The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Terra EP

Parachute WMF - Compliance

SGS Job Number: DA3458

Sampling Date: 03/13/18

Report to:

Terra EP
1058 County Road 215
Parachute, CO 81635
bkesler@terraep.com

ATTN: Brad Kesler

Total number of pages in report: **13**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Scott Heideman
Laboratory Director

Client Service contact: Elizabeth Sutcliffe 303-425-6021

Certifications: CO (CO00049), ID (CO00049), NE (NE-OS-06-04), ND (R-027), NJ (CO007), OK (D9942) UT (NELAP CO00049), LA (LA150028), TX (T104704511), WY (8TMS-L)

Sections:

1 2 3 4 5 6

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Sample Summary

Terra EP

Job No: DA3458

Parachute WMF - Compliance

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
DA3458-1	03/13/18	11:00	BK	03/14/18	AQ	Water	SMITH GULCH PIT

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	Terra EP	**Job No**	DA3458
Site:	Parachute WMF - Compliance	**Report Date**	3/21/2018 4:04:36 PM

On 03/14/2018, 1 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at SGS North America Inc. (SGS) at a temperature of 1.4 °C. The samples were intact and properly preserved, unless noted below. An SGS Job Number of DA3458 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

General Chemistry By Method SM 2540C-2011

Matrix: AQ **Batch ID:** GN42279

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) DA3509-1DUP were used as the QC samples for the Solids, Total Dissolved analysis.

SGS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting SGS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by SGS indicated via signature on the report cover.

Summary of Hits

Job Number: DA3458
Account: Terra EP
Project: Parachute WMF - Compliance
Collected: 03/13/18

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
DA3458-1	**SMITH GULCH PIT**					
Solids, Total Dissolved		18500	10		mg/l	SM 2540C-2011

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	SMITH GULCH PIT		
Lab Sample ID:	DA3458-1	**Date Sampled:**	03/13/18
Matrix:	AQ - Water	**Date Received:**	03/14/18
		Percent Solids:	n/a
Project:	Parachute WMF - Compliance		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	18500	10	mg/l	1	03/20/18	SK	SM 2540C-2011

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

ACCUTEST Laboratories
10165 Harwin Dr, Ste 150 Houston, TX 77036
TEL: 713-271-4700 FAX: 713-271-4770
www.accutest.com

FED-EX Tracking #:
Bottle Order Control #:
Accutest Quote #:
Accutest Job #: DA3458

Client / Reporting Information

Company Name: Terra Energy Partners LLC
Street Address: 1058 County Road 215
City: Parachute State: CO Zip: 81635
Project Contact: Bkesler@terraep.com E-mail:
Phone #: 970-216-8703 Fax #:
Sampler(s) Name(s): Brad Kesler Phone #: 970-216-8703

Project Information

Project Name: Parachute WMF - Compliance
Street:
City: State:
Project #:
Client Purchase Order #:
Project Manager: Brad Kesler

Billing Information (if different from Report to)

Company Name: Terra Energy Partners LLC
Street Address: 1058 County Road 215
City: Parachute State: CO Zip: 81635
Attention: NXEEPPARACH - Brad Kesler

Requested Analyses

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank

Accutest Sample #	Field ID / Point of Collection	Collection Date	Time	Sampled By	Matrix	# of bottles	HCl	NaOH	Zn-NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	TSP	NaHSO4	ENCORE	OTHER	Total Dissolved Solids	LAB USE ONLY
	Smith Gulch Pit	3/13/2018	11:00	BK	WW	1													X	01

3/14/18 AM

Turnaround Time (Business days)

- [ ] Standard
- [X] 5 Day *RUSH* (0%)
- [ ] 4 Day *RUSH* (25%)
- [ ] 3 Day *RUSH* (50%)
- [ ] 2 Day *RUSH* (75%)
- [ ] 1 Day *EMERGENCY* (100%)

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [X] Commercial "B" (Level 2)
- [ ] FULT1 (Level 3+4)
- [ ] REDT1 (Level 3+4)
- [ ] Commercial "C"
- [ ] TRRP
- [ ] EDD Format
- [X] Other_ COMMBN+

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC & Surrogate Summary

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		3-13-18 2:10	1	2	3/14/18 1423	2 3/14/18 1432
3			3	4		4
5			5	Custody Seal #	Intact / Not intact	Preserved where applicable: On Ice: Cooler Temp: 1.4

Rifle Service Center

DA3458: Chain of Custody
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SGS Accutest Sample Receipt Summary

Job Number: DA3458 **Client:** TERRA ENERGY PARTNERS LLC **Project:** PARACHUTE WMF - COMPLIANCE

Date / Time Received: 3/14/2018 2:30:00 PM **Delivery Method:** **Airbill #'s:** CO

Cooler Temps (Initial/Adjusted): #1: (1.4/1.4);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun;		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☑	☐
2. Trip Blank listed on COC:	☐		☑	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☑	☐

Comments

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

DA3458: Chain of Custody
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General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: DA3458
Account: TERRCOP - Terra EP
Project: Parachute WMF - Compliance

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Solids, Total Dissolved	GN42279	10	0.0	mg/l	400	395	98.8	90-110%

Associated Samples:
Batch GN42279: DA3458-1
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: DA3458
Account: TERRCOP - Terra EP
Project: Parachute WMF - Compliance

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Solids, Total Dissolved	GN42279	DA3509-1	mg/l	874	880	0.7	0-5%

Associated Samples:
Batch GN42279: DA3458-1
(*) Outside of QC limits

Multi-Chem Analytical Laboratory
1553 East Highway 40
Vernal, UT 84078

Units of Measurement: **Standard**

multi-chem
A HALLIBURTON SERVICE

Water Analysis Report

Production Company:	**TERRA ENERGY PARTNERS-EBUS**	Sales Rep:	**Pete Prodromides**
Well Name:	**WILLIAMS SG 432-32,GARFIELD**	Lab Tech:	**Kaitlyn Natelli**
Sample Point:	**Separator**		
Sample Date:	**3/25/2017**		
Sample ID:	**WA-348621**		

Scaling potential predicted using ScaleSoftPitzer from
Brine Chemistry Consortium (Rice University)

Sample Specifics

Test Date:	**4/10/2017**
System Temperature 1 (°F):	**300**
System Pressure 1 (psig):	**300**
System Temperature 2 (°F):	**66**
System Pressure 2 (psig):	**45**
Calculated Density (g/ml):	**1.0109**
pH:	**6.50**
Calculated TDS (mg/L):	**19387.67**
CO2 in Gas (%):	
Dissolved CO_2 (mg/L)):	**485.00**
H_2S in Gas (%):	
H2S in Water (mg/L):	**1.00**
Tot. SuspendedSolids(mg/L):	
Corrosivity(LanglierSat.Indx)	**0.00**
Alkalinity:	

Analysis @ Properties in Sample Specifics

Cations	*mg/L*	*Anions*	*mg/L*
Sodium (Na):		Chloride (Cl):	
Potassium (K):		Sulfate (SO_4):	
Magnesium (Mg):		Bicarbonate (HCO_3):	
Calcium (Ca):		Carbonate (CO_3):	
Strontium (Sr):		Acetic Acid (CH_3COO)	
Barium (Ba):		Propionic Acid (C_2H_5COO)	
Iron (Fe):		Butanoic Acid (C_3H_7COO)	
Zinc (Zn):		Isobutyric Acid ($(CH_3)_2CHCOO$)	
Lead (Pb):		Fluoride (F):	
Ammonia NH_3:		Bromine (Br):	
Manganese (Mn):		Silica (SiO_2):	
Aluminum (Al):		Calcium Carbonate ($CaCO_3$):	
Lithium (Li):		Phosphates (PO_4):	
Boron (B):		Oxygen (O_2):	
Silicon (Si):			