

December 01, 2014

Tasman Geosciences

Christine Wasko

6899 Pecos Street, Unit C

Denver CO 80211

**Project Name - KMG - Opatril 1**

**Project Number - [none]**

Attached are your analytical results for KMG - Opatril 1 received by Origins Laboratory, Inc. November 21, 2014. This project is associated with Origins project number X411237-01.

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  
6899 Pecos Street, Unit C  
Denver CO 80211

Christine Wasko  
Project Number: [none]  
Project: KMG - Opatril 1

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01-112014	X411237-01	Water	November 20, 2014 12:00	11/21/2014 15:30
BH02-112014	X411237-02	Water	November 20, 2014 12:20	11/21/2014 15:30
BH03-112014	X411237-03	Water	November 20, 2014 12:10	11/21/2014 15:30
BH04-112014	X411237-04	Water	November 20, 2014 11:45	11/21/2014 15:30

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  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Christine Wasko  
 Project Number: [none]  
 Project: KMG - Opatril 1

www.originslaboratory.com

X11237

page 1 of 1

**ORIGINS**  
 LABORATORY, INC

Client: Tasman Geo  
 Project Manager: Christine Wasko  
 Project Name: Opatril 1  
 Project Number: 912 230 2807  
 Telephone Number: 912 230 2807  
 Email Address: CWasko@Tasman-geo.com  
 Address: \_\_\_\_\_  
 Samples Collected By: Brick Nelson

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		Sample Instructions		
				Unpreserved	HCl	HNO <sub>3</sub>	Other	Groundwater	Soil	Air Summa #	Other	(STEX) (820)			
BH01 - 112014	11/20/14	1200	3	X				X						1	
BH02 - 112014	11/20/14	1220	3	X				X						2	
BH03 - 112014	11/20/14	1210	3	X				X						3	
BH04 - 112014	11/20/14	145	3	X				X						4	
														5	
														6	
														7	
														8	
														9	
														10	

Relinquished By: \_\_\_\_\_  
 Relinquished By: \_\_\_\_\_  
 Date: 11/20/14  
 Date: 11/20/14  
 Time: 1530  
 Time: 1530

Received By: \_\_\_\_\_  
 Received By: \_\_\_\_\_  
 Date: 11/20/14  
 Date: 11/20/14  
 Time: 1530  
 Time: 1530

Turnaround Time:  
 Same Day  24 Hr   
 48 Hr  72 Hr   
 Standard  53

Temp Received: \_\_\_\_\_  
 Date Results Needed \_\_\_\_\_

Origins Laboratory, Inc.

*Jefe Pellegrini*

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Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Christine Wasko  
 Project Number: [none]  
 Project: KMG - Opatril 1

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: M11237 Client: Tasman  
 Client Project ID: Opatril 1  
 Checklist Completed by: Jeff Smith Shipped Via: Pick Up  
 Date/time completed: 11/21/14 (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 / 5.3 °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> ?	X			
Is there ice present (document if blue ice is used)	X			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		X		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		X		
Were all samples received intact <sup>(1)</sup> ?	X			
Was adequate sample volume provided <sup>(1)</sup> ?	X			
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?		X		
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	X			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	X			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	X			
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	X			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.		X		
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)	X			Hcc
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 11.25.14

Origins Laboratory, Inc.

[Signature: Jen Pellegrini]

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Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Christine Wasko  
 Project Number: [none]  
 Project: KMG - Opatril 1

**BH01-112014**  
**11/20/2014 12:00:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X411237-01 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	4K24007	11/24/2014	11/25/2014	
Toluene	ND	1.0	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	
Xylenes, total	ND	1.0	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	114 %	87.3-113			"	"	"	S-07
<i>Surrogate: Toluene-d8</i>	99.8 %	90.9-108			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	99.0 %	88.6-111			"	"	"	

Origins Laboratory, Inc.



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Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Christine Wasko  
 Project Number: [none]  
 Project: KMG - Opatril 1

**BH02-112014**  
**11/20/2014 12:20:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X411237-02 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	4K24007	11/24/2014	11/25/2014	
Toluene	ND	1.0	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	
Xylenes, total	ND	1.0	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	114 %	87.3-113			"	"	"	S-07
<i>Surrogate: Toluene-d8</i>	101 %	90.9-108			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	99.2 %	88.6-111			"	"	"	

Origins Laboratory, Inc.



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Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Christine Wasko  
 Project Number: [none]  
 Project: KMG - Opatril 1

**BH03-112014**

**11/20/2014 12:10:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X411237-03 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	4K24007	11/24/2014	11/25/2014	
Toluene	ND	1.0	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	
Xylenes, total	ND	1.0	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	113 %	87.3-113			"	"	"	
<i>Surrogate: Toluene-d8</i>	98.9 %	90.9-108			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	97.0 %	88.6-111			"	"	"	

Origins Laboratory, Inc.



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 Denver CO 80211

Christine Wasko  
 Project Number: [none]  
 Project: KMG - Opatril 1

**BH04-112014**  
**11/20/2014 11:45:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X411237-04 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	4K24007	11/24/2014	11/25/2014	
Toluene	ND	1.0	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	
Xylenes, total	ND	1.0	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	112 %	87.3-113			"	"	"	
Surrogate: Toluene-d8	98.2 %	90.9-108			"	"	"	
Surrogate: 4-Bromofluorobenzene	102 %	88.6-111			"	"	"	

Origins Laboratory, Inc.



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Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Christine Wasko  
 Project Number: [none]  
 Project: KMG - Opatril 1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 4K24007 - EPA 5030B (Water)**

**Blank (4K24007-BLK1)**

Prepared: 11/24/2014 Analyzed: 11/25/2014

Benzene	ND	1.0	ug/L							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes, total	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	72		"	62.5	115		87.3-113			S-07
Surrogate: Toluene-d8	63		"	62.5	100		90.9-108			
Surrogate: 4-Bromofluorobenzene	63		"	62.5	101		88.6-111			

Origins Laboratory, Inc.



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 6899 Pecos Street, Unit C  
 Denver CO 80211

Christine Wasko  
 Project Number: [none]  
 Project: KMG - Opatriil 1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 4K24007 - EPA 5030B (Water)**

**LCS (4K24007-BS1)**

Prepared: 11/24/2014 Analyzed: 11/25/2014

Benzene	48.3	1.0	ug/L	50.0		96.5	75-126			
Toluene	50.7	1.0	"	50.0		101	78.7-126			
Ethylbenzene	55.1	1.0	"	50.0		110	81-130			
m,p-Xylene	111	2.0	"	100		111	77.2-133			
o-Xylene	55.4	1.0	"	50.0		111	77.9-126			
Surrogate: 1,2-Dichloroethane-d4	66		"	62.5		106	87.3-113			
Surrogate: Toluene-d8	63		"	62.5		101	90.9-108			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	88.6-111			

Origins Laboratory, Inc.



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 6899 Pecos Street, Unit C  
 Denver CO 80211

Christine Wasko  
 Project Number: [none]  
 Project: KMG - Opatril 1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 4K24007 - EPA 5030B (Water)**

<b>Matrix Spike (4K24007-MS1)</b>	<b>Source: X411231-01</b>			<b>Prepared: 11/24/2014 Analyzed: 11/25/2014</b>						
Benzene	56.0	1.0	ug/L	50.0	ND	112	74-130			
Toluene	59.3	1.0	"	50.0	ND	119	73-131			
Ethylbenzene	66.6	1.0	"	50.0	ND	133	76-132			QM-07
m,p-Xylene	132	2.0	"	100	ND	132	69-139			
o-Xylene	64.2	1.0	"	50.0	ND	128	74-131			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	67		"	62.5		107	87.3-113			
<i>Surrogate: Toluene-d8</i>	63		"	62.5		101	90.9-108			
<i>Surrogate: 4-Bromofluorobenzene</i>	64		"	62.5		103	88.6-111			

Origins Laboratory, Inc.



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 6899 Pecos Street, Unit C  
 Denver CO 80211

Christine Wasko  
 Project Number: [none]  
 Project: KMG - Opatril 1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 4K24007 - EPA 5030B (Water)**

Matrix Spike Dup (4K24007-MSD1)	Source: X411231-01			Prepared: 11/24/2014 Analyzed: 11/25/2014						
Benzene	56.3	1.0	ug/L	50.0	ND	113	74-130	0.570	20	
Toluene	60.5	1.0	"	50.0	ND	121	73-131	1.94	20	
Ethylbenzene	67.5	1.0	"	50.0	ND	135	76-132	1.27	20	QM-07
m,p-Xylene	134	2.0	"	100	ND	134	69-139	1.33	20	
o-Xylene	66.1	1.0	"	50.0	ND	132	74-131	2.87	20	QM-07
Surrogate: 1,2-Dichloroethane-d4	65		"	62.5		104	87.3-113			
Surrogate: Toluene-d8	63		"	62.5		101	90.9-108			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	88.6-111			

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Christine Wasko  
Project Number: [none]  
Project: KMG - Opatril 1

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### Notes and Definitions

- S-07 High surrogate in sample, however sample is non-detect. High surrogate indicates result values are biased high.
- 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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February 06, 2015

Tasman Geosciences

Christine Wasko

6899 Pecos Street, Unit C

Denver CO 80211

Project Name - KMG - Opatril 1

Project Number - [none]

Attached are your analytical results for KMG - Opatril 1 received by Origins Laboratory, Inc. February 02, 2015. This project is associated with Origins project number X502023-01.

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.

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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.

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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  
6899 Pecos Street, Unit C  
Denver CO 80211

Christine Wasko  
Project Number: [none]  
Project: KMG - Opatril 1

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01-020215	X502023-01	Water	February 2, 2015 13:15	02/02/2015 17:25
BH02-020215	X502023-02	Water	February 2, 2015 13:12	02/02/2015 17:25
BH03-020215	X502023-03	Water	February 2, 2015 13:20	02/02/2015 17:25
BH04-020215	X502023-04	Water	February 2, 2015 13:10	02/02/2015 17:25

Origins Laboratory, Inc.



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

Jen Pellegrini For Noelle Doyle Mathis, President

Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Christine Wasko  
 Project Number: [none]  
 Project: KMG - Opatril 1

www.originslaboratory.com

X502023

**ORIGINS**  
 LABORATORY, INC

page 1 of 1

Client: TASMAN GEOSCIENCES  
 Address:  
 Telephone Number: (720) 409-8791  
 Email Address: CWASKO@TASMAN-GEO.COM

Project Manager: Christine Wasko  
 Project Name: Opatril 1  
 Project Number: DON BASKIS  
 Samples Collected By: DON BASKIS

Preservative: Unpreserved, HCl, HNO<sub>3</sub>, Other  
 Matrix: Groundwater, Soil, Air/Sediment, Other  
 Analysis: BSLT (10/20/05)

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix				Analysis	Sample Instructions	
				Unpreserved	HCl	HNO <sub>3</sub>	Other	Groundwater	Soil	Air/Sediment	Other			
BH01-020215	2/2/15	1315	3	X				X					X	1
BH02-020215	2/2/15	1312	3	X				X					X	2
BH03-020215	2/2/15	1320	3	X				X					X	3
BH04-020215	2/2/15	1310	3	X				X					X	4
														5
														6
														7
														8
														9
														10
Relinquished By: [Signature]	Date: 2/2/2015	Time: 1725		Received By: [Signature]	Date: 2/2/15	Time: 1725		Received By: [Signature]	Date: 2/2/15	Time: 1725		Turnaround Time: Same Day <input type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 5,8		

Date Results Needed

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

Origins Laboratory, Inc.

*Jefe Pellegrini*

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Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Christine Wasko  
 Project Number: [none]  
 Project: KMG - Opatril 1

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: X502023 Client: Tasman  
 Client Project ID: Opatril 1  
 Checklist Completed by: Jeff Smith Shipped Via: Pick up  
 Date/time completed: 2/3/15 (UPS, FedEx, Hand Delivered, Pick-up, etc.)  
 Airbill #: NA  
 Matrix(s) Received: (Check all that apply): Soil/Solid  Water  Other:   
 Cooler Number/Temperature: 1 / 5.8 °C 1 °C 1 °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> ?	X			
Is there ice present (document if blue ice is used)	X			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		X		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		X		
Were all samples received intact <sup>(1)</sup> ?	X			
Was adequate sample volume provided <sup>(1)</sup> ?	X			
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?		X		
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	X			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	X			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	X			
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	X			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.		X		
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)	X			HCL
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)

0204-15  
 Date/Time Reviewed

Origins Laboratory, Inc.



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Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Christine Wasko  
 Project Number: [none]  
 Project: KMG - Opatril 1

**BH01-020215**  
**2/2/2015 1:15:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X502023-01 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	5B03008	02/03/2015	02/04/2015	
Toluene	ND	1.0	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	
Xylenes, total	ND	1.0	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	102 %	87.3-113			"	"	"	
<i>Surrogate: Toluene-d8</i>	99.7 %	90.9-108			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	104 %	88.6-111			"	"	"	

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  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Christine Wasko  
 Project Number: [none]  
 Project: KMG - Opatril 1

**BH02-020215**

**2/2/2015 1:12:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X502023-02 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	5B03008	02/03/2015	02/04/2015	
Toluene	ND	1.0	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	
Xylenes, total	ND	1.0	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	102 %	87.3-113			"	"	"	
<i>Surrogate: Toluene-d8</i>	101 %	90.9-108			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	104 %	88.6-111			"	"	"	

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  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Christine Wasko  
 Project Number: [none]  
 Project: KMG - Opatril 1

**BH03-020215**  
**2/2/2015 1:20:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X502023-03 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	5B03008	02/03/2015	02/04/2015	
Toluene	ND	1.0	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	
Xylenes, total	ND	1.0	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	101 %	87.3-113			"	"	"	
Surrogate: Toluene-d8	101 %	90.9-108			"	"	"	
Surrogate: 4-Bromofluorobenzene	102 %	88.6-111			"	"	"	

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  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Christine Wasko  
 Project Number: [none]  
 Project: KMG - Opatril 1

**BH04-020215**  
**2/2/2015 1:10:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X502023-04 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	5B03008	02/03/2015	02/04/2015	
Toluene	ND	1.0	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	
Xylenes, total	ND	1.0	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	100 %	87.3-113			"	"	"	
<i>Surrogate: Toluene-d8</i>	99.4 %	90.9-108			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	101 %	88.6-111			"	"	"	

Origins Laboratory, Inc.



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Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Christine Wasko  
 Project Number: [none]  
 Project: KMG - Opatri 1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 5B03008 - EPA 5030B (Water)**

**Blank (5B03008-BLK1)**

Prepared: 02/03/2015 Analyzed: 02/04/2015

Benzene	ND	1.0	ug/L							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes, total	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	63		"	62.5		101	87.3-113			
Surrogate: Toluene-d8	63		"	62.5		100	90.9-108			
Surrogate: 4-Bromofluorobenzene	65		"	62.5		104	88.6-111			

Origins Laboratory, Inc.



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Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Christine Wasko  
 Project Number: [none]  
 Project: KMG - Opatri 1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 5B03008 - EPA 5030B (Water)**

**LCS (5B03008-BS1)**

Prepared: 02/03/2015 Analyzed: 02/04/2015

Benzene	50.2	1.0	ug/L	50.0		100	75-126			
Toluene	49.3	1.0	"	50.0		98.7	78.7-126			
Ethylbenzene	49.3	1.0	"	50.0		98.6	80-130			
m,p-Xylene	98.6	2.0	"	100		98.6	77.2-133			
o-Xylene	48.4	1.0	"	50.0		96.9	77.9-126			
Surrogate: 1,2-Dichloroethane-d4	60		"	62.5		96.8	87.3-113			
Surrogate: Toluene-d8	63		"	62.5		100	90.9-108			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	88.6-111			

Origins Laboratory, Inc.



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Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Christine Wasko  
 Project Number: [none]  
 Project: KMG - Opatril 1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 5B03008 - EPA 5030B (Water)**

Matrix Spike (5B03008-MS1)	Source: X502022-01			Prepared: 02/03/2015 Analyzed: 02/04/2015				QM-07
Benzene	26.4	1.0	ug/L	50.0	0.3	52.1	74-130	
Toluene	25.9	1.0	"	50.0	ND	51.8	73-131	
Ethylbenzene	27.5	1.0	"	50.0	1.5	52.1	76-132	
m,p-Xylene	53.9	2.0	"	100	0.2	53.7	69-139	
o-Xylene	26.9	1.0	"	50.0	0.2	53.3	74-131	
Surrogate: 1,2-Dichloroethane-d4	58		"	62.5		93.6	87.3-113	
Surrogate: Toluene-d8	68		"	62.5		110	90.9-108	
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	88.6-111	

Origins Laboratory, Inc.



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Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Christine Wasko  
 Project Number: [none]  
 Project: KMG - Opatril 1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 5B03008 - EPA 5030B (Water)**

Matrix Spike Dup (5B03008-MSD1)	Source: X502022-01			Prepared: 02/03/2015 Analyzed: 02/04/2015				QM-07	
Benzene	57.3	1.0	ug/L	50.0	0.3	114	74-130	73.9	20
Toluene	56.5	1.0	"	50.0	ND	113	73-131	74.3	20
Ethylbenzene	60.2	1.0	"	50.0	1.5	117	76-132	74.4	20
m,p-Xylene	117	2.0	"	100	0.2	117	69-139	74.2	20
o-Xylene	57.6	1.0	"	50.0	0.2	115	74-131	72.7	20
Surrogate: 1,2-Dichloroethane-d4	64		"	62.5		102	87.3-113		
Surrogate: Toluene-d8	70		"	62.5		112	90.9-108		
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	88.6-111		

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Christine Wasko  
Project Number: [none]  
Project: KMG - Opatril 1

---

### Notes and Definitions

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.*

---

Jen Pellegrini For Noelle Doyle Mathis, President



May 12, 2015

Tasman Geosciences

Bob Cornez

6899 Pecos Street, Unit C

Denver CO 80211

Project Name - KMG - Opatril Unit 1

Project Number - [none]

Attached are your analytical results for KMG - Opatril Unit 1 received by Origins Laboratory, Inc. May 07, 2015. This project is associated with Origins project number X505067-01.

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  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG - Opatril Unit 1

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01	X505067-01	Water	May 7, 2015 13:08	05/07/2015 16:45
BH02	X505067-02	Water	May 7, 2015 13:10	05/07/2015 16:45
BH03	X505067-03	Water	May 7, 2015 13:18	05/07/2015 16:45
BH04	X505067-04	Water	May 7, 2015 13:14	05/07/2015 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.*

Jen Pellegrini For Noelle Doyle Mathis, President

Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: [none]  
 Project: KMG - Opatriil Unit 1

www.originslaboratory.com

page 1 of 1

**ORIGINS**  
LABORATORY, INC

Client: Tasman Geosciences

Address: \_\_\_\_\_

Telephone Number: 303 262 9910

Email Address: rcornez@originslab.com

Project Manager: Bob Cornez

Project Name: Opatriil Unit 1

Project Number: \_\_\_\_\_

Samples Collected By: Kirk Forstman

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

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis	Sample Instructions	Turnaround Time					
				Unpreserved	HCl	HNO <sub>3</sub>	Other	Groundwater	Soil	Air Summa #			Other	Same Day	48 Hr	72 Hr		
B401	5/7/15	1308	13	X				X										
B402	↓	1310	↓	↓				↓										
B403	↓	1318	↓	↓				↓										
B404	↓	1314	↓	↓				↓										
Relinquished by: <u>[Signature]</u>	Date: <u>5/7/15</u>	Time: <u>1645</u>	Time: <u>1645</u>	Received by: <u>[Signature]</u>	Received by: <u>[Signature]</u>	Date: <u>5/7/15</u>	Date: <u>5/7/15</u>	Time: <u>1645</u>	Time: <u>1645</u>	Turnaround Time: <input checked="" type="checkbox"/> Standard	Same Day <input type="checkbox"/>	48 Hr <input type="checkbox"/>	72 Hr <input type="checkbox"/>					

Temp Received: 9.3 Date Results Needed: \_\_\_\_\_

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  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: [none]  
 Project: KMG - Opatril Unit 1

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: XSD067

Client: Tasman

Client Project ID: Opatril Unit #1

Checklist Completed by: Jeff Smith

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

Date/time completed: 5/7/15

Airbill #: N/A

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

Cooler Number/Temperature: 1 / 9.3 °C 1 / \_\_\_\_\_ °C 1 / \_\_\_\_\_ °C (Describe)

Thermometer ID: T203

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

Jeff Smith  
 Reviewed by (Project Manager)

5/8/15  
 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  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: [none]  
 Project: KMG - Opatril Unit 1

**BH01**  
**5/7/2015 1:08:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X505067-01 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	5E08010	05/08/2015	05/11/2015	
Toluene	ND	1.0	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	
Xylenes, total	ND	1.0	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	101 %	87.3-113			"	"	"	
<i>Surrogate: Toluene-d8</i>	99.2 %	90.9-108			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	98.9 %	88.6-111			"	"	"	

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  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: [none]  
 Project: KMG - Opatril Unit 1

**BH02**  
**5/7/2015 1:10:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X505067-02 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	5E08010	05/08/2015	05/11/2015	
Toluene	ND	1.0	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	
Xylenes, total	ND	1.0	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	101 %	87.3-113			"	"	"	
<i>Surrogate: Toluene-d8</i>	99.0 %	90.9-108			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	99.7 %	88.6-111			"	"	"	

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  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: [none]  
 Project: KMG - Opatril Unit 1

**BH03**  
**5/7/2015 1:18:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X505067-03 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	5E08010	05/08/2015	05/11/2015	
Toluene	ND	1.0	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	
Xylenes, total	ND	1.0	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	101 %	87.3-113			"	"	"	
<i>Surrogate: Toluene-d8</i>	99.3 %	90.9-108			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	101 %	88.6-111			"	"	"	

Origins Laboratory, Inc.



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Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: [none]  
 Project: KMG - Opatril Unit 1

**BH04**

**5/7/2015 1:14:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X505067-04 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	5E08010	05/08/2015	05/11/2015	
Toluene	ND	1.0	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	
Xylenes, total	ND	1.0	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	101 %	87.3-113			"	"	"	
<i>Surrogate: Toluene-d8</i>	97.6 %	90.9-108			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	102 %	88.6-111			"	"	"	

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  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: [none]  
 Project: KMG - Opatri Unit 1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 5E08010 - EPA 5030B (Water)**

**Blank (5E08010-BLK1)**

Prepared: 05/08/2015 Analyzed: 05/11/2015

Benzene	ND	1.0	ug/L							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes, total	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5	99.8		87.3-113			
Surrogate: Toluene-d8	62		"	62.5	99.1		90.9-108			
Surrogate: 4-Bromofluorobenzene	61		"	62.5	97.2		88.6-111			

Origins Laboratory, Inc.



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Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: [none]  
 Project: KMG - Opatri Unit 1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 5E08010 - EPA 5030B (Water)**

**LCS (5E08010-BS1)**

Prepared: 05/08/2015 Analyzed: 05/11/2015

Benzene	43.1	1.0	ug/L	50.0		86.1	75-126			
Toluene	42.8	1.0	"	50.0		85.6	78.7-126			
Ethylbenzene	44.4	1.0	"	50.0		88.9	80-130			
m,p-Xylene	89.7	2.0	"	100		89.7	77.2-133			
o-Xylene	43.0	1.0	"	50.0		86.0	77.9-126			
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5		98.0	87.3-113			
Surrogate: Toluene-d8	61		"	62.5		98.3	90.9-108			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		98.3	88.6-111			

Origins Laboratory, Inc.



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Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: [none]  
 Project: KMG - Opatril Unit 1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 5E08010 - EPA 5030B (Water)**

<b>Matrix Spike (5E08010-MS1)</b>	<b>Source: X505062-02</b>			<b>Prepared: 05/08/2015 Analyzed: 05/11/2015</b>						
Benzene	49.1	1.0	ug/L	50.0	ND	98.2	74-130			
Toluene	49.8	1.0	"	50.0	ND	99.7	73-131			
Ethylbenzene	51.7	1.0	"	50.0	ND	103	76-132			
m,p-Xylene	104	2.0	"	100	ND	104	69-139			
o-Xylene	48.7	1.0	"	50.0	ND	97.3	74-131			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	61		"	62.5		97.8	87.3-113			
<i>Surrogate: Toluene-d8</i>	62		"	62.5		99.9	90.9-108			
<i>Surrogate: 4-Bromofluorobenzene</i>	63		"	62.5		100	88.6-111			

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Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: [none]  
 Project: KMG - Opatril Unit 1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 5E08010 - EPA 5030B (Water)**

Matrix Spike Dup (5E08010-MSD1)	Source: X505062-02			Prepared: 05/08/2015 Analyzed: 05/11/2015						
Benzene	46.3	1.0	ug/L	50.0	ND	92.6	74-130	5.83	20	
Toluene	47.2	1.0	"	50.0	ND	94.3	73-131	5.55	20	
Ethylbenzene	48.7	1.0	"	50.0	ND	97.4	76-132	5.96	20	
m,p-Xylene	90.0	2.0	"	100	ND	90.0	69-139	14.6	20	
o-Xylene	43.1	1.0	"	50.0	ND	86.1	74-131	12.2	20	
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5		98.6	87.3-113			
Surrogate: Toluene-d8	62		"	62.5		100	90.9-108			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	88.6-111			

Origins Laboratory, Inc.



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6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG - Opatril Unit 1

---

**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.*

---

Jen Pellegrini For Noelle Doyle Mathis, President

August 14, 2015

Tasman Geosciences

Christine Wasko

6899 Pecos Street, Unit C

Denver CO 80211

Project Name - KMG - Opatril Unit 1

Project Number - [none]

Attached are your analytical results for KMG - Opatril Unit 1 received by Origins Laboratory, Inc. August 10, 2015. This project is associated with Origins project number X508093-01.

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  
6899 Pecos Street, Unit C  
Denver CO 80211

Christine Wasko  
Project Number: [none]  
Project: KMG - Opatril Unit 1

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01	X508093-01	Water	August 10, 2015 10:25	08/10/2015 16:20
BH02	X508093-02	Water	August 10, 2015 10:35	08/10/2015 16:20
BH03	X508093-03	Water	August 10, 2015 10:45	08/10/2015 16:20
BH04	X508093-04	Water	August 10, 2015 10:55	08/10/2015 16:20

Origins Laboratory, Inc.



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Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Christine Wasko  
 Project Number: [none]  
 Project: KMG - Opatril Unit 1

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: XS08093

Client: Tasman

Client Project ID: Opatril #1

Checklist Completed by: Jeff Smith

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

Date/time completed: 8/11/15

Airbill #: N/A

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

Cooler Number/Temperature: 1 / 5.4 °C / \_\_\_\_\_ °C / \_\_\_\_\_ °C (Describe)

Thermometer ID: TC03

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

Jeff Smith  
 Reviewed by (Project Manager)

8/11/15  
 Date/Time Reviewed

Origins Laboratory, Inc.



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Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Christine Wasko  
 Project Number: [none]  
 Project: KMG - Opatril Unit 1

**BH01**

**8/10/2015 10:25:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X508093-01 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	5H11015	08/11/2015	08/12/2015	
Toluene	ND	1.0	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	
Xylenes, total	ND	1.0	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	99.8 %	84-121			"	"	"	
Surrogate: Toluene-d8	101 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	95.3 %	84-114			"	"	"	

Origins Laboratory, Inc.



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

Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Christine Wasko  
 Project Number: [none]  
 Project: KMG - Opatril Unit 1

**BH02**

**8/10/2015 10:35:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X508093-02 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	5H11015	08/11/2015	08/12/2015	
Toluene	ND	1.0	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	
Xylenes, total	ND	1.0	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	98.9 %	84-121			"	"	"	
Surrogate: Toluene-d8	101 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	93.2 %	84-114			"	"	"	

Origins Laboratory, Inc.



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Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Christine Wasko  
 Project Number: [none]  
 Project: KMG - Opatril Unit 1

**BH03**

**8/10/2015 10:45:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X508093-03 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	5H11015	08/11/2015	08/12/2015	
Toluene	ND	1.0	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	
Xylenes, total	ND	1.0	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	99.0 %	84-121			"	"	"	
Surrogate: Toluene-d8	100 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	94.5 %	84-114			"	"	"	

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Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Christine Wasko  
 Project Number: [none]  
 Project: KMG - Opatril Unit 1

**BH04**

**8/10/2015 10:55:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X508093-04 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	5H11015	08/11/2015	08/12/2015	
Toluene	ND	1.0	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	
Xylenes, total	ND	1.0	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	101 %	84-121			"	"	"	
Surrogate: Toluene-d8	101 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	94.4 %	84-114			"	"	"	

Origins Laboratory, Inc.



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Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Christine Wasko  
 Project Number: [none]  
 Project: KMG - Opatril Unit 1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 5H11015 - EPA 5030B (Water)**

**Blank (5H11015-BLK1)**

Prepared: 08/11/2015 Analyzed: 08/12/2015

Benzene	ND	1.0	ug/L							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes, total	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5		99.1	84-121			
Surrogate: Toluene-d8	63		"	62.5		100	85-115			
Surrogate: 4-Bromofluorobenzene	60		"	62.5		95.6	84-114			

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Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Christine Wasko  
 Project Number: [none]  
 Project: KMG - Opatril Unit 1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 5H11015 - EPA 5030B (Water)**

**Blank (5H11015-BLK2)**

Prepared: 08/11/2015 Analyzed: 08/12/2015

Benzene	ND	1.0	ug/L							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes, total	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	70		"	62.5		112	84-121			
Surrogate: Toluene-d8	61		"	62.5		98.4	85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.7	84-114			

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 6899 Pecos Street, Unit C  
 Denver CO 80211

Christine Wasko  
 Project Number: [none]  
 Project: KMG - Opatril Unit 1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 5H11015 - EPA 5030B (Water)**

**LCS (5H11015-BS1)**

Prepared: 08/11/2015 Analyzed: 08/12/2015

Benzene	51.8	1.0	ug/L	50.0		104	75-126			
Toluene	52.6	1.0	"	50.0		105	78.7-126			
Ethylbenzene	53.0	1.0	"	50.0		106	80-130			
m,p-Xylene	104	2.0	"	100		104	77.2-133			
o-Xylene	52.5	1.0	"	50.0		105	77.9-126			
Surrogate: 1,2-Dichloroethane-d4	58		"	62.5		93.5	84-121			
Surrogate: Toluene-d8	63		"	62.5		100	85-115			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		97.3	84-114			

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 6899 Pecos Street, Unit C  
 Denver CO 80211

Christine Wasko  
 Project Number: [none]  
 Project: KMG - Opatri Unit 1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 5H11015 - EPA 5030B (Water)**

**LCS (5H11015-BS2)**

Prepared: 08/11/2015 Analyzed: 08/12/2015

Benzene	48.7	1.0	ug/L	50.0		97.5	75-126			
Toluene	46.5	1.0	"	50.0		93.0	78.7-126			
Ethylbenzene	48.2	1.0	"	50.0		96.4	80-130			
m,p-Xylene	95.8	2.0	"	100		95.8	77.2-133			
o-Xylene	50.0	1.0	"	50.0		99.9	77.9-126			
Surrogate: 1,2-Dichloroethane-d4	67		"	62.5		106	84-121			
Surrogate: Toluene-d8	61		"	62.5		98.3	85-115			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		96.9	84-114			

Origins Laboratory, Inc.



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Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Christine Wasko  
 Project Number: [none]  
 Project: KMG - Opatril Unit 1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 5H11015 - EPA 5030B (Water)**

<b>Matrix Spike (5H11015-MS1)</b>	<b>Source: X508082-01</b>			<b>Prepared: 08/11/2015 Analyzed: 08/12/2015</b>						
Benzene	54.9	1.0	ug/L	50.0	ND	110	74-130			
Toluene	53.2	1.0	"	50.0	ND	106	73-131			
Ethylbenzene	55.9	1.0	"	50.0	ND	112	76-132			
m,p-Xylene	112	2.0	"	100	ND	112	69-139			
o-Xylene	54.7	1.0	"	50.0	ND	109	74-131			
Surrogate: 1,2-Dichloroethane-d4	66		"	62.5		105	84-121			
Surrogate: Toluene-d8	61		"	62.5		98.3	85-115			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		98.4	84-114			

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Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Christine Wasko  
 Project Number: [none]  
 Project: KMG - Opatril Unit 1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 5H11015 - EPA 5030B (Water)**

<b>Matrix Spike (5H11015-MS2)</b>	<b>Source: X508082-02</b>			<b>Prepared: 08/11/2015 Analyzed: 08/12/2015</b>						
Benzene	1180	1.0	ug/L	50.0	1380	NR	74-130			QM-4X
Toluene	51.3	1.0	"	50.0	ND	103	73-131			
Ethylbenzene	138	1.0	"	50.0	72.0	132	76-132			
m,p-Xylene	113	2.0	"	100	4.8	108	69-139			
o-Xylene	53.4	1.0	"	50.0	ND	107	74-131			
Surrogate: 1,2-Dichloroethane-d4	66		"	62.5		106	84-121			
Surrogate: Toluene-d8	61		"	62.5		96.8	85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		98.5	84-114			

Origins Laboratory, Inc.



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Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Christine Wasko  
 Project Number: [none]  
 Project: KMG - Opatril Unit 1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 5H11015 - EPA 5030B (Water)**

<b>Matrix Spike Dup (5H11015-MSD1)</b>	<b>Source: X508082-01</b>			<b>Prepared: 08/11/2015 Analyzed: 08/12/2015</b>						
Benzene	53.8	1.0	ug/L	50.0	ND	108	74-130	2.15	20	
Toluene	52.6	1.0	"	50.0	ND	105	73-131	1.02	20	
Ethylbenzene	55.5	1.0	"	50.0	ND	111	76-132	0.628	20	
m,p-Xylene	110	2.0	"	100	ND	110	69-139	1.99	20	
o-Xylene	54.9	1.0	"	50.0	ND	110	74-131	0.365	20	
Surrogate: 1,2-Dichloroethane-d4	67		"	62.5		107	84-121			
Surrogate: Toluene-d8	61		"	62.5		97.7	85-115			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		97.1	84-114			

Origins Laboratory, Inc.



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Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Christine Wasko  
 Project Number: [none]  
 Project: KMG - Opatril Unit 1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 5H11015 - EPA 5030B (Water)**

Matrix Spike Dup (5H11015-MSD2)	Source: X508082-02			Prepared: 08/11/2015 Analyzed: 08/12/2015						
Benzene	1230	1.0	ug/L	50.0	1380	NR	74-130	4.42	20	QM-4X
Toluene	53.4	1.0	"	50.0	ND	107	73-131	3.99	20	
Ethylbenzene	140	1.0	"	50.0	72.0	136	76-132	1.50	20	QM-07
m,p-Xylene	117	2.0	"	100	4.8	112	69-139	3.56	20	
o-Xylene	56.2	1.0	"	50.0	ND	112	74-131	5.18	20	
Surrogate: 1,2-Dichloroethane-d4	67		"	62.5		107	84-121			
Surrogate: Toluene-d8	60		"	62.5		96.4	85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		98.7	84-114			

Origins Laboratory, Inc.



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

Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Christine Wasko  
Project Number: [none]  
Project: KMG - Opatril Unit 1

---

### Notes and Definitions

- QM-4X The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.
- 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 09, 2015

Tasman Geosciences

Bob Cornez

6899 Pecos Street, Unit C

Denver CO 80211

Project Name - KMG - Opatril Unit 1

Project Number - [none]

Attached are your analytical results for KMG - Opatril Unit 1 received by Origins Laboratory, Inc. November 04, 2015. This project is associated with Origins project number X511061-01.

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  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG - Opatril Unit 1

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01	X511061-01	Water	November 4, 2015 13:18	11/04/2015 17:20
BH02	X511061-02	Water	November 4, 2015 13:24	11/04/2015 17:20
BH03	X511061-03	Water	November 4, 2015 13:30	11/04/2015 17:20
BH04	X511061-04	Water	November 4, 2015 13:37	11/04/2015 17:20

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.*



Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: [none]  
 Project: KMG - Opatriil Unit 1

Origins Laboratory

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

**Sample Receipt Checklist**

Origins Work Order: XS11061

Client: Tasman

Client Project ID: KMG - Opatriil Unit 1

Checklist Completed by: Jeff Smith

Shipped Via: H/D  
 (UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 11/5/15

Airbill #: N/A

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

Cooler Number/Temperature: 1 / 11.8 °C 1 °C 1 °C 1 °C

Thermometer ID: TC03

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

Jeff Smith  
 Reviewed by (Project Manager)

11/5/15  
 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  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: [none]  
 Project: KMG - Opatril Unit 1

**BH01**

**11/4/2015 1:18:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X511061-01 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	B5K0503	11/05/2015	11/05/2015	
Toluene	ND	1.0	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	
Xylenes, total	ND	1.0	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	105 %	84-121			"	"	"	
Surrogate: Toluene-d8	103 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	103 %	84-114			"	"	"	

Origins Laboratory, Inc.



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

Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: [none]  
 Project: KMG - Opatril Unit 1

**BH02**

**11/4/2015 1:24:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X511061-02 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	B5K0503	11/05/2015	11/05/2015	
Toluene	ND	1.0	"	"	"	"	"	
Ethylbenzene	<b>2.9</b>	1.0	"	"	"	"	"	
Xylenes, total	<b>12.9</b>	1.0	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	106 %	84-121			"	"	"	
<i>Surrogate: Toluene-d8</i>	102 %	85-115			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	99.7 %	84-114			"	"	"	

Origins Laboratory, Inc.



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

Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: [none]  
 Project: KMG - Opatril Unit 1

**BH03**

**11/4/2015 1:30:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X511061-03 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	B5K0503	11/05/2015	11/05/2015	
Toluene	ND	1.0	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	
Xylenes, total	ND	1.0	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	107 %	84-121			"	"	"	
Surrogate: Toluene-d8	101 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	103 %	84-114			"	"	"	

Origins Laboratory, Inc.



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

Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: [none]  
 Project: KMG - Opatril Unit 1

**BH04**

**11/4/2015 1:37:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X511061-04 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	B5K0503	11/05/2015	11/05/2015	
Toluene	ND	1.0	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	
Xylenes, total	ND	1.0	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	107 %	84-121			"	"	"	
<i>Surrogate: Toluene-d8</i>	101 %	85-115			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	101 %	84-114			"	"	"	

Origins Laboratory, Inc.



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

Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: [none]  
 Project: KMG - Opatril Unit 1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B5K0503 - EPA 5030B (Water)**

**Blank (B5K0503-BLK1)**

Prepared: 11/05/2015 Analyzed: 11/05/2015

Benzene	ND	1.0	ug/L							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes, total	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	67		"	62.5	107		84-121			
Surrogate: Toluene-d8	63		"	62.5	101		85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5	99.3		84-114			

Origins Laboratory, Inc.



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

Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: [none]  
 Project: KMG - Opatril Unit 1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B5K0503 - EPA 5030B (Water)**

**LCS (B5K0503-BS1)**

Prepared: 11/05/2015 Analyzed: 11/05/2015

Benzene	46.3	1.0	ug/L	50.0		92.7	75-126			
Toluene	45.5	1.0	"	50.0		91.1	78.7-126			
Ethylbenzene	47.3	1.0	"	50.0		94.5	80-130			
m,p-Xylene	95.4	2.0	"	100		95.4	77.2-133			
o-Xylene	47.1	1.0	"	50.0		94.2	77.9-126			
Surrogate: 1,2-Dichloroethane-d4	63		"	62.5		100	84-121			
Surrogate: Toluene-d8	64		"	62.5		103	85-115			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	84-114			

Origins Laboratory, Inc.



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

Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: [none]  
 Project: KMG - Opatril Unit 1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B5K0503 - EPA 5030B (Water)**

<b>Matrix Spike (B5K0503-MS1)</b>	<b>Source: X511061-01</b>			<b>Prepared: 11/05/2015 Analyzed: 11/05/2015</b>						
Benzene	46.1	1.0	ug/L	50.0	ND	92.3	74-130			
Toluene	45.3	1.0	"	50.0	ND	90.7	73-131			
Ethylbenzene	47.1	1.0	"	50.0	ND	94.2	76-132			
m,p-Xylene	94.6	2.0	"	100	ND	94.6	69-139			
o-Xylene	46.4	1.0	"	50.0	ND	92.8	74-131			
Surrogate: 1,2-Dichloroethane-d4	64		"	62.5		103	84-121			
Surrogate: Toluene-d8	63		"	62.5		102	85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		100	84-114			

Origins Laboratory, Inc.



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

Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: [none]  
 Project: KMG - Opatril Unit 1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B5K0503 - EPA 5030B (Water)**

Matrix Spike Dup (B5K0503-MSD1)	Source: X511061-01			Prepared: 11/05/2015 Analyzed: 11/05/2015						
Benzene	48.6	1.0	ug/L	50.0	ND	97.1	74-130	5.09	20	
Toluene	49.0	1.0	"	50.0	ND	97.9	73-131	7.66	20	
Ethylbenzene	50.7	1.0	"	50.0	ND	101	76-132	7.46	20	
m,p-Xylene	102	2.0	"	100	ND	102	69-139	7.26	20	
o-Xylene	49.8	1.0	"	50.0	ND	99.6	74-131	7.11	20	
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5		98.4	84-121			
Surrogate: Toluene-d8	64		"	62.5		102	85-115			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	84-114			

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG - Opatril Unit 1

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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.*

---

Jen Pellegrini For Noelle Doyle Mathis, President

March 01, 2016

Tasman Geosciences

Bob Cornez

6899 Pecos Street, Unit C

Denver CO 80211

Project Name - KMG - Opatril Unit 1

Project Number - [none]

Attached are your analytical results for KMG - Opatril Unit 1 received by Origins Laboratory, Inc. February 23, 2016. This project is associated with Origins project number X602268-01.

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  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG - Opatril Unit 1

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01X	X602268-01	Water	February 23, 2016 12:27	02/23/2016 16:00
BH02X	X602268-02	Water	February 23, 2016 12:28	02/23/2016 16:00
BH03X	X602268-03	Water	February 23, 2016 12:36	02/23/2016 16:00
BH04	X602268-04	Water	February 23, 2016 12:35	02/23/2016 16:00
BH05	X602268-05	Water	February 23, 2016 12:38	02/23/2016 16:00

Origins Laboratory, Inc.



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

Jen Pellegrini For Noelle Doyle Mathis, President



Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: [none]  
 Project: KMG - Opatril Unit 1

Origins Laboratory

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

**Sample Receipt Checklist**

Origins Work Order: X602268 Client: Tasman  
 Client Project ID: Opatril Unit 1  
 Checklist Completed by: Jeff Smith Shipped Via: HD  
 Date/time completed: 2/23/16 (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 / 4.1 °C \_\_\_\_\_ / \_\_\_\_\_ °C \_\_\_\_\_ / \_\_\_\_\_ °C (Describe)  
 Thermometer ID: TRX3

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 HNO3, HCL, H2SO4) / ( pH >10 for samples preserved with NaAsO2+NaOH, ZnAc+NaOH)	<input checked="" type="checkbox"/>			Hec
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 02/25/16

Origins Laboratory, Inc.

*Jeff 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  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: [none]  
 Project: KMG - Opatril Unit 1

**BH01X**  
**2/23/2016 12:27:00PM**

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

**Origins Laboratory, Inc.**  
**X602268-01 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	B6B2604	02/26/2016	02/29/2016	U
Toluene	ND	1.0	"	"	"	"	"	U
Ethylbenzene	ND	1.0	"	"	"	"	"	U
Xylenes, total	ND	1.0	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	104 %	84-121			"	"	"	
Surrogate: Toluene-d8	97.6 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	96.9 %	84-114			"	"	"	

Origins Laboratory, Inc.



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

Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: [none]  
 Project: KMG - Opatril Unit 1

**BH02X**  
**2/23/2016 12:28:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X602268-02 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	B6B2604	02/26/2016	02/29/2016	U
Toluene	ND	1.0	"	"	"	"	"	U
Ethylbenzene	ND	1.0	"	"	"	"	"	U
Xylenes, total	ND	1.0	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	107 %	84-121			"	"	"	
Surrogate: Toluene-d8	96.2 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	95.6 %	84-114			"	"	"	

Origins Laboratory, Inc.



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

Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: [none]  
 Project: KMG - Opatril Unit 1

**BH03X**

**2/23/2016 12:36:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X602268-03 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	B6B2604	02/26/2016	02/29/2016	U
Toluene	ND	1.0	"	"	"	"	"	U
Ethylbenzene	ND	1.0	"	"	"	"	"	U
Xylenes, total	ND	1.0	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	105 %	84-121			"	"	"	
Surrogate: Toluene-d8	98.6 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	97.2 %	84-114			"	"	"	

Origins Laboratory, Inc.



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

Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: [none]  
 Project: KMG - Opatril Unit 1

**BH04**

**2/23/2016 12:35:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X602268-04 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	B6B2604	02/26/2016	02/29/2016	U
Toluene	ND	1.0	"	"	"	"	"	U
Ethylbenzene	ND	1.0	"	"	"	"	"	U
Xylenes, total	ND	1.0	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	105 %	84-121			"	"	"	
Surrogate: Toluene-d8	98.7 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	94.9 %	84-114			"	"	"	

Origins Laboratory, Inc.



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

Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: [none]  
 Project: KMG - Opatril Unit 1

**BH05**

**2/23/2016 12:38:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X602268-05 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	B6B2604	02/26/2016	02/29/2016	U
Toluene	ND	1.0	"	"	"	"	"	U
Ethylbenzene	ND	1.0	"	"	"	"	"	U
Xylenes, total	ND	1.0	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	106 %	84-121			"	"	"	
Surrogate: Toluene-d8	98.3 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	97.8 %	84-114			"	"	"	

Origins Laboratory, Inc.



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Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: [none]  
 Project: KMG - Opatril Unit 1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B6B2604 - EPA 5030B (Water)**

**Blank (B6B2604-BLK1)**

Prepared: 02/26/2016 Analyzed: 02/29/2016

Benzene	ND	1.0	ug/L							U
Toluene	ND	1.0	"							U
Ethylbenzene	ND	1.0	"							U
Xylenes, total	ND	1.0	"							U
Surrogate: 1,2-Dichloroethane-d4	64		"	62.5		102	84-121			
Surrogate: Toluene-d8	61		"	62.5		97.9	85-115			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		98.0	84-114			

Origins Laboratory, Inc.



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Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: [none]  
 Project: KMG - Opatril Unit 1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B6B2604 - EPA 5030B (Water)

**LCS (B6B2604-BS1)**

Prepared: 02/26/2016 Analyzed: 02/29/2016

Benzene	45.4	1.0	ug/L	50.0		90.8	73.3-129			
Toluene	43.6	1.0	"	50.0		87.1	76.2-123			
Ethylbenzene	44.6	1.0	"	50.0		89.2	73.6-130			
m,p-Xylene	89.1	2.0	"	100		89.1	76.1-126			
o-Xylene	44.6	1.0	"	50.0		89.1	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5		97.9	84-121			
Surrogate: Toluene-d8	61		"	62.5		97.6	85-115			
Surrogate: 4-Bromofluorobenzene	60		"	62.5		95.4	84-114			

Origins Laboratory, Inc.



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Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: [none]  
 Project: KMG - Opatril Unit 1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B6B2604 - EPA 5030B (Water)**

<b>Matrix Spike (B6B2604-MS1)</b>	<b>Source: X602268-01</b>			<b>Prepared: 02/26/2016 Analyzed: 02/29/2016</b>						
Benzene	48.3	1.0	ug/L	50.0	ND	96.5	74-130			
Toluene	47.7	1.0	"	50.0	ND	95.4	73-131			
Ethylbenzene	49.0	1.0	"	50.0	ND	98.1	76-132			
m,p-Xylene	99.2	2.0	"	100	ND	99.2	69-139			
o-Xylene	49.8	1.0	"	50.0	ND	99.6	74-131			
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5		97.6	84-121			
Surrogate: Toluene-d8	62		"	62.5		98.6	85-115			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		97.2	84-114			

Origins Laboratory, Inc.



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Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: [none]  
 Project: KMG - Opatril Unit 1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B6B2604 - EPA 5030B (Water)**

Matrix Spike Dup (B6B2604-MSD1)	Source: X602268-01			Prepared: 02/26/2016 Analyzed: 02/29/2016						
Benzene	43.5	1.0	ug/L	50.0	ND	86.9	74-130	10.5	20	
Toluene	43.4	1.0	"	50.0	ND	86.7	73-131	9.58	20	
Ethylbenzene	43.8	1.0	"	50.0	ND	87.5	76-132	11.4	20	
m,p-Xylene	88.8	2.0	"	100	ND	88.8	69-139	11.1	20	
o-Xylene	44.3	1.0	"	50.0	ND	88.7	74-131	11.6	20	
Surrogate: 1,2-Dichloroethane-d4	60		"	62.5		96.5	84-121			
Surrogate: Toluene-d8	62		"	62.5		98.8	85-115			
Surrogate: 4-Bromofluorobenzene	59		"	62.5		95.2	84-114			

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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG - Opatril Unit 1

---

**Notes and Definitions**

U Sample is Non-Detect.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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---

Jen Pellegrini For Noelle Doyle Mathis, President



May 17, 2016

Tasman Geosciences

Bob Cornez

6899 Pecos Street, Unit C

Denver CO 80211

Project Name - KMG - Opatril Unit 1

Project Number - 88507268

Attached are your analytical results for KMG - Opatril Unit 1 received by Origins Laboratory, Inc. May 10, 2016. This project is associated with Origins project number X605136-01.

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  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: 88507268  
Project: KMG - Opatril Unit 1

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01X - 05/10/16	X605136-01	Water	May 10, 2016 13:59	05/10/2016 17:15
BH02X - 05/10/16	X605136-02	Water	May 10, 2016 14:00	05/10/2016 17:15
BH03X - 05/10/16	X605136-03	Water	May 10, 2016 14:08	05/10/2016 17:15
BH04 - 05/10/16	X605136-04	Water	May 10, 2016 13:49	05/10/2016 17:15
BH05 - 05/10/16	X605136-05	Water	May 10, 2016 13:47	05/10/2016 17:15

Origins Laboratory, Inc.



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Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: 88507268  
 Project: KMG - Opatril Unit 1

www.originslaboratory.com

page  of

**ORIGINS**  
LABORATORY, INC

Client: Tasman Geosciences

Address: [Redacted]

Telephone Number: (352) 262-9910

Email Address: [info@tasman-geo.com](mailto:info@tasman-geo.com)

Project Manager: Bob Cornez

Project Name: Opatril #1

Project Number: 88507268

Samples Collected By: Kate Fosmark

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix				Analysis	Sample Instructions		
				Unpreserved	HCl	HNO <sub>3</sub>	Other	Groundwater	Soil	Air Summa #	Other				
BH01X-05/10/16	5/10/16	1359	3	X				X						1	
BH02X-05/10/16	5/10/16	1400	3	X				X						2	
BH03X-05/10/16	5/10/16	1408	3	X				X						3	
BH01-05/10/16	5/10/16	1349	3	X				X						4	
BH05-05/10/16	5/10/16	1347	3	X				X						5	
														6	
														7	
														8	
														9	
														10	

BTEX SLO

Relinquished By: [Signature]

Date: 5/10/16

Time: 1520

Received By: [Signature]

Date: 5.10.16

Time: 1715

Turnaround Time:

Same Day  24 Hr

48 Hr  72 Hr

Standard

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

7.3 Date Results Needed

Origins Laboratory, Inc.

*Jefe Pellegrini*

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Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: 88507268  
 Project: KMG - Opatril Unit 1

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: X605136

Client: Tasman  
 Client Project ID: X606-Opatril #1

Checklist Completed by: Jeff Smith  
 Date/time completed: 5/11/16

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 / 7.3 °C 1 °C 1 °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> ?		X		Sampled Same Day
Is there ice present (document if blue ice is used)	A			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		I		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		X		
Were all samples received intact <sup>(1)</sup> ?	X			
Was adequate sample volume provided <sup>(1)</sup> ?	I			
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?		X		
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	I			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	I			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	I			
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	X			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.		I		
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)	X			HCC
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 5/11/16

Origins Laboratory, Inc.

*Jefe Pellegrini*

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Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: 88507268  
 Project: KMG - Opatril Unit 1

**BH01X - 05/10/16**  
**5/10/2016 1:59:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X605136-01 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	B6E1107	05/11/2016	05/13/2016	U
Toluene	ND	1.0	"	"	"	"	"	U
Ethylbenzene	ND	1.0	"	"	"	"	"	U
Xylenes, total	ND	1.0	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	103 %	84-121			"	"	"	
Surrogate: Toluene-d8	98.6 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	97.1 %	84-114			"	"	"	

Origins Laboratory, Inc.



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Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: 88507268  
 Project: KMG - Opatril Unit 1

**BH02X - 05/10/16**  
**5/10/2016 2:00:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X605136-02 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	B6E1107	05/11/2016	05/13/2016	U
Toluene	ND	1.0	"	"	"	"	"	U
Ethylbenzene	ND	1.0	"	"	"	"	"	U
Xylenes, total	<b>2.5</b>	1.0	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	106 %	84-121			"	"	"	
Surrogate: Toluene-d8	97.6 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	97.5 %	84-114			"	"	"	

Origins Laboratory, Inc.



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Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: 88507268  
 Project: KMG - Opatril Unit 1

BH03X - 05/10/16  
 5/10/2016 2:08:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
 X605136-03 (Water)

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	B6E1107	05/11/2016	05/13/2016	U
Toluene	ND	1.0	"	"	"	"	"	U
Ethylbenzene	ND	1.0	"	"	"	"	"	U
Xylenes, total	ND	1.0	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	102 %	84-121			"	"	"	
Surrogate: Toluene-d8	98.8 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	96.4 %	84-114			"	"	"	

Origins Laboratory, Inc.



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Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: 88507268  
 Project: KMG - Opatril Unit 1

**BH04 - 05/10/16**  
**5/10/2016 1:49:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X605136-04 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	B6E1107	05/11/2016	05/13/2016	U
Toluene	ND	1.0	"	"	"	"	"	U
Ethylbenzene	ND	1.0	"	"	"	"	"	U
Xylenes, total	ND	1.0	"	"	"	"	"	U
<i>Surrogate: 1,2-Dichloroethane-d4</i>	103 %	84-121			"	"	"	
<i>Surrogate: Toluene-d8</i>	101 %	85-115			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	102 %	84-114			"	"	"	

Origins Laboratory, Inc.



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Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: 88507268  
 Project: KMG - Opatril Unit 1

**BH05 - 05/10/16**  
**5/10/2016 1:47:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X605136-05 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.0	ug/L	1	B6E1107	05/11/2016	05/13/2016	U
Toluene	ND	1.0	"	"	"	"	"	U
Ethylbenzene	ND	1.0	"	"	"	"	"	U
Xylenes, total	ND	1.0	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	101 %	84-121			"	"	"	
Surrogate: Toluene-d8	96.6 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	94.5 %	84-114			"	"	"	

Origins Laboratory, Inc.



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 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: 88507268  
 Project: KMG - Opatril Unit 1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B6E1107 - EPA 5030B (Water)**

**Blank (B6E1107-BLK1)**

Prepared: 05/11/2016 Analyzed: 05/13/2016

Benzene	ND	1.0	ug/L							U
Toluene	ND	1.0	"							U
Ethylbenzene	ND	1.0	"							U
Xylenes, total	ND	1.0	"							U
Surrogate: 1,2-Dichloroethane-d4	63		"	62.5		101	84-121			
Surrogate: Toluene-d8	60		"	62.5		96.4	85-115			
Surrogate: 4-Bromofluorobenzene	65		"	62.5		103	84-114			

Origins Laboratory, Inc.



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Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: 88507268  
 Project: KMG - Opatril Unit 1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B6E1107 - EPA 5030B (Water)**

**LCS (B6E1107-BS1)**

Prepared: 05/11/2016 Analyzed: 05/13/2016

Benzene	59.5	1.0	ug/L	50.0		119	73.3-129			
Toluene	59.4	1.0	"	50.0		119	76.2-123			
Ethylbenzene	58.6	1.0	"	50.0		117	73.6-130			
m,p-Xylene	122	2.0	"	100		122	76.1-126			
o-Xylene	58.8	1.0	"	50.0		118	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	64		"	62.5		103	84-121			
Surrogate: Toluene-d8	61		"	62.5		96.8	85-115			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	84-114			

Origins Laboratory, Inc.



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Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: 88507268  
 Project: KMG - Opatril Unit 1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B6E1107 - EPA 5030B (Water)**

<b>Matrix Spike (B6E1107-MS1)</b>	<b>Source: X605136-01</b>			<b>Prepared: 05/11/2016 Analyzed: 05/13/2016</b>						
Benzene	63.7	1.0	ug/L	50.0	ND	127	74-130			
Toluene	61.4	1.0	"	50.0	ND	123	73-131			
Ethylbenzene	64.2	1.0	"	50.0	ND	128	76-132			
m,p-Xylene	126	2.0	"	100	ND	126	69-139			
o-Xylene	62.4	1.0	"	50.0	ND	125	74-131			
Surrogate: 1,2-Dichloroethane-d4	66		"	62.5		105	84-121			
Surrogate: Toluene-d8	61		"	62.5		97.0	85-115			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	84-114			

Origins Laboratory, Inc.



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

Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: 88507268  
 Project: KMG - Opatril Unit 1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B6E1107 - EPA 5030B (Water)**

<b>Matrix Spike Dup (B6E1107-MSD1)</b>	<b>Source: X605136-01</b>			<b>Prepared: 05/11/2016 Analyzed: 05/13/2016</b>						
Benzene	63.2	1.0	ug/L	50.0	ND	126	74-130	0.788	20	
Toluene	61.6	1.0	"	50.0	ND	123	73-131	0.439	20	
Ethylbenzene	63.3	1.0	"	50.0	ND	127	76-132	1.43	20	
m,p-Xylene	124	2.0	"	100	ND	124	69-139	2.33	20	
o-Xylene	60.3	1.0	"	50.0	ND	121	74-131	3.41	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	63		"	62.5		101	84-121			
<i>Surrogate: Toluene-d8</i>	61		"	62.5		97.9	85-115			
<i>Surrogate: 4-Bromofluorobenzene</i>	59		"	62.5		94.4	84-114			

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: 88507268  
Project: KMG - Opatril Unit 1

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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 For Noelle Doyle Mathis, President

August 31, 2016

Tasman Geosciences

Bob Cornez

6899 Pecos Street, Unit C

Denver CO 80211

**Project Name - KMG - Opatril #1**

**Project Number - 88507268**

Attached are your analytical results for KMG - Opatril #1 received by Origins Laboratory, Inc. August 23, 2016. This project is associated with Origins project number X608247-01.

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  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: 88507268  
Project: KMG - Opatril #1

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01X - 08/23/16	X608247-01	Water	August 23, 2016 14:15	08/23/2016 17:12
BH02X - 08/23/16	X608247-02	Water	August 23, 2016 14:45	08/23/2016 17:12
BH03X - 08/23/16	X608247-03	Water	August 23, 2016 14:30	08/23/2016 17:12
BH04 - 08/23/16	X608247-04	Water	August 23, 2016 14:38	08/23/2016 17:12
BH05 - 08/23/16	X608247-05	Water	August 23, 2016 14:27	08/23/2016 17:12

Origins Laboratory, Inc.



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

Jen Pellegrini For Noelle Doyle Mathis, President



Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: 88507268  
 Project: KMG - Opatril #1

Origins Laboratory

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

**Sample Receipt Checklist**

Origins Work Order: X1608247

Client: Tasman

Client Project ID: Opatril #1

Checklist Completed by: Jefe Smith

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

Date/time completed: 8/25/12

Airbill #: NA

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

Cooler Number/Temperature: 1 / 2.1 °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>	X			
Is there ice present (document if blue ice is used)	X			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		X		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		X		
Were all samples received intact <sup>(1)?</sup>	X			
Was adequate sample volume provided <sup>(1)?</sup>	X			
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)?</sup>		X		
Is a chain-of-custody (COC) present and filled out completely <sup>(1)?</sup>	X			
Does the COC agree with the number and type of sample bottles received <sup>(1)?</sup>	X			
Do the sample IDs on the bottle labels match the COC <sup>(1)?</sup>	X			
Is the COC properly relinquished by the client with date and time recorded <sup>(1)?</sup>	X			
For volatiles in water – is there headspace (> ¼ inch bubble) present? <b>If yes, contact client and note in narrative.</b>		X		
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)		X		
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.

Jefe Smith  
 Reviewed by (Project Manager)

8/25/12  
 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  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: 88507268  
 Project: KMG - Opatril #1

**BH01X - 08/23/16**  
**8/23/2016 2:15:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X608247-01 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.00	ug/L	1	B6H2603	08/26/2016	08/29/2016	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	108 %	84-121			"	"	"	
Surrogate: Toluene-d8	103 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	100 %	84-114			"	"	"	

Origins Laboratory, Inc.



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

Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: 88507268  
 Project: KMG - Opatril #1

**BH02X - 08/23/16**  
**8/23/2016 2:45:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X608247-02 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.00	ug/L	1	B6H2603	08/26/2016	08/29/2016	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	105 %	84-121			"	"	"	
Surrogate: Toluene-d8	101 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	93.4 %	84-114			"	"	"	

Origins Laboratory, Inc.



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

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 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: 88507268  
 Project: KMG - Opatril #1

**BH03X - 08/23/16**  
**8/23/2016 2:30:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X608247-03 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.00	ug/L	1	B6H2603	08/26/2016	08/29/2016	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	112 %	84-121			"	"	"	
Surrogate: Toluene-d8	103 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	99.5 %	84-114			"	"	"	

Origins Laboratory, Inc.



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 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: 88507268  
 Project: KMG - Opatril #1

**BH04 - 08/23/16**  
**8/23/2016 2:38:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X608247-04 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.00	ug/L	1	B6H2603	08/25/2016	08/25/2016	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	109 %	84-121			"	"	"	
Surrogate: Toluene-d8	96.7 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	103 %	84-114			"	"	"	

Origins Laboratory, Inc.



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Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: 88507268  
 Project: KMG - Opatril #1

**BH05 - 08/23/16**  
**8/23/2016 2:27:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X608247-05 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.00	ug/L	1	B6H2603	08/25/2016	08/25/2016	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	112 %	84-121			"	"	"	
Surrogate: Toluene-d8	96.0 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	96.4 %	84-114			"	"	"	

Origins Laboratory, Inc.



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Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: 88507268  
 Project: KMG - Opatril #1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B6H2603 - EPA 5030B (Water)**

**Blank (B6H2603-BLK1)**

Prepared: 08/26/2016 Analyzed: 08/29/2016

Benzene	ND	1.00	ug/L							U
Toluene	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Xylenes, total	ND	1.00	"							U
Surrogate: 1,2-Dichloroethane-d4	64		"	62.5	103		84-121			
Surrogate: Toluene-d8	64		"	62.5	103		85-115			
Surrogate: 4-Bromofluorobenzene	60		"	62.5	95.6		84-114			

Origins Laboratory, Inc.



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

Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: 88507268  
 Project: KMG - Opatril #1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B6H2603 - EPA 5030B (Water)**

**LCS (B6H2603-BS1)**

Prepared: 08/26/2016 Analyzed: 08/29/2016

Benzene	52.8	1.00	ug/L	50.0		106	73.3-129			
Toluene	52.3	1.00	"	50.0		105	76.2-123			
Ethylbenzene	54.7	1.00	"	50.0		109	73.6-130			
m,p-Xylene	109	2.00	"	100		109	76.1-126			
o-Xylene	52.5	1.00	"	50.0		105	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	64		"	62.5		102	84-121			
Surrogate: Toluene-d8	65		"	62.5		104	85-115			
Surrogate: 4-Bromofluorobenzene	60		"	62.5		95.7	84-114			

Origins Laboratory, Inc.



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Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: 88507268  
 Project: KMG - Opatril #1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B6H2603 - EPA 5030B (Water)**

<b>Matrix Spike (B6H2603-MS1)</b>	<b>Source: X608248-01</b>			<b>Prepared: 08/26/2016 Analyzed: 08/29/2016</b>						
Benzene	49.6	1.00	ug/L	50.0	ND	99.2	74-130			
Toluene	48.0	1.00	"	50.0	ND	96.1	73-131			
Ethylbenzene	50.0	1.00	"	50.0	ND	100	76-132			
m,p-Xylene	96.3	2.00	"	100	ND	96.3	69-139			
o-Xylene	46.0	1.00	"	50.0	ND	91.9	74-131			
Surrogate: 1,2-Dichloroethane-d4	66		"	62.5		106	84-121			
Surrogate: Toluene-d8	62		"	62.5		99.8	85-115			
Surrogate: 4-Bromofluorobenzene	60		"	62.5		96.2	84-114			

Origins Laboratory, Inc.



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Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: 88507268  
 Project: KMG - Opatril #1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B6H2603 - EPA 5030B (Water)**

Matrix Spike Dup (B6H2603-MSD1)	Source: X608248-01			Prepared: 08/26/2016 Analyzed: 08/29/2016						
Benzene	55.8	1.00	ug/L	50.0	ND	112	74-130	11.8	20	
Toluene	53.0	1.00	"	50.0	ND	106	73-131	9.80	20	
Ethylbenzene	58.8	1.00	"	50.0	ND	118	76-132	16.2	20	
m,p-Xylene	116	2.00	"	100	ND	116	69-139	18.3	20	
o-Xylene	55.2	1.00	"	50.0	ND	110	74-131	18.4	20	
Surrogate: 1,2-Dichloroethane-d4	64		"	62.5		103	84-121			
Surrogate: Toluene-d8	63		"	62.5		101	85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.8	84-114			

Origins Laboratory, Inc.



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

Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: 88507268  
Project: KMG - Opatril #1

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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 For Noelle Doyle Mathis, President

November 21, 2016

Tasman Geosciences

Bob Cornez

6899 Pecos Street, Unit C

Denver CO 80211

**Project Name - KMG - Opatril #1**

**Project Number - 88507268**

Attached are your analytical results for KMG - Opatril #1 received by Origins Laboratory, Inc. November 15, 2016. This project is associated with Origins project number X611184-01.

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  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: 88507268  
Project: KMG - Opatril #1

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01X	X611184-01	Water	November 15, 2016 12:00	11/15/2016 14:15
BH02X	X611184-02	Water	November 15, 2016 12:16	11/15/2016 14:15
BH03X	X611184-03	Water	November 15, 2016 12:18	11/15/2016 14:15
BH04	X611184-04	Water	November 15, 2016 12:26	11/15/2016 14:15
BH05	X611184-05	Water	November 15, 2016 12:05	11/15/2016 14:15

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  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: 88507268  
 Project: KMG - Opatril #1

Origins Laboratory

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

**Sample Receipt Checklist**

Origins Work Order: X1011184

Client: Tasman

Client Project ID: KMG - Opatril

Checklist Completed by: J. P. Smith

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

Date/time completed: 11-16-12

Airbill #: NA

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

Cooler Number/Temperature: 1 / 2.4 °C / \_\_\_\_\_ °C / \_\_\_\_\_ °C (Describe) \_\_\_\_\_ °C

Thermometer ID: TC08

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"/>	<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 HNO3, HCL, H2SO4) / (pH >10 for samples preserved with NaAsO2+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.

[Signature]  
 Reviewed by (Project Manager)

11-16-12  
 Date/Time Reviewed

Origins Laboratory, Inc.

Jefe Pellegrini

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Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: 88507268  
 Project: KMG - Opatril #1

**BH01X**  
**11/15/2016 12:00:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X611184-01 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.00	ug/L	1	B6K1701	11/17/2016	11/17/2016	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	101 %	84-121			"	"	"	
Surrogate: Toluene-d8	103 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	101 %	84-114			"	"	"	

Origins Laboratory, Inc.



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 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: 88507268  
 Project: KMG - Opatril #1

**BH02X**  
**11/15/2016 12:16:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X611184-02 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.00	ug/L	1	B6K1701	11/17/2016	11/17/2016	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	98.5 %	84-121			"	"	"	
Surrogate: Toluene-d8	101 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	103 %	84-114			"	"	"	

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 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: 88507268  
 Project: KMG - Opatril #1

**BH03X**  
**11/15/2016 12:18:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X611184-03 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.00	ug/L	1	B6K1701	11/17/2016	11/17/2016	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	99.2 %	84-121			"	"	"	
Surrogate: Toluene-d8	98.3 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	103 %	84-114			"	"	"	

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 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: 88507268  
 Project: KMG - Opatril #1

**BH04**

**11/15/2016 12:26:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X611184-04 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.00	ug/L	1	B6K1701	11/17/2016	11/17/2016	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	101 %	84-121			"	"	"	
Surrogate: Toluene-d8	99.9 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	98.7 %	84-114			"	"	"	

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 Denver CO 80211

Bob Cornez  
 Project Number: 88507268  
 Project: KMG - Opatril #1

**BH05**

**11/15/2016 12:05:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X611184-05 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.00	ug/L	1	B6K1701	11/17/2016	11/17/2016	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	103 %	84-121			"	"	"	
Surrogate: Toluene-d8	101 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	99.2 %	84-114			"	"	"	

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 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: 88507268  
 Project: KMG - Opatril #1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B6K1701 - EPA 5030B (Water)**

**Blank (B6K1701-BLK1)**

Prepared: 11/17/2016 Analyzed: 11/17/2016

Benzene	ND	1.00	ug/L							U
Toluene	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Xylenes, total	ND	1.00	"							U
Surrogate: 1,2-Dichloroethane-d4	60		"	62.5	95.5		84-121			
Surrogate: Toluene-d8	62		"	62.5	99.8		85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5	101		84-114			

Origins Laboratory, Inc.



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 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: 88507268  
 Project: KMG - Opatril #1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B6K1701 - EPA 5030B (Water)**

**Blank (B6K1701-BLK2)**

Prepared: 11/17/2016 Analyzed: 11/17/2016

Benzene	ND	1.00	ug/L							U
Toluene	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Xylenes, total	ND	1.00	"							U
Surrogate: 1,2-Dichloroethane-d4	60		"	62.5		96.4	84-121			
Surrogate: Toluene-d8	62		"	62.5		99.3	85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.4	84-114			

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 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: 88507268  
 Project: KMG - Opatril #1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B6K1701 - EPA 5030B (Water)

**LCS (B6K1701-BS1)**

Prepared: 11/17/2016 Analyzed: 11/17/2016

Benzene	48.3	1.00	ug/L	50.0		96.5	73.3-129			
Toluene	50.0	1.00	"	50.0		99.9	76.2-123			
Ethylbenzene	48.5	1.00	"	50.0		97.0	73.6-130			
m,p-Xylene	97.8	2.00	"	100		97.8	76.1-126			
o-Xylene	47.5	1.00	"	50.0		94.9	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5		98.5	84-121			
Surrogate: Toluene-d8	63		"	62.5		100	85-115			
Surrogate: 4-Bromofluorobenzene	66		"	62.5		105	84-114			

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 Denver CO 80211

Bob Cornez  
 Project Number: 88507268  
 Project: KMG - Opatril #1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B6K1701 - EPA 5030B (Water)**

**LCS (B6K1701-BS2)**

Prepared: 11/17/2016 Analyzed: 11/17/2016

Benzene	51.8	1.00	ug/L	50.0		104	73.3-129			
Toluene	52.4	1.00	"	50.0		105	76.2-123			
Ethylbenzene	51.2	1.00	"	50.0		102	73.6-130			
m,p-Xylene	104	2.00	"	100		104	76.1-126			
o-Xylene	49.3	1.00	"	50.0		98.6	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	60		"	62.5		96.3	84-121			
Surrogate: Toluene-d8	63		"	62.5		102	85-115			
Surrogate: 4-Bromofluorobenzene	65		"	62.5		104	84-114			

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 Denver CO 80211

Bob Cornez  
 Project Number: 88507268  
 Project: KMG - Opatril #1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B6K1701 - EPA 5030B (Water)**

<b>Matrix Spike (B6K1701-MS1)</b>	<b>Source: X611184-01</b>			<b>Prepared: 11/17/2016 Analyzed: 11/17/2016</b>						
Benzene	51.0	1.00	ug/L	50.0	ND	102	74-130			
Toluene	51.6	1.00	"	50.0	ND	103	73-131			
Ethylbenzene	49.9	1.00	"	50.0	ND	99.8	76-132			
m,p-Xylene	99.5	2.00	"	100	ND	99.5	69-139			
o-Xylene	48.2	1.00	"	50.0	ND	96.5	74-131			
Surrogate: 1,2-Dichloroethane-d4	60		"	62.5		96.7	84-121			
Surrogate: Toluene-d8	64		"	62.5		103	85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	84-114			

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 Denver CO 80211

Bob Cornez  
 Project Number: 88507268  
 Project: KMG - Opatril #1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B6K1701 - EPA 5030B (Water)**

<b>Matrix Spike (B6K1701-MS2)</b>	<b>Source: X611184-02</b>			<b>Prepared: 11/17/2016 Analyzed: 11/17/2016</b>						
Benzene	51.4	1.00	ug/L	50.0	ND	103	74-130			
Toluene	52.2	1.00	"	50.0	ND	104	73-131			
Ethylbenzene	52.8	1.00	"	50.0	ND	106	76-132			
m,p-Xylene	108	2.00	"	100	ND	108	69-139			
o-Xylene	51.7	1.00	"	50.0	ND	103	74-131			
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5		97.2	84-121			
Surrogate: Toluene-d8	62		"	62.5		99.2	85-115			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	84-114			

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Bob Cornez  
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 Project: KMG - Opatril #1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B6K1701 - EPA 5030B (Water)**

Matrix Spike Dup (B6K1701-MSD1)	Source: X611184-01			Prepared: 11/17/2016 Analyzed: 11/17/2016						
Benzene	47.4	1.00	ug/L	50.0	ND	94.9	74-130	7.13	20	
Toluene	47.9	1.00	"	50.0	ND	95.9	73-131	7.36	20	
Ethylbenzene	46.4	1.00	"	50.0	ND	92.9	76-132	7.20	20	
m,p-Xylene	95.3	2.00	"	100	ND	95.3	69-139	4.28	20	
o-Xylene	45.9	1.00	"	50.0	ND	91.8	74-131	4.95	20	
Surrogate: 1,2-Dichloroethane-d4	60		"	62.5		95.6	84-121			
Surrogate: Toluene-d8	64		"	62.5		102	85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	84-114			

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Bob Cornez  
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 Project: KMG - Opatril #1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B6K1701 - EPA 5030B (Water)**

Matrix Spike Dup (B6K1701-MSD2)	Source: X611184-02			Prepared: 11/17/2016 Analyzed: 11/17/2016						
Benzene	47.5	1.00	ug/L	50.0	ND	95.1	74-130	7.78	20	
Toluene	47.9	1.00	"	50.0	ND	95.7	73-131	8.71	20	
Ethylbenzene	49.0	1.00	"	50.0	ND	97.9	76-132	7.60	20	
m,p-Xylene	97.5	2.00	"	100	ND	97.5	69-139	9.90	20	
o-Xylene	47.5	1.00	"	50.0	ND	95.0	74-131	8.41	20	
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5		99.0	84-121			
Surrogate: Toluene-d8	62		"	62.5		98.8	85-115			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	84-114			

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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: 88507268  
Project: KMG - Opatril #1

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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.



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Jen Pellegrini For Noelle Doyle Mathis, President