### INVITATION TO BID CITY OF WOODLAND 2021 WTP LAGOON CLEANING PROJECT SMA-22-013

The following project will be accomplished as a **SMALL WORKS PROJECT** and will be subject to prevailing wage laws.

Proposals for furnishing all materials, labor and equipment for the following described work will be received by the City of Woodland Public Works Office at 230 Davidson Avenue, Woodland, WA 98674 or by electronic mail at <a href="mailto:myklebustk@ci.woodland.wa.us">myklebustk@ci.woodland.wa.us</a>. Bids will be accepted until 4:00 PM on May 10, 2022.

PROJECT NAME: 2022 LAGOON CLEANING PROJECT

<u>PROJECT DESCRIPTION</u>: Project consists of pumping and properly disposing of iron sludge (low odor, high staining, concentrated gel form) from the City of Woodland's Water Treatment Plant lagoons (2). The successful bidder will be required to coordinate with the Water Treatment Plant Superintendent on isolating and pumping down of lagoons prior to the start of work so that the concentrated sludge can be handled. The successful bidder will also be responsible for supplying the necessary truck; the driver may need additional help with hose handling and filling of the truck. The work site will accommodate drop boxes and all other necessary equipment. Sludge needs to be disposed of in accordance with Washington Administrative Code (WAC) 173.350, Solid Waste Handling Standards. Contractor will provide owner with information on how the disposal site meets WAC 173-350 prior to the contractor beginning work on-site.

Attached is site map and plan view. Previous year's test results included. Current test results will be provided separately. (expected the week of April 25<sup>th</sup>)

COVID-19 protocols of masks, social distancing, and sanitizing shall be followed.

The issuing office for contract documents is City of Woodland Public Works, PO Box 9, Woodland, WA 98674, (360) 225-7999. Contact Todd Douglas, Water Treatment Plant Superintendent, at (360) 225-6174 for questions or to arrange a site visit.

All proposals must be submitted on the Bid Proposal Form that is being furnished. Work shall be completed within fifteen (15) working days after receipt of permission to proceed.

State Sales Taxes -- the provisions of Section 1-07.2(2) - Rule 170 – apply to this project. The Contractor shall include Washington State Retail Sales Taxes on the full contract price.

All construction and material, unless otherwise specified, shall be in accordance with the 2018 Standard Specifications and Standard Plans for Road, Bridge and Municipal Construction as prepared by the Washington State Department of Transportation and as amended under Amendments to the Standard Specifications, and the American Public Works Association, and the City of Woodland Engineering Standards for Construction.

The CITY OF WOODLAND reserves the right to cancel this request or reject any and all bids received or to waive any minor formalities of this call if in the judgment of the City Council the best interest of the City would be served.

#### **BID PROPOSAL FORM**

TO:	City of Woodland
	230 Davidson Avenue
	PO Box 9
	Woodland, Washington 98674

FROM:	Bidder	
	Address	
	Telephone	
	E-Mail	

The undersigned, as bidder, declares that we will contract with the City of Woodland to do everything necessary to complete the 2022 Lagoon Cleaning as presented.

If our BID is accepted, we agree to sign a Certification of Compliance with Wage Payment Statues, provide Employment Security Department account standing, to sign an Affidavit of Compliance for E-Verify, and to provide the required evidence of insurance within five (5) working days after receiving written notice of the contract award.

We further agree, if our BID is accepted to so plan the work and to prosecute it with such diligence that all of the work shall be completed within the period stated. We understand that the City of Woodland reserves the right to reject any or all bids and to determine which proposal is, in the judgment of the City of Woodland, the lowest responsible bid, and which proposal, if any, should be accepted in the best interests of the City of Woodland and that the City of Woodland also reserves the right to waive any informalities in any proposal or bid.

We further state that we have not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding regarding such contract.

Bidder agrees that the work will be completed within <u>fifteen (15) working days</u> after notice to proceed is received from the City of Woodland.

We propose to perform the work at the prices listed in the following bid schedule(s):

#### <u>Notes</u>:

- (1) Sales taxes shall be paid on the full contract price.
- (2) The City reserves the right to adjust the scope of this work to match available funds.
- (3) The City reserves the right to reject any or all bids.
- (4) Below a list of items required to complete the project. It is the contractor's responsibility to complete the project scope to all required standards and specifications.

#### **BASE BID PROPOSAL:**

ltem No.	Project Work Description	Quantity	Units	Unit Price	Total Price
1.	Pumping and proper disposal of Water Treatment Plant lagoon sludge	2	Each	\$	\$
		Subtotal	Work:	\$	
		\$			
	Grand Total Bid (Su	\$			

BIDDER'S ADDRESS: Notice of acceptance of this bid or requests for additional information should be addressed to the undersigned at the address stated below.

NON-COLLUSION DECLARATION: I, by signing the proposal, hereby declare, under penalty of perjury under the laws of the United States that the following statements are true and correct:

- 1. That the undersigned person(s), firm, association or corporation has (have) not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with the project or which this proposal is submitted.
- 2. That by signing the signature page of this proposal, I am deemed to have signed and have agreed to the provisions of this declaration.

NOTES:

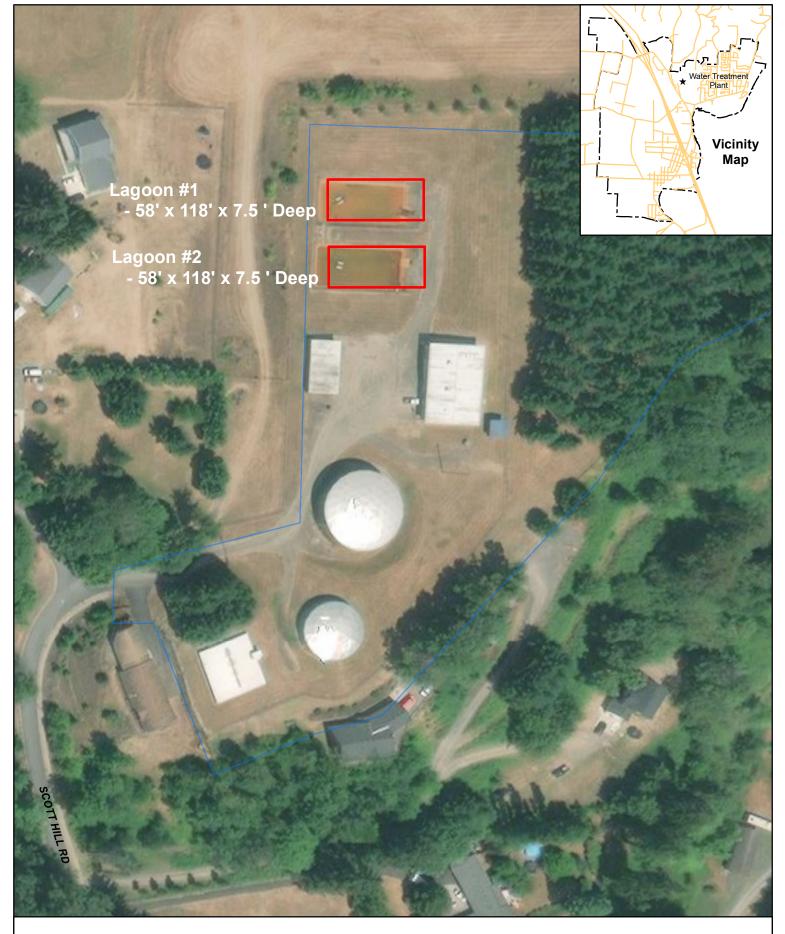
1. This proposal form is not transferable and any alteration of the firm's name entered hereon without prior permission from the Public Works Director will be cause for considering the proposal irregular and subsequent rejection of the bid.

SIGNATURE:

Date: \_\_\_\_\_

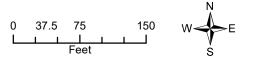
Proper Name of Bidder

Contractor's License Number: City of Woodland License Number		
Ву:		
Address:		
City	State	Zip





2022 Lagoon Cleaning Project Woodland Water Treatment Plant 130 Scott Hill Road





**BSK Associates Vancouver** 2517 E. Evergreen Blvd. Vancouver, WA 98661 360-750-0055 (Main)

Mike Peterson City of Woodland, WA P.O. Box 9 Woodland, WA 98674

#### **RE: Report for VEA0095 Settling Ponds Solids**

Dear Mike Peterson,

Thank you for using BSK Associates for your analytical testing needs. In the following pages, you will find the test results for the samples submitted to our laboratory on 1/7/2021. The results have been approved for release by our Laboratory Director as indicated by the authorizing signature below.

The samples were analyzed for the test(s) indicated on the Chain of Custody (see attached) and the results relate only to the samples analyzed. BSK certifies that the testing was performed in accordance with the quality system requirements specified in the 2016 TNI Standard. Any deviations from this standard or from the method requirements for each test procedure performed will be annotated alongside the analytical result or noted in the Case Narrative. Unless otherwise noted, the sample results are reported on an "as received" basis.

This certificate of analysis shall not be reproduced except in full, without written approval of the laboratory.

If additional clarification of any information is required, please contact your Project Manager, Debra Karlsson, at (360) 750-0055.

Thank you again for using BSK Associates. We value your business and appreciate your loyalty.

Sincerely,

anna

Debra Karlsson, Project Manager



Accredited in Accordance with NELAP ORELAP #WA100008-010

VEA0095 FINAL 01272021 1528



## VEA0095 Settling Ponds Solids

### **Case Narrative**

Project and	Report Details		Invoice Details
Client:	City of Woodland, WA		Invoice To: City of Woodland, WA
Report To:	Mike Peterson		Invoice Attn: Mike Peterson
Project #:	-		Project PO#: -
Received:	1/07/2021 - 11:32		
Report Due:	1/29/2021		
Sample Re	ceipt Conditions		
	ault Cooler on Receipt °C: 6.7	Containers Intact COC/Labels Agree Received On Blue Ice	

Sample(s) arrived at lab on same day sampled.

#### **Data Qualifiers**

#### The following qualifiers have been applied to one or more analytical results:

- DP1.0 Sample Duplicate RPD exceeded the method acceptance limit. Concentration estimated.
- DP1.1 Sample Duplicate RPD exceeded method acceptance criteria.
- MS1.0 Matrix spike recoveries exceed control limits.
- MS1.1 Matrix spike recovery exceeds upper control limit. Reported results for parent matrix should be considered estimated due to matrix interferences.
- MS2.1 MS/MSD RPD exceeds control limit. Reportable results in parent sample may have some degree of variability, higher than that inherent in the method.

Packing Material - Other Initial receipt at BSK-VAL

#### **Report Distribution**

Recipient(s)	Report Format	CC:
Mike Peterson	FINAL.RPT	Garrett@tribecatransport.com



### **Certificate of Analysis**

Sample ID: VEA0095-01 Sampled By: R. Dwayne VanNeste Sample Description: Lagoon #1 & Lagoon #2 - Composite N+S Ponds Sample Date - Time: 01/07/2021 - 09:10 Matrix: Soil Sample Type: Composite

Composite Start: 01/07/2021 - 09:10

#### BSK Associates Laboratory Fresno

#### **General Chemistry**

					RL				
Analyte	Method	Result	RL	Units	Mult	Batch	Prepared	Analyzed	Qual
Ammonia as N	EPA 350.1	13	1.0	mg/kg	1	AEA0673	01/15/21	01/18/21	
Conductivity @ 25C, DI Extract	SM 2510B	140	20	umhos/cm	1	AEA0835	01/20/21	01/20/21	DP1.0
Nitrate as N, DI Extract	EPA 300.0	ND	2.3	mg/kg	1	AEA0744	01/18/21	01/19/21	
Percent Ash	ASTM E 1534-93	82	0.10	% by Weight	1	AEA0474	01/13/21	01/15/21	
Percent Solids	SM 2540B	11	0.10	% by Weight	1	AEA0474	01/13/21	01/15/21	
pH, Solid at 25°C	EPA 9040B	6.90	0.00	pH Units	1	AEA0715	01/19/21	01/19/21	
pH Temperature in °C		24.8							
Phosphorus	EPA 365.4	1300	9.8	mg/kg	3.9	AEA0472	01/13/21	01/19/21	MS1.1
Total Kjeldahl Nitrogen	EPA 351.2	640	98	mg/kg	3.9	AEA0472	01/13/21	01/15/21	
Total Organic Carbon	Walkley-Black	34000	50	mg/kg	1	AEA0641	01/15/21	01/15/21	
Total Solids	SM 2540G	150000	40	mg/kg	1	AEA0778	01/19/21	01/19/21	
Total Volatile Solids	SM 2540G	24000	40	mg/kg	1	AEA0778	01/19/21	01/19/21	

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#### BSK Associates Laboratory Fresno

#### **General Chemistry Quality Control Report**

Analuta	Decuk	D	Unite	Spike	Source	0/ DE0	%REC	000	RPD	Date
Analyte	Result	RL		Level	Result	%REC	Limits	-RPD	Limit	Analyzed Qual
	A	STM E 153	4-93 -	Quality	Control					5
Batch: AEA0474 Deser Mathada Mathad Organitia Deserva										Prepared: 1/13/202
Prep Method: Method Specific Prepar	ation									Analyst: SN
Duplicate (AEA0474-DUP1), Source: V	'EA0095-01									
Percent Ash	81	0.10	% by Weight	İ	82			1	20	01/15/21
		EPA 300.	0 - Qu	ality Co	ntrol					
Batch: AEA0744 Prep Method: Method Specific Prepar	ation									Prepared: 1/18/202 Analyst: BC
Blank (AEA0744-BLK1)										
Nitrate as N, DI Extract	ND	0.23	mg/kg							01/19/21
Blank Spike (AEA0744-BS1)										
Nitrate as N, DI Extract	23	0.23	mg/kg	23	ND	100	90-110			01/19/21
Matrix Spike (AEA0744-MS1), Source:	AEA0907-01									
Nitrate as N, DI Extract	110	2.3	mg/kg	110	ND	99	80-120			01/19/21
Matrix Spike Dup (AEA0744-MSD1), So	ource: AEA0907-01									
Nitrate as N, DI Extract	110	2.3	mg/kg	110	ND	97	80-120	3	20	01/19/21
		EPA 350.	1 - Qu	ality Co	ntrol					
Batch: AEA0673										Prepared: 1/15/202
Prep Method: Method Specific Prepar	ation									Analyst: CT
Blank (AEA0673-BLK1)										
Ammonia as N	ND	1.0	mg/kg							01/18/21
Blank Spike (AEA0673-BS1)										
Ammonia as N	41	1.0	mg/kg	40	ND	103	90-110			01/18/21
Blank Spike Dup (AEA0673-BSD1)										
Ammonia as N	42	1.0	mg/kg	40	ND	106	90-110	2	20	01/18/21
Matrix Spike (AEA0673-MS1), Source:	VEA0095-01									
Ammonia as N	50	1.0	mg/kg	40	13	93	90-110			01/18/21
		EPA 351.	2 - Qu	alitv Co	ntrol					
Batch: AEA0472										Prepared: 1/13/202
Prep Method: Digestion										Analyst: CE
Blank (AEA0472-BLK1)										
Total Kjeldahl Nitrogen	ND	25	mg/kg							01/15/21
Blank Spike (AEA0472-BS1)										
Total Kjeldahl Nitrogen	9.5	1.0	mg/kg	10	ND	95	90-110			01/15/21
he results in this report apply to the sample. ccordance with the chain of custody docum	ent. This							V	/EA009	5 FINAL 01272021 152
nalytical report must be reproduced in its en	ntirety.									Page 4 of 2



### BSK Associates Laboratory Fresno

#### **General Chemistry Quality Control Report**

		Gileinisti	2						DDD	
Analyte	Result	RL		Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed Qual
, mayte	Rooun					/01120	Linito			Analyzou Qua
		EPA 351.	2 - Qua	lity Co	ntrol					D 1440/0004
Batch: AEA0472 Prep Method: Digestion										Prepared: 1/13/2021 Analyst: CEG
										Analyst. CEO
Blank Spike Dup (AEA0472-BSD1)										
Total Kjeldahl Nitrogen	9.6	1.0	mg/kg	10	ND	96	90-110	1	10	01/15/21
Matrix Spike (AEA0472-MS1), Source: V	/EA0095-01									
Total Kjeldahl Nitrogen	1600	98	mg/kg	980	640	98	90-110			01/15/21
Mateix Spike Dup (AEA0472 MSD4) So										
Matrix Spike Dup (AEA0472-MSD1), Sou Total Kjeldahl Nitrogen	1700	98	mg/kg	980	640	105	90-110	4	10	01/15/21
						100	00 110	·	10	01110121
		EPA 365.	4 - Qua	lity Co	ntrol					
Batch: AEA0472										Prepared: 1/13/2021
Prep Method: Digestion										Analyst: CEG
Blank (AEA0472-BLK2)										
Phosphorus	ND	2.5	mg/kg							01/19/21
Blank Spike (AEA0472-BS2)										
Phosphorus	9.1	0.10	mg/kg	10	ND	91	90-110			01/19/21
			00							
Blank Spike Dup (AEA0472-BSD2)	0.5			40		05	00.440	_	10	21/12/21
Phosphorus	9.5	0.10	mg/kg	10	ND	95	90-110	5	10	01/19/21
Matrix Spike (AEA0472-MS2), Source: V	/EA0095-01									
Phosphorus	2300	98	mg/kg	980	1300	99	90-110			01/19/21
Matrix Spike Dup (AEA0472-MSD2), Sou	urce: VEA0095-01									
Phosphorus	2600	98	mg/kg	980	1300	128	90-110	12	10	01/19/21 MS1.0 High
			5.2							,
										MS2.1
		SM 2510	B - Qua	lity Co	ntrol					
Batch: AEA0835										Prepared: 1/20/2021
Prep Method: DI Extraction										Analyst: CEG
Blank Spike (AEA0835-BS1)										
Conductivity @ 25C, DI Extract	1400	4.0	umhos/c	1400	ND	99	90-110			01/20/21
			m							
Blank Spike Dup (AEA0835-BSD1)										
Conductivity @ 25C, DI Extract	1400	4.0	umhos/c	1400	ND	99	90-110	0		01/20/21
			m							
Duplicate (AEA0835-DUP1), Source: VE										
Conductivity @ 25C, DI Extract	160	20	umhos/c m		140			8	5	01/20/21 DP1.1

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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**Settling Ponds Solids** 

### BSK Associates Laboratory Fresno

### **General Chemistry Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed Qual
		SM 2540	B - Qua	ality Co	ntrol					
Batch: AEA0474										Prepared: 1/13/2021
Prep Method: Method Specific Pr	eparation									Analyst: SNH
Duplicate (AEA0474-DUP1), Source	ce: VEA0095-01									
Percent Solids	11	0.10	% by Weight		11			1	20	01/15/21
		SM 2540	G - Qua	ality Co	ntrol					
Batch: AEA0778										Prepared: 1/19/2021
Prep Method: Method Specific Pr	eparation									Analyst: DEH
Blank (AEA0778-BLK1)										
Total Solids	ND	40	mg/kg							01/19/21
Total Volatile Solids	ND	40	mg/kg							01/19/21
Duplicate (AEA0778-DUP1), Source	ce: VEA0095-01									
Total Solids	150000	40	mg/kg		150000			1	20	01/19/21
Total Volatile Solids	26000	40	mg/kg		24000			8	20	01/19/21
		Walkley-Bl	ack - Q	uality C	Control					
Batch: AEA0641										Prepared: 1/15/2021
Prep Method: Method Specific Pr	eparation									Analyst: DXR
Blank (AEA0641-BLK1)										
Total Organic Carbon	ND	50	mg/kg							01/15/21
Blank Spike (AEA0641-BS1)										
Total Organic Carbon	1000	50	mg/kg	800	ND	128	88-136			01/15/21
Blank Spike Dup (AEA0641-BSD1	)									
Total Organic Carbon	1100	50	mg/kg	800	ND	133	88-136	4	20	01/15/21
Duplicate (AEA0641-DUP1), Source Total Organic Carbon	ce: VEA0095-01 38000	50	ma/ka		34000			11	20	01/15/21
	30000	50	mg/kg		34000			11	20	01/10/21

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Settling Ponds Solids

### BSK Associates Laboratory Fresno

### General Chemistry - pH Quality Control Report

Analyte	Result	Units	Source Result	Diff	Diff Limit	Date Analyzed	Qual
	E	EPA 9040B - Quali	ty Contro	I			
Batch: AEA0715							Prepared: 1/19/2021
Prep Method: Method Sp	ecific Preparation						Analyst: KDF
Duplicate (AEA0715-DUP	1), Source: VEA0095-01						
pH, Solid at 25°C	6.84	0.00 pH Units	6.90	-0.06	± 0.1	01/19/21	



## **Certificate of Analysis**

#### Notes:

- The Chain of Custody document and Sample Integrity Sheet are part of the analytical report.
- Any remaining sample(s) for testing will be disposed of according to BSK's sample retention policy unless other arrangements are made in advance.
- All positive results for EPA Methods 504.1 and 524.2 require the analysis of a Field Reagent Blank (FRB) to confirm that the results are not a contamination error from field sampling steps. If Field Reagent Blanks were not submitted with the samples, this method requirement has not been performed.
- Samples collected by BSK Analytical Laboratories were collected in accordance with the BSK Sampling and Collection Standard Operating Procedures.
- J-value is equivalent to DNQ (Detected, not quantified) which is a trace value. A trace value is an analyte detected between the MDL and the laboratory reporting limit. This result is of an unknown data quality and is only qualitative (estimated). Baseline noise, calibration curve extrapolation below the lowest calibrator, method blank detections, and integration artifacts can all produce apparent DNQ values, which contribute to the un-reliability of these values.
- (1) Residual chlorine and pH analysis have a 15 minute holding time for both drinking and waste water samples as defined by the EPA and 40 CFR 136. Waste water and ground water (monitoring well) samples must be field filtered to meet the 15 minute holding time for dissolved metals.
- · Field tests are outside the scope of laboratory accreditation and there is no certification available for field testing.
- Summations of analytes (i.e. Total Trihalomethanes) may appear to add individual amounts incorrectly, due to rounding of analyte values occurring before or after the total value is calculated, as well as rounding of the total value.
- RL Multiplier is the factor used to adjust the reporting limit (RL) due to variations in sample preparation procedures and dilutions required for matrix interferences.
- Due to the subjective nature of the Threshold Odor Method, all characterizations of the detected odor are the opinion of the panel of analysts. The characterizations can be found in Standard Methods 2170B Figure 2170:1.
- The MCLs provided in this report (if applicable) represent the primary MCLs for that analyte.
- (2) Formerly known as Bis(2-Chloroisopropyl) ether.

#### Definitions

mg/L:	Milligrams/Liter (ppm)	MDL:	Method Detection Limit	MDA95:	Min. Detected Activity
mg/Kg:	Milligrams/Kilogram (ppm)	RL:	Reporting Limit: DL x Dilution	MPN:	Most Probable Number
µg/L:	Micrograms/Liter (ppb)	ND:	None Detected below MRL/MDL	CFU:	Colony Forming Unit
µg/Kg:	Micrograms/Kilogram (ppb)	pCi/L:	PicoCuries per Liter	Absent:	Less than 1 CFU/100mLs
%:	Percent	RL Mult:	RL Multiplier	Present:	1 or more CFU/100mLs
NR:	Non-Reportable	MCL:	Maximum Contaminant Limit	U:	The analyte was not detected at or
					above the reported sample quantitation

#### Please see the individual Subcontract Lab's report for applicable certifications.

#### BSK is not accredited under the NELAP program for the following parameters:

Conductivity @ 25C, DI Extract
Percent Solids
Total Solids

Nitrate as N, DI Extract Phosphorus Total Volatile Solids Percent Ash Total Organic Carbon

limit.



## **Certificate of Analysis**

Certifications: Please refer to our website for a copy of our Accredited Fields of Testing under each certification.

#### Fresno

State of California - ELAP	1180	State of Hawaii	4021
Los Angeles CSD	9254479	NELAP certified	4021-015
State of Nevada	CA000792020-2	State of Oregon - NELAP	4021-015
EPA - UCMR4	CA00079	State of Washington	C997-20b
Sacramento			
State of California - ELAP	2435		
San Bernardino			
State of California - ELAP	2993	Los Angeles CSD	9254478
NELAP certified	4119-005	State of Oregon - NELAP	4119-005
Vancouver			
NELAP certified	WA100008-012	State of Oregon - NELAP	WA100008-013
State of Washington	C824-20		

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	Courier: Custody Seal: Y/N		ment for service charges and interest specified in 18 days from the date involved. If not so paid, account balances are deemed delinquent. Delinquent balances are subject to monthly service charges and interest specified in BSK's current standard remus and continuous or tuboratory services. The provide the providence and the services on this Chain of Custody, and agrees to BSK's terms and conditions for laboratory services unless contractually bound otherwise. BSK's current terms and conditions for laboratory services unless contractually bound otherwise. BSK's current terms and conditions for laboratory services unless contractually bound otherwise.		
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	FED EX		are deemed delinquent. De ponsible for payment for th		
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Vancouver, WA 98661 Page	e1 of1		sta Sta	Standard - 10 business days	siness days			7	VEAU095	W000161/4	101 /4			
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City of Woodland Additional costs	erson s:		#Od	- 0		<u> </u>	360-225-617 E-mail*: On File	360-225-6174			-			
Address*: City*: City*: PO Box 9 Woo	oity*: Woodland			State*: WA	Zip*: 98674				1100					
Project # Project # Settling Ponds Solids	ct #;		Rep	Reporting Options:	Trace (J-Flag)	lag)			isO o			>		
Sampler Name (Printed/Signature)*: New Conversed	1/anh	St		D Fax Mail	EDD Type				Aquin		* (N	l əldı		
State: DVA DOR	NS ID:		HOD	DOH Source/Source ID:	e ID:		S	.0.			volə	stor		d :
Water System Name:				LT.			SA.				В	sıb	К	sn
Sample Composition: Single Source	*Com	**Composite		Distribution Sample			L 's	TKI	iaci iaci		995	xΞ ,	աn	010
Samole Taken: T Before Treatment After Treatment	r °v □	No Treatment	G	Group (WA only):	Ā	Пв	pilo	_	-		S) I	ΈC	iss	чd
Matrix Types: SW=Surface Water BW=Bottlec	ter WW=Waste M	later STW=S	torm Water DW	=Drinking Water	SO=Solid		os		-		eta	3 '	ej	so
# Sample Description/Location*	Sampled* Date Tir	led* Time	Matrix*	Comr	Comments	# of cont.	%			1!N	эM	Hq	οЧ	Ча
Ladoon # 1 & Ladoon #2	1/7/2021	9:10	SO C	Composite N+S Ponds	S Ponds	2	>	` >	\ \	>	>	>	>	>
					1000 in from and ladon		1	1	-	+				
(Report on Dry Weight Basis)				- 1002 /al 110			ϯ			-				
*Arsenic, barium, cadmium, chromium, cobalt, copper							T		+	+	+			
Lead, mercury, molybdenum, nickel, selenium, zinc								-		_				
Receipt Conditions in Vancouver: Temp:		Received Via:		Ī	WALK-IN FED EX	X		Courier:		1	0			
R. Dwavne VanNeste/	Company BSK Associates	es	Date Time 1/7/2021	0/	Received by: (Signature and Printed Name)	d Name)					Company	ž		
(au	any		Date Time		Received by: (Signature and Printed Name)	d Name)					Company	٨ı		
Relinquished by: (Signature and Printed Name) Company	ynac		2021 Time	32	Received for Lab by: (Signature and Printed Name)	Id Printed N	ame)	XVC	16	NY	veste			
ayment Received at Delivery: Check / Cash	Date:		An	: -	-	PIA#:			4		luit.			
hipping Method: ONTRAC UPS GSO	WALK-IN	FED EX	Alaskan Airlines	U	Courier				Chi	Custody Seal: Y / N Chilling Process Begun: Y / N	Y / N s Beg(n:	N/X		
Dolling Method: Wet Blue None None None None Determined in BSK's current Standard Terms and Conditions for Laboratory Services. The person signing for Determined in BSK's current Standard Terms and Conditions for Laboratory Services. The person signing for Determined in BSK's current Standard Terms and Conditions for Laboratory Services. The person signing for Determined in BSK's current Standard Terms and Conditions for Laboratory Services. The person signing for Determined in BSK's current Standard Terms and Conditions for Laboratory Services. The person signing for Determined in BSK's current Standard Terms and Conditions for Laboratory Services. The person signing for Determined in BSK's current Standard Terms and Conditions for Laboratory Services. The person signing for Determined in BSK's current Standard Terms and Conditions for Laboratory Services. The person signing for Determined in BSK's current Standard Terms and Conditions for Laboratory Services. The person signing for Determined in BSK's current Standard Terms and Conditions for Laboratory Services. The person signing for Determined in BSK's current Standard Terms and Conditions for Laboratory Services. The person signing for Determined in BSK's current Standard Terms and Conditions for Standard Terms and Condit	account balances are d	leemed delinque	nt. Delinquent balanc	es are subject to mon	thly service charges and in	terest specifi	s'NSB ni be	current Stan	lard Terms a	d Conditions	for Laborato	ry Services.	The perso	n signing for

		val-FL-0048-02	у								10
BSł		tles: Yes	No Page	eo	f	-	<u> </u>				
	Was ten	nperature within ra	ange?	Yes) No	NA		e correct contai ived for the tes			Yes	No NA
0		try ≤ 6°C Micro	ay, is there evidence		NIA		e there bubbles			Yes	NO
coc Info	that chil	ling has begun?			NA	(Vola	atiles Only)	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	-		
8		ottles arrive unbro		Yes	No No	Was	a sufficient am amples have a	hold time	<72 hours?	Yes	
õ	Was so	oottle labels agree dium thiosulfate a orine was no long	dded to CN sample(s)	Yes No	1	Was PM:	PM notified of	discrepar By/Time	ncies?	Yes	NONA
		A) 500ml(B) 1Liter		Checks	Ť	1					
t		la2S2O3	RAEEA			1					
ſ	and the second s	P) <sup>White Cap</sup>									
			ap NH4OH(NH4)2SO4 DW	CI, pH >	8			1985.6		entre alle	
	Cr6 (P)	) Pink Label/Blue Cap	NH4OH(NH4)2SO4 WW	pH 9.3-9	.7						
the lab		Black Label/Blue Cap	100 - Andrew Martin and Andrew	pH 9.0-9	).5						
.⊑	HNO <sub>3</sub>	(P) Red Cap or HCI	(P) Purple Cap/Lt. Blue Label	-				20 20-0 10-020	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	N BASSIN IN	-
performed	H <sub>2</sub> SO <sub>4</sub>	(P) or (AG)	Yellow Cap/Label	pH < 2							
arfor	NaOH	(P) Green Cap		CI, pH >	10		7			- and a local day	
	NaOH	+ ZnAc (P)		pH > 9	•	10					
or are	Dissol	ved Oxygen 300	ml (g)								
1.224	None (	(AG) 608/8081/8082,	625, 632/8321, 8151, 8270	-							
eived either N/A	HCI (A	G)Lt. Blue Label O&	and the second sec	-							
Received are either h	Ascort		t (AG) <sup>Pink Label</sup> 525								
Rec		S 250mL (AG)Ne				12		48.94%			
		O <sub>3</sub> 1 Liter (Browr				1					
Bottles ne checks	the set of the set of the set of the	O <sub>3</sub> (AG) <sup>Blue Label</sup>						1 10 15		1. S. A. A.	
ine B	And a state of the	O <sub>3</sub> (CG) <sup>Blue Label</sup>									
hlor		03 + MCAA (CG		pH < 3	3						Martin State
ation/chl	INa252	- It was a start of the start o	the state of the second second second	priss	1992	1973			(VELLED VILLES) 문		
-		(AG) <sup>Purple Label</sup>			255 S.L.	C States .	and the second of the			I X SAMEAN	
presen	EDA (	AG) <sup>Brown Label</sup> DI	Contraction of the second se		24682				Ma Las Xones		
		and the second se	as, MTBE, 8260/624	and the second s		-	1	11 - gr 46.70			1.11.11
means	Buffer	pH 4 (CG)								-	
Ē	(Collinger Action	4 (CG) <sup>Salmon Label</sup>				1927 TEL					
	Other: Asbes		stic w/ Foil	-	5.66.0.0	1		La Martin		No.	
	South and the state of the state of the	evel Hg / Metals	Souther a state of the state of	_							
		d Water	1			1					
	Clear		/ 500mL / 1 Liter			2		-		a sidente da	
	Soil T	2020020 // 22 12211 //	Steel / Plastic		K EN BON	1-30		S. S	7.5 Martines		
	Tedla		tic Bag Preservative Da	te/Time/In	itials	L	Containe	er P	reservative	Date/Ti	me/Initials
Split	SP	Container	Fieservauve Da		niaio	SP					
s S	S P					SP					
Comments		1									
Labe	eled by:	@									

VEA0095 Woodl6174

01/07/2021

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Page 11 of 23

ASSOCI	ATES	SAMPLE TRANSI VEA0095 Debra Karlsso			
	Receipt te	mp @ FAL: $1-\overline{5}$	Thermome	eter/ IR Gun ID:	
SENDING LAE BSK Associate 2517 E. Evergr Vancouver, WA 360-750-0055	s Vancouver een Blvd. A 98661 (Main)		BSK Associa 1414 Stanisl Fresno, CA 559-497-288	93706 8 (Main)	
	er: Debra Karlsson		559-485-693 Turnaround	5 (FAX) (Days): Standard bles: I Std III IV	
E-ma	all: dkarisson@	bskassociates.com	ity of Woodla		
Sample ID	Samp Desc	Chent. O	ity of Woodia		Sample Date
	Lagoon #1 & La Solid Analysis: EC, Conductivity Percent Solids pH, EPA 9040 TS, Total Solids TVS, Total Solids TVS, Total Volati Percent Ash Ammonia, CFA Nitrate-N Phosphorus TKN TOC, Walkley-Bl	le Solids	S Ponds	Client Matrix Soil Organic Matter report in dry weight report in dry weight report in dry weight report in dry weight 16oz soil jar	01/07/2021 09:10
Refeased By Released By	l.	Durayne Van Nes 1/7/2021 Date	Received By Received By	Dat DA AA BL	1.8.21 1515

## SAMPLE TRANSIT INTEGRITY

PM: Debra Karlsson

VEA0095



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BSK	Bottles: Yes No Page		of						0	
	Was temperature within range? Chemistry ≤ 6°C Micro< 8°C	Yes No N	A		e correct cont requested?	ainers and j	preservatives	received for the	Yes	NO NA
l f	Did all bottles arrive unbroken and intact?	Yes No		Bub	bles Present V	VOAs (524.	2/TCP/TTHN	4)?	Yes 1	NO NA
5	Was a sufficient amount of sample received?	Yes No		TB I	Received? (Cl	heck Metho	d Below)		Yes N	No/NA
COC Info	Do samples have a hold time <72 hours?	Yes No	/	1.151 (1.197)	PM notified	of discrepa	ncies?		Yes N	NO NA
	Was sodium thiosulfate added to CN sample(s) until chlorine was no longer present?	Yes No 🤇	íA)	PM: By/1	Time:					9
	250ml(A) 500ml(B) 1Liter(C) 40ml VOA(V) Bacti Na2S2O3	Checks	Passe		1		1			
۾ ا	None (P) White Cap						/			
<u></u>	Cr6 (P) Lt. Green Label/Blue Cap NH4OH(NH4)SO4 DW	Cl, pH> 8	Р	F			$\boldsymbol{V}$			
글 문	Cr6 (P) Pink Label/Blue Cap NH4OH(NH4)SO4 WW	pH 9.3 - 9.7	Р	F						
performed in the lab	Cr6 (P) Black Label/Blue Cap NH4OH(NH4)SO4 7199 <u>***24 HOUR HOLD TIME***</u>	pH 9.0 - 9.5	Р	F						
for	HNO3 (P) Red Cap or HCl (P) Purple Cap/Lt. Blue Label			•						
Jer l	H2SO4 (P) or (AG) Yellow Cap/Label	pH < 2	Р	F						
e	NaOH (P) Green Cap	Cl, pH>10	Р	F						
0	NaOH + ZnAc (P)	pH > 9	Р	F						
A o	Dissolved Oxygen 300ml (g)									
Ż	None (AG) 608/8081/8082, 625, 632/8321, 8151, 8270									
Jer a	HCl (AG) Lt. Blue Label O&G, Diesel, TCP									
eite	Ascorbic, EDTA, KH2Ct (AG) Pink Label 525									
are	Na2SO3 250ml (AG) Neon Green Label 515							m		
N S S	Na2S2O3 1 Liter (Brown P) 549						\	VAL	)	
ectes	Na2S2O3 (AG) Blue Label 548, THM, 524			•			A	111		
Bottles Received e checks are eithe	Na2S2O3 (CG) Blue Label 504, 505, 547						1	<i>a</i>		
шe ш	Na2S2O3 + MCAA (CG) Orange Label 531	pH < 3	Р	F			$\rightarrow$			
2	NH4Cl (AG) Purple Label 552							1.0	-1	
lot l	EDA (AG) Brown Label DBPs			-				1.8	01	
fig	HCL (CG) 524.2, BTEX, Gas, MTBE, 8260/624			-						
Za	Buffer pH 4 (CG)			-						
Bottles Received preservation/chlorine checks are either N/A or are	H3PO4 (CG) Salmon Label			-						
bre	250mL P / Trizma 531.1			-						
us	Other:									
mean	Asbestos 1L (P) w/Foil / LL Metals Bottle			-						
_ <u>►</u>	Bottled Water			-	0		/			
	Clear Glass 250ml / 300ml / 1 Liter			-	iB		X			
-	Solids: Brass / Steel / Plastic Bag			-		$\rightarrow$				
	Container Preservative	Date/Time/I	nitials		Con	ntainer	Prese	rvative	Date/Tim	e/Initials
Split	S P			S						
	S P			S	P					
ţ2							$\checkmark$	Indicates Bla	nks Receiv	ed
Comments						5	)4	524.2	TCP	
1 2										
S						Т	THM	_537	_8260/624	
	I									
				1		_				
Label	S MALAINE		)	M	a		RUSH			
Checl	s ced by: 1110 Scanr	ned by:	V	a <u> </u>	$\nu$	1	Paged by:	(	<i>v</i>	
			1						CD E	1-0052-00

11



Burlington, WA Corporate Laboratory (a) 1620 S Walnut St - Burlington, WA 98233 - 800.755.9295 • 360.757.1400

Bellingham, WA Microbiology (b) 805 Orchard Dr Ste 4 - Bellingham, WA 98225 - 360.715.1212 Portland, OR Microbiology/Chemistry (c) 9150 SW Pioneer Ct Ste W - Wilsonville, OR 97070 - 503.682.7802

Corvallis, OR *Microbiology/Chemistry (d)* 1100 NE Circle Blvd, Ste 130 - Corvallis, OR 97330 - 541.753.4946 Bend, OR *Microbiology (e)* 20332 Empire Blvd Ste 4 - Bend, OR 97701 - 541.639.8425

Page 1 of 1

January 27, 2021

Debra Karlsson BSK Associates 2517 East Evergreen Blvd Vancouver, WA 98661

RE: 21-01150 - VEA0095

Dear Debra Karlsson,

Your project: VEA0095, was received on Tuesday January 12, 2021.

The following comments are reported for your project:

TS% used for calculation provided by BSK, 11%.

If you have questions phone us at 800 755-9295.

Respectfully

Lawrence J Henderson, PhD Director of Laboratories, Vice President

Enclosures: Data Report QC Reports Chain of Custody



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Page 1 of 1

# Data Report

Client Name: BSK Associates 2517 East Evergreen Blvd Vancouver, WA 98661 Reference Number: 21-01150 Project: VEA0095

Report Date: 1/27/21

Date Received: 1/12/21

Approved by: bj,bsp Authorized by:

Jawstenie I Sender

Lawrence J Henderson, PhD Director of Laboratories, Vice President

•		#1 & Lagoon #2 Comment:	2 - Comp	osite N+	S Ponds			Matrix S		ample D ollected	ate: 1/7/21 By:	9:10 am
CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyze	d Analyst	Batch	Comment
7440-38-2	ARSENIC	156	0.5		mg/Kg	1.0	6010D/3051	а	1/19/21	BJ	6010_210119A	
7440-39-3	BARIUM	70	0.5		mg/Kg	1.0	6010D/3051	а	1/19/21	BJ	6010_210119A	
7440-43-9	CADMIUM	4.8	0.5		mg/Kg	1.0	6010D/3051	а	1/19/21	BJ	6010_210119A	
7440-47-3	CHROMIUM	4.9	0.5		mg/Kg	1.0	6010D/3051	а	1/19/21	BJ	6010_210119A	
7440-48-4	COBALT	10	0.5		mg/Kg	1.0	6010D/3051	а	1/19/21	BJ	6010_210119A	
7440-50-8	COPPER	33	0.5		mg/Kg	1.0	6010D/3051	а	1/19/21	BJ	6010_210119A	
7439-92-1	LEAD	15	0.5		mg/Kg	1.0	6010D/3051	а	1/19/21	BJ	6010_210119A	
7439-98-7	MOLYBDENUM	ND	0.5		mg/Kg	1.0	6010D/3051	а	1/19/21	BJ	6010_210119A	
7440-02-0	NICKEL	12	0.5		mg/Kg	1.0	6010D/3051	а	1/19/21	BJ	6010_210119A	
7440-09-7	POTASSIUM	210	23		mg/Kg	1.0	6010D/3051	а	1/19/21	BJ	6010_210119A	
7440-09-7	POTASSIUM	210	23		mg/Kg	1.0	6010D/3051	а	1/19/21	BJ	6010_210119A	As K2O = 253mg/Kg
7782-49-2	SELENIUM	ND	0.5		mg/Kg	1.0	6010D/3051	а	1/19/21	BJ	6010_210119A	
7440-66-6	ZINC	87	0.5		mg/Kg	1.0	6010D/3051	а	1/19/21	BJ	6010_210119A	
7439-97-6	MERCURY	0.017	0.005		mg/Kg	1.0	7470A	а	1/26/21	TJB	7470A_210126	
E-10151	TOTAL SOLIDS FOR CALCULATI	<b>ON</b> 11	0.10		%	1.0	SM2540 G	а	1/12/21	BSK	TS_210112	

Notes:

ND = Not detected above the listed practical quantitation limit (PQL) or not above the Method Detection Limit (MDL), if requested.

PQL = Practical Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions. D.F. - Dilution Factor



## SAMPLE INDEPENDENT QUALITY CONTROL REPORT

Reference Number:	21-01150
Report Date:	01/27/21

			True			%		QC	QC	
Batch	Analyte	Result	Value	Units	Method	Recovery	Limits*	Qualifier	туре	Comment
Calibration Che	eck									
6010_210119A	2 ARSENIC	1.01	1	mg/L	6010D	101	90-110		CAL	
	2 BARIUM	1.02	1	mg/L	6010D	102	90-110		CAL	
	2 CADMIUM	1.01	1	mg/L	6010D	101	90-110		CAL	
	2 CHROMIUM	1.01	1	mg/L	6010D	101	90-110		CAL	
	2 COBALT	1.01	1	mg/L	6010D	101	90-110		CAL	
	2 COPPER	0.993	1	mg/L	6010D	99	90-110		CAL	
	2 LEAD	1	1	mg/L	6010D	100	90-110		CAL	
	2 MOLYBDENUM	1.01	1	mg/L	6010D	101	90-110		CAL	
	2 NICKEL	1	1	mg/L	6010D	100	90-110		CAL	
	2 POTASSIUM	9.8	10	mg/L	6010D	98	90-110		CAL	
	2 SELENIUM	0.999	1	mg/L	6010D	100	90-110		CAL	
	2 ZINC	1.02	1	mg/L	6010D	102	90-110		CAL	
7470A_210126	0 MERCURY	0.00216	0.002	mg/L	7470A	108	95-105		CAL	
Laboratory For	tified Blank									
6010_210119A	0 ARSENIC	0.928	1	mg/L	6010D	93	85-115		LFB	
	0 BARIUM	0.993	1	mg/L	6010D	99	85-115		LFB	
	0 CADMIUM	0.907	1	mg/L	6010D	91	85-115		LFB	
	0 CHROMIUM	0.996	1	mg/L	6010D	100	85-115		LFB	
	0 COBALT	0.928	1	mg/L	6010D	93	85-115		LFB	
	0 COPPER	0.927	1	mg/L	6010D	93	85-115		LFB	
	0 LEAD	0.922	1	mg/L	6010D	92	85-115		LFB	
	0 MOLYBDENUM	1.02	1	mg/L	6010D	102	85-115		LFB	
	0 NICKEL	0.912	1	mg/L	6010D	91	85-115		LFB	
	0 POTASSIUM	34.7	37	mg/L	6010D	94	85-115		LFB	
	0 SELENIUM	0.933	1	mg/L	6010D	93	85-115		LFB	
	0 ZINC	0.868	1	mg/L	6010D	87	85-115		LFB	
7470A_210126	0 MERCURY	0.00177	0.00167	mg/L	7470A	106	70-130		LFB	

% Recovery = (Result of Analysis)/(True Value) \* 100

NA = Indicates % Recovery could not be calculated.

Limits are intended for water matrices only. These criteria are for guidance only when reported with soils/solids.



## SAMPLE INDEPENDENT QUALITY CONTROL REPORT

Reference Number: **21-01150** Report Date: 01/27/21

			True			%	QC QC	
Batch	Analyte	Result	Value	Units	Method	Recovery Limits*	Qualifier Type	Comment
boratory Rea	agent Blank							
6010_210119A	0 ARSENIC	ND		mg/L	6010D	0-0	LRB	
	0 BARIUM	ND		mg/L	6010D	0-0	LRB	
	0 CADMIUM	ND		mg/L	6010D	0-0	LRB	
	0 CHROMIUM	ND		mg/L	6010D	0-0	LRB	
	0 COBALT	ND		mg/L	6010D	0-0	LRB	
	0 COPPER	ND		mg/L	6010D	0-0	LRB	
	0 LEAD	ND		mg/L	6010D	0-0	LRB	
	0 MOLYBDENUM	ND		mg/L	6010D	0-0	LRB	
	0 NICKEL	ND		mg/L	6010D	0-0	LRB	
	0 POTASSIUM	ND		mg/L	6010D	0-0	LRB	
	0 SELENIUM	ND		mg/L	6010D	0-0	LRB	
	0 ZINC	ND		mg/L	6010D	0-0	LRB	
7470A_210126	0 MERCURY	ND		mg/L	7470A	0-0	LRB	
ethod Blank								
6010_210119A	0 ARSENIC	ND		mg/L	6010D	0-0	MB	
	0 BARIUM	ND		mg/L	6010D	0-0	MB	
	0 CADMIUM	ND		mg/L	6010D	0-0	MB	
	0 CHROMIUM	ND		mg/L	6010D	0-0	MB	
	0 COBALT	ND		mg/L	6010D	0-0	MB	
	0 COPPER	ND		mg/L	6010D	0-0	MB	
	0 LEAD	ND		mg/L	6010D	0-0	MB	
	0 MOLYBDENUM	ND		mg/L	6010D	0-0	MB	
	0 NICKEL	ND		mg/L	6010D	0-0	MB	
	0 POTASSIUM	ND		mg/L	6010D	0-0	MB	
	0 SELENIUM	ND		mg/L	6010D	0-0	MB	
	0 ZINC	0.015		mg/L	6010D	0-0	MB	Digest Contamir

% Recovery = (Result of Analysis)/(True Value) \* 100

NA = Indicates % Recovery could not be calculated.

Limits are intended for water matrices only. These criteria are for guidance only when reported with soils/solids.



## SAMPLE INDEPENDENT QUALITY CONTROL REPORT

Reference Number:	21-01150
Report Date:	01/27/21

			True			%		QC (	QC	
Batch	Analyte	Result	Value	Units	Method	Recovery	Limits*	Qualifier 1	Гуре (	Comment
ality Control	Sample									
6010_210119A	0 ARSENIC	2.08	2	mg/L	6010D	104	90-110	C	QCS	
	0 BARIUM	2.01	2	mg/L	6010D	101	90-110	C	QCS	
	0 CADMIUM	2.04	2	mg/L	6010D	102	90-110	C	QCS	
	0 CHROMIUM	2.04	2	mg/L	6010D	102	90-110	C	QCS	
	0 COBALT	2.05	2	mg/L	6010D	103	90-110	C	QCS	
	0 COPPER	0.0384	0.04	mg/L	6010D	96	90-110	C	QCS	
	0 LEAD	2.07	2	mg/L	6010D	104	90-110	C	QCS	
	0 MOLYBDENUM	2.02	2	mg/L	6010D	101	90-110	C	QCS	
	0 NICKEL	2.09	2	mg/L	6010D	105	90-110	C	QCS	
	0 SELENIUM	2.07	2	mg/L	6010D	104	90-110	C	QCS	
	0 ZINC	2.09	2	mg/L	6010D	105	90-110	C	QCS	
	1 POTASSIUM	19.9	20	mg/L	6010D	100	90-110	C	QCS	
7470A_210126	0 MERCURY	0.00254	0.00248	mg/L	7470A	102	90-110	C	QCS	

NA = Indicates % Recovery could not be calculated.

Limits are intended for water matrices only. These criteria are for guidance only when reported with soils/solids.



Page 1 of 2

### SAMPLE DEPENDENT QUALITY CONTROL REPORT Duplicate, Matrix Spike/Matrix Spike Duplicate and Confirmation Result Report

#### Duplicate

Batch	Sample Analyte	Result	Duplicate Result	Units	%RPD	Limits	QC Qualifier	Туре	Comments
6010_2101 <sup>,</sup>	19A								
7440-38-2	2456 ARSENIC	ND	ND	mg/Kg	NA	0-20		DUP	
7440-43-9	2456 CADMIUM	ND	ND	mg/Kg	NA	0-20		DUP	
7440-47-3	2456 CHROMIUM	72	73	mg/Kg	1.4	0-20		DUP	
7440-50-8	2456 COPPER	334	338	mg/Kg	1.2	0-20		DUP	
7439-92-1	2456 LEAD	5.5	6.1	mg/Kg	10.3	0-20		DUP	
7439-98-7	2456 MOLYBDENUM	4.6	4.8	mg/Kg	4.3	0-20		DUP	
7440-02-0	2456 NICKEL	14	14	mg/Kg	0.0	0-20		DUP	
7782-49-2	2456 SELENIUM	ND	ND	mg/Kg	NA	0-20		DUP	
7440-66-6	2456 ZINC	285	284	mg/Kg	0.4	0-20		DUP	
7440-38-2	3091 ARSENIC	ND	ND	mg/Kg	NA	0-20		DUP	
7440-43-9	3091 CADMIUM	1.0	1.0	mg/Kg	0.0	0-20		DUP	
7440-47-3	3091 CHROMIUM	16	18	mg/Kg	11.8	0-20		DUP	
7440-50-8	3091 COPPER	350	354	mg/Kg	1.1	0-20		DUP	
7439-92-1	3091 LEAD	7.2	7.1	mg/Kg	1.4	0-20		DUP	
7439-98-7	3091 MOLYBDENUM	5.8	6.7	mg/Kg	14.4	0-20		DUP	
7440-02-0	3091 NICKEL	14	16	mg/Kg	13.3	0-20		DUP	
7782-49-2	3091 SELENIUM	ND	ND	mg/Kg	NA	0-20		DUP	
7440-66-6	3091 ZINC	662	688	mg/Kg	3.9	0-20		DUP	
7440-09-7	3091 POTASSIUM	1750	1670	mg/Kg	4.7	0-20		DUP	
7440-09-7	3091 POTASSIUM	1750	1670	mg/Kg	4.7	0-20		DUP	
7470A_210	126								
7439-97-6	4345 MERCURY	0.324	1.025	mg/Kg	103.9	0-45	INH	DUP	

<sup>%</sup>RPD = Relative Percent Difference

NA = Indicates %RPD could not be calculated

Matrix Spike (MS)/Matrix Spike Duplicate (MSD) analyses are used to determine the accuracy (MS) and precision (MSD) of a analytical method in a given sample matrix. Therefore, the usefulness of this report is limited to samples of similar matrices analyzed in the same analytical batch.

Only Duplicate sample with detections are listed in this report

Limits are intended for water matrices only. These criteria are for guidance only when reported with soils/solids.



### Laboratory Fortified Matrix (MS)

		0-			Duplicate									
5			Spike	Spike				t Recovery				QC	-	
Batch/CAS	Sample Analyte	Result	Result	Result	Conc	Units	MS	MSD	Limits*	%RPD	Limits*	Qualifier	Туре	Comments
6010_21011	9A													
7440-38-2	2456 ARSENIC	ND	119	117	123	mg/Kg	97	95	75-125	1.7	0-20		LFM	
7440-43-9	2456 CADMIUM	ND	117	120	123	mg/Kg	95	98	75-125	2.5	0-20		LFM	
7440-47-3	2456 CHROMIUM	72	199	202	123	mg/Kg	103	106	75-125	2.3	0-20		LFM	
7440-50-8	2456 COPPER	334	468	473	123	mg/Kg	109	113	75-125	3.7	0-20		LFM	
7439-92-1	2456 LEAD	5.5	123	123	123	mg/Kg	96	96	75-125	0.0	0-20		LFM	
7439-98-7	2456 MOLYBDENUM	4.6	129	132	123	mg/Kg	101	104	75-125	2.4	0-20		LFM	
7440-02-0	2456 NICKEL	14	134	136	123	mg/Kg	98	99	75-125	1.7	0-20		LFM	
7782-49-2	2456 SELENIUM	ND	110	110	123	mg/Kg	89	89	75-125	0.0	0-20		LFM	
7440-66-6	2456 ZINC	285	398	402	123	mg/Kg	92	95	75-125	3.5	0-20		LFM	
7440-38-2	3091 ARSENIC	ND	108	108	114	mg/Kg	95	95	75-125	0.0	0-20		LFM	
7440-43-9	3091 CADMIUM	1.0	107	106	114	mg/Kg	93	92	75-125	0.9	0-20		LFM	
440-47-3	3091 CHROMIUM	16	129	130	114	mg/Kg	99	100	75-125	0.9	0-20		LFM	
7440-50-8	3091 COPPER	350	470	476	114	mg/Kg	105	111	75-125	4.9	0-20		LFM	
7439-92-1	3091 LEAD	7.2	112	111	114	mg/Kg	92	91	75-125	1.0	0-20		LFM	
7439-98-7	3091 MOLYBDENUM	5.8	120	120	114	mg/Kg	100	100	75-125	0.0	0-20		LFM	
7440-02-0	3091 NICKEL	14	124	123	114	mg/Kg	96	96	75-125	0.9	0-20		LFM	
7782-49-2	3091 SELENIUM	ND	99	96	114	mg/Kg	87	84	75-125	3.1	0-20		LFM	
7440-66-6	3091 ZINC	662	746	749	114	mg/Kg	74	76	75-125	3.5	0-20	IS	LFM	
7440-09-7	3091 POTASSIUM	1750	5920	6010	3980	mg/Kg	105	107	75-125	2.1	0-20		LFM	
7440-09-7	3091 POTASSIUM	1750	5920	6010	3980	mg/Kg	105	107	75-125	2.1	0-20		LFM	
7470A_210 <sup>,</sup>	126													
7439-97-6	4345 MERCURY	0.324	1.782	1.615	1.422	mg/Kg	103	91	70-130	12.1	0-20		LFM	

<sup>%</sup>RPD = Relative Percent Difference

NA = Indicates %RPD could not be calculated

Matrix Spike (MS)/Matrix Spike Duplicate (MSD) analyses are used to determine the accuracy (MS) and precision (MSD) of a analytical method in a given sample matrix. Therefore, the usefulness of this report is limited to samples of similar matrices analyzed in the same analytical batch.

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Limits are intended for water matrices only. These criteria are for guidance only when reported with soils/solids.



**Qualifier Definitions** 

Reference Number: 21-01150 Report Date: 01/27/21

Qualifier	Definition
INH	The sample was non-homogeneous
IS	The ratio of the spike concentration to sample background was too low to meet performance criteria
15	The faile of the spike concentration to sample background was too low to meet performance chiena

Note: Some qualifier definitions found on this page may pertain to results or QC data which are not printed with this report.

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# **Prep Method Definitions**

Reference Number: 21-01150 Report Date: 01/27/21

 Prep Method	Definition
3051	Microwave Digestion of Solids





**VEA0095** 



I.

2517 E. Ever Vancouver, V Phone: 360-7 Fax: 360-750	tes Vancouver green Blvd. VA 98661 750-0055 0-0057 er: Debra Karlsson	RECEIVI Edge An 1620 So Burlingto Phone :( Fax: - Turnarou QC Delive		
Sample ID	Samp Desc		Comments	Sample Date
VEA0095-01 Lab Matrix:	Lagoon #1 & Lagoon #2 - Composite N+ Solid	S Ponds	Client Matrix Soil	01/07/2021 09:10
	Analysis: Arsenic, 3050 ICPMS Barium, 3050 ICPMS Cadmium, 3050 ICPMS Chromium, 3050 ICPMS Cobalt, 3050 ICPMS Copper, 3050 ICPMS Lead, 3050 ICPMS Mercury, 3050 ICPMS Molybdenum, 3050 ICPMS Nickel, 3050 ICPMS Potassium Oxide, 3050 ICP Potassium, 3050 ICPMS Selenium, 3050 ICPMS Zinc, 3050 ICPMS		report in dry weight report in dry weight	
	<u>Containers Included</u> VEA0095-01 B Other		4oz soil jar	

MME 2.3 UPS 1/12/21 1004

Duryne Vanneste 1/11/2021 Released By Date

Received By

Date

Received By