JSC TOXICOLOGY AND ENVIRONMENTAL CHEMISTRY GROUP

E. Spencer Williams, PhD DABT
Toxicology and Environmental Chemistry
NASA JSC/SK4
Houston, TX 77058

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Voice: (281) 483-8921
Fax: (281) 483-3058
edward.s.williams@nasa.gov

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SUBJECT: Toxicological Assessment of ISS Air and Water Quality: April 19 to December 9, 2025 (Increment 73), including SpaceX-32, Ax-4, SpaceX-33, NG-23, and HTV-X1 Ingress

SUMMARY: Based on these data, air and water quality were acceptable on ISS during this Increment.

AIR QUALITY

Fifteen archive air samples, 10 routine and 5 ingress, were collected in mini grab sample containers (mGSCs) on ISS during Increment 73. A sample was also collected during the ascent of Space-X Crew-11 on August 1, 2025. A summary of the key air quality indicators from the Increment 73 mGSC samples is provided in Table 1.

Data tables containing measured concentrations and corresponding T-values based on appropriate Spacecraft Maximum Allowable Concentrations (SMACs) for compounds present at levels above the laboratory reporting limits are attached to this report. Complete data tables, which include compounds assessed but not detected, are available upon request. Pressure readings for the mGSCs during Increment 73 indicate that two samples were not collected: the Axiom-4 ingress sample on 6/26/2025 (0.7 psia) and the nominal SM sample on November 5, 2025 (also 0.7 psia). The results of these samples are not reported; no analytes could be reliably quantitated due to the minimal sample contained in the mGSC. Two additional samples contained samples at lower-than-expected pressures: JPM on August 11, 2025 (3.5 psia) and US Lab on November 5, 2025 (12.2 psia); though these samples were analyzed and quantitated, a reduction in sample pressure causes decreased sensitivity in the analytical instrumentation. As such, the results of these two samples (marked with an asterisk in Table 1) carry some uncertainty. The analytical results from reportable mGSCs are provided below.

Toxicological Evaluation of ISS Air Quality

Archive air samples (mGSCs) are collected during each Increment and returned for analysis in the Environmental Chemistry Laboratory. Data from the ground analyses complement in-flight data (reported below) and provide a more complete understanding of air quality on the ISS. Analytical results from the routine mGSC samples that returned on Crew-10 and -11 and SpaceX-32 and -33 confirmed that air quality was acceptable during this Increment. **T-values calculated using data from all routine archive samples met the 180-d T-value guideline (T< 1), indicating no concern for crew health.**

Table 1. Analytical summary of ISS air analyses from mGSCs during Increment 73

Return Flight	Sample Location	Sample Date	Alcohols[a] (mg/m^3)	T-Value[b]
Crew-10	SpX-32 ingress	4/22/2025	4.6	0.4 (0.3)
SpaceX-32	US Lab	5/15/2025	4.3	0.2
SpaceX-32	Columbus	5/15/2025	4.5	0.2
Crew-11	Axiom-4 ingress	6/26/2025	NR	NR
Crew-10	US Lab	6/27/2025	4.4	0.4
Crew-10	SM	6/27/2025	3.6	0.2
Crew-11	Ascent	8/1/2025	0.3	<0.1
SpaceX-33	US Lab	8/11/2025	2.7	0.1
SpaceX-33	JPM*	8/11/2025	2.6	0.1
Crew-11	SpX-33 ingress	8/25/2025	4.5	0.5 (0.2)
Crew-11	NG-23 ingress	9/18/2025	3.8	2 (1.1)
SpaceX-33	US Lab	9/26/2025	4.5	0.2
SpaceX-33	Columbus	9/26/2025	3.7	0.2
Crew-11	HTV-X1 ingress	10/30/2025	6.1	3.3 (3.0)
SpaceX-33	US Lab*	11/5/2025	3.90	0.2
SpaceX-33	SM	11/5/2025	NR	NR
Guideline			*<5*	*<1*[c]

[a] Includes acetone.

[b] Sum of the ratios of the measured concentrations and the corresponding 180-day SMAC for each compound; parenthesis indicate value based on 7-day SMACs and applicable to first ingress.

[c] T-value <1 used to evaluate routine monthly sampling; <3 used to evaluate first ingress.

NR not reported due to no sample pressure.

* lower than expected pressure, but results were reportable.

The average, rounded T-value calculated from the nominal Increment 73 mGSC samples was 0.2 (Figure 1). Acrylonitrile was a significant contributor to the T-value in in the US Lab sample in June (0.4). In the other archive samples, carbon monoxide was frequently the primary contributor to the T-value.

ANITA-2 provides in-flight data for up to 48 analytes every 6-10 minutes. In early 2025, NASA selected ANITA-2 as its primary trace contaminants monitor for ISS after a review of its performance against archive samples and Air Quality Monitor (AQM) readings. Monthly average readings for several of ANITA-2's target compounds are presented in Table 2. Trimethylsilanol (TMS) was measured by ANITA-2 in October, coinciding with the arrival of HTV-X1; this compound was observed at 10 mg/m^3 in the HTV-X1 ingress mGSC sample and contributed 87% of the total T-value in that sample, which was at the ingress guideline limit of 3. A non-local sample was also collected in HTV-X1 and measured by ANITA-2 ; results are provided below.

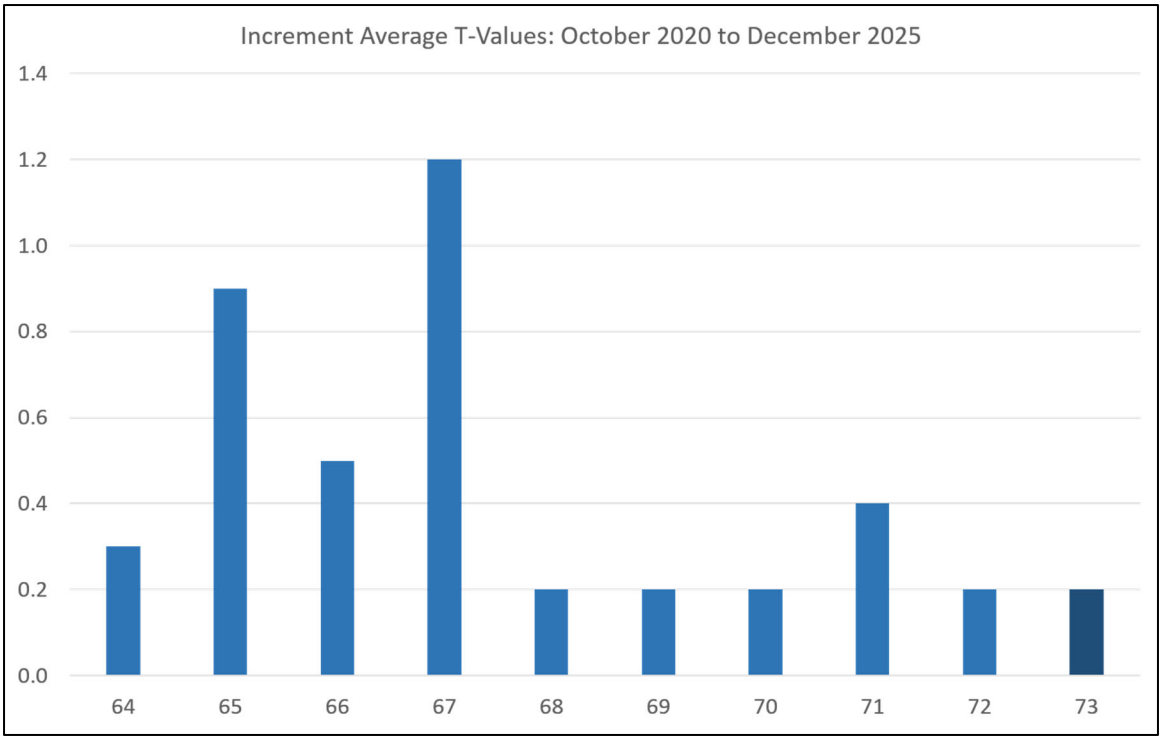

Figure 1. mGSC-Derived T-Values for Increments 64-73
(does not include CO_2, first ingress, or contingency samples)

Alcohol values for the eight available routine mGSC samples from Increment 73 were all below the ECLS guideline of < 5 mg/m^3. The levels observed are mostly attributable to ethanol. Data from ANITA-2 indicates that ethanol levels continued their downward trend from September 2024 until the mid-summer, at which time levels began to rise slightly.

None of the reported routine mGSC samples collected and analyzed during Increment 73 contained a CO_2 concentration above the limit documented in Flight Note F091532D, which requests that the 24-hour average concentration not exceed 3.0 mmHg (7100 mg/m^3, 4000 ppm) on the US segment. While mGSC CO_2 sampling provides a snapshot of the CO_2 concentration, real-time CO_2 data are available from the Commercial Major Atmospheric Constituents Sensors (CMACS), from ANITA-2 in Columbus, and intermittently from the Major Constituent Analyzers (MCAs) in Node 3 and the US Lab (daily average CO_2 concentrations are represented in Figure 2). To preserve the longevity of the instrumentation, MCAs are only activated during EVA activities, crew metabolic characterization, tech demo analysis, anomaly resolution, and when requested by crew surgeons.

Table 2: Monthly average concentrations (mg/m^3) of ANITA-2 target compounds (Increment 73)

Compound	April 2025	May 2025	June 2025	July 2025	August 2025	September 2025	October 2025	November 2025	December 2025	Increment Average
Methanol	0.31	0.32	0.33	0.29	0.28	0.28	0.31	0.31	0.30	0.31
Ethanol	4.99	3.06	2.97	1.81	1.97	2.11	2.61	2.34	2.61	2.73
2-Propanol	0.45	0.40	0.38	0.37	0.45	0.41	0.42	0.43	ND	0.41
PFP	0.07	0.07	ND	ND	0.11	ND	ND	ND	ND	0.09
R134a	ND	ND	ND	ND	ND	ND	ND	0.15	ND	ND
DMCPS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TMS	ND	ND	ND	ND	ND	ND	0.71	ND	ND	ND
HMCTS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
OCTMS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SF6	0.07	0.07	0.10	0.06	0.08	0.05	0.06	0.03	0.06	0.06
Ammonia	0.03	ND	ND	ND	ND	ND	0.03	0.03	ND	0.03
CO	2.33	1.71	1.89	2.27	1.69	1.78	2.20	2.33	2.26	2.02
Methane	77.55	61.30	51.82	52.92	56.58	72.58	83.13	86.45	96.11	67.79
CO2	1.92	1.81	2.05	2.31	2.03	1.93	1.98	1.99	1.98	2.00
Isobutane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N2O	0.06	0.20	0.28	0.11	0.09	0.06	0.35	ND	ND	0.16
CF4	0.10	0.09	0.08	0.07	0.07	0.07	0.07	0.07	0.07	0.08

ND: not detected during that month.

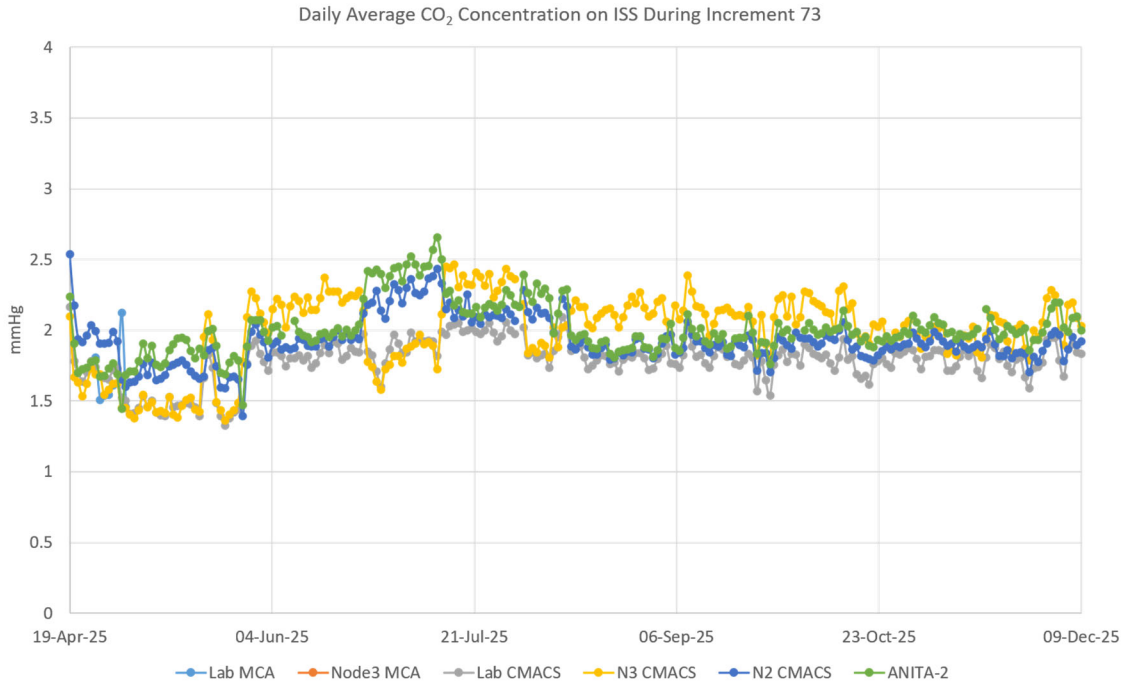

Figure 2. Daily Average Environmental ppCO$_2$ Concentrations on ISS During Increment 73 (mmHg)

The deployment of passive formaldehyde badges as part of the Formaldehyde Monitoring Kit (FMK) has been discontinued due to difficulties with procuring the equipment and concerns with reliability of the results. Though NASA has discontinued the use of formaldehyde badges on ISS, ANITA-2 has the capability to measure formaldehyde at levels on the order of 80 $\mu g/m^3$, which is below the 180-d SMAC limit but exceeds historical concentrations. Formaldehyde was not detected during Increment 73.

SpaceX-32 Ingress

- Date: April 22, 2025
- Ingress at 14:37, mGSC collected at 14:44
- Low mixing at time of sample collection
    - Methane: 12 mg/m^3 vs. ~58 mg/m^3 on ISS
    - Ethanol: 1 mg/m^3 vs. ~3 mg/m^3 on ISS
- T-value: 0.3 (no concern for crew health)

Axiom-4 Ingress

- Date: June 26, 2026
- An mGSC sample was attempted upon ingress into Axiom-4. However, the pressure in the mGSC was 0.7 psia when it arrived at the Environmental Chemistry Lab, indicating that the sample was not actually collected. No analytes in this sample could be reliably quantitated.

Crew-11 Ascent

- Date: August 1, 2025 (during ascent to ISS)
- T-value: < 0.1 (no concern for crew health)

As NASA now has data from eleven crewed vehicles indicating a consistent record of excellent air quality, no further ascent samples will be taken in SpaceX crewed vehicles.

SpaceX-33 Ingress

- Date: August 25, 2025
- Ingress at 13:00, mGSC collected at 13:01
- Low mixing with ISS atmosphere at time of sample collection
    - Methane: 7 mg/m^3 vs. 50-74 mg/m^3 on ISS
    - TMS: 0.45 mg/m^3 vs. 0.1 mg/m^3 on ISS
- T-value: 0.2 (no concern for crew health)

NG-23 Ingress

- Date: September 18, 2025
- Ingress at 18:37, mGSC reported at 18:40
- Relatively low mixing with ISS atmosphere at time of sample collection
    - Methane: 18 mg/m^3 vs. ~70 mg/m^3 on ISS
    - Ethanol: 1.1 mg/m^3 vs. ~3 mg/m^3 on ISS
- T-value: 1.1 (acceptable for ingress - no concern for crew health)
    - Primary contributors were fluorotrimethylsilane (0.47) and TMS (0.27)

HTV-X1 Ingress

- Prior to HTV-X1 launch, JAXA notified JSC Toxicology that their offgas test data indicated that the T-value at ingress into HTV-X1 might exceed 3.0 if the launch were significantly delayed. Due to these concerns, an ANITA-2 non-local sample was also planned for this ingress. Data from the mGSC and ANITA-2 NLS are for the most part consistent (Table 3).
- Date: October 30, 2025
- Ingress at 12:37, mGSC reported at 12:38 (16 minutes)
- Relatively low mixing with ISS atmosphere at time of sample collection
    - Methane: 30 mg/m^3 vs. ~83 mg/m^3 on ISS
    - Ethanol: 1.2 mg/m^3 vs. ~3 mg/m^3 on ISS
    - Isopropanol: 4 mg/m^3 vs. 0.46 mg/m^3 on ISS
    - TMS: 10 mg/m^3 vs. 0.06 mg/m^3 on ISS
- T-value: 3.0 (though right at target T-value, no concern for crew health as atmosphere was scrubbed quickly and effectively. No crew symptoms were reported). Primary contributors were TMS (2.6), and fluorotrimethylsilane (0.3).
    - TMS levels on ISS fell below ANITA-2's limits of detection (0.13 mg/m^3) within 5 hours post-ingress, indicating highly effective removal through scrubbing.

Table 3: HTV-X1 Ingress Data from mGSC and ANITA-2 Non-Local Sample

Compound	mGSC (mg/m^3)	ANITA-2 (mg/m^3)
TMS	10	3.5
Hexamethyldisiloxane	0.65	0.73
Isobutane	1.1	0.81
Methane	30	42
2-propanol	4.0	3.5
Ethanol	1.2	1.7
Methanol	0.31	0.28

WATER QUALITY

In total, 6 water samples were collected from the US Segment during Increment 73 and returned on SpaceX-32 and Crew-10. Hot water samples from PWD and xPWD were collected in May and July 2025; these samples fall under the ISS Crew Health Care System (CHeCS). The remaining four samples were non-potable water, including wastewater and condensate samples (ECLS). Summaries of selected analytical results from the Increment 73 samples are provided in Tables 4A and 4B.

Toxicological Evaluation of ISS Water Quality

Routine water quality monitoring is performed in-flight using the total organic carbon analyzer (TOCA). Results from these analyses provide a general indication of overall water quality. Typically, archive water samples are also collected during each Increment and returned for comprehensive analysis in ground laboratories (Table 4A, 4B). Data from the ground analyses complement the in-flight data and provide a more complete understanding of water quality on the ISS.

Table 4A. Analytical Summary of ISS Water Analyses for CHeCS Samples (Increment 73)

Return Mission	Sample Location	Sample Date	TOC (mg/L)	DMSD (mg/L)	Methyl Sulfone (mg/L)	Conductivity (µS/cm)	Total Iodine (mg/L)
SpaceX-32	PWD Hot	5/6/2025	0.7	<1	0.2	2	<0.05
Crew-10	xPWD Hot	7/23/2025	0.4	<1	0.2	2	0.06

Table 4B. Analytical Summary of ISS Water Analyses for ECLS Samples (Increment 73)

Return Mission	Sample Location	Sample Date	TOC (mg/L)	DMSD (mg/L)	Methyl Sulfone (mg/L)	Conductivity (µS/cm)	Total Iodine (mg/L)
SpaceX-32	Wastewater	5/19/2025	28.7	3.4	0.1	85	0.13
SpaceX-32	US Condensate	5/19/2025	103	5.8	0.2	182	0.01
Crew-10	Wastewater	8/4/2025	34.0	4.6	0.1	129	0.19
Crew-10	US Condensate	8/4/2025	65.4	6.1	0.1	193	0.05

Potable Water

Concentrations of all chemicals detected in the potable water samples met the requirements listed in SSP 41000, *System Specification for the International Space Station* and JSC 63414, *Spacecraft Water Exposure Guidelines (SWEGs)*. Total organic carbon (TOC) concentrations from in-flight (PWD TOC and WPA TOC) and ground analyses (Archive TOC) performed between December 2022 and December 2025 are shown in Figure 3. The TOC concentrations in the potable samples continued to be low and were well below both the specification for the US segment (< 3 mg/L) and the 100-day SWEG (5 mg/L). Elevated levels of alcohols did not translate into noteworthy increases in TOC in potable water. Methyl sulfone, tracked for potential Sabatier impacts, was detected in both potable water samples at 0.2 mg/L.

Iodine is a biocide used on the US Segment. It is added to the water produced by the WPA but removed prior to crew consumption to avoid potential thyroid dysfunction. The total iodine level in the potable samples collected from the PWD was below the reporting limit, and the sample from xPWD contained 0.06 mg/L, indicating effective removal of iodine in water intended for consumption. For additional information regarding microbial analyses, see the Increment 73 post-flight report generated by the JSC Microbiology Laboratory.

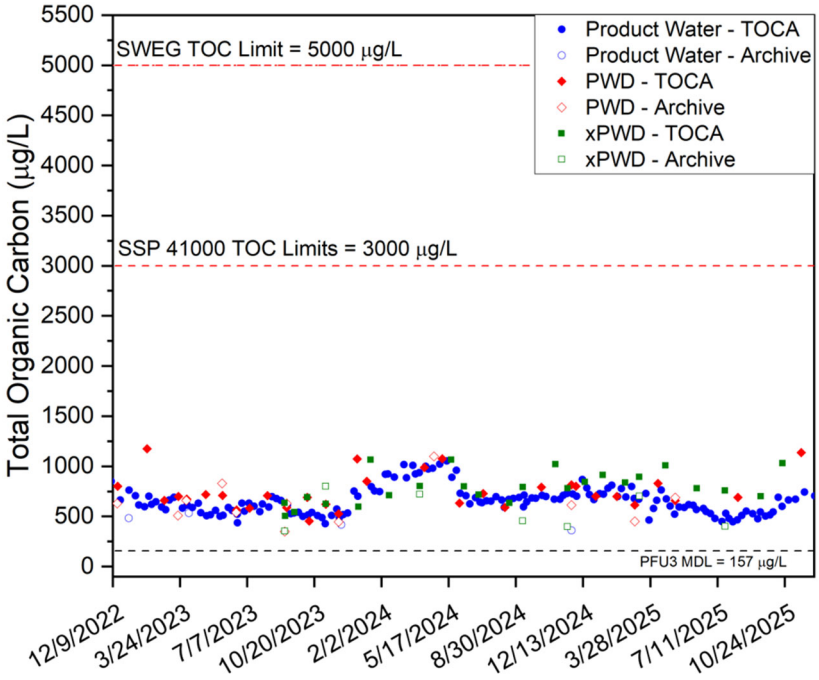

Figure 3. Total Organic Carbon (TOC) trending in US Potable Water from Archive Water Samples and On-Orbit TOCA (PFU3) for December 2022 to December 2025

Condensate

Condensate samples were collected on the US Segment in May and August 2025. Both condensate samples contained TOC levels well below the historical average of 142 mg/L. Organic compounds detected at or above 1 mg/L are listed in Table 5. In both samples, only zinc and nickel were detected above 0.1 mg/L. The concentration of ammonium in both samples was 20 mg/L.

Table 5: Organic Compounds Detected > 1 mg/L in US Condensate Sampled During Increment 73

Compound	Condensate (mg/L)		Historical average (mg/L)
	5/19/2025	8/4/2025	
Ethanol	58.1	26.5	48.3
Acetate	29.1	25.0	38
Benzyl alcohol	11.3	3.2	11.7
1,2-propanediol	9.6	10.3	25.6
Methanol	6.4	5.0	4.9
Dimethylsilanediol	5.8	6.1	31.4
Formate	4.9	1.8	7.0
2-propanol	3.7	2.0	1.5
Acetone	2.5	4.1	2.0
1,2-ethanediol	ND	2.4	5.0
Formaldehyde	1.8	1.2	1.0

ND: not detected

Wastewater

Wastewater samples were also collected in May and August 2025. TOC levels in both wastewater samples fell below the historical average of 37.4 mg/L. Organic compounds detected above 1 mg/L are listed in Table 6. In both samples, nickel and zinc were the only metals detected at levels above 0.1 mg/L. Ammonium was present at concentrations of 8.7 and 13.7 mg/L in the May and August 2025 samples, respectively.

Table 6: Organic Compounds Detected > 1 mg/L in Wastewater Sampled During Increment 73

Compound	Wastewater (mg/L)		Historical average (mg/L)
Acetone	10.8	6.8	3.5
Ethanol	ND	6.7	10.6
Methanol	5.6	4.3	4.3
Dimethylsilanediol	3.4	4.6	13.0
Benzyl alcohol	2.0	2.4	2.5
2-propanol	1.0	1.6	ND

ND: not detected

Given the results from wastewater and condensate, the cleanliness of potable water dispensed from the PWD and xPWD provide strong evidence that the Water Recovery System is performing well on ISS. Expanded summary tables containing organic carbon recoveries and results for all analytes present at concentrations above reporting limits are included as attachments to this report.

E. Spencer Williams, PhD DABT
NASA Toxicologist

Edward Williams
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Valerie E. Ryder, PhD DABT
NASA Toxicologist

Valerie Ryder
Digitally signed by Valerie Ryder
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Enclosures

- Table S-1A: Analytical concentrations of compounds quantified in mGSCs collected during Increment 73 and returned on SpaceX-32, -33, and Crew-10
- Table S-1B: Analytical concentrations of compounds quantified in ingress and ascent mGSC samples collected during Increment 73 and returned on Crew-10 and -11
- Table S-2A: T-values corresponding to concentrations for routine mGSC samples collected during Increment 73 and returned on SpaceX-32, -33, and Crew-10
- Table S-2B: T-values corresponding to concentrations for ingress and ascent mGSC samples collected during Increment 73 and returned on Crew-10 and -11
- Table S-3A: Analytical concentrations of compounds quantified in hot potable water samples returned on SpaceX-32 and Crew-10
- Table S-3B: Analytical concentrations of compounds quantified in US condensate and wastewater returned on SpaceX-32 and Crew-10

TABLE S-1A: ANALYTICAL RESULTS FOR NOMINAL SAMPLES RETURNED ON SPACEX-32, CREW-10, AND SPACEX-33

Increment	73									
Mission	SpX-32		Crew-10		SpX-33					
Sample Location	Lab	Columbus	Lab	SM	Lab	JPM	Columbus	Lab	Lab	SM
Sample Description	Nominal air sample, S/N 2021	Nominal air sample, S/N 2064	Nominal air sample, S/N 2042	Nominal air sample, S/N 2069	Nominal air sample, S/N 2074	Nominal air sample, S/N 2104	Nominal air sample, S/N 2012	Nominal air sample, S/N 2013	Nominal air sample, S/N 2015	Nominal air sample, S/N 2016
Sample Date	5/15/2025	5/15/2025	6/27/2025	6/27/2025	8/11/2025	8/11/2025	9/26/2025	9/26/2025	11/5/2025	11/5/2025
Sample Time	08:32	08:34	12:15	12:20	11:07	11:10	15:02	15:05	17:25	17:27
Analysis/Sample ID	**AQ250686**	**AQ250687**	**AQ250764**	**AQ250765**	**AQ260384**	**AQ260385**	**AQ260386**	**AQ260387**	**AQ260388**	**AQ260389**
Volatiles Targets GCMS (TO-15 mod)										
1,1,1,2-Tetrafluoroethane	0.046	0.050	0.083	0.072	0.055	<0.17	0.082	0.092	0.095	<0.84
1-Butanol	0.028	0.035	0.066	0.064	0.053	<0.074	0.062	0.082	0.064	<0.36
1-Propanol	0.019	0.022	0.030	0.024	0.023	<0.060	0.030	0.035	0.026	<0.30
2-Methyl-1-propene	<0.014	<0.014	0.015	0.014	<0.014	<0.056	0.015	0.016	<0.016	<0.28
2-Propanol (Isopropanol)	0.45	0.51	0.53	See GC-FID	0.30	0.36	0.41	0.44	0.46	<0.48
Acetaldehyde	0.18	0.21	0.14	0.12	0.10	0.10	0.12	0.13	0.10	<0.36
Acetone	0.45	0.53	0.46	0.39	0.32	0.47	0.36	0.38	0.33	1.1
Acrylonitrile	<0.013	<0.013	0.014	<0.013	<0.013	<0.053	<0.013	0.014	<0.015	<0.26
Ethanol	See GC-FID	See GC-FID	See GC-FID	See GC-FID	See GC-FID	1.5	See GC-FID	See GC-FID	See GC-FID	0.56
Ethyl acetate	0.034	0.035	0.053	0.043	0.031	<0.089	0.031	0.039	0.030	<0.44
Isobutane	<0.014	<0.014	<0.014	<0.014	0.022	<0.058	0.026	0.021	<0.016	<0.28
Isoprene (2-Methyl-1,3-butadiene)	0.036	0.042	0.053	0.045	0.031	<0.068	0.034	0.035	0.029	<0.34
Methanol	See GC-FID	See GC-FID	See GC-FID	See GC-FID	0.26	0.28	0.28	0.33	0.31	0.28
Methylene chloride (Dichloromethane)	<0.020	<0.020	<0.020	<0.020	<0.020	<0.081	0.066	0.054	0.035	<0.40
Pentane	<0.018	0.12	<0.018	<0.018	<0.018	<0.072	<0.018	<0.018	<0.020	<0.36
Perfluoro(2-methylpentane)	0.12	0.14	<0.082	<0.082	<0.082	<0.33	<0.082	<0.082	<0.094	<1.6
Trimethylsilanol	0.043	0.054	0.079	0.047	0.041	0.096	0.086	0.071	0.059	<0.44
Volatiles Non-Targets GCMS (estimated conc.)										
Tetradecafluorohexane	not found	not found	1.4	1.1	0.56	not found	0.76	0.82	0.78	not found
Volatiles Targets GCFID										
Ethanol	3.0	3.1	2.8	2.2	1.7	NR	2.6	3.2	2.7	NR
Volatiles Targets TGA										
Carbon dioxide	3400	4000	6100	4800	4800	4100	4100	4100	4600	<14000
Carbon monoxide	1.1	1.1	1.8	1.7	1.1	<1.9	1.2	1.2	1.5	<9.2
Hydrogen	4.5	4.8	4.6	4.6	4.9	4.5	4.0	3.9	4.6	<6.8
Methane	58	58	48	48	51	43	74	74	83	<52
	GMT 135	GMT 135	GMT 178	GMT 178	GMT 223	GMT 223	GMT 269	GMT 269	GMT 309	GMT 309

Comments: Units in mg/m3

NR= Not Reported

Not Found =No unknown peaks above the threshold limit

AQ260247-251, AQ260384-389: Data Qualifier-Acetone: Possible high bias

AQ260248: Initial pressure 0.7psia

AQ260385 Low Initial Pressure 3.5psia

AQ260388 Low Initial Pressure 12.2psia

AQ260389 Low Initial Pressure 0.7psia

TABLE S-1B: ANALYTICAL RESULTS FOR INGRESS AND ASCENT SAMPLES RETURNED ON CREW-10 AND CREW-11

Increment	**73**					
Mission	**Crew-10**	**Crew-11**				
Sample Location	SpX-32	Dragon Cabin	Ax-4	SpX-33	NG-23	HTV-X
Sample Description	Ingress air sample, S/N 2041	Crew-11 Ascent, S/N 2044	Ingress air sample, S/N 2037	Ingress air sample, S/N 2106	Ingress air sample, S/N 2010	Ingress air sample, S/N 2011
Sample Date	4/22/2025	8/1/2025	6/26/2025	8/25/2025	9/18/2025	10/30/2025
Sample Time	14:40	17:44	12:10	13:01	18:40	12:37
Analysis/Sample ID	**AQ250766**	**AQ260247**	**AQ260248**	**AQ260249**	**AQ260250**	**AQ260251**
Volatiles Targets GCMS (TO-15 mod)						
1,1,1,2-Tetrafluoroethane	0.23	<0.042	<0.86	0.22	0.052	0.042
1-Butanol	0.094	<0.018	<0.37	0.11	0.13	0.083
1-Propanol	0.052	<0.015	<0.30	0.043	0.021	0.048
2-Butanone (Methyl ethyl ketone)	0.021	<0.018	<0.36	0.025	0.069	0.040
2-Methyl-1-propene	0.034	<0.014	<0.28	0.048	0.33	0.090
2-Methyl-2-propanol	<0.018	<0.018	<0.37	<0.018	0.035	<0.018
2-Propanol (Isopropanol)	See GC-FID	0.072	0.79	See GC-FID	See GC-FID	See GC-FID
Acetaldehyde	0.14	0.021	<0.37	0.14	0.27	0.18
Acetone	0.31	0.096	1.6	0.25	0.64	0.47
Acrylonitrile	<0.013	<0.013	<0.27	<0.013	<0.013	<0.013
Butanal (Butyraldehyde)	<0.018	<0.018	<0.36	<0.018	0.020	<0.018
Butane	0.015	<0.014	<0.29	0.042	0.057	0.016
Butyl acetate	0.030	<0.028	<0.57	0.059	<0.028	<0.028
Carbon disulfide	0.021	<0.019	<0.38	0.020	0.059	0.048
Carbonyl sulfide (Carbon oxide sulfide)	0.027	<0.015	<0.30	0.029	0.12	0.055
Decamethylcyclopentasiloxane (DMCPS)	<0.15	<0.15	<3.1	<0.15	<0.15	0.40
Ethanol	See GC-FID	0.063	1.5	See GC-FID	See GC-FID	See GC-FID
Ethyl acetate	<0.022	<0.022	<0.45	0.024	0.16	0.045
Hexamethylcyclotrisiloxane (HMCTS)	0.11	<0.18	<3.7	0.086	0.43	0.13
Isobutane	5.8	0.037	<0.29	See GC-FID	See GC-FID	See GC-FID
Isoprene (2-Methyl-1,3-butadiene)	<0.017	<0.017	<0.34	<0.017	<0.017	<0.017
m and p-Xylene	<0.052	<0.052	<1.1	0.075	<0.052	<0.052
Methanol	0.17	0.056	0.60	0.12	0.28	0.31
Methylene chloride (Dichloromethane)	<0.020	<0.020	<0.41	0.14	4.3	0.21
Octamethylcyclotetrasiloxane (OMCTS)	<0.12	<0.12	<2.5	<0.12	0.20	0.19
Pentane	<0.018	<0.018	<0.36	<0.018	<0.018	<0.018
Perfluoro(2-methylpentane)	5.2	<0.082	<1.7	0.24	<0.082	<0.082
Propanal (Propionaldehyde)	<0.014	<0.014	<0.29	0.016	0.025	<0.014
Propane	0.023	<0.011	<0.22	0.032	0.071	0.016
Propene	<0.010	<0.010	<0.21	<0.010	0.021	0.012
Toluene	0.10	<0.022	<0.45	0.26	0.046	<0.022
Trichloroethene	<0.032	<0.032	<0.66	<0.032	0.11	<0.032
Trimethylsilanol	0.54	<0.022	<0.45	0.45	1.1	10
Volatiles Non-Targets GCMS (estimated conc.)						
C-10 Alkanes	not found	not found	not found	0.47	1.1	not found
C11-Alkanes	not found	not found	not found	0.94	2.1	not found
C12-Alkanes	not found	not found	not found	1.7	3.6	not found
C13-Alkanes	2.1	not found	not found	1.4	2.9	0.56
C-16 Alkanes	not found	not found	not found	not found	0.48	not found
Fluorotrimethylsilane	not found	not found	not found	not found	0.52	0.32
Hexamethyldisiloxane	not found	not found	not found	not found	not found	0.65
Tetradecafluorohexane	not found	not found	not found	not found	0.29	not found
Volatiles Targets GCFID						
2-Propanol (Isopropanol)	3.0	NR	NR	3.3	1.6	4.0
Ethanol	1.0	NR	NR	0.67	1.1	1.2
Isobutane	NR	NR	NR	2.9	3.5	1.1
Volatiles Targets TGA						
Carbon dioxide	2300	1700	<15000	1000	2500	2100
Carbon monoxide	0.96	0.63	<9.4	0.67	2.3	3.2
Hydrogen	1.1	0.36	<7.0	1.1	1.3	2.1
Methane	12	3.7	<53	7.2	18	30
	GMT 112	GMT 213	GMT 177	GMT 237	GMT 261	GMT 303

Comments:

TABLE S-2A: T-VALUES FOR SPACEX-32, CREW-10, CREW-11, AND SPACEX-33 RETURNS

Increment	73									
Mission	SpX-32		Crew-10		SpX-33					
	T-Value (180-day)									
Sample Location	Lab	Columbus	Lab	SM	Lab	JPM	Columbus	Lab	Lab	SM
Sample Description	Nominal air sample, S/N 2021	Nominal air sample, S/N 2064	Nominal air sample, S/N 2042	Nominal air sample, S/N 2069	Nominal air sample, S/N 2074	Nominal air sample, S/N 2104	Nominal air sample, S/N 2012	Nominal air sample, S/N 2013	Nominal air sample, S/N 2015	Nominal air sample, S/N 2016
Sample Date	5/15/2025	5/15/2025	6/27/2025	6/27/2025	8/11/2025	8/11/2025	9/26/2025	9/26/2025	11/5/2025	11/5/2025
Sample Time	08:32	08:34	12:15	12:20	11:07	11:10	15:02	15:05	17:25	17:27
Analysis/Sample ID	AQ250686	AQ250687	AQ250764	AQ250765	AQ260384	AQ260385	AQ260386	AQ260387	AQ260388	AQ260389
Volatiles Targets GCMS (TO-15 mod)										
1,1,1,2-Tetrafluoroethane	<0.001	<0.001	<0.001	<0.001	<0.001	ND	<0.001	<0.001	<0.001	ND
1-Butanol	0.001	0.001	0.002	0.002	0.001	ND	0.002	0.002	0.002	ND
1-Propanol	<0.001	<0.001	<0.001	<0.001	<0.001	ND	<0.001	<0.001	<0.001	ND
2-Methyl-1-propene	ND	ND	<0.001	<0.001	ND	ND	<0.001	<0.001	ND	ND
2-Propanol (Isopropanol)	0.003	0.003	0.004	See GC-FID	0.002	0.002	0.003	0.003	0.003	ND
Acetaldehyde	0.045	0.052	0.034	0.031	0.013	0.015	0.016	0.019	0.015	ND
Acetone	0.009	0.010	0.009	0.007	0.006	0.009	0.007	0.007	0.006	0.02
Acrylonitrile	ND	ND	0.203	ND	ND	ND	ND	0.070	ND	ND
Ethanol	See GC-FID	See GC-FID	See GC-FID	See GC-FID	See GC-FID	0.001	See GC-FID	See GC-FID	See GC-FID	<0.001
Ethyl acetate	<0.001	<0.001	<0.001	<0.001	<0.001	ND	<0.001	<0.001	<0.001	ND
Isobutane	ND	ND	ND	ND	<0.001	ND	<0.001	<0.001	ND	ND
Isoprene (2-Methyl-1,3-butadiene)	0.012	0.014	0.018	0.015	0.01	ND	0.011	0.012	0.01	ND
Methanol	See GC-FID	See GC-FID	See GC-FID	See GC-FID	0.010	0.011	0.011	0.013	0.012	0.011
Methylene chloride (Dichloromethane)	ND	ND	ND	ND	ND	ND	0.007	0.005	0.003	ND
Perfluoro(2-methylpentane)	<0.001	<0.001	ND	ND	ND	ND	ND	ND	ND	ND
Propene	ND	ND	ND	ND	ND	ND	<0.001	<0.001	<0.001	ND
Trimethylsilanol	0.011	0.014	0.020	0.012	0.01	0.024	0.022	0.018	0.015	ND
Volatiles Non-Targets GCMS (estimated conc.)										
Tetradecafluorohexane	ND	ND	<0.001	<0.001	<0.001	ND	<0.001	<0.001	<0.001	ND
Volatiles Targets GCFID										
2-Propanol (Isopropanol)	NR	NR	NR	0.004	NR	NR	NR	NR	NR	NR
Ethanol	0.001	0.002	0.001	0.001	0.001	NR	0.001	0.002	0.001	NR
Isobutane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Volatiles Targets TGA										
Carbon monoxide	0.066	0.067	0.104	0.102	0.065	ND	0.073	0.069	0.087	ND
Total T-Value	**0.2**	**0.2**	**0.4**	**0.2**	**0.1**	**0.1**	**0.2**	**0.2**	**0.2**	**< 0.1**

Comments: ND= Value is less than the laboratory reporting limit.
NR= Not Reported

Project Specific SMACS: C10-C13 Alkanes: Used C5-C9 SMACs
C16 Alkanes: Used Hexane SMAC
The individual T-value reporting limit for the compounds is 0.001, any T-value calculated lower than 0.001 is reported as <0.001, but the actual value is used in the total T-value calculation.
The total T-value reporting limit is 0.1, any calculated total T-value lower than 0.1 is reported as <0.1.
AQ260247-251, AQ260384-389: Data Qualifier-Acetone: Possible high bias
AQ260248: Initial pressure 0.7psia
AQ260385 Low Initial Pressure 3.5psia
AQ260388 Low Initial Pressure 12.2psia
AQ260389 Low Initial Pressure 0.7psia

TABLE S-2B: T-VALUES FOR CREW-10 AND CREW-11 RETURNS

Increment	73											
Mission	Crew-10		Crew-11									
	T-Value (7-Day)	T-Value (180 day)	T-Value (7-Day)	T-Value (180-Day)	T-Value (7-Day)	T-Value (180 Day)	T-Value (7-Day)	T-Value (180-Day)	T-Value (7-Day)	T-Value (180-Day)	T-Value (7-Day)	T-Value (180-Day)
Sample Location	Cargo Drgn (CRS-32)	Cargo Drgn (CRS-32)	Dragon Cabin Crew-11	Dragon Cabin Crew-11	Ax-4	Ax-4	CRS-33	CRS-33	NG-23	NG-23	HTV-X	HTV-X
Sample Description	Ingress air sample, S/N 2041	Ingress air sample, S/N 2041	Ascent, S/N 2044	Ascent, S/N 2044	Ingress air sample, S/N 2037	Ingress air sample, S/N 2037	Ingress air sample, S/N 2106	Ingress air sample, S/N 2106	Ingress air sample, S/N 2010	Ingress air sample, S/N 2010	Ingress air sample, S/N 2011	Ingress air sample, S/N 2011
Sample Date	4/22/2025	4/22/2025	8/1/2025	8/1/2025	6/26/2025	6/26/2025	8/25/2025	8/25/2025	9/18/2025	9/18/2025	10/30/2025	10/30/2025
Sample Time	14:40	14:40	17:44	17:44	12:10	12:10	13:01	13:01	18:40	18:40	12:37	12:37
Analysis/Sample ID	**AQ250766**	**AQ250766**	**AQ260247**	**AQ260247**	**AQ260248**	**AQ260248**	**AQ260249**	**AQ260249**	**AQ260250**	**AQ260250**	**AQ260251**	**AQ260251**
Volatiles Targets GCMS (TO-15 mod)												
1,1,1,2-Tetrafluoroethane	<0.001	<0.001	ND	ND	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1-Butanol	0.001	0.002	ND	ND	ND	ND	0.001	0.003	0.002	0.003	0.001	0.002
1-Propanol	0.001	0.001	ND	ND	ND	ND	0.001	0.001	<0.001	<0.001	0.001	0.001
2-Butanone (Methyl ethyl ketone)	0.001	0.001	ND	ND	ND	ND	<0.001	<0.001	<0.001	0.001	<0.001	0.001
2-Methyl-1-propene	<0.001	<0.001	ND	ND	ND	ND	<0.001	<0.001	0.002	0.003	<0.001	0.001
2-Methyl-2-propanol	ND	ND	ND	ND	ND	ND	ND	ND	<0.001	<0.001	ND	ND
2-Propanol (Isopropanol)	See GC-FID	See GC-FID	<0.001	<0.001	0.005	0.005	See GC-FID	See GC-FID	See GC-FID	See GC-FID	See GC-FID	See GC-FID
Acetaldehyde	0.034	0.034	0.001	0.003	ND	ND	0.006	0.019	0.012	0.037	0.008	0.024
Acetone	0.006	0.006	0.002	0.002	0.031	0.031	0.005	0.005	0.012	0.012	0.009	0.009
Butanal (Butyraldehyde)	ND	ND	ND	ND	ND	ND	ND	ND	0.001	0.001	ND	ND
Butyl acetate	<0.001	<0.001	ND	ND	ND	ND	<0.001	<0.001	ND	ND	ND	ND
Carbon disulfide	0.019	0.019	ND	ND	ND	ND	0.019	0.019	0.054	0.054	0.044	0.044
Carbonyl sulfide (Carbon oxide sulfide)	<0.001	0.001	ND	ND	ND	ND	<0.001	0.001	0.001	0.006	0.001	0.003
Decamethylcyclopentasiloxane (DMCPS)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.004	0.026
Ethanol	See GC-FID	See GC-FID	<0.001	<0.001	0.001	0.001	See GC-FID	See GC-FID	See GC-FID	See GC-FID	See GC-FID	See GC-FID
Ethyl acetate	ND	ND	ND	ND	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Hexamethylcyclotrisiloxane (HMCTS)	0.001	0.012	ND	ND	ND	ND	0.001	0.01	0.005	0.048	0.001	0.014
Isobutane	0.030	0.030	<0.001	<0.001	ND	ND	See GC-FID	See GC-FID	See GC-FID	See GC-FID	See GC-FID	See GC-FID
m and p-Xylene	ND	ND	ND	ND	ND	ND	0.001	0.002	ND	ND	ND	ND
Methanol	0.006	0.006	0.002	0.002	0.023	0.023	0.004	0.004	0.011	0.011	0.012	0.012
Methylene chloride (Dichloromethane)	ND	ND	ND	ND	ND	ND	0.003	0.014	0.087	0.426	0.004	0.021
Octamethylcyclotetrasiloxane (OMCTS)	ND	ND	ND	ND	ND	ND	ND	ND	0.001	0.017	0.001	0.016
Perfluoro(2-methylpentane)	<0.001	<0.001	ND	ND	ND	ND	<0.001	<0.001	ND	ND	ND	ND
Propanal (Propionaldehyde)	ND	ND	ND	ND	ND	ND	0.001	0.001	0.002	0.002	ND	ND
Propene	ND	ND	ND	ND	ND	ND	ND	ND	<0.001	<0.001	<0.001	<0.001
Toluene	0.007	0.007	ND	ND	ND	ND	0.018	0.018	0.003	0.003	ND	ND
Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	0.002	0.011	ND	ND
Trimethylsilanol	0.135	0.135	ND	ND	ND	ND	0.112	0.112	0.271	0.271	2.571	2.571
Volatiles Non-Targets GCMS (estimated conc.)												
C10-Alkanes	ND	ND	ND	ND	ND	ND	0.001	0.025	0.003	0.057	ND	ND
C11-Alkanes	ND	ND	ND	ND	ND	ND	0.002	0.049	0.005	0.111	ND	ND
C12-Alkanes	ND	ND	ND	ND	ND	ND	0.004	0.08	0.009	0.170	ND	ND
C13-Alkanes	0.005	0.095	ND	ND	ND	ND	0.003	0.064	0.007	0.131	0.001	0.025
C16-Alkanes	ND	ND	ND	ND	ND	ND	ND	ND	0.022	0.022	ND	ND
Fluorotrimethylsilane	ND	ND	ND	ND	ND	ND	ND	ND	0.472	0.472	0.292	0.292
Hexamethyldisiloxane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.001	0.002
Tetradecafluorohexane	ND	ND	ND	ND	ND	ND	ND	ND	<0.001	<0.001	ND	ND
Volatiles Targets GCFID												
2-Propanol (Isopropanol)	0.020	0.020	NR	NR	NR	NR	0.023	0.023	0.011	0.011	0.027	0.027
Ethanol	0.001	0.001	NR	NR	NR	NR	<0.001	<0.001	0.001	0.001	0.001	0.001
Isobutane	NR	NR	NR	NR	NR	NR	0.015	0.015	0.018	0.018	0.006	0.006
Volatiles Targets TGA												
Carbon monoxide	0.015	0.057	0.01	0.037	ND	ND	0.011	0.039	0.037	0.137	0.051	0.189
Total T-Value	**0.3**	**0.4**	**< 0.1**	**< 0.1**	**0.1**	**0.1**	**0.2**	**0.5**	**1.1**	**2.0**	**3.0**	**3.3**

Comments: ND= Value is less than the laboratory reporting limit.
NR= Not Reported

Project Specific SMACs: C10-C13 Alkanes: Used C5-C9 SMACs
C16 Alkanes: Used Hexane SMAC

The individual T-value reporting limit for the compounds is 0.001, any T-value calculated lower than 0.001 is reported as <0.001, but the actual value is used in the total T-value calculation.

The total T-value reporting limit is 0.1, any calculated total T-value lower than 0.1 is reported as <0.1.

AQ260247-251, AQ260384-389: Data Qualifier-Acetone: Possible high bias

AQ260248: Initial pressure 0.7psia

AQ260385 Low Initial Pressure 3.5psia

AQ260388 Low Initial Pressure 12.2psia

AQ260389 Low Initial Pressure 0.7psia

TABLE S-3A: ANALYTICAL CONCENTRATIONS OF COMPOUNDS QUANTIFIED IN HOT AND POTABLE WATER RETURNED ON SPACEX-32 AND CREW-10

Increment					73	
Mission					SpX-32	Crew-10
Sample Location					WPA PWD Hot	WPA xPWD Hot
Sample Description					Potable Water	Potable Water
Sample Date					5/6/2025	7/23/2025
Analysis/Sample ID	Units	Test Conducted by	Potable Water Maximum Contaminant Level (MCL)	Maximum Contaminant Level Source	WQ250290	WQ250486
Physical Characteristics						
Conductivity	µS/cm	U.S.			2	2
pH	pH units	U.S.	4.5-8.5	41000	5.44	5.60
Iodine LCV						
Iodine	mg/L	U.S.	1.0-4.0	41000 (residual iodine in product water)	< 0.05	0.05
Total I	mg/L	U.S.	6/0.2	41000 (tl I max in product water/tl I at pt of consumption)	< 0.05	0.06
Minerals ICPMS						
Calcium	mg/L	U.S.	30	41000	0.01	< 0.01
Sodium	mg/L	U.S.			< 0.01	0.01
Trace Metals ICPMS						
Aluminum	µg/L	U.S.			< 1	2
Nickel	µg/L	U.S.	300	SWEG&41000	1	7
Silicon ICPMS						
Silicon	µg/L	U.S.			327	35
Total Organic Carbon-Sievers						
Total Inorganic Carbon (TIC)	mg/L	U.S.			2.62	1.27
Total Organic Carbon (TOC)	mg/L	U.S.	5 / 3	SWEG / 41000	0.689	0.400
Volatile Organics-Targets						
Acetone	µg/L	U.S.	15,000	SWEG	< 5	19
Semi-volatile Organics-Targets						
Methyl sulfone	µg/L	U.S.	1,500,000	interim SWEG (06-2017)	173	166
N-n-Butylbenzenesulfonamide	µg/L	U.S.			21	< 20
Semi-volatile Organics-Special Interest Compounds (Semi-quantitative)						
2-Butoxyethanol	µg/L	U.S.			< 20	not found
Palmitic acid	µg/L	U.S.			not found	640
Alcohols & Acetone GCMS						
Acetone	µg/L	U.S.	15,000	SWEG	See Volatiles	See Volatiles
Aldehydes GCMS						
Formaldehyde (Methanal)	µg/L	U.S.	12,000	SWEG	< 10	11
Organic Carbon Recovery	percent	U.S.			8.13	135
Unaccounted Organic Carbon	mg/L	U.S.			0.630	0.000

Comments: NR= Not Reported NA=Not Analyzed

Data Qualifiers: WQ250486: Palmitic Acid detected in the method blank

TABLE S-3B: ANALYTICAL CONCENTRATIONS OF COMPOUNDS QUANTIFIED IN WASTEWATER AND US CONDENSATE SAMPLES RETURNED ON SPACEX-32 AND CREW-10

Increment					73			
Mission					SpX-32		Crew-10	
Sample Location					WPA Wastewater ORU	WPA Condensate Sample Port	WPA Wastewater ORU	WPA Condensate Sample Port
Sample Description			Potable Water Maximum Contaminant Level	Maximum Contaminant Level	WPA Wastewater	US Condensate	WPA Wastewater	US Condensate
Sample Date		Test Conducted			5/19/2025	5/19/2025	8/4/2025	8/4/2025
Analysis/Sample ID	Units	by	(MCL)	Source	WQ250291	WQ250292	WQ250487	WQ250488
Physical Characteristics								
Conductivity	µS/cm	U.S.			85	182	129	193
pH	pH units	U.S.	4.5-8.5	41000	6.72	7.22	7.42	7.73
Iodine ICPMS								
Total I	mg/L	U.S.			0.126	0.008	0.185	0.050
Anions IC								
Fluoride	mg/L	U.S.			0.5	< 0.1	0.2	< 0.1
Cations IC								
Ammonium (as N)	mg/L	U.S.	1	SWEG&41000	8.73	20.4	13.7	20.6
Minerals ICPMS								
Calcium	mg/L	U.S.	30	41000	0.04	0.04	0.04	0.04
Phosphate (as P)	mg/L	U.S.			0.21	< 0.01	0.10	< 0.01
Potassium	mg/L	U.S.	340	41000	0.15	0.01	0.09	0.05
Sodium	mg/L	U.S.			0.15	< 0.01	0.08	< 0.01
Trace Metals ICPMS								
Aluminum	µg/L	U.S.			13	8	4	4
Boron	µg/L	U.S.			10	15	14	14
Chromium	µg/L	U.S.	230	41000	45	2	24	1
Copper	µg/L	U.S.	1,000	41000	< 1	2	< 1	1
Manganese	µg/L	U.S.	300	SWEG&41000	4	5	6	4
Nickel	µg/L	U.S.	300	SWEG&41000	125	182	176	154
Silver	µg/L	U.S.	400	SWEG&41000	2	34	6	< 1
Strontium	µg/L	U.S.			< 1	1	< 1	2
Zinc	µg/L	U.S.	2,000	SWEG&41000	4220	7850	4850	6960
Silicon ICPMS								
Silicon	µg/L	U.S.			1230	2480	2220	3040
Total Organic Carbon-Sievers								
Total Inorganic Carbon (TIC)	mg/L	U.S.			14.6	13.5	16.1	16.3
Total Organic Carbon (TOC)	mg/L	U.S.	5 / 3	SWEG / 41000	28.7	103	34.0	65.4
Volatile Organics-Targets								
2-Butanone (Methyl ethyl ketone)	µg/L	U.S.	54,000	SWEG	317	< 50	194	41
Acetone	µg/L	U.S.	15,000	SWEG	See Alcohols	See Alcohols	See Alcohols	See Alcohols
Volatile Organics-Special Interest Compounds (Semi-quantitative)								
Acetaldehyde	µg/L	U.S.			not found	280	not found	110
Trimethylsilanol	µg/L	U.S.			not found	66	89	150
Semi-volatile Organics-Targets								
Benzothiazole	µg/L	U.S.			25	< 20	< 20	< 20
Methyl sulfone	µg/L	U.S.	1,500,000	interim SWEG (06-2017)	134	214	139	146
N-n-Butylbenzenesulfonamide	µg/L	U.S.			< 20	< 20	36	28
Acid Extractables-EPA 625 List GCMS								
4-Methylphenol (p-Cresol)	µg/L	U.S.			258	< 20	70	< 20
Benzoic acid	µg/L	U.S.			< 100	649	< 100	710
Phenol	µg/L	U.S.	4,000	SWEG	172	82	< 20	41
Base and Neutral Extractables-EPA 625 List GCMS								
Benzyl alcohol	µg/L	U.S.			1980	11300	2380	3170
Diethylphthalate	µg/L	U.S.			41	61	45	64
Semi-volatile Organics-Special Interest Compounds (Semi-quantitative)								
1-Methyl-2-pyrrolidinone	µg/L	U.S.			< 80	< 80	< 80	< 80
2-(2-Butoxyethoxy)ethanol	µg/L	U.S.			< 40	100	50	77
2-Butoxyethanol	µg/L	U.S.			< 20	140	45	79
2-Ethoxyethanol	µg/L	U.S.			58	170	74	120
2-Ethyl-1-hexanol	µg/L	U.S.			not found	not found	< 40	< 40
2-Ethylhexanoic acid	µg/L	U.S.			not found	66	not found	55
2-Phenoxyethanol	µg/L	U.S.			65	220	110	220
Acetophenone	µg/L	U.S.			15	not found	not found	< 10
Benzaldehyde	µg/L	U.S.			< 20	50	< 20	28
Heptanoic acid	µg/L	U.S.			not found	71	not found	66
Hexanoic acid (Caprolate)	µg/L	U.S.			not found	250	not found	200
Ibuprofen	µg/L	U.S.			220	not found	240	210
Monomethyl phthalate	µg/L	U.S.			16	not found	13	14
N,N-Diethylformamide	µg/L	U.S.			28	44	32	43
N,N-Dimethyl acetamide	µg/L	U.S.			82	180	120	170
N,N-Dimethylformamide	µg/L	U.S.			120	200	150	230
Neomenthol	µg/L	U.S.			33	not found	23	< 20
Nonanoic acid	µg/L	U.S.			not found	not found	not found	< 100
Palmitic acid	µg/L	U.S.			640	not found	640	640
Phenethyl alcohol	µg/L	U.S.			not found	< 10	not found	not found
Tetramethyl thiourea	µg/L	U.S.			not found	< 10	not found	not found
Triethyl phosphate	µg/L	U.S.			< 10	not found	< 10	< 10
Alcohols & Acetone GCMS								
1-Butanol	µg/L	U.S.			< 400	750	< 400	597
1-Propanol	µg/L	U.S.			< 400	416	< 400	< 400
2-Propanol (Isopropanol)	µg/L	U.S.			967	3690	1610	1980
Acetone	µg/L	U.S.	15,000	SWEG	10800	2470	6780	4090
Ethanol	µg/L	U.S.			< 400	58100	6680	26500
Methanol	µg/L	U.S.	40,000	SWEG	5620	6430	4330	4950
Glycols GCMS								
1,2-Ethanediol (Ethylene glycol)	µg/L	U.S.	4000	SWEG	< 1000	< 2000	< 2000	2360
1,2-Propanediol (Propylene glycol)	µg/L	U.S.	1,700,000	SWEG	< 1000	9570	< 2000	10300
Silanols LCRI (Semi-Quantitative-NIST traceable standard not available)								
Dimethylsilanediol (DMSD)	µg/L	U.S.	35,000	SWEG	3400	5800	4600	6100
Carboxylates IC								
Acetate	µg/L	U.S.			< 500	29100	< 500	25000
Formate	µg/L	U.S.	2,500,000	SWEG	< 500	4850	< 500	1780
Glyoxylate	µg/L	U.S.			< 500	586	< 500	< 500
Propionate	µg/L	U.S.			< 500	616	< 500	< 500
Aldehydes GCMS								
Formaldehyde (Methanal)	µg/L	U.S.	12,000	SWEG	< 10	1770	24	1220
Non-volatile Organics LC								
Urea	µg/L	U.S.			945	< 800	< 800	< 800
Organic Carbon Recovery	percent	U.S.			47.0	66.0	43.1	65.6
Unaccounted Organic Carbon	mg/L	U.S.			15.2	35.1	19.4	22.5

Comments: NR= Not Reported NA=Not Analyzed

Data Qualifiers: **WQ250291 & 292: Proprionate-Data Qualifier: Possible low bias (MS 65.7%)**

WQ250291 & 292: Formate-Data Qualifier: Possible low bias (MS 61.8%)

WQ250487&488: Palmitic Acid detected in the method blank