How Public Utilities Increase Productivity for Annual FOG Inspections

NEWEA2016 Annual Conference & Exhibit

Session 19 Information Technology & Automation

January 26, 2016

Ricky Langley, Utility Cloud Sales Associate

utilitycloud

Presentation Outline

- What is a FOG Program?
- Answering the How?
- Technology Parts and Pieces
- SRU FOG Program Case Study
- Conclusion
- Q & A

utilitycloud

What is a FOG Program?

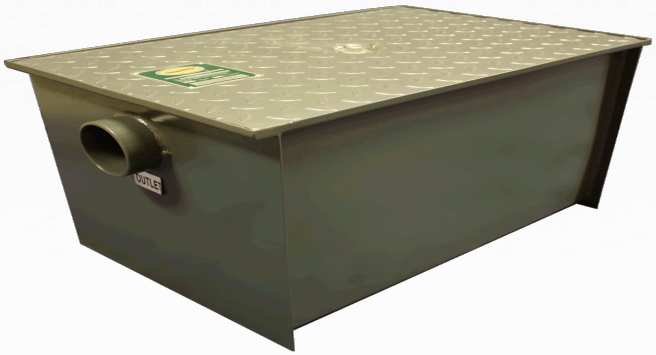
FOG - Fats, Oils, And Grease Are Byproduct Of Food Preparation Process

Restaurants are estimated to produce between 800 and 17,000 pounds each year (1)

(1) National Service Center for Environmental Publications (NSCEP)

utilitycloud

What is a FOG Program? Cont.



Program Mandated By EPA and State Government

Includes Education and Enforcement For Customers

utilitycloud

Answering the How?

Information technology (IT) is the application of computers and telecommunications equipment to store, retrieve, transmit and manipulate data, often in the context of a business or other enterprise. (Wikipedia)

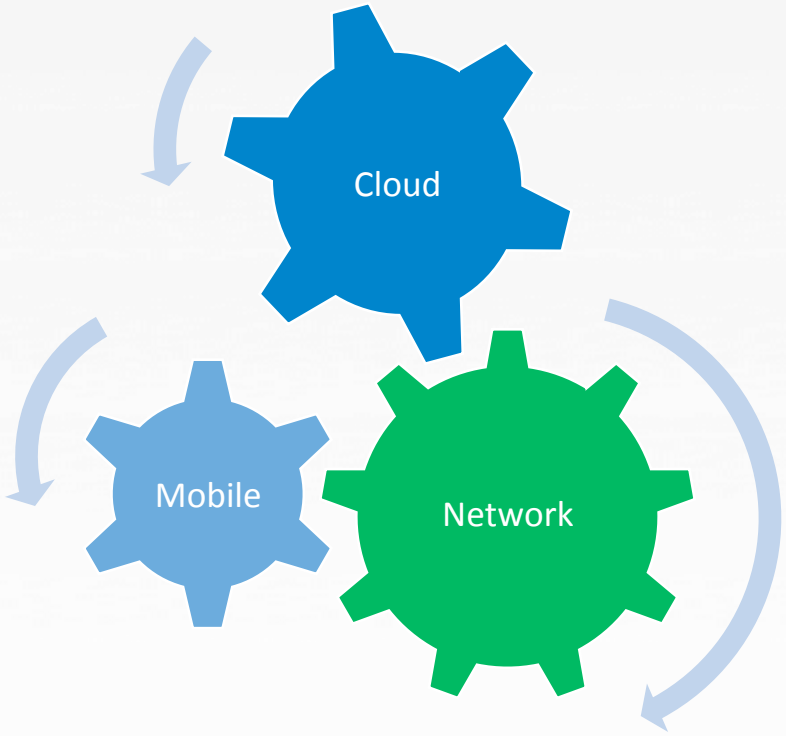
Answering the How? Cont.

Mobile Operations Management Software is the application of computers and telecommunications equipment to store, retrieve, transmit and manipulate data, in the context of business or enterprise operations.

Technology Parts and Pieces

utilitycloud

Technology



Network

Mobile

Cloud

Software

utilitycloud

Network

Widely Available 3G And 4G Coverage Nationwide

High Speed WIFI 802.11ac And 802.11n

verizon wireless

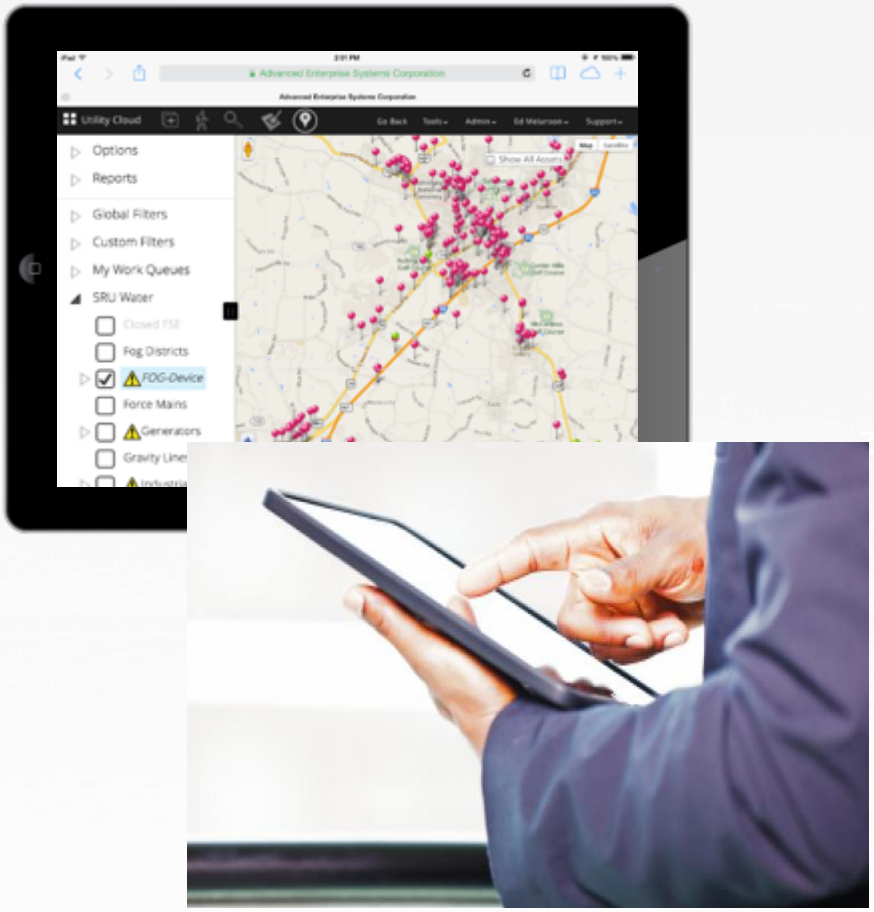
Sprint

T-Mobile

at&t

utilitycloud

Mobile



Lightweight
Long Battery Life
Many Manufacturers

Built In Networking
Powerful Processors
Strong Graphic Capabilities

HTML5 Compliant
Built-in Multimedia & GPS

iPad amazon Microsoft SAMSUNG Google

utilitycloud

Cloud

Elastic Infrastructure
Multi User – Shared Cost

Widely Available, Off-Site Infrastructure Designed to Reduce In-house IT Needs

Strong Security
High Data Reliability
Low Cost

amazon web services™ at&t rackspace verizon Google

utilitycloud

Software

Web vs App Platform
Proprietary vs Open Platform

User Friendly
Intuitive Operations Platform

Collect, Store, Retrieve, Transmit, Manipulate and report data

Case Study: Salisbury-Rowan Utilities FOG Program

utilitycloud

Salisbury-Rowan Utilities

Located in the City of Salisbury, North Carolina

Medium Size Utility Responsible For Water, Wastewater And Stormwater for residential and business customers in the cities of Salisbury, Rockwell, Spencer, East Spencer, Granite Quarry, and Rowan County North Carolina

SRU Facilities Include:

- 3 WWTP
- 1 WTP
- 36 WW PS
- 8 W PS
- 13 Storage Tanks
- 21,000 Water Services
- 450 Miles Water Mains
- 450 Miles Sewer Mains
- 3,000 Hydrants
- 9,000 Manholes
- 300 FOG Devices

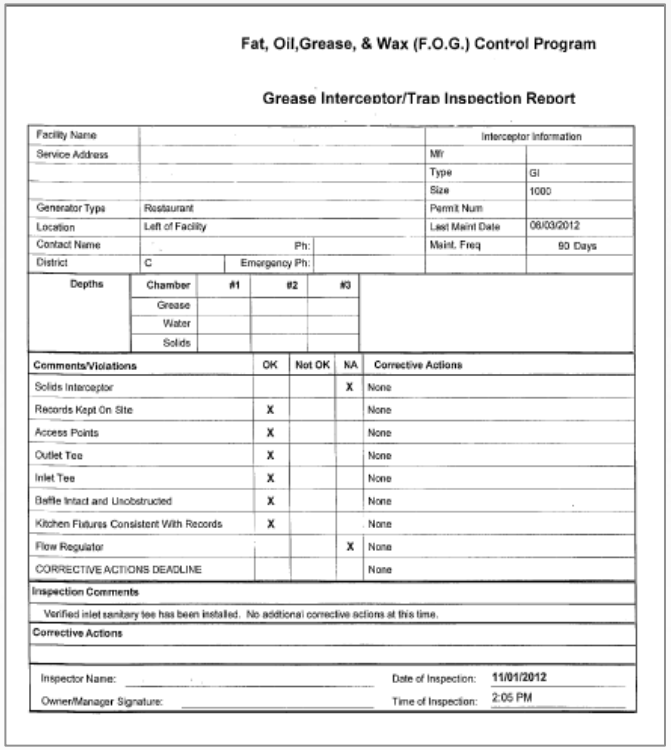
utilitycloud

SRU Initial FOG Program

Started 2010 Using Paper Forms And Spreadsheets

Paper Intensive Process Didn't Work Well For Field Activities

Challenges: More Time Spent Planning Work Than Doing Work



Fat, Oil,Grease, & Wax (F.O.G.) Control Program

Grease Interceptor/Trap Inspection Report

Facility Name		Interceptor Information	
Service Address		Mfr	
		Type	GI
		Size	1000
Generator Type	Restaurant	Permit Num	
Location	Left of Facility	Last Maint Date	08/03/2012
Contact Name	Ph:	Maint. Freq	90 Days
District	C Emergency Ph:		

Depths	Chamber	#1	#2	#3
	Grease			
	Water			
	Solids			

Comments/Violations	OK	Not OK	NA	Corrective Actions
Solids Interceptor			X	None
Records Kept On Site	X			None
Access Points	X			None
Outlet Tee	X			None
Inlet Tee	X			None
Baffle Intact and Unobstructed	X			None
Kitchen Fixtures Consistent With Records	X			None
Flow Regulator			X	None
CORRECTIVE ACTIONS DEADLINE				None

Inspection Comments

Verified inlet sanitary tee has been installed. No additional corrective actions at this time.

Corrective Actions

Inspector Name: _____ Date of Inspection: 11/01/2012

Owner/Manager Signature: _____ Time of Inspection: 2:05 PM

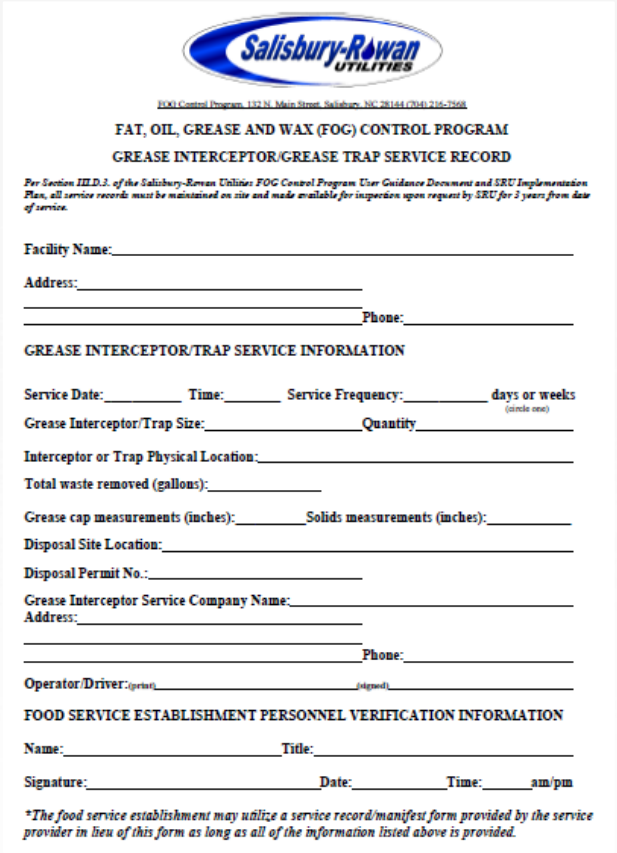
utilitycloud

SRU Initial FOG Program Cont

Updating Customer information was difficult

Tried a work management software on a laptop and air card but unreliable

Began looking ways to streamline data collection, scheduling & reporting



Salisbury-Rowan UTILITIES

FOG Control Program, 132 N. Main Street, Salisbury, NC 28144 (704) 216-7568

FAT, OIL, GREASE AND WAX (FOG) CONTROL PROGRAM

GREASE INTERCEPTOR/GREASE TRAP SERVICE RECORD

Per Section III.D.3. of the Salisbury-Rowan Utilities FOG Control Program User Guidance Document and SRU Implementation Plan, all service records must be maintained on site and made available for inspection upon request by SRU for 3 years from date of service.

Facility Name:_____

Address:_____

_____

_____Phone:_____

GREASE INTERCEPTOR/TRAP SERVICE INFORMATION

Service Date:_____ Time:_____ Service Frequency:_____ days or weeks (circle one)

Grease Interceptor/Trap Size:_____Quantity_____

Interceptor or Trap Physical Location:_____

Total waste removed (gallons):_____

Grease cap measurements (inches):_____Solids measurements (inches):_____

Disposal Site Location:_____

Disposal Permit No.:_____

Grease Interceptor Service Company Name:_____

Address:_____

_____

_____Phone:_____

Operator/Driver:(print)_____(signed)_____

FOOD SERVICE ESTABLISHMENT PERSONNEL VERIFICATION INFORMATION

Name:_____Title:_____

Signature:_____Date:_____Time:_____am/pm

**The food service establishment may utilize a service record/manifest form provided by the service provider in lieu of this form as long as all of the information listed above is provided.*

utilitycloud

In Sept of 2012 SRU Decided to Pilot a Mobile Web based Operations Management Software Program that Utilizes Cloud Technology

utilitycloud

Looking to

- View all scheduled grease trap/ interceptor inspections easily
- Add or edit asset information as needed
- View real-time Status of work including; Inspections, location of field inspectors and work orders

Looking to Cont.

- Customize and configure asset information, workflows (inspection forms), schedules, notices and reports In House
- Send all notices and reports via email, mail or fax
- Create regulatory compliance reporting

Implementation Plan

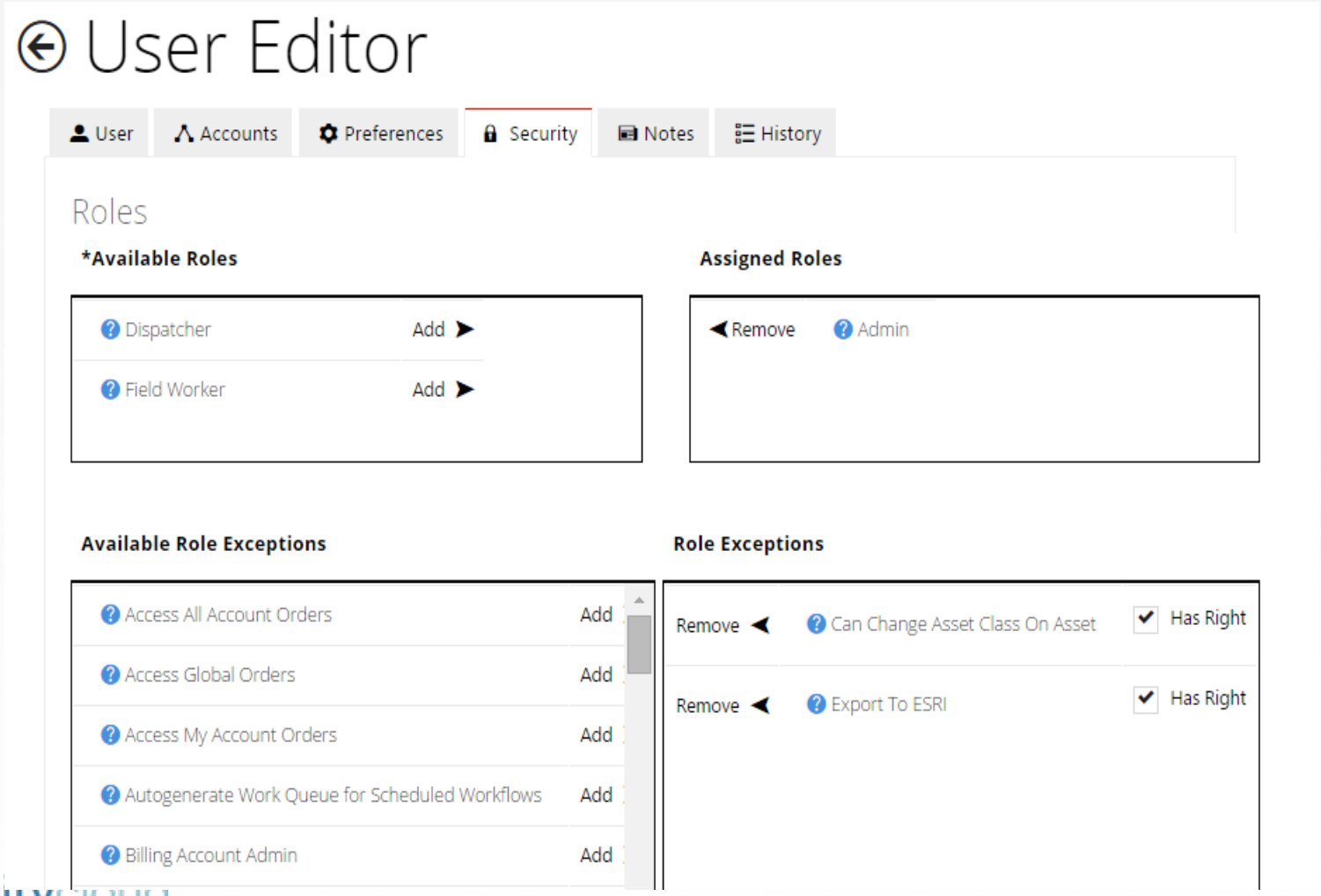
- Setup Account – Establish User Roles
- Establish Asset Class; Naming, Attributes, Icon,
- Import Assets
- Build Electronic Form or Workflow

Implementation Plan Cont

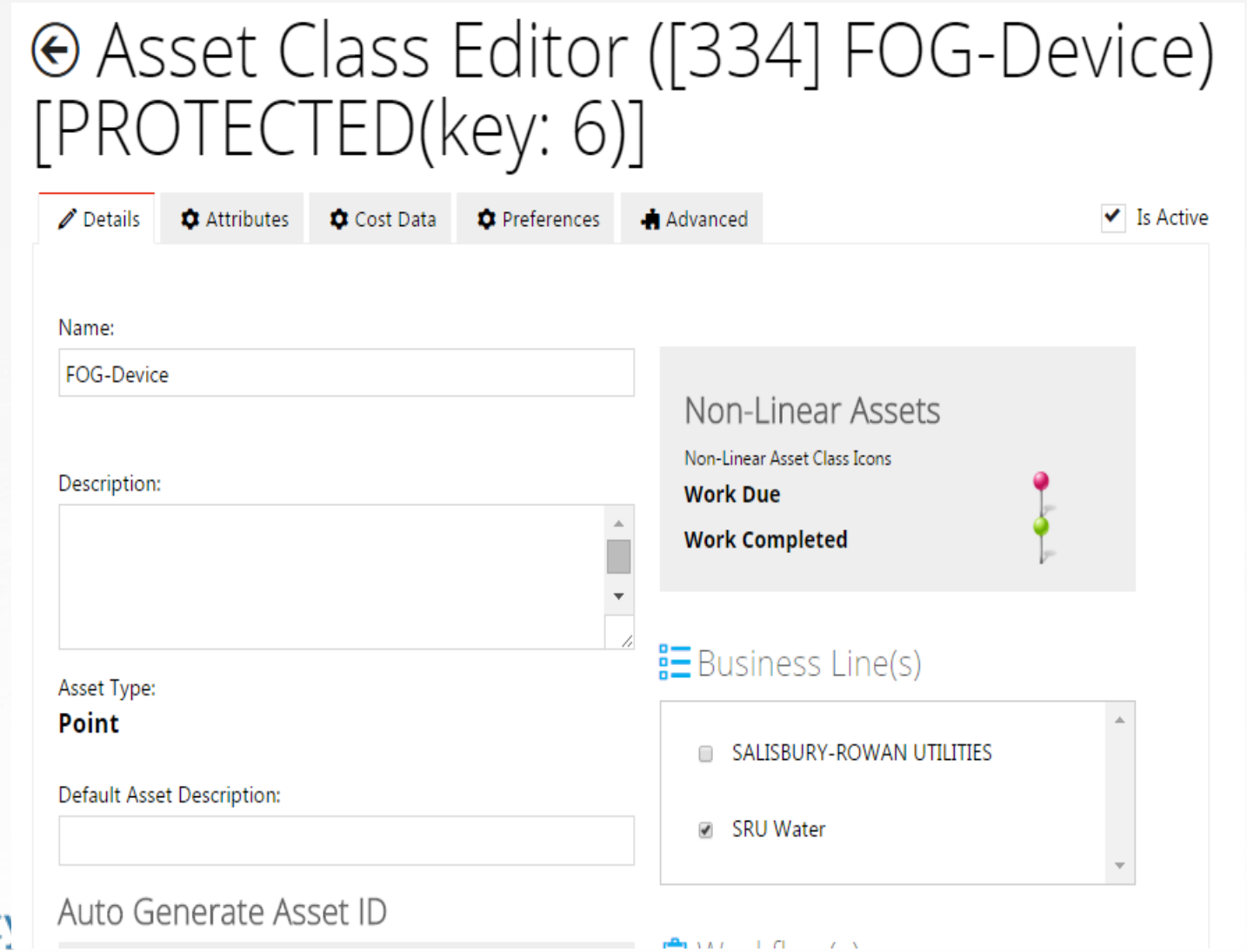
- Build Custom Inspection Report in Google Docs
- Schedule Work/ Link to Google Docs
- Create Work Process Plan

NOTE: Normally can be completed in a single business day.

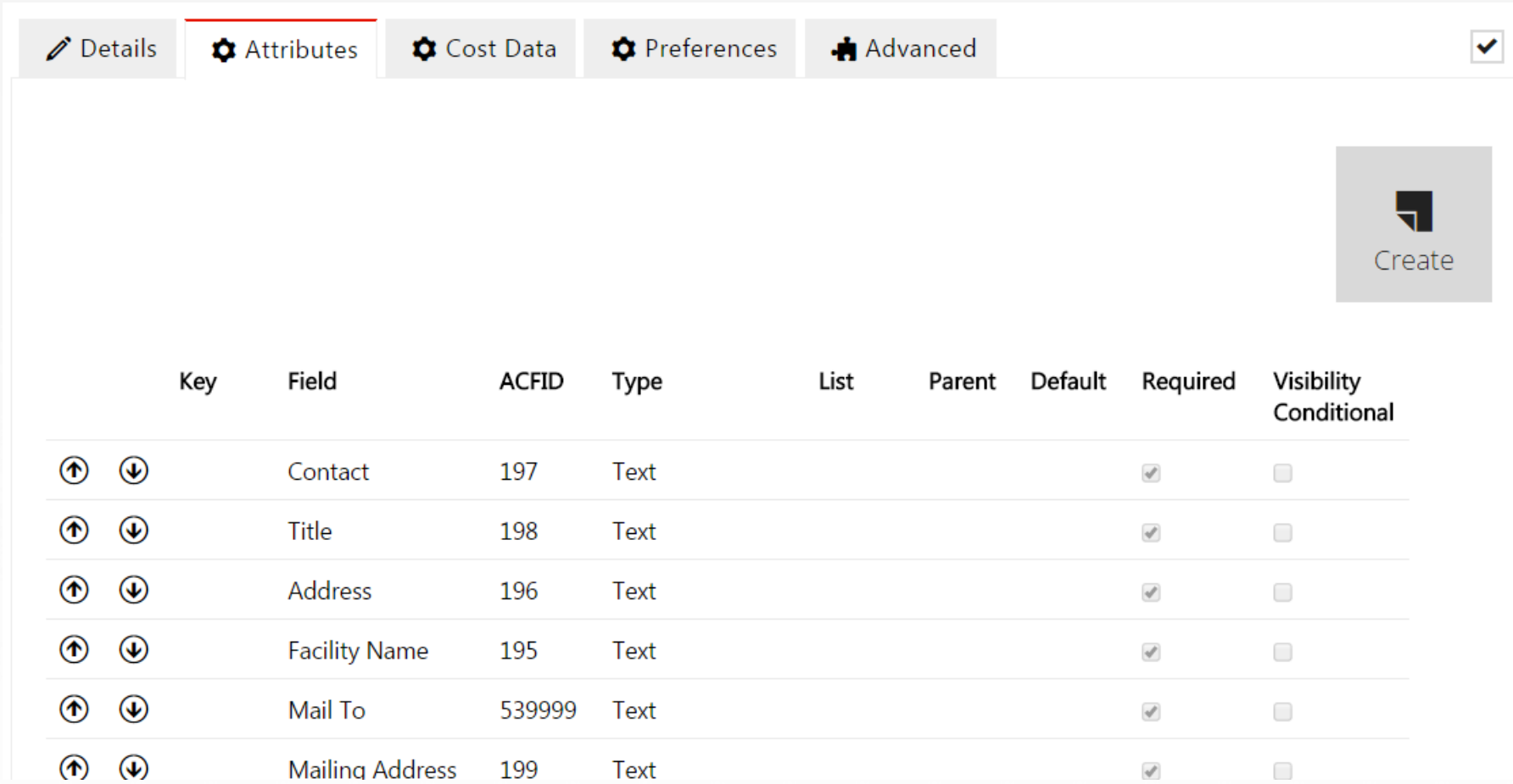
Setup Account



Create Asset Class



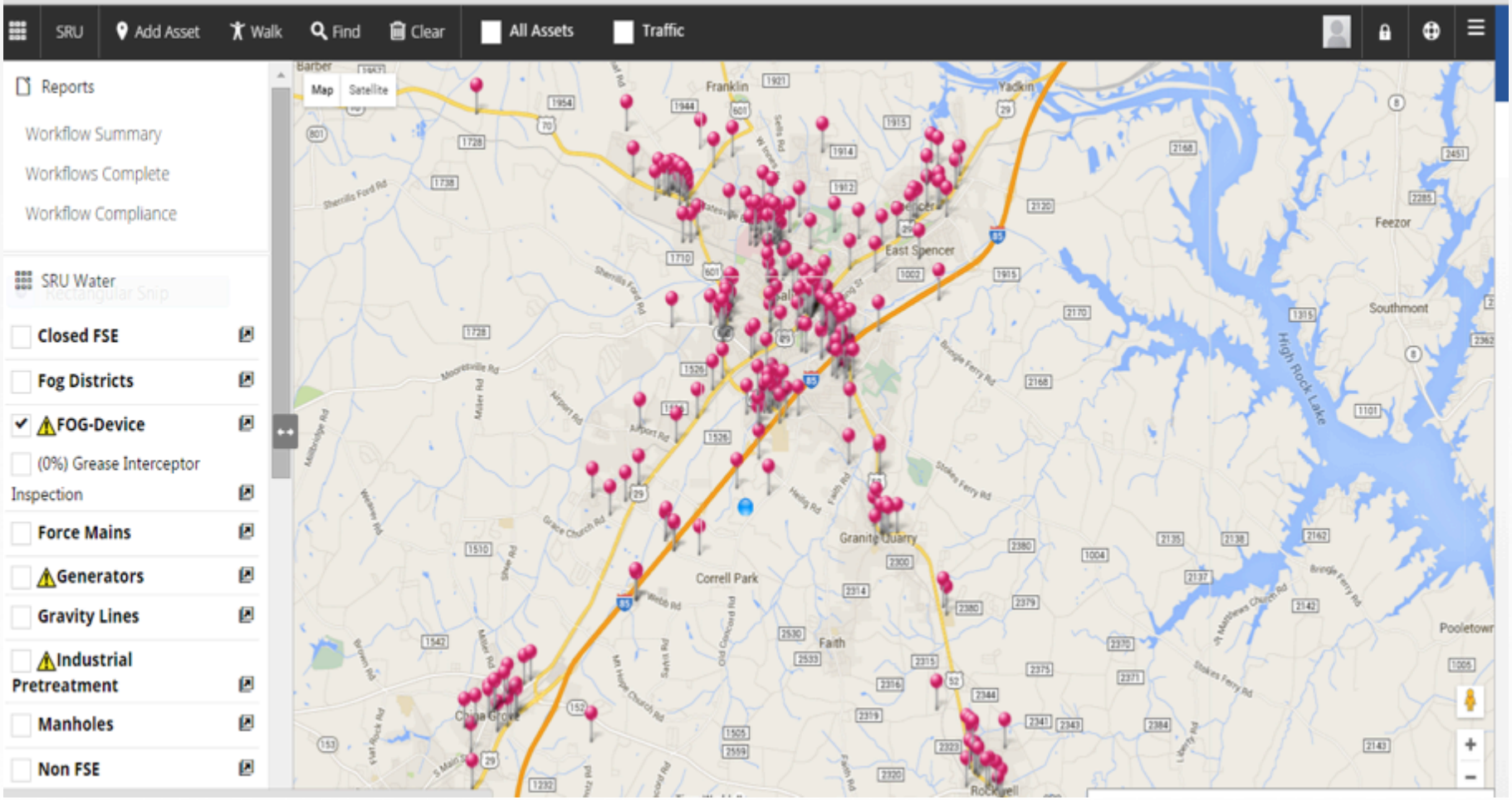
Asset Class Attributes- Define descriptive data to be collected on each asset



		Key	Field	ACFID	Type	List	Parent	Default	Required	Visibility Conditional
↑	↓		Contact	197	Text				☑	☐
↑	↓		Title	198	Text				☑	☐
↑	↓		Address	196	Text				☑	☐
↑	↓		Facility Name	195	Text				☑	☐
↑	↓		Mail To	539999	Text				☑	☐
↑	↓		Mailing Address	199	Text				☑	☐

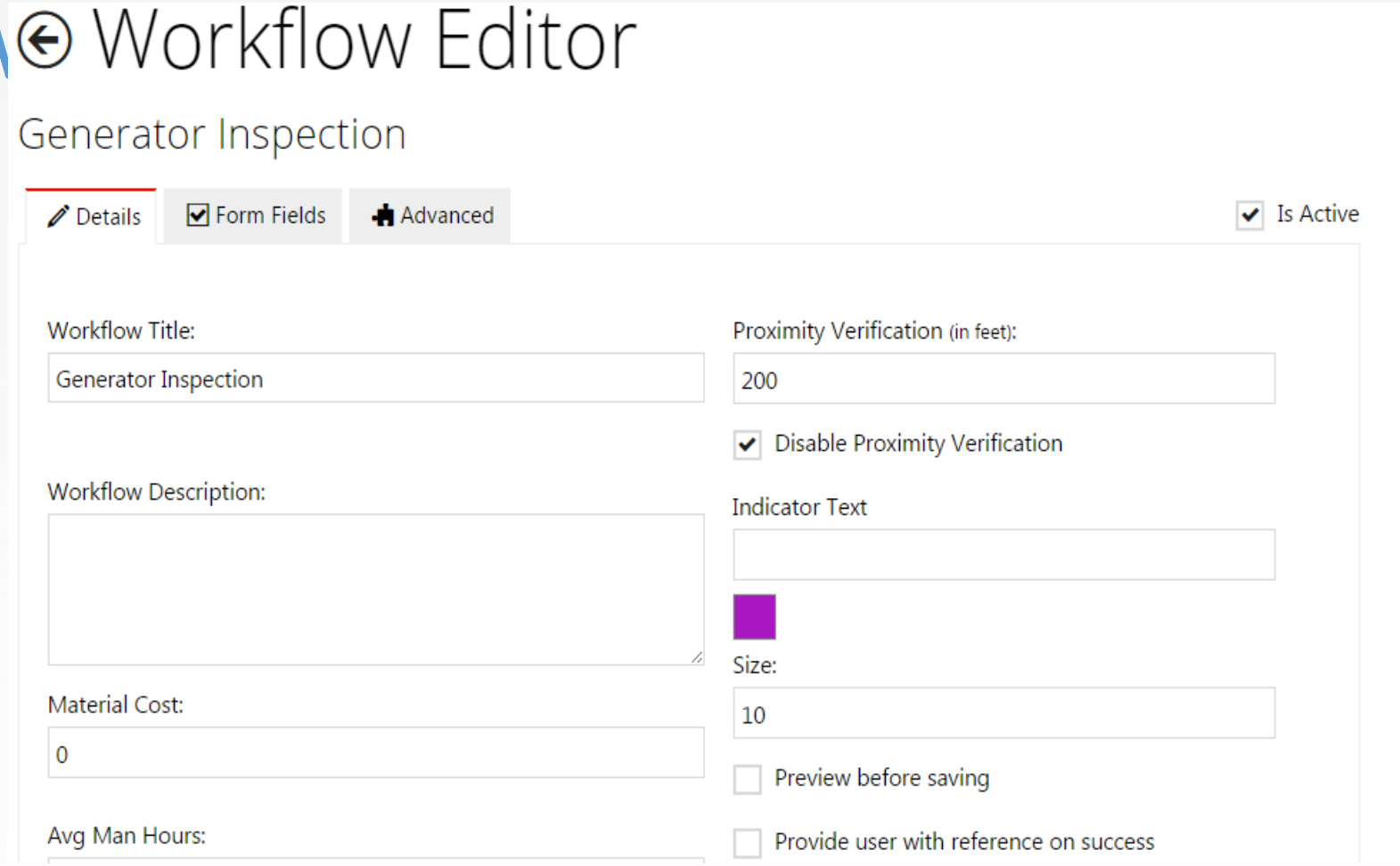
utilitycloud

Import Assets- GIS, Excel List, One at a Time



utilitycloud

Use Shared Workflow or Your own Build Electronic Inspection Form or W



utilitycloud

Form FieldsText, Date,Multi-Choice Select, Numbers, Signature, etc…

Key	Field	WFFID	Type	List
	Inlet Tee	2022	Multiple Choice	Ok, Not Ok, Not Evaluated, N/A
	Outlet Tee	2021	Multiple Choice	Ok, Not Ok, Not Evaluated, N/A
	Access Points	2020	Multiple Choice	Ok, Not Ok, Not Evaluated, N/A
	Condition of Walls and Bottom	2023	Multiple Choice	Ok, Not Ok, Not Evaluated, N/A
	Baffle Intact and Unobstructed	2024	Multiple Choice	Ok, Not Ok, Not Evaluated, N/A
	Flow Regulator	2036	Multiple Choice	Yes, No, N/A
	Maintenance Provider	2027	Text	
	Date Last Serviced	2028	Date	

Build Custom Inspection Report in Google Docs

FOG Program Coordinator
132 N. Main Street
Salisbury, NC 28144
Phone: 704-216-7568, Fax: 704-638-8481

Gerald Wood
Po Box 610
Rockwell, NC 28138
704-279-4550
selectbakery@carolina.rr.com

Fat, Oil, Grease, and Wax (FOG) Control Program
Grease Interceptor/Trap Inspection Report
1/6/2014
Re-Inspection Required

Facility Name: Select Bakery
Facility Address: 607 Palmer Road

Device Type: GI **Device Rate:** - **Device Model:** Per SS-8A
Trap Location: Left rear corner in grassy area **Device Volume:** 1500

Inspections

INSPECTION ITEMS (OK, NOT OK, NA)		MAINTENANCE RECORDS	
Access Points:	OK	Provider:	Valley Proteins
Outlet Tee:	NOT OK	Are Records Available:	YES
Inlet Tee:	NOT OK	Date Last Serviced:	11/6/2013
Condition of Walls and Bottom:	NOT OK	Amount Removed:	1500
Baffle Intact and Unobstructed:	NA	Maintenance Schedule:	90 days
Flow Regulator:	N/A	Kitchen Fixtures Consistent with Records:	YES

Measurements

Chamber		Additional Information	
Grease:	52 inches	Solids interceptor:	N/A
Solids:	6 inches	Rendering container:	N/A

Action (Please click here or visit http://salisburync.gov/ for additional FOG Program information.)

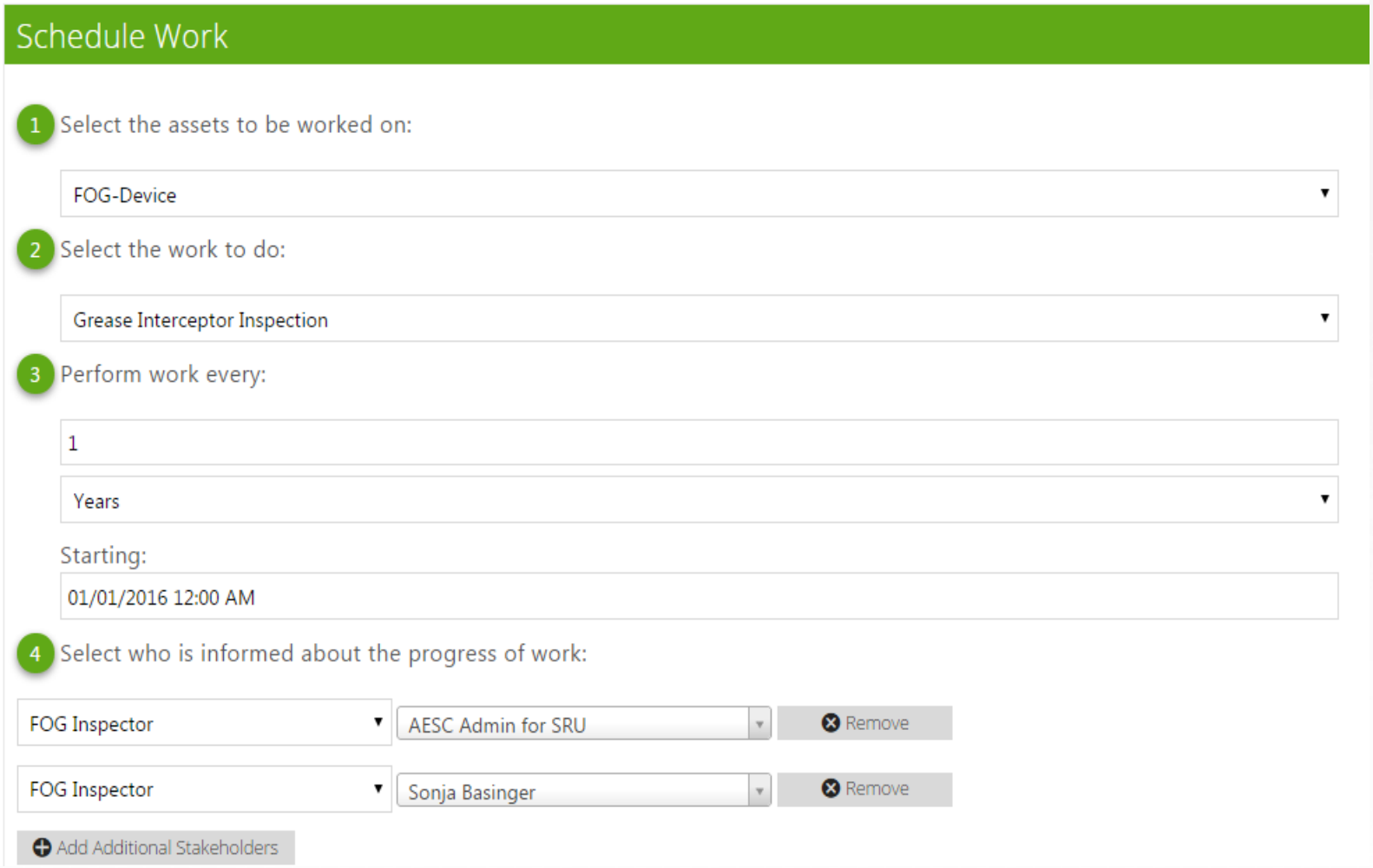
Observations/Comments:	Ensure each grease device service record is kept on site for 3 years. Observed high water level with inlet and outlet tees nearly submerged. Water was gurgling in the outlet tee. Noted grease accumulation in the lift pump vault with high water level. Appeared to have gutter downspout connected to the lift pump.
Corrective Actions:	GI and lift pump needs to be evaluated to determine operating properly. Storm water discharge to sanitary sewer is prohibited. If corrugated pipe discharging into lift pump vault is storm water, cap or remove pipe to eliminate storm water discharge going to lift station. |
Corrective Action Due by:	2/7/2014 (please call 704-216-7568 to schedule a re-inspection when work is complete)

Inspected By: Teresa Barringer
Date: 1/6/2014
CC: tbarr@salisburync.gov

Ron
Facility Representative

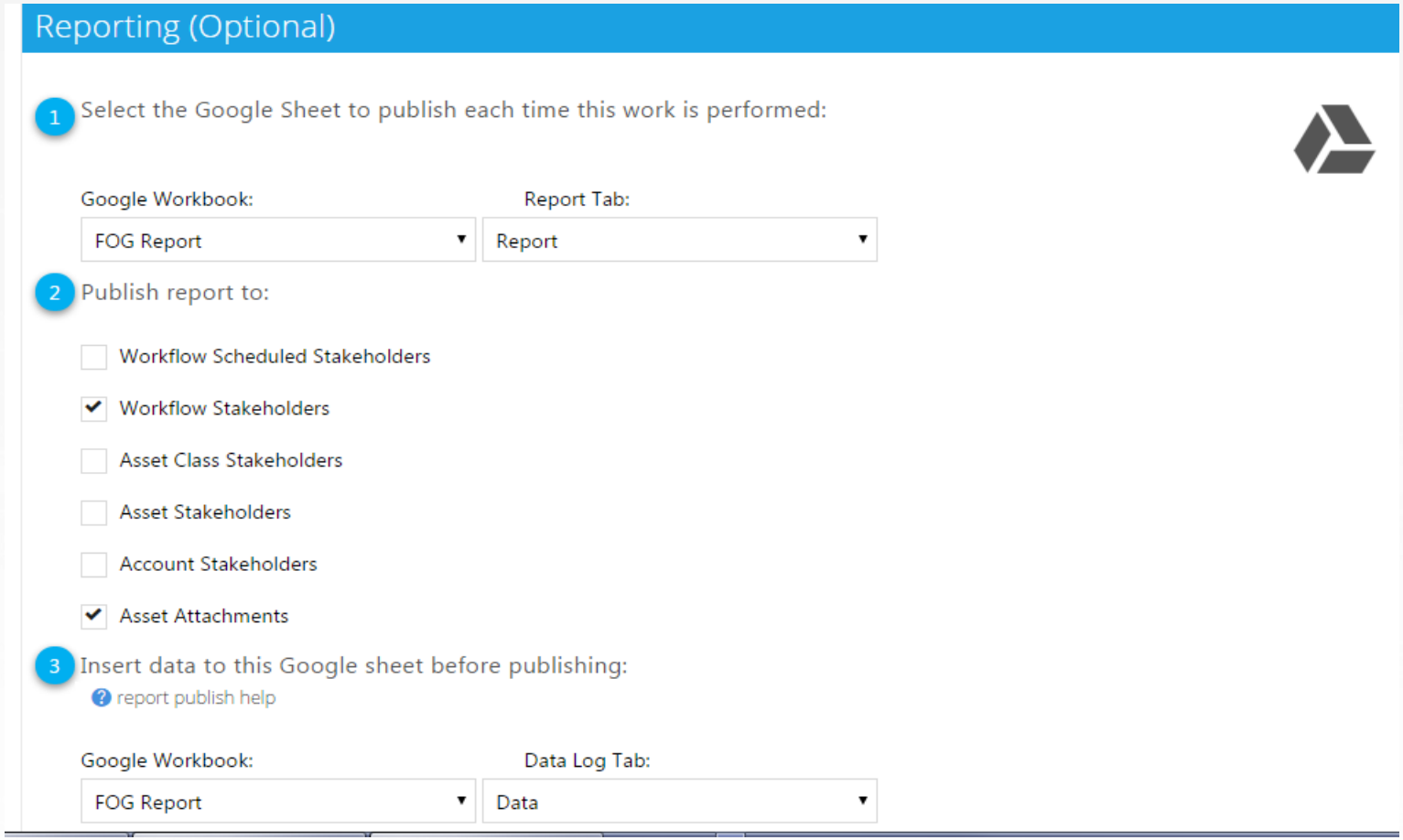
utilitycloud

Schedule Work-Frequency, Start Date, Stakeholder



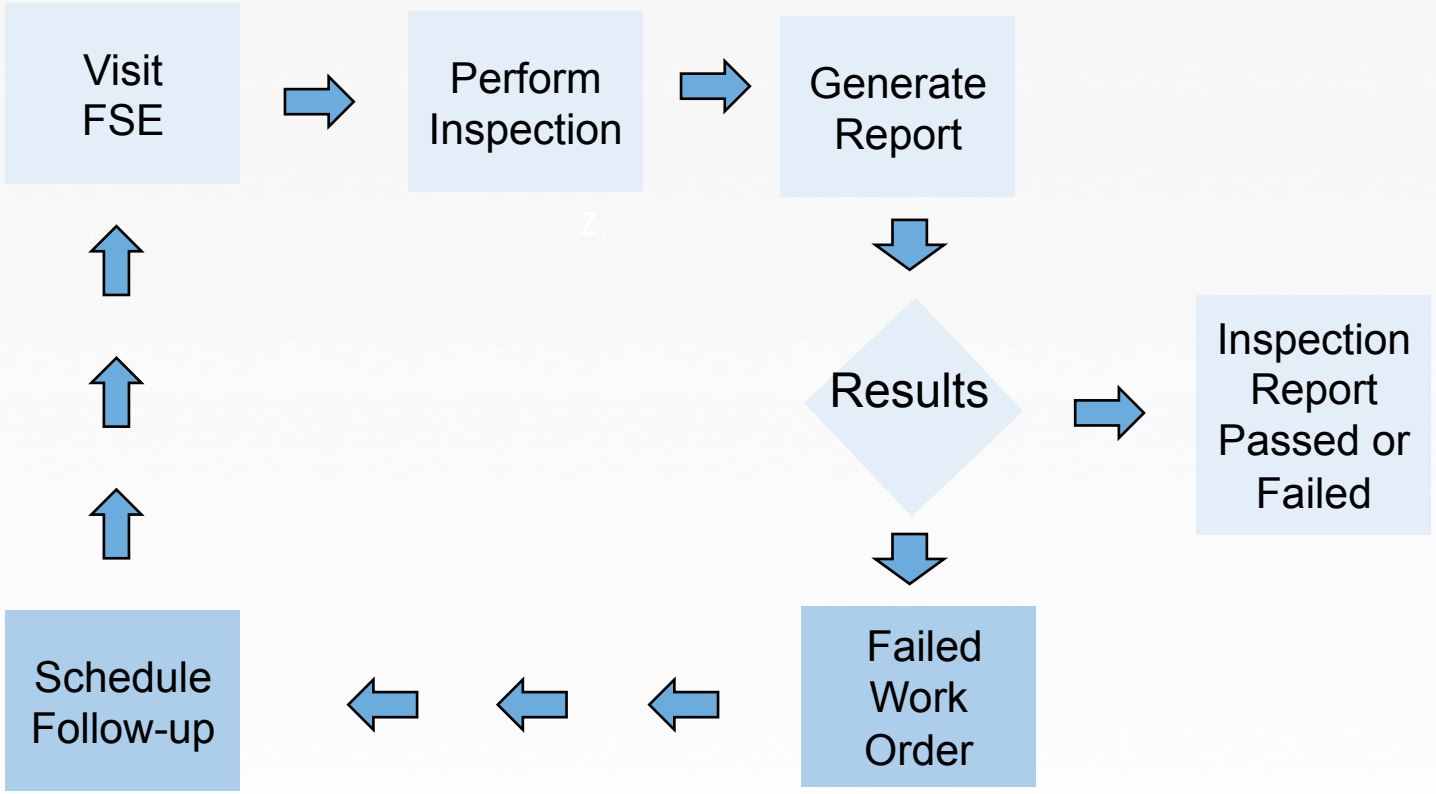
utilitycloud

Setup Report Generation Google Doc



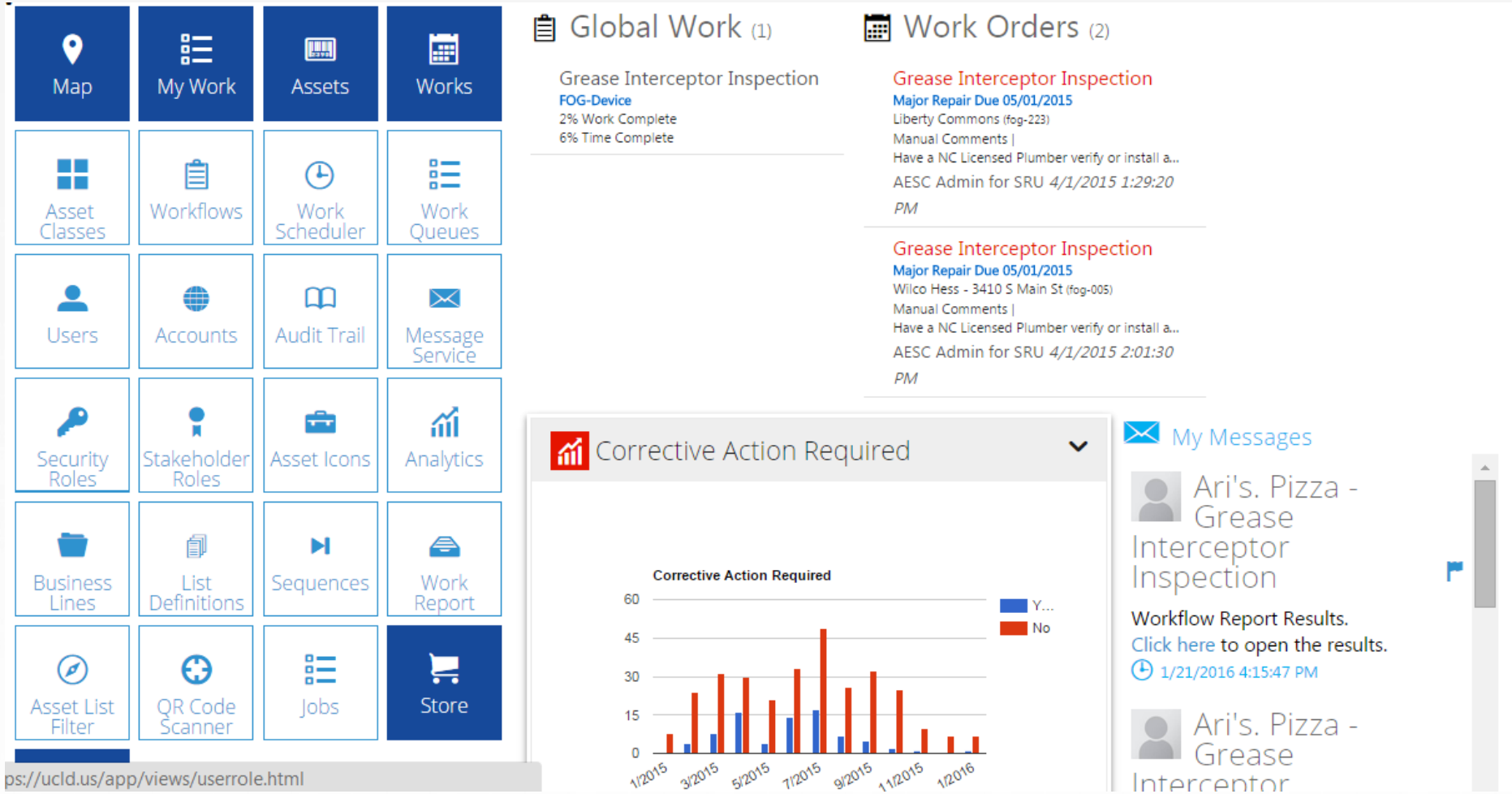
utilitycloud

Inspection Workflow Process



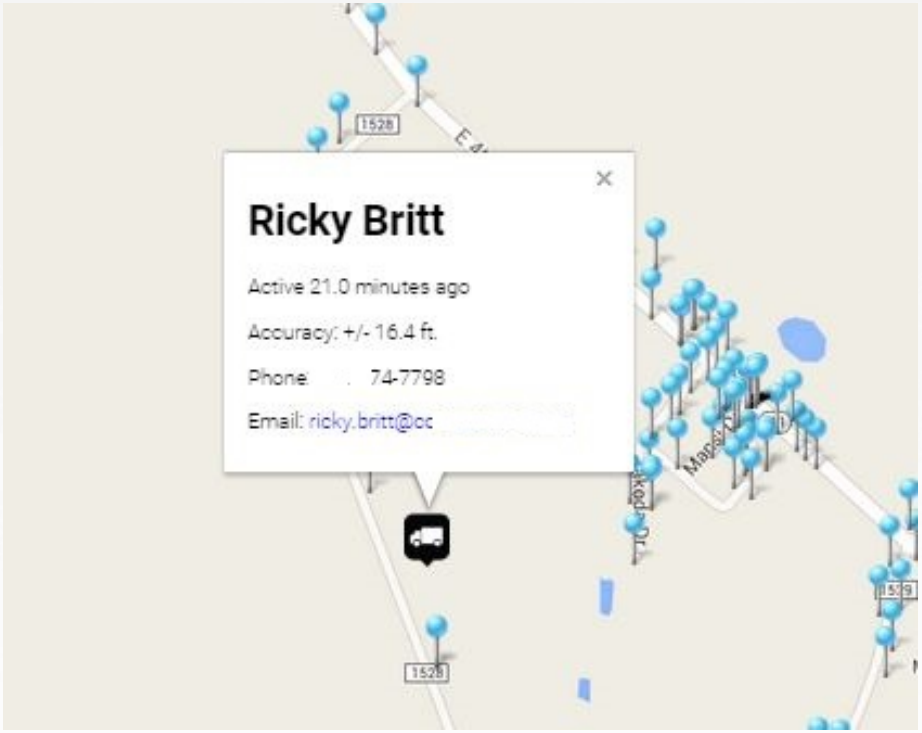
utilitycloud

Logging in -Dash Board



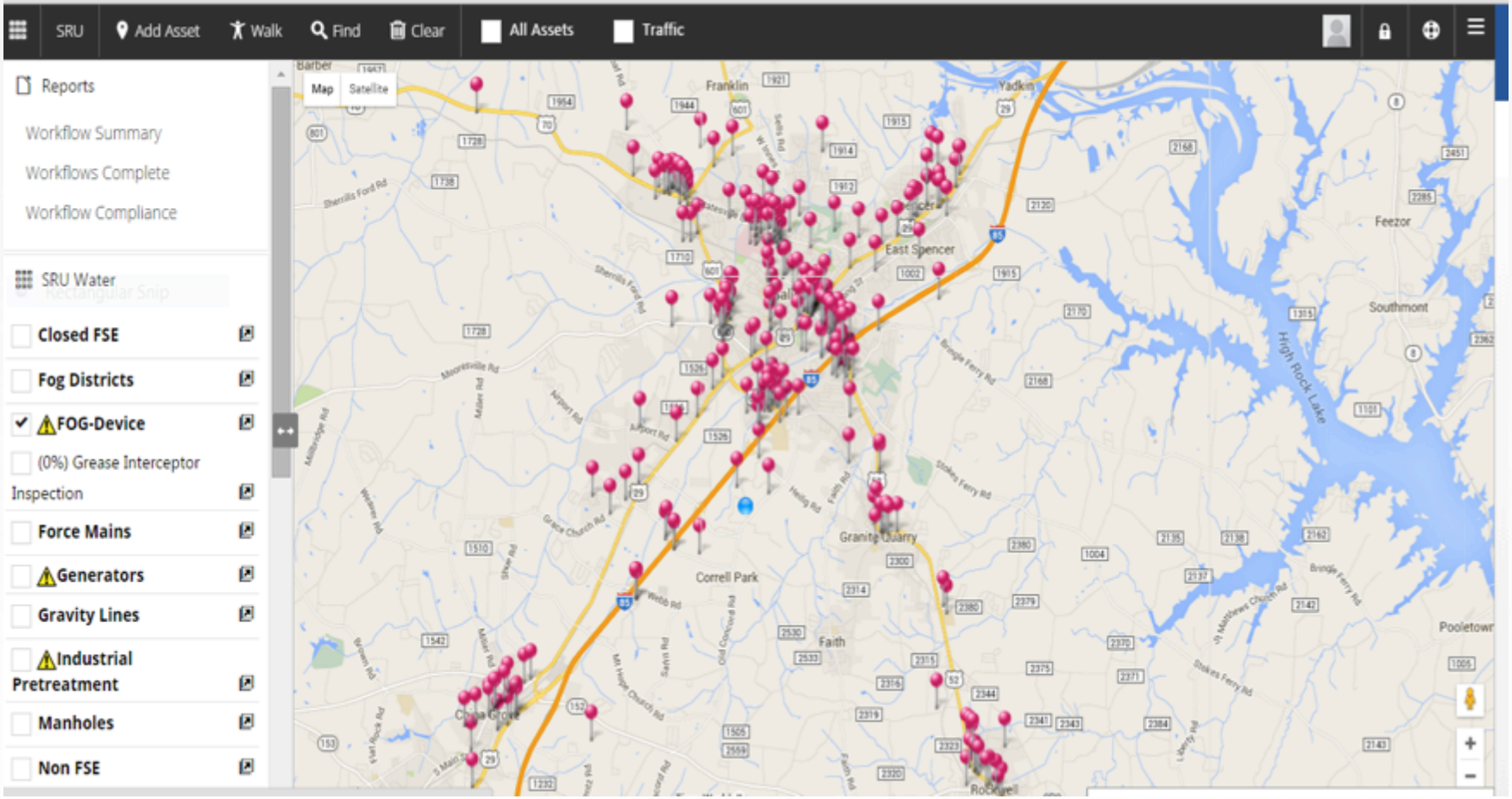
utilitycloud

Location of Field Staff



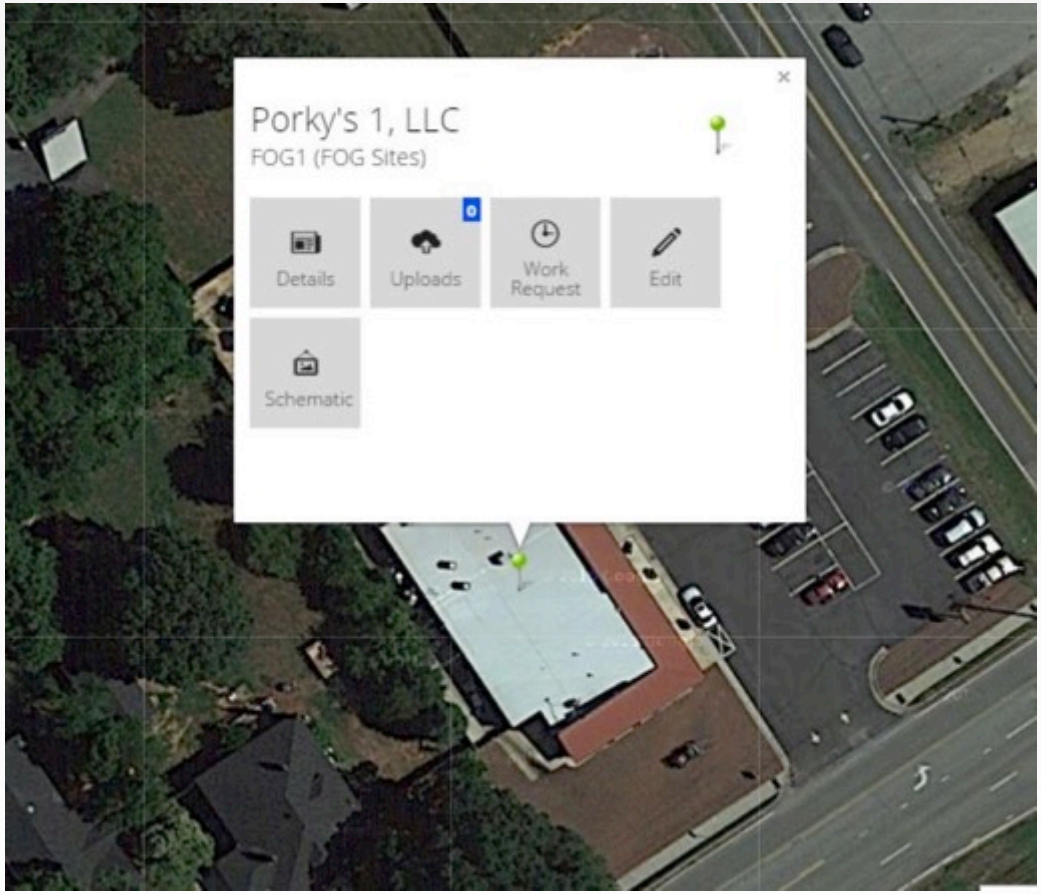
utilitycloud

Visual of Inspection Site



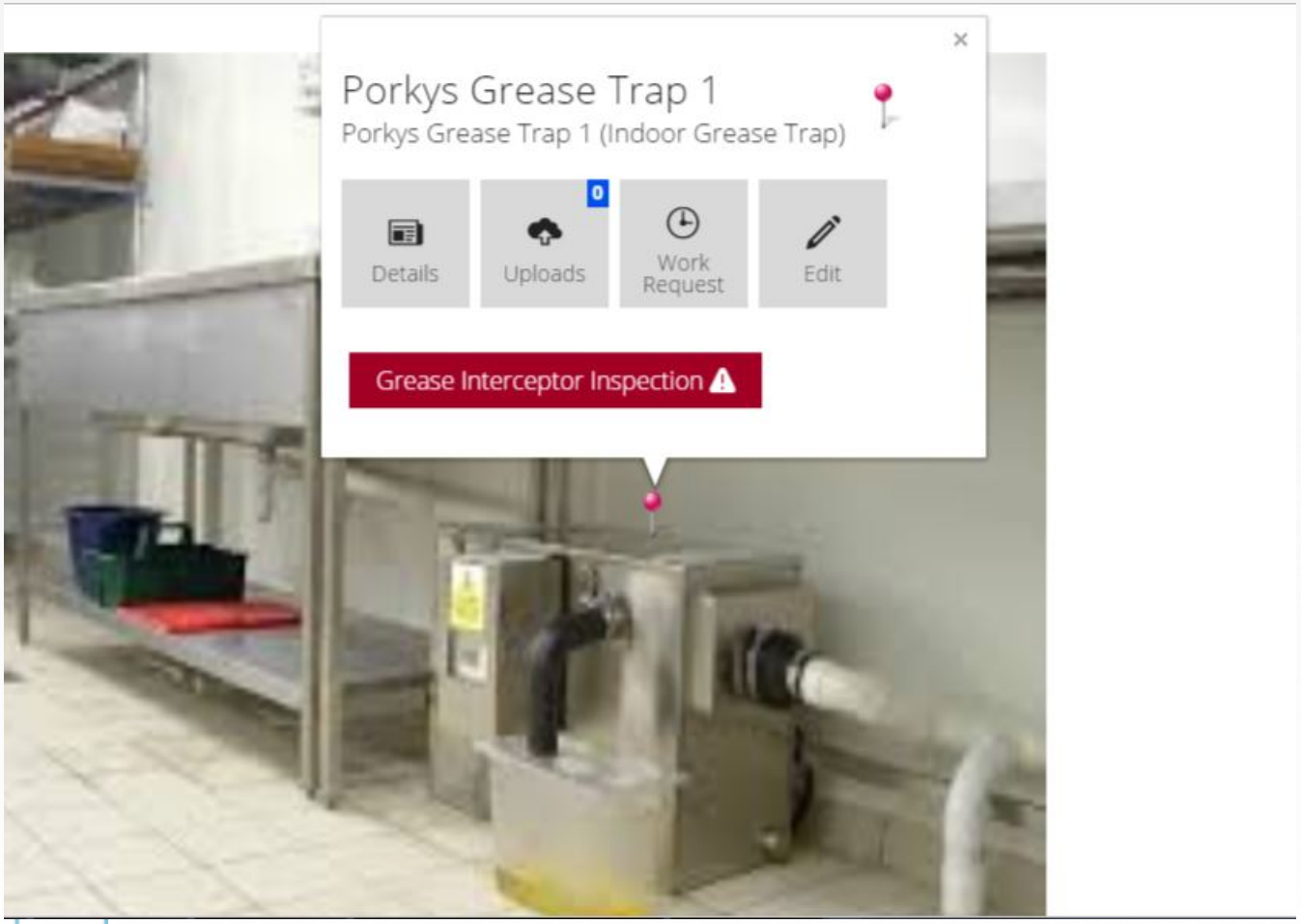
utilitycloud

Visit Site Click Icon



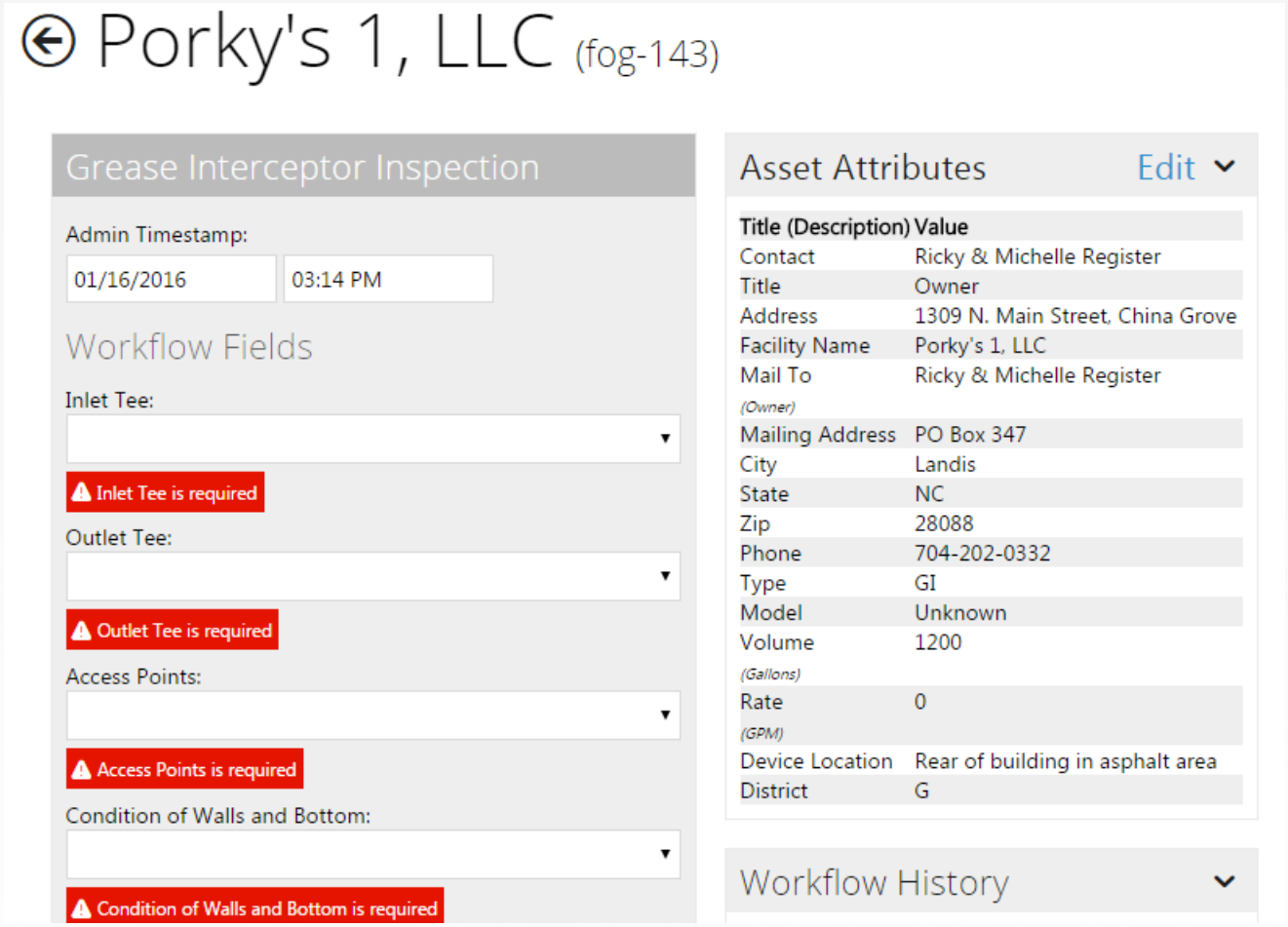
utilitycloud

Show Grease Trap Inside the Kitchen



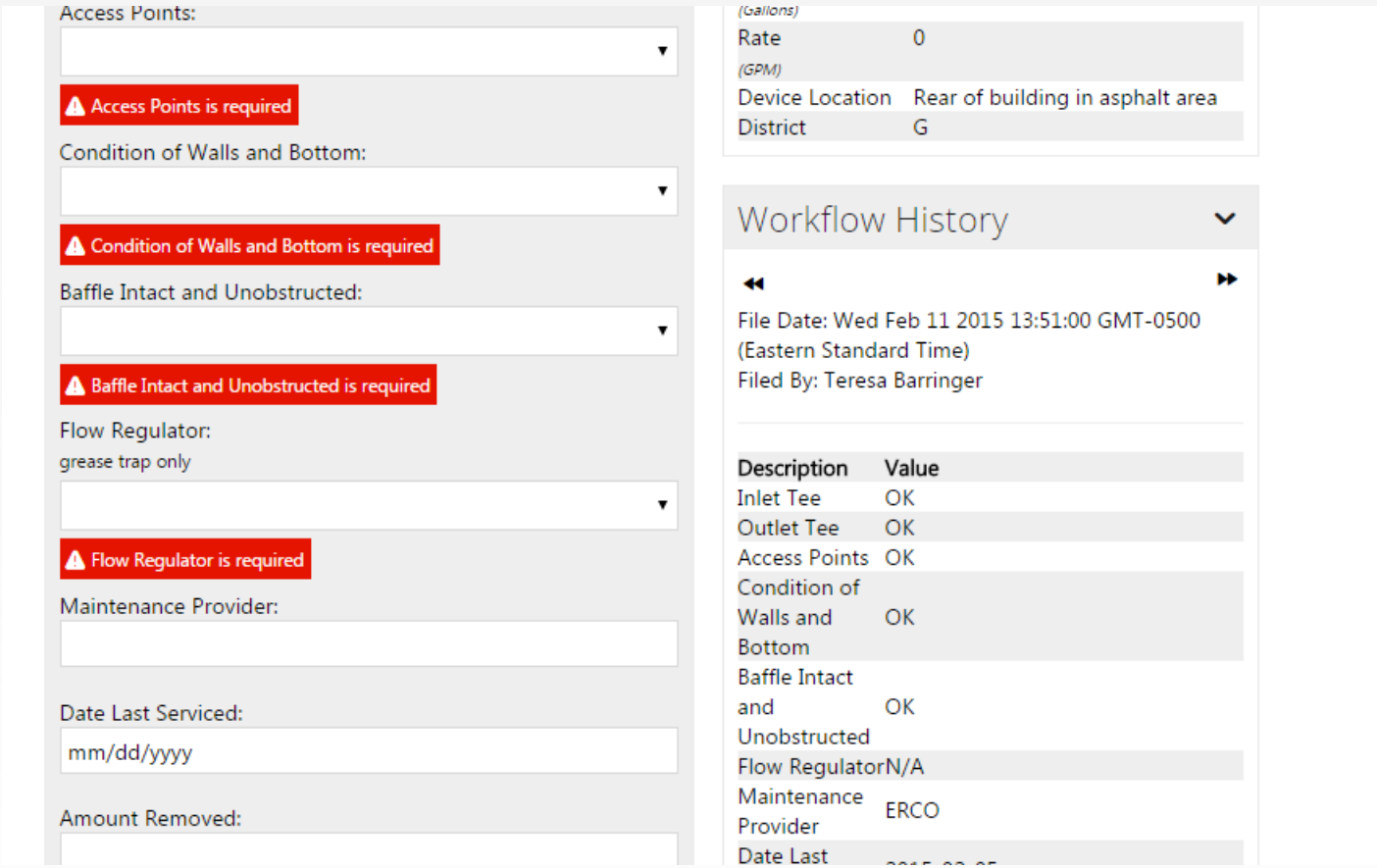
utilitycloud

Open and Complete Workflow



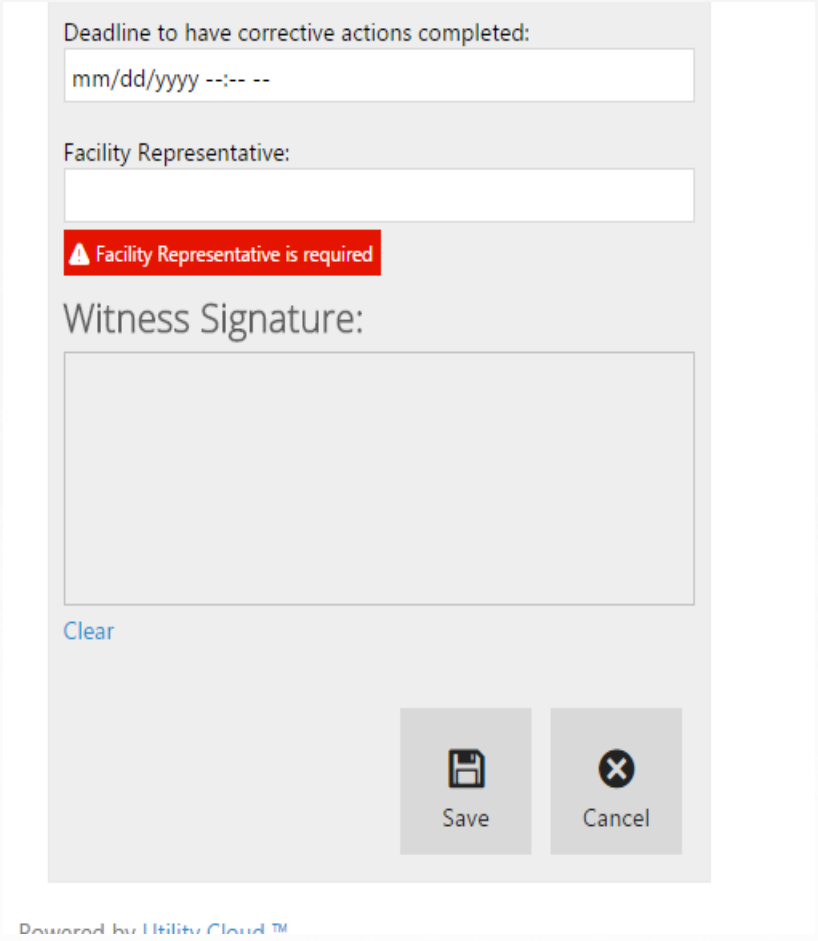
utilitycloud

Asset Work History



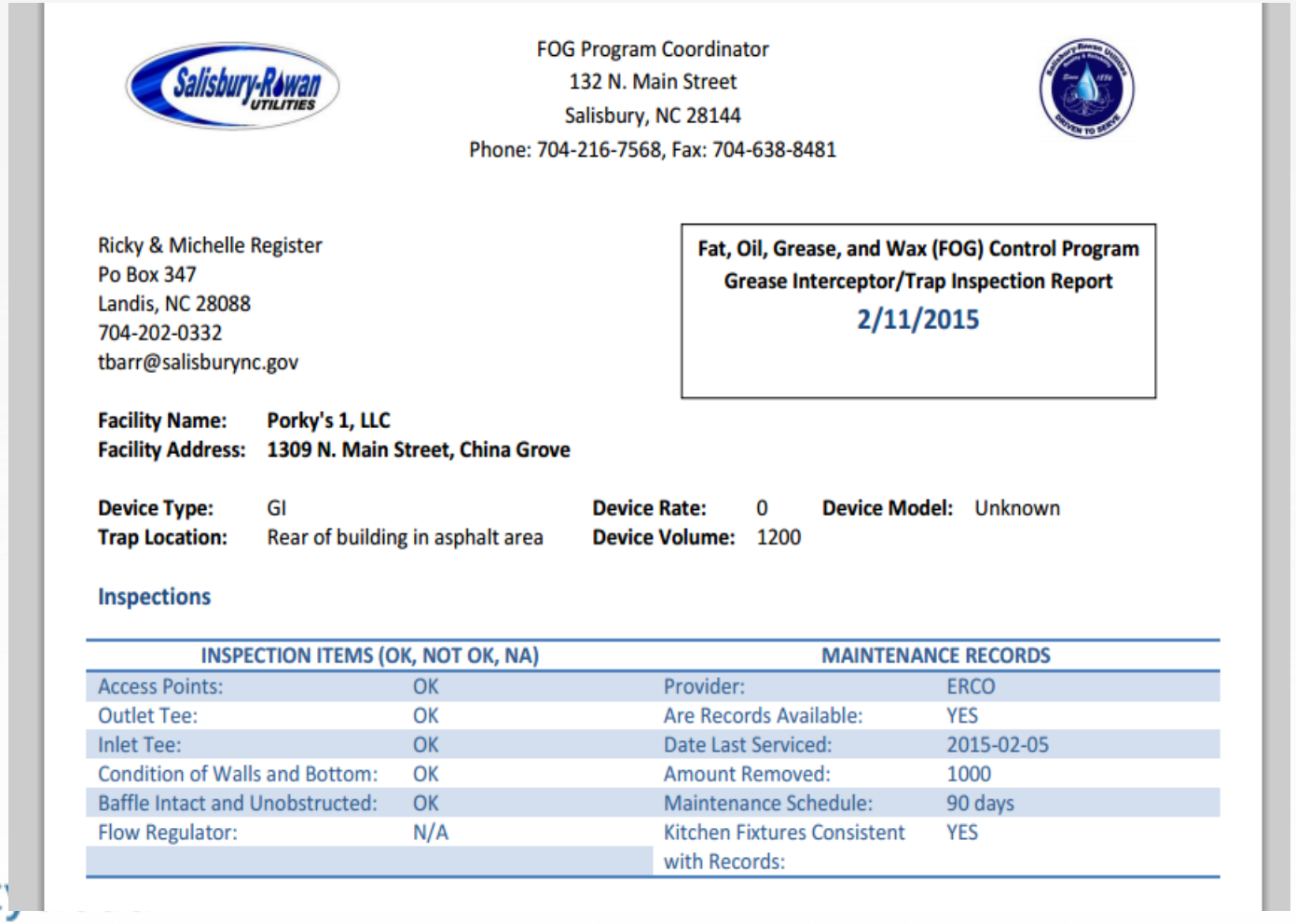
utilitycloud

Sign and Save Workflow



utilitycloud

Inspection Report is Automatically Generated and Emailed to Owner



FOG Program Coordinator
132 N. Main Street
Salisbury, NC 28144
Phone: 704-216-7568, Fax: 704-638-8481

Ricky & Michelle Register
Po Box 347
Landis, NC 28088
704-202-0332
tbarr@salisburync.gov

Fat, Oil, Grease, and Wax (FOG) Control Program
Grease Interceptor/Trap Inspection Report
2/11/2015

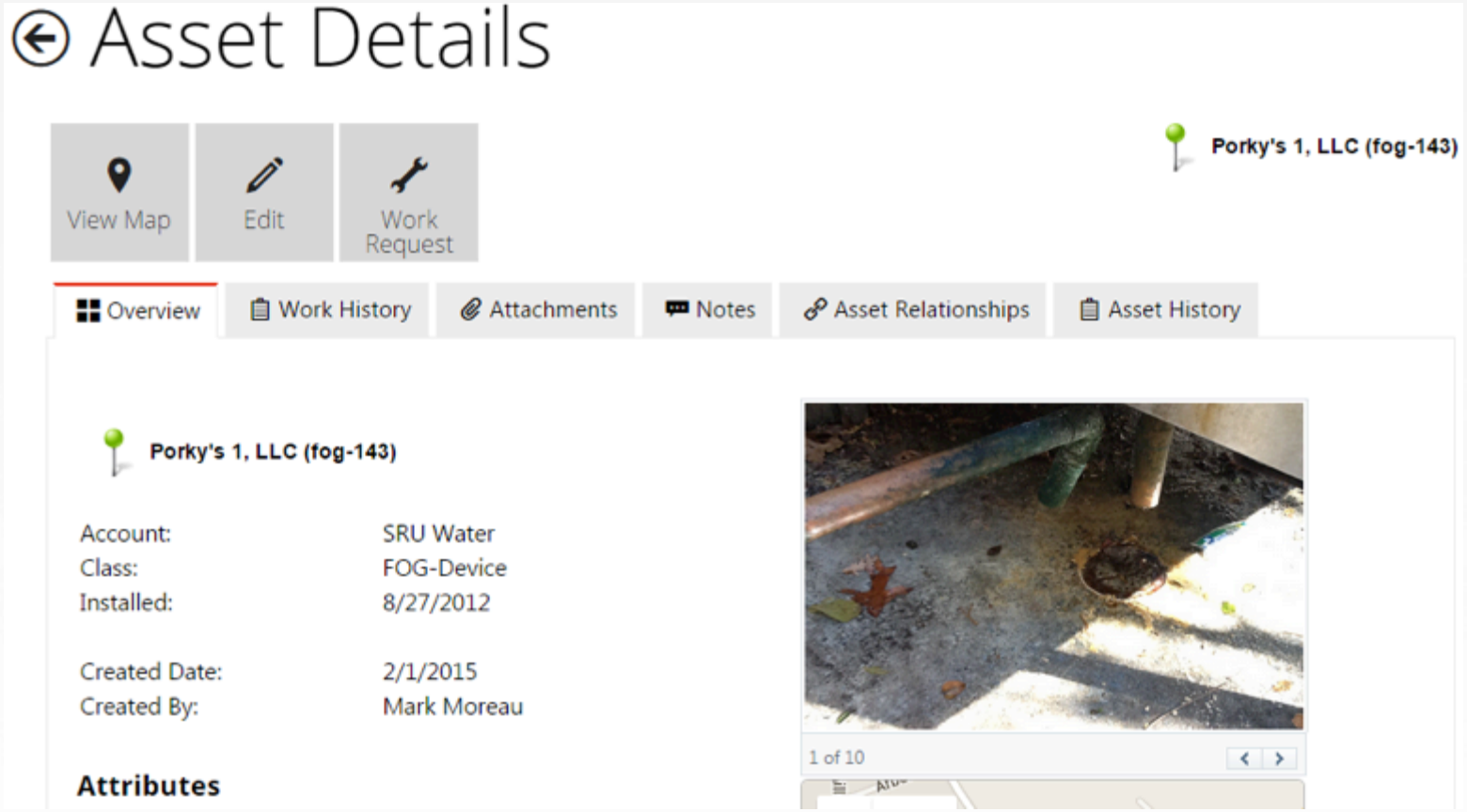
Facility Name: **Porky's 1, LLC**
Facility Address: **1309 N. Main Street, China Grove**

Device Type: GI **Device Rate:** 0 **Device Model:** Unknown
Trap Location: Rear of building in asphalt area **Device Volume:** 1200

Inspections

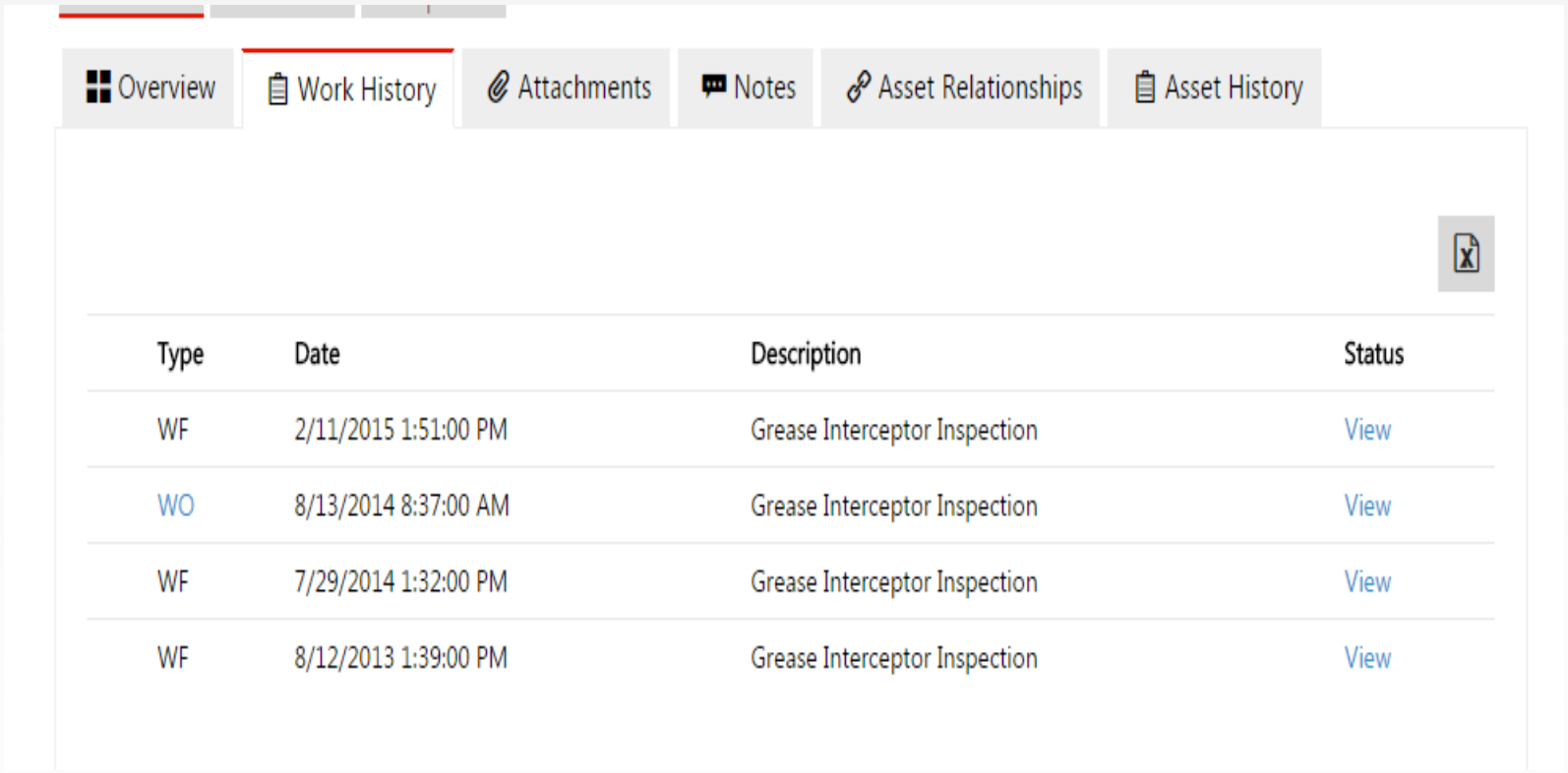
INSPECTION ITEMS (OK, NOT OK, NA)		MAINTENANCE RECORDS	
Access Points:	OK	Provider:	ERCO
Outlet Tee:	OK	Are Records Available:	YES
Inlet Tee:	OK	Date Last Serviced:	2015-02-05
Condition of Walls and Bottom:	OK	Amount Removed:	1000
Baffle Intact and Unobstructed:	OK	Maintenance Schedule:	90 days
Flow Regulator:	N/A	Kitchen Fixtures Consistent with Records:	YES

Asset Details



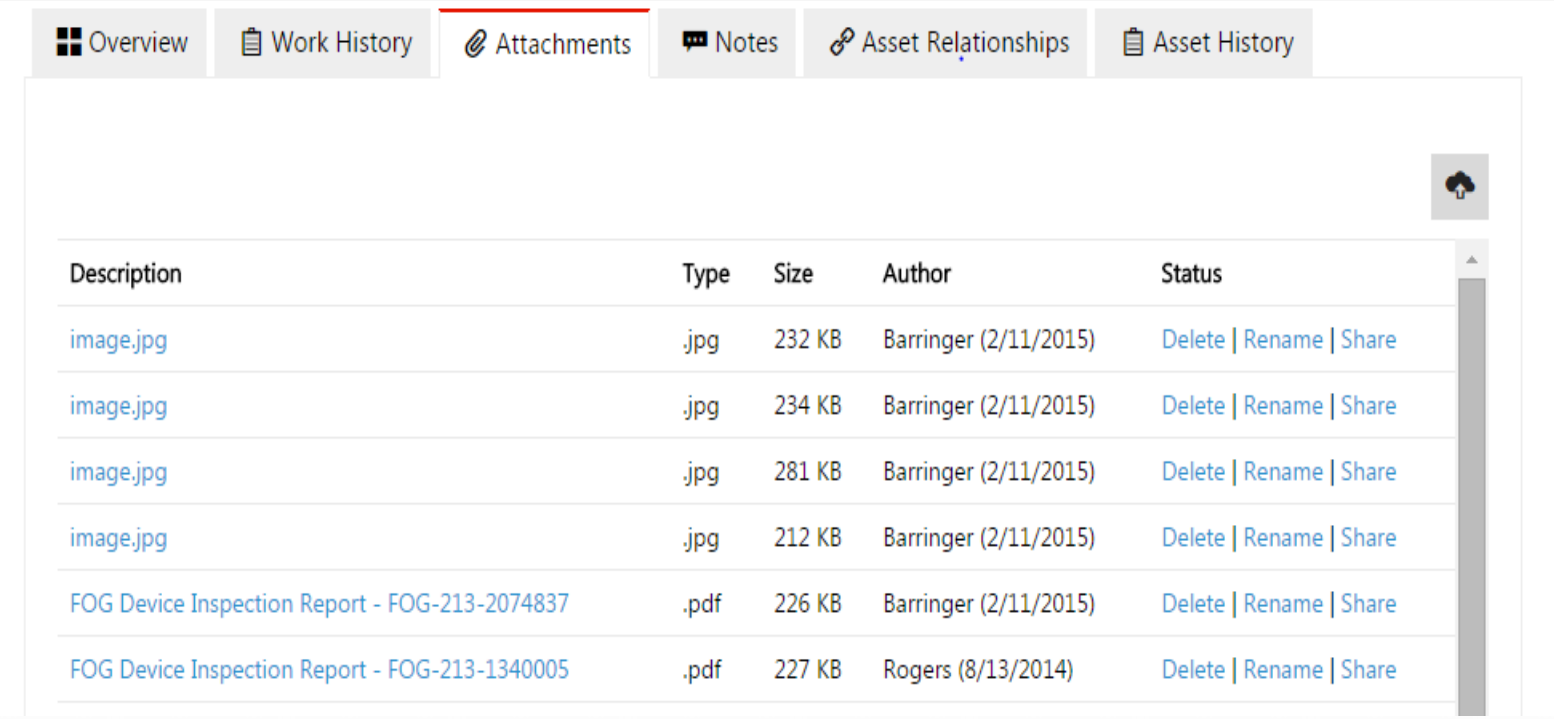
utilitycloud

Work History



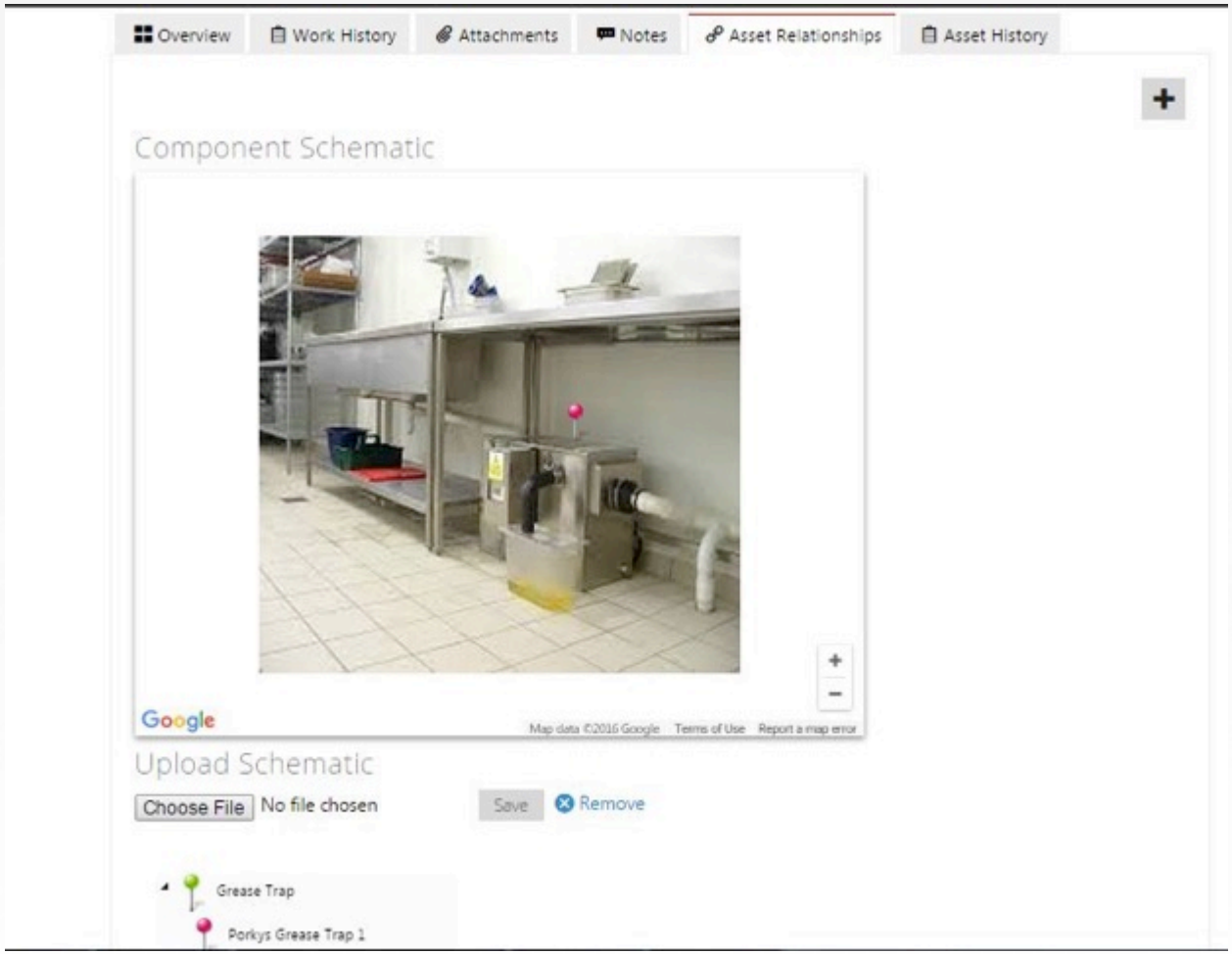
utilitycloud

Attachments- Folder for Pictures, As Built Drawings, O & M Manuals MSDSs, SOP Manuals etc…



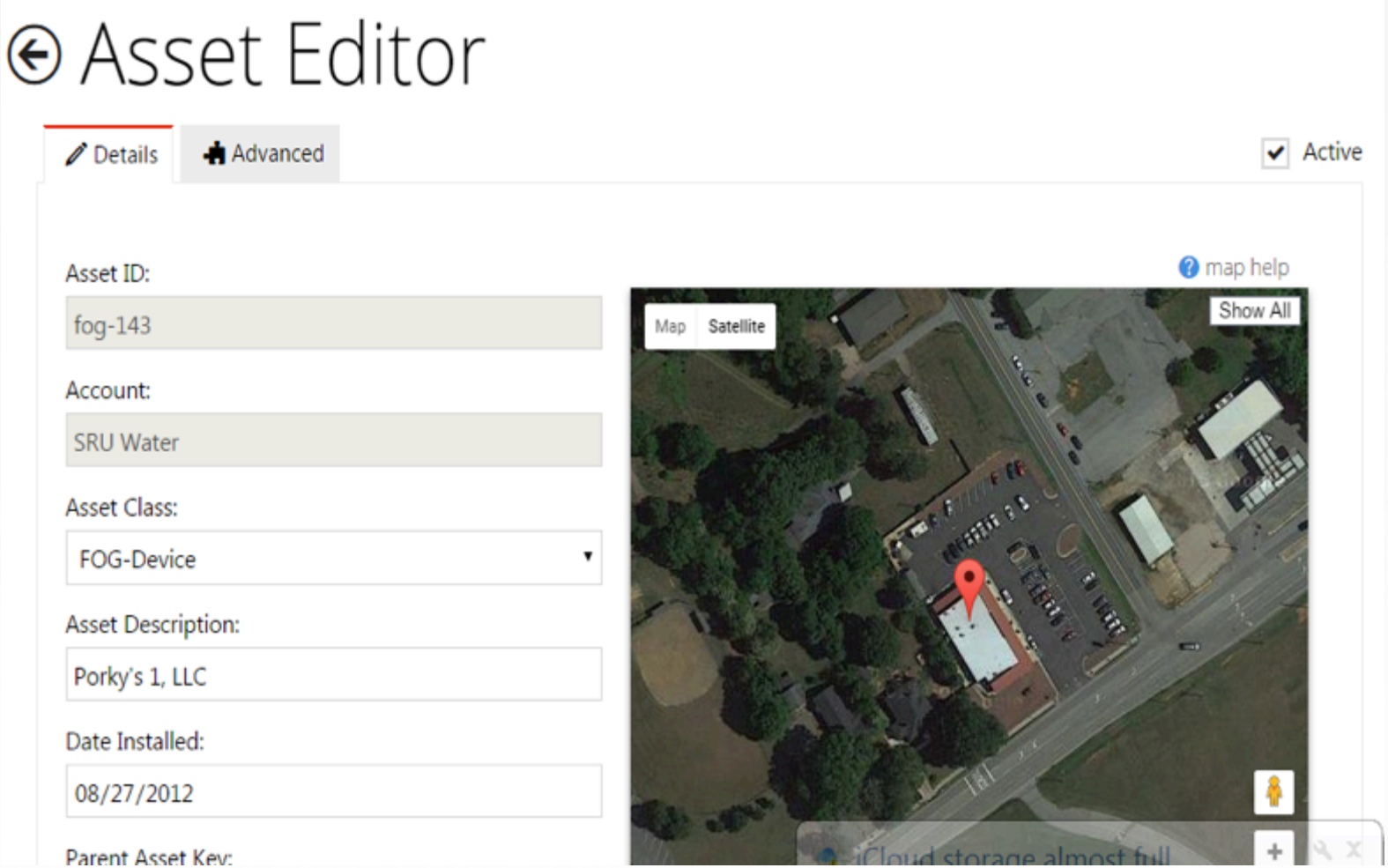
utilitycloud

Asset Relationship - Upload Picture or Schematic



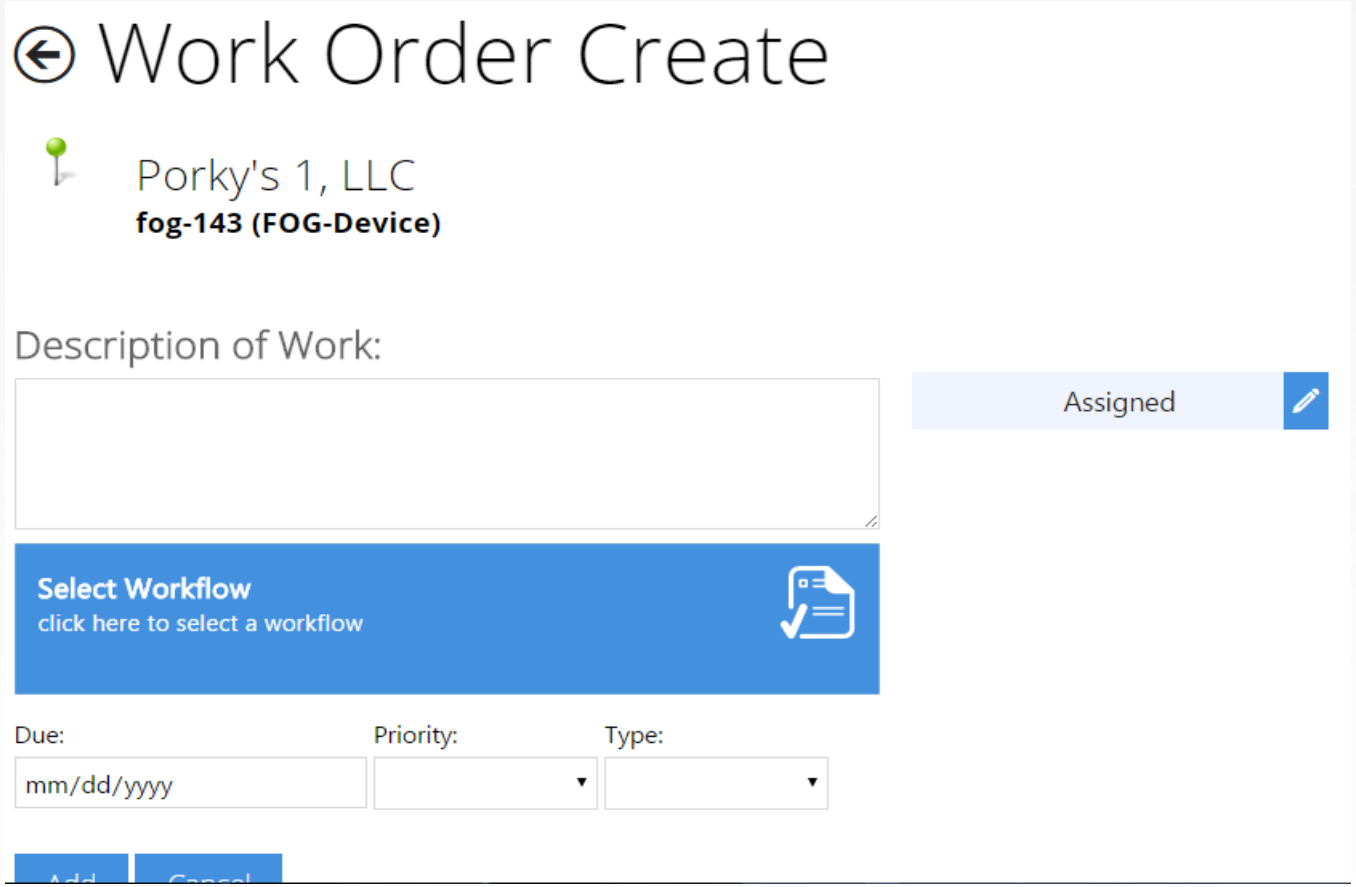
utilitycloud

Edit- Move Asset, Edit Attributes



utilitycloud

Work Order Tile- Assign staff, workflow, Due Date, Prioritize, Type



utilitycloud

Conclusion

How Did this Public Utility Increase Productivity for Annual FOG Inspections?

By Applying

Information Technology also called a

Mobile Operations Management Tool

utilitycloud

Results

- Measurable Time Savings - 40% Less Staff Time to Complete Program
- Real-time access to Asset Data – Everybody Knows What's Going On
- Increased Customer Compliance – The Number One Goal of the Program

Questions?

Ricky Langley
(252) 714-5791
ricky.langley@utilitycloud.us
www.ucld.us
Booth C 4th Floor

utilitycloud