

In Field Instrument Review  
2020.12.12 – 2021.01.03  
Performed by Colleen O'Bryant

**100255 (Clear AFB)** – 2/4 Filter wheel error on VOC – Filter wheel errors occurred during 2020.12.12 VOC day and discovered on 2020.12.14. Clear AFB BTS provided troubleshooting and resolved the issue (100255 2020.12.12 Change In Instrument Status Form) No further status messages occurred – No action taken.

**100355 (Homer PD)** – 2/5 RFI on Subject Test, 1/5 Pump Error on Subject Test – all status messages occurred with the same subject (2020.12.20). No further issues following this test. – No action taken.

**100366 (APD)** – 3/56 Pump Error on Subject Test, 1/56 Standard Out of Range on Subject Test – No action taken

**100381 (AST/Soldotna)** – 2/19 RFI on Subject Test – No action taken.

**100400 (Craig PD)** – 1/3 Tank Interference on VOC – Successful VOCs completed on 2020.12.14 and 2021.01.03 – No action taken.

**100406 (Juneau PD)** – 1/12 Internal Standard Error on Subject Test – Internal standard < 1% outside normal range and wasn't repeated – No action taken.

**100413 (Kenai PD)** – 2/10 Tank Interference on Subject Test – Troubleshooting occurred on 2020.12.27 followed by the instrument being monitored. Instrument removed from service for internal standard errors, simulator timeouts and tank interference on 2020.01.10 (100413 2020.12.27, 100413 2020.12.30, 100413 2021.01.11 Change In Instrument Status Forms).

**100416 (Fairbanks PD)** – 1/2 Tank Interference on VOC – Failed VOC on 2020.01.03 followed by a successful VOC – No action taken.

**100420 (Ft. Greely PD)** – 1/3 RFI on Subject Test – No action taken.

**100421 (JBER)** – 1/7 RFI on Subject Test – No action taken. Recommended monitoring from 2020.10.24 – 2020.12.12 IFIR no longer needed.

**100665 (AST/Emmonak)** – 1/3 Blank Error on VOC followed by two successful VOCs – No action taken.

**100667 (AST/Tok)** – 1/3 RFI on VOC followed by two successful VOCs – No action taken.

**100668 (Palmer PD)** – 4/21 RFI on Subject Test – No action taken.

**100680 (Dillingham PD)** – 1/3 Diagnostic Failed on VOC – Failed due to Pump On, followed by two successful VOCs – Recommend Monitoring

Completed 2021.01.27 COB

**100689 (Anchorage PD) – 1/79 Pump Error on Subject Test, 1/79 Standard out of Range on Subject Test, 1/79 Ambient Fail on Subject Test, 1/79 Internal Standard Error on Subject Test, 1/79 Static Analysis Error on Subject Test – Based on numerous cycles of previous monitoring and static analysis error - Recommend removing instrument from service.**

**100693 (Juneau PD) – 1/4 Blank Error on Subject Test – Status message occurred following an elevated subject sample – No action taken.**

**Instruments previously being monitored during 2020.12.12 VOC Cycle – The following information is copied from 2020.12.12 IFIR**

**100413 (Kenai PD):** 3/19 RFI, 2/19 Blank error, 1/19 Internal standard error on subject tests – Internal standard error appeared to be a sudden, temporary change and not part of a trend, 1 Blank error followed by a completed test. Contacted agency (100413 2020.12.27 Change In Status) – *Recommend monitoring* – **See more information above - Instrument removed from service**

**100421 (JBER):** 1/21 RFI, 1/21 Pump error, 2/21 Subject interference, 3/21 Blank error, 1/21 Ambient fail on subject tests – All of these were followed by completed tests – *Recommend monitoring* – **Monitoring no longer required**

**100689 (Anchorage PD):** 1/140 RFI, 2/140 Pump errors, 3/140 Tank interference, 3/140 Blank errors, 2/140 Internal standard errors, 4/140 Diagnostic failed on subject test – Most status messages followed by completed tests, Diagnostic failed messages all resulted from low breath tube temperature, Internal standard error values were 7% and 25% which did appear to be isolated incidents – Sent an e-mail to one of the Datamaster Supervisors on 01/05/2021 recommending checking the breath hose heater connection to the instrument - *Recommend continued monitoring* – **Recommend removing instrument from service**

\*\*Agencies not included in this review are Eielson AFB (100346) and Sand Point PD (100360).

# Subject Test Data

Serial Number	Total Subject Tests	RFI		Pump Error		Interference		Tank Interference		Blank Error		Standard Out of Range		Gas Flow Error		Ambient Fail		Internal Standard Error		Diagnostic Failed	
		Date Range		Total Tests		Total Messages		Total Messages		Total Messages		Total Messages		Total Messages		Total Messages		Total Messages		Total Messages	
		12/12/2020	1/3/2021	351	23	6.6%															
100355	5	2	40%	1	20%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
100366	56	0	0%	3	5%	0	0%	0	0%	0	0%	1	2%	0	0%	0	0%	0	0%	0	0%
100381	19	2	11%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
100406	12	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	1	8%	0	0%
100413	10	0	0%	0	0%	0	0%	2	20%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
100420	3	1	33%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
100421	7	1	14%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
100668	21	4	19%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
100689	79	0	0%	1	1%	0	0%	0	0%	0	0%	1	1%	0	0%	1	1%	1	1%	0	0%
100693	4	0	0%	0	0%	0	0%	0	0%	1	25%	0	0%	0	0%	0	0%	0	0%	0	0%
Total	351	10	3%	5	1%	0	0%	2	1%	1	0%	2	1%	0	0%	1	0%	2	1%	0	0%

## Subject Test Data

Serial Number	Total Subject Tests	User Abort		Detector Overflow		Barometer Error		Filter Wheel Error		Date Range		Total Tests		Total Messages		Samp Chamb Low		Breath Tube High		Static Analysis Error	
										12/12/2020	1/3/2021		351	1	0.3%						
100689	79	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	1	1%
Total	351	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	1	0%

# VOC Data

Serial Number	Total VOC Tests	RFI		Pump Error		Interference		Tank Interference		Date Range		Total Tests		Total Messages		Ambient Fail		Internal Standard Error		Diagnostic Failed	
										12/12/2020	1/3/2021	158	3.2%	5	3.2%	0	0%	0	0%	0	0%
100400	3	0	0%	0	0%	0	0%	1	33%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
100416	2	0	0%	0	0%	0	0%	1	50%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
100665	3	0	0%	0	0%	0	0%	0	0%	1	33%	0	0%	0	0%	0	0%	0	0%	0	0%
100667	3	1	33%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	1	33%
100680	3	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	1	33%
Total	158	1	1%	0	0%	0	0%	2	1%	1	1%	0	0%	0	0%	0	0%	0	0%	1	1%

### VOC Data

Serial Number	Total VOC Tests	User Abort		Detector Overflow		Barometer Error		Filter Wheel Error		Suck Back Error		Undefined Error		Filter 1 Won't Zero		Samp Chamb Low		Breath Tube High		Static Analysis Error	
								12/12/2020	1/3/2021												
100255	4	0	0%	0	0%	0	0%	2	50%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Total	158	0	0%	0	0%	0	0%	2	1%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%