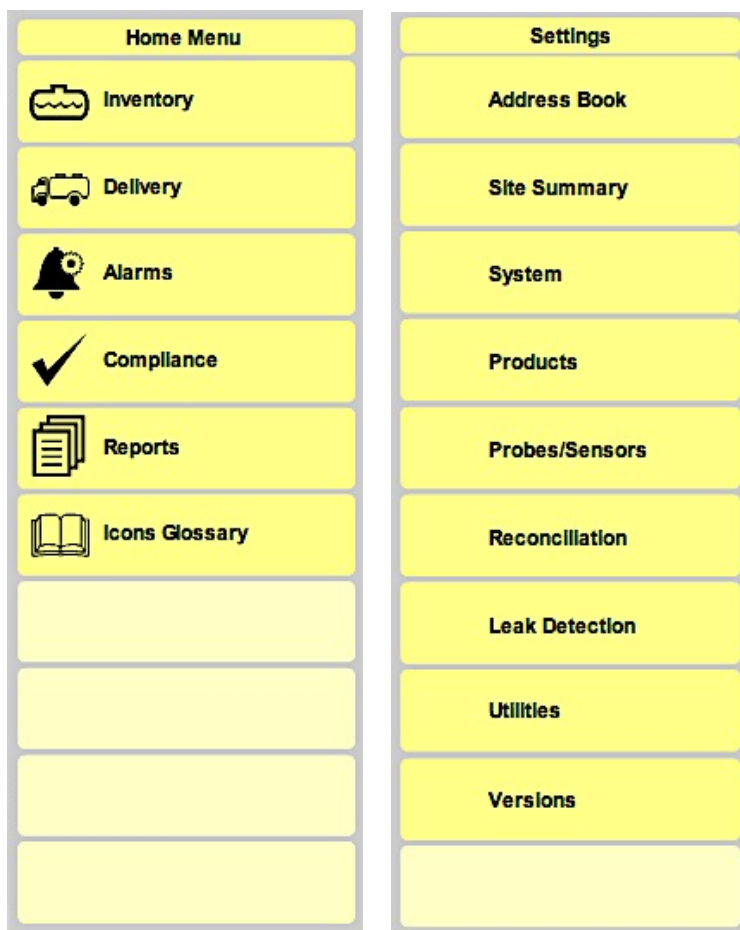


Figure 1-2 Home Menu

Figure 1-3 Settings Menu

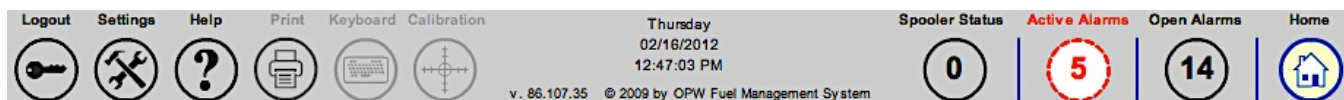
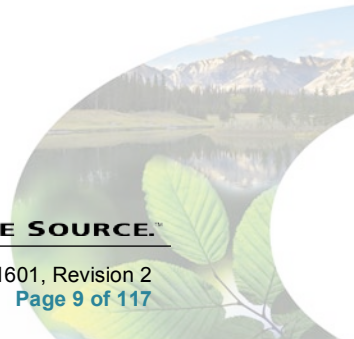


Figure 1-4 Main Toolbar

The yellow column with individual tabs located on the left side of the screen shows your **Home Menu** options. Here you will be able to check **Inventory**, **Delivery** status, **Alarms** and **Reports**, and reference the system's **Icon Glossary**.

The **Main Toolbar** is located across the bottom of your screen. Using these buttons you can **Logout**, open a **Help** window for the screen you are currently viewing, check **Active Alarms**, **Open Alarms** and **Spooler Status**, and access the system's configuration **Settings**.

By selecting the **Settings** button located in the Main Toolbar, you will be presented with the **Settings Menu**. Here you can navigate the SiteSentinel® iSite™'s configuration options (Address Book, System Information, System Time/Date, Alarm Preferences, User Preferences, Warning Preferences, Networking options, Printers, Security, Firmware, Products, Probes/Sensors, Leak Detection, Hose Mapping, Thresholds and System Operations.)



### 1.3 Module Detection (VSmart, Smart, OM4, and LIM)

The first step in configuring your SiteSentinel® iSite™ is to detect the modules connected to your SiteSentinel® iSite™'s console.

**Module Detection** allows the user to find each module that is connected to the system, including VSmart Modules, Smart Modules, OM4 Modules and LIM. By auto-detecting the modules connected to the console, you will see what devices are connected to your SiteSentinel® iSite™. These devices will be displayed as shown below:

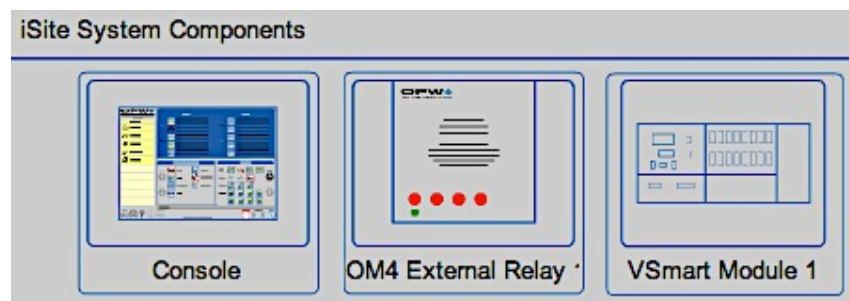


Figure 1-5 Modules Connected to System

#### 1.3.1 Level 0 Auto Detection

1. To begin, press the **Settings** button to enter the **Settings** menu.
2. Then, press the **Probes/Sensor** button twice to enter the **Probe/Sensor** Configuration.
3. Next, press the **Auto Detect** button.
4. Press the **Console** component to find all of the components connected to the system. This will perform what is considered a **Level 0 Auto Detection** and find all modules connected to the system.
5. Next, press **Yes** if this is a new system and you want to find all modules.

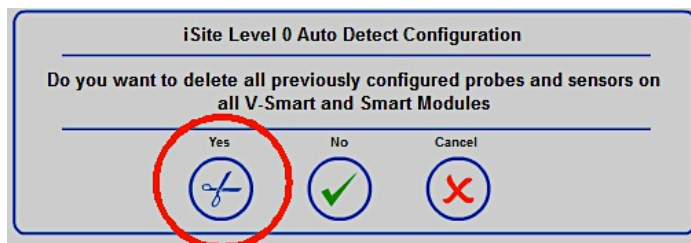


Figure 1-6 Level 0 Auto Detect Module Confirmation

When the system is powered up for the first time there is no data to be lost; therefore, answer **Yes** when configuring new installations. Also, pressing **Yes** will delete all current configurations and find all devices.

Press **No** if you are adding a module to the system.

Pressing **No** will not overwrite any configuration and will only find new modules.

6. Once the process is complete, the components/modules connected will be displayed.



## 1.4 Device Detection (Probes and Sensors)

### 1.4.1 Level 1 Auto Detection

To detect the devices (i.e., probes and sensors) connected to the modules:

1. Press **Auto Detect**, then press the VSmart Module to which the devices are connected.
2. Answer **"Yes"** to the prompt in order to find all of the Probes, Sensors and LLD devices connected to the system.

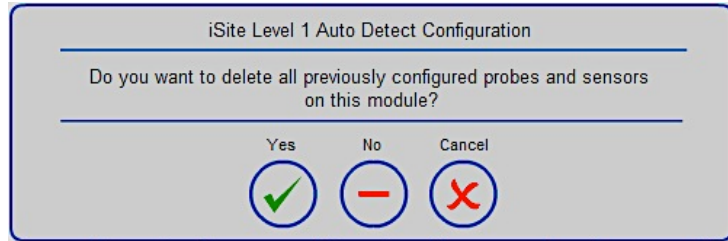


Figure 1-7 Level 1 Auto Detect (Probes/Sensors) Confirmation

Pressing **"Yes"** will delete all current configurations and find all devices.

Pressing **"No"** will not overwrite any configuration and will cause the system to find only new devices.

Please note that Auto Detection cannot be performed on Smart Modules.

This will perform what is called **Level 1 Auto Detection**, which allows detection of all devices connected to that module.

Once this process is complete, you can select the VSmart on which the detection was run and view all devices connected to that particular module. Repeat these steps for each connected VSmart Module.

### 1.4.2 Level 2 Auto Detection

Replacing a device on a specific channel or moving a device to a channel where another device was previously connected is referred to as **Level 2 Auto Detection**.

1. Begin by ensuring the device is connected to the appropriate channel you wish to connect.
2. Press **Auto Detect** and then select the channel for which the new device is connected.
3. Answer **"Yes"** to the prompt in order to find all the Probes and Sensors connected to the selected VSmart position. Pressing **"No"** will not overwrite any configuration and will cause the system to find new devices.
4. This will then replace that device on the selected channel and display the new device along with a notice of conflict. Once approved, this conflict will no longer display.

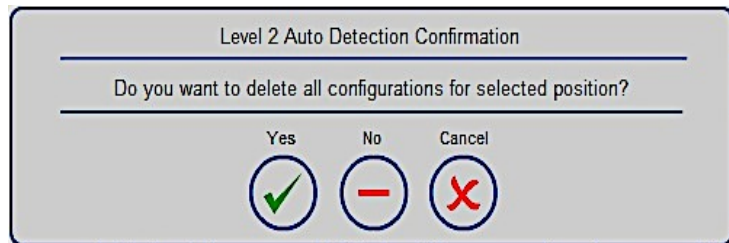


Figure 1-8 Level 2 Auto Detect (Probes/Sensors) Confirmation

Configured devices will be marked as **configured** with a green check mark (see Figure 1-9 Configured Probes and Sensors).

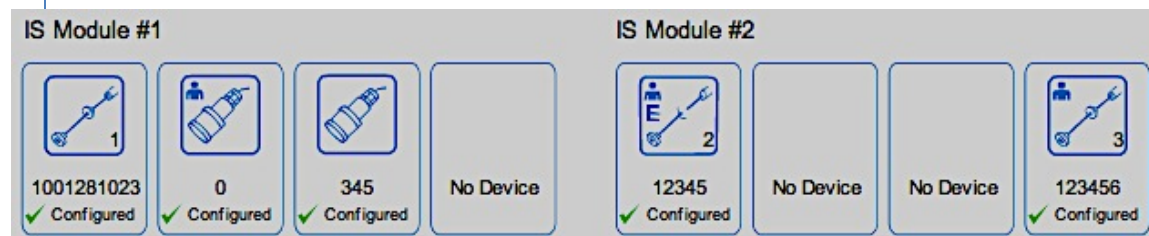


Figure 1-9 Configured Probes and Sensors

For sensors, probes, EECO probes, AST Flex probes and probes with density meters that are shown as being connected you can add/edit information by accessing the **Device Configuration** screen. LLD devices and Density probe configuration screens can also be accessed from the **Tanks Configuration** screen. For LIM devices, go to the **LIM Configuration** and **LIM Diagnostic** screens to add/edit device information.

See below for a list of possible configured devices with proper device description:



**Probe** can be auto-detected for VSmart Modules and added manually for Smart Modules.



**EECO Probe** can only be auto-detected for VSmart Modules and requires additional (manual) configuration.



**AST Flex Probe** can only be auto-detected for VSmart Modules and requires additional (manual) configuration.



**Probe with Density Meter** can be auto-detected for VSmart Modules and added manually for Smart Modules.



**Density Probe** can only be auto-detected for VSmart Modules.



**Digital Sensor** can only be auto-detected for VSmart Modules.

Please note that all sensor icons for service type are listed on the **Icon Glossary** screen which may be accessed from the Home Screen in your SiteSentinel® iSite™ system.



**Analog Sensor** can only be added manually for VSmart and Smart Module.

Analog Sensors are the same as Digital Sensors; however, please note the person image in the Analog Sensor icon. This indicates that the device must be configured manually.



**LLD Device** can only be auto-detected for Vsmart Modules.



**Unrecognized Device** cannot be recognized by the system.

For a complete glossary of icons with corresponding description, select the **Icons Glossary** tab from the Home Menu.



### 1.4.3 Adding Devices Manually

Once a module has been detected, devices can be added to the appropriate I.S. positions as indicated by the user.

1. Begin by going to **Available Devices** within the Probe/Sensor Menu.

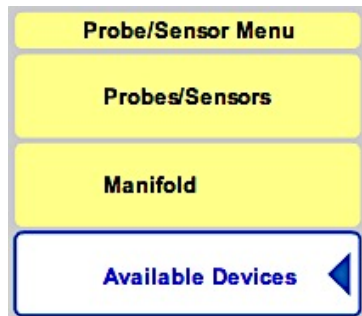


Figure 1-10 Available Devices

You can add **Analog Sensors** to a VSmart Module and to a Smart Module. For Probes and Probes with a Density Meter, you can only add these to a Smart Module.

2. In order to connect a particular device to a selected position, you must select the device you wish to configure. The selected device will be displayed with a white frame.
3. Now select the position in which the device is to be connected.
4. Save the configuration by selecting **"Apply"**.
5. Connected positions will be marked as **Assigned** and indicated by a green check mark.
6. Press **"Cancel"** to leave the screen without saving the new configuration.

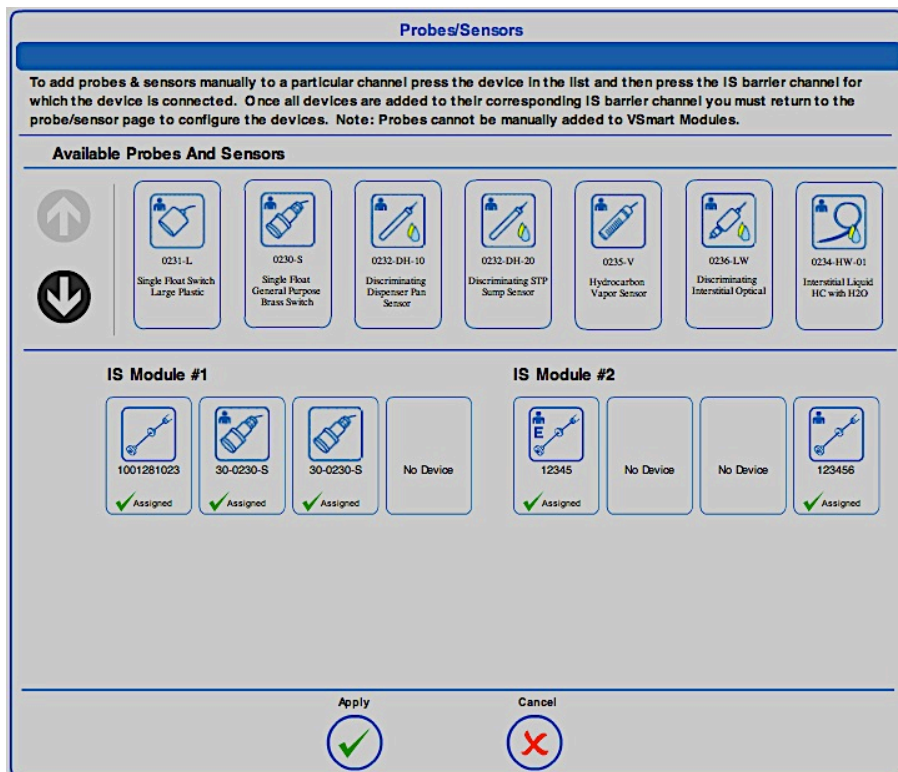


Figure 1-11 Adding Devices Manually

## 1.5 Multi-Probe and Sensor Setup

Only if a VSmart Module is connected is it possible to connect up to four (4) standard probes, three (3) LLD sensors or 16 digital sensors per one (1) channel.

Analog sensors, EMCO probes and AST probes are not supported by multi-drop function.

The multi-drop function is indicated as a pair of device icons with a number indicating how many devices are connected per one (1) multi-drop position. Multi-drop function is shown in Figure 1-12 Multi-Dropped Devices:

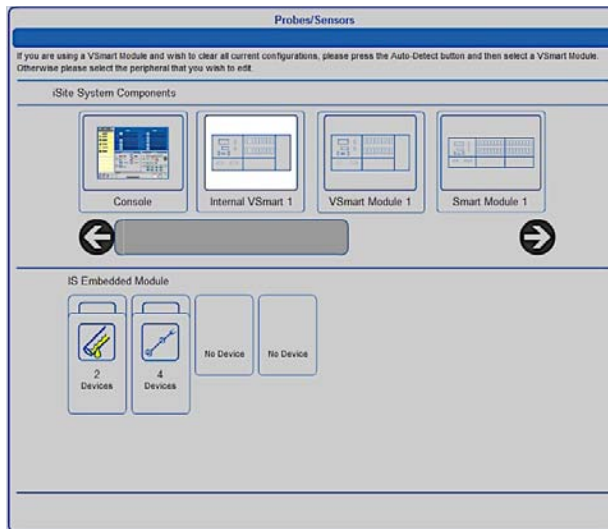


Figure 1-12 Multi-Dropped Devices

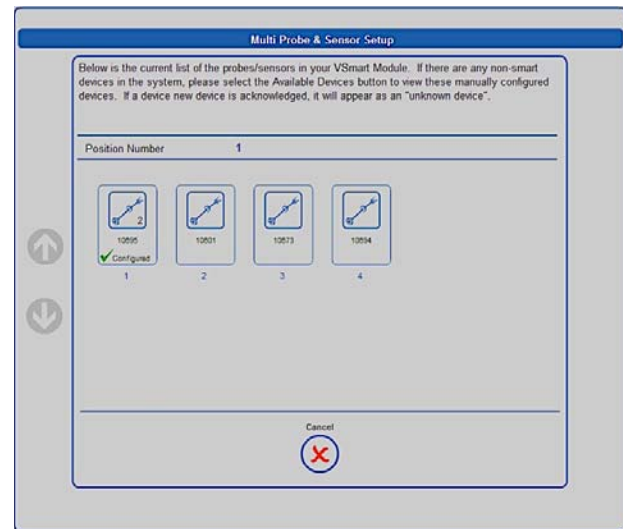


Figure 1-13 Multi-Probe and Sensor Setup

Begin by selecting the **Device** icon in the multi-dropped position. Then select the sensor or tank you are configuring. From the multi-probe and sensor setup screen, you may also delete separate devices, if desired.

You cannot run auto-detection from the multi-probe and sensor screen. Auto-detection can only be run for a position, after which all multi-dropped devices are detected.

## 1.6 Deleting Modules and Devices

The **Delete Device** function allows you to remove a selected module or device from the system configuration. This function is accessed by first clicking on the **Delete Device** tab. Then select the module (VSmart, Smart, OM4 or LIM) you wish to delete.

Upon clicking the module, a message box asking "Are you sure you want to delete the selected peripheral?" is displayed. Click **"Yes"** to delete the configured item or click **"No"** to cancel the action and maintain the current information.

Next, press **Delete Device** and select the device (Probe, Sensor or LLD) on the I.S. barrier position. Click **"Yes"** to delete the configured item or click **"No"** to cancel the action and maintain the current information.

All configuration and reports associated with the deleted device or module will also be deleted.

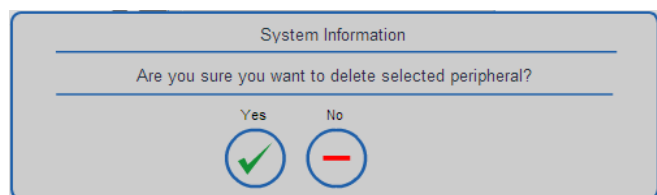


Figure 1-14 Deleting Modules

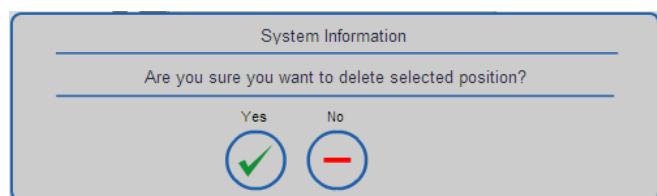
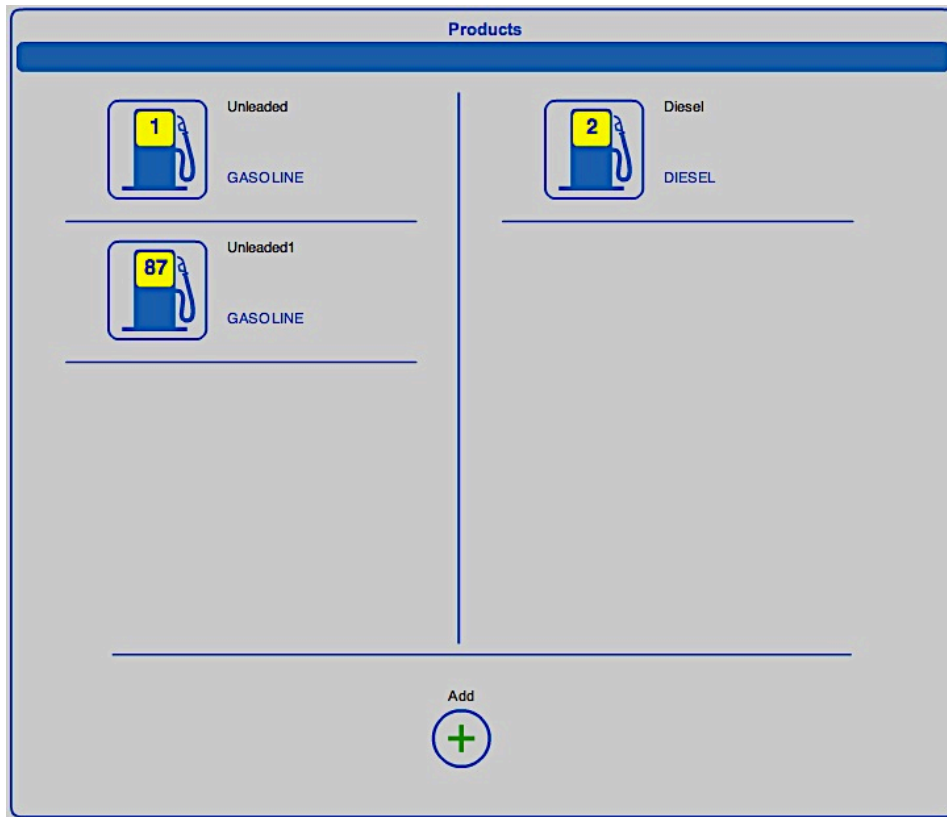


Figure 1-15 Deleting Devices

## 2 Products

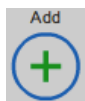


**Figure 2-1 Product Screen**

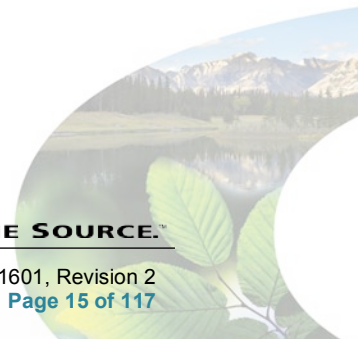
The **Products** screen allows the user to set up (add/edit/delete) the products that are at the site. All products in the system will be displayed in numerical order based on their **Product ID**. It will be possible to add blended and non-blended products, as well as other fuel-type categories. **Blended Products** are only required when using reconciliation-enabled systems (ACR).

Products must be set up in the system prior to configuring any tanks/probes.

To add a **Product**:



Begin by pressing the **Settings** button, then press the **Products** button. Next, select the **"Add"** button at the bottom middle of the screen.



## 2.1 To Add a Product Type

Additional **product types** can be added if the product in use has not been defined. This allows users to add additional product types to the system other than default values:

To do so, press **Add CTE Category**. Then enter the values or choose an option for each of the following:

- **CTE Categories List:** Allows users to choose from a list of installed categories. Once a category is selected, you may then edit the following values described below.
- **Standard CTE Category:** If left unselected, you will be required to enter the **Product Type CTE** (coefficient of terminal expansion). If checked, the system calculates CTE for the product type based upon its product density.
- **CTE Category ID:** Allows for the assignment of an ID number to a category. The numbers 0, 1 and 2 are used as default categories.
- **CTE Category Name:** Allows for the assignment of a name to a Category ID.
- **Density/API Min Value:** Minimum density or API allowed for the chosen category.
- **Density/API Max Value:** Maximum density or API allowed for the chosen category.
- **Product Type CTE:** Coefficient of thermal expansion may only be configured when the **Standard CTE Category** checkbox is selected.

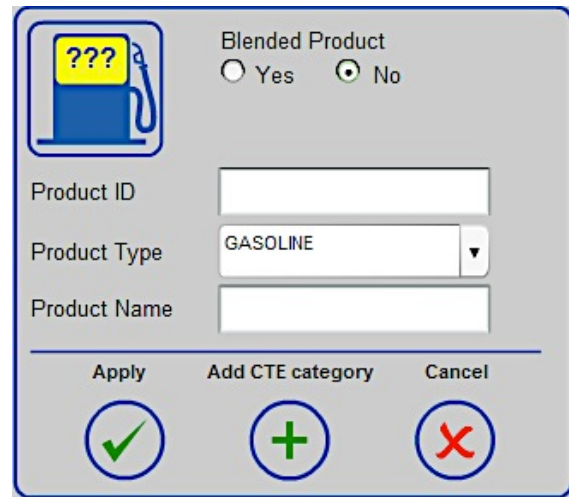


Figure 2-2 is a screenshot of the 'Product Information' form. It features a fuel pump icon with '???' on it. To the right, there is a 'Blended Product' section with radio buttons for 'Yes' and 'No' (the 'No' button is selected). Below this are three input fields: 'Product ID', 'Product Type' (which has a dropdown menu currently showing 'GASOLINE'), and 'Product Name'. At the bottom of the form are three buttons: 'Apply' (with a green checkmark icon), 'Add CTE category' (with a green plus icon), and 'Cancel' (with a red X icon).

Figure 2-2 Product Information

Press **"Apply"** to save the product type, press **"Cancel"** to discard your changes and terminate the operation.

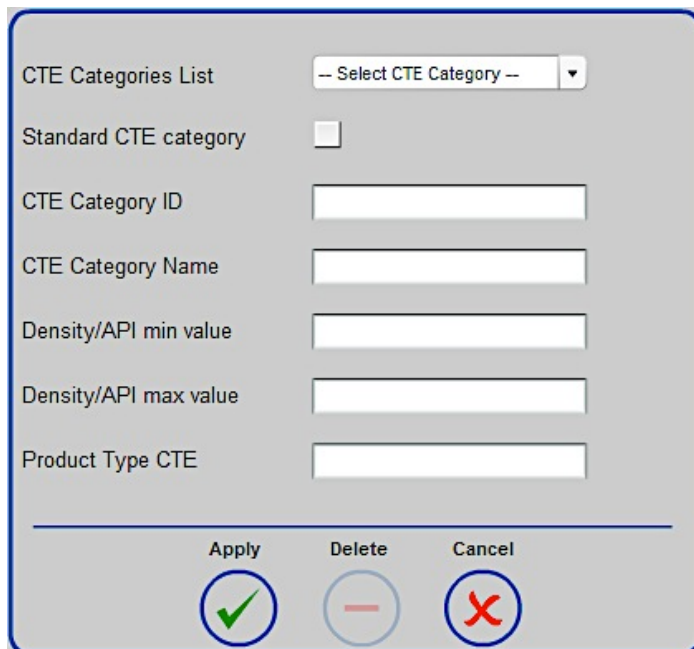


Figure 2-3 is a screenshot of the 'CTE Category Information' form. It has a 'CTE Categories List' section with a dropdown menu labeled '-- Select CTE Category --'. Below this is a 'Standard CTE category' checkbox. The form contains several input fields: 'CTE Category ID', 'CTE Category Name', 'Density/API min value', 'Density/API max value', and 'Product Type CTE'. At the bottom are three buttons: 'Apply' (with a green checkmark icon), 'Delete' (with a red minus icon), and 'Cancel' (with a red X icon).

Figure 2-3 CTE Category Information



## 2.2 To Add A Non-Blended Product

First, select **"No"** to indicate you are adding a non-blended product. Next, choose values or menu selections for each of the following:

- **Enter 2-Digit Product ID:** Identifies the product by number reference for reports and POS protocols. When using POS protocols, the Product ID must be limited to the maximum number supported by the selected POS protocol.

A list must be added for each protocol.

- **Select Product Type:** This is the type of product (e.g., Diesel, Gasoline, Oil or a user-defined product type).
- **Enter Product Name:** A user-defined entry to identify the product (e.g., Unleaded).

Press **"Apply"** to add the product to the product list.

Repeat these steps for each additional non-blended product.



Figure 2-4 Adding Non-Blended Products

## 2.3 To Add A Blended Product

**Blended Product** is a product that is created by blending two products together to create another product. Blended Products are only required when using reconciliation-enabled systems (ACR).

To add a blended product, you must first add two (2) non-blended products of the same product type.

Select **"Yes"** to Blended Product at the top of the **Product** screen; this will bring up the **Blended Product Setup**.

- **Enter 2-Digit Product ID:** Identifies the product by number reference.
- **Enter Product Name:** A user-defined entry to identify the product (Mid-Grade).
- **Select High Stock fuel:** The higher-octane fuel type (Premium).
- **Select Low Stock fuel:** The lower-octane fuel type (Unleaded).
- **Set High Stock Blend Ratio:** Enter a percentage (e.g., 60%) for the blended product and the **Low Stock** will be automatically calculated (e.g., 40%).

Example given:

Product ID: 2  
Product Name: Mid-Grade  
High Stock: Premium  
Low Stock: Unleaded  
Blend Ratio: High Stock 60%

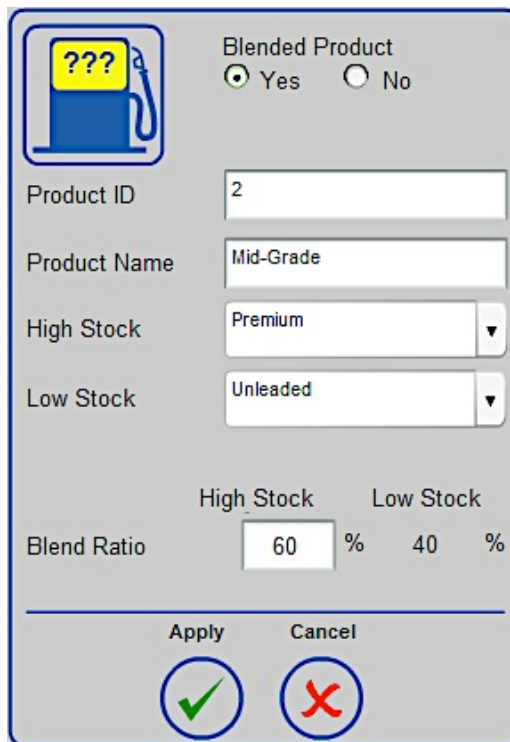


Figure 2-5 Adding Blended Products

### 3 Device Setup (Probes & Sensors)

The **Device Setup** menu allows users to configure all of the devices connected to the modules, including probes and sensors.

The auto-detect process cannot be performed on a Smart Module or non-Smart sensors. The auto-detection process can only be performed on VSmart Modules with Smart sensors, Model 924 and AST Flex Probes.

1. To begin, press **Settings**, then press the **Probes/Sensors** tab twice. Then select the **VSmart Module**.
  - a. To configure a single probe, click on **Individual Probe**.
  - b. To configure multi-dropped probes, click on the channel with the Multi-Dropped Probes.
2. Select the individual probe.

On **In-Tank Probe** screen:

**Figure 3-1 Device Setup**

From this configuration screen, you may also **"Delete"** a tank.

**Verify Density Device Values:** Allows you to access the **Density Reading** screen where you can verify current density values and detail.

**Probe Diagnostics:** Allows you to access the **Probe Diagnostics** screen where you can check float levels, probe details, probe temperature, status of error codes and density readings.

**Lock Tank:** If the **Weights and Measures Calibration Lock** option is installed, the **Lock Tank** button will be available. The Lock Tank feature allows you to secure the tank configuration. For example, when an Authorized Official selects the **Lock Tank** option, the **"Apply"** and **"Delete"** buttons disappear. The **Unlock Tank** feature may be activated by setting the **Requires H/W Key** option. This user must insert a USB drive into the USB port and restart the system. After this operation, the user can **Unlock Tank** configuration.

### 3.1 Configuring a Standard SiteSentinel® iSite™ Probe

1. **Enter Tank ID:** A numerical value identifying the tank for reports and POS protocols. When using POS protocols, the tank ID must be limited to the maximum number supported by the selected POS protocol.

A list must be added for each protocol.

2. **Enter Name:** Alphanumeric entry used to identify the tank in reports.
3. **Select Product:** Product Type in the tank.
4. **Select Tank Shape:** The SiteSentinel® iSite™ supports the following:
  - a. **Straight:** (typical vertical tanks)
  - b. **CYL:** Flat Ends (typical cylindrical steel tank)
  - c. **CYL:** Round Ends (typical cylindrical fiberglass)
  - d. **Dished:** (typical cylindrical flat/round hybrid)

When setting up multi-compartment tanks, special conditions may apply. For example, if the compartment tank has two round ends facing the same direction, you would select CYL- Flat Ends.

5. **Enter Tank Diameter:** The majority of tanks have a nominal diameter (or height for vertical tanks) listed in the manufacturer's specifications. The actual size of a tank can vary several inches from its supplied specification. Therefore, it is strongly recommended that the inside of each tank be measured carefully to ensure accurate system data.
6. **Enter Dished-End Radius (applicable if Tank Shape is set to "Dished"):** Enter the radius of the cylindrical ends of a cylindrical tank. Refer to the manufacturer's specification for dish-end radius value.
7. **Enter Capacity:** The tank volume is determined from the nominal volume supplied by the manufacturer or through measured fill.
8. **Safe Working Capacity:** Automatically calculated to 95% of tank capacity and generally used as an overfill level.
  - a. **Ullage:** Safe Working Capacity – Product Volume.
9. **Enter Product Offset:** A numerical value calculated and added to the probe product offset to electronically "center" the probe in the tank. No compensation factor is required if the tank is perfectly level or if the probe is installed at or near the center of the tank.
  - a. **Product Offset** is  $D \times \text{Pitch}$ , where  $D$  = the distance of the probe from the center of the tank.
  - b. **Pitch** equals  $(A-B) / C$ , where  $A$  = product depth at the deep (lower) end of the tank,  $B$  = product depth at the shallow (higher) end of the tank and  $C$  = the distance between  $A$  and  $B$ .
10. **Select Water Float (Yes/No/Disable):** Defines if the probe should be looking for a water float, as well as how to respond to each water float setting.
  - a. **Yes:** A water float reading is always used; if a water-float error occurs, the probe will show an error and provide no product or water levels.
  - b. **No:** The probe will not look for a water float and always show zero for water, even if a water float is installed.
  - c. **Disable:** Probe will use the water float readings unless a water float error occurs. If an error occurs, the last good water float position will be displayed. If the product level drops below the last water level, the last water level displayed is equal to the product level (product level will be water).

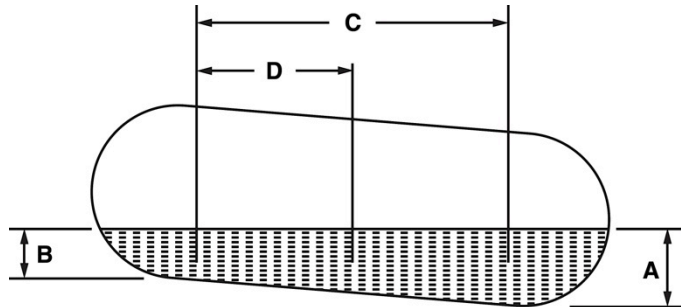


Figure 3-2 Calculating Product Offset

11. **Select Water Float Offset (if applicable):** A numerical value calculated and added to the probe water level. To calculate the **water offset**, the amount of water must be manually measured (usually by sticking the tank). The system measurement is then subtracted from the amount of water to yield the water offset. This is used to account for the float difference in the bottom of the tank.

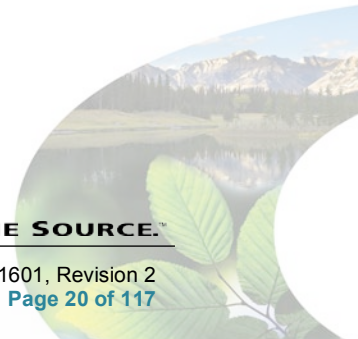
12. **Select whether or not the water float should be active during delivery:** The water float may be affected by delivery turbulence, which can cause the water float to provide false water or probe alarms. For this reason, the recommended setting is **"No"**.
13. **Stage II Vapor Recovery:** Specify the type of Vapor Recovery System installed on the site and used by the SLD algorithm. Select **No**, **Regular Nozzle** or **ORVR Nozzle** according to your application requirements.
14. **Enter Density Sensor Constants (supplied with density sensor) (if applicable):** If the system detects a density sensor, two additional fields will be available to set the density float constants A and B. If a density probe is linked, another additional field will be available.
15. **Enter Product Density/API:** The SiteSentinel® iSite™ uses the Density/API number to determine the product's expansion coefficient factor. Density/API can usually be obtained from the product distributor. The SiteSentinel® iSite™ will accept API numbers between 0 and 85, or density values 645 kg/m<sup>3</sup> to 1075 kg/m<sup>3</sup> (LPG 350-637 kg/m<sup>3</sup>). The SiteSentinel® iSite™ will automatically determine whether an entry is an API number or a density value by the range in which it falls.
  - a. **Typical API numbers for Common Liquids:**
  - b. **Regular Gasoline** = 62
  - c. **Unleaded Gasoline** = 59
  - d. **Premium Unleaded Gasoline** = 56
  - e. **Diesel** = 34
  - f. **Kerosene** = 42
16. **Enter Product Density/API Reference Temperature:** For standardized API or Density, the value for a product must be calculated at a reference temperature. For API numbers, the reference temperature is usually 60°F (15.6°C). For density, the reference temperature is 59°F (15°C) or 68°F (20°C). If the density API is measured using a hydrometer, the current product temperature must also be determined.
17. **Enter Density Tolerance (if applicable):** Available when a density sensor is detected or a density probe is linked. The recommended setting is 30%.
18. **Enter CTE (if applicable).** If a non-standard CTE Category product was selected during tank configuration, you can set up your own CTE value for the tank.
19. **Enter Delivery Timer:** Enter the time it takes the product to settle after a delivery. Turbulence occurs during and following a delivery and may cause erroneous readings. Enter a time from 0 (disable) to 59 minutes. After this time, normal probe monitoring resumes.

Delivery Timer is set at a default of 10 minutes.

20. Choose **Tank Mode**.

ACR is used when the auto-calibration and reconciliation module is in use.

21. **Enter Evaporation Factor:** Used by an ACR system exclusively when ACR tank mode is selected to compute evaporation loss as a percent of unit volume. For diesel products enter **"0"**; for unleaded products enter **".17"**.
22. Press **"Apply"** to save the tank settings.





### 3.2 Configuring an AST Flex Probe or EECO Probe

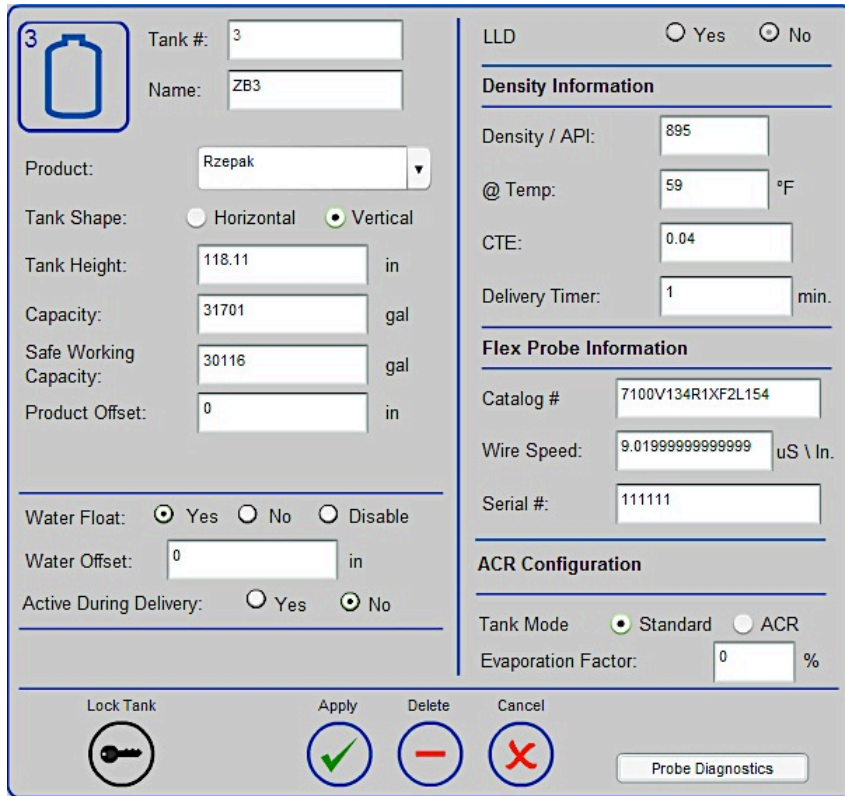


Figure 3-3 Configuring AST Flex / EECO Probes

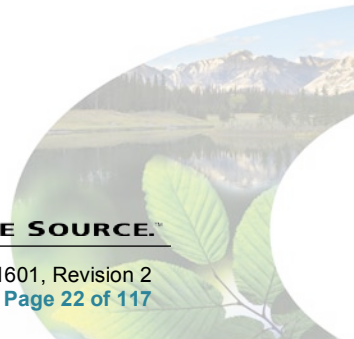
1. **Enter Tank ID:** A user-defined numerical value identifying the tank.
2. **Enter Name:** Alphanumeric entry used to identify the tank.
3. **Select Product:** Product Type in the tank.
4. **Select Tank Shape:** Shape of the tank (i.e., vertical or horizontal).
5. **Enter Tank Height:** Height of the tank.
6. **Enter Capacity:** Overall capacity of the tank.
7. **Enter Safe Working Capacity:** This value is automatically calculated at 95% of tank capacity.
8. **Enter Product Offset:** Numerical value used to accommodate for float difference.
9. Select **(Yes/No/Disable)** depending if a **water float** is installed (if applicable).
10. **Enter Water Float Offset** (if applicable): Used to accommodate for float difference at bottom of tank.
11. Select whether or not the water float should be **Active During Delivery**.
12. **Enter Product Density:** This is the density of the product compared to water.
13. **Enter Product Temperature for Density:** This is the temperature at which the product is at the indicated density.
14. **Enter Delivery Timer:** Enter the time it takes the product to settle after a delivery. Turbulence occurs during and following a delivery and may cause erroneous readings. Enter a time from 0 (disable) to 59 minutes. After this time, normal probe monitoring resumes.

Delivery Timer is set at a default of 10 minutes.

15. **Enter Catalog Number:** Number pulled from the yellow/white tag on a flex probe to identify the probe classification. For an EECO probe, this will be the model number.
16. **Enter the Wire Speed:** Number pulled from the yellow/white tag on the Flex probe or the label on the EECO probe to identify the amount of time it takes the signal to travel to the end of the probe and back.

17. **Enter the Serial Number:** Number pulled from the yellow/white tag of the flex probe or the label of the EECO probe to identify the probe.
18. **Select Tank Mode:** Choice of whether or not the tank is going to be used with ACR or as a standard tank.
19. **Enter Evaporation Factor:** Only used when ACR tank mode is selected.
20. Press **"Apply"** to save tank settings.

Water float selections will only be available once the catalog number of a probe reflecting two (2) floats is entered.



## 4 Tank Setup

May be accessed by selecting:

**Settings → Probe/Sensor → Select Module → Select Device → Tank Setup Menu → General**

### 4.1 Tank Thresholds

The **Tank Thresholds** screen allows for the definition of the value level at which an alarm/event condition is desired to occur.

**Tank Thresholds**

Tank Number: 2  
 Tank Name: ZB2  
 Product Name: on  
 Safe Working Capacity: 2761 gal

Delivery Start Threshold: 26.42 gal  
 Delivery End Threshold: 0 gal  
 Unstable Delivery Timer: 10 min.  
 Always Show Net Volume: No

High-High Product: 52.36 in  
 High Product: 49.61 in  
 Low Product: 8.27 in  
 Low-Low Product: 5.51 in  
 High-High Water: 3 in  
 High Water: 1.5 in

High Temperature: 32 °F  
 Low Temperature: 32 °F

Apply

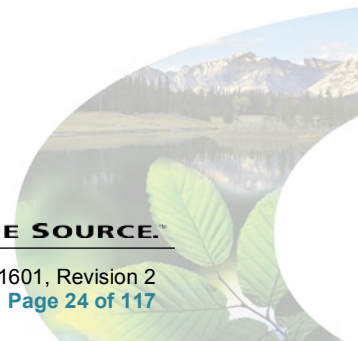
**Figure 4-1 Configuring Tank Thresholds**

To begin, press the **Thresholds** button to enter the Tank Thresholds screen, or you can access the Tank Thresholds screen after you have configured the first tank and select **"Apply."** You will be directed immediately to the Tank Thresholds screen. Next, enter a value or choose an option for each of the following:

- **Delivery Start Threshold:** Defines the amount of minimum product increase required to initiate the start of delivery detection. The recommended setting is 40 liters (10.6 gallons).
- **Delivery End Threshold:** Amount of gallons/liters added per minute to reference the end of the delivery. This value is normally 0.
- **Unstable Delivery Time Threshold (ACR Tank-Mode Enabled):** Defines the amount of time that must pass after the unstable delivery in order to prepare a stable delivery report.
- **Select Show Net Volume:** The tank probe uses up to five (5) RTDs (depending on probe) to calculate the temperature-compensated volume. The controllers will only use the RTD(s) that are below the current product level to calculate average temperature. When the product level drops below the lowest RTD in the probe, this setting will select whether or not to show net corrected volume.

- **High-High Product:** When the product level exceeds this threshold, a High-High Product alarm will occur. High-High product is used to warn of an impending overfill condition. To activate this threshold, click the check box next to the icon. Next, select whether you wish the threshold to be by **Height** or by **Volume**, then enter a value for the threshold.
- **High Product:** When the product level exceeds this threshold, a High Product alarm will occur. High product is used to warn of a potential overfill. To activate this threshold, check the box next to the icon. Next, select whether you wish the threshold to be by **Height** or by **Volume**, then enter a value for the threshold.
- **Low Product:** When the product level drops below this threshold a Low Product alarm will occur, informing the operator that product should be ordered. To activate this threshold, check the box next to the icon. Next, select whether you wish the threshold to be by **Height** or by **Volume**, then enter a value for the threshold.
- **Low-Low Product:** When the product level drops below this threshold, a Low-Low Product alarm will occur to warn the operator that the product level in the tank is critically low. This threshold can be used to turn off submersible or suction pumps (OM4 Module required) to prevent damage caused to the submersible or suction pump if it were to run dry. This threshold should be set higher than the pickup for the submersible pump or suction pipe. To activate, check the box next to the icon. Next, select whether you wish the threshold to be by **Height** or by **Volume**, then enter a value for the threshold.
- **High-High Water:** When the water level exceeds this threshold, a High-High Water alarm will occur. A High-High water alarm indicates a water level in the tank that has reached a critical state and requires attention. This threshold can be used to turn off submersible or suction pumps (OM4 Module required) to prevent the pumping of water. This threshold should be set lower than the pickup for the submersible pump or suction pipe; default is 3 in. (7.6 cm). To activate the threshold, check the box next to the icon. Next, select whether you wish the threshold to be by **Height** or by **Volume**, then enter a value for the threshold.
- **High Water:** When the water level exceeds this threshold, a High Water alarm will occur, acting as a pre-warning to High-High water. The default is 1.5 in. (3.8 cm). To activate the threshold, check the box next to the icon. Next, select whether you would like the threshold to be by **Height** or by **Volume**, then enter a value for the threshold.
- **High Temperature:** When the product temperature exceeds this threshold, a High Temperature alarm will occur. This threshold is normally used to turn off heated tanks (OM4 module required). Check the box to activate the threshold and enter a value for the threshold.
- **Low Temperature:** When the product temperature drops below this threshold a Low Temperature alarm will occur. This threshold is normally used to turn on heated tanks (OM4 Module required). Check the box to activate the threshold, then enter a value for the threshold.

High-High Water and High Water thresholds are only available when the Water Float is enabled on the In-Tank Probe screen.



## 4.2 Tank Correction Table

**Figure 4-2 Entering Tank Correction Values**

The **Tank Correction Table** allows users to adjust the measurement to volume conversion based on a tank chart. This is used if there are dents or other obstructions in the tank, or if the tank is an abnormal shape. These values are entered as height and volume measurements for particular points throughout the tank. Points may be added or removed at any time.

Correction entries do not have to be put in sequential order; the SiteSentinel® iSite™ system will organize the entries in sequential order.

1. To begin, press **Correction**.
2. Next, enter the **height** and **volume**, and press the **"Add"** button.
3. Repeat steps to add each correction point.
4. Press **"Apply"** to save table entries.

Pressing the **Remove All** button will remove all points from the table, causing the table to be blank, or select **Remove** to remove separate correction points.

### 4.2.1 Import/Export Feature

The **Import/Export** feature allows for the exportation and importation of the tank correction table when setting up tanks of the same type.

In order **To Export a Tank Chart**, press **"Export Data"**. Select file name and location for the tank chart and press **"Apply"**.

In order **To Import a Tank Chart**, press **"Import Data"**. Select a **File to Import**. Press **"Open"** to Import the file.



Press **"Apply"** to save the table information.

The **Import Data** function may be performed remotely or locally on a SiteSentinel® iSite™ system.



The **Lock Tank Correction Table** button allows the user to lock the correction table so that it cannot be modified.

### 4.3 Tank Strapping Table

The **Tank Strapping Table** is used to show the volume of the tank at certain product levels based on the current configuration of the In-Tank settings. This information is based on mathematical calculations from the tank setup (i.e., tank shape, diameter, capacity, correction chart, etc.).

Product Height: in	Volume : gal
0	0
2	61.4
4	171.8
6	312.3
8	475.6
10	657.3
12	854.3
14	1064
16	1284.5
18	1513.9
20	1750.7
22	1993.6
24	2241.2
26	2492.2
28	2745.5
30	3000
32	3254.5
34	3507.8
36	3758.8
38	4006.4
40	4249.3
42	4486.1
44	4715.5
46	4936
48	5145.7

Figure 4-3 Tank Strapping Table

On ACR-enabled tanks, the system will add additional correction values based on calculations of data received from the probe and pump sales (additional hardware required) to modify the tank-strapping table.

1. To begin, press **Tank Strapping**.
2. Next, enter a **Start** point, **Stop** point and **Step** measurement. The **step measurement** is the distance between the points shown in the tank-strapping table. The default value for this entry is 2; the lowest increment that may be entered for this value is 0.5.
3. To show the height-volume measurements throughout the tank's height for the selected start/stop range, press **"Show Points"**.

To export the generated table, select **"Export Data"**.

## 4.4 Tank Autocalibration

When tank is in ACR mode it is possible to configure autocalibration parameters and run, restart or stop the autocalibration process.

The screenshot displays the 'Autocalibration' window with the title 'Set autocalibration parameters'. It is divided into several sections:

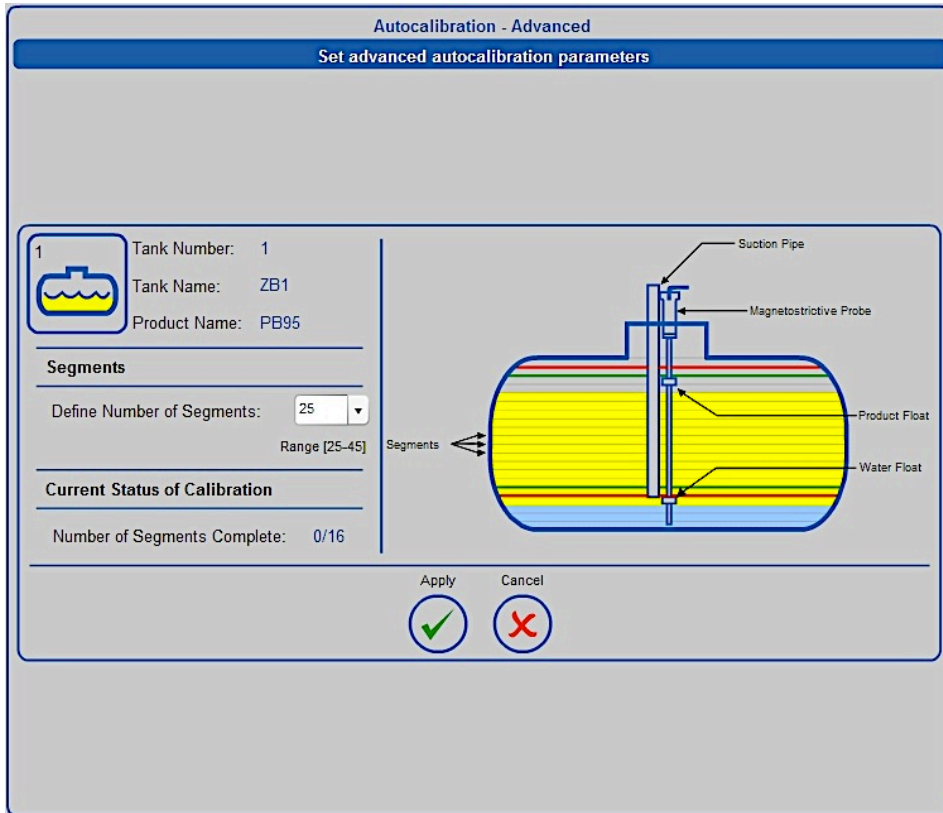
- Tank Information:** Tank Number: 1, Tank Name: ZB1, Product Name: PB95.
- Current:** Status: 0 %, Remaining: 100 %.
- Calibration state:** State: Stop. Buttons: Enable, Disable, Start.
- Calibrate:** From Volume: 3098.26 l, To Volume: 25728.65 l.
- Calibration Cycles:** Required: 5, Maximum: 5.
- Unaccounted Variance Period:** Hours: 1.

At the bottom, there is an 'Apply' button with a green checkmark icon and an 'Advanced' button.

Figure 4-4 Autocalibration

- The **Current** parameter allows you to check the actual status of the autocalibration process. The percentage (%) is calculated as a ratio of the amount of calibration cycles done in the calibration volume range and required calibration cycles for this segment.
- The **Calibration State** parameter allows you to check if the autocalibration process is in progress, and the user can Enable, Disable and Start autocalibration.
  - Enable** and **Disable** operations have no impact on the autocalibration strapping table.
  - The **Start** operation allows you to start autocalibration from the beginning; meaning that the autocalibration strapping table is calculating the base on tank configuration (like tank diameter, shape and volume) and the tank correction table. The counters for generated segments are reset to zero.
- The **Calibrate** parameter defines the definite calibration volume range in which autocalibration strapping table segments will be modified.
- The **Calibration Cycles** parameter sets the required and maximum calibration cycle values for each segment.
  - The **Required** calibration cycles value parameter defines the autocalibration status percentage (%). When each segment within the defined autocalibration volume range archives this required value, the autocalibration process is finished. Because not all segments in one autocalibration cycle are modified, some segments can be modified more than the required value.
  - The **Maximum** calibration cycles value parameter sets the number of autocalibration cycles, in which the segments will not be modified if the autocalibration process isn't complete.
- The **Unaccounted Variance Period** parameter allows you to define how many hours will be calculated during reconciliation for unaccounted variance volume.

#### 4.4.1 Advanced Autocalibration Parameters



**Figure 4-5 Advanced Autocalibration Parameters**

- The **Segments** parameter is used to define the number of segments (in a range between 25 and 45) the tank height will be divided into during the autocalibration process. The tank height is divided for equal segments. Tank height where one segment is ending and another segment begins is called the **Strapping Point**. The table of strapping point (tank height and volume) is called the **Strapping Table**. The yellow product color on the picture shows the autocalibration range, which is defined by “From volume” and “To volume” during configuration.
- The **Current Status of Calibration** displays how many segments in the autocalibration range reach the required calibration cycles value.



## 4.5 Alarm Actions (In-Tank)

This allows users to determine the actions taken when the alarm/event-condition occurs. Each tank is set up individually in this chart. Previous tank settings can be imported here, as well.

Figure 4-6 Alarm Action Details

If using email, fax or SMS, users must set up options in the Address Book prior to establishing Alarm Actions. See Email & SMS section for information on how to set up these options. See Address Book section for information on how to set up contacts.

### 4.5.1 Alarms/Events



**Product High-High:** Occurs when product in the tank is equal to or exceeds what is defined as the Product High-High Threshold.



**Product High:** Occurs when product in the tank is equal to or exceeds what is defined as the Product High Threshold.



**Product Low-Low:** Occurs when product in the tank is equal to or less than what is defined as the Product Low-Low Threshold.



**Water High-High:** Occurs when product in the tank is equal to or exceeds what is defined as the Water High-High Threshold.



**Water High:** Occurs when product in the tank is equal to or exceeds what is defined as the Water High Threshold.



**Probe Failure:** Occurs when the probe does not see all or part of the probe data.



**Fail RTD/Thermistor:** Occurs when the probe temperature-sensing circuiting is not working properly (i.e., temperature corrected product level could be off).



**Delivery Start/Finish:** Occurs when a delivery is detected.



**In-Tank Leak Test Failure:** Occurs when leak test has failed.



**In-Tank Test Warning:** Occurs when SiteSentinel® iSite™ has not been able to run a complete leak test in the defined period.



**Density Variation Warning:** Occurs when the density tolerance level is greater than the defined density level.



**Theft:** Occurs when the product has been detected to leave the tank when the SiteSentinel® iSite™ is set to close.



**High Temperature:** Occurs when the product in the tank is equal to or less than its defined High Temperature Threshold.



**Low Temperature:** Occurs when the product in the tank is equal to or less than its defined Low Temperature threshold.



**LLD Leak Test Failed:** There are separate alarms for the 0.1 and the 0.2 GPH LLD Leak Test Failed alarm.



**LLD 0.2 Periodic Failure:** Occurs when 0.2 LLD leak test should be generated, but the time frame in which this was to occur expired and the passed test was not generated.



**LLD 0.1 Periodic Failure:** Alarm is generated when the time frame during which 0.1 LLD leak test should be generated has expired and any passed test wasn't generated.



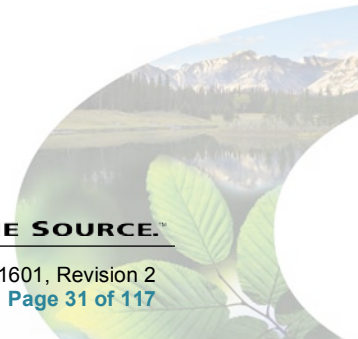
**LLD Sensor Failure:** Alarm is generated when LLD Sensor reports any hardware error.

For a complete glossary of icons with corresponding description, select the **Icons Glossary** tab from the Home Menu.

## 4.5.2 Alarm Actions

Alarm Action configuration can be imported from other tank configuration. Select the tank from the **Setup of the Tank Number (#)** dropdown list and press the **"Import"** button.


- **Audible Alarm:** Will sound the internal buzzer when an Alarm/Event occurs. Buzzer duration can be changed in **Settings → System Preferences → System** and will be global to all audible Alarm/Events.
- **Visual Alarm:** Can perform action on an external visual alarm connected to the special terminal in the SiteSentinel® iSite™.
- **Print on Event:**
  - **Start:** SiteSentinel® iSite™ will print Alarm/Event when an Alarm/Event starts
  - **End:** SiteSentinel® iSite™ will print Alarm/Event when an Alarm/Event ends
- **Internal Output Contacts:**
  - **Internal Output Contacts 1** will close when an Alarm/Event occurs
  - **Internal Output Contacts 2** will close when an Alarm/Event occurs
- **Fax:** Maximum of five (5) contacts can be faxed when an Alarm/Event occurs
- **Email:** Maximum of five (5) contacts can be emailed when an Alarm/Event occurs
- **SMS:** Maximum of five (5) contacts can be notified via text message when an Alarm/Event occurs
- **OM4 Output Relay:** OM4 relay position(s) will toggle when an Alarm/Event occurs; OM4 relay logic can be changed in **Settings → System → Preferences → System** and will be global to all OM4 Alarm/Events.
- **Notification Settings:** Used to define contacts when Fax, Email and SMS is selected, to define the output end of an event when Internal Output Contact is selected, and to define OM4 relay positions when OM4 Output Module is selected.
- **Escalate Alarm:** Used to define the contacts to Fax, Email, SMS when Alarm/Event has not been acknowledged or the Event ended.



### 4.5.3 Configuring Alarm Action Notifications

The screenshot displays the 'Alarm Setup Details' window for Tank Name 't1' and Product Name 'Premium'. The 'Alarm event' is set to 'Product High-High'. The interface includes sections for 'Fax', 'Email', and 'SMS', each with a contact selection icon (a person silhouette). The 'Internal output contacts' section has checkboxes for 'Turn off position only at the end of event' and 'Enable output contacts configuration with alarms active'. The 'OM4 output module' section shows four modules (R1, R2, R3, R4) with checkboxes for 'Turn off position only at the end of event' and 'Enable output contacts configuration with alarms active'. The right pane shows the 'Address Book' with a list of contacts and a search bar.

Figure 4-7 Configuring Alarm Action Notifications

1. Press **Settings**
2. Press **Alarm Actions**
3. Select tank at top of the screen
4. Select Alarm Action for each **Alarm Event** by using the checkbox
5. Press **Details**
6. Press  icon under fax (if applicable)
7. Select recipient from **Address Book**
8. Press the silhouette icon under Email (if applicable)
9. Select recipient from **Address Book**
10. Press the silhouette icon under SMS (if applicable)
11. Select recipient from **Address Book**
12. Select whether or not to turn off internal relay only at end of event (checkbox is located in the top-right corner of screen)
13. Select OM4 Relay position to turn on for an event
14. Select whether or not to turn off OM4 Relay only at end of event under relay position
15. Press **"Apply"**
16. Repeat steps for each alarm event
17. Press **"Apply"** to save table setting
18. Repeat Steps 1-17 for each tank

#### 4.5.4 Configuring Escalation Alarms

The screenshot displays two side-by-side windows from the OPW system interface.


**Event Escalation Details (Left Window):**

- Header:** Event Escalation Details, Serial #7025164
- Fields:** Tank Number, Tank Name: 11, Product Name: Premium
- Alarm event:** Product High-High
- Left Panel:** Contains sections for Fax, E-mail, and SMS, each with a silhouette icon and five contact selection slots (Contact 1 to Contact 5).
- Right Panel:** 'Halt Escalation on:' with radio buttons for ACK (selected) and Event End / Service Remediation. Below is 'Escalation Time Intervals' with three sections: Escalation #1, #2, and #3. Each section has radio buttons for mins, hours, days, weeks, and mths.
- Bottom:** An 'Apply' button with a green checkmark icon.

**Address Book (Right Window):**

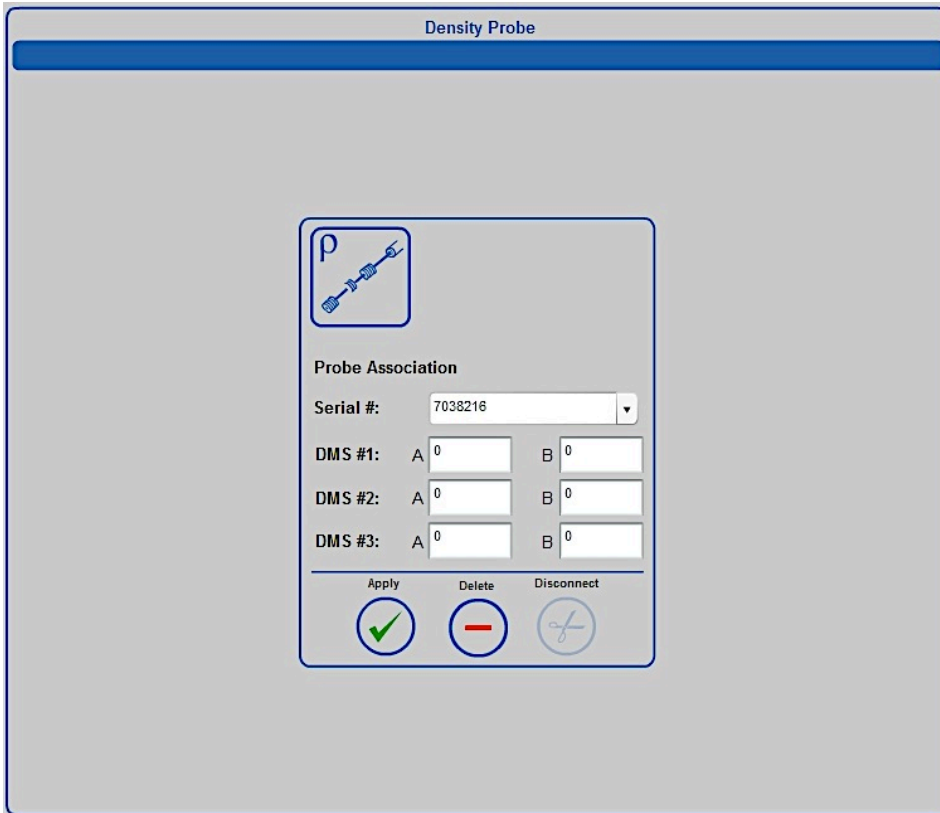
- Header:** Address Book
- Text:** Select up to five recipients for alarm action notification. When the list is complete, press 'Apply' to return to the contact setup screen.
- Left Panel:** Shows a selected contact: Robert Raczak, Administrator. Below are fields for Company (OPW/FMS), Phone (4106633), Fax (4106590), Email (rraczak@opw-fms.com), and SMS (123456).
- Right Panel:** Five empty slots for Contact 1 through Contact 5.
- Bottom:** 'Apply' (green checkmark) and 'Delete' (red minus) buttons.
- Navigation:** A vertical list of letters (A-Z) on the far right for quick navigation.

Figure 4-8 Configuring Escalation Alarm Action

1. Press **Settings**
2. Press **Alarm Actions**
3. Select **Tank** at the top of the screen
4. Select Alarm Action for each **Alarm Event** by using the checkbox
5. Press **Setup**
6. Press  icon under fax (if applicable)
7. Select recipient from the **Address Book**
8. Press the silhouette icon under Email (if applicable)
9. Select recipient from the **Address Book**
10. Press the silhouette icon under SMS (if applicable)
11. Select recipient from the **Address Book**
12. Select Escalation level (#1, 2 or 3) and enter number of minutes, hours, days, weeks or month
13. Press **"Apply"**
14. Repeat steps for each alarm event
15. Press **"Apply"** to save table settings
16. Repeat Steps 1-15 for each tank



## 4.6 Density Probe



The screenshot shows a software interface titled "Density Probe". Inside, there is a section with a probe icon and the text "Probe Association". Below this, there is a "Serial #" dropdown menu showing "7038216". Underneath, there are three rows labeled "DMS #1:", "DMS #2:", and "DMS #3:". Each row has two input fields, "A" and "B", both containing the value "0". At the bottom of this section are three buttons: "Apply" (with a green checkmark icon), "Delete" (with a red minus icon), and "Disconnect" (with a scissors icon).

**Figure 4-9 Density Probe Screen**

On this screen, the user can connect/disconnect density probes to the tank. The **Serial #** dropdown list displays the available density probes. After selecting a density probe **Serial #** and pressing "**Apply**," you can identify the selected density problem within a specific tank. On this screen, you can also configure A and B factors for each density sensor on the probe.

## 5 Volumetric Line Leak Detection (LLD) Sensor

Designed to detect a leak in the pressurized product pipe by utilizing the submersible turbine pump (STP) in order to monitor volume changes in the product piping when no one is dispensing fuel. The LLD utilizes an internal flow sensor to detect and measure any volume changes in product pipe and will initiate an alarm condition if an actual leak is detected.

### 5.1 Auto Detection

The first step in configuring your SiteSentinel® iSite™ and Line Leak Detection sensor is to detect the modules connected to your SiteSentinel® iSite™'s system.

Refer to Section 1.1 on page 11 for Auto Detection instructions, which should have already been completed by this point.

After Auto Detecting the VSmart Module, you must now Auto Detect the remaining devices connected to the SiteSentinel® iSite™ console. In the case of a LLD installation this will include one or more Line Leak Detection (LLD) sensors together with a **Line Leak Interface Module (LIM)**, together with any tank probes and sensors that are connected to the system.

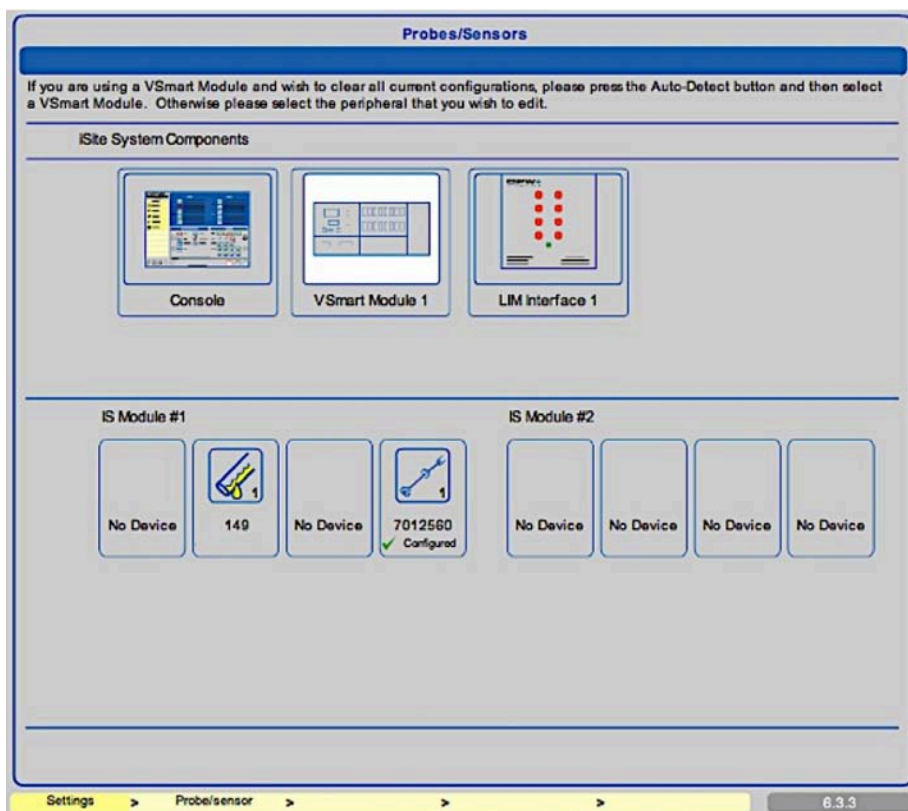


Figure 5-1 LLD Sensor Configured to a Tank

In the example above, one LLD sensor has been discovered on Intrinsically Safe (I.S.) Module channel 2, with a serial number of 149 and a probe has been detected on channel 4 of the same I.S. Module. Also shown under the SiteSentinel® **iSite System Components** is a LIM Module connected via Petro-Net™.

No configuration of the LIM should be carried out at this stage.

## 5.2 LLD Sensor Setup

**Figure 5-2 Linking LLD Sensor to Tank During Configuration Option**

This configuration screen will only be available if there is a sensor eligible to configure to a specific tank during tank configuration.

The **LLD Sensor** menu option will be highlighted, denoting the fact that the tank parameters have been configured, saved and that the system has detected an available LLD Sensor connected to a VSmart channel. Select the LLD Sensor icon menu button in order to enter the LLD configuration screen.

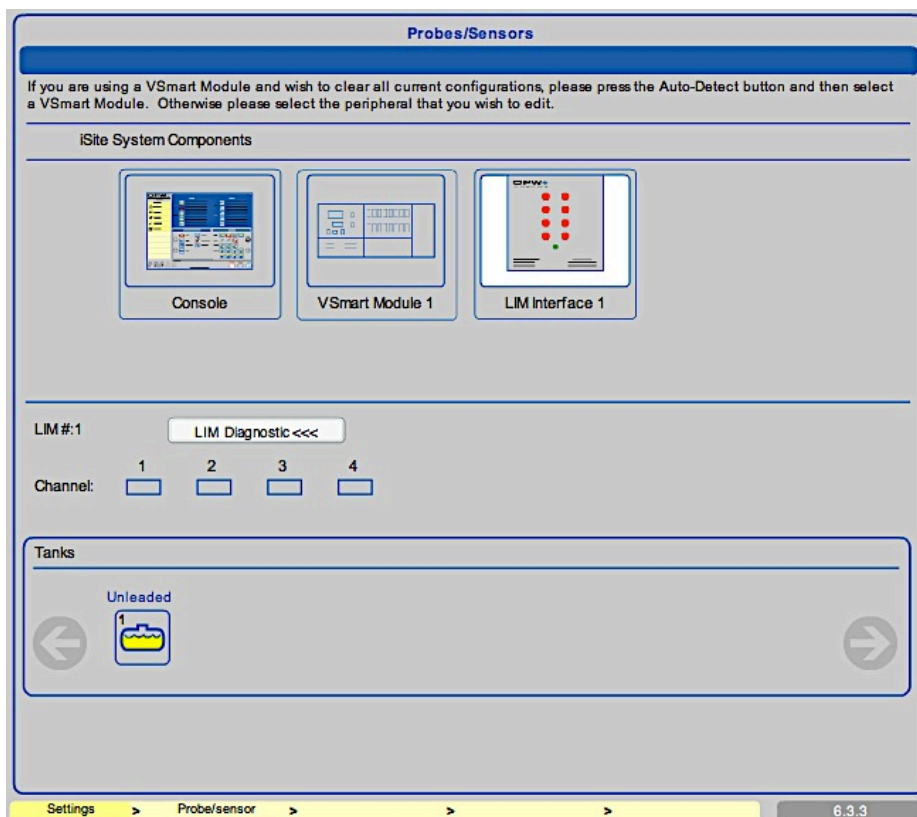
The **LLD Serial #** dropdown menu on the screen above displays the serial numbers of all LLD sensors that are available to be connected to the **Submersible Turbine Pump (STP)** installed in the tank being configured; the appropriate serial number should be chosen and applied.

Please note that the **LIM Address** and **LIM Channel** are not assigned. This is because an STP may be wired to any available LIM device and an available channel on a LIM. There are four (4) channels total.

The next and final stage of the configuration process is executed in the **Probes and Sensors Setup** screen; see **1.1.1 LIM Setup**.



## 5.2.1 Line-Leak Interface Module (LIM) Setup



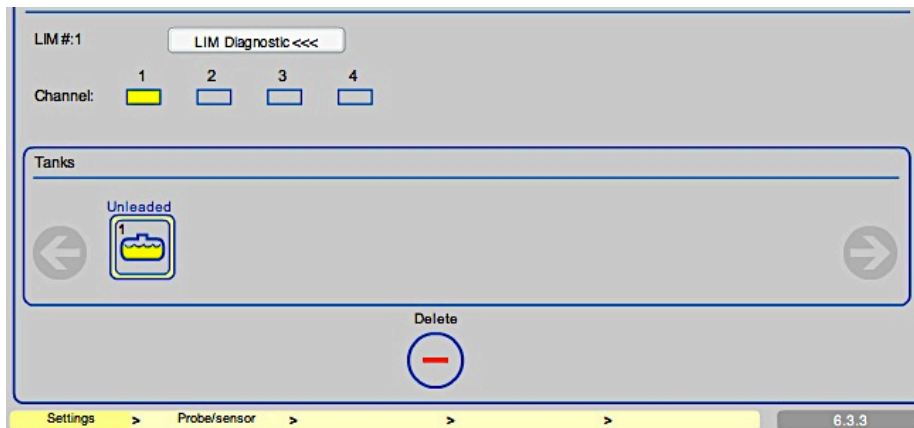
**Figure 5-3 LIM Interface**

On the **Probes/Sensors** setup screen, click on the LIM that was detected earlier. In this case, as shown above, only one LIM is available; although, please note that the SiteSentinel® iSite™ can support a maximum of four (4) LIMs.

Now, in the center of the screen select the physical LIM channel on the LIM device and map it to the Tank from the available tanks shown at the bottom of the screen; this will indicate to the system that the STP fitted in the chosen tank is controlled by the relay on the channel chosen.

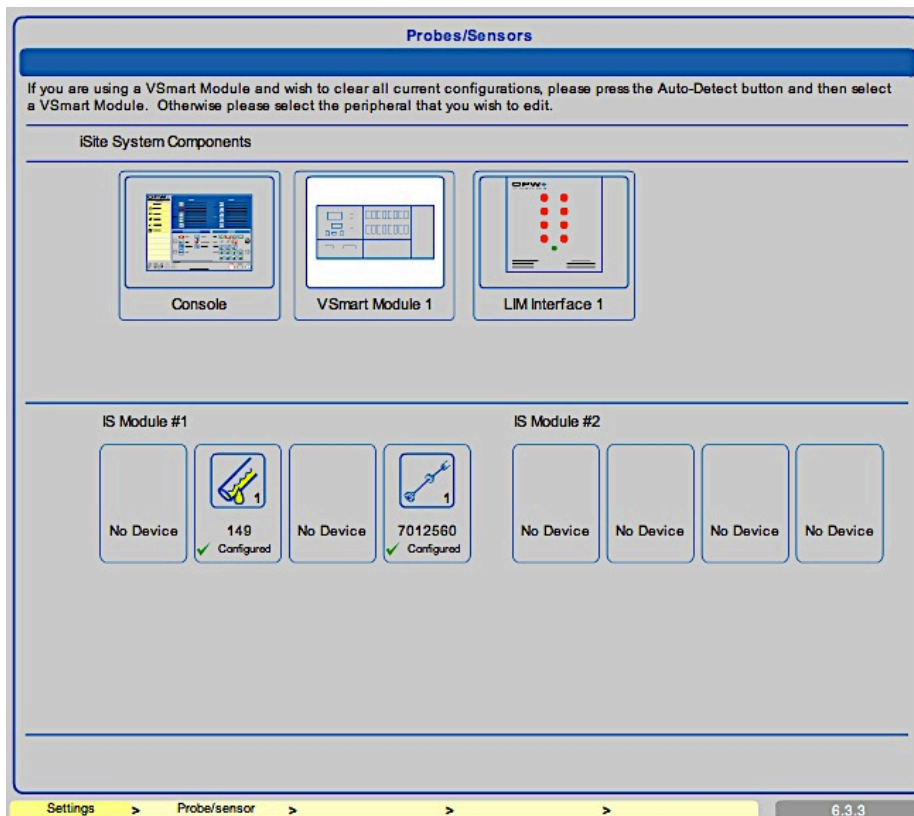
In this case, the LIM Channel 1 is chosen and Tank 1 is chosen. When the **“Apply”** button is clicked a dialogue box will be presented confirming that the selected LIM channel should be connected to the selected Tank. Go ahead and click **“Yes”** at this point to complete the setup.

## 5.2.2 Confirming Correct LIM/LLD Configuration



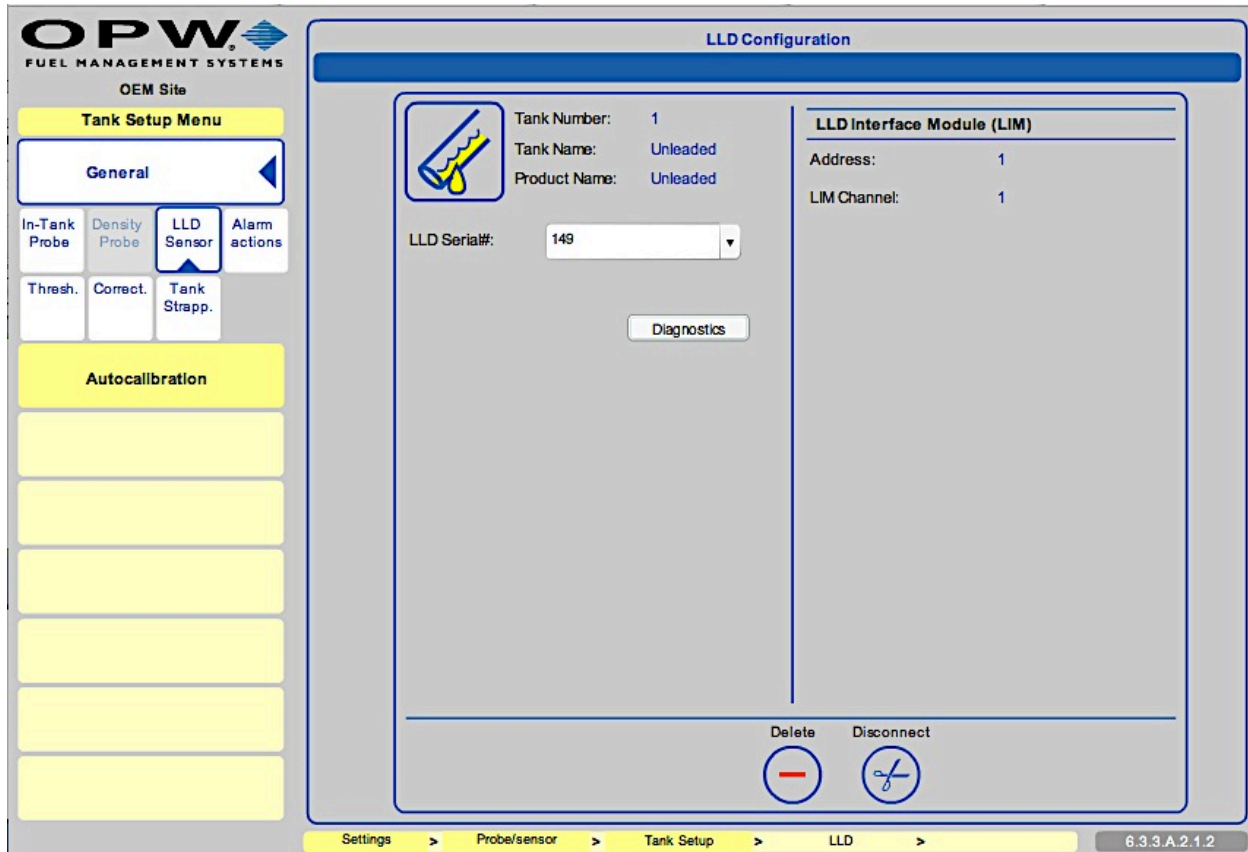
**Figure 5-4 LIM Channel Connected**

Once configured, the LIM channel will display in yellow signifying that the selected channel is associated with the Tank, also highlighted with a yellow border.



**Figure 5-5 Sensor Connected**

Clicking back on the VSmart Module will now show the probe and the LLD Sensor configured in the system.



**Figure 5-6 LLD Configuration**

To verify that the LLD is correctly configured to the correct LIM Address and LIM Channel, revisit the LLD Sensor menu option located within the Tank Setup Menu. Here you will see that the newly configured LLD is associated with LIM #1 (Address 1) and the physical LIM Channel (#1).

The **Diagnostics** button allows the user to view the selected LLD's **Base Data**, **Flow**, **Parameters** and **Configuration** setup.

**Line Leak Settings**

Tank Number:

LIM Address:  LLD Serial #:

LIM Channel:

Leak Test Rate	Test Duration:	Warn after	Non Technician Retest Count	STP Shutdown
3.0 Gph	N/A	N/A	<input type="text" value="2"/> 0 - 5 max	<input checked="" type="radio"/> Always after max retests
0.2 Gph	<input type="text" value="12"/> h <input type="text" value="00"/> min	<input type="text" value="14"/> days	N/A <input type="radio"/> Never <input checked="" type="radio"/> Always	<input type="radio"/> After Warning Period
0.1 Gph	<input type="text" value="12"/> h <input type="text" value="00"/> min	<input type="text" value="180"/> days	N/A <input type="radio"/> Never <input checked="" type="radio"/> Always	<input type="radio"/> After Warning Period

**Line Leak Options**

☒ **Auto Test**  
☐ **Manual Test**

☒ 3.0 Gph ☒ 0.2 Gph ☒ 0.1 Gph  
☐ 3.0 Gph ☐ 0.2 Gph ☐ 0.1 Gph

☒ Run Now ☐ Schedule test

Date:    Time:  :  ☐ AM ☐ PM

Apply

Settings > Line Leak Settings >

6.3.6.7.4

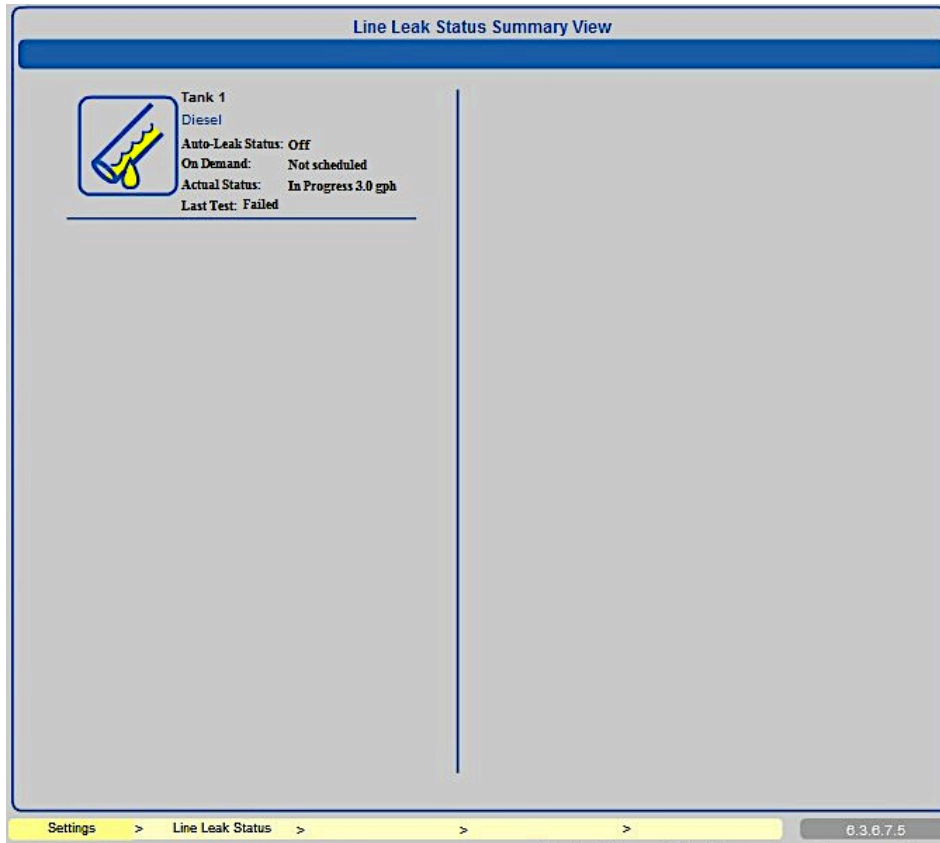
**Figure 5-7 Line Leak Settings**

The LLD test operational parameters cannot be set up without a valid Technician login; since this set up is critical to the operation of the site, it cannot even be accessed by the Administrator. A Technician login should be configured by the administrator.

The test durations for 0.1 GPH and 0.2 GPH tests should be left at 12 h and 00 min and the warning periods should be also be left at 14 days and 180 days. It remains the choice of the station owner as to whether an STP should be shut down upon failure of one of the precision (0.1 GPH or 0.2 GPH) tests. The choices offered are as shown: Never, Always or only after no successful test has been performed beyond the configured warning period.

Dependent upon the option purchased, the system can be put into an **Auto Test** mode whereby it will attempt to perform a 0.2 GPH and a 0.1 GPH precision test every time the submersible shuts-off in conjunction with the EPA-mandated 3.0 GPH catastrophic test.

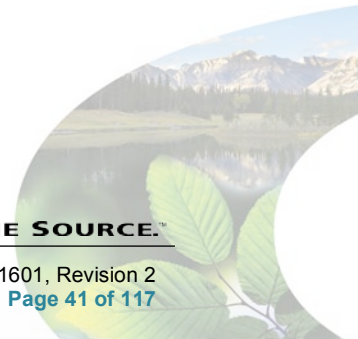
Additionally, the option to run a **Manual Test** for any of the leak rates is provided for non-Technician logins.



**Figure 5-8 Line Leak Status Summary View**

Check the current status of any configured line on the system by visiting the Line Leak Status screen.

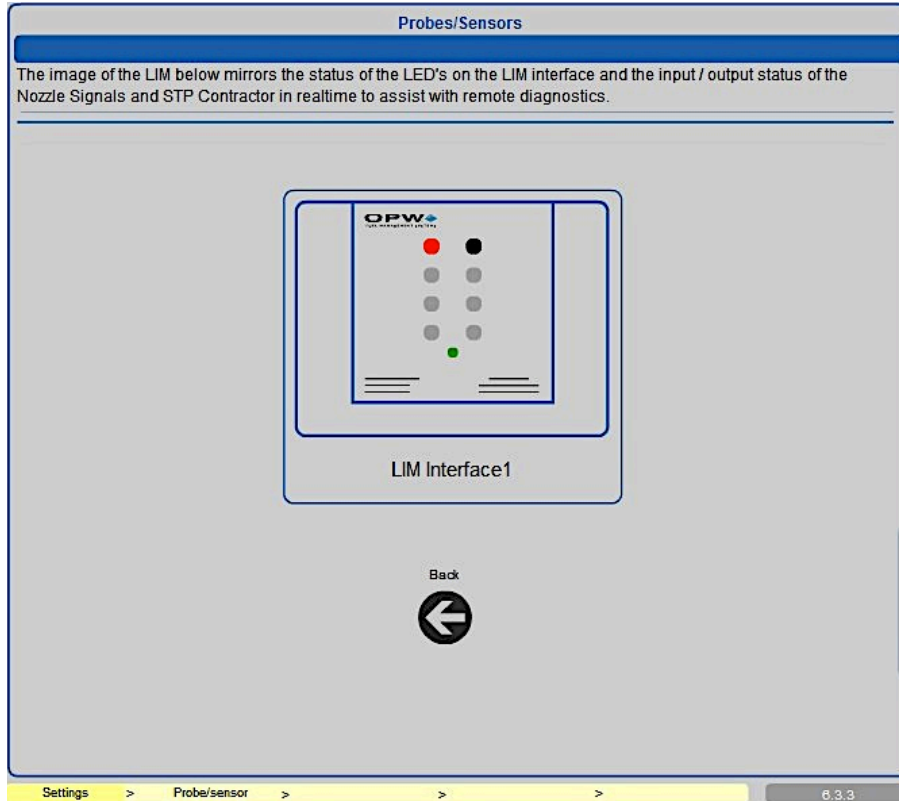
Please note that a Technician's Login is not required to access this information.





### 5.2.3 LIM Diagnostics

The **LIM Diagnostics** screen displays the current LIM status refreshing automatically every five (5) seconds. The left side of the LIM interface image displays the **nozzle signal**, while the right side of the LIM interface image displays the **STP contractors**.



**Figure 5-9 LIM Diagnostics Interface**

Under normal conditions of use, the LIM module LED input/output status lights will show the following:

**GREEN/GREEN:** The dispenser hook signal is activated and the STP controller signals the pump to turn on.

Otherwise, in the input LED shows RED, this indicates that the SiteSentinel® iSite™ is in control and performing line diagnostics.

**RED/GREEN:** The SiteSentinel® iSite™ is performing a line leak test.

During 0.2 or 0.1 GPH scheduled precision tests, the RED LED will stay on longer (maybe several hours).

**GREEN/RED:** Indicates that the dispenser hook signal is detected, but an alarm condition was detected, and the LIM blocks the signal to the STP and the pump will not turn ON.

Please note that the customer always takes priority if no problem is detected in the line, thus canceling any test in progress.

If the HV INPUT does not detect high voltage feedback from the STP contactor when the relay is closed, the LIM module will flash, indicating contactor failure.

If the HV INPUT continues to detect high voltage feedback from the STP after the relay is opened, the LIM module will flash, indicating contactor fused off and there is a problem with the line.

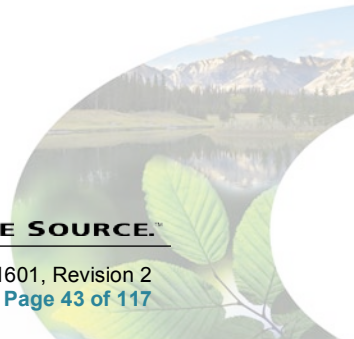
A 3.0 GPH catastrophic test is performed after activation of the STP and if there is no customer hook request for the product associated.

#### **5.2.4 STP Error**

In the event that two (2) STP's are supplying a single manifolded line and the system experiences an STP OFF error condition (only on the STP with the deadhead valve), then the system is in alarm and is unable to run an LLD 3.0 GPH catastrophic test.

Please note that while the alarm condition has been raised, the STP is permanently running and the system has no control over the STP via the LIM relay in this scenario.

However, in the event that two (2) STP's are supplying a single manifolded line and the system experiences an STP OFF error condition (on the STP with an LLD sensor fitted), then the system's alarm condition will raise, but the LLD 3.0 GPH catastrophic test will still run while the STP is permanently running.



## 6 Sensors

### 6.1 Smart Sensors

After the auto-detection process is complete, the installed Smart Sensors should be available for programming. Smart Sensors will require very little programming in the system, as most of the sensor's information is provided to the SiteSentinel® iSite™ console via the IntelliSense™ board on the sensor.

Figure 6-1 Smart Sensor Settings

#### 6.1.1 Programming Smart Sensors

1. Go to **Settings**
2. Go to **Probes/Sensors**
3. Choose the VSmart Module that the sensor is connected to
4. Choose the Channel the sensor is located on, if multi-dropped; if not, choose sensor
5. Choose the sensor to program
6. Enter a **Description** for the sensor. This could be additional information regarding the sensor's location, sensor name, tank name or any other identifying information
7. Choose association:
  - a. **Tank:** In order to link sensor to a specific tank
    - i. Choose the tank where the sensor is located
  - b. **Dispenser:** In order to link sensor to a specific dispenser
    - i. Choose the dispenser where the sensor is located
  - c. **Site**
8. Press **"Apply"** to save these sensor's settings
9. Press **Alarm Actions**

- a. Choose the **Actions** that need to be triggered in an alarm condition.
- b. If fax, Email, SMS or OM4 are chosen:
  - i. Press **Details**
  - ii. Choose the **Recipient** for fax, Email or SMS or choose OM4 position to be triggered in the event of an alarm condition
- c. Press **“Apply”** to save settings

Repeat Steps 1-9 for each additional sensor you wish to program.

Smart Sensors do not require additional configuration for thresholds. The **threshold configuration** is automatically saved during auto-detection but is not active. In order to active these threshold configurations, you must go to the Sensor Settings screen and press the “Apply” button.

## 6.2 Non-Smart Sensors

Sensor Settings

This sensor is not configured. Please set its thresholds and press 'Apply' to configure it!

Sensor Type: Sump Sensor - Float Switch (Large Plastic)

Sensor Model: 30-0231-L

Sensor Serial: 1234

IS Module

---

Device: V-Smart 1      Position: 3

---

Sensor Number: 5      ☐ Disabled

---

Description:

---

Association

☐ Tank

☐ Dispenser

☒ Site

Channel: 0

---

Upper Threshold ☒ Not Used

---

Limit: 5 Volts

Alarm Start Delay: 0 Secs

Alarm End Delay: 0 Secs

Hysteresis: 0.1 Volts

---

Lower Threshold ☐ Not Used

---

Limit: 2.5 Volts

Alarm Start Delay: 0 Secs

Alarm End Delay: 0 Secs

Hysteresis: 0.1 Volts

---

Current Sensor Reading:

---

Level: ---

Figure 6-2 Non-Smart Sensor Settings

## 6.2.1 Programming Non-Smart Sensors

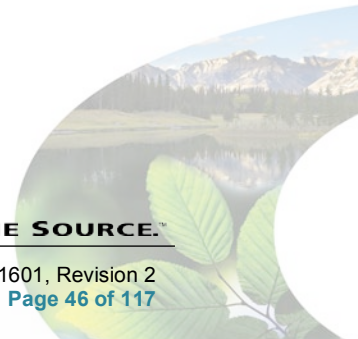
**Non-Smart Sensors** are sensors that do not have the IntelliSense™ board on the sensor wiring. These sensors must be added manually to the system and then programmed.

1. Go to Settings
2. Go to **Probes/Sensors**
3. Choose **VSmart**
4. Choose **Available Devices**
5. Choose sensor type from top of screen
6. Choose the **Channel** that the sensor is connected to
7. Press **“Apply”** to save settings
8. Press **Probes/Sensors**
9. Choose the sensor that was just installed on the channel
10. Enter **Sensor Serial Number**
11. Enter **Sensor Description**
12. Choose Association
  - a. **Tank:** To link sensor to a specific tank
    - i. Choose the tank where the sensor is located
  - b. **Dispenser:** To link sensor to a specific dispenser
    - i. Choose the dispenser where the sensor is located
  - c. **Site**
13. Choose **Thresholds** to be configured

For Non-Smart Sensor users, you will need to set up Upper Thresholds, Lower Thresholds or both, depending on the sensor type. If configuring a single float switch sensor, the upper threshold will normally be disabled. Default threshold values should not be changed unless the user wants the alarm to trigger sooner or later than the current value.

14. Press **“Apply”** to save settings
15. Press **Alarm Actions**
  - a. Choose **Actions** that need to be triggered in alarm condition
  - b. If fax, Email, SMS or OM4 are chosen:
    - i. Press **Details**.
    - ii. Choose **Recipient** for fax, Email or SMS, or choose OM4 position to be triggered in alarm condition
  - a. Press **“Apply”** to save settings

Repeat Steps 1-15 for each additional sensor you wish to program.





## 7 Add/Edit New Users

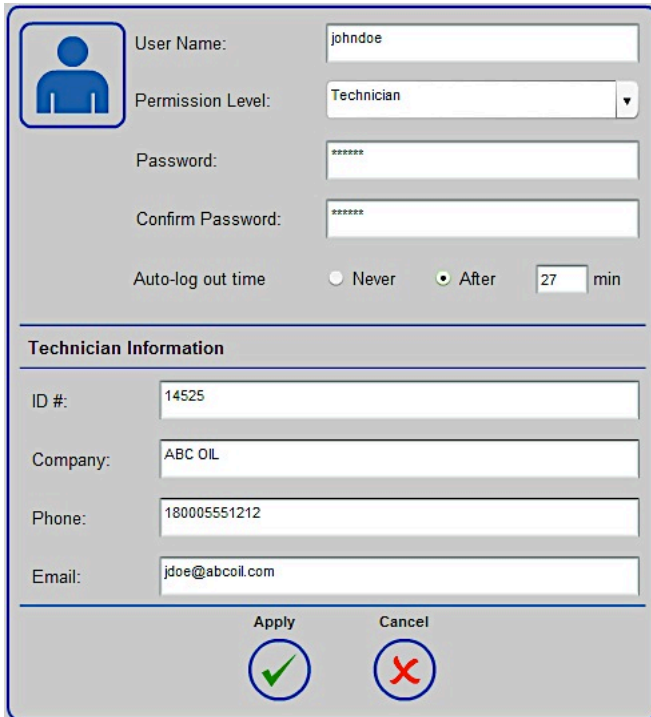


Figure 7-1 Adding/Editing Users

### 7.1 Security

The **Security** section allows users to add or edit new users in the system. These security names are used to log into the system at the login screen.

1. Press **Settings**
2. Press **System**
3. Press the **Security** button
4. Press **User Accounts**
5. Press **Create a New Account**
6. Enter **Username**: Unique to each user configured in the system. This name is used to log into the system.
7. Select **Permission Level**: Used to grant each user different access levels to the system. The **Access Levels** section under the **Security** button determines this level. This level restricts users to certain screens on the SiteSentinel® iSite™ system.
8. Select **Auto-Logout Time**: Determines system's automatic behavior for logged-in users who show inactivity on the console screen after a defined period of time. If the "After" option is selected, the system will automatically log out after the defined time in minutes, or if the "Never" option is selected, the system will never automatically log out. For local connections, the "Never" option cannot be selected and the user is always automatically logged out after 27 minutes. The "After" option with a time value of less than 27 minutes works normally.
9. Enter **Password**: Used at the login screen to access the SiteSentinel® iSite™ system
10. Enter Password Confirmation
11. Enter **Tech ID #** (if applicable): Identification number assigned to a technician by his or her company to use as a reference for each technician. This number is similar to an employee number. Tech ID # is also used for alarm remediation service.

12. Enter **Company Name**
13. Enter **Phone Number**
14. Enter **Email Address**
15. Press **"Apply"**




Repeat Steps 1-15 for any additional users you wish to add.

## 7.2 Access Levels

This screen defines the **access rights** for each level of login.

1. Press **Access Levels**
2. Select the options for each user to have access based on their access label.

System Attributes								
	Requires H/W key	Settings	Reports	Acknowledgement	Alarm Remediation	Compliance	Remote Access	Inventory Delivery Detail
Administrator	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Technician	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Manager	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Senior Operator	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Default User	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Compliance Officer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Scroll      Apply      Scroll  




**Figure 7-2 Access Levels**

Administrator attributes always have all options available besides the **Requires H/W Key** option. The **Requires H/W Key** option is used when the **Unlock Tanks** feature is activated.

The **Remote Access** option is used to define if a user can directly access the system.

All of the options may be selected to limit access to some parts of particular configuration screens.

### 7.3 Address Book

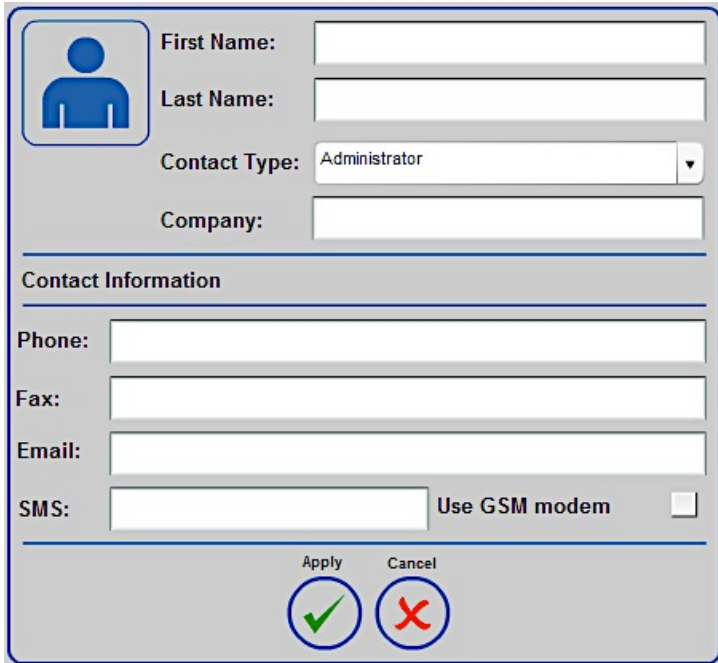
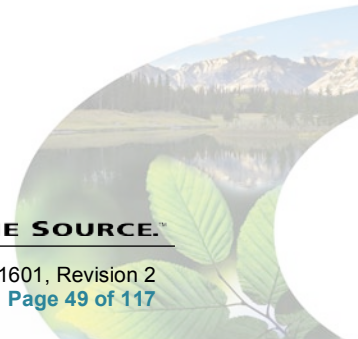


Figure 7-3 Address Book Entry

The **Address Book** entries are used to reference Email, SMS or fax notifications.

1. Press **Settings**
2. Press the **Address Book** button to enter the SiteSentinel® iSite™'s Address Book
3. Press the **Add** button at the bottom-center of screen
4. Enter **First Name**
5. Enter **Last Name**
6. Select **Contact Type**
7. Enter **Company** Name
8. Enter **Phone** Number
9. Enter **Fax** Number
10. Enter **Email** Address
11. Enter **SMS** Number
12. Select **Use GSM Modem** (optional) if connected with an SMS number that is serviced by external GSM modem connected to the SiteSentinel® iSite™. If this option is not selected, each SMS is sent using an "Email/SMS" external gateway service company.
13. Press "**Apply**" to add address entry

Repeat Steps 1-13 to enter additional address entries.



## 8 Preferences

### 8.1 System Preferences

**System preferences**

**Alarm Preferences**

**Require Alarm Remediation**  
☒ All Alarms   ☐ Only Leak Alarms   ☐ None

**Buzzer Duration**  
☒ Until Acknowledged   ☐ Until Event Ends or Acknowledged  
☒ Auto silence after fixed period  
 Delay:  hours  min  sec

**Time until Run Out: (Apply To)**  
☒ Low Threshold  
☐ Low-Low Threshold  
☐ Tank Empty

**Manifold Logic**  
☐ Gated Valve   ☒ Siphon   ☐ True Manifold

**References Temperature**  
 60F always for API  
☒ 15C   ☐ 20C

**Alarm Event Closure**

**Requires Technician Text**  
☐ Always   ☒ Never

**Leak Test Alarm Event Closes Automatically On Next Passed Test**  
☐ Always   ☒ Never

☒ End of day   ☐ Shift 1   ☐ Shift 2   ☐ Shift 3

Hour  Minute   ☐ AM   ☐ PM

**Output Module Logic**  
☒ Standard   ☐ Closed Under Power

Wire to N.O. or N.C. contacts, relay will change state upon alarm condition

Wire to N.C. contacts relay will open the circuit upon alarm condition or if power or comm. is

N.O. COM N.C.   N.O. COM N.C.

Apply

Figure 8-1 System Preferences Setup

1. Press the **Settings** button to enter the site's configuration screens
2. Press the **System** button to enter the SiteSentinel® iSite™'s System Parameters screens
3. Press **System Preferences** to set up the System Preferences, User Preferences and System Warnings
4. Select the settings for each section
5. Press "**Apply**" to save the settings

#### 8.1.1 Alarm Preferences

- **Require Alarm Remediation:** Allows users to choose when to require alarm remediation. Users can choose between all alarms, only leak alarms or no remediation at all.
- **Buzzer Duration:** Allows users to choose how long they want the internal buzzer to sound when in an alarm condition. They can choose to end the buzzer when the alarm is acknowledged or when the event ends.
- **Auto Silence After Fixed Period:** Allows the user to shut off the internal buzzer after the set period of time.
- **Time Until Run Out:** Gives users the ability to choose which level they want their run out to be based off of. They can choose between the Low Threshold, Low-Low Threshold or Tank Empty. The Time Until Run Out level is calculated based on the run rate.
- **Manifold Logic:** Allows users the ability to choose which Manifold Logic to use.

User cannot configure Manifold Logic if an SLD leak test is in progress.

- **References Temperature:** Gives the user the ability to choose the temperature that they want to use as a reference when referring to density.

### 8.1.2 Alarm Event Closure

- **Requires Technician Text:** Gives users the ability to choose whether or not to require technician text when remediation of an alarm condition occurs.
- **Leak Test Alarm Closes Automatically on Next Test Passed:** Gives users the ability to choose whether or not they want a leak-test alarm to end when the next leak test is passed.
- **Output Module Logic:** Gives the user the ability to choose their output module logic. They can choose between **Standard** (where the relay is not energized when in normal condition) or **Closed Under Power** (where the relay is energized in the normal condition).

## 8.2 User Preferences

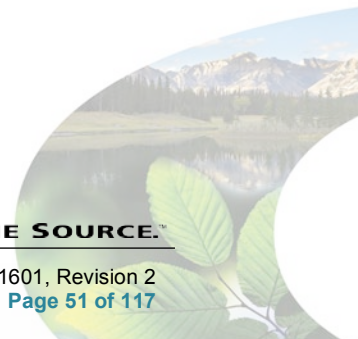
Press the **User** button under **Preferences** to choose the settings for the user that is currently logged in.

Setting these preferences for the default user sets the default system preferences for the SiteSentinel® iSite™.

**Figure 8-2 User Preferences Setup**

To set up the signed-in **User's Preferences**:

1. Press **Settings**
2. Press **System**
3. Press **Preferences**
4. Press **User**
5. Select **Language** choice
6. Select **Home Screen Layout**
7. Select **System Units**



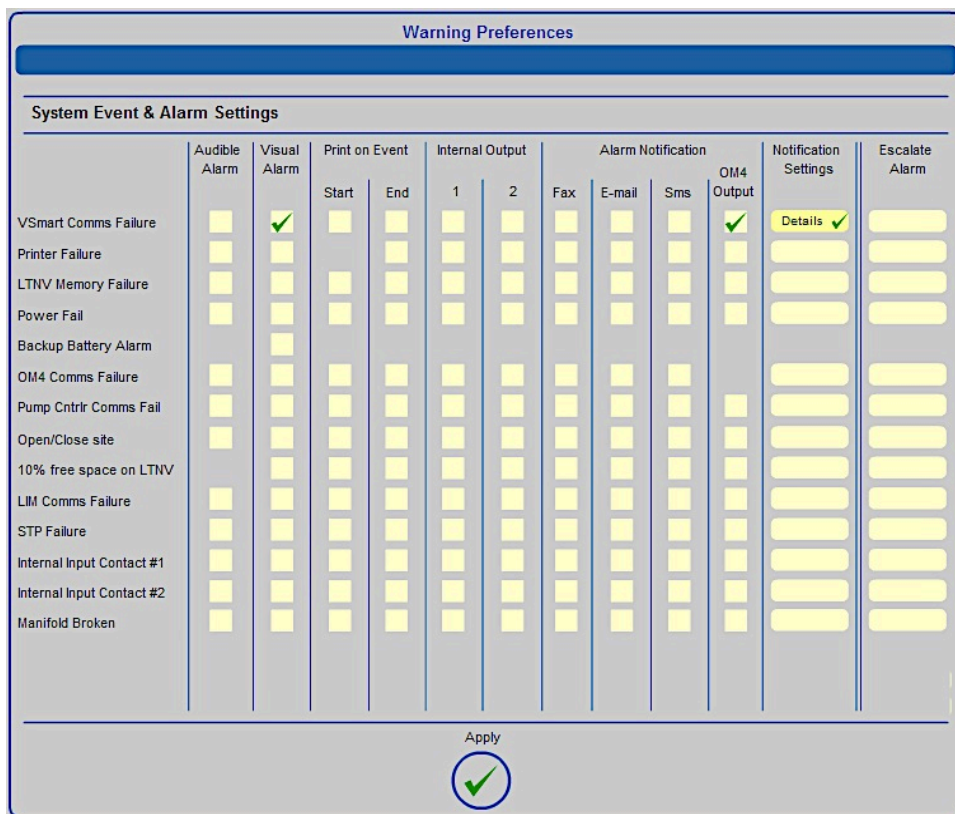


8. Select **Decimal Separator**
9. Select **Printout Size**
10. Select **Date Format**
11. Select **Time Format**
12. Select **First Day of Week**
13. Press **“Apply”**

Follow the same steps above to set up the default user preferences. These preferences will control what is displayed when the system is idle with no user logged in.

## 8.3 Warning Preferences

**System Event and Alarm Settings** are alarm conditions that apply to system components at the site. These can include communication breaks, system failures and warnings.



Warning Preferences											
System Event & Alarm Settings											
	Audible Alarm	Visual Alarm	Print on Event		Internal Output		Alarm Notification			Notification Settings	Escalate Alarm
			Start	End	1	2	Fax	E-mail	Sms	OM4 Output	
VSmart Comms Failure	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Details <input checked="" type="checkbox"/>
Printer Failure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
LTNV Memory Failure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Power Fail	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Backup Battery Alarm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OM4 Comms Failure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pump Cntrlr Comms Fail	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Open/Close site	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10% free space on LTNV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
LIM Comms Failure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
STP Failure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Internal Input Contact #1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Internal Input Contact #2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manifold Broken	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>


Apply 

Figure 8-3 Warning Preferences Setup

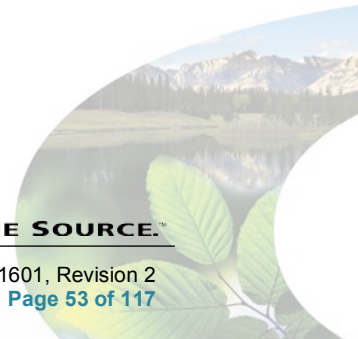
### 8.3.1 Setting System Warnings

1. Press **Settings**
2. Press **System**
3. Press **Preferences**
4. Press the **Warnings** button to enter the preferences for system events and alarm settings
5. Select an **Alarm Action** for each **Alarm Event** by using check box
6. Press **Details** (if applicable)
7. Press the **Blue Person** icon under Fax, Email or SMS (if applicable)
8. Select the desired recipient from the Address Book
9. Select whether or not to turn off internal relay only at end of event in top-right corner of screen
10. Select **OM4 relay position** to turn on for event

11. Select whether or not to turn off **OM4 relay** only at the end of the event located under the relay position
12. Press “**Apply**”
13. Repeat Steps for each alarm event
14. Press “**Apply**” to save the table
15. Once all settings are applied, press the “**Apply**” button to save the settings for the entire table

### 8.3.2 Alarm Conditions

- **VSmart Comms Failure:** Creates an alarm condition when communication to the VSmart Module is lost.
- **Printer Failure:** Creates an alarm condition when a print job fails to print due to printer fail or paper outage.
- **LTNV Memory Failure:** Creates an alarm condition when the internal USB key is removed.
- **Power Fail:** Creates an alarm condition when power for the console is shut off.
- **Backup Battery Alarm:** Creates an alarm condition when the backup battery is nearing failure.
- **OM4 Comms Failure:** Creates an alarm condition when OM4 communications are lost or the OM4 is powered off.
- **Open/Close Site:** Creates an alarm action after user presses the Open or Close button on home screen.
- **Pump Controller Comms Failure:** Creates an alarm condition when communications are lost to the pump controller.
- **LIM Comms Failure:** Creates an alarm condition when LIM communication is lost.
- **STP Comms Failure:** Creates an alarm condition for STP Start Failed or STP Stop Failed or STP communication lost.
- **Internal Input Contact #1/#2:** Creates an alarm condition when the input is seen on contacts.
- **10% Free Space on LTNV:** Creates an alarm condition when less than 10% space remains on internal USB Key.
- **Manifold Broken:** Creates an alarm condition when the manifold connection is corrupted.



## 9 Network

### 9.1 Networking Setup

Press the **Networking** button to enter the setup screen for system Network Connections.

The screenshot shows a network configuration window with the following sections:

- Incoming Connection:**
  - ☐ Enabled
  - ☒ STATIC ☐ DHCP
  - Subnet: 192.168.0.0
  - Mask: 255.255.0.0
  - Start Address: 192.168.254.1
- Users:**
  - test
  - Add new
  - Remove
  - Change user password
- E-mail and SMS Transport/WEB Access:**
  - ☒ LAN/WAN ☐ DIAL-UP ISP
- Ethernet Interface:**
  - ☐ DHCP ☒ STATIC
  - MAC Address: 00:0B:AB:12:D8:15
  - IP Address: 10.0.3.8
  - Mask: 255.255.248.0
  - Gateway: 10.0.0.1
  - DNS: 10.0.0.59

An **Apply** button with a green checkmark icon is at the bottom center.

Figure 9-1 Network Setup

#### 9.1.1 Dial-in Networking Connection (Incoming Connection)

1. Link Dial-in connection to modem port:
  - a. Press **Settings**
  - b. Press **System**
  - c. Press **Communications**
  - d. Press **"Next"** at bottom of screen to enter configuration setup
  - e. Choose **Remote Dial-In** from top list
  - f. Choose modem from bottom list
  - g. Press **Map**
  - h. Set **baud rate** (use highest selection for higher speed)
  - i. Press **"Apply"**
2. Setup Connection information:
  - a. Press **Settings**
  - b. Press **System**
  - c. Press **Networking**
  - d. Choose **IP Scheme** (Static is standard and will use provided IP)
  - e. Create **User**: this username and password will be used in creating connection and is not the login to the SiteSentinel® iSite™ console
    - i. Press **Add New**
    - ii. Enter **User**
    - iii. Enter **Password**
    - iv. Re-enter **Password** to confirm
    - v. Press **"Apply"**

3. Create Dial-up Network connection on PC:
  - a. Open **My Network Places** on PC
  - b. Choose **View Network Connections** (located under Network Tasks)
  - c. Choose **Create New Connection** (located under Network Tasks)
  - d. Network Connection Wizard will open:
    - i. Choose **"Next"**
    - ii. Choose **Connect** to the network at my workplace
    - iii. Choose **Dial-up Connection**
    - iv. Choose modem being used on PC
    - v. Enter **Company Name**
    - vi. Enter the phone number for the line the SiteSentinel® iSite™ console is connected to
    - vii. Choose connection availability
    - viii. Press **"Finish"**
  - e. Open Dial-up Connection:
    - i. Enter **User Name** (username created on networking screen of SiteSentinel® iSite™)
    - ii. Enter **Password** (password created for above user in SiteSentinel® iSite™)
    - iii. Verify **Phone Number**
    - iv. Press **"Dial"**
  - f. Once Dial-up Connection is established:
    - i. Open your Internet browser
    - ii. Enter **Start Address** from the **Networking** screen into the address bar of the Internet browser (IP address is located under Incoming connections in upper left)

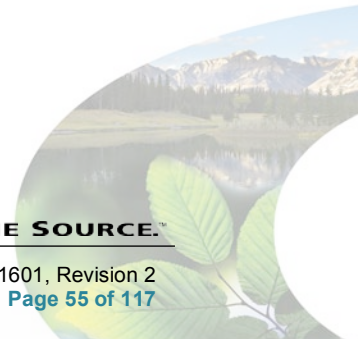
Dial-in networking connection will allow the user to dial into the SiteSentinel® iSite™ console via a phone line to view/edit configuration. This connection will display the information just as if the user was looking at the console or connected via Ethernet connection.

### 9.1.2 Setup Email & SMS Transport

1. Press **Settings**
2. Press **System**
3. Press **Networking**
4. Select **LAN/WAN** or **Dial-up ISP**
5. If **Dial-up ISP** is selected:
  - a. Enter **Username**
  - b. Enter **Password**
  - c. Enter **Dialout**
6. If **LAN/WAN** is selected:
  - a. Press **"Apply"**

### 9.1.3 Setup Ethernet Interface

1. Press **Settings**
2. Press **System**
3. Press **Networking**
4. Select **DHCP** or **Static**
5. If **Static** is selected:
  - a. Enter **IP Address**
  - b. Enter **Mask**
  - c. Enter **Gateway**
  - d. Enter **DNS**
6. If **DHCP** is selected:
  - a. Press **"Apply"**



## 10 Communications

Allows the user to setup the communication ports within the system to communicate to modules and perform notifications. This allows the user to choose the device or service(s) to be linked to specific ports on the system. Some services can be linked to multiple ports, as well as being linked with other services on the same ports. Each service is independently configured and linked to each port on the system.

### 10.1 Port Connections

The Communications screen displays all ports in the SiteSentinel® iSite™ system. Configured ports are represented with yellow background. In order to link an available communication port to an available service, press the **“Next”** button to begin setting the system’s communications.

Once choosing a service, the user will be able to select the port to be linked to. Once the port is chosen, the customer will choose to map this connection. Once done mapping the connection, the user will select the communication parameters for the service and then select to map the port to that service. Once the service is mapped to a port it will be displayed on the Communications screen. To view the parameters of a mapped service, choose the service and press View, and the link as well as the parameters will be displayed.

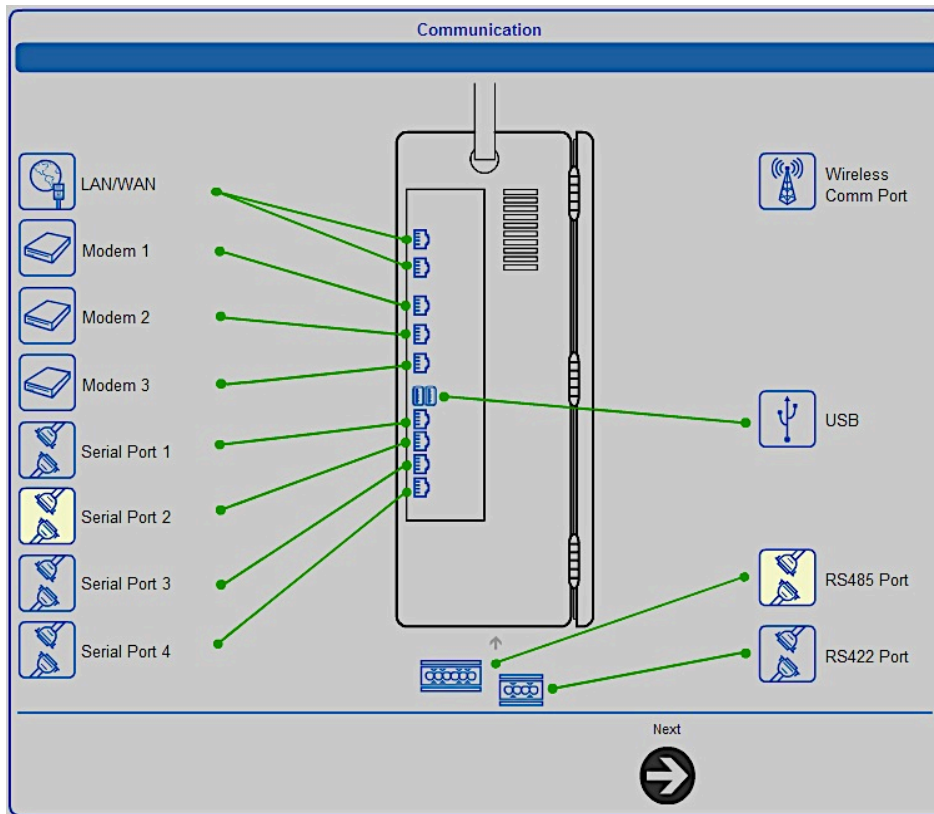


Figure 10-1 Port Communications



## 10.2 Linking Devices to Services

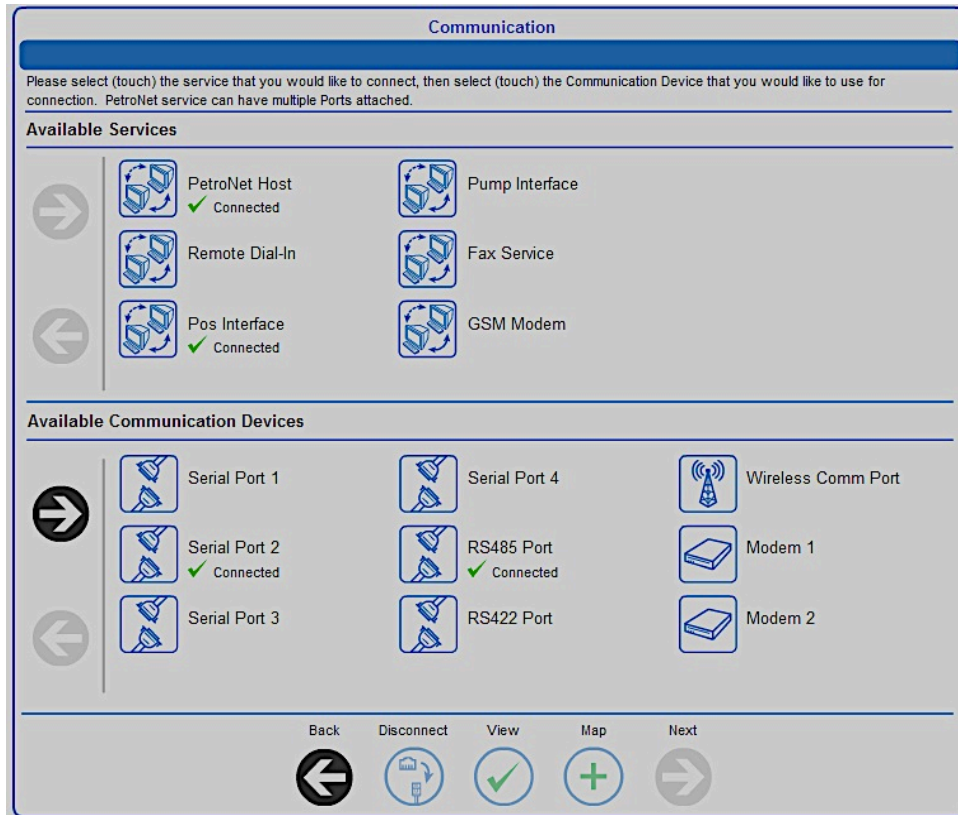


Figure 10-2 Linking Devices to Services

1. Press **Settings**
2. Press **System**
3. Press **Communications**
4. Press **"Next"** on Communication Overview screen
5. Select **Service** at top of screen
6. Select **Device** at bottom of screen
7. Select **Map**
8. Select **Communication Parameters**
9. Press **Map**
10. Press **"Apply"** to accept mapping of device and service

### 10.3 Petro-Net™ Host Setup

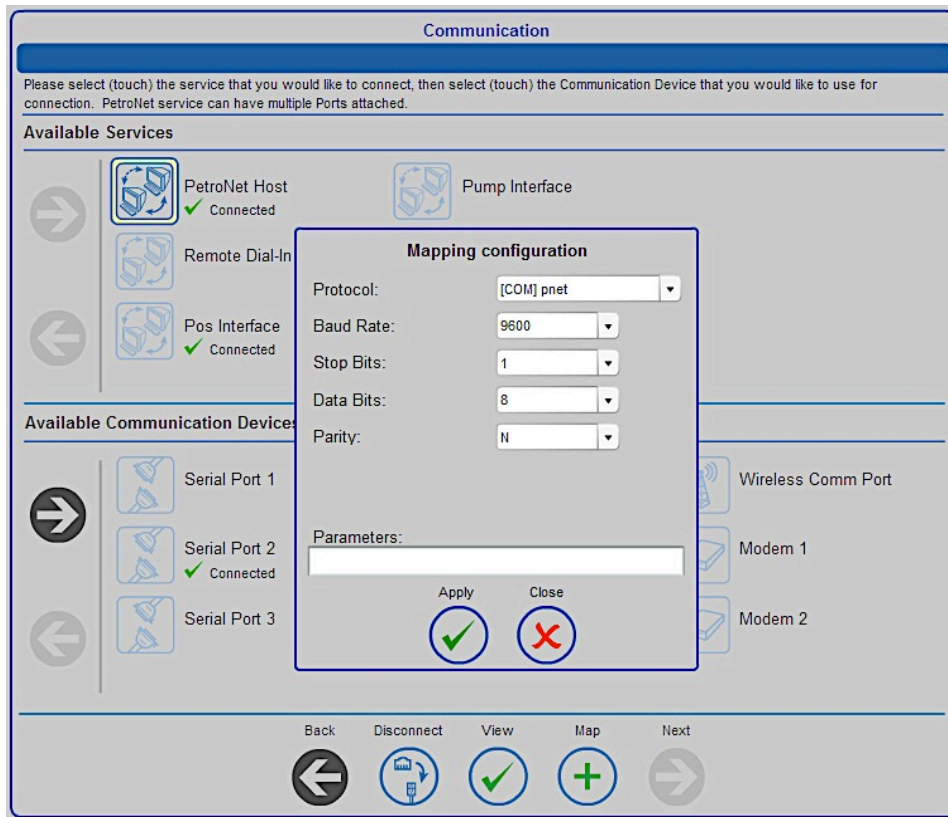


Figure 10-3 Petro-Net™ Host Setup

Via RS-485 Port: (this is the default setup)

1. Press **Petro-Net Host**
2. Press **Port RS-485**
3. Press **Map**
4. Select **Protocol** (COM pnet is Standard)
5. Select **Baud Rate**
6. Select **Stop Bits**
7. Select **Data Bits**
8. Select **Parity**
9. Press **“Apply”** to map

Via 422/485 Port:

1. Press **Petro-Net Host**
2. Press **Port RS422**
3. Press **Map**
4. Select **Protocol** (COM pnet is Standard)
5. Select **Baud Rate**
6. Select **Stop Bits**
7. Select **Data Bits**
8. Select **Parity**
9. Press **“Apply”** to map

Via Ethernet:

1. Press **Petro-Net Host**
2. Press **LAN/WAN Port**
3. Press **Map**
4. Select **Protocol** ([NET] pnet is Standard)
5. Press **"Apply"** to map

When setting up Petro-Net™ Host, none of the settings will need to be changed and should be left at the default values.

## 10.4 Remote Dial-In Setup

1. Press **Remote Dial-In**
2. Press **Modem** (1, 2 or 3)
3. Press **Map**
4. Select **Protocol** (COM ppp is Standard)
5. Select **Baud Rate**
6. Select **Stop Bits**
7. Select **Data Bits**
8. Select **Parity**
9. Press **"Apply"** to map

Only internal modems on the SiteSentinel® iSite™ console can be linked to remote dial-in connection. Set up the highest baud rate for better results when connecting to the console. For more details on remote dial-in setup, see the networking section for complete dial-up connection configuration.

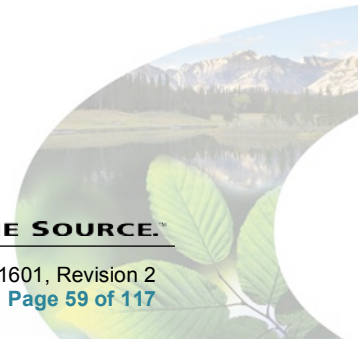
## 10.5 POS Interface Setup

Via Modem:

1. Select **POS Interface**
2. Select **Modem** (1, 2 or 3)
3. Press **Map**
4. Select **Protocol** (PV4, TLS250, TLS350, scp350 and Smith)
5. Select **Baud Rate**
6. Select **Stop Bits**
7. Select **Data Bits**
8. Select **Parity**
9. Select **POS Units**
10. Enter **Parameters** (if applicable)
11. Press **"Apply"** to map

Via Serial Port:

1. Select **POS Interface**
2. Select **Serial** (1, 2, 3 or 4)
3. Press **Map**
4. Select **Protocol** (PV4, TLS250, TLS350, scp350 and Smith)
5. Select **Baud Rate**
6. Select **Stop Bits**
7. Select **Data Bits**
8. Select **Parity**
9. Select **POS Units**
10. Enter **Parameters** (if applicable)
11. Press **"Apply"** to map



Via LAN/WAN:

1. Select **POS Interface**
2. Select **LAN/WAN**
3. Press **Map**
4. Select **Protocol** (PV4, TLS250, TLS350, scp350 and Smith)
5. Enter Port Number:  
SCP-350-2377  
TLS-350 -2374  
TLS-250-2375  
PV4-2372  
Gilbarco Block-2373  
Wayne IDPOS-35555
6. Select **POS Units**
7. Enter **Parameters** (if applicable)
8. Press **"Apply"** to map

SCP350 protocol will be used when using the Phoenix™ Premier OPW (PPO) software to poll the gauge.

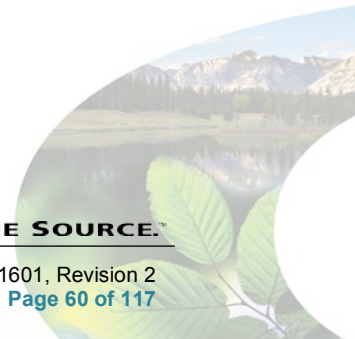
## 10.6 Pump Interface Setup

Via Serial Port:

1. Select **Pump Interface**
2. Select **Serial** (1, 2, 3 or 4)
3. Press **Map**
4. Select **Protocol** (PV4, GenB or EECO350)
5. Select **Baud Rate**
6. Select **Stop Bits**
7. Select **Data Bits**
8. Select **Parity**
9. Select **POS units**
10. Enter **Parameters** (if applicable)
11. Press **"Apply"** to map

Via Ethernet:

1. Select **Pump Interface**
2. Select **LAN/WAN**
3. Press **Map**
4. Select **Protocol** (PV4, idpos, GenB or EECO350)
5. Enter **Port Number**:  
PV4 – 2472 (could be 2372)  
Gilbarco Block - 2373  
Wayne IDPOS - 35555
6. Select **Baud Rate**
7. Select **Stop Bits**
8. Select **Data Bits**
9. Select **Parity**
10. Select **POS Units** (if applicable)
11. Enter **Parameters** (if applicable)
12. Press **"Apply"** to map



## 10.7 Fax Service Setup

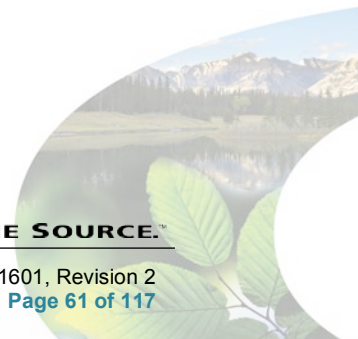
Via Modem:

1. Select **Fax Service**
2. Select **Modem** (1, 2 or 3)
3. Press **Map**
4. Select **Protocol** (fax is standard)
5. Select **Baud Rate**
6. Select **Stop Bits**
7. Select **Data Bits**
8. Select **Parity**
9. Press **"Apply"** to map

## 10.8 GSM Modem Setup

Via Serial Port:

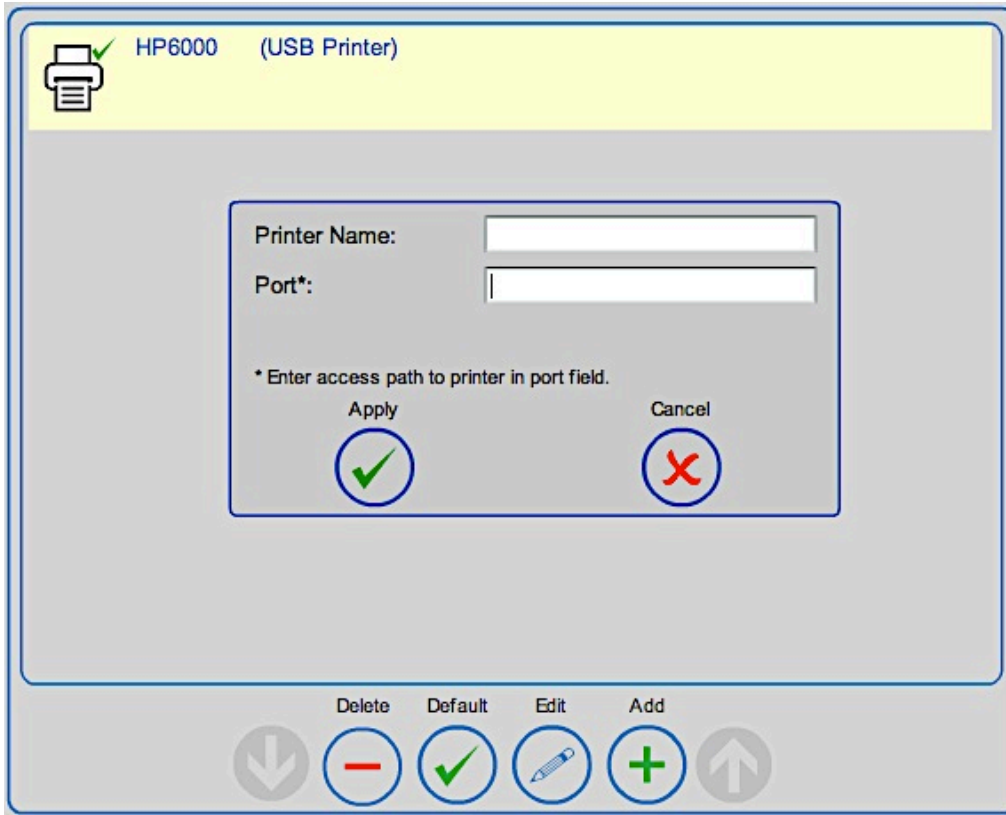
1. Select **GSM Modem**
2. Select **Serial** (1, 2, 3 or 4)
3. Press **Map**
4. Select **Protocol** (GSM is default)
5. Select **Baud Rate**
6. Select **Stop Bits**
7. Select **Data Bits**
8. Select **Parity**
9. Enter **Parameters** (if applicable)
10. Press **"Apply"** to map





## 11 Printer Setup

The Printer screen allows the user to add, edit and configure printers, as well as select a default printer.





HP6000 (USB Printer)

Printer Name:

Port\*:

\* Enter access path to printer in port field.

Apply  Cancel 

Delete Default Edit Add







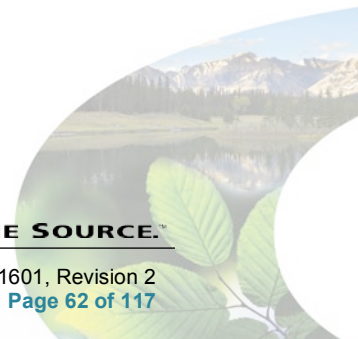
     

Figure 11-1 Adding a Printer

### 11.1 Adding a Printer

1. Press **Settings**
2. Press **System**
3. Press the **Printer** button to enter the **Printer Setup**
4. Press **Add** to add the internal printer
5. Enter **Printer Name** (user-defined)
6. Enter **Port** (port number or access path of printer)
7. Enter **Driver** (printer must support native PCL drivers)
8. Press **"Apply"** to add the printer
9. Select the newly configured printer



## 11.2 Selecting a Default Printer

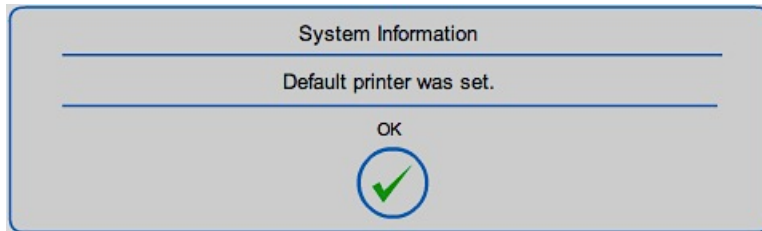


Figure 11-2 Confirming Default Printer Setup

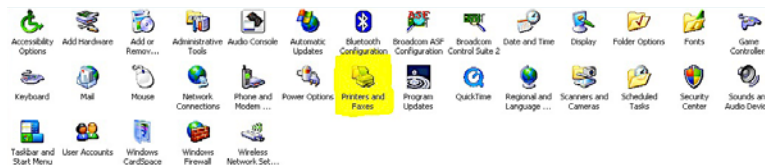
1. Select the **Printer** you want to be the default printer
2. Select the **Default** button at the bottom of the screen
3. Press **“Apply”**

## 11.3 Network Printer Setup:

It is recommended that you create a new printer connection on the PC or server.

### 11.3.1 Creating a Printer Connection

To create a new printer on the PC or Server, access the Control Panel and then go to the **Printers and Faxes** icon.



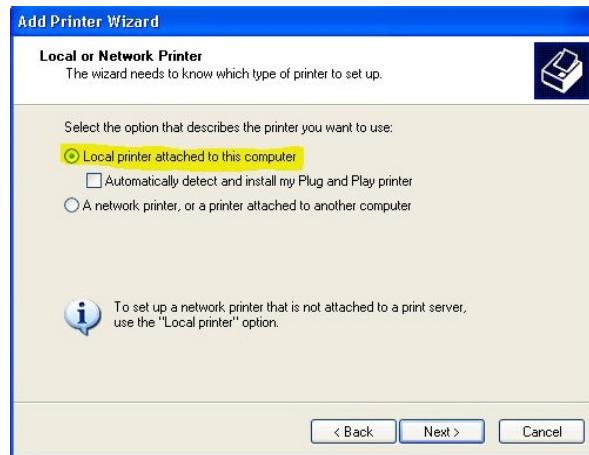
Click on the **Add a Printer** icon to start the Printer Wizard and click **“Next”**.



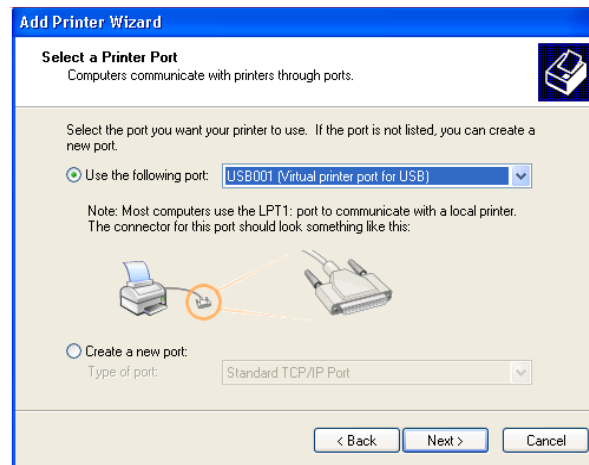
Then select **Local printer attached to this computer**.

Do not select the “Automatically detect...” checkbox.

Click “Next”.



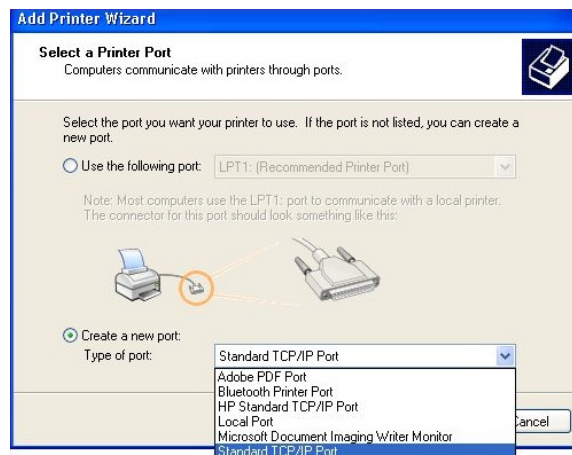
Choose the type of connection the printer will be using. If it is connected on a USB or Parallel port, then you would click the radio button “Use the following port” as shown at right.



If the printer is on the network and does not directly connect to the PC via a USB or printer cable, select Create a **New Port** type and choose **Standard TCP/IP Port** to connect to the IP addressable printer.

You will need to know the IP address of the printer itself, not the PC or Server IP that the printer may be shared through.

Click “Next”.



This will start the Standard TCP/IP Printer Port Wizard.

Click **"Next"**.

Enter the **IP Address** of the printer to be used in the field Printer Name or IP Address.

Click **"Next"**.

If the adaptor is found, a message will appear stating that the Add Printer Wizard is complete.

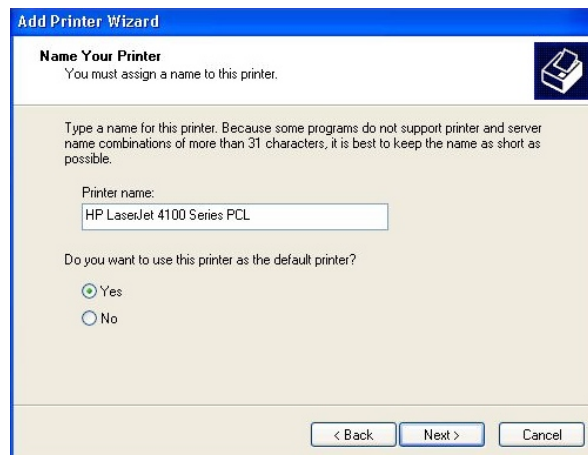
Click **"Finish"** to complete and exit the Add Printer Wizard.

Choose the appropriate drivers for the printer and click **"Next"**.

Specify a friendly printer name (this name is not the name that the SiteSentinel® iSite™ will use when connecting to the printer).

The **Share Name** created later is what will be needed for the SiteSentinel® iSite™ configuration; therefore, this name is unimportant when being specified.

Click **“Next”**.



**Add Printer Wizard**

**Name Your Printer**  
You must assign a name to this printer.

Type a name for this printer. Because some programs do not support printer and server name combinations of more than 31 characters, it is best to keep the name as short as possible.

Printer name:  
HP LaserJet 4100 Series PCL

Do you want to use this printer as the default printer?

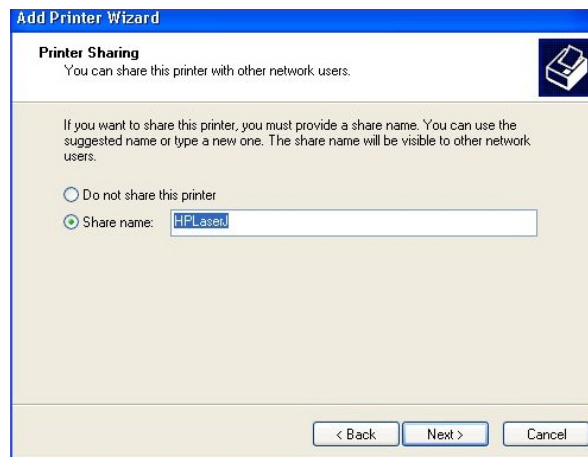
☒ Yes  
☐ No

< Back   Next >   Cancel

Specify a **Share Name** to be used by the SiteSentinel® iSite™.

This name will need to be added as part of the UNC path outlined in the setup of the SiteSentinel® iSite™ section of this document when creating a printer on the SiteSentinel® iSite™ itself (e.g., \\mypc\hplaserj).

Click **“Next”**.



**Add Printer Wizard**

**Printer Sharing**  
You can share this printer with other network users.

If you want to share this printer, you must provide a share name. You can use the suggested name or type a new one. The share name will be visible to other network users.

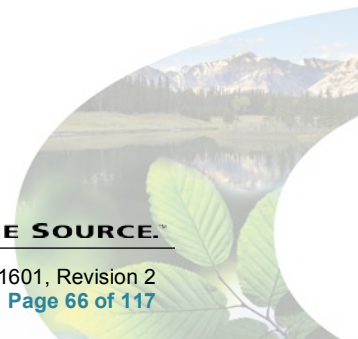
☐ Do not share this printer  
☒ Share name: HPLaserJ

< Back   Next >   Cancel

The next screen **Location and Comments** is optional for the user.

Click **“Next”**.

At this point verify that you can print a test page from the PC or Server where you just created the printer. If the test page prints successfully then you are ready to move on to the next section.

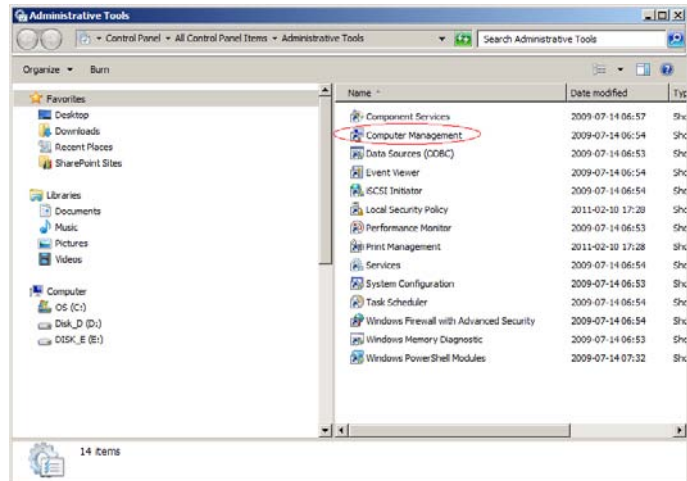




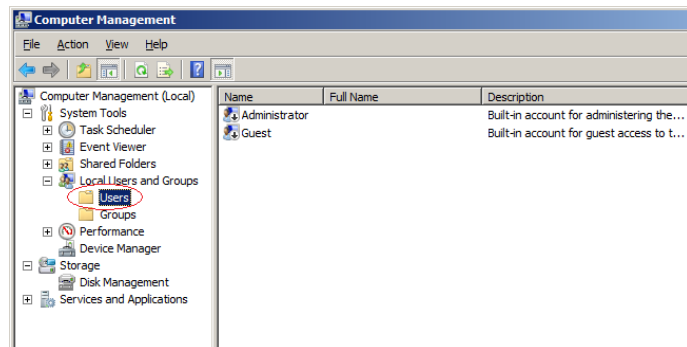
### 11.3.2 Creating a Local PC User Name

In order to print remotely on the PC printer a remote machine must log on to the PC using a user account created on the PC. It is not recommended to use the administrator account – a better solution is to create a separate user only for the shared printer:

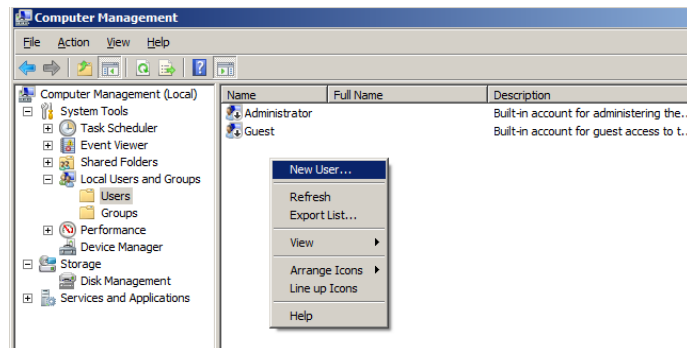
Menu: **Start** → **Control Panel** → **Administrative Tools**, and then run Computer Management.



Select **Users**.



Right-click on the right panel. A context menu will appear.



Select the **New User...** and complete all form fields.

Press the **Create** button, then select “Close” to exit setup.

### 11.3.3 Printer Setup on the SiteSentinel® iSite™

Once the console is up and running, enter the Username and the appropriate Password for Administrator access.

Select **Settings** → **System** → **Printer** → **Add (+)** in order to add a printer.

Next, enter the name you would like to call the printer in the Printer Name field.

In the **Port\*** field, enter the UNC (Universal Naming Convention) path that you would like to send print jobs to, and click Apply\*.

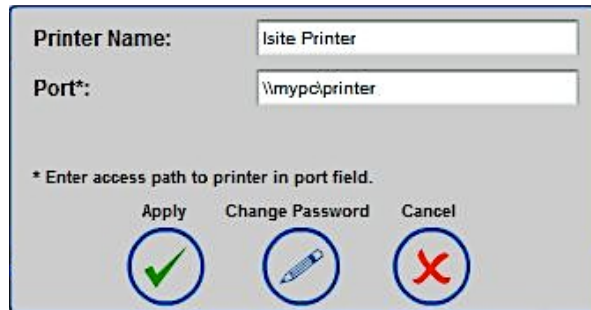
\*The UNC path and printer setup on the PC or Server, to which the SiteSentinel® iSite™ will send print jobs should be established prior to attempting to print from the SiteSentinel® iSite™. This document provides general information on how to setup a new print share on a PC under printer setup on PC or Server. Any existing printer share that was created on a PC or Server prior to the SiteSentinel® iSite™ installation may or may not work (depending on the network topology, policies and/or use of the print share when it was created); therefore, it is recommended that you setup a new printer and print share for use with the SiteSentinel® iSite™.

If the printer was successfully added to the SiteSentinel® iSite™ you will see a message confirming printer addition.

This message only ensures the adding of the printer to the SiteSentinel® iSite™; this does not mean that it was able to successfully contact or see the network print share on the LAN/WAN.

Once the printer installation (with the correct UNC path that corresponds to the PC or Server that was set up in the first section of this document) is complete, you will need to add the local user information that was created on the PC or Server in the previous section (i.e., SiteSentinel iSite User).

Click on the printer that was just created, and click **Edit**.






Printer Name:

Port\*:

\* Enter access path to printer in port field.

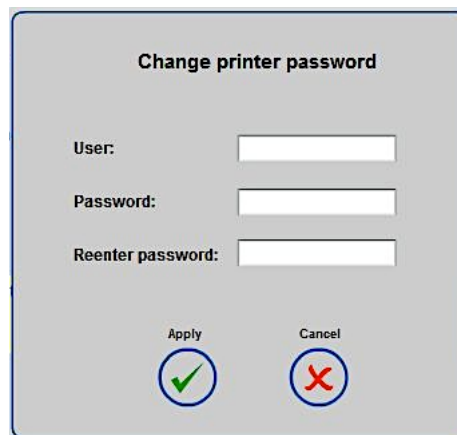
Apply Change Password Cancel

Click on **Change Password**:

Enter the local username that was created on the PC or Server in the previous section and the password, and click "**Apply**".

Congratulations! You may print to the printer that is now connected to the PC or server.





**Change printer password**

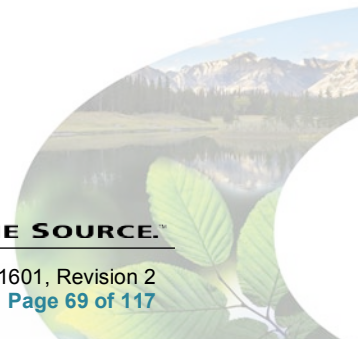
User:

Password:

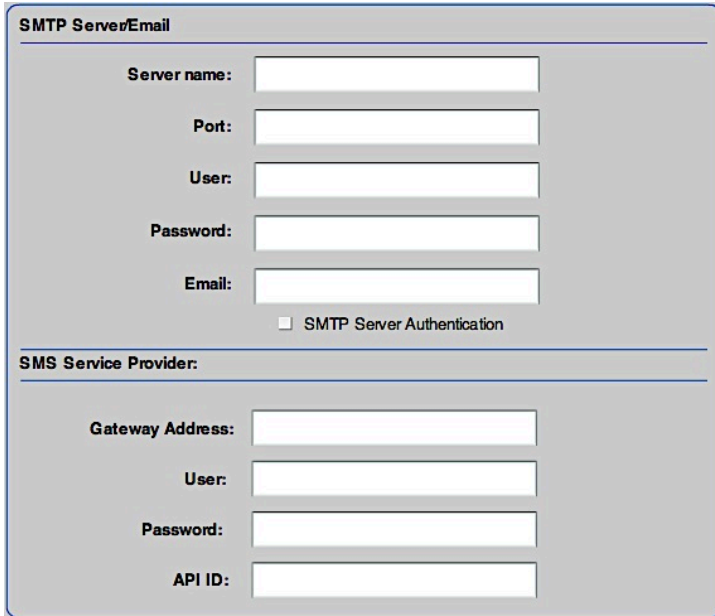
Reenter password:

Apply Cancel



## 12 Email & SMS Setup



The image shows two stacked configuration screens. The top screen is titled "SMTP Server/Email" and contains five input fields: "Server name:", "Port:", "User:", "Password:", and "Email:". Below these fields is a checkbox labeled "SMTP Server Authentication". The bottom screen is titled "SMS Service Provider:" and contains four input fields: "Gateway Address:", "User:", "Password:", and "API ID:".

Figure 12-1 Email and SMS Service Setup

### 12.1 Setup Email Service

Email field may sometimes be required if using SMTP authentication. Email service setup allows for an SMS status report and for sending alarms and scheduled electronic reports.

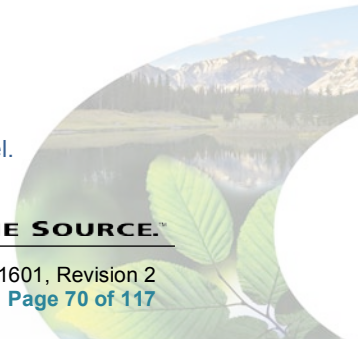
1. Press **Settings**
2. Press **System**
3. Press **Email & SMS**
4. Enter **Server Name**
5. Enter **Port Number**
6. Enter **Username** for email server
7. Enter **Password** for the user
8. Enter **SiteSentinel iSite Email Address** (user-defined)
9. Select whether SMTP server authentication is required
10. Press **"Apply"**

If the SMTP server authentication option is selected, User and Password fields are not needed for configuration.

### 12.2 Setup SMS Service

1. Press **Settings**
2. Press **System**
3. Press **Email & SMS**
4. Enter **Gateway Address**
5. Enter **User ID**
6. Enter **Password**
7. Enter **API ID**
8. Press **"Apply"**

In order to use the SMS service, the user must create an account with service provider Clickatel.



## 13 Installed Options

Installed Options for ESN# 0ACEB7000000			
Feature	Option Control		
	Other Components Required	Software	Installed/Enabled
<b>Advanced Leak Detection</b>			
Dynamic Leak Test (SLD)	None	Yes	✓
0.2gph In-Tank Leak Test	None	Yes	✓
0.1gph In-Tank Leak Test	None	Yes	✓
LLD Compliance	None	Yes	✓
LLD Ultimate	None	Yes	☐
<b>POS And Pump Cotroller Interfaces</b>			
POS Protocols (250, 350, Smith's, PV4)	Compatible 3rd Party Equipment	Yes	✓
PV4 ACR Mode	Compatible 3rd Party Equipment	Yes	✓
Gilbarco Generic-B (Block Protocol) ACR Mode	Compatible 3rd Party Equipment	Yes	✓
<b>Tank Calibration Security Lock</b>			
Weights and Measures Calibration Lock	None	Yes	✓

Figure 13-1 Installed System Options

The Installed Options tab allows you to check the installed hardware and software options. The information is stored on the ESN chip on the main board of the console. The ESN number located in the blue header of the screen is necessary for preparing an \*.ssr file needed for updating system options.

Features:

- **Dynamic Leak Test (SLD):** Service for statistical leak detection.
- **0.2 gph In-Tank Leak Test:** Service for 0.2 GPH static leak test.
- **0.1 gph In-Tank Leak Test:** Service for 0.1 GPH static leak test.
- **LLD Compliance:** Indicates that the 0.1 Line leak Test will only be carried out automatically after a 0.2 if it has not been performed within the past 180 days.
- **LLD Ultimate:** Indicates the 0.1 Line Leak Test will be carried out immediately following the completion of a successful 0.2 Line Leak Test. System will attempt to performs as many tests as it can per month, in strict accordance with the defined SLD and LLD test interoperability definition.
- **POS Protocols (250, 350, Smith's, PV4):** Access for POS protocols.
- **PV4 ACR Mode:** Access for PV4 protocol in ACR mode.
- **Gilbarco Generic-B (Block Protocol) ACR Mode:** Access to the Gilbarco Generic-B protocol in ACR mode.
- **Weights and Measures Calibration Lock:** Indicates the ability to lock tank configuration.

Option Control:

- **Components Required:** Indicates whether additional components are necessary to use this option.
- **Software:** Indicates if the option is a software version.
- **Installed/Enabled** column shows if an option is installed and/or active in the system.



## 14 Reconciliation

The **Reconciliation** menu allows users to set up the pumps in the SiteSentinel® iSite™ system and link them to their corresponding tanks.

### 14.1 Hose Mapping

#### 14.1.1 Dispenser Address Setup

Dispenser address mapping may be established by pump controller or by the physical address.

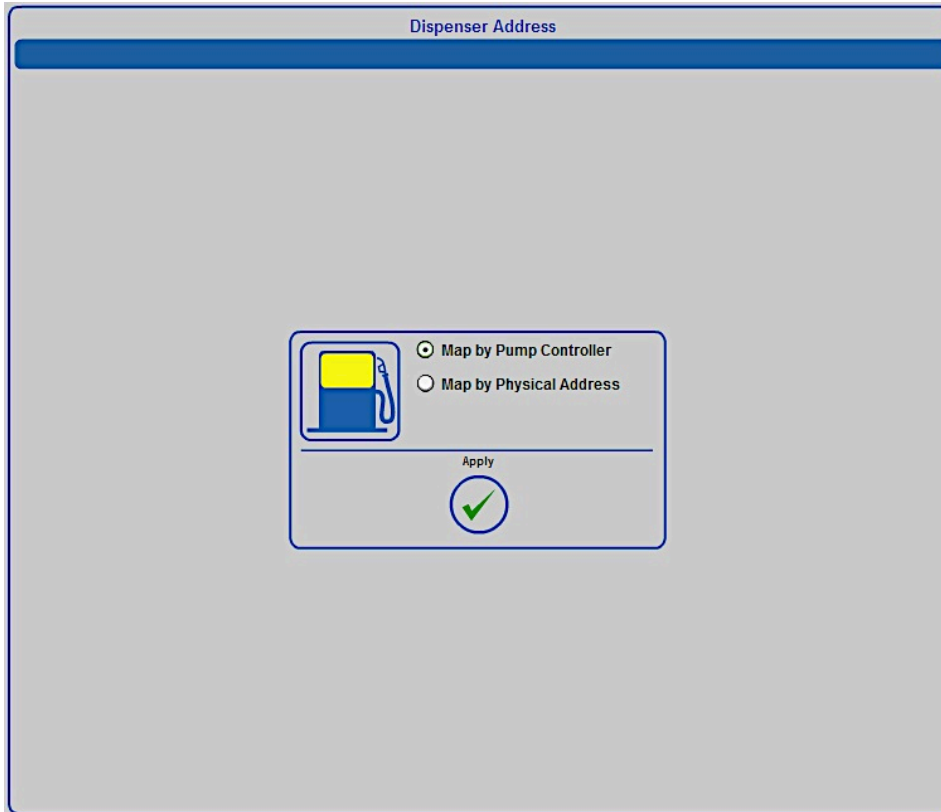
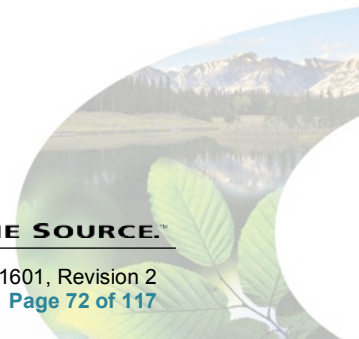
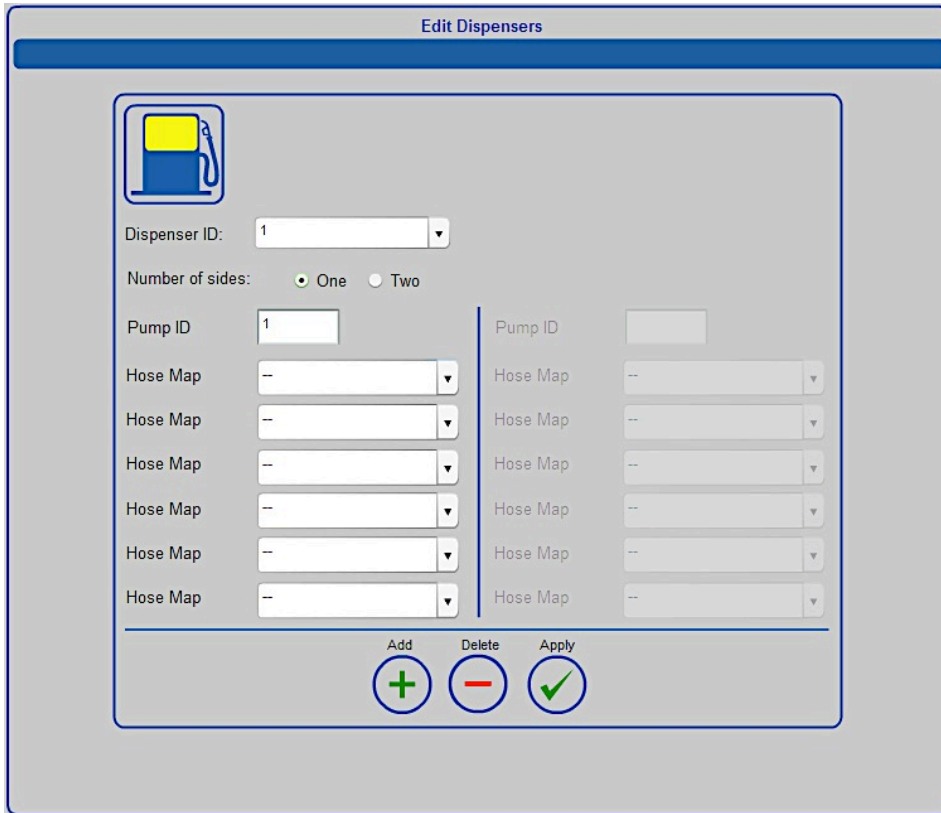


Figure 14-1 Dispenser Address Setup

1. Press **Settings**
2. Press **Reconciliation**
3. Press **Hose Mapping**
4. Press **Display Address**
5. For the dispenser address, select your preferred addressing method
6. Press **“Apply”**



## 14.1.2 Edit Dispenser

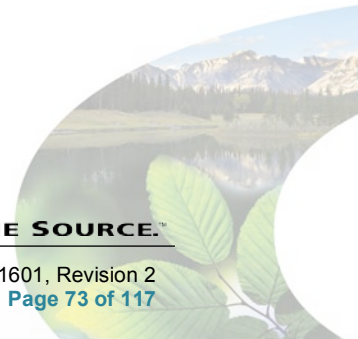


**Figure 14-2 Edit Dispenser**

1. Press **Edit Dispensers**
2. Press **Add** on the Dispenser screen
3. Select **Number of Sides** on dispenser
4. Select **Product** on hoses

Repeat Steps 1-4 for additional dispensers.

5. Press **“Apply”** to save dispenser



### 14.1.3 Map Hoses

When ACR mode is enabled, the hose map must be setup. The hose map displays what hoses are connected to which tanks. By selecting a tank icon at the bottom of the screen, only the hoses configured with the same product will be displayed. The Dispenser Map Overview panel indicates which hoses are connected to a selected tank with an orange box. Configured hoses are marked with a yellow drop and connected tank number.

On this screen, blended products may also be created, and high/low stock percentages must be configured. Additionally, in the top-right dialogue box, notice that **Offset** is available on a “per hose” basis. If available, the data related to the variance of a meter can be entered. The value entered is in Gallons/Liters (i.e., 0.001 gallons is a normal offset; it can be plus (+) or minus (-) the value).

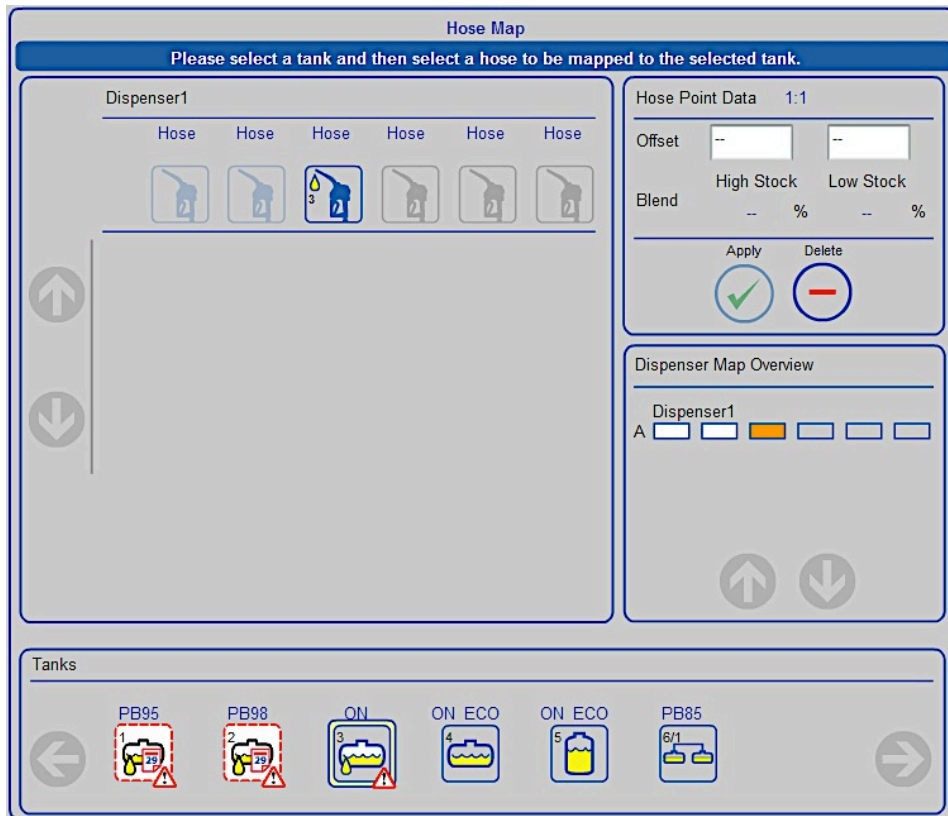


Figure 14-3 Hose Mapping

1. Press **Hose Maps**
2. Press **Tank** at bottom of screen to select product
3. Press **Hose** at top of screen
4. Enter **Offset** in top-right of screen (if applicable)
5. Press “**Apply**” to link product/tank to that hose

Repeat Steps 1-5 for additional hose mapping.

#### 14.1.4 Site Schematics

The **Site Schematics** screen indicates which hose is connected to what tank. The light-yellow boxes show the active hose positions. Once a tank is selected, the hoses connected to this tank are indicated as an orange box.

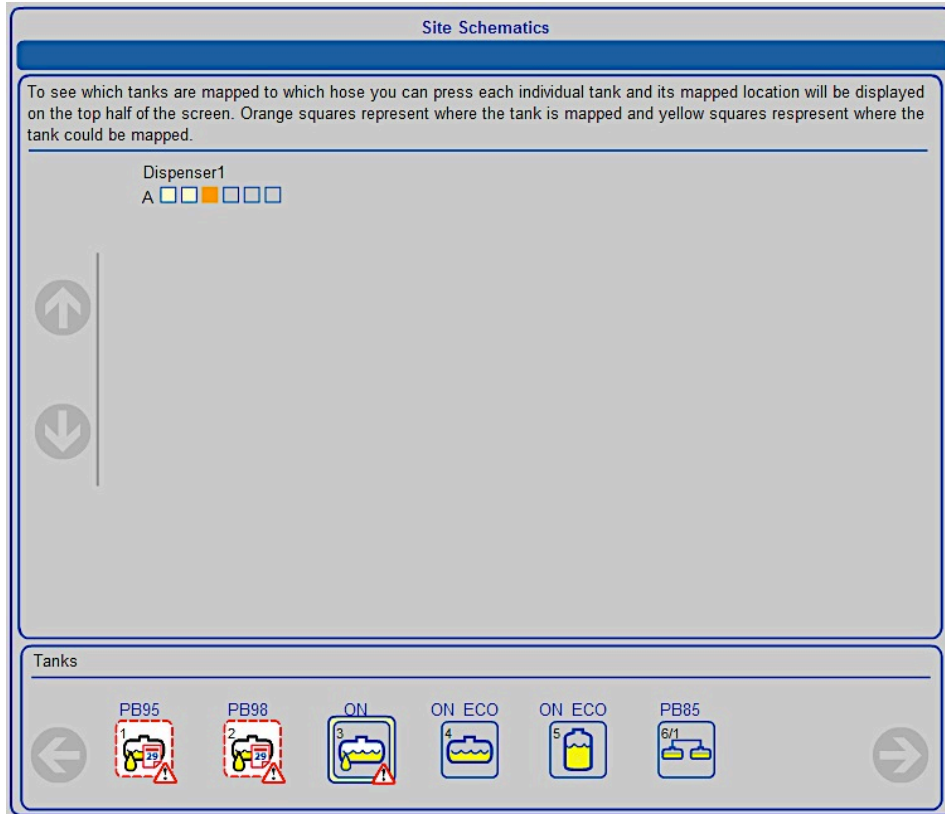
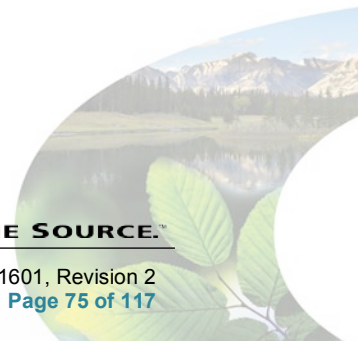


Figure 14-4 Site Schematics



## 14.2 Reconciliation Thresholds

The Reconciliation Thresholds screen allows the user to setup thresholds when in ACR mode.

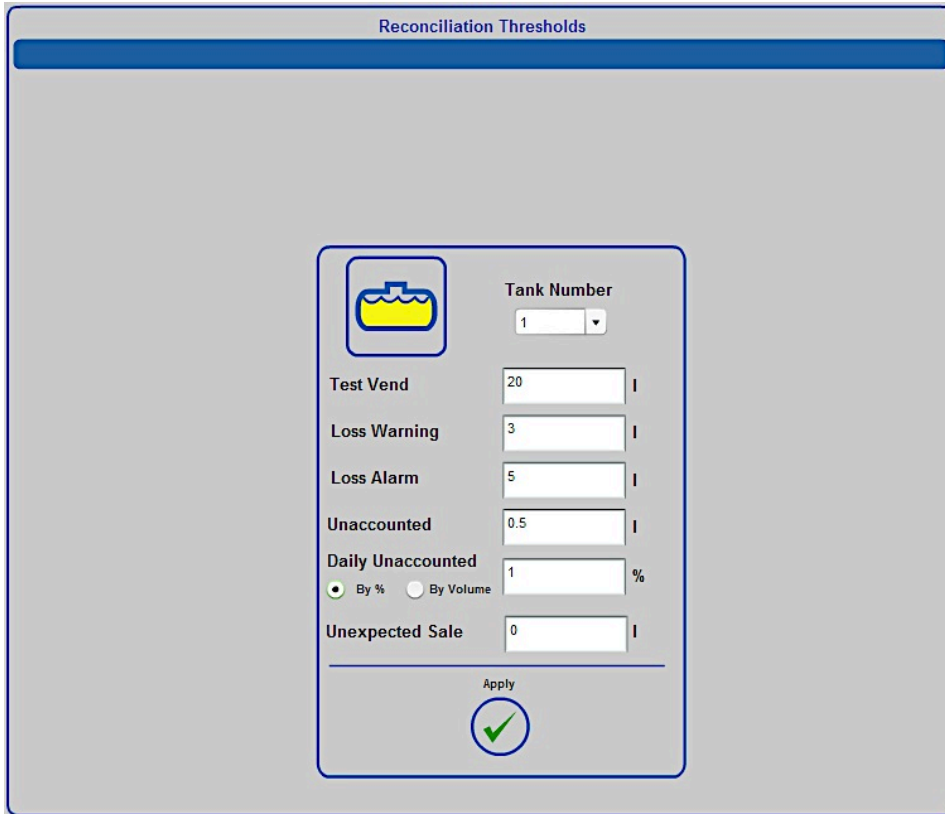
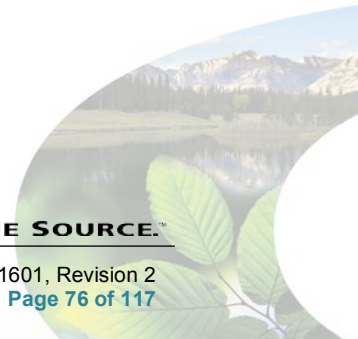


Figure 14-5 Reconciliation Thresholds

- **Test Vend:** Amount of product used in the calibration of hose meters (i.e., a rise of this amount is tolerated).
- **Loss Warning:** Warning that indicates service hourly losses.
- **Loss Alarm:** Alarm that indicates service hourly losses.
- **Unaccounted:** Indicates variation that cannot be accounted for during the reconciliation process.
- **Daily Unaccounted:** Daily variation that cannot be accounted for during the reconciliation process.
- **Unexpected Sale:** For tanks in ACR mode, and when the tank is in a quiet mode and product loss occurs, an unexpected sale alarm will be generated if the threshold is exceeded.





## 15 Leak Detection

**Tank or Group Number:** Dropdown menu displaying all tanks and manifold groups. For manifold group, users may only run SLD leak test type.

**SLD:** Statistical Leak Detection test is only available for UST tank with standard CTE products and is only available if the system option has been purchased and setup in the Dallas chip.

If global setting for Manifold Logic is set to “Gated Valve” and SLDM (SLD for Manifold Tanks) is run, a message window will display the following message: “You cannot run SLD for Gated Valve Manifold Group. You must closed the Gated Valve, disconnect manifold group in system configuration and run SLD for each individual tank.”

For **Auto-Static** Leak Test Type:

- **Duration:** Length of time the static leak test will be performed.
- **Recurrence Pattern:** Determines how often static leak test result should be generated and is then stored in the calendar.
- **Leak Test Warning:** Determines after how many days the “In-Tank Test Warning” alarms should be generated if the system doesn’t perform a leak test according to the configured Recurrence Pattern.
- **Min. Volume:** Determines how much product should be in the tank stated as a percentage of tank capacity (i.e., must not be < 14%).

For **SLD** Leak Test Type:

- **Shortened Delivery Waiting Time:** Default set to ON. Must be disabled for manifold tanks or for tanks with more than 13,000-gallon capacity.
- **Auto Re-test Confirm:** Decreases the number of false alarms by automatically retesting before activating leak test failed alarm.
- **High Activity Mode:** Select this option for tanks with large monthly throughput (i.e., > 150,000 gallons).
- **Vapor Compensation:** Default set to OFF; however, may be activated for high temperature or gas tanks.
- **Recurrence Pattern:** Determines how often SLD leak test result should be generated. This option may be set for daily, weekly or monthly recurrence.
  - **Daily** – By selecting this option, hourly configuration becomes available. Daily results will be saved for one year. After one year, the test results will be replaced by the result from the same day in the previous year.
  - **Weekly** – By selecting this option, day of week configuration becomes available. Choose the day the test will begin.
  - **Monthly** – By selecting this option, the SLD test will be performed every 14 days.

Figure 15-1 Auto-Static Leak Test

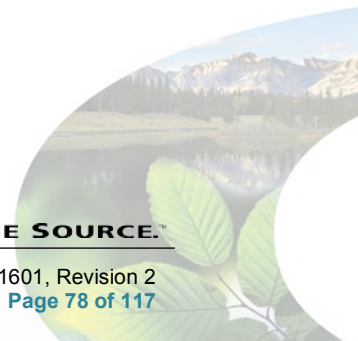
Figure 15-1 SLD Leak Test Type

- **Leak Test Warning:** Is the number of days that will be added to the Recurrence Pattern and if no leak test results, the Leak Test Warning Alarm will generate.

## 15.1 Setup Leak Detection Schedule

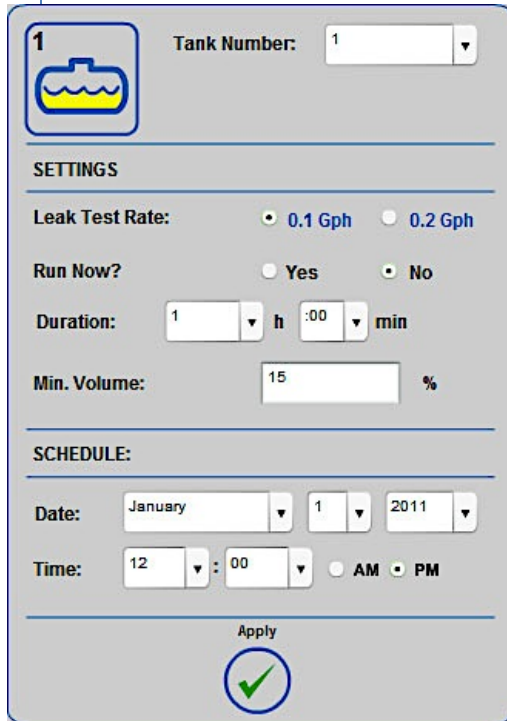
1. Press **Settings**
2. Press **Leak Detection**
3. Press **In-Tank Leak Settings**
4. Press **Auto Leak Test** to set up leak tests
5. Select **Tank**
6. Select **Test Type** (SLD or Auto-Static)
7. For **SLD**:
  - a. Shortened Delivery Waiting Time
  - b. Auto Re-test Confirm
  - c. High Activity Mode
  - d. Vapor Compensation
  - e. Choose Recurrence Pattern
  - f. Choose Time in which to run the test
  - g. Choose Leak Test Warning
8. For **Auto-Static**:
  - a. Select Duration of test in hours and minutes
  - b. Select Recurrence Pattern
  - c. Select Leak Test Warning
  - d. Select Min. Volume (%)
  - e. Press "**Apply**" to save settings


Repeat steps for additional tanks/tests.



## 15.2 Static On-Demand

Only UST tanks with standard CTE product are supported with this function. Does not support manifold groups, AST tanks or UST tanks with non-standard CTE product.



1  Tank Number: 1

---

**SETTINGS**

Leak Test Rate: ☒ 0.1 Gph ☐ 0.2 Gph

Run Now? ☐ Yes ☒ No

Duration: 1 h :00 min

Min. Volume: 15 %

---

**SCHEDULE:**

Date: January 1, 2011

Time: 12 :00 AM ☒ PM

---


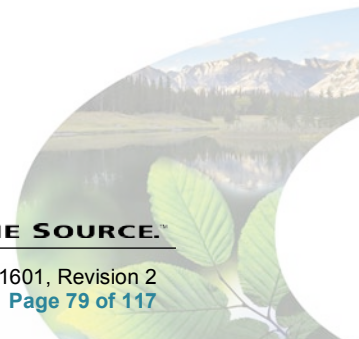
Apply 

Figure 15-2 Static On-Demand

1. Press **Static On-Demand**
2. Select **Tank**
3. Select **Leak Test Rate**
4. Select **Run Now** (Yes/No)
5. Select **Duration**
6. If **"No"** is selected
  - a. Select **Date**
  - b. Select **Time**
7. Press **"Apply"**

Repeat steps for additional tanks/tests.



## 15.3 In-Tank Leak Status

The In-Tank Leak Status Summary View screen displays only the leak status of UST tanks and groups. Individual tanks are displayed first then manifold groups are displayed (this is for Statistical Leak Detection test runs only).

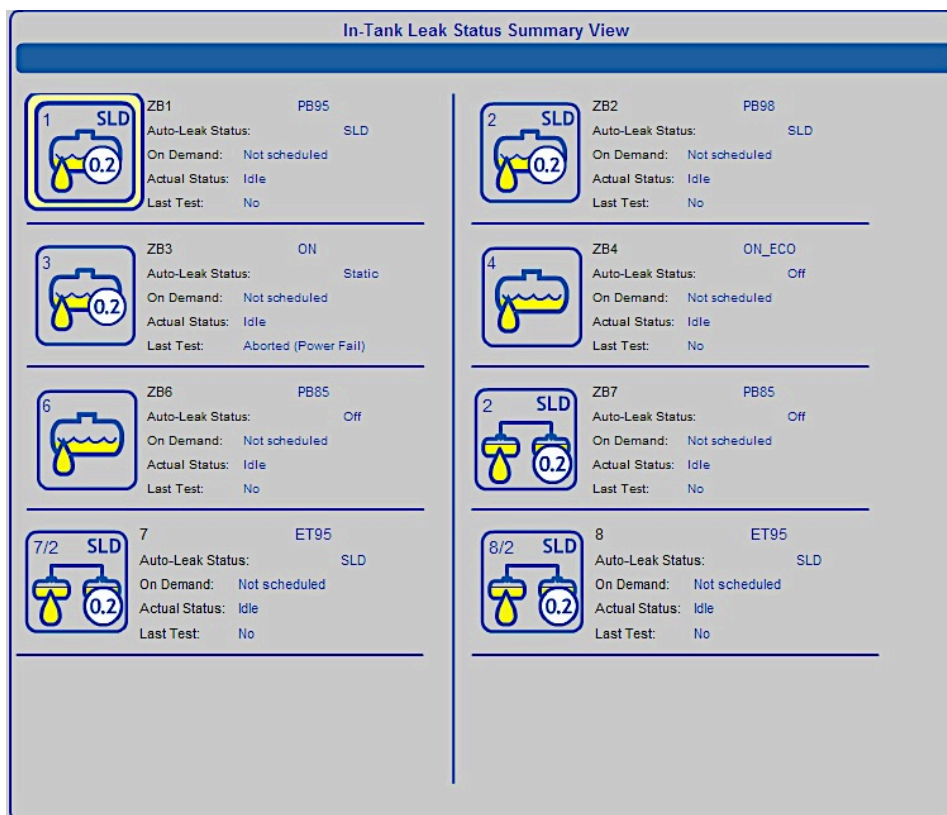


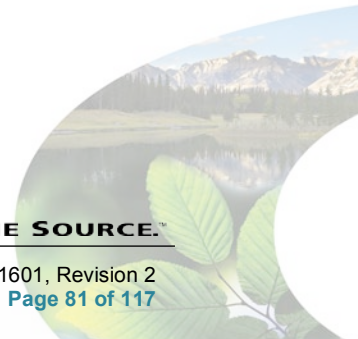
Figure 15-3 in-Tank Leak Status Summary View

- **Tank/Group Designation:** After each manifold group a numbering convention is displayed in the top-left corner of the tank icon. This is the Tank Number/Group Number, or simply Tank Number for individual tanks.
- **SLD/SLDM Icons:** May display in the top-right corners of the tank icons. Selecting the SLD/SLDM allows you to view the current SLD Diagnostic Test Report.
- **Auto-Leak Status:** Displays if or which automatic leak test (OFF, SLD or Static) is setup on a specific tank.
- **On-Demand:** Displays if or which specific leak test is scheduled for a designated time. Values here may be displayed as Not Scheduled, Scheduled 0.1 GPH or Scheduled 0.2 GPH.
- **Actual Status:** Displays the current status of the in-tank leak test. Value may be displayed as Idle, In Progress 0.1 GPH or In Progress 0.2 GPH.
- **Last Test:** Displays the status of the last performed in-tank leak test. Value may be displayed as Passed, Failed, Aborted (Activity), Aborted (Insufficient Volume), Aborted (Bad Net Volume), Aborted (Start Data), Aborted (In Progress), Aborted (Delivery), Aborted (Device Fail), Aborted (Power Fail), Aborted (Excessive Temp. Change), Aborted (Data Quality Fail 1), Aborted (Data Quality Fail 2), Aborted (Data Quality Fail 3) or Aborted (Temperature Change No Volume).

### 15.3.1 SLD Diagnostic Guidelines

There are many useful hints that will aid in understanding the generated SLD Diagnosis Reports:

1. Review current test data. Particularly the coefficients that have recently reset. If no outstanding indicators, collect this report again after several days and review the coefficient values again.
2. If logged in as a Technician, after reviewing the diagnostic report, review the segment data for the current test to reaffirm diagnostic data report. Reviewing segment data is also helpful when checking a probe for a sticking float and diagnosis confirmation is needed.
3. Check if it is a large tank or if the tank is setup in large tank mode; if so, then the first diagnostic report will require 25 days to complete or requires 23 hours of data.
4. Check, after test has begun, if any results have come back as failed or inconclusive. Check if the tank is in SLD test mode. A quick check of alarm history can show test failures. Be sure that enough time has passed for a test to complete.
5. Check if throughput is high as this may explain a low number of segments in some cases, especially when site has been open for 24 hours.
6. If the current diagnostic reports show good segments and no bad/incomplete segments, this would indicate that SLD is functioning properly.
7. If there is a high number of recorded hours, then there should be enough collected data for a conclusive result.
8. Check all inconclusive I1 tests. If there are no I5 results and only I1 results, then the I1 must be the reason for the lack of passing tests. This means that the data shows a high deviation in leak rates from one test to another, and it needs to check what can cause these variations.
9. If most of the segments are one (1) hour in length, the results should be conclusive.
10. If the average temperature variation (mt) is relatively small and oscillates around zero, this indicates that temperature is not the problem.
11. Check if the leak rates (mn) vary a lot from one segment to another. High leak-rate segments seem to be consistent with large level drops. This indicates that small volumes of product are being dispensed during the test (such small transactions are tagged as leaks), or something else is causing the product level to drop.
12. If the product height (ht) is not consistent with a leak at the top of the tank this is due to high leak segments all over the tank.
13. If the temperature changes and the float does not move, this is often due to a sticking float.





### 15.3.2 SLD Diagnostic Report – Current Test for Single Tank

The SLD Diagnostic Report – Current Test screen shows the actual test data for the single tank. Only a user logged in as a Technician may view all SLD diagnostic screens. For a user not logged into the system as a Technician, only the right panel of information will display.

- **Segment Data:** Continuous part of data for SLD calculations not interrupted by a transaction or delivery.
- **Test History:** Stored historical data of all previous SLD tests for this tank.

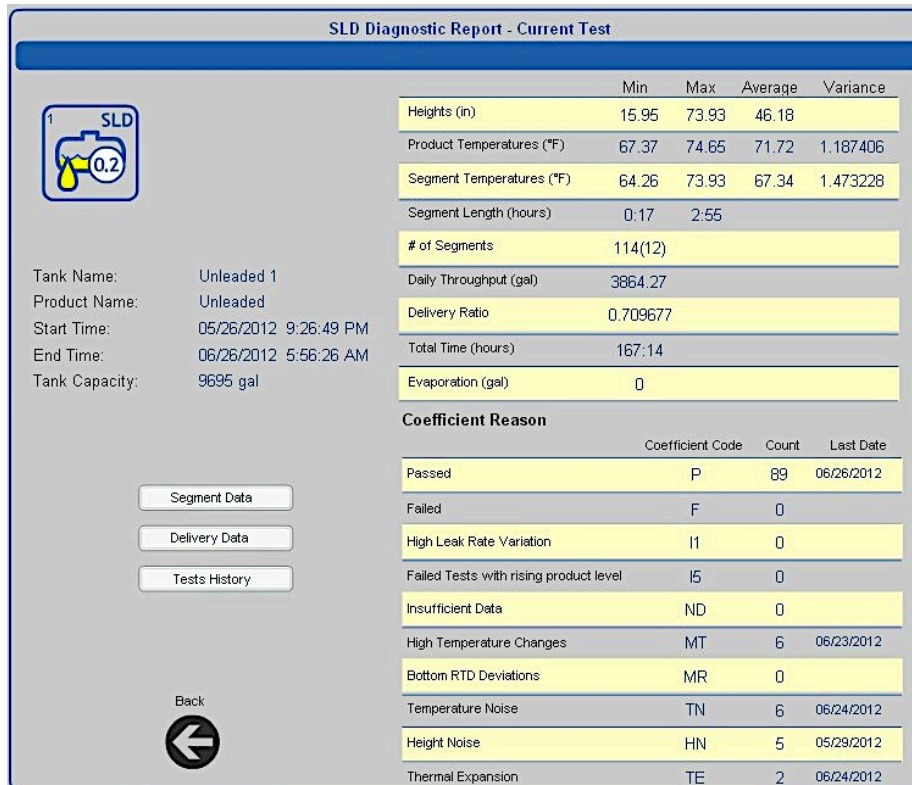


Figure 15-4 Current SLD Diagnostic Report for Single Tank

Report Information Field:

- **Heights:** Displays the product height ranged during the test period.
- **Product Temperature:** Displays the product temperature as well as temperature variance.
- **Segment Temperature:** Displays the product temperature as well as the variation RTD1 for stored segments.
- **Segment Length:** Segment length range displays in hours.
- **# of Segments:** Displays the number of good/valid segments.
- **Daily Throughput:** Average daily throughput for the tank. This value may be compared with the delivery history by selecting the Delivery Data button in the left panel of the screen.
- **Delivery Ratio:** Average number of deliveries each day during the test period.

Please note that SLD segments are not collected for six (6) hours after a delivery occurs.

- **Total Time:** Once initial data collection is complete, the number of hours should be between 14 and 15 for a standard test and between 22 and 23 for a larger tank test. SLD test requires 15 hours of data collection, whereas larger tanks and manifold tanks tests require 23 hours of data collection.
- **Evaporation:** The measured product volume accounting for evaporation effect.

Coefficient Reason:

- **Passed (P):** Number of tests passed and completed since the counter was reset.
- **Failed (F):** Number of test failed since the counter was reset.
- **High Leak Rate Variation (I1):** Number of tests with high leak rate variation.
- **Failed Tests with Rising Product Level (I5):** Number of failed tests with rising product level. This result may occur if the product temperature rises during testing, but the float remains unchanged.
- **Insufficient Data (ND):** The leak test has been running for days, but SLD does not have enough information to complete a test due to high throughput, frequent deliveries or LLD is taking too much available time.
- **High Temperature Changes (MT):** Temperature gradient is too high during testing.
- **Bottom RTD Deviation (MR):** RTD1 gradient is too high during testing; this may indicate a high water table.
- **Temperature Noise (TN):** RTD readings are unstable; check RTD's functionality.
- **Height Noise (NH):** Height is unstable; check probe shaft cleanliness.
- **Thermal Expansion (TE):** Fuel expansions occurred, but no evidence in change of float; ensure probe shaft cleanliness.

### 15.3.3 SLD Diagnostic Report – Current Test for Manifold Group

The SLD Diagnostic Report – Current Test screen shows the actual test data for the manifold group.

- **Segment Data:** Continuous part of data for SLD calculations not interrupted by a transaction or delivery.
- **Test History:** Stored historical data of all previous SLD tests for this tank.
- **Manifold Broken Data:** Provides data allowing for the diagnosis of problems regarding manifold connection.

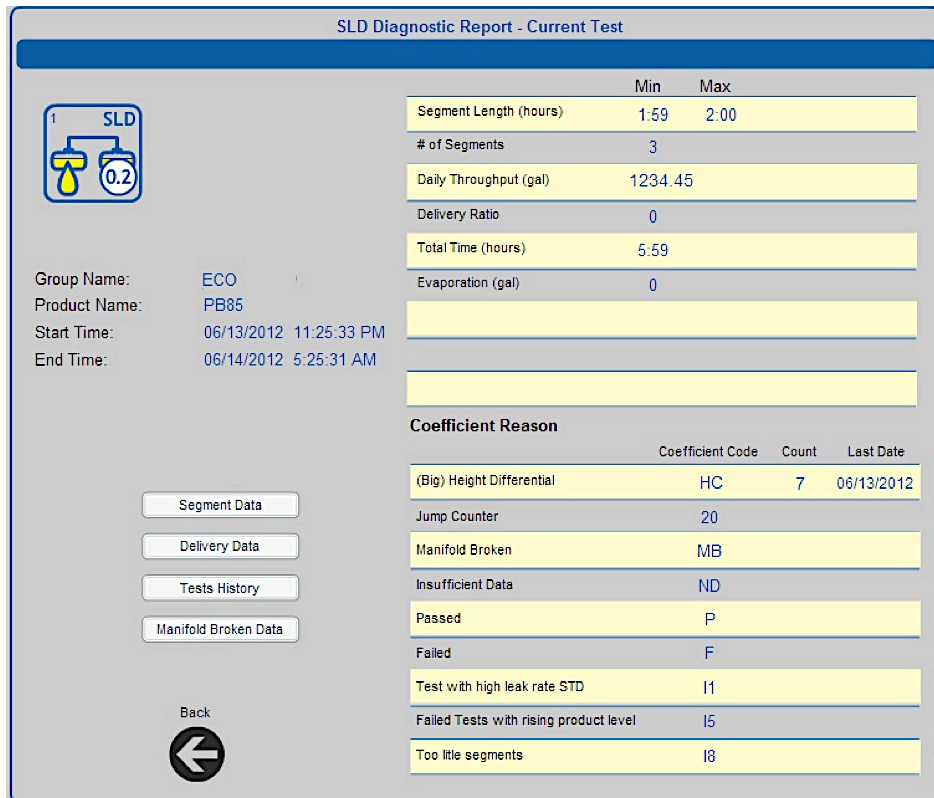


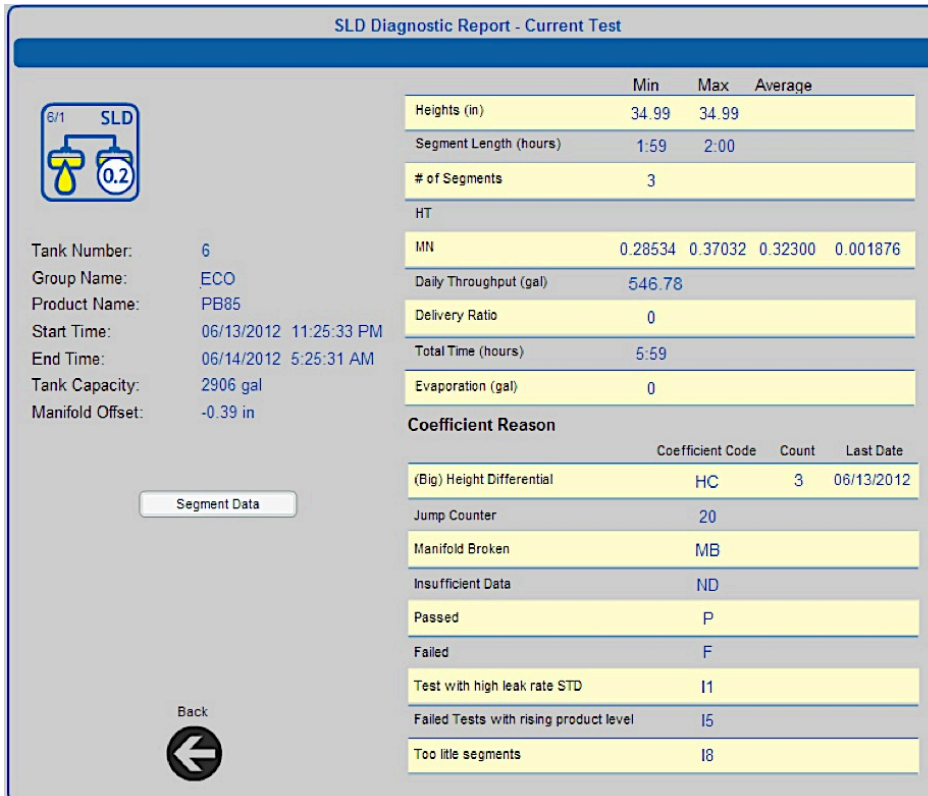
Figure 15-5 Current SLD Diagnostic Report for Manifold Group

#### Coefficient Reason:

- **Height Differential (HC):** Displays if the product height difference between tanks is too great. This may occur if the manifold is broken or if the tanks are buried at different levels. If tanks are buried at different levels, manifold offset must be adjusted to compensate. This counter will be reset if leak test fails.
- **Jump Counter (20):** Number of segments discarded due to product height jumps (leak rate segments differed by more than 0.2 GPH). This counter will be reset if leak test fails.
- **Manifold Broken (MB):** Displays when the test for a manifold is broken. This counter will be reset if leak test fails.
- **Insufficient Data (ND):** The leak test has been running for days, but SLD does not have enough information to complete a test due to high throughput, frequent deliveries or LLD is taking too much available time.
- **Passed (P):** Number of tests passed and completed since the counter was reset.
- **Failed (F):** Number of tests failed since the counter was reset.
- **Test with High Leak Rate STD (I1):** Number of tests with high leak rate STD.
- **Failed Tests with Rising Product Level (I5):** Number of failed tests with rising product level. This may be caused by a leaking check valve or manifold.
- **Too Little Segments (I8):** Time in which the test segment calculations were run is greater than 23 hours, but the number of segments is less than 25.

#### 15.3.4 SLD Diagnostic Report – Current Test for Tank in Manifold Group

The SLD Diagnostic Report – Current Test screen shows the actual test data for the single tank in a manifold group that was tested.



**SLD Diagnostic Report - Current Test**

6/1 SLD

Tank Number: 6  
Group Name: ECO  
Product Name: PB85  
Start Time: 06/13/2012 11:25:33 PM  
End Time: 06/14/2012 5:25:31 AM  
Tank Capacity: 2906 gal  
Manifold Offset: -0.39 in

Segment Data

Back

	Min	Max	Average
Heights (in)	34.99	34.99	
Segment Length (hours)	1:59	2:00	
# of Segments	3		
HT			
MN	0.28534	0.37032	0.32300 0.001876
Daily Throughput (gal)	546.78		
Delivery Ratio	0		
Total Time (hours)	5:59		
Evaporation (gal)	0		

**Coefficient Reason**

	Coefficient Code	Count	Last Date
(Big) Height Differential	HC	3	06/13/2012
Jump Counter	20		
Manifold Broken	MB		
Insufficient Data	ND		
Passed	P		
Failed	F		
Test with high leak rate STD	I1		
Failed Tests with rising product level	I5		
Too little segments	I8		

Figure 15-6 Current SLD Diagnostic Report for Tank in Manifold Group

Report Information Field:

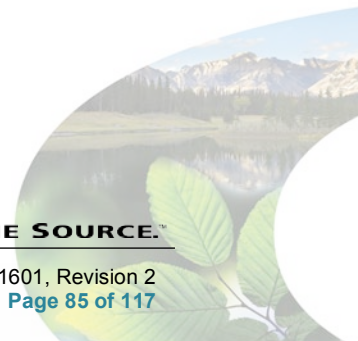
- **Heights:** Displays the product height.
- **Segment Length:** Segment length displays in hours.
- **# of Segments:** Displays the number of good/valid segments.
- **HT:** Displays the product height change.
- **MN:** Displays the measured leak rate.
- **Daily Throughput:** Average daily throughput for the tank. This value may be compared with the delivery history by selecting the Delivery Data button in the left panel of the screen.
- **Delivery Ratio:** Average daily number of deliveries each day.

Please note that SLD segments are not collected for six (6) hours after a delivery occurs.

- **Total Time:** Once initial data collection is complete, the number of hours should be between 14 and 15 for a standard test and between 22 and 23 for a larger tank test. SLD test requires 15 hours of data collection, whereas larger tanks and manifold tank tests require 23 hours of data collection.
- **Evaporation:** The measured product volume accounting for evaporation effect.

Coefficient Reason:

- **Height Differential (HC):** Displays if the product height difference between tanks is too great. This may occur if the manifold is broken or if the tanks are buried at different levels. If tanks are buried at different levels, manifold offset must be adjusted to compensate. This counter will be reset if leak test fails.
- **Jump Counter (20):** Number of segments discarded due to product height jumps (leak rate segments differed by more than 0.2 GPH). This counter will be reset if leak test fails.
- **Manifold Broken (MB):** Displays when the test for if a manifold is broken. This counter will be reset if leak test fails.
- **Insufficient Data (ND):** The leak test has been running for days, but SLD does not have enough information to complete a test due to high throughput, frequent deliveries or LLD is taking too much available time.
- **Passed (P):** Number of tests passed and completed since the counter was reset.
- **Failed (F):** Number of tests failed since the counter was reset.
- **Test with High Leak Rate STD (I1):** Number of tests with high leak rate STD.
- **Failed Tests with Rising Product Level (I5):** Number of failed tests with rising product level. This may be caused by a leaking check valve or manifold.
- **Too Little Segments (I8):** Time in which the test segment calculations were run is greater than 23 hours, but the number of segments is less than 25.





## 15.4 SLD Segment Information

### 15.4.1 SLD Segment Information for Single Tanks and Tanks in Manifold Group

The SLD Segment Information screen displays all SLD segments in buffer for a selected tank, whether it is a single tank or a tank in a manifold group.


SLD Segment Information											
		Tank Name: Unleaded 1									
		Product Name: Unleaded									
Date	Time	Length	mn	smn	sta	sht	mt	mr1	mh	tave	ht
05/26/2012	9:26:49 PM	2:00	-0.166973	0.045681	0.001842	0.000228	-0.081748	-0.081748	-0.003979	19.7530	42.925038
05/26/2012	11:27:22 PM	1:59	-0.114765	0.033569	0.001405	0.000164	-0.073090	-0.073090	-0.003059	19.5957	42.916948
05/27/2012	1:27:32 AM	1:06	0.029789	0.047570	0.000644	0.000281	-0.066131	-0.066131	-0.001955	19.4940	42.911938
05/27/2012	6:28:50 AM	2:00	0.200924	0.038116	0.000421	0.000138	0.004192	-0.008720	0.001985	18.1188	187.772276
05/27/2012	8:29:22 AM	1:59	0.042468	0.036126	0.000393	0.000133	0.001454	-0.011962	0.000507	18.1245	187.776010
05/27/2012	10:29:20 AM	1:59	-0.183020	0.028658	0.000260	0.000119	0.002072	-0.010565	-0.000885	18.1283	187.777205
05/27/2012	12:29:19 PM	1:59	-0.130947	0.037131	0.000458	0.000123	0.002165	-0.010077	-0.000404	18.1321	187.775776
05/27/2012	2:29:17 PM	2:00	-0.013518	0.034957	0.000436	0.000115	0.004852	-0.007816	0.000910	18.1390	187.775000
05/27/2012	4:29:49 PM	1:59	-0.146604	0.084312	0.000842	0.000332	0.002318	-0.010113	-0.000540	18.1460	187.776243
05/27/2012	6:29:45 PM	1:13	0.212662	0.044446	0.000762	0.000095	-0.002282	-0.013451	0.000705	18.1467	187.775395
05/28/2012	1:11:14 AM	0:26	-0.447864	0.059208	0.000714	0.000188	0.002971	-0.008427	-0.001681	18.2561	172.653490
05/28/2012	4:51:40 AM	0:40	0.035407	0.044501	0.000670	0.000114	-0.003339	-0.015111	-0.000530	18.2561	171.709695
05/30/2012	12:56:51 AM	0:45	-0.096027	0.041789	0.000851	0.000158	-0.024863	-0.031977	-0.002493	19.5835	77.081081
05/30/2012	2:20:41 AM	1:23	-0.085052	0.037815	0.001105	0.000122	-0.026780	-0.038254	-0.002299	19.5473	76.586500
05/31/2012	12:20:43 AM	0:32	-0.247189	0.068985	0.001964	0.000158	-0.018523	-0.023916	-0.003412	19.3311	99.706514
05/31/2012	1:24:55 AM	0:36	-0.087820	0.054587	0.001435	0.000136	-0.021045	-0.025922	-0.002287	19.3177	99.247305
05/31/2012	2:08:19 AM	0:41	0.037032	0.059565	0.001218	0.000181	-0.017217	-0.026162	-0.001729	19.3098	98.817062
Min:		0:17	-0.447864	0.02172	0.00026	0.000079	-0.081748	-0.100158	-0.009443	17.900591	40.521567
Max:		2:55	0.435439	0.107179	0.002019	0.000497	0.011608	-0.007162	0.001985	23.243804	187.777205
Average:		1:27	-0.02581	0.04858	0.000911	0.000172	-0.020558	-0.035798	-0.002049	19.622134	117.293577

Figure 15-7 SLD Segment Info. for Single Tanks and Tank in Manifold Group

- **Date/Time:** Displays when the data collection for a segment began.
- **Length:** Displays how long data was collected for a segment.
- **MN:** Displays measured leak rate for the segment. Value is displayed in Liters.
- **SMN:** Standard deviation of the leak rate during the segment. Value is displayed in Liters.
- **STA:** Standard deviation of the average product temperature.
- **SHT:** Standard deviation of the average product height in the tank.
- **MT:** Displays average temperature slope.
- **MR1:** Slope of RTD#1.
- **MH:** Slope of product height.
- **TAVE:** Average temperature.
- **HT:** Product height in the tank.

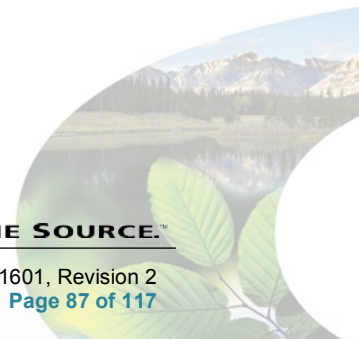
## 15.4.2 SLD Segment Information for Manifold Group

The SLD Segment Information screen displays all SLD segments in buffer for a manifold group.

SLD Segment Information					
<div> <div>1 SLD</div> <div>  </div> </div> <div> Group Name: Etyliny_ECO  Product Name: PB85 </div>					
Date	Time	Length	mn	smn	
06/13/2012	11:25:33 PM	1:59	0.370327	0.016826	
06/14/2012	1:25:26 AM	2:00	0.313342	0.014940	
06/14/2012	3:25:37 AM	1:59	0.285342	0.015636	
<div> Min: 1:59 0.285342 0.01494  Max: 2:00 0.370327 0.016826  Average: 1:59 0.323004 0.015801 </div> <div>  Back </div>					

Figure 15-8 SLD Segment Info. for a Manifold Group

- **Date/Time:** Displays when the data collection for a segment began.
- **Length:** Displays how long data was collected for a segment.
- **MN:** Displays measured leak rate for the segment. Value is displayed in Liters.
- **SMN:** Standard deviation of the leak rate during the segment. Value is displayed in Liters.





### 15.4.3 SLD Segment Information – Delivery Data

The SLD Segment Information – Delivery Data screen displays all deliveries for a selected tank within the same data range in SLD buffer.

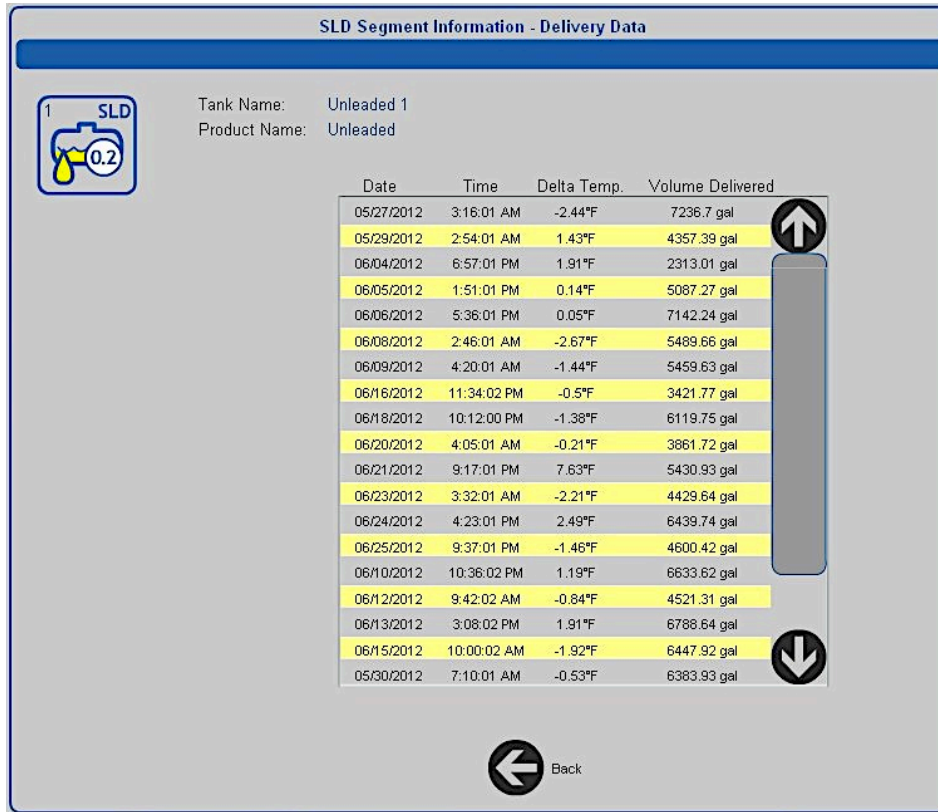



Figure 15-9 Delivery Data

#### 15.4.4 SLD Segment Information – Test Result History

The SLD Segment Information – Test Result History screen displays all SLD test results (i.e., passed, failed or inconclusive).

1

SLD



Tank Name:

Unleaded 1

Product Name:

Unleaded

Date	Time	Test Result
06/25/2012	5:23:53 AM	Passed
06/18/2012	4:02:15 AM	Passed
06/11/2012	3:36:11 AM	Passed
06/04/2012	2:10:58 AM	Passed
05/26/2012	11:26:50 PM	Passed
05/19/2012	6:33:06 AM	Passed


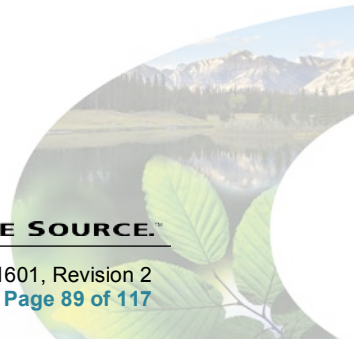

Back


Figure 15-10 Test Result History



### 15.4.5 Manifold Broken Data

The Manifold Broken Data screen is used to diagnose connection problems between tanks in a manifold tank group.

Manifold Broken Data



Group Name: Etyliny\_ECO  
Product Name: PB85  
Start time: 02/27/2009 13:11:21  
Capacity: 8717.68 gal  
State: In Alarm

HT1	0
HT2	1
HTDeltaStd	0.12
HTDeltaAvgB	XX.X
HTDeltaAvgG	-99.9
HtNumB	30
HtNumG	35

Back


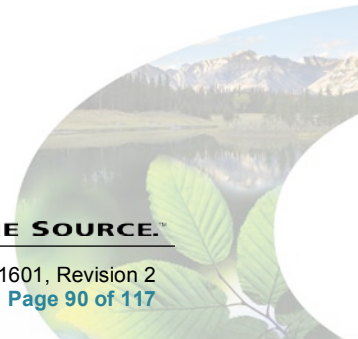


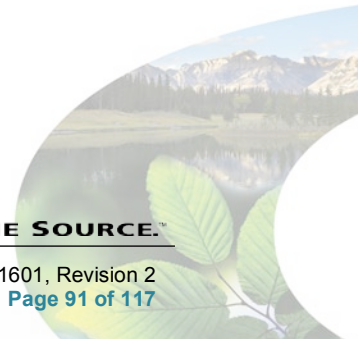
Figure 15-11 Manifold Broken Data

- **HT1:** Specialty code values; see Table 15-1.
- **HT2:** Specialty code values; see Table 15-1.
- **HGDeltaStd:** Standard deviation of the product height difference between tanks.
- **HTDeltaAvgB:** Specialty code values; see Table 15-1.
- **HTDeltaAvgG:** Specialty code values; see Table 15-1.
- **HtNumB:** Number of segments with height less than 0.4 in tank diameter.
- **HtNumG:** Number of segments with height more than 0.5 in tank diameter.



Ht1	Ht2	HTDeltaAvgB	HTDeltaAvgG	Can Leak Test Be Run?	Manifold Condition	Comments
0	0	XX.X	XX.X	Yes	OK	Only case where manifold condition is evaluated
0	1	XX.X	-99.9	Yes	?	Ht < 0.4 tank diameter
0	2	-99.9	XX.X	Yes	?	Ht > 0.6 tank diameter
0	3	XX.X	XX.X	Yes	?	Ht ~ = 0.5 tank diameter
0	4	XX.X	XX.X	Yes	?	HtDeltaAvgB~ = HtDeltaAvG
XX.X	5	XX.X	XX.X	Yes	No	Manifold is broken and several segments Ht > 0.6 tank diameter, so leak test can be done
XX.X	6	XX.X	XX.X	No	No	Manifold is broken and insufficient number of segments Ht > 0.6 tank diameter to run leak test
-1	0	XX.X	XX.X	No	?	Not enough data to test manifold

Table 15-1 Manifold Broken Data Specialty Code Values



## 15.5 SLD Reports History

SLD History screen is available from **Leak Detection** menu for users with technician role. For other user's types this button is invisible. On this calendar are showing all available SLD reports (passed, failed and inconclusive). Days with available reports are displayed on the calendar with green checkmarks. If no selected day, in the right panel shows all reports for a given month. After select day, shows reports only for this day.

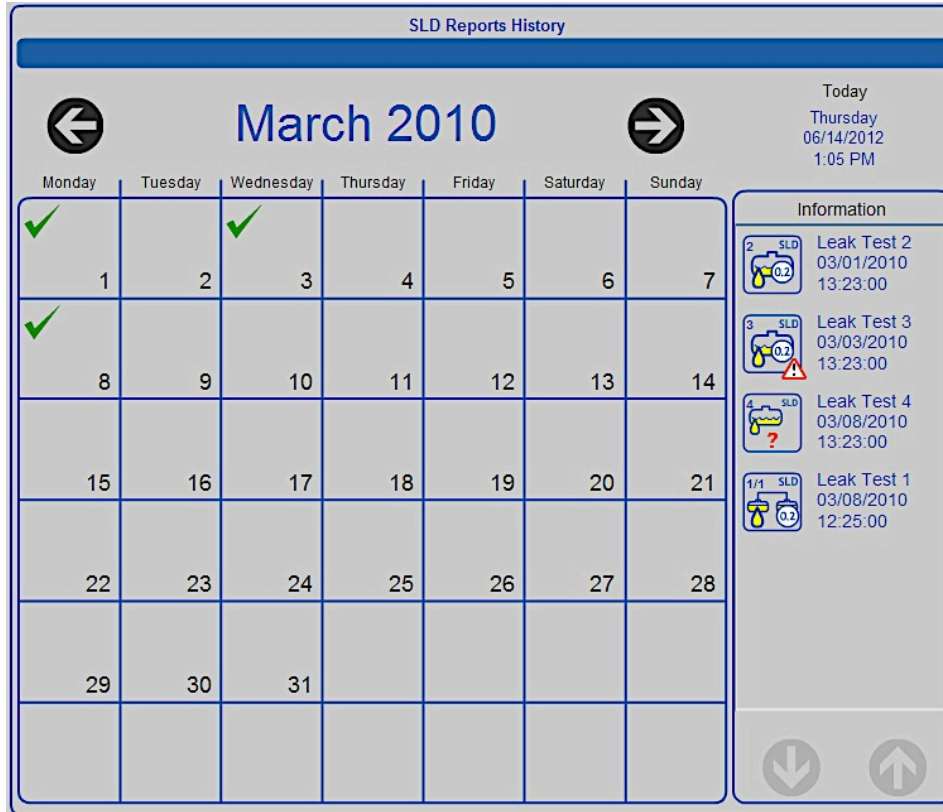



Figure 15-12 SLD Reports History

### 15.5.1 SLD Report Details


The Leak Test Status Report Details screen is similar for a single tank and for a tank in manifold group. However, the report for a tank in manifold group has an additional field: **Tank Number**. For each report, a Detailed Diagnostic Report is available; access this report by selecting the **SLD Detailed Diagnostic Report** button.

Leak Test Status Report Details



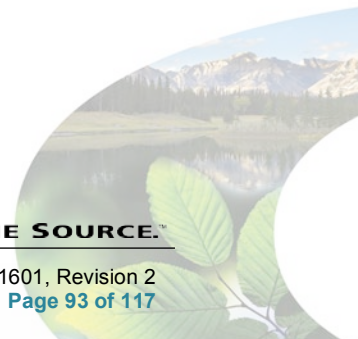
**Tank Number:** 1  
**Tank Name:** G1-5  
**Product Name:** U86  
**Start Time:** 03/24/2009 2:49:57 AM  
**End Time:** 03/24/2009 3:55:08 AM  
**Test Type:** SLD  
**Leak Test Rate:** 0.2Gph  
**Leak Test Status:** Passed  
**Measured Leak Rate:** -0.0007 gal/h

SLD Detailed Diagnostic Report

Back  


Max Height	9.06 in
Min Height	7.91 in
Max Temperature	113°F
Min Temperature	116.6°F
Max Segment Length	1 hours
Min Segment Length	0.56 hours
# of Segments	44
Daily Throughput	338.14 gal
Delivery Ratio	0.45

Figure 15-13 SLD Report Details





## 15.5.2 SLD Diagnostic Report

The SLD Diagnostic Report is available for single tanks and for tanks in manifold groups.

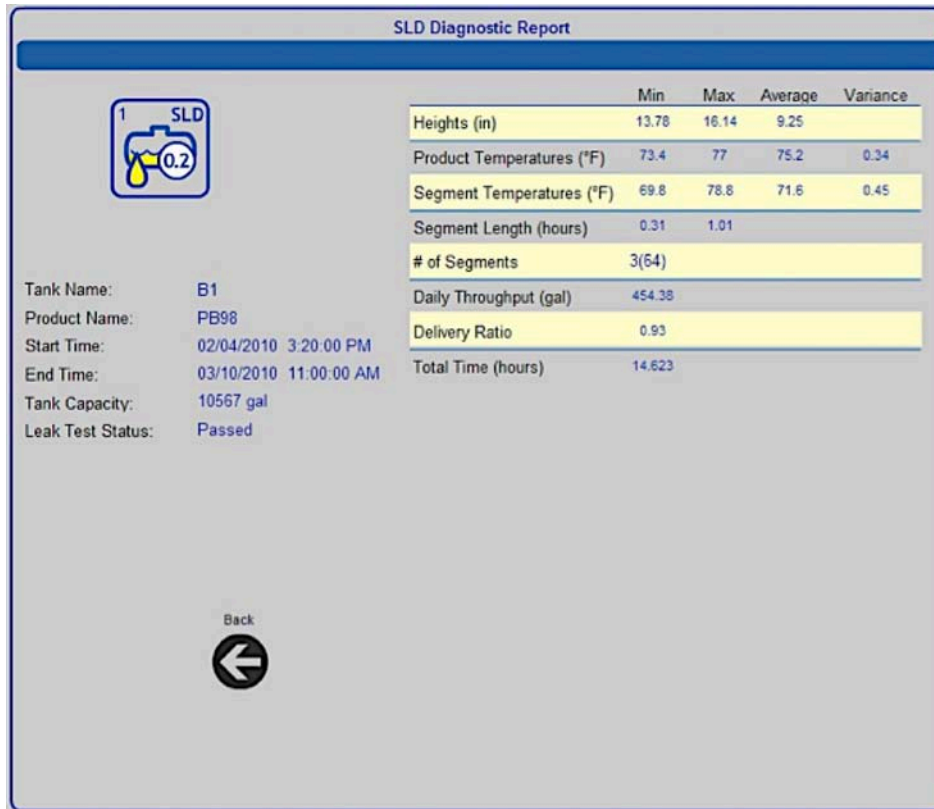
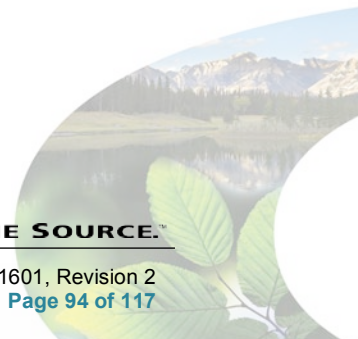


Figure 15-14 SLD Diagnostic Report



## 16 Reports

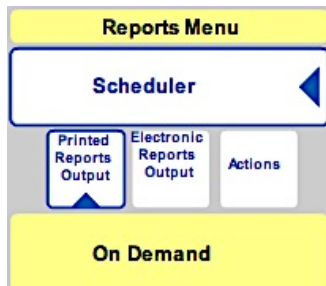


Figure 16-1 Reports Menu

1. Go to **Reports**
2. Choose **Scheduler** or **On Demand**

### 16.1 On-Demand (Available) Reports

From the **On-Demand Reports** screen, you can choose any Available Report to run.

- For **Inventory** or **Delivery** reports, you will need to select the **Report Basis**. This allows you to run a report by selected product or by an individual tank.

Next, choose the **Date Range** that will specify the **Start Date** and **End Date** for the reported data.

Select the **Print** button to print to the system's default printer.

- For **Leak Test Status** reports, you will need to select the **Report Basis**. This allows you to run **All Tests**, which will include all test types in the report, Static, Auto-Static, SLD or LLD testing results.

Next, choose the **Date Range** that will specify the **Start Date** and **End Date** for the reported data, or you can reprint the **Last Report** instead.

Select the **Print** button to print to the system's default printer.

- For **Reconciliation** reports, you will need to select the **Report Basis**. This allows you to run a report based on **Daily** reported information, reconciliation information sorted by **Shifts**, **Hourly** reconciliation information or reconciliation **History** for a selected period. You can also select to reprint the **Last Report**.

Next, choose the **Date Range** that will specify the **Start Date** and **End Date** for the reported data.

Selected the **Print** button to print to the system's default printer.

- For **Autocalibration Status** reports, you will need to select the tank to run the report against. You can also choose to reprint the **Last Report** for the Autocalibration Status.

Next, choose the **Date Range** that will specify the **Start Date** and **End Date** for the reported data.

Select the **"Print"** button to print to the system's default.

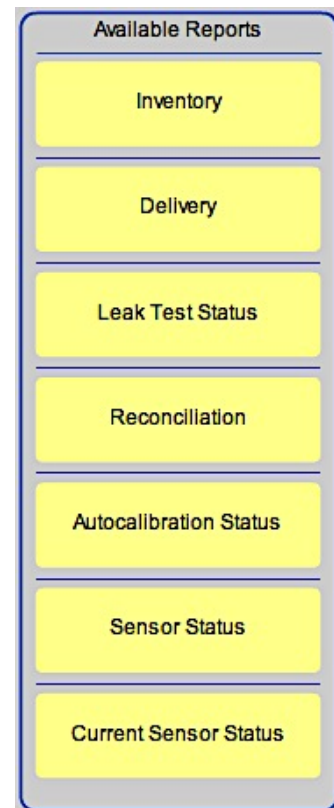
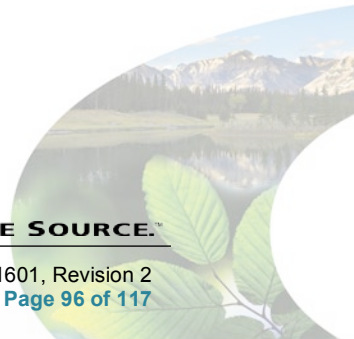


Figure 16-2 Available Report Menu

- For **Sensor Status** reports, choose the **Date Range** that will specify the **Start Date** and **End Date** for the reported data.

Select the **Print** button to print to the system's default printer.

- For **Current Sensor Status** reports, simply select the **"Print"** button to print to the system's default printer.



## 16.2 Scheduled Reports

The Scheduler allows you to select the report's output as Printed, Electronic (i.e., Email or fax) or as an Action that does not require a printer, Email or fax information, but rather stores inventories to memory, or schedules a site to open and close at a certain time.

The screenshot displays the OPW Fuel Management Systems Scheduler interface. The main window is titled 'Printed Reports Output'. On the left, a 'Reports Menu' sidebar shows 'Scheduler' selected. Below it, 'Printed Reports Output' and 'Electronic Reports Output' are visible. The central area features a calendar for May 2012, with the 10th highlighted. To the right of the calendar, a list of 'Available Reports' includes Delivery, Inventory, Reconciliation, Autocalibration Status, Leak Test Status, and Sensor Status. Below this list are up and down arrows. The bottom of the interface shows a navigation bar with 'Reports', 'Scheduler', and 'Printed Reports' tabs, and a version number '5.0'.

Figure 16-3 Printed Reports Output

For **Printed** or **Electronic** reports, select the report type you wish to run (Inventory, Delivery, Reconciliation, Autocalibration Leak Test Status, Sensor Status or Active Alarm Count).

Next, depending on the available report type that you have selected, please select the following:

1. Choose **Tank, Sensor (Sensor Status Report only)**, or for **Active Alarm Counts** please proceed to step 2.
2. Choose Recurrence Pattern:
  - a. **Once**: Will run the report one (1) time
  - b. **Daily**: Will run the report daily
  - c. **Weekly**: Will run the report weekly on a selected day or every "x" number of weeks
  - d. **Monthly**: Will run the report monthly or every "x" number of months
  - e. **Yearly**: Will run the report yearly or every "x" number of years
3. The every "x" days/weeks/months/years selection will be used in conjunction with the above selection to choose the pattern for which the report should be run.
4. Choose the **Report Time**: Time for the report to be run based on the above selections
5. Choose the method to **Receive this Report Via**:
  - a. For **Printed Reports**:
    - i. Choose the **Printer** to print report to
  - b. For **Electronic Reports**:

- i. Choose **E-mail** or **Fax**
- ii. Press **Details**
- iii. Choose recipient for the report
- c. Press **"Apply"** to save the report settings

**OPW**  
FUEL MANAGEMENT SYSTEMS  
OEM Site

**Reports Menu**

**Scheduler**

Printed Reports Output | Electronic Reports Output | **Actions**

**On Demand**

**Actions**

May 2012

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

**Available Actions**

Inventory

Open Site

Close Site

**Scheduled Actions**

Reports > Scheduler > Actions > >

5.1.1.3

**Figure 16-4 Reports Scheduler Available Actions**

For Action reports, select the Action you wish to perform that does not require a printer, Email or fax information. To schedule Inventory reports to be saved to memory, choose the **Tank** from which you would like to gather inventory data. To schedule the opening or closing of a site, proceed with the following setup as indicated:

1. Choose Tank (for Inventory selections only)
2. Choose Recurrence Pattern
  - a. **Once:** Will run the report one (1) time
  - b. **Daily:** Will run the report daily
  - c. **Weekly:** Will run the report weekly on a selected day or every "x" number of weeks
  - d. **Monthly:** Will run the report monthly or every "x" number of months
  - e. **Yearly:** Will run the report yearly or every "x" number of years
3. The every "x" days/weeks/months/years selection will be used in conjunction with the above selection to choose the pattern for which the report should be run
4. Choose **Report Time:** Choose time for the **Action** to be run based on the above selections
5. Press **"Apply"** to save **Action** settings

## 17 Utilities

The **Utilities** screen allows the user to perform some technical operations on the SiteSentinel® iSite™. Those operations have a big impact on the System so that they must be performed very carefully.

The screen is accessible after selecting the **Settings** (left-bottom corner) and menu **Utilities**.

Using this screen, the user can:

- Backup or Restore the Site Configuration
- Reset Site Configuration
- Download Log Files to a USB or Remote PC
- Maintenance Mode
- Remove SLD Data from System Database
- Copy Database to USB
- Acknowledge Alarms

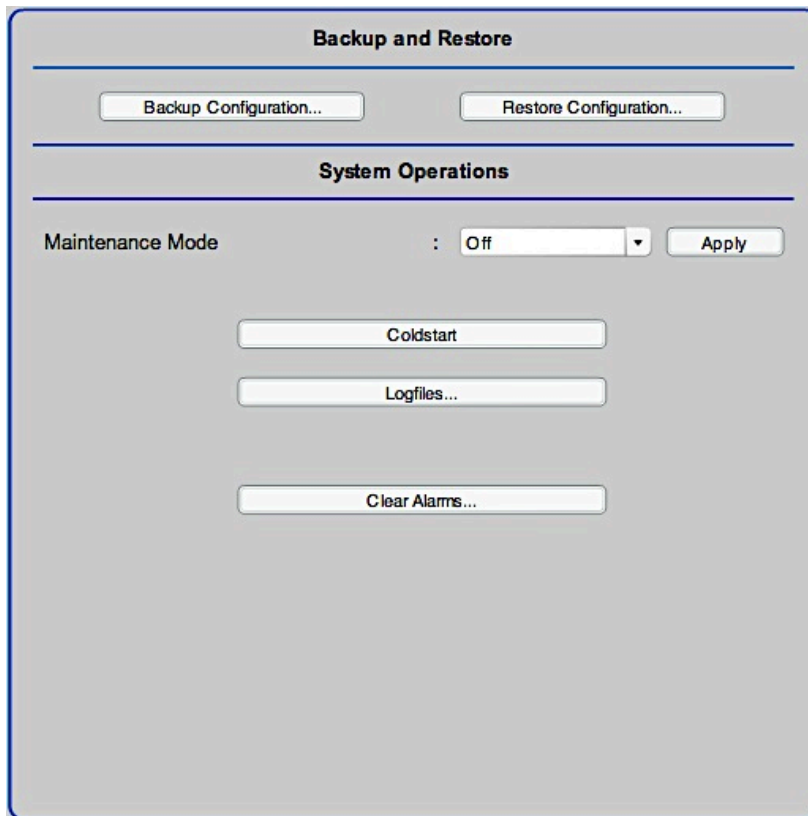
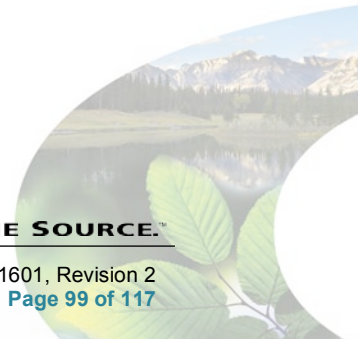


Figure 17-1 Backup & Restore System Configuration





## 17.1 Backup and Restore System Configuration

The SiteSentinel® iSite™ system keeps all necessary data, such as site configuration products, hoses, pumps, tanks, reports, deliveries and leak test results in a database.

There is the possibility to configure the site on one SiteSentinel® iSite™ controller and copy this configuration to a different controller.

Those two controllers must have the same software version!

The **Backup Configuration** button allows you to save the configuration to a file.

The **Restore Configuration** button allows you to import a saved configuration file.

When restoring, the SiteSentinel® iSite™ clears ALL previously stored data! The backup file contains only configuration data (i.e., site, tanks, sensors, pumps and hoses). It does NOT contain ANY reports, leak test results or deliveries.

It is recommended to perform a **Cold Start** before importing the backup file.

### 17.1.1 Backup System Configuration

1. Go to **Settings**
2. Go to **Utilities**
3. Choose **Backup Configuration**
4. Choose location where the backup should be saved

### 17.1.2 Restore Console Configuration

1. Go to **Settings**
2. Go to **Utilities**
3. Choose **Restore Configuration**
4. Select **File** to restore
5. After restore is complete, log out of current user and log in to view/verify changes.

## 17.2 Resetting the System Configuration

To reset the system database, the user must press the **Cold Start** button. After that, the system is stopped, the database is cleared-up and filled by the default values. Then the SiteSentinel® iSite™ restarts; its configuration resets to the default settings when it was originally purchased by the user.

## 17.3 Downloading Log Files

Some system information is stored in the log files. There is one main log file; its approximate size is 4 MB. If the log data exceeds the limit, the backup log files are created. Therefore, after pressing the **Logfiles...** button, the user will see multiple files. Select one file and download it. If connected remotely, then point to the folder in which the logfile will be saved. When the user is working directly on the SiteSentinel® iSite™ (LCD screen), insert the USB key into the USB port located on the side of the SiteSentinel® iSite™ console, navigate the GUI, select the **Logfiles...** and the logfile will be copied to the USB key.

## 17.4 Maintenance Mode

The SiteSentinel® iSite™ controller can work in two modes: **Normal** and **Maintenance**. Generally, the SiteSentinel® iSite™ operates in **Normal** mode, or rather, all features as purchased by the user.

There is only one difference between the **Normal** and **Maintenance** modes, which is when the system works in the **Maintenance** mode, the alarm information is not sent via SMS (text messages), faxes or Emails, but they can be printed to the default printer that is connected to the SiteSentinel® iSite™

The **Maintenance** mode is useful when the servicemen are working with some devices (tanks or sensors) since the alarm messages will not be interfering with any other function.

The SiteSentinel® iSite™ operates in **Normal** mode when the **Maintenance** mode is switched OFF. To switch the system to Maintenance mode, change this option to ON and press the “**Apply**” button located to the right of the option.

## 17.5 Removing SLD Data from System

During the Statistical Leak Detection (SLD) process, the SiteSentinel® iSite™ collects different types of data within its database. Some data is available only for users with **Technician access rights**. The Technician may remove this data from the SiteSentinel® iSite™ by selecting **Clear SLD Segments for Tank or Group**. If he wishes to delete this data, he must select the tank or group for which the data will be deleted and press “**Clear**”.

## 17.6 Copying Database

The Copy Database feature is only available if operating the SiteSentinel® iSite™ controller (LCD) directly.

Copy the database to the USB key plugged into the USB port located on side of the SiteSentinel® iSite™ controller.

During this operation, the SiteSentinel® iSite™ system is stopped and is not processing any data from devices or modules.

## 17.7 Clear Alarms

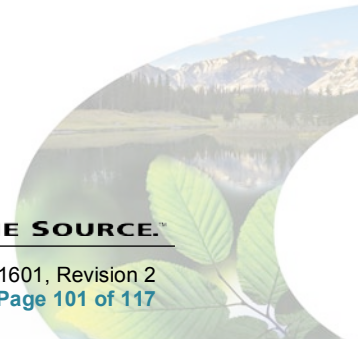
An alarm is information stored in the database about an event that happened inside the system. There are various kinds of alarms, such as those reported by a probe (high/low product or water level), by a sensor, by a leak detection system, etc.

Each alarm should be acknowledged that appears on the **Alarm** screen. The count of unacknowledged alarms has an impact on the **Open Alarms** value, which is displayed in a circle located at the bottom right-hand corner of the screen.

The **Clear Alarms** option allows the user to acknowledge all alarms and add information to those alarms.

Leak alarms are not acknowledged by this option.

1. Go to **Settings**
2. Go to **Utilities**
3. Choose **Clear Alarms**
4. Enter text to attach to each alarm
5. Press “**Apply**”

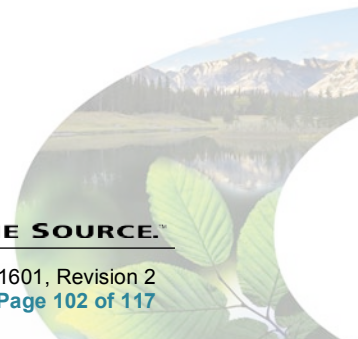


## 18 Versions

The **Versions** screen displays all software versions of each individual module installed on the system, including additional information if the module is included in a package or is part of the system's platform.

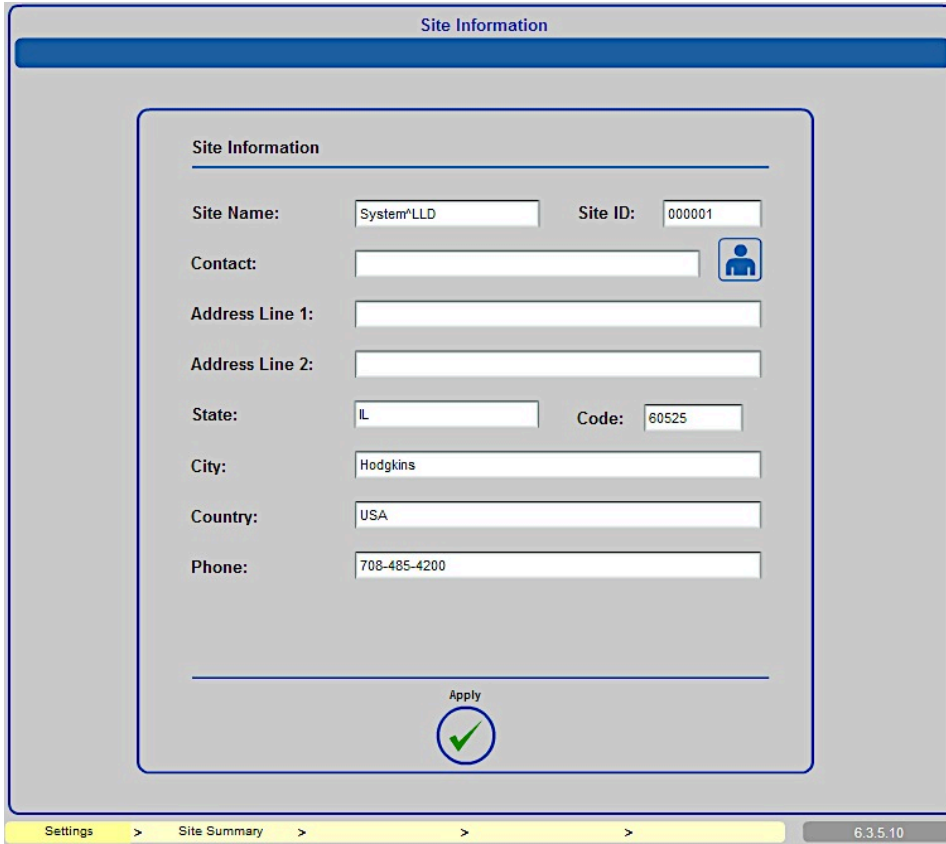
Modules versions			
Module name	Version	Information	
OS WinCE	1.3.0.5	mini-iSite Platform	
UI	2.00C.145	OPWFMS Package	
Core	1.1.00.118	OPWFMS Package	
UI HELP	2.00C.144	OPWFMS Package	
DB	3.42	OPWFMS Package	
Std-Reports	20120606.45	OPWFMS Package	
System DB	342		
dao.dll	1, 0, 2, 15		
axiohm.dll	2, 0, 0, 1		
BRDdriver.dll	01.00A		
ConfigModule.dll	1, 1, 0, 20		
crypto.dll	1, 0, 0, 1		
DBRestoreModule.dll	2, 0, 0, 7		

Figure 18-1 System Software Version




## 19 Site Summary

The **Site Summary** screen displays general information regarding a site. The **Site Name**, **Site ID**, **Address** and **Phone** are used in the headers for generated reports.



Site Information

Site Name:  Site ID:

Contact:  

Address Line 1:


Address Line 2:

State:  Code:

City:

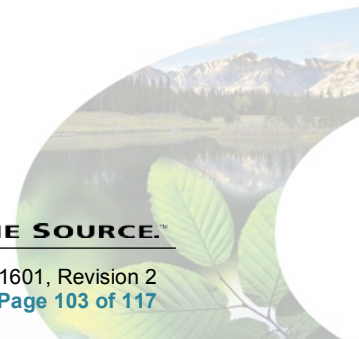
Country:

Phone:

Apply 

Settings > Site Summary > > > 6.3.5.10

Figure 19-1 Site Information



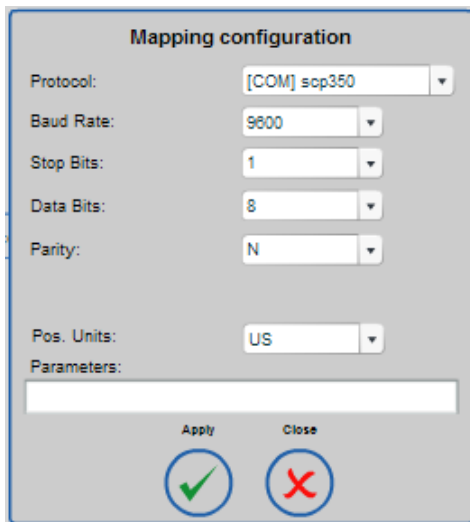
## 20 Software Setup

The SiteSentinel® iSite™ console can be polled by several types of OPW software in order to allow for reconciliation and remote viewing of inventories and deliveries.

### 20.1 OPW Phoenix™ Premier Direct

To setup communications in the SiteSentinel® iSite™ system:

1. Go to **Settings**
2. Go to **System**
3. Go to **Communications**
4. Select **Next**
5. Select **POS Interface**
6. Select **Serial**
7. Select **Map**
8. Choose the following parameters:



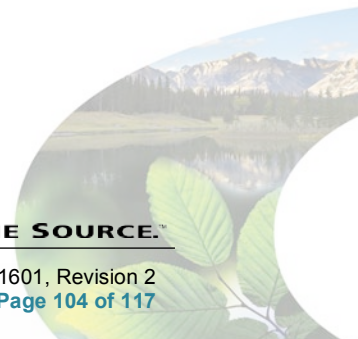
The image shows a 'Mapping configuration' dialog box with the following fields and values:

- Protocol: [COM] sop350
- Baud Rate: 9600
- Stop Bits: 1
- Data Bits: 8
- Parity: N
- Pos. Units: US
- Parameters: (empty text box)

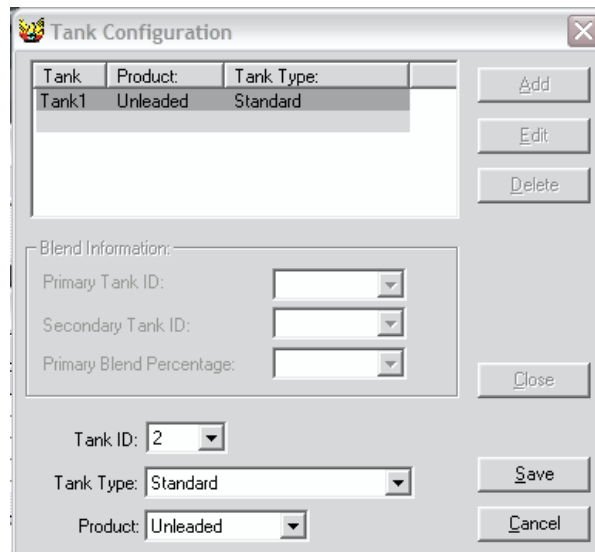
At the bottom, there are two buttons: 'Apply' (with a green checkmark icon) and 'Close' (with a red X icon).

Figure 20-1 Mapping Configuration

- a. **Protocol:** choose SCP350
  - b. **Baud Rate** (must match Phoenix™ Premier Direct baud rate)
  - c. **Stop Bits:** choose 1
  - d. **Data Bits:** choose 8
  - e. **Parity:** choose None
  - f. **Pos. Units:** select accordingly
  - g. **Parameters:** erase information if populated
9. Press **“Apply”** to confirm Mapping Configuration setup



10. Setup Phoenix™ Software
  - a. Choose **Tanks** from the **Site Information** tab



Tank	Product	Tank Type
Tank1	Unleaded	Standard

Blend Information:

Primary Tank ID:

Secondary Tank ID:

Primary Blend Percentage:

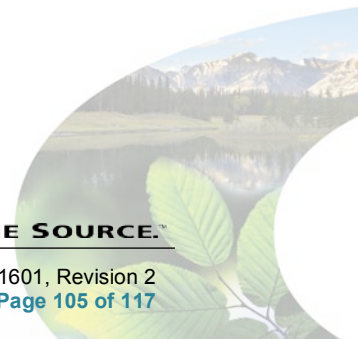
Tank ID:

Tank Type:

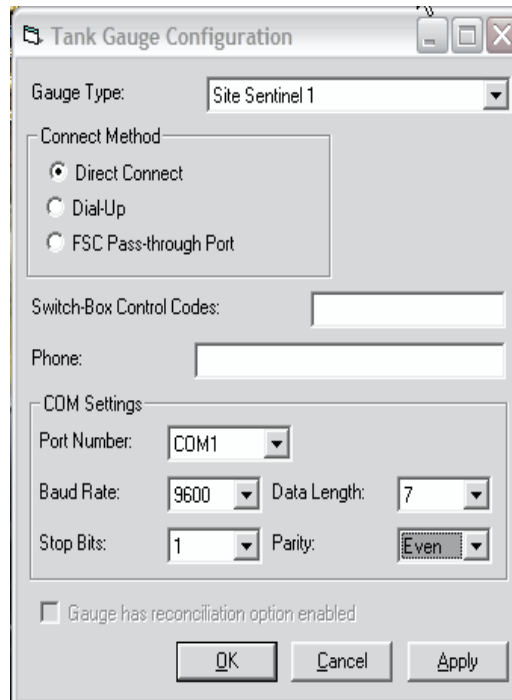
Product:

**Figure 20-2 Tank Configuration**

- i. Press **Add**
  - ii. Choose the **Tank ID**
  - iii. Choose the **Tank Type**
  - iv. Choose the **Product**
  - v. Press **Save**
  - vi. Repeat until all tanks are added
- b. Choose **Gauge** on **Site Information** tab

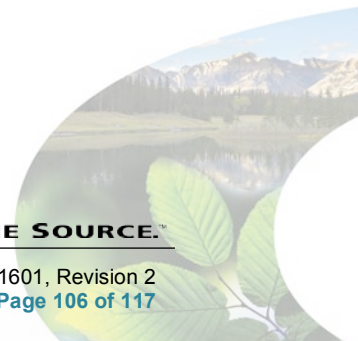






**Figure 20-3 Tank Gauge Configuration**

- i. Choose **Gauge Type** – SiteSentinel® 1 or SiteSentinel® iSite™ depending on version
- ii. Choose **Direct Connect**
- iii. Choose **COM Settings**:
  1. **Port Number** - port number the serial cable is connected to on the PC
  2. **Baud Rate** - match baud rate set in SiteSentinel® iSite™
  3. **Data Length** - match SiteSentinel® iSite™ setting
  4. **Stop Bits** - match SiteSentinel® iSite™ setting
  5. **Parity** - match SiteSentinel® iSite™ setting
- iv. Press **“Apply”**
- c. Choose **Pumps** on **Site Information** tab



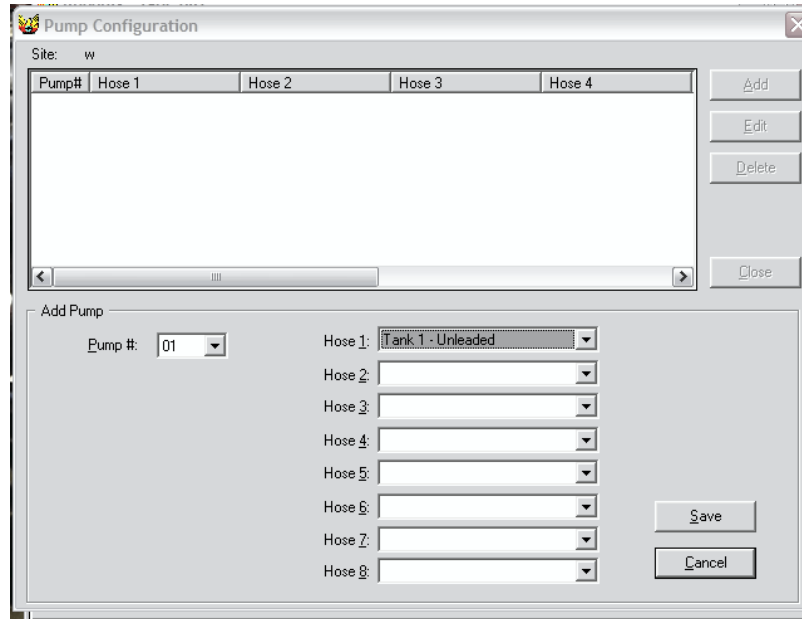
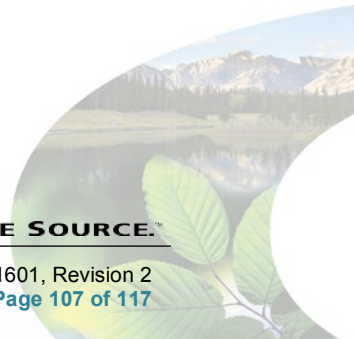


Figure 20-4 Pump Configuration

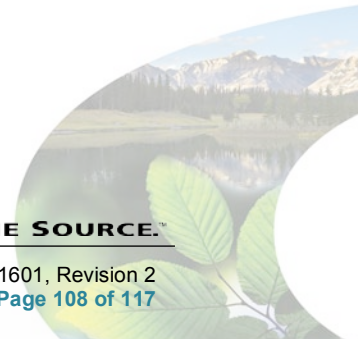
- i. Select **Add**
- ii. Select **Pump Number**
- iii. Select **Products** for valid hoses
- iv. Select **Save**
- d. **Poll Gauge** using Phoenix™ Program
  - i. Go to **Utilities**
  - ii. Go to **Tank Gauge**
  - iii. Go to **Poll Gauge**



## 20.1.1 Internal Modem

To set up communications in the SiteSentinel® iSite™ system:

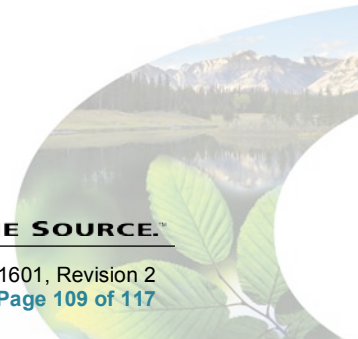
1. Go to **Settings**
2. Go to **System**
3. Go to **Communications**
4. Select **Next**
5. Select **POS Interface**
6. Select **Modem number** being used
7. Select **Map**
8. Choose **Parameters**
9. **Protocol** - choose SCP350
  - a. **Baud Rate** (must match Phoenix™ baud rate)
  - b. **Stop Bits** - choose 1
  - c. **Data Bits** - choose 8
  - d. **Parity** - choose None
  - e. **Pos. Units** - select accordingly
  - f. **Parameters** - erase info if populated
10. Press **"Apply"**
11. Setup Phoenix™ Software
  - a. Choose **Tanks** on **Site Information** tab:
    - i. Press **Add**
    - ii. Choose the **Tank ID**
    - iii. Choose the **Tank Type**
    - iv. Choose the **Product**
    - v. Press **Save**
    - vi. Repeat until all tanks are added
  - b. Choose **Gauge** on **Site Information** tab:
    - i. Choose **Gauge Type** - SiteSentinel® 1 or SiteSentinel® iSite™ depending on version
    - ii. Choose **Modem Connect**
    - iii. Enter **Phone Number**
    - iv. Choose COM Settings
      1. **Port Number** - port number the serial cable is connected to on the PC
      2. **Baud Rate** - match baud rate set in SiteSentinel® iSite™
      3. **Data Length** - match SiteSentinel® iSite™ setting
      4. **Stop Bits** - match SiteSentinel® iSite™ setting
      5. **Parity** - match SiteSentinel® iSite™ setting
    - v. Press **"Apply"**
  - c. Choose Pumps on Site Information tab
    - i. Select **Add**
    - ii. Select **Pump Number**
    - iii. Select **Products** for valid hoses
    - iv. Select **Save**
  - d. Poll Gauge using Phoenix™ Program
    - i. Go to **Utilities**
    - ii. Go to **Tank Gauge**
    - iii. Go to **Poll Gauge**



## 20.1.2 TCP/IP

To set up communications in the SiteSentinel® iSite™ system:

1. Go to **Settings**
2. Go to **System**
3. Go to **Communications**
4. Select **Next**
5. Select **POS Interface**
6. Select **LAN/WAN**
7. Select **Map**
8. Choose **Parameters**
  - a. Protocol - choose SCP350
  - b. Port - enter 2377 for SCP350
  - c. Pos. Units - select accordingly
  - d. Parameters - erase info if populated
9. Press **"Apply"**
10. Setup Phoenix™ Software
  - a. Choose **Tanks** on **Site Information** tab
    - i. Press **Add**
    - ii. Choose the **Tank ID**
    - iii. Choose the **Tank Type**
    - iv. Choose the **Product**
    - v. Press **Save**
    - vi. Repeat until all tanks are added
  - b. Choose **Gauge** on **Site Information** tab
    - i. Choose **Gauge Type** - SiteSentinel® 1 or SiteSentinel® iSite™ depending on version
    - ii. Choose **Modem Connect**
    - iii. Enter **IP Address** and **Port Number** (xxx.xxx.xxx.xxx/pppp)
    - iv. Choose **COM Settings** (these settings need to be set but are not used because Phoenix™ is utilizing dial-up connection for TCP/IP)
      1. **Port Number** - choose any option
      2. **Baud Rate** - choose any option
      3. **Data Length** - choose any option
      4. **Stop Bits** - choose any option
      5. **Parity** - choose any option
    - v. Press **"Apply"**
  - c. Choose **Pumps** on **Site Information** tab
    - i. Select **Add**
    - ii. Select **Pump** number
    - iii. Select **Products** for valid hoses
    - iv. Select **Save**
  - d. **Poll Gauge** using Phoenix™ Program
    - i. Go to **Utilities**
    - ii. Go to **Tank Gauge**
    - iii. Go to **Poll Gauge**



### 20.1.3 Pass-through Port

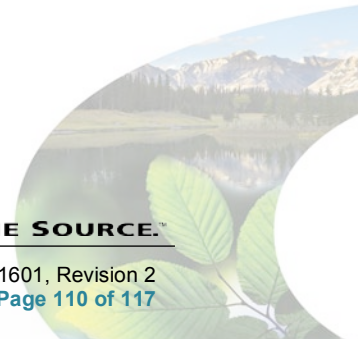
The SiteSentinel® iSite™ console can be polled using the pass-through port on either the System2™ FSC or the FSC3000™, and connecting to a serial port on the SiteSentinel® iSite™ console.

Cables required:

- For System2™ FSC users without networks enabled use cable part #20-1612 connected to AUX 3 on FSC.
- For System2™ FSC users with networks enabled use cable part # 20-1611 connected to AUX 2 on FSC.
- For FSC3000™ users use cable part #20-1613 connected to port 8 on FSC3000™.

To set up Communications in SiteSentinel® iSite™ console:

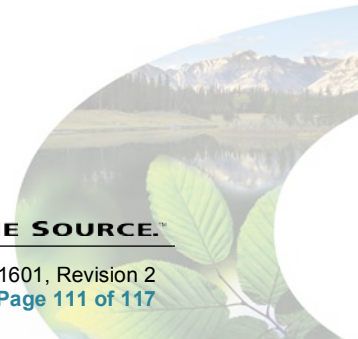
1. Go to **Settings**
2. Go to **System**
3. Go to **Communications**
4. Select **Next**
5. Select **POS Interface**
6. Select **Serial**
7. Select **Map**
8. Choose **Parameters**
  - a. **Protocol** - choose SCP350
  - b. **Baud Rate** (must match Phoenix™ baud rate)
  - c. **Stop Bits** - choose 1
  - d. **Data Bits** - choose 8
  - e. **Parity** - choose None
  - f. **Pos. Units** - select accordingly
  - g. **Parameters** - erase info if populated
9. Press **“Apply”**
10. Setup Phoenix™ Software
  - a. Choose **Tanks** on **Site Information** tab
    - i. Press **Add**
    - ii. Choose the **Tank ID**
    - iii. Choose the **Tank Type**
    - iv. Choose the **Product**
    - v. Press **Save**
    - vi. Repeat until all tanks are added
  - b. Choose **Gauge** on **Site Information** tab
    - i. Choose **Gauge Type** - SiteSentinel 1® or SiteSentinel® iSite™ depending on version
    - ii. Choose **FSC Pass-through Port**
    - iii. Press **“Apply”**
  - c. Choose **Pumps** on **Site Information** tab
    - i. Select **Add**
    - ii. Select **Pump** number
    - iii. Select **Products** for valid hoses
    - iv. Select **Save**
  - d. **Poll Gauge** using Phoenix™ Program
    - i. Go to **Utilities**
    - ii. Go to **Tank Gauge**
    - iii. Go to **Poll Gauge**



## 20.2 OPW Phoenix™ Premier (Third-Party) Direct

To set up Communications in SiteSentinel® iSite™ console:

1. Go to **Settings**
2. Go to **System**
3. Go to **Communications**
4. Select **Next**
5. Select **POS Interface**
6. Select **Serial**
7. Select **Map**
8. Choose **Parameters**
  - a. **Protocol** - choose TLS350
  - b. **Baud Rate** (must match Phoenix™ baud rate)
  - c. **Stop Bits** - choose 1
  - d. **Data Bits** - choose 8
  - e. **Parity** - choose None
  - f. **Pos. Units** - select accordingly
  - g. **Parameters** - erase info if populated
9. Press **"Apply"**
10. Setup Phoenix™ Software
  - a. Choose **Tanks** on **Site Information** tab
    - i. Press **Add**
    - ii. Choose the **Tank ID**
    - iii. Choose the **Tank Type**
    - iv. Choose the **Product**
    - v. Press **Save**
    - vi. Repeat until all tanks are added
  - b. Choose **Gauge** on **Site Information** tab
    - i. Choose **Gauge Type** - TLS350
    - ii. Choose **Direct Connect**
    - iii. Choose **COM Settings**
      1. **Port Number**: port number the serial cable is connected to on the PC
      2. **Baud Rate**: match baud rate set in SiteSentinel® iSite™
      3. **Data Length**: match SiteSentinel® iSite™ setting
      4. **Stop Bits**: match SiteSentinel® iSite™ setting
      5. **Parity**: match SiteSentinel® iSite™ setting
    - iv. Press **"Apply"**
  - c. Choose **Pumps** on **Site Information** tab
    - i. Select **Add**
    - ii. Select **Pump** number
    - iii. Select **Products** for valid hoses
    - iv. Select **Save**
  - d. Poll Gauge using Phoenix™ Program
    - i. Go to **Utilities**
    - ii. Go to **Tank Gauge**
    - iii. Go to **Poll Gauge**

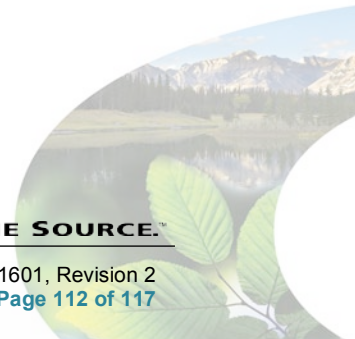




## 20.2.1 Internal Modem

To set up Communications in SiteSentinel® iSite™ console:

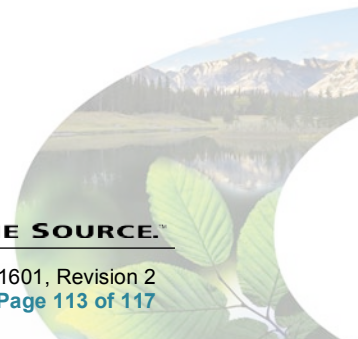
1. Go to **Settings**
2. Go to **System**
3. Go to **Communications**
4. Select **Next**
5. Select **POS Interface**
6. Select **Modem Number** being used
7. Select **Map**
8. Choose Parameters
  - a. **Protocol:** choose TLS350
  - b. **Baud Rate** (must match Phoenix™ baud rate)
  - c. **Stop Bits:** choose 1
  - d. **Data Bits:** choose 8
  - e. **Parity:** choose None
  - f. **Pos. Units:** select accordingly
  - g. **Parameters:** erase info if populated
9. Press **"Apply"**
10. Setup Phoenix™ Software
  - a. Choose **Tanks** on **Site Information** tab
    - i. Press **Add**
    - ii. Choose the **Tank ID**
    - iii. Choose the **Tank Type**
    - iv. Choose the **Product**
    - v. Press **Save**
    - vi. Repeat until all tanks are added
  - b. Choose **Gauge** on **Site Information** tab
    - i. Choose **Gauge Type** - TLS350
    - ii. Choose **Modem Connect**
    - iii. Enter **Phone Number**
    - iv. Choose **COM Settings**
      1. **Port Number:** port number the serial cable is connected to on the PC
      2. **Baud Rate:** match baud rate set in SiteSentinel® iSite™
      3. **Data Length:** match SiteSentinel® iSite™ setting
      4. **Stop Bits:** match SiteSentinel® iSite™ setting
      5. **Parity:** match SiteSentinel® iSite™ setting
    - v. Press **"Apply"**
  - c. Choose **Pumps** on **Site Information** tab
    - i. Select **Add**
    - ii. Select **Pump** number
    - iii. Select **Products** for valid hoses
    - iv. Select **Save**
  - d. **Poll Gauge** using Phoenix™ Program
    - i. Go to **Utilities**
    - ii. Go to **Tank Gauge**
    - iii. Go to **Poll Gauge**



## 20.2.2 TCP/IP

To set up Communications in SiteSentinel® iSite™ console:

1. Go to **Settings**
2. Go to **System**
3. Go to **Communications**
4. Select **Next**
5. Select **POS Interface**
6. Select **LAN/WAN**
7. Select **Map**
8. Choose Parameters
  - a. **Protocol:** choose TLS350
  - b. **Port:** enter 2374 for TLS350
  - c. **Pos. Units:** select accordingly
  - d. **Parameters:** erase info if populated
9. Press **"Apply"**
10. Setup Phoenix™ Software
  - a. Choose **Tanks** on **Site Information** tab
    - i. Press **Add**
    - ii. Choose the **Tank ID**
    - iii. Choose the **Tank Type**
    - iv. Choose the **Product**
    - v. Press **Save**
    - vi. Repeat until all tanks are added
  - b. Choose **Gauge** on **Site Information** tab
    - i. Choose **Gauge Type** - TLS350
    - ii. Choose **Modem Connect**
    - iii. Enter **IP Address** and **Port Number** (xxx.xxx.xxx.xxx/pppp)
    - iv. Choose **COM Settings** (these settings need to be set but are not used because Phoenix™ is utilizing dial-up connection for TCP/IP)
      1. **Port Number:** choose any option
      2. **Baud Rate:** choose any option
      3. **Data Length:** choose any option
      4. **Stop Bits:** choose any option
      5. **Parity:** choose any option
    - v. Press **"Apply"**
  - c. Choose **Pumps** on **Site Information** tab
    - i. Select **Add**
    - ii. Select **Pump Number**
    - iii. Select **Products** for valid hoses
    - iv. Select **Save**
  - d. **Poll Gauge** using Phoenix™ Program
    - i. Go to **Utilities**
    - ii. Go to **Tank Gauge**
    - iii. Go to **Poll Gauge**



### 20.2.3 Pass-through Port

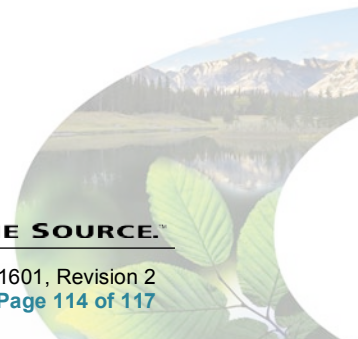
The SiteSentinel® iSite™ console can be polled using the pass-through port on either the System2™ FSC or the FSC3000™ and connecting to a serial port on the SiteSentinel® iSite™ console.

Cables required:

- For System2™ FSC users without networks enabled use cable part # 20-1612 connected to AUX 3 on FSC.
- For System2™ FSC users with networks enabled use cable part # 20-1611 connected to AUX 2 on FSC.
- For FSC3000™ users, use cable part # 20-1613 connected to port 8 on FSC3000.

To Setup Communications in SiteSentinel® iSite™ console:

1. Go to **Settings**
2. Go to **System**
3. Go to **Communications**
4. Select **Next**
5. Select **POS Interface**
6. Select **Serial**
7. Select **Map**
8. Choose **Parameters**
  - a. **Protocol:** choose TLS350
  - b. **Baud Rate:** (must match Phoenix™ baud rate)
  - c. **Stop Bits:** choose 1
  - d. **Data Bits:** choose 8
  - e. **Parity:** choose None
  - f. **Pos. Units:** select accordingly
  - g. **Parameters:** erase info if populated
9. Press **"Apply"**
10. Setup Phoenix™ Software
  - a. Choose **Tanks** on **Site Information** tab
    - i. Press **Add**
    - ii. Choose the **Tank ID**
    - iii. Choose the **Tank Type**
    - iv. Choose **Product**
    - v. Press **Save**
    - vi. Repeat until all tanks are added
  - b. Choose **Gauge** on **Site Information** tab
    - i. Choose **Gauge Type** - TLS350
    - ii. Choose **FSC Pass-through Port**
    - iii. Press **Apply**
  - c. Choose **Pumps** on **Site Information** tab
    - i. Select **Add**
    - ii. Select **Pump Number**
    - iii. Select **Products** for valid hoses
    - iv. Select **Save**
  - d. **Poll Gauge** using Phoenix™ Program
    - i. Go to **Utilities**
    - ii. Go to **Tank Gauge**
    - iii. Go to **Poll Gauge**



## 21 Firmware

To upgrade the SiteSentinel® iSite™ console firmware version, follow the instructions below.

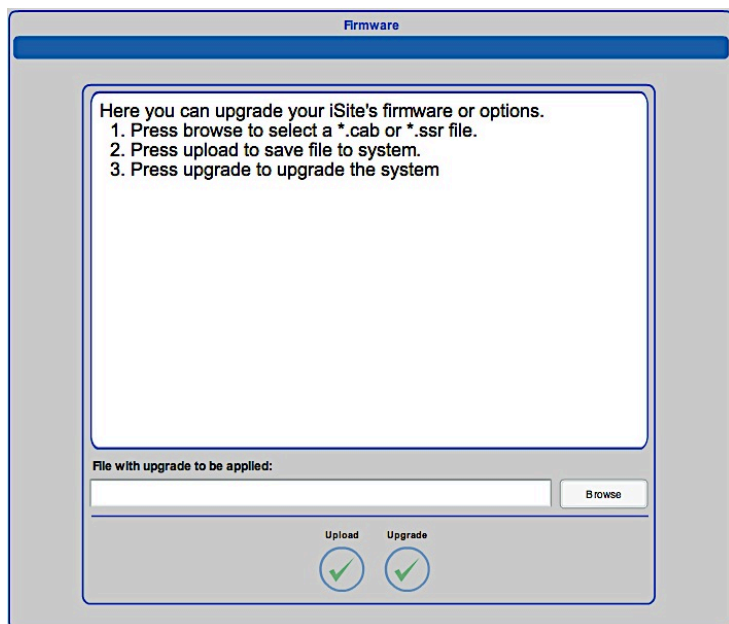


Figure 21-1 Firmware Upgrade

### 21.1 File Upgrade (.cab)

1. Log in to the SiteSentinel® iSite™ as a user with access to settings
2. Press the **Settings** button (located at the bottom-left corner of the screen)
3. From the **Settings** menu, press the **System** button
4. From the **System** menu, press the **Firmware** button
5. Now using the **Browse** button, choose the first **.cab file** from the location where the update files are stored.
6. The same process is followed if the upgrade is performed locally at the SiteSentinel® iSite™ screen.

The **.cab files** should be run in alphabetical order, one at a time.

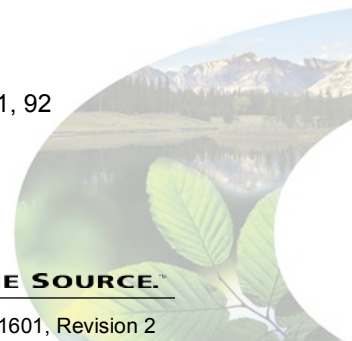
7. Once the file has been selected it will appear in the file bar at the bottom of the firmware window.
8. Now press the **Upload** button, this will transfer the file from its current location (a remote laptop drive or a local USB memory key inserted in the side of the SiteSentinel® iSite™ console) to the internal CF card in preparation for the upgrade process to begin.
9. During the transfer process a file progress indicator will be displayed showing the number of bytes transferred on the left and the number of bytes remaining on the right.
10. Once the transfer is complete, the upper pane of the **Firmware** screen will show the details of the file transferred.
11. To perform the **.cab file** upgrade process you should now press the **Upgrade** button.
12. When the upgrade is complete, the SiteSentinel® iSite™ console will reboot as indicated on the screen shown above.

Not all **.cab file** upgrades will require a reboot.

13. Repeat the process for each of the **.cab files** supplied for a given upgrade. Some upgrades will have multiple **.cab files** associated with them.

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