



SGS Korea

Level II Data Report

Lab Work Order No. : G24-535

Client Name : US AIR FORCE(Osan)

Project Name : Drinking Water Monitoring

Project Number : EC24-146

Released by (Signature)

(Printed Name)

JEFF JANG

(Title)

EHS Director

(Date)

04-25-2024

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3. Sample Result
4. QC Result Summary
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6. Sample Receipt

I certify this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager of the Manager's designee, as verified by the following signature.

Signature :

Name :

JUN LEE

Date :

04-25-2024

Title :

Technical Manager

This reports contains a total number of 19 Pages

Routing

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US AIR FORCE(Osan)

51AMDS/SGPB
UNIT2060
APO AP96278

SGS Environmental Services
#322, The O Valley Bldg
76, LS-ro, Dongan-gu
Anyang-city
Gyeonggi-do
Korea

* US AIR FORCE = Hereinafter referred to as 'USAF'

Work Order No. : G24-535

Project Name : Drinking Water Monitoring

Project No : EC24-146

Client Name : US AIR FORCE(Osan)

Report Date : 04-25-2024

Released By :

Jun Lee

Technical Manager

Enclosed are the analytical results associated with the above workorder

As required by the Korea MOE and US EPA, a formal Quality Assurance / Quality Control Program is maintained by SGS Korea.

A Copy of our Quality Control Manual that outlines this program is available at your request.

All statements and data in this report are in conformance to the provisions set forth by the SGS Quality Assurance Program.

If you have any questions regarding this report or if we can be of any other assistance, please call SGS Project Manager (82-31-4608-052).

The following descriptions may be found on your report which will serve to further quality the data.

MB	Method Blank
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N.D.	Not Detected
PS	Parent Sample
MDL	Method Detection Limit
PQL	Practical Quantification Limit (reporting limit)
C	QC result has exceeded or is under control limits.
U	The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
F	The analyte was positively identified but the associated numerical value is between the MDL and the PQL.
R	The data was rejected due to deficiencies in the ability to analyze the sample and meet QC criteria.
H	The natural concentration of the spiked element is so much greater than the spiked concentration spiked so that an accurate determination of spike recovery is not possible.
B	The analyte was found in an associated blank, as well as in the sample.
D	The analyte concentration is the result of a dilution reflected by dilution factor.
M	A matrix effect was present.
S	To be applied to all field screening data.
T	Tentatively identified compound (using GC/MS)
*	Certified parameter by The Nelac Institute Standard
NA	Not Available

Note : Soil samples are reported on a dry weight basis unless otherwise specified

The results shown in this test report refer only to the sample(s) tested unless otherwise stated. This test report is not related to Korea Laboratory Accreditation Scheme.

Cover Page

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Case Narrative

Client Name : US AIR FORCE(Osan)

Work Order No. : G24-535

Printed Date : 04-25-2024

There is no specific case narrative.

Case Narrative

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All Dates/Times are Korean Standard Time

Project Name : Drinking Water Monitoring

Printed Date/Time : 2024-04-25

Project Number : EC24-146

Collected Date/Time : 2024-04-08 08:19:00

Client Sample ID : GP24059 – Field Blank

Received Date/Time : 2024-04-08 15:30:00

Site Local : Bldg 435, Pump House, Out, Field Blank

Technical Manager : Jun Lee

Matrix : Drinking Water

Lab Sample ID : G24-535-1

Sample Remarks:

There is no specific sample remarks.

Analyte	Results	KEGS	%Recovery	PQL (Control Limit)	Unit	Prep. Date	Anal. Date	Cont. ID	Analyst
PFAS									
11CI-PF3OUdS	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
8:2FTS	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
4:2FTS	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
6:2FTS	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
ADONA	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
9CI-PF3ONS	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
HFPO-DA/GenX	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
NFDHA	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
PFEESA	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
PFMPA	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
PFMBA	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
PFBS	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
PFBA	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
PFDA	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
PFDoA	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
PFHpS	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
PFHpA	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
PFHxS	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
PFHxA	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
PFNA	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
PFOS	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
PFOA	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
PFPeS	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
PFPeA	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
PFUnA	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
13C3 HFPO-DA(surr)	73.0		73	50~200	%	2024-04-10	2024-04-12	A	Subcon.
13C6 PFDA(surr)	82.0		82	50~200	%	2024-04-10	2024-04-12	A	Subcon.
13C5 PFHxA(surr)	75.0		75	50~200	%	2024-04-10	2024-04-12	A	Subcon.
13C4 PFHpA(surr)	79.0		79	50~200	%	2024-04-10	2024-04-12	A	Subcon.
13C8 PFOA(surr)	80.0		80	50~200	%	2024-04-10	2024-04-12	A	Subcon.
13C9 PFNA(surr)	83.0		83	50~200	%	2024-04-10	2024-04-12	A	Subcon.
13C7 PFUnA(surr)	82.0		82	50~200	%	2024-04-10	2024-04-12	A	Subcon.

Sample Result



All Dates/Times are Korean Standard Time

Project Name : Drinking Water Monitoring

Printed Date/Time : 2024-04-25

Project Number : EC24-146

Collected Date/Time : 2024-04-08 08:19:00

Client Sample ID : GP24059 – Field Blank

Received Date/Time : 2024-04-08 15:30:00

Site Local : Bldg 435, Pump House, Out, Field Blank

Technical Manager : Jun Lee

Matrix : Drinking Water

Lab Sample ID : G24-535-1

Sample Remarks:

There is no specific sample remarks.

Analyte	Results	KEGS	%Recovery	PQL (Control Limit)	Unit	Prep. Date	Anal. Date	Cont. ID	Analyst
13C2 PFDoA(surr)	84.0		84	50~200	%	2024-04-10	2024-04-12	A	Subcon.
13C4 PFBA(surr)	79.0		79	50~200	%	2024-04-10	2024-04-12	A	Subcon.
13C5 PFPeA(surr)	81.0		81	50~200	%	2024-04-10	2024-04-12	A	Subcon.
13C3 PFBS(surr)	93.0		93	50~200	%	2024-04-10	2024-04-12	A	Subcon.
13C3 PFHxS(surr)	92.0		92	50~200	%	2024-04-10	2024-04-12	A	Subcon.
13C8 PFOS(surr)	93.0		93	50~200	%	2024-04-10	2024-04-12	A	Subcon.
13C2-4:2FTS(surr)	92.0		92	50~200	%	2024-04-10	2024-04-12	A	Subcon.
13C2-6:2FTS(surr)	88.0		88	50~200	%	2024-04-10	2024-04-12	A	Subcon.
13C2-8:2FTS(surr)	74.0		74	50~200	%	2024-04-10	2024-04-12	A	Subcon.
						Pretreatment Method : EPA 533			
						Method : EPA 533			

Sample Result

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SGS Korea Co.,Ltd.

322, The O valley, 76, LS-ro, Dongan-gu, Anyang-si, Gyeonggi-do, Korea 431-080
t +82 (0)31 4608 000 f +82 (0)31 4608 059 <http://www.sgslab.co.kr> www.kr.sgs.com/greenlab

CQW-7081-EC001-F03(01)

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All Dates/Times are Korean Standard Time

Project Name : Drinking Water Monitoring

Project Number : EC24-146

Client Sample ID : GP24060

Site Local : Bldg 435, Pump House, Out

Matrix : Drinking Water

Printed Date/Time : 2024-04-25

Collected Date/Time : 2024-04-08 08:25:00

Received Date/Time : 2024-04-08 15:30:00

Technical Manager : Jun Lee

Lab Sample ID : G24-535-2

Sample Remarks:

There is no specific sample remarks.

Analyte	Results	KEGS	%Recovery	PQL (Control Limit)	Unit	Prep. Date	Anal. Date	Cont. ID	Analyst
PFAS									
11CI-PF3OUdS	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
8:2FTS	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
4:2FTS	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
6:2FTS	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
ADONA	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
9CI-PF3ONS	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
HFPO-DA/GenX	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
NFDHA	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
PFEESA	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
PFMPA	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
PFMBA	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
PFBS	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
PFBA	2.10	N.A.		2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
PFDA	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
PFDoA	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
PFHpS	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
PFHpA	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
PFHxS	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
PFHxA	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
PFNA	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
PFOS	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
PFOA	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
PFPeS	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
PFPeA	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
PFUnA	N.D.	N.A.	U	2.0	ng/L	2024-04-10	2024-04-12	A	Subcon.
13C3 HFPO-DA(surr)	77.0		77	50~200	%	2024-04-10	2024-04-12	A	Subcon.
13C6 PFDA(surr)	78.0		78	50~200	%	2024-04-10	2024-04-12	A	Subcon.
13C5 PFHxA(surr)	79.0		79	50~200	%	2024-04-10	2024-04-12	A	Subcon.
13C4 PFHpA(surr)	80.0		80	50~200	%	2024-04-10	2024-04-12	A	Subcon.
13C8 PFOA(surr)	78.0		78	50~200	%	2024-04-10	2024-04-12	A	Subcon.
13C9 PFNA(surr)	84.0		84	50~200	%	2024-04-10	2024-04-12	A	Subcon.
13C7 PFUnA(surr)	80.0		80	50~200	%	2024-04-10	2024-04-12	A	Subcon.

Sample Result



All Dates/Times are Korean Standard Time

Project Name : Drinking Water Monitoring

Project Number : EC24-146

Client Sample ID : GP24060

Site Local : Bldg 435, Pump House, Out

Matrix : Drinking Water

Printed Date/Time : 2024-04-25

Collected Date/Time : 2024-04-08 08:25:00

Received Date/Time : 2024-04-08 15:30:00

Technical Manager : Jun Lee

Lab Sample ID : G24-535-2

Sample Remarks:

There is no specific sample remarks.

Analyte	Results	KEGS	%Recovery	PQL (Control Limit)	Unit	Prep. Date	Anal. Date	Cont. ID	Analyst
13C2 PFDoA(surr)	82.0		82	50~200	%	2024-04-10	2024-04-12	A	Subcon.
13C4 PFBA(surr)	87.0		87	50~200	%	2024-04-10	2024-04-12	A	Subcon.
13C5 PFPeA(surr)	111		111	50~200	%	2024-04-10	2024-04-12	A	Subcon.
13C3 PFBS(surr)	89.0		89	50~200	%	2024-04-10	2024-04-12	A	Subcon.
13C3 PFHxS(surr)	90.0		90	50~200	%	2024-04-10	2024-04-12	A	Subcon.
13C8 PFOS(surr)	93.0		93	50~200	%	2024-04-10	2024-04-12	A	Subcon.
13C2-4:2FTS(surr)	126		126	50~200	%	2024-04-10	2024-04-12	A	Subcon.
13C2-6:2FTS(surr)	104		104	50~200	%	2024-04-10	2024-04-12	A	Subcon.
13C2-8:2FTS(surr)	83.0		83	50~200	%	2024-04-10	2024-04-12	A	Subcon.
						Pretreatment Method : EPA 533			
						Method : EPA 533			

Sample Result

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QC Summary

Analyte Surrogate	QC TYPE	Extraction Batch No.	Analysis Batch No.
PFAS			
11Cl-PF3OUdS	MB,LCS	85238	85516
13C2 PFD _o A	MB,LCS	85238	85516
13C2-4:2FTS	MB,LCS	85238	85516
13C2-6:2FTS	MB,LCS	85238	85516
13C2-8:2FTS	MB,LCS	85238	85516
13C3 HFPO-DA	MB,LCS	85238	85516
13C3 PFBS	MB,LCS	85238	85516
13C3 PFH _x S	MB,LCS	85238	85516
13C4 PFBA	MB,LCS	85238	85516
13C4 PFHpA	MB,LCS	85238	85516
13C5 PFH _x A	MB,LCS	85238	85516
13C5 PFPeA	MB,LCS	85238	85516
13C6 PFDA	MB,LCS	85238	85516
13C7 PFUnA	MB,LCS	85238	85516
13C8 PFOA	MB,LCS	85238	85516
13C8 PFOS	MB,LCS	85238	85516
13C9 PFNA	MB,LCS	85238	85516
4:2FTS	MB,LCS	85238	85516
6:2FTS	MB,LCS	85238	85516
8:2FTS	MB,LCS	85238	85516
9Cl-PF3ONS	MB,LCS	85238	85516
ADONA	MB,LCS	85238	85516
HFPO-DA/GenX	MB,LCS	85238	85516
NFDHA	MB,LCS	85238	85516
PFBA	MB,LCS	85238	85516
PFBS	MB,LCS	85238	85516
PFDA	MB,LCS	85238	85516
PFD _o A	MB,LCS	85238	85516
PFEESA	MB,LCS	85238	85516
PFHpA	MB,LCS	85238	85516
PFHpS	MB,LCS	85238	85516
PFH _x A	MB,LCS	85238	85516
PFH _x S	MB,LCS	85238	85516
PFMBA	MB,LCS	85238	85516
PFMPA	MB,LCS	85238	85516
PFNA	MB,LCS	85238	85516
PFOA	MB,LCS	85238	85516
PFOS	MB,LCS	85238	85516
PFPeA	MB,LCS	85238	85516

QC Summary

Analyte Surrogate	QC TYPE	Extraction Batch No.	Analysis Batch No.
PFPeS	MB,LCS	85238	85516
PFUnA	MB,LCS	85238	85516

QC Summary



Data Report for MB

Client Name : US AIR FORCE(Osan)

All Dates/Times are Korean Standard Time

Project Name : Drinking Water Monitoring

Project No. : EC24-146

Printed Date/Time : 2024-04-25

Matrix : Drinking Water

Technical Manager : Jun Lee

QC Remarks:

There is no specific qc remarks.

Analyte	Spiked Amount	Measured Amount	Unit	Percent Recovery(%)	Control Limits	Rece. Date Coll. Date	Prep. Date Anal. Date
PFAS							
11CI-PF3OUdS	Not Spiked	N.D.	U	ng/L	2.0	N.A.	2024-04-10
						N.A.	2024-04-12
8:2FTS	Not Spiked	N.D.	U	ng/L	2.0	N.A.	2024-04-10
						N.A.	2024-04-12
4:2FTS	Not Spiked	N.D.	U	ng/L	2.0	N.A.	2024-04-10
						N.A.	2024-04-12
6:2FTS	Not Spiked	N.D.	U	ng/L	2.0	N.A.	2024-04-10
						N.A.	2024-04-12
ADONA	Not Spiked	N.D.	U	ng/L	2.0	N.A.	2024-04-10
						N.A.	2024-04-12
9CI-PF3ONS	Not Spiked	N.D.	U	ng/L	2.0	N.A.	2024-04-10
						N.A.	2024-04-12
HFPO-DA/GenX	Not Spiked	N.D.	U	ng/L	2.0	N.A.	2024-04-10
						N.A.	2024-04-12
NFDHA	Not Spiked	N.D.	U	ng/L	2.0	N.A.	2024-04-10
						N.A.	2024-04-12
PFEESA	Not Spiked	N.D.	U	ng/L	2.0	N.A.	2024-04-10
						N.A.	2024-04-12
PFMPA	Not Spiked	N.D.	U	ng/L	2.0	N.A.	2024-04-10
						N.A.	2024-04-12
PFMBA	Not Spiked	N.D.	U	ng/L	2.0	N.A.	2024-04-10
						N.A.	2024-04-12
PFBS	Not Spiked	N.D.	U	ng/L	2.0	N.A.	2024-04-10
						N.A.	2024-04-12
PFBA	Not Spiked	N.D.	U	ng/L	2.0	N.A.	2024-04-10
						N.A.	2024-04-12
PFDA	Not Spiked	N.D.	U	ng/L	2.0	N.A.	2024-04-10
						N.A.	2024-04-12
PFDaA	Not Spiked	N.D.	U	ng/L	2.0	N.A.	2024-04-10
						N.A.	2024-04-12
PFHpS	Not Spiked	N.D.	U	ng/L	2.0	N.A.	2024-04-10
						N.A.	2024-04-12
PFHpA	Not Spiked	N.D.	U	ng/L	2.0	N.A.	2024-04-10
						N.A.	2024-04-12

QC Result Summary

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Data Report for MB

Client Name : US AIR FORCE(Osan)

All Dates/Times are Korean Standard Time

Project Name : Drinking Water Monitoring

Project No. : EC24-146

Printed Date/Time : 2024-04-25

Matrix : Drinking Water

Technical Manager : Jun Lee

QC Remarks:

There is no specific qc remarks.

Analyte	Spiked Amount	Measured Amount	Unit	Percent Recovery(%)	Control Limits	Rece. Date Coll. Date	Prep. Date Anal. Date
PFHxS	Not Spiked	N.D.	U	ng/L	2.0	N.A.	2024-04-10
						N.A.	2024-04-12
PFHxA	Not Spiked	N.D.	U	ng/L	2.0	N.A.	2024-04-10
						N.A.	2024-04-12
PFNA	Not Spiked	N.D.	U	ng/L	2.0	N.A.	2024-04-10
						N.A.	2024-04-12
PFOS	Not Spiked	N.D.	U	ng/L	2.0	N.A.	2024-04-10
						N.A.	2024-04-12
PFOA	Not Spiked	N.D.	U	ng/L	2.0	N.A.	2024-04-10
						N.A.	2024-04-12
PFPeS	Not Spiked	N.D.	U	ng/L	2.0	N.A.	2024-04-10
						N.A.	2024-04-12
PFPeA	Not Spiked	N.D.	U	ng/L	2.0	N.A.	2024-04-10
						N.A.	2024-04-12
PFUnA	Not Spiked	N.D.	U	ng/L	2.0	N.A.	2024-04-10
						N.A.	2024-04-12
13C3 HFPO-DA(Surr)	100	90.0	%	90	50~200	N.A.	2024-04-10
						N.A.	2024-04-12
13C6 PFDA(Surr)	100	94.0	%	94	50~200	N.A.	2024-04-10
						N.A.	2024-04-12
13C5 PFHxA(Surr)	100	93.0	%	93	50~200	N.A.	2024-04-10
						N.A.	2024-04-12
13C4 PFHpA(Surr)	100	95.0	%	95	50~200	N.A.	2024-04-10
						N.A.	2024-04-12
13C8 PFOA(Surr)	100	95.0	%	95	50~200	N.A.	2024-04-10
						N.A.	2024-04-12
13C9 PFNA(Surr)	100	94.0	%	94	50~200	N.A.	2024-04-10
						N.A.	2024-04-12
13C7 PFUnA(Surr)	100	95.0	%	95	50~200	N.A.	2024-04-10
						N.A.	2024-04-12
13C2 PFDoA(Surr)	100	94.0	%	94	50~200	N.A.	2024-04-10
						N.A.	2024-04-12
13C4 PFBA(Surr)	100	94.0	%	94	50~200	N.A.	2024-04-10
						N.A.	2024-04-12
13C5 PFPeA(Surr)	100	97.0	%	97	50~200	N.A.	2024-04-10
						N.A.	2024-04-12

QC Result Summary



Data Report for MB

Client Name : US AIR FORCE(Osan)

All Dates/Times are Korean Standard Time

Project Name : Drinking Water Monitoring

Project No. : EC24-146

Printed Date/Time : 2024-04-25

Matrix : Drinking Water

Technical Manager : Jun Lee

QC Remarks:

There is no specific qc remarks.

Analyte	Spiked Amount	Measured Amount	Unit	Percent Recovery(%)	Control Limits	Rece. Date Coll. Date	Prep. Date Anal. Date
13C3 PFBS(Surr)	100	97.0	%	97	50~200	N.A. N.A.	2024-04-10 2024-04-12
13C3 PFHxS(Surr)	100	99.0	%	99	50~200	N.A. N.A.	2024-04-10 2024-04-12
13C8 PFOS(Surr)	100	97.0	%	97	50~200	N.A. N.A.	2024-04-10 2024-04-12
13C2-4:2FTS(Surr)	100	107	%	107	50~200	N.A. N.A.	2024-04-10 2024-04-12
13C2-6:2FTS(Surr)	100	99.0	%	99	50~200	N.A. N.A.	2024-04-10 2024-04-12
13C2-8:2FTS(Surr)	100	86.0	%	86	50~200	N.A. N.A.	2024-04-10 2024-04-12

Lab. Sample ID : 85516-MB

Parent Sample : NA

Site Local : NA

Pretreatment Method : EPA 533

Method : EPA 533

QC Result Summary

12 / 19



Data Report for LCS

Client Name : US AIR FORCE(Osan)

All Dates/Times are Korean Standard Time

Project Name : Drinking Water Monitoring

Project No. : EC24-146

Printed Date/Time : 2024-04-25

Matrix : Drinking Water

Technical Manager : Jun Lee

QC Remarks:

There is no specific qc remarks.

Analyte	Spiked Amount	Measured Amount	Unit	Percent Recovery(%)	Control Limits	Rece. Date Coll. Date	Prep. Date Anal. Date
PFAS							
11CI-PF3OUdS	60.2	56.9	ng/L	94	70~130	N.A.	2024-04-10
						N.A.	2024-04-12
8:2FTS	60.2	59.4	ng/L	99	70~130	N.A.	2024-04-10
						N.A.	2024-04-12
4:2FTS	60.2	60.7	ng/L	101	70~130	N.A.	2024-04-10
						N.A.	2024-04-12
6:2FTS	60.2	57.4	ng/L	95	70~130	N.A.	2024-04-10
						N.A.	2024-04-12
ADONA	60.2	55.2	ng/L	92	70~130	N.A.	2024-04-10
						N.A.	2024-04-12
9CI-PF3ONS	60.2	54.5	ng/L	90	70~130	N.A.	2024-04-10
						N.A.	2024-04-12
HFPO-DA/GenX	60.2	59.3	ng/L	98	70~130	N.A.	2024-04-10
						N.A.	2024-04-12
NFDHA	60.2	67.4	ng/L	112	70~130	N.A.	2024-04-10
						N.A.	2024-04-12
PFEESA	60.2	51.8	ng/L	86	70~130	N.A.	2024-04-10
						N.A.	2024-04-12
PFMPA	60.2	57.2	ng/L	95	70~130	N.A.	2024-04-10
						N.A.	2024-04-12
PFMBA	60.2	55.9	ng/L	93	70~130	N.A.	2024-04-10
						N.A.	2024-04-12
PFBS	60.2	56.1	ng/L	93	70~130	N.A.	2024-04-10
						N.A.	2024-04-12
PFBA	60.2	56.3	ng/L	93	70~130	N.A.	2024-04-10
						N.A.	2024-04-12
PFDA	60.2	55.8	ng/L	93	70~130	N.A.	2024-04-10
						N.A.	2024-04-12
PFDoA	60.2	58.2	ng/L	97	70~130	N.A.	2024-04-10
						N.A.	2024-04-12
PFHpS	60.2	57.5	ng/L	95	70~130	N.A.	2024-04-10
						N.A.	2024-04-12
PFHpA	60.2	58.2	ng/L	97	70~130	N.A.	2024-04-10
						N.A.	2024-04-12

QC Result Summary

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Data Report for LCS

Client Name : US AIR FORCE(Osan)

All Dates/Times are Korean Standard Time

Project Name : Drinking Water Monitoring

Project No. : EC24-146

Printed Date/Time : 2024-04-25

Matrix : Drinking Water

Technical Manager : Jun Lee

QC Remarks:

There is no specific qc remarks.

Analyte	Spiked Amount	Measured Amount	Unit	Percent Recovery(%)	Control Limits	Rece. Date Coll. Date	Prep. Date Anal. Date
PFHxS	60.2	60.1	ng/L	100	70~130	N.A. N.A.	2024-04-10 2024-04-12
PFHxA	60.2	58.1	ng/L	96	70~130	N.A. N.A.	2024-04-10 2024-04-12
PFNA	60.2	58.0	ng/L	96	70~130	N.A. N.A.	2024-04-10 2024-04-12
PFOS	60.2	55.0	ng/L	91	70~130	N.A. N.A.	2024-04-10 2024-04-12
PFOA	60.2	58.1	ng/L	96	70~130	N.A. N.A.	2024-04-10 2024-04-12
PFPeS	60.2	56.6	ng/L	94	70~130	N.A. N.A.	2024-04-10 2024-04-12
PFPeA	60.2	57.1	ng/L	95	70~130	N.A. N.A.	2024-04-10 2024-04-12
PFUnA	60.2	57.1	ng/L	95	70~130	N.A. N.A.	2024-04-10 2024-04-12
13C3 HFPO-DA(Surr)	100	90.0	ng/L	90	50~200	N.A. N.A.	2024-04-10 2024-04-12
13C6 PFDA(Surr)	100	94.0	ng/L	94	50~200	N.A. N.A.	2024-04-10 2024-04-12
13C5 PFHxA(Surr)	100	90.0	ng/L	95	50~200	N.A. N.A.	2024-04-10 2024-04-12
13C4 PFHpA(Surr)	100	91.0	ng/L	91	50~200	N.A. N.A.	2024-04-10 2024-04-12
13C8 PFOA(Surr)	100	92.0	ng/L	92	50~200	N.A. N.A.	2024-04-10 2024-04-12
13C9 PFNA(Surr)	100	93.0	ng/L	88	50~200	N.A. N.A.	2024-04-10 2024-04-12
13C7 PFUnA(Surr)	100	93.0	ng/L	93	50~200	N.A. N.A.	2024-04-10 2024-04-12
13C2 PFDoA(Surr)	100	89.0	ng/L	89	50~200	N.A. N.A.	2024-04-10 2024-04-12
13C4 PFBA(Surr)	100	88.0	ng/L	88	50~200	N.A. N.A.	2024-04-10 2024-04-12
13C5 PFPeA(Surr)	100	96.0	ng/L	96	50~200	N.A. N.A.	2024-04-10 2024-04-12

QC Result Summary



Data Report for LCS

Client Name : US AIR FORCE(Osan)

All Dates/Times are Korean Standard Time

Project Name : Drinking Water Monitoring

Project No. : EC24-146

Printed Date/Time : 2024-04-25

Matrix : Drinking Water

Technical Manager : Jun Lee

QC Remarks:

There is no specific qc remarks.

Analyte	Spiked Amount	Measured Amount	Unit	Percent Recovery(%)	Control Limits	Rece. Date Coll. Date	Prep. Date Anal. Date
13C3 PFBS(Surr)	100	96.0	ng/L	96	50~200	N.A. N.A.	2024-04-10 2024-04-12
13C3 PFHxS(Surr)	100	96.0	ng/L	96	50~200	N.A. N.A.	2024-04-10 2024-04-12
13C8 PFOS(Surr)	100	96.0	ng/L	96	50~200	N.A. N.A.	2024-04-10 2024-04-12
13C2-4:2FTS(Surr)	100	96.0	ng/L	96	50~200	N.A. N.A.	2024-04-10 2024-04-12
13C2-6:2FTS(Surr)	100	94.0	ng/L	94	50~200	N.A. N.A.	2024-04-10 2024-04-12
13C2-8:2FTS(Surr)	100	81.0	ng/L	81	50~200	N.A. N.A.	2024-04-10 2024-04-12

Lab. Sample ID : 85516-LCS

Parent Sample : NA

Site Local : NA

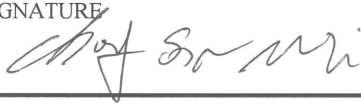
Pretreatment Method : EPA 533

Method : EPA 533

QC Result Summary

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G24-535-1

ENVIRONMENTAL SAMPLING DATA										OEHL USE ONLY																			
(Use this space for mechanical imprint) Received by: Daniella Jo / 2024.4.8, 15:30										SAMPLING SITE IDENTIFIER (AFR19-7)										0 6 8 9 P D 0 3 3									
										BASE WHERE SAMPLE COLLECTED																			
										Osan AB, ROK																			
										SAMPLING SITE DESCRIPTION																			
Bldg 435, Pump House, Out, Field Blank																													
DATE COLLECTION BEGAN					TIME COLLECTION BEGAN					COLLECTION METHOD																			
8-Apr-24					0819 hrs					☒ GRAB ☐ COMPOSITE ☐ HOURS																			
MAIL REPORTS TO (circle if changed)		ORIGINAL		0 6 8 9		51 OMRS/SGXB APO AP 96278-2060																							
		COPY1																											
		COPY2																											
SAMPLE COLLECTED BY (Name, Grade, AFSC)										SIGNATURE										AUTOVON									
CHONG, SON KI / Civ.																				784-2623									
REASON FOR SUBMISSION		E		A-ACCIDENT/INCIDENT										C-COMPLAINT F-FOLLOWUP/CLEANUP															
				R-ROUTINE/PERIODIC										N-NPDES O-OTHER (specify)															
BASE SAMPLE NUMBER					G P		2 4		0 5 9 X X X		Field Blank																		
ANALYSES REQUESTED (Check appropriate blocks)																													
GROUP A					Hardness 00900					Silica 00955					2,4,5-T 39740														
Ammonia 00610					Iron 01045					Specific Conductance 00095					2,4,5-TP-Silvex 39760														
Chemical Oxygen Demand 00340					Lead 01051					Sulfate 00945																			
Kjeldahl Nitrogen 00625					Magnesium 00927					Surfactants-MBAS 38260					X EPA Method: 533 -Subcon														
Nitrate 00620					Manganese 01055					Turbidity 00076					including 25 compounds in the method.														
Nitrite 00615					Mercury 71900																								
Oil & Grease 00560					Nickel 01067																								
Organic Carbon 00680					Potassium 00937																								
Orthophosphate 00671					Selenium 01147																								
Phosphorus, total 00665					Silver 01077					Aldrin 39330																			
Total Nitrate / Nitrite					Sodium 00929					BHC Isomers 39340																			
GROUP D					Thallium 01059					a-BHC 39337																			
Cyanide, Total 00720					Zinc 01092					b-BHC 39338																			
Cyanide, Free 00722										d-BHC 34259																			
										Chlordane 39350					GROUP J														
GROUP E					GROUP G					DDT Isomers 39370					Sulfides 00745														
Phenols 32730					Acidity, Total 70508					p,p-DDD 39310																			
					Alkalinity, Total 00410					p,p-DDE 39320																			
GROUP F					Alkalinity, Bicarbonate 00425					p,p-DDT 39300					ON SITE ANALYSES														
Antimony 01097					Bromide 71870					Dieldrin 39380					PARAMETER VALUE														
Arsenic 01002					Carbon Dioxide 00405					Dursban 77969					Flow 50050 mgd														
Barium 01007					Chloride 00940					Endrin 39390					Chlorine, Free mg/l														
Beryllium 01012					Color 00080					Heptachlor 39410					Chlorine, Total 50060 mg/l														
Boron 01022					Fluoride 00951					Heptachlor Epoxide 39420					Dissolved Oxygen 00300 mg/l														
Cadmium 01027					Residue, Total 00500					Lindane 39782					pH 00400 units														
Calcium 00916					Residue, Filterable (TDS) 70300					Methoxychlor 39480					Temperature 00010 C														
Chromium, Total 01034					Residue, Nonfilterable 00530					Pramitol (Pramaton) XY4200000					Odor 00086														
Chromium VI 01032					Residue, Settleable 50085					Toxaphene 39400					Iodide 71865														
Copper 01042					Residue, Volatile 00505					2,4-D 39730					Sulfite 00740														
REMARKS																													
EC24-146, Quotation: FTC24-0214-04																													

G24-535-2

ENVIRONMENTAL SAMPLING DATA										OEHL USE ONLY															
(Use this space for mechanical imprint) Received by : Daniella Jo / 2024. 4. 8, 15:30										SAMPLING SITE IDENTIFIER (AFR19-7) 0 6 8 9 P D 0 3 3															
										BASE WHERE SAMPLE COLLECTED Osan AB, ROK															
										SAMPLING SITE DESCRIPTION Bldg 435, Pump House, Out															
DATE COLLECTION BEGAN 8-Apr-24					TIME COLLECTION BEGAN 0825 hrs					COLLECTION METHOD ☒ GRAB ☐ COMPOSITE ☐ HOURS															
MAIL REPORTS TO (circle if changed)		ORIGINAL		0 6 8 9		51 OMRS/SGXB APO AP 96278-2060																			
		COPY1																							
		COPY2																							
SAMPLE COLLECTED BY (Name, Grade, AFSC) CHONG, SON KI / Civ.										SIGNATURE 					AUTOVON 784-2623										
REASON FOR SUBMISSION		E		A-ACCIDENT/INCIDENT										C-COMPLAINT F-FOLLOWUP/CLEANUP											
				R-ROUTINE/PERIODIC										N-NPDES O-OTHER (specify)											
BASE SAMPLE NUMBER				G P		2 4		0 6 0 X X X		OEHL PID															
ANALYSES REQUESTED (Check appropriate blocks)																									
GROUP A		Hardness		00900		Silica		00955		2,4,5-T		39740													
Ammonia 00610		Iron		01045		Specific Conductance		00095		2,4,5-TP-Silvex		39760													
Chemical Oxygen Demand 00340		Lead		01051		Sulfate		00945																	
Kjeldahl Nitrogen 00625		Magnesium		00927		Surfactants-MBAS		38260		X		EPA Method: 533-Silvex													
Nitrate 00620		Manganese		01055		Turbidity		00076				including 25 compounds in the method.													
Nitrite 00615		Mercury		71900																					
Oil & Grease 00560		Nickel		01067																					
Organic Carbon 00680		Potassium		00937																					
Orthophosphate 00671		Selenium		01147		GROUP H																			
Phosphorus, total 00665		Silver		01077		Aldrin		39330																	
Total Nitrate / Nitrite		Sodium		00929		BHC Isomers		39340																	
GROUP D		Thallium		01059		a-BHC		39337																	
Cyanide, Total 00720		Zinc		01092		b-BHC		39338																	
Cyanide, Free 00722						d-BHC		34259																	
						Chlordane		39350		GROUP J															
GROUP E		GROUP G		DDT Isomers		39370		Sulfides		00745															
Phenols 32730		Acidity, Total		70508		p,p-DDD		39310																	
		Alkalinity, Total		00410		p,p-DDE		39320																	
GROUP F		Alkalinity, Bicarbonate		00425		p,p-DDT		39300		ON SITE ANALYSES															
Antimony 01097		Bromide		71870		Dieldrin		39380		PARAMETER		VALUE													
Arsenic 01002		Carbon Dioxide		00405		Dursban		77969		Flow		50050 mgd													
Barium 01007		Chloride		00940		Endrin		39390		Chlorine, Free		0.8 mg/l													
Beryllium 01012		Color		00080		Heptachlor		39410		Chlorine, Total		50060 mg/l													
Boron 01022		Fluoride		00951		Heptachlor Epoxide		39420		Dissolved Oxygen		00300 mg/l													
Cadmium 01027		Residue, Total		00500		Lindane		39782		pH		00400 7.1 units													
Calcium 00916		Residue, Filterable (TDS)		70300		Methoxychlor		39480		Temperature		00010 11.0 C													
Chromium, Total 01034		Residue, Nonfilterable		00530		Pramitol (Pramaton)		XY4200000		Odor		00086													
Chromium VI 01032		Residue, Settleable		50085		Toxaphene		39400		Iodide		71865													
Copper 01042		Residue, Volatile		00505		2,4-D		39730		Sulfite		00740													
REMARKS EC24-146, Quotation: FTC24-0214-04																									

SAMPLE RECEIPT FORM

WO#:

G24-535

Yes No NA

<u> </u>	<u>✓</u>	<u> </u>	Are samples RUSH , priority, or w/n 72 hrs. of hold time ?
<u> </u>	<u>✓</u>	<u> </u>	If yes, have you done <i>e-mail notification</i> ?
<u> </u>	<u>✓</u>	<u> </u>	Are samples <i>within 24 hrs.</i> of hold time or due date ?
<u> </u>	<u>✓</u>	<u> </u>	If yes, have you <i>spoken with</i> Supervisor?
<u>✓</u>	<u> </u>	<u> </u>	Archiving bottles – if required, are they properly marked?
<u>✓</u>	<u>✓</u>	<u> </u>	Are there any problems ? PM Notified? <u> </u>
<u>✓</u>	<u> </u>	<u> </u>	Were samples preserved correctly and pH verified?

✓ Will courier charges apply?
Method of payment?
✓ Data package required? (Level: 1 (2) / 3 / 4)
✓ Notes:
Is this a DoD project? (USACE, Navy, AFCEE) | KAE

Due Date: 30-Apr-2024
 Received Date: 8-Apr-2024
 Received Time: 15:30
 Is date/time conversion necessary? _____
 # of hours from Korea Standard Time: _____

Thermometer ID: _____

<u>Cooler ID</u>	<u>Temp Blank</u>
#1	4.6 °C
_____	_____ °C
_____	_____ °C
_____	_____ °C

*Temperature readings include thermometer correction factors

Delivery method (circle all that apply):

Client / UPS / FedEx / USPS /
SGS Korea / Other:

This section must be filled out for DoD projects (USACE, Navy, AFCEE)

Yes **No**

✓	15	Is received temperature $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$?
_____	_____	Exceptions: Samples/Analyses Affected:

✓ ✓

NA

✓

✓

✓

✓

✓

✓

✓

NA

✓

✓

✓

✓

Was there an airbill? *(Note # above in the right hand column)*

Was cooler sealed with custody seals? Faxed to COE?

/ where:

Were seal(s) intact upon arrival?

Was there a COC with cooler?

Was the COC filled out properly?

Did the COC indicate ACOE / AFCEE project? (If applicable)

Did the COC and samples correspond?

Were all sample packed to prevent breakage?

Packing material:

Were all samples unbroken and clearly labeled?

Were all samples sealed in separate plastic bags?

Were all VOCs free of headspace and/or MeOH preserved?

Were correct container / sample sizes submitted?

Is sample condition good?

Was copy of CoC and Sample Receipt Forms given to PM?

Airbill #

Additional Sample Remarks: (✓ if applicable)

_____ Extra Sample Volume?
 _____ Limited Sample Volume?
 _____ Field preserved for volatiles?
 _____ Field-filtered for dissolved?
 _____ Lab-filtered for dissolved?
 _____ Ref Lab required?
 _____ Foreign Soil?

This section must be filled if problems are found.

Yes No

Was client notified of problems?

Individual contacted: _____
Date/Time: _____
Phone/Fax: _____
Reason for contact: _____

SGS Korea Contact:

Notes:



Completed by (sign): Daniella Jo (print): Daniella Jo
Login proof (check one): waived ☒ required ☐ Performed by: _____

[illegible]

Bottle Totals

5

Total: 5

Completed by: David a Jo Date: 2-24-48