ATEK Intelligence Platform for TankScan

Instruction Guide





Model TSM1000



Model TSC



Model TSU1000





www.tankscan.com







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AIP (ATEK Intelligence Platform)

AIP is a secure, web-based portal designed to set up, provision, and manage assets and data. Throughout this guide there are references to ATEK Technical Support. They can be reached at 877-874-7226 or CCT@tankscan.com.

Log In

- Open an internet browser and type in URL **mytankscan.com** to bring up AIP login page or www.TankScan.com to bring up TankScan home page, and then click on **CUSTOMER LOGIN** in upper right hand corner.
- Type in login credentials and click Log In. Login credentials are provided by ATEK Technical Support.

og In		
User Name:		-
Password:		7
Log In Forgot Your Pa	assword?	
Forgot Your Pa	assword?	wor

- Landing page opens.

TankScan.		Demo •	
Select Views Menu to Get Started	For TankScar		

4



AIP Navigation

a. Menu Tabs

These menu tabs can be used to navigate within AIP. Select Views then Tanks on landing page to get started.

Instruction Guide for

ATEK Intelligence Platform



Views Menu

Views menu items provide following services:

- a. Home Brings user back to landing page
- b. Tanks Displays tank monitor information for account's tanks.
- c. Reporting Brings user to Reporting section of AIP

Views▼	
Home	
Tanks	
Reporting	



Grids Menu

Grids menu items provide the following services:

- c. Locations Displays information on all account locations
- d. Tanks Displays tank monitor information for all account's tanks
- e. Gateways Displays information for all account's gateways

Grids▼	
Locations	
Tanks	
Gateways	



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Instruction Guide for



Actions Menu

Actions menu items provide the following services:

- f. Refresh Refreshes page to display updated information
- g. Select Columns Allows user to select which columns are displayed
- h. Export to Excel Exports displayed information to Excel®
- i. **Show all on map** Shows on map all tanks for this account. Tank locations are indicated by color coded map markers that also provide alert status.

Actions -	
Refresh	
Select Columns	
Export to Excel	
Show all on map	

b. Customizing the View

Customizing works the same way for Locations, Gateways, and Tanks pages. Start on Views menu then select **Tanks**. Under Grids menu, select **Locations**, **Gateways**, or **Tanks** and do the following.

1

Sort by Column

• Click on desired column heading to resort all displayed information.

Tanks							
	1	Status 🔻	Name T	% Full	T	Empty	T
۲		Normal	Tank 1	87%		2551.76 gals	
•			Pacific Petroleum TSU	48%		155.48 gals	
۲			Antifreeze Tank	58%		8560.28 gals	
+			HQ Red Diesel	13%		8473.20 gals	

After sorting (descending).

Tanks						
	Ţ	Status	Name T	% Full 🔻 🛛 🔻	Empty T	Fi
۲		Normal	Tank 1	87%	2551.76 gals	17
۲			Antifreeze Tank	58%	8560.28 gals	11
۲			Pacific Petroleum TSU	48%	155.48 gals	14
•			HQ Red Diesel	13%	8473.20 gals	12



Instruction Guide for



Sorting again (ascending).

Tar	nks		+	1	\sum	
	T	Status	Name T	% Full 🔺 🛛 🔻	Empty T	Fu
۲			HQ Red Diesel	13%	8473.20 gals	128
×			Pacific Petroleum TSU	48%	155.48 gals	143
Þ			Antifreeze Tank	58%	8560.28 gals	118
•		Normal	Tank 1	87%	2551.76 gals	176



Drag and Drop Column Order

• Click on desired column heading and drag to a new position then release.

Ta	nks					$\langle \rangle$
	- 1 T	Status •	Name T	% Full	Empty T	F
۲		Normal	Tank 1	87%	2551.76 gals	1
Þ			Pacific Petroleum TSU	48%	155.48 gals	1
۲			Antifreeze Tank	58%	8560.28 gals	1
Þ			HQ Red Diesel	13%	8473.20 gals	1

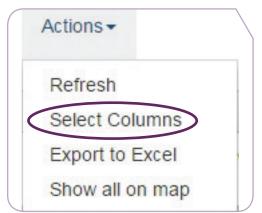
After		

Tar	nks					
	· .	Name T	Status 🔻	% Full	Empty	r Fu
×		Tank 1	Normal	87%	2551.76 gals	17
+		Pacific Petroleum TSU		48%	155.48 gals	14:
×		Antifreeze Tank		58%	8560.28 gals	118
		HQ Red Diesel		13%	8473.20 gals	12



Add and Remove Columns

Click on Actions menu then click Select Columns.







• Check box to add field /column, uncheck box to remove it. Changes will apply and save automatically.

•	6 Full		
	Battery		
10	apacity		
•	apacity	U	DMC
10	ontents	;	
	Depth		
	Empty		
✓ F	ull		
	ast Rep	ort	t
 L 	ocation		
	ocation	Ту	pe
N	Ionitor I	D	
	lame		
S	Status		
✓ 1	empera	tur	e
Re	estore De	fau	It

Click **X button** to remove **Select fields** menu.

c. Filtering the View

.

Click on **filter** icon in column header to open a drop-down menu. Menu items vary depending on data type in column.







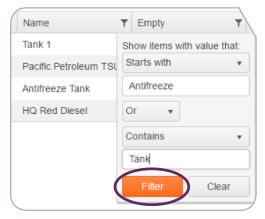
• Click on **Show items with value** that parameter drop-down menu and select type of filter.

Name	T	Empty T
Tank 1	S	now items with value that:
Pacific Petroleum TSL	C	contains 🔻
Antifreeze Tank	4	Contains
HQ Red Diesel	5	Starts with
	C	contains 🔻
		Filter

• Select a conjunction to use if needed.

Name	T	Empty		Ţ	
Tank 1	SI	now items v	vith va	lue that:	
Pacific Petroleum TSU	C	contains			
Antifreeze Tank					
HQ Red Diesel	A	nd 🔻			
	1	\nd	-		,
	0	Dr			
		Filter		Clear	
		Filler		Clear	

• Enter filter value(s) and click on Filter.



• Notice that display table is now filtered and filter button's background color is white.

Name	T
Tank 1	
Antifreeze Tank	





• Remove filters by clicking on **Filter** icon and clicking on **Clear**.



d. Viewing Tank Details

- Select Tanks from Grids menu.
- Click on Rotating Triangle icon | | on left side of a row to show additional information about tank.

Status 1	Name	Location	T 1	% Full	T	Temperature	T	Battery	T Capacit	y T	Contents	T	Last Report	Y Capacity UON
Normal	DVT_3	ATEK EP	1	12.79%		74.0 F		6.866 V					2/15/2019 3:58 PM	
stap Navigate	Details Alerts Pr	ovision View All	Update I	Aonitor										
1 1	in the	- Datas		-				Reading		Value		Date		History
12.79%		C296-1		5				% Full		12.79%		2/15/2019 3	58 PM	
12.1976			- 1			ertical		Battery		6.866 V		2/15/2019 3	58 PM	1
		A AN AN	- 1	lank	Tank		Empty		12.8 gal		2/15/2019 3	58 PM		
		and the second se						Ful		169.3 gal		2/15/2019 3	58 PM	2
								Temperat	ure	74.0 F		2/15/2019 3	58 PM	
•	850 Alkaline	LONG MIR TEST				37.4 F		3.8 V					3/16/2018 11:03 AM	

- Notice additional buttons are displayed above tank's picture:
 - a. **Map** View map location of Gateway, Location, or Tank
 - b. Navigate Opens Google Maps and navigates to tank location
 - c. **Details** Displays additional details specified during asset set up about Location or Tank. Can only be edited from Administration Console
 - d. Alerts Displays alert history of tank
 - e. **Provision** Allows users to map incoming monitor parameters to actual tank, specify alerts for each parameter, and apply strapping tables to tank level readings
 - See Provision Tank Instructions under Account Setup & Editing to provision tanks
 - f. View All Displays all tanks at this tank location
 - g. Update Monitor Allows users to modify tank monitor reporting settings





For Monitors Used in Single Tank Applications

• Select Update Monitor.



Update Monitor page appears.

Parameter Name	Value	Units
Report Interval	6	Hours
Fixed Report #1	6	Hour
Fixed Report #2	0	Hour
Measurement Interval	60	Minutes
Measurement Threshold	15	inches of air gap

- Report Interval Number of hours between monitor reports to AIP, values: 1 24. Report Interval timer
 resets after each Fixed Report. This has a direct impact on battery life, less frequent reporting results in
 longer battery life.
- Fixed Report #1 Fixed time of day for monitor to send a report to AIP, values: 0 disabled, 1 24 hours
 Universal Time Coordinated (UTC) time with 1 being 1:00 am and 24 being midnight. Example: North America
 without daylight savings time, desire 1:00 PM (13:00) CST report so set Fixed Report #1 to 19 for 19:00 UTC.
 With daylight savings time then set Fixed Report #1 to 18 for 18:00 UTC.
- Fixed Report #2 Same as Fixed Report #1
- Measurement Interval Number of minutes monitor sleeps then wakes to take a tank level reading, values: 15, 30, 60 and any value 61 – 1440 is rounded to nearest hour. Typically, Measurement Interval is set to same interval length as Report Interval except when used with Measurement Threshold parameter. Measurement Interval must not be set greater than Report Interval.
- **Measurement Threshold** Inches of tank level change to cause immediate report to AIP, values: 0 disabled, 0 - 100. Each time monitor wakes up, due to Report Interval, Fixed Report, or Measurement Interval, it takes a level reading and accumulates any change in level from last time a report was sent to AIP. Once this accumulated change exceeds the Measurement Threshold value, in either an increase or decrease fashion, a report is sent to AIP and accumulated change is reset to zero. This process begins again next time a level is measured. Example: Measurement Threshold is set to 9 inches. A tank level measurement is taken each time monitor wakes up. Any change in level is accumulated and if that accumulated change exceeds 9 inches in either direction, then a report is sent to AIP.





set: TSU900013AB cation: ATEK EP st Saved:12/20/2019 10:07:5	3 PM UTC	
Parameter Name	Value	Units
Report Interval	1	Hours
Fixed Report #1	0	24 Hour UTC
Fixed Report #2	0	24 Hour UTC
Measurement Interval	60	Minutes
Measurement Threshold	0	Inches
GPS Enabled	1	No=0/Yes=1
GPS Upload Every Report	0	No=0/Yes=1

For TSU1000 and TSM1000 monitors with Global Positioning System (GPS) functionality their location is determined from satellites and updated automatically to AIP. This feature is controlled with **GPS Enabled** and **GPS Upload Every Report** parameters. Because GPS services uses more data and shortens battery life it is by default set to only report location once a day.

Note: Reporting position multiple times a day will substantially consume more data and shorten battery life.

- **GPS Enabled** Turns location function on and off, values: 0 disabled and 1 on; default is 1.
- **GPS Upload Every Report** Determines number of times location information is sent to AIP, values: 0 location sent once a day and 1 location sent with every monitor report; default is 0.
- Make Changes in appropriate fields and click **Update Monitor**. Do this when setting up monitor for first time even if no parameter values are changed.





For Monitors Used in Tank Farm Applications

• Select Update Monitor.



- Configuration window opens.

Send Configurati	on to Monitor
Tank Id:	6858
Monitor: 00	0005B0
Last configuration sent:	1/11/2016 2:25 P
Report Interval:	4 hours V
Reader Interval:	4 hours 🔻
Delta Threshold:	0 inches
Send Configuratio	on Cancel

- a. **Monitor** monitor ID number
- b. Last configuration sent time and date of late configuration sent to monitor
- c. **Report Interval** time interval between reports from monitor, monitor awakens, takes a level reading, reports, and goes back to sleep
- Reader Interval time interval between monitor level measurements, monitor awakens, takes a level reading, checks thresholds and only reports if a threshold has been exceeded, then goes back to sleep.
 Reader Interval must not be set greater than Report Interval.
- e. **Delta Threshold** absolute change in level threshold value (inches) from one measurement to the next that if exceeded will cause the monitor to report level immediately. Set to 0 to disable.
- Make changes in appropriate fields and click on Send Configuration.

WARNING! Shorter reporting time intervals of TSM Monitors and frequent crossing of Delta Threshold conditions will decrease monitor battery life and cause an increase in data usage with a potential for data plan overages of cellular gateways.

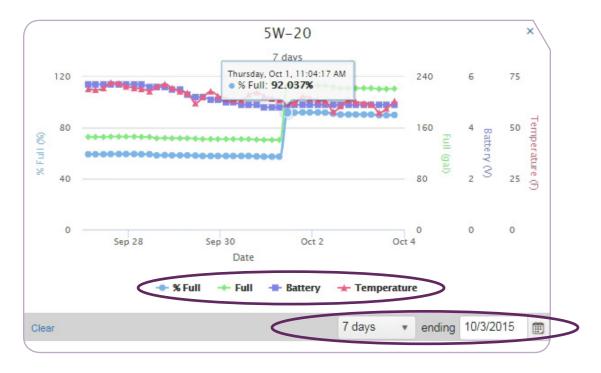




• Note table to right of tank picture which displays last readings uploaded by tank's monitor.

	Reading	Value	Date	History
•	% Full	38%	6/12/2017 2:01 PM	
•	Empty	185.87 gals	6/12/2017 2:01 PM	
•	Full	113.03 gals	6/12/2017 2:01 PM	
•	Temperature	71.33 F	6/12/2017 2:01 PM	

- Click on graph button under History column to quickly view readings. Clicking on multiple graph buttons will display multiple graph lines.
 For a more detailed history report, see Reporting section.
- Hovering over a data point on graph will show a date/time stamp and its specific reading.
- Chart window's timespan can be changed by picking an ending date or one of seven preset time periods from controls in lower right corner.
- When more than one reading is displayed, individual readings can be turned on/off by selecting their label at bottom of chart.









View all Tanks

3

All tanks at a location can be viewed in one table.

• Click on Rotating Triangle icon of a location or tank then click View All.

	▼ Status ▼		Name				
0	Unreported		HQ Red Diesel				
	Normal		Pacific Petroleu	um TSU			
0	Normal		Tank 1				
		Horizontal	Reading	Value 91%	Date 5/22/2017 10:05 AM	History	
	91%	Horizontal Tank					
			 Battery 	5.500 V	5/22/2017 10:05 AM		
	the second se		Depth	100 in	5/22/2017 10:05 AM	~	

• A new screen appears showing all tanks for that location. Tanks with alerts are shown first.

	Y Status •		N	ame			
	O Unreported		Н	Q Red Diesel			
4	Normal		P	acific Petroleum TS	SU		
	Map Navigate Details Provision View All						
ſ	I We Well -			Reading	Value	Date	History
		Horizontal		% Full	78%	5/22/2017 2:01 AM	
l		Tank		Empty	66.21 gals	5/22/2017 2:01 AM	
l				Full	232.69 gals	5/22/2017 2:01 AM	
			•	Temperature	56.37 F	5/22/2017 2:01 AM	
ŀ	Normal		Ta	ank 1			
F	•		A	ntifreeze Tank			

• Select Locations, Gateways or Tanks from Grids menu to view all tanks or locations.



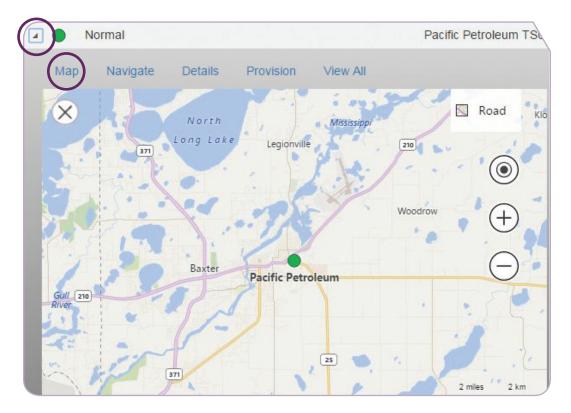


View on Map

4

To view map positions of Locations, Gateways, or Tanks, a validated address or longitude and latitude coordinates must be entered for Location associated with that Gateway and Tank.

• Click on **Rotating Triangle** icon of a Location, Gateway, or Tank then click on **Map** button.



- A map will appear and an icon will be placed at position of Location, Gateway, or Tank.
- Zoom in/out of map by using buttons on right hand side or by using mouse scroll wheel.
- Hover over Road to choose alternate Aerial or Streetside views.
- Clicking on **Navigate** will display position in a new browser page .
- Close map by clicking on **X** in upper left hand corner.





e. Reporting

Generating Reports

• Click on Views menu then click **Reporting**. This opens a new browser tab.

Views	•	
Home	e	
Tanks	5	
Repo	rting	
- Reports	s window will open.	
Report	S	
Report		
Custom	er List	
Districts		
All •		
Alert Statu	IS	
All	×	
Show R	eport	

Select type of report from **Report** drop-down box.



- a. Customer List provides a listing of customers for this account
- b. Location List provides a listing of all locations for this account
- c. Tank Current Reading List provides a listing of most current tank readings
- d. **Tank History List** (Battery/Temperature) (% Full/Full) provides a listing of tank full percentages/gallons over a date range
- e. Tank History Chart provides a chart of tank readings over a date range





• When a type of report is chosen, this view refreshes with menu options appropriate for that type of report.

Reports
Report
Tank History List
Districts
All 🔻
Alert Status
All
Locations
All 🔻
Assets
All
Start date
1D 2D 7D 1M 3M 8M 9M 1Y Prior to end date
08/07/2017
End date
08/14/2017
Show Report

- Select which district from **Districts** drop-down box.
- Select which **Alert Status** to report on from drop-down box.



- a. **All** report created for all alert conditions including no alerts
- b. Minor report created for readings where Minor alerts were caused
- c. Warning report created for readings where Warning alerts were caused
- d. Critical report created for readings where Critical alerts were caused
- e. Unreported report created for all monitors where Unreported alerts were caused
- Other filter options:
 - a. Locations selection of all or a specific location
 - b. **Assets** selection of all or a specific tank
 - c. **Start Date** specify report start date, select from preset buttons, type in field or click drop-down arrow to show a calendar
 - d. End Date specify report end date
 - e. **Show Report** click on button to generate report

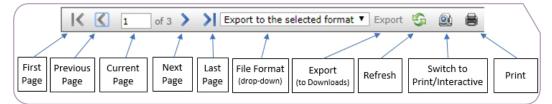




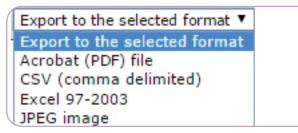
- Click on Show Report button to generate a report.
 - Tank history report example.

Tank History List (% Full/Full)					20
Name	Description	Location	Reading Date	% Full	Full
Tank 1		Pacific Petroleum	5/14/2017 7:04:08 PM	56	11,325.11
Tank 1		Pacific Petroleum	5/14/2017 7:49:09 PM	56	11,282.49
Tank 1		Pacific Petroleum	5/14/2017 8:34:09 PM	56	11,239.86
Tank 1		Pacific Petroleum	5/14/2017 9:19:09 PM	56	11,218.55
Tank 1		Pacific Petroleum	5/14/2017 10:04:09 PM	56	11,218.55
Tank 1		Pacific Petroleum	5/14/2017 10:49:10 PM	56	11,218.55
Tank 1		Pacific Petroleum	5/14/2017 11:34:10 PM	56	11,197.24
Tank 1		Pacific Petroleum	5/15/2017 12:19:10 AM	56	11,197.24
Tank 1		Pacific Petroleum	5/15/2017 1:04:10 AM	56	11,197.24
Tank 1		Pacific Petroleum	5/15/2017 1:49:10 AM	55	11,175.93
Tank 1		Pacific Petroleum	5/15/2017 2:34:11 AM	55	11,175.93

- Note toolbar at top of each report.



• For data exporting, choose format from drop-down box and click on **Export**.



 From **Reports** tab, click on web browser's back button to be returned to **Reporting** home page or close browser Reports window.





Account Setup and Editing

a. Select the Administration Console

Creation of new Locations, Gateways and Assets such as tank monitors and administration of Users, Types, and Districts is done via Administration Console. Use this console to set up new assets and AIP users.

To access Administration Console:

Click on user name in upper right corner and select Administration Console.



This will open a new Administration tab.

b. Create a New Location

A new location must be created before creating gateways or tanks.

• Select **Assets** from **Admin** menu.

Admin -	
Assets Users	

• Click on New button for Locations.

Admin 🗸	Assets -					
	Locations	All locations	T	E	New	Show [
	Assets					



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- A New Location window opens.

			Address
Name		Address 1	
Description			
		Address 2	
Notes		Address 3	
Location type		City	
		Country	United States
District		▼ State/Prov	
c	ontact Information		
First Name		Postal Code	
Last Name			GPS is Manual
		Validate Address	Not validated
Phone			Use location-specific image
Alt Phone			
Fax			
Email			

- Fill out Name, Location type, Contact Information and Address portions of form.
 - For **Location type** and **District** (if applicable), select a type from drop-down box. Selection is determined from **Assets** menu and **Configure Types** submenu.
- Specify GPS coordinates of site location (if known).
 - Click on **GPS is Manual** check box.
 - Fill in Latitude and Longitude coordinates in appropriate boxes.
- If coordinates are not known, click on Validate Address.
 - Validate address function ties address or GPS coordinates to location on map. An address that does not validate only affects map's ability to show site's location.
- Click on Use location-specific image check box to upload a picture of this location.
- Fill out Description and Notes boxes if desired.
- Click on **Save** button at top of window.
- Click on **OK** button at bottom of window.





c. Edit an Existing Location

• Select Assets from Admin menu.

DEMO						
Admin •	Assets -					
	Locations	Pacific Petroleum	*	Edit	New	Show
	Assets	All locations Pacific Petroleum				
	Gateways		v	Edit	New	Provi
	Tanko	Antifreeze Tank		Edit	Now	Drovi
	Tanks	Anuneeze rank	•	Eult	New	Provi

- Click on **All Locations** drop-down, select desired location and click **Edit** to display
 Edit Locations window.
 - a. Modify as needed and select **OK** button.
 - b. To remove a location, click on **Delete** button. A delete confirmation will appear. Select **OK** or **Cancel** to proceed.

Pacific Petroleum			Address	
T denie T et oleum		Address 1	210 10th Ave. NE	
		Address 2		
		Address 2		
		Address 3		
		City	Brainerd	
Retail Stores	•	Country	United States	
Contact Information		A.360,0000		
		Postal Code	56401	
			GPS is Manual	
		Validate Address	Not validated	
	Pacific Petroleum	Retail Stores	Address 1 Address 2 Address 3 City Retail Stores Country Contact Information State/Prov Postal Code	Address 1 210 10th Ave. NE Address 2 Address 2 Address 3





d. Single Tank Monitor System Setup - for TSU1000/TSM1000 Monitors

Create a New Gateway

Note: Single tanks system monitors communicate directly to AIP and serve as their own gateway.

A new location must be created before creating a gateway.

• Select Admin, then Assets.







System Setup

• Click on **New** button for Gateways.

Admin -	Assets -					
	Locations	All locations	T	E	New	Show E
	Assets					
	Gateways		•	Edit	New	Provisi

- New Gateway window will open.
- Fill in Name and pick gateway Type TSU1000 or TSM1000 unless monitor has Global Positioning System (GPS) functionality then pick TSU1000 GPS or TSM1000 GPS from drop-down box.
 NOTE: Gateway type must match monitor model name.

w Gateway		×	
Name			
Туре	TSU-1000 ¥		
Key			
	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX		
Location	•		
Manufacturer			
Notes			
Install Date			
Reporting Interval (hrs)	\$		
Alert as Unreported Interval (hrs)	0		
		OK Cancel	

• Select Location from drop-down box.





- Fill in **Key** using serial number information from monitor label.
 - Use the following format: TSU00000xxx (Example: TSU00000**151**)





Note: All information below **Location** is optional.

- Fill out **Manufacturer and Notes** field sections if desired.
- Fill out **Install Date** field when gateway is installed.
- **Reporting Interval** is not used and is left blank.
- Alert as Unreported Interval is set up by ATEK Technical Support and should be left alone.
- Click on **OK**.







Edit an Existing Gateway

• Select Admin, then Assets.



• Select Gateway from drop-down menu and then click on Edit to make changes to this gateway.

Admin - Assets -				
Districts	All districts	•	Edit New	
Locations	All locations	•	Edit New	
Assets			_	
Gateways	A Test	•	Edit	Provision
Tanks	A Test Bob Test		Edit New	Provision Configure Monitor
	Dave TEST Eden Prairie Test	and the second		
	LONG MIR GATEWAY			
	MR TSU Sensor Test PD Test X2			
	Royal Tire SR TSU Sensor Test			



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Edit Gateway			×
Name	DVT_3	<u>ا</u>	
Туре	TSU-1000	•	
Кеу	TSU90001236		
	XXXXXXXXXXXXXX		
Location	ATEK EP	•	
Manufacturer			
Notes			
Install Date			
Reporting Interval (hrs)			
Alert as Unreported Interval (hrs)	0		
Delete		ОК	Cancel

- If changes are made to gateway **Key**, then **Key** value must be updated for all tank parameters on each tank asset's **Provisioning** window, refer to next section.
- Click on **OK** to keep changes.

Create a New Tank

3

A new gateway must be created before creating a tank.

• Select Admin, then Assets.





Click on **New**.

Admin 🗸	Assets -					
	Locations	All locations	Ŧ	Edit	New	Show Districts
	Assets					
	Gateways		•	Edit	New	Provision
	Tanks	Antifreeze Tank	Ŧ	Edit	New	Provision

- New Tank window will open.

Name		Location	
Tag		Gateway	
			Use asset-specific coordinates
Description			Use asset-specific image
Туре	•		Custom Fields
Notes		Monitor ID	
	A	Capacity UOM	
		Contents	
		Capacity	

- Enter customer's tank **Name**.
- Specify a Tag, to display extra information about tank, if desired.
- Fill in **Description** if desired.
- Select tank Type from drop-down box (list is created from menu item Assets/Configure Types).
- Select **Location** from drop-down box.
- Select Gateway from drop-down box.

For monitors without global positioning service feature:

- Click on **Use asset-specific coordinates** checkbox to manually enter Latitude and Longitude values of tank, if desired.
 - Type in **Latitude**
 - Type in Longitude

For monitors with global positioning service feature:

- Do not click on **Use asset-specific coordinates** checkbox
- Type in Monitor's model number in Monitor ID field, if desired.
- Type in **Capacity UOM**, UOM means unit of measurement, examples: gal, liters.
- Type in **Contents** of tank, (i.e. 5W-20).
- Type in **Capacity** of tank, (i.e. 246).
- Click on **OK**.
- Click on Use asset-specific image to upload an actual tank image.

Instruction Guide for

ATEK Intelligence Platform



4



Edit an Existing Tank

- Select Admin, then Assets.
- Select **Tank** from drop-down menu and then click on **Edit**.

Admin - Assets -					
Locations	All locations	Ŧ	Edit	New	Show Districts
Assets					
Gateways		•	Edit	New	Provision
Tanks	Antifreeze Tank	(Edit	New	Provision
	Antifreeze Tank				
	HQ Red Diesel Pacific Petroleum TSU				

• Modify fields in **Edit Tank** window as needed.

Tank				
Name	Antifreeze Tank	ă.	Location	Pacific Petroleum 🔻
Тад			Gateway	T
Description				✓ Use asset-specific coordinates
Туре	Vertical Cylinder	•	Latitude	46.360964
Notes		-	Longitude	-94.172993
				Use asset-specific image
		li)	Browse for image	Vertical
				Custom Fields
			Monitor ID	000005E4
			Capacity	20,000
			Capacity UOM	Gallons
			Contents	Used Anitfreeze
elete				ОКСЛО

Click on **OK** after editing tank details.



5



Provision a Tank

Provisioning allows users to map incoming monitor parameters to actual tank, specify alerts for each parameter, and to apply strapping tables to tank level readings.

Failure to provision monitors properly could resort in loss of report information.

- Select Admin, then Assets.
- Select **Tank** from drop-down menu and then click on **Provision**.

Admin -	Assets -					
	Locations	All locations	Ŧ	Edit	New	Show Districts
	Assets					
	Gateways		•	Edit	New	Provision
	Tanks	Antifreeze Tank	*	Edit	New	Provision
		Antifreeze Tank				
		HQ Red Diesel Pacific Petroleum TSU				

Provisioning window opens.

Tank!			Provisio	ning								
ssets	G	ateways		A Salar	A SALED IS				iline.			
Readi	ings	for As	set: DVT_3									
Create N	<u>lew</u>											
Name	Tag	Gateway	OutputType	SourceKey	ReadingKeys	Last Value	Last Reported	Unreported after(min)	Alerts	Verified		
Name DVT_3	Tag	Gateway	OutputType % Full (%)	SourceKey TSU90001236		Last Value 3.80%	Last Reported 2019-02-18 14:01:07Z	Unreported after(min)	Alerts <u>Yes</u>	Verified	Edit	Dele
-	Tag				Range	in a second s		Unreported after(min)			Edit Edit	
DVT_3	Tag	DVT_3	% Full (%)	TSU90001236	Range BV	3.80%	2019-02-18 14:01:07Z	Unreported after(min)	<u>Yes</u>			Dele
DVT_3 DVT_3	Tag	DVT_3 DVT_3	% Full (%) Battery (V)	TSU90001236 TSU90001236	Range BV DegC	3.80% 7.259 V	2019-02-18 14:01:07Z 2019-02-18 14:01:07Z	<u>Unreported after(min)</u>	Yes No	2	Edit	Dele Dele Dele







• Reading keys are assigned to monitor's reported parameters in order to display them.

Monitors have 7 parameters that can be assigned to Reading Keys:

- % Full, Full (UOM), and Empty (UOM) created from "Range"
- Battery (V) created from "BV"
- Temperature (F) or (C) created from "DegC"
- Connection Attempts created from"CA"
- Signal Strength created from "SS"

For monitors with GPS function there are two more Reading Keys to set up:

- Latitude coordinate created from "lat"
- Longitude coordinate created from "long"
- Click on Create New or Edit at Provisioning window for each parameter individually.

Read	ings	for As	set: DVT_3									
Create Name	<u>Tag</u>	Gateway	OutputType	SourceKey	ReadingKeys	Last Value	Last Reported	Unreported after(min)	Alerts	Verified		
-		DVT_3	% Full (%)	TSU90001236	Range	3.80%	2019-02-18 14:01:07Z		Yes		Edit	Dilet
DVT_3						7.259 V	2019-02-18 14:01:07Z		No		Edit	Delet
DVT_3		DVT_3	Battery (V)	TSU90001236	BV	1.239 V	2017-02-10 14.01.072		140			
		DVT_3 DVT_3	Battery (V) Temperature (F)			68.7 F	2019-02-18 14:01:07Z		No	8	Edit	Delet
DVT_3					DegC				_	1000	~	

 Click on Set Keys in edit window to open fields for Asset Name, Source Key and Reading Key 1 when editing otherwise skip.

and the second sec		
leading Identification		
Asset Name	DVT_3 \$	
Source key	TSU90001236	\$
Reading key 1	Range	Set Keys
Reading key 2		
Reading key 3		
Reading key 4		





Reading	
Identification	
Asset Name DVT_3	
Source key TSU90001236	
Reading key 1 Range	Set Keys
Reading key 2	
Reading key 3	
Reading key 4	

Note: Asset Name, Source Key and Reading Key can only be changed when editing a Reading Key.

- Select Asset Name of tank this monitor belongs to from drop-down box.
- Select **Source Key** (i.e. serial number) of tank's monitor from drop-down box, source keys were set up in **Create a New Gateway** section.
- Type in **Reading Key 1**. Leave other reading key fields blank.

TSU Monitor **Reading Key 1** examples:

- % Full (%): Range
- Full (gal): Range
- Empty (gal): Range
- Battery (V): BV
- Temperature (F or C): DegC
- Connection Attempts: CA
- Signal Strength: SS

For monitors with GPS function there are two more Reading Keys to set up:

- Latitude Coordinate: lat
- Longitude Coordinate: long
- Click on **Reading** radio button.





Scroll down edit window to Processing section:

Processing		
Input UOM	inches	
Unreported after(min)		
Input type	Standard 🖨	
Output type	% Full (%)	
Significant digits	0	
Accumulate Value	25	
Adjust Input		
 Apply Lookup Tab 	le	
	put	
0 100 1 100 2 100		

- Input unit of measurement into **Input UOM** field.
 - a. % Full (%), Full (UOM), and Empty (UOM) use "inches"
 - b. Battery uses "volts"
 - c. Temperature uses "celsius"
 - d. Connection Attempts is left blank.
 - e. Signal Strength uses "dBm"
 - f. Latitude and Longitude uses "deg"
- Leave Unreported after field blank.
- Select Standard from Input type drop-down box.
- Select **Output type** from drop-down box.
 - a. % Full use "% Full (%)"
 - b. Full (gal) use "Full (gal)"
 - c. Empty (gal) use "Empty (gal)"
 - d. Battery use "Battery (V)"
 - e. Temperature use "Temperature (F)" for Fahrenheit or "Temperature (C)" for Celsius.
 - f. Connection Attempts use "Connection Attempts ()"
 - g. Signal Strength uses "Signal Strength (dBm)"
 - h. Latitude uses "Latitude (deg)"
 - i. Longitude uses "Longitude (deg)"
- Input number of digits to right of decimal point in Significant Digits field.
 - a. % Full, Connection Attempts and Signal Strengths use "0"
 - b. Full (gal) and Empty (gal) use "1"
 - c. Battery (V) use "2"
 - d. Temperature (F or C) use "1"
 - e. Latitude and Longitude use "9"
- Leave Accumulate Values check box unchecked.



- Instruction Guide for
- Check **Adjust Input** check box only for displaying Temperature in Fahrenheit units, leave unchecked for Celsius and all other parameters.
 - a. Set "Offset" value to "0"
 - b. Set "Scale" value to "1.8"
 - c. Set "Adder" value to "32"
- Leave Apply Lookup Table check box unchecked until monitor is installed;
 Important: contact ATEK Technical Support to apply a lookup table to each monitor after installation. This is required to convert raw monitor readings into tank level readings.
- Adjust Output checkbox Do Not Use.
- Click on **Save** at bottom of edit window.
- Configure/edit alerts for monitor parameters.
 - Alerts can be configured on any parameter to generate text or e-mail messages automatically whenever a parameter value exceeds a user defined limit.
- Click on **Yes** or **No** under Alerts heading of **% Full** parameter to configure alert conditions. Alerts are not typically configured for other parameters.

Alert	es Verifie	ed	
No		<u>Edit</u>	<u>Delete</u>
No		<u>Edit</u>	Delete

- Alerts for % Full window will open.

Alert R	anges ? –				
Vhen mo	ore than				
	Ignore				
	Critical				
	Warning				
	Minor				
Vhen les	s than				
•	Minor	40			
•	Warning	30			
1	Critical	20			
	Ignore				
Alert O	ptions				
Hyste	eresis: Tolerance	band			
Alert frequency: Send no more than 1 every hours				minutes	
Unreported alerts: Send unreported alert after hours			minutes		





- In example on previous page, alert levels are in terms of % Full reading key with a scale of 0 100%.
- Activate any alert level by clicking on check box next to desired alert, then type in its value. Note that while there are many alert options to choose, none, some, or all can be utilized.
- Ignore levels are typically not used in tank level applications and should be unchecked.
- Use Hysteresis Tolerance Band to prevent over alerting by creating a buffer around an alert level. Click on Hysteresis checkbox to enable, then type in its value. When an alert level is triggered it cannot be reset until tank level has passed through this band, however more urgent alert levels are unaffected by it and are triggered at their respective levels. Make sure that an alert level plus its Hysteresis Tolerance Band do not encroach on another alert level.
- Use **Alert Frequency** to limit alert messages to only happening every so often instead of at any time in case over alerting is a concern.
- Use Unreported Alerts to send an alert if tank monitor does not report within time span set as measured from last reading. Care should be taken to make sure monitor's reporting interval (see Update Monitor parameters) is not more than this unreported alert interval otherwise needless alerts may be sent.
- Alerts for other reading keys are set in same manner and use same units as output type specified when reading key was created during tank monitor provisioning process.
- Alerts can be edited at any time and will be evaluated at next received report. Alert Frequency intervals
 and Unreported Alerts timer will be reset upon saving any new alert settings.
- Click on Save.
- Close out **Provisioning** web browser tab to conclude provisioning process.
- After setting up reading keys and alerts, the final step is to setup monitor's reporting interval, see AIP Navigation/d. Viewing Tank Details/1. For Monitors Used in Single Tank Applications/ Update Monitor.



6



Duplicate a Tank

Tanks can be duplicated to make copies with similar provisioning set ups. Before copying, a new tank's location and monitor gateway must have been set up.

• Click on tank's **Edit** button.

Admin -	Assets -					
	Locations	All locations	Ŧ	Edit	New	Show Dist
	Assets					
	Gateways		•	Edit	New	Provision
	Tanks	Antifreeze Tank	(Edit	New	Provision
		Antifreeze Tank				
		HQ Red Diesel				
		Pacific Petroleum TSU				

- This will open **Edit Tank** window.
- Click on **Copy**.

Name	TSU1060M	Location	ATEK EP	•
Tag		Gateway	TSU1060M	•
Description			Use asset-specific coordinates	
Туре	Rectangular Tank	•	Use asset-specific image Custom Fields	
Notes		Monitor ID	Custom Fields	
		Capacity UOM	Gallons	
		Contents		
		Capacity		\$



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- A new window will pop up to create a new tank asset.

Name		
	Copy to a different business owner	
Gateway	TSU1060M	
Key 1 Modifier		
Key 2 Modifier		

- Fill out **Name** for new tank.
- Select gateway associated with new tank from **Gateway** drop-down menu.
- Enter serial number of new monitor into Key 1 Modifier field.



- This will change reading keys for new duplicated tank.
- Click **OK**.
 - A new tank site will be created from original tank with same details and provisioning parameters.

New copied tank will fill in its data next time its monitor reports in.

4/24/2017 6:06 PM	ATEK EP	41160201	290.5 gal	6.0 V	72.1 F
	ATEK EP	41160201 Copy		- A 5 0	





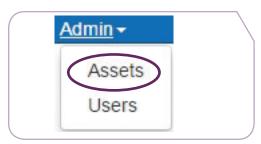
e. TSC System Setup

(1)

Create a New Gateway

A new location must be created before creating a gateway.

• Select Admin, then Assets.





Click on **New** button for Gateways.

Admin -	Assets -					
	Locations	All locations	T	Edit	New	Show E
	Assets					
	Gateways		Ŧ	E	New	Provisio

- New Gateway window will open.
- Fill in **Name** and pick gateway **Type TSC** from drop-down box. NOTE: Gateway type must match gateway model.

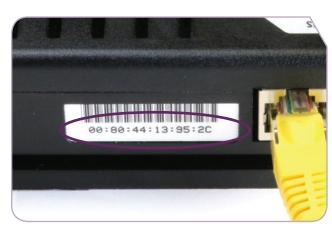
w Gateway		×
Name		
Туре	TSC	•
Key		
	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	
Location		•
Manufacturer		
Notes		
Install Date		
Reporting Interval (hrs)	\$	
Alert as Unreported Interval (hrs)	0	

• Select Location from drop-down box.





- Fill in **Key** using serial number information from monitor label.
 - Use the following format: xxxxxxxxx, example below: 00804413952C





Note: All information below **Location** is optional.

- Fill out Manufacturer and Notes field sections if desired.
- Fill out **Install Date** field when gateway is installed.
- **Reporting Interval** is not used and is left blank.
- Alert as Unreported Interval is set up by ATEK Technical Support and should be left alone.
- Click on **OK**.







• Select Admin, then Assets.

Admin -
Assets
Users

• Select **Gateway** from drop-down menu and then click on **Edit** to make changes to this gateway.

Admin • Assets •			
Districts	All districts	▼ Edit	New
Locations	All locations	▼ Edit	New
Assets			
Gateways	Plato C-Store	- Edit	New Provision
Tanks	ATEK 2	▼ Edit	New Provision
Filters	Filter 1	▼ Edit	New Provision
Mobile Tanks		▼ Edit	New Provision



Name	Plato C-Store	
Туре	TSC	
Key	00804411D396	
	X000000000X	
Location	NBT	
Manufacturer		
Notes		
Install Date		
Reporting Interval (hrs)	\$	
Alert as Unreported Interval (hrs)	0	

- If changes are made to gateway **Key**, then **Key** value must be updated for all tank parameters on each tank asset's **Provisioning** window, refer to next section.
- Click on **OK** to keep changes.

Create a New Tank

A new gateway must be created before creating a tank.

• Select Admin, then Assets.



TSC System Setup

Instruction Guide for

ATEK Intelligence Platform



• Click on **New**.

Admin -	Assets -					
	Locations	All locations	•	Edit	New	Show Districts
	Assets					
	Gateways		Ŧ	Edit	New	Provision
	Tanks	Antifreeze Tank	¥	Edit	New	Provision

- New Tank window will open.

Name	±	Location	
Tag		Gateway	
			Use asset-specific coordinates
Description			Use asset-specific image
Туре	•		Custom Fields
Notes		Monitor ID	
	4	Capacity UOM	
		Contents	
		Capacity	

- Enter customer's tank **Name**.
- Specify a Tag, to display extra information about tank, if desired.
- Fill in **Description** if desired.
- Select tank **Type** from drop-down box (list is created from menu item Assets/Configure Types).
- Select Location from drop-down box.
- Select **Gateway** from drop-down box.
- Click on Use asset-specific coordinates to enter Latitude and Longitude values of tank, if desired.
 - Type in **Latitude** if applicable.
 - Type in **Longitude** if applicable.
- Type in Monitor's model number in **Monitor ID** field, if desired.
- Fill in following information after device is reporting.
 - Type in Capacity UOM, UOM means unit of measurement, examples: gal, liters.
 - Type in **Contents** of tank, (i.e. 5W-20).
 - Type in Capacity of tank, (i.e. 246).
- Click on **OK**.
- Click on Use asset-specific image to upload an actual tank image.

Instruction Guide for

ATEK Intelligence Platform



4





Edit an Existing Tank

- Select Admin, then Assets.
- Select Tank from drop-down menu and then click on Edit.

Dev Atek			
Admin - Assets -	-		_
Districts	All districts	▼ Edit N	lew
Locations	All locations	▼ Edit N	lew
Assets			
Gateways	AZ PAN Test	▼ Edit N	lew Provision
Tanks	ATEK 2	▼ Edit N	lew Provision Update
Filters	C-Tank Mango Juice Mike M. Test Tank	Edit	New Provision
Mobile Tanks	Mikes tank #3 Recreation Gas TSM000001F4	Edt	Provision

• Modify fields in **Edit Tank** window as needed.

Name	Recreation Gas	Location	NBT
Tag		Gateway	Plato C-Store
Description	Non Oxygenated Gasoline		Use asset-specific coordinates
		Latitude	44.9831187085352
Type Notes	Horizontal Cylinder	Longitude	-93.2680208376279
			Use asset-specific image
		le	Custom Fields
		Capacity UOM	Gallons
		Contents	Non Oxygenated Gasoline
		Style	
		Monitor ID	
		Capacity	18,974
Delete Copy	Migrate		ОКС

• Click on **OK** after editing tank details.





Provision a Tank

Provisioning allows users to map incoming gateway parameters to actual tank and specify alerts for each parameter.

Failure to provision monitors properly could resort in loss of report information.

- Select Admin, then Assets.
- Select Gateway from drop-down menu and then click on Provision.

Districts	All districts •	Edit New
Locations	All locations	Edit New
Assets -		
Gateways	Plato C-Store 🔻	Edit New Provision
Tanks	ATEK 2	Edit New Provision Update M
Filters	Filter 1	Edit New Provision
Mobile Tanks	•	Edit New Provision
Filters Mobile Tanks		

- **Provisioning** window opens.
- TSC gateway reports information from multiple tanks. Each tank is identified by numeric prefix used in ReadingKey parameter.
- Choose Reading Key from intended tank and click on **New Definition** button on right.

ankScan	Provisio	ning				
sets Gate	eways					
ncoming F	Readings for Plato	C-Store				
Source Key	ReadingKeys	Value	UOM	TimeStamp	Reading Definitions	
	['1.ActiveAlarms']	0	<u></u>	8/8/2019 2:09:00 PM		New Definition
00804411D396	['1.Capacity']	15228		8/8/2019 2:09:00 PM	1	New Definition
00804411D396	['1.DailyUsage']	0		8/8/2019 2:09:00 PM	1	New Definition
00804411D396	['1.DaysInventory']	100		8/8/2019 2:09:00 PM	1	New Definition
00804411D396	['1.Gross']	5175		8/8/2019 2:09:00 PM	<u>0</u>	New Definition
00804411D396	['1.LastDeliveryAt']	7/24/2019 1:29:00 PM		8/8/2019 2:09:00 PM	1	New Definition
	BRITH REPORT IN CONSIST.	147		8/8/2019 2:09:00 PM	1	New Definition
00804411D396	['1.LastDeliveryQuantity']	107		0.0.2017 21071001111		





- Use the drop down list to select targeted tank.
- Choose standard input type for most numeric inputs.
- Choose text for non-numeric inputs.
- Choose **Output type** from pull down list.
- Set significant degits to:
 - 1 for full, empty and percent full
 - 0 for all others
- Click Save button. This action closes EDIT window and reopens incoming Readings window
- Repeat process for other parameters as desired.
 - Use x.Gross for 'Full (gal)' output type
 - Use x.PercentFull for '% Full' output type
 - Use x.Ullage for 'Empty (gal)' output type
 - Use x.ActiveAlarms for 'Active Alarms ()'
- Other Reading Keys can be utilized to fill in Custom Field information in New or Edit Tank screens.
 - X.Capacity = Capacity
 - X.ProductiveName = Contents

sets Gateways	rovisioning	
dit		
Reading Identification		
Asset Name	Recreation Gas •	
	Mike M. Test Tank	
Source key	Mikes tank #3	
Reading key 1	Recreation Gas	Set Keys
Reading key 2		
Reading key 3		
Reading key 4		
Reading O Com	mand	
Processing		
Input UOM		
Unreported		
after(min)		
after(min) Input type	Standard *	
	Standard • Full (gal)	
Input type		
Input type Output type	Full (gal) •	





- Configure/edit alerts for monitor parameters.
 - Alerts can be configured on any parameter to generate text or e-mail messages automatically whenever a parameter value exceeds a user defined limit.
- Click on **Yes** or **No** under Alerts heading of **% Full** parameter to configure alert conditions. Alerts are not typically configured for other parameters.

(Alerts	Verified			
	No		<u>Edit</u>	<u>Delete</u>	
	<u>No</u>		<u>Edit</u>	Delete	

- Alerts for % Full window will open.

Alert Ra	anges 🥐 –			
When mor	re than			
	Ignore			
	Critical			
	Warning			
	Minor			
When less	than			
۲	Minor	40		
	Warning	30		
•	Critical	20		
	Ignore			
Alert O	ptions			
	resis: Tolerance	band		
Alert	frequency: Send	d no more than 1 every	hours	minutes
Unrep	orted alerts: Se	end unreported alert after	hours	minutes



Instruction Guide for



- In example on previous page, alert levels are in terms of % Full reading key with a scale of 0 100%.
- Activate any alert level by clicking on check box next to desired alert, then type in its value. Note that while there are many alert options to choose, none, some, or all can be utilized.
- **Ignore** levels are typically not used in tank level applications and should be unchecked.
- Use **Hysteresis Tolerance Band** to prevent over alerting by creating a buffer around an alert level. Click on **Hysteresis** checkbox to enable, then type in its value. When an alert level is triggered it cannot be reset until tank level has passed through this band, however more urgent alert levels are unaffected by it and are triggered at their respective levels. Make sure that an alert level plus its **Hysteresis Tolerance Band** do not encroach on another alert level.
- Use **Alert Frequency** to limit alert messages to only happening every so often instead of at any time in case over alerting is a concern.
- Use **Unreported Alerts** to send an alert if tank monitor does not report within time span set as measured from last reading. Care should be taken to make sure monitor's reporting interval (see Update Monitor parameters) is not more than this unreported alert interval otherwise needless alerts may be sent.
- Alerts for other reading keys are set in same manner and use same units as output type specified when reading key was created during tank monitor provisioning process.
- Alerts can be edited at any time and will be evaluated at next received report. **Alert Frequency** intervals and **Unreported Alerts** timer will be reset upon saving any new alert settings.
- Click on **Save**.
- Close out **Provisioning** web browser tab to conclude provisioning process.





Duplicate a Tank

5

Tanks can be duplicated to make copies with similar provisioning set ups. Before copying, a new tank's location and monitor gateway must have been set up.

• Click on tank's **Edit** button.

Districts	All districts	•	Edit	New	
Locations	All locations	•	Edit	New	
Assets					
Gateways	Plato C-Store	•	Edit	New	Provision
Tanks	ATEK 2		Edit	Nev	Provision Update Monitor
Filters	ATEK 2 C-Tank		Edit	New	Provision
Mobile Tanks	Mike M. Test Tank Mikes tank #3 MTI Test		Edit	New	Provision

- This will open **Edit Tank** window.
- Click on **Copy**.

Edit Tank			
Name	Recreation Gas	Location	NBT
Tag		Gateway	Plato C-Store 🔹
Description			Use asset-specific coordinates
Туре	Horizontal Cylinder	•	Use asset-specific image
Notes		0	Custom Fields
		Capacity UOM	
		Contents	
		Style	
		Monitor ID	
		Capacity	\$
Dek le Copy	Mjrate		OK Cancel



Instruction Guide for



- A new window will pop up to create a new tank asset.

Name	1	
	Copy to a different business owner	
Gateway	Plato C-Store	
Key 1 Modifier		
Key 2 Modifier		

- Fill out **Name** for new tank.
- Select gateway associated with new tank from **Gateway** drop-down menu.
- Enter tank number of new tank into Key 1 Modifier field, as found in reading key format.

Incoming Readings for Plato C-Store						
Source Key	ReadingKeys	<u>Value</u>	UOM	TimeStamp	Reading	
00804411D396	['1.ActiveAlarms']	0		8/8/2019 6:09:00 PM	1	
00804411D396	['1.Capacity']	15228		8/8/2019 6:09:00 PM	1	
00804411D396	['1.DailyUsage']	0		8/8/2019 6:09:00 PM	1	
00804411D396	['1.DaysInventory']	100		8/8/2019 6:09:00 PM	1	
00804411D396	['1.Gross']	5175		8/8/2019 6:09:00 PM	<u>0</u>	

- This will change reading keys for new duplicated tank.
- Click **OK**.
 - A new tank will be created from original tank with same details and provisioning parameters.

New copied tank will fill in its data next time its monitor reports in.



(1)



f. Tank Farm Monitor System Setup - For TSM8000/TSM1000 Monitors

Create a New Gateway

A new location must be created before creating a gateway.

• Select **Admin,** then **Assets**.





Click on **New** button for Gateways.

Admin -	Assets -					
	Locations	All locations	T	Edit	New	Show D
	Assets					
	Gateways		Ŧ	E	New	Provisio

- New Gateway window will open.
- Fill in Name and pick gateway Type Industrial Cellular or Industrial Ethernet from drop-down box.

Name		
Туре	Industrial Ethernet	
Key		
	00X00000-00000000-XXXXXXXX-XXXXXXXXXXXX	
Location		
Manufacturer		
Notes		
Install Date		
Reporting Interval (hrs)	\$	
Alert as Unreported Interval (hrs)	0	
		OK Cancel

• Select Location from drop-down box.

Tank Farm Monitor System Setup





• Fill in Key.

For TSM Monitors – enter in gateway serial number from the box or gateway label, number always begins with "0004..."

Use the following format: xxxxxFF-FFyyyyyy (Example: 0004F3FF-FF083B3A)

DIGI	5VDC 2.14		
Model Type: XBee Industrial Gateway PN: 50001942-02 E		5	
Serial Number: 0004F3083B3A	1		
	X	<u>*</u> D	
IMEI: 353535094412564	RoHS		
EUI64: 0013 A200 417C ED08	or e	Ŕ	
Contains FCC ID: RI7LE910NAV2 & MCQ-PS2CSM Contains IC: 5131A-LE910NAV2 & 1846A-PS2CSM			

Note: All information below **Location** is optional.

- Fill out Manufacturer and Notes field sections if desired.
- Fill out **Install Date** field when gateway is installed.
- **Reporting Interval** is not used and is left blank.
- Alert as Unreported Interval is set up by ATEK Technical Support and should be left alone.
- Click on **OK**.







Edit an Existing Gateway

Select Admin, then Assets. •



Select Gateway from drop-down menu and then click on Edit to make changes to this gateway. •

Admin	
Distri	All districts
Locatio	All locations
Ass	
Gatew	A Test • Edit New Provision
Tai	A Test Bob Test Edit New Provision Configure Mon
	Dave TEST
	Eden Prairie Test
	LONG MIR GATEWAY
	MR TSU Sensor Test
	PD Test X2
	Royal Tire
	SR TSU Sensor Test







Name	Eden Prairie	Test	1	
Туре	Industrial Cellular		•	
Key	00000000-00	000000-00409DFF	FF6B0F0B	
	00X00000-0000	0000-XXXXXXXX-XXXX	XXXX	
Location	ATEK EP		•	
Manufacturer				
Notes				
Install Date	1/7/2016			
Reporting Interval (hrs)		*		
Alert as Unreported Interval (hrs)	0	*		

- If changes are made to gateway **Key**, then **Key** value must be updated for all tank parameters on each tank asset's **Provisioning** window, refer to next section.
- Click on **OK** to keep changes.

Create a New Tank

A new gateway must be created before creating a tank.

• Select Admin, then Assets.





• Click on **New**.

Admin				
Locations	All locations	Ŧ	Edit	New Show Districts
Assets				
Gateways		•	Edit	New Provision
Tanks	Antifreeze Tank	×	Edit	New Provision

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- New Tank window will open.

Name	<u>≜</u>	Location	
Tag		Gateway	
			Use asset-specific coordinates
Description			Use asset-specific image
Туре	•		Custom Fields
Notes		Monitor ID	
	R	Capacity UOM	
		Contents	
		Capacity	

- Enter customer's tank **Name**.
- Specify a Tag, to display extra information about tank, if desired.
- Fill in **Description** if desired.
- Select tank **Type** from drop-down box (list is created from menu item Assets/Configure Types).
- Select Location from drop-down box.
- Select **Gateway** from drop-down box.
- Click on Use asset-specific coordinates to enter Latitude and Longitude values of tank, if desired.
 - Type in **Latitude** if applicable.
 - Type in **Longitude** if applicable.
- Type in Monitor's model number in **Monitor ID** field, if desired.
- Type in Capacity UOM, UOM means unit of measurement, examples: gal, liters.
- Type in **Contents** of tank, (i.e. 5W-20).
- Type in **Capacity** of tank, (i.e. 246).
- Click on **OK**.
- Click on Use asset-specific image to upload an actual tank image.

Tank Farm Monitor System Setup



4



Edit an Existing Tank

- Select Admin, then Assets.
- Select Tank from drop-down menu and then click on Edit.

Admin -	Assets -					
	Locations	All locations	•	Edit	New	Show Districts
	Assets					
	Gateways		•	Edit	New	Provision
	Tanks	Antifreeze Tank	E	Edit	New	Provision
		Antifreeze Tank		_		
		HQ Red Diesel Pacific Petroleum TSU				

• Modify fields in **Edit Tank** window as needed.

ank				
Name	Antifreeze Tank	۱.	Location	Pacific Petroleum 🔻
Тад			Gateway	T
Description				Use asset-specific coordinates
Туре	Vertical Cylinder	•	Latitude	46.360964
Notes		-	Longitude	-94.172993
				Use asset-specific image
			Browse for image	Custom Fields
			Monitor ID	000005E4
			Capacity	20,000
			Capacity UOM	Gallons
			Contents	Used Anitfreeze
ete				ОК Сло
ele				UK CH

Click on **OK** after editing tank details.



5



Provision a Tank

Provisioning allows users to map incoming monitor parameters to actual tank, specify alerts for each parameter, and to apply strapping tables to tank level readings.

Failure to provision monitors properly could resort in loss of report information.

- Select Admin, then Assets.
- Select **Tank** from drop-down menu and then click on **Provision**.

Admin					
Locations	All locations	Ŧ	Edit	New	Show Districts
Assets					
Gateways		•	Edit	New	Provision
Tanks	Antifreeze Tank	*	Edit	New	Provision
	Antifreeze Tank				
	HQ Red Diesel Pacific Petroleum TSU Tank 1				

Provisioning window opens.

ankScar sets Ga	n. teways	Provisio	Jiilig								User	
Readings	for A	sset: Antifre	eze Tank									
reate New												
Name	Tag	Gateway	OutputType	SourceKey	ReadingKeys	Last Value	Last Reported	Unreported after(min)	Alerts	Verified		
Antifreeze Tank		Haz Mat Gateway	% Full (%)	00000000-0000000-00409DFF- FF50DD85	000005E4.probe_dist	64%	2017-08-14 20:02:09Z	1380	No		Edit	Dele
Antifreeze Tank		Haz Mat Gateway	Empty (gals)	00000000-0000000-00409DFF- FF50DD85	000005E4.probe_dist	7430.61 gals	2017-08-14 20:02:09Z		No	2	Edit	Dele
Antifreeze Tank		Haz Mat Gateway	Full (gals)	00000000-0000000-00409DFF- FF50DD85	000005E4.probe_dist	12969.29 gals	2017-08-14 20:02:09Z		No	2	Edit	Dele
Antifreeze Tank		Haz Mat Gateway	Battery (V)	00000000-0000000-00409DFF- FF50DD85	000005E4.battery_level	6.000 V	2017-08-14 20:02:09Z		No	2	Edit	Dele
Antifreeze Tank		Haz Mat Gateway	Temperature (F)	00000000-0000000-00409DFF- FF50DD85	000005E4.temperature	104.00 F	2017-08-14 20:02:09Z		No		Edit	Dele
Antifreeze Tank		Haz Mat Gateway	Depth (in)	00000000-00000000-00409DFF- FF50DD85	000005E4.probe_dist	236 in	2017-08-14 20:02:09Z		No	2	Edit	Dele





• Reading keys are assigned to monitor's reported parameters in order to display them.

Monitors have 5 parameters:

- % Full (UOM), Full (UOM) and Empty (UOM) created from "Range"
- Battery (V) created from "BV"
- Temperature (F) created from "DegC"
- Click on Create New or Edit at Provisioning window for each parameter individually.

Assets Ga	iteways	Provisio	3								
Readings	for A	sset: Antifre	eze Tank								
Name	Tag	Gateway	OutputType	SourceKey	ReadingKeys	Last Value	Last Reported	Unreported after(min)	Alerts	Verified	
Antifreeze Tank		Haz Mat Gateway	% Full (%)	00000000-0000000-00409DFF- FF50DD85	000005E4.probe_dist	64%	2017-08-14 20:02:09Z	1380	No		Ed
Antifreeze Tank		Haz Mat Gateway	Empty (gals)	00000000-0000000-00409DFF- FF50DD85	000005E4.probe_dist	7430.61 gals	2017-08-14 20:02:09Z		No		Ed
Antifreeze Tank		Haz Mat Gateway	Full (gals)	00000000-0000000-00409DFF- FF50DD85	000005E4.probe_dist	12969.29 gals	2017-08-14 20:02:09Z		No	2	Edi
Antifreeze Tank		Haz Mat Gateway	Battery (V)	00000000-00000000-00409DFF- FF50DD85	000005E4.battery_level	6.000 V	2017-08-14 20:02:09Z		No		Edi
Antifreeze Tank		Haz Mat Gateway	Temperature (F)	00000000-00000000-00409DFF- FF50DD85	000005E4.temperature	104.00 F	2017-08-14 20:02:09Z		No	al and	Ed
Antifreeze Tank		Haz Mat Gateway	Depth (in)	00000000-0000000-00409DFF- FF50DD85	000005E4.probe_dist	236 in	2017-08-14 20:02:09Z		No	2	Ed

Click on Set Keys in edit window to open fields for Asset Name, Source Key and Reading Key 1
when editing otherwise skip.

leading			
Identification			
Asset Name	XBGW_EN01		
Source key	00000000-0000000-0004f3ff-ff083a7f		
Reading key 1	4162331F.probe_dist	Set Keys	
Reading key 2			
Reading key 3			
Reading key 4			





eading			
Identification			
Asset Name	XBGW_EN01 •		
Source key	0000000-0000000-0004f3ff-ff08	3a7f •	
Reading key 1	4162331F.probe_dist	Set Keys	
Reading key 2			
Reading key 3			
Reading key 4			

• Retrieve monitor's serial number from monitor label (see picture below) this will be used to construct reading keys.

NOTE: Asset Name, Source Key and Reading Key can only be changed when editing a reading key

- Select Asset Name of tank this monitor belongs to from drop-down box.
- Select **Source Key** of gateway that monitor will report to from drop-down box, source keys were set up in **Create a New Gateway** section.
- Retrieve monitor's serial number from monitor label (see picture below) this will be used to construct reading keys for TSM8000 monitored tanks only



• Input Reading Key 1 using lower case text. Leave other reading key fields blank.

Monitor Reading Key 1 examples:

- % Full: 00000000000X.Range
- Full (gal): 00000000000X.Range
- Empty (gal): 00000000000X.Range
- Battery (V): 00000000000X.BV
- Temperature (F or C): 00000000000X.DegC
- Click on **Reading** radio button.



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Scroll down edit window to Processing section:

Processing		$\left \right $
Input UOM	inches	
Unreported after(min)		
Input type	Standard 🕈	
Output type	% Full (%)	
Significant digits	0	
Accumulate Value	es	
Adjust Input		
Apply Lookup Tab	ble	
	tput	
0 100 1 100 2 100 3 100		

- Input unit of measurement into Input UOM field.
 - a. % Full (%), Full (UOM), and Empty (UOM) use "inches"
 - b. Battery uses "volts"
 - c. Temperature uses "celsius"
- Leave **Unreported after** field blank.
- Select Standard from Input type drop-down box.
- Select **Output type** from drop-down box.
 - a. % Full use "% Full (%)"
 - b. Full use "Full (gal)"
 - c. Empty use "Empty (gal)"
 - d. Battery use "Battery (V)"
 - e. Temperature use "Temperature (F)" for Fahrenheit.
- Input number of digits to right of decimal point in Significant Digits field.
 - a. % Full use "0"
 - b. Full and Empty use "1"
 - c. Battery (V) use "2"
 - d. Temperature (F or C) use "1"
- Leave Accumulate Values check box unchecked.
- Check **Adjust Input** check box only for displaying Temperature in Fahrenheit units, leave unchecked for Celsius
 and all other parameters.
 - a. Set "Offset" value to "0"
 - b. Set "Scale" value to "1.8"
 - c. Set "Adder" value to "32"



Instruction Guide for



- Leave Apply Lookup Table check box unchecked until monitor is installed; Important: contact ATEK Technical Support to apply a lookup table to each monitor after installation. This is required to convert raw monitor readings into tank level readings.
- Adjust Output checkbox Do Not Use.
- Click on **Save** at bottom of edit window.
- Configure/edit alerts for monitor parameters.
 - Alerts can be configured on any parameter to generate text or e-mail messages automatically whenever a parameter value exceeds a user defined limit.
- Click on **Yes** or **No** under Alerts heading of **% Full** parameter to configure alert conditions. Alerts are not typically configured for other parameters.

Alerts	Verifi	ed		
No		<u>Edit</u>	<u>Delete</u>	
No		<u>Edit</u>	Delete	

- Alerts for % Full window will open.

	anges ? –				
Vhen mo	re than				
	Ignore				
	Critical				
	Warning				
	Minor				
Vhen les	s than				
4	Minor	40			
•	Warning	30			
4	Critical	20			
	Ignore				
Alert O	ptions				
	eresis: Tolerance	band			
Alert	frequency: Send	no more than 1 every	hours	minutes	
Unre	ported alerts: Se	end unreported alert after	hours	minutes	







- In example on previous page, alert levels are in terms of % Full reading key with a scale of 0 100%.
- Activate any alert level by clicking on check box next to desired alert, then type in its value. Note that while there are many alert options to choose, none, some, or all can be utilized.
- **Ignore** levels are typically not used in tank level applications and should be unchecked.
- Use Hysteresis Tolerance Band to prevent over alerting by creating a buffer around an alert level. Click on Hysteresis checkbox to enable, then type in its value. When an alert level is triggered it cannot be reset until tank level has passed through this band, however more urgent alert levels are unaffected by it and are triggered at their respective levels. Make sure that an alert level plus its Hysteresis Tolerance Band do not encroach on another alert level.
- Use **Alert Frequency** to limit alert messages to only happening every so often instead of at any time in case over alerting is a concern.
- Use **Unreported Alerts** to send an alert if tank monitor does not report within time span set as measured from last reading. Care should be taken to make sure monitor's reporting interval (see Update Monitor parameters) is not more than this unreported alert interval otherwise needless alerts may be sent.
- Alerts for other reading keys are set in same manner and use same units as output type specified when reading key was created during tank monitor provisioning process.
- Alerts can be edited at any time and will be evaluated at next received report. Alert Frequency intervals
 and Unreported Alerts timer will be reset upon saving any new alert settings.
- Click on **Save**.
- Close out **Provisioning** web browser tab to conclude provisioning process.
- After setting up reading keys and alerts, the final step is to setup monitor's reporting interval, see AIP Navigation/d. Viewing Tank Details/2. For Monitors Used in Tank Farm Applications/ Update Monitor.



6



Duplicate a Tank

Tanks can be duplicated to make copies with similar provisioning set ups. Before copying, a new tank's location and monitor gateway must have been set up.

• Click on tank's **Edit** button.

Admin -	Assets -					
	Locations	All locations	Ŧ	Edit	New	Show Dis
	Assets					
	Gateways		•	Edit	New	Provision
	Tanks	Antifreeze Tank	(Edit	New	Provision
		Antifreeze Tank				
		HQ Red Diesel				
		Pacific Petroleum TSU				

- This will open **Edit Tank** window.
- Click on **Copy**.

Name	A86	Location	Gas Testing
Tag		Gateway	Gas Test B
Description			Use asset-specific coordinates
			Use asset-specific image
Туре	Vertical Cylinder	*	Custom Fields
Notes		Monitor ID	
		Capacity UOM	Gallons
		Contents	Gasoline
		Capacity	1,000





- A new window will pop up to create a new tank asset.

Name			
	Copy to a different business owner		
Gateway	Gas Test B	•	
Key 1 Modifier			
Key 2 Modifier			

- Fill out **Name** for new tank.
- Select gateway associated with new tank from Gateway drop-down menu.
- Enter serial number of new monitor into Key 1 Modifier field.



- This will change reading keys for new duplicated tank.
- Click **OK**.
 - A new tank site will be created from original tank with same details and provisioning parameters.

New copied tank will fill in its data next time its monitor reports in.

4/24/2017 6:06 PM	ATEK EP	41160201	290.5 gal	6.0 V	72.1 F
	ATEK EP	41160201 Copy			



Instruction Guide for

g. Administration (Admin)

It is common for AIP users to have to monitor multiple locations of tanks and have groups of locations called Districts. An account owner can view all districts and locations associated with their account. Users in AIP can be associated with Districts or Locations. Users associated with a district can have permissions for that district and all locations assigned to that district. A user associated with a location can only have permissions for that location.



Districts

Set up districts to organize locations into groups for purposes such as service or ownership.

• Select Admin, then Assets.



• Click on Show Districts to begin setting up districts or to edit them.

Admin +	Assets -					
		Locations	All locations	٠	Edit	New Show Districts
		Assets				
		Gateways		٣	Edit	New Provision

• Click on appropriate button next to Districts. Select New or Edit.

dmin				
Districts	All districts	•	dit New	
Locations	All locations	•	idit New	
Assets				





- A district set up window will open.

			Address	
Name		Address 1		
Description				
Notes		Address 2		
NUCCO		Address 3		
		City		
	Contact Information			
Contact		Country	United States	
Phone		State/Prov		
THORE		Postal Code		

- Fill in district **Name** and **Description**.
- Fill in district **Contact** information.
- Fill in **Notes** if needed.
- Fill in Address information.
- Click on **Ok**.
- Once created locations can be assiged to Districts by editing each location and selecting a district from
 District drop-down menu.
- Once created Users can be assigned to Districts by editing each user and selecting **District Provisioner** or **District Viewer** from **Role** drop-down menu.
- Districts can be deleted by:
 - Unassign all assigned locations and users.
 - Click on **Delete** button in **Edit District** window.
 - When prompted with "Are you sure you want to delete district" in Edit District window, Click on Delete.





2 Users

Create users with roles that dictate their permissions for districts and locations.

• Click **Admin/Users** to begin setup for each user.

D	EMO
Ad	<u>Imin</u> -
	Assets
(Users

Click New to create a user or select a user and click on Edit and a form will pop up.



0.200200		
Role	No Console Access	
First Name		1
Last Name		
User Name		
Password		9
Confirm Password		(1)
Time Zone	(UTC-08:00) Pacific Time (US & Canada)	•
Date Format	31/12/2008 11:59 pm	•
Primary Email		
Send primary email in SMS format	No	•
Alternate Email		
Send alternate email in SMS format	No	•
Reading Alert Level	None	•
Non Reading Alert Level	None	
Email Alerts To	No Email Alerts	,







Select security level from **Role** drop-down box.



Security hierarchy is as follows:

- a. Master Administrator reserved for ATEK Access Technologies personnel
- b. **Owner Administrator** can create locations and provision gateways and tanks for all owner's districts and locations
- c. Owner Dispatcher do not use
- d. Owner Viewer view only access to owner's districts and locations
- e. District Provisioner can create locations and provision gateways and tanks for district and their locations
- f. District Viewer view only access of a district and their locations
- g. Customer Provisioner can create and provision gateways and tanks for one location
- h. Customer Viewer view only access for one location
- i. **No Console Access** assigned to users to prevent access to AIP, but they can receive alerts same as an owner if alerts are enabled in their user profile
 - User roles after being selected may present an additional drop-down box.

Role	Master Administrator	*	
Reseller	ATEK	*	
First Name		±	

- Owner roles and No Console Access do not allow any other selections.

Role	Owner Administrator	•	
First Name	L	A	
Last Name			

- District roles allow selecting District. Users assigned to district roles can be associated with one district.

Role	District Provisioner	*	
District		*	
First Name		â	

- Customer roles allow selecting a location. Users assigned a customer role can be associated with one location.





- Enter in **Names**.
- Assign User Name (write this down as it will need to be passed along to user).
- Assign **Password** (write this down as it will need to be passed along to user).
- Select **Time Zone** from drop-down box to select time zone for data time stamps that are displayed.
- Select desired **Date Format**.
- To send e-mail message alerts, enter in user's e-mail address in **Primary Email** or **Alternate Email** field and leave **Send primary email in SMS format** checkbox blank.

Time Zone	(UTC-08:00) Pacific Time (US & Canada)	*
Date Format	31/12/2008 11:59 pm	
Primary Email	you@youremail.com	
Send primary email in SMS format		

 To send text message alerts, enter in phone number in Alternate Email field and leave Send alternate email in SMS format checkbox blank.

Alternate Email	555-222-1212	
Send alternate email in SMS format		

• Select Alert level from **Reading Alert Level** drop-down selection box and select either Warning or Critical that alert messages begin sending from. Also select which e-mail to send alert to with **Email Alerts** dropdown selection box. Set **Reading Alert Level** to **None** to disable sending of alert messages.

Send alternate email in SMS format		
Reading Alert Level	Minor	•
Non Reading Alert Level	Unreported	•
Send Bad Reading Alerts	None	
Email Alerts To	Unreported	

- Set Non Reading Alert Level to None.
- Send Bad Reading Alerts checkbox Do Not Use.
- Click **OK**.

OK	Cancel	

67



3



Configure Asset Types

Assets such as Locations, Gateways, and Tanks can have types created with icons associated with them. These types are selected from drop-down box when locations, gateways, and tanks are created or edited. Asset Type icons will appear on map for assets with validated addresses.

Click Assets/Configure Types to create Location, Gateway, and Tank types.



Asset Types window will open.

These types are used to display assets such as tanks in graphical form in AIP.

Types				
New Edit				
Category 🔺	T Name	T De	escription 🔻	Icon
Location	Garage	Ga	arage	
Location	Office	Of	fice	<u>ش</u>
Tank	Rectangular Tank	Bu	lk	10
Tank	Other			Ň
Tank	Horizontal Cylinder	Су	linder	10 m
Tank	Horizontal Cylinder Domed	Bu	lk	C.F.
Tank	Oval Tank	Ov	/al	-



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• Click on **New** button to create a new Asset Type.

Category	•	
Type Name		
Description		
Browse for image		

- Click on Category to select Gateway, Location, or Tank.
- Fill in **Type Name** field with type of Gateway, Location, or Tank.
- Fill in **Description** field with text describing asset type being created.
- Click on **Browse for image**. To associate a picture file as an icon for that asset type, icon size should be approximately 400 pixels high by 1000 pixels wide.
- Click on **OK**.
- To edit an asset type, select asset from list.
- Click on Edit to change Category, Type Name, Description, and Image then click on OK.

Category	Tank 💌	
Type Name	Oval Tank	
Description	Oval	
Browse for image	Oval Tank	
	Carrier and Carrier	

Click on **Delete** to remove that asset type.

ATEK Tech Support

For questions in regards to this Instruction Guide or AIP, please contact ATEK Tech Support at 877-847-7226 or CCT@tankscan.com.

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