



MASSDEP

Automation Utilizing Air Vision

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MASSDEP

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YEAR LONG DISCOVERY PROCESS

- EDAS TO AIRVISION UPGRADE IN 2012
- WITH EDAS ~20 SITES THAT WERE ALL DIFFERENT
- LOT OF AV TRIAL-AND-ERROR TESTING
- LOT OF FAILS AND STARTING OVER
- REPROGRAMMED ENTIRE NETWORK IN JANUARY 2015
- BEEN WORKING SOLID GOING ON 10+ YEARS

AV PROGRAMMING USED FOR AUTOMATION

- [AUTO NULL CODING CALIBRATIONS](#)
- [SHELTER TEMP STANDARD DEVIATION CALCULATIONS](#)
- EMAILS
- [COMPONENT AND ACTIVITY TRACKING SYSTEM - AGILAIRE LLC](#)
- AV/AVT SYNC

AUTO NULL CODE CALIBRATION PROGRAMMING

SO2TPREC – LOGGER CONTROLLED

ASSIGNED PSEUDO INPUTS

The screenshot shows the configuration interface for the SO2TPREC sequence. The 'Phases' table lists the following data:

Phase Name	Phase Number	Duration Time	Response Time	Enabled	Status Pattern	Level
SPAN	1	040M	010M	<input checked="" type="checkbox"/>	3,5,6,8,35	SPAN
PREC				<input checked="" type="checkbox"/>	3,4,8,35	PREC
ZERO				<input checked="" type="checkbox"/>	3,5,6,35	ZERO
PURGE				<input checked="" type="checkbox"/>	8	

The 'Line Status Pattern' dialog is open, showing the 'Output Control Pattern' table:

Select	Line Number	Name
<input type="checkbox"/>	24	OutPut Line24
<input type="checkbox"/>	25	OutPut Line25
<input type="checkbox"/>	26	O3MPV
<input type="checkbox"/>	27	NO2MPV
<input type="checkbox"/>	28	COTMPV
<input type="checkbox"/>	29	SO2TMPV
<input type="checkbox"/>	30	NOYMPV
<input type="checkbox"/>	31	CAPSMPV
<input type="checkbox"/>	32	O3PREC
<input type="checkbox"/>	33	NO2PREC
<input type="checkbox"/>	34	COTPREC
<input checked="" type="checkbox"/>	35	SO2TPREC
<input type="checkbox"/>	36	NOYPREC

A purple arrow points from the 'SO2TPREC' entry in the dialog to the '35' in the 'Status Pattern' column of the 'SPAN' phase in the main table.

SO2TMPV – USER INITIATED

ASSIGNED PSEUDO INPUTS

The screenshot shows the configuration interface for the SO2TMPV sequence. The 'Phases' table lists the following data:

Phase Name	Phase Number	Duration Time	Response Time	Enabled	Status Pattern	Level
L1				<input checked="" type="checkbox"/>	3,5,6,8,29	80%
L2				<input checked="" type="checkbox"/>	3,5,6,7,29	60%
L3				<input checked="" type="checkbox"/>	3,5,6,7,8,29	40%
L4				<input checked="" type="checkbox"/>	3,4,29	20%
ZERO				<input checked="" type="checkbox"/>	3,5,6,29	ZERO
PURGE				<input checked="" type="checkbox"/>	8	

The 'Line Status Pattern' dialog is open, showing the 'Output Control Pattern' table:

Select	Line Number	Name
<input type="checkbox"/>	18	OutPut Line18
<input type="checkbox"/>	19	OutPut Line19
<input type="checkbox"/>	20	OutPut Line20
<input type="checkbox"/>	21	OutPut Line21
<input type="checkbox"/>	22	OutPut Line22
<input type="checkbox"/>	23	OutPut Line23
<input type="checkbox"/>	24	OutPut Line24
<input type="checkbox"/>	25	OutPut Line25
<input type="checkbox"/>	26	O3MPV
<input type="checkbox"/>	27	NO2MPV
<input type="checkbox"/>	28	COTMPV
<input checked="" type="checkbox"/>	29	SO2TMPV
<input type="checkbox"/>	30	NOYMPV

A purple arrow points from the 'SO2TMPV' entry in the dialog to the '29' in the 'Status Pattern' column of the 'L1' phase in the main table.

AUTO NULL CODE CHANNEL VALIDATION PROGRAMMING

SO2TPREC – STATUS INPUT PATTERN (Y)

INFORMATIONAL FLAGS

The screenshot shows the 'Line Status Pattern' dialog for 'Status Input Pattern (Y)'. The dialog has a table with columns: Select, Line Number, Name, and Status. A purple arrow points from the 'Digital Info#4 (Y) Status' button in the 'Information Flags' section to the 'Status' column of the table.

Select	Line Number	Name	Status
<input type="checkbox"/>	24	Input Line 24	Off On
<input type="checkbox"/>	25	Input Line 25	Off On
<input type="checkbox"/>	26	O3MPV	Off On
<input type="checkbox"/>	27	NO2MPV	Off On
<input type="checkbox"/>	28	COTMPV	Off On
<input type="checkbox"/>	29	SO2TMPV	Off On
<input type="checkbox"/>	30	NOYMPV	Off On
<input type="checkbox"/>	31	Input Line 31	Off On
<input type="checkbox"/>	32	O3PREC	Off On
<input type="checkbox"/>	33	NO2PREC	Off On
<input type="checkbox"/>	34	COTPREC	Off On
<input checked="" type="checkbox"/>	35	SO2TPREC	Off On
<input type="checkbox"/>	36	NOYPREC	Off On

Information Flags:

- Digital Info#1 (V) Status: Select Lines
- Digital Info#2 (W) Status: Select Lines
- Digital Info#3 (X) Status: Select Lines
- Digital Info#4 (Y) Status: Select Lines
- Digital Info#5 (Z) Status: Select Lines
- Bad Status Inputs (B): Select Lines
- Maintenance Inputs (M): Select Lines
- Boiler Offline (CEM) (F): Select Lines

Max Readings (+):
Min Reading (-):
Rate of Change (R):
CEM Validation:

SO2TMPV – STATUS INPUT PATTERN (V)

INFORMATIONAL FLAGS

The screenshot shows the 'Line Status Pattern' dialog for 'Status Input Pattern (V)'. The dialog has a table with columns: Select, Line Number, Name, and Status. A purple arrow points from the 'Digital Info#4 (Y) Status' button in the 'Information Flags' section to the 'Status' column of the table.

Select	Line Number	Name	Status
<input type="checkbox"/>	18	Input Line 18	Off On
<input type="checkbox"/>	19	Input Line 19	Off On
<input type="checkbox"/>	20	Input Line 20	Off On
<input type="checkbox"/>	21	Input Line 21	Off On
<input type="checkbox"/>	22	Input Line 22	Off On
<input type="checkbox"/>	23	Input Line 23	Off On
<input type="checkbox"/>	24	Input Line 24	Off On
<input type="checkbox"/>	25	Input Line 25	Off On
<input type="checkbox"/>	26	O3MPV	Off On
<input type="checkbox"/>	27	NO2MPV	Off On
<input type="checkbox"/>	28	COTMPV	Off On
<input checked="" type="checkbox"/>	29	SO2TMPV	Off On
<input type="checkbox"/>	30	NOYMPV	Off On

Information Flags:

- Digital Info#1 (V) Status: Select Lines
- Digital Info#2 (W) Status: Select Lines
- Digital Info#3 (X) Status: Select Lines
- Digital Info#4 (Y) Status: Select Lines
- Digital Info#5 (Z) Status: Select Lines
- Bad Status Inputs (B): Select Lines
- Maintenance Inputs (M): Select Lines
- Boiler Offline (CEM) (F): Select Lines

Max Readings (+):
Min Reading (-):
Rate of Change (R):
CEM Validation:

AUTO NULL CODING AV PROGRAMMING AND REPORTING

AV FLAG MAPPING AND REPORTING

Flag	Description	Priority	Invalidates Data	Mapped AQS Null Code	Mapped AIRNow Code	Flag Type	Fore Color	Back Color
<input checked="" type="checkbox"/> [Custo <input checked="" type="checkbox"/>			<input type="checkbox"/>					
Y	Scheduled Precision Points	2	<input type="checkbox"/>	AX - Precision Check (PREC)			0, 0, 0	255, 255,
V	Multi-Point Verification	3	<input type="checkbox"/>	QV - Quality Control Multi-Point Verification			0, 0, 0	110, 193,

AV HOURLY AVERAGES

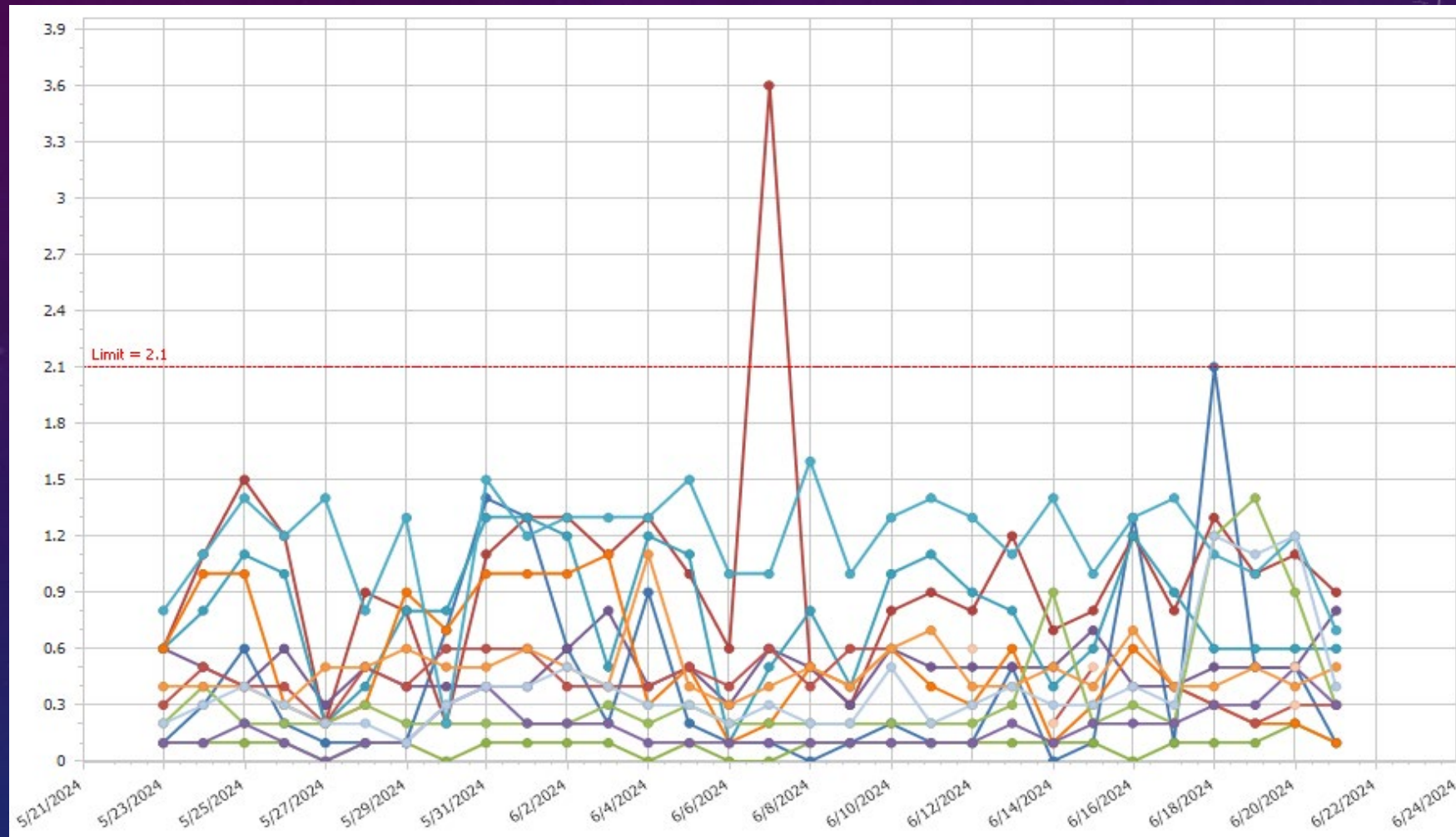
07/02/2024 20:00	0.05	
07/02/2024 21:00	37.57	YC<
07/02/2024 22:00	16.97	YC<
07/02/2024 23:00	0.05	YC<
07/03/2024 00:00	0.00	
07/03/2024 01:00	-0.05	L
07/03/2024 02:00	-0.01	L
07/03/2024 03:00	0.02	
07/03/2024 04:00	0.02	
07/03/2024 05:00	0.05	M>
07/03/2024 06:00	-0.12	M<L
07/03/2024 07:00	-0.14	M<L
07/03/2024 08:00	54.24	M<
07/03/2024 09:00	78.22	VCM<
07/03/2024 10:00	30.73	VC<
07/03/2024 11:00	8.25	VC<
07/03/2024 12:00	0.16	VC<
07/03/2024 13:00	0.13	
07/03/2024 14:00	0.17	

AV 2.2 TEXT REPORT

```

RD|I|25|013|0018|42401|1|1|008|560|20240702|19:00|0.15|
RD|I|25|013|0018|42401|1|1|008|560|20240702|20:00|0.05|
RD|I|25|013|0018|42401|1|1|008|560|20240702|21:00|AX|
RD|I|25|013|0018|42401|1|1|008|560|20240702|22:00|AX|
RD|I|25|013|0018|42401|1|1|008|560|20240702|23:00|AX|
RD|I|25|013|0018|42401|1|1|008|560|20240703|00:00|0|
RD|I|25|013|0018|42401|1|1|008|560|20240703|01:00|-0.05|
RD|I|25|013|0018|42401|1|1|008|560|20240703|02:00|-0.01|
RD|I|25|013|0018|42401|1|1|008|560|20240703|03:00|0.02|
RD|I|25|013|0018|42401|1|1|008|560|20240703|04:00|0.02|
RD|I|25|013|0018|42401|1|1|008|560|20240703|05:00|0.05|
RD|I|25|013|0018|42401|1|1|008|560|20240703|06:00|BA|
RD|I|25|013|0018|42401|1|1|008|560|20240703|07:00|BA|
RD|I|25|013|0018|42401|1|1|008|560|20240703|08:00|BA|
RD|I|25|013|0018|42401|1|1|008|560|20240703|09:00|QV|
RD|I|25|013|0018|42401|1|1|008|560|20240703|10:00|QV|
RD|I|25|013|0018|42401|1|1|008|560|20240703|11:00|QV|
RD|I|25|013|0018|42401|1|1|008|560|20240703|12:00|QV|
    
```

24 HOUR SHELTER TEMPERATURE STANDARD DEVIATION



AUTOMATED EMAILS

Airvision.Alerts@state.ma.us
To: Shea, Patrick (DEP)

Current Date: 6/11/2024 4:57 AM

Site Health Report

Site Name: NORTHADAMS Starting Date: 10-Jun-2024 02:00
Address: 86 Holden Street Ending Date: 11-Jun-2024 03:59

Primary Measurements:

Parameter	Max	Min	Average
BC	0.16	0.05	0.09
BCUV	0.22	0.06	0.11
SHLTRTEM	23	22	22
T640 PM25	4.6	2.2	3.2

Secondary Measurements:

Airvision.Alerts@state.ma.us
To: Shea, Patrick (DEP)

Work Items To Be Completed

NORTHADAMS

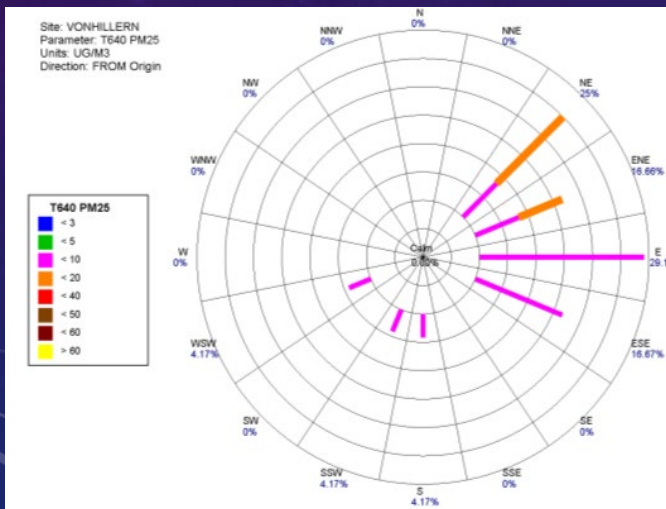
Overdue Work Items

Task Name	User	Current Due Date	Priority	Description	Serial Number	Tag
N. Adams BC bi-weekly instrument check	PShea	24-Jun-2024 08:59	Low	BLACK CARBON sm: 434	AE33-504-00434	ABS20246
N. Adams Purple Air Check (DEPDEB7)	PShea	24-Jun-2024 23:59	Low	PA-II-SD DEPDEB7	DEPDEB7	
N. Adams Levelt Data Review Point	PShea	28-Jun-2024 06:07	Low			

Upcoming Work Items

Task Name	User	Current Due Date	Priority	Description	Serial Number	Tag
N. Adams AC Maintenance	PShea	08-Jul-2024 09:00	Low	Shelter 453 SP #4707-1	4707-1	

- AV sends out >1000/Day
- Site Health Reports
- ADVP Alerts
- Last 24hours of Minute Data
- Last 24hours of Diagnostic Data
- Last 30 days of hourly diagnostic Data Averages
- Precision Traces
- Precision Trend Graphs



Airvision.Alerts@state.ma.us
Chicopee NO2 Quarterly Calibration [Assigned]
Chicopee NO2 Quarterly Calibration (Low) [Assigned] 9/30/2024 7:51:48 AM at [CHICOPEE]

Airvision.Alerts@state.ma.us
Springfield SO2T Quarterly Calibration [Assigned]
Springfield SO2T Quarterly Calibration (Low) [Assigned] 6/30/2024 7:51:48 AM at

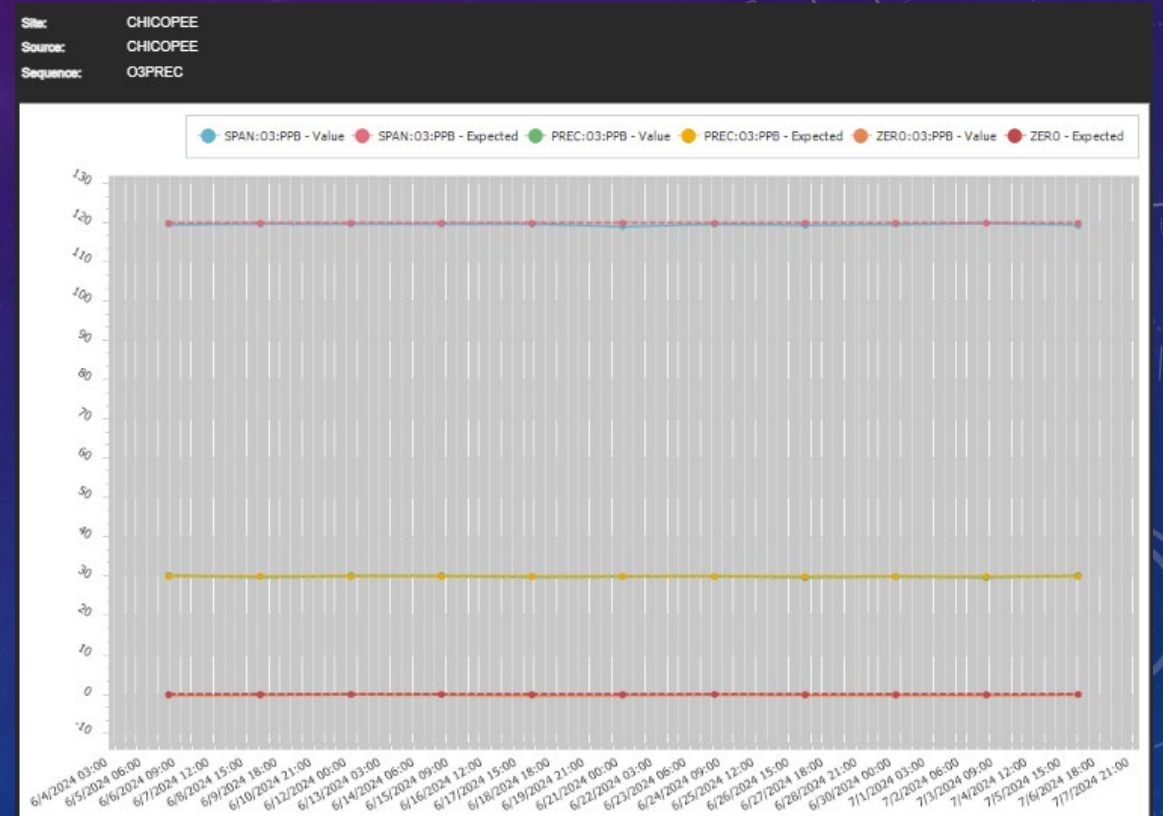
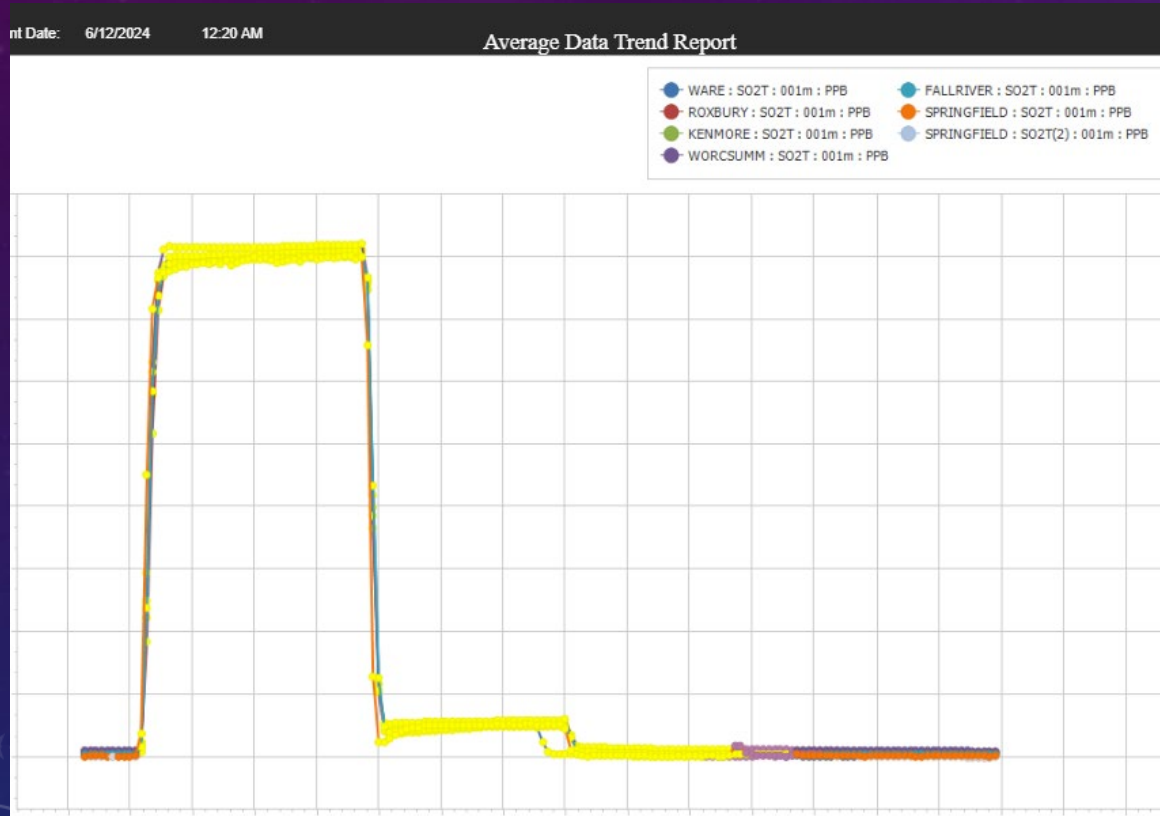
Airvision.Alerts@state.ma.us
Springfield NO2 Quarterly Calibration [Assigned]
Springfield NO2 Quarterly Calibration (Low) [Assigned] 6/30/2024 7:51:48 AM at

ADVP ALERTS

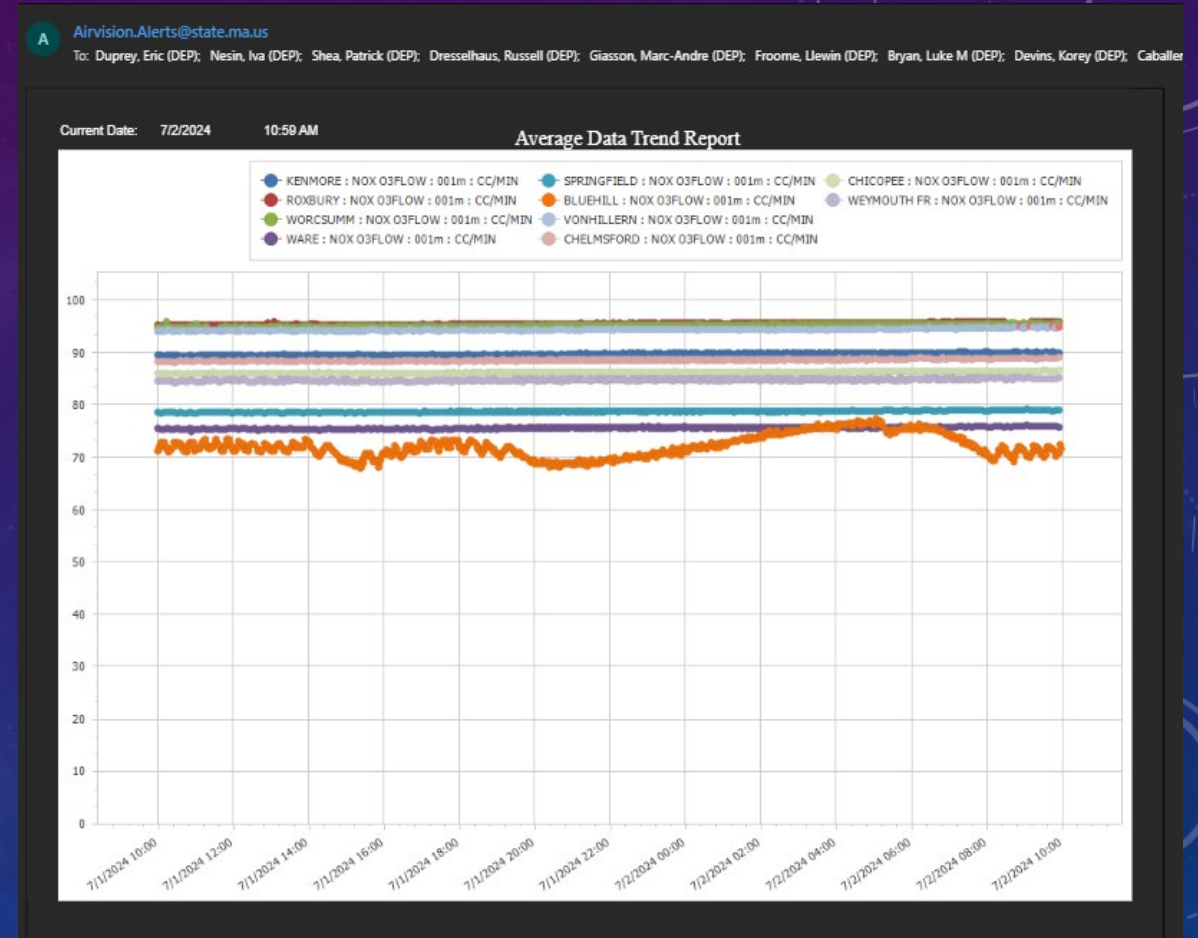
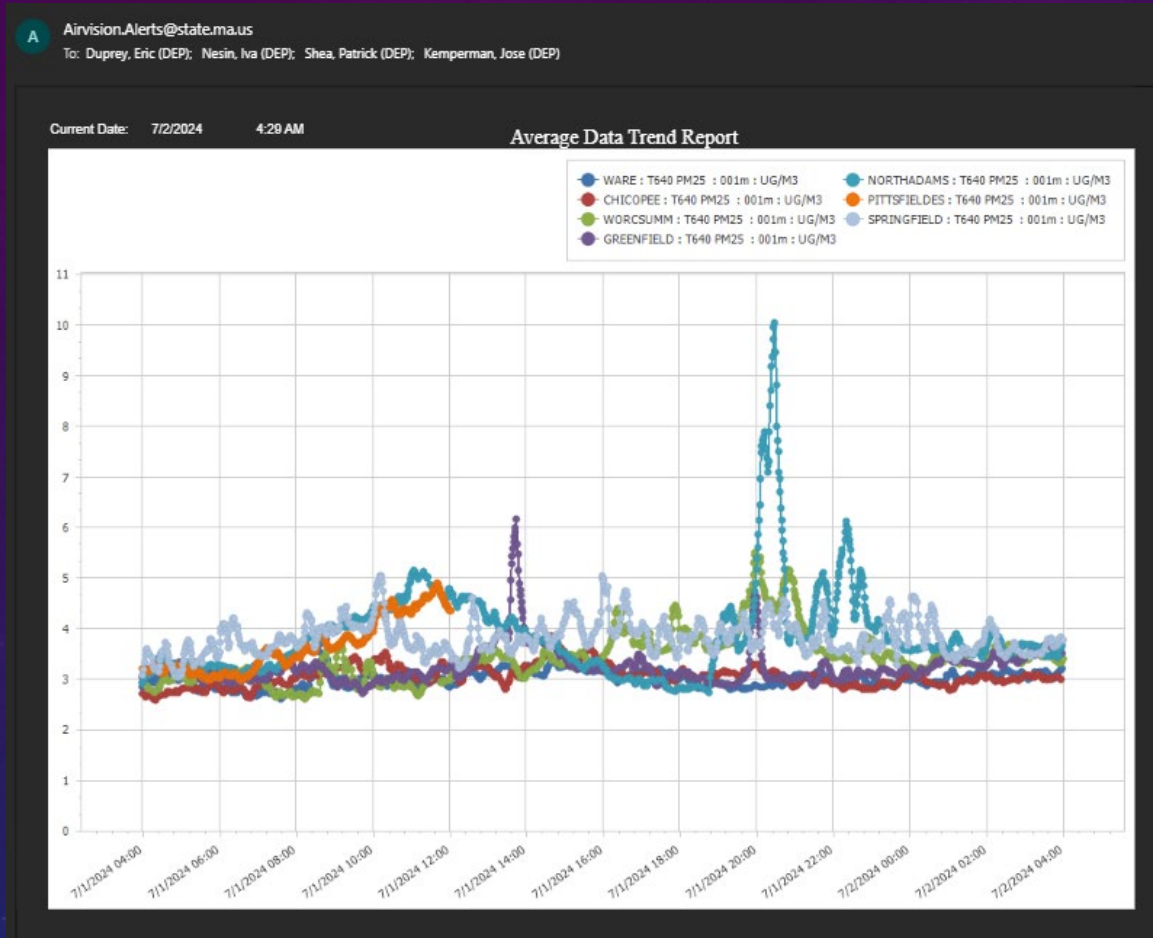
Airvision.Alerts@state.ma.us	!
Signal Length <1 - NETWORK T640 SL 6/13/2024 02:00:00 - 6/13/2024 03:00:00 1h	5:30 AM
Message: Check instrument. Might need a hard reboot. Applying Actions on reading: VONHILLER...	
Airvision.Alerts@state.ma.us	!
T640 Pump Warning - NETWORK T640 PUMP POWER 6/13/2024 02:00:00 - 6/13/20...	5:30 AM
Message: Check Instrument Applying Actions on reading: VONHILLERN:T640 PUMPPWM:001h at ...	
Airvision.Alerts@state.ma.us	!
COT FLOW ERROR - NETWORK COT FLOW ERROR 6/13/2024 02:00:00 - 6/13/2024 0...	5:30 AM
Message: Applying Actions on reading: VONHILLERN:COT FLOW:001h at 6/13/2024 02:00:00 with...	
Airvision.Alerts@state.ma.us	!
T640 Flow Warning - NETWORK T640 FLOW ERROR 6/13/2024 02:00:00 - 6/13/2024...	5:30 AM
Message: Check Instrument Applying Actions on reading: VONHILLERN:T640 FLOW:001h at 6/13/...	
Airvision.Alerts@state.ma.us	!
NO Flow Error - NETWORK NO FLOW ERROR 6/13/2024 02:00:00 - 6/13/2024 03:00:...	5:30 AM
Message: Applying Actions on reading: VONHILLERN:NOX FLOW:001h at 6/13/2024 02:00:00 wit...	

- ADVP Task that runs at 530 each morning
- Alerts are sent to all staff
- Increases response time and data capture.

TRACES AND TREND GRAPHS



PARAMETER AND DIAGNOSTIC AVERAGE DATA GRAPHS



COMPONENT AND ACTIVITY TRACKING SYSTEM

EPA AIR MONITORING ASSET REPORTING TEMPLATE

AirVision

Home View Favorites Asset Tracking

Editor Options Tools

AssetTracking

Site	Asset Type	Current Status	Manufacturer	Model	Serial Number	Purchase Date
- (NonBlanks)		Reti				
PITTSFIELDES	Zero Air Generator	Active	Teledyne AP	T701H	1175	08/10/2023 12:00
PITTSFIELDES	Analyzer	Active	Teledyne AP	T200	8471	08/10/2023 12:00
PITTSFIELDES	Unspecified	Active	Aluma Towe	T-135	AT62109-2-R5	07/17/2020 13:28
PMLAB	Unspecified	Active	Mettler-Tole	XPR6U	CO03946884	
ROXBURY	Instrument	Active	ATEC	2200	63513	09/15/2023 10:11
SPRINGFIELD	Calibration Bottle/T	Active	AIRGAS		LL37405	06/13/2022 12:00
SPRINGFIELD	Analyzer	Active	TSI INCORP	3783	3783241001	04/08/2024 12:00
VONHILLERN	Unspecified	Active	Aluma Towe	T-135	AT-213069-Y-5	07/14/2013 13:52
VONHILLERN	Calibration Bottle/T	Active	AIRGAS		ET0040612	10/03/2022 12:00
VONHILLERN	Calibration Bottle/T	Active	AIRGAS		LL192540	02/01/2021 12:00
WARE	Cal Standard	Active	Teledyne AP	T700U	877	08/10/2023 12:00
WARE	Calibration Bottle/T	Active	AIRGAS		LL193304	03/01/2023 12:00
WEYMOUTH FR	Unspecified	Active	Xonteck	910 Can	7227	08/01/2023 12:00
WORCARPT	Cal Standard	Active	Teledyne AP	T703	1034	08/10/2023 12:00
WORCARPT	Unspecified	Active	Aluma Towe	T-135	2023034-II-3	02/03/2023 13:50
WORCARPT	Analyzer	Active	MetOne	O20D	D16688	
WORCARPT	Instrument	Active	MetOne	O85A-3	D16996	
WORCSUMM	Analyzer	Active	Teledyne AP	T640	1826	05/30/2023 12:00

Asset Details

Asset Details Additional Details AV-Doc Files

Manufacturer: TSI INCORPORATED

Model Number: 3783

Serial Number: 3783241001

Asset Tag: ABS20561

Additional Identifier:

Current Status: Active

Condition: New

Method Code:

Description: UFP #3783241001

Current Site: SPRINGFIELD

Associated With:

Assignment History

Start	End	Site
04/08/2024 12:00	06/07/2024 10:15	LAB
06/07/2024 10:15		SPRINGFIELD

PROTOCOL GAS VERIFICATION PROGRAM

AirVision

Home View Favorites Asset Tracking

AssetTracking

Display Text	Asset Type	Current Status	EPA Cylinder ID	PGVP Producer ID	Description
- Calibration Bottle/Tank	- Calibration Bottle/Tank	- Active			
SO2T Tank BLM001360: 10.09 ppm	Calibration Bottle/Tank	Active	BLM00136	A12022	SO2T Tank BLM001360: 10.09 ppm
SO2T Tank BLM004883 10.03 ppm	Calibration Bottle/Tank	Active	BLM00488	A12022	SO2T Tank BLM004883 10.03 ppm
COT Tank BR0011296 247.2 ppm	Calibration Bottle/Tank	Active	BR0011296	A12021	COT Tank BR0011296 247.2 ppm
NO2 Tank ET0024207 NO: 24.99 ppm/NOx: 24	Calibration Bottle/Tank	Active	ET0024207	A12022	NO2 Tank ET0024207 NO: 24.99 ppm/NOx: 24.9
NO2 Tank ET0024800 NO: 24.02 ppm/NOx: 24	Calibration Bottle/Tank	Active	ET0024800	A12023	NO2 Tank ET0024800 NO: 24.02 ppm/NOx: 24.0
NO2 Tank ET0040612 NO: 24.63 ppm/NOx: 24	Calibration Bottle/Tank	Active	ET0040612	A12022	NO2 Tank ET0040612 NO: 24.63 ppm/NOx: 24.6
NO2 Tank LL122765 NO: 25.14 ppm/NOx: 25.2	Calibration Bottle/Tank	Active	LL122765	A12021	NO2 Tank LL122765 NO: 25.14 ppm/NOx: 25.25
NO2 Tank LL176898 NO: 24.98 ppm/NOx: 25.	Calibration Bottle/Tank	Active	LL176898	A12023	NO2 Tank LL176898 NO: 24.98 ppm/NOx: 25.01
NO2 Tank LL182111 NO: 25.72 ppm/NOx: 25.7	Calibration Bottle/Tank	Active	LL182111	A12022	NO2 Tank LL182111 NO: 25.72 ppm/NOx: 25.74
SO2T Tank LL191403 10.11 ppm	Calibration Bottle/Tank	Active	LL191403	A12023	SO2T Tank LL191403 10.11 ppm
COT Tank LL192540 246.5 ppm	Calibration Bottle/Tank	Active	LL192540	A12021	COT Tank LL192540 246.5 ppm
NO2 Tank LL192560 NO: 24.97 ppm/NOx: 25.0	Calibration Bottle/Tank	Active	LL192560	A12022	NO2 Tank LL192560 NO: 24.97 ppm/NOx: 25.03
NO2 Tank LL193269 NO: 24.95 ppm/NOx: 24.9	Calibration Bottle/Tank	Active	LL193269	A12022	NO2 Tank LL193269 NO: 24.95 ppm/NOx: 24.95
SO2T Tank LL193304 10.19 ppm	Calibration Bottle/Tank	Active	LL193304	A12023	SO2T Tank LL193304 10.19 ppm
SO2T Tank LL37405 10.05 ppm	Calibration Bottle/Tank	Active	LL37405	A12022	SO2T Tank LL37405 10.05 ppm
SO2T Tank LL40831 10.15 ppm	Calibration Bottle/Tank	Active	LL40831	A12023	SO2T Tank LL40831 10.15 ppm
NO2 Tank LL51034 NO: 24.55 ppm/NOx: 24.92	Calibration Bottle/Tank	Active	LL51034	A12022	NO2 Tank LL51034 NO: 24.55 ppm/NOx: 24.92 p
NO2 Tank LL64265 NO: 23.04 ppm/NOx: 23.08	Calibration Bottle/Tank	Active	LL64265	A12022	NO2 Tank LL64265 NO: 23.04 ppm/NOx: 23.08 p
NO2 Tank LL66277 NO: 24.88 ppm/NOx: 24.9	Calibration Bottle/Tank	Active	LL66277	A12023	NO2 Tank LL66277 NO: 24.88 ppm/NOx: 24.9 pp
NO2 Tank LL80536 NO: 24.67 ppm/NOx: 25.12	Calibration Bottle/Tank	Active	LL80536	A12024	NO2 Tank LL80536 NO: 24.67 ppm/NOx: 25.12 p
COT Tank XL003591B 251.8 ppm	Calibration Bottle/Tank	Active	XL003591B	B52018	COT Tank XL003591B 251.8 ppm

+ Asset Details

- Cal Standard/Bottle Details

Standard Owner:

EPA Cylinder ID: BLM001360

PGVP Producer ID: A12022

Certification Details

Certifying Authority:

Certification Date: 06/20/2022 12:01

Expiration Date: 06/20/2026 12:00

Reference Concentration: 10.090000

Secondary Concentration:

Tertiary Concentration:

Quaternary Concentration:

Bottle Pressure:

- Calibrations

Calibration	Phase
<input checked="" type="checkbox"/> FALLRIVER : FALLRIVE : SO2TMPV	(All Phases)
<input checked="" type="checkbox"/> FALLRIVER : FALLRIVE : SO2TPREC	(All Phases)
* <input type="checkbox"/>	(All Phases)

- Assignment History

Start	End	Site
<input checked="" type="checkbox"/> 07/08/2022 10:51	03/27/2023 08:00	LAB
<input checked="" type="checkbox"/> 03/27/2023 10:00		FALLRIVER

PROTOCOL GAS VERIFICATION PROGRAM

Site	Parameter	Sequence	Phase	Value	Expected Value	Level	EPA Cylinder ID
FALLRIVER	SO2T	SO2TPREC	SPAN	79.4214019	80	SPAN	BLM001360
FALLRIVER	SO2T	SO2TPREC	PREC	4.8394947	5	PREC	BLM001360
FALLRIVER	SO2T	SO2TPREC	ZERO	0.369375646	0	ZERO	BLM001360
FALLRIVER	SO2T	SO2TMPV	L1	79.5737457	80	80%	BLM001360
FALLRIVER	SO2T	SO2TMPV	L2	39.7785491	40	60%	BLM001360
FALLRIVER	SO2T	SO2TMPV	L3	19.9288406	20	40%	BLM001360
FALLRIVER	SO2T	SO2TMPV	L4	9.97911834	10	20%	BLM001360
FALLRIVER	SO2T	SO2TMPV	ZERO	0.312675863	0	ZERO	BLM001360

```
Q&|I|1-Point QC|0660|25|005|1004|42401|1|20240702|1|600|008|4.81|5.00| ||BLM001360
Q&|I|1-Point QC|0660|25|005|1004|42401|1|20240705|1|600|008|4.90|5.00| ||BLM001360
Q&|I|1-Point QC|0660|25|005|1004|42401|1|20240708|1|600|008|4.83|5.00| ||BLM001360
```

WORK ITEMS

Springfield Purple Air Check (DEP9A9B)
Springfield BC Weekly Instrument Check
Springfield Daily Site Log
Springfield PM 2.5 Filter Collection
Springfield Level1 Data Review Point
Springfield T640 Optical Cell Cleaning
Springfield Audit Site Visit Information
Springfield NO2 Filter Change
Springfield BC Monthly Duties
Springfield SO2T Filter Change
Springfield FRM PM 2.5 Monthly QC
Springfield T640 QC Check
Springfield SO2T Quarterly Calibration

Roxbury NO2 Tank Change
Roxbury SO2T Tank Change
Roxbury COT Tank Change

Roxbury Calibrator Recert
Greenfield Calibrator Recert
Fall River Calibrator Recert
Weymouth FR Calibrator Recert
WorcSummer Calibrator Recert
WorcAirport Calibrator Recert
Blue Hill Calibrator Recert

- Removes the guess work
- Critical Criteria Work Items
- Historical Maintenance Records
- AVTrend contains site specific
- AV displays completed list

HISTORICAL SAMPLER MAINTENANCE RECORD WORK ITEMS

Task Name	Site Name	Due Date
(Custom)		
Chicopee NO2 Maintenance	CHICOPEE	04/19/2050 09:17
Chicopee O3 Maintenance	CHICOPEE	05/03/2050 09:17
Chicopee T640 Maintenance	CHICOPEE	09/26/2050 13:18

Task Definition				Repeat	Activity
Overdue	Due Date	Completed Date	Memo		
<input type="checkbox"/>					
<input type="checkbox"/>	01/22/2050 23:59	12/18/2023 13:32	Replumbing Calibration Manifold in Line with T703 and MPV...		
<input type="checkbox"/>	01/21/2050 23:59	12/11/2023 15:07	O3 MPV with Span and Zero Adjustments- FAIL...		
<input type="checkbox"/>	01/20/2050 23:59	12/08/2023 12:20	Instrument Swap...		
<input type="checkbox"/>	01/19/2050 23:59	10/13/2023 06:20	O3 Filter Change, Leak Checks and MPV After Lamp Adjustment...		
<input type="checkbox"/>	01/18/2050 23:59	10/13/2023 06:16	O3 MPV- No Adjustments...		
<input type="checkbox"/>	01/17/2050 23:59	10/10/2023 14:14	O3 Failed Calibration with Zero Adjustment...		
<input type="checkbox"/>	01/16/2050 23:59	07/27/2023 12:12	O3 Calibration with Zero Adjustment...		
<input type="checkbox"/>	01/15/2050 23:59	07/24/2023 07:36	Updated T400 firmware version...		
<input type="checkbox"/>	01/14/2050 23:59	04/11/2023 12:30	O3 Diaphragm Change, Filter Change, Leak Checks, Quarterly TTP Points and MPV (no adjustments)...		

CONSISTENT LOGBOOK ENTRIES UTILIZING ANNOTATION REPORTS

Annotation Report
14-Jun-2024 06:00 - 14-Jul-2024 23:59

Site: CHICOPEE
Parameter: NO2

<u>Site</u>	<u>Parameter</u>	<u>Category</u>	<u>Date Annotated</u>	<u>User Name</u>	<u>Start</u>	<u>End</u>	<u>Annotation</u>
CHICOPEE	NO2	Maintenance	14-Jun-24 07:52	PShea	14-Jun-24 07:49	14-Jun-24 07:49	M flag for LC, FC, LC.
CHICOPEE	NO2	Maintenance	14-Jun-24 07:52	PShea	14-Jun-24 07:51	14-Jun-24 07:51	Pre FC LC = RX = 2.2", PSI = 2.3"
CHICOPEE	NO2	Maintenance	14-Jun-24 07:54	PShea	14-Jun-24 07:53	14-Jun-24 07:53	Post FC LC = RX = 2.2", PSI = 2.4" Placed probe back into manifold and left M flag on waiting for sampler to resume ambient averages.
CHICOPEE	NO2	Maintenance	14-Jun-24 08:15	PShea	14-Jun-24 08:05	14-Jun-24 08:05	Removed m flag.

Entry Text

Chicopee O3 Filter Change [on O3 #2444] completed on 3/5/2024 10:04:54 AM by PShea

Memo:

05-Mar-24 09:15 05-Mar-24 09:15 M flag for LC, FC, LC.

05-Mar-24 09:16 05-Mar-24 09:16 Pre FC LC = 2.7", 2cc/min.

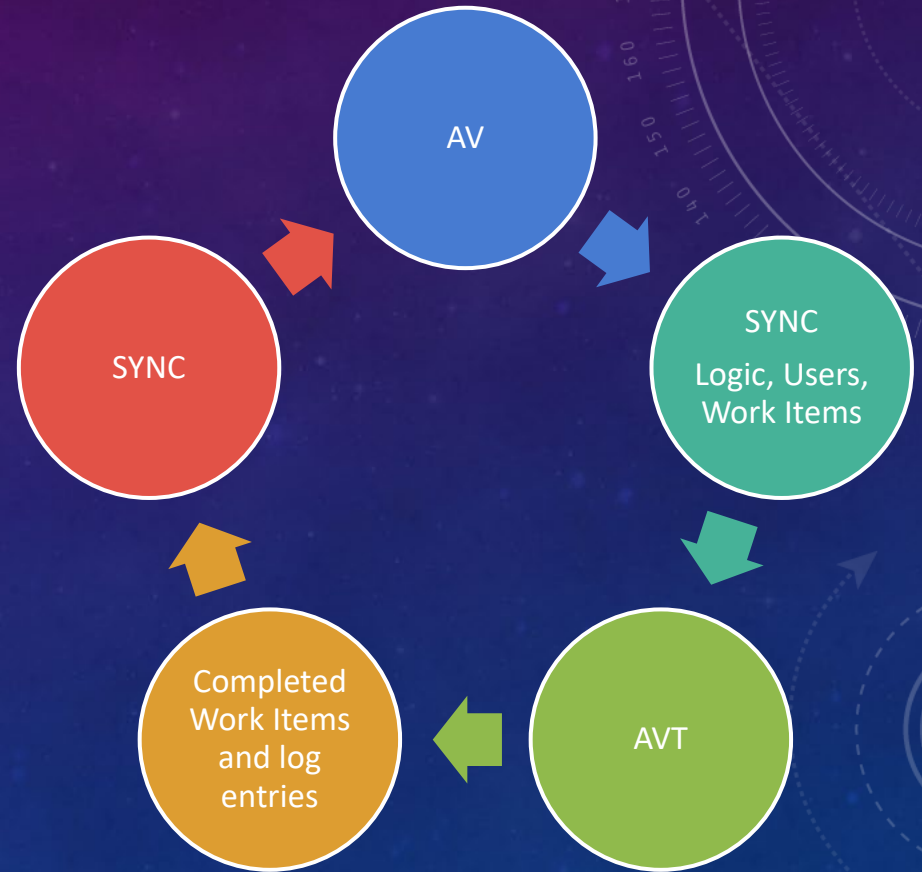
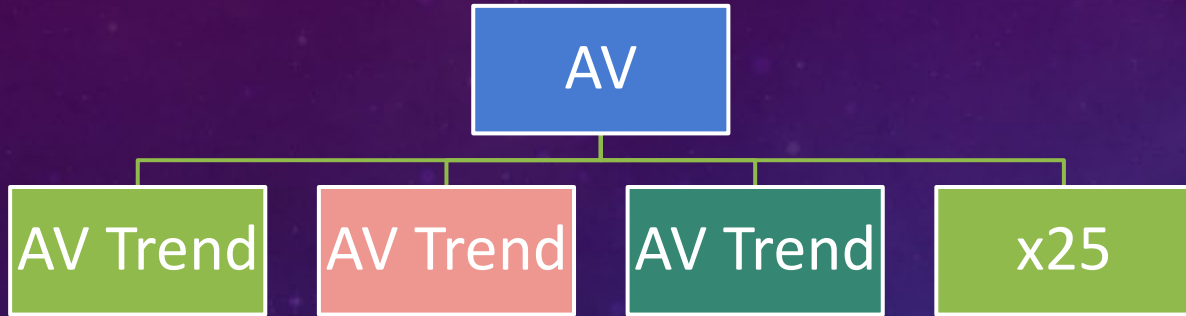
05-Mar-24 09:19 05-Mar-24 09:19 post FC LC = 2.7", 2cc/min
removed cap and left M flag on for manifold cleaning.

05-Mar-24 09:28 05-Mar-24 09:28 Took apart manifold
few spiders under rain hood.
ran a few wet Kimwipes down 3/8" sample line until the last one was clear. First few were black.

05-Mar-24 09:40 05-Mar-24 09:40 Reassembled manifold and replaced sample lines.
left M flag on waiting for sampler to resume ambient averages.

05-Mar-24 09:55 05-Mar-24 09:55 Removed M flag.

AV/AVT SYNC



[Site Sync - Monitor Assessments] Start: 1/25/19 03:52:15, Repeat:001D
[Site Sync - Users] Start: 2/1/19 03:46:46, Repeat:001N
[Sites Sync - Configurations] Start: 9/2/18 03:30:00, Repeat:001W
[Sites Sync Work items/Asset/Logbook site sync.] Start: 2/14/24 18:37:00, Repeat:001D

UPGRADES/FUTURE/LIMITS/QUESTIONS/SUGGESTIONS

Pros/Future

- Opening doors for more automation
- Hardware Plug and Play Network
 - Hardware Interchangeable
 - Very effective with the AV Asset Tracker/Work Items
- Integration of small sensor networks
- All the credit goes to Agilaire
 - They are continually updating their software
 - Streamlining operations around the AV technology

Cons

- Lot of detailed programming to figure out
- Learning Curve
- Still using signal wires
- 8832 Logger have limitations
- Large server storage