

October 22, 2021

Tasman Geosciences

Mike Jahn

6855 West 119th Avenue

Broomfield CO 80020

**Project Name - KMG - Hauck 24-29**

**Project Number - 90419452**

Attached are your analytical results for KMG - Hauck 24-29 received by Origins Laboratory, Inc. October 12, 2021. This project is associated with Origins project number Y110271-01.

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



Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Mike Jahn  
Project Number: 90419452  
Project: KMG - Hauck 24-29

CROSS REFERENCE REPORT

| Sample ID    | Laboratory ID | Matrix | Date Sampled           | Date Received    |
|--------------|---------------|--------|------------------------|------------------|
| WH-B01@7'    | Y110271-01    | Soil   | October 12, 2021 14:25 | 10/12/2021 17:40 |
| WH-BG01@3.5' | Y110271-02    | Soil   | October 12, 2021 14:52 | 10/12/2021 17:40 |
| WH-BG01@7'   | Y110271-03    | Soil   | October 12, 2021 14:55 | 10/12/2021 17:40 |
| WH-BG02@3.5' | Y110271-04    | Soil   | October 12, 2021 14:58 | 10/12/2021 17:40 |
| WH-BG02@7'   | Y110271-05    | Soil   | October 12, 2021 15:01 | 10/12/2021 17:40 |
| WH-BG03@3.5' | Y110271-06    | Soil   | October 12, 2021 15:04 | 10/12/2021 17:40 |
| WH-BG03@7'   | Y110271-07    | Soil   | October 12, 2021 15:07 | 10/12/2021 17:40 |

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**ORIGINS**  
 LABORATORY, INC

4110271

page 1 of 1

Client: Oxy/Tasman Project Manager/Send Report To: Mike Jahn  
 Address: 6855 W 119th Ave Email Address: mjahn@tasman-geo.com  
Broomfield, CO 80020 Project Name/Number: Hauck 24-29 W0#-90419452  
 Telephone Number: 303-487-1229 Samples Collected By: Brandon V. Salva

1725 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/Method | Sample Instructions |  |
|---|-------------------|---------------|-----------------|---------------------------|-------------------|------------------|-------|---|------|------------|-----------------|---------------------|--|
|   |                   |               |                 | Unpreserved               | HCl               | HNO <sub>3</sub> | Other | Groundwater   | Soil | 2# Summa # |                 |                     |  |
| WH-B61027                                   | 10-12-21          | 1425          | 1               | X                         |                   |                  |       |   | X    |            |                 |                     |  |
| WH-B61023.5'                                |                   | 1452          |                 |                           |                   |                  |       |   |      |            |                 |                     |  |
| WH-B61027                                   |                   | 1455          |                 |                           |                   |                  |       |   |      |            |                 |                     |  |
| WH-B610203.5'                               |                   | 1458          |                 |                           |                   |                  |       |   |      |            |                 |                     |  |
| WH-B61027                                   |                   | 1501          |                 |                           |                   |                  |       |   |      |            |                 |                     |  |
| WH-B610203.5'                               |                   | 1504          |                 |                           |                   |                  |       |   |      |            |                 |                     |  |
| WH-B610327                                  |                   | 1507          |                 |                           |                   |                  |       |   |      |            |                 |                     |  |
|   |                   |               |                 |                           |                   |                  |       |   |      |            |                 |                     |  |
|   |                   |               |                 |                           |                   |                  |       |   |      |            |                 |                     |  |
|   |                   |               |                 |                           |                   |                  |       |   |      |            |                 |                     |  |
|   |                   |               |                 |                           |                   |                  |       |   |      |            |                 |                     |  |
|   |                   |               |                 |                           |                   |                  |       |   |      |            |                 |                     |  |
| Relinquished By:<br><u>Brandon V. Salva</u> | Date:<br>10-12-21 | Time:<br>1740 |                 | Received By:<br><u>MJ</u> | Date:<br>10-12-21 | Time:<br>1740    |       | Turnaround Time:<br>Same Day <input checked="" type="checkbox"/> 24 Hr <input type="checkbox"/><br>48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/><br>Standard <input type="checkbox"/> |      |            |                 |                     |  |
| Relinquished By:                            | Date:             | Time:         |                 | Received By:              | Date:             | Time:            |       |   |      |            |                 |                     |  |

Prints Required: \_\_\_\_\_

Origins Laboratory, Inc.  


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 Broomfield CO 80020

Mike Jahn  
 Project Number: 90419452  
 Project: KMG - Hauck 24-29

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

**Sample Receipt Checklist**

Origins Work Order: 1110271 Client: Tasman  
 Client Project ID: Hauck 24-29

Checklist Completed by: KH Shipped Via: TD  
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 10/11/21 <sup>KH</sup> 10/12/21 Airbill #: 123

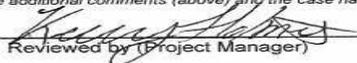
Matrix(s) Received: (Check all that apply):  Soil/Solid  Water  Other: \_\_\_\_\_  
(Describe)

Cooler Number/Temperature: 1 4.5 °C 1 °C 1 °C 1 °C

Thermometer ID: T03

| 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> ?   | /   |    |     |                   |
| Is there ice present (document if blue ice is used)   | /   |    |     |                   |
| Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)   |     | /  |     |                   |
| Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)  |     | /  |     |                   |
| Were all samples received intact <sup>(1)</sup> ?   | /   |    |     |                   |
| Was adequate sample volume provided <sup>(1)</sup> ?  | /   |    |     |                   |
| Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?  |     | /  |     |                   |
| Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?  | /   |    |     |                   |
| Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?   | /   |    |     |                   |
| Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?   | /   |    |     |                   |
| Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?   | /   |    |     |                   |
| For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.  |     |    | /   |                   |
| 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) |     |    | /   |                   |
| 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 be in the additional comments (above) and the case narrative.

  
 Reviewed by (Project Manager)

10/12/21  
 Date/Time Reviewed

Origins Laboratory, Inc.



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Mike Jahn  
 Project Number: 90419452  
 Project: KMG - Hauck 24-29

**WH-B01@7'**  
**10/12/2021 2:25:00PM**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Analyst | Prepared | Analyzed | Notes |
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|

**Origins Laboratory, Inc.**  
**Y110271-01 (Soil)**

**Boron (DTPA Sorbitol)**

|       |       |       |      |   |         |     |            |            |  |
|-------|-------|-------|------|---|---------|-----|------------|------------|--|
| Boron | 0.360 | 0.200 | mg/L | 1 | B1J1221 | KAP | 10/12/2021 | 10/14/2021 |  |
|-------|-------|-------|------|---|---------|-----|------------|------------|--|

**DRO/ORO by EPA 8015D**

|                                   |    |      |       |   |         |     |            |            |   |
|-----------------------------------|----|------|-------|---|---------|-----|------------|------------|---|
| Diesel (C10-C28)                  | ND | 25.0 | mg/kg | 1 | B1J1211 | EPC | 10/12/2021 | 10/12/2021 | U |
| Residual Range Organics (C28-C40) | ND | 100  | "     | " | "       | EPC | "          | "          | U |

|                                |        |        |  |  |   |   |   |   |  |
|--------------------------------|--------|--------|--|--|---|---|---|---|--|
| Surrogate: <i>o</i> -Terphenyl | 66.3 % | 50-150 |  |  | " | " | " | " |  |
|--------------------------------|--------|--------|--|--|---|---|---|---|--|

**GBTEX+TMBs**

|                             |    |         |       |   |         |     |            |            |   |
|-----------------------------|----|---------|-------|---|---------|-----|------------|------------|---|
| Naphthalene                 | ND | 0.00380 | mg/kg | 1 | B1J1210 | KDK | 10/12/2021 | 10/12/2021 | U |
| Benzene                     | ND | 0.00200 | "     | " | "       | KDK | "          | "          | U |
| Ethylbenzene                | ND | 0.00200 | "     | " | "       | KDK | "          | "          | U |
| Toluene                     | ND | 0.00200 | "     | " | "       | KDK | "          | "          | U |
| Gasoline Range Hydrocarbons | ND | 0.200   | "     | " | "       | KDK | "          | "          | U |
| Xylenes, total              | ND | 0.00200 | "     | " | "       | KDK | "          | "          | U |

|                                  |        |        |  |  |   |   |   |   |  |
|----------------------------------|--------|--------|--|--|---|---|---|---|--|
| Surrogate: 1,2-Dichloroethane-d4 | 83.0 % | 70-130 |  |  | " | " | " | " |  |
| Surrogate: Toluene-d8            | 85.0 % | 70-130 |  |  | " | " | " | " |  |
| Surrogate: 4-Bromofluorobenzene  | 83.3 % | 70-130 |  |  | " | " | " | " |  |

**Metals by Saturated Paste**

|         |      |       |       |    |        |     |            |            |  |
|---------|------|-------|-------|----|--------|-----|------------|------------|--|
| Calcium | 3.16 | 0.499 | meq/L | 10 | [CALC] | KAP | 10/12/2021 | 10/13/2021 |  |
|---------|------|-------|-------|----|--------|-----|------------|------------|--|

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 Project: KMG - Hauck 24-29

**WH-B01@7'**  
**10/12/2021 2:25:00PM**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Analyst | Prepared | Analyzed | Notes |
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|

**Origins Laboratory, Inc.**  
**Y110271-01 (Soil)**

**Metals by Saturated Paste**

|           |      |       |       |    |        |     |            |            |  |
|-----------|------|-------|-------|----|--------|-----|------------|------------|--|
| Magnesium | 3.00 | 0.823 | meq/L | 10 | [CALC] | KAP | 10/12/2021 | 10/13/2021 |  |
| Sodium    | 5.02 | 0.435 | "     | "  | "      | KAP | "          | "          |  |

**pH in Soil by 9045D**

|    |      |  |          |   |         |     |            |            |  |
|----|------|--|----------|---|---------|-----|------------|------------|--|
| pH | 7.66 |  | pH Units | 1 | B1J1225 | AHK | 10/12/2021 | 10/13/2021 |  |
|----|------|--|----------|---|---------|-----|------------|------------|--|

**SAR by 20B Saturated Paste**

|     |      |  |     |   |         |     |            |            |  |
|-----|------|--|-----|---|---------|-----|------------|------------|--|
| SAR | 2.86 |  | SAR | 1 | B1J1219 | KAP | 10/12/2021 | 10/13/2021 |  |
|-----|------|--|-----|---|---------|-----|------------|------------|--|

**Specific Conductance Mod. 9050A**

|                           |      |         |          |   |         |     |            |            |  |
|---------------------------|------|---------|----------|---|---------|-----|------------|------------|--|
| Specific Conductance (EC) | 1.07 | 0.00500 | mmhos/cm | 1 | B1J1228 | AHK | 10/12/2021 | 10/13/2021 |  |
|---------------------------|------|---------|----------|---|---------|-----|------------|------------|--|

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 Project: KMG - Hauck 24-29

**WH-BG01@3.5'**  
**10/12/2021 2:52:00PM**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Analyst | Prepared | Analyzed | Notes |
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|

**Origins Laboratory, Inc.**  
**Y110271-02 (Soil)**

**Boron (DTPA Sorbitol)**

|       |      |       |      |   |         |     |            |            |  |
|-------|------|-------|------|---|---------|-----|------------|------------|--|
| Boron | 2.18 | 0.200 | mg/L | 1 | B1J1221 | KAP | 10/12/2021 | 10/14/2021 |  |
|-------|------|-------|------|---|---------|-----|------------|------------|--|

**Metals by Saturated Paste**

|           |      |       |       |    |        |     |            |            |  |
|-----------|------|-------|-------|----|--------|-----|------------|------------|--|
| Calcium   | 23.1 | 0.499 | meq/L | 10 | [CALC] | KAP | 10/12/2021 | 10/13/2021 |  |
| Magnesium | 30.8 | 0.823 | "     | "  | "      | KAP | "          | "          |  |
| Sodium    | 37.2 | 0.435 | "     | "  | "      | KAP | "          | "          |  |

**pH in Soil by 9045D**

|    |      |  |          |   |         |     |            |            |  |
|----|------|--|----------|---|---------|-----|------------|------------|--|
| pH | 7.76 |  | pH Units | 1 | B1J1225 | AHK | 10/12/2021 | 10/13/2021 |  |
|----|------|--|----------|---|---------|-----|------------|------------|--|

**SAR by 20B Saturated Paste**

|     |      |  |     |   |         |     |            |            |  |
|-----|------|--|-----|---|---------|-----|------------|------------|--|
| SAR | 7.17 |  | SAR | 1 | B1J1219 | KAP | 10/12/2021 | 10/13/2021 |  |
|-----|------|--|-----|---|---------|-----|------------|------------|--|

**Specific Conductance Mod. 9050A**

|                           |      |         |          |   |         |     |            |            |  |
|---------------------------|------|---------|----------|---|---------|-----|------------|------------|--|
| Specific Conductance (EC) | 6.60 | 0.00500 | mmhos/cm | 1 | B1J1228 | AHK | 10/12/2021 | 10/13/2021 |  |
|---------------------------|------|---------|----------|---|---------|-----|------------|------------|--|

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 Project: KMG - Hauck 24-29

**WH-BG01@7'**  
**10/12/2021 2:55:00PM**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Analyst | Prepared | Analyzed | Notes |
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|

**Origins Laboratory, Inc.**  
**Y110271-03 (Soil)**

**Boron (DTPA Sorbitol)**

|       |       |       |      |   |         |     |            |            |  |
|-------|-------|-------|------|---|---------|-----|------------|------------|--|
| Boron | 0.827 | 0.202 | mg/L | 1 | B1J1221 | KAP | 10/12/2021 | 10/14/2021 |  |
|-------|-------|-------|------|---|---------|-----|------------|------------|--|

**Metals by Saturated Paste**

|           |      |       |       |    |        |     |            |            |  |
|-----------|------|-------|-------|----|--------|-----|------------|------------|--|
| Calcium   | 1.87 | 0.499 | meq/L | 10 | [CALC] | KAP | 10/12/2021 | 10/13/2021 |  |
| Magnesium | 1.55 | 0.823 | "     | "  | "      | KAP | "          | "          |  |
| Sodium    | 3.60 | 0.435 | "     | "  | "      | KAP | "          | "          |  |

**pH in Soil by 9045D**

|    |      |  |          |   |         |     |            |            |  |
|----|------|--|----------|---|---------|-----|------------|------------|--|
| pH | 8.53 |  | pH Units | 1 | B1J1225 | AHK | 10/12/2021 | 10/13/2021 |  |
|----|------|--|----------|---|---------|-----|------------|------------|--|

**SAR by 20B Saturated Paste**

|     |      |  |     |   |         |     |            |            |  |
|-----|------|--|-----|---|---------|-----|------------|------------|--|
| SAR | 2.75 |  | SAR | 1 | B1J1219 | KAP | 10/12/2021 | 10/13/2021 |  |
|-----|------|--|-----|---|---------|-----|------------|------------|--|

**Specific Conductance Mod. 9050A**

|                           |       |         |          |   |         |     |            |            |  |
|---------------------------|-------|---------|----------|---|---------|-----|------------|------------|--|
| Specific Conductance (EC) | 0.754 | 0.00500 | mmhos/cm | 1 | B1J1228 | AHK | 10/12/2021 | 10/13/2021 |  |
|---------------------------|-------|---------|----------|---|---------|-----|------------|------------|--|

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Mike Jahn  
 Project Number: 90419452  
 Project: KMG - Hauck 24-29

**WH-BG02@3.5'**  
**10/12/2021 2:58:00PM**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Analyst | Prepared | Analyzed | Notes |
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|

**Origins Laboratory, Inc.**  
**Y110271-04 (Soil)**

**Boron (DTPA Sorbitol)**

|       |       |       |      |   |         |     |            |            |  |
|-------|-------|-------|------|---|---------|-----|------------|------------|--|
| Boron | 0.811 | 0.203 | mg/L | 1 | B1J1221 | KAP | 10/12/2021 | 10/14/2021 |  |
|-------|-------|-------|------|---|---------|-----|------------|------------|--|

**Metals by Saturated Paste**

|           |      |       |       |    |        |     |            |            |  |
|-----------|------|-------|-------|----|--------|-----|------------|------------|--|
| Calcium   | 20.0 | 0.499 | meq/L | 10 | [CALC] | KAP | 10/12/2021 | 10/13/2021 |  |
| Magnesium | 16.4 | 0.823 | "     | "  | "      | KAP | "          | "          |  |
| Sodium    | 13.6 | 0.435 | "     | "  | "      | KAP | "          | "          |  |

**pH in Soil by 9045D**

|    |      |  |          |   |         |     |            |            |  |
|----|------|--|----------|---|---------|-----|------------|------------|--|
| pH | 7.60 |  | pH Units | 1 | B1J1225 | AHK | 10/12/2021 | 10/13/2021 |  |
|----|------|--|----------|---|---------|-----|------------|------------|--|

**SAR by 20B Saturated Paste**

|     |      |  |     |   |         |     |            |            |  |
|-----|------|--|-----|---|---------|-----|------------|------------|--|
| SAR | 3.18 |  | SAR | 1 | B1J1219 | KAP | 10/12/2021 | 10/13/2021 |  |
|-----|------|--|-----|---|---------|-----|------------|------------|--|

**Specific Conductance Mod. 9050A**

|                           |      |         |          |   |         |     |            |            |  |
|---------------------------|------|---------|----------|---|---------|-----|------------|------------|--|
| Specific Conductance (EC) | 3.88 | 0.00500 | mmhos/cm | 1 | B1J1228 | AHK | 10/12/2021 | 10/13/2021 |  |
|---------------------------|------|---------|----------|---|---------|-----|------------|------------|--|

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Mike Jahn  
 Project Number: 90419452  
 Project: KMG - Hauck 24-29

**WH-BG02@7'**  
**10/12/2021 3:01:00PM**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Analyst | Prepared | Analyzed | Notes |
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|

**Origins Laboratory, Inc.**  
**Y110271-05 (Soil)**

**Boron (DTPA Sorbitol)**

|       |              |       |      |   |         |     |            |            |  |
|-------|--------------|-------|------|---|---------|-----|------------|------------|--|
| Boron | <b>0.594</b> | 0.198 | mg/L | 1 | B1J1221 | KAP | 10/12/2021 | 10/14/2021 |  |
|-------|--------------|-------|------|---|---------|-----|------------|------------|--|

**Metals by Saturated Paste**

|           |             |       |       |    |        |     |            |            |  |
|-----------|-------------|-------|-------|----|--------|-----|------------|------------|--|
| Calcium   | <b>4.94</b> | 0.499 | meq/L | 10 | [CALC] | KAP | 10/12/2021 | 10/13/2021 |  |
| Magnesium | <b>4.63</b> | 0.823 | "     | "  | "      | KAP | "          | "          |  |
| Sodium    | <b>5.99</b> | 0.435 | "     | "  | "      | KAP | "          | "          |  |

**pH in Soil by 9045D**

|    |             |  |          |   |         |     |            |            |  |
|----|-------------|--|----------|---|---------|-----|------------|------------|--|
| pH | <b>7.74</b> |  | pH Units | 1 | B1J1225 | AHK | 10/12/2021 | 10/13/2021 |  |
|----|-------------|--|----------|---|---------|-----|------------|------------|--|

**SAR by 20B Saturated Paste**

|     |             |  |     |   |         |     |            |            |  |
|-----|-------------|--|-----|---|---------|-----|------------|------------|--|
| SAR | <b>2.74</b> |  | SAR | 1 | B1J1219 | KAP | 10/12/2021 | 10/13/2021 |  |
|-----|-------------|--|-----|---|---------|-----|------------|------------|--|

**Specific Conductance Mod. 9050A**

|                           |             |         |          |   |         |     |            |            |  |
|---------------------------|-------------|---------|----------|---|---------|-----|------------|------------|--|
| Specific Conductance (EC) | <b>1.40</b> | 0.00500 | mmhos/cm | 1 | B1J1228 | AHK | 10/12/2021 | 10/13/2021 |  |
|---------------------------|-------------|---------|----------|---|---------|-----|------------|------------|--|

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Tasman Geosciences  
 6855 West 119th Avenue  
 Broomfield CO 80020

Mike Jahn  
 Project Number: 90419452  
 Project: KMG - Hauck 24-29

**WH-BG03@3.5'**  
**10/12/2021 3:04:00PM**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Analyst | Prepared | Analyzed | Notes |
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|

**Origins Laboratory, Inc.**  
**Y110271-06 (Soil)**

**Boron (DTPA Sorbitol)**

|       |      |       |      |   |         |     |            |            |  |
|-------|------|-------|------|---|---------|-----|------------|------------|--|
| Boron | 1.02 | 0.196 | mg/L | 1 | B1J1221 | KAP | 10/12/2021 | 10/14/2021 |  |
|-------|------|-------|------|---|---------|-----|------------|------------|--|

**Metals by Saturated Paste**

|           |      |       |       |    |        |     |            |            |  |
|-----------|------|-------|-------|----|--------|-----|------------|------------|--|
| Calcium   | 24.2 | 0.499 | meq/L | 10 | [CALC] | KAP | 10/12/2021 | 10/13/2021 |  |
| Magnesium | 14.0 | 0.823 | "     | "  | "      | KAP | "          | "          |  |
| Sodium    | 13.5 | 0.435 | "     | "  | "      | KAP | "          | "          |  |

**pH in Soil by 9045D**

|    |      |  |          |   |         |     |            |            |  |
|----|------|--|----------|---|---------|-----|------------|------------|--|
| pH | 7.62 |  | pH Units | 1 | B1J1225 | AHK | 10/12/2021 | 10/13/2021 |  |
|----|------|--|----------|---|---------|-----|------------|------------|--|

**SAR by 20B Saturated Paste**

|     |      |  |     |   |         |     |            |            |  |
|-----|------|--|-----|---|---------|-----|------------|------------|--|
| SAR | 3.09 |  | SAR | 1 | B1J1219 | KAP | 10/12/2021 | 10/13/2021 |  |
|-----|------|--|-----|---|---------|-----|------------|------------|--|

**Specific Conductance Mod. 9050A**

|                           |      |         |          |   |         |     |            |            |  |
|---------------------------|------|---------|----------|---|---------|-----|------------|------------|--|
| Specific Conductance (EC) | 3.96 | 0.00500 | mmhos/cm | 1 | B1J1228 | AHK | 10/12/2021 | 10/13/2021 |  |
|---------------------------|------|---------|----------|---|---------|-----|------------|------------|--|

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Tasman Geosciences  
 6855 West 119th Avenue  
 Broomfield CO 80020

Mike Jahn  
 Project Number: 90419452  
 Project: KMG - Hauck 24-29

**WH-BG03@7'**  
**10/12/2021 3:07:00PM**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Analyst | Prepared | Analyzed | Notes |
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|

**Origins Laboratory, Inc.**  
**Y110271-07 (Soil)**

**Boron (DTPA Sorbitol)**

|       |      |       |      |   |         |     |            |            |
|-------|------|-------|------|---|---------|-----|------------|------------|
| Boron | 1.40 | 0.201 | mg/L | 1 | B1J1221 | KAP | 10/12/2021 | 10/14/2021 |
|-------|------|-------|------|---|---------|-----|------------|------------|

**Metals by Saturated Paste**

|           |      |       |       |    |        |     |            |            |
|-----------|------|-------|-------|----|--------|-----|------------|------------|
| Calcium   | 12.2 | 0.499 | meq/L | 10 | [CALC] | KAP | 10/12/2021 | 10/13/2021 |
| Magnesium | 8.07 | 0.823 | "     | "  | "      | KAP | "          | "          |
| Sodium    | 10.9 | 0.435 | "     | "  | "      | KAP | "          | "          |

**pH in Soil by 9045D**

|    |      |  |          |   |         |     |            |            |
|----|------|--|----------|---|---------|-----|------------|------------|
| pH | 7.78 |  | pH Units | 1 | B1J1225 | AHK | 10/12/2021 | 10/13/2021 |
|----|------|--|----------|---|---------|-----|------------|------------|

**SAR by 20B Saturated Paste**

|     |      |  |     |   |         |     |            |            |
|-----|------|--|-----|---|---------|-----|------------|------------|
| SAR | 3.42 |  | SAR | 1 | B1J1219 | KAP | 10/12/2021 | 10/13/2021 |
|-----|------|--|-----|---|---------|-----|------------|------------|

**Specific Conductance Mod. 9050A**

|                           |      |         |          |   |         |     |            |            |
|---------------------------|------|---------|----------|---|---------|-----|------------|------------|
| Specific Conductance (EC) | 2.61 | 0.00500 | mmhos/cm | 1 | B1J1228 | AHK | 10/12/2021 | 10/13/2021 |
|---------------------------|------|---------|----------|---|---------|-----|------------|------------|

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Tasman Geosciences  
 6855 West 119th Avenue  
 Broomfield CO 80020

Mike Jahn  
 Project Number: 90419452  
 Project: KMG - Hauck 24-29

**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 B1J1210 - EPA 5030 (soil)**

**Blank (B1J1210-BLK1)**

Prepared: 10/12/2021 Analyzed: 10/12/2021

|                                  |      |         |       |       |      |  |        |  |  |   |
|----------------------------------|------|---------|-------|-------|------|--|--------|--|--|---|
| 1,2,4-Trimethylbenzene           | ND   | 0.00200 | mg/kg |       |      |  |        |  |  | U |
| Naphthalene                      | ND   | 0.00380 | "     |       |      |  |        |  |  | U |
| 1,3,5-Trimethylbenzene           | ND   | 0.00200 | "     |       |      |  |        |  |  | U |
| Benzene                          | ND   | 0.00200 | "     |       |      |  |        |  |  | U |
| Ethylbenzene                     | ND   | 0.00200 | "     |       |      |  |        |  |  | U |
| Toluene                          | ND   | 0.00200 | "     |       |      |  |        |  |  | U |
| Gasoline Range Hydrocarbons      | ND   | 0.200   | "     |       |      |  |        |  |  | U |
| Xylenes, total                   | ND   | 0.00200 | "     |       |      |  |        |  |  | U |
| Surrogate: 1,2-Dichloroethane-d4 | 0.11 |         | "     | 0.125 | 91.1 |  | 70-130 |  |  |   |
| Surrogate: Toluene-d8            | 0.13 |         | "     | 0.125 | 104  |  | 70-130 |  |  |   |
| Surrogate: 4-Bromofluorobenzene  | 0.12 |         | "     | 0.125 | 94.1 |  | 70-130 |  |  |   |

Origins Laboratory, Inc.



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Tasman Geosciences  
 6855 West 119th Avenue  
 Broomfield CO 80020

Mike Jahn  
 Project Number: 90419452  
 Project: KMG - Hauck 24-29

**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 B1J1210 - EPA 5030 (soil)**

**LCS (B1J1210-BS1)**

Prepared: 10/12/2021 Analyzed: 10/12/2021

|                                  |        |         |       |        |  |      |        |  |  |  |
|----------------------------------|--------|---------|-------|--------|--|------|--------|--|--|--|
| 1,2,4-Trimethylbenzene           | 0.0500 | 0.00200 | mg/kg | 0.0500 |  | 100  | 70-130 |  |  |  |
| Naphthalene                      | 0.0493 | 0.0100  | "     | 0.0500 |  | 98.6 | 70-130 |  |  |  |
| 1,3,5-Trimethylbenzene           | 0.0494 | 0.00200 | "     | 0.0500 |  | 98.7 | 70-130 |  |  |  |
| Benzene                          | 0.0467 | 0.00200 | "     | 0.0500 |  | 93.4 | 70-130 |  |  |  |
| Ethylbenzene                     | 0.0481 | 0.00200 | "     | 0.0500 |  | 96.2 | 70-130 |  |  |  |
| m,p-Xylene                       | 0.0988 | 0.00400 | "     | 0.100  |  | 98.8 | 70-130 |  |  |  |
| o-Xylene                         | 0.0488 | 0.00200 | "     | 0.0500 |  | 97.7 | 70-130 |  |  |  |
| Toluene                          | 0.0496 | 0.00200 | "     | 0.0500 |  | 99.2 | 70-130 |  |  |  |
| Surrogate: 1,2-Dichloroethane-d4 | 0.12   |         | "     | 0.125  |  | 93.8 | 70-130 |  |  |  |
| Surrogate: Toluene-d8            | 0.13   |         | "     | 0.125  |  | 103  | 70-130 |  |  |  |
| Surrogate: 4-Bromofluorobenzene  | 0.12   |         | "     | 0.125  |  | 94.2 | 70-130 |  |  |  |

Origins Laboratory, Inc.



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Tasman Geosciences  
 6855 West 119th Avenue  
 Broomfield CO 80020

Mike Jahn  
 Project Number: 90419452  
 Project: KMG - Hauck 24-29

**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 B1J1210 - EPA 5030 (soil)**

| Matrix Spike (B1J1210-MS1)       | Source: Y110234-18 |         |       | Prepared: 10/12/2021 Analyzed: 10/12/2021 |          |      |        |  |  |  |
|----------------------------------|--------------------|---------|-------|---|----------|------|--------|--|--|--|
| 1,2,4-Trimethylbenzene           | 0.0398             | 0.00200 | mg/kg | 0.0500                                    | 0.00118  | 77.2 | 70-130 |  |  |  |
| Naphthalene                      | 0.0432             | 0.0100  | "     | 0.0500                                    | ND       | 86.3 | 70-130 |  |  |  |
| 1,3,5-Trimethylbenzene           | 0.0387             | 0.00200 | "     | 0.0500                                    | 0.000440 | 76.6 | 70-130 |  |  |  |
| Benzene                          | 0.0386             | 0.00200 | "     | 0.0500                                    | ND       | 77.2 | 70-130 |  |  |  |
| Ethylbenzene                     | 0.0380             | 0.00200 | "     | 0.0500                                    | ND       | 75.9 | 70-130 |  |  |  |
| m,p-Xylene                       | 0.0780             | 0.00400 | "     | 0.100                                     | ND       | 78.0 | 70-130 |  |  |  |
| o-Xylene                         | 0.0387             | 0.00200 | "     | 0.0500                                    | ND       | 77.3 | 70-130 |  |  |  |
| Toluene                          | 0.0397             | 0.00200 | "     | 0.0500                                    | ND       | 79.3 | 70-130 |  |  |  |
| Surrogate: 1,2-Dichloroethane-d4 | 0.12               |         | "     | 0.125                                     |          | 96.7 | 70-130 |  |  |  |
| Surrogate: Toluene-d8            | 0.13               |         | "     | 0.125                                     |          | 101  | 70-130 |  |  |  |
| Surrogate: 4-Bromofluorobenzene  | 0.12               |         | "     | 0.125                                     |          | 93.1 | 70-130 |  |  |  |

Origins Laboratory, Inc.



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Tasman Geosciences  
 6855 West 119th Avenue  
 Broomfield CO 80020

Mike Jahn  
 Project Number: 90419452  
 Project: KMG - Hauck 24-29

**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 B1J1210 - EPA 5030 (soil)**

| Matrix Spike Dup (B1J1210-MSD1)  | Source: Y110234-18 |         |       | Prepared: 10/12/2021 Analyzed: 10/13/2021 |          |      |        |      |    |       |
|----------------------------------|--------------------|---------|-------|---|----------|------|--------|------|----|-------|
| 1,2,4-Trimethylbenzene           | 0.0497             | 0.00200 | mg/kg | 0.0500                                    | 0.00118  | 97.0 | 70-130 | 22.1 | 20 | QR-03 |
| Naphthalene                      | 0.0490             | 0.0100  | "     | 0.0500                                    | ND       | 98.0 | 70-130 | 12.7 | 20 |       |
| 1,3,5-Trimethylbenzene           | 0.0487             | 0.00200 | "     | 0.0500                                    | 0.000440 | 96.4 | 70-130 | 22.8 | 20 | QR-03 |
| Benzene                          | 0.0483             | 0.00200 | "     | 0.0500                                    | ND       | 96.6 | 70-130 | 22.3 | 20 | QR-03 |
| Ethylbenzene                     | 0.0471             | 0.00200 | "     | 0.0500                                    | ND       | 94.2 | 70-130 | 21.4 | 20 | QR-03 |
| m,p-Xylene                       | 0.0977             | 0.00400 | "     | 0.100                                     | ND       | 97.7 | 70-130 | 22.4 | 20 | QR-03 |
| o-Xylene                         | 0.0485             | 0.00200 | "     | 0.0500                                    | ND       | 97.0 | 70-130 | 22.5 | 20 | QR-03 |
| Toluene                          | 0.0499             | 0.00200 | "     | 0.0500                                    | ND       | 99.8 | 70-130 | 22.9 | 20 | QR-03 |
| Surrogate: 1,2-Dichloroethane-d4 | 0.12               |         | "     | 0.125                                     |          | 98.9 | 70-130 |      |    |       |
| Surrogate: Toluene-d8            | 0.13               |         | "     | 0.125                                     |          | 102  | 70-130 |      |    |       |
| Surrogate: 4-Bromofluorobenzene  | 0.12               |         | "     | 0.125                                     |          | 92.4 | 70-130 |      |    |       |

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 6855 West 119th Avenue  
 Broomfield CO 80020

Mike Jahn  
 Project Number: 90419452  
 Project: KMG - Hauck 24-29

**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 B1J1211 - EPA 3550B</b>  |        |                 |       |             |   |      |             |     |           |       |
| <b>Blank (B1J1211-BLK1)</b>       |        |                 |       |             |   |      |             |     |           |       |
|                                   |        |                 |       |             | Prepared: 10/12/2021 Analyzed: 10/12/2021 |      |             |     |           |       |
| Diesel (C10-C28)                  | ND     | 25.0            | mg/kg |             |   |      |             |     |           | U     |
| Residual Range Organics (C28-C40) | ND     | 100             | "     |             |   |      |             |     |           | U     |
| Surrogate: o-Terphenyl            | 17     |                 | "     | 25.0        |   | 67.0 | 50-150      |     |           |       |

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Tasman Geosciences  
 6855 West 119th Avenue  
 Broomfield CO 80020

Mike Jahn  
 Project Number: 90419452  
 Project: KMG - Hauck 24-29

**Extractable Petroleum Hydrocarbons by 8015D - Quality Control**  
**Origins Laboratory, Inc.**

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

**Batch B1J1211 - EPA 3550B**

**LCS (B1J1211-BS1)**

Prepared: 10/12/2021 Analyzed: 10/12/2021

|                                   |     |      |       |      |  |      |        |  |  |  |
|-----------------------------------|-----|------|-------|------|--|------|--------|--|--|--|
| Diesel (C10-C28)                  | 706 | 50.0 | mg/kg | 1000 |  | 70.6 | 70-130 |  |  |  |
| Residual Range Organics (C28-C40) | 825 | 200  | "     | 1000 |  | 82.5 | 70-130 |  |  |  |
| Surrogate: o-Terphenyl            | 36  |      | "     | 50.0 |  | 71.0 | 50-150 |  |  |  |

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Tasman Geosciences  
 6855 West 119th Avenue  
 Broomfield CO 80020

Mike Jahn  
 Project Number: 90419452  
 Project: KMG - Hauck 24-29

**Extractable Petroleum Hydrocarbons by 8015D - Quality Control**  
**Origins Laboratory, Inc.**

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

**Batch B1J1211 - EPA 3550B**

| <b>Matrix Spike (B1J1211-MS1)</b> | <b>Source: Y110253-01</b> |      |       | Prepared: 10/12/2021 Analyzed: 10/12/2021 |    |      |        |  |  |       |
|-----------------------------------|---------------------------|------|-------|---|----|------|--------|--|--|-------|
| Diesel (C10-C28)                  | 697                       | 50.0 | mg/kg | 1000                                      | ND | 69.7 | 70-130 |  |  | QM-07 |
| Residual Range Organics (C28-C40) | 812                       | 200  | "     | 1000                                      | ND | 81.2 | 70-130 |  |  |       |
| Surrogate: o-Terphenyl            | 35                        |      | "     | 50.0                                      |    | 70.2 | 50-150 |  |  |       |

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Tasman Geosciences  
 6855 West 119th Avenue  
 Broomfield CO 80020

Mike Jahn  
 Project Number: 90419452  
 Project: KMG - Hauck 24-29

**Extractable Petroleum Hydrocarbons by 8015D - Quality Control**  
**Origins Laboratory, Inc.**

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

**Batch B1J1211 - EPA 3550B**

| <b>Matrix Spike Dup (B1J1211-MSD1)</b> | <b>Source: Y110253-01</b> |      |       | Prepared: 10/12/2021 Analyzed: 10/12/2021 |    |      |        |      |    |  |
|--|---------------------------|------|-------|---|----|------|--------|------|----|--|
| Diesel (C10-C28)                       | 705                       | 50.0 | mg/kg | 1000                                      | ND | 70.5 | 70-130 | 1.02 | 35 |  |
| Residual Range Organics (C28-C40)      | 822                       | 200  | "     | 1000                                      | ND | 82.2 | 70-130 | 1.25 | 35 |  |
| Surrogate: o-Terphenyl                 | 35                        |      | "     | 50.0                                      |    | 70.7 | 50-150 |      |    |  |

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Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Mike Jahn  
Project Number: 90419452  
Project: KMG - Hauck 24-29

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### Notes and Definitions

U Sample is Non-Detect.

QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

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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October 22, 2021

Tasman Geosciences

Mike Jahn

6855 West 119th Avenue

Broomfield CO 80020

**Project Name - KMG - Hauck 7-29**

**Project Number - 90412767**

Attached are your analytical results for KMG - Hauck 7-29 received by Origins Laboratory, Inc. October 12, 2021. This project is associated with Origins project number Y110273-01.

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



Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Mike Jahn  
Project Number: 90412767  
Project: KMG - Hauck 7-29

CROSS REFERENCE REPORT

| Sample ID | Laboratory ID | Matrix | Date Sampled           | Date Received    |
|-----------|---------------|--------|------------------------|------------------|
| WH-B01@7' | Y110273-01    | Soil   | October 12, 2021 15:00 | 10/12/2021 17:40 |

Origins Laboratory, Inc.



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Tasman Geosciences  
 6855 West 119th Avenue  
 Broomfield CO 80020

Mike Jahn  
 Project Number: 90412767  
 Project: KMG - Hauck 7-29

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: Y110273

Client: Tasman  
 Client Project ID: Hauck 7-29

Checklist Completed by: JG  
 Date/time completed: 10/12/21

Shipped Via: HD  
 (UPS, FedEx, Hand Delivered, Pick-up, etc.)  
 Airbill #: N/A

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

Cooler Number/Temperature: 1 4.5 °C / \_\_\_\_\_ °C / \_\_\_\_\_ °C (Describe) \_\_\_\_\_ °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"/> |                                     |                                     |                   |
| 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? <b>If yes, contact client and note in narrative.</b>   |                                     |                                     | <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) [Signature]

Date/Time Reviewed 10/12/21

Origins Laboratory, Inc.

[Signature]

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Tasman Geosciences  
 6855 West 119th Avenue  
 Broomfield CO 80020

Mike Jahn  
 Project Number: 90412767  
 Project: KMG - Hauck 7-29

**WH-B01@7'**  
**10/12/2021 3:00:00PM**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Analyst | Prepared | Analyzed | Notes |
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|

**Origins Laboratory, Inc.**  
**Y110273-01 (Soil)**

**Boron (DTPA Sorbitol)**

|       |       |       |      |   |         |     |            |            |  |
|-------|-------|-------|------|---|---------|-----|------------|------------|--|
| Boron | 0.978 | 0.200 | mg/L | 1 | B1J1221 | KAP | 10/12/2021 | 10/14/2021 |  |
|-------|-------|-------|------|---|---------|-----|------------|------------|--|

**DRO/ORO by EPA 8015D**

|                                   |    |      |       |   |         |     |            |            |   |
|-----------------------------------|----|------|-------|---|---------|-----|------------|------------|---|
| Diesel (C10-C28)                  | ND | 25.0 | mg/kg | 1 | B1J1211 | EPC | 10/12/2021 | 10/12/2021 | U |
| Residual Range Organics (C28-C40) | ND | 100  | "     | " | "       | EPC | "          | "          | U |

|                        |        |        |  |  |   |   |   |   |  |
|------------------------|--------|--------|--|--|---|---|---|---|--|
| Surrogate: o-Terphenyl | 55.1 % | 50-150 |  |  | " | " | " | " |  |
|------------------------|--------|--------|--|--|---|---|---|---|--|

**GBTEX+TMBs**

|                             |    |         |       |   |         |     |            |            |   |
|-----------------------------|----|---------|-------|---|---------|-----|------------|------------|---|
| Naphthalene                 | ND | 0.00380 | mg/kg | 1 | B1J1210 | KDK | 10/12/2021 | 10/12/2021 | U |
| Benzene                     | ND | 0.00200 | "     | " | "       | KDK | "          | "          | U |
| Ethylbenzene                | ND | 0.00200 | "     | " | "       | KDK | "          | "          | U |
| Toluene                     | ND | 0.00200 | "     | " | "       | KDK | "          | "          | U |
| Gasoline Range Hydrocarbons | ND | 0.200   | "     | " | "       | KDK | "          | "          | U |
| Xylenes, total              | ND | 0.00200 | "     | " | "       | KDK | "          | "          | U |

|                                  |        |        |  |  |   |   |   |   |  |
|----------------------------------|--------|--------|--|--|---|---|---|---|--|
| Surrogate: 1,2-Dichloroethane-d4 | 96.7 % | 70-130 |  |  | " | " | " | " |  |
| Surrogate: Toluene-d8            | 102 %  | 70-130 |  |  | " | " | " | " |  |
| Surrogate: 4-Bromofluorobenzene  | 93.4 % | 70-130 |  |  | " | " | " | " |  |

**Metals by Saturated Paste**

|         |      |       |       |    |        |     |            |            |  |
|---------|------|-------|-------|----|--------|-----|------------|------------|--|
| Calcium | 3.42 | 0.499 | meq/L | 10 | [CALC] | KAP | 10/12/2021 | 10/13/2021 |  |
|---------|------|-------|-------|----|--------|-----|------------|------------|--|

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Tasman Geosciences  
 6855 West 119th Avenue  
 Broomfield CO 80020

Mike Jahn  
 Project Number: 90412767  
 Project: KMG - Hauck 7-29

**WH-B01@7'**  
**10/12/2021 3:00:00PM**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Analyst | Prepared | Analyzed | Notes |
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|

**Origins Laboratory, Inc.**  
**Y110273-01 (Soil)**

**Metals by Saturated Paste**

|           |      |       |       |    |        |     |            |            |  |
|-----------|------|-------|-------|----|--------|-----|------------|------------|--|
| Magnesium | 4.49 | 0.823 | meq/L | 10 | [CALC] | KAP | 10/12/2021 | 10/13/2021 |  |
| Sodium    | 18.4 | 0.435 | "     | "  | "      | KAP | "          | "          |  |

**pH in Soil by 9045D**

|    |      |  |          |   |         |     |            |            |  |
|----|------|--|----------|---|---------|-----|------------|------------|--|
| pH | 7.82 |  | pH Units | 1 | B1J1224 | AHK | 10/12/2021 | 10/13/2021 |  |
|----|------|--|----------|---|---------|-----|------------|------------|--|

**SAR by 20B Saturated Paste**

|     |      |  |     |   |         |     |            |            |  |
|-----|------|--|-----|---|---------|-----|------------|------------|--|
| SAR | 9.24 |  | SAR | 1 | B1J1218 | KAP | 10/12/2021 | 10/13/2021 |  |
|-----|------|--|-----|---|---------|-----|------------|------------|--|

**Specific Conductance Mod. 9050A**

|                           |      |         |          |   |         |     |            |            |  |
|---------------------------|------|---------|----------|---|---------|-----|------------|------------|--|
| Specific Conductance (EC) | 2.44 | 0.00500 | mmhos/cm | 1 | B1J1227 | AHK | 10/12/2021 | 10/13/2021 |  |
|---------------------------|------|---------|----------|---|---------|-----|------------|------------|--|

Origins Laboratory, Inc.



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Tasman Geosciences  
 6855 West 119th Avenue  
 Broomfield CO 80020

Mike Jahn  
 Project Number: 90412767  
 Project: KMG - Hauck 7-29

**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 B1J1210 - EPA 5030 (soil)**

**Blank (B1J1210-BLK1)**

Prepared: 10/12/2021 Analyzed: 10/12/2021

|                                  |      |         |       |       |      |  |        |  |  |   |
|----------------------------------|------|---------|-------|-------|------|--|--------|--|--|---|
| 1,2,4-Trimethylbenzene           | ND   | 0.00200 | mg/kg |       |      |  |        |  |  | U |
| Naphthalene                      | ND   | 0.00380 | "     |       |      |  |        |  |  | U |
| 1,3,5-Trimethylbenzene           | ND   | 0.00200 | "     |       |      |  |        |  |  | U |
| Benzene                          | ND   | 0.00200 | "     |       |      |  |        |  |  | U |
| Ethylbenzene                     | ND   | 0.00200 | "     |       |      |  |        |  |  | U |
| Toluene                          | ND   | 0.00200 | "     |       |      |  |        |  |  | U |
| Xylenes, total                   | ND   | 0.00200 | "     |       |      |  |        |  |  | U |
| Gasoline Range Hydrocarbons      | ND   | 0.200   | "     |       |      |  |        |  |  | U |
| Surrogate: 1,2-Dichloroethane-d4 | 0.11 |         | "     | 0.125 | 91.1 |  | 70-130 |  |  |   |
| Surrogate: Toluene-d8            | 0.13 |         | "     | 0.125 | 104  |  | 70-130 |  |  |   |
| Surrogate: 4-Bromofluorobenzene  | 0.12 |         | "     | 0.125 | 94.1 |  | 70-130 |  |  |   |

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 Broomfield CO 80020

Mike Jahn  
 Project Number: 90412767  
 Project: KMG - Hauck 7-29

**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 B1J1210 - EPA 5030 (soil)**

**LCS (B1J1210-BS1)**

Prepared: 10/12/2021 Analyzed: 10/12/2021

|                                  |        |         |       |        |  |      |        |  |  |  |
|----------------------------------|--------|---------|-------|--------|--|------|--------|--|--|--|
| 1,2,4-Trimethylbenzene           | 0.0500 | 0.00200 | mg/kg | 0.0500 |  | 100  | 70-130 |  |  |  |
| Naphthalene                      | 0.0493 | 0.0100  | "     | 0.0500 |  | 98.6 | 70-130 |  |  |  |
| 1,3,5-Trimethylbenzene           | 0.0494 | 0.00200 | "     | 0.0500 |  | 98.7 | 70-130 |  |  |  |
| Benzene                          | 0.0467 | 0.00200 | "     | 0.0500 |  | 93.4 | 70-130 |  |  |  |
| Ethylbenzene                     | 0.0481 | 0.00200 | "     | 0.0500 |  | 96.2 | 70-130 |  |  |  |
| m,p-Xylene                       | 0.0988 | 0.00400 | "     | 0.100  |  | 98.8 | 70-130 |  |  |  |
| o-Xylene                         | 0.0488 | 0.00200 | "     | 0.0500 |  | 97.7 | 70-130 |  |  |  |
| Toluene                          | 0.0496 | 0.00200 | "     | 0.0500 |  | 99.2 | 70-130 |  |  |  |
| Surrogate: 1,2-Dichloroethane-d4 | 0.12   |         | "     | 0.125  |  | 93.8 | 70-130 |  |  |  |
| Surrogate: Toluene-d8            | 0.13   |         | "     | 0.125  |  | 103  | 70-130 |  |  |  |
| Surrogate: 4-Bromofluorobenzene  | 0.12   |         | "     | 0.125  |  | 94.2 | 70-130 |  |  |  |

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Tasman Geosciences  
 6855 West 119th Avenue  
 Broomfield CO 80020

Mike Jahn  
 Project Number: 90412767  
 Project: KMG - Hauck 7-29

**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 B1J1210 - EPA 5030 (soil)**

| Matrix Spike (B1J1210-MS1)       | Source: Y110234-18 |         |       | Prepared: 10/12/2021 Analyzed: 10/12/2021 |          |      |        |  |  |  |
|----------------------------------|--------------------|---------|-------|---|----------|------|--------|--|--|--|
| 1,2,4-Trimethylbenzene           | 0.0398             | 0.00200 | mg/kg | 0.0500                                    | 0.00118  | 77.2 | 70-130 |  |  |  |
| Naphthalene                      | 0.0432             | 0.0100  | "     | 0.0500                                    | ND       | 86.3 | 70-130 |  |  |  |
| 1,3,5-Trimethylbenzene           | 0.0387             | 0.00200 | "     | 0.0500                                    | 0.000440 | 76.6 | 70-130 |  |  |  |
| Benzene                          | 0.0386             | 0.00200 | "     | 0.0500                                    | ND       | 77.2 | 70-130 |  |  |  |
| Ethylbenzene                     | 0.0380             | 0.00200 | "     | 0.0500                                    | ND       | 75.9 | 70-130 |  |  |  |
| m,p-Xylene                       | 0.0780             | 0.00400 | "     | 0.100                                     | ND       | 78.0 | 70-130 |  |  |  |
| o-Xylene                         | 0.0387             | 0.00200 | "     | 0.0500                                    | ND       | 77.3 | 70-130 |  |  |  |
| Toluene                          | 0.0397             | 0.00200 | "     | 0.0500                                    | ND       | 79.3 | 70-130 |  |  |  |
| Surrogate: 1,2-Dichloroethane-d4 | 0.12               |         | "     | 0.125                                     |          | 96.7 | 70-130 |  |  |  |
| Surrogate: Toluene-d8            | 0.13               |         | "     | 0.125                                     |          | 101  | 70-130 |  |  |  |
| Surrogate: 4-Bromofluorobenzene  | 0.12               |         | "     | 0.125                                     |          | 93.1 | 70-130 |  |  |  |

Origins Laboratory, Inc.



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 6855 West 119th Avenue  
 Broomfield CO 80020

Mike Jahn  
 Project Number: 90412767  
 Project: KMG - Hauck 7-29

**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 B1J1210 - EPA 5030 (soil)**

| Matrix Spike Dup (B1J1210-MSD1)  | Source: Y110234-18 |         |       | Prepared: 10/12/2021 Analyzed: 10/13/2021 |          |      |        |      |    |       |
|----------------------------------|--------------------|---------|-------|---|----------|------|--------|------|----|-------|
| 1,2,4-Trimethylbenzene           | 0.0497             | 0.00200 | mg/kg | 0.0500                                    | 0.00118  | 97.0 | 70-130 | 22.1 | 20 | QR-03 |
| Naphthalene                      | 0.0490             | 0.0100  | "     | 0.0500                                    | ND       | 98.0 | 70-130 | 12.7 | 20 |       |
| 1,3,5-Trimethylbenzene           | 0.0487             | 0.00200 | "     | 0.0500                                    | 0.000440 | 96.4 | 70-130 | 22.8 | 20 | QR-03 |
| Benzene                          | 0.0483             | 0.00200 | "     | 0.0500                                    | ND       | 96.6 | 70-130 | 22.3 | 20 | QR-03 |
| Ethylbenzene                     | 0.0471             | 0.00200 | "     | 0.0500                                    | ND       | 94.2 | 70-130 | 21.4 | 20 | QR-03 |
| m,p-Xylene                       | 0.0977             | 0.00400 | "     | 0.100                                     | ND       | 97.7 | 70-130 | 22.4 | 20 | QR-03 |
| o-Xylene                         | 0.0485             | 0.00200 | "     | 0.0500                                    | ND       | 97.0 | 70-130 | 22.5 | 20 | QR-03 |
| Toluene                          | 0.0499             | 0.00200 | "     | 0.0500                                    | ND       | 99.8 | 70-130 | 22.9 | 20 | QR-03 |
| Surrogate: 1,2-Dichloroethane-d4 | 0.12               |         | "     | 0.125                                     |          | 98.9 | 70-130 |      |    |       |
| Surrogate: Toluene-d8            | 0.13               |         | "     | 0.125                                     |          | 102  | 70-130 |      |    |       |
| Surrogate: 4-Bromofluorobenzene  | 0.12               |         | "     | 0.125                                     |          | 92.4 | 70-130 |      |    |       |

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 Broomfield CO 80020

Mike Jahn  
 Project Number: 90412767  
 Project: KMG - Hauck 7-29

**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 B1J1211 - EPA 3550B</b>  |        |                 |       |             |   |      |             |     |           |       |
| <b>Blank (B1J1211-BLK1)</b>       |        |                 |       |             |   |      |             |     |           |       |
|                                   |        |                 |       |             | Prepared: 10/12/2021 Analyzed: 10/12/2021 |      |             |     |           |       |
| Diesel (C10-C28)                  | ND     | 25.0            | mg/kg |             |   |      |             |     |           | U     |
| Residual Range Organics (C28-C40) | ND     | 100             | "     |             |   |      |             |     |           | U     |
| Surrogate: o-Terphenyl            | 17     |                 | "     | 25.0        |   | 67.0 | 50-150      |     |           |       |

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 6855 West 119th Avenue  
 Broomfield CO 80020

Mike Jahn  
 Project Number: 90412767  
 Project: KMG - Hauck 7-29

**Extractable Petroleum Hydrocarbons by 8015D - Quality Control**  
**Origins Laboratory, Inc.**

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

**Batch B1J1211 - EPA 3550B**

**LCS (B1J1211-BS1)**

Prepared: 10/12/2021 Analyzed: 10/12/2021

|                                   |     |      |       |      |  |      |        |  |  |  |
|-----------------------------------|-----|------|-------|------|--|------|--------|--|--|--|
| Diesel (C10-C28)                  | 706 | 50.0 | mg/kg | 1000 |  | 70.6 | 70-130 |  |  |  |
| Residual Range Organics (C28-C40) | 825 | 200  | "     | 1000 |  | 82.5 | 70-130 |  |  |  |
| Surrogate: o-Terphenyl            | 36  |      | "     | 50.0 |  | 71.0 | 50-150 |  |  |  |

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 6855 West 119th Avenue  
 Broomfield CO 80020

Mike Jahn  
 Project Number: 90412767  
 Project: KMG - Hauck 7-29

**Extractable Petroleum Hydrocarbons by 8015D - Quality Control**  
**Origins Laboratory, Inc.**

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

**Batch B1J1211 - EPA 3550B**

| <b>Matrix Spike (B1J1211-MS1)</b> | <b>Source: Y110253-01</b> |      |       | Prepared: 10/12/2021 Analyzed: 10/12/2021 |    |      |        |  |  |       |
|-----------------------------------|---------------------------|------|-------|---|----|------|--------|--|--|-------|
| Diesel (C10-C28)                  | 697                       | 50.0 | mg/kg | 1000                                      | ND | 69.7 | 70-130 |  |  | QM-07 |
| Residual Range Organics (C28-C40) | 812                       | 200  | "     | 1000                                      | ND | 81.2 | 70-130 |  |  |       |
| Surrogate: o-Terphenyl            | 35                        |      | "     | 50.0                                      |    | 70.2 | 50-150 |  |  |       |

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Tasman Geosciences  
 6855 West 119th Avenue  
 Broomfield CO 80020

Mike Jahn  
 Project Number: 90412767  
 Project: KMG - Hauck 7-29

**Extractable Petroleum Hydrocarbons by 8015D - Quality Control**  
**Origins Laboratory, Inc.**

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

**Batch B1J1211 - EPA 3550B**

| <b>Matrix Spike Dup (B1J1211-MSD1)</b> | <b>Source: Y110253-01</b> |      |       | Prepared: 10/12/2021 Analyzed: 10/12/2021 |    |      |        |      |    |  |
|--|---------------------------|------|-------|---|----|------|--------|------|----|--|
| Diesel (C10-C28)                       | 705                       | 50.0 | mg/kg | 1000                                      | ND | 70.5 | 70-130 | 1.02 | 35 |  |
| Residual Range Organics (C28-C40)      | 822                       | 200  | "     | 1000                                      | ND | 82.2 | 70-130 | 1.25 | 35 |  |
| Surrogate: o-Terphenyl                 | 35                        |      | "     | 50.0                                      |    | 70.7 | 50-150 |      |    |  |

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Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Mike Jahn  
Project Number: 90412767  
Project: KMG - Hauck 7-29

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### Notes and Definitions

U Sample is Non-Detect.

QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

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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October 22, 2021

Tasman Geosciences

Mike Jahn

6855 West 119th Avenue

Broomfield CO 80020

**Project Name - KMG - Hauck 17-29**

**Project Number - 90419066**

Attached are your analytical results for KMG - Hauck 17-29 received by Origins Laboratory, Inc. October 12, 2021. This project is associated with Origins project number Y110274-01.

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



Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Mike Jahn  
Project Number: 90419066  
Project: KMG - Hauck 17-29

CROSS REFERENCE REPORT

| Sample ID | Laboratory ID | Matrix | Date Sampled           | Date Received    |
|-----------|---------------|--------|------------------------|------------------|
| WH-B01@7' | Y110274-01    | Soil   | October 12, 2021 15:26 | 10/12/2021 17:40 |

Origins Laboratory, Inc.



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 Broomfield CO 80020

Mike Jahn  
 Project Number: 90419066  
 Project: KMG - Hauck 17-29

Origins Laboratory

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

**Sample Receipt Checklist**

Origins Work Order: 4110274

Client: Tasman  
 Client Project ID: Hauck 17-29

Checklist Completed by: JH

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

Date/time completed: 10/12/11

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

Cooler Number/Temperature: 1 14.5 °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"/> |                                     |                                     |                   |
| 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 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.

Jules Helmer (Reviewed by Project Manager) 10/12/11 (Date/Time Reviewed)

Origins Laboratory, Inc.



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 Broomfield CO 80020

Mike Jahn  
 Project Number: 90419066  
 Project: KMG - Hauck 17-29

**WH-B01@7'**  
**10/12/2021 3:26:00PM**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Analyst | Prepared | Analyzed | Notes |
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|

**Origins Laboratory, Inc.**  
**Y110274-01 (Soil)**

**Boron (DTPA Sorbitol)**

|       |       |       |      |   |         |     |            |            |  |
|-------|-------|-------|------|---|---------|-----|------------|------------|--|
| Boron | 0.820 | 0.200 | mg/L | 1 | B1J1221 | KAP | 10/12/2021 | 10/14/2021 |  |
|-------|-------|-------|------|---|---------|-----|------------|------------|--|

**DRO/ORO by EPA 8015D**

|                                   |    |      |       |   |         |     |            |            |   |
|-----------------------------------|----|------|-------|---|---------|-----|------------|------------|---|
| Diesel (C10-C28)                  | ND | 25.0 | mg/kg | 1 | B1J1211 | EPC | 10/12/2021 | 10/12/2021 | U |
| Residual Range Organics (C28-C40) | ND | 100  | "     | " | "       | EPC | "          | "          | U |

|                        |        |        |  |  |   |   |   |   |  |
|------------------------|--------|--------|--|--|---|---|---|---|--|
| Surrogate: o-Terphenyl | 66.5 % | 50-150 |  |  | " | " | " | " |  |
|------------------------|--------|--------|--|--|---|---|---|---|--|

**GBTEX+TMBs**

|                             |    |         |       |   |         |     |            |            |   |
|-----------------------------|----|---------|-------|---|---------|-----|------------|------------|---|
| Naphthalene                 | ND | 0.00380 | mg/kg | 1 | B1J1210 | KDK | 10/12/2021 | 10/12/2021 | U |
| Benzene                     | ND | 0.00200 | "     | " | "       | KDK | "          | "          | U |
| Ethylbenzene                | ND | 0.00200 | "     | " | "       | KDK | "          | "          | U |
| Toluene                     | ND | 0.00200 | "     | " | "       | KDK | "          | "          | U |
| Gasoline Range Hydrocarbons | ND | 0.200   | "     | " | "       | KDK | "          | "          | U |
| Xylenes, total              | ND | 0.00200 | "     | " | "       | KDK | "          | "          | U |

|                                  |        |        |  |  |   |   |   |   |  |
|----------------------------------|--------|--------|--|--|---|---|---|---|--|
| Surrogate: 1,2-Dichloroethane-d4 | 97.3 % | 70-130 |  |  | " | " | " | " |  |
| Surrogate: Toluene-d8            | 101 %  | 70-130 |  |  | " | " | " | " |  |
| Surrogate: 4-Bromofluorobenzene  | 92.9 % | 70-130 |  |  | " | " | " | " |  |

**Metals by Saturated Paste**

|         |      |       |       |    |        |     |            |            |  |
|---------|------|-------|-------|----|--------|-----|------------|------------|--|
| Calcium | 24.5 | 0.499 | meq/L | 10 | [CALC] | KAP | 10/13/2021 | 10/14/2021 |  |
|---------|------|-------|-------|----|--------|-----|------------|------------|--|

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Mike Jahn  
 Project Number: 90419066  
 Project: KMG - Hauck 17-29

**WH-B01@7'**  
**10/12/2021 3:26:00PM**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Analyst | Prepared | Analyzed | Notes |
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|

**Origins Laboratory, Inc.**  
**Y110274-01 (Soil)**

**Metals by Saturated Paste**

|           |      |       |       |    |        |     |            |            |  |
|-----------|------|-------|-------|----|--------|-----|------------|------------|--|
| Magnesium | ND   | 0.823 | meq/L | 10 | [CALC] | KAP | 10/13/2021 | 10/14/2021 |  |
| Sodium    | 13.7 | 0.435 | "     | "  | "      | KAP | "          | "          |  |

**pH in Soil by 9045D**

|    |      |  |          |   |         |     |            |            |  |
|----|------|--|----------|---|---------|-----|------------|------------|--|
| pH | 12.8 |  | pH Units | 1 | B1J1313 | AHK | 10/13/2021 | 10/14/2021 |  |
|----|------|--|----------|---|---------|-----|------------|------------|--|

**SAR by 20B Saturated Paste**

|     |      |  |     |   |         |     |            |            |  |
|-----|------|--|-----|---|---------|-----|------------|------------|--|
| SAR | 3.90 |  | SAR | 1 | B1J1311 | KAP | 10/13/2021 | 10/14/2021 |  |
|-----|------|--|-----|---|---------|-----|------------|------------|--|

**Specific Conductance Mod. 9050A**

|                           |      |         |          |   |         |     |            |            |  |
|---------------------------|------|---------|----------|---|---------|-----|------------|------------|--|
| Specific Conductance (EC) | 9.89 | 0.00500 | mmhos/cm | 1 | B1J1312 | AHK | 10/13/2021 | 10/14/2021 |  |
|---------------------------|------|---------|----------|---|---------|-----|------------|------------|--|

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 Broomfield CO 80020

Mike Jahn  
 Project Number: 90419066  
 Project: KMG - Hauck 17-29

**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 B1J1210 - EPA 5030 (soil)**

**Blank (B1J1210-BLK1)**

Prepared: 10/12/2021 Analyzed: 10/12/2021

|                                  |      |         |       |       |      |  |        |  |  |   |
|----------------------------------|------|---------|-------|-------|------|--|--------|--|--|---|
| 1,2,4-Trimethylbenzene           | ND   | 0.00200 | mg/kg |       |      |  |        |  |  | U |
| Naphthalene                      | ND   | 0.00380 | "     |       |      |  |        |  |  | U |
| 1,3,5-Trimethylbenzene           | ND   | 0.00200 | "     |       |      |  |        |  |  | U |
| Benzene                          | ND   | 0.00200 | "     |       |      |  |        |  |  | U |
| Ethylbenzene                     | ND   | 0.00200 | "     |       |      |  |        |  |  | U |
| Toluene                          | ND   | 0.00200 | "     |       |      |  |        |  |  | U |
| Xylenes, total                   | ND   | 0.00200 | "     |       |      |  |        |  |  | U |
| Gasoline Range Hydrocarbons      | ND   | 0.200   | "     |       |      |  |        |  |  | U |
| Surrogate: 1,2-Dichloroethane-d4 | 0.11 |         | "     | 0.125 | 91.1 |  | 70-130 |  |  |   |
| Surrogate: Toluene-d8            | 0.13 |         | "     | 0.125 | 104  |  | 70-130 |  |  |   |
| Surrogate: 4-Bromofluorobenzene  | 0.12 |         | "     | 0.125 | 94.1 |  | 70-130 |  |  |   |

Origins Laboratory, Inc.



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 Broomfield CO 80020

Mike Jahn  
 Project Number: 90419066  
 Project: KMG - Hauck 17-29

**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 B1J1210 - EPA 5030 (soil)**

**LCS (B1J1210-BS1)**

Prepared: 10/12/2021 Analyzed: 10/12/2021

|                                  |        |         |       |        |  |      |        |  |  |  |
|----------------------------------|--------|---------|-------|--------|--|------|--------|--|--|--|
| 1,2,4-Trimethylbenzene           | 0.0500 | 0.00200 | mg/kg | 0.0500 |  | 100  | 70-130 |  |  |  |
| Naphthalene                      | 0.0493 | 0.0100  | "     | 0.0500 |  | 98.6 | 70-130 |  |  |  |
| 1,3,5-Trimethylbenzene           | 0.0494 | 0.00200 | "     | 0.0500 |  | 98.7 | 70-130 |  |  |  |
| Benzene                          | 0.0467 | 0.00200 | "     | 0.0500 |  | 93.4 | 70-130 |  |  |  |
| Ethylbenzene                     | 0.0481 | 0.00200 | "     | 0.0500 |  | 96.2 | 70-130 |  |  |  |
| m,p-Xylene                       | 0.0988 | 0.00400 | "     | 0.100  |  | 98.8 | 70-130 |  |  |  |
| o-Xylene                         | 0.0488 | 0.00200 | "     | 0.0500 |  | 97.7 | 70-130 |  |  |  |
| Toluene                          | 0.0496 | 0.00200 | "     | 0.0500 |  | 99.2 | 70-130 |  |  |  |
| Surrogate: 1,2-Dichloroethane-d4 | 0.12   |         | "     | 0.125  |  | 93.8 | 70-130 |  |  |  |
| Surrogate: Toluene-d8            | 0.13   |         | "     | 0.125  |  | 103  | 70-130 |  |  |  |
| Surrogate: 4-Bromofluorobenzene  | 0.12   |         | "     | 0.125  |  | 94.2 | 70-130 |  |  |  |

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Mike Jahn  
 Project Number: 90419066  
 Project: KMG - Hauck 17-29

**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 B1J1210 - EPA 5030 (soil)**

| Matrix Spike (B1J1210-MS1)       | Source: Y110234-18 |         |       | Prepared: 10/12/2021 Analyzed: 10/12/2021 |          |      |        |  |  |  |
|----------------------------------|--------------------|---------|-------|---|----------|------|--------|--|--|--|
| 1,2,4-Trimethylbenzene           | 0.0398             | 0.00200 | mg/kg | 0.0500                                    | 0.00118  | 77.2 | 70-130 |  |  |  |
| Naphthalene                      | 0.0432             | 0.0100  | "     | 0.0500                                    | ND       | 86.3 | 70-130 |  |  |  |
| 1,3,5-Trimethylbenzene           | 0.0387             | 0.00200 | "     | 0.0500                                    | 0.000440 | 76.6 | 70-130 |  |  |  |
| Benzene                          | 0.0386             | 0.00200 | "     | 0.0500                                    | ND       | 77.2 | 70-130 |  |  |  |
| Ethylbenzene                     | 0.0380             | 0.00200 | "     | 0.0500                                    | ND       | 75.9 | 70-130 |  |  |  |
| m,p-Xylene                       | 0.0780             | 0.00400 | "     | 0.100                                     | ND       | 78.0 | 70-130 |  |  |  |
| o-Xylene                         | 0.0387             | 0.00200 | "     | 0.0500                                    | ND       | 77.3 | 70-130 |  |  |  |
| Toluene                          | 0.0397             | 0.00200 | "     | 0.0500                                    | ND       | 79.3 | 70-130 |  |  |  |
| Surrogate: 1,2-Dichloroethane-d4 | 0.12               |         | "     | 0.125                                     |          | 96.7 | 70-130 |  |  |  |
| Surrogate: Toluene-d8            | 0.13               |         | "     | 0.125                                     |          | 101  | 70-130 |  |  |  |
| Surrogate: 4-Bromofluorobenzene  | 0.12               |         | "     | 0.125                                     |          | 93.1 | 70-130 |  |  |  |

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Mike Jahn  
 Project Number: 90419066  
 Project: KMG - Hauck 17-29

**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 B1J1210 - EPA 5030 (soil)**

| Matrix Spike Dup (B1J1210-MSD1)  | Source: Y110234-18 |         |       | Prepared: 10/12/2021 Analyzed: 10/13/2021 |          |      |        |      |    |       |
|----------------------------------|--------------------|---------|-------|---|----------|------|--------|------|----|-------|
| 1,2,4-Trimethylbenzene           | 0.0497             | 0.00200 | mg/kg | 0.0500                                    | 0.00118  | 97.0 | 70-130 | 22.1 | 20 | QR-03 |
| Naphthalene                      | 0.0490             | 0.0100  | "     | 0.0500                                    | ND       | 98.0 | 70-130 | 12.7 | 20 |       |
| 1,3,5-Trimethylbenzene           | 0.0487             | 0.00200 | "     | 0.0500                                    | 0.000440 | 96.4 | 70-130 | 22.8 | 20 | QR-03 |
| Benzene                          | 0.0483             | 0.00200 | "     | 0.0500                                    | ND       | 96.6 | 70-130 | 22.3 | 20 | QR-03 |
| Ethylbenzene                     | 0.0471             | 0.00200 | "     | 0.0500                                    | ND       | 94.2 | 70-130 | 21.4 | 20 | QR-03 |
| m,p-Xylene                       | 0.0977             | 0.00400 | "     | 0.100                                     | ND       | 97.7 | 70-130 | 22.4 | 20 | QR-03 |
| o-Xylene                         | 0.0485             | 0.00200 | "     | 0.0500                                    | ND       | 97.0 | 70-130 | 22.5 | 20 | QR-03 |
| Toluene                          | 0.0499             | 0.00200 | "     | 0.0500                                    | ND       | 99.8 | 70-130 | 22.9 | 20 | QR-03 |
| Surrogate: 1,2-Dichloroethane-d4 | 0.12               |         | "     | 0.125                                     |          | 98.9 | 70-130 |      |    |       |
| Surrogate: Toluene-d8            | 0.13               |         | "     | 0.125                                     |          | 102  | 70-130 |      |    |       |
| Surrogate: 4-Bromofluorobenzene  | 0.12               |         | "     | 0.125                                     |          | 92.4 | 70-130 |      |    |       |

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Mike Jahn  
 Project Number: 90419066  
 Project: KMG - Hauck 17-29

**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 B1J1211 - EPA 3550B</b>  |        |                 |       |             |   |      |             |     |           |       |
| <b>Blank (B1J1211-BLK1)</b>       |        |                 |       |             |   |      |             |     |           |       |
|                                   |        |                 |       |             | Prepared: 10/12/2021 Analyzed: 10/12/2021 |      |             |     |           |       |
| Diesel (C10-C28)                  | ND     | 25.0            | mg/kg |             |   |      |             |     |           | U     |
| Residual Range Organics (C28-C40) | ND     | 100             | "     |             |   |      |             |     |           | U     |
| Surrogate: o-Terphenyl            | 17     |                 | "     | 25.0        |   | 67.0 | 50-150      |     |           |       |

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Mike Jahn  
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 Project: KMG - Hauck 17-29

**Extractable Petroleum Hydrocarbons by 8015D - Quality Control**  
**Origins Laboratory, Inc.**

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

**Batch B1J1211 - EPA 3550B**

**LCS (B1J1211-BS1)**

Prepared: 10/12/2021 Analyzed: 10/12/2021

|                                   |     |      |       |      |  |      |        |  |  |  |
|-----------------------------------|-----|------|-------|------|--|------|--------|--|--|--|
| Diesel (C10-C28)                  | 706 | 50.0 | mg/kg | 1000 |  | 70.6 | 70-130 |  |  |  |
| Residual Range Organics (C28-C40) | 825 | 200  | "     | 1000 |  | 82.5 | 70-130 |  |  |  |
| Surrogate: o-Terphenyl            | 36  |      | "     | 50.0 |  | 71.0 | 50-150 |  |  |  |

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Mike Jahn  
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 Project: KMG - Hauck 17-29

**Extractable Petroleum Hydrocarbons by 8015D - Quality Control**  
**Origins Laboratory, Inc.**

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

**Batch B1J1211 - EPA 3550B**

| <b>Matrix Spike (B1J1211-MS1)</b> | <b>Source: Y110253-01</b> |      |       | <b>Prepared: 10/12/2021 Analyzed: 10/12/2021</b> |    |      |        |  |  |       |
|-----------------------------------|---------------------------|------|-------|--|----|------|--------|--|--|-------|
| Diesel (C10-C28)                  | 697                       | 50.0 | mg/kg | 1000   | ND | 69.7 | 70-130 |  |  | QM-07 |
| Residual Range Organics (C28-C40) | 812                       | 200  | "     | 1000   | ND | 81.2 | 70-130 |  |  |       |
| Surrogate: o-Terphenyl            | 35                        |      | "     | 50.0   |    | 70.2 | 50-150 |  |  |       |

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Mike Jahn  
 Project Number: 90419066  
 Project: KMG - Hauck 17-29

**Extractable Petroleum Hydrocarbons by 8015D - Quality Control**  
**Origins Laboratory, Inc.**

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

**Batch B1J1211 - EPA 3550B**

| <b>Matrix Spike Dup (B1J1211-MSD1)</b> | <b>Source: Y110253-01</b> |      |       | <b>Prepared: 10/12/2021 Analyzed: 10/12/2021</b> |    |      |        |      |    |  |
|--|---------------------------|------|-------|--|----|------|--------|------|----|--|
| Diesel (C10-C28)                       | 705                       | 50.0 | mg/kg | 1000   | ND | 70.5 | 70-130 | 1.02 | 35 |  |
| Residual Range Organics (C28-C40)      | 822                       | 200  | "     | 1000   | ND | 82.2 | 70-130 | 1.25 | 35 |  |
| Surrogate: o-Terphenyl                 | 35                        |      | "     | 50.0   |    | 70.7 | 50-150 |      |    |  |

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.*

Tasman Geosciences  
 6855 West 119th Avenue  
 Broomfield CO 80020

Mike Jahn  
 Project Number: 90419066  
 Project: KMG - Hauck 17-29

**Extractable Petroleum Hydrocarbons by 8015D - Quality Control**  
**Origins Laboratory, Inc.**

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

**Saturated Paste - Quality Control**  
**Origins Laboratory, Inc.**

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

**Batch B1J1312 - NO PREP**

**Blank (B1J1312-BLK1)**

Prepared: 10/13/2021 Analyzed: 10/14/2021

Specific Conductance (EC) 0.00160 0.00500 mmhos/cm

**Duplicate (B1J1312-DUP1)**

**Source: Y110272-06**

Prepared: 10/13/2021 Analyzed: 10/14/2021

Specific Conductance (EC) 0.0937 0.00500 mmhos/cm 0.0881 6.16 25

**Batch B1J1313 - NO PREP**

**Duplicate (B1J1313-DUP1)**

**Source: Y110272-06**

Prepared: 10/13/2021 Analyzed: 10/14/2021

pH 7.28 pH Units 7.47 2.58 25

Origins Laboratory, Inc.



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Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Mike Jahn  
Project Number: 90419066  
Project: KMG - Hauck 17-29

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### Notes and Definitions

U Sample is Non-Detect.

QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

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.*



November 08, 2021

**Tasman Geosciences**

**Mike Jahn**

**6855 West 119th Avenue**

**Broomfield CO 80020**

**Project Name - KMG - Hauck 7-29**

**Project Number - 90412767**

Attached are your analytical results for KMG - Hauck 7-29 received by Origins Laboratory, Inc. November 03, 2021. This project is associated with Origins project number Y111083-01.

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

Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Mike Jahn  
Project Number: 90412767  
Project: KMG - Hauck 7-29

CROSS REFERENCE REPORT

| Sample ID | Laboratory ID | Matrix | Date Sampled           | Date Received    |
|-----------|---------------|--------|------------------------|------------------|
| WH-B02@9' | Y111083-01    | Soil   | November 3, 2021 14:50 | 11/03/2021 16:45 |
| WH-N02@8' | Y111083-02    | Soil   | November 3, 2021 14:52 | 11/03/2021 16:45 |
| WH-S02@8' | Y111083-03    | Soil   | November 3, 2021 14:54 | 11/03/2021 16:45 |
| WH-E02@8' | Y111083-04    | Soil   | November 3, 2021 14:56 | 11/03/2021 16:45 |
| WH-W02@8' | Y111083-05    | Soil   | November 3, 2021 14:58 | 11/03/2021 16:45 |

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.*



Tasman Geosciences  
 6855 West 119th Avenue  
 Broomfield CO 80020

Mike Jahn  
 Project Number: 90412767  
 Project: KMG - Hauck 7-29

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

**Sample Receipt Checklist**

Origins Work Order: Y111083 Client: Tasman  
 Client Project ID: Hauck 17-29 WH

Checklist Completed by: JG Shipped Via: HD  
 Date/time completed: 11/3/21 (UPS, FedEx, Hand Delivered, Pick-up, etc.)  
 Airbill #: N/A

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

Cooler Number/Temperature: 1 / 8.4 °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"/> |                                     | Some Day          |
| 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 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) [Signature]

Date/Time Reviewed 11/3/21

Origins Laboratory, Inc.

[Signature]

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.

Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Mike Jahn  
Project Number: 90412767  
Project: KMG - Hauck 7-29

**WH-B02@9'**  
**11/3/2021 2:50:00PM**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Analyst | Prepared | Analyzed | Notes |
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|

**Origins Laboratory, Inc.**  
**Y111083-01 (Soil)**

**Metals by Saturated Paste**

|           |      |       |       |    |        |     |            |            |  |
|-----------|------|-------|-------|----|--------|-----|------------|------------|--|
| Calcium   | 2.87 | 0.499 | meq/L | 10 | [CALC] | KAP | 11/03/2021 | 11/04/2021 |  |
| Magnesium | 2.80 | 0.823 | "     | "  | "      | KAP | "          | "          |  |
| Sodium    | 4.25 | 0.435 | "     | "  | "      | KAP | "          | "          |  |

**SAR by 20B Saturated Paste**

|     |      |  |     |   |         |     |   |   |  |
|-----|------|--|-----|---|---------|-----|---|---|--|
| SAR | 2.52 |  | SAR | 1 | B1K0328 | KAP | " | " |  |
|-----|------|--|-----|---|---------|-----|---|---|--|

Origins Laboratory, Inc.



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Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Mike Jahn  
Project Number: 90412767  
Project: KMG - Hauck 7-29

**WH-N02@8'**  
**11/3/2021 2:52:00PM**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Analyst | Prepared | Analyzed | Notes |
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|

**Origins Laboratory, Inc.**  
**Y111083-02 (Soil)**

**Metals by Saturated Paste**

|           |      |       |       |    |        |     |            |            |
|-----------|------|-------|-------|----|--------|-----|------------|------------|
| Calcium   | 3.78 | 0.499 | meq/L | 10 | [CALC] | KAP | 11/03/2021 | 11/04/2021 |
| Magnesium | 4.95 | 0.823 | "     | "  | "      | KAP | "          | "          |
| Sodium    | 13.7 | 0.435 | "     | "  | "      | KAP | "          | "          |

**SAR by 20B Saturated Paste**

|     |      |  |     |   |         |     |   |   |
|-----|------|--|-----|---|---------|-----|---|---|
| SAR | 6.55 |  | SAR | 1 | B1K0328 | KAP | " | " |
|-----|------|--|-----|---|---------|-----|---|---|

Origins Laboratory, Inc.



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Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Mike Jahn  
Project Number: 90412767  
Project: KMG - Hauck 7-29

**WH-S02@8'**  
**11/3/2021 2:54:00PM**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Analyst | Prepared | Analyzed | Notes |
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|

**Origins Laboratory, Inc.**  
**Y111083-03 (Soil)**

**Metals by Saturated Paste**

|           |      |       |       |    |        |     |            |            |  |
|-----------|------|-------|-------|----|--------|-----|------------|------------|--|
| Calcium   | 4.46 | 0.499 | meq/L | 10 | [CALC] | KAP | 11/03/2021 | 11/04/2021 |  |
| Magnesium | 5.32 | 0.823 | "     | "  | "      | KAP | "          | "          |  |
| Sodium    | 15.3 | 0.435 | "     | "  | "      | KAP | "          | "          |  |

**SAR by 20B Saturated Paste**

|     |      |  |     |   |         |     |   |   |  |
|-----|------|--|-----|---|---------|-----|---|---|--|
| SAR | 6.92 |  | SAR | 1 | B1K0328 | KAP | " | " |  |
|-----|------|--|-----|---|---------|-----|---|---|--|

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Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Mike Jahn  
Project Number: 90412767  
Project: KMG - Hauck 7-29

**WH-E02@8'**  
**11/3/2021 2:56:00PM**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Analyst | Prepared | Analyzed | Notes |
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|

**Origins Laboratory, Inc.**  
**Y111083-04 (Soil)**

**Metals by Saturated Paste**

|           |      |       |       |    |        |     |            |            |  |
|-----------|------|-------|-------|----|--------|-----|------------|------------|--|
| Calcium   | 10.4 | 0.499 | meq/L | 10 | [CALC] | KAP | 11/04/2021 | 11/05/2021 |  |
| Magnesium | 9.94 | 0.823 | "     | "  | "      | KAP | "          | "          |  |
| Sodium    | 15.3 | 0.435 | "     | "  | "      | KAP | "          | "          |  |

**SAR by 20B Saturated Paste**

|     |      |  |     |   |         |     |   |   |  |
|-----|------|--|-----|---|---------|-----|---|---|--|
| SAR | 4.81 |  | SAR | 1 | B1K0404 | KAP | " | " |  |
|-----|------|--|-----|---|---------|-----|---|---|--|

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Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Mike Jahn  
Project Number: 90412767  
Project: KMG - Hauck 7-29

**WH-W02@8'**  
**11/3/2021 2:58:00PM**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Analyst | Prepared | Analyzed | Notes |
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|

**Origins Laboratory, Inc.**  
**Y111083-05 (Soil)**

**Metals by Saturated Paste**

|           |      |       |       |    |        |     |            |            |  |
|-----------|------|-------|-------|----|--------|-----|------------|------------|--|
| Calcium   | 2.07 | 0.499 | meq/L | 10 | [CALC] | KAP | 11/04/2021 | 11/05/2021 |  |
| Magnesium | 3.75 | 0.823 | "     | "  | "      | KAP | "          | "          |  |
| Sodium    | 16.8 | 0.435 | "     | "  | "      | KAP | "          | "          |  |

**SAR by 20B Saturated Paste**

|     |      |  |     |   |         |     |   |   |  |
|-----|------|--|-----|---|---------|-----|---|---|--|
| SAR | 9.83 |  | SAR | 1 | B1K0404 | KAP | " | " |  |
|-----|------|--|-----|---|---------|-----|---|---|--|

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Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Mike Jahn  
Project Number: 90412767  
Project: KMG - Hauck 7-29

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

Origins Laboratory, Inc.



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Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Mike Jahn  
Project Number: 90412767  
Project: KMG - Hauck 7-29

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### Notes and Definitions

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.*

November 05, 2021

Tasman Geosciences

Mike Jahn

6855 West 119th Avenue

Broomfield CO 80020

**Project Name - KMG - Hauck 17-29 WH**

**Project Number - 90412767**

Attached are your analytical results for KMG - Hauck 17-29 WH received by Origins Laboratory, Inc. November 03, 2021. This project is associated with Origins project number Y111084-01.

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



Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Mike Jahn  
Project Number: 90412767  
Project: KMG - Hauck 17-29 WH

CROSS REFERENCE REPORT

| Sample ID | Laboratory ID | Matrix | Date Sampled           | Date Received    |
|-----------|---------------|--------|------------------------|------------------|
| WH-B02@9' | Y111084-01    | Soil   | November 3, 2021 15:10 | 11/03/2021 16:45 |
| WH-N02@8' | Y111084-02    | Soil   | November 3, 2021 15:12 | 11/03/2021 16:45 |
| WH-S02@8' | Y111084-03    | Soil   | November 3, 2021 15:14 | 11/03/2021 16:45 |
| WH-E02@8' | Y111084-04    | Soil   | November 3, 2021 15:16 | 11/03/2021 16:45 |
| WH-W02@8' | Y111084-05    | Soil   | November 3, 2021 15:18 | 11/03/2021 16:45 |

Origins Laboratory, Inc.



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Tasman Geosciences  
 6855 West 119th Avenue  
 Broomfield CO 80020

Mike Jahn  
 Project Number: 90412767  
 Project: KMG - Hauck 17-29 WH

Origins Laboratory: \_\_\_\_\_ F-012207-01-R1  
 Effective Date: 01/09/12

**Sample Receipt Checklist**

Origins Work Order: 4111024 Client: TASMAN  
 Client Project ID: HAUCK 17-29 WH

Checklist Completed by: OH Shipped Via: HD  
 (UPS, FedEx, Hand Delivered, Pick-up, etc.)  
 Date/time completed: 11/2/21 Airbill #: N/A

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

Cooler Number/Temperature: 1 / 6.4 °C \_\_\_\_\_ °C \_\_\_\_\_ °C \_\_\_\_\_ °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"/> |                                     | <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 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) Kenny H. Date/Time Reviewed 11/2/21

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.

Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Mike Jahn  
Project Number: 90412767  
Project: KMG - Hauck 17-29 WH

**WH-B02@9'**  
**11/3/2021 3:10:00PM**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Analyst | Prepared | Analyzed | Notes |
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|

**Origins Laboratory, Inc.**  
**Y111084-01 (Soil)**

**pH in Soil by 9045D**

|    |      |  |          |   |         |     |            |            |  |
|----|------|--|----------|---|---------|-----|------------|------------|--|
| pH | 7.86 |  | pH Units | 1 | B1K0416 | ACC | 11/04/2021 | 11/05/2021 |  |
|----|------|--|----------|---|---------|-----|------------|------------|--|

**Specific Conductance Mod. 9050A**

|                           |       |         |          |   |         |     |            |            |  |
|---------------------------|-------|---------|----------|---|---------|-----|------------|------------|--|
| Specific Conductance (EC) | 0.841 | 0.00500 | mmhos/cm | " | B1K0420 | ACC | 11/04/2021 | 11/05/2021 |  |
|---------------------------|-------|---------|----------|---|---------|-----|------------|------------|--|

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.*

Tasman Geosciences  
 6855 West 119th Avenue  
 Broomfield CO 80020

Mike Jahn  
 Project Number: 90412767  
 Project: KMG - Hauck 17-29 WH

**WH-N02@8'**  
**11/3/2021 3:12:00PM**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Analyst | Prepared | Analyzed | Notes |
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|

**Origins Laboratory, Inc.**  
**Y111084-02 (Soil)**

**pH in Soil by 9045D**

|    |      |  |          |   |         |     |            |            |  |
|----|------|--|----------|---|---------|-----|------------|------------|--|
| pH | 7.89 |  | pH Units | 1 | B1K0416 | ACC | 11/04/2021 | 11/05/2021 |  |
|----|------|--|----------|---|---------|-----|------------|------------|--|

**Specific Conductance Mod. 9050A**

|                           |      |         |          |   |         |     |            |            |  |
|---------------------------|------|---------|----------|---|---------|-----|------------|------------|--|
| Specific Conductance (EC) | 1.13 | 0.00500 | mmhos/cm | " | B1K0420 | ACC | 11/04/2021 | 11/05/2021 |  |
|---------------------------|------|---------|----------|---|---------|-----|------------|------------|--|

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Tasman Geosciences  
 6855 West 119th Avenue  
 Broomfield CO 80020

Mike Jahn  
 Project Number: 90412767  
 Project: KMG - Hauck 17-29 WH

**WH-S02@8'**

**11/3/2021 3:14:00PM**

| Analyte | Result | Reporting<br>Limit | Units | Dilution | Batch | Analyst | Prepared | Analyzed | Notes |
|---------|--------|--------------------|-------|----------|-------|---------|----------|----------|-------|
|---------|--------|--------------------|-------|----------|-------|---------|----------|----------|-------|

**Origins Laboratory, Inc.**  
**Y111084-03 (Soil)**

**pH in Soil by 9045D**

|    |      |  |          |   |         |     |            |            |  |
|----|------|--|----------|---|---------|-----|------------|------------|--|
| pH | 7.83 |  | pH Units | 1 | B1K0416 | ACC | 11/04/2021 | 11/05/2021 |  |
|----|------|--|----------|---|---------|-----|------------|------------|--|

**Specific Conductance Mod. 9050A**

|                           |      |         |          |   |         |     |            |            |  |
|---------------------------|------|---------|----------|---|---------|-----|------------|------------|--|
| Specific Conductance (EC) | 1.47 | 0.00500 | mmhos/cm | " | B1K0420 | ACC | 11/04/2021 | 11/05/2021 |  |
|---------------------------|------|---------|----------|---|---------|-----|------------|------------|--|

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 6855 West 119th Avenue  
 Broomfield CO 80020

Mike Jahn  
 Project Number: 90412767  
 Project: KMG - Hauck 17-29 WH

**WH-E02@8'**  
**11/3/2021 3:16:00PM**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Analyst | Prepared | Analyzed | Notes |
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|

**Origins Laboratory, Inc.**  
**Y111084-04 (Soil)**

**pH in Soil by 9045D**

|    |      |  |          |   |         |     |            |            |  |
|----|------|--|----------|---|---------|-----|------------|------------|--|
| pH | 8.05 |  | pH Units | 1 | B1K0416 | ACC | 11/04/2021 | 11/05/2021 |  |
|----|------|--|----------|---|---------|-----|------------|------------|--|

**Specific Conductance Mod. 9050A**

|                           |      |         |          |   |         |     |            |            |  |
|---------------------------|------|---------|----------|---|---------|-----|------------|------------|--|
| Specific Conductance (EC) | 1.03 | 0.00500 | mmhos/cm | " | B1K0420 | ACC | 11/04/2021 | 11/05/2021 |  |
|---------------------------|------|---------|----------|---|---------|-----|------------|------------|--|

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6855 West 119th Avenue  
Broomfield CO 80020

Mike Jahn  
Project Number: 90412767  
Project: KMG - Hauck 17-29 WH

**WH-W02@8'**  
**11/3/2021 3:18:00PM**

| Analyte | Result | Reporting<br>Limit | Units | Dilution | Batch | Analyst | Prepared | Analyzed | Notes |
|---------|--------|--------------------|-------|----------|-------|---------|----------|----------|-------|
|---------|--------|--------------------|-------|----------|-------|---------|----------|----------|-------|

**Origins Laboratory, Inc.**  
**Y111084-05 (Soil)**

**pH in Soil by 9045D**

|    |      |  |          |   |         |     |            |            |  |
|----|------|--|----------|---|---------|-----|------------|------------|--|
| pH | 7.71 |  | pH Units | 1 | B1K0416 | ACC | 11/04/2021 | 11/05/2021 |  |
|----|------|--|----------|---|---------|-----|------------|------------|--|

**Specific Conductance Mod. 9050A**

|                           |       |         |          |   |         |     |            |            |  |
|---------------------------|-------|---------|----------|---|---------|-----|------------|------------|--|
| Specific Conductance (EC) | 0.855 | 0.00500 | mmhos/cm | " | B1K0420 | ACC | 11/04/2021 | 11/05/2021 |  |
|---------------------------|-------|---------|----------|---|---------|-----|------------|------------|--|

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 6855 West 119th Avenue  
 Broomfield CO 80020

Mike Jahn  
 Project Number: 90412767  
 Project: KMG - Hauck 17-29 WH

**Saturated Paste - Quality Control**  
**Origins Laboratory, Inc.**

| Analyte                         | Result  | Reporting Limit                           | Units    | Spike Level | Source Result                             | %REC | %REC Limits | RPD  | RPD Limit | Notes |
|---------------------------------|---------|---|----------|-------------|---|------|-------------|------|-----------|-------|
| <b>Batch B1K0416 - NO PREP</b>  |         |   |          |             |   |      |             |      |           |       |
| <b>Duplicate (B1K0416-DUP1)</b> |         | <b>Source: Y111084-01</b>                 |          |             | Prepared: 11/04/2021 Analyzed: 11/05/2021 |      |             |      |           |       |
| pH                              | 7.98    |   | pH Units |             | 7.86                                      |      |             | 1.52 | 25        |       |
| <b>Batch B1K0420 - NO PREP</b>  |         |   |          |             |   |      |             |      |           |       |
| <b>Blank (B1K0420-BLK1)</b>     |         | Prepared: 11/04/2021 Analyzed: 11/05/2021 |          |             |   |      |             |      |           |       |
| Specific Conductance (EC)       | 0.00140 | 0.00500                                   | mmhos/cm |             |   |      |             |      |           |       |
| <b>Duplicate (B1K0420-DUP1)</b> |         | <b>Source: Y111084-01</b>                 |          |             | Prepared: 11/04/2021 Analyzed: 11/05/2021 |      |             |      |           |       |
| Specific Conductance (EC)       | 0.806   | 0.00500                                   | mmhos/cm |             | 0.841                                     |      |             | 4.26 | 25        |       |

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Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Mike Jahn  
Project Number: 90412767  
Project: KMG - Hauck 17-29 WH

---

### Notes and Definitions

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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November 05, 2021

Tasman Geosciences

Mike Jahn

6855 West 119th Avenue

Broomfield CO 80020

**Project Name - KMG - Hauck 7-29**

**Project Number - 90412767**

Attached are your analytical results for KMG - Hauck 7-29 received by Origins Laboratory, Inc. November 04, 2021. This project is associated with Origins project number Y111100-01.

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



Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Mike Jahn  
Project Number: 90412767  
Project: KMG - Hauck 7-29

CROSS REFERENCE REPORT

| Sample ID | Laboratory ID | Matrix | Date Sampled           | Date Received    |
|-----------|---------------|--------|------------------------|------------------|
| WH-GW01   | Y111100-01    | Water  | November 4, 2021 12:30 | 11/04/2021 16:20 |

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, Project Manager



Tasman Geosciences  
 6855 West 119th Avenue  
 Broomfield CO 80020

Mike Jahn  
 Project Number: 90412767  
 Project: KMG - Hauck 7-29

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: y/111100

Client: Tasman  
 Client Project ID: Hauck 7-29

Checklist Completed by: JG  
 Date/time completed: 11/14/21

Shipped Via: HD  
 (UPS, FedEx, Hand Delivered, Pick-up, etc.)  
 Airbill #: N/A

Matrix(s) Received: (Check all that apply):  Soil/Solid

Water  Other: \_\_\_\_\_

Cooler Number/Temperature: 1 / 11.7 °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"/> | <input checked="" type="checkbox"/> |     | <u>See 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 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) [Signature]

Date/Time Reviewed 11/14/21

Origins Laboratory, Inc.

Jen 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.

Tasman Geosciences  
 6855 West 119th Avenue  
 Broomfield CO 80020

Mike Jahn  
 Project Number: 90412767  
 Project: KMG - Hauck 7-29

**WH-GW01**

**11/4/2021 12:30:00PM**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Analyst | Prepared | Analyzed | Notes |
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|

**Origins Laboratory, Inc.**  
**Y111100-01 (Water)**

**BTEX+N+TMBs by 8260D**

|                        |    |      |      |   |         |     |            |            |   |
|------------------------|----|------|------|---|---------|-----|------------|------------|---|
| 1,2,4-Trimethylbenzene | ND | 1.00 | ug/L | 1 | B1K0324 | ZZZ | 11/04/2021 | 11/04/2021 | U |
| 1,3,5-Trimethylbenzene | ND | 1.00 | "    | " | "       | ZZZ | "          | "          | U |
| Benzene                | ND | 1.00 | "    | " | "       | ZZZ | "          | "          | U |
| Ethylbenzene           | ND | 1.00 | "    | " | "       | ZZZ | "          | "          | U |
| Naphthalene            | ND | 4.00 | "    | " | "       | ZZZ | "          | "          | U |
| Toluene                | ND | 1.00 | "    | " | "       | ZZZ | "          | "          | U |
| Xylenes, total         | ND | 1.00 | "    | " | "       | ZZZ | "          | "          | U |

|                                  |        |        |  |  |   |   |   |   |  |
|----------------------------------|--------|--------|--|--|---|---|---|---|--|
| Surrogate: 1,2-Dichloroethane-d4 | 106 %  | 70-130 |  |  | " | " | " | " |  |
| Surrogate: Toluene-d8            | 99.4 % | 70-130 |  |  | " | " | " | " |  |
| Surrogate: 4-Bromofluorobenzene  | 100 %  | 70-130 |  |  | " | " | " | " |  |

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Tasman Geosciences  
 6855 West 119th Avenue  
 Broomfield CO 80020

Mike Jahn  
 Project Number: 90412767  
 Project: KMG - Hauck 7-29

**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 B1K0324 - EPA 5030B (Water)**

**Blank (B1K0324-BLK1)**

Prepared: 11/03/2021 Analyzed: 11/03/2021

|                                  |    |      |      |      |      |  |        |  |  |   |
|----------------------------------|----|------|------|------|------|--|--------|--|--|---|
| 1,2,4-Trimethylbenzene           | ND | 1.00 | ug/L |      |      |  |        |  |  | U |
| 1,3,5-Trimethylbenzene           | ND | 1.00 | "    |      |      |  |        |  |  | U |
| Benzene                          | ND | 1.00 | "    |      |      |  |        |  |  | U |
| Ethylbenzene                     | ND | 1.00 | "    |      |      |  |        |  |  | U |
| m,p-Xylene                       | ND | 2.00 | "    |      |      |  |        |  |  | U |
| Naphthalene                      | ND | 4.00 | "    |      |      |  |        |  |  | U |
| o-Xylene                         | ND | 1.00 | "    |      |      |  |        |  |  | U |
| Toluene                          | ND | 1.00 | "    |      |      |  |        |  |  | U |
| Xylenes, total                   | ND | 1.00 | "    |      |      |  |        |  |  | U |
| Surrogate: 1,2-Dichloroethane-d4 | 62 |      | "    | 62.5 | 98.4 |  | 70-130 |  |  |   |
| Surrogate: Toluene-d8            | 61 |      | "    | 62.5 | 96.9 |  | 70-130 |  |  |   |
| Surrogate: 4-Bromofluorobenzene  | 65 |      | "    | 62.5 | 105  |  | 70-130 |  |  |   |

Origins Laboratory, Inc.



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Tasman Geosciences  
 6855 West 119th Avenue  
 Broomfield CO 80020

Mike Jahn  
 Project Number: 90412767  
 Project: KMG - Hauck 7-29

**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 B1K0324 - EPA 5030B (Water)**

**LCS (B1K0324-BS1)**

Prepared: 11/03/2021 Analyzed: 11/03/2021

|                                  |      |      |      |      |  |      |        |  |  |  |
|----------------------------------|------|------|------|------|--|------|--------|--|--|--|
| 1,2,4-Trimethylbenzene           | 50.2 | 1.00 | ug/L | 50.0 |  | 100  | 70-130 |  |  |  |
| 1,3,5-Trimethylbenzene           | 48.7 | 1.00 | "    | 50.0 |  | 97.3 | 70-130 |  |  |  |
| Benzene                          | 51.6 | 1.00 | "    | 50.0 |  | 103  | 70-130 |  |  |  |
| Ethylbenzene                     | 54.7 | 1.00 | "    | 50.0 |  | 109  | 70-130 |  |  |  |
| m,p-Xylene                       | 109  | 2.00 | "    | 100  |  | 109  | 70-130 |  |  |  |
| Naphthalene                      | 59.6 | 4.00 | "    | 50.0 |  | 119  | 70-130 |  |  |  |
| o-Xylene                         | 54.5 | 1.00 | "    | 50.0 |  | 109  | 70-130 |  |  |  |
| Toluene                          | 54.2 | 1.00 | "    | 50.0 |  | 108  | 70-130 |  |  |  |
| Surrogate: 1,2-Dichloroethane-d4 | 66   |      | "    | 62.5 |  | 105  | 70-130 |  |  |  |
| Surrogate: Toluene-d8            | 61   |      | "    | 62.5 |  | 97.1 | 70-130 |  |  |  |
| Surrogate: 4-Bromofluorobenzene  | 65   |      | "    | 62.5 |  | 104  | 70-130 |  |  |  |

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 6855 West 119th Avenue  
 Broomfield CO 80020

Mike Jahn  
 Project Number: 90412767  
 Project: KMG - Hauck 7-29

**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 B1K0324 - EPA 5030B (Water)**

| Matrix Spike (B1K0324-MS1)       | Source: Y111053-27 |      |      | Prepared: 11/03/2021 Analyzed: 11/04/2021 |      |      |        |  |  |  |
|----------------------------------|--------------------|------|------|---|------|------|--------|--|--|--|
| 1,2,4-Trimethylbenzene           | 51.4               | 1.00 | ug/L | 50.0                                      | ND   | 103  | 70-130 |  |  |  |
| 1,3,5-Trimethylbenzene           | 48.8               | 1.00 | "    | 50.0                                      | ND   | 97.7 | 70-130 |  |  |  |
| Benzene                          | 53.6               | 1.00 | "    | 50.0                                      | ND   | 107  | 70-130 |  |  |  |
| Ethylbenzene                     | 53.6               | 1.00 | "    | 50.0                                      | ND   | 107  | 70-130 |  |  |  |
| m,p-Xylene                       | 110                | 2.00 | "    | 100                                       | ND   | 110  | 70-130 |  |  |  |
| Naphthalene                      | 55.9               | 4.00 | "    | 50.0                                      | 2.32 | 107  | 70-130 |  |  |  |
| o-Xylene                         | 55.1               | 1.00 | "    | 50.0                                      | ND   | 110  | 70-130 |  |  |  |
| Toluene                          | 53.8               | 1.00 | "    | 50.0                                      | ND   | 108  | 70-130 |  |  |  |
| Surrogate: 1,2-Dichloroethane-d4 | 65                 |      | "    | 62.5                                      |      | 103  | 70-130 |  |  |  |
| Surrogate: Toluene-d8            | 60                 |      | "    | 62.5                                      |      | 96.6 | 70-130 |  |  |  |
| Surrogate: 4-Bromofluorobenzene  | 65                 |      | "    | 62.5                                      |      | 104  | 70-130 |  |  |  |

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Tasman Geosciences  
 6855 West 119th Avenue  
 Broomfield CO 80020

Mike Jahn  
 Project Number: 90412767  
 Project: KMG - Hauck 7-29

**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 B1K0324 - EPA 5030B (Water)**

| Matrix Spike Dup (B1K0324-MSD1)  | Source: Y111053-27 |      |      | Prepared: 11/03/2021 Analyzed: 11/04/2021 |      |      |        |       |    |  |
|----------------------------------|--------------------|------|------|---|------|------|--------|-------|----|--|
| 1,2,4-Trimethylbenzene           | 51.5               | 1.00 | ug/L | 50.0                                      | ND   | 103  | 70-130 | 0.194 | 20 |  |
| 1,3,5-Trimethylbenzene           | 49.4               | 1.00 | "    | 50.0                                      | ND   | 98.9 | 70-130 | 1.22  | 20 |  |
| Benzene                          | 53.8               | 1.00 | "    | 50.0                                      | ND   | 108  | 70-130 | 0.466 | 20 |  |
| Ethylbenzene                     | 55.2               | 1.00 | "    | 50.0                                      | ND   | 110  | 70-130 | 2.92  | 20 |  |
| m,p-Xylene                       | 110                | 2.00 | "    | 100                                       | ND   | 110  | 70-130 | 0.473 | 20 |  |
| Naphthalene                      | 58.6               | 4.00 | "    | 50.0                                      | 2.32 | 113  | 70-130 | 4.68  | 20 |  |
| o-Xylene                         | 55.6               | 1.00 | "    | 50.0                                      | ND   | 111  | 70-130 | 0.903 | 20 |  |
| Toluene                          | 53.7               | 1.00 | "    | 50.0                                      | ND   | 107  | 70-130 | 0.205 | 20 |  |
| Surrogate: 1,2-Dichloroethane-d4 | 57                 |      | "    | 62.5                                      |      | 91.0 | 70-130 |       |    |  |
| Surrogate: Toluene-d8            | 60                 |      | "    | 62.5                                      |      | 95.9 | 70-130 |       |    |  |
| Surrogate: 4-Bromofluorobenzene  | 65                 |      | "    | 62.5                                      |      | 105  | 70-130 |       |    |  |

Origins Laboratory, Inc.



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Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Mike Jahn  
Project Number: 90412767  
Project: KMG - Hauck 7-29

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### 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, Project Manager

November 05, 2021

Tasman Geosciences

Mike Jahn

6855 West 119th Avenue

Broomfield CO 80020

**Project Name - KMG - Hauck 17-29 WH**

**Project Number - 90412767**

Attached are your analytical results for KMG - Hauck 17-29 WH received by Origins Laboratory, Inc. November 04, 2021. This project is associated with Origins project number Y111099-01.

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



Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Mike Jahn  
Project Number: 90412767  
Project: KMG - Hauck 17-29 WH

CROSS REFERENCE REPORT

| Sample ID | Laboratory ID | Matrix | Date Sampled           | Date Received    |
|-----------|---------------|--------|------------------------|------------------|
| WH-GW01   | Y111099-01    | Water  | November 4, 2021 12:20 | 11/04/2021 16:20 |

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, Project Manager



Tasman Geosciences  
 6855 West 119th Avenue  
 Broomfield CO 80020

Mike Jahn  
 Project Number: 90412767  
 Project: KMG - Hauck 17-29 WH

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: Y111099

Client: Tasman  
 Client Project ID: Hauck 17-29

Checklist Completed by: JG

Shipped Via: HD  
 (UPS, FedEx, Hand Delivered, Pick-up, etc.)  
 Airbill #: N/A

Date/time completed: 11/4/21

Matrix(s) Received: (Check all that apply):  
 Soil/Solid  Water  Other: \_\_\_\_\_  
 Cooler Number/Temperature: 1, 5.11.7 °C \_\_\_\_\_ °C \_\_\_\_\_ °C \_\_\_\_\_ °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"/>            |     | Same Day          |
| 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 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)

11/4/21  
 Date/Time Reviewed

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.

Tasman Geosciences  
 6855 West 119th Avenue  
 Broomfield CO 80020

Mike Jahn  
 Project Number: 90412767  
 Project: KMG - Hauck 17-29 WH

**WH-GW01**

**11/4/2021 12:20:00PM**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Analyst | Prepared | Analyzed | Notes |
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|

**Origins Laboratory, Inc.**  
**Y111099-01 (Water)**

**BTEX+N+TMBs by 8260D**

|                        |    |      |      |   |         |     |            |            |   |
|------------------------|----|------|------|---|---------|-----|------------|------------|---|
| 1,2,4-Trimethylbenzene | ND | 1.00 | ug/L | 1 | B1K0324 | ZZZ | 11/04/2021 | 11/04/2021 | U |
| 1,3,5-Trimethylbenzene | ND | 1.00 | "    | " | "       | ZZZ | "          | "          | U |
| Benzene                | ND | 1.00 | "    | " | "       | ZZZ | "          | "          | U |
| Ethylbenzene           | ND | 1.00 | "    | " | "       | ZZZ | "          | "          | U |
| Naphthalene            | ND | 4.00 | "    | " | "       | ZZZ | "          | "          | U |
| Toluene                | ND | 1.00 | "    | " | "       | ZZZ | "          | "          | U |
| Xylenes, total         | ND | 1.00 | "    | " | "       | ZZZ | "          | "          | U |

|                                  |        |        |  |  |   |   |   |   |  |
|----------------------------------|--------|--------|--|--|---|---|---|---|--|
| Surrogate: 1,2-Dichloroethane-d4 | 105 %  | 70-130 |  |  | " | " | " | " |  |
| Surrogate: Toluene-d8            | 99.2 % | 70-130 |  |  | " | " | " | " |  |
| Surrogate: 4-Bromofluorobenzene  | 99.6 % | 70-130 |  |  | " | " | " | " |  |

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.

Tasman Geosciences  
 6855 West 119th Avenue  
 Broomfield CO 80020

Mike Jahn  
 Project Number: 90412767  
 Project: KMG - Hauck 17-29 WH

**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 B1K0324 - EPA 5030B (Water)**

**Blank (B1K0324-BLK1)**

Prepared: 11/03/2021 Analyzed: 11/03/2021

|                                  |    |      |      |      |      |  |        |  |  |   |
|----------------------------------|----|------|------|------|------|--|--------|--|--|---|
| 1,2,4-Trimethylbenzene           | ND | 1.00 | ug/L |      |      |  |        |  |  | U |
| 1,3,5-Trimethylbenzene           | ND | 1.00 | "    |      |      |  |        |  |  | U |
| Benzene                          | ND | 1.00 | "    |      |      |  |        |  |  | U |
| Ethylbenzene                     | ND | 1.00 | "    |      |      |  |        |  |  | U |
| m,p-Xylene                       | ND | 2.00 | "    |      |      |  |        |  |  | U |
| Naphthalene                      | ND | 4.00 | "    |      |      |  |        |  |  | U |
| o-Xylene                         | ND | 1.00 | "    |      |      |  |        |  |  | U |
| Toluene                          | ND | 1.00 | "    |      |      |  |        |  |  | U |
| Xylenes, total                   | ND | 1.00 | "    |      |      |  |        |  |  | U |
| Surrogate: 1,2-Dichloroethane-d4 | 62 |      | "    | 62.5 | 98.4 |  | 70-130 |  |  |   |
| Surrogate: Toluene-d8            | 61 |      | "    | 62.5 | 96.9 |  | 70-130 |  |  |   |
| Surrogate: 4-Bromofluorobenzene  | 65 |      | "    | 62.5 | 105  |  | 70-130 |  |  |   |

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.*

Tasman Geosciences  
 6855 West 119th Avenue  
 Broomfield CO 80020

Mike Jahn  
 Project Number: 90412767  
 Project: KMG - Hauck 17-29 WH

**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 B1K0324 - EPA 5030B (Water)**

**LCS (B1K0324-BS1)**

Prepared: 11/03/2021 Analyzed: 11/03/2021

|                                  |      |      |      |      |  |      |        |  |  |  |
|----------------------------------|------|------|------|------|--|------|--------|--|--|--|
| 1,2,4-Trimethylbenzene           | 50.2 | 1.00 | ug/L | 50.0 |  | 100  | 70-130 |  |  |  |
| 1,3,5-Trimethylbenzene           | 48.7 | 1.00 | "    | 50.0 |  | 97.3 | 70-130 |  |  |  |
| Benzene                          | 51.6 | 1.00 | "    | 50.0 |  | 103  | 70-130 |  |  |  |
| Ethylbenzene                     | 54.7 | 1.00 | "    | 50.0 |  | 109  | 70-130 |  |  |  |
| m,p-Xylene                       | 109  | 2.00 | "    | 100  |  | 109  | 70-130 |  |  |  |
| Naphthalene                      | 59.6 | 4.00 | "    | 50.0 |  | 119  | 70-130 |  |  |  |
| o-Xylene                         | 54.5 | 1.00 | "    | 50.0 |  | 109  | 70-130 |  |  |  |
| Toluene                          | 54.2 | 1.00 | "    | 50.0 |  | 108  | 70-130 |  |  |  |
| Surrogate: 1,2-Dichloroethane-d4 | 66   |      | "    | 62.5 |  | 105  | 70-130 |  |  |  |
| Surrogate: Toluene-d8            | 61   |      | "    | 62.5 |  | 97.1 | 70-130 |  |  |  |
| Surrogate: 4-Bromofluorobenzene  | 65   |      | "    | 62.5 |  | 104  | 70-130 |  |  |  |

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.*

Tasman Geosciences  
 6855 West 119th Avenue  
 Broomfield CO 80020

Mike Jahn  
 Project Number: 90412767  
 Project: KMG - Hauck 17-29 WH

**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 B1K0324 - EPA 5030B (Water)**

| <b>Matrix Spike (B1K0324-MS1)</b> | <b>Source: Y111053-27</b> |      |      | <b>Prepared: 11/03/2021 Analyzed: 11/04/2021</b> |      |      |        |  |  |  |
|-----------------------------------|---------------------------|------|------|--|------|------|--------|--|--|--|
| 1,2,4-Trimethylbenzene            | 51.4                      | 1.00 | ug/L | 50.0   | ND   | 103  | 70-130 |  |  |  |
| 1,3,5-Trimethylbenzene            | 48.8                      | 1.00 | "    | 50.0   | ND   | 97.7 | 70-130 |  |  |  |
| Benzene                           | 53.6                      | 1.00 | "    | 50.0   | ND   | 107  | 70-130 |  |  |  |
| Ethylbenzene                      | 53.6                      | 1.00 | "    | 50.0   | ND   | 107  | 70-130 |  |  |  |
| m,p-Xylene                        | 110                       | 2.00 | "    | 100  | ND   | 110  | 70-130 |  |  |  |
| Naphthalene                       | 55.9                      | 4.00 | "    | 50.0   | 2.32 | 107  | 70-130 |  |  |  |
| o-Xylene                          | 55.1                      | 1.00 | "    | 50.0   | ND   | 110  | 70-130 |  |  |  |
| Toluene                           | 53.8                      | 1.00 | "    | 50.0   | ND   | 108  | 70-130 |  |  |  |
| Surrogate: 1,2-Dichloroethane-d4  | 65                        |      | "    | 62.5   |      | 103  | 70-130 |  |  |  |
| Surrogate: Toluene-d8             | 60                        |      | "    | 62.5   |      | 96.6 | 70-130 |  |  |  |
| Surrogate: 4-Bromofluorobenzene   | 65                        |      | "    | 62.5   |      | 104  | 70-130 |  |  |  |

Origins Laboratory, Inc.



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Tasman Geosciences  
 6855 West 119th Avenue  
 Broomfield CO 80020

Mike Jahn  
 Project Number: 90412767  
 Project: KMG - Hauck 17-29 WH

**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 B1K0324 - EPA 5030B (Water)**

| Matrix Spike Dup (B1K0324-MSD1)  | Source: Y111053-27 |      |      | Prepared: 11/03/2021 Analyzed: 11/04/2021 |      |      |        |       |    |  |
|----------------------------------|--------------------|------|------|---|------|------|--------|-------|----|--|
| 1,2,4-Trimethylbenzene           | 51.5               | 1.00 | ug/L | 50.0                                      | ND   | 103  | 70-130 | 0.194 | 20 |  |
| 1,3,5-Trimethylbenzene           | 49.4               | 1.00 | "    | 50.0                                      | ND   | 98.9 | 70-130 | 1.22  | 20 |  |
| Benzene                          | 53.8               | 1.00 | "    | 50.0                                      | ND   | 108  | 70-130 | 0.466 | 20 |  |
| Ethylbenzene                     | 55.2               | 1.00 | "    | 50.0                                      | ND   | 110  | 70-130 | 2.92  | 20 |  |
| m,p-Xylene                       | 110                | 2.00 | "    | 100                                       | ND   | 110  | 70-130 | 0.473 | 20 |  |
| Naphthalene                      | 58.6               | 4.00 | "    | 50.0                                      | 2.32 | 113  | 70-130 | 4.68  | 20 |  |
| o-Xylene                         | 55.6               | 1.00 | "    | 50.0                                      | ND   | 111  | 70-130 | 0.903 | 20 |  |
| Toluene                          | 53.7               | 1.00 | "    | 50.0                                      | ND   | 107  | 70-130 | 0.205 | 20 |  |
| Surrogate: 1,2-Dichloroethane-d4 | 57                 |      | "    | 62.5                                      |      | 91.0 | 70-130 |       |    |  |
| Surrogate: Toluene-d8            | 60                 |      | "    | 62.5                                      |      | 95.9 | 70-130 |       |    |  |
| Surrogate: 4-Bromofluorobenzene  | 65                 |      | "    | 62.5                                      |      | 105  | 70-130 |       |    |  |

Origins Laboratory, Inc.



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Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Mike Jahn  
Project Number: 90412767  
Project: KMG - Hauck 17-29 WH

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**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, Project Manager

November 22, 2021

Tasman Geosciences

Mike Jahn

6855 West 119th Avenue

Broomfield CO 80020

**Project Name - KMG - Hauck 7-29**

**Project Number - 90412767**

Attached are your analytical results for KMG - Hauck 7-29 received by Origins Laboratory, Inc. November 15, 2021. This project is associated with Origins project number Y111278-01.

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



Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Mike Jahn  
Project Number: 90412767  
Project: KMG - Hauck 7-29

CROSS REFERENCE REPORT

| Sample ID | Laboratory ID | Matrix | Date Sampled            | Date Received    |
|-----------|---------------|--------|-------------------------|------------------|
| WH-W03@8' | Y111278-01    | Soil   | November 15, 2021 12:05 | 11/15/2021 15:44 |

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.*



Tasman Geosciences  
 6855 West 119th Avenue  
 Broomfield CO 80020

Mike Jahn  
 Project Number: 90412767  
 Project: KMG - Hauck 7-29

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

**Sample Receipt Checklist**

Origins Work Order: V111278 Client: Tasman  
 Client Project ID: Hauck 7-29

Checklist Completed by: JG Shipped Via: HD  
(UPS, FedEx, Hand Delivered, Pick-up, etc.)  
 Date/time completed: 11/15/21 Airbill #: N/A

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

Cooler Number/Temperature: 1 19.9 °C / \_\_\_\_\_ °C / \_\_\_\_\_ °C / \_\_\_\_\_ °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"/> |                                     | <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 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) [Signature] Date/Time Reviewed 11/15/21

Origins Laboratory, Inc.

*Jordan A. Merrill*

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.

Tasman Geosciences  
 6855 West 119th Avenue  
 Broomfield CO 80020

Mike Jahn  
 Project Number: 90412767  
 Project: KMG - Hauck 7-29

**WH-W03@8'**

**11/15/2021 12:05:00PM**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Analyst | Prepared | Analyzed | Notes |
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|

**Origins Laboratory, Inc.**  
**Y111278-01 (Soil)**

**Metals by Saturated Paste**

|           |      |       |       |    |        |     |            |            |  |
|-----------|------|-------|-------|----|--------|-----|------------|------------|--|
| Calcium   | 10.5 | 0.499 | meq/L | 10 | [CALC] | KAP | 11/16/2021 | 11/18/2021 |  |
| Magnesium | 16.2 | 0.823 | "     | "  | "      | KAP | "          | "          |  |
| Sodium    | 36.1 | 0.435 | "     | "  | "      | KAP | "          | "          |  |

**SAR by 20B Saturated Paste**

|     |      |  |     |   |         |     |   |   |  |
|-----|------|--|-----|---|---------|-----|---|---|--|
| SAR | 9.88 |  | SAR | 1 | B1K1613 | KAP | " | " |  |
|-----|------|--|-----|---|---------|-----|---|---|--|

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.*

Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Mike Jahn  
Project Number: 90412767  
Project: KMG - Hauck 7-29

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

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.*

Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Mike Jahn  
Project Number: 90412767  
Project: KMG - Hauck 7-29

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### Notes and Definitions

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.*

December 03, 2021

Tasman Geosciences

Mike Jahn

6855 West 119th Avenue

Broomfield CO 80020

**Project Name - KMG - Hauck 7-29**

**Project Number - 90412767**

Attached are your analytical results for KMG - Hauck 7-29 received by Origins Laboratory, Inc. November 30, 2021. This project is associated with Origins project number Y111572-01.

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



Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Mike Jahn  
Project Number: 90412767  
Project: KMG - Hauck 7-29

CROSS REFERENCE REPORT

| Sample ID | Laboratory ID | Matrix | Date Sampled            | Date Received    |
|-----------|---------------|--------|-------------------------|------------------|
| WH-W04@8' | Y111572-01    | Soil   | November 30, 2021 12:05 | 11/30/2021 14:05 |

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Origins Laboratory

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

**Sample Receipt Checklist**

Origins Work Order: 111572 Client: Tasman  
 Client Project ID: Hauck 7-29  
 Checklist Completed by: JH Shipped Via: HD  
 (UPS, FedEx, Hand Delivered, Pick-up, etc.)  
 Date/time completed: 11/30/21 Airbill #: UA  
 Matrix(s) Received: (Check all that apply): 1 Soil/Solid          Water          Other:           
 Cooler Number/Temperature: 1 15.3°C /          °C /          °C (Describe) /          °C  
 Thermometer ID: T603

| 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? <b>If yes, contact client and note in narrative.</b>   | <input type="checkbox"/>            | <input type="checkbox"/>            | <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 HNO3, HCL, H2SO4) / (pH >10 for samples preserved with NaAsO2+NaOH, ZnAc+NaOH) | <input type="checkbox"/>            | <input type="checkbox"/>            | <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.

Jordan A. Merrill  
 Reviewed by (Project Manager)

11/30/21  
 Date/Time Reviewed

Origins Laboratory, Inc.



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 Project: KMG - Hauck 7-29

**WH-W04@8'**

**11/30/2021 12:05:00PM**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Analyst | Prepared | Analyzed | Notes |
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|
|---------|--------|-----------------|-------|----------|-------|---------|----------|----------|-------|

**Origins Laboratory, Inc.**  
**Y111572-01 (Soil)**

**Metals by Saturated Paste**

|           |      |       |       |    |        |     |            |            |  |
|-----------|------|-------|-------|----|--------|-----|------------|------------|--|
| Calcium   | 3.44 | 0.499 | meq/L | 10 | [CALC] | KAP | 11/30/2021 | 12/01/2021 |  |
| Magnesium | 3.60 | 0.823 | "     | "  | "      | KAP | "          | "          |  |
| Sodium    | 10.4 | 0.435 | "     | "  | "      | KAP | "          | "          |  |

**SAR by 20B Saturated Paste**

|     |      |  |     |   |         |     |   |   |  |
|-----|------|--|-----|---|---------|-----|---|---|--|
| SAR | 5.54 |  | SAR | 1 | B1K3010 | KAP | " | " |  |
|-----|------|--|-----|---|---------|-----|---|---|--|

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

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### Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

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