



October 24, 2018

**Olsson Associates**

**Jason Davidson**

**1525 Raleigh St, Suite 400**

**Denver**

**CO 80204**

**Project Name - Kraus-Albin #22-20 TB**

**Project Number - 018-0459**

Attached are your analytical results for Kraus-Albin #22-20 TB received by Origins Laboratory, Inc. October 18, 2018. This project is associated with Origins project number Y810305-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.  
303.433.1322  
o-squad@oelabinc.com



1725 Elk Place, Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Olsson Associates

1525 Raleigh St, Suite 400

Denver CO 80204

Jason Davidson

Project Number: 018-0459

Project: Kraus-Albin #22-20 TB

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-2	Y810305-01	Water	October 18, 2018 13:56	10/18/2018 17:10
MW-3	Y810305-02	Water	October 18, 2018 13:45	10/18/2018 17:10

Origins Laboratory, Inc.



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Denver CO 80204

Jason Davidson  
Project Number: 018-0459  
Project: Kraus-Albin #22-20 TB

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1/810305

page 1 of 1

**ORIGINS**  
LABORATORY, INC

Client: Olsson  
Address: 1525 Raleigh St., Ste. 400  
Telephone Number: 303-237-2072  
Email Address: jidavidson@olsson.com

Project Manager: Jason Davidson  
Project Name: Kraus-Albin #22-20 TB  
Project Number: 018-0459  
Samples Collected By: jidavidson@olsson.com

1 725 Elk Place | Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative					Matrix			Analysis	Sample Instructions
				Unpreserved	HCl	HNO <sub>3</sub>	Other	Groundwater	Soil	Air Summa #	Other		
MW-2	10/18/18	13:56	3		3				X			BTEX (8260)	1
MW-3	10/18/18	13:45	3		3				X			BTEX (8260)	2
													3
													4
													5
													6
													7
													8
													9
													10

  

Relinquished By:	Date:	Time:	Received By:	Date:	Time:	Turnaround Time:
Jason Davidson	10/18/18	17:10	[Signature]	10/18/18	17:10	Same Day <input type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input checked="" type="checkbox"/>
Relinquished By:	Date:	Time:	Received By:	Date:	Time:	

8.3

Date Results Needed

Origins Laboratory, Inc.

*Jefe Pellegrini*

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Jason Davidson  
Project Number: 018-0459  
Project: Kraus-Albin #22-20 TB

Origins Laboratory

F-012207-01-R1  
Effective Date: 01/09/12

## Sample Receipt Checklist

Origins Work Order: Y810305

Client: Olsson

Client Project ID: Kraus-Albin 22-20 TB

Checklist Completed by: JG

Shipped Via: HD  
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 10/19/2018

Airbill #: N/A

Matrix(s) Received: (Check all that apply): Soil/Solid ☒ Water ☐ Other: ☐

Cooler Number/Temperature: 1 / 8.3 °C        /        °C        /        °C        /        °C (Describe)

Thermometer ID: T003

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C <sup>(1)</sup> ?		<input checked="" type="checkbox"/>		<u>Same Day</u>
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Were all samples received intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HT's due within 48 hours present <sup>(1)</sup> ?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.		<input checked="" type="checkbox"/>		
Are samples preserved that require preservation and was it checked <sup>(1)</sup> ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO <sub>3</sub> , HCL, H <sub>2</sub> SO <sub>4</sub> ) / (pH >10 for samples preserved with NaAsO <sub>2</sub> +NaOH, ZnAc+NaOH)		<input checked="" type="checkbox"/>		
Additional Comments (if any):				

<sup>(1)</sup> If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager) JG

10/19/18  
Date/Time Reviewed

Origins Laboratory, Inc.

*Jefe Pellegrini*

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Denver CO 80204

Jason Davidson  
Project Number: 018-0459  
Project: Kraus-Albin #22-20 TB

**MW-2**

**10/18/2018 1:56:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y810305-01 (Water)**

**BTEX by EPA 8260C**

Benzene	371	100	ug/L	100	B8J1903	KDK	10/19/2018	10/23/2018
Toluene	25.8	1.00	"	1	"	KDK	"	10/22/2018
Ethylbenzene	39.6	1.00	"	"	"	KDK	"	"
Xylenes, total	165	1.00	"	"	"	KDK	"	"

Surrogate: 1,2-Dichloroethane-d4	101 %	84-121	"	"	"
Surrogate: Toluene-d8	105 %	85-115	"	"	"
Surrogate: 4-Bromofluorobenzene	101 %	84-114	"	"	"

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Project Number: 018-0459  
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## MW-3

10/18/2018 1:45:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y810305-02 (Water)

### BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B8J1903	KDK	10/19/2018	10/22/2018	U
Toluene	ND	1.00	"	"	"	KDK	"	"	U
Ethylbenzene	ND	1.00	"	"	"	KDK	"	"	U
Xylenes, total	ND	1.00	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	91.3 %	84-121	"	"	"
Surrogate: Toluene-d8	110 %	85-115	"	"	"
Surrogate: 4-Bromofluorobenzene	89.5 %	84-114	"	"	"

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**Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B8J1903 - EPA 5030B (Water)</b>										
<b>Blank (B8J1903-BLK1)</b>					Prepared: 10/19/2018 Analyzed: 10/22/2018					
Benzene	ND	1.00	ug/L							U
Toluene	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Xylenes, total	ND	1.00	"							U
Surrogate: 1,2-Dichloroethane-d4	69		"	62.5	110		84-121			
Surrogate: Toluene-d8	59		"	62.5	95.0		85-115			
Surrogate: 4-Bromofluorobenzene	64		"	62.5	103		84-114			

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**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B8J1903 - EPA 5030B (Water)</b>										
<b>Blank (B8J1903-BLK2)</b>					Prepared: 10/19/2018 Analyzed: 10/22/2018					
Benzene	ND	1.00	ug/L							U
Toluene	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Xylenes, total	ND	1.00	"							U
Surrogate: 1,2-Dichloroethane-d4	65		"	62.5	103		84-121			
Surrogate: Toluene-d8	65		"	62.5	104		85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5	99.8		84-114			

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch B8J1903 - EPA 5030B (Water)**

**LCS (B8J1903-BS1)**

Prepared: 10/19/2018 Analyzed: 10/22/2018

Benzene	55.5	1.00	ug/L	50.0	111	73.3-129
Toluene	54.7	1.00	"	50.0	109	76.2-123
Ethylbenzene	53.0	1.00	"	50.0	106	73.6-130
m,p-Xylene	103	2.00	"	100	103	76.1-126
o-Xylene	50.1	1.00	"	50.0	100	76.6-124
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5	97.3	84-121
Surrogate: Toluene-d8	65		"	62.5	105	85-115
Surrogate: 4-Bromofluorobenzene	62		"	62.5	99.5	84-114

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B8J1903 - EPA 5030B (Water)**

**LCS (B8J1903-BS2)**

Prepared: 10/19/2018 Analyzed: 10/22/2018

Benzene	54.5	1.00	ug/L	50.0	109	73.3-129
Toluene	58.2	1.00	"	50.0	116	76.2-123
Ethylbenzene	57.5	1.00	"	50.0	115	73.6-130
m,p-Xylene	115	2.00	"	100	115	76.1-126
o-Xylene	57.0	1.00	"	50.0	114	76.6-124
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5	98.9	84-121
Surrogate: Toluene-d8	68		"	62.5	108	85-115
Surrogate: 4-Bromofluorobenzene	63		"	62.5	100	84-114

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**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B8J1903 - EPA 5030B (Water)**

Matrix Spike (B8J1903-MS1)		Source: Y810304-01			Prepared: 10/19/2018 Analyzed: 10/22/2018					
Benzene	60.3	1.00	ug/L	50.0	ND	121	74-130			
Toluene	62.3	1.00	"	50.0	ND	125	73-131			
Ethylbenzene	62.0	1.00	"	50.0	ND	124	76-132			
m,p-Xylene	123	2.00	"	100	ND	123	69-139			
o-Xylene	61.5	1.00	"	50.0	ND	123	74-131			
Surrogate: 1,2-Dichloroethane-d4	64		"	62.5		102	84-121			
Surrogate: Toluene-d8	66		"	62.5		106	85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		100	84-114			

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Project Number: 018-0459  
Project: Kraus-Albin #22-20 TB

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**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B8J1903 - EPA 5030B (Water)**

Matrix Spike (B8J1903-MS2)		Source: Y810304-02			Prepared: 10/19/2018 Analyzed: 10/22/2018					
Benzene	57.0	1.00	ug/L	50.0	ND	114	74-130			
Toluene	59.3	1.00	"	50.0	ND	119	73-131			
Ethylbenzene	58.0	1.00	"	50.0	0.480	115	76-132			
m,p-Xylene	116	2.00	"	100	7.95	108	69-139			
o-Xylene	59.0	1.00	"	50.0	0.490	117	74-131			
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5		98.9	84-121			
Surrogate: Toluene-d8	66		"	62.5		106	85-115			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	84-114			

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**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch B8J1903 - EPA 5030B (Water)**

Matrix Spike Dup (B8J1903-MSD1)		Source: Y810304-01			Prepared: 10/19/2018 Analyzed: 10/22/2018					
Benzene	53.3	1.00	ug/L	50.0	ND	107	74-130	12.4	20	
Toluene	55.4	1.00	"	50.0	ND	111	73-131	11.8	20	
Ethylbenzene	54.2	1.00	"	50.0	ND	108	76-132	13.4	20	
m,p-Xylene	109	2.00	"	100	ND	109	69-139	12.8	20	
o-Xylene	56.7	1.00	"	50.0	ND	113	74-131	8.14	20	
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5		98.2	84-121			
Surrogate: Toluene-d8	66		"	62.5		106	85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.4	84-114			

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch B8J1903 - EPA 5030B (Water)**

Matrix Spike Dup (B8J1903-MSD2)		Source: Y810304-02			Prepared: 10/19/2018 Analyzed: 10/22/2018					
Benzene	62.4	1.00	ug/L	50.0	ND	125	74-130	9.04	20	
Toluene	64.6	1.00	"	50.0	ND	129	73-131	8.57	20	
Ethylbenzene	63.3	1.00	"	50.0	0.480	126	76-132	8.84	20	
m,p-Xylene	127	2.00	"	100	7.95	119	69-139	8.65	20	
o-Xylene	64.3	1.00	"	50.0	0.490	128	74-131	8.63	20	
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5		98.9	84-121			
Surrogate: Toluene-d8	65		"	62.5		104	85-115			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	84-114			

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Denver CO 80204

Jason Davidson

Project Number: 018-0459

Project: Kraus-Albin #22-20 TB

### Notes and Definitions

U Sample is Non-Detect.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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Jen Pellegrini For Noelle Doyle Mathis, President



October 24, 2018

**Olsson Associates**

**Jason Davidson**

**1525 Raleigh St, Suite 400**

**Denver**

**CO 80204**

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**Project Number - 018-0459**

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MW-2	Y810305-01	Water	October 18, 2018 13:56	10/18/2018 17:10
MW-3	Y810305-02	Water	October 18, 2018 13:45	10/18/2018 17:10

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LABORATORY, INC

Client: Olsson  
Address: 1525 Raleigh St., Ste. 400  
Telephone Number: 303-237-2072  
Email Address: jidavidson@olsson.com

Project Manager: Jason Davidson  
Project Name: Kraus-Albin #22-20 TB  
Project Number: 018-0459  
Samples Collected By: jidavidson@olsson.com

1 725 Elk Place | Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative					Matrix			Analysis	Sample Instructions
				Unpreserved	HCl	HNO <sub>3</sub>	Other	Groundwater	Soil	Air Summa #	Other		
MW-2	10/18/18	13:56	3		3				X			BTEX (8260)	1
MW-3	10/18/18	13:45	3		3				X			BTEX (8260)	2
													3
													4
													5
													6
													7
													8
													9
													10

  

Relinquished By:	Date:	Time:	Received By:	Date:	Time:	Turnaround Time:
Jason Davidson	10/18/18	17:10	[Signature]	10/18/18	17:10	Same Day <input type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input checked="" type="checkbox"/>
Relinquished By:	Date:	Time:	Received By:	Date:	Time:	

8.3

Date Results Needed

Origins Laboratory, Inc.

*Jefe Pellegrini*

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Origins Laboratory

F-012207-01-R1  
Effective Date: 01/09/12

## Sample Receipt Checklist

Origins Work Order: Y810305

Client: Olsson

Client Project ID: Kraus-Albin 22-20 TB

Checklist Completed by: JG

Shipped Via: HD  
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 10/19/2018

Airbill #: N/A

Matrix(s) Received: (Check all that apply): Soil/Solid ☒ Water ☐ Other: ☐

Cooler Number/Temperature: 1 / 8.3 °C        /        °C        /        °C        /        °C (Describe)

Thermometer ID: T003

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C <sup>(1)</sup> ?		<input checked="" type="checkbox"/>		<u>Same Day</u>
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Were all samples received intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HT's due within 48 hours present <sup>(1)</sup> ?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.		<input checked="" type="checkbox"/>		
Are samples preserved that require preservation and was it checked <sup>(1)</sup> ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO <sub>3</sub> , HCL, H <sub>2</sub> SO <sub>4</sub> ) / (pH >10 for samples preserved with NaAsO <sub>2</sub> +NaOH, ZnAc+NaOH)		<input checked="" type="checkbox"/>		
Additional Comments (if any):				

<sup>(1)</sup> If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager) JG

10/19/18  
Date/Time Reviewed

Origins Laboratory, Inc.

*Jefe Pellegrini*

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

Olsson Associates  
1525 Raleigh St, Suite 400  
Denver CO 80204

Jason Davidson  
Project Number: 018-0459  
Project: Kraus-Albin #22-20 TB

**MW-2**

**10/18/2018 1:56:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y810305-01 (Water)**

**BTEX by EPA 8260C**

Benzene	371	100	ug/L	100	B8J1903	KDK	10/19/2018	10/23/2018
Toluene	25.8	1.00	"	1	"	KDK	"	10/22/2018
Ethylbenzene	39.6	1.00	"	"	"	KDK	"	"
Xylenes, total	165	1.00	"	"	"	KDK	"	"

Surrogate: 1,2-Dichloroethane-d4	101 %	84-121	"	"	"
Surrogate: Toluene-d8	105 %	85-115	"	"	"
Surrogate: 4-Bromofluorobenzene	101 %	84-114	"	"	"

Origins Laboratory, Inc.



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Olsson Associates  
1525 Raleigh St, Suite 400  
Denver CO 80204

Jason Davidson  
Project Number: 018-0459  
Project: Kraus-Albin #22-20 TB

## MW-3

10/18/2018 1:45:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y810305-02 (Water)

### BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B8J1903	KDK	10/19/2018	10/22/2018	U
Toluene	ND	1.00	"	"	"	KDK	"	"	U
Ethylbenzene	ND	1.00	"	"	"	KDK	"	"	U
Xylenes, total	ND	1.00	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	91.3 %	84-121	"	"	"
Surrogate: Toluene-d8	110 %	85-115	"	"	"
Surrogate: 4-Bromofluorobenzene	89.5 %	84-114	"	"	"

Origins Laboratory, Inc.



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Olsson Associates  
1525 Raleigh St, Suite 400  
Denver CO 80204

Jason Davidson  
Project Number: 018-0459  
Project: Kraus-Albin #22-20 TB

**Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B8J1903 - EPA 5030B (Water)**

**Blank (B8J1903-BLK1)**

Prepared: 10/19/2018 Analyzed: 10/22/2018

Benzene	ND	1.00	ug/L							U
Toluene	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Xylenes, total	ND	1.00	"							U
Surrogate: 1,2-Dichloroethane-d4	69		"	62.5	110		84-121			
Surrogate: Toluene-d8	59		"	62.5	95.0		85-115			
Surrogate: 4-Bromofluorobenzene	64		"	62.5	103		84-114			

Origins Laboratory, Inc.



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Olsson Associates  
1525 Raleigh St, Suite 400  
Denver CO 80204

Jason Davidson  
Project Number: 018-0459  
Project: Kraus-Albin #22-20 TB

**Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B8J1903 - EPA 5030B (Water)</b>										
<b>Blank (B8J1903-BLK2)</b>					Prepared: 10/19/2018 Analyzed: 10/22/2018					
Benzene	ND	1.00	ug/L							U
Toluene	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Xylenes, total	ND	1.00	"							U
Surrogate: 1,2-Dichloroethane-d4	65		"	62.5		103	84-121			
Surrogate: Toluene-d8	65		"	62.5		104	85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.8	84-114			

Origins Laboratory, Inc.



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Olsson Associates  
1525 Raleigh St, Suite 400  
Denver CO 80204

Jason Davidson  
Project Number: 018-0459  
Project: Kraus-Albin #22-20 TB

**Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B8J1903 - EPA 5030B (Water)</b>										
<b>LCS (B8J1903-BS1)</b>					Prepared: 10/19/2018 Analyzed: 10/22/2018					
Benzene	55.5	1.00	ug/L	50.0		111	73.3-129			
Toluene	54.7	1.00	"	50.0		109	76.2-123			
Ethylbenzene	53.0	1.00	"	50.0		106	73.6-130			
m,p-Xylene	103	2.00	"	100		103	76.1-126			
o-Xylene	50.1	1.00	"	50.0		100	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5		97.3	84-121			
Surrogate: Toluene-d8	65		"	62.5		105	85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.5	84-114			

Origins Laboratory, Inc.



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Olsson Associates  
1525 Raleigh St, Suite 400  
Denver CO 80204

Jason Davidson  
Project Number: 018-0459  
Project: Kraus-Albin #22-20 TB

**Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B8J1903 - EPA 5030B (Water)**

**LCS (B8J1903-BS2)**

Prepared: 10/19/2018 Analyzed: 10/22/2018

Benzene	54.5	1.00	ug/L	50.0	109	73.3-129
Toluene	58.2	1.00	"	50.0	116	76.2-123
Ethylbenzene	57.5	1.00	"	50.0	115	73.6-130
m,p-Xylene	115	2.00	"	100	115	76.1-126
o-Xylene	57.0	1.00	"	50.0	114	76.6-124
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5	98.9	84-121
Surrogate: Toluene-d8	68		"	62.5	108	85-115
Surrogate: 4-Bromofluorobenzene	63		"	62.5	100	84-114

Origins Laboratory, Inc.



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Olsson Associates  
1525 Raleigh St, Suite 400  
Denver CO 80204

Jason Davidson  
Project Number: 018-0459  
Project: Kraus-Albin #22-20 TB

**Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B8J1903 - EPA 5030B (Water)**

Matrix Spike (B8J1903-MS1)		Source: Y810304-01			Prepared: 10/19/2018 Analyzed: 10/22/2018					
Benzene	60.3	1.00	ug/L	50.0	ND	121	74-130			
Toluene	62.3	1.00	"	50.0	ND	125	73-131			
Ethylbenzene	62.0	1.00	"	50.0	ND	124	76-132			
m,p-Xylene	123	2.00	"	100	ND	123	69-139			
o-Xylene	61.5	1.00	"	50.0	ND	123	74-131			
Surrogate: 1,2-Dichloroethane-d4	64		"	62.5		102	84-121			
Surrogate: Toluene-d8	66		"	62.5		106	85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		100	84-114			

Origins Laboratory, Inc.



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Olsson Associates  
1525 Raleigh St, Suite 400  
Denver CO 80204

Jason Davidson  
Project Number: 018-0459  
Project: Kraus-Albin #22-20 TB

**Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B8J1903 - EPA 5030B (Water)**

Matrix Spike (B8J1903-MS2)		Source: Y810304-02			Prepared: 10/19/2018 Analyzed: 10/22/2018					
Benzene	57.0	1.00	ug/L	50.0	ND	114	74-130			
Toluene	59.3	1.00	"	50.0	ND	119	73-131			
Ethylbenzene	58.0	1.00	"	50.0	0.480	115	76-132			
m,p-Xylene	116	2.00	"	100	7.95	108	69-139			
o-Xylene	59.0	1.00	"	50.0	0.490	117	74-131			
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5		98.9	84-121			
Surrogate: Toluene-d8	66		"	62.5		106	85-115			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	84-114			

Origins Laboratory, Inc.



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Olsson Associates  
1525 Raleigh St, Suite 400  
Denver CO 80204

Jason Davidson  
Project Number: 018-0459  
Project: Kraus-Albin #22-20 TB

**Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B8J1903 - EPA 5030B (Water)**

Matrix Spike Dup (B8J1903-MSD1)		Source: Y810304-01			Prepared: 10/19/2018 Analyzed: 10/22/2018					
Benzene	53.3	1.00	ug/L	50.0	ND	107	74-130	12.4	20	
Toluene	55.4	1.00	"	50.0	ND	111	73-131	11.8	20	
Ethylbenzene	54.2	1.00	"	50.0	ND	108	76-132	13.4	20	
m,p-Xylene	109	2.00	"	100	ND	109	69-139	12.8	20	
o-Xylene	56.7	1.00	"	50.0	ND	113	74-131	8.14	20	
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5		98.2	84-121			
Surrogate: Toluene-d8	66		"	62.5		106	85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.4	84-114			

Origins Laboratory, Inc.



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Olsson Associates  
1525 Raleigh St, Suite 400  
Denver CO 80204

Jason Davidson  
Project Number: 018-0459  
Project: Kraus-Albin #22-20 TB

**Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B8J1903 - EPA 5030B (Water)**

Matrix Spike Dup (B8J1903-MSD2)		Source: Y810304-02			Prepared: 10/19/2018 Analyzed: 10/22/2018					
Benzene	62.4	1.00	ug/L	50.0	ND	125	74-130	9.04	20	
Toluene	64.6	1.00	"	50.0	ND	129	73-131	8.57	20	
Ethylbenzene	63.3	1.00	"	50.0	0.480	126	76-132	8.84	20	
m,p-Xylene	127	2.00	"	100	7.95	119	69-139	8.65	20	
o-Xylene	64.3	1.00	"	50.0	0.490	128	74-131	8.63	20	
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5		98.9	84-121			
Surrogate: Toluene-d8	65		"	62.5		104	85-115			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	84-114			

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Olsson Associates

1525 Raleigh St, Suite 400

Denver CO 80204

Jason Davidson

Project Number: 018-0459

Project: Kraus-Albin #22-20 TB

### Notes and Definitions

U Sample is Non-Detect.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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

Jen Pellegrini For Noelle Doyle Mathis, President



January 24, 2019

**Olsson Associates**

**Jason Davidson**

**1525 Raleigh St, Suite 400**

**Denver**

**CO 80204**

**Project Name - Kraus-Albin #22-20 TB**

**Project Number - 018-0459**

Attached are your analytical results for Kraus-Albin #22-20 TB received by Origins Laboratory, Inc. January 23, 2019. This project is associated with Origins project number Y901296-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.  
303.433.1322  
o-squad@oelabinc.com



1725 Elk Place, Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Olsson Associates

1525 Raleigh St, Suite 400

Denver CO 80204

Jason Davidson

Project Number: 018-0459

Project: Kraus-Albin #22-20 TB

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-2	Y901296-01	Water	January 23, 2019 10:45	01/23/2019 12:10
MW-3	Y901296-02	Water	January 23, 2019 11:00	01/23/2019 12:10

Origins Laboratory, Inc.



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Jen Pellegrini For Noelle Doyle Mathis, President



Jason Davidson  
Project Number: 018-0459  
Project: Kraus-Albin #22-20 TB

[illegible]

Origins Laboratory, Inc.

Jeff Pellgrini

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

Olsson Associates  
1525 Raleigh St, Suite 400  
Denver CO 80204

Jason Davidson  
Project Number: 018-0459  
Project: Kraus-Albin #22-20 TB

Origins Laboratory

F-012207-01-R1  
Effective Date: 01/09/12

### Sample Receipt Checklist

Origins Work Order: Y901296

Client: Olsson

Client Project ID: Kraus Albin 22-20

Checklist Completed by: JG

Shipped Via: HD

(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 1/23/2019

Airbill #: N/A

Matrix(s) Received: (Check all that apply): Soil/Solid ☒ Water ☐ Other: ☐

Cooler Number/Temperature: 1 / 3.9 °C        /        °C        /        °C (Describe)

Thermometer ID: T003

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are samples preserved that require preservation and was it checked <sup>(1)</sup> ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO <sub>3</sub> , HCL, H <sub>2</sub> SO <sub>4</sub> ) / (pH >10 for samples preserved with NaAsO <sub>2</sub> +NaOH, ZnAc+NaOH).	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Additional Comments (if any):				

<sup>(1)</sup>If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager) JG

Date/Time Reviewed 1/24/19

Origins Laboratory, Inc.

*Jefe Pellegrini*

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

Olsson Associates  
1525 Raleigh St, Suite 400  
Denver CO 80204

Jason Davidson  
Project Number: 018-0459  
Project: Kraus-Albin #22-20 TB

## MW-2

1/23/2019 10:45:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y901296-01 (Water)

### BTEX by EPA 8260C

Benzene	200	4.00	ug/L	4	B9A2305	KDK	01/23/2019	01/23/2019	
Toluene	ND	4.00	"	"	"	KDK	"	"	U
Ethylbenzene	ND	4.00	"	"	"	KDK	"	"	U
Xylenes, total	ND	4.00	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	113 %	84-121	"	"	"
Surrogate: Toluene-d8	93.5 %	85-115	"	"	"
Surrogate: 4-Bromofluorobenzene	100 %	84-114	"	"	"

Origins Laboratory, Inc.



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Olsson Associates  
1525 Raleigh St, Suite 400  
Denver CO 80204

Jason Davidson  
Project Number: 018-0459  
Project: Kraus-Albin #22-20 TB

**MW-3**

**1/23/2019 11:00:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y901296-02 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.00	ug/L	1	B9A2305	KDK	01/23/2019	01/23/2019	U
Toluene	ND	1.00	"	"	"	KDK	"	"	U
Ethylbenzene	ND	1.00	"	"	"	KDK	"	"	U
Xylenes, total	ND	1.00	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	97.7 %	84-121	"	"	"
Surrogate: Toluene-d8	97.8 %	85-115	"	"	"
Surrogate: 4-Bromofluorobenzene	102 %	84-114	"	"	"

Origins Laboratory, Inc.



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Olsson Associates  
1525 Raleigh St, Suite 400  
Denver CO 80204

Jason Davidson  
Project Number: 018-0459  
Project: Kraus-Albin #22-20 TB

**Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B9A2305 - EPA 5030B (Water)</b>										
<b>Blank (B9A2305-BLK1)</b>					Prepared: 01/23/2019 Analyzed: 01/23/2019					
Benzene	ND	1.00	ug/L							U
Toluene	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Xylenes, total	ND	1.00	"							U
Surrogate: 1,2-Dichloroethane-d4	69		"	62.5	111		84-121			
Surrogate: Toluene-d8	59		"	62.5	94.1		85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5	101		84-114			

Origins Laboratory, Inc.



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

Olsson Associates  
1525 Raleigh St, Suite 400  
Denver CO 80204

Jason Davidson  
Project Number: 018-0459  
Project: Kraus-Albin #22-20 TB

**Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B9A2305 - EPA 5030B (Water)										
LCS (B9A2305-BS1)					Prepared: 01/23/2019 Analyzed: 01/23/2019					
Benzene	56.8	1.00	ug/L	50.0		114	73.3-129			
Toluene	52.4	1.00	"	50.0		105	76.2-123			
Ethylbenzene	50.3	1.00	"	50.0		101	73.6-130			
m,p-Xylene	105	2.00	"	100		105	76.1-126			
o-Xylene	50.4	1.00	"	50.0		101	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	67		"	62.5		108	84-121			
Surrogate: Toluene-d8	58		"	62.5		93.0	85-115			
Surrogate: 4-Bromofluorobenzene	60		"	62.5		96.2	84-114			

Origins Laboratory, Inc.



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Olsson Associates  
1525 Raleigh St, Suite 400  
Denver CO 80204

Jason Davidson  
Project Number: 018-0459  
Project: Kraus-Albin #22-20 TB

**Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B9A2305 - EPA 5030B (Water)**

Matrix Spike (B9A2305-MS1)		Source: Y901289-05			Prepared: 01/23/2019 Analyzed: 01/24/2019					
Benzene	57.5	1.00	ug/L	50.0	0.920	113	74-130			
Toluene	56.0	1.00	"	50.0	ND	112	73-131			
Ethylbenzene	78.0	1.00	"	50.0	32.7	90.6	76-132			
m,p-Xylene	116	2.00	"	100	0.400	116	69-139			
o-Xylene	57.0	1.00	"	50.0	1.55	111	74-131			
Surrogate: 1,2-Dichloroethane-d4	53		"	62.5		84.7	84-121			
Surrogate: Toluene-d8	66		"	62.5		105	85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	84-114			

Origins Laboratory, Inc.



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Olsson Associates  
1525 Raleigh St, Suite 400  
Denver CO 80204

Jason Davidson  
Project Number: 018-0459  
Project: Kraus-Albin #22-20 TB

**Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B9A2305 - EPA 5030B (Water)</b>										
<b>Matrix Spike Dup (B9A2305-MSD1)</b>			<b>Source: Y901289-05</b>		Prepared: 01/23/2019 Analyzed: 01/23/2019					
Benzene	61.9	1.00	ug/L	50.0	0.920	122	74-130	7.49	20	
Toluene	56.0	1.00	"	50.0	ND	112	73-131	0.0714	20	
Ethylbenzene	90.8	1.00	"	50.0	32.7	116	76-132	15.2	20	
m,p-Xylene	115	2.00	"	100	0.400	114	69-139	1.13	20	
o-Xylene	55.3	1.00	"	50.0	1.55	107	74-131	3.05	20	
Surrogate: 1,2-Dichloroethane-d4	64		"	62.5		103	84-121			
Surrogate: Toluene-d8	61		"	62.5		97.7	85-115			

Origins Laboratory, Inc.



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



Olsson Associates

1525 Raleigh St, Suite 400

Denver CO 80204

Jason Davidson

Project Number: 018-0459

Project: Kraus-Albin #22-20 TB

### Notes and Definitions

U Sample is Non-Detect.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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

Jen Pellegrini For Noelle Doyle Mathis, President



April 23, 2019

**Olsson Associates**

**Jason Davidson**

**1525 Raleigh St, Suite 400**

**Denver**

**CO 80204**

**Project Name - Kraus Albin GW**

**Project Number - 018-0459**

Attached are your analytical results for Kraus Albin GW received by Origins Laboratory, Inc. April 17, 2019. This project is associated with Origins project number Y904316-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.  
303.433.1322  
o-squad@oelabinc.com



1725 Elk Place, Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Olsson Associates

1525 Raleigh St, Suite 400

Denver CO 80204

Jason Davidson

Project Number: 018-0459

Project: Kraus Albin GW

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-2	Y904316-01	Water	April 17, 2019 12:45	04/17/2019 15:05
MW-3	Y904316-02	Water	April 17, 2019 12:55	04/17/2019 15:05
MW-4	Y904316-03	Water	April 17, 2019 13:00	04/17/2019 15:05
MW-5	Y904316-04	Water	April 17, 2019 13:10	04/17/2019 15:05

Origins Laboratory, Inc.



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

Jen Pellegrini For Noelle Doyle Mathis, President



Olsson Associates  
1525 Raleigh St, Suite 400  
Denver CO 80204

Jason Davidson  
Project Number: 018-0459  
Project: Kraus Albin GW

Origins Laboratory

F-012207-01-R1  
Effective Date: 01/09/12

## Sample Receipt Checklist

Origins Work Order: Y904316

Client: Olsson

Client Project ID: Kraus Albin

Checklist Completed by: JG

Shipped Via: HD  
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 4/18/2019

Airbill #: N/A

Matrix(s) Received: (Check all that apply): Soil/Solid ☒ Water ☐ Other: ☐

Cooler Number/Temperature: 1 5.5 °C 1 °C 1 °C (Describe) 1 °C

Thermometer ID: T003

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace (> ¼ inch bubble) present? if yes, contact client and note in narrative.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples preserved that require preservation and was it checked <sup>(1)</sup> ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH < 2 for samples preserved with HNO <sub>3</sub> , HCL, H <sub>2</sub> SO <sub>4</sub> ) / (pH > 10 for samples preserved with NaAsO <sub>2</sub> +NaOH, ZnAc+NaOH)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Comments (if any):				

<sup>(1)</sup> If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager) [Signature]

Date/Time Reviewed 4/18/19

Origins Laboratory, Inc.

Jefe Pellegrini

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

Olsson Associates  
1525 Raleigh St, Suite 400  
Denver CO 80204

Jason Davidson  
Project Number: 018-0459  
Project: Kraus Albin GW

## MW-2

4/17/2019 12:45:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y904316-01 (Water)

### BTEX by EPA 8260D

Benzene	127	4.00	ug/L	4	B9D1804	JTD	04/18/2019	04/18/2019	
Toluene	ND	4.00	"	"	"	JTD	"	"	U
Ethylbenzene	ND	4.00	"	"	"	JTD	"	"	U
Xylenes, total	ND	4.00	"	"	"	JTD	"	"	U

Surrogate: 1,2-Dichloroethane-d4	113 %	70-130			"	"	"
Surrogate: Toluene-d8	103 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	98.6 %	70-130			"	"	"

Origins Laboratory, Inc.



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Olsson Associates  
1525 Raleigh St, Suite 400  
Denver CO 80204

Jason Davidson  
Project Number: 018-0459  
Project: Kraus Albin GW

## MW-3

4/17/2019 12:55:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y904316-02 (Water)

### BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B9D1804	JTD	04/18/2019	04/18/2019	U
Toluene	ND	1.00	"	"	"	JTD	"	"	U
Ethylbenzene	ND	1.00	"	"	"	JTD	"	"	U
Xylenes, total	ND	1.00	"	"	"	JTD	"	"	U

Surrogate: 1,2-Dichloroethane-d4  
Surrogate: Toluene-d8  
Surrogate: 4-Bromofluorobenzene

112 %	70-130	"	"	"
103 %	70-130	"	"	"
103 %	70-130	"	"	"

Origins Laboratory, Inc.



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Olsson Associates  
1525 Raleigh St, Suite 400  
Denver CO 80204

Jason Davidson  
Project Number: 018-0459  
Project: Kraus Albin GW

## MW-4

4/17/2019 1:00:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y904316-03 (Water)

### BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B9D1804	JTD	04/18/2019	04/18/2019	U
Toluene	ND	1.00	"	"	"	JTD	"	"	U
Ethylbenzene	ND	1.00	"	"	"	JTD	"	"	U
Xylenes, total	ND	1.00	"	"	"	JTD	"	"	U

Surrogate: 1,2-Dichloroethane-d4	115 %	70-130	"	"	"
Surrogate: Toluene-d8	100 %	70-130	"	"	"
Surrogate: 4-Bromofluorobenzene	101 %	70-130	"	"	"

Origins Laboratory, Inc.



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Olsson Associates  
1525 Raleigh St, Suite 400  
Denver CO 80204

Jason Davidson  
Project Number: 018-0459  
Project: Kraus Albin GW

## MW-5

4/17/2019 1:10:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y904316-04 (Water)

### BTEX by EPA 8260D

Benzene	13.5	1.00	ug/L	1	B9D1804	JTD	04/18/2019	04/18/2019
Toluene	1.40	1.00	"	"	"	JTD	"	"
Ethylbenzene	6.46	1.00	"	"	"	JTD	"	"
Xylenes, total	21.9	1.00	"	"	"	JTD	"	"

Surrogate: 1,2-Dichloroethane-d4	115 %	70-130	"	"	"	"	"
Surrogate: Toluene-d8	103 %	70-130	"	"	"	"	"
Surrogate: 4-Bromofluorobenzene	102 %	70-130	"	"	"	"	"

Origins Laboratory, Inc.



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Olsson Associates  
1525 Raleigh St, Suite 400  
Denver CO 80204

Jason Davidson  
Project Number: 018-0459  
Project: Kraus Albin GW

**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B9D1804 - EPA 5030B (Water)**

**Blank (B9D1804-BLK1)**

Prepared: 04/18/2019 Analyzed: 04/18/2019

Benzene	ND	1.00	ug/L							U
Toluene	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Xylenes, total	ND	1.00	"							U
Surrogate: 1,2-Dichloroethane-d4	72		"	62.5	114		70-130			
Surrogate: Toluene-d8	64		"	62.5	103		70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5	102		70-130			

Origins Laboratory, Inc.



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Olsson Associates  
1525 Raleigh St, Suite 400  
Denver CO 80204

Jason Davidson  
Project Number: 018-0459  
Project: Kraus Albin GW

**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B9D1804 - EPA 5030B (Water)**

**LCS (B9D1804-BS1)**

Prepared: 04/18/2019 Analyzed: 04/18/2019

Benzene	49.2	1.00	ug/L	50.0		98.3	70-130			
Toluene	50.8	1.00	"	50.0		102	70-130			
Ethylbenzene	49.5	1.00	"	50.0		99.1	70-130			
m,p-Xylene	101	2.00	"	100		101	70-130			
o-Xylene	49.5	1.00	"	50.0		99.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	66		"	62.5		106	70-130			
Surrogate: Toluene-d8	64		"	62.5		102	70-130			
Surrogate: 4-Bromofluorobenzene	66		"	62.5		105	70-130			

Origins Laboratory, Inc.



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Jen Pellegrini For Noelle Doyle Mathis, President

Olsson Associates  
1525 Raleigh St, Suite 400  
Denver CO 80204

Jason Davidson  
Project Number: 018-0459  
Project: Kraus Albin GW

**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch B9D1804 - EPA 5030B (Water)**

Matrix Spike (B9D1804-MS1)		Source: Y904313-01			Prepared: 04/18/2019 Analyzed: 04/18/2019					
Benzene	50.6	1.00	ug/L	50.0	ND	101	70-130			
Toluene	52.8	1.00	"	50.0	ND	106	70-130			
Ethylbenzene	51.3	1.00	"	50.0	ND	103	70-130			
m,p-Xylene	104	2.00	"	100	0.260	104	70-130			
o-Xylene	50.7	1.00	"	50.0	ND	101	70-130			
Surrogate: 1,2-Dichloroethane-d4	67		"	62.5		107	70-130			
Surrogate: Toluene-d8	64		"	62.5		103	70-130			
Surrogate: 4-Bromofluorobenzene	65		"	62.5		103	70-130			

Origins Laboratory, Inc.



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Olsson Associates  
1525 Raleigh St, Suite 400  
Denver CO 80204

Jason Davidson  
Project Number: 018-0459  
Project: Kraus Albin GW

**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B9D1804 - EPA 5030B (Water)**

Matrix Spike Dup (B9D1804-MSD1)		Source: Y904313-01			Prepared: 04/18/2019 Analyzed: 04/18/2019					
Benzene	52.4	1.00	ug/L	50.0	ND	105	70-130	3.59	20	
Toluene	56.0	1.00	"	50.0	ND	112	70-130	5.88	20	
Ethylbenzene	55.5	1.00	"	50.0	ND	111	70-130	7.94	20	
m,p-Xylene	112	2.00	"	100	0.260	112	70-130	7.42	20	
o-Xylene	55.4	1.00	"	50.0	ND	111	70-130	8.99	20	
Surrogate: 1,2-Dichloroethane-d4	67		"	62.5		107	70-130			
Surrogate: Toluene-d8	63		"	62.5		100	70-130			
Surrogate: 4-Bromofluorobenzene	65		"	62.5		103	70-130			

Origins Laboratory, Inc.



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Olsson Associates

1525 Raleigh St, Suite 400

Denver CO 80204

Jason Davidson

Project Number: 018-0459

Project: Kraus Albin GW

### Notes and Definitions

U Sample is Non-Detect.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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

Jen Pellegrini For Noelle Doyle Mathis, President



July 29, 2019

**Olsson Associates**

**Trent Watne**

**1525 Raleigh St, Suite 400**

**Denver**

**CO 80204**

**Project Name - Kraus-Albin #22-20 TB**

**Project Number - 018-0459**

Attached are your analytical results for Kraus-Albin #22-20 TB received by Origins Laboratory, Inc. July 23, 2019. This project is associated with Origins project number Y907356-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.  
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1725 Elk Place, Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Olsson Associates

1525 Raleigh St, Suite 400

Denver CO 80204

Trent Watne

Project Number: 018-0459

Project: Kraus-Albin #22-20 TB

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-2	Y907356-01	Water	July 23, 2019 12:10	07/23/2019 14:03
MW-3	Y907356-02	Water	July 23, 2019 12:15	07/23/2019 14:03
MW-4	Y907356-03	Water	July 23, 2019 12:20	07/23/2019 14:03
MW-5	Y907356-04	Water	July 23, 2019 12:05	07/23/2019 14:03

Origins Laboratory, Inc.



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

Jen Pellegrini For Noelle Doyle Mathis, President





Olsson Associates  
1525 Raleigh St, Suite 400  
Denver CO 80204

Trent Watne  
Project Number: 018-0459  
Project: Kraus-Albin #22-20 TB

Origins Laboratory

F-012207-01-R1  
Effective Date: 01/09/12

## Sample Receipt Checklist

Origins Work Order: 19107356

Client: Olsson

Client Project ID: Kraus Albin 22-20

Checklist Completed by: JG

Shipped Via: HD

(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 7/24/2019

Airbill #: N/A

Matrix(s) Received: (Check all that apply): Soil/Solid ☒ Water ☐ Other: \_\_\_\_\_

Cooler Number/Temperature: 1 / 11.9 °C \_\_\_\_\_ / \_\_\_\_\_ °C \_\_\_\_\_ / \_\_\_\_\_ °C (Describe)

Thermometer ID: T003

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C <sup>(1)</sup> ?		<input checked="" type="checkbox"/>		<u>Same Day</u>
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Were all samples received intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
For volatiles in water — is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.		<input checked="" type="checkbox"/>		
Are samples preserved that require preservation and was it checked <sup>(1)</sup> ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity) / (pH < 2 for samples preserved with HNO <sub>3</sub> , HCL, H <sub>2</sub> SO <sub>4</sub> ) / (pH > 10 for samples preserved with Na <sub>2</sub> CO <sub>3</sub> +NaOH, ZnAc+NaOH)		<input checked="" type="checkbox"/>		
Additional Comments (if any):				

<sup>(1)</sup> If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager) JG

Date/Time Reviewed 7/25/19

Origins Laboratory, Inc.

*Jefe Pellegrini*

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Olsson Associates  
1525 Raleigh St, Suite 400  
Denver CO 80204

Trent Watne  
Project Number: 018-0459  
Project: Kraus-Albin #22-20 TB

## MW-2

7/23/2019 12:10:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y907356-01 (Water)

### BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B9G2407	KDK	07/24/2019	07/24/2019	U
Toluene	ND	1.00	"	"	"	KDK	"	"	U
Ethylbenzene	ND	1.00	"	"	"	KDK	"	"	U
Xylenes, total	ND	1.00	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	99.2 %	70-130	"	"	"
Surrogate: Toluene-d8	101 %	70-130	"	"	"
Surrogate: 4-Bromofluorobenzene	100 %	70-130	"	"	"

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Denver CO 80204

Trent Watne  
Project Number: 018-0459  
Project: Kraus-Albin #22-20 TB

## MW-3

7/23/2019 12:15:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y907356-02 (Water)

### BTEX by EPA 8260D

Benzene	107	1.00	ug/L	1	B9G2407	KDK	07/24/2019	07/25/2019
Toluene	2.05	1.00	"	"	"	KDK	"	"
Ethylbenzene	9.88	1.00	"	"	"	KDK	"	"
Xylenes, total	14.4	1.00	"	"	"	KDK	"	"

Surrogate: 1,2-Dichloroethane-d4	100 %	70-130	"	"	"	"	"
Surrogate: Toluene-d8	102 %	70-130	"	"	"	"	"
Surrogate: 4-Bromofluorobenzene	99.0 %	70-130	"	"	"	"	"

Origins Laboratory, Inc.



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Project: Kraus-Albin #22-20 TB

## MW-4

7/23/2019 12:20:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y907356-03 (Water)

### BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B9G2407	KDK	07/24/2019	07/25/2019	U
Toluene	ND	1.00	"	"	"	KDK	"	"	U
Ethylbenzene	ND	1.00	"	"	"	KDK	"	"	U
Xylenes, total	ND	1.00	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	98.8 %	70-130	"	"	"
Surrogate: Toluene-d8	102 %	70-130	"	"	"
Surrogate: 4-Bromofluorobenzene	100 %	70-130	"	"	"

Origins Laboratory, Inc.



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## MW-5

7/23/2019 12:05:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y907356-04 (Water)

### BTEX by EPA 8260D

Benzene	5.07	1.00	ug/L	1	B9G2407	KDK	07/24/2019	07/25/2019	
Toluene	ND	1.00	"	"	"	KDK	"	"	U
Ethylbenzene	3.84	1.00	"	"	"	KDK	"	"	
Xylenes, total	3.90	1.00	"	"	"	KDK	"	"	
Surrogate: 1,2-Dichloroethane-d4	99.8 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	102 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	98.7 %	70-130			"	"	"	"	

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Project: Kraus-Albin #22-20 TB

**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B9G2407 - EPA 5030B (Water)</b>										
<b>Blank (B9G2407-BLK1)</b>					Prepared: 07/24/2019 Analyzed: 07/24/2019					
Benzene	ND	1.00	ug/L							U
Toluene	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Xylenes, total	ND	1.00	"							U
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5		99.3	70-130			
Surrogate: Toluene-d8	64		"	62.5		102	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.3	70-130			

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**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B9G2407 - EPA 5030B (Water)</b>										
<b>LCS (B9G2407-BS1)</b>					Prepared: 07/24/2019 Analyzed: 07/24/2019					
Benzene	49.7	1.00	ug/L	50.0		99.4	70-130			
Toluene	51.3	1.00	"	50.0		103	70-130			
Ethylbenzene	50.6	1.00	"	50.0		101	70-130			
m,p-Xylene	102	2.00	"	100		102	70-130			
o-Xylene	50.8	1.00	"	50.0		102	70-130			
Surrogate: 1,2-Dichloroethane-d4	60		"	62.5		95.5	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.8	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	70-130			

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**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B9G2407 - EPA 5030B (Water)**

Matrix Spike (B9G2407-MS1)		Source: Y907356-01			Prepared: 07/24/2019 Analyzed: 07/24/2019					
Benzene	54.9	1.00	ug/L	50.0	ND	110	70-130			
Toluene	55.7	1.00	"	50.0	ND	111	70-130			
Ethylbenzene	56.5	1.00	"	50.0	0.110	113	70-130			
m,p-Xylene	112	2.00	"	100	0.330	112	70-130			
o-Xylene	55.7	1.00	"	50.0	ND	111	70-130			
Surrogate: 1,2-Dichloroethane-d4	60		"	62.5		96.7	70-130			
Surrogate: Toluene-d8	63		"	62.5		100	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	70-130			

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Project Number: 018-0459  
Project: Kraus-Albin #22-20 TB

**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B9G2407 - EPA 5030B (Water)**

Matrix Spike Dup (B9G2407-MSD1)		Source: Y907356-01			Prepared: 07/24/2019 Analyzed: 07/24/2019					
Benzene	55.4	1.00	ug/L	50.0	ND	111	70-130	0.889	20	
Toluene	56.3	1.00	"	50.0	ND	113	70-130	1.05	20	
Ethylbenzene	57.2	1.00	"	50.0	0.110	114	70-130	1.20	20	
m,p-Xylene	113	2.00	"	100	0.330	113	70-130	0.506	20	
o-Xylene	55.8	1.00	"	50.0	ND	112	70-130	0.305	20	
Surrogate: 1,2-Dichloroethane-d4	60		"	62.5		96.2	70-130			
Surrogate: Toluene-d8	63		"	62.5		101	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	70-130			

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Project: Kraus-Albin #22-20 TB

### Notes and Definitions

U Sample is Non-Detect.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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Jen Pellegrini For Noelle Doyle Mathis, President