



284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
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Hit Summary Sheet
SW-846

SDG No.: P4578 **Order ID:** P4578
Client: Portal Partners Tri-Venture **Project ID:** Amtrak Sawtooth Bridges 2024

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID : WB-305-BOT								
P4578-06	WB-305-BOT	TCLP	Barium	558		62.8	500	ug/L
P4578-06	WB-305-BOT	TCLP	Cadmium	1.68	J	0.94	30.0	ug/L
P4578-06	WB-305-BOT	TCLP	Chromium	17.2	J	6.60	50.0	ug/L
Client ID : WB-305-BOT-1								
P4578-08	WB-305-BOT-1	TCLP	Barium	492	J	62.8	500	ug/L
P4578-08	WB-305-BOT-1	TCLP	Cadmium	1.08	J	0.94	30.0	ug/L
P4578-08	WB-305-BOT-1	TCLP	Chromium	42.4	J	6.60	50.0	ug/L



SAMPLE DATA

Report of Analysis

Client:	Portal Partners Tri-Venture	Date Collected:	10/25/24
Project:	Amtrak Sawtooth Bridges 2024	Date Received:	10/25/24
Client Sample ID:	WB-305-BOT	SDG No.:	P4578
Lab Sample ID:	P4578-06	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7440-38-2	Arsenic	34.8	U	1	34.8	100	ug/L	10/27/24 11:00	10/28/24 18:25	SW6010	SW3050
7440-39-3	Barium	558		1	62.8	500	ug/L	10/27/24 11:00	10/28/24 18:25	SW6010	SW3050
7440-43-9	Cadmium	1.68	J	1	0.94	30.0	ug/L	10/27/24 11:00	10/28/24 18:25	SW6010	SW3050
7440-47-3	Chromium	17.2	J	1	6.60	50.0	ug/L	10/27/24 11:00	10/28/24 18:25	SW6010	SW3050
7439-92-1	Lead	35.1	U	1	35.1	60.0	ug/L	10/27/24 11:00	10/28/24 18:25	SW6010	SW3050
7439-97-6	Mercury	0.81	U	1	0.81	2.00	ug/L	10/28/24 12:15	10/29/24 09:10	SW7470A	
7782-49-2	Selenium	58.8	U	1	58.8	100	ug/L	10/27/24 11:00	10/28/24 18:25	SW6010	SW3050
7440-22-4	Silver	5.80	U	1	5.80	50.0	ug/L	10/27/24 11:00	10/28/24 18:25	SW6010	SW3050

Color Before:	Colorless	Clarity Before:	Clear	Texture:
Color After:	Colorless	Clarity After:	Clear	Artifacts:
Comments:	TCLP-FULL			

U = Not Detected
 LOQ = Limit of Quantitation
 MDL = Method Detection Limit
 LOD = Limit of Detection
 D = Dilution
 Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
 B = Analyte Found in Associated Method Blank
 * = indicates the duplicate analysis is not within control limits.
 E = Indicates the reported value is estimated because of the presence of interference.
 OR = Over Range
 N = Spiked sample recovery not within control limits

Report of Analysis

Client:	Portal Partners Tri-Venture	Date Collected:	10/25/24
Project:	Amtrak Sawtooth Bridges 2024	Date Received:	10/25/24
Client Sample ID:	WB-305-BOT-1	SDG No.:	P4578
Lab Sample ID:	P4578-08	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7440-38-2	Arsenic	34.8	U	1	34.8	100	ug/L	10/27/24 11:00	10/28/24 18:29	SW6010	SW3050
7440-39-3	Barium	492	J	1	62.8	500	ug/L	10/27/24 11:00	10/28/24 18:29	SW6010	SW3050
7440-43-9	Cadmium	1.08	J	1	0.94	30.0	ug/L	10/27/24 11:00	10/28/24 18:29	SW6010	SW3050
7440-47-3	Chromium	42.4	J	1	6.60	50.0	ug/L	10/27/24 11:00	10/28/24 18:29	SW6010	SW3050
7439-92-1	Lead	35.1	U	1	35.1	60.0	ug/L	10/27/24 11:00	10/28/24 18:29	SW6010	SW3050
7439-97-6	Mercury	0.81	U	1	0.81	2.00	ug/L	10/28/24 12:15	10/29/24 09:12	SW7470A	
7782-49-2	Selenium	58.8	U	1	58.8	100	ug/L	10/27/24 11:00	10/28/24 18:29	SW6010	SW3050
7440-22-4	Silver	5.80	U	1	5.80	50.0	ug/L	10/27/24 11:00	10/28/24 18:29	SW6010	SW3050

Color Before:	Colorless	Clarity Before:	Clear	Texture:
Color After:	Colorless	Clarity After:	Clear	Artifacts:
Comments:	TCLP-FULL			

U = Not Detected
 LOQ = Limit of Quantitation
 MDL = Method Detection Limit
 LOD = Limit of Detection
 D = Dilution
 Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
 B = Analyte Found in Associated Method Blank
 * = indicates the duplicate analysis is not within control limits.
 E = Indicates the reported value is estimated because of the presence of interference.
 OR = Over Range
 N =Spiked sample recovery not within control limits



284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client:

Portal Partners Tri-Venture

SDG No.:

P4578

Contract:

PORT06

Lab Code:

CHEM

Case No.:

P4578

SAS No.:

P4578

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB56	Mercury	0.20	+/-0.20	U	0.20	CV	10/29/2024	08:17	LB133181

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Portal Partners Tri-Venture		SDG No.: P4578							
Contract: PORT06	Lab Code: CHEM	Case No.: P4578	SAS No.: P4578						
Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB82	Mercury	0.20	+/-0.20	U	0.20	CV	10/29/2024	08:22	LB133181
CCB83	Mercury	0.20	+/-0.20	U	0.20	CV	10/29/2024	08:49	LB133181
CCB84	Mercury	0.20	+/-0.20	U	0.20	CV	10/29/2024	09:16	LB133181
CCB85	Mercury	0.20	+/-0.20	U	0.20	CV	10/29/2024	09:39	LB133181

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Portal Partners Tri-Venture **SDG No.:** P4578
Contract: PORT06 **Lab Code:** CHEM **Case No.:** P4578 **SAS No.:** P4578

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB01	Arsenic	20.0	+/-20.0	U	20.0	P	10/28/2024	13:08	LB133175
	Barium	100	+/-100	U	100	P	10/28/2024	13:08	LB133175
	Cadmium	6.00	+/-6.00	U	6.00	P	10/28/2024	13:08	LB133175
	Chromium	10.0	+/-10.0	U	10.0	P	10/28/2024	13:08	LB133175
	Lead	12.0	+/-12.0	U	12.0	P	10/28/2024	13:08	LB133175
	Selenium	20.0	+/-20.0	U	20.0	P	10/28/2024	13:08	LB133175
	Silver	10.0	+/-10.0	U	10.0	P	10/28/2024	13:08	LB133175

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Portal Partners Tri-Venture		SDG No.: P4578							
Contract: PORT06	Lab Code: CHEM	Case No.: P4578	SAS No.: P4578						
Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB01	Arsenic	20.0	+/-20.0	U	20.0	P	10/28/2024	13:39	LB133175
	Barium	100	+/-100	U	100	P	10/28/2024	13:39	LB133175
	Cadmium	6.00	+/-6.00	U	6.00	P	10/28/2024	13:39	LB133175
	Chromium	10.0	+/-10.0	U	10.0	P	10/28/2024	13:39	LB133175
	Lead	12.0	+/-12.0	U	12.0	P	10/28/2024	13:39	LB133175
	Selenium	20.0	+/-20.0	U	20.0	P	10/28/2024	13:39	LB133175
	Silver	10.0	+/-10.0	U	10.0	P	10/28/2024	13:39	LB133175
CCB02	Arsenic	20.0	+/-20.0	U	20.0	P	10/28/2024	14:30	LB133175
	Barium	100	+/-100	U	100	P	10/28/2024	14:30	LB133175
	Cadmium	6.00	+/-6.00	U	6.00	P	10/28/2024	14:30	LB133175
	Chromium	10.0	+/-10.0	U	10.0	P	10/28/2024	14:30	LB133175
	Lead	12.0	+/-12.0	U	12.0	P	10/28/2024	14:30	LB133175
	Selenium	20.0	+/-20.0	U	20.0	P	10/28/2024	14:30	LB133175
	Silver	10.0	+/-10.0	U	10.0	P	10/28/2024	14:30	LB133175
CCB03	Arsenic	20.0	+/-20.0	U	20.0	P	10/28/2024	15:20	LB133175
	Barium	100	+/-100	U	100	P	10/28/2024	15:20	LB133175
	Cadmium	6.00	+/-6.00	U	6.00	P	10/28/2024	15:20	LB133175
	Chromium	10.0	+/-10.0	U	10.0	P	10/28/2024	15:20	LB133175
	Lead	12.0	+/-12.0	U	12.0	P	10/28/2024	15:20	LB133175
	Selenium	20.0	+/-20.0	U	20.0	P	10/28/2024	15:20	LB133175
	Silver	10.0	+/-10.0	U	10.0	P	10/28/2024	15:20	LB133175
CCB04	Arsenic	20.0	+/-20.0	U	20.0	P	10/28/2024	16:10	LB133175
	Barium	100	+/-100	U	100	P	10/28/2024	16:10	LB133175
	Cadmium	6.00	+/-6.00	U	6.00	P	10/28/2024	16:10	LB133175
	Chromium	10.0	+/-10.0	U	10.0	P	10/28/2024	16:10	LB133175
	Lead	12.0	+/-12.0	U	12.0	P	10/28/2024	16:10	LB133175
	Selenium	20.0	+/-20.0	U	20.0	P	10/28/2024	16:10	LB133175
	Silver	10.0	+/-10.0	U	10.0	P	10/28/2024	16:10	LB133175
CCB05	Arsenic	20.0	+/-20.0	U	20.0	P	10/28/2024	17:01	LB133175
	Barium	100	+/-100	U	100	P	10/28/2024	17:01	LB133175
	Cadmium	6.00	+/-6.00	U	6.00	P	10/28/2024	17:01	LB133175
	Chromium	10.0	+/-10.0	U	10.0	P	10/28/2024	17:01	LB133175
	Lead	12.0	+/-12.0	U	12.0	P	10/28/2024	17:01	LB133175
	Selenium	20.0	+/-20.0	U	20.0	P	10/28/2024	17:01	LB133175
	Silver	10.0	+/-10.0	U	10.0	P	10/28/2024	17:01	LB133175
CCB06	Arsenic	20.0	+/-20.0	U	20.0	P	10/28/2024	17:54	LB133175
	Barium	100	+/-100	U	100	P	10/28/2024	17:54	LB133175
	Cadmium	6.00	+/-6.00	U	6.00	P	10/28/2024	17:54	LB133175
	Chromium	10.0	+/-10.0	U	10.0	P	10/28/2024	17:54	LB133175

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Portal Partners Tri-Venture		SDG No.: P4578							
Contract: PORT06	Lab Code: CHEM	Case No.: P4578	SAS No.: P4578						
Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB06	Lead	12.0	+/-12.0	U	12.0	P	10/28/2024	17:54	LB133175
	Selenium	20.0	+/-20.0	U	20.0	P	10/28/2024	17:54	LB133175
	Silver	10.0	+/-10.0	U	10.0	P	10/28/2024	17:54	LB133175
CCB07	Arsenic	20.0	+/-20.0	U	20.0	P	10/28/2024	18:47	LB133175
	Barium	100	+/-100	U	100	P	10/28/2024	18:47	LB133175
	Cadmium	6.00	+/-6.00	U	6.00	P	10/28/2024	18:47	LB133175
	Chromium	10.0	+/-10.0	U	10.0	P	10/28/2024	18:47	LB133175
	Lead	12.0	+/-12.0	U	12.0	P	10/28/2024	18:47	LB133175
	Selenium	20.0	+/-20.0	U	20.0	P	10/28/2024	18:47	LB133175
	Silver	10.0	+/-10.0	U	10.0	P	10/28/2024	18:47	LB133175
CCB08	Arsenic	20.0	+/-20.0	U	20.0	P	10/28/2024	19:37	LB133175
	Barium	100	+/-100	U	100	P	10/28/2024	19:37	LB133175
	Cadmium	6.00	+/-6.00	U	6.00	P	10/28/2024	19:37	LB133175
	Chromium	10.0	+/-10.0	U	10.0	P	10/28/2024	19:37	LB133175
	Lead	12.0	+/-12.0	U	12.0	P	10/28/2024	19:37	LB133175
	Selenium	20.0	+/-20.0	U	20.0	P	10/28/2024	19:37	LB133175
	Silver	10.0	+/-10.0	U	10.0	P	10/28/2024	19:37	LB133175
CCB09	Arsenic	20.0	+/-20.0	U	20.0	P	10/28/2024	20:26	LB133175
	Barium	100	+/-100	U	100	P	10/28/2024	20:26	LB133175
	Cadmium	6.00	+/-6.00	U	6.00	P	10/28/2024	20:26	LB133175
	Chromium	10.0	+/-10.0	U	10.0	P	10/28/2024	20:26	LB133175
	Lead	12.0	+/-12.0	U	12.0	P	10/28/2024	20:26	LB133175
	Selenium	20.0	+/-20.0	U	20.0	P	10/28/2024	20:26	LB133175
	Silver	10.0	+/-10.0	U	10.0	P	10/28/2024	20:26	LB133175
CCB10	Arsenic	20.0	+/-20.0	U	20.0	P	10/28/2024	21:25	LB133175
	Barium	100	+/-100	U	100	P	10/28/2024	21:25	LB133175
	Cadmium	6.00	+/-6.00	U	6.00	P	10/28/2024	21:25	LB133175
	Chromium	10.0	+/-10.0	U	10.0	P	10/28/2024	21:25	LB133175
	Lead	12.0	+/-12.0	U	12.0	P	10/28/2024	21:25	LB133175
	Selenium	20.0	+/-20.0	U	20.0	P	10/28/2024	21:25	LB133175
	Silver	10.0	+/-10.0	U	10.0	P	10/28/2024	21:25	LB133175
CCB11	Arsenic	20.0	+/-20.0	U	20.0	P	10/28/2024	21:43	LB133175
	Barium	100	+/-100	U	100	P	10/28/2024	21:43	LB133175
	Cadmium	6.00	+/-6.00	U	6.00	P	10/28/2024	21:43	LB133175
	Chromium	10.0	+/-10.0	U	10.0	P	10/28/2024	21:43	LB133175
	Lead	12.0	+/-12.0	U	12.0	P	10/28/2024	21:43	LB133175
	Selenium	20.0	+/-20.0	U	20.0	P	10/28/2024	21:43	LB133175
	Silver	10.0	+/-10.0	U	10.0	P	10/28/2024	21:43	LB133175

Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: Portal Partners Tri-Venture

SDG No.: P4578

Instrument: CV1

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB164393TB		WATER		Batch Number:	PB164477		Prep Date:	10/28/2024	
	Mercury	2.00	<2.00	U	2.00	CV	10/29/2024	09:30	LB133181
Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB164477BL		WATER		Batch Number:	PB164477		Prep Date:	10/28/2024	
	Mercury	0.20	<0.20	U	0.20	CV	10/29/2024	08:31	LB133181

Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: Portal Partners Tri-Venture

SDG No.: P4578

Instrument: P4

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB164393TB		WATER		Batch Number:	PB164453		Prep Date:	10/27/2024	
	Arsenic	100	<100	U	100	P	10/28/2024	19:04	LB133175
	Barium	500	<500	U	500	P	10/28/2024	19:04	LB133175
	Cadmium	30.0	<30.0	U	30.0	P	10/28/2024	19:04	LB133175
	Chromium	45.3	<50.0	J	50.0	P	10/28/2024	19:04	LB133175
	Lead	60.0	<60.0	U	60.0	P	10/28/2024	19:04	LB133175
	Selenium	100	<100	U	100	P	10/28/2024	19:04	LB133175
	Silver	50.0	<50.0	U	50.0	P	10/28/2024	19:04	LB133175
Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB164453BL		WATER		Batch Number:	PB164453		Prep Date:	10/27/2024	
	Arsenic	100	<100	U	100	P	10/28/2024	19:08	LB133175
	Barium	500	<500	U	500	P	10/28/2024	19:08	LB133175
	Cadmium	30.0	<30.0	U	30.0	P	10/28/2024	19:08	LB133175
	Chromium	50.0	<50.0	U	50.0	P	10/28/2024	19:08	LB133175
	Lead	60.0	<60.0	U	60.0	P	10/28/2024	19:08	LB133175
	Selenium	100	<100	U	100	P	10/28/2024	19:08	LB133175
	Silver	50.0	<50.0	U	50.0	P	10/28/2024	19:08	LB133175



METAL CALIBRATION DATA



- 2a -

Client:	<u>Portal Partners Tri-Venture</u>	SDG No.:	<u>P4578</u>	
Contract:	<u>PORT06</u>	Lab Code:	<u>CHEM</u>	Case No.: <u>P4578</u> SAS No.: <u>P4578</u>
Initial Calibration Source:	<u>EPA</u>			
Continuing Calibration Source:	<u>PLASMA-PURE</u>			

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV56	Mercury	3.87	4.0	97	90 - 110	CV	10/29/2024	08:15	LB133181

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Portal Partners Tri-Venture **SDG No.:** P4578
Contract: PORT06 **Lab Code:** CHEM **Case No.:** P4578 **SAS No.:** P4578
Initial Calibration Source: EPA
Continuing Calibration Source: PLASMA-PURE

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV82	Mercury	5.04	5.0	101	90 - 110	CV	10/29/2024	08:20	LB133181
CCV83	Mercury	4.91	5.0	98	90 - 110	CV	10/29/2024	08:47	LB133181
CCV84	Mercury	4.59	5.0	92	90 - 110	CV	10/29/2024	09:14	LB133181
CCV85	Mercury	5.09	5.0	102	90 - 110	CV	10/29/2024	09:37	LB133181

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Portal Partners Tri-Venture **SDG No.:** P4578
Contract: PORT06 **Lab Code:** CHEM **Case No.:** P4578 **SAS No.:** P4578
Initial Calibration Source: EPA
Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV01	Arsenic	975	1000	98	90 - 110	P	10/28/2024	12:57	LB133175
	Barium	483	520	93	90 - 110	P	10/28/2024	12:57	LB133175
	Cadmium	494	510	97	90 - 110	P	10/28/2024	12:57	LB133175
	Chromium	532	520	102	90 - 110	P	10/28/2024	12:57	LB133175
	Lead	983	1000	98	90 - 110	P	10/28/2024	12:57	LB133175
	Selenium	1010	1000	101	90 - 110	P	10/28/2024	12:57	LB133175
	Silver	273	250	109	90 - 110	P	10/28/2024	12:57	LB133175

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Portal Partners Tri-Venture

SDG No.: P4578

Contract: PORT06

Lab Code: CHEM

Case No.: P4578

SAS No.: P4578

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
LLICV01	Arsenic	18.8	20.0	94	80 - 120	P	10/28/2024	13:04	LB133175
	Barium	94.7	100	95	80 - 120	P	10/28/2024	13:04	LB133175
	Cadmium	5.66	6.0	94	80 - 120	P	10/28/2024	13:04	LB133175
	Chromium	9.20	10.0	92	80 - 120	P	10/28/2024	13:04	LB133175
	Lead	11.0	12.0	92	80 - 120	P	10/28/2024	13:04	LB133175
	Selenium	18.6	20.0	93	80 - 120	P	10/28/2024	13:04	LB133175
	Silver	11.3	10.0	113	80 - 120	P	10/28/2024	13:04	LB133175

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Portal Partners Tri-Venture SDG No.: P4578
Contract: PORT06 Lab Code: CHEM Case No.: P4578 SAS No.: P4578
Initial Calibration Source: EPA
Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV01	Arsenic	4870	5000	97	90 - 110	P	10/28/2024	13:35	LB133175
	Barium	9340	10000	93	90 - 110	P	10/28/2024	13:35	LB133175
	Cadmium	2430	2500	97	90 - 110	P	10/28/2024	13:35	LB133175
	Chromium	969	1000	97	90 - 110	P	10/28/2024	13:35	LB133175
	Lead	4840	5000	97	90 - 110	P	10/28/2024	13:35	LB133175
	Selenium	4920	5000	98	90 - 110	P	10/28/2024	13:35	LB133175
	Silver	1260	1250	101	90 - 110	P	10/28/2024	13:35	LB133175
CCV02	Arsenic	4910	5000	98	90 - 110	P	10/28/2024	14:25	LB133175
	Barium	9410	10000	94	90 - 110	P	10/28/2024	14:25	LB133175
	Cadmium	2440	2500	98	90 - 110	P	10/28/2024	14:25	LB133175
	Chromium	959	1000	96	90 - 110	P	10/28/2024	14:25	LB133175
	Lead	4860	5000	97	90 - 110	P	10/28/2024	14:25	LB133175
	Selenium	4970	5000	100	90 - 110	P	10/28/2024	14:25	LB133175
	Silver	1240	1250	99	90 - 110	P	10/28/2024	14:25	LB133175
CCV03	Arsenic	5060	5000	101	90 - 110	P	10/28/2024	15:15	LB133175
	Barium	9730	10000	97	90 - 110	P	10/28/2024	15:15	LB133175
	Cadmium	2470	2500	99	90 - 110	P	10/28/2024	15:15	LB133175
	Chromium	980	1000	98	90 - 110	P	10/28/2024	15:15	LB133175
	Lead	4940	5000	99	90 - 110	P	10/28/2024	15:15	LB133175
	Selenium	5150	5000	103	90 - 110	P	10/28/2024	15:15	LB133175
	Silver	1270	1250	102	90 - 110	P	10/28/2024	15:15	LB133175
CCV04	Arsenic	5020	5000	100	90 - 110	P	10/28/2024	16:06	LB133175
	Barium	9800	10000	98	90 - 110	P	10/28/2024	16:06	LB133175
	Cadmium	2440	2500	98	90 - 110	P	10/28/2024	16:06	LB133175
	Chromium	974	1000	97	90 - 110	P	10/28/2024	16:06	LB133175
	Lead	4870	5000	97	90 - 110	P	10/28/2024	16:06	LB133175
	Selenium	5100	5000	102	90 - 110	P	10/28/2024	16:06	LB133175
	Silver	1260	1250	101	90 - 110	P	10/28/2024	16:06	LB133175
CCV05	Arsenic	5210	5000	104	90 - 110	P	10/28/2024	16:57	LB133175
	Barium	9800	10000	98	90 - 110	P	10/28/2024	16:57	LB133175
	Cadmium	2490	2500	100	90 - 110	P	10/28/2024	16:57	LB133175
	Chromium	965	1000	96	90 - 110	P	10/28/2024	16:57	LB133175
	Lead	4990	5000	100	90 - 110	P	10/28/2024	16:57	LB133175
	Selenium	5400	5000	108	90 - 110	P	10/28/2024	16:57	LB133175

Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Portal Partners Tri-Venture SDG No.: P4578
Contract: PORT06 Lab Code: CHEM Case No.: P4578 SAS No.: P4578
Initial Calibration Source: EPA
Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV05	Silver	1280	1250	102	90 - 110	P	10/28/2024	16:57	LB133175
CCV06	Arsenic	5080	5000	102	90 - 110	P	10/28/2024	17:50	LB133175
	Barium	9780	10000	98	90 - 110	P	10/28/2024	17:50	LB133175
	Cadmium	2490	2500	100	90 - 110	P	10/28/2024	17:50	LB133175
	Chromium	973	1000	97	90 - 110	P	10/28/2024	17:50	LB133175
	Lead	4970	5000	99	90 - 110	P	10/28/2024	17:50	LB133175
	Selenium	5210	5000	104	90 - 110	P	10/28/2024	17:50	LB133175
	Silver	1270	1250	102	90 - 110	P	10/28/2024	17:50	LB133175
CCV07	Arsenic	5110	5000	102	90 - 110	P	10/28/2024	18:43	LB133175
	Barium	9750	10000	98	90 - 110	P	10/28/2024	18:43	LB133175
	Cadmium	2480	2500	99	90 - 110	P	10/28/2024	18:43	LB133175
	Chromium	966	1000	97	90 - 110	P	10/28/2024	18:43	LB133175
	Lead	4970	5000	99	90 - 110	P	10/28/2024	18:43	LB133175
	Selenium	5270	5000	106	90 - 110	P	10/28/2024	18:43	LB133175
	Silver	1260	1250	101	90 - 110	P	10/28/2024	18:43	LB133175
CCV08	Arsenic	5290	5000	106	90 - 110	P	10/28/2024	19:33	LB133175
	Barium	10000	10000	100	90 - 110	P	10/28/2024	19:33	LB133175
	Cadmium	2570	2500	103	90 - 110	P	10/28/2024	19:33	LB133175
	Chromium	989	1000	99	90 - 110	P	10/28/2024	19:33	LB133175
	Lead	5130	5000	103	90 - 110	P	10/28/2024	19:33	LB133175
	Selenium	5470	5000	110	90 - 110	P	10/28/2024	19:33	LB133175
	Silver	1310	1250	105	90 - 110	P	10/28/2024	19:33	LB133175
CCV09	Arsenic	5200	5000	104	90 - 110	P	10/28/2024	20:22	LB133175
	Barium	9830	10000	98	90 - 110	P	10/28/2024	20:22	LB133175
	Cadmium	2530	2500	101	90 - 110	P	10/28/2024	20:22	LB133175
	Chromium	975	1000	98	90 - 110	P	10/28/2024	20:22	LB133175
	Lead	5040	5000	101	90 - 110	P	10/28/2024	20:22	LB133175
	Selenium	5360	5000	107	90 - 110	P	10/28/2024	20:22	LB133175
	Silver	1290	1250	103	90 - 110	P	10/28/2024	20:22	LB133175
CCV10	Arsenic	5180	5000	104	90 - 110	P	10/28/2024	21:21	LB133175
	Barium	9840	10000	98	90 - 110	P	10/28/2024	21:21	LB133175
	Cadmium	2500	2500	100	90 - 110	P	10/28/2024	21:21	LB133175
	Chromium	967	1000	97	90 - 110	P	10/28/2024	21:21	LB133175
	Lead	4980	5000	100	90 - 110	P	10/28/2024	21:21	LB133175



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Client:	<u>Portal Partners Tri-Venture</u>	SDG No.:	<u>P4578</u>	
Contract:	<u>PORT06</u>	Lab Code:	<u>CHEM</u>	Case No.: <u>P4578</u> SAS No.: <u>P4578</u>
Initial Calibration Source:	<u>EPA</u>			
Continuing Calibration Source:	Inorganic Ventures			

Sample ID	Analyte	Result	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
		ug/L							
CCV10	Selenium	5330	5000	107	90 - 110	P	10/28/2024	21:21	LB133175
	Silver	1270	1250	102	90 - 110	P	10/28/2024	21:21	LB133175
CCV11	Arsenic	5220	5000	104	90 - 110	P	10/28/2024	21:38	LB133175
	Barium	10100	10000	101	90 - 110	P	10/28/2024	21:38	LB133175
	Cadmium	2480	2500	99	90 - 110	P	10/28/2024	21:38	LB133175
	Chromium	970	1000	97	90 - 110	P	10/28/2024	21:38	LB133175
	Lead	4970	5000	99	90 - 110	P	10/28/2024	21:38	LB133175
	Selenium	5380	5000	108	90 - 110	P	10/28/2024	21:38	LB133175
	Silver	1290	1250	103	90 - 110	P	10/28/2024	21:38	LB133175



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Metals

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CRDL STANDARD FOR AA & ICP

Client: Portal Partners Tri-Venture **SDG No.:** P4578
Contract: PORT06 **Lab Code:** CHEM **Case No.:** P4578 **SAS No.:** P4578
Initial Calibration Source: _____
Continuing Calibration Source: _____

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CRI01	Arsenic	19.1	20.0	96	40 - 160	P	10/28/2024	13:12	LB133175
	Barium	93.7	100	94	40 - 160	P	10/28/2024	13:12	LB133175
	Cadmium	5.55	6.0	92	40 - 160	P	10/28/2024	13:12	LB133175
	Chromium	9.13	10.0	91	40 - 160	P	10/28/2024	13:12	LB133175
	Lead	11.5	12.0	96	40 - 160	P	10/28/2024	13:12	LB133175
	Selenium	17.6	20.0	88	40 - 160	P	10/28/2024	13:12	LB133175
	Silver	11.0	10.0	110	40 - 160	P	10/28/2024	13:12	LB133175
CRA	Mercury	0.18	0.2	90	40 - 160	CV	10/29/2024	08:24	LB133181

Metals
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INTERFERENCE CHECK SAMPLE

Client: Portal Partners Tri-Venture **SDG No.:** P4578
Contract: PORT06 **Lab Code:** CHEM **Case No.:** P4578 **SAS No.:** P4578
ICS Source: EPA **Instrument ID:** P4

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Low Limit (ug/L)	High Limit (ug/L)	Analysis Date	Analysis Time	Run Number
ICSA01	Arsenic	2.59			-20	20	10/28/2024	13:16	LB133175
	Barium	2.22	6.0	37	-94	106	10/28/2024	13:16	LB133175
	Cadmium	6.97	1.0	697	-5	7	10/28/2024	13:16	LB133175
	Chromium	56.5	52.0	109	42	62	10/28/2024	13:16	LB133175
	Lead	8.36			-12	12	10/28/2024	13:16	LB133175
	Selenium	-9.09			-20	20	10/28/2024	13:16	LB133175
	Silver	3.99			-10	10	10/28/2024	13:16	LB133175
ICSAB01	Arsenic	107	104	103	88.4	120	10/28/2024	13:21	LB133175
	Barium	472	537	88	437	637	10/28/2024	13:21	LB133175
	Cadmium	967	972	100	826	1120	10/28/2024	13:21	LB133175
	Chromium	556	542	103	460	624	10/28/2024	13:21	LB133175
	Lead	55.7	49.0	114	37	61	10/28/2024	13:21	LB133175
	Selenium	39.8	46.0	86	26	66	10/28/2024	13:21	LB133175
	Silver	212	201	106	170	232	10/28/2024	13:21	LB133175



METAL QC DATA

metals
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MATRIX SPIKE SUMMARY

client: <u>Portal Partners Tri-Venture</u>	level: <u>low</u>	sdg no.: <u>P4578</u>
contract: <u>PORT06</u>	lab code: <u>CHEM</u>	case no.: <u>P4578</u> sas no.: <u>P4578</u>
matrix: <u>Water</u>	sample id: <u>P4578-08</u>	client id: <u>WB-305-BOT-1MS</u>
Percent Solids for Sample: <u>NA</u>	Spiked ID: <u>P4578-08MS</u>	Percent Solids for Spike Sample: <u>NA</u>

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	ug/L	75 - 125	3670		100	U	4000	92		P
Barium	ug/L	75 - 125	1330		492	J	1000	84		P
Cadmium	ug/L	75 - 125	874		1.08	J	1000	87		P
Chromium	ug/L	75 - 125	1910		42.4	J	2000	94		P
Lead	ug/L	75 - 125	4140		60.0	U	5000	83		P
Mercury	ug/L	75 - 125	38.7		2.00	U	40.0	97		CV
Selenium	ug/L	75 - 125	9380		100	U	10000	94		P
Silver	ug/L	75 - 125	373		50.0	U	380	98		P

metals
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MATRIX SPIKE DUPLICATE SUMMARY

client: <u>Portal Partners Tri-Venture</u>	level: <u>low</u>	sdg no.: <u>P4578</u>
contract: <u>PORT06</u>	lab code: <u>CHEM</u>	case no.: <u>P4578</u> sas no.: <u>P4578</u>
matrix: <u>Water</u>	sample id: <u>P4578-08</u>	client id: <u>WB-305-BOT-1MSD</u>
Percent Solids for Sample: <u>NA</u>	Spiked ID: <u>P4578-08MSD</u>	Percent Solids for Spike Sample: <u>NA</u>

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	ug/L	75 - 125	3710		100	U	4000	93		P
Barium	ug/L	75 - 125	1330		492	J	1000	84		P
Cadmium	ug/L	75 - 125	874		1.08	J	1000	87		P
Chromium	ug/L	75 - 125	1920		42.4	J	2000	94		P
Lead	ug/L	75 - 125	4140		60.0	U	5000	83		P
Mercury	ug/L	75 - 125	37.2		2.00	U	40.0	93		CV
Selenium	ug/L	75 - 125	9510		100	U	10000	95		P
Silver	ug/L	75 - 125	381		50.0	U	380	100		P

Metals
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Client: Portal Partners Tri-Venture **SDG No.:** P4578
Contract: PORT06 **Lab Code:** CHEM **Case No.:** P4578 **SAS No.:** P4578
Matrix: **Level:** LOW **Client ID:**
Sample ID: **Spiked ID:**

Analyte	Units	Acceptance Limit %R	C	Sample Result	C	Spike Added	% Recovery	Qual	M
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A
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Metals

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DUPLICATE SAMPLE SUMMARY

Client: Portal Partners Tri-Venture **Level:** LOW **SDG No.:** P4578
Contract: PORT06 **Lab Code:** CHEM **Case No.:** P4578 **SAS No.:** P4578
Matrix: Water **Sample ID:** P4578-08 **Client ID:** WB-305-BOT-1DUP
Percent Solids for Sample: NA **Duplicate ID** P4578-08DUP **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	ug/L	20	100	U	100	U			P
Barium	ug/L	20	492	J	472	J	4		P
Cadmium	ug/L	20	1.08	J	1.39	J	25		P
Chromium	ug/L	20	42.4	J	41.7	J	2		P
Lead	ug/L	20	60.0	U	60.0	U			P
Mercury	ug/L	20	2.00	U	2.00	U			CV
Selenium	ug/L	20	100	U	100	U			P
Silver	ug/L	20	50.0	U	50.0	U			P

Metals

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DUPLICATE SAMPLE SUMMARY

Client: Portal Partners Tri-Venture **Level:** LOW **SDG No.:** P4578
Contract: PORT06 **Lab Code:** CHEM **Case No.:** P4578 **SAS No.:** P4578
Matrix: Water **Sample ID:** P4578-08MS **Client ID:** WB-305-BOT-1MSD
Percent Solids for Sample: NA **Duplicate ID** P4578-08MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	ug/L	20	3670		3710		1		P
Barium	ug/L	20	1330		1330		0		P
Cadmium	ug/L	20	874		874		0		P
Chromium	ug/L	20	1910		1920		1		P
Lead	ug/L	20	4140		4140		0		P
Mercury	ug/L	20	38.7		37.2		4		CV
Selenium	ug/L	20	9380		9510		1		P
Silver	ug/L	20	373		381		2		P



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Client:	<u>Portal Partners Tri-Venture</u>	SDG No.:	<u>P4578</u>				
Contract:	<u>PORT06</u>	Lab Code:	<u>CHEM</u>	Case No.:	<u>P4578</u>	SAS No.:	<u>P4578</u>

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
B164453BS							
Arsenic	ug/L	4000	3870		97	80 - 120	P
Barium	ug/L	1000	945		94	80 - 120	P
Cadmium	ug/L	1000	943		94	80 - 120	P
Chromium	ug/L	2000	2000		100	80 - 120	P
Lead	ug/L	5000	4800		96	80 - 120	P
Selenium	ug/L	10000	10100		101	80 - 120	P
Silver	ug/L	380	399		105	80 - 120	P

Metals

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LABORATORY CONTROL SAMPLE SUMMARY

Client: Portal Partners Tri-Venture

SDG No.: P4578

Contract: PORT06

Lab Code: CHEM

Case No.: P4578

SAS No.: P4578

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB164477BS Mercury	ug/L	4.0	3.96		99	80 - 120	CV

Metals
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ICP SERIAL DILUTIONS

SAMPLE NO.

WB-305-BOT-1L

Lab Name: Chemtech Consulting Group **Contract:** PORT06
Lab Code: CHEM **Lb No.:** lb133175 **Lab Sample ID :** P4578-08L **SDG No.:** P4578
Matrix (soil/water): Water **Level (low/med):** LOW
Concentration Units: ug/L

Analyte	Initial Sample Result (I)		Serial Dilution Result (S)		% Differ- ence	Q	M
Arsenic	100	U	500	U			P
Barium	492	J	418	J	15		P
Cadmium	1.08	J	150	U	100.0		P
Chromium	42.4	J	250	U	100.0		P
Lead	60.0	U	300	U			P
Mercury	2.00	U	10.0	U			CV
Selenium	100	U	500	U			P
Silver	50.0	U	250	U			P

metals
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ANALYSIS RUN LOG

Client: Portal Partners Tri-Venture **Contract:** PORT06

Lab code: CHEM **Case no.:** P4578 **Sas no.:** P4578 **Sdg no.:** P4578

Instrument id number: **Method:** **Run number:** LB133175

Start date: 10/28/2024 **End date:** 10/28/2024

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1158	Ag,As,Ba,Cd,Cr,Pb,Se
S1	S1	1	1203	Ag,As,Ba,Cd,Cr,Pb,Se
S2	S2	1	1207	Ag,As,Ba,Cd,Cr,Pb,Se
S3	S3	1	1211	Ag,As,Ba,Cd,Cr,Pb,Se
S4	S4	1	1216	Ag,As,Ba,Cd,Cr,Pb,Se
S5	S5	1	1220	Ag,As,Ba,Cd,Cr,Pb,Se
ICV01	ICV01	1	1257	Ag,As,Ba,Cd,Cr,Pb,Se
LLICV01	LLICV01	1	1304	Ag,As,Ba,Cd,Cr,Pb,Se
ICB01	ICB01	1	1308	Ag,As,Ba,Cd,Cr,Pb,Se
CRI01	CRI01	1	1312	Ag,As,Ba,Cd,Cr,Pb,Se
ICSA01	ICSA01	1	1316	Ag,As,Ba,Cd,Cr,Pb,Se
ICSAB01	ICSAB01	1	1321	Ag,As,Ba,Cd,Cr,Pb,Se
ICSA	ICSA	20	1327	Ag,As,Ba,Cd,Cr,Pb,Se
ICSAB	ICSAB	20	1331	Ag,As,Ba,Cd,Cr,Pb,Se
CCV01	CCV01	1	1335	Ag,As,Ba,Cd,Cr,Pb,Se
CCB01	CCB01	1	1339	Ag,As,Ba,Cd,Cr,Pb,Se
CCV02	CCV02	1	1425	Ag,As,Ba,Cd,Cr,Pb,Se
CCB02	CCB02	1	1430	Ag,As,Ba,Cd,Cr,Pb,Se
CCV03	CCV03	1	1515	Ag,As,Ba,Cd,Cr,Pb,Se
CCB03	CCB03	1	1520	Ag,As,Ba,Cd,Cr,Pb,Se
CCV04	CCV04	1	1606	Ag,As,Ba,Cd,Cr,Pb,Se
CCB04	CCB04	1	1610	Ag,As,Ba,Cd,Cr,Pb,Se
CCV05	CCV05	1	1657	Ag,As,Ba,Cd,Cr,Pb,Se
CCB05	CCB05	1	1701	Ag,As,Ba,Cd,Cr,Pb,Se
CCV06	CCV06	1	1750	Ag,As,Ba,Cd,Cr,Pb,Se
CCB06	CCB06	1	1754	Ag,As,Ba,Cd,Cr,Pb,Se
P4578-06	WB-305-BOT	1	1825	Ag,As,Ba,Cd,Cr,Pb,Se
P4578-08	WB-305-BOT-1	1	1829	Ag,As,Ba,Cd,Cr,Pb,Se
P4578-08DUP	WB-305-BOT-1DUP	1	1834	Ag,As,Ba,Cd,Cr,Pb,Se
P4578-08L	WB-305-BOT-1L	5	1838	Ag,As,Ba,Cd,Cr,Pb,Se
CCV07	CCV07	1	1843	Ag,As,Ba,Cd,Cr,Pb,Se
CCB07	CCB07	1	1847	Ag,As,Ba,Cd,Cr,Pb,Se
P4578-08MS	WB-305-BOT-1MS	1	1851	Ag,As,Ba,Cd,Cr,Pb,Se
P4578-08MSD	WB-305-BOT-1MSD	1	1855	Ag,As,Ba,Cd,Cr,Pb,Se
PB164393TB	PB164393TB	1	1904	Ag,As,Ba,Cd,Cr,Pb,Se
PB164453BL	PB164453BL	1	1908	Ag,As,Ba,Cd,Cr,Pb,Se
PB164453BS	PB164453BS	1	1912	Ag,As,Ba,Cd,Cr,Pb,Se
CCV08	CCV08	1	1933	Ag,As,Ba,Cd,Cr,Pb,Se
CCB08	CCB08	1	1937	Ag,As,Ba,Cd,Cr,Pb,Se
CCV09	CCV09	1	2022	Ag,As,Ba,Cd,Cr,Pb,Se
CCB09	CCB09	1	2026	Ag,As,Ba,Cd,Cr,Pb,Se

metals
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ANALYSIS RUN LOG

Client: Portal Partners Tri-Venture

Contract: PORT06

Lab code: CHEM **Case no.:** P4578 **Sas no.:** P4578

Sdg no.: P4578

Instrument id number: **Method:**

Run number: LB133175

Start date: 10/28/2024 **End date:** 10/28/2024

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
CCV10	CCV10	1	2121	Ag,As,Ba,Cd,Cr,Pb,Se
CCB10	CCB10	1	2125	Ag,As,Ba,Cd,Cr,Pb,Se
CCV11	CCV11	1	2138	Ag,As,Ba,Cd,Cr,Pb,Se
CCB11	CCB11	1	2143	Ag,As,Ba,Cd,Cr,Pb,Se

metals
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ANALYSIS RUN LOG

Client: Portal Partners Tri-Venture **Contract:** PORT06

Lab code: CHEM **Case no.:** P4578 **Sas no.:** P4578 **Sdg no.:** P4578

Instrument id number: **Method:** **Run number:** LB133181

Start date: 10/29/2024 **End date:** 10/29/2024

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	0801	HG
S0.2	S0.2	1	0803	HG
S2.5	S2.5	1	0805	HG
S5	S5	1	0808	HG
S7.5	S7.5	1	0810	HG
S10	S10	1	0812	HG
ICV56	ICV56	1	0815	HG
ICB56	ICB56	1	0817	HG
CCV82	CCV82	1	0820	HG
CCB82	CCB82	1	0822	HG
CRA	CRA	1	0824	HG
PB164477BL	PB164477BL	1	0831	HG
PB164477BS	PB164477BS	1	0833	HG
CCV83	CCV83	1	0847	HG
CCB83	CCB83	1	0849	HG
P4578-06	WB-305-BOT	1	0910	HG
P4578-08	WB-305-BOT-1	1	0912	HG
CCV84	CCV84	1	0914	HG
CCB84	CCB84	1	0916	HG
P4578-08DUP	WB-305-BOT-1DUP	1	0919	HG
P4578-08MS	WB-305-BOT-1MS	1	0926	HG
P4578-08MSD	WB-305-BOT-1MSD	1	0928	HG
PB164393TB	PB164393TB	1	0930	HG
P4578-08L	WB-305-BOT-1L	5	0933	HG
CCV85	CCV85	1	0937	HG
CCB85	CCB85	1	0939	HG



METAL PREPARATION & INSTRUMENT DATA

Metals

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ICP INTERELEMENT CORRECTION FACTORS

Client: Portal Partners Tri-Venture **SDG No.:** P4578
Contract: PORT06 **Lab Code:** CHEM **Case No.:** P4578 **SAS No.:** P4578
Instrument ID: _____ **Date:** _____
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave- Length (nm)	ICP Interelement Correction Factors For:				
		Al	Ca	Fe	Mg	Ag
Arsenic	193.759	0.0000000	0.0000000	-0.0000440	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0000930	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	-0.0000920	0.0000000	0.0000380	0.0000000	0.0000000
Selenium	196.090	0.0000000	0.0000000	-0.0001440	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	-0.0001490	0.0000000	0.0000000

Metals

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ICP INTERELEMENT CORRECTION FACTORS

Client: Portal Partners Tri-Venture

SDG No.: P4578

Contract: PORT06

Lab Code: CHEM

Case No.: P4578

SAS No.: P4578

Instrument ID:

Date:

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave- Length (nm)	ICP Interelement Correction Factors For:				
		As	Ba	Be	Cd	Co
Arsenic	193.759	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0002870
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	0.0003170	0.0000000	0.0000000	0.0000000
Selenium	196.090	0.0000000	0.0000000	0.0000000	0.0000000	-0.0003570
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Metals

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ICP INTERELEMENT CORRECTION FACTORS

Client: Portal Partners Tri-Venture **SDG No.:** P4578

Contract: PORT06 **Lab Code:** CHEM **Case No.:** P4578 **SAS No.:** P4578

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave- Length (nm)	ICP Interelement Correction Factors For:				
		Cr	Cu	K	Mn	Mo
Arsenic	193.759	-0.0029000	0.0000000	0.0000000	0.0000000	0.0004900
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000070	0.0002200	0.0000000
Lead	220.353	0.0000000	0.0000000	0.0000000	0.0001400	-0.0008600
Selenium	196.090	0.0000000	0.0000000	0.0000000	0.0007460	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	-0.0000120

Metals

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ICP INTERELEMENT CORRECTION FACTORS

Client: Portal Partners Tri-Venture **SDG No.:** P4578

Contract: PORT06 **Lab Code:** CHEM **Case No.:** P4578 **SAS No.:** P4578

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave- Length (nm)	ICP Interelement Correction Factors For:				
		Na	Ni	Pb	Sb	Se
Arsenic	193.759	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	0.0006580	0.0000000	0.0000000	0.0001290
Selenium	196.090	0.0000000	0.0000000	0.0003330	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Metals

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ICP INTERELEMENT CORRECTION FACTORS

Client: Portal Partners Tri-Venture **SDG No.:** P4578
Contract: PORT06 **Lab Code:** CHEM **Case No.:** P4578 **SAS No.:** P4578
Instrument ID: _____ **Date:** _____
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave- Length (nm)	ICP Interelement Correction Factors For:				
		Sn	Ti	Tl	V	Zn
Arsenic	193.759	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000630	0.0001280	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0001110	0.0000000
Lead	220.353	0.0000000	-0.0003610	0.0000000	0.0000000	0.0000000
Selenium	196.090	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	-0.0007420	0.0000000	0.0000000	0.0000000

LAB CHRONICLE

OrderID:	P4578	OrderDate:	10/25/2024 3:58:00 PM
Client:	Portal Partners Tri-Venture	Project:	Amtrak Sawtooth Bridges 2024
Contact:	Joseph Krupansky	Location:	K63,VOA Ref. #2 Soil,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
P4578-01	WB-305-SW	Water			10/25/24			10/25/24
			Mercury	7470A		10/25/24	10/28/24	
			Metals ICP-TAL	6010D		10/26/24	10/29/24	
P4578-02	WB-305-SW-1	Water			10/25/24			10/25/24
			Mercury	7470A		10/25/24	10/28/24	
			Metals ICP-TAL	6010D		10/26/24	10/29/24	
P4578-03	WB-305-TOP	SOIL			10/25/24			10/25/24
			Mercury	7471B		10/28/24	10/29/24	
			Metals ICP-TAL	6010D		10/25/24	10/28/24	
P4578-04	WB-305-TOP-1	SOIL			10/25/24			10/25/24
			Mercury	7471B		10/28/24	10/29/24	
			Metals ICP-TAL	6010D		10/25/24	10/28/24	
P4578-05	WB-305-BOT	SOIL			10/25/24			10/25/24
			Mercury	7471B		10/28/24	10/29/24	
			Metals ICP-TAL	6010D		10/25/24	10/28/24	
P4578-06	WB-305-BOT	TCLP			10/25/24			10/25/24
			TCLP ICP Metals	6010D		10/27/24	10/28/24	
			TCLP Mercury	7470A		10/28/24	10/29/24	
P4578-07	WB-305-BOT-1	SOIL			10/25/24			10/25/24
			Mercury	7471B		10/28/24	10/29/24	
			Metals ICP-TAL	6010D		10/25/24	10/28/24	
P4578-08	WB-305-BOT-1	TCLP			10/25/24			10/25/24
			TCLP ICP Metals	6010D		10/27/24	10/28/24	
			TCLP Mercury	7470A		10/28/24	10/29/24	



METAL PREPARATION & ANALYICAL SUMMARY

Metals

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SAMPLE PREPARATION SUMMARY

Client:	<u>Portal Partners Tri-Venture</u>	SDG No.:	<u>P4578</u>
Contract:	<u>PORT06</u>	Lab Code:	<u>CHEM</u>
		Method:	<u></u>
		Case No.:	<u>P4578</u>
		SAS No.:	<u>P4578</u>

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(mL)	Final Sample Volume (mL)	Percent Solids
Batch Number: PB164453							
P4578-06	WB-305-BOT	SAM	WATER	10/27/2024	5.0	25.0	
P4578-08	WB-305-BOT-1	SAM	WATER	10/27/2024	5.0	25.0	
P4578-08DUP	WB-305-BOT-1DUP	DUP	WATER	10/27/2024	5.0	25.0	
P4578-08MS	WB-305-BOT-1MS	MS	WATER	10/27/2024	5.0	25.0	
P4578-08MSD	WB-305-BOT-1MSD	MSD	WATER	10/27/2024	5.0	25.0	
PB164393TB	PB164393TB	MB	WATER	10/27/2024	5.0	25.0	
PB164453BL	PB164453BL	MB	WATER	10/27/2024	5.0	25.0	
PB164453BS	PB164453BS	LCS	WATER	10/27/2024	5.0	25.0	

Metals
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SAMPLE PREPARATION SUMMARY

Client: Portal Partners Tri-Venture

SDG No.: P4578

Contract: PORT06

Lab Code: CHEM

Method:

Case No.: P4578

SAS No.: P4578

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(mL)	Final Sample Volume (mL)	Percent Solids
Batch Number: PB164477							
P4578-06	WB-305-BOT	SAM	WATER	10/28/2024	3.0	30.0	
P4578-08	WB-305-BOT-1	SAM	WATER	10/28/2024	3.0	30.0	
P4578-08DUP	WB-305-BOT-1DUP	DUP	WATER	10/28/2024	3.0	30.0	
P4578-08MS	WB-305-BOT-1MS	MS	WATER	10/28/2024	3.0	30.0	
P4578-08MSD	WB-305-BOT-1MSD	MSD	WATER	10/28/2024	3.0	30.0	
PB164393TB	PB164393TB	MB	WATER	10/28/2024	3.0	30.0	
PB164477BL	PB164477BL	MB	WATER	10/28/2024	30.0	30.0	
PB164477BS	PB164477BS	LCS	WATER	10/28/2024	30.0	30.0	

Instrument ID: P4

Daily Analysis Runlog For Sequence/QC Batch ID # LB133175

Review By	jaswal	Review On	10/30/2024 1:21:12 AM
Supervise By	kareem	Supervise On	11/6/2024 10:58:05 PM
STD. NAME	STD REF.#		
ICAL Standard	MP82441,MP82476,MP82477,MP82478,MP82479,MP82712		
ICV Standard	MP82485		
CCV Standard	MP82488		
ICSA Standard	MP82486,MP82487		
CRI Standard	MP82712		
LCS Standard			
Chk Standard	MP82491,MP82492		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	10/28/24 11:58		Kareem	OK
2	S1	S1	CAL2	10/28/24 12:03		Kareem	OK
3	S2	S2	CAL3	10/28/24 12:07		Kareem	OK
4	S3	S3	CAL4	10/28/24 12:11		Kareem	OK
5	S4	S4	CAL5	10/28/24 12:16		Kareem	OK
6	S5	S5	CAL6	10/28/24 12:20		Kareem	OK
7	ICV01	ICV01	ICV	10/28/24 12:57	Fail for Ba,Mn,K,Ag,Zn (200.7)	Kareem	OK
8	LLICV01	LLICV01	LLICV	10/28/24 13:04		Kareem	OK
9	ICB01	ICB01	ICB	10/28/24 13:08		Kareem	OK
10	CRI01	CRI01	CRDL	10/28/24 13:12		Kareem	OK
11	ICSA01	ICSA01	ICSA	10/28/24 13:16		Kareem	OK
12	ICSAB01	ICSAB01	ICSAB	10/28/24 13:21		Kareem	OK
13	ICSADL	ICSADL	ICSA	10/28/24 13:27		Kareem	OK
14	ICSABDL	ICSABDL	ICSAB	10/28/24 13:31		Kareem	OK
15	CCV01	CCV01	CCV	10/28/24 13:35		Kareem	OK
16	CCB01	CCB01	CCB	10/28/24 13:39		Kareem	OK
17	P4549-02	TT-067-IDWGW-2024	SAM	10/28/24 13:44		Kareem	OK
18	P4549-03	TT-068-IDWGW-2024	SAM	10/28/24 13:48		Kareem	OK

Instrument ID: P4

Daily Analysis Runlog For Sequence/QC Batch ID # LB133175

Review By	jaswal	Review On	10/30/2024 1:21:12 AM
Supervise By	kareem	Supervise On	11/6/2024 10:58:05 PM
STD. NAME	STD REF.#		
ICAL Standard	MP82441,MP82476,MP82477,MP82478,MP82479,MP82712		
ICV Standard	MP82485		
CCV Standard	MP82488		
ICSA Standard	MP82486,MP82487		
CRI Standard	MP82712		
LCS Standard			
Chk Standard	MP82491,MP82492		

19	P4549-04	TT-069-IDWGW-2024	SAM	10/28/24 13:52		Kareem	OK
20	P4549-04DUP	TT-069-IDWGW-2024	DUP	10/28/24 13:57		Kareem	OK
21	P4549-04L	TT-069-IDWGW-2024	SD	10/28/24 14:01		Kareem	OK
22	P4549-04MS	TT-069-IDWGW-2024	MS	10/28/24 14:05	0.1ml of m6001 and m6010 were added to 10 ml of the sample	Kareem	OK
23	P4549-04MSD	TT-069-IDWGW-2024	MSD	10/28/24 14:09	0.1ml of m6001 and m6010 were added to 10 ml of the sample	Kareem	OK
24	P4549-04A	TT-069-IDWGW-2024	PS	10/28/24 14:13	0.1ml of m6001 and m6010 were added to 10 ml of the sample	Kareem	OK
25	PB164404BL	PB164404BL	MB	10/28/24 14:17		Kareem	OK
26	PB164404BS	PB164404BS	LCS	10/28/24 14:21	0.1ml of m6001 and m6010 were added to 10 ml of the sample	Kareem	OK
27	CCV02	CCV02	CCV	10/28/24 14:25		Kareem	OK
28	CCB02	CCB02	CCB	10/28/24 14:30		Kareem	OK
29	P4554-01	001-WILLETS-PT-BL	SAM	10/28/24 14:34		Kareem	OK
30	P4554-02	002-35TH-AVE(SEP)	SAM	10/28/24 14:38		Kareem	OK
31	P4554-02DUP	002-35TH-AVE(SEP)	DUP	10/28/24 14:42		Kareem	OK
32	P4554-02L	002-35TH-AVE(SEP)	SD	10/28/24 14:46		Kareem	OK
33	P4554-02MS	002-35TH-AVE(SEP)	MS	10/28/24 14:51	0.1ml of m6001 and m6010 were added to 10 ml of the sample	Kareem	OK

Instrument ID: P4

Daily Analysis Runlog For Sequence/QC Batch ID # LB133175

Review By	jaswal	Review On	10/30/2024 1:21:12 AM
Supervise By	kareem	Supervise On	11/6/2024 10:58:05 PM

STD. NAME	STD REF.#
ICAL Standard	MP82441,MP82476,MP82477,MP82478,MP82479,MP82712
ICV Standard	MP82485
CCV Standard	MP82488
ICSA Standard	MP82486,MP82487
CRI Standard	MP82712
LCS Standard	
Chk Standard	MP82491,MP82492

34	P4554-02MSD	002-35TH-AVE(SEP)	MSD	10/28/24 14:55	0.1ml of m6001 and m6010 were added to 10 ml of the sample	Kareem	OK
35	P4554-02A	002-35TH-AVE(SEP)	PS	10/28/24 14:59	0.1ml of m6001 and m6010 were added to 10 ml of the sample	Kareem	OK
36	PB164410BL	PB164410BL	MB	10/28/24 15:03		Kareem	OK
37	PB164410BS	PB164410BS	LCS	10/28/24 15:07	0.1ml of m6001 and m6010 were added to 10 ml of the sample	Kareem	OK
38	P3440-01	923-K1-WS-080124	SAM	10/28/24 15:11		Kareem	OK
39	CCV03	CCV03	CCV	10/28/24 15:15		Kareem	OK
40	CCB03	CCB03	CCB	10/28/24 15:20		Kareem	OK
41	P3440-01DUP	923-K1-WS-080124D	DUP	10/28/24 15:24		Kareem	OK
42	P3440-01L	923-K1-WS-080124L	SD	10/28/24 15:28		Kareem	OK
43	P3440-02	923-K1-WS-080124M	MS	10/28/24 15:33	0.1ml of m6001 and m6010 were added to 10 ml of the sample	Kareem	OK
44	P3440-03	923-K1-WS-080124M	MSD	10/28/24 15:37	0.1ml of m6001 and m6010 were added to 10 ml of the sample	Kareem	OK
45	P3440-01A	923-K1-WS-080124A	PS	10/28/24 15:41	0.1ml of m6001 and m6010 were added to 10 ml of the sample	Kareem	OK
46	P3440-04	922-K1-WS-080124	SAM	10/28/24 15:45		Kareem	OK
47	PB164476BL	PB164476BL	MB	10/28/24 15:49		Kareem	OK

Instrument ID: P4

Daily Analysis Runlog For Sequence/QC Batch ID # LB133175

Review By	jaswal	Review On	10/30/2024 1:21:12 AM
Supervise By	kareem	Supervise On	11/6/2024 10:58:05 PM
STD. NAME	STD REF.#		
ICAL Standard	MP82441,MP82476,MP82477,MP82478,MP82479,MP82712		
ICV Standard	MP82485		
CCV Standard	MP82488		
ICSA Standard	MP82486,MP82487		
CRI Standard	MP82712		
LCS Standard			
Chk Standard	MP82491,MP82492		

48	PB164476BS	PB164476BS	LCS	10/28/24 15:54	0.1ml of m6001 and m6010 were added to 10 ml of the sample	Kareem	OK
49	P4574-01	GRAVEL-1	SAM	10/28/24 15:58		Kareem	OK
50	P4574-04	GRAVEL-2	SAM	10/28/24 16:02		Kareem	OK
51	CCV04	CCV04	CCV	10/28/24 16:06		Kareem	OK
52	CCB04	CCB04	CCB	10/28/24 16:10		Kareem	OK
53	P4574-07	CONCRETE-1	SAM	10/28/24 16:15		Kareem	OK
54	P4574-09	CONCRETE-2	SAM	10/28/24 16:19	Cr high	Kareem	Dilution
55	P4574-11	CONCRETE-3	SAM	10/28/24 16:23	Cr high	Kareem	Dilution
56	P4575-01	PL-02-102424	SAM	10/28/24 16:28		Kareem	OK
57	P4577-01	TR-05-102524	SAM	10/28/24 16:32		Kareem	OK
58	P4577-01DUP	TR-05-102524DUP	DUP	10/28/24 16:36		Kareem	OK
59	P4577-01L	TR-05-102524L	SD	10/28/24 16:41		Kareem	OK
60	P4577-01MS	TR-05-102524MS	MS	10/28/24 16:45	0.1ml of m6001 and m6010 were added to 10 ml of the sample	Kareem	OK
61	P4577-01MSD	TR-05-102524MSD	MSD	10/28/24 16:49	0.1ml of m6001 and m6010 were added to 10 ml of the sample	Kareem	OK
62	P4577-01A	TR-05-102524A	PS	10/28/24 16:53	0.1ml of m6001 and m6010 were added to 10 ml of the sample	Kareem	OK
63	CCV05	CCV05	CCV	10/28/24 16:57		Kareem	OK
64	CCB05	CCB05	CCB	10/28/24 17:01		Kareem	OK

Instrument ID: P4

Daily Analysis Runlog For Sequence/QC Batch ID # LB133175

Review By	jaswal	Review On	10/30/2024 1:21:12 AM
Supervise By	kareem	Supervise On	11/6/2024 10:58:05 PM
STD. NAME	STD REF.#		
ICAL Standard	MP82441,MP82476,MP82477,MP82478,MP82479,MP82712		
ICV Standard	MP82485		
CCV Standard	MP82488		
ICSA Standard	MP82486,MP82487		
CRI Standard	MP82712		
LCS Standard			
Chk Standard	MP82491,MP82492		

65	PB164439BL	PB164439BL	MB	10/28/24 17:06		Kareem	OK
66	PB164439BS	PB164439BS	LCS	10/28/24 17:10	0.1ml of m6001 and m6010 were added to 10 ml of the sample	Kareem	OK
67	P4452-03	ETGI-285	SAM	10/28/24 17:14		Kareem	OK
68	P4545-02	VNJ-215	SAM	10/28/24 17:19		Kareem	OK
69	P4547-04	BP-F-21	SAM	10/28/24 17:23		Kareem	OK
70	P4547-08	BP-F-20	SAM	10/28/24 17:28		Kareem	OK
71	P4561-04	BP-F-19	SAM	10/28/24 17:32		Kareem	OK
72	P4561-08	BP-F-18	SAM	10/28/24 17:36		Kareem	OK
73	P4567-04	WC-1	SAM	10/28/24 17:41		Kareem	OK
74	P4567-08	WC-2	SAM	10/28/24 17:45		Kareem	OK
75	CCV06	CCV06	CCV	10/28/24 17:50		Kareem	OK
76	CCB06	CCB06	CCB	10/28/24 17:54		Kareem	OK
77	P4567-12	WC-3	SAM	10/28/24 17:58		Kareem	OK
78	P4574-03	GRAVEL-1	SAM	10/28/24 18:03		Kareem	OK
79	P4574-06	GRAVEL-2	SAM	10/28/24 18:07		Kareem	OK
80	P4574-08	CONCRETE-1	SAM	10/28/24 18:12		Kareem	OK
81	P4574-10	CONCRETE-2	SAM	10/28/24 18:16		Kareem	OK
82	P4574-12	CONCRETE-3	SAM	10/28/24 18:21		Kareem	OK
83	P4578-06	WB-305-BOT	SAM	10/28/24 18:25		Kareem	OK

Instrument ID: P4

Daily Analysis Runlog For Sequence/QC Batch ID # LB133175

Review By	jaswal	Review On	10/30/2024 1:21:12 AM
Supervise By	kareem	Supervise On	11/6/2024 10:58:05 PM
STD. NAME	STD REF.#		
ICAL Standard	MP82441,MP82476,MP82477,MP82478,MP82479,MP82712		
ICV Standard	MP82485		
CCV Standard	MP82488		
ICSA Standard	MP82486,MP82487		
CRI Standard	MP82712		
LCS Standard			
Chk Standard	MP82491,MP82492		

84	P4578-08	WB-305-BOT-1	SAM	10/28/24 18:29		Kareem	OK
85	P4578-08DUP	WB-305-BOT-1DUP	DUP	10/28/24 18:34		Kareem	OK
86	P4578-08L	WB-305-BOT-1L	SD	10/28/24 18:38		Kareem	OK
87	CCV07	CCV07	CCV	10/28/24 18:43		Kareem	OK
88	CCB07	CCB07	CCB	10/28/24 18:47		Kareem	OK
89	P4578-08MS	WB-305-BOT-1MS	MS	10/28/24 18:51	0.1ml of m6001 and m6010 were added to 10 ml of the sample	Kareem	OK
90	P4578-08MSD	WB-305-BOT-1MSD	MSD	10/28/24 18:55	0.1ml of m6001 and m6010 were added to 10 ml of the sample	Kareem	OK
91	P4578-08A	WB-305-BOT-1A	PS	10/28/24 18:59	0.1ml of m6001 and m6010 were added to 10 ml of the sample	Kareem	OK
92	PB164393TB	PB164393TB	MB	10/28/24 19:04		Kareem	OK
93	PB164453BL	PB164453BL	MB	10/28/24 19:08		Kareem	OK
94	PB164453BS	PB164453BS	LCS	10/28/24 19:12	0.1ml of m6001 and m6010 were added to 10 ml of the sample	Kareem	OK
95	P4547-01	BP-F-21	SAM	10/28/24 19:16		Kareem	OK
96	P4547-05	BP-F-20	SAM	10/28/24 19:21		Kareem	OK
97	P4531-01	OR-03-102424	SAM	10/28/24 19:25		Kareem	OK
98	P4545-01	VNJ-215	SAM	10/28/24 19:29		Kareem	OK
99	CCV08	CCV08	CCV	10/28/24 19:33		Kareem	OK

Instrument ID: P4

Daily Analysis Runlog For Sequence/QC Batch ID # LB133175

Review By	jaswal	Review On	10/30/2024 1:21:12 AM
Supervise By	kareem	Supervise On	11/6/2024 10:58:05 PM
STD. NAME	STD REF.#		
ICAL Standard	MP82441,MP82476,MP82477,MP82478,MP82479,MP82712		
ICV Standard	MP82485		
CCV Standard	MP82488		
ICSA Standard	MP82486,MP82487		
CRI Standard	MP82712		
LCS Standard			
Chk Standard	MP82491,MP82492		

100	CCB08	CCB08	CCB	10/28/24 19:37		Kareem	OK
101	P4547-05DUP	BP-F-20DUP	DUP	10/28/24 19:42		Kareem	OK
102	P4547-05L	BP-F-20L	SD	10/28/24 19:46		Kareem	OK
103	P4547-05MS	BP-F-20MS	MS	10/28/24 19:50	0.1ml of m6001 and m6010 were added to 10 ml of the sample	Kareem	OK
104	P4547-05MSD	BP-F-20MSD	MSD	10/28/24 19:54	0.1ml of m6001 and m6010 were added to 10 ml of the sample	Kareem	OK
105	P4547-05A	BP-F-20A	PS	10/28/24 19:58	0.1ml of m6001 and m6010 were added to 10 ml of the sample	Kareem	OK
106	P4561-01	BP-F-19	SAM	10/28/24 20:02		Kareem	OK
107	P4561-05	BP-F-18	SAM	10/28/24 20:06		Kareem	OK
108	P4566-01	HD-01-102524	SAM	10/28/24 20:10		Kareem	OK
109	P4567-01	WC-1	SAM	10/28/24 20:14		Kareem	OK
110	P4567-05	WC-2	SAM	10/28/24 20:18		Kareem	OK
111	CCV09	CCV09	CCV	10/28/24 20:22		Kareem	OK
112	CCB09	CCB09	CCB	10/28/24 20:26		Kareem	OK
113	P4567-09	WC-3	SAM	10/28/24 20:31		Kareem	OK
114	P4578-03	WB-305-TOP	SAM	10/28/24 20:35		Kareem	OK
115	P4578-04	WB-305-TOP-1	SAM	10/28/24 20:39	Cr high	Kareem	Dilution
116	P4578-05	WB-305-BOT	SAM	10/28/24 20:43		Kareem	OK

Instrument ID: P4

Daily Analysis Runlog For Sequence/QC Batch ID # LB133175

Review By	jaswal	Review On	10/30/2024 1:21:12 AM
Supervise By	kareem	Supervise On	11/6/2024 10:58:05 PM
STD. NAME	STD REF.#		
ICAL Standard	MP82441,MP82476,MP82477,MP82478,MP82479,MP82712		
ICV Standard	MP82485		
CCV Standard	MP82488		
ICSA Standard	MP82486,MP82487		
CRI Standard	MP82712		
LCS Standard			
Chk Standard	MP82491,MP82492		

117	P4578-07	WB-305-BOT-1	SAM	10/28/24 20:47		Kareem	OK
118	P4574-09DL	CONCRETE-2DL	SAM	10/28/24 20:59	5x for Cr	Kareem	Confirms
119	P4574-11DL	CONCRETE-3DL	SAM	10/28/24 21:04	5x for Cr	Kareem	Confirms
120	PB164415BL	PB164415BL	MB	10/28/24 21:08		Kareem	OK
121	PB164415BS	PB164415BS	LCS	10/28/24 21:12	0.1ml of m6001 and m6010 were added to 10 ml of the sample	Kareem	OK
122	CCV10	CCV10	CCV	10/28/24 21:21		Kareem	OK
123	CCB10	CCB10	CCB	10/28/24 21:25		Kareem	OK
124	LR1	LR1	HIGH STD	10/28/24 21:29		Kareem	OK
125	LR2	LR2	HIGH STD	10/28/24 21:34		Kareem	OK
126	CCV11	CCV11	CCV	10/28/24 21:38		Kareem	OK
127	CCB11	CCB11	CCB	10/28/24 21:43		Kareem	OK

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QC Batch ID # LB133181

Review By	jaswal	Review On	10/30/2024 12:41:53 AM
Supervise By	mohan	Supervise On	10/30/2024 12:42:44 AM
STD. NAME	STD REF.#		
ICAL Standard	MP82944,MP82945,MP82946,MP82947,MP82948,MP82949		
ICV Standard	MP82950		
CCV Standard	MP82952		
ICSA Standard			
CRI Standard	MP82954		
LCS Standard			
Chk Standard	MP82951,MP82953,MP82955,MP82958		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	10/29/24 08:01		Mohan	OK
2	S0.2	S0.2	CAL2	10/29/24 08:03		Mohan	OK
3	S2.5	S2.5	CAL3	10/29/24 08:05		Mohan	OK
4	S5	S5	CAL4	10/29/24 08:08		Mohan	OK
5	S7.5	S7.5	CAL5	10/29/24 08:10		Mohan	OK
6	S10	S10	CAL6	10/29/24 08:12		Mohan	OK
7	ICV56	ICV56	ICV	10/29/24 08:15		Mohan	OK
8	ICB56	ICB56	ICB	10/29/24 08:17		Mohan	OK
9	CCV82	CCV82	CCV	10/29/24 08:20		Mohan	OK
10	CCB82	CCB82	CCB	10/29/24 08:22		Mohan	OK
11	CRA	CRA	CRDL	10/29/24 08:24		Mohan	OK
12	HighStd	HighStd	HIGH STD	10/29/24 08:26		Mohan	OK
13	ChkStd	ChkStd	SAM	10/29/24 08:29		Mohan	OK
14	PB164477BL	PB164477BL	MB	10/29/24 08:31		Mohan	OK
15	PB164477BS	PB164477BS	LCS	10/29/24 08:33		Mohan	OK
16	P4545-02	VNJ-215	SAM	10/29/24 08:36		Mohan	OK
17	P4547-04	BP-F-21	SAM	10/29/24 08:38		Mohan	OK
18	P4547-08	BP-F-20	SAM	10/29/24 08:40		Mohan	OK

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QC Batch ID # LB133181

Review By	jaswal	Review On	10/30/2024 12:41:53 AM
Supervise By	mohan	Supervise On	10/30/2024 12:42:44 AM
STD. NAME	STD REF.#		
ICAL Standard	MP82944,MP82945,MP82946,MP82947,MP82948,MP82949		
ICV Standard	MP82950		
CCV Standard	MP82952		
ICSA Standard			
CRI Standard	MP82954		
LCS Standard			
Chk Standard	MP82951,MP82953,MP82955,MP82958		

19	P4561-04	BP-F-19	SAM	10/29/24 08:42		Mohan	OK
20	P4561-08	BP-F-18	SAM	10/29/24 08:45		Mohan	OK
21	CCV83	CCV83	CCV	10/29/24 08:47		Mohan	OK
22	CCB83	CCB83	CCB	10/29/24 08:49		Mohan	OK
23	P4567-04	WC-1	SAM	10/29/24 08:51		Mohan	OK
24	P4567-08	WC-2	SAM	10/29/24 08:54		Mohan	OK
25	P4567-12	WC-3	SAM	10/29/24 08:56		Mohan	OK
26	P4574-03	GRAVEL-1	SAM	10/29/24 08:58		Mohan	OK
27	P4574-06	GRAVEL-2	SAM	10/29/24 09:00		Mohan	OK
28	P4574-08	CONCRETE-1	SAM	10/29/24 09:03		Mohan	OK
29	P4574-10	CONCRETE-2	SAM	10/29/24 09:05		Mohan	OK
30	P4574-12	CONCRETE-3	SAM	10/29/24 09:07		Mohan	OK
31	P4578-06	WB-305-BOT	SAM	10/29/24 09:10		Mohan	OK
32	P4578-08	WB-305-BOT-1	SAM	10/29/24 09:12		Mohan	OK
33	CCV84	CCV84	CCV	10/29/24 09:14		Mohan	OK
34	CCB84	CCB84	CCB	10/29/24 09:16		Mohan	OK
35	P4578-08DUP	WB-305-BOT-1DUP	DUP	10/29/24 09:19		Mohan	OK
36	P4578-08MS	WB-305-BOT-1MS	MS	10/29/24 09:26		Mohan	OK
37	P4578-08MSD	WB-305-BOT-1MSD	MSD	10/29/24 09:28		Mohan	OK
38	PB164393TB	PB164393TB	MB	10/29/24 09:30		Mohan	OK

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QC Batch ID # LB133181

Review By	jaswal	Review On	10/30/2024 12:41:53 AM
Supervise By	mohan	Supervise On	10/30/2024 12:42:44 AM
STD. NAME	STD REF.#		
ICAL Standard	MP82944,MP82945,MP82946,MP82947,MP82948,MP82949		
ICV Standard	MP82950		
CCV Standard	MP82952		
ICSA Standard			
CRI Standard	MP82954		
LCS Standard			
Chk Standard	MP82951,MP82953,MP82955,MP82958		

39	P4578-08L	WB-305-BOT-1L	SD	10/29/24 09:33		Mohan	OK
40	P4578-08A	WB-305-BOT-1A	PS	10/29/24 09:35		Mohan	OK
41	CCV85	CCV85	CCV	10/29/24 09:37		Mohan	OK
42	CCB85	CCB85	CCB	10/29/24 09:39		Mohan	OK

SOP ID : M3010A-Digestion-17

SDG No : N/A

Matrix : WATER

Pipette ID: ICP A

Balance ID : N/A

Filter paper ID : N/A

pH Strip ID : M6069

Hood ID : #3

Block ID: 1. HOT BLOCK #1 2. N/A

Start Digest Date: 10/27/2024 Time : 11:00 Temp : 95 °C

End Digest Date: 10/27/2024 Time : 14:00 Temp : 95 °C

Digestion tube ID: M5595

Block thermometer ID: MET-DIG. #1

Dig Technician Signature: *[Signature]*

Supervisor Signature: *[Signature]*

Temp : 1. 95°C 2. N/A

Standard Name	MLS USED	STD REF. # FROM LOG
LFS-1	0.25	M6000
LFS-2	0.25	M6009
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
Conc. HNO3	3.00	M6097
1:1 HCL	5.00	MP82127
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

Hot Block # 1 Cell # 35 Temp: 95 C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
10/27/24 14:10	<i>[Signature]</i> Prep/Met dig	<i>[Signature]</i> Metals Lab
	Preparation Group	Analysis Group

Lab Sample ID	Client Sample ID	pH	Initial Vol (ml)	Final Vol (ml)	Color Before	Color After	Clarity Before	Clarity After	Comment	Prep Pos
P4452-03	ETGI-285	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	1
P4545-02	VNJ-215	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	2
P4547-04	BP-F-21	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	3
P4547-08	BP-F-20	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	4
P4561-04	BP-F-19	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	5
P4561-08	BP-F-18	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	6
P4567-04	WC-1	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	7
P4567-08	WC-2	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	8
P4567-12	WC-3	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	9
P4574-03	GRAVEL-1	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	10
P4574-06	GRAVEL-2	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	11
P4574-08	CONCRETE-1	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	12
P4574-10	CONCRETE-2	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	13
P4574-12	CONCRETE-3	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	14
P4578-06	WB-305-BOT	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	15
P4578-08	WB-305-BOT-1	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	16
P4578-08DUP	WB-305-BOT-1DUP	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	17
P4578-08MS	WB-305-BOT-1MS	<2	5	25	Colorless	Colorless	Clear	Clear	M6000,M6009	18
P4578-08MSD	WB-305-BOT-1MSD	<2	5	25	Colorless	Colorless	Clear	Clear	M6000,M6009	19
PB164393TB	PB164393TB	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	20
PB164453BL	PBW453	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	21
PB164453BS	LCS453	<2	5	25	Colorless	Colorless	Clear	Clear	M6000,M6009	22

SOP ID : M7470A-Mercury-19

SDG No : NA

Matrix : WATER

Pipette ID: HG A

Balance ID : N/A

Filter paper ID : NA

pH Strip ID : M4909

Hood ID : #1

Block ID: 1. HG HOT BLOCK#3 2. N/A

Start Digest Date: 10/28/2024 Time : 12:15 Temp : 94 °C

End Digest Date: 10/28/2024 Time : 14:15 Temp : 95 °C

Digestion tube ID: M5595

Block thermometer ID: HG-DIG#3

Dig Technician Signature: *MB*

Supervisor Signature: *12*

Temp : 1. 94°C 2. N/A

Standardized Name	MLS USED	STD REF. # FROM LOG
ICV	30mL	MP82950
CCV	30mL	MP82952
CRA	30mL	MP82954
Blank Spike	0.48mL	MP82943
Matrix Spike	0.48mL	MP82943

Chemical Used	ML/SAMPLE USED	Lot Number
HNO3/H2SO4(1:2)	2.5mL	MP82651
KMnO4 (5%)	4.5mL	MP82652
K2S2O8 (5%)	2.5mL	MP82653
Hydroxylamine HCL (12%)	2.0mL	MP82654
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

LAB SAMPLE ID	CLIENT SAMPLE ID	Wt(g)/Vol(ml)	Comment
0.0 ppb	S0	30mL	MP82944
0.05 ppb	S0.05	N/A	N/A
0.2 ppb	S0.2	30mL	MP82945
2.5 ppb	S2.5	30mL	MP82946
5.0 ppb	S5.0	30mL	MP82947
7.5 ppb	S7.5	30mL	MP82948
10.0 ppb	S10.0	30mL	MP82949
ICV	ICV	30mL	MP82950
ICB	ICB	30mL	MP82951
CCV	CCV	30mL	MP82952
CCB	CCB	30mL	MP82953
CRI	CRI	30mL	MP82954
CHK STD	CHK STD	30mL	MP82955

Extraction Conformance/Non-Conformance Comments:

N/A		
Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
10/28/24 @ 14:10	<i>MB - MCHW Lab</i>	<i>MB - MCHW Lab</i>
	Preparation Group	Analysis Group

Lab Sample ID	Client Sample ID	Initial Vol (ml)	Final Vol (ml)	pH	Comment	Prep Pos
P4545-02	VNJ-215	3	30	<2	N/A	3-1
P4547-04	BP-F-21	3	30	<2	N/A	2
P4547-08	BP-F-20	3	30	<2	N/A	3
P4561-04	BP-F-19	3	30	<2	N/A	4
P4561-08	BP-F-18	3	30	<2	N/A	5
P4567-04	WC-1	3	30	<2	N/A	6
P4567-08	WC-2	3	30	<2	N/A	7
P4567-12	WC-3	3	30	<2	N/A	8
P4574-03	GRAVEL-1	3	30	<2	N/A	9
P4574-06	GRAVEL-2	3	30	<2	N/A	10
P4574-08	CONCRETE-1	3	30	<2	N/A	11
P4574-10	CONCRETE-2	3	30	<2	N/A	12
P4574-12	CONCRETE-3	3	30	<2	N/A	13
P4578-06	WB-305-BOT	3	30	<2	N/A	14
P4578-08	WB-305-BOT-1	3	30	<2	N/A	15
P4578-08DUP	WB-305-BOT-1DUP	3	30	<2	N/A	16
P4578-08MS	WB-305-BOT-1MS	3	30	<2	MP82943	17
P4578-08MSD	WB-305-BOT-1MSD	3	30	<2	MP82943	18
PB164393TB	PB164393TB	3	30	<2	N/A	19
PB164477BL	PBW477	30	30	<2	N/A	20
PB164477BS	LCS477	30	30	<2	MP82943	21

SOP ID : M1311-TCLP-15

SDG No : N/A

Weight By : JP

Balance ID : WC SC-4

pH Meter ID : WC PH METER-1

Extraction By : JP

Filter By : JP

Pipette ID : WC

Tumbler ID : T-1 / T-2

TCLP Filter ID : 114771

Start Prep Date : 10/25/2024 Time : 17:40

End Prep Date : 10/26/2024 Time : 10:37

Combination Ratio : 20

ZHE Cleaning Batch : N/A

Initial Room Temperature: 23 °C

Final Room Temperature: 22 °C

TCLP Technician Signature : *JP*

Supervisor By : *12*

Standardized Name	MLS USED	STD REF. # FROM LOG
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Chemical Used	ML/SAMPLE U	Lot Number
TCLP-FLUID-1	N/A	WP108622
HCL-TCLP,1N	N/A	WP108584
HNO3-TCLP,1N	N/A	WP108585
pH Strips	N/A	W1931,W1934,W2350,W2755
pH Strips	N/A	W1937,W1938,W1939,W1940,W1941,W1942
1 Liter Amber	N/A	23091
120ml Plastic bottle	N/A	21029
1:1 HNO3	MP81119	N/A

Extraction Conformance/Non-Conformance Comments:

Matrix spikes are added after filtration and before preservation. Tumbler T-1 / T-2 CHECKED,30 RPM. Particle size reduction is not required. p4578-08 is used for MS-MSD.

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
10/26/24 11:45	<i>JP</i> <i>1st Room</i>	<i>JP</i> <i>1st Room</i>
	Preparation Group	Analysis Group

Sample ID	ClientID	TCLP Vessel ID	Sample Wt (g)	Volume Extraction Fluid #1 (mL)	Multi phasic	Phase Miscible	Phases Combined	Final Leachate PH	Metals Leachate Adj. PH	Prep Pos
P4452-03	ETGI-285	01	100.03	2000	N/A	N/A	N/A	11.0	1.5	T-1
P4545-02	VNJ-215	02	100.02	2000	N/A	N/A	N/A	5.8	1.5	T-1
P4547-04	BP-F-21	03	100.01	2000	N/A	N/A	N/A	4.5	1.0	T-1
P4547-08	BP-F-20	04	100.02	2000	N/A	N/A	N/A	6.0	1.0	T-1
P4561-04	BP-F-19	05	100.03	2000	N/A	N/A	N/A	5.6	1.5	T-1
P4561-08	BP-F-18	06	100.04	2000	N/A	N/A	N/A	4.0	1.0	T-1
P4567-04	WC-1	07	100.02	2000	N/A	N/A	N/A	7.2	1.5	T-1
P4567-08	WC-2	08	100.03	2000	N/A	N/A	N/A	7.6	1.0	T-1
P4567-12	WC-3	09	100.04	2000	N/A	N/A	N/A	7.6	1.5	T-1
P4574-03	GRAVEL-1	10	100.02	2000	N/A	N/A	N/A	4.5	1.0	T-1
P4574-06	GRAVEL-2	11	100.03	2000	N/A	N/A	N/A	3.5	1.5	T-2
P4574-08	CONCRETE-1	12	100.02	2000	N/A	N/A	N/A	10.5	1.0	T-2
P4574-10	CONCRETE-2	13	100.02	2000	N/A	N/A	N/A	10.5	1.5	T-2
P4574-12	CONCRETE-3	14	100.03	2000	N/A	N/A	N/A	11.0	1.0	T-2
P4578-06	WB-305-BOT	15	100.04	2000	N/A	N/A	N/A	5.8	1.5	T-2
P4578-08	WB-305-BOT-1	16	100.02	2000	N/A	N/A	N/A	6.0	1.5	T-2
PB164393TB	LEB393	17	N/A	2000	N/A	N/A	N/A	4.93	1.5	T-2

SampleID	ClientID	Sample Weight (g)	Filter Weight (g)	Filtrate (mL)	Filter + Solid (After 100°C)	% solids	% Dry Solids
P4452-03	ETGI-285	N/A	N/A	N/A	N/A	100	N/A
P4545-02	VNJ-215	N/A	N/A	N/A	N/A	100	N/A
P4547-04	BP-F-21	N/A	N/A	N/A	N/A	100	N/A
P4547-08	BP-F-20	N/A	N/A	N/A	N/A	100	N/A
P4561-04	BP-F-19	N/A	N/A	N/A	N/A	100	N/A
P4561-08	BP-F-18	N/A	N/A	N/A	N/A	100	N/A
P4567-04	WC-1	N/A	N/A	N/A	N/A	100	N/A
P4567-08	WC-2	N/A	N/A	N/A	N/A	100	N/A
P4567-12	WC-3	N/A	N/A	N/A	N/A	100	N/A
P4574-03	GRAVEL-1	N/A	N/A	N/A	N/A	100	N/A
P4574-06	GRAVEL-2	N/A	N/A	N/A	N/A	100	N/A
P4574-08	CONCRETE-1	N/A	N/A	N/A	N/A	100	N/A
P4574-10	CONCRETE-2	N/A	N/A	N/A	N/A	100	N/A
P4574-12	CONCRETE-3	N/A	N/A	N/A	N/A	100	N/A
P4578-06	WB-305-BOT	N/A	N/A	N/A	N/A	100	N/A
P4578-08	WB-305-BOT-1	N/A	N/A	N/A	N/A	100	N/A
PB164393TB	LEB393	N/A	N/A	N/A	N/A	N/A	N/A

Hot Block ID : WC S-1 /WC S-2

Thermometer ID : FLASHPOINT

SampleID	ClientID	Sample Weight (g)	Volume DI Water (mL)	PH after 5 min stir	PH after 10 min stir	Extraction Fluid 1 or 2	pH Extraction Fluid
P4452-03	ETGI-285	5.02	96.5	11.0	4.0	#1	4.93
P4545-02	VNJ-215	5.02	96.5	7.6	2.5	#1	4.93
P4547-04	BP-F-21	5.00	96.5	6.2	2.0	#1	4.93
P4547-08	BP-F-20	5.03	96.5	8.2	3.0	#1	4.93
P4561-04	BP-F-19	5.02	96.5	7.6	2.5	#1	4.93
P4561-08	BP-F-18	5.02	96.5	7.0	2.5	#1	4.93
P4567-04	WC-1	5.03	96.5	9.1	4.0	#1	4.93
P4567-08	WC-2	5.02	96.5	9.5	4.0	#1	4.93
P4567-12	WC-3	5.02	96.5	7.2	3.0	#1	4.93
P4574-03	GRAVEL-1	5.02	96.5	6.0	2.0	#1	4.93
P4574-06	GRAVEL-2	5.03	96.5	5.6	1.5	#1	4.93
P4574-08	CONCRETE-1	5.02	96.5	11.0	4.0	#1	4.93
P4574-10	CONCRETE-2	5.03	96.5	11.0	4.0	#1	4.93
P4574-12	CONCRETE-3	5.02	96.5	11.5	4.5	#1	4.93
P4578-06	WB-305-BOT	5.03	96.5	7.6	2.5	#1	4.93
P4578-08	WB-305-BOT-1	5.02	96.5	8.2	3.0	#1	4.93
PB164393TB	LEB393	N/A	N/A	N/A	N/A	#1	4.93