

# ANALYTICAL SUMMARY REPORT

April 21, 2022

King Ranch Sub PO Box 118 Frenchtown, MT					
Work Order:	H22030282				
Project Name:	King Ranch Subdivision M	T0004158			
Energy Laborato	pries Inc Helena MT received	d the following 1	sample for Kin	g Ranch Subdiv	ision on 3/11/2022 for analysis.
Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H22030282-001	CH001 EP502	03/10/22 11:00	0 03/11/22	Drinking Water	Metals by ICP/ICPMS, Drinking Water Metals Digestion by E200.2 Gross Alpha Calculated Gross Alpha, Gross Beta, Total Radium 226 + Radium 228 Radium 226, Total Radium 228, Total

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the report package. Any issues encountered during sample receipt are documented in the Work Order Receipt Checklist.

The results as reported relate only to the item(s) submitted for testing. This report shall be used or copied only in its entirety. Energy Laboratories, Inc. is not responsible for the consequences arising from the use of a partial report.

If you have any questions regarding these test results, please contact your Project Manager.

Report Approved By:



CLIENT:King Ranch SubdivisionProject:King Ranch Subdivision MT0004158Work Order:H22030282

**Report Date:** 04/21/22

# **CASE NARRATIVE**

Tests associated with analyst identified as ELI-CA were subcontracted to Energy Laboratories, 2393 Salt Creek Hwy., Casper, WY, EPA Number WY00002.



## LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client:	King Ranch Subdivision
Project:	King Ranch Subdivision MT0004158
Lab ID:	H22030282-001
Client Sample ID:	CH001 EP502

 Report Date:
 04/21/22

 Collection Date:
 03/10/22 11:00

 DateReceived:
 03/11/22

 Matrix:
 Drinking Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
METALS, TOTAL (CONTRACT LAB MT	00945)						
Uranium	0.0022	mg/L		0.0003	0.03	E200.8	03/16/22 00:52 / dck
RADIONUCLIDES - TOTAL							
Gross Alpha	-0.5	pCi/L	U			E900.0	04/08/22 03:51 / eli-ca
Gross Alpha precision (±)	1.5	pCi/L				E900.0	04/08/22 03:51 / eli-ca
Gross Alpha MDC	1.5	pCi/L				E900.0	04/08/22 03:51 / eli-ca
Gross Alpha - Adjusted	-0.51	pCi/L	U		15	E900.0	04/11/22 10:25 / eli-c
Gross Alpha - Adjusted precision (±)	1.5	pCi/L				E900.0	04/11/22 10:25 / eli-c
Gross Alpha - Adjusted MDC	1.5	pCi/L				E900.0	04/11/22 10:25 / eli-c
Radium 226	0.4	pCi/L			5	E903.0	04/20/22 11:40 / eli-ca
Radium 226 precision (±)	0.4	pCi/L				E903.0	04/20/22 11:40 / eli-ca
Radium 226 MDC	0.3	pCi/L				E903.0	04/20/22 11:40 / eli-ca
Radium 228	1.0	pCi/L			5	RA-05	03/24/22 10:49 / eli-c
Radium 228 precision (±)	0.4	pCi/L				RA-05	03/24/22 10:49 / eli-c
Radium 228 MDC	0.4	pCi/L				RA-05	03/24/22 10:49 / eli-c
Radium 226 + Radium 228	1.5	pCi/L				A7500-RA	04/21/22 08:01 / eli-ca
Radium 226 + Radium 228 precision (±)	0.6	pCi/L				A7500-RA	04/21/22 08:01 / eli-ca
Radium 226 + Radium 228 MDC	0.6	pCi/L				A7500-RA	04/21/22 08:01 / eli-ca

Report Definitions: RL - Analyte Reporting Limit QCL - Quality Control Limit U - Not detected at Minimum Detectable Concentration (MDC)



Prepared by Helena, MT Branch

Client:	King Ranch Subdivi	sion			Work Order:	H2203	30282	Repor	t Date	: 04/21/22	
Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8							Analytica	l Run: I	CPMS205-H_	_220315C
Lab ID:	ICV	Init	ial Calibratio	on Verifica	ation Standard					03/15/	/22 22:47
Uranium			0.0577	mg/L	0.0010	96	90	110			
Lab ID:	ICSA	Inte	erference C	heck Sam	ple A					03/15/	22 22:53
Uranium		C	0.0000200	mg/L	0.0010						
Lab ID:	ICSAB	Inte	erference C	heck Sam	ple AB					03/15/	/22 22:59
Uranium		C	0.0000161	mg/L	0.0010		0	0			
Lab ID:	ICSA	Inte	erference C	heck Sam	ple A					03/16/	/22 11:37
Uranium		C	0.0000285	mg/L	0.0010						
Lab ID:	ICSAB	Inte	erference C	heck Sam	ple AB					03/16/	/22 11:43
Uranium		C	0.0000230	mg/L	0.0010		0	0			
Method:	E200.8									Bat	ch: 60464
Lab ID:	MB-60464	Me	thod Blank				Run: ICPM	S205-H_220315	С	03/16/	/22 00:46
Uranium			ND	mg/L	0.00005						
Lab ID:	H22030282-001BMS	<b>53</b> Sa	mple Matrix	Spike			Run: ICPM	S205-H_220315	С	03/16/	/22 01:16
Uranium			0.500	mg/L	0.0010	100	70	130			
Lab ID:	H22030282-001BMS	SD Sa	mple Matrix	Spike Du	plicate		Run: ICPM	S205-H_220315	С	03/16/	/22 01:19
Uranium			0.502	mg/L	0.0010	100	70	130	0.4	20	



Prepared by Helena, MT Branch

Client: King Ranch Subdivi	sion			Work Order:	H2203	80282	Repo	ort Date:	: 04/21/22	
Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E900.0									Batch: C_G	DW-1623
Lab ID: Th230-GrDW-1623	3 Lat	ooratory Cor	ntrol Sample	9		Run: SUB-0	2281258		04/06	/22 01:19
Gross Alpha		95	pCi/L		100	80	120			
Gross Alpha precision (±)		14	pCi/L							
Gross Alpha MDC		0.79	pCi/L							
Lab ID: MB-GrDW-1623	3 Me	thod Blank				Run: SUB-0	2281258		04/06/	/22 01:19
Gross Alpha		-0.4	pCi/L							U
Gross Alpha precision (±)		0.8	pCi/L							
Gross Alpha MDC		0.8	pCi/L							
Lab ID: H22030282-001A	3 Sa	mple Matrix	Spike			Run: SUB-0	2281258		04/08	/22 03:51
Gross Alpha		110	pCi/L		113	70	130			
Gross Alpha precision (±)		16	pCi/L							
Gross Alpha MDC		1.5	pCi/L							
Lab ID: H22030282-001A	3 Sa	mple Matrix	Spike Dupli	icate		Run: SUB-0	2281258		04/08	/22 03:51
Gross Alpha		120	pCi/L		130	70	130	14	20	
Gross Alpha precision (±)		19	pCi/L							
Gross Alpha MDC		1.5	pCi/L							

- The RER result for alpha is 1.3.

**Qualifiers:** 

RL - Analyte Reporting Limit

U - Not detected at Minimum Detectable Concentration (MDC)



Prepared by Helena, MT Branch

Client:	King Ranch Subdivis	ion			Work Order:	H2203	80282	Repo	ort Date:	: 04/21/22	
Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E903.0								Bate	ch: C_RA226	DW-0820
Lab ID:	LCS-RA226DW-0820	3 Lab	oratory Cor	ntrol Sample	e		Run: SUB-0	C281698		04/20	/22 10:03
Radium	226		20	pCi/L		96	90	110			
Radium	226 precision (±)		3.3	pCi/L							
Radium	226 MDC		0.27	pCi/L							
Lab ID:	MB-RA226DW-0820	3 Met	hod Blank				Run: SUB-0	C281698		04/20	/22 10:03
Radium	226		0.09	pCi/L							U
Radium	226 precision (±)		0.4	pCi/L							
Radium	226 MDC		0.4	pCi/L							
Lab ID:	C22030434-001ADU	<b>&gt;</b> 3 Sar	nple Duplic	ate			Run: SUB-(	C281698		04/20	/22 10:03
Radium	226		0.86	pCi/L					21	20	R
Radium	226 precision (±)		0.43	pCi/L							
Radium	226 MDC		0.37	pCi/L							
Duplics	te RPD is outside of the acce	ontanco rano	o for this and	lucic Howow	or the DED is less	than the	limit of 2 the F	DED recult is 0.6			

- Duplicate RPD is outside of the acceptance range for this analysis. However, the RER is less than the limit of 2, the RER result is 0.6.

**Qualifiers:** 

RL - Analyte Reporting Limit

R - Relative Percent Difference (RPD) exceeds advisory limit

ND - Not detected at the Reporting Limit (RL)

U - Not detected at Minimum Detectable Concentration (MDC)



Prepared by Helena, MT Branch

King Ranch Subdivision Work Order: H22030282 **Client:** Report Date: 04/21/22 Analyte Result Units **RL %REC Low Limit High Limit RPD RPDLimit** Count Qual Method: RA-05 Batch: C\_RA228DW-0799 Lab ID: LCS-228-RA228DW-0 3 Laboratory Control Sample Run: SUB-C280834 03/24/22 14:17 Radium 228 7.9 pCi/L 99 80 120 Radium 228 precision (±) 1.8 pCi/L Radium 228 MDC 0.69 pCi/L Lab ID: MB-228-RA228DW-07 3 Method Blank Run: SUB-C280834 03/24/22 10:49 0.02 U Radium 228 pCi/L Radium 228 precision (±) 0.5 pCi/L Radium 228 MDC 0.6 pCi/L H22030307-001B Lab ID: 3 Sample Duplicate Run: SUB-C280834 03/24/22 10:49 UR Radium 228 0.15 110 20 pCi/L Radium 228 precision (±) 0.50 pCi/L Radium 228 MDC 0.52 pCi/L - Duplicate RPD is outside of the acceptance range for this analysis. However, the RER is less than or equal to the limit of 2, the RER result is 0.3.

### **Qualifiers:**

RL - Analyte Reporting Limit

R - Relative Percent Difference (RPD) exceeds advisory limit

- ND Not detected at the Reporting Limit (RL)
- U Not detected at Minimum Detectable Concentration (MDC)



# Work Order Receipt Checklist

# King Ranch Subdivision

Η	22	03	02	82
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Login completed by:	Rebecca A. Tooke		Date I	Received: 3/11/2022
Reviewed by:	BL2000\wjohnson		Rec	ceived by: RMF
Reviewed Date:	3/21/2022		Carr	ier name: Return-FedEx Ground
Shipping container/cooler in	good condition?	Yes 🗸	No 🗌	Not Present
Custody seals intact on all sl	nipping container(s)/cooler(s)?	Yes 🗹	No 🗌	Not Present
Custody seals intact on all sa	ample bottles?	Yes	No 🗌	Not Present 🗹
Chain of custody present?		Yes 🗹	No 🗌	
Chain of custody signed whe	en relinquished and received?	Yes 🗹	No 🗌	
Chain of custody agrees with	n sample labels?	Yes 🗹	No 🗌	
Samples in proper container,	/bottle?	Yes 🗹	No 🗌	
Sample containers intact?		Yes 🗹	No 🗌	
Sufficient sample volume for	indicated test?	Yes 🗹	No 🗌	
All samples received within h (Exclude analyses that are c such as pH, DO, Res Cl, Su	onsidered field parameters	Yes 🗸	No 🗌	
Temp Blank received in all sl	hipping container(s)/cooler(s)?	Yes	No 🗹	Not Applicable
Container/Temp Blank tempe	erature:	3.9°C On Ice		
Containers requiring zero here bubble that is <6mm (1/4").	adspace have no headspace or	Yes	No 🗌	No VOA vials submitted
Water - pH acceptable upon	receipt?	Yes 🗹	No 🗌	Not Applicable

# **Standard Reporting Procedures:**

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

The reference date for Radon analysis is the sample collection date. The reference date for all other Radiochemical analyses is the analysis date. Radiochemical precision results represent a 2-sigma Total Measurement Uncertainty.

# **Contact and Corrective Action Comments:**

None

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# Chain of Custody & Analytical Request Record

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Account Information (Billing information)	lon)		Report Information (if different than Account Information)	nation (if diffe	rent than Account	(information)		Comments	ents	
Company/Name King Ranch Subdivision			Company/Name Blue Heron Water Testing LLC	ue Heron Wa	ter Testing LL	Ö	3			
Contact Craig Milam			Contact C	Charles Weihe						
Phone (406) 240-9345			Phone (4	(406) 552-7175				<u> </u>		
Mailing Address 17771 Wild Goose			Mailing Address 24	2408 57th St.				<u> </u>		
- 1			City State Zip M	Missoula, MT. 59803	59803					
Email figmtn@yahoo.com			Email bl	ueheronwatei	blueheronwatertesting@hotma	nail.com				
	Receive Report EHard Copy	EEmail	Receive Report LiHard Copy EEmail	Hard Copy EEn	Ъ					
Quote	Bottle Order 39894 & 39895	5	D LEVEL IV UNE	LAC	EDO/EDT (contact laboratory)	ay) 🗆 Other				
Project Information			Matrix Codes		Analys	/sis Requested	b			
Project Name, PWSID, Permit, etc. King Ranch Subdivision 4158	ch Subdivision 4158		W. Water						All t stand	All turnaround times are standard unless marked as
Sampler Name Charles Weihe	Sampler Phone (406) 552-7175	7175	S Solids V Vegelation		_		_		ص	Energy Laboratories
Sample Origin State Montana	EPA/State Compliance	Serves (7) No	•					ed	RUS	MUST be contacted prior to RUSH sample submittal for
MINING CLIENTS, please indicate sample type. "If ore has been processed or refined, call before sending. Byproduct 11 (e)2 material Unprocessed c	pie type all before sending. □ Unprocessed ore (NOT ground or refined)*	efined)*	DW Drinking Weter					Attach	chan Se	charges and scheduling – See Instructions Page
Sample Identification (Name, Location, Interval, etc.)	Date	Collection Nu e Time Co	Number of Matrix Containers (See Codes Above)						RUSH TAT	ELI LAB ID Laboratory Use Only
1 CH001 EP502	3/10/22	11:00 pm	19 DW				   	•	¥	122020281
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Custody Relinquished by (print) Record MUST	Date/Time 940-22 6	1500 0091	Scourd and Weike		Received by (print)		Date/Time		Signature	
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Cooler ID(s)		Receipt Temp			0	ent Type	Amount	Rece	ipt Number	Receipt Number (cash/check only)
Proc. soco	⊗ N © B ⊗ N	3.9 °C	Y⊘ ⊘ Z		CC Cash	sh Check				
r In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested This serves as notice of this possibility. All subcontracted data will be clearly notated on your analytical report	es, samples submitted t This serves as r	o Energy Laborat office of this poss	tories, Inc. may b sibility All subcor	e subcontracte itracted data wi	d to other certifi Il be clearly not	ied laboratories ated on your an	in order to com alytical report	plete the ana	alysis req	uested
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			BOTTLE ORDER 39895	)ER 39	895	(200	@9895(
SHIPPED Blue Heron Water Testing TO:	ron Wat	er Testin					
Contact: Charles Weihe						Order Created by: Wanda Johnson	נ 
2408 57th St						Shipped From: Helena, MT	
Missoula MT 59803-3018	3-3018					Ship Date: 2/22/2022	
Phone: (406) 552-7175						VIA: FedEx Ground	
Project: Rad Testing							
	Bottles			Critical			Num
Bottle Size/Type	Samp	Method	Tests	Time	Preservative	Notes	or Samp
RAD-DW							
250 mL Plastic	<u>-</u>	E200.8	Total Uranium		HNO3		-
1 Gallon Plastic	1	E900.0	Gross Alpha, Gross Beta, Total		HNO3	ł	
	<u></u>	E903.0	Radium 226, Total				
	ज	RA-05	Radium 228, Total				
		E900.0	Gross Alpha Calculated				
;	A:	A7500-RA	Radium 226 + Radium 228				
Comments							
Quote 15067							
HNO3 - Nitric Acid	H2SC	H2SO4 - Sulfuric Acid	c Acid 🔲 NaOH - Sodium Hydroxide		We strong	We strongly suggest that the samples are	are
ZnAc - Zinc Acetate	HCI -	HCI - Hydrochloric Acid	ric Acid 🔲 H3PO4 - Phosphoric Acid		shipped the	hipped the same day as they are collected.	cted.
aterial Safety Data Shee rrosive Chemicals: Nitric, Suth	ts(MSDS) uric, Phosp	i) Availabl horic, Hydro	Material Safety Data Sheets(MSDS) Available @ EnergyLab.com ->Services -> MSDS Sheets Corrosive Chemicals: Nitric, Sulturic, Phosphoric, Hydrochloric Acids and Sodium Hydroxide. Zinc Acetate is a skin initant	S Sheets is a skin irrit	ant		
Subcontracting of sample analyses to an outside laborat	to an outsic	le laboratory i	Subcontracting of sample analyses to an outside laboratory may be required. If so, Energy Laboratories will utilize its branch laboratories	its branch la		or qualified contract laboratories for this service. Any such laboratories	oratories

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