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July 07, 2023

Tarah Garza
Bison Oil and Gas
518 17th St
STE 1800
Denver, CO 80202

Work Order: **HS23060921**

Laboratory Results for: **CR 89**

Dear Tarah Garza,

ALS Environmental received 2 sample(s) on Jun 14, 2023 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL
Tyler Monroe

Client: Bison Oil and Gas
Project: CR 89
Work Order: HS23060921

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS23060921-01	SS1	Soil		14-Jun-2023 14:45	14-Jun-2023 15:53	☐
HS23060921-02	SS2	Soil		14-Jun-2023 14:52	14-Jun-2023 15:53	☐

Client: Bison Oil and Gas **CASE NARRATIVE**
Project: CR 89
Work Order: HS23060921

Work Order Comments

• The analyses for Total Metals Method 6020 was subcontracted to ALS Environmental in Kelso, WA. Final report attached.

• The analysis for Boron was subcontracted to ALS Environmental in Holland, MI. Final report attached.

• Sample received outside method holding time for pH. pH is an immediate test. Sample results are flagged with an "H" qualifier.

The temperature at the time of pH is reported. Please note that all pH results are already normalized to a temperature of 25 °C.

GC Semivolatiles by Method SW8015M

Batch ID: 196365

Sample ID: HS23060828-05MS

• MS and MSD are for an unrelated sample

GC Volatiles by Method SW8015

Batch ID: R439419

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

GCMS Semivolatiles by Method SW8270

Batch ID: 196603

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

GCMS Volatiles by Method SW8260

Batch ID: R439277

Sample ID: SS1 (HS23060921-01MS)

• MS/MSD failed QC limits for some compounds.

Metals by Method La29B SAR

Batch ID: R439752

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Metals by Method La29B-6020A

Batch ID: 196635

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Metals by Method SW6020A

Batch ID: 196431

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Client: Bison Oil and Gas **CASE NARRATIVE**
Project: CR 89
Work Order: HS23060921

WetChemistry by Method SW9045D

Batch ID: R439566

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SW9050M

Batch ID: R439498

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SW7196

Batch ID: 196610

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Client: Bison Oil and Gas
Project: CR 89
Sample ID: SS1
Collection Date: 14-Jun-2023 14:45

ANALYTICAL REPORT
WorkOrder:HS23060921
Lab ID:HS23060921-01
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**					Analyst: WLR
1,2,4-Trimethylbenzene		U	0.95	4.8	ug/Kg	1	19-Jun-2023 21:53
1,3,5-Trimethylbenzene		U	0.76	4.8	ug/Kg	1	19-Jun-2023 21:53
Benzene		U	0.48	4.8	ug/Kg	1	19-Jun-2023 21:53
Ethylbenzene		U	0.66	4.8	ug/Kg	1	19-Jun-2023 21:53
Naphthalene		U	0.76	4.8	ug/Kg	1	19-Jun-2023 21:53
Toluene		U	0.57	4.8	ug/Kg	1	19-Jun-2023 21:53
Xylenes, Total		U	0.95	4.8	ug/Kg	1	19-Jun-2023 21:53
Surr: 1,2-Dichloroethane-d4	*103*			*70-126*	*%REC*	*1*	*19-Jun-2023 21:53*
Surr: 4-Bromofluorobenzene	*95.1*			*70-130*	*%REC*	*1*	*19-Jun-2023 21:53*
Surr: Dibromofluoromethane	*96.1*			*70-130*	*%REC*	*1*	*19-Jun-2023 21:53*
Surr: Toluene-d8	*105*			*70-130*	*%REC*	*1*	*19-Jun-2023 21:53*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**					Analyst: PJM
Gasoline Range Organics		U	0.0095	0.048	mg/Kg	1	20-Jun-2023 13:14
Surr: 4-Bromofluorobenzene	*83.8*			*70-123*	*%REC*	*1*	*20-Jun-2023 13:14*
SEMIVOLATILES		**Method:SW8270**			Prep:SW3541 / 22-Jun-2023		Analyst: GEY
1-Methylnaphthalene		U	34	170	ug/Kg	1	27-Jun-2023 01:03
2-Methylnaphthalene		U	27	170	ug/Kg	1	27-Jun-2023 01:03
Acenaphthene		U	15	170	ug/Kg	1	27-Jun-2023 01:03
Anthracene		U	12	170	ug/Kg	1	27-Jun-2023 01:03
Benz(a)anthracene		U	10	170	ug/Kg	1	27-Jun-2023 01:03
Benzo(a)pyrene		U	12	170	ug/Kg	1	27-Jun-2023 01:03
Benzo(b)fluoranthene		U	12	170	ug/Kg	1	27-Jun-2023 01:03
Benzo(k)fluoranthene		U	15	170	ug/Kg	1	27-Jun-2023 01:03
Chrysene		U	17	170	ug/Kg	1	27-Jun-2023 01:03
Dibenz(a,h)anthracene		U	15	170	ug/Kg	1	27-Jun-2023 01:03
Fluoranthene		U	14	170	ug/Kg	1	27-Jun-2023 01:03
Fluorene		U	17	170	ug/Kg	1	27-Jun-2023 01:03
Indeno(1,2,3-cd)pyrene		U	14	170	ug/Kg	1	27-Jun-2023 01:03
Pyrene		U	43	170	ug/Kg	1	27-Jun-2023 01:03
Surr: 2,4,6-Tribromophenol	*79.2*			*36-126*	*%REC*	*1*	*27-Jun-2023 01:03*
Surr: 2-Fluorobiphenyl	*91.6*			*43-125*	*%REC*	*1*	*27-Jun-2023 01:03*
Surr: 2-Fluorophenol	*63.7*			*37-125*	*%REC*	*1*	*27-Jun-2023 01:03*
Surr: 4-Terphenyl-d14	*87.9*			*32-125*	*%REC*	*1*	*27-Jun-2023 01:03*
Surr: Nitrobenzene-d5	*76.0*			*37-125*	*%REC*	*1*	*27-Jun-2023 01:03*
Surr: Phenol-d6	*68.3*			*40-125*	*%REC*	*1*	*27-Jun-2023 01:03*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**			Prep:SW3541 / 19-Jun-2023		Analyst: SAM
TPH (Oil Range)	**10**		**1.8**	**3.4**	**mg/Kg**	1	20-Jun-2023 11:54
TPH (Diesel Range)	**2.0**		**0.99**	**1.7**	**mg/Kg**	1	20-Jun-2023 11:54
Surr: 2-Fluorobiphenyl	*84.2*			*60-129*	*%REC*	*1*	*20-Jun-2023 11:54*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Bison Oil and Gas
Project: CR 89
Sample ID: SS1
Collection Date: 14-Jun-2023 14:45

ANALYTICAL REPORT
WorkOrder:HS23060921
Lab ID:HS23060921-01
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B SODIUM ADSORPTION RATIO		**Method:La29B SAR**					Analyst: JHD
Sodium Adsorption Ratio	**0.555**		**0.0100**	**0.0100**	**meq/meq**	1	23-Jun-2023 16:20
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		**Method:La29B-6020A**			Prep:La29B-6020A / 22-Jun-2023		Analyst: MSC
Calcium	**38.1**		**4.99**	**4.99**	**mg/L**	10	23-Jun-2023 15:00
Magnesium	**10.0**		**4.99**	**4.99**	**mg/L**	10	23-Jun-2023 15:00
Sodium	**14.9**		**4.99**	**4.99**	**mg/L**	10	23-Jun-2023 15:00
METALS BY SW6020A		**Method:SW6020A**			Prep:SW3050B / 21-Jun-2023		Analyst: MSC
Barium	**45.4**		**0.0274**	**0.457**	**mg/Kg**	1	21-Jun-2023 23:29
Copper	**1.69**		**0.0348**	**0.183**	**mg/Kg**	1	21-Jun-2023 23:29
Lead	**1.44**		**0.0119**	**0.457**	**mg/Kg**	1	21-Jun-2023 23:29
Nickel	**1.21**		**0.0439**	**0.457**	**mg/Kg**	1	21-Jun-2023 23:29
Silver	**0.0160**	J	**0.0137**	**0.457**	**mg/Kg**	1	21-Jun-2023 23:29
Zinc	**6.22**		**0.156**	**0.457**	**mg/Kg**	1	21-Jun-2023 23:29
HEXAVALENT CHROMIUM BY SW7196A		**Method:SW7196**			Prep:SW3060A / 21-Jun-2023		Analyst: MZD
Chromium, Hexavalent	U		0.300	2.00	mg/kg	1	22-Jun-2023 15:08
PH SOIL BY SW9045D		**Method:SW9045D**					Analyst: DW
pH	**8.63**	H	**0.100**	**0.100**	**pH Units**	1	22-Jun-2023 12:02
Temp Deg C @pH	**22.6**	H	**0**	**0**	**°C**	1	22-Jun-2023 12:02
SPECIFIC CONDUCTIVITY, SOIL 10X EXTRACT		**Method:SW9050M**					Analyst: CD
Conductance, Soil Extract	**619**		**50.0**	**50.0**	**umhos/cm**	10	21-Jun-2023 15:31
SUBCONTRACT ANALYSIS - METALS ANALYSIS		**Method:NA**					Analyst: SUBK
Subcontract Analysis	See Attached		0		NA	1	06-Jul-2023 19:46
SUBCONTRACTED ANALYSIS		**Method:NA**					Analyst: SUBHO
Miscellaneous Analysis	See Attached		0		NA	1	22-Jun-2023 09:16

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Bison Oil and Gas
Project: CR 89
Sample ID: SS2
Collection Date: 14-Jun-2023 14:52

ANALYTICAL REPORT
WorkOrder:HS23060921
Lab ID:HS23060921-02
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**					Analyst: WLR
1,2,4-Trimethylbenzene		U	0.98	4.9	ug/Kg	1	19-Jun-2023 22:15
1,3,5-Trimethylbenzene		U	0.78	4.9	ug/Kg	1	19-Jun-2023 22:15
Benzene		U	0.49	4.9	ug/Kg	1	19-Jun-2023 22:15
Ethylbenzene		U	0.69	4.9	ug/Kg	1	19-Jun-2023 22:15
Naphthalene		U	0.78	4.9	ug/Kg	1	19-Jun-2023 22:15
Toluene		U	0.59	4.9	ug/Kg	1	19-Jun-2023 22:15
Xylenes, Total		U	0.98	4.9	ug/Kg	1	19-Jun-2023 22:15
Surr: 1,2-Dichloroethane-d4	*104*			*70-126*	*%REC*	*1*	*19-Jun-2023 22:15*
Surr: 4-Bromofluorobenzene	*96.7*			*70-130*	*%REC*	*1*	*19-Jun-2023 22:15*
Surr: Dibromofluoromethane	*95.5*			*70-130*	*%REC*	*1*	*19-Jun-2023 22:15*
Surr: Toluene-d8	*104*			*70-130*	*%REC*	*1*	*19-Jun-2023 22:15*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**					Analyst: PJM
Gasoline Range Organics		U	0.0096	0.048	mg/Kg	1	20-Jun-2023 12:58
Surr: 4-Bromofluorobenzene	*91.4*			*70-123*	*%REC*	*1*	*20-Jun-2023 12:58*
SEMIVOLATILES		**Method:SW8270**			Prep:SW3541 / 22-Jun-2023		Analyst: GEY
1-Methylnaphthalene		U	34	170	ug/Kg	1	27-Jun-2023 01:25
2-Methylnaphthalene		U	27	170	ug/Kg	1	27-Jun-2023 01:25
Acenaphthene		U	15	170	ug/Kg	1	27-Jun-2023 01:25
Anthracene		U	12	170	ug/Kg	1	27-Jun-2023 01:25
Benz(a)anthracene		U	10	170	ug/Kg	1	27-Jun-2023 01:25
Benzo(a)pyrene		U	12	170	ug/Kg	1	27-Jun-2023 01:25
Benzo(b)fluoranthene		U	12	170	ug/Kg	1	27-Jun-2023 01:25
Benzo(k)fluoranthene		U	15	170	ug/Kg	1	27-Jun-2023 01:25
Chrysene		U	17	170	ug/Kg	1	27-Jun-2023 01:25
Dibenz(a,h)anthracene		U	15	170	ug/Kg	1	27-Jun-2023 01:25
Fluoranthene		U	14	170	ug/Kg	1	27-Jun-2023 01:25
Fluorene		U	17	170	ug/Kg	1	27-Jun-2023 01:25
Indeno(1,2,3-cd)pyrene		U	14	170	ug/Kg	1	27-Jun-2023 01:25
Pyrene		U	43	170	ug/Kg	1	27-Jun-2023 01:25
Surr: 2,4,6-Tribromophenol	*82.1*			*36-126*	*%REC*	*1*	*27-Jun-2023 01:25*
Surr: 2-Fluorobiphenyl	*76.6*			*43-125*	*%REC*	*1*	*27-Jun-2023 01:25*
Surr: 2-Fluorophenol	*47.1*			*37-125*	*%REC*	*1*	*27-Jun-2023 01:25*
Surr: 4-Terphenyl-d14	*75.3*			*32-125*	*%REC*	*1*	*27-Jun-2023 01:25*
Surr: Nitrobenzene-d5	*58.8*			*37-125*	*%REC*	*1*	*27-Jun-2023 01:25*
Surr: Phenol-d6	*52.8*			*40-125*	*%REC*	*1*	*27-Jun-2023 01:25*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**			Prep:SW3541 / 19-Jun-2023		Analyst: SAM
TPH (Oil Range)	**11**		**1.8**	**3.4**	**mg/Kg**	1	20-Jun-2023 12:21
TPH (Diesel Range)	**4.4**		**0.99**	**1.7**	**mg/Kg**	1	20-Jun-2023 12:21
Surr: 2-Fluorobiphenyl	*86.1*			*60-129*	*%REC*	*1*	*20-Jun-2023 12:21*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Bison Oil and Gas
Project: CR 89
Sample ID: SS2
Collection Date: 14-Jun-2023 14:52

ANALYTICAL REPORT
WorkOrder:HS23060921
Lab ID:HS23060921-02
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LA29B SODIUM ADSORPTION RATIO		**Method:La29B SAR**					Analyst: JHD
Sodium Adsorption Ratio	**0.420**		**0.0100**	**0.0100**	**meq/meq**	1	23-Jun-2023 16:20
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR		**Method:La29B-6020A**			Prep:La29B-6020A / 22-Jun-2023		Analyst: MSC
Calcium	**23.2**		**4.99**	**4.99**	**mg/L**	10	23-Jun-2023 15:02
Magnesium	**7.91**		**4.99**	**4.99**	**mg/L**	10	23-Jun-2023 15:02
Sodium	**9.18**		**4.99**	**4.99**	**mg/L**	10	23-Jun-2023 15:02
METALS BY SW6020A		**Method:SW6020A**			Prep:SW3050B / 21-Jun-2023		Analyst: MSC
Barium	**82.7**		**0.0274**	**0.457**	**mg/Kg**	1	21-Jun-2023 23:31
Copper	**2.07**		**0.0347**	**0.183**	**mg/Kg**	1	21-Jun-2023 23:31
Lead	**2.36**		**0.0119**	**0.457**	**mg/Kg**	1	21-Jun-2023 23:31
Nickel	**1.45**		**0.0439**	**0.457**	**mg/Kg**	1	21-Jun-2023 23:31
Silver	U		0.0137	0.457	mg/Kg	1	21-Jun-2023 23:31
Zinc	**7.07**		**0.155**	**0.457**	**mg/Kg**	1	21-Jun-2023 23:31
HEXAVALENT CHROMIUM BY SW7196A		**Method:SW7196**			Prep:SW3060A / 21-Jun-2023		Analyst: MZD
Chromium, Hexavalent	U		0.300	2.00	mg/kg	1	22-Jun-2023 15:08
PH SOIL BY SW9045D		**Method:SW9045D**					Analyst: DW
pH	**9.28**	H	**0.100**	**0.100**	**pH Units**	1	22-Jun-2023 12:02
Temp Deg C @pH	**22.3**	H	**0**	**0**	**°C**	1	22-Jun-2023 12:02
SPECIFIC CONDUCTIVITY, SOIL 10X EXTRACT		**Method:SW9050M**					Analyst: CD
Conductance, Soil Extract	**361**		**50.0**	**50.0**	**umhos/cm**	10	21-Jun-2023 15:31
SUBCONTRACT ANALYSIS - METALS ANALYSIS		**Method:NA**					Analyst: SUBK
Subcontract Analysis	See Attached		0		NA	1	06-Jul-2023 19:46
SUBCONTRACTED ANALYSIS		**Method:NA**					Analyst: SUBHO
Miscellaneous Analysis	See Attached		0		NA	1	22-Jun-2023 09:16

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Weight / Prep Log

Client: Bison Oil and Gas
Project: CR 89
WorkOrder: HS23060921

Batch ID: 6093 **Start Date:** 19 Jun 2023 10:23 **End Date:** 19 Jun 2023 10:23
Method: VOLATILES BY SW8260C

Sample ID	Container	Sample Wt/Vol	Final Volume	Weight Factor	Container Type
HS23060921-01	1	5.268 (g)	5 (mL)	0.95	Bulk (5030B)
HS23060921-02	1	5.107 (g)	5 (mL)	0.98	Bulk (5030B)

Batch ID: 6098 **Start Date:** 20 Jun 2023 08:42 **End Date:** 20 Jun 2023 08:42
Method: GASOLINE RANGE ORGANICS BY SW8015C **Prep Code:**

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS23060921-01	1	5.252 (g)	5 (mL)	0.95	Bulk (5030B)
HS23060921-02	1	5.194 (g)	5 (mL)	0.96	Bulk (5030B)

Batch ID: 196365 **Start Date:** 19 Jun 2023 06:30 **End Date:** 19 Jun 2023 06:30
Method: SOPREP: 3541 TPH **Prep Code:** 8015SPR_LL

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS23060921-01		30.34 (g)	1 (mL)	0.03296	Ziplock Bag
HS23060921-02		30.16 (g)	1 (mL)	0.03316	Ziplock Bag

Batch ID: 196431 **Start Date:** 21 Jun 2023 07:30 **End Date:** 21 Jun 2023 07:30
Method: METALS PREP - SOLIDS - SW3050B **Prep Code:** 3050_I_LOW

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS23060921-01		0.5466 (g)	50 (mL)	91.47	Ziplock Bag
HS23060921-02		0.5471 (g)	50 (mL)	91.39	Ziplock Bag

Batch ID: 196603 **Start Date:** 22 Jun 2023 12:30 **End Date:** 22 Jun 2023 12:30
Method: SV SOXHLET EXTRACTION - SW3541 **Prep Code:** 3541_B

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS23060921-01		30.12 (grams)	1 (mL)	0.0332	Ziplock Bag
HS23060921-02		30.02 (grams)	1 (mL)	0.03331	Ziplock Bag

Batch ID: 196610 **Start Date:** 21 Jun 2023 16:22 **End Date:** 21 Jun 2023 16:22
Method: CR6 PREP - SOIL **Prep Code:** CR6_S_PR3060A

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS23060921-01		2.5 (g)	100 (mL)	40	Ziplock Bag
HS23060921-02		2.5 (g)	100 (mL)	40	Ziplock Bag

Batch ID: 196635 **Start Date:** 22 Jun 2023 09:30 **End Date:** 22 Jun 2023 09:30
Method: LA29B SAR CATION PREP **Prep Code:** LA29B SAR CATPR

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS23060921-01		100.2 (g)	100 (mL)	0.998	Ziplock Bag
HS23060921-02		100.3 (g)	100 (mL)	0.997	Ziplock Bag

Client: Bison Oil and Gas
Project: CR 89
WorkOrder: HS23060921

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 196365 (1)	**Test Name :** TPH DRO/ORO BY SW8015C				**Matrix:** Soil	
HS23060921-01	SS1	14 Jun 2023 14:45		19 Jun 2023 06:30	20 Jun 2023 11:54	1
HS23060921-02	SS2	14 Jun 2023 14:52		19 Jun 2023 06:30	20 Jun 2023 12:21	1
Batch ID: 196431 (0)	**Test Name :** METALS BY SW6020A				**Matrix:** Soil	
HS23060921-01	SS1	14 Jun 2023 14:45		21 Jun 2023 07:30	21 Jun 2023 23:29	1
HS23060921-02	SS2	14 Jun 2023 14:52		21 Jun 2023 07:30	21 Jun 2023 23:31	1
Batch ID: 196603 (0)	**Test Name :** SEMIVOLATILES				**Matrix:** Soil	
HS23060921-01	SS1	14 Jun 2023 14:45		22 Jun 2023 12:30	27 Jun 2023 01:03	1
HS23060921-02	SS2	14 Jun 2023 14:52		22 Jun 2023 12:30	27 Jun 2023 01:25	1
Batch ID: 196610 (0)	**Test Name :** HEXAVALENT CHROMIUM BY SW7196A				**Matrix:** Soil	
HS23060921-01	SS1	14 Jun 2023 14:45		21 Jun 2023 16:22	22 Jun 2023 15:08	1
HS23060921-02	SS2	14 Jun 2023 14:52		21 Jun 2023 16:22	22 Jun 2023 15:08	1
Batch ID: 196635 (0)	**Test Name :** LA 29B - 1:1 SOLUBLE CATIONS FOR SAR				**Matrix:** Soil	
HS23060921-01	SS1	14 Jun 2023 14:45		22 Jun 2023 09:30	23 Jun 2023 15:00	10
HS23060921-02	SS2	14 Jun 2023 14:52		22 Jun 2023 09:30	23 Jun 2023 15:02	10
Batch ID: R439277 (0)	**Test Name :** VOLATILES BY SW8260C				**Matrix:** Soil	
HS23060921-01	SS1	14 Jun 2023 14:45			19 Jun 2023 21:53	1
HS23060921-02	SS2	14 Jun 2023 14:52			19 Jun 2023 22:15	1
Batch ID: R439419 (0)	**Test Name :** GASOLINE RANGE ORGANICS BY SW8015C				**Matrix:** Soil	
HS23060921-01	SS1	14 Jun 2023 14:45			20 Jun 2023 13:14	1
HS23060921-02	SS2	14 Jun 2023 14:52			20 Jun 2023 12:58	1
Batch ID: R439498 (0)	**Test Name :** SPECIFIC CONDUCTIVITY, SOIL 10X EXTRACT				**Matrix:** Soil	
HS23060921-01	SS1	14 Jun 2023 14:45			21 Jun 2023 15:31	10
HS23060921-02	SS2	14 Jun 2023 14:52			21 Jun 2023 15:31	10
Batch ID: R439541 (0)	**Test Name :** SUBCONTRACTED ANALYSIS				**Matrix:** Soil	
HS23060921-01	SS1	14 Jun 2023 14:45			22 Jun 2023 09:16	1
HS23060921-02	SS2	14 Jun 2023 14:52			22 Jun 2023 09:16	1
Batch ID: R439566 (0)	**Test Name :** PH SOIL BY SW9045D				**Matrix:** Soil	
HS23060921-01	SS1	14 Jun 2023 14:45			22 Jun 2023 12:02	1
HS23060921-02	SS2	14 Jun 2023 14:52			22 Jun 2023 12:02	1
Batch ID: R439752 (0)	**Test Name :** LA29B SODIUM ADSORPTION RATIO				**Matrix:** Soil	
HS23060921-01	SS1	14 Jun 2023 14:45			23 Jun 2023 16:20	1
HS23060921-02	SS2	14 Jun 2023 14:52			23 Jun 2023 16:20	1
Batch ID: R440708 (0)	**Test Name :** SUBCONTRACT ANALYSIS - METALS ANALYSIS				**Matrix:** Soil	
HS23060921-01	SS1	14 Jun 2023 14:45			06 Jul 2023 19:46	1
HS23060921-02	SS2	14 Jun 2023 14:52			06 Jul 2023 19:46	1

Client: Bison Oil and Gas
Project: CR 89
WorkOrder: HS23060921

QC BATCH REPORT

Batch ID: 196365 (1) **Instrument: FID-8** **Method: TPH DRO/ORO BY SW8015C**

MBLK Sample ID: **MBLK-196365** Units: **mg/Kg** Analysis Date: **19-Jun-2023 20:01**
Client ID: Run ID: **FID-8_439436** SeqNo: **7375316** PrepDate: **19-Jun-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Oil Range)	U	3.4								
TPH (Diesel Range)	U	1.7								
Surr: 2-Fluorobiphenyl	*2.785*	*0.10*	*3.33*	*0*	*83.6*	*60 - 129*				

LCS Sample ID: **LCS-196365** Units: **mg/Kg** Analysis Date: **19-Jun-2023 20:28**
Client ID: Run ID: **FID-8_439436** SeqNo: **7375317** PrepDate: **19-Jun-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Oil Range)	38.56	3.4	33.33	0	116	70 - 130				
TPH (Diesel Range)	36.78	1.7	33.33	0	110	70 - 130				
Surr: 2-Fluorobiphenyl	*3.915*	*0.10*	*3.33*	*0*	*118*	*60 - 129*				

MS Sample ID: **HS23060828-05MS** Units: **mg/Kg** Analysis Date: **19-Jun-2023 21:21**
Client ID: Run ID: **FID-8_439436** SeqNo: **7375319** PrepDate: **19-Jun-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Oil Range)	139.6	3.4	33.16	79.51	181	70 - 130				SE
TPH (Diesel Range)	145	1.7	33.16	100.8	133	70 - 130				SE
Surr: 2-Fluorobiphenyl	*5.002*	*0.10*	*3.313*	*0*	*151*	*60 - 129*				S

MSD Sample ID: **HS23060828-05MSD** Units: **mg/Kg** Analysis Date: **19-Jun-2023 21:47**
Client ID: Run ID: **FID-8_439436** SeqNo: **7375320** PrepDate: **19-Jun-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Oil Range)	136.8	3.4	32.91	79.51	174	70 - 130	139.6	2.04	30	SE
TPH (Diesel Range)	141.2	1.7	32.91	100.8	123	70 - 130	145	2.66	30	E
Surr: 2-Fluorobiphenyl	*4.874*	*0.099*	*3.288*	*0*	*148*	*60 - 129*	*5.002*	*2.59*	*30*	S

The following samples were analyzed in this batch: HS23060921-01 HS23060921-02

Client: Bison Oil and Gas
Project: CR 89
WorkOrder: HS23060921

QC BATCH REPORT

Batch ID: R439419 (0) **Instrument:** FID-20 **Method:** GASOLINE RANGE ORGANICS BY SW8015C

MBLK Sample ID: **MBLK-230620** Units: **mg/Kg** Analysis Date: **20-Jun-2023 10:21**
Client ID: Run ID: **FID-20_439419** SeqNo: **7374377** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	U	0.050								
Surr: 4-Bromofluorobenzene	*0.08268*	*0.0050*	*0.1*	*0*	*82.7*	*75 - 121*				

LCS Sample ID: **LCS-230620** Units: **mg/Kg** Analysis Date: **20-Jun-2023 09:49**
Client ID: Run ID: **FID-20_439419** SeqNo: **7374375** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.9127	0.050	1	0	91.3	72 - 121				
Surr: 4-Bromofluorobenzene	*0.08513*	*0.0050*	*0.1*	*0*	*85.1*	*75 - 121*				

LCSD Sample ID: **LCSD-230620** Units: **mg/Kg** Analysis Date: **20-Jun-2023 10:05**
Client ID: Run ID: **FID-20_439419** SeqNo: **7374376** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.8774	0.050	1	0	87.7	72 - 121	0.9127	3.95	30	
Surr: 4-Bromofluorobenzene	*0.0852*	*0.0050*	*0.1*	*0*	*85.2*	*75 - 121*	*0.08513*	*0.0798*	*30*	

The following samples were analyzed in this batch: HS23060921-01 HS23060921-02

Client: Bison Oil and Gas
Project: CR 89
WorkOrder: HS23060921

QC BATCH REPORT

Batch ID: 196431 (0) **Instrument: ICPMS07** **Method: METALS BY SW6020A**

MBLK Sample ID: **MBLK-196431** Units: **mg/Kg** Analysis Date: **21-Jun-2023 22:33**
Client ID: Run ID: **ICPMS07_439474** SeqNo: **7376912** PrepDate: **21-Jun-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	U	0.496								
Copper	U	0.199								
Lead	0.06672	0.496								J
Nickel	U	0.496								
Silver	U	0.496								
Zinc	U	0.496								

LCS Sample ID: **LCS-196431** Units: **mg/Kg** Analysis Date: **21-Jun-2023 22:35**
Client ID: Run ID: **ICPMS07_439474** SeqNo: **7376913** PrepDate: **21-Jun-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	10.41	0.497	9.944	0	105	80 - 120				
Copper	11.33	0.199	9.944	0	114	80 - 120				
Lead	10.55	0.497	9.944	0	106	80 - 120				
Nickel	11.28	0.497	9.944	0	113	80 - 120				
Zinc	11.05	0.497	9.944	0	111	80 - 120				

LCS Sample ID: **LCS-196431** Units: **mg/Kg** Analysis Date: **22-Jun-2023 13:14**
Client ID: Run ID: **ICPMS07_439595** SeqNo: **7378233** PrepDate: **21-Jun-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Silver	11.52	0.497	9.944	0	116	80 - 120				

MS Sample ID: **HS23061115-06MS** Units: **mg/Kg** Analysis Date: **21-Jun-2023 22:41**
Client ID: Run ID: **ICPMS07_439474** SeqNo: **7376916** PrepDate: **21-Jun-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	18.08	0.489	9.781	8.225	101	75 - 125				
Copper	13.32	0.196	9.781	2.332	112	75 - 125				
Lead	11.87	0.489	9.781	1.39	107	75 - 125				
Nickel	15.7	0.489	9.781	6.297	96.2	75 - 125				
Zinc	22.06	0.489	9.781	13.59	86.6	75 - 125				

Client: Bison Oil and Gas
Project: CR 89
WorkOrder: HS23060921

QC BATCH REPORT

Batch ID: 196431 (0) **Instrument: ICPMS07** **Method: METALS BY SW6020A**

MS Sample ID: **HS23061115-06MS** Units: **mg/Kg** Analysis Date: **22-Jun-2023 13:16**
Client ID: Run ID: **ICPMS07_439595** SeqNo: **7378234** PrepDate: **21-Jun-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Silver	10.82	0.464	9.275	0	117	75 - 125				

MSD Sample ID: **HS23061115-06MSD** Units: **mg/Kg** Analysis Date: **21-Jun-2023 22:43**
Client ID: Run ID: **ICPMS07_439474** SeqNo: **7376917** PrepDate: **21-Jun-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	18.55	0.464	9.275	8.225	111	75 - 125	18.08	2.57	20	
Copper	11.86	0.185	9.275	2.332	103	75 - 125	13.32	11.6	20	
Lead	11.13	0.464	9.275	1.39	105	75 - 125	11.87	6.43	20	
Nickel	15.18	0.464	9.275	6.297	95.8	75 - 125	15.7	3.4	20	
Silver	11.45	0.464	9.275	0.01122	123	75 - 125	12.38	7.8	20	
Zinc	21.36	0.464	9.275	13.59	83.8	75 - 125	22.06	3.24	20	

PDS Sample ID: **HS23061115-06PDS** Units: **mg/Kg** Analysis Date: **21-Jun-2023 22:45**
Client ID: Run ID: **ICPMS07_439474** SeqNo: **7376918** PrepDate: **21-Jun-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	18.95	0.480	9.593	8.225	112	75 - 125				
Copper	13.17	0.192	9.593	2.332	113	75 - 125				
Lead	12.04	0.480	9.593	1.39	111	75 - 125				
Nickel	16.82	0.480	9.593	6.297	110	75 - 125				
Zinc	23.86	0.480	9.593	13.59	107	75 - 125				

SD Sample ID: **HS23061115-06SD** Units: **mg/Kg** Analysis Date: **21-Jun-2023 22:39**
Client ID: Run ID: **ICPMS07_439474** SeqNo: **7376915** PrepDate: **21-Jun-2023** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Barium	8.388	2.40					8.225	1.98	10	
Copper	2.456	0.959					2.332	5.34	10	
Lead	1.518	2.40					1.39	0	10	J
Nickel	6.518	2.40					6.297	3.51	10	
Silver	U	2.40					0.01122	0	10	
Zinc	14.15	2.40					13.59	4.08	10	

The following samples were analyzed in this batch: HS23060921-01 HS23060921-02

Client: Bison Oil and Gas
Project: CR 89
WorkOrder: HS23060921

QC BATCH REPORT

Batch ID: 196635 (0) **Instrument:** ICPMS07 **Method:** LA 29B - 1:1 SOLUBLE CATIONS FOR SAR

MBLK Sample ID: **MBLK-196635** Units: **mg/L** Analysis Date: **23-Jun-2023 14:58**
Client ID: Run ID: **ICPMS07_439687** SeqNo: **7381584** PrepDate: **22-Jun-2023** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	U	5.00								
Magnesium	U	5.00								
Sodium	U	5.00								

DUP Sample ID: **HS23060921-02DUP** Units: **mg/L** Analysis Date: **23-Jun-2023 15:04**
Client ID: **SS2** Run ID: **ICPMS07_439687** SeqNo: **7381587** PrepDate: **22-Jun-2023** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	23.09	4.98					23.15	0.26	30	
Magnesium	7.945	4.98					7.912	0.409	30	
Sodium	7.036	4.98					9.18	26.4	30	

The following samples were analyzed in this batch: HS23060921-01 HS23060921-02

Client: Bison Oil and Gas
Project: CR 89
WorkOrder: HS23060921

QC BATCH REPORT

Batch ID: 196603 (0) **Instrument: SV-4** **Method: SEMIVOLATILES**

MBLK Sample ID: **MBLK-196603** Units: **ug/Kg** Analysis Date: **26-Jun-2023 15:42**
Client ID: Run ID: **SV-4_439983** SeqNo: **7387561** PrepDate: **22-Jun-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1-Methylnaphthalene	U	170								
2-Methylnaphthalene	U	170								
Acenaphthene	U	170								
Anthracene	U	170								
Benz(a)anthracene	U	170								
Benzo(a)pyrene	U	170								
Benzo(b)fluoranthene	U	170								
Benzo(k)fluoranthene	U	170								
Chrysene	U	170								
Dibenz(a,h)anthracene	U	170								
Fluoranthene	U	170								
Fluorene	U	170								
Indeno(1,2,3-cd)pyrene	U	170								
Pyrene	U	170								
Surr: 2,4,6-Tribromophenol	*3228*	*170*	*3333*	*0*	*96.8*	*36 - 126*				
Surr: 2-Fluorobiphenyl	*2925*	*170*	*3333*	*0*	*87.8*	*43 - 125*				
Surr: 2-Fluorophenol	*2207*	*170*	*3333*	*0*	*66.2*	*37 - 125*				
Surr: 4-Terphenyl-d14	*2816*	*170*	*3333*	*0*	*84.5*	*32 - 125*				
Surr: Nitrobenzene-d5	*2758*	*170*	*3333*	*0*	*82.8*	*37 - 125*				
Surr: Phenol-d6	*2421*	*170*	*3333*	*0*	*72.6*	*40 - 125*				

Client: Bison Oil and Gas
Project: CR 89
WorkOrder: HS23060921

QC BATCH REPORT

Batch ID: 196603 (0) **Instrument: SV-4** **Method: SEMIVOLATILES**

LCS Sample ID: **LCS-196603** Units: **ug/Kg** Analysis Date: **26-Jun-2023 15:20**
Client ID: Run ID: **SV-4_439983** SeqNo: **7387560** PrepDate: **22-Jun-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1-Methylnaphthalene	1431	170	1667	0	85.8	55 - 120				
2-Methylnaphthalene	1353	170	1667	0	81.2	55 - 120				
Acenaphthene	1404	170	1667	0	84.2	55 - 120				
Anthracene	1495	170	1667	0	89.7	55 - 120				
Benz(a)anthracene	1368	170	1667	0	82.1	55 - 125				
Benzo(a)pyrene	1376	170	1667	0	82.5	55 - 120				
Benzo(b)fluoranthene	1367	170	1667	0	82.0	55 - 125				
Benzo(k)fluoranthene	1229	170	1667	0	73.7	55 - 130				
Chrysene	1335	170	1667	0	80.1	55 - 125				
Dibenz(a,h)anthracene	1413	170	1667	0	84.7	55 - 120				
Fluoranthene	1451	170	1667	0	87.1	55 - 125				
Fluorene	1483	170	1667	0	89.0	55 - 120				
Indeno(1,2,3-cd)pyrene	1412	170	1667	0	84.7	55 - 125				
Pyrene	1421	170	1667	0	85.2	55 - 125				
Surr: 2,4,6-Tribromophenol	*3407*	*170*	*3333*	*0*	*102*	*36 - 126*				
Surr: 2-Fluorobiphenyl	*2996*	*170*	*3333*	*0*	*89.9*	*43 - 125*				
Surr: 2-Fluorophenol	*2454*	*170*	*3333*	*0*	*73.6*	*37 - 125*				
Surr: 4-Terphenyl-d14	*2961*	*170*	*3333*	*0*	*88.8*	*32 - 125*				
Surr: Nitrobenzene-d5	*2786*	*170*	*3333*	*0*	*83.6*	*37 - 125*				
Surr: Phenol-d6	*2696*	*170*	*3333*	*0*	*80.9*	*40 - 125*				

Client: Bison Oil and Gas
Project: CR 89
WorkOrder: HS23060921

QC BATCH REPORT

Batch ID: 196603 (0) **Instrument: SV-4** **Method: SEMIVOLATILES**

MS Sample ID: **HS23060988-14MS** Units: **ug/Kg** Analysis Date: **27-Jun-2023 02:08**
Client ID: Run ID: **SV-4_439987** SeqNo: **7387715** PrepDate: **22-Jun-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1-Methylnaphthalene	1088	170	1663	0	65.5	55 - 120				
2-Methylnaphthalene	1804	170	1663	0	108	55 - 120				
Acenaphthene	1044	170	1663	0	62.8	55 - 120				
Anthracene	1100	170	1663	0	66.1	55 - 120				
Benz(a)anthracene	1059	170	1663	0	63.7	55 - 125				
Benzo(a)pyrene	1086	170	1663	0	65.3	55 - 120				
Benzo(b)fluoranthene	1042	170	1663	0	62.7	55 - 125				
Benzo(k)fluoranthene	1024	170	1663	0	61.6	55 - 130				
Chrysene	1100	170	1663	0	66.2	55 - 125				
Dibenz(a,h)anthracene	1139	170	1663	0	68.5	55 - 120				
Fluoranthene	1133	170	1663	0	68.1	55 - 125				
Fluorene	1134	170	1663	0	68.2	55 - 120				
Indeno(1,2,3-cd)pyrene	1098	170	1663	0	66.1	55 - 125				
Pyrene	1045	170	1663	0	62.9	55 - 125				
Surr: 2,4,6-Tribromophenol	*2522*	*170*	*3324*	*0*	*75.9*	*36 - 126*				
Surr: 2-Fluorobiphenyl	*2308*	*170*	*3324*	*0*	*69.4*	*43 - 125*				
Surr: 2-Fluorophenol	*1809*	*170*	*3324*	*0*	*54.4*	*37 - 125*				
Surr: 4-Terphenyl-d14	*2275*	*170*	*3324*	*0*	*68.5*	*32 - 125*				
Surr: Nitrobenzene-d5	*1956*	*170*	*3324*	*0*	*58.8*	*37 - 125*				
Surr: Phenol-d6	*2000*	*170*	*3324*	*0*	*60.2*	*40 - 125*				

Client: Bison Oil and Gas
Project: CR 89
WorkOrder: HS23060921

QC BATCH REPORT

Batch ID: 196603 (0) **Instrument: SV-4** **Method: SEMIVOLATILES**

MSD Sample ID: **HS23060988-14MSD** Units: **ug/Kg** Analysis Date: **27-Jun-2023 02:30**
Client ID: Run ID: **SV-4_439987** SeqNo: **7387716** PrepDate: **22-Jun-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1-Methylnaphthalene	1177	170	1664	0	70.7	55 - 120	1088	7.79	30	
2-Methylnaphthalene	1954	170	1664	0	117	55 - 120	1804	8	30	
Acenaphthene	1159	170	1664	0	69.6	55 - 120	1044	10.4	30	
Anthracene	1213	170	1664	0	72.9	55 - 120	1100	9.82	30	
Benz(a)anthracene	1173	170	1664	0	70.5	55 - 125	1059	10.2	30	
Benzo(a)pyrene	1205	170	1664	0	72.4	55 - 120	1086	10.4	30	
Benzo(b)fluoranthene	1121	170	1664	0	67.3	55 - 125	1042	7.29	30	
Benzo(k)fluoranthene	1137	170	1664	0	68.3	55 - 130	1024	10.4	30	
Chrysene	1235	170	1664	0	74.2	55 - 125	1100	11.6	30	
Dibenz(a,h)anthracene	1321	170	1664	0	79.4	55 - 120	1139	14.8	30	
Fluoranthene	1171	170	1664	0	70.4	55 - 125	1133	3.34	30	
Fluorene	1229	170	1664	0	73.8	55 - 120	1134	7.96	30	
Indeno(1,2,3-cd)pyrene	1266	170	1664	0	76.1	55 - 125	1098	14.2	30	
Pyrene	1133	170	1664	0	68.1	55 - 125	1045	8.04	30	
Surr: 2,4,6-Tribromophenol	*2775*	*170*	*3327*	*0*	*83.4*	*36 - 126*	*2522*	*9.56*	*30*	
Surr: 2-Fluorobiphenyl	*2558*	*170*	*3327*	*0*	*76.9*	*43 - 125*	*2308*	*10.3*	*30*	
Surr: 2-Fluorophenol	*2073*	*170*	*3327*	*0*	*62.3*	*37 - 125*	*1809*	*13.6*	*30*	
Surr: 4-Terphenyl-d14	*2466*	*170*	*3327*	*0*	*74.1*	*32 - 125*	*2275*	*8.05*	*30*	
Surr: Nitrobenzene-d5	*2256*	*170*	*3327*	*0*	*67.8*	*37 - 125*	*1956*	*14.2*	*30*	
Surr: Phenol-d6	*2219*	*170*	*3327*	*0*	*66.7*	*40 - 125*	*2000*	*10.4*	*30*	

The following samples were analyzed in this batch: HS23060921-01 HS23060921-02

Client: Bison Oil and Gas
Project: CR 89
WorkOrder: HS23060921

QC BATCH REPORT

Batch ID: R439277 (0) **Instrument: VOA5** **Method: VOLATILES BY SW8260C**

MBLK Sample ID: **VBLKS2-061923** Units: **ug/Kg** Analysis Date: **19-Jun-2023 21:32**
Client ID: Run ID: **VOA5_439277** SeqNo: **7371246** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	U	5.0								
1,3,5-Trimethylbenzene	U	5.0								
Benzene	U	5.0								
Ethylbenzene	U	5.0								
Naphthalene	U	5.0								
Toluene	U	5.0								
Xylenes, Total	U	5.0								
Surr: 1,2-Dichloroethane-d4	*47.44*	*0*	*50*	*0*	*94.9*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*47.31*	*0*	*50*	*0*	*94.6*	*80 - 120*				
Surr: Dibromofluoromethane	*46.51*	*0*	*50*	*0*	*93.0*	*80 - 119*				
Surr: Toluene-d8	*52.82*	*0*	*50*	*0*	*106*	*81 - 118*				

LCS Sample ID: **VLCSS2-061923** Units: **ug/Kg** Analysis Date: **19-Jun-2023 20:49**
Client ID: Run ID: **VOA5_439277** SeqNo: **7371245** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	39.76	5.0	50	0	79.5	74 - 126				
1,3,5-Trimethylbenzene	40.05	5.0	50	0	80.1	76 - 126				
Benzene	45.32	5.0	50	0	90.6	75 - 124				
Ethylbenzene	40.85	5.0	50	0	81.7	70 - 123				
Naphthalene	39.18	5.0	50	0	78.4	71 - 128				
Toluene	44.33	5.0	50	0	88.7	76 - 122				
Xylenes, Total	124.6	5.0	150	0	83.0	77 - 128				
Surr: 1,2-Dichloroethane-d4	*50.75*	*0*	*50*	*0*	*102*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*51.65*	*0*	*50*	*0*	*103*	*80 - 120*				
Surr: Dibromofluoromethane	*51.94*	*0*	*50*	*0*	*104*	*80 - 119*				
Surr: Toluene-d8	*51.72*	*0*	*50*	*0*	*103*	*81 - 118*				

Client: Bison Oil and Gas
Project: CR 89
WorkOrder: HS23060921

QC BATCH REPORT

Batch ID: R439277 (0) **Instrument:** VOA5 **Method:** VOLATILES BY SW8260C

MS Sample ID: **HS23060921-01MS** Units: **ug/Kg** Analysis Date: **19-Jun-2023 22:36**
Client ID: **SS1** Run ID: **VOA5_439277** SeqNo: **7371249** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	29.44	5.0	49.5	0	59.5	70 - 130				S
1,3,5-Trimethylbenzene	30.76	5.0	49.5	0	62.1	70 - 130				S
Benzene	43.05	5.0	49.5	0	87.0	70 - 130				
Ethylbenzene	36.46	5.0	49.5	0	73.7	70 - 130				
Naphthalene	20.54	5.0	49.5	0	41.5	70 - 130				S
Toluene	42.84	5.0	49.5	0	86.5	70 - 130				
Xylenes, Total	109.8	5.0	148.5	0	73.9	70 - 130				
Surr: 1,2-Dichloroethane-d4	*50.51*	*0*	*49.5*	*0*	*102*	*70 - 126*				
Surr: 4-Bromofluorobenzene	*52.41*	*0*	*49.5*	*0*	*106*	*70 - 130*				
Surr: Dibromofluoromethane	*51.47*	*0*	*49.5*	*0*	*104*	*70 - 130*				
Surr: Toluene-d8	*53.99*	*0*	*49.5*	*0*	*109*	*70 - 130*				

MSD Sample ID: **HS23060921-01MSD** Units: **ug/Kg** Analysis Date: **19-Jun-2023 22:57**
Client ID: **SS1** Run ID: **VOA5_439277** SeqNo: **7371250** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	29.53	5.0	50.5	0	58.5	70 - 130	29.44	0.284	30	S
1,3,5-Trimethylbenzene	31.83	5.0	50.5	0	63.0	70 - 130	30.76	3.41	30	S
Benzene	46.53	5.0	50.5	0	92.1	70 - 130	43.05	7.77	30	
Ethylbenzene	39.01	5.0	50.5	0	77.2	70 - 130	36.46	6.77	30	
Naphthalene	21.2	5.0	50.5	0	42.0	70 - 130	20.54	3.13	30	S
Toluene	45.99	5.0	50.5	0	91.1	70 - 130	42.84	7.09	30	
Xylenes, Total	115.7	5.0	151.5	0	76.4	70 - 130	109.8	5.27	30	
Surr: 1,2-Dichloroethane-d4	*50.59*	*0*	*50.5*	*0*	*100*	*70 - 126*	*50.51*	*0.16*	*30*	
Surr: 4-Bromofluorobenzene	*53.05*	*0*	*50.5*	*0*	*105*	*70 - 130*	*52.41*	*1.21*	*30*	
Surr: Dibromofluoromethane	*51.64*	*0*	*50.5*	*0*	*102*	*70 - 130*	*51.47*	*0.334*	*30*	
Surr: Toluene-d8	*53.79*	*0*	*50.5*	*0*	*107*	*70 - 130*	*53.99*	*0.376*	*30*	

The following samples were analyzed in this batch: HS23060921-01 HS23060921-02

Client: Bison Oil and Gas
Project: CR 89
WorkOrder: HS23060921

QC BATCH REPORT

Batch ID: 196610 (0) **Instrument: UV-2450** **Method: HEXAVALENT CHROMIUM BY SW7196A**

MBLK Sample ID: **MBLK-196610** Units: **mg/kg** Analysis Date: **22-Jun-2023 15:08**
Client ID: Run ID: **UV-2450_439625** SeqNo: **7378846** PrepDate: **21-Jun-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	U	2.00								

LCS Sample ID: **LCS-196610** Units: **mg/kg** Analysis Date: **22-Jun-2023 15:08**
Client ID: Run ID: **UV-2450_439625** SeqNo: **7378845** PrepDate: **21-Jun-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	10.04	2.00	10	0	100	81 - 115				

MS Sample ID: **HS23060921-02MS** Units: **mg/kg** Analysis Date: **22-Jun-2023 15:08**
Client ID: **SS2** Run ID: **UV-2450_439625** SeqNo: **7378843** PrepDate: **21-Jun-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	9.24	2.00	10	-0.04	92.8	81 - 115				

MSD Sample ID: **HS23060921-02MSD** Units: **mg/kg** Analysis Date: **22-Jun-2023 15:08**
Client ID: **SS2** Run ID: **UV-2450_439625** SeqNo: **7378844** PrepDate: **21-Jun-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	9.08	2.00	10	-0.04	91.2	81 - 115	9.24	1.75	20	

The following samples were analyzed in this batch: HS23060921-01 HS23060921-02

Client: Bison Oil and Gas
Project: CR 89
WorkOrder: HS23060921

QC BATCH REPORT

Batch ID: R439498 (0) **Instrument:** WetChem_HS **Method:** SPECIFIC CONDUCTIVITY, SOIL 10X EXTRACT

MBLK Sample ID: **MBLK-R439498** Units: **umhos/cm** Analysis Date: **21-Jun-2023 15:31**
Client ID: Run ID: **WetChem_HS_439498** SeqNo: **7375935** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Conductance, Soil Extract	U	5.00								

LCS Sample ID: **LCS-R439498** Units: **umhos/cm** Analysis Date: **21-Jun-2023 15:31**
Client ID: Run ID: **WetChem_HS_439498** SeqNo: **7375934** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Conductance, Soil Extract	1429	5.00	1413	0	101	85 - 115				

DUP Sample ID: **HS23060921-02DUP** Units: **umhos/cm** Analysis Date: **21-Jun-2023 15:31**
Client ID: **SS2** Run ID: **WetChem_HS_439498** SeqNo: **7375936** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Conductance, Soil Extract	364	50.0					361	0.828	20	

The following samples were analyzed in this batch: HS23060921-01 HS23060921-02

Client: Bison Oil and Gas
Project: CR 89
WorkOrder: HS23060921

QC BATCH REPORT

Batch ID: R439566 (0) **Instrument:** WetChem_HS **Method:** PH SOIL BY SW9045D

DUP Sample ID: **HS23061115-06DUP** Units: **pH Units** Analysis Date: **22-Jun-2023 12:02**
Client ID: Run ID: **WetChem_HS_439566** SeqNo: **7377726** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	6.09	0.100					5.72	6.27	10	
Temp Deg C @pH	22.3	0					22.3	0	10	

The following samples were analyzed in this batch: HS23060921-01 HS23060921-02

Client: Bison Oil and Gas
Project: CR 89
WorkOrder: **HS23060921**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	88-00356	27-Mar-2024
California	2919; 2024	30-Apr-2024
Dept of Defense	L23-358	31-May-2025
Illinois	2000322023-11	30-Jun-2024
Kansas	E-10352; 2022-2023	31-Jul-2023
Louisiana	03087-2023	30-Jun-2024
North Carolina	624-2023	31-Dec-2023
North Dakota	R-193 2023-2024	30-Apr-2024
Oklahoma	2022-141	31-Aug-2023
Texas	T104704231-23-31	30-Apr-2024
Utah	TX026932022-13	31-Jul-2023

Sample Receipt Checklist

Work Order ID: HS23060921 **Date/Time Received:** **14-Jun-2023 15:53**

Client Name: Bison Oil and Gas **Received by:** **Malcolm Burleson**

Completed By:	/S/ Paresh M. Giga	16-Jun-2023 13:44	**Reviewed by:**	/S/ Tyler Monroe	19-Jun-2023 11:36
	eSignature	Date/Time		eSignature	Date/Time

Matrices: **Soil** Carrier name: **FedEx Priority Overnight**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☑	Not Present ☐
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:none
Samplers name present on COC?	Yes ☐	No ☑	
Chain of custody agrees with 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 holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Temperature(s)/Thermometer(s):	2.0C/1.9C U/C	IR31
Cooler(s)/Kit(s):	Blue	
Date/Time sample(s) sent to storage:	6/16/23 13:50	

Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

HS23060921

Bison Oil and Gas
CR 89

ALS Loveland Service Center
965 E 11th Street
Loveland, CO 80537
Phone: 970-305-1648

Right Solution
Right Partner

CHAIN OF CUSTODY

Page 1 of 1

Shipping to Samples to: _____

PROJECT NAME	CR 90	SAMPLER		TURNAROUND: ☐ 10 Day ☒ 5 Day ☐ 3 Day ☐ Other:	
PROJECT No.		SITE ID			Parameter/Method Request for Analysis
		EDD FORMAT		A	GRO, DRO, ORO
		PURCHASE ORDER		B	8260 VOC'S
COMPANY NAME	BISON OPERATING	BILL TO COMPANY	Same	C	8270 VOC'S
SEND REPORT TO	Tajah Garza	INVOICE ATTN TO	Same	D	Conductivity, pH
ADDRESS	41665 ER 95	ADDRESS		E	Total Metals - Ba, Cu, Pb, Ni, Ag, Zn
CITY / STATE / ZIP	BRIGGSDALE, CO 80611	CITY / STATE / ZIP		F	Hexavalent Cr
PHONE	970 692 1963	PHONE		G	LA29B - Sodium Adsorption Ratio
FAX		FAX		H	SUB Kelso - Total Metals - As, Cd, Se
E-MAIL	tgarza@bisonog.com	E-MAIL		I	SUB Holland - Hot Water Soluble Boron

SAMPLE #	FIELD ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	MS/MSD	A	B	C	D	E	F	G	H	I
1	SS1	S	6/14/23	2:45p					X	X	X	X	X	X	X	X	X
2	SS2	S	6/14/23	2:52p					X	X	X	X	X	X	X	X	X
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

* **MATRIX:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

DISPOSAL: By lab ☐ Return to Client ☐

	SIGNATURE	PRINTED NAME	DATE	TIME	COOLER TEMP
RELINQUISHED BY		Tajah Garza	6/14/23	3:52	N231
RECEIVED BY		Tyler Monroe	6/14/23	1553	2.0
RELINQUISHED BY		FedEx	06/16/23	0930	-0.1
RECEIVED BY					
RELINQUISHED BY					
RECEIVED BY					

Comments:

QC PACKAGE (check below)

- ☐ LEVEL II (Standard QC)
- ☐ LEVEL III (Std QC + forms)
- ☐ LEVEL IV (Std QC + forms + raw data)

Preservative: 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-NaHSO4 7- Other 8-4°C 9-5035

Ps. Baby Blue

July 06, 2023 Service Request No:K2306906

Tyler Monroe
ALS Fort Collins
225 Commerce Drive
Fort Collins, CO 80524

Laboratory Results for: HS23060921

Dear Tyler,

Enclosed are the results of the sample(s) submitted to our laboratory June 16, 2023
For your reference, these analyses have been assigned our service request number **K2306906.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3260. You may also contact me via email at Luke.Rahn@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

for Luke Rahn
Project Manager

ADDRESS 1317 S. 13th Avenue, Kelso, WA 98626
PHONE +1 360 577 7222 | FAX +1 360 636 1068
ALS Group USA, Corp.
dba ALS Environmental

Narrative Documents

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

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Client: ALS Environmental - US
Project: HS23060921
Sample Matrix: Soil

Service Request: K2306906
Date Received: 06/16/2023

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Two soil samples were received for analysis at ALS Environmental on 06/16/2023. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

Method 6020B, 07/05/2023:The Relative Percent Difference (RPD) for the replicate analysis of Arsenic in sample SS1 was outside the normal ALS control limits. The variability in the results was attributed to the heterogeneous character of the sample. Standard mixing techniques were used, but were not sufficient for complete homogenization of this sample.

Approved by _____ Date 07/06/2023

SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: SS1			Lab ID: K2306906-001			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	1.24			0.48	mg/Kg	6020B
Cadmium	0.086			0.039	mg/Kg	6020B
Solids, Total	83.7				Percent	160.3 Modified

CLIENT ID: SS2			Lab ID: K2306906-002			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Arsenic	1.45			0.40	mg/Kg	6020B
Cadmium	0.056			0.032	mg/Kg	6020B
Solids, Total	90.7				Percent	160.3 Modified

Sample Receipt Information

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

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Client: ALS Environmental - US **Service Request:**K2306906
Project: HS23060921

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
K2306906-001	SS1	6/14/2023	1445
K2306906-002	SS2	6/14/2023	1452

K23069060

10450 Stancliff Rd, Ste 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: **Colorado** **COC ID:** **22042**

SUBCONTRACT TO:

ALS Environmental Kelso
1317 S. 13th Avenue
Kelso, WA 98626

Phone: +1 360 501 3312

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	Tyler Monroe
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	tyler.monroe@alsglobal.com
Alternate Contact:	Jumoke M. Lawal
Email:	jumoke.lawal@alsglobal.com

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS23060921
TSR:	ALS_Fort Collins

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS23060921-01**	**SS1**	**Soil**	**14 Jun 2023 14:45**
	SUB Kelso Total Metals 6020 - As, Cd, Se			22 Jun 2023
2.	**HS23060921-02**	**SS2**	**Soil**	**14 Jun 2023 14:52**
	SUB Kelso Total Metals 6020 - As, Cd, Se			22 Jun 2023

Comments: Please analyze for the analysis listed above.

Report to MDL on Final Report.

Send report to the emails shown above.

QC Level: STD (Laboratory Standard QC: method blank and LCS required)

Relinquished By: _____ Date/Time: 6/15/23 1600

Received By: _____ Date/Time: 6/16/23 1030

Cooler ID(s): _____ Temperature(s): _____

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PM LR

Cooler Receipt and Preservation Form

Client Houston Service Request K23 069906

Received: 6/16/23 Opened: 6/16/23 By: VM Unloaded: 6/16/23 By: VM

1. Samples were received via? *USPS* (*Fed Ex*) *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y (N) If yes, how many and where? _____
   If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with "X"	PM Notified If out of temp	Tracking Number NA	Filed
	0.2	IR04	22072			618252441344	

4. Was a Temperature Blank present in cooler? NA Y (N) If yes, notate the temperature in the appropriate column above:
   If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
5. Were samples received within the method specified temperature ranges? NA (Y) N
   If no, were they received on ice and same day as collected? If not, notate the cooler # above and notify the PM. (NA) Y N

If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*

6. Packing material: *Inserts* (*Baggies*) (*Bubble Wrap*) *Gel Packs* (*Wet Ice*) *Dry Ice* *Sleeves* _____
7. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
8. Were samples received in good condition (unbroken) NA (Y) N
9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA (Y) N
10. Did all sample labels and tags agree with custody papers? NA (Y) N
11. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
12. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* (NA) Y N
13. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
14. Was C12/Res negative? (NA) Y N
15. Were samples received within the method specified time limit? If not, notate the error below and notify the PM (NA) Y N
16. Were 100ml sterile microbiology bottles filled exactly to the 100ml mark? (NA) Y N Underfilled Overfilled

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____

Miscellaneous Forms

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

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Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Client:	ALS Environmental - US	**Service Request:**	K2306906
Project:	HS23060921/		

Sample Name:	SS1	**Date Collected:**	06/14/23
Lab Code:	K2306906-001	**Date Received:**	06/16/23
Sample Matrix:	Soil		

Analysis Method	Extracted/Digested By	Analyzed By
160.3 Modified		PPRICE
6020B	MSOLADEY	KLINN

Sample Name:	SS2	**Date Collected:**	06/14/23
Lab Code:	K2306906-002	**Date Received:**	06/16/23
Sample Matrix:	Soil		

Analysis Method	Extracted/Digested By	Analyzed By
160.3 Modified		PPRICE
6020B	MSOLADEY	KLINN

Sample Results

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

RIGHT SOLUTIONS | RIGHT PARTNER

Metals

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
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www.alsglobal.com

RIGHT SOLUTIONS | RIGHT PARTNER

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	K2306906
Project:	HS23060921	**Date Collected:**	06/14/23 14:45
Sample Matrix:	Soil	**Date Received:**	06/16/23 10:30
Sample Name:	SS1	**Basis:**	Dry
Lab Code:	K2306906-001		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020B	**1.24**	mg/Kg	0.48	5	07/05/23 14:11	06/22/23	
Cadmium	6020B	**0.086**	mg/Kg	0.039	5	07/05/23 14:11	06/22/23	
Selenium	6020B	ND U	mg/Kg	0.96	5	07/05/23 14:11	06/22/23	

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	K2306906
Project:	HS23060921	**Date Collected:**	06/14/23 14:52
Sample Matrix:	Soil	**Date Received:**	06/16/23 10:30
Sample Name:	SS2	**Basis:**	Dry
Lab Code:	K2306906-002		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020B	**1.45**	mg/Kg	0.40	5	07/05/23 14:23	06/22/23	
Cadmium	6020B	**0.056**	mg/Kg	0.032	5	07/05/23 14:23	06/22/23	
Selenium	6020B	ND U	mg/Kg	0.80	5	07/05/23 14:23	06/22/23	

General Chemistry

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
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www.alsglobal.com

RIGHT SOLUTIONS | RIGHT PARTNER

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	K2306906
Project:	HS23060921	**Date Collected:**	06/14/23 14:45
Sample Matrix:	Soil	**Date Received:**	06/16/23 10:30
Sample Name:	SS1	**Basis:**	As Received
Lab Code:	K2306906-001		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Solids, Total	160.3 Modified	**83.7**	Percent	-	-	1	06/19/23 10:45	

Client:	ALS Environmental - US	**Service Request:**	K2306906
Project:	HS23060921	**Date Collected:**	06/14/23 14:52
Sample Matrix:	Soil	**Date Received:**	06/16/23 10:30
Sample Name:	SS2	**Basis:**	As Received
Lab Code:	K2306906-002		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Solids, Total	160.3 Modified	**90.7**	Percent	-	-	1	06/19/23 10:45	

QC Summary Forms

ALS Environmental—Kelso Laboratory
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www.alsglobal.com

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Metals

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RIGHT SOLUTIONS | RIGHT PARTNER

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	K2306906
Project:	HS23060921	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	Dry
Lab Code:	KQ2310835-03		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020B	ND U	mg/Kg	0.5	5	07/05/23 14:07	06/22/23	
Cadmium	6020B	ND U	mg/Kg	0.040	5	07/05/23 14:07	06/22/23	
Selenium	6020B	ND U	mg/Kg	1.0	5	07/05/23 14:07	06/22/23	

Client:	ALS Environmental - US	**Service Request:**	K2306906
Project:	HS23060921	**Date Collected:**	06/14/23
Sample Matrix:	Soil	**Date Received:**	06/16/23
		Date Analyzed:	07/5/23
		Date Extracted:	06/22/23

Matrix Spike Summary
Total Metals

Sample Name:	SS1	**Units:**	mg/Kg
Lab Code:	K2306906-001	**Basis:**	Dry
Analysis Method:	6020B		
Prep Method:	EPA 3050B		

Matrix Spike
KQ2310835-02

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	1.24	98.1	92.7	104	75-125
Cadmium	0.086	9.57	9.27	102	75-125
Selenium	ND U	97.1	92.7	105	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2306906
Project	HS23060921	**Date Collected:**	06/14/23
Sample Matrix:	Soil	**Date Received:**	06/16/23
		Date Analyzed:	07/05/23

Replicate Sample Summary
Total Metals

Sample Name:	SS1	**Units:**	mg/Kg
Lab Code:	K2306906-001	**Basis:**	Dry

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample KQ2310835-01 Result	Average	RPD	RPD Limit
Arsenic	6020B	0.45	1.24	2.26	1.75	58 *	20
Cadmium	6020B	0.036	0.086	0.067	0.077	25 #	20
Selenium	6020B	0.90	ND U	ND U	ND	-	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: ALS Environmental - US
Project: HS23060921
Sample Matrix: Soil

Service Request: K2306906
Date Analyzed: 07/05/23

Lab Control Sample Summary
Total Metals

Units:mg/Kg
Basis: Dry

Lab Control Sample
KQ2310835-04

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	6020B	95.3	100	95	80-120
Cadmium	6020B	9.80	10.0	98	80-120
Selenium	6020B	98.5	100	99	80-120

22-Jun-2023

Tyler Monroe
ALS Environmental
10450 Stancliff Rd
Suite 210
Houston, TX 77099

Re: **HS23060921** Work Order: **23061591**

Dear Tyler,

ALS Environmental received 2 samples on 16-Jun-2023 09:00 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 11.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

Chelsey Cook

Electronically approved by: Chelsey Cook

Chelsey Cook
Project Manager

Client: ALS Environmental
Project: HS23060921
Work Order: **23061591**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
23061591-01	SS1	Soil		6/14/2023 14:45	6/16/2023 09:00	☐
23061591-02	SS2	Soil		6/14/2023 14:52	6/16/2023 09:00	☐

Client: ALS Environmental
Project: HS23060921
WorkOrder: **23061591**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
Hr	BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated.
J	Analyte is present at an estimated concentration between the MDL and Report Limit
n	Analyte accreditation is not offered
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
% of sample	Percent of Sample
mg/Kg-dry	Milligrams per Kilogram Dry Weight

Client:	ALS Environmental
Project:	HS23060921
Work Order:	23061591

Case Narrative

Samples for the above noted Work Order were received on 06/16/2023. The attached "Sample Receipt Checklist" documents the status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting. A copy of the laboratory's scope of accreditation is available upon request.

With the following exceptions, all sample analyses achieved analytical criteria.

Metals:
No deviations or anomalies were noted.

Wet Chemistry:
No deviations or anomalies were noted.

ALS Group, USA

Date: *22-Jun-23*

Client: ALS Environmental
Project: HS23060921
Sample ID: SS1
Collection Date: 6/14/2023 02:45 PM

Work Order: 23061591
Lab ID: 23061591-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
HOT WATER SOLUBLE BORON BY ICP-MS		Method: **SW6020B**		Prep: EXTRACT / 6/20/23			Analyst: **STP**
Boron (Hot Water Soluble)	**1.4**		**0.020**	**0.51**	**mg/Kg-dry**	10	6/20/2023 14:43
MOISTURE		Method: **SW3550C**					Analyst: **ALG**
Moisture	**23**		**0.10**	**0.10**	**% of sample**	1	6/20/2023 16:27

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: ALS Environmental
Project: HS23060921
Sample ID: SS2
Collection Date: 6/14/2023 02:52 PM

Work Order: 23061591
Lab ID: 23061591-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
HOT WATER SOLUBLE BORON BY ICP-MS		Method: **SW6020B**			Prep: EXTRACT / 6/20/23		Analyst: **STP**
Boron (Hot Water Soluble)	**0.36**	J	**0.017**	**0.42**	**mg/Kg-dry**	10	6/20/2023 14:44
MOISTURE		Method: **SW3550C**					Analyst: **ALG**
Moisture	**8.5**		**0.10**	**0.10**	**% of sample**	1	6/20/2023 16:27

Note: See Qualifiers page for a list of qualifiers and their definitions.

Batch ID: **218428** Instrument ID **ICPMS3** Method: **SW6020B**

MBLK Sample ID: **MBLK-218428-218428** Units: **mg/Kg** Analysis Date: **6/20/2023 02:40 PM**
Client ID: Run ID: **ICPMS3_230620B** SeqNo: **9679603** Prep Date: **6/20/2023** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron (Hot Water Soluble)	0.02058	0.0016	0.040								J

LCS Sample ID: **LCS-218428-218428** Units: **mg/Kg** Analysis Date: **6/20/2023 02:41 PM**
Client ID: Run ID: **ICPMS3_230620B** SeqNo: **9679604** Prep Date: **6/20/2023** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron (Hot Water Soluble)	0.9076	0.0016	0.040	1	0	90.8	80-120	0			

The following samples were analyzed in this batch: 23061591-01A 23061591-02A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: ALS Environmental
Work Order: 23061591
Project: HS23060921

QC BATCH REPORT

Batch ID: **R374747** Instrument ID **MOIST** Method: **SW3550C**

MBLK Sample ID: **WBLKS-R374747** Units: **% of sample** Analysis Date: **6/20/2023 04:27 PM**
Client ID: Run ID: **MOIST_230620F** SeqNo: **9682226** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	U	0.1	0.10								

LCS Sample ID: **LCS-R374747** Units: **% of sample** Analysis Date: **6/20/2023 04:27 PM**
Client ID: Run ID: **MOIST_230620F** SeqNo: **9682225** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	99.99	0.1	0.10	100	0	100	98-102	0			

DUP Sample ID: **23060956-01B DUP** Units: **% of sample** Analysis Date: **6/20/2023 04:27 PM**
Client ID: Run ID: **MOIST_230620F** SeqNo: **9682206** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	8.32	0.1	0.10	0	0	0	0-0	9.2	10	10	R

DUP Sample ID: **23061005-01A DUP** Units: **% of sample** Analysis Date: **6/20/2023 04:27 PM**
Client ID: Run ID: **MOIST_230620F** SeqNo: **9682212** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	5.73	0.1	0.10	0	0	0	0-0	6.03	5.1	10	

The following samples were analyzed in this batch: 23061591-01A 23061591-02A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

23061591

ALS - HOUSTON: ALS Environmental
Project: HS 22041

10450 Stancliff Rd, Ste 210
Houston, TX 77099
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F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: **Colorado** **COC ID:** **22041**

SUBCONTRACT TO:

ALS Laboratory Group
3352 128th Ave.
Holland, MI 494249263

Phone: +1 616 399 6070

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	Tyler Monroe
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	tyler.monroe@alsglobal.com
Alternate Contact:	Jumoke M. Lawal
Email:	jumoke.lawal@alsglobal.com

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS23060921
TSR:	ALS_Fort Collins

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS23060921-01**	**SS1**	**Soil**	**14 Jun 2023 14:45**
	SUB Holland - Hot Water Soluble Boron			22 Jun 2023
2.	**HS23060921-02**	**SS2**	**Soil**	**14 Jun 2023 14:52**
	SUB Holland - Hot Water Soluble Boron			22 Jun 2023

Comments: Please analyze for the analysis listed above.

Report to MDL on Final Report.

Send report to the emails shown above.

QC Level: STD (Laboratory Standard QC: method blank and LCS required)

Relinquished By: _____ Date/Time: 6/15/23 1600

Received By: Fedex ~~Address~~ Date/Time: 6/16/23 900

Cooler ID(s): _____ Temperature(s): _____

ALS Group, USA
Holland, Michigan

Sample Receipt Checklist

Client Name: **ALS - HOUSTON** Date/Time Received: **16-Jun-23 09:00**

Work Order: **23061591** Received by: **WSK**

Checklist completed by Keith Wierenga (eSignature) 20-Jun-23 (Date) Reviewed by: Chelsey Cook (eSignature) 20-Jun-23 (Date)

Matrices: Soil
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with 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 holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	1.2/1.2 C	DF2	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	6/20/2023 2:43:33 PM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

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