

State of Colorado Oil and Gas Conservation Commission



1120 Lincoln Street, Suite 801, Denver, Colorado 80203 (303)894-2100 Fax: (303)894-2109

FOR OGCC USE ONLY

SITE INVESTIGATION AND REMEDIATION WORKPLAN

This form shall be submitted to the Director for approval prior to the initiation of site investigation and remediation activities. Form 27 is intended to be used whenever possible. Additional documentation will be required when large volumes of soil and groundwater have been impacted or involve large facilities with multiple source areas. See Rule 910. Attach as many pages as needed to fully describe the proposed work.

OGCC Employee:

☐ Spill ☐ Complaint
☐ Inspection ☐ NOAV

Tracking No:

CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED

☐ Spill or Release ☐ Plug & Abandon ☐ Central Facility Closure ☐ Site/Facility Closure ☒ Other (describe): close earthen skim pit

OGCC Operator Number: 24320

Name of Operator: Diamond Operating, Inc.

Address: 6666 Gunpark Drive, Suite 200

City: Boulder

State: CO Zip: 80301

Contact Name and Telephone:

Dave Peterson

No: 303-517-3399

Fax: 303-494-3931

API Number: 05-121-05150-00

County: Washington

Facility Name: Decker skim pit

Facility Number: 117631

Well Name: Decker

Well Number: #2

Location: (QtrQtr, Sec, Twp, Rng, Meridian): NE SW NE Sec. 18-T4S-R53W

Latitude: 39.706667

Longitude: 103.35713

TECHNICAL CONDITIONS

Type of Waste Causing Impact (crude oil, condensate, produced water, etc.): Crude Oil

Site Conditions: Is location within a sensitive area (according to Rule 901e)? ☐ Y ☒ N If yes, attach evaluation.

Adjacent land use (cultivated, irrigated, dry land farming, industrial, residential, etc.): Pasture

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: Norka-Colby loam (symbol 47)

Potential receptors (water wells within 1/4 mi, surface waters, etc.): Stock water well 570'

Description of Impact (if previously provided, refer to that form or document):

Impacted Media (check):



Soils



Vegetation



Groundwater



Surface Water

Extent of Impact:

Oil-stained soil

How Determined:

Visual

REMEDIALATION WORKPLAN

Describe initial action taken (if previously provided, refer to that form or document):

Operator installed and plumbed-in a water tank that will be used to replace the existing earthen skim pit. After the skim tank was fully operational and the earthen skim pit was no longer in use, all of the fluid from the skim pit was removed in order to let the saturated soil in the base and sides of the pit to completely dry. During the drying out process, the pit will be covered with plastic to prevent any new moisture from entering the pit.

Describe how source is to be removed:

Source material will be removed with an extended-reach Track Hoe and any oil stained soil will be laid out on black plastic. Earthen berms will be built around the piles of soil to prevent any run-off.

Describe how remediation of existing impacts is to be accomplished, including removal and disposal at an injection well or licensed facility, land treatment on site, removal of impacted groundwater, insitu bioremediation, burning of oily vegetation, etc.:

The soil will either be hauled to a licensed disposal facility or some portion of the material may be land farmed on-site and used for road and location repair work.

FORM
27
Rev 6/99

State of Colorado
Oil and Gas Conservation Commission
1120 Lincoln Street, Suite 801, Denver, Colorado 80203
(303)894-2100 Fax: (303)894-2109



Page 2

REMEDIAL WORKPLAN (Cont.)

Tracking Number: _____
Name of Operator: _____
OGCC Operator No: _____
Received Date: _____
Well Name & No: _____
Facility Name & No: _____

OGCC Employee: _____

If groundwater has been impacted, describe proposed monitoring plan (# of wells or sample points, sampling schedule, analytical methods, etc.):

Not Applicable

Describe reclamation plan. Discuss existing and new grade recontouring; method and testing of compaction alleviation; and reseeding program, including location of new seed, seed mix and noxious weed prevention. Attach diagram or drawing. Use additional sheet for description if required.

After testing soil sample from base of the pit, if the analytical results comply with concentration levels set forth in Table 910-1, backfill pit using excess soil available on site. Pit area will be restored to original grade. Location of pit is within confines of tank battery site and therefore it will not be reseeded at this time.

Attach samples and analytical results taken to verify remediation of impacts. Show locations of samples on an onsite schematic or drawing.

Is further site investigation required? ☐ Y ☐ N If yes, describe:

*This information will be provided after all the source material has been removed from pit.

Final disposition of E&P waste (landtreated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.):

Clean Harbors – Deer Trail Colorado disposal facility.

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: September 2014 Date Site Investigation Completed: _____ Date Remediation Plan Submitted: _____
Remediation Start Date: September 2014 Anticipated Completion Date: August 2015 Actual Completion Date: _____

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete.

Print Name: David C. Peterson

Title: President

Signed: _____

Date: October 13, 2014

OGCC Approved: Robert J. Young Title: EPS Date: 10/21/2014

COA: Collect and analyze 4 sidewall soil samples and 1 base soil sample from the combined skin pit excavation. Provide soil disposal manifests with the excavation report.



**Addendum to Pit Closure Form 27 Doc # 2142361
Remediation Project # 8697
Decker Lease - Skim Pits 1, and 22-18 2
Diamond Operating Inc.**

Introduction

Tasman Geosciences, Inc. (Tasman), on behalf of Diamond Operating Inc. (Diamond), has prepared this Pit Closure request as an addendum to the attached Form 27 submittal to the Colorado Oil and Gas Conservation Commission (COGCC) in relation to the removal of impacted soils from the Skim Pits located at the Decker Lease (Site). This Decker Lease Skim Pit 1, and 22-18 2 request for closure is being submitted under the existing attached Form 27 (Document #2142361) and the existing Remediation Project #8697 (REM#8697). The Site is situated approximately 1/2 mile east of the intersection of Washington County Roads U and 10 within Washington County, Colorado, as shown in Figure 1. The Site is surrounded by rangeland, and the Site legal description is the SW ¼ of the NE ¼ of Section 18, Township 4S, and Range 53W.

Diamond has selected to remediate the impacted pit soils associated with the Decker Lease Skim Pit 1 and 22-18 2 using an Enhanced Bioremediation approach outlined within The Land Treatment Form 27 received by COGCC 6/21/2016, Document # 2004339904, under Remediation Project # 9744.

Closure Field Activities

On July 13, 2016 soils exhibiting impacts above Table 910 standards were excavated and confirmation samples were collected from the base and sidewalls of the excavation as illustrated within Figure 2. Confirmation samples were submitted to Summit Scientific Laboratory in Golden, Colorado for laboratory analyses of TPH-DRO and TPH-GRO which were identified as the main constituents of concern during characterization activities. The excavation sidewalls were sloped and a ramp access was added to allow an escape pathway for wildlife. The excavation are has been surrounded by fencing which will remain until backfill is completed. With COGCC approval impacted soils have been placed in the designated treatment area illustrated within the Decker Bioremediation Area Map – Figure 3 and graded to a maximum 1 foot thickness. Confirmation sample results as compared to COGCC Table 910-1 (Table 910) are included within the Decker Skim Pit 1 and 22-18 2 Soil Analytical Summary-Table 1 and the laboratory analytical report is included as Exhibit A. Groundwater was not encountered during excavation activities and no impacted soil was removed from location.



Conclusions

In order to close Decker Lease Skim Pit 1, and 22-18 2, impacted soils were removed and sidewall and base confirmation samples were collected which exhibited concentrations below Table 910 standards. In order to address the impacted soils Diamond has selected Enhanced Bioremediation as the remediation approach. Project progress reports of the land treatment of the impacted soils will be submitted under Remediation Project # 9744. Based on the removal of soils which exhibit concentrations above Table 910 standards and the analytical data included within this report Diamond would request a No Further Action (NFA) determination for this project and the closure of Remediation Project #8697.

Please contact me at 303-854-7337 if you require additional information.

Sincerely,
Tasman Geosciences, Inc.

A handwritten signature in blue ink, appearing to read 'Carter Peace', is positioned above the printed name.

Carter Peace
Environmental Scientist

Attached:

Figure 1 – Site Location Map
Figure 2 – Confirmation Soil Sample Location Map
Figure 3 – Decker Bioremediation Area Map
Table 1 – Decker Skim Pit 1 and 22-18 2 Soil Analytical Summary
Exhibit A– Laboratory Analytical Report

Figures

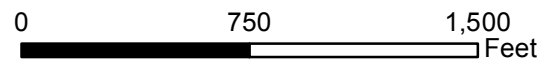
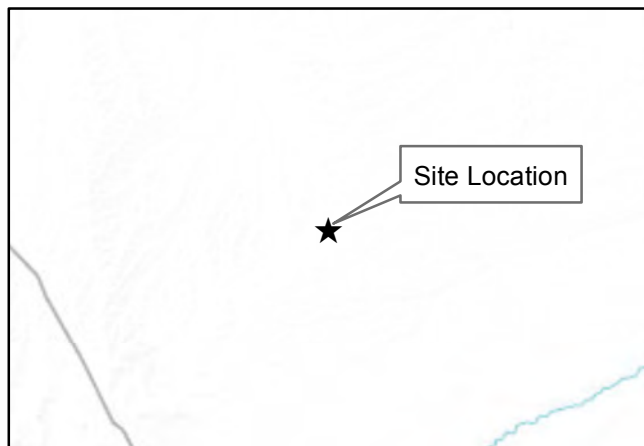
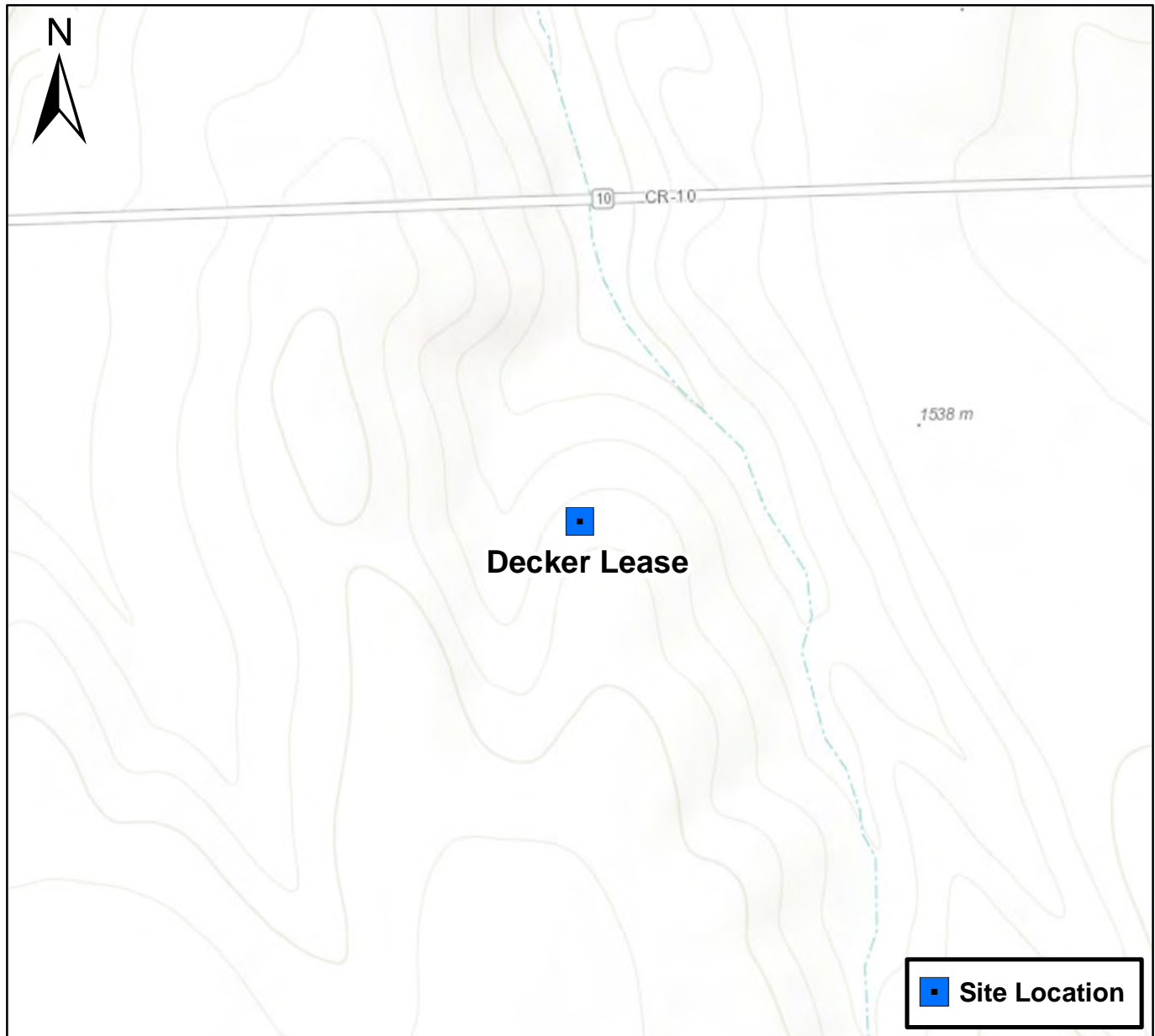


Figure 1
Site Location Map
Decker Lease
NWNE S18 T4S R53W
Washington County, Colorado



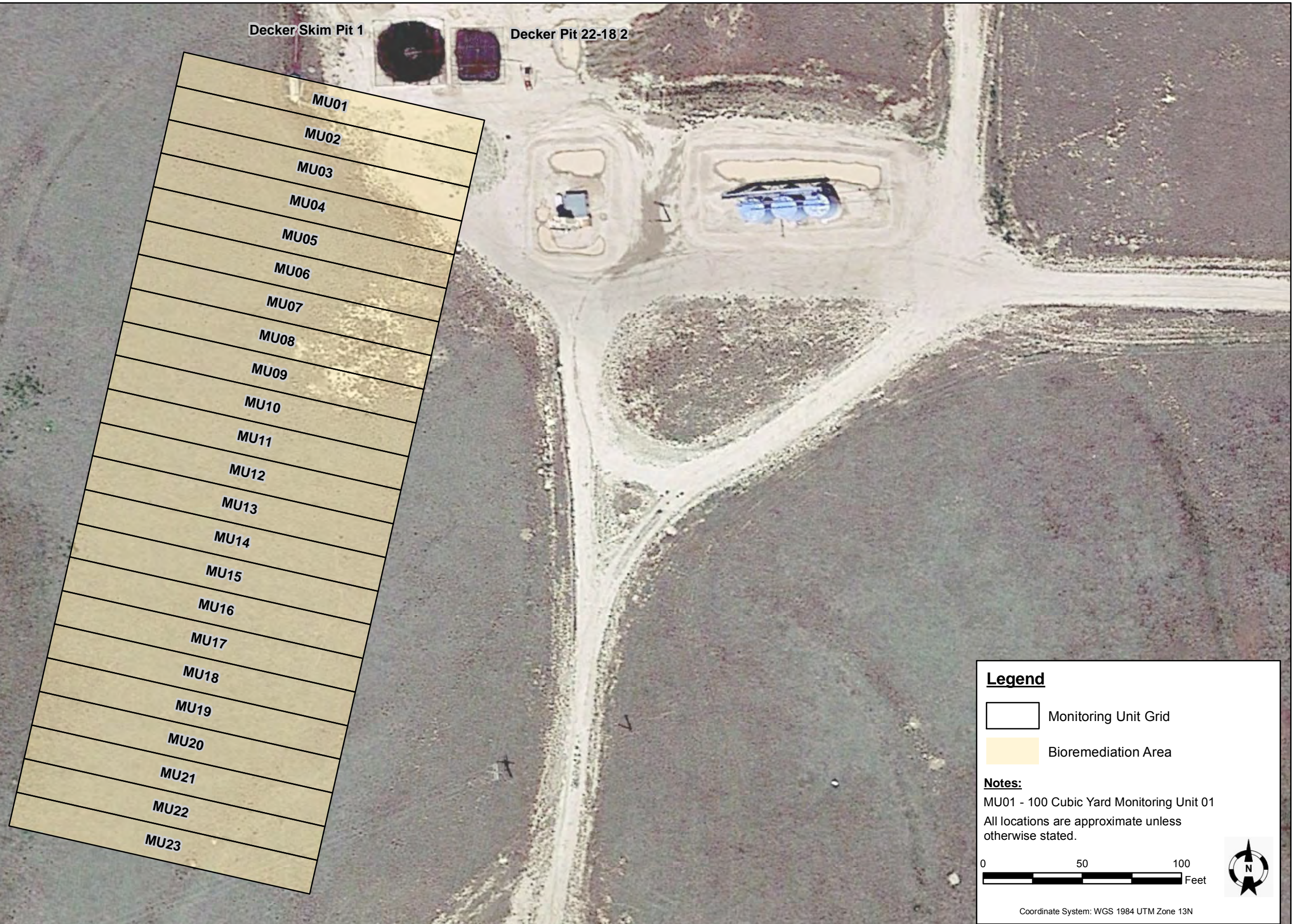


DATE:	July 20, 2016
DESIGNED BY:	C. Peace
DRAWN BY:	D. Arnold



Kerr-McGee Oil and Gas Onshore, LP
Decker Lease
SWNE, Section 18, Township 4 South, Range 53 West
Washington County, Colorado

Confirmation Soil Sample Location
Map



DATE:	June 6, 2016
DESIGNED BY:	C. Peace
DRAWN BY:	Z. Mahaffey



**Diamond Operating
Decker Pits**
SWNE, Section 18, Township 4 South, Range 53 West
Washington County, Colorado

Bioremediation Area
Map

Figure
3

Tables

**DIAMOND OPERATING
DECKER SKIM PIT 1 & 22-18 2
SOIL ANALYTICAL SUMMARY TABLE
TABLE 1**

Sample ID	Date Sampled	PID Reading (ppm)	GRO (mg/kg)	DRO (mg/kg)	TPH ⁽²⁾ (mg/kg)
COGCC standards for soil (mg/kg) ⁽¹⁾			500	500	500
SS01 @ 24	7/13/2016	1.1	<0.500	<50	<50
SS02 @ 24	7/13/2016	0.5	<0.500	<50	<50
SS03 @ 24	7/13/2016	1.7	<0.500	<50	<50
SS04 @ 28	7/13/2016	1.9	<0.500	<50	<50
SS05 @ 28	7/13/2016	0.8	<0.500	<50	<50
SS06 @ 24	7/13/2016	7.6	3.75	52	55.75
SS07 @ 24	7/13/2016	48.6	23.7	240	263.7
SS08 @ 28	7/13/2016	2.2	9.77	<50	9.77
SS09 @ 24	7/13/2016	2.3	<0.500	<50	<50
SS10 @ 24	7/13/2016	55.6	2.8	350	352.8
SS11 @ 24	7/13/2016	5.5	<0.500	<50	<50
SS12 @ 24	7/13/2016	1.5	<0.500	<50	<50
SS13 @ 24	7/13/2016	1.6	<0.500	<50	<50
SS14 @ 12	7/13/2016	0.4	<0.500	<50	<50
SS15 @ 12	7/13/2016	0.1	<0.500	<50	<50

**DIAMOND OPERATING
DECKER SKIM PIT 1 & 22-18 2
SOIL ANALYTICAL SUMMARY TABLE
TABLE 1**

SS16 @ 12	7/13/2016	0.2	<0.500	<50	<50
SS17 @ 12	7/13/2016	0.5	<0.500	<50	<50
SS18 @ 12	7/13/2016	0.9	<0.500	<50	<50
SS19 @ 12	7/13/2016	0.3	<0.500	<50	<50
SS20 @ 12	7/13/2016	0.1	<0.500	<50	<50
SS21 @ 12	7/13/2016	3.1	1.0	110	111
SS22 @ 12	7/13/2016	5.2	1.06	<50	1.06
SS23 @ 12	7/13/2016	4.6	0.916	<50	<50

Notes:

1. Standards for soil are taken from 2 CCR 404-1, Table 910-1, effective March 16, 2016.

2. TPH - Total volatile and extractable petroleum hydrocarbons. Value calculated by adding GRO and DRO concentrations.

PID = Photoionization detector

COGCC = Colorado Oil and Gas Conservation Commission

(<) = Analytical result is less than the indicated laboratory reporting limit.

GRO = Total volatile petroleum hydrocarbons - gasoline range organics

DRO = Total extractable petroleum hydrocarbons - diesel range organics

mg/kg = Milligrams per kilogram

BOLD = Analytical result is in exceedance of COGCC Table 910-1 soil standards.

Exhibit A

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

July 19, 2016

Carter Peace
Tasman Geosciences
6899 Pecos Street
Denver, CO 80221
RE: Decker

Enclosed are the results of analyses for samples received by Summit Scientific on 07/13/16 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury
President



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Decker
Project Number: [none]
Project Manager: Carter Peace

Reported:
07/19/16 14:54

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS01@24	1607085-01	Soil	07/13/16 00:00	07/13/16 17:00
SS02@24	1607085-02	Soil	07/13/16 00:00	07/13/16 17:00
SS03@24	1607085-03	Soil	07/13/16 00:00	07/13/16 17:00
SS04@28	1607085-04	Soil	07/13/16 00:00	07/13/16 17:00
SS05@28	1607085-05	Soil	07/13/16 00:00	07/13/16 17:00
SS06@24	1607085-06	Soil	07/13/16 00:00	07/13/16 17:00
SS07@24	1607085-07	Soil	07/13/16 00:00	07/13/16 17:00
SS08@28	1607085-08	Soil	07/13/16 00:00	07/13/16 17:00
SS09@24	1607085-09	Soil	07/13/16 00:00	07/13/16 17:00
SS10@24	1607085-10	Soil	07/13/16 00:00	07/13/16 17:00
SS11@24	1607085-11	Soil	07/13/16 00:00	07/13/16 17:00
SS12@24	1607085-12	Soil	07/13/16 00:00	07/13/16 17:00
SS13@24	1607085-13	Soil	07/13/16 00:00	07/13/16 17:00
SS14@12	1607085-14	Soil	07/13/16 00:00	07/13/16 17:00
SS15@12	1607085-15	Soil	07/13/16 00:00	07/13/16 17:00
SS16@12	1607085-16	Soil	07/13/16 00:00	07/13/16 17:00
SS17@12	1607085-17	Soil	07/13/16 00:00	07/13/16 17:00
SS18@12	1607085-18	Soil	07/13/16 00:00	07/13/16 17:00
SS19@12	1607085-19	Soil	07/13/16 00:00	07/13/16 17:00
SS20@12	1607085-20	Soil	07/13/16 00:00	07/13/16 17:00
SS21@12	1607085-21	Soil	07/13/16 00:00	07/13/16 17:00
SS22@12	1607085-22	Soil	07/13/16 00:00	07/13/16 17:00
SS23@12	1607085-23	Soil	07/13/16 00:00	07/13/16 17:00

Summit Scientific

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
Denver CO, 80221

Project: Decker

Project Number: [none]
Project Manager: Carter Peace

Reported:
07/19/16 14:54

Summit Scientific

1607085.1

741 Corporate Circle Suite I - Golden, Colorado 80401
303-277-9310 • 303-277-9531 Fax

Client: TASMAN / DIAMOND (INVOICING)
Address: _____
City/State/Zip: _____
Phone: _____ Fax: _____
Sampler Name: CJP

Page 1 of 3

Project Manager: C. PEACE
E-Mail: _____
Project Name: DECKER
Project Number: _____

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix		Analyze For:				Special Instructions
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	TPH GAO	TPH DRO	
SS01 @ 24	7/13/16													
SS02 @ 24														
SS03 @ 24														
SS04 @ 28														
SS05 @ 28														
SS06 @ 24														
SS07 @ 24														
SS08 @ 28														
SS09 @ 24														
SS10 @ 24	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Relinquished by:		Date/Time:		Received by:		Date/Time:		Turn Around Time (Check)				Notes:		
								Same Day <input type="checkbox"/> 72 Hours <input type="checkbox"/>						
								24 Hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/>						
								48 Hours <input type="checkbox"/>						
Relinquished by:		Date/Time:		Received in Lab by:		Date/Time:		Sample Integrity:						
								Temperature Upon Receipt: <u>8.9°C</u>						
								Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>						

Relinquished by: [Signature]
Date/Time: 7/13/16 17:03

Received in Lab by: [Signature]
Date/Time: 7/13/16 17:01
[Signature]
Date/Time: 7/13/16 17:45

www.s2scientific.com

Summit Scientific

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.

[Signature]



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Decker

Project Number: [none]
Project Manager: Carter Peace

Reported:
07/19/16 14:54

741 Corporate Circle Suite I Golden, Colorado 80401
303-277-9310 303-277-9531 Fax

Client: TASMAN / DIAMOND (INVOICE)
Address: _____
City/State/Zip: _____
Phone: _____ Fax: _____
Sampler Name: CSP

Page 2 of 3

Project Manager: C. PEACE
E-Mail: _____
Project Name: DECKER
Project Number: _____

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative			Matrix			Analyze For:				Special Instructions
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	TPH GRD	TPH DRG	
SS11 Q24	7/13/16		1			X			X					
SS12 Q24			1			X			X					
SS13 Q24														
SS14 Q12														
SS15 Q12														
SS16 Q12														
SS17 Q12														
SS18 Q12														
SS19 Q12														
SS20 Q12														
Relinquished by: _____ Date/Time: _____				Received by: _____ Date/Time: _____				Turn Around Time (Check) Same Day <input type="checkbox"/> 72 Hours <input type="checkbox"/> 24 Hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 Hours <input type="checkbox"/>				Notes: on ice		
Relinquished by: _____ Date/Time: _____				Received by: _____ Date/Time: _____				Sample Integrity: Temperature Upon Receipt: <u>8.9°C</u> Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>						
Relinquished by: _____ Date/Time: _____				Received in Lab by: _____ Date/Time: _____										

www.s2scientific.com

Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Decker

Project Number: [none]
Project Manager: Carter Peace

Reported:
07/19/16 14:54

Summit Scientific

1607085.3

741 Corporate Circle Suite I • Golden, Colorado 80401
303-277-9310 • 303-277-9531 Fax

Page 3 of 3

Client: TASMAN / DIAMOND (Invoicing)
Address:
City/State/Zip:
Phone: Fax:
Sampler Name: CTD

Project Manager: C. PEACE
E-Mail:
Project Name: DECEMBER
Project Number:

				Preservative		Matrix		Analyze For:												
Sample Description	Date Sampled	Time Sampled	Number of Containers	HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)									Special Instructions
SS22W12	7/13/16		1			X			X			X	TPH GRU							
SS22W12			1			X			X			X	TPH DRU							
SS23W12	V		1			X			X			X								
Relinquished by:				Date/Time:		Received by:		Date/Time:		Turn Around Time (Check) Same Day <input type="checkbox"/> 72 Hours <input type="checkbox"/> 24 Hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 Hours <input type="checkbox"/>										Notes: on ice
Relinquished by:				Date/Time:		Received by:		Date/Time:												
Relinquished by:				Date/Time:		Received in Lab by:		Date/Time:		Sample Integrity: Temperature Upon Receipt: 89°C Intact: Yes <input type="checkbox"/> No <input type="checkbox"/>										

www.s2scientific.com

Summit Scientific

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
Denver CO, 80221

Project: Decker
Project Number: [none]
Project Manager: Carter Peace

Reported:
07/19/16 14:54

Sample Receipt Checklist

S2 Work Order: 1607085

Client: Tasman / Diamond Client Project ID: Decker

Shipped Via: P/U Airbill #: _____
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Matrix (check all that apply): Air ✓ Soil/Solid Water Other:
(Describe)

Cooler ID					
Temp (°C)	8.9				

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature just above 0°C to ≤ 6°C ⁽¹⁾ ?		✓		
NOTE: If samples are delivered the same day of sampling, this requirement is waived provided that there is evidence that cooling has begun.				
Were all samples received intact ⁽¹⁾ ?	✓			
Was adequate sample volume provided ⁽¹⁾ ?	✓			
If custody seals are present, are they intact ⁽¹⁾ ?			✓	
Are short holding time analytes or samples with HTs due within 48 hours present?			✓	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	✓			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	✓			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?				
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	✓			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			✓	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ?			✓	
Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect			✓	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ?			✓	
Record the pH in Comments.			✓	
If dissolved metals are requested, were samples field filtered?			✓	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

Nakita
Custodian Printed Name

MS
Signature or Initials of Custodian

7/13/16 1745
Date/Time

MS



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Decker
Project Number: [none]
Project Manager: Carter Peace

Reported:
07/19/16 14:54

SS01@24
1607085-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1607128	07/14/16	07/15/16	8015M	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		95.4 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Gasoline Range Hydrocarbons	ND	0.500	mg/kg	1	1607133	07/14/16	07/14/16	EPA 8260B	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		107 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Decker
Project Number: [none]
Project Manager: Carter Peace

Reported:
07/19/16 14:54

SS02@24
1607085-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1607128	07/14/16	07/15/16	8015M	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		89.6 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Gasoline Range Hydrocarbons	ND	0.500	mg/kg	1	1607133	07/14/16	07/14/16	EPA 8260B	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		115 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.5 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Decker
Project Number: [none]
Project Manager: Carter Peace

Reported:
07/19/16 14:54

SS03@24
1607085-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1607128	07/14/16	07/15/16	8015M	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		98.6 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Gasoline Range Hydrocarbons	ND	0.500	mg/kg	1	1607133	07/14/16	07/14/16	EPA 8260B	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		113 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.1 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Decker
Project Number: [none]
Project Manager: Carter Peace

Reported:
07/19/16 14:54

SS04@28
1607085-04 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1607128	07/14/16	07/15/16	8015M	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		101 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Gasoline Range Hydrocarbons	ND	0.500	mg/kg	1	1607133	07/14/16	07/14/16	EPA 8260B	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		115 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Decker
Project Number: [none]
Project Manager: Carter Peace

Reported:
07/19/16 14:54

SS05@28
1607085-05 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1607128	07/14/16	07/15/16	8015M	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		100 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Gasoline Range Hydrocarbons	ND	0.500	mg/kg	1	1607133	07/14/16	07/14/16	EPA 8260B	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		117 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Decker
Project Number: [none]
Project Manager: Carter Peace

Reported:
07/19/16 14:54

SS06@24
1607085-06 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	52	50	mg/kg	1	1607128	07/14/16	07/15/16	8015M	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		107 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Gasoline Range Hydrocarbons	3.75	0.500	mg/kg	1	1607133	07/14/16	07/14/16	EPA 8260B	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		103 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Decker
Project Number: [none]
Project Manager: Carter Peace

Reported:
07/19/16 14:54

SS07@24
1607085-07 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	240	50	mg/kg	1	1607128	07/14/16	07/15/16	8015M	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		103 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Gasoline Range Hydrocarbons	23.7	0.500	mg/kg	1	1607133	07/14/16	07/15/16	EPA 8260B	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		107 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.4 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Decker
Project Number: [none]
Project Manager: Carter Peace

Reported:
07/19/16 14:54

SS08@28
1607085-08 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1607128	07/14/16	07/15/16	8015M	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		107 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Gasoline Range Hydrocarbons	9.77	0.450	mg/kg	1	1607133	07/14/16	07/15/16	EPA 8260B	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		101 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.5 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Decker
Project Number: [none]
Project Manager: Carter Peace

Reported:
07/19/16 14:54

SS09@24
1607085-09 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1607128	07/14/16	07/15/16	8015M	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		101 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Gasoline Range Hydrocarbons	ND	0.500	mg/kg	1	1607133	07/14/16	07/15/16	EPA 8260B	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		107 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Decker
Project Number: [none]
Project Manager: Carter Peace

Reported:
07/19/16 14:54

SS10@24
1607085-10 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	350	50	mg/kg	1	1607128	07/14/16	07/15/16	8015M	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		131 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Gasoline Range Hydrocarbons	2.81	0.500	mg/kg	1	1607133	07/14/16	07/15/16	EPA 8260B	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		108 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		103 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.3 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Decker
Project Number: [none]
Project Manager: Carter Peace

Reported:
07/19/16 14:54

SS11@24
1607085-11 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1607128	07/14/16	07/15/16	8015M	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		124 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Gasoline Range Hydrocarbons	ND	0.500	mg/kg	1	1607133	07/14/16	07/15/16	EPA 8260B	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.7 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Decker
Project Number: [none]
Project Manager: Carter Peace

Reported:
07/19/16 14:54

SS12@24
1607085-12 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1607128	07/14/16	07/15/16	8015M	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		117 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Gasoline Range Hydrocarbons	ND	0.500	mg/kg	1	1607133	07/14/16	07/15/16	EPA 8260B	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		113 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Decker
Project Number: [none]
Project Manager: Carter Peace

Reported:
07/19/16 14:54

SS13@24
1607085-13 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1607128	07/14/16	07/15/16	8015M	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		123 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Gasoline Range Hydrocarbons	ND	0.500	mg/kg	1	1607133	07/14/16	07/15/16	EPA 8260B	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		111 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.8 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Decker
Project Number: [none]
Project Manager: Carter Peace

Reported:
07/19/16 14:54

SS14@12
1607085-14 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1607128	07/14/16	07/15/16	8015M	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		128 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Gasoline Range Hydrocarbons	ND	0.500	mg/kg	1	1607133	07/14/16	07/15/16	EPA 8260B	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		104 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Decker
Project Number: [none]
Project Manager: Carter Peace

Reported:
07/19/16 14:54

SS15@12
1607085-15 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1607128	07/14/16	07/15/16	8015M	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		120 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Gasoline Range Hydrocarbons	ND	0.500	mg/kg	1	1607133	07/14/16	07/15/16	EPA 8260B	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		104 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Decker
Project Number: [none]
Project Manager: Carter Peace

Reported:
07/19/16 14:54

SS16@12
1607085-16 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1607128	07/14/16	07/15/16	8015M	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		108 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Gasoline Range Hydrocarbons	ND	0.500	mg/kg	1	1607133	07/14/16	07/15/16	EPA 8260B	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.2 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Decker
Project Number: [none]
Project Manager: Carter Peace

Reported:
07/19/16 14:54

SS17@12
1607085-17 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1607128	07/14/16	07/15/16	8015M	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		128 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Gasoline Range Hydrocarbons	ND	0.500	mg/kg	1	1607133	07/14/16	07/15/16	EPA 8260B	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Decker
Project Number: [none]
Project Manager: Carter Peace

Reported:
07/19/16 14:54

SS18@12
1607085-18 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1607128	07/14/16	07/15/16	8015M	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		112 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Gasoline Range Hydrocarbons	ND	0.500	mg/kg	1	1607133	07/14/16	07/15/16	EPA 8260B	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.7 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Decker
Project Number: [none]
Project Manager: Carter Peace

Reported:
07/19/16 14:54

SS19@12
1607085-19 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1607128	07/14/16	07/15/16	8015M	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		124 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Gasoline Range Hydrocarbons	ND	0.500	mg/kg	1	1607133	07/14/16	07/15/16	EPA 8260B	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		104 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.0 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.5 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Decker
Project Number: [none]
Project Manager: Carter Peace

Reported:
07/19/16 14:54

SS20@12
1607085-20 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1607128	07/14/16	07/15/16	8015M	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		101 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Gasoline Range Hydrocarbons	ND	0.500	mg/kg	1	1607133	07/14/16	07/15/16	EPA 8260B	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		106 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Decker
Project Number: [none]
Project Manager: Carter Peace

Reported:
07/19/16 14:54

SS21@12
1607085-21 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	110	50	mg/kg	1	1607140	07/15/16	07/16/16	8015M	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		96.6 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Gasoline Range Hydrocarbons	1.04	0.500	mg/kg	1	1607141	07/15/16	07/16/16	EPA 8260B	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		93.5 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.6 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Decker
Project Number: [none]
Project Manager: Carter Peace

Reported:
07/19/16 14:54

SS22@12
1607085-22 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1607140	07/15/16	07/16/16	8015M	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		96.6 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Gasoline Range Hydrocarbons	1.06	0.500	mg/kg	1	1607141	07/15/16	07/16/16	EPA 8260B	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		93.9 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.2 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Decker
Project Number: [none]
Project Manager: Carter Peace

Reported:
07/19/16 14:54

SS23@12
1607085-23 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1607140	07/15/16	07/16/16	8015M	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		97.7 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Gasoline Range Hydrocarbons	0.916	0.500	mg/kg	1	1607141	07/15/16	07/16/16	EPA 8260B	

Date Sampled: 07/13/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		92.8 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.2 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Decker
Project Number: [none]
Project Manager: Carter Peace

Reported:
07/19/16 14:54

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch 1607128 - EPA 3550A

Blank (1607128-BLK1)

Prepared: 07/14/16 Analyzed: 07/15/16

C10-C28 (DRO) ND 50 mg/kg

Surrogate: o-Terphenyl 11.8 " 12.5 94.7 30-150

LCS (1607128-BS1)

Prepared: 07/14/16 Analyzed: 07/15/16

C10-C28 (DRO) 446 50 mg/kg 499 89.5 73-134

Surrogate: o-Terphenyl 11.4 " 12.5 91.4 30-150

Matrix Spike (1607128-MS1)

Source: 1607085-01

Prepared: 07/14/16 Analyzed: 07/15/16

C10-C28 (DRO) 484 50 mg/kg 485 11.8 97.4 50-148

Surrogate: o-Terphenyl 11.0 " 12.2 90.5 30-150

Matrix Spike Dup (1607128-MSD1)

Source: 1607085-01

Prepared: 07/14/16 Analyzed: 07/15/16

C10-C28 (DRO) 529 50 mg/kg 489 11.8 106 50-148 8.88 20

Surrogate: o-Terphenyl 11.3 " 12.3 92.1 30-150

Batch 1607140 - EPA 3550A

Blank (1607140-BLK1)

Prepared: 07/15/16 Analyzed: 07/16/16

C10-C28 (DRO) ND 50 mg/kg

Surrogate: o-Terphenyl 12.7 " 12.5 102 30-150

LCS (1607140-BS1)

Prepared: 07/15/16 Analyzed: 07/16/16

C10-C28 (DRO) 605 50 mg/kg 499 121 73-134

Surrogate: o-Terphenyl 13.7 " 12.5 109 30-150

Matrix Spike (1607140-MS1)

Source: 1607085-21

Prepared: 07/15/16 Analyzed: 07/16/16

C10-C28 (DRO) 741 50 mg/kg 484 108 131 50-148

Surrogate: o-Terphenyl 14.7 " 12.1 121 30-150

Summit Scientific

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
Denver CO, 80221

Project: Decker
Project Number: [none]
Project Manager: Carter Peace

Reported:
07/19/16 14:54

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch 1607140 - EPA 3550A

Matrix Spike Dup (1607140-MSD1)				Source: 1607085-21		Prepared: 07/15/16		Analyzed: 07/16/16		
C10-C28 (DRO)	728	50	mg/kg	497	108	125	50-148	1.84	20	
Surrogate: o-Terphenyl	15.0		"	12.5		120	30-150			

Summit Scientific

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
Denver CO, 80221

Project: Decker
Project Number: [none]
Project Manager: Carter Peace

Reported:
07/19/16 14:54

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

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

Batch 1607133 - EPA 5030 Soil MS

Blank (1607133-BLK1)

Prepared & Analyzed: 07/14/16

Gasoline Range Hydrocarbons	ND	0.500	mg/kg							
Surrogate: 1,2-Dichloroethane-d4	0.0413		"	0.0400	103	23-173				
Surrogate: Toluene-d8	0.0401		"	0.0400	100	20-170				
Surrogate: 4-Bromofluorobenzene	0.0410		"	0.0400	102	21-167				

LCS (1607133-BS1)

Prepared & Analyzed: 07/14/16

Gasoline Range Hydrocarbons	2.83	0.500	mg/kg			30-150				
Surrogate: 1,2-Dichloroethane-d4	0.0404		"	0.0400	101	23-173				
Surrogate: Toluene-d8	0.0426		"	0.0400	106	20-170				
Surrogate: 4-Bromofluorobenzene	0.0394		"	0.0400	98.5	21-167				

Matrix Spike (1607133-MS1)

Source: 1607085-01

Prepared & Analyzed: 07/14/16

Gasoline Range Hydrocarbons	3.07	0.500	mg/kg		ND	30-150				
Surrogate: 1,2-Dichloroethane-d4	0.0404		"	0.0378	107	23-173				
Surrogate: Toluene-d8	0.0387		"	0.0378	102	20-170				
Surrogate: 4-Bromofluorobenzene	0.0382		"	0.0378	101	21-167				

Matrix Spike Dup (1607133-MSD1)

Source: 1607085-01

Prepared & Analyzed: 07/14/16

Gasoline Range Hydrocarbons	3.23	0.500	mg/kg		ND	30-150	5.14	20		
Surrogate: 1,2-Dichloroethane-d4	0.0407		"	0.0382	106	23-173				
Surrogate: Toluene-d8	0.0383		"	0.0382	100	20-170				
Surrogate: 4-Bromofluorobenzene	0.0376		"	0.0382	98.3	21-167				

Batch 1607141 - EPA 5030 Soil MS

Blank (1607141-BLK1)

Prepared: 07/15/16 Analyzed: 07/16/16

Gasoline Range Hydrocarbons	ND	0.500	mg/kg							
Surrogate: 1,2-Dichloroethane-d4	0.0363		"	0.0400	90.8	23-173				
Surrogate: Toluene-d8	0.0400		"	0.0400	100	20-170				
Surrogate: 4-Bromofluorobenzene	0.0373		"	0.0400	93.3	21-167				

Summit Scientific

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
Denver CO, 80221

Project: Decker
Project Number: [none]
Project Manager: Carter Peace

Reported:
07/19/16 14:54

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

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

Batch 1607141 - EPA 5030 Soil MS

LCS (1607141-BS1)

Prepared: 07/15/16 Analyzed: 07/16/16

Gasoline Range Hydrocarbons	2.86	0.500	mg/kg				30-150			
Surrogate: 1,2-Dichloroethane-d4	0.0369		"	0.0400		92.3	23-173			
Surrogate: Toluene-d8	0.0397		"	0.0400		99.2	20-170			
Surrogate: 4-Bromofluorobenzene	0.0375		"	0.0400		93.8	21-167			

Matrix Spike (1607141-MS1)

Source: 1607085-21

Prepared: 07/15/16 Analyzed: 07/16/16

Gasoline Range Hydrocarbons	2.78	0.500	mg/kg		1.04		30-150			
Surrogate: 1,2-Dichloroethane-d4	0.0377		"	0.0400		94.4	23-173			
Surrogate: Toluene-d8	0.0395		"	0.0400		98.8	20-170			
Surrogate: 4-Bromofluorobenzene	0.0385		"	0.0400		96.2	21-167			

Matrix Spike Dup (1607141-MSD1)

Source: 1607085-21

Prepared: 07/15/16 Analyzed: 07/16/16

Gasoline Range Hydrocarbons	2.78	0.500	mg/kg		1.04		30-150	0.100	20	
Surrogate: 1,2-Dichloroethane-d4	0.0368		"	0.0400		92.0	23-173			
Surrogate: Toluene-d8	0.0388		"	0.0400		97.0	20-170			
Surrogate: 4-Bromofluorobenzene	0.0385		"	0.0400		96.2	21-167			

Summit Scientific

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
Denver CO, 80221

Project: Decker
Project Number: [none]
Project Manager: Carter Peace

Reported:
07/19/16 14:54

Notes and Definitions

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

Summit Scientific

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.

A handwritten signature in black ink, appearing to be 'MSM'.