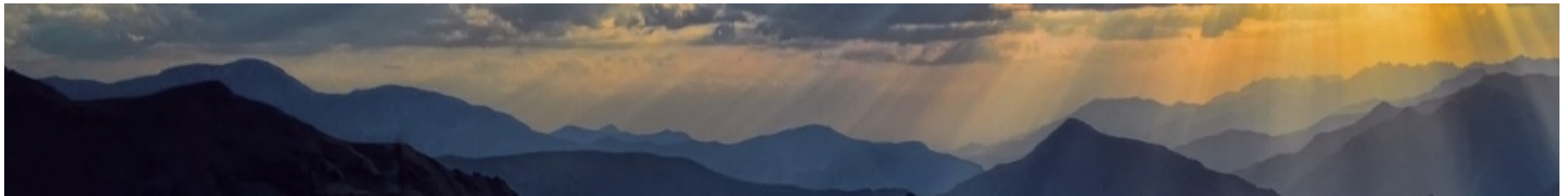




TELEDYNE
ADVANCED MONITORING SOLUTIONS
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RegPerfect User Web Series 2020

RegPerfect Release and Software Platform

Agenda

- RegPerfect Review
 - RegPerfect versions
 - RegPerfect platforms - 3rd party software
 - Obsolescence
- RegPerfect v8000.0
- RegPerfect v7103.0
 - Assets, Dashboards, Notes
 - Deprecated services/applications
 - Other enhancements
- RegPerfect v7102.0 & v7101.0
 - Assets, Dashboards, Notes

RegPerfect Review

- RegPerfect versions
 - RegPerfect v7103.0
 - Current version
 - Originally released: 02/04/2020
 - Re-released (to fix a couple minor issues): 06/10/2020
 - RegPerfect v8000.0
 - Next version
 - In system testing
 - New platform support

RegPerfect Review

- RegPerfect support platforms - 3rd party software

RegPerfect v7103.0 (and previous, down to Rpv7006.0)	RegPerfect v8000.0
<ul style="list-style-type: none">• 2012 Platform<ul style="list-style-type: none">• Windows Server 2012 R2 / SQL Server 2012 (SP4)• 2016 Platform<ul style="list-style-type: none">• Windows Server 2016 / SQL Server 2016 (SP2)• Workstations<ul style="list-style-type: none">• Windows 10 workstation• All server and workstation platforms<ul style="list-style-type: none">• .NET Framework 4.7.2• Access Runtime 2010• Internet Explorer 11 (recommend Chrome)• Major service packs & security updates	<ul style="list-style-type: none">• 2016 Platform<ul style="list-style-type: none">• Windows Server 2016 / SQL Server 2016 (SP2)• 2019 Platform<ul style="list-style-type: none">• Windows Server 2019 / SQL Server 2019• Workstations<ul style="list-style-type: none">• Windows 10 workstation• All server and workstation platforms<ul style="list-style-type: none">• .NET Framework 4.8• Access Runtime “16” (Office 2016, 365, 2019)• Internet Explorer 11 (recommend Chrome)• Major service packs & security updates

RegPerfect Review

- **Obsolescence**

- Upcoming end of support

- Windows Server 2012 R2 / SQL Server 2012

- RegPerfect v7103.0 is the last RegPerfect version that is supported on the Windows Server 2012 R2/SQL Server 2012 server platform.

- Office 2010, including the Access Runtime

- RegPerfect v7103.0 is the last RegPerfect version that uses Office/Access 2010, including the Access Runtime.

- Not supported

- Windows Server 2008 R2 / SQL Server 2008 R2
- Windows 7
- Windows XP

RegPerfect v8000.0

- Next version of RegPerfect
- Mainly just platform changes and full system testing
- Minimum system requirements
 - Processor*
 - Intel Xeon E-2124, 3.3GHz, 8M cache
 - RAM*
 - 8GB 2666MHz DDR4 ECC
 - Disks*
 - RAID 1 (2 + 2 HDDs/SSDs) - 300GB each

*Current TML server specs

RegPerfect v7103.0

- Assets, Dashboards, Notes
 - Assets Enhancements
 - Added allowing the user to change cylinder put-in-service time.
 - Added a section to show calibration reference constant history on the Edit Cylinder Put In-Service Time dialog.
 - Added "Stack Test" choice for Q/A test type and removed the TBDs for inventory classification.

RegPerfect v7103.0

- Assets, Dashboards, Notes (cont.)
 - Dashboards and Widgets Enhancements
 - Reminders widget
 - Support has been added to the reminders widget for Flow-to-Load Checks, Fuel Flowmeter QA tests, and Fuel Flow-to-Load tests.
 - Matrix widget
 - Enhancements have been made to the Matrix widget to interface with UDC and display real-time values from data loggers and PLCs.

RegPerfect v7103.0

- **Deprecated services/applications**
 - Removed from the RegPerfect suite
 - RegPerfect Data Logger Configuration application
 - Bailey data collection service

RegPerfect v7103.0

- Other enhancements

- GetComponentID() and GetSystemID() functions will return valid component and system IDs instead of blanks even when the input sample is substituted.
- UDC: Modified all PLC Data Collectors (and Data Logger Collector) to read instantaneous data and to make the data available for Matrix widget.

RegPerfect v7102.0

- Assets, Dashboards, Notes
 - Dashboards and widget enhancements
 - Q/A Tests widget (calibration) - show 1-minute data +10 minutes / - 5 minutes from when C flag was flagged on the data and show a calibration control chart
 - Reports widget - can configure with reports from My Reports folder in addition to the “normal” Reports folder
 - Reminders widget - added the functionality to email approaching and expired due date reminders
 - Q/A Tests (chart) and Trend widgets - added functionality to drag an area in which to zoom in on the charts

RegPerfect v7102.0

- Assets, Dashboards, Notes (cont.)
 - Assets enhancements
 - Added functionality to import electronic gas cylinder certificates in .csv file format (initially only AirGas CSV files supported)
 - After importing the data, the data from the import is populated and allows the user an opportunity to change/override the imported data, as well as add any additional data to fields not in the data import
 - Added functionality to track/save and display valve transactions - which cylinders connected from what date/time to what date/time
 - Added support for TRS instruments, using H2S gas cylinders

RegPerfect v7101.0

- Assets, Dashboards, Notes
 - Notes (new application)
 - CEMS Log - rewrite of legacy, Access app w/ additional features
 - Attach one or more PDFs to log entries
 - Tag log entries with keywords
 - Print/Export to CSV, Excel, or PDF
 - Dashboards
 - Copy Dashboards
 - New widgets
 - Control widget
 - Matrix widget
 - Reminders widget

RegPerfect v7101.0

- Assets, Dashboards, Notes (cont.)
 - Dashboards (cont.)
 - Updated widgets
 - Compliance widget
 - Trend widget

Assets, Dashboards, Notes

- Assets

- Cylinders enhancement
- Added functionality to import electronic gas cylinder certificates in .csv file format

The screenshot displays the 'Import Cylinder' interface. At the top, the breadcrumb path is 'Assets / Cylinder Management / Import Cylinder'. The main section is titled 'Import Cylinder' and contains a 'CSV Files' area. A blue button labeled 'Browse for files' is visible. Below it, a purple notification bar states 'No files selected (import from \\RegPerfec...'. The 'CSV Files' list shows three files: 'Airgas cylinder number CC160239.csv', 'Airgas cylinder number ET0009952.csv', and 'Airgas cylinder number ET0015796.csv'. Each file has a red trash icon to its left. At the bottom right, there are 'Cancel' and 'Import' buttons. A red notification bell icon with the number '33' is present in the top right corner of the interface.

Assets, Dashboards, Notes






















- Notes

- CEMS Log - legacy, Access application rewritten
- New features: file attachments, tag logs with keywords, and print/export to CSV, Excel, or PDF

CEMS Log

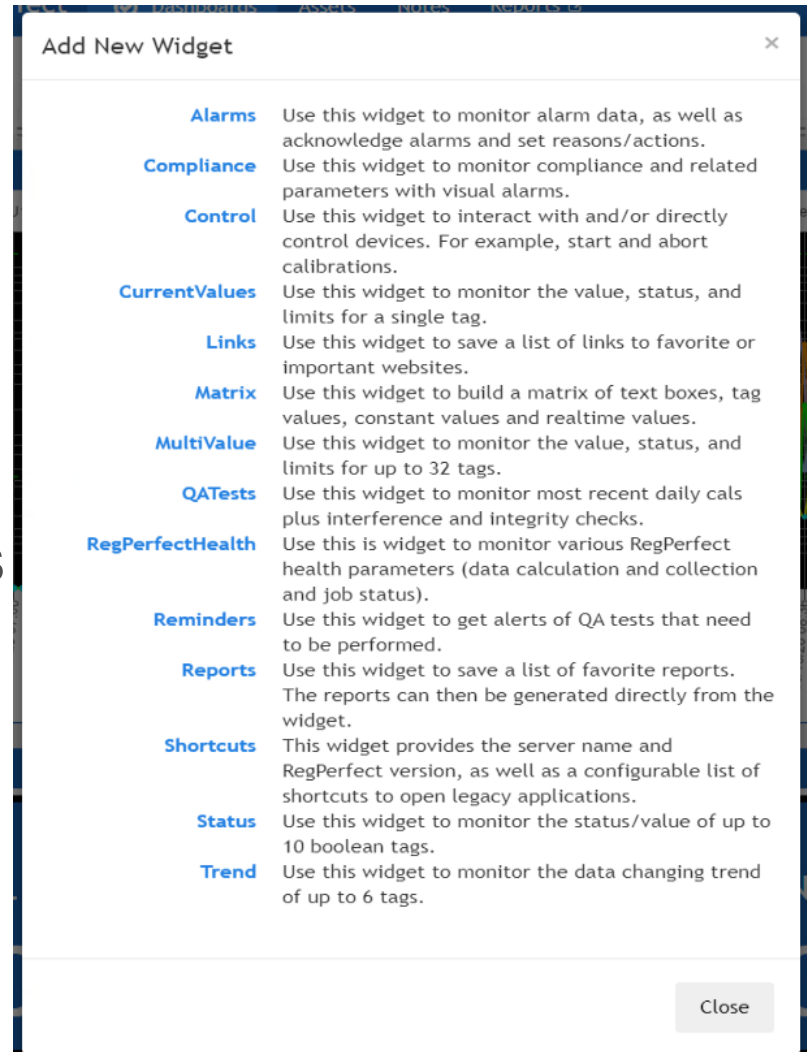
Logs

Add csv Excel pdf

	Log Time	Operator	Initials	Description	Tags	Files
 	10/05/2011 10:58	MLSUPPORT	hgf	Calibrated nox analyzer abc	nox	 cemslogs.pdf
 	10/05/2011 10:58	MLSUPPORT	hgf	Ran Quarterly Cals		
 	08/01/2018 14:51	Administrator	abc	Calibrated SO2 analyzer.	SO2	
 	09/05/2018 07:26	Administrator	abc	Lorem ipsum dolor sit amet, consectetur adipiscing elit. Aliquam tincidunt urna eros, eu efficitur tortor sollicitudin quis. Donec hendrerit at nunc nec dictum. Duis neque arcu, interdum a nisi nec, venenatis tincidunt velit. Nullam volutpat vitae orci id auctor. Donec ac elit aliquam, sollicitudin nunc dapibus, commodo metus.	analyzer instrument	
 	09/05/2018 07:26	Administrator	def	Sed pellentesque, tortor ut suscipit maximus, nunc dolor eleifend tortor, vitae posuere diam nisl sit amet quam. Vestibulum nibh leo, eleifend in orci vel, condimentum hendrerit justo.		 cemslogs.pdf
 	09/05/2018 07:28	Administrator	abc	Etiam egestas lobortis finibus. Nunc blandit lorem vitae ullamcorper rutrum. Vestibulum fringilla urna et gravida congue. Mauris ultricies sem ac efficitur dignissim. Sed id magna sed nulla ultrices ullamcorper. Phasellus fermentum massa hendrerit dictum blandit.		 cemsfilestest01.pdf  cemsfilestest02.pdf  cemsfilestest03.pdf
 	09/05/2018 07:30	Administrator	xyz	Performed CEMS maintenance	CEMS SO2 nox	 cemsfilestest02.pdf  cemslogs.pdf

Assets, Dashboards, Notes

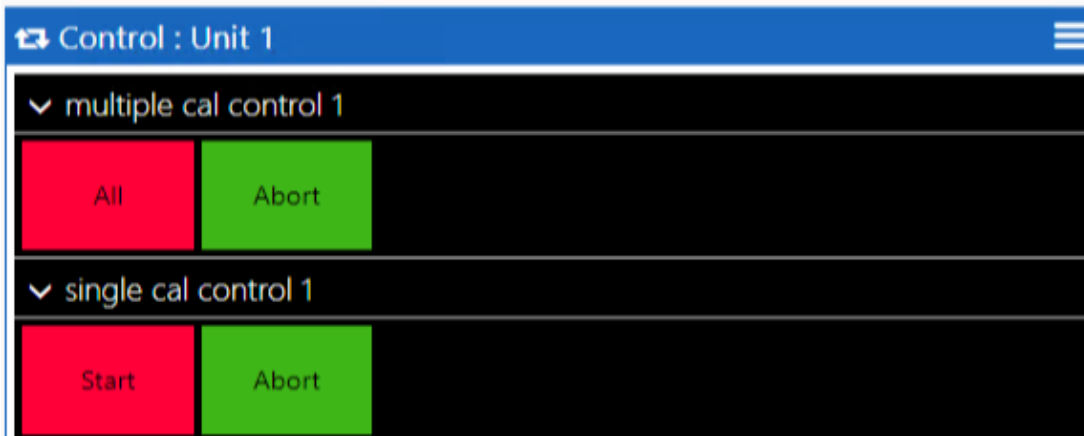
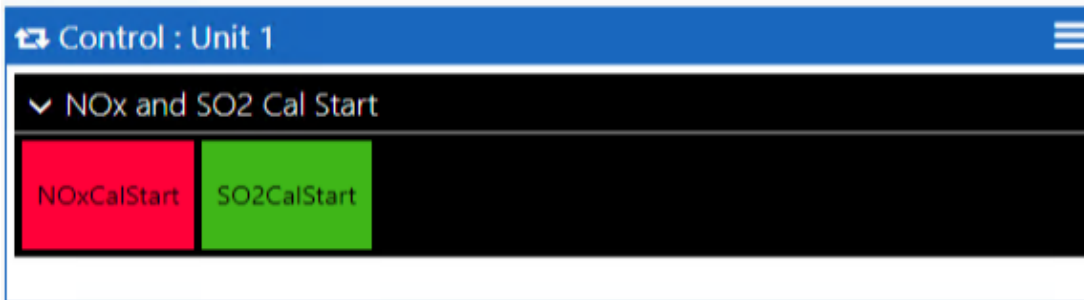
- Dashboards & widgets
 - Create multiple dashboards
 - Add & configure multiple widgets on a dashboard
 - Copy dashboards
 - Support for global dashboards
 - 14 widgets



Assets, Dashboards, Notes

- Control widget

- Control widget interfaces with Allen Bradley PLCs to start and abort calibrations



Assets, Dashboards, Notes

- Matrix widget

- Matrix widget allows you to build a matrix or grid of text boxes, tag and realtime values, and constant values

Matrix : Current Values				
Boiler #1				
Parameter	1-Minute	Current Hour-to-date Avg	1-Hour	12 Month Run (or 30-Day)
Unit On	1	1	1	MTD 556
NOx ppm	100.0	100.0	100.0	n.a.
O2 pct	12.5	12.5	12.5	n.a.
Gas Flow scfh	1200.0	1200.0	1200.0	Mscf 1516
Oil Flow gph	0.0	B1_OilFlow_12MRun_gal_1D		
NOx lb per mmBtu	0.26			
Capacity Factor %	n.a.			

Date/Time	Value	Flags	MODC
08/15/2018 00:00	0	M	0
08/14/2018 00:00	2211733		0
08/13/2018 00:00	2191520		0
08/12/2018 00:00	2171307		0
08/11/2018 00:00	2151094		0

- Clicking a tag tile opens a details view, which contains columns for values, flags, and MODC

Assets, Dashboards, Notes

- Matrix widget (cont.)

- Configure column and row titles, tags, constants, text, notes

Parameter	1-Minute	Current Hour-to-date Avg	1-Hour	12 Month Run (or 30-Day)
Unit On	B1_UnitOn_TF_1M	B1_UnitOn_TF_1M	B1_UnitOn_TF_1H	B1_UnitOn_TF_1H
NOx ppm	B1_NOx_Ppm_1M	B1_NOx_Ppm_1M	B1_NOx_Ppm_1H	n.a.
O2 pct	B1_O2Dry_Pct_1M	B1_O2Dry_Pct_1M	B1_O2Dry_Pct_1H	n.a.
Gas Flow scfh	B1_GasFlow_scfh_1M	B1_GasFlow_scfh_1M	B1_GasFlow_scfh_1H	B1_GasFlow_12MRun_Mscf_1D
Oil Flow gph	B1_OilFlow_gph_1M	B1_OilFlow_gph_1M	B1_OilFlow_gph_1H	B1_OilFlow_12MRun_gal_1D
NOx lb per mMBtu	B1_NOx_LbPerMBtu_1M	B1_NOx_LbPerMBtu_1M	B1_NOx_LbPerMBtu_1H	B1_NOx_30D_LbPerMBtu_1D
Capacity Factor %	n.a.	n.a.	n.a.	B1_CapFactor_12MRun_Pct_1D

Select and configure text, constant or tag

Text

Enter Text

Constant

Constant Name

Decimal Precision

Site Filter
Constant Category Filter

- Get Value
- Get Current 6-Minute Avg
- Get Current 15-Minute Avg
- Get Current Hour Avg
- Get Current 3-Hour Roll Avg
- Get Current Day Avg
- Get Current Day Sum
- Get Current Month Avg
- Get Current Month Sum
- Get Current Year Avg

Tag Name	Inset Text	Unit Prefix	HiHi Limit	Hi Limit	Lo Limit	LoLo Limit
B1_NOx_Lb_1H	Enter Text	None				

Assets, Dashboards, Notes

- Reminders widget

- Reminders widget allows you to get alerts (aka “reminders”) of Q/A tests that need to be performed
- Displays due dates for QA tests
- Incorporates grace periods and non-operating quarters
- Configurable warning and alert timeframes
- Emailing alerts
- RATA (60 & 75), Linearity, CGA
- Flow-to-Load Checks
- Fuel Flowmeter QA tests
- Fuel Flow-to-Load tests

▼ Part 75 RATAs due by September 19, 2018

A QA RATA is due.
Last passing RATA: March 20, 2018, Frequency Code: 2 QTRS.

Unit 1 quarterly operating hours:	75	
Unit 1 - NOX - P		×
Unit 1 - NOX - RB		×

▼ Part 75 linearity tests due by September 30, 2018

Next regular QA linearity is due.
Last passing linearity: March 28, 2018.
Note: The linearity must be performed while the source is operating and 30 days after the grace period linearity is completed.

Unit 1 quarterly operating hours:	75	
U1_CO2R_B_Instrument - High		×
U1_SO2LDualRq_P_Instrument - High		×

Assets, Dashboards, Notes

- Compliance widget
 - Compliance widget allows you to monitor the value, status, and limit for up to 16 compliance, base, and prediction tags
 - Availability status may also be monitored

© Compliance : Title Online 56.0 MWe				
Parameter	Base	Compliance	Limit	Prediction
NOx_P60 LbPerMBtu	1	© Compliance : Boiler 1 Online		
		Parameter	Base	Compliance
30-Day NOx LbPerMBtu	1-Hour 0.26	Yesterday 0.31	< 0.20	
12-Month NOx ton	Yesterday MTD 15.79	Yesterday 135.92	<= 32.41	

Assets, Dashboards, Notes

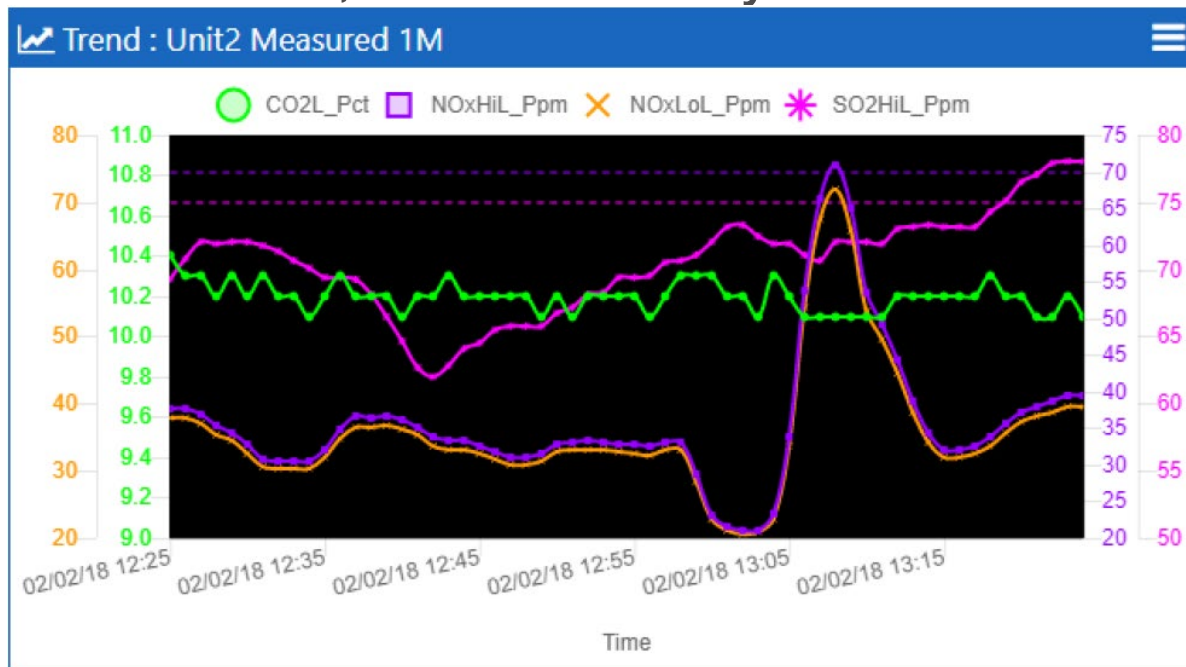
- Compliance widget (cont.)

- Configure compliance, base, limit values (optional predictive)

Compliance Tag Name Compliance Label	Parameter Upper Label Parameter Lower Label	Base Tag Name Base Label	Limit Name Limit Label
B1_OilFlow_12MRun_gal_1D Yesterday	30-Day NOx LbPerMBtu	B1_NOx_LbPerMBtu_1H 1-Hour	< (High Limit) B1_NOx_30D_LbPerMBtu_1D_HiHi_AlarmLimit
B1_OilFlow_12MRun_gal_1D Yesterday	12-Month NOx ton	B1_NOxMonth_ton_1D Yesterday MTD	<= (High Limit) B1_NOx_12MRun_ton_1D_HiHi_AlarmLimit
B1_OilFlow_12MRun_gal_1D Yesterday	12-Month Gas Flow Mscf	B1_GasFlowMonth_Mscf_1D Yesterday MTD	<= (High Limit) B1_GasFlow_12MRun_Mscf_1D_HiHi_AlarmLimit
B1_OilFlow_12MRun_gal_1D Yesterday	12-Month Oil Flow gal	B1_OilFlowMonth_gal_1D Yesterday MTD	<= (High Limit) B1_OilFlow_12MRun_gal_1D_HiHi_AlarmLimit
B1_OilFlow_12MRun_gal_1D Yesterday	12-Month Capacity Factor Pct	B1_CapFactorMonth_Pct_1D Yesterday MTD	<= (High Limit) B1_CapFactor_12MRun_Pct_1D_HiHi_AlarmLimit

Assets, Dashboards, Notes


- Trend widget
 - Trend widget allows you to view a data graph and monitor the trend of changing data for up to 6 tags
 - Automatically updates the display in a configurable time interval, one minute by default



Assets, Dashboards, Notes


- Trend widget (cont.)

- Configure trend properties and tags

Graph Background 

Single Y-Axis (auto scale)

Hide Data Points

Hide Invalid Data 

Limit

Dotted Line (plot color)

Upward Triangle Symbol

X-Axis

Time

Tag (scatter plot)

Time Range Hour(s)

Type Filter

Time Filter

Site Filter

Parameter Filter

Tag Name	Label	Plot Color	Point Symbol	Auto Scale	Min Scale	Max Scale	Low Limit	High Limit	Hide Plot
U1_NOx_Ppm_1M	U1_NOx_Ppm_1M	#3d85c6	circle	Yes	0	0			Show
U1_O2Dry_Pct_1M	U1_O2Dry_Pct_1M	#38761d	circle	Yes	0	0			Show
U1_NOx_LbPerMBtu_1M	U1_NOx_LbPerMBtu_1M	#0b5394	circle	Yes	0	0			Show