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8/1/2013

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741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

July 11, 2013

Alyssa Beard
Tasman Geosciences
6899 Pecos Street
Denver, CO 80221
RE: FEM Hillman 9-1

Enclosed are the results of analyses for samples received by Summit Scientific on 07/02/13 16:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Joseph J Egry IV For Ben Shrewsbury
President / Laboratory Manager

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: FEM Hillman 9-1

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
07/11/13 11:45

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B01@3'	R307017-01	Soil	07/02/13 08:45	07/02/13 16:00
N01	R307017-02	Soil	07/02/13 09:00	07/02/13 16:00
E01	R307017-03	Soil	07/02/13 09:05	07/02/13 16:00
W01	R307017-04	Soil	07/02/13 09:10	07/02/13 16:00
S01	R307017-05	Soil	07/02/13 09:15	07/02/13 16:00
B02@6"	R307017-06	Soil	07/02/13 09:30	07/02/13 16:00
BKG	R307017-07	Soil	07/02/13 09:40	07/02/13 16:00

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: FEM Hillman 9-1

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
07/11/13 11:45

R307017

Summit Scientific

741 Corporate Circle Suite 1 • Golden, Colorado 80401
303-277-9310 • 303-374-5933 Fax

Client: Foundations Hillman Page 1 of 1

Address: _____

City/State/Zip: _____

Project Manager: Alyssa Beard

Phone: _____ E-Mail: ash

Project Name: Hillman 9-1

Sampler Name: CANVAS Project Number: _____

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix		Analyze For:	Special Instructions
				HCl	HNO ₃	Zone	Other (Specify)	Groundwater	Soil		
W1031	7/13/13	8:45	1		X						
ND1	7/10	8:00									
ED1	7/10	9:00									
W101	7/10	9:10									
871	7/15	9:15									
B07001	7/16	9:36									
B10	7/16	9:40									
Relinquished by: <u>[Signature]</u> Date/Time: <u>7/12/13 15:00</u> Received by: <u>[Signature]</u> Date/Time: <u>7/13/13</u> Relinquished by: _____ Date/Time: _____ Received by: _____ Date/Time: _____ Relinquished by: _____ Date/Time: _____ Received by: _____ Date/Time: _____											
Turn Around Time (Check): <input type="checkbox"/> 72 Hours <input checked="" type="checkbox"/> Standard Sample Integrity: <input checked="" type="checkbox"/> 5°C <input type="checkbox"/> 4°C <input type="checkbox"/> No Temperature Upon Receipt: _____ Notes: _____											

www.summitscientific.com

[Signature]



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: FEM Hillman 9-1

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
07/11/13 11:45

B01@3'
R307017-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/02/13 08:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (TEPH-DRO)	110	50	mg/kg	1	3070305	07/03/13	07/03/13	8015M	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/02/13 08:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		80.9 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/02/13 08:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.026	0.0050	mg/kg	1	3070304	07/03/13	07/03/13	EPA 8260B	
Toluene	0.13	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.072	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.23	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	250	50	"	100	"	"	"	"	

Date Sampled: **07/02/13 08:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		104 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.5 %	21-167		"	"	"	"	

Semivolatile Organic Compounds by EPA Method 8270D SIM

Date Sampled: **07/02/13 08:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	5.00	ug/kg	1	3070701	07/08/13	07/08/13	EPA 8270D SIM	

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Project: FEM Hillman 9-1

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Project Manager: Alyssa Beard

Reported:
07/11/13 11:45

B01@3'
R307017-01 (Soil)

Summit Scientific

Semivolatile Organic Compounds by EPA Method 8270D SIM

Acenaphthylene	7.60	5.00	ug/kg	1	3070701	07/08/13	07/08/13	EPA 8270D SIM
Anthracene	ND	5.00	"	"	"	"	"	"
Benzo (a) anthracene	ND	5.00	"	"	"	"	"	"
Benzo (b) fluoranthene	ND	5.00	"	"	"	"	"	"
Benzo (k) fluoranthene	ND	5.00	"	"	"	"	"	"
Benzo (g,h,i) perylene	ND	5.00	"	"	"	"	"	"
Benzo (a) pyrene	ND	5.00	"	"	"	"	"	"
Chrysene	17.6	5.00	"	"	"	"	"	"
Dibenz (a,h) anthracene	ND	10.0	"	"	"	"	"	"
Fluoranthene	ND	5.00	"	"	"	"	"	"
Fluorene	ND	5.00	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	ND	10.0	"	"	"	"	"	"
Naphthalene	93.3		"	"	"	"	"	"
Phenanthrene	93.1	5.00	"	"	"	"	"	"
Pyrene	16.3	5.00	"	"	"	"	"	"

Date Sampled: 07/02/13 08:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		52.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		62.7 %	40-150		"	"	"	"	

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: 07/02/13 08:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	8.36	0.269	mg/kg dry	1	3070302	07/03/13	07/08/13	EPA 6020A	
Barium	271	0.269	"	"	"	"	"	"	
Cadmium	0.490	0.269	"	"	"	"	"	"	
Chromium	25.2	0.269	"	"	"	"	"	"	
Copper	47.2	1.34	"	"	"	"	"	"	
Lead	18.7	0.269	"	"	"	"	"	"	
Nickel	29.4	0.269	"	"	"	"	"	"	
Selenium	1.60	0.269	"	"	"	"	07/03/13	"	
Silver	ND	0.269	"	"	"	"	"	"	
Zinc	74.9	26.9	"	"	"	"	07/08/13	"	

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Project: FEM Hillman 9-1

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
07/11/13 11:45

B01@3'
R307017-01 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Total Mercury by EPA Method 7471/7470/245.1

Date Sampled: **07/02/13 08:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.114	mg/kg dry	1	3070801	07/08/13	07/08/13	EPA 7471	

Calculated Analytes

Date Sampled: **07/02/13 08:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium+3 Calculated	24.2	1.00	mg/kg	1	3071105	07/10/13	07/10/13	Calculation	

Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis

Date Sampled: **07/02/13 08:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	3460	8.28	mg/kg dry	1	3070303	07/03/13	07/03/13	EPA 6020/Mod. USDA60 6(2, 3A)	
Magnesium	140	3.31	"	"	"	"	"	"	
Sodium	3970	16.6	"	"	"	"	"	"	

Date Sampled: **07/02/13 08:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	18.0		units	"	3070909	07/09/13	07/09/13	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/02/13 08:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	5.42	0.00100	mmhos/cm	1	3070307	07/03/13	07/03/13	SM 2510B	

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Project: FEM Hillman 9-1

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
07/11/13 11:45

B01@3'
R307017-01 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/02/13 08:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	9.88	0.100	pH Units	1	3070306	07/03/13	07/03/13	EPA 9045	

Date Sampled: **07/02/13 08:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	30.2		%	"	3070907	07/09/13	07/10/13	% calculation	

Accutest Laboratories - 6010 Hexavalent Chromium, Soil (3060A Mod Digest)

Date Sampled: **07/02/13 08:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	1	mg/kg	1	3071104	07/10/13	07/10/13	3060A/7196 A	

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Project: FEM Hillman 9-1

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
07/11/13 11:45

N01
R307017-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/02/13 09:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (TEPH-DRO)	ND	50	mg/kg	1	3070305	07/03/13	07/03/13	8015M	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: 07/02/13 09:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		77.6 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/02/13 09:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	3070304	07/03/13	07/03/13	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 07/02/13 09:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		113 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.8 %	21-167		"	"	"	"	

Semivolatile Organic Compounds by EPA Method 8270D SIM

Date Sampled: 07/02/13 09:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	5.00	ug/kg	1	3070701	07/08/13	07/08/13	EPA 8270D SIM	

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Project: FEM Hillman 9-1

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
07/11/13 11:45

N01
R307017-02 (Soil)

Summit Scientific

Semivolatile Organic Compounds by EPA Method 8270D SIM

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthylene	ND	5.00	ug/kg	1	3070701	07/08/13	07/08/13	EPA 8270D SIM	
Anthracene	ND	5.00	"	"	"	"	"	"	
Benzo (a) anthracene	ND	5.00	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	5.00	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	5.00	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	5.00	"	"	"	"	"	"	
Benzo (a) pyrene	ND	5.00	"	"	"	"	"	"	
Chrysene	ND	5.00	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	10.0	"	"	"	"	"	"	
Fluoranthene	ND	5.00	"	"	"	"	"	"	
Fluorene	ND	5.00	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	10.0	"	"	"	"	"	"	
Naphthalene	0.621		"	"	"	"	"	"	
Phenanthrene	ND	5.00	"	"	"	"	"	"	
Pyrene	ND	5.00	"	"	"	"	"	"	

Date Sampled: 07/02/13 09:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		68.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		79.2 %	40-150		"	"	"	"	

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: 07/02/13 09:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.735	0.0898	mg/kg dry	1	3070302	07/03/13	07/08/13	EPA 6020A	
Barium	79.8	0.0898	"	"	"	"	"	"	
Cadmium	ND	0.0898	"	"	"	"	"	"	
Chromium	4.56	0.0898	"	"	"	"	"	"	
Copper	2.56	0.449	"	"	"	"	"	"	
Lead	4.42	0.0898	"	"	"	"	"	"	
Nickel	3.07	0.0898	"	"	"	"	"	"	
Selenium	ND	0.0898	"	"	"	"	07/03/13	"	
Silver	ND	0.0898	"	"	"	"	"	"	
Zinc	10.8	8.98	"	"	"	"	07/08/13	"	

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6899 Pecos Street
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Project: FEM Hillman 9-1

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
07/11/13 11:45

N01
R307017-02 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Total Mercury by EPA Method 7471/7470/245.1

Date Sampled: **07/02/13 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.0529	mg/kg dry	1	3070801	07/08/13	07/08/13	EPA 7471	

Calculated Analytes

Date Sampled: **07/02/13 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium+3 Calculated	3.56	1.00	mg/kg	1	3071105	07/10/13	07/10/13	Calculation	

Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis

Date Sampled: **07/02/13 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	532	2.65	mg/kg dry	1	3070303	07/03/13	07/03/13	EPA 6020/Mod. USDA60 6(2, 3A)	
Magnesium	35.7	1.06	"	"	"	"	"	"	
Sodium	29.2	5.29	"	"	"	"	"	"	

Date Sampled: **07/02/13 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.330		units	"	3070909	07/09/13	07/09/13	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/02/13 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.314	0.00100	mmhos/cm	1	3070307	07/03/13	07/03/13	SM 2510B	

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Project: FEM Hillman 9-1

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
07/11/13 11:45

N01
R307017-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/02/13 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	9.31	0.100	pH Units	1	3070306	07/03/13	07/03/13	EPA 9045	

Date Sampled: **07/02/13 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.5		%	"	3070907	07/09/13	07/10/13	% calculation	

Accutest Laboratories - 6010 Hexavalent Chromium, Soil (3060A Mod Digest)

Date Sampled: **07/02/13 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	1	mg/kg	1	3071104	07/10/13	07/10/13	3060A/7196 A	

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Project: FEM Hillman 9-1

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
07/11/13 11:45

E01
R307017-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/02/13 09:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (TEPH-DRO)	ND	50	mg/kg	1	3070305	07/03/13	07/04/13	8015M	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: 07/02/13 09:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		91.2 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/02/13 09:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	3070304	07/03/13	07/03/13	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 07/02/13 09:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		106 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.0 %	21-167		"	"	"	"	

Semivolatile Organic Compounds by EPA Method 8270D SIM

Date Sampled: 07/02/13 09:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	5.00	ug/kg	1	3070701	07/08/13	07/08/13	EPA 8270D SIM	

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6899 Pecos Street
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Project: FEM Hillman 9-1

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
07/11/13 11:45

E01
R307017-03 (Soil)

Summit Scientific

Semivolatile Organic Compounds by EPA Method 8270D SIM

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthylene	ND	5.00	ug/kg	1	3070701	07/08/13	07/08/13	EPA 8270D SIM	
Anthracene	ND	5.00	"	"	"	"	"	"	
Benzo (a) anthracene	ND	5.00	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	5.00	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	5.00	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	5.00	"	"	"	"	"	"	
Benzo (a) pyrene	ND	5.00	"	"	"	"	"	"	
Chrysene	ND	5.00	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	10.0	"	"	"	"	"	"	
Fluoranthene	ND	5.00	"	"	"	"	"	"	
Fluorene	ND	5.00	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	10.0	"	"	"	"	"	"	
Naphthalene	0.516		"	"	"	"	"	"	
Phenanthrene	ND	5.00	"	"	"	"	"	"	
Pyrene	ND	5.00	"	"	"	"	"	"	

Date Sampled: 07/02/13 09:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		59.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		66.7 %	40-150		"	"	"	"	

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: 07/02/13 09:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.765	0.0959	mg/kg dry	1	3070302	07/03/13	07/08/13	EPA 6020A	
Barium	93.6	0.0959	"	"	"	"	"	"	
Cadmium	ND	0.0959	"	"	"	"	"	"	
Chromium	4.29	0.0959	"	"	"	"	"	"	
Copper	2.45	0.480	"	"	"	"	"	"	
Lead	3.89	0.0959	"	"	"	"	"	"	
Nickel	3.18	0.0959	"	"	"	"	"	"	
Selenium	ND	0.0959	"	"	"	"	07/03/13	"	
Silver	ND	0.0959	"	"	"	"	"	"	
Zinc	9.84	9.59	"	"	"	"	07/08/13	"	

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: FEM Hillman 9-1

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
07/11/13 11:45

E01
R307017-03 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Total Mercury by EPA Method 7471/7470/245.1

Date Sampled: **07/02/13 09:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.0562	mg/kg dry	1	3070801	07/08/13	07/08/13	EPA 7471	

Calculated Analytes

Date Sampled: **07/02/13 09:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium+3 Calculated	3.29	1.00	mg/kg	1	3071105	07/10/13	07/10/13	Calculation	

Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis

Date Sampled: **07/02/13 09:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	733	2.81	mg/kg dry	1	3070303	07/03/13	07/03/13	EPA 6020/Mod. USDA60 6(2, 3A)	
Magnesium	33.3	1.12	"	"	"	"	"	"	
Sodium	23.8	5.62	"	"	"	"	"	"	

Date Sampled: **07/02/13 09:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.230		units	"	3070909	07/09/13	07/09/13	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/02/13 09:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.324	0.00100	mmhos/cm	1	3070307	07/03/13	07/03/13	SM 2510B	

Summit Scientific

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: FEM Hillman 9-1

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
07/11/13 11:45

E01
R307017-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/02/13 09:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	9.03	0.100	pH Units	1	3070306	07/03/13	07/03/13	EPA 9045	

Date Sampled: **07/02/13 09:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.0		%	"	3070907	07/09/13	07/10/13	% calculation	

Accutest Laboratories - 6010 Hexavalent Chromium, Soil (3060A Mod Digest)

Date Sampled: **07/02/13 09:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	1	mg/kg	1	3071104	07/10/13	07/10/13	3060A/7196 A	

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: FEM Hillman 9-1

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
07/11/13 11:45

W01
R307017-04 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/02/13 09:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (TEPH-DRO)	ND	50	mg/kg	1	3070305	07/03/13	07/04/13	8015M	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: 07/02/13 09:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		77.3 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/02/13 09:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	3070304	07/03/13	07/03/13	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 07/02/13 09:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		115 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.4 %	21-167		"	"	"	"	

Semivolatile Organic Compounds by EPA Method 8270D SIM

Date Sampled: 07/02/13 09:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	5.00	ug/kg	1	3070701	07/08/13	07/08/13	EPA 8270D SIM	

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: FEM Hillman 9-1

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
07/11/13 11:45

W01
R307017-04 (Soil)

Summit Scientific

Semivolatile Organic Compounds by EPA Method 8270D SIM

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthylene	ND	5.00	ug/kg	1	3070701	07/08/13	07/08/13	EPA 8270D SIM	
Anthracene	ND	5.00	"	"	"	"	"	"	
Benzo (a) anthracene	ND	5.00	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	5.00	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	5.00	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	5.00	"	"	"	"	"	"	
Benzo (a) pyrene	ND	5.00	"	"	"	"	"	"	
Chrysene	ND	5.00	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	10.0	"	"	"	"	"	"	
Fluoranthene	ND	5.00	"	"	"	"	"	"	
Fluorene	ND	5.00	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	10.0	"	"	"	"	"	"	
Naphthalene	0.00		"	"	"	"	"	"	
Phenanthrene	ND	5.00	"	"	"	"	"	"	
Pyrene	ND	5.00	"	"	"	"	"	"	

Date Sampled: 07/02/13 09:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		55.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		65.4 %	40-150		"	"	"	"	

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: 07/02/13 09:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.02	0.0891	mg/kg dry	1	3070302	07/03/13	07/08/13	EPA 6020A	
Barium	154	0.0891	"	"	"	"	"	"	
Cadmium	ND	0.0891	"	"	"	"	"	"	
Chromium	4.64	0.0891	"	"	"	"	"	"	
Copper	2.73	0.446	"	"	"	"	"	"	
Lead	4.61	0.0891	"	"	"	"	"	"	
Nickel	3.56	0.0891	"	"	"	"	"	"	
Selenium	ND	0.0891	"	"	"	"	07/03/13	"	
Silver	ND	0.0891	"	"	"	"	"	"	
Zinc	12.6	8.91	"	"	"	"	07/08/13	"	

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: FEM Hillman 9-1

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
07/11/13 11:45

W01
R307017-04 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Total Mercury by EPA Method 7471/7470/245.1

Date Sampled: **07/02/13 09:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.0462	mg/kg dry	1	3070801	07/08/13	07/08/13	EPA 7471	

Calculated Analytes

Date Sampled: **07/02/13 09:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium+3 Calculated	3.64	1.00	mg/kg	1	3071105	07/10/13	07/10/13	Calculation	

Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis

Date Sampled: **07/02/13 09:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	485	2.66	mg/kg dry	1	3070303	07/03/13	07/03/13	EPA 6020/Mod. USDA60 6(2, 3A)	
Magnesium	59.7	1.06	"	"	"	"	"	"	
Sodium	1020	5.31	"	"	"	"	"	"	

Date Sampled: **07/02/13 09:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	11.6		units	"	3070909	07/09/13	07/09/13	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/02/13 09:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.212	0.00100	mmhos/cm	1	3070307	07/03/13	07/03/13	SM 2510B	

Summit Scientific

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: FEM Hillman 9-1

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
07/11/13 11:45

W01
R307017-04 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/02/13 09:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.81	0.100	pH Units	1	3070306	07/03/13	07/03/13	EPA 9045	

Date Sampled: **07/02/13 09:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.1		%	"	3070907	07/09/13	07/10/13	% calculation	

Accutest Laboratories - 6010 Hexavalent Chromium, Soil (3060A Mod Digest)

Date Sampled: **07/02/13 09:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	1	mg/kg	1	3071104	07/10/13	07/10/13	3060A/7196 A	

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: FEM Hillman 9-1

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
07/11/13 11:45

S01
R307017-05 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/02/13 09:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (TEPH-DRO)	ND	50	mg/kg	1	3070305	07/03/13	07/04/13	8015M	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: 07/02/13 09:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		95.5 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/02/13 09:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	3070304	07/03/13	07/03/13	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 07/02/13 09:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		112 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		87.3 %	21-167		"	"	"	"	

Semivolatile Organic Compounds by EPA Method 8270D SIM

Date Sampled: 07/02/13 09:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	5.00	ug/kg	1	3070701	07/08/13	07/08/13	EPA 8270D SIM	

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: FEM Hillman 9-1

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
07/11/13 11:45

S01
R307017-05 (Soil)

Summit Scientific

Semivolatile Organic Compounds by EPA Method 8270D SIM

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthylene	ND	5.00	ug/kg	1	3070701	07/08/13	07/08/13	EPA 8270D SIM	
Anthracene	ND	5.00	"	"	"	"	"	"	
Benzo (a) anthracene	ND	5.00	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	5.00	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	5.00	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	5.00	"	"	"	"	"	"	
Benzo (a) pyrene	ND	5.00	"	"	"	"	"	"	
Chrysene	ND	5.00	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	10.0	"	"	"	"	"	"	
Fluoranthene	ND	5.00	"	"	"	"	"	"	
Fluorene	ND	5.00	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	10.0	"	"	"	"	"	"	
Naphthalene	0.00		"	"	"	"	"	"	
Phenanthrene	ND	5.00	"	"	"	"	"	"	
Pyrene	ND	5.00	"	"	"	"	"	"	

Date Sampled: 07/02/13 09:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		51.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		62.7 %	40-150		"	"	"	"	

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: 07/02/13 09:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.558	0.0946	mg/kg dry	1	3070302	07/03/13	07/08/13	EPA 6020A	
Barium	58.4	0.0946	"	"	"	"	"	"	
Cadmium	ND	0.0946	"	"	"	"	"	"	
Chromium	2.33	0.0946	"	"	"	"	"	"	
Copper	1.52	0.473	"	"	"	"	"	"	
Lead	2.46	0.0946	"	"	"	"	"	"	
Nickel	1.69	0.0946	"	"	"	"	"	"	
Selenium	ND	0.0946	"	"	"	"	07/03/13	"	
Silver	ND	0.0946	"	"	"	"	"	"	
Zinc	ND	9.46	"	"	"	"	07/08/13	"	

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: FEM Hillman 9-1

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
07/11/13 11:45

S01
R307017-05 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Total Mercury by EPA Method 7471/7470/245.1

Date Sampled: **07/02/13 09:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.0391	mg/kg dry	1	3070801	07/08/13	07/08/13	EPA 7471	

Calculated Analytes

Date Sampled: **07/02/13 09:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium+3 Calculated	1.33	1.00	mg/kg	1	3071105	07/10/13	07/10/13	Calculation	

Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis

Date Sampled: **07/02/13 09:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	406	2.85	mg/kg dry	1	3070303	07/03/13	07/03/13	EPA 6020/Mod. USDA60 6(2, 3A)	
Magnesium	17.5	1.14	"	"	"	"	"	"	
Sodium	173	5.71	"	"	"	"	"	"	

Date Sampled: **07/02/13 09:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.28		units	"	3070909	07/09/13	07/09/13	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/02/13 09:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.301	0.00100	mmhos/cm	1	3070307	07/03/13	07/03/13	SM 2510B	

Summit Scientific

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: FEM Hillman 9-1

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
07/11/13 11:45

S01
R307017-05 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/02/13 09:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.65	0.100	pH Units	1	3070306	07/03/13	07/03/13	EPA 9045	

Date Sampled: **07/02/13 09:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.6		%	"	3070907	07/09/13	07/10/13	% calculation	

Accutest Laboratories - 6010 Hexavalent Chromium, Soil (3060A Mod Digest)

Date Sampled: **07/02/13 09:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	1	mg/kg	1	3071104	07/10/13	07/10/13	3060A/7196 A	

Summit Scientific

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: FEM Hillman 9-1

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
07/11/13 11:45

B02@6''
R307017-06 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/02/13 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (TEPH-DRO)	10000	50	mg/kg	1	3070305	07/03/13	07/04/13	8015M	
C28-C36 (TEPH-ORO)	1600	50	"	"	"	"	"	"	

Date Sampled: **07/02/13 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		79.3 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/02/13 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	3070304	07/03/13	07/03/13	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.0080	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	200	50	"	100	"	"	"	"	

Date Sampled: **07/02/13 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		111 %	23-173		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		98.8 %	20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		95.9 %	21-167		"	"	"	"	

Semivolatile Organic Compounds by EPA Method 8270D SIM

Date Sampled: **07/02/13 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	5.00	ug/kg	1	3070701	07/08/13	07/08/13	EPA 8270D SIM	

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: FEM Hillman 9-1

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
07/11/13 11:45

B02@6''
R307017-06 (Soil)

Summit Scientific

Semivolatile Organic Compounds by EPA Method 8270D SIM

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthylene	ND	5.00	ug/kg	1	3070701	07/08/13	07/08/13	EPA 8270D SIM	
Anthracene	ND	5.00	"	"	"	"	"	"	
Benzo (a) anthracene	61.0	5.00	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	5.00	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	5.00	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	5.00	"	"	"	"	"	"	
Benzo (a) pyrene	ND	5.00	"	"	"	"	"	"	
Chrysene	55.3	5.00	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	10.0	"	"	"	"	"	"	
Fluoranthene	ND	5.00	"	"	"	"	"	"	
Fluorene	ND	5.00	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	10.0	"	"	"	"	"	"	
Naphthalene	0.00		"	"	"	"	"	"	
Phenanthrene	1340	5.00	"	"	"	"	"	"	
Pyrene	63.4	5.00	"	"	"	"	"	"	

Date Sampled: 07/02/13 09:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		69.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		101 %	40-150		"	"	"	"	

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: 07/02/13 09:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.819	0.105	mg/kg dry	1	3070302	07/03/13	07/08/13	EPA 6020A	
Barium	84.4	0.105	"	"	"	"	"	"	
Cadmium	ND	0.105	"	"	"	"	"	"	
Chromium	5.45	0.105	"	"	"	"	"	"	
Copper	7.89	0.523	"	"	"	"	"	"	
Lead	9.48	0.105	"	"	"	"	"	"	
Nickel	4.74	0.105	"	"	"	"	"	"	
Selenium	ND	0.105	"	"	"	"	07/03/13	"	
Silver	ND	0.105	"	"	"	"	"	"	
Zinc	15.7	10.5	"	"	"	"	07/08/13	"	

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6899 Pecos Street
Denver CO, 80221

Project: FEM Hillman 9-1

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
07/11/13 11:45

B02@6''
R307017-06 (Soil)

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Total Metals by EPA Method 6020 - Dry Weight Basis

Total Mercury by EPA Method 7471/7470/245.1

Date Sampled: **07/02/13 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.0522	mg/kg dry	1	3070801	07/08/13	07/08/13	EPA 7471	

Calculated Analytes

Date Sampled: **07/02/13 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium+3 Calculated	4.45	1.00	mg/kg	1	3071105	07/10/13	07/10/13	Calculation	

Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis

Date Sampled: **07/02/13 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	376	3.10	mg/kg dry	1	3070303	07/03/13	07/03/13	EPA 6020/Mod. USDA60 6(2, 3A)	
Magnesium	65.3	1.24	"	"	"	"	"	"	
Sodium	2770	6.20	"	"	"	"	"	"	

Date Sampled: **07/02/13 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	34.7		units	"	3070909	07/09/13	07/09/13	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/02/13 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	7.08	0.00100	mmhos/cm	1	3070307	07/03/13	07/03/13	SM 2510B	

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Denver CO, 80221

Project: FEM Hillman 9-1

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
07/11/13 11:45

B02@6''
R307017-06 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/02/13 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	9.05	0.100	pH Units	1	3070306	07/03/13	07/03/13	EPA 9045	

Date Sampled: **07/02/13 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	80.6		%	"	3070907	07/09/13	07/10/13	% calculation	

Accutest Laboratories - 6010 Hexavalent Chromium, Soil (3060A Mod Digest)

Date Sampled: **07/02/13 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	1	mg/kg	1	3071104	07/10/13	07/10/13	3060A/7196 A	

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6899 Pecos Street
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Project: FEM Hillman 9-1

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
07/11/13 11:45

BKG
R307017-07 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **07/02/13 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.823	0.0896	mg/kg dry	1	3070302	07/03/13	07/08/13	EPA 6020A	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/02/13 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.41	0.100	pH Units	1	3070306	07/03/13	07/03/13	EPA 9045	

Date Sampled: **07/02/13 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	96.3		%	"	3070907	07/09/13	07/10/13	% calculation	

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6899 Pecos Street
Denver CO, 80221

Project: FEM Hillman 9-1

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
07/11/13 11:45

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch 3070305 - EPA 3550A

Blank (3070305-BLK1)

Prepared & Analyzed: 07/03/13

C10-C28 (TEPH-DRO)	ND	50	mg/kg							
C28-C36 (TEPH-ORO)	ND	50	"							

LCS (3070305-BS1)

Prepared & Analyzed: 07/03/13

C10-C28 (TEPH-DRO)	603	50	mg/kg	501	120	73-134				
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LCS Dup (3070305-BSD1)

Prepared & Analyzed: 07/03/13

C10-C28 (TEPH-DRO)	624	50	mg/kg	501	125	73-134	3.33	11		
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Matrix Spike (3070305-MS1)

Source: R307016-02

Prepared & Analyzed: 07/03/13

C10-C28 (TEPH-DRO)	608	50	mg/kg	501	ND	121	50-148			
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Matrix Spike Dup (3070305-MSD1)

Source: R307016-02

Prepared & Analyzed: 07/03/13

C10-C28 (TEPH-DRO)	578	50	mg/kg	501	ND	115	50-148	5.19	13	
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6899 Pecos Street
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Project: FEM Hillman 9-1

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
07/11/13 11:45

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

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

Batch 3070304 - EPA 5030 Soil MS

Blank (3070304-BLK1)

Prepared & Analyzed: 07/03/13

Benzene	ND	0.0050	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.0050	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0412		"	0.0397	104	23-173				
Surrogate: Toluene-d8	0.0385		"	0.0400	96.3	20-170				
Surrogate: 4-Bromofluorobenzene	0.0416		"	0.0400	104	21-167				

LCS (3070304-BS1)

Prepared & Analyzed: 07/03/13

Benzene	0.0857	0.0050	mg/kg	0.100	85.7	58-130				
Toluene	0.0965	0.0050	"	0.100	96.5	61-134				
Ethylbenzene	0.126	0.0050	"	0.100	126	74-139				
m,p-Xylene	0.241	0.010	"	0.200	120	73-137				
o-Xylene	0.119	0.0050	"	0.100	119	73-141				
Surrogate: 1,2-Dichloroethane-d4	0.0397		"	0.0397	100	23-173				
Surrogate: Toluene-d8	0.0367		"	0.0400	91.8	20-170				
Surrogate: 4-Bromofluorobenzene	0.0414		"	0.0400	103	21-167				

LCS Dup (3070304-BSD1)

Prepared & Analyzed: 07/03/13

Benzene	0.0921	0.0050	mg/kg	0.100	92.1	58-130	7.15	13		
Toluene	0.104	0.0050	"	0.100	104	61-134	7.83	16		
Ethylbenzene	0.126	0.0050	"	0.100	126	74-139	0.0237	12		
m,p-Xylene	0.243	0.010	"	0.200	121	73-137	0.782	14		
o-Xylene	0.120	0.0050	"	0.100	120	73-141	0.553	12		
Surrogate: 1,2-Dichloroethane-d4	0.0429		"	0.0397	108	23-173				
Surrogate: Toluene-d8	0.0395		"	0.0400	98.7	20-170				
Surrogate: 4-Bromofluorobenzene	0.0399		"	0.0400	99.8	21-167				

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: FEM Hillman 9-1

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
07/11/13 11:45

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

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

Batch 3070304 - EPA 5030 Soil MS

Matrix Spike (3070304-MS1)	Source: R307016-02			Prepared & Analyzed: 07/03/13						
Benzene	0.0900	0.0050	mg/kg	0.100	ND	90.0	30-131			
Toluene	0.0995	0.0050	"	0.100	ND	99.5	30-134			
Ethylbenzene	0.125	0.0050	"	0.100	ND	125	22-153			
m,p-Xylene	0.243	0.010	"	0.200	ND	121	10-159			
o-Xylene	0.120	0.0050	"	0.100	ND	120	31-151			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0439</i>		<i>"</i>	<i>0.0397</i>		<i>111</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0381</i>		<i>"</i>	<i>0.0400</i>		<i>95.2</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0406</i>		<i>"</i>	<i>0.0400</i>		<i>102</i>	<i>21-167</i>			

Matrix Spike Dup (3070304-MSD1)	Source: R307016-02			Prepared & Analyzed: 07/03/13						
Benzene	0.0838	0.0050	mg/kg	0.100	ND	83.8	30-131	7.04	34	
Toluene	0.0951	0.0050	"	0.100	ND	95.1	30-134	4.56	30	
Ethylbenzene	0.124	0.0050	"	0.100	ND	124	22-153	1.13	24	
m,p-Xylene	0.241	0.010	"	0.200	ND	121	10-159	0.695	68	
o-Xylene	0.121	0.0050	"	0.100	ND	121	31-151	0.774	38	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0405</i>		<i>"</i>	<i>0.0397</i>		<i>102</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0368</i>		<i>"</i>	<i>0.0400</i>		<i>91.9</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0418</i>		<i>"</i>	<i>0.0400</i>		<i>104</i>	<i>21-167</i>			

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: FEM Hillman 9-1

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
07/11/13 11:45

Semivolatile Organic Compounds by EPA Method 8270D SIM - Quality Control
Summit Scientific

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

Batch 3070701 - EPA 5030 Soil MS

Blank (3070701-BLK1)

Prepared: 07/07/13 Analyzed: 07/09/13

Acenaphthene	ND	5.00	ug/kg							
Acenaphthylene	ND	5.00	"							
Anthracene	ND	5.00	"							
Benzo (a) anthracene	ND	5.00	"							
Benzo (b) fluoranthene	ND	5.00	"							
Benzo (k) fluoranthene	ND	5.00	"							
Benzo (g,h,i) perylene	ND	5.00	"							
Benzo (a) pyrene	ND	5.00	"							
Chrysene	ND	5.00	"							
Dibenz (a,h) anthracene	ND	10.0	"							
Fluoranthene	ND	5.00	"							
Fluorene	ND	5.00	"							
Indeno (1,2,3-cd) pyrene	ND	10.0	"							
Naphthalene	0.00		"							
Phenanthrene	ND	5.00	"							
Pyrene	ND	5.00	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>19.0</i>		<i>"</i>	<i>34.8</i>		<i>54.5</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>20.6</i>		<i>"</i>	<i>34.5</i>		<i>59.9</i>	<i>40-150</i>			

LCS (3070701-BS1)

Prepared: 07/07/13 Analyzed: 07/09/13

Acenaphthene	18.4	5.00	ug/kg	33.3		55.3	48-131			
Acenaphthylene	17.0	5.00	"	33.3		50.9	49-130			
Anthracene	16.8	5.00	"	33.3		50.4	48-135			
Benzo (a) anthracene	18.2	5.00	"	33.3		54.7	37-142			
Benzo (b) fluoranthene	24.6	5.00	"	33.3		73.7	35-139			
Benzo (k) fluoranthene	41.2	5.00	"	33.3		124	30-139			
Benzo (g,h,i) perylene	10.2	5.00	"	33.3		30.7	30-132			
Benzo (a) pyrene	28.6	5.00	"	33.3		85.8	41-132			
Chrysene	28.4	5.00	"	33.3		85.3	30-136			
Dibenz (a,h) anthracene	15.9	10.0	"	33.3		47.7	24-127			
Fluoranthene	17.8	5.00	"	33.3		53.4	50-139			
Fluorene	20.6	5.00	"	33.3		61.8	50-130			
Indeno (1,2,3-cd) pyrene	18.3	10.0	"	33.3		54.8	26-139			
Naphthalene	17.9		"	33.3		53.6	40-135			
Phenanthrene	17.2	5.00	"	33.3		51.7	50-130			
Pyrene	25.7	5.00	"	33.3		77.2	39-141			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>15.2</i>		<i>"</i>	<i>34.8</i>		<i>43.8</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>17.0</i>		<i>"</i>	<i>34.5</i>		<i>49.4</i>	<i>40-150</i>			

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: FEM Hillman 9-1

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
07/11/13 11:45

Semivolatile Organic Compounds by EPA Method 8270D SIM - Quality Control
Summit Scientific

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

Batch 3070701 - EPA 5030 Soil MS

Matrix Spike (3070701-MS1)	Source: R307017-01			Prepared: 07/07/13		Analyzed: 07/09/13		
Acenaphthene	21.7	5.00	ug/kg	33.3	ND	65.1	27-140	
Acenaphthylene	19.7	5.00	"	33.3	7.60	36.3	24-136	
Anthracene	26.0	5.00	"	33.3	ND	77.9	23-144	
Benzo (a) anthracene	26.5	5.00	"	33.3	ND	79.6	12-168	
Benzo (b) fluoranthene	30.9	5.00	"	33.3	ND	92.6	10-170	
Benzo (k) fluoranthene	53.2	5.00	"	33.3	ND	160	11-150	QM-07
Benzo (g,h,i) perylene	11.6	5.00	"	33.3	ND	34.7	10-161	
Benzo (a) pyrene	35.7	5.00	"	33.3	ND	107	11-162	
Chrysene	32.1	5.00	"	33.3	17.6	43.7	10-167	
Dibenz (a,h) anthracene	20.0	10.0	"	33.3	ND	59.9	10-128	
Fluoranthene	27.7	5.00	"	33.3	ND	83.0	18-157	
Fluorene	25.1	5.00	"	33.3	ND	75.2	37-133	
Indeno (1,2,3-cd) pyrene	23.8	10.0	"	33.3	ND	71.3	10-161	
Naphthalene	23.8		"	33.3	93.3	NR	10-157	QM-07
Phenanthrene	24.4	5.00	"	33.3	93.1	NR	10-156	QM-07
Pyrene	34.2	5.00	"	33.3	16.3	53.7	10-166	
Surrogate: 2-Methylnaphthalene-d10	24.2		"	34.8		69.5	40-150	
Surrogate: Fluoranthene-d10	26.9		"	34.5		78.1	40-150	

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: FEM Hillman 9-1

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
07/11/13 11:45

Total Metals by EPA Method 6020 - Dry Weight Basis - Quality Control
Summit Scientific

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

Batch 3070302 - EPA 3050B

Blank (3070302-BLK1)

Prepared: 07/03/13 Analyzed: 07/08/13

Arsenic	ND	0.100	mg/kg wet							
Arsenic	ND	0.100	"							
Barium	ND	0.100	"							
Cadmium	ND	0.100	"							
Chromium	ND	0.100	"							
Copper	ND	0.500	"							
Lead	ND	0.100	"							
Nickel	ND	0.100	"							
Selenium	ND	0.100	"							
Silver	ND	0.100	"							
Zinc	ND	10.0	"							

LCS (3070302-BS1)

Prepared: 07/03/13 Analyzed: 07/08/13

Arsenic	2.62	0.100	mg/kg wet	2.40	109	80-120				
Arsenic	2.62	0.100	"	2.40	109	80-120				
Barium	212	0.100	"	216	98.5	80-120				
Cadmium	1.12	0.100	"	0.960	116	80-120				
Chromium	10.8	0.100	"	9.60	113	80-120				
Copper	20.2	0.500	"	19.2	106	80-120				
Lead	8.35	0.100	"	7.20	116	80-120				
Nickel	16.2	0.100	"	14.4	112	80-120				
Selenium	1.42	0.100	"	1.20	118	80-120				
Silver	0.300	0.100	"	0.240	125	80-120				QLCS-01
Zinc	6.97	10.0	"	7.20	96.8	80-120				

LCS Dup (3070302-BSD1)

Prepared: 07/03/13 Analyzed: 07/08/13

Arsenic	2.81	0.100	mg/kg wet	2.40	117	80-120	6.86	20		
Arsenic	2.81	0.100	"	2.40	117	80-120	6.86	20		
Barium	239	0.100	"	216	111	80-120	11.7	20		
Cadmium	1.12	0.100	"	0.960	116	80-120	0.0204	20		
Chromium	11.5	0.100	"	9.60	119	80-120	5.66	20		
Copper	21.5	0.500	"	19.2	113	80-120	6.43	20		
Lead	8.57	0.100	"	7.20	119	80-120	2.65	20		
Nickel	17.2	0.100	"	14.4	120	80-120	6.19	20		
Selenium	1.23	0.100	"	1.20	102	80-120	14.5	20		
Silver	0.301	0.100	"	0.240	126	80-120	0.169	20		QLCS-01
Zinc	7.21	10.0	"	7.20	100	80-120	3.38	20		

Summit Scientific

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: FEM Hillman 9-1

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
07/11/13 11:45

Total Metals by EPA Method 6020 - Dry Weight Basis - Quality Control
Summit Scientific

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

Batch 3070302 - EPA 3050B

Matrix Spike (3070302-MS1)	Source: R307017-02			Prepared: 07/03/13		Analyzed: 07/08/13				
Arsenic	3.16	0.0899	mg/kg dry	2.15	0.735	113	75-125			
Arsenic	3.16	0.0899	"	2.15	0.735	113	75-125			
Barium	316	0.0899	"	194	79.8	122	75-125			
Cadmium	0.815	0.0899	"	0.863	0.0485	88.9	75-125			
Chromium	15.1	0.0899	"	8.63	4.56	122	75-125			
Copper	21.3	0.449	"	17.2	2.56	109	75-125			
Lead	12.9	0.0899	"	6.47	4.42	131	75-125			QM-07
Nickel	18.5	0.0899	"	12.9	3.07	120	75-125			
Selenium	1.06	0.0899	"	1.08	ND	97.9	75-125			
Silver	0.282	0.0899	"	0.215	0.0279	118	75-125			
Zinc	18.4	8.99	"	6.47	10.8	119	75-125			

Matrix Spike Dup (3070302-MSD1)	Source: R307017-02			Prepared: 07/03/13		Analyzed: 07/08/13				
Arsenic	3.47	0.0899	mg/kg dry	2.15	0.735	127	75-125	9.26	25	QM-07
Arsenic	3.47	0.0899	"	2.15	0.735	127	75-125	9.26	25	QM-07
Barium	355	0.0899	"	194	79.8	142	75-125	11.6	25	QM-07
Cadmium	0.902	0.0899	"	0.863	0.0485	98.8	75-125	10.1	25	
Chromium	16.9	0.0899	"	8.63	4.56	143	75-125	11.7	25	QM-07
Copper	24.3	0.450	"	17.2	2.56	126	75-125	13.1	25	QM-07
Lead	14.5	0.0899	"	6.47	4.42	156	75-125	12.0	25	QM-07
Nickel	21.0	0.0899	"	12.9	3.07	138	75-125	12.4	25	QM-07
Selenium	1.18	0.0899	"	1.08	ND	109	75-125	11.0	25	
Silver	0.325	0.0899	"	0.215	0.0279	138	75-125	14.3	25	QLCS-01
Zinc	19.6	8.99	"	6.47	10.8	137	75-125	6.24	25	QM-07

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Tasman Geosciences
6899 Pecos Street
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Project: FEM Hillman 9-1

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
07/11/13 11:45

Total Mercury by EPA Method 7471/7470/245.1 - Quality Control
Summit Scientific

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

Batch 3070801 - EPA 7471A

Blank (3070801-BLK1)			Prepared & Analyzed: 07/08/13							
Mercury	ND	0.0500	mg/kg wet							
LCS (3070801-BS1)			Prepared & Analyzed: 07/08/13							
Mercury	0.344	0.0500	mg/kg wet	0.400		85.9	80-120			
LCS Dup (3070801-BSD1)			Prepared & Analyzed: 07/08/13							
Mercury	0.382	0.0500	mg/kg wet	0.400		95.6	80-120	10.7	20	
Matrix Spike (3070801-MS1)			Source: R307017-02		Prepared & Analyzed: 07/08/13					
Mercury	0.333	0.0529	mg/kg dry	0.388	0.00248	85.1	80-120			
Matrix Spike Dup (3070801-MSD1)			Source: R307017-02		Prepared & Analyzed: 07/08/13					
Mercury	0.372	0.0473	mg/kg dry	0.378	0.00248	97.7	80-120	11.1	20	

Summit Scientific

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Denver CO, 80221

Project: FEM Hillman 9-1

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
07/11/13 11:45

Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis - Quality Control
Summit Scientific

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

Batch 3070303 - General Preparation

Blank (3070303-BLK1)

Prepared & Analyzed: 07/03/13

Calcium	ND	2.50	mg/kg wet							
Magnesium	ND	1.00	"							
Sodium	ND	5.00	"							

LCS (3070303-BS1)

Prepared & Analyzed: 07/03/13

Calcium	421	2.50	mg/kg wet	383		110	77-118			
Magnesium	215	1.00	"	192		112	77-117			
Sodium	537	5.00	"	479		112	80-119			

LCS Dup (3070303-BSD1)

Prepared & Analyzed: 07/03/13

Calcium	365	2.50	mg/kg wet	383		95.2	77-118	14.2	14	
Magnesium	192	1.00	"	192		99.8	77-117	11.4	12	
Sodium	465	5.00	"	479		97.1	80-119	14.4	14	

Matrix Spike (3070303-MS1)

Source: R307017-02

Prepared & Analyzed: 07/03/13

Calcium	1520	2.65	mg/kg dry	402	532	246	13-170			QM-07
Magnesium	307	1.06	"	202	35.7	135	34-152			
Sodium	564	5.29	"	503	29.2	106	43-155			

Matrix Spike Dup (3070303-MSD1)

Source: R307017-02

Prepared & Analyzed: 07/03/13

Calcium	906	2.65	mg/kg dry	403	532	92.8	13-170	50.8	37	QM-07
Magnesium	231	1.06	"	202	35.7	96.6	34-152	28.3	33	
Sodium	490	5.29	"	504	29.2	91.3	43-155	14.2	25	

Summit Scientific

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Tasman Geosciences
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Project: FEM Hillman 9-1

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
07/11/13 11:45

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

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

Batch 3070306 - General Preparation

LCS (3070306-BS1)					Prepared & Analyzed: 07/03/13					
pH	8.05	0.100	pH Units	8.00	101	0-200				

Duplicate (3070306-DUP1)					Source: R307017-01 Prepared & Analyzed: 07/03/13					
pH	9.92	0.100	pH Units	9.88			0.404	20		

Batch 3070307 - General Preparation

Duplicate (3070307-DUP1)					Source: R307017-01 Prepared & Analyzed: 07/03/13					
Specific Conductance (EC)	5.44	0.00100	mmhos/cm	5.42			0.368	20		

Batch 3070907 - General Preparation

Duplicate (3070907-DUP1)					Source: R307017-01 Prepared: 07/09/13 Analyzed: 07/10/13					
% Solids	30.6		%	30.2			1.32	20		

Summit Scientific

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: FEM Hillman 9-1

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
07/11/13 11:45

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/LCSD recovery.
- QLCS-01 The spike recovery was outside acceptance limits for this analyte indicating a potential high bias. The corresponding samples did not exhibit concentrations above reporting level for this analyte. Data quality is not affected.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference