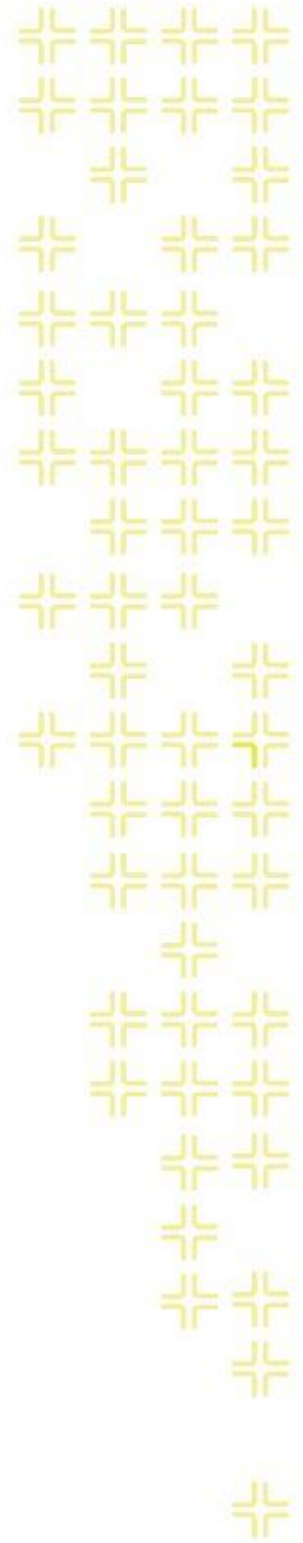




TRAINING GUIDE

Lucity Plant



Lucity Plant Module

The Lucity Plant Module is designed to track Water, Sewer and Electric Utility Plants.

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Plant Module

The Plant Module provides the following features and functions, as an extension of the Existing equipment Module:

- Plant Inventory
- Plant Process Definitions
- Equipment Inventory and Hierarchy
- Equipment Component Library
- Equipment Performance Monitoring

Plant Inventory

The Plant inventory enables tracking of overall Plant location, types and general information

- General description of the Plant and location
- Plant Type
- Contact details for supervisor
- Address
- Plant Processes
- Work History
- Utility Pipes in/out

Plant Process Definition

Each plant has the capability to have custom plant processes defined for each inventory item making it easy to look into a process and associated equipment.

- Sequential Process
- Equipment associations & hierarchy within each process definition

Equipment Component Library

The Equipment Module now has the capability to define a component library of user defined attributes. These attributes can be loaded as a template to new equipment items. This enables unlimited attribute definitions to be associated and tracked to equipment rather than customizing the equipment forms.

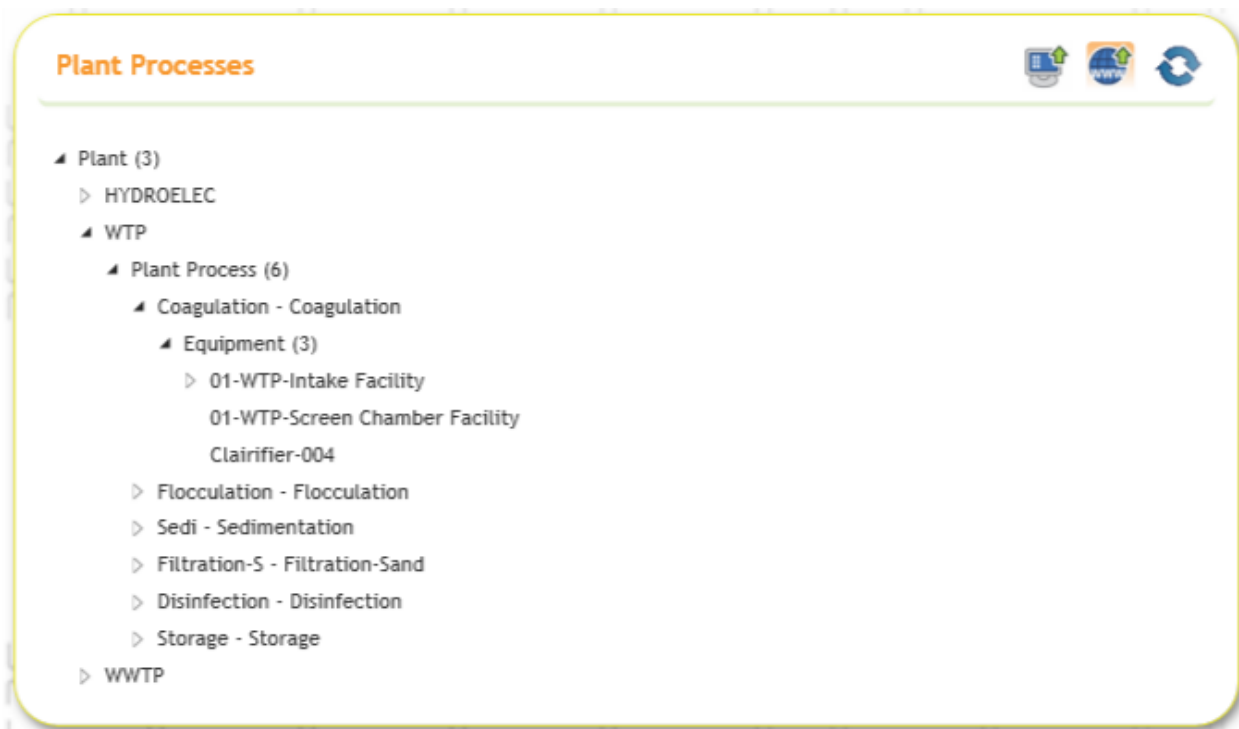
Equipment Threshold Library for Performance Monitoring

The Plant Module has the capability to monitor equipment units by several criteria, using an equipment threshold setting to track performance. Each equipment unit can have an upper and lower limit of performance data that can be entered via inspection records.

- Define Threshold Items (Temperature, RPM's, etc.)
- Define Upper and Lower Limits
- Threshold values assigned and associated to equipment inspection form fields.
- Notifications based on inspections outside defined threshold.
- Default thresholds can be set on the Asset record in the Inventory so that they are automatically loaded onto the Inspection.

Plant Asset Tree for Dashboard Views

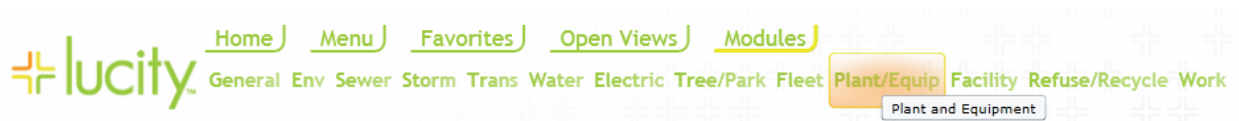
Plants and their associated processes can be displayed in the Dashboard .using the Asset Tree feature.



Plant Scenario

Plant

The Plant Module is now integrated within the existing Lucity Equipment Module menu. Click Plant/Equip and select "Plant"



1. Select "Plant" and you will have a listing of existing Plant records.

The screenshot shows the Lucity software interface with the 'Plant' module selected. The navigation bar includes 'Home', 'Menu', 'Favorites', 'Open Views', and 'Modules'. A search bar contains 'Plant x'. The main window displays a table of plant records:

Plant ID	Plant Name	Operating Status Text	Use Text	Property ID Tag	Building No	Street Post Bldg No	Address	Street Prefix Type	Street Name	Street Type
HYDROELEC	City Hydro-Electric Plant	Active		30421921	2154		E		ARABIAN	DR
WTP	City Water Treatment	Active		30421923	2168		E		ARABIAN	DR
WWTP	City Wastewater Treatment	Active		30426646	13721		S		155TH	ST

2. Click the "Plus" icon button to view Plant details like Processes, Work History, Pipes in/out, Service Requests etc..

The screenshot shows the Lucity software interface with the 'Plant' module selected. The 'WTP' record is selected, and the 'Plant Processes (6)' button is highlighted. The table below shows the details for the 'WTP' plant:

Plant ID	Plant Name	Operating Status Text	Use Text	Property ID Tag	Building No	Street Post Bldg No	Address	Street Prefix Type	Street Name	Street Type
HYDROELEC	City Hydro-Electric Plant	Active		30421921	2154		E		ARABIAN	DR
WTP	City Water Treatment	Active		30421923	2168		E		ARABIAN	DR

Below the table, there are buttons for various plant details: Plant Processes (6), Sewer Pipes (0), Work Orders (0), Work Requests (0), PM/Work Template (0), Water Pipes (2), Conduits (0), Raw Pipes (0), and Recycled Pipes (0).

3. Click "Plant Process" to view Process Data and sequences.

The screenshot shows the Lucity software interface with the 'Plant Processes' for the 'WTP' plant selected. The table below displays the process data:

Plant Rec #	Process Sequence	Process	Process Text
2	1	Coagulation	Coagulation
2	2	Flocculation	Flocculation
2	3	Sedi	Sedimentation
2	4	Filtration-S	Filtration-Sand
2	5	Disinfection	Disinfection
2	6	Storage	Storage

Notes: _____

4. Click the folder button to open the plant form and view detailed information about the plant.

The screenshot shows a web browser window with the address bar containing the URL: http://jarrodgerbaud/?PID=1629&isEdit=true&isChild=false&RID=2&MID=2441&refreshKey=Refresh_P162. The browser title is "Windows Internet Explorer".

The main content area is titled "Plant Form" and includes navigation arrows and "2 of 3" text. On the left side, there is a vertical toolbar with icons for adding, saving, deleting, and refreshing.

The form contains the following fields:

- Plant ID***: WTP
- Plant Name**: City Water Treatment
- Plant Rec #**: 2
- Operating Status**: 1 Active
- Use**: [Empty]
- Property ID Tag**: 30421923
- Building No**: 2168
- Street Name**: E ARABIAN DR

A section titled "Attributes" contains the following fields:

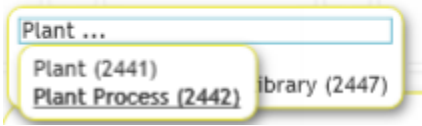
- Location**: 2168 E Arabian Way
- Type**: 2 Water Treatment Plant
- Plant Supervisor**: Jarrod Gerbaud
- Area**: [Empty]
- District**: [Empty]
- Acquisition**: 3/3/2009
- Region**: [Empty]
- Sold**: [Empty]
- Owner**: [Empty]
- Date Opened**: 3/3/2014
- Address 1**: [Empty]

Notes: _____

Plant Process Scenario

1. Open Plant Process Menu

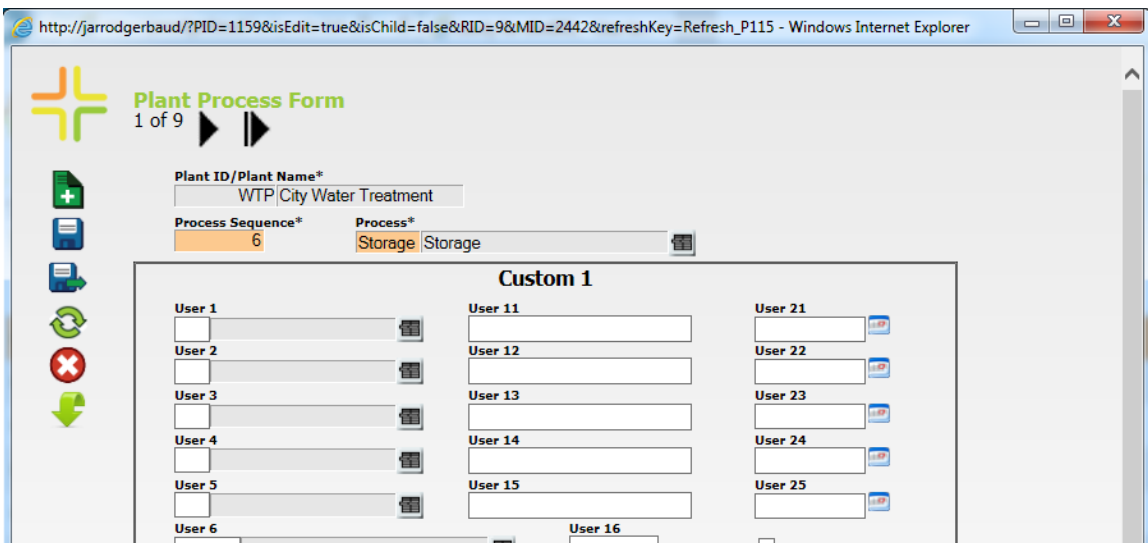
Plant/Equip Facility Refuse/R



2. Click the add button



3. Fill in Process data you wish to define, along with any custom information to go along with the process definition and then click "Save". Create as many processes as you wish. These are then associated to the Plant record you want the process to live within.

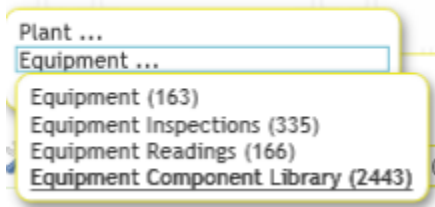
A screenshot of the 'Plant Process Form' in a web browser. The form is titled 'Plant Process Form 1 of 9'. It contains several input fields: 'Plant ID/Plant Name*' with the value 'WTP|City Water Treatment', 'Process Sequence*' with the value '6', and 'Process*' with the value 'Storage|Storage'. Below these fields is a section titled 'Custom 1' which contains 25 user input fields, labeled 'User 1' through 'User 25'. Each user field has a small icon to its right. The browser's address bar shows the URL: 'http://jarrodgerbaud/?PID=1159&isEdit=true&isChild=false&RID=9&MID=2442&refreshKey=Refresh_P115 - Windows Internet Explorer'.

Notes: _____

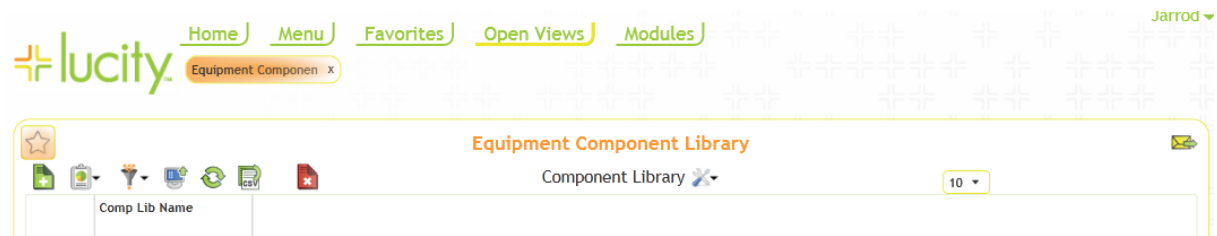
Equipment Component Library Scenario

1. Open The Equipment Component Library

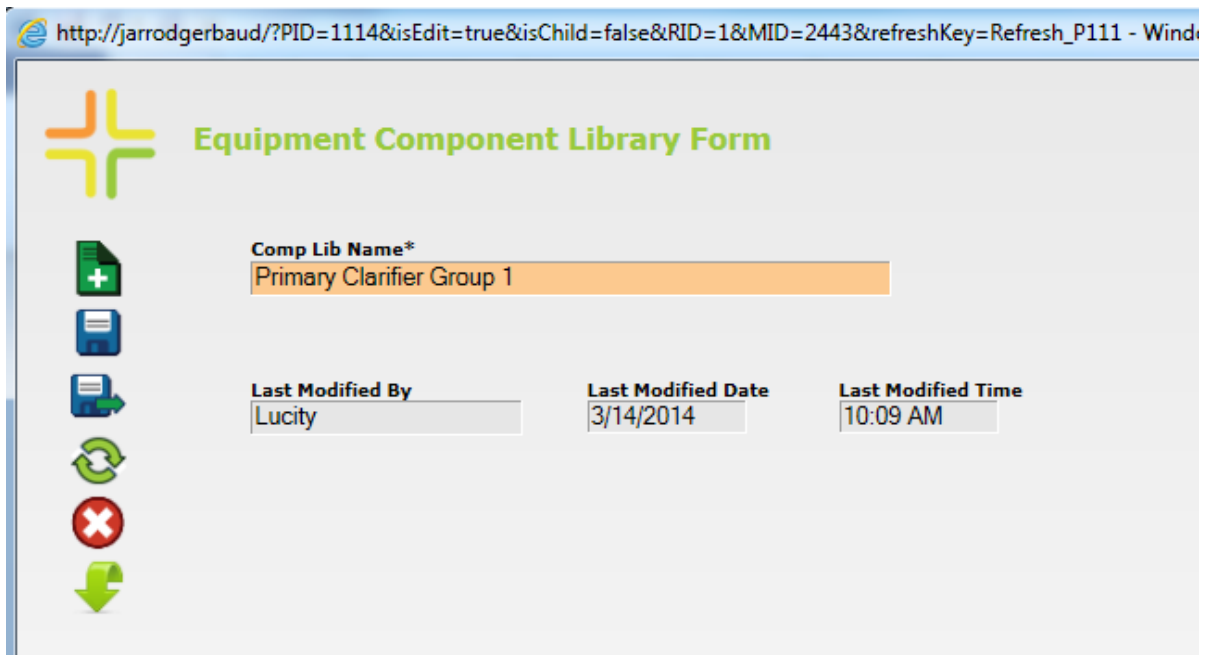
Plant/Equip Facility Refuse/Re



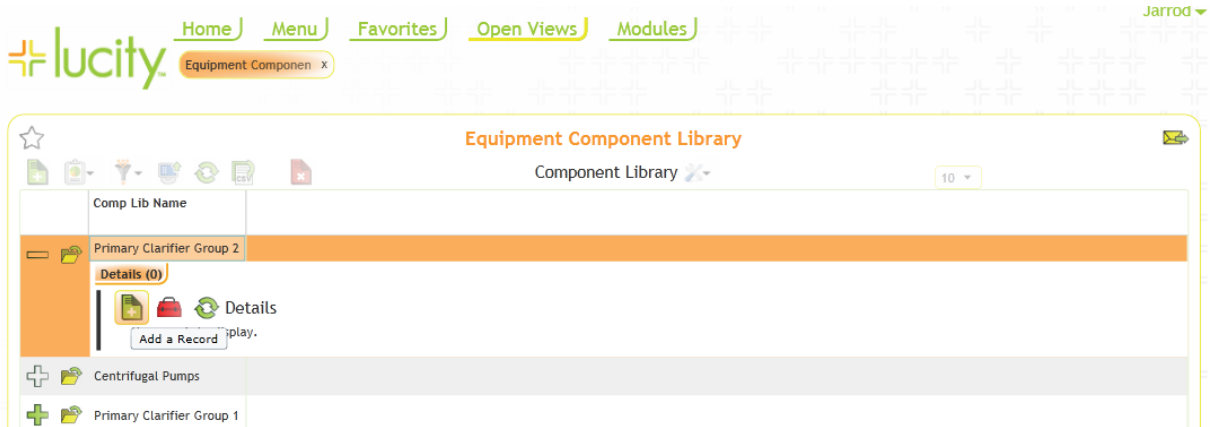
2. Click the “Add” button.



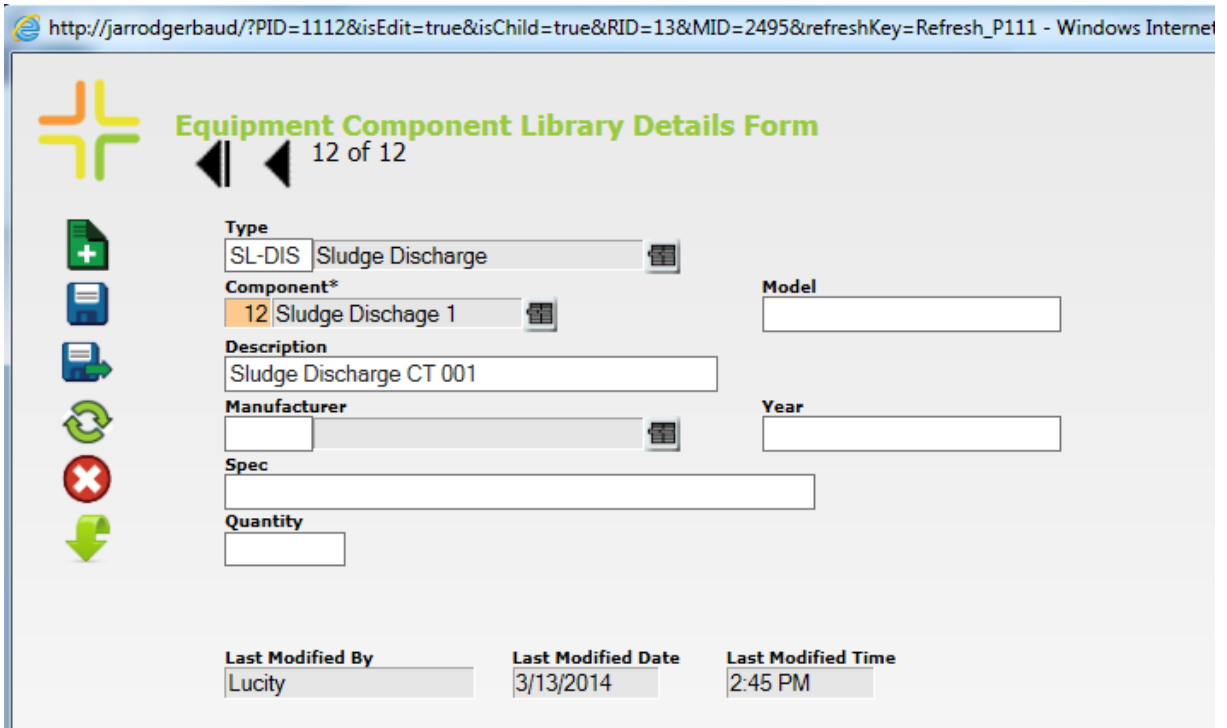
3. From the form, define your library. In this case we are defining a library of common components for a Clarifier. Then Click the “Save and Close” button.



- From the Component, click the (Plus” icon and click once on the “Details” tab and “add” a new Record.



- Add Component Types and Details and Click “Save”. Continue adding components to the library.



Notes: _____

- Once complete, you can view the list of components in the library and then the Library can be used to load into an Equipment record.

The screenshot shows the 'Equipment Component Library' interface. At the top, there are navigation tabs: Home, Menu, Favorites, Open Views, and Modules. A user profile 'Jarrod' is visible in the top right. Below the navigation is a breadcrumb trail: Equipment Component > Component Library. The main content area is titled 'Equipment Component Library' and shows a table of components. The table has the following columns: Type, Type Text, Component Text, and Description. The components listed are:

Type	Type Text	Component Text	Description
SL-DIS	Sludge Discharge	Sludge Discharge 1	Sludge Discharge CT 001
SKIMR	Skimmer	Sludge Rake 1	Sludge Rake CT 001
S-Rake	Sludge Rake	Sludge Rake 1	Sludge Rake CT 001
S-Outlet	Scum Outlet	Scum Outlet 1	Scum Outlet CT 001
S-BOX	Scum Box	Scum Box 1	Scum Box CT 001
S-Baffle	Scum Baffle	Scum Baffle 1	Scum Baffle CT 001
P-WALK	Perimeter Walkway	Perimeter Walkway	Perimeter Walkway CT 001
I-Well	Inlet Well	Inlet Well	Inlet Well CT 001

Component Library within an Equipment record

The screenshot shows the 'Equipment' record interface. At the top, there are navigation tabs: Home, Menu, Favorites, Open Views, and Modules. A user profile 'Jarrod' is visible in the top right. Below the navigation is a breadcrumb trail: Equipment Component > Plant > Equipment. The main content area is titled 'Equipment' and shows a table of equipment components. The table has the following columns: Rec No, Component, Component Text, Install Date, Description, Manufacturer Text, Model, Serial Number, Year, Status Text, Quantity, and General Comment. The components listed are:

Rec No	Component	Component Text	Install Date	Description	Manufacturer Text	Model	Serial Number	Year	Status Text	Quantity	General Comment
12	12	Sludge Discharge 1	3/11/1999	Sludge Discharge CT 001	CARSO	A-5400	736235237-555	1999			
11	11	Sludge Rake 1	5/21/2014	Sludge Rake CT 001	CASE	45E	079797987	1999		4.00	
9	9	Scum Outlet 1		Scum Outlet CT 001	ATLASCOPCO	342-ER	986896896	1999		1.00	
8	8	Scum Box 1		Scum Box CT 001	Kenworth	556-HG	89162489	1999		1.00	
7	7	Scum Baffle 1		Scum Baffle CT 001	Bandit	A2000	876986986	1999		1.00	
6	6	Perimeter Walkway		Perimeter Walkway CT 001							

Notes: _____

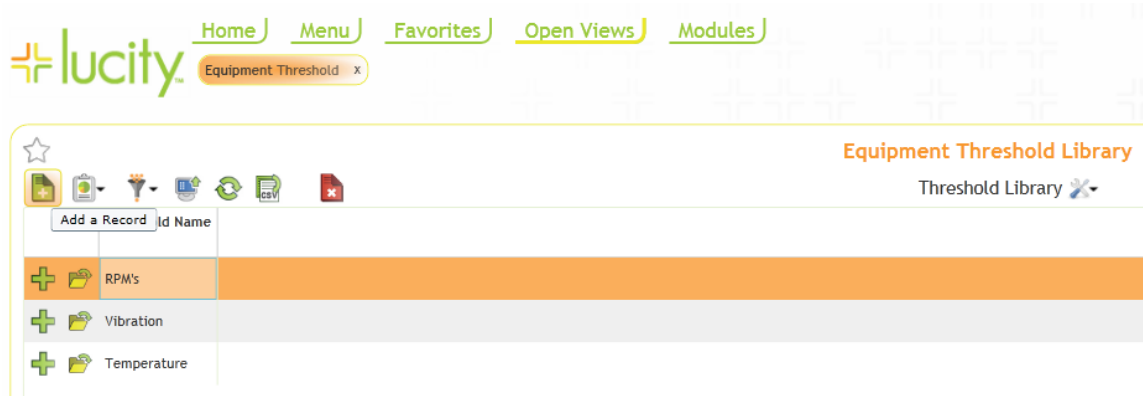
Equipment Threshold Library Scenario

1. Open The Equipment Threshold Library

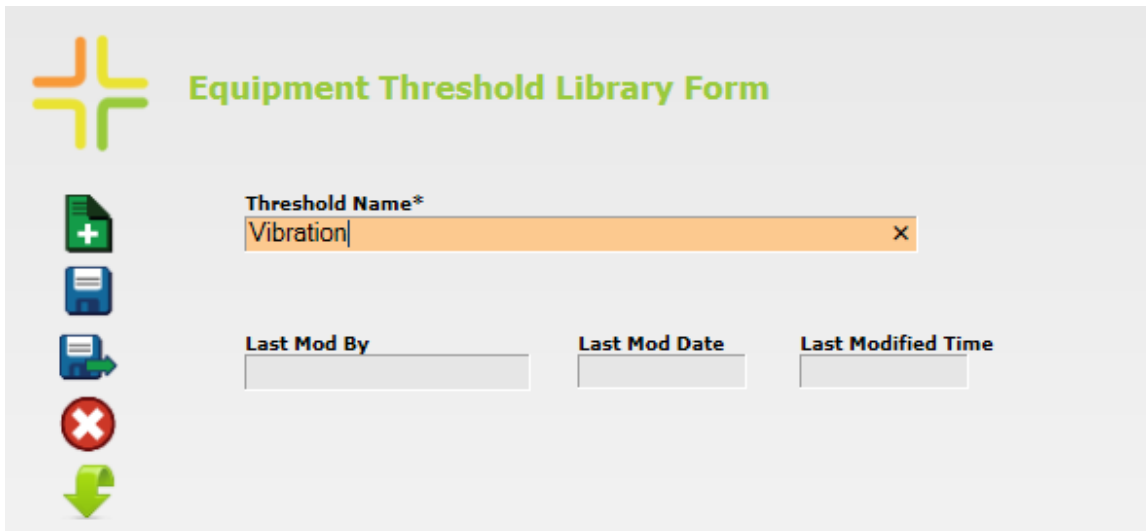
Plant/Equip Facility Refuse/



2. Click the “Add” Button.



3. Enter the monitoring type and click “Save & Close”.



A screenshot of the 'Equipment Threshold Library Form'. The form has a title bar with the Lucity logo and the text 'Equipment Threshold Library Form'. On the left side, there is a vertical toolbar with icons for adding, saving, deleting, and refreshing. The main form area contains a 'Threshold Name*' field with the text 'Vibration' entered. Below this field are three fields: 'Last Mod By', 'Last Mod Date', and 'Last Modified Time', each with an empty input box.

- From the Library, click on “Details” and Add a new record. This record defines upper and lower limits of performance monitoring as well as links that to your selected Equipment Inspection field. This field will then be used for data entry in Equipment Inspections. It will also associate to a Lucity Notification to trigger notifications if equipment inspection shows it operating outside normal parameters.

The screenshot shows the 'Equipment Threshold Library' interface. It features a sidebar with categories: RPM's, Vibration (selected), and Temperature. The 'Vibration' section is expanded to show 'Details (1)'. Below this, there is a table with the following data:

	Field	Low	High
Vibration	EI_COND22	0.0000	25.0000

Example: Vibration Details Upper/Lower limits and Field/Notification association

The screenshot shows the 'Equipment Threshold Library Details Form'. The form contains the following fields:

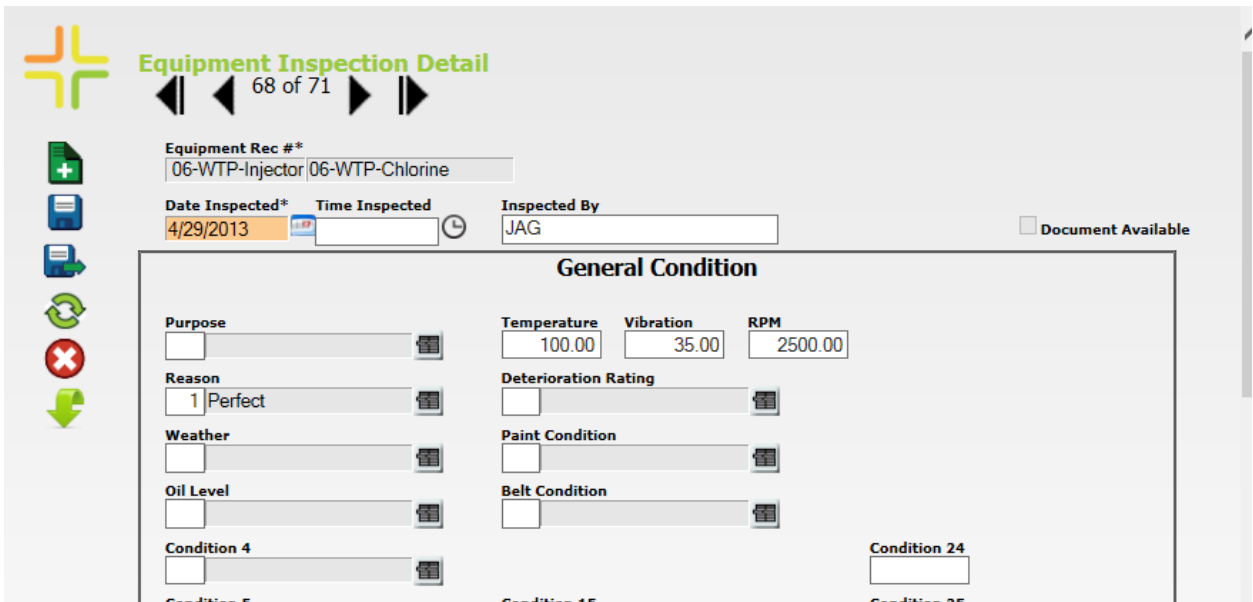
- Name***: Vibration
- Field***: EI_COND22
- Low**: 0.0000
- High**: 25.0000
- Notification Label**: (empty)

At the bottom of the form, there are three fields for tracking changes:

- Last Mod By**: Lucy
- Last Mod Date**: 3/3/2014
- Last Modified Time**: 2:16 PM

Notes: _____

Equipment Inspection requires Form editor to customize for to match Threshold Performance Monitoring topic as seen below:



The screenshot shows a web-based form titled "Equipment Inspection Detail". At the top left is a logo consisting of four colored lines (orange, green, yellow, red) forming a cross. To the right of the logo is the title "Equipment Inspection Detail" and a page indicator "68 of 71" with navigation arrows. Below the title is a vertical toolbar with icons for adding, deleting, saving, and refreshing. The main form area contains the following fields:

- Equipment Rec #***: 06-WTP-Injector 06-WTP-Chlorine
- Date Inspected***: 4/29/2013
- Time Inspected**: [Empty field]
- Inspected By**: JAG
- Document Available

The "General Condition" section is enclosed in a box and contains the following fields:

- Purpose**: [Empty field]
- Reason**: 1 Perfect
- Weather**: [Empty field]
- Oil Level**: [Empty field]
- Condition 4**: [Empty field]
- Temperature**: 100.00
- Vibration**: 35.00
- RPM**: 2500.00
- Deterioration Rating**: [Empty field]
- Paint Condition**: [Empty field]
- Belt Condition**: [Empty field]
- Condition 24**: [Empty field]

Notes: _____
