

WSP GROUNDWATER MONITORING REPORT

October 3 & December 19, 2023

Under Agreed Order No. DE 13229, WSP is required to conduct groundwater monitoring to assess performance of the cleanup action in accordance with the Compliance Monitoring Plan approved by Ecology.

On October 3, 2023, groundwater monitoring well testing was conducted at the Washington State Penitentiary Landfill site by Sandra Treccani, Site Manager for the Department of Ecology and Darin Klein, Dean Smith, and Kelly Fulbright, representatives for the Department of Corrections. The weather was mid-fifties to mid-sixties with a light breeze and rain at times.

Six monitoring wells, MW-3, MW-5, MW-9, MW-11, MW-12, and MW-14 were chosen and approved by Ecology for testing. Groundwater levels were measured and noted on the attached field logs, as were the water quality parameters. Water parameters were obtained using a YSI Pro DSS Multiparameter Sampling Instrument.

A Geotech, Geocontrol PRO submersible bladder pump with dedicated bladders and tubing, was used for groundwater purging and sampling. The pump was decontaminated between monitoring wells with Liquinox and rinsed in distilled water. A new bladder was used at each well.

Monitoring Well MW-9 did not have sufficient water to complete the test.

Water samples were sent to Eurofins Environmental Testing for analysis of **Tetrachloroethene (PCE), Manganese, Total Chromium, and Nitrates.**

The samples sent to Eurofins did not arrive within the hold time for Nitrates or the required temperature of $\leq 6^{\circ}\text{C}$. After conferring with Eurofins staff, it was decided to run tests for metals only and retest for PCE and Nitrates.

All contaminants were below the cleanup levels.

On December 19, 2023, groundwater monitoring well testing was again conducted at the Washington State Penitentiary Landfill site by Sandra Treccani, Site Manager for the Department of Ecology and Dean Smith and Kelly Fulbright, representatives for the Department of Corrections. The weather was mid-thirties with a light breeze and mist/fog.

The six monitoring wells, MW-3, MW-5, MW-9, MW-11, MW-12, and MW-14 were tested. Groundwater levels were measured and noted on the attached field logs, as were the water quality parameters. Temperature and pH were obtained using an OAKTON pH6+ handheld meter. Deviation from prior multiparameter sampling was approved by Sandra Treccani.

A Geotech, Geocontrol PRO submersible bladder pump with dedicated bladders and tubing, was used for groundwater purging and sampling. The pump was decontaminated between monitoring wells with Liquinox and rinsed in distilled water. A new bladder was used at each well.

Water samples were sent to Eurofins Environmental Testing for analysis of **Tetrachloroethene (PCE), Manganese, Total Chromium, and Nitrates.**

The samples sent to Eurofins did not arrive within the hold time for Nitrates. **Tetrachloroethene (PCE)** analysis was conducted on all wells with **Manganese, and Total Chromium** analysis on MW-9.

All contaminants were below the cleanup levels.



Dean Smith

Environmental Specialist

Washington State Department of Corrections

(509) 386-0388

ANALYTICAL RESULTS

Site Clean Up Levels		48	2240	5	2240	10	
		ug/L	ug/L	ug/L	ug/L	ug/L	mg/L
Monitoring Well ID	Sample Collection Date	Hex Chrome	Total Chrome	RJ Lee Group Maganese	PCE	Eurofins Maganese	Nitrate
MW-3	5/24/2023	<PQL	2.24	6.08	ND	ND	26
	10/3/2023		ND			14	
	12/19/2023				ND		
MW-5	5/23/2023	<PQL	4.11	11.23	0.9	8.1	1.8
	10/3/2023		2.7			18	
	12/19/2023				0.67		
MW-9	5/24/2023	<PQL	15.24	765.2	ND	180	10
	12/19/2023		ND		ND	24	
MW-11	5/23/2023	<PQL	5.67	224.3	0.71	62	24
	10/3/2023		ND			15	
	12/19/2023				0.45		
MW-12	5/23/2023	<PQL	1.32	2.2	ND	ND	27
	10/3/2023		ND			44	
	12/19/2023				ND		
MW-14	5/24/2023	<PQL	1.47	2.3	ND	5.2	24
	10/3/2023		ND			150	
	12/19/2023				ND		
MW-3 Duplicate	5/24/2023	<PQL	1.1	2.07	ND	ND	26
	10/3/2023		ND			22	
	12/19/2023				ND		

FAINAL WATER QUALITY PARAMETERS

Monitoring Well ID	Sample Collection Date	pH	Conductivity	Dissolved Oxygen	Temperature (°C)	Turbidity	ORP
MW-3	5/24/2023	6.77	857	68.4	15	2.01	164.2
	10/3/2023	6.81	0.679	5.96	15.3	43.28	152
	12/19/2023	7.47			12.8		
MW-5	5/23/2023	7.4	194.5	81.3	19.4	149	179.7
	10/3/2023	7.19	0.566	7.59	18	21	145
	12/19/2023	7.61			13.9		
MW-9	5/24/2023	6.92	498.6	97.9	14.9	223.6	156.6
	12/19/2023	7.36			12.3		
MW-11	5/23/2023	6.89	887	82.3	18.1	94.6	188
	10/3/2023	6.95	0.853	6.79	18.6	14	153
	12/19/2023	7.26			15.6		
MW-12	5/23/2023	6.97	888	86.3	17.3	1.75	178.5
	10/3/2023	7.01	0.676	8	16.7	37	147
	12/19/2023	7.34			13.9		
MW-14	5/24/2023	6.74	1046	84.2	16	4.12	168
	10/3/2023	6.81	0.833	7.83	16.1	58	146.3
	12/19/2023	7.25			12.4		

Hit well bottom.

Well / Water / Pump Depth

Monitoring Well ID	Sample Collection Date	Well	Water	Pump
MW-3	5/24/2023	80'	72.73'	76'
	10/3/2023	78.7	74.94	77.5
	12/19/2023	78.7	73.66	76
MW-5	5/23/2023	102'	81.63'	93'
	10/3/2023	99.9	85.11	97.5
	12/19/2023	99.9	82.69	97
MW-9	5/24/2023	90'	83.18'	87'
	12/19/2023	90	84.38	85
MW-11	5/23/2023	76'	71.3'	74'
	10/3/2023	75.45	73.52	74
	12/19/2023	76	71	74
MW-12	5/23/2023	76'	70.8'	74'
	10/3/2023	75.45	73.55	74
	12/19/2023	76	71.78	74.5
MW-14	5/24/2023	74.6'	68.43'	71'
	10/3/2023	72.9	70.3	72
	12/19/2023	73	69.35	72

WEATHER: BREEZY WITH WIND & DIRECTIONAL TEMP 55°F - 65°F

Well Number MW-3 Date 10-03-2023
 Project Name WSP GW Monitoring Time On/Off Location _____

Depth to Water 74.94 Sampled By D Smith/S Treccani
 Depth of Well 80' 78.7 Sampling Time 1145
 Pump Depth 77.5 Sample ID _____

Purge Time _____ Est Purge Volume _____
 Purge Flow Rate _____ Actual Purge Volume _____

020 H²O
 035 SHUT OFF
 PUMP NOT
 WORKING.

Time	pH	Cond	DO	Temp	Turb	ORP
1126	6.78	.683	6.42	15.6	77.1	189.7
1133	6.77	.681	6.03	15.4	44.73	165
1137	6.81	.679	5.96	15.3	43.28	152

Notes PUMP WOULD NOT WORK CORRECTLY AT START. FAULTY CHECK VAL

Well Number MW-5 Date 10-03-2023
 Project Name WSP GW Monitoring Time On/Off Location _____

Depth to Water 85.11 Sampled By D Smith/S Treccani
 Depth of Well 102' 99.9 Sampling Time 1638
 Pump Depth 97.5 Sample ID _____

Purge Time _____ Est Purge Volume _____
 Purge Flow Rate _____ Actual Purge Volume _____

1608
 PUMP ON
 1613
 H²O

Time	pH	Cond	DO	Temp	Turb	ORP
1620	7.29	.514	9.40	20.9	9.51	168.3
1625	7.19	.606	7.83	19.9	15.45	150.1
1631	7.20	.580	7.59	18.2	22	147.8
1636	7.19	.566	7.59	18.0	21	145

Notes _____

Well Number MW-9 Date 10-3-2023
 Project Name _____ Time On/Off Location _____
 Depth to Water 85.82 Sampled By D Smith/S Treccani
 Depth of Well 90' 87 Sampling Time _____
 Pump Depth _____ Sample ID _____
 Purge Time _____ Est Purge Volume _____
 Purge Flow Rate _____ Actual Purge Volume _____

1212
pump on

Time	pH	Cond	DO	Temp	Turb	ORP

Notes WELL PUMPED DRY BEFORE FIRST SAMPLE

Well Number MW-11 Date 10-3-2023
 Project Name _____ Time On/Off Location _____
 Depth to Water 73.52 Sampled By D Smith/S Treccani
 Depth of Well 76' 75.45 Sampling Time 1545
 Pump Depth 74 Sample ID _____
 Purge Time _____ Est Purge Volume _____
 Purge Flow Rate _____ Actual Purge Volume _____

1525
pump on
1531
H₂O

Time	pH	Cond	DO	Temp	Turb	ORP
1534	6.94	1.05	7.05	19.2	83	177
1539	6.94	.995	6.85	18.6	24	155
1544	6.95	.853	6.79	18.6	14	153

Notes _____

1447
 2UMP ON
 1452
 H²O

Well Number MW-12 Date 10-03-2023
 Project Name _____ Time On/Off Location _____
 Depth to Water 73.55 Sampled By D Smith/S Treccani
 Depth of Well 76' 75.45 Sampling Time 1505
 Pump Depth 74 Sample ID _____
 Purge Time _____ Est Purge Volume _____
 Purge Flow Rate _____ Actual Purge Volume _____

Time	pH	Cond	DO	Temp	Turb	ORP
1453	7.10	.719	8.11	18.1	304	177.8
1458	7.04	.685	8.04	16.9	77	154
1502	7.01	.676	8.00	16.7	37	147
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

Notes _____

Well Number MW-14 Date 10-03-2023
 Project Name _____ Time On/Off Location _____
 Depth to Water 70.3 Sampled By D Smith/S Treccani
 Depth of Well 70' 72.9 Sampling Time 1347
 Pump Depth 72 Sample ID _____
 Purge Time _____ Est Purge Volume _____
 Purge Flow Rate _____ Actual Purge Volume _____

Time	pH	Cond	DO	Temp	Turb	ORP
1332	6.77	.850	7.55	16.7	172.15	135.69
1338	6.80	.837	7.81	16.2	61.37	160
1343	6.82	.837	7.95	16.3	58.68	153.9
1346	6.81	.833	7.83	16.1	58	146.3
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

Notes _____

SAME AS MW3

~~SLF-9~~
mw1A

Well Number _____ Date _____
Project Name _____ Time On/Off Location _____

Depth to Water _____ Sampled By D Smith/S Treccani
Depth of Well 211' Sampling Time _____
Pump Depth _____ Sample ID _____

Purge Time _____ Est Purge Volume _____
Purge Flow Rate _____ Actual Purge Volume _____

Time	pH	Cond	DO	Temp	Turb	ORP
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

Notes _____

FIELD
DUPLICATE

COLD MID 30's FOG/MIST SLIGHT BREEZE AT TIMES

Well Number MW-3 Date 12-19-23
 Project Name WSP GW Monitoring Time On/Off Location _____
 Depth to Water 73.66 Sampled By D Smith/S Treccani
 Depth of Well 80' Sampling Time 1322
 Pump Depth 76' Sample ID _____
 Purge Time _____ Est Purge Volume _____
 Purge Flow Rate _____ Actual Purge Volume _____

Time	pH	Cond	DO	Temp	Turb	ORP
1256	7.90			7.7		
1300	7.77			10.5		
1305	7.73			10.8		
1310	7.60			13.1		
1315	7.54			12.9		
1320	7.47			12.8		

Notes PUMP START 1252 H²O 1254

Well Number MW-5 GUSKIE Date _____
 Project Name WSP GW Monitoring Time On/Off Location _____
 Depth to Water 82.69 Sampled By D Smith/S Treccani
 Depth of Well 102' Sampling Time 1125
 Pump Depth 97 Sample ID _____
 Purge Time _____ Est Purge Volume _____
 Purge Flow Rate _____ Actual Purge Volume _____

Time	pH	Cond	DO	Temp	Turb	ORP
1106	7.77			7.2		
1110	8.17			10.8		
1115	7.80			12.1		
1120	7.66			13.0		
1125	7.61			13.9		

Notes PUMP START 1103 H²O 1105

PER ECOLOGY SWITCHED TO PH & TEMP ONLY.

Well Number MW-9 DAIRY Date 12-19-23
Project Name _____ Time On/Off Location _____

Depth to Water 84.38 Sampled By D Smith/S Treccani
Depth of Well 90' Sampling Time 1231
Pump Depth 85 Sample ID _____

Purge Time _____ Est Purge Volume _____
Purge Flow Rate _____ Actual Purge Volume _____

Time	pH	Cond	DO	Temp	Turb	ORP
<u>1215</u>	<u>7.47</u>			<u>7.6</u>		
<u>1220</u>	<u>7.40</u>			<u>10.7</u>		
<u>1225</u>	<u>7.37</u>			<u>11.8</u>		
<u>1230</u>	<u>7.36</u>			<u>12.3</u>		

Notes PUMP START 1209 H₂O 1214 HFT BOTTOM ?

Well Number MW-11 HSB Date _____
Project Name _____ Time On/Off Location _____

Depth to Water 71 Sampled By D Smith/S Treccani
Depth of Well 76' Sampling Time 1035
Pump Depth 74 Sample ID _____

Purge Time _____ Est Purge Volume _____
Purge Flow Rate _____ Actual Purge Volume _____

Time	pH	Cond	DO	Temp	Turb	ORP
<u>1017</u>	<u>8.02</u>			<u>6.8</u>		
<u>1022</u>	<u>7.35</u>			<u>12.4</u>		
<u>1027</u>	<u>7.29</u>			<u>14.2</u>		
<u>1032</u>	<u>7.27</u>			<u>15.1</u>		
<u>1035</u>	<u>7.26</u>			<u>15.6</u>		

Notes PUMP START 1013 H₂O 1016

Well Number MW-12 DELTA Date 12-19-23
Project Name _____ Time On/Off Location _____

Depth to Water 71.78 Sampled By D Smith/S Treccani
Depth of Well 76' Sampling Time 0947
Pump Depth 74.5 Sample ID _____

Purge Time _____ Est Purge Volume _____
Purge Flow Rate _____ Actual Purge Volume _____

Time	pH	Cond	DO	Temp	Turb	ORP
0927	8.03			8.9		
0932	7.62			10.5		
0935	7.43			12.9		
0940	7.36			13.8		
0945	7.34			13.9		

Notes pump START 0920 H₂O 0925

Well Number MW-14 Date _____
Project Name _____ Time On/Off Location _____

Depth to Water 69.35 Sampled By D Smith/S Treccani
Depth of Well 70' 73 Sampling Time 1415
Pump Depth 72 Sample ID _____

Purge Time _____ Est Purge Volume _____
Purge Flow Rate _____ Actual Purge Volume _____

Time	pH	Cond	DO	Temp	Turb	ORP
1350	8.29			5.5		
1355	7.40			8.3		
1400	7.31			9.8		
1405	7.26			11.8		
1410	7.25			12.9		
1415	7.25			12.4		

Notes pump START 1345 H₂O 1347

FIELD DUPLICATE

SAME AS MW 3

Well Number SLF-9 MW1A
Project Name _____

Date _____
Time On/Off Location _____

Depth to Water _____
Depth of Well 211'
Pump Depth _____

Sampled By D Smith/S Treccani
Sampling Time _____
Sample ID _____

Purge Time _____
Purge Flow Rate _____

Est Purge Volume _____
Actual Purge Volume _____

Time	pH	Cond	DO	Temp	Turb	ORP
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

Notes _____



Instruction Manual

pH 5+ pH/°C
pH 6+ pH/°C/mV
Ion 6+ pH/°C/mV/Ion



OAKTON

EUTECH
INSTRUMENTS
Technology Made Easy...

CE

ISO 9001
CERTIFIED

68X243633 Rev 1-1 3/2011

Part of Thermo Fisher Scientific

Table of Contents

- 1. INTRODUCTION 2**
- 2. GETTING STARTED 3**
 - 2.1 Description of Keypad Functions 3
 - 2.2 Description of LCD Annunciators 4
 - 2.3 Inserting & Removing the Rubber Armor / Stand 4
 - 2.4 Inserting New Batteries 5
 - 2.5 Battery Replacement 5
 - 2.6 Connecting the Electrode and Temperature Sensor 5
 - 2.7 Conditioning the pH Electrode 6
 - 2.8 Switching the Meter On 6
- 3. CALIBRATION 7**
 - 3.1 pH Calibration 7
 - 3.1.1 pH Calibration Procedure 7
 - 3.1.2 Changing the pH Buffer Group 8
 - 3.1.3 Resetting User Calibrated Values 9
 - 3.2 Ion Calibration (Ion 6+) 9
 - 3.2.1 Ion Calibration Procedure 10
 - 3.3 Millivolt (mV) Calibration (pH 6+ only) 12
 - 3.4 Temperature Calibration 13
 - 3.4.1 With Temperature Probe 13
 - 3.4.2 Without Temperature Probe (no ATC) 14
- 4. MEASUREMENT 15**
 - 4.1 Taking Measurements 15
 - 4.2 Millivolt (mV) Reference Check (Ion 6+ only) 15
 - 4.3 Holding a Reading 15
 - 4.4 Releasing a Held Reading 15
- 5. ELECTRODE CARE AND MAINTENANCE 16**
- 6. TROUBLESHOOTING 16**
- 7. SPECIFICATIONS 17**
- 8. REPLACEMENTS AND ACCESSORIES 18**
- 9. WARRANTY 20**
- 10. RETURN OF ITEMS 20**

1. INTRODUCTION

Thank you for purchasing the pH 5+, pH 6+, or Ion 6+ meter. These microprocessor-based handheld meters are economical and easy to use. It has a large custom LCD (Liquid Crystal Display) for clear and easy reading.

The pH 5+ measures pH and temperature (°C). The pH 6+ and Ion 6+ meters measure pH, mV (ORP) and temperature.

Additionally, the Ion 6+ allows direct ion concentration measurement of various ions (mono and divalent). The mV mode is also useful for diagnosis of ion selective electrodes (ISE).

Meters include 4 alkaline "AAA" batteries, a rubber armor / stand, instruction manual, and warranty card. Please refer to **Section 8 Replacements and Accessories** for information on additional accessories and calibration solutions.

2. GETTING STARTED

2.1 Description of Keypad Functions

The pH 5+ and pH 6+ have four keys while the Ion 6+ meter has six keys on its splash-proof keypad. The common keys are **ON/OFF**, **HOLD/ENTER**, **CAL** and **MODE**. The Ion 6+ meter adds **▲** and **▼** keys.

ON/OFF: Powers meter on and off. Meter starts up in the mode that you last switched off from.

MODE/INC: Selects measurement mode for Ion, mV, pH and Temperature. Increment button for mV calibration (pH 6+ only).

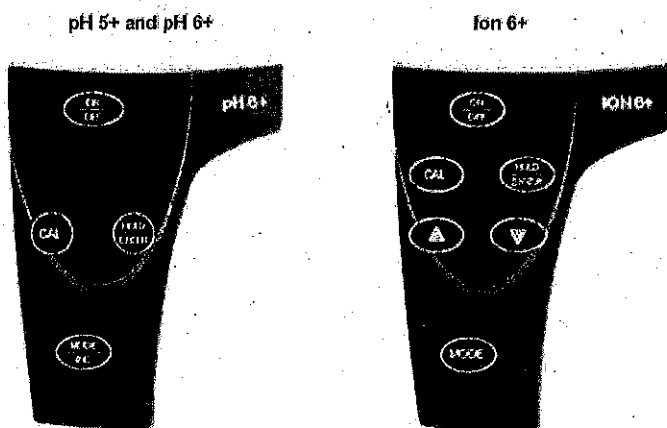
CAL: Allows calibration for Ion, pH, mV or Temperature, or to abort calibration and return to measure without confirming a value.

▲ (Ion 6+ only): Increment values during calibration mode.

▼ (Ion 6+ only): Decrement values during calibration mode.

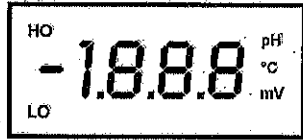
HOLD: Freezes the measured reading for easy viewing.

ENTER: Confirms calibration value.



2.2 Description of LCD Annunciators

The large custom LCD consists of 3½-digit segments which uses annunciators for pH, mV or °C (Temperature). No annunciator is shown in Ion mode. Other annunciators include "HO" (when HOLD function is activated) and "LO" (low battery condition).



2.3 Inserting & Removing the Rubber Armor / Stand

1. To remove meter from rubber armor, push out from the bottom edges of meter until it is completely out of boot. Ensure that cables of ISE/pH electrode or temperature probe are not connected. **Figure A.**

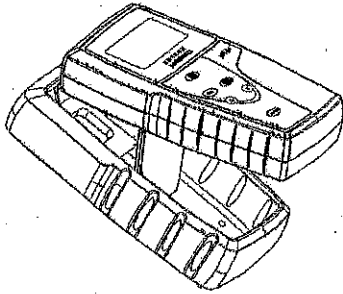


Figure A

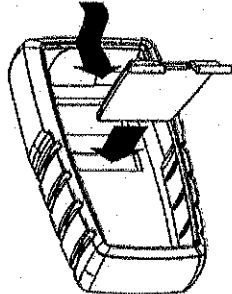
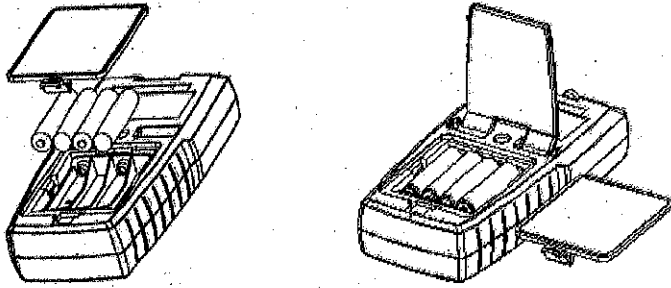


Figure B

2. To insert meter into armor, slide in from the top of meter before pushing the bottom edges of meter down to set it into position. Lift up the stand at the back of meter for bench top applications if necessary. **Figure B.**

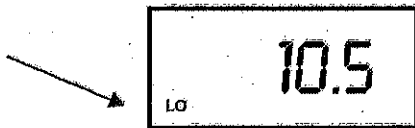
2.4 Inserting New Batteries

The battery compartment is found at the back of instrument. To open the battery compartment, push in the direction of arrow and lift up the cover. Note the polarity of battery before inserting into position. After replacement, place cover back and press down until it locks.



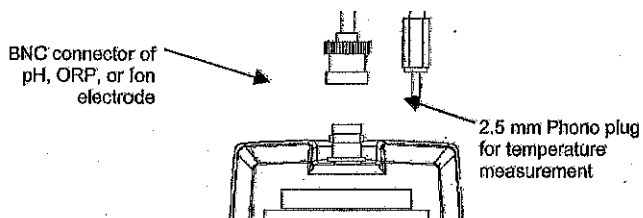
2.5 Battery Replacement

The "LO" annunciator of the LCD alerts you when battery power is running low.
Caution: Power off the meter before changing battery.



2.6 Connecting the Electrode and Temperature Sensor

To connect the electrode into meter, align the BNC connector slots with the posts of meter's socket and rotate connector clockwise until it locks. Do not force when connecting. To remove, simply rotate the connector in counter-clockwise direction until it unlocks, and slide the connector off the socket.



Insert the mini phono jack of temperature sensor into the socket on the meter. Unplug the phono jack when not in use or you measure pH without any temperature compensation.

2.7 Conditioning the pH Electrode

For best results condition the pH electrode before use or if it has not been in use for a long time by soaking it into a container filled with pH 4 buffer solution for at least 1 hour and rinse before use.

2.8 Switching the Meter On

1. Press **ON/OFF** key. All LCD segments will display momentarily as the meter performs a self-diagnostic test. The Ion 6+ will display "- -" if the meter has not been calibrated or if the meter has been reset.

2. Press **MODE** key to choose the desired measurement mode.

If a temperature probe is not connected, either 25.0°C (factory default) or the last calibrated temperature value is displayed. If a temperature probe is connected, the current measured temperature is displayed.

3. "Or" (Over range) indicates the reading exceeds the maximum. "Ur" (Under range) indicates the reading is under minimum measurement range (see Section 7 Specifications).

Ur

Or

3. CALIBRATION

3.1 pH Calibration

The meter is capable of calibrating up to 3 pH values using USA or NIST (nSi) pH buffer standards or 2 pH values with Low Ionic (Pb) pH buffer standard. All new calibration values will automatically override existing data.

USA group	4.01, 7.00, 10.01
NIST group	4.01, 6.86, 9.18
Pb group	4.10, 6.97

For best results perform at least a 2-point calibration at room temperature (25 °C) using standard buffers. Begin with pH 7.00 (USA group), pH 6.86 (NIST group) or pH 6.97 (Pb group).

For a 1-point calibration, calibration should be performed with a pH buffer value closest to the expected sample value being measured.

The meter has automatic buffer recognition that identifies the correct pH buffer values during calibration. The meter will accept calibration values that are within +/-1.0 pH units of the expected value, otherwise the LCD will flash "Er1" and the value will not be accepted. Press **CAL** to abort calibration and resume measurement.

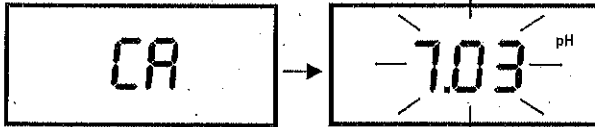
Always use new pH buffer solutions for calibration. Do not reuse buffer solutions as it may be contaminated and affect the calibration and accuracy of measurements. Promptly seal containers and store solutions in a dark, dry, cool environment.

Before use, remove the plastic protective cap of pH electrode and condition the glass bulb by soaking it in tap water or pH buffer (preferably pH 4) for 1-2 hours. This hydrates the glass bulb if the electrode is too dry or has not been used recently. Always rinse the probes with clean water before and after each calibration/sample measurement to avoid cross-contamination. For details refer to section 5 on Electrode care and maintenance.

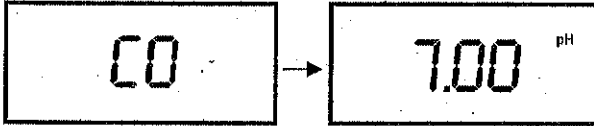
3.1.1 pH Calibration Procedure

1. Pour known pH buffer calibration standard solution into a clean, dry container, e.g. pH 7.00. Turn on meter and select pH mode by pressing **MODE** key if necessary.
2. Dip the pH electrode and temperature probe into the solution. Swirl gently and wait for reading to stabilise (approx. 30 seconds depending on your electrode condition).

3. Press **CAL** to enter pH calibration mode. "CA" displays momentarily before the display flashes the current un-calibrated reading.



4. To abort or cancel calibration without accepting the new value, press **CAL** key. The meter will automatically revert to pH measurement mode.
5. Allow reading to stabilise if necessary. Press **ENTER** key to confirm calibration. "CO" displays momentarily before reverting to pH measurement mode.



6. For highest accuracy, perform a multiple-point calibration. Repeat step 1 with additional pH buffer calibration standard solutions.

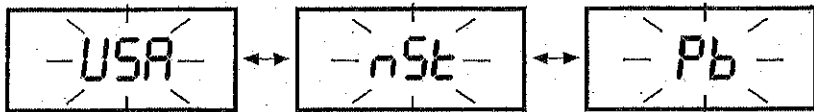
3.1.2 Changing the pH Buffer Group

You can calibrate with pH standards of either USA, NIST (nSt) or Low Ionic (Pb) pH buffer groups. The factory default is USA. To abort buffer group selection press **CAL** to revert to pH measurement mode.

1. Press and hold **MODE** while switching the meter on using the **ON/OFF** key. The display shows "bUF" blinking.



2. Press **ENTER** key to begin buffer group selection mode. Use the **MODE** key to toggle between USA, NIST or Pb as shown below.



Press ENTER key to confirm your selection. The meter will automatically revert to pH measurement mode. The meter will save the selected group indefinitely until changed.

3.1.3 Resetting User Calibrated Values

The calibrated pH/mV/Ion values can be reset to factory default using the procedure below. Temperature offset will not be reset using this procedure. To abort press CAL to revert to measurement mode.

1. Press and hold CAL while switching the meter on using the ON/OFF key. The LCD shows "rSt" blinking.
2. Press ENTER key to confirm. The meter automatically clears all stored pH/Ion calibration or mV offset values and reverts to measurement mode.

3.2 Ion Calibration (Ion 6+)

The Ion 6+ meter is capable of 2 or 3 point ion calibration with standard solutions. The Ion 6+ will display "--" if the meter has not been calibrated or if the meter has been reset.

To abort ion calibration press CAL to revert to measurement mode.

Ion calibration values are not stored into the meter's non-volatile memory. Ion calibration data is lost once the meter is reset and when the batteries are being removed and replaced.

Error message "Er2" is displayed after a single point calibration is completed. Recalibrate using minimum of 2 points.

Calibration values are successfully stored if the ISE (Ion Selective Electrode) slope is within the specified tolerance of 15-90mV/decade, otherwise an error message "Er3" is displayed.

If any of calibration points are not within 1 decade of each other, an error message "Er4" will be shown at the end of calibration process. The ion calibration options

available include 0.1, 1.0, 10.0, 100.0 ppm. Recalibrate and ensure that consecutive calibration points are 1 decade apart from each other.

Ensure that you use new or fresh standard solutions during calibration. Do not reuse ion standard solution as it may be contaminated and affect the calibration and accuracy of measurements. Store standard solutions in a dry, cool environment if possible. Check that ISE's and ion standard solutions are kept in good condition for best results.

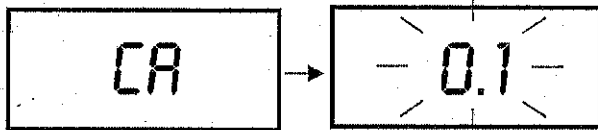
Before use, remove any plastic protective cap of ISE (at the tip of sensor) and refer to electrode instruction manual for proper operation. Rinse probes before and after each calibration or sample measurement to avoid cross-contamination.

3.2.1 Ion Calibration Procedure

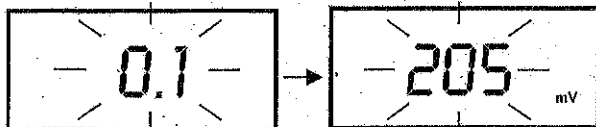
The Ion 6+ can measure various ions. Ion measurement requires ion selective electrodes (ISE)—(sold separately) which measure a specific ion of interest—such as ammonia or fluoride.

The available ion calibration values for the Ion 6+ are 0.1, 1.0, 10.0, and 100.0 ppm. Pick any 2 or 3 consecutive values to use and prepare the corresponding ion calibration solutions. Turn on the meter and select ion mode by pressing MODE key if necessary. **For best results, always begin with your lowest standard value, followed by the next lowest standard.**

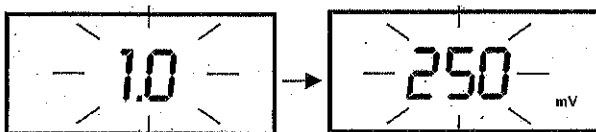
1. Dip the ISE into your standard solution. Add ISA if required. Swirl it gently. Press CAL key to begin calibration mode.
2. The display shows "CA" (to indicate calibration mode) momentarily followed by "0.1" flashing. To select the appropriate standard, use ▲ and ▼ keys.



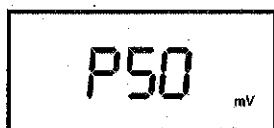
3. Press **ENTER** to confirm that the ppm value is the desired standard. The displayed value now shows the corresponding mV reading for the selected ppm value selected. Allow the reading to stabilise.



4. When the mV reading is stable, press **ENTER** to complete the 1st point calibration. The display will show the next highest calibration standard value. Rinse the electrode with clean water.
5. Dip the electrode into your next highest standard solution. Add ISA if required. Swirl it gently. Press **CAL** key to begin calibration mode.
6. Press **ENTER** to confirm that the ppm value is the desired standard. The displayed value now shows the corresponding mV reading for the selected ppm value selected. Allow the reading to stabilise.



7. When the mV reading is stable, press **ENTER** to complete the 2nd point calibration. The display will show the next highest calibration standard value. Rinse the electrode with clean water.
8. To calibrate a 3rd point, repeat steps 6 & 7. To exit from 2-point calibration, press **CAL** key.
9. The ISE slope in mV value "PXX mV" will momentarily display before reverting to ion measurement mode.

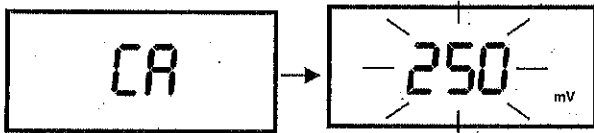


If the calibration is not successfully stored into its memory, an error message "Er3" will be displayed. This occurs when the slope is lower than 15mV/decade or higher than 90mV/decade.

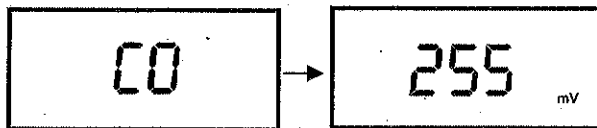
3.3 Millivolt (mV) Calibration (pH 6+ only)

mV calibration is performed for Oxidization Reduction Potential (ORP / Redox) measurements, where you can adjust its mV value as a base value for measurements. To abort press **CAL** to revert to measurement mode.

1. Press **MODE** key to enter mV mode, the LCD displays "mV".
2. Dip the ORP electrode into a known standard solution, (e.g. Quinhydrone 255) and swirl it until the reading stabilizes.
3. Press **CAL** key to enter mV calibration. The LCD shows "CA" momentarily before flashing the mV reading.



4. To proceed calibration use **INC** key to adjust the reading to your desired value. The maximum adjustment you can make is ± 50 mV. Pressing **INC** key continuously allows you to scroll to the maximum allowable value and then loops back to the minimum allowable value.
5. Press **ENTER** key to confirm calibration. The display shows "CO" momentarily and meter reverts to measurement mode showing the current set value.

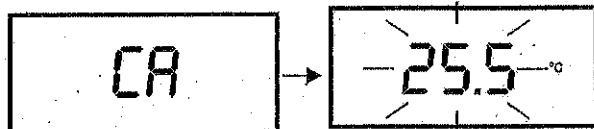


3.4 Temperature Calibration

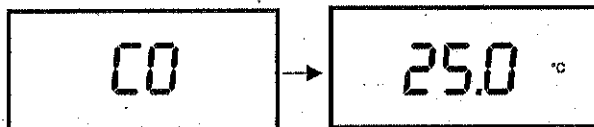
3.4.1 With Temperature Probe

The temperature probe (ECPHSTEM01P) provided with the meter is factory-calibrated. Over time, temperature calibration may drift and require calibration. If there is a need to replace with the new probe you should calibrate the temperature probe prior to pH calibration.

1. Connect your temperature probe to the meter. Press **MODE** key to enter the Temperature mode until "°C" annunciator appears in the LCD.
2. Compare the displayed value to a NIST certified thermometer or other thermometer known to be accurate. For best accuracy, place both the probe and thermometer in a constant temperature bath.
3. Press **CAL** key to enter temperature calibration mode. The LCD shows "CA" momentarily and displayed reading flashes.



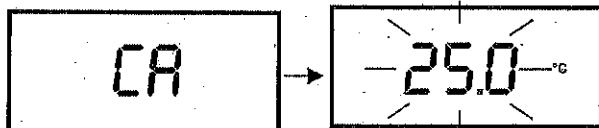
4. Press **▲** and **▼** keys (for Ion 6+) or **INC** key (for pH 5+ / pH 6+) until the LCD display shows the desired temperature. The meter allows an adjustable maximum value of ± 5 °C from factory default.
5. To cancel or abort this operation, press **CAL** key. Note no new value will be stored into its meter's non-volatile memory. To confirm calibration, press **ENTER** key. The LCD displays "CO" momentarily, and the meter reverts to measurement mode.



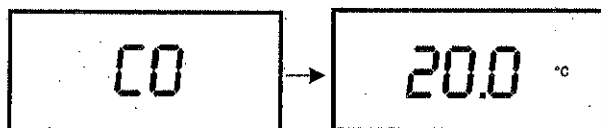
3.4.2 Without Temperature Probe (no ATC)

If no temperature probe is used, the meter compensates for pH response based on a temperature value manually set by you or at 25.0 °C (factory default).

1. Press **MODE** key to enter into Temperature mode until "°C" shows in LCD.
2. Compare the displayed value to NIST certified thermometer or thermometer known to be accurate (dipped into a constant temperature bath).
3. Press **CAL** key to enter temperature calibration mode. The LCD shows "CA" momentarily and displayed reading flashes. Note that this displayed value should either be 25.0 °C or last set temperature value.



4. Press **▲** and **▼** key (for Ion 6) or **INC** key (for pH 5/6) until the displays shows the desired temperature. You can set any value from 0 to 100 °C.
5. To cancel or abort this operation, press **CAL** key. Note no new value will be stored into its meter's non-volatile memory. To confirm calibration, press **ENTER** key. The LCD displays "CO" momentarily, and the meter reverts to measurement mode.



4. MEASUREMENT

4.1 Taking Measurements

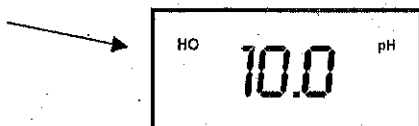
1. Before measurement, rinse pH/ORP electrode or Ion Selective Electrode and temperature probe with clean water to remove any impurities stuck onto the bodies of probes.
2. Power on the meter using **ON/OFF** key. Press **MODE** key to select your desired mode of operation (pH, mV, Ion, or Temperature).
3. Dip and stir both probes gently into an aqueous test sample, swirl gently and wait for the reading to stabilise. Note the reading. Freeze the displayed if desired—for details refer to Section 4.3.
4. Rinse probes with clean water before taking next reading or storage.

4.2 Millivolt (mV) Reference Check (Ion 6+ only)

The mV mode in Ion 6+ can be used for the diagnosis of ISE or pH electrode condition. Press **MODE** to access mV mode, the "mV" annunciator in LCD is displayed. The displayed value shows the absolute mV value of ISE or pH electrode being measured.

4.3 Holding a Reading

To freeze or hold your displayed reading momentarily, press **HOLD** key once. The LCD displays "HO" annunciator to indicate the HOLD function is activated.



4.4 Releasing a Held Reading

Press **HOLD** key once again to deactivate the HOLD function or to release your frozen reading. The meter reverts to current measurement mode, and the "HO" annunciator disappears from the LCD.

5. ELECTRODE CARE AND MAINTENANCE

For best results, keep the ISE capped dry and pH/ORP electrode bulb wet. Store the pH/ORP glass bulb with pH electrode storage solution. **NEVER** use deionised water for storage. Wash electrodes with clean water after each use.

Your ISE or pH electrode is susceptible to contamination or dirt. Clean as needed using mild detergent and warm water. Blot the probe gently with a soft tissue paper. Avoid excessive drying of the glass membrane and avoid touching it with your fingers. Recalibrate after cleaning.

6. TROUBLESHOOTING

Problem	Cause	Solution
No display	Batteries not in place.	a) Insert batteries. b) Re-insert batteries in correct polarity.
"--" on display	Ion 6+ does not have 2 point calibration	Perform 2 or 3 point calibration.
"LO" displays in the LCD	Low battery	Replace batteries.
Unstable reading	a) Electrode not deep enough in sample b) Dirty electrode. c) Broken electrode	a) Place electrode deeper in sample. b) Clean electrode and recalibrate. c) Replace electrode.
"Er1" display	Buffer value out of tolerance	Use new pH buffer solution and recalibrate. Ensure correct pH buffer group was selected.
"Er2" display	Single point calibration	Perform at least 2 point calibration. (Ion 6+).
"Er3" display	ISE slope not within the specified tolerance	Check ISE is in good working condition-refer to ISE manual (Ion 6+).
"Er4" display	Any calibration points not within 1 decade	Ensure any calibration points between each other must be within 1 decade. (Ion 6+)
Not able to calibrate	a) Display freezes b) Faulty electrode c) Inaccurate buffer	a) Release reading by pressing HOLD. b) Replace electrode. c) Replace expired buffer solutions.

7. SPECIFICATIONS

	Model	pH 5+	pH 6+	Ion 6+
Ion Range	0.01 to 1999 ppm			✓
Resolution	0.01 ppm for 0.01 to 0.99 ppm; 0.1 ppm for 1.0 to 199.9 ppm; 1 ppm for 200 to 1999 ppm			✓
Accuracy	+/- 1% of reading			✓
No. of Calibration Pts	2 to 3 points (minimum 2 pts)			✓
pH Range	0.00 to 14.00 pH	✓	✓	✓
Resolution	0.01 pH	✓	✓	✓
Accuracy	+/- 0.01 pH	✓	✓	✓
pH Slope Range	80 to 120%	✓	✓	✓
No. of Calibration Pts	1 to 3 points (push-button)	✓	✓	✓
Buffer Options	pH 4.01, 7.00, 10.01 (USA) pH 4.01, 6.86, 9.18 (NIST) pH 4.10, 6.87 (Pb)	✓	✓	✓
Temperature Range	0.0 to 100.0 °C	✓	✓	✓
Resolution	0.1 °C	✓	✓	✓
Accuracy	+/- 0.5 °C	✓	✓	✓
Temperature Comp.	Automatic / Manual (0 to 100 °C)	✓	✓	✓
Millivolt Range	-1000 to +1000 mV		✓	
Resolution	1 mV		✓	
Accuracy	+/- 2 mV		✓	
Millivolt Range	-500 to 500 mV			✓
Resolution	0.1 mV for -200 to 200 mV; 1 mV for 200 to 500 mV			✓
Accuracy	+/- 0.2 and 2 mV resp.			✓
Features				
Auto-Buffer Recognition	Yes			
Hold Function	"HO"			
Auto Shut Off	After 17 minutes			
Low Battery Indication	"LO"			
Display	Single Custom LCD			
Operating Temperature	0 to 50 °C			
Power Requirements	4 x "AAA" Alkaline Batteries			
Battery Life	500 hours			
Meter Dim./Weight	15.7 x 8.5 x 4.2 cm / 255 g			

8. REPLACEMENTS AND ACCESSORIES

Item Description	Part number Ordering Code	
	Eutech Instruments	Oakton Instruments
pH 5+ with ATC probe	ECPH501PLUS 01X244911	35613-50
pH 5+ with pH and ATC probes	—	35613-52
pH 5+ with pH and ATC probes and solutions in hard carrying case	ECPH502PLUSK 01X244912	—
pH 5+ with pH/ATC probe and solutions in hard carrying case	ECPH503PLUSK 01X244913	35613-54
pH 6+ with ATC probe	ECPH601PLUS 01X245025	35613-20
pH 6+ with pH and ATC probes	—	35613-22
pH 6+ with ATC probe and solutions in hard carrying case	ECPH601PLUSK 01X245028	—
pH 6+ with pH and ATC probes and solutions in hard carrying case	ECPH602PLUSK 01X245026	—
pH 6+ with pH/ATC probe and solutions in hard carrying case	ECPH603PLUSK 01X245027	35613-24
Ion 6+ with ATC probe	ECION601PLUS 01X256409	35613-80
Ion 6+ with pH and ATC probes and solutions in hard carrying case	ECION602PLUSK 01X256410	35613-82
ATC Probe, Stainless Steel, 84 x 3 mm	PH5TEM01P 01X021804	35613-05
pH electrode, plastic, gel-filled, single-junction	ECFC7252101B 01X099412	59001-65
pH electrode, plastic, gel-filled, double-junction	ECFC7252201B 01X099417	35641-51
pH electrode, glass, refillable, double-junction	ECFG7370101B 93X218819	35805-04
pH/ATC electrode, plastic, gel-filled, single-junction	ECFE7352901B 01X218964	35811-71

Item Description	Part number Ordering Code	
	Eutech Instruments	Oakton Instruments
pH/ATC electrode, plastic, gel-filled, double-junction	—	35811-72
ORP electrode, plastic, gel-filled, single-junction	ECFC7960101B 01X256612	59001-75
ORP electrode, plastic, gel-filled, double-junction	ECFC7960201B 01X256613	59001-77
pH 1.68 buffer solution, 480 mL bottle	ECBU1BT	00654-01
pH 4.01 buffer solution, 480 mL bottle (1 pint)	ECBU4BT	00654-00
pH 4.01 buffer sachets, 20 mL x 20 pcs.	ECBU4BS	35653-01
pH 6.86 buffer solution, 480 mL bottle	ECBU686BT	00654-03
pH 7.00 buffer solution, 480 mL bottle (1 pint)	ECBU7BT	00654-04
pH 7.00 buffer sachets, 20 mL x 20 pcs.	ECBU7BS	35653-02
pH 9.18 buffer solution, 480 mL bottle	ECBU918BT	00654-07
pH 10.01 buffer solution, 480 mL bottle (1 pint)	ECBU10BT	00654-08
pH 10.01 buffer sachets, 20 mL x 20 pcs.	ECBU10BS	35653-03
pH 12.45 buffer solution, 480 mL bottle	ECBU12BT	00654-12
pH 4.01, 7.00, & 10.01 buffer pack, 480 mL bottles	—	05942-10
Electrode Storage Solution	ECRE005	00653-04
Electrode Cleaning Solution	ECDPCBT	00653-06



ANALYTICAL REPORT

PREPARED FOR

Attn: Dean Smith
Washington State Dept of Corrections
1313 N 13th Ave - MS#37
Walla Walla, Washington 99362

Generated 10/20/2023 6:20:49 PM Revision 1

JOB DESCRIPTION

Bi-Annual Monitoring

JOB NUMBER

580-132558-1

Eurofins Seattle

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northwest, LLC Project Manager.

Authorization



Generated
10/20/2023 6:20:49 PM
Revision 1

Authorized for release by
Laura Schick, Project Manager
Laura.Schick@et.eurofinsus.com
(253)922-2310



Table of Contents

Cover Page	1
Table of Contents	3
Case Narrative	4
Definitions	5
Client Sample Results	6
QC Sample Results	12
Chronicle	13
Certification Summary	14
Sample Summary	15
Chain of Custody	16
Receipt Checklists	20

Case Narrative

Client: Washington State Dept of Corrections
Project/Site: Bi-Annual Monitoring

Job ID: 580-132558-1

Job ID: 580-132558-1

Laboratory: Eurofins Seattle

Narrative

**Job Narrative
580-132558-1**

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method. Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Revision 1 (10/20/2023)

The report being provided is a revision of the original report sent on 10/20/2023. The report was revised to add Chromium by method 6010D.

Receipt

The samples were received on 10/9/2023 9:30 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 19.0°C

Metals

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.



Definitions/Glossary

Client: Washington State Dept of Corrections
Project/Site: Bi-Annual Monitoring

Job ID: 580-132558-1



Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Client Sample Results

Client: Washington State Dept of Corrections
Project/Site: Bi-Annual Monitoring

Job ID: 580-132558-1

Client Sample ID: MW1A 100323 MC

Lab Sample ID: 580-132558-2

Date Collected: 10/03/23 10:45

Matrix: Water

Date Received: 10/09/23 09:30

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	22		20	1.7	ug/L		10/18/23 16:07	10/19/23 20:41	1
Chromium	ND		25	2.7	ug/L		10/18/23 16:07	10/19/23 20:41	1



Client Sample Results

Client: Washington State Dept of Corrections
Project/Site: Bi-Annual Monitoring

Job ID: 580-132558-1

Client Sample ID: MW3 100323 MC

Lab Sample ID: 580-132558-5

Date Collected: 10/03/23 11:45

Matrix: Water

Date Received: 10/09/23 09:30

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	14	J	20	1.7	ug/L		10/18/23 16:07	10/19/23 20:44	1
Chromium	ND		25	2.7	ug/L		10/18/23 16:07	10/19/23 20:44	1



Client Sample Results

Client: Washington State Dept of Corrections
Project/Site: Bi-Annual Monitoring

Job ID: 580-132558-1

Client Sample ID: MW5 100323 MC

Lab Sample ID: 580-132558-8

Date Collected: 10/03/23 16:38

Matrix: Water

Date Received: 10/09/23 09:30

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	18	J	20	1.7	ug/L		10/18/23 16:07	10/19/23 20:48	1
Chromium	2.7	J	25	2.7	ug/L		10/18/23 16:07	10/19/23 20:48	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11

Client Sample Results

Client: Washington State Dept of Corrections
Project/Site: Bi-Annual Monitoring

Job ID: 580-132558-1

Client Sample ID: MW11 100323 MC

Lab Sample ID: 580-132558-11

Date Collected: 10/03/23 15:45

Matrix: Water

Date Received: 10/09/23 09:30

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	15	J	20	1.7	ug/L		10/18/23 16:07	10/19/23 20:51	1
Chromium	ND		25	2.7	ug/L		10/18/23 16:07	10/19/23 20:51	1



Client Sample Results

Client: Washington State Dept of Corrections
Project/Site: Bi-Annual Monitoring

Job ID: 580-132558-1

Client Sample ID: MW12 100323 MC

Lab Sample ID: 580-132558-14

Date Collected: 10/03/23 15:05

Matrix: Water

Date Received: 10/09/23 09:30

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	44		20	1.7	ug/L		10/18/23 16:07	10/19/23 20:55	1
Chromium	ND		25	2.7	ug/L		10/18/23 16:07	10/19/23 20:55	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11

Client Sample Results

Client: Washington State Dept of Corrections
Project/Site: Bi-Annual Monitoring

Job ID: 580-132558-1

Client Sample ID: MW14 100323 MC

Lab Sample ID: 580-132558-17

Date Collected: 10/03/23 13:47

Matrix: Water

Date Received: 10/09/23 09:30

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	150		20	1.7	ug/L		10/18/23 16:07	10/19/23 20:58	1
Chromium	ND		25	2.7	ug/L		10/18/23 16:07	10/19/23 20:58	1



QC Sample Results

Client: Washington State Dept of Corrections
 Project/Site: Bi-Annual Monitoring

Job ID: 580-132558-1

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 580-441273/23-A
Matrix: Water
Analysis Batch: 441465

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 441273

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	ND		20	1.7	ug/L		10/18/23 16:07	10/19/23 18:38	1
Chromium	ND		25	2.7	ug/L		10/18/23 16:07	10/19/23 18:38	1

Lab Sample ID: LCS 580-441273/24-A
Matrix: Water
Analysis Batch: 441465

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 441273

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Manganese	1000	984		ug/L		98	80 - 120
Chromium	1000	1070		ug/L		107	80 - 120

Lab Sample ID: LCSD 580-441273/25-A
Matrix: Water
Analysis Batch: 441465

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 441273

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Manganese	1000	994		ug/L		99	80 - 120	1	20
Chromium	1000	1070		ug/L		107	80 - 120	0	20



Lab Chronicle

Client: Washington State Dept of Corrections
Project/Site: BI-Annual Monitoring

Job ID: 580-132558-1

Client Sample ID: MW1A 100323 MC

Lab Sample ID: 580-132558-2

Date Collected: 10/03/23 10:45

Matrix: Water

Date Received: 10/09/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			441273	MJ	EET SEA	10/18/23 16:07
Total Recoverable	Analysis	6010D		1	441465	TMH	EET SEA	10/19/23 20:41

Client Sample ID: MW3 100323 MC

Lab Sample ID: 580-132558-5

Date Collected: 10/03/23 11:45

Matrix: Water

Date Received: 10/09/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			441273	MJ	EET SEA	10/18/23 16:07
Total Recoverable	Analysis	6010D		1	441465	TMH	EET SEA	10/19/23 20:44

Client Sample ID: MW5 100323 MC

Lab Sample ID: 580-132558-8

Date Collected: 10/03/23 16:38

Matrix: Water

Date Received: 10/09/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			441273	MJ	EET SEA	10/18/23 16:07
Total Recoverable	Analysis	6010D		1	441465	TMH	EET SEA	10/19/23 20:48

Client Sample ID: MW11 100323 MC

Lab Sample ID: 580-132558-11

Date Collected: 10/03/23 15:45

Matrix: Water

Date Received: 10/09/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			441273	MJ	EET SEA	10/18/23 16:07
Total Recoverable	Analysis	6010D		1	441465	TMH	EET SEA	10/19/23 20:51

Client Sample ID: MW12 100323 MC

Lab Sample ID: 580-132558-14

Date Collected: 10/03/23 15:05

Matrix: Water

Date Received: 10/09/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			441273	MJ	EET SEA	10/18/23 16:07
Total Recoverable	Analysis	6010D		1	441465	TMH	EET SEA	10/19/23 20:55

Client Sample ID: MW14 100323 MC

Lab Sample ID: 580-132558-17

Date Collected: 10/03/23 13:47

Matrix: Water

Date Received: 10/09/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			441273	MJ	EET SEA	10/18/23 16:07
Total Recoverable	Analysis	6010D		1	441465	TMH	EET SEA	10/19/23 20:58

Laboratory References:

EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310



Accreditation/Certification Summary

Client: Washington State Dept of Corrections
Project/Site: Bi-Annual Monitoring

Job ID: 580-132558-1

Laboratory: Eurofins Seattle

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Washington	State	C788	07-13-24



Sample Summary

Client: Washington State Dept of Corrections
Project/Site: Bi-Annual Monitoring

Job ID: 580-132558-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-132558-2	MW1A 100323 MC	Water	10/03/23 10:45	10/09/23 09:30
580-132558-5	MW3 100323 MC	Water	10/03/23 11:45	10/09/23 09:30
580-132558-8	MW5 100323 MC	Water	10/03/23 16:38	10/09/23 09:30
580-132558-11	MW11 100323 MC	Water	10/03/23 15:45	10/09/23 09:30
580-132558-14	MW12 100323 MC	Water	10/03/23 15:05	10/09/23 09:30
580-132558-17	MW14 100323 MC	Water	10/03/23 13:47	10/09/23 09:30

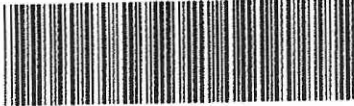


Eurofins Seattle

5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310

Chain of Custody Record

eurofins | Environment Testing

Client Information		Sampler: Dean Smith		Lab PM: Schick, Laura		Carrier Tracking No(s):		COC No: 580-58912-17316.1	
Client Contact: Dean Smith		Phone: 509-386-0388		E-Mail: Laura.Schick@et.eurofinsus.com		State of Origin:		Page: Page 1 of 2	
Company: Washington State Dept of Corrections				PWSID:		Analysis Requested			
Address: 1313 N 13th Ave - MS#37		Due Date Requested:		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) 300_48HR - Nitrate only 6010D - Manganese & Chromium only 8260D - Tetrachloroethene (PCE) only		Total Number of containers		Preservation Codes: A - HCL M - Hexane B - NaOH O - AsNaO2 C - Zn Acetate P - Na2O4S D - Nitric Acid Q - Na2SO3 E - NaHSO4 R - Na2S2O3 F - MeOH S - H2SO4 G - Amchlor T - TSP Dodecahydrate H - Ascorbic Acid U - Acetone I - Ice V - MCAA J - DI Water W - pH 4.5 K - EDTA Y - Trizma L - EDA Z - other (specify)	
City: Walla Walla		TAT Requested (days):							
State, Zip: WA, 99362		Compliance Project: Δ Yes Δ No							
Phone: 509 386 0388		PO #: 310PO2325914							
Email: dean.smith@doc.wa.gov		WO #:							
Project Name: Bi-Annual Monitoring		Project #: 58019384		Site:		SSOW#:		Other:	
Sample Identification		Sample Date		Sample Time		Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, O=waste/soil, BT=Tissue, A=Air)	
								Preservation Codes: N D A	
MW1A 100323 N		10/3/23		1645		G Water		Water	
MW1A 100323 MC		10/3/23		1645		G Water		Water	
MW1A 100323 PCE		10/3/23		1045		G Water		Water	
MW3 100323 N		10/3/23		1145		G Water		Water	
MW3 100323 MC		10/3/23		1145		G Water		Water	
MW3 100323 PCE		10/3/23		1145		G Water		Water	
MW5 100323 N		10/3/23		1638		G Water		Water	
MW5 100323 MC		10/3/23		1638		G Water		Water	
MW5 100323 PCE		10/3/23		1638		G Water		Water	
MW9 100323 N		10/3/23				G Water		Water	
MW9 100323 MC		10/3/23				G Water		Water	
Possible Hazard Identification					Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)				
<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological					<input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months				
Deliverable Requested: I, II, III, IV, Other (specify)					Special Instructions/QC Requirements:				
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:			
Relinquished by: Dean Smith		Date/Time: 10-03-2023		Company: WSP		Received by: Khasley		Date/Time: 10/9/23 0930	
Relinquished by:		Date/Time:		Company:		Date/Time:		Company:	
Relinquished by:		Date/Time:		Company:		Date/Time:		Company:	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:		 580-132558 Chain of Custody		and Other Remarks: IR9 19.8/19.3 UPS NDR MR Bub/west			

Page 16 of 20

10/20/2023 (Rev. 1)



Eurofins Seattle

5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310

Chain of Custody Record

eurofins | Environment Testing

Client Information		Sampler: Dean Smith		Lab PM: Schick, Laura		Carrier Tracking No(s):		COC No: 580-58912-17316.1			
Client Contact: Dean Smith		Phone: 509-386-0388		E-Mail: Laura.Schick@et.eurofinsus.com		State of Origin:		Page: Page 2 of 2			
Company: Washington State Dept of Corrections				PWSID:		Analysis Requested					
Address: 1313 N 13th Ave - MS#37		Due Date Requested:		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) 300_48HR - Nitrate only 6010D - Manganese & Chromium only 8260D - Tetrachloroethene (PCE) only		Total Number of Containers		Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Y - Trizma Z - other (specify)			
City: Walla Walla		TAT Requested (days):									
State, Zip: WA, 99362		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No									
Phone: 509 386 0388		PO #: 310PO2325914									
Email: dean.smith@doc.wa.gov		WO #:									
Project Name: Bi-Annual Monitoring		Project #: 58019384		SSOW#:							
Site:											
Sample Identification		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Preservation Code:	X	N	D	A	Special Instructions/Note:
MW9 100323 PCE		10/3/23		G	Water				X		Voa Vial 40 ml - HCL
MW11 100323 N		10/3/23	1545	G	Water		X				250 ml - unpreserved
MW11 100323 MC		10/3/23	1545	G	Water			X			250 ml - Nitric Acid
MW11 100323 PCE		10/3/23	1545	G	Water				X		Voa Vial 40 ml - HCL
MW12 100323 N		10/3/23	1505	G	Water		X				250 ml - unpreserved
MW12 100323 MC		10/3/23	1505	G	Water			X			250 ml - Nitric Acid
MW12 100323 PCE		10/3/23	1505	G	Water				X		Voa Vial 40 ml - HCL
MW14 100323 N		10/3/23	1347	G	Water		X				250 ml - unpreserved
MW14 100323 MC		10/3/23	1347	G	Water			X			250 ml - Nitric Acid
MW14 100323 PCE		10/3/23	1347	G	Water				X		Voa Vial 40 ml - HCL
Possible Hazard Identification						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					
<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological						<input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
Deliverable Requested: I, II, III, IV, Other (specify)						Special Instructions/QC Requirements:					
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:					
Relinquished by: Dean Smith		Date/Time: 10-03-2023		Company: WSP		Received by:		Date/Time:		Company:	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:		Company:	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:		Company:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:							

Page 17 of 20

10/20/2023 (Rev. 1)



Eurofins Seattle

5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310

Chain of Custody Record

eurofins | Environment Testing

Client Information				Sampler: Dean Smith		Lab PM: Schick, Laura		Carrier Tracking No(s):		COC No: 580-58912-17316.1			
Client Contact: Dean Smith				Phone: 509-386-0388		E-Mail: Laura.Schick@et.eurofinsus.com		State of Origin:		Page: Page 1 of 2			
Company: Washington State Dept of Corrections				PWSID:		Analysis Requested						Job #:	
Address: 1313 N 13th Ave - MS#37				Due Date Requested:								Field Filtered Sample (Yes or No) Perform ASMS? (Yes or No) 300_48HR - Nitrate only 6010D - Manganese & Chromium only 8260D - Tetrachloroethene (PCE) only	
City: Walla Walla				TAT Requested (days):		Special Instructions/Note:							
State, Zip: WA, 99362				Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No									
Phone: 509 386 0388				PO #: 310PO2325914									
Email: dean.smith@doc.wa.gov				WO #:									
Project Name: Bi-Annual Monitoring				Project #: 58019384									
Site:				SSOW#:									
Sample Identification		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	MATRIX (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform ASMS? (Yes or No)	300_48HR - Nitrate only	6010D - Manganese & Chromium only	8260D - Tetrachloroethene (PCE) only	Total Number of Containers	Special Instructions/Note:	
Preservation Code: N D A													
MW1A 100323 N	10/3/23	1045	G	Water		X						250 ml - unpreserved	
MW1A 100323 MC	10/3/23	1045	G	Water				X				250 ml - Nitric Acid	
MW1A 100323 PCE	10/3/23	1045	G	Water					X			Voa Vial 40 ml - HCL	
MW3 100323 N	10/3/23	1145	G	Water		X						250 ml - unpreserved	
MW3 100323 MC	10/3/23	1145	G	Water				X				250 ml - Nitric Acid	
MW3 100323 PCE	10/3/23	1145	G	Water					X			Voa Vial 40 ml - HCL	
MW5 100323 N	10/3/23	1638	G	Water		X						250 ml - unpreserved	
MW5 100323 MC	10/3/23	1638	G	Water				X				250 ml - Nitric Acid	
MW5 100323 PCE	10/3/23	1638	G	Water					X			Voa Vial 40 ml - HCL	
MW9 100323 N	10/3/23		G	Water		X						250 ml - unpreserved	
MW9 100323 MC	10/3/23		G	Water				X				250 ml - Nitric Acid	
Possible Hazard Identification						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)							
<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological						<input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months							
Deliverable Requested: I, II, III, IV, Other (specify)						Special Instructions/QC Requirements:							
Empty Kit Relinquished by:				Date:		Time:		Method of Shipment:					
Relinquished by: Dean Smith				Date/Time: 10-03-2023 10-4-23 0930		Company: WSP		Received by: Khasley		Date/Time: 10/9/23 0930		Company:	
Relinquished by:				Date/Time:		Company:		Received by:		Date/Time:		Company:	
Relinquished by:				Date/Time:		Company:		Received by:		Date/Time:		Company:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:				Cooler Temperature(s) °C and Other Remarks: IR9 19.0/19.3 MR Bub/west							

1
2
3
4
5
6
7
8
9
10

Eurofins Seattle

5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310

Chain of Custody Record



Environment Testing

Client Information		Sampler: Dean Smith		Lab PM: Schick, Laura		Carrier Tracking No(s):		COC No: 580-58912-17316.1				
Client Contact: Dean Smith		Phone: 509-386-0388		E-Mail: Laura.Schick@et.eurofinsus.com		State of Origin:		Page: Page 2 of 2				
Company: Washington State Dept of Corrections				PWSID:		Analysis Requested						
Address: 1313 N 13th Ave - MS#37		Due Date Requested:		Field Filled Sample (Yes or No) Perform MS/MS (Yes or No) 300_48HR - Nitrate only 6010D - Manganese & Chromium only 8260D - Tetrachloroethene (PCE) only		Total Number of Containers		Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2S03 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Y - Trizma Z - other (specify)				
City: Walla Walla		TAT Requested (days):										
State, Zip WA, 99362		Compliance Project: Δ Yes Δ No										
Phone: 509 386 0388		PO #: 310PO2325914										
Email: dean.smith@doc.wa.gov		WO #:										
Project Name: Bi-Annual Monitoring		Project #: 58019384										
Site:		SSOW#:										
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filled Sample (Yes or No)	Perform MS/MS (Yes or No)	300_48HR - Nitrate only	6010D - Manganese & Chromium only	8260D - Tetrachloroethene (PCE) only	Special Instructions/Note:	
				Preservation Code:		X	X	N	D	A		
MW9 100323 PCE		10/3/23		G	Water					X	Voa Vial 40 ml - HCL	
MW11 100323 N		10/3/23	1545	G	Water		X				250 ml - unpreserved	
MW11 100323 MC		10/3/23	1545	G	Water			X			250 ml - Nitric Acid	
MW11 100323 PCE		10/3/23	1545	G	Water				X		Voa Vial 40 ml - HCL	
MW12 100323 N		10/3/23	1505	G	Water		X				250 ml - unpreserved	
MW12 100323 MC		10/3/23	1505	G	Water			X			250 ml - Nitric Acid	
MW12 100323 PCE		10/3/23	1505	G	Water				X		Voa Vial 40 ml - HCL	
MW14 100323 N		10/3/23	1347	G	Water		X				250 ml - unpreserved	
MW14 100323 MC		10/3/23	1347	G	Water			X			250 ml - Nitric Acid	
MW14 100323 PCE		10/3/23	1347	G	Water				X		Voa Vial 40 ml - HCL	
Possible Hazard Identification						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)						
<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological						<input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months						
Deliverable Requested: I, II, III, IV, Other (specify)						Special Instructions/QC Requirements:						
Empty Kit Relinquished by:			Date:		Time:		Method of Shipment:					
Relinquished by: Dean Smith			Date/Time: 10-03-2023		Company: WSP		Received by:		Date/Time:		Company:	
			10-4-23 0930									
Relinquished by:			Date/Time:		Company:		Received by:		Date/Time:		Company:	
Relinquished by:			Date/Time:		Company:		Received by:		Date/Time:		Company:	
Custody Seals Intact:		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:								
Δ Yes Δ No												



Login Sample Receipt Checklist

Client: Washington State Dept of Corrections

Job Number: 580-132558-1

Login Number: 132558

List Source: Eurofins Seattle

List Number: 1

Creator: Presley, Kim A

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	False	Cooler temperature outside required temperature criteria.
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	False	Refer to Job Narrative for details.
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





ANALYTICAL REPORT

PREPARED FOR

Attn: Dean Smith
Washington State Dept of Corrections
1313 N 13th Ave - MS#37
Walla Walla, Washington 99362

Generated 12/27/2023 4:10:21 PM

JOB DESCRIPTION

Bi-Annual Monitoring
WSP

JOB NUMBER

580-135214-1

Eurofins Seattle

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northwest, LLC Project Manager.

Authorization



Generated
12/27/2023 4:10:21 PM

Authorized for release by
Laura Schick, Project Manager
Laura.Schick@et.eurofinsus.com
(253)922-2310



Table of Contents

Cover Page	1
Table of Contents	3
Case Narrative	4
Definitions	5
Client Sample Results	6
QC Sample Results	13
Chronicle	15
Certification Summary	17
Sample Summary	18
Chain of Custody	19
Receipt Checklists	20

Case Narrative

Client: Washington State Dept of Corrections
Project: Bi-Annual Monitoring

Job ID: 580-135214-1

Job ID: 580-135214-1

Eurofins Seattle

Job Narrative 580-135214-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 12/21/2023 11:10 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.7°C

Receipt Exceptions

The following samples were canceled for method 300.0 Nitrate by the client on 12/21/2023: MW 1 A (580-135214-1), MW 3 (580-135214-2), MW 5 (580-135214-3), MW 9 (580-135214-4), MW 11 (580-135214-5), MW 12 (580-135214-6) and MW14 (580-135214-7). Due to a shipping delay the sample were received at the laboratory either past hold time or with insufficient hold time remaining.

GC/MS VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Eurofins Seattle



Definitions/Glossary

Client: Washington State Dept of Corrections
Project/Site: Bi-Annual Monitoring

Job ID: 580-135214-1
SDG: WSP

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Client Sample Results

Client: Washington State Dept of Corrections
 Project/Site: Bi-Annual Monitoring

Job ID: 580-135214-1
 SDG: WSP

Client Sample ID: MW 1 A

Lab Sample ID: 580-135214-1

Date Collected: 12/19/23 15:00

Matrix: Water

Date Received: 12/21/23 11:10

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene (PCE)	ND		1.0	0.41	ug/L			12/26/23 18:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	104		80 - 120					12/26/23 18:27	1
4-Bromofluorobenzene (Surr)	98		80 - 120					12/26/23 18:27	1
Dibromofluoromethane (Surr)	108		80 - 120					12/26/23 18:27	1
1,2-Dichloroethane-d4 (Surr)	105		80 - 120					12/26/23 18:27	1



Client Sample Results

Client: Washington State Dept of Corrections
 Project/Site: Bi-Annual Monitoring

Job ID: 580-135214-1
 SDG: WSP

Client Sample ID: MW 3

Lab Sample ID: 580-135214-2

Date Collected: 12/19/23 13:22

Matrix: Water

Date Received: 12/21/23 11:10

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene (PCE)	ND		1.0	0.41	ug/L			12/26/23 18:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>Toluene-d8 (Surr)</i>	104		80 - 120					12/26/23 18:51	1
<i>4-Bromofluorobenzene (Surr)</i>	100		80 - 120					12/26/23 18:51	1
<i>Dibromofluoromethane (Surr)</i>	106		80 - 120					12/26/23 18:51	1
<i>1,2-Dichloroethane-d4 (Surr)</i>	105		80 - 120					12/26/23 18:51	1



Client Sample Results

Client: Washington State Dept of Corrections
 Project/Site: Bi-Annual Monitoring

Job ID: 580-135214-1
 SDG: WSP

Client Sample ID: MW 5

Lab Sample ID: 580-135214-3

Date Collected: 12/19/23 11:25

Matrix: Water

Date Received: 12/21/23 11:10

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene (PCE)	0.67	J	1.0	0.41	ug/L			12/26/23 19:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>Toluene-d8 (Surr)</i>	105		80 - 120					12/26/23 19:15	1
<i>4-Bromofluorobenzene (Surr)</i>	97		80 - 120					12/26/23 19:15	1
<i>Dibromofluoromethane (Surr)</i>	106		80 - 120					12/26/23 19:15	1
<i>1,2-Dichloroethane-d4 (Surr)</i>	105		80 - 120					12/26/23 19:15	1



Client Sample Results

Client: Washington State Dept of Corrections
 Project/Site: Bi-Annual Monitoring

Job ID: 580-135214-1
 SDG: WSP

Client Sample ID: MW 9

Lab Sample ID: 580-135214-4

Date Collected: 12/19/23 12:31

Matrix: Water

Date Received: 12/21/23 11:10

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene (PCE)	ND		1.0	0.41	ug/L			12/26/23 19:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	105		80 - 120		12/26/23 19:40	1
4-Bromofluorobenzene (Surr)	97		80 - 120		12/26/23 19:40	1
Dibromofluoromethane (Surr)	106		80 - 120		12/26/23 19:40	1
1,2-Dichloroethane-d4 (Surr)	107		80 - 120		12/26/23 19:40	1

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	ND		0.025	0.0027	mg/L		12/21/23 18:40	12/22/23 19:36	1
Manganese	24		20	1.7	ug/L		12/21/23 18:40	12/22/23 19:36	1



Client Sample Results

Client: Washington State Dept of Corrections
 Project/Site: Bi-Annual Monitoring

Job ID: 580-135214-1
 SDG: WSP

Client Sample ID: MW 11

Lab Sample ID: 580-135214-5

Date Collected: 12/19/23 10:35

Matrix: Water

Date Received: 12/21/23 11:10

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene (PCE)	0.45	J	1.0	0.41	ug/L			12/26/23 20:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	105		80 - 120					12/26/23 20:04	1
4-Bromofluorobenzene (Surr)	97		80 - 120					12/26/23 20:04	1
Dibromofluoromethane (Surr)	106		80 - 120					12/26/23 20:04	1
1,2-Dichloroethane-d4 (Surr)	106		80 - 120					12/26/23 20:04	1



Client Sample Results

Client: Washington State Dept of Corrections
 Project/Site: Bi-Annual Monitoring

Job ID: 580-135214-1
 SDG: WSP

Client Sample ID: MW 12

Lab Sample ID: 580-135214-6

Date Collected: 12/19/23 09:47

Matrix: Water

Date Received: 12/21/23 11:10

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene (PCE)	ND		1.0	0.41	ug/L			12/26/23 20:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	103		80 - 120					12/26/23 20:28	1
4-Bromofluorobenzene (Surr)	99		80 - 120					12/26/23 20:28	1
Dibromofluoromethane (Surr)	101		80 - 120					12/26/23 20:28	1
1,2-Dichloroethane-d4 (Surr)	107		80 - 120					12/26/23 20:28	1



Client Sample Results

Client: Washington State Dept of Corrections
 Project/Site: Bi-Annual Monitoring

Job ID: 580-135214-1
 SDG: WSP

Client Sample ID: MW14

Lab Sample ID: 580-135214-7

Date Collected: 12/19/23 14:15

Matrix: Water

Date Received: 12/21/23 11:10

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene (PCE)	ND		1.0	0.41	ug/L			12/26/23 20:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	103		80 - 120					12/26/23 20:52	1
4-Bromofluorobenzene (Surr)	99		80 - 120					12/26/23 20:52	1
Dibromofluoromethane (Surr)	106		80 - 120					12/26/23 20:52	1
1,2-Dichloroethane-d4 (Surr)	106		80 - 120					12/26/23 20:52	1



QC Sample Results

Client: Washington State Dept of Corrections
 Project/Site: Bi-Annual Monitoring

Job ID: 580-135214-1
 SDG: WSP



Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 580-447070/7						Client Sample ID: Method Blank			
Matrix: Water						Prep Type: Total/NA			
Analysis Batch: 447070									
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene (PCE)	ND		1.0	0.41	ug/L			12/26/23 17:39	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Toluene-d8 (Surr)	104		80 - 120				12/26/23 17:39	1	
4-Bromofluorobenzene (Surr)	100		80 - 120				12/26/23 17:39	1	
Dibromofluoromethane (Surr)	108		80 - 120				12/26/23 17:39	1	
1,2-Dichloroethane-d4 (Surr)	106		80 - 120				12/26/23 17:39	1	

Lab Sample ID: LCS 580-447070/4						Client Sample ID: Lab Control Sample			
Matrix: Water						Prep Type: Total/NA			
Analysis Batch: 447070									
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Tetrachloroethene (PCE)			5.00	4.95		ug/L		99	76 - 125
Surrogate	%Recovery	Qualifier	Limits						
Toluene-d8 (Surr)	105		80 - 120						
4-Bromofluorobenzene (Surr)	94		80 - 120						
Dibromofluoromethane (Surr)	107		80 - 120						
1,2-Dichloroethane-d4 (Surr)	104		80 - 120						

Lab Sample ID: LCSD 580-447070/5						Client Sample ID: Lab Control Sample Dup					
Matrix: Water						Prep Type: Total/NA					
Analysis Batch: 447070											
Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Tetrachloroethene (PCE)			5.00	4.95		ug/L		99	76 - 125	0	13
Surrogate	%Recovery	Qualifier	Limits								
Toluene-d8 (Surr)	104		80 - 120								
4-Bromofluorobenzene (Surr)	96		80 - 120								
Dibromofluoromethane (Surr)	107		80 - 120								
1,2-Dichloroethane-d4 (Surr)	105		80 - 120								

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 580-446934/14-A						Client Sample ID: Method Blank			
Matrix: Water						Prep Type: Total Recoverable			
Analysis Batch: 447105						Prep Batch: 446934			
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	ND		0.025	0.0027	mg/L		12/21/23 18:40	12/22/23 18:59	1
Manganese	ND		20	1.7	ug/L		12/21/23 18:40	12/22/23 18:59	1

QC Sample Results

Client: Washington State Dept of Corrections
 Project/Site: Bi-Annual Monitoring

Job ID: 580-135214-1
 SDG: WSP

Method: 6010D - Metals (ICP) (Continued)

Lab Sample ID: LCS 580-446934/15-A
Matrix: Water
Analysis Batch: 447105

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 446934

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec	
		Result	Qualifier				Limits	
Chromium	1.00	1.03		mg/L		103	80 - 120	
Manganese	1000	1020		ug/L		102	80 - 120	

Lab Sample ID: LCSD 580-446934/16-A
Matrix: Water
Analysis Batch: 447105

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 446934

Analyte	Spike Added	LCSD	LCSD	Unit	D	%Rec	%Rec		RPD
		Result	Qualifier				Limits	RPD	Limit
Chromium	1.00	1.02		mg/L		102	80 - 120	1	20
Manganese	1000	979		ug/L		98	80 - 120	4	20



Lab Chronicle

Client: Washington State Dept of Corrections
 Project/Site: Bi-Annual Monitoring

Job ID: 580-135214-1
 SDG: WSP

Client Sample ID: MW 1 A

Lab Sample ID: 580-135214-1

Date Collected: 12/19/23 15:00

Matrix: Water

Date Received: 12/21/23 11:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	447070	K1K	EET SEA	12/26/23 18:27

Client Sample ID: MW 3

Lab Sample ID: 580-135214-2

Date Collected: 12/19/23 13:22

Matrix: Water

Date Received: 12/21/23 11:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	447070	K1K	EET SEA	12/26/23 18:51

Client Sample ID: MW 5

Lab Sample ID: 580-135214-3

Date Collected: 12/19/23 11:25

Matrix: Water

Date Received: 12/21/23 11:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	447070	K1K	EET SEA	12/26/23 19:15

Client Sample ID: MW 9

Lab Sample ID: 580-135214-4

Date Collected: 12/19/23 12:31

Matrix: Water

Date Received: 12/21/23 11:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	447070	K1K	EET SEA	12/26/23 19:40
Total Recoverable	Prep	3005A			446934	TMH	EET SEA	12/21/23 18:40
Total Recoverable	Analysis	6010D		1	447105	JLS	EET SEA	12/22/23 19:36

Client Sample ID: MW 11

Lab Sample ID: 580-135214-5

Date Collected: 12/19/23 10:35

Matrix: Water

Date Received: 12/21/23 11:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	447070	K1K	EET SEA	12/26/23 20:04

Client Sample ID: MW 12

Lab Sample ID: 580-135214-6

Date Collected: 12/19/23 09:47

Matrix: Water

Date Received: 12/21/23 11:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	447070	K1K	EET SEA	12/26/23 20:28

Client Sample ID: MW14

Lab Sample ID: 580-135214-7

Date Collected: 12/19/23 14:15

Matrix: Water

Date Received: 12/21/23 11:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	447070	K1K	EET SEA	12/26/23 20:52

Lab Chronicle

Client: Washington State Dept of Corrections
Project/Site: Bi-Annual Monitoring

Job ID: 580-135214-1
SDG: WSP

Laboratory References:

EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310



Accreditation/Certification Summary

Client: Washington State Dept of Corrections
Project/Site: Bi-Annual Monitoring

Job ID: 580-135214-1
SDG: WSP

Laboratory: Eurofins Seattle

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Washington	State	C788	07-13-24



Sample Summary

Client: Washington State Dept of Corrections
Project/Site: Bi-Annual Monitoring

Job ID: 580-135214-1
SDG: WSP

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-135214-1	MW 1 A	Water	12/19/23 15:00	12/21/23 11:10
580-135214-2	MW 3	Water	12/19/23 13:22	12/21/23 11:10
580-135214-3	MW 5	Water	12/19/23 11:25	12/21/23 11:10
580-135214-4	MW 9	Water	12/19/23 12:31	12/21/23 11:10
580-135214-5	MW 11	Water	12/19/23 10:35	12/21/23 11:10
580-135214-6	MW 12	Water	12/19/23 09:47	12/21/23 11:10
580-135214-7	MW14	Water	12/19/23 14:15	12/21/23 11:10



Eurofins Seattle

5755 8th Street East
Tacoma, WA 98424
Phone: 253-922-2310

Chain of Custody Record

Client Information		Sampler: <u>D. SMITH</u>		Lab PM: Schick, Laura		Carrier Tracking No(s):		COC No: 580-59958-18471.1				
Client Contact: Dean Smith		Phone: <u>509 386 0388</u>		E-Mail: Laura.Schick@et.eurofinsus.com		State of Origin:		Page: Page 1 of 1				
Company: Washington State Dept of Corrections		PWSID:		Analysis Requested						Job #:		
Address: 1313 N 13th Ave - MS#37		Due Date Requested:								Preservation Codes:		
City: Walla Walla		TAT Requested (days):		Field Filtered Sample (Yes or No) 300_48HR - Nitrate only 8280D - Tetrachloroethane (PCE) only 8010D - Manganese & Chromium		Total Number of Containers		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify)				
State, Zip: WA, 99362		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No										
Phone: <u>509 386 0388</u>		PO #: 310PO2325914										
Email: dean.smith@doc.wa.gov		WO #:										
Project Name: Bi-Annual Monitoring		Project #: 58019384		SSOW#:		Other:		Special Instructions/Note:				
Site: <u>WSP</u>												
Sample Identification		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/soil, BT=Tissue, AA=Air)	Preservation Code						
						N	A	D				
<u>MW 1 A</u>		<u>12-19-23</u>	<u>1500</u>	Water	Water	X	X					
<u>MW 3</u>		<u>12-19-23</u>	<u>1322</u>	Water	Water	X	X					
<u>MW 5</u>		<u>12-19-23</u>	<u>1125</u>	Water	Water	X	X					
<u>MW 9</u>		<u>12-19-23</u>	<u>1231</u>	Water	Water	X	X	X				
<u>MW 11</u>		<u>12-19-23</u>	<u>1035</u>	Water	Water	X	X					
<u>MW 12</u>		<u>12-19-23</u>	<u>0947</u>	Water	Water	X	X					
<u>MW 14</u>		<u>12-19-23</u>	<u>1415</u>	Water	Water	X	X					
				Water	Water							



Possible Hazard Identification				Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)			
<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological				<input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
Deliverable Requested: I, II, III, IV, Other (specify)				Special Instructions/QC Requirements:			
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:	
Relinquished by: <u>DEAN SMITH</u>		Date/Time: <u>12-19-23 1530</u>		Company: <u>WSP</u>		Received by: <u>[Signature]</u>	
Relinquished by:		Date/Time:		Company:		Date/Time: <u>12/21/23 1110</u>	
Relinquished by:		Date/Time:		Company:		Date/Time:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: <u>IR11 1.5/1.7</u>			

Login Sample Receipt Checklist

Client: Washington State Dept of Corrections

Job Number: 580-135214-1

SDG Number: WSP

Login Number: 135214

List Number: 1

Creator: Lauhoff, Sydney 1

List Source: Eurofins Seattle

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





Environment Testing

Invoice No.	5800060603	Invoice Date	December 27, 2023
Terms	Net 30 days	Federal Tax ID	91-1540636
Remit to	Eurofins Environment Testing Northwest, LLC, PO BOX 1451, Carol Stream, IL 60132-1451		
Wire	Citibank ABA: 031100209 Acct# 38996659 SWIFT Code: CITIUS33		
ACH	Citibank ABA: 031100209 Acct# 38996659 SWIFT Code: CITIUS33		

Bill to:
Washington State Dept of Corrections Attn: Accounts Payable PO Box 41107 Olympia, WA 98504

Ship to:
Washington State Dept of Corrections 1313 N 13th Ave - MS#37 Walla Walla, WA 99362

P.O. Number	W.O. Number	Contract Number	Work Ordered by
310PO2325914			Dean Smith
Job Description	Site Name	SDG Number	Invoice Contact
See below		WSP	Account Payable

Job No.	Job Description	Receipt Date	Quantity	Unit Price	Amount
Method/Test Description					
J135214-1	Bi-Annual Monitoring	12/21/2023			
	6010D - Total Recoverable Manganese & Chromium		1.00	38.00	38.00
	8260D - Tetrachloroethene (PCE) only		7.00	70.00	490.00
	Safe and Environmentally Responsible Waste Management (per sample)		7.00	2.50	17.50
	Minimum Total Invoice per analytical receipt (for details see T&Cs)		0.00	0.00	0.00

Project Number	Client Number	Project Manager	Subtotal (USD)	\$545.50
58019384	1411129	Laura Schick		
Latest Sample Receipt Date	Latest Report Date	Phone Number	Total (USD)	\$545.50
12/21/2023	12/27/2023	(253) 922-2310		

For proper credit, please include invoice number on all remittance.

Eurofins Seattle - 5755 8th Street East, Tacoma, WA 98424

Eurofins Seattle

5755 8th Street East
Tacoma, WA 98424
Phone: 253-922-2310

Chain of Custody Record

Client Information		Sampler: D. SMITH	Lab PM: Schick, Laura	Carrier Tracking No(s):	COG No: 580-59958-18471.1	
Client Contact: Dean Smith		Phone: 509 386 0388	E-Mail: Laura.Schick@et.eurofinsus.com	State of Origin:	Page: Page 1 of 1	
Company: Washington State Dept of Corrections		PWSID:	Analysis Requested		Job #:	
Address: 1313 N 13th Ave - MS#37		Due Date Requested:	Field # of Samples (Yes or No) 300_48HR - Nitrate only 8260D - Tetrachloroethene (PCE) only 6010D - Manganese & Chromium		Preservation Codes:	
City: Walla Walla		TAT Requested (days):			A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Anchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Hexane N - None O - As/NaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acelone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify)	
State, Zip: WA, 99362		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No			Other:	
Phone: 509 386 0388		PO #: 310PO2325914				
Email: dean.smith@doc.wa.gov		WO #:				
Project Name: Bi-Annual Monitoring		Project #: 58019384				
Site: WSP		SSOW#:				
Sample Identification		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, D=waste/dirt, BT=Tissue, A=Air)	Special Instructions/Note:
		Preservation Code		M	A	D
MW1A	12-19-23	1500	Water	X	X	
MW3	12-19-23	1322	Water	X	X	
MW5	12-19-23	1125	Water	X	X	
MW9	12-19-23	1231	Water	X	X	X
MW11	12-19-23	1035	Water	X	X	
MW12	12-19-23	0947	Water	X	X	
MW14	12-19-23	1415	Water	X	X	
			Water			



Possible Hazard Identification

Non-Hazard
 Flammable
 Skin Irritant
 Poison B
 Unknown
 Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Return To Client
 Disposal By Lab
 Archive For _____ Months

Empty Kit Relinquished by:		Date:	Time:	Method of Shipment:	
Relinquished by: DEAN SMITH	Date/Time: 12-19-23 1530	Company: WSP	Received by: <i>[Signature]</i>	Date/Time: 12/21/23 1110	Company: EETA
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: Yes No

Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: TRU 1.5/1.7

580/Bub/Wsp/WNA