

### Technical Report for

## Renegade Oil & Gas

126 B7

SGS Accutest Job Number: D96256

Sampling Date: 07/31/17

### Report to:

Renegade Oil & Gas  
6155 S. Main Street  
Aurora, CO 80016  
jbcrog@aol.com; wrico2@kci.net  
  
ATTN: JB Condill

Total number of pages in report: 49



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: Cristina Araujo 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)

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Test results relate only to samples analyzed.

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Sample Summary

Renegade Oil & Gas  
126 B7

Job No: D96256

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
D96256-1	07/31/17	12:00	CB	07/31/17	SO Soil	WEST
D96256-1A	07/31/17	12:00	CB	07/31/17	SO Soil	WEST
D96256-2	07/31/17	12:00	CB	07/31/17	SO Soil	EAST
D96256-2A	07/31/17	12:00	CB	07/31/17	SO Soil	EAST

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

## CASE NARRATIVE / CONFORMANCE SUMMARY

2

**Client:** Renegade Oil & Gas

**Job No** D96256

**Site:** 126 B7

**Report Date** 8/14/2017 2:03:35 PM

On 07/31/2017, 2 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at SGS Accutest Mountain States (SAMS) at a temperature of 30.1 °C. The samples were intact and properly preserved, unless noted below. An SAMS Job Number of D96256 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.

### Volatiles by GCMS By Method SW846 8260B

**Matrix:** SO

**Batch ID:** V5V2386

- All samples were analyzed within the recommended method holding time.
- Sample(s) D96117-7MS, D96117-7MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

**Matrix:** SO

**Batch ID:** V5V2387

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D96343-1MS, D96343-1MSD were used as the QC samples indicated.

### Volatiles by GC By Method SW846 8015B

**Matrix:** SO

**Batch ID:** GGB2036

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D96247-10MS, D96247-10MSD were used as the QC samples indicated.

### Extractables by GC By Method SW846-8015B

**Matrix:** SO

**Batch ID:** OP15328

- All samples were extracted and analyzed within the recommended method holding time.
- Sample(s) D96256-2MS, D96256-2MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- The matrix spike (MS) recovery(s) of TPH-DRO (C10-C28) are outside control limits. Outside control limits due to high level in sample relative to spike amount.
- Sample(s) D96256-2, OP15328-MSD have surrogates outside control limits. Probable cause due to matrix interference.
- D96256-2 for o-Terphenyl: Outside control limits due to dilution.
- OP15328-MSD for o-Terphenyl: Outside control limits due to dilution.

Monday, August 14, 2017

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## Metals By Method SW846 6010C

**Matrix:** AQ

**Batch ID:** MP22565

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D96256-1AMS, D96256-1AMSD, D96256-1ASDL were used as the QC samples for the metals analysis.
- The serial dilution RPD(s) for Sodium are outside control limits for sample MP22565-SD1. Probable cause due to sample homogeneity.
- MP22565-SD1 for Sodium: Serial dilution indicates possible matrix interference.
- MP22565-MB1 for Sodium: All sample results < RL or > 10x MB concentration.

## Wet Chemistry By Method SM2540G-2011 M

**Matrix:** SO

**Batch ID:** GN39669

- Sample(s) D96302-1DUP were used as the QC samples for the Solids, Percent analysis.

## Wet Chemistry By Method USDA HANDBOOK 60

**Matrix:** SO

**Batch ID:** MP22565

- D96256-1A and -2A for Sodium Adsorption Ratio: Calculated as:  $(\text{Na meq/L}) / \sqrt{[(\text{Ca meq/L}) + (\text{Mg meq/L})/2]}$

SAMS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting AMS'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.

SAMS 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 SAMS indicated via signature on the report cover.

## Summary of Hits

Page 1 of 1

Job Number: D96256  
Account: Renegade Oil & Gas  
Project: 126 B7  
Collected: 07/31/17



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
D96256-1	WEST					
TPH-DRO (C10-C28)		41.5	11	9.8	mg/kg	SW846-8015B
D96256-1A	WEST					
Calcium		11.3	2.0		mg/l	SW846 6010C
Magnesium		3.62	1.0		mg/l	SW846 6010C
Sodium		13.8	2.0		mg/l	SW846 6010C
Sodium Adsorption Ratio <sup>a</sup>		0.914			ratio	USDA HANDBOOK 60
D96256-2	EAST					
Benzene		3200	330	170	ug/kg	SW846 8260B
Toluene		31000	670	330	ug/kg	SW846 8260B
Ethylbenzene		11700	670	170	ug/kg	SW846 8260B
Xylene (total)		169000	730	330	ug/kg	SW846 8260B
TPH-GRO (C6-C10)		2500	270	130	mg/kg	SW846 8015B
TPH-DRO (C10-C28)		5250	120	100	mg/kg	SW846-8015B
D96256-2A	EAST					
Calcium		104	2.0		mg/l	SW846 6010C
Magnesium		27.2	1.0		mg/l	SW846 6010C
Sodium		340	2.0		mg/l	SW846 6010C
Sodium Adsorption Ratio <sup>a</sup>		7.67			ratio	USDA HANDBOOK 60

(a) Calculated as:  $(\text{Na meq/L}) / \sqrt{[(\text{Ca meq/L}) + (\text{Mg meq/L})/2]}$

**Sample Results**

**Report of Analysis**

## Report of Analysis

Client Sample ID:	WEST	Date Sampled:	07/31/17
Lab Sample ID:	D96256-1	Date Received:	07/31/17
Matrix:	SO - Soil	Percent Solids:	92.0
Method:	SW846 8260B		
Project:	126 B7		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V42895.D	1	08/01/17 17:30	MB	n/a	n/a	V5V2386
Run #2							

Run #	Initial Weight	Final Volume
Run #1	5.03 g	5.0 ml
Run #2		

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.1	0.54	ug/kg	
108-88-3	Toluene	ND	2.2	1.1	ug/kg	
100-41-4	Ethylbenzene	ND	2.2	0.54	ug/kg	
1330-20-7	Xylene (total)	ND	2.4	1.1	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	115%		70-130%
2037-26-5	Toluene-D8	94%		70-130%
460-00-4	4-Bromofluorobenzene	100%		65-142%
17060-07-0	1,2-Dichloroethane-D4	104%		70-130%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



## Report of Analysis

Client Sample ID:	WEST	Date Sampled:	07/31/17
Lab Sample ID:	D96256-1	Date Received:	07/31/17
Matrix:	SO - Soil	Percent Solids:	92.0
Method:	SW846 8015B		
Project:	126 B7		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB41274.D	1	08/02/17 17:59	MB	n/a	n/a	GGB2036
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	12	5.9	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	85%		60-140%		

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID:	WEST	Date Sampled:	07/31/17
Lab Sample ID:	D96256-1	Date Received:	07/31/17
Matrix:	SO - Soil	Percent Solids:	92.0
Method:	SW846-8015B SW846 3546		
Project:	126 B7		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FI56634.D	1	08/07/17 17:57	GN	08/07/17	OP15328	GFI2366
Run #2							

Run #	Initial Weight	Final Volume
Run #1	20.0 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	41.5	11	9.8	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	86%		41-134%		

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	WEST	Date Sampled:	07/31/17
Lab Sample ID:	D96256-1A	Date Received:	07/31/17
Matrix:	SO - Soil	Percent Solids:	92.0
Project:	126 B7		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	11.3	2.0	mg/l	1	08/04/17	08/04/17 JM	SW846 6010C <sup>1</sup>	SW846 3010A/M <sup>3</sup>
Magnesium	3.62	1.0	mg/l	1	08/04/17	08/07/17 JM	SW846 6010C <sup>2</sup>	SW846 3010A/M <sup>3</sup>
Sodium	13.8	2.0	mg/l	1	08/04/17	08/04/17 JM	SW846 6010C <sup>1</sup>	SW846 3010A/M <sup>3</sup>

- (1) Instrument QC Batch: MA8858
- (2) Instrument QC Batch: MA8863
- (3) Prep QC Batch: MP22565

RL = Reporting Limit

Report of Analysis

Client Sample ID:	WEST	Date Sampled:	07/31/17
Lab Sample ID:	D96256-1A	Date Received:	07/31/17
Matrix:	SO - Soil	Percent Solids:	92.0
Project:	126 B7		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio <sup>a</sup>	0.914		ratio	1	08/07/17 19:36	JM	USDA HANDBOOK 60

(a) Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+ (Mg meq/L)/2]

RL = Reporting Limit

4.2  
4

## Report of Analysis

Client Sample ID:	EAST	Date Sampled:	07/31/17
Lab Sample ID:	D96256-2	Date Received:	07/31/17
Matrix:	SO - Soil	Percent Solids:	85.4
Method:	SW846 8260B		
Project:	126 B7		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V42927.D	1	08/04/17 21:08	MB	n/a	n/a	V5V2387
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.03 g	5.0 ml	20.0 ul
Run #2			

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	3200	330	170	ug/kg	
108-88-3	Toluene	31000	670	330	ug/kg	
100-41-4	Ethylbenzene	11700	670	170	ug/kg	
1330-20-7	Xylene (total)	169000	730	330	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		70-130%
2037-26-5	Toluene-D8	102%		70-130%
460-00-4	4-Bromofluorobenzene	90%		65-142%
17060-07-0	1,2-Dichloroethane-D4	97%		70-130%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID:	EAST	Date Sampled:	07/31/17
Lab Sample ID:	D96256-2	Date Received:	07/31/17
Matrix:	SO - Soil	Percent Solids:	85.4
Method:	SW846 8015B		
Project:	126 B7		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB41275.D	1	08/02/17 18:36	MB	n/a	n/a	GGB2036
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	5.0 ml	5.0 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	2500	270	130	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	89%		60-140%		

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID:	EAST	Date Sampled:	07/31/17
Lab Sample ID:	D96256-2	Date Received:	07/31/17
Matrix:	SO - Soil	Percent Solids:	85.4
Method:	SW846-8015B SW846 3546		
Project:	126 B7		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FI56696.D	10	08/08/17 16:04	GN	08/07/17	OP15328	GFI2368
Run #2							

Run #	Initial Weight	Final Volume
Run #1	20.1 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	5250	120	100	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	147% <sup>a</sup>		41-134%		

(a) Outside control limits due to dilution.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	EAST	Date Sampled:	07/31/17
Lab Sample ID:	D96256-2A	Date Received:	07/31/17
Matrix:	SO - Soil	Percent Solids:	85.4
Project:	126 B7		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	104	2.0	mg/l	1	08/04/17	08/04/17 JM	SW846 6010C <sup>1</sup>	SW846 3010A/M <sup>3</sup>
Magnesium	27.2	1.0	mg/l	1	08/04/17	08/07/17 JM	SW846 6010C <sup>2</sup>	SW846 3010A/M <sup>3</sup>
Sodium	340	2.0	mg/l	1	08/04/17	08/04/17 JM	SW846 6010C <sup>1</sup>	SW846 3010A/M <sup>3</sup>

- (1) Instrument QC Batch: MA8858
- (2) Instrument QC Batch: MA8863
- (3) Prep QC Batch: MP22565

RL = Reporting Limit



Report of Analysis

Client Sample ID:	EAST	Date Sampled:	07/31/17
Lab Sample ID:	D96256-2A	Date Received:	07/31/17
Matrix:	SO - Soil	Percent Solids:	85.4
Project:	126 B7		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio <sup>a</sup>	7.67		ratio	1	08/07/17 20:06	JM	USDA HANDBOOK 60

(a) Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+ (Mg meq/L)/2]

RL = Reporting Limit

**Misc. Forms**

5

**Custody Documents and Other Forms**

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**Includes the following where applicable:**

- Chain of Custody



ACCUTEST

## CHAIN OF CUSTODY

PAGE \_\_\_\_ OF \_\_\_\_

4036 Youngfield Street, Wheat Ridge, CO 80033  
TEL: 303-425-6021 FAX: 303-425-6854  
www.accutest.com

FED-EX Tracking #	Order Control #
SGS Account Code #	SGS Account Job # <b>D96256</b>

Client / Reporting Information		Project Information		Requested Analysis (see TEST CODE sheet)												Matrix Codes																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
Company Name <b>Pennepack Oil &amp; Gas</b>	Project Name <b>12687</b>	Street Address <b>Cross S. Main St. Ste. 210</b>	City, State <b>Aspen, CO</b>	Company Name													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 PB-Field Blank EB-Equipment Blank RB-Rinse Blank TB-Trip Blank																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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Email <b>ed@edirvine.com</b>	Project Manager																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
Sample(s) Name(s) <b>Cody Bayles</b>	Attention:																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
SGS Account Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Date	Time	Sampled by	Matrix	# of bottles	PC	HC3	HC4	HC5	HC6	HC7	HC8	HC9	HC10	HC11	HC12	HC13	HC14	HC15	HC16	HC17	HC18	HC19	HC20	HC21	HC22	HC23	HC24	HC25	HC26	HC27	HC28	HC29	HC30	HC31	HC32	HC33	HC34	HC35	HC36	HC37	HC38	HC39	HC40	HC41	HC42	HC43	HC44	HC45	HC46	HC47	HC48	HC49	HC50	HC51	HC52	HC53	HC54	HC55	HC56	HC57	HC58	HC59	HC60	HC61	HC62	HC63	HC64	HC65	HC66	HC67	HC68	HC69	HC70	HC71	HC72	HC73	HC74	HC75	HC76	HC77	HC78	HC79	HC80	HC81	HC82	HC83	HC84	HC85	HC86	HC87	HC88	HC89	HC90	HC91	HC92	HC93	HC94	HC95	HC96	HC97	HC98	HC99	HC100	HC101	HC102	HC103	HC104	HC105	HC106	HC107	HC108	HC109	HC110	HC111	HC112	HC113	HC114	HC115	HC116	HC117	HC118	HC119	HC120	HC121	HC122	HC123	HC124	HC125	HC126	HC127	HC128	HC129	HC130	HC131	HC132	HC133	HC134	HC135	HC136	HC137	HC138	HC139	HC140	HC141	HC142	HC143	HC144	HC145	HC146	HC147	HC148	HC149	HC150	HC151	HC152	HC153	HC154	HC155	HC156	HC157	HC158	HC159	HC160	HC161	HC162	HC163	HC164	HC165	HC166	HC167	HC168	HC169	HC170	HC171	HC172	HC173	HC174	HC175	HC176	HC177	HC178	HC179	HC180	HC181	HC182	HC183	HC184	HC185	HC186	HC187	HC188	HC189	HC190	HC191	HC192	HC193	HC194	HC195	HC196	HC197	HC198	HC199	HC200	HC201	HC202	HC203	HC204	HC205	HC206	HC207	HC208	HC209	HC210	HC211	HC212	HC213	HC214	HC215	HC216	HC217	HC218	HC219	HC220	HC221	HC222	HC223	HC224	HC225	HC226	HC227	HC228	HC229	HC230	HC231	HC232	HC233	HC234	HC235	HC236	HC237	HC238	HC239	HC240	HC241	HC242	HC243	HC244	HC245	HC246	HC247	HC248	HC249	HC250	HC251	HC252	HC253	HC254	HC255	HC256	HC257	HC258	HC259	HC260	HC261	HC262	HC263	HC264	HC265	HC266	HC267	HC268	HC269	HC270	HC271	HC272	HC273	HC274	HC275	HC276	HC277	HC278	HC279	HC280	HC281	HC282	HC283	HC284	HC285	HC286	HC287	HC288	HC289	HC290	HC291	HC292	HC293	HC294	HC295	HC296	HC297	HC298	HC299	HC300	HC301	HC302	HC303	HC304	HC305	HC306	HC307	HC308	HC309	HC310	HC311	HC312	HC313	HC314	HC315	HC316	HC317	HC318	HC319	HC320	HC321	HC322	HC323	HC324	HC325	HC326	HC327	HC328	HC329	HC330	HC331	HC332	HC333	HC334	HC335	HC336	HC337	HC338	HC339	HC340	HC341	HC342	HC343	HC344	HC345	HC346	HC347	HC348	HC349	HC350	HC351	HC352	HC353	HC354	HC355	HC356	HC357	HC358	HC359	HC360	HC361	HC362	HC363	HC364	HC365	HC366	HC367	HC368	HC369	HC370	HC371	HC372	HC373	HC374	HC375	HC376	HC377	HC378	HC379	HC380	HC381	HC382	HC383	HC384	HC385	HC386	HC387	HC388	HC389	HC390	HC391	HC392	HC393	HC394	HC395	HC396	HC397	HC398	HC399	HC400	HC401	HC402	HC403	HC404	HC405	HC406	HC407	HC408	HC409	HC410	HC411	HC412	HC413	HC414	HC415	HC416	HC417	HC418	HC419	HC420	HC421	HC422	HC423	HC424	HC425	HC426	HC427	HC428	HC429	HC430	HC431	HC432	HC433	HC434	HC435	HC436	HC437	HC438	HC439	HC440	HC441	HC442	HC443	HC444	HC445	HC446	HC447	HC448	HC449	HC450	HC451	HC452	HC453	HC454	HC455	HC456	HC457	HC458	HC459	HC460	HC461	HC462	HC463	HC464	HC465	HC466	HC467	HC468	HC469	HC470	HC471	HC472	HC473	HC474	HC475	HC476	HC477	HC478	HC479	HC480	HC481	HC482	HC483	HC484	HC485	HC486	HC487	HC488	HC489	HC490	HC491	HC492	HC493	HC494	HC495	HC496	HC497	HC498	HC499	HC500	HC501	HC502	HC503	HC504	HC505	HC506	HC507	HC508	HC509	HC510	HC511	HC512	HC513	HC514	HC515	HC516	HC517	HC518	HC519	HC520	HC521	HC522	HC523	HC524	HC525	HC526	HC527	HC528	HC529	HC530	HC531	HC532	HC533	HC534	HC535	HC536	HC537	HC538	HC539	HC540	HC541	HC542	HC543	HC544	HC545	HC546	HC547	HC548	HC549	HC550	HC551	HC552	HC553	HC554	HC555	HC556	HC557	HC558	HC559	HC560	HC561	HC562	HC563	HC564	HC565	HC566	HC567	HC568	HC569	HC570	HC571	HC572	HC573	HC574	HC575	HC576	HC577	HC578	HC579	HC580	HC581	HC582	HC583	HC584	HC585	HC586	HC587	HC588	HC589	HC590	HC591	HC592	HC593	HC594	HC595	HC596	HC597	HC598	HC599	HC600	HC601	HC602	HC603	HC604	HC605	HC606	HC607	HC608	HC609	HC610	HC611	HC612	HC613	HC614	HC615	HC616	HC617	HC618	HC619	HC620	HC621	HC622	HC623	HC624	HC625	HC626	HC627	HC628	HC629	HC630	HC631	HC632	HC633	HC634	HC635	HC636	HC637	HC638	HC639	HC640	HC641	HC642	HC643	HC644	HC645	HC646	HC647	HC648	HC649	HC650	HC651	HC652	HC653	HC654	HC655	HC656	HC657	HC658	HC659	HC660	HC661	HC662	HC663	HC664	HC665	HC666	HC667	HC668	HC669	HC670	HC671	HC672	HC673	HC674	HC675	HC676	HC677	HC678	HC679	HC680	HC681	HC682	HC683	HC684	HC685	HC686	HC687	HC688	HC689	HC690	HC691	HC692	HC693	HC694	HC695	HC696	HC697	HC698	HC699	HC700	HC701	HC702	HC703	HC704	HC705	HC706	HC707	HC708	HC709	HC710	HC711	HC712	HC713	HC714	HC715	HC716	HC717	HC718	HC719	HC720	HC721	HC722	HC723	HC724	HC725	HC726	HC727	HC728	HC729	HC730	HC731	HC732	HC733	HC734	HC735	HC736	HC737	HC738	HC739	HC740	HC741	HC742	HC743	HC744	HC745	HC746	HC747	HC748	HC749	HC750	HC751	HC752	HC753	HC754	HC755	HC756	HC757	HC758	HC759	HC760	HC761	HC762	HC763	HC764	HC765	HC766	HC767	HC768	HC769	HC770	HC771	HC772	HC773	HC774	HC775	HC776	HC777	HC778	HC779	HC780	HC781	HC782	HC783	HC784	HC785	HC786	HC787	HC788	HC789	HC790	HC791	HC792	HC793	HC794	HC795	HC796	HC797	HC798	HC799	HC800	HC801	HC802	HC803	HC804	HC805	HC806	HC807	HC808	HC809	HC810	HC811	HC812	HC813	HC814	HC815	HC816	HC817	HC818	HC819	HC820	HC821	HC822	HC823	HC824	HC825	HC826	HC827	HC828	HC829	HC830	HC831	HC832	HC833	HC834	HC835	HC836	HC837	HC838	HC839	HC840	HC841	HC842	HC843	HC844	HC845	HC846	HC847	HC848	HC849	HC850	HC851	HC852	HC853	HC854	HC855	HC856	HC857	HC858	HC859	HC860	HC861	HC862	HC863	HC864	HC865	HC866	HC867	HC868	HC869	HC870	HC871	HC872	HC873	HC874	HC875	HC876	HC877	HC878	HC879	HC880	HC881	HC882	HC883	HC884	HC885	HC886	HC887	HC888	HC889	HC890	HC891	HC892	HC893	HC894	HC895	HC896	HC897	HC898	HC899	HC900	HC901	HC902	HC903	HC904	HC905	HC906	HC907	HC908	HC909	HC910	HC911	HC912	HC913	HC914	HC915	HC916	HC917	HC918	HC919	HC920	HC921	HC922	HC923	HC924	HC925	HC926	HC927	HC928	HC929	HC930	HC931	HC932	HC933	HC934	HC935	HC936	HC937	HC938	HC939	HC940	HC941	HC942	HC943	HC944	HC945	HC946	HC947	HC948	HC949	HC950	HC951	HC952	HC953	HC954	HC955	HC956	HC957	HC958	HC959	HC960	HC961	HC962	HC963	HC964	HC965	HC966	HC967	HC968	HC969	HC970	HC971	HC972	HC973	HC974	HC975	HC976	HC977	HC978	HC979	HC980	HC981	HC982	HC983	HC984	HC985	HC986	HC987	HC988	HC989	HC990	HC991	HC992	HC993	HC994	HC995	HC996	HC997	HC998	HC999	HC1000	HC1001	HC1002	HC1003	HC1004	HC1005	HC1006	HC1007	HC1008	HC1009	HC1010	HC1011	HC1012	HC1013	HC1014	HC1015	HC1016	HC1017	HC1018	HC1019	HC1020	HC1021	HC1022	HC1023	HC1024	HC1025	HC1026	HC1027	HC1028	HC1029	HC1030	HC1031	HC1032	HC1033	HC1034	HC1035	HC1036	HC1037	HC1038	HC1039	HC1040	HC1041	HC1042	HC1043	HC1044	HC1045	HC1046	HC1047	HC1048	HC1049	HC1050	HC1051	HC1052	HC1053	HC1054	HC1055	HC1056	HC1057	HC1058	HC1059	HC1060	HC1061	HC1062	HC1063	HC1064	HC1065	HC1066	HC1067	HC1068	HC1069	HC1070	HC1071	HC1072	HC1073	HC1074	HC1075	HC1076	HC1077	HC1078	HC1079	HC1080	HC1081	HC1082	HC1083	HC1084	HC1085	HC1086	HC1087	HC1088	HC1089	HC1090	HC1091	HC1092	HC1093	HC1094	HC1095	HC1096	HC1097	HC1098	HC1099	HC1100	HC1101	HC1102	HC1103	HC1104	HC1105	HC1106	HC1107	HC1108	HC1109	HC1110	HC1111	HC1112	HC1113	HC1114	HC1115	HC1116	HC1117	HC1118	HC1119	HC1120	HC1121	HC1122	HC1123	HC1124	HC1125	HC1126	HC1127	HC1128	HC1129	HC1130	HC1131	HC1132	HC1133	HC1134	HC1135	HC1136	HC1137	HC1138	HC1139	HC1140	HC1141	HC1142	HC1143	HC1144	HC1145	HC1146	HC1147	HC1148	HC1149	HC1150	HC1151	HC1152	HC1153	HC1154	HC1155	HC1156	HC1157	HC1158	HC1159	HC1160	HC1161	HC1162	HC1163	HC1164	HC1165	HC1166	HC1167	HC1168	HC1169	HC1170	HC1171	HC1172	HC1173	HC1174	HC1175	HC1176	HC1177	HC1178	HC1179	HC1180	HC1181	HC1182	HC1183	HC1184	HC1185	HC1186	HC1187	HC1188	HC1189	HC1190	HC1191	HC1192	HC1193	HC1194	HC1195	HC1196	HC1197	HC1198	HC1199	HC1200	HC1201	HC1202	HC1203	HC1204	HC1205	HC1206	HC1207	HC1208	HC1209	HC1210	HC1211	HC1212	HC1213	HC1214	HC1215	HC1216	HC1217	HC1218	HC1219	HC1220	HC1221	HC1222	HC1223	HC1224	HC1225	HC1226	HC1227	HC1228	HC1229	HC1230	HC1231	HC1232	HC1233	HC1234	HC1235	HC1236	HC1237	HC1238	HC1239	HC1240	HC1241	HC1242	HC1243	HC1244	HC1245	HC1246	HC1247	HC1248	HC1249	HC1250	HC1251	HC1252	HC1253	HC1254	HC1255	HC1256	HC1257	HC1258	HC1259	HC1260	HC1261	HC1262	HC1263	HC1264	HC1265	HC1266	HC1267	HC1268	HC1269	HC1270

# SGS Accutest Sample Receipt Summary

Job Number: D96256

Client: RENEGADE

Project: 126 B7

Date / Time Received: 7/31/2017 4:05:00 PM

Delivery Method:

Airbill #'s: HD

Cooler Temps (Initial/Adjusted): #1: (30.1/30.1):

## Cooler Security

Y or N

Y or N

- |                           |                                     |                          |                       |                                     |                          |
|---------------------------|-------------------------------------|--------------------------|-----------------------|-------------------------------------|--------------------------|
| 1. Custody Seals Present: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3. COC Present:       | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Custody Seals Intact:  | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 4. Smpl Dates/Time OK | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

## Cooler Temperature

Y or N

- |                              |                                     |                          |
|------------------------------|-------------------------------------|--------------------------|
| 1. Temp criteria achieved:   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 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: | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Trip Blank listed on COC:    | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Samples preserved properly:  | <input checked="" type="checkbox"/> | <input type="checkbox"/> |                                     |
| 4. VOCs headspace free:         | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Comments

## Sample Integrity - Documentation

Y or N

- |  |                                     |                          |
|--|-------------------------------------|--------------------------|
| 1. Sample labels present on bottles:   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Container labeling complete:        | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Sample container label / COC agree: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

## Sample Integrity - Condition

Y or N

- |                                  |                                     |                          |
|----------------------------------|-------------------------------------|--------------------------|
| 1. Sample recvd within HT:       | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. All containers accounted for: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Condition of sample:          | Intact                              |                          |

## Sample Integrity - Instructions

Y or N

N/A

- |   |                                     |                                     |                                     |
|---|-------------------------------------|-------------------------------------|-------------------------------------|
| 1. Analysis requested is clear:           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |                                     |
| 2. Bottles received for unspecified tests | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |                                     |
| 3. Sufficient volume recvd for analysis:  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |                                     |
| 4. Compositing instructions clear:        | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 5. Filtering instructions clear:          | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

D96256: Chain of Custody

Page 2 of 2

**GC/MS Volatiles****QC Data Summaries**

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**Includes the following where applicable:**

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

## Method Blank Summary

Page 1 of 1

Job Number: D96256  
Account: RENOGCOA Renegade Oil & Gas  
Project: 126 B7

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V2386-MB	5V42890.D	1	08/01/17	MB	n/a	n/a	V5V2386

The QC reported here applies to the following samples:

Method: SW846 8260B

D96256-1

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/kg	
100-41-4	Ethylbenzene	ND	2.0	0.50	ug/kg	
108-88-3	Toluene	ND	2.0	1.0	ug/kg	
1330-20-7	Xylene (total)	ND	2.2	1.0	ug/kg	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	111% 70-130%
2037-26-5	Toluene-D8	96% 70-130%
460-00-4	4-Bromofluorobenzene	98% 65-142%
17060-07-0	1,2-Dichloroethane-D4	97% 70-130%

## Method Blank Summary

Page 1 of 1

Job Number: D96256  
Account: RENOGCOA Renegade Oil & Gas  
Project: 126 B7

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V2387-MB	5V42909.D	1	08/04/17	MB	n/a	n/a	V5V2387

The QC reported here applies to the following samples:

Method: SW846 8260B

D96256-2

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	50	25	ug/kg	
100-41-4	Ethylbenzene	ND	100	25	ug/kg	
108-88-3	Toluene	ND	100	50	ug/kg	
1330-20-7	Xylene (total)	ND	110	50	ug/kg	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	109% 70-130%
2037-26-5	Toluene-D8	95% 70-130%
460-00-4	4-Bromofluorobenzene	99% 65-142%
17060-07-0	1,2-Dichloroethane-D4	96% 70-130%

## Method Blank Summary

Page 1 of 1

Job Number: D96256  
Account: RENOGCOA Renegade Oil & Gas  
Project: 126 B7

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V2387-MB	5V42910.D	1	08/04/17	MB	n/a	n/a	V5V2387

The QC reported here applies to the following samples:

Method: SW846 8260B

D96256-2

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/kg	
100-41-4	Ethylbenzene	ND	2.0	0.50	ug/kg	
108-88-3	Toluene	ND	2.0	1.0	ug/kg	
1330-20-7	Xylene (total)	ND	2.2	1.0	ug/kg	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	108% 70-130%
2037-26-5	Toluene-D8	95% 70-130%
460-00-4	4-Bromofluorobenzene	100% 65-142%
17060-07-0	1,2-Dichloroethane-D4	93% 70-130%



## Blank Spike Summary

Page 1 of 1

Job Number: D96256  
Account: RENOGCOA Renegade Oil & Gas  
Project: 126 B7

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V2386-BS	5V42886.D	1	08/01/17	MB	n/a	n/a	V5V2386

The QC reported here applies to the following samples:

Method: SW846 8260B

D96256-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	50	42.5	85	70-130
100-41-4	Ethylbenzene	50	42.3	85	70-130
108-88-3	Toluene	50	40.8	82	70-130
1330-20-7	Xylene (total)	150	128	85	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	115%	70-130%
2037-26-5	Toluene-D8	94%	70-130%
460-00-4	4-Bromofluorobenzene	98%	65-142%
17060-07-0	1,2-Dichloroethane-D4	102%	70-130%

\* = Outside of Control Limits.

## Blank Spike Summary

Page 1 of 1

Job Number: D96256

Account: RENOGCOA Renegade Oil & Gas

Project: 126 B7

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V2387-BS	5V42907.D	1	08/04/17	MB	n/a	n/a	V5V2387

The QC reported here applies to the following samples:

Method: SW846 8260B

D96256-2

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	50	43.3	87	70-130
100-41-4	Ethylbenzene	50	42.9	86	70-130
108-88-3	Toluene	50	41.7	83	70-130
1330-20-7	Xylene (total)	150	130	87	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	113%	70-130%
2037-26-5	Toluene-D8	94%	70-130%
460-00-4	4-Bromofluorobenzene	97%	65-142%
17060-07-0	1,2-Dichloroethane-D4	101%	70-130%

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: D96256  
Account: RENOGCOA Renegade Oil & Gas  
Project: 126 B7

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D96117-7MS	5V42892.D	1	08/01/17	MB	n/a	n/a	V5V2386
D96117-7MSD	5V42893.D	1	08/01/17	MB	n/a	n/a	V5V2386
D96117-7	5V42891.D	1	08/01/17	MB	n/a	n/a	V5V2386

The QC reported here applies to the following samples:

Method: SW846 8260B

D96256-1

CAS No.	Compound	D96117-7 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		64.6	50.5	78	65.4	55.9	86	10	43-135/30
100-41-4	Ethylbenzene	ND		64.6	49.9	77	65.4	55.2	84	10	30-144/30
108-88-3	Toluene	ND		64.6	47.9	74	65.4	53.1	81	10	27-144/30
1330-20-7	Xylene (total)	ND		194	151	78	196	167	85	10	13-154/30

CAS No.	Surrogate Recoveries	MS	MSD	D96117-7	Limits
1868-53-7	Dibromofluoromethane	116%	115%	114%	70-130%
2037-26-5	Toluene-D8	95%	94%	94%	70-130%
460-00-4	4-Bromofluorobenzene	98%	98%	97%	65-142%
17060-07-0	1,2-Dichloroethane-D4	105%	103%	107%	70-130%

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: D96256  
Account: RENOGCOA Renegade Oil & Gas  
Project: 126 B7

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D96343-1MS	5V42912.D	1	08/04/17	MB	n/a	n/a	V5V2387
D96343-1MSD	5V42913.D	1	08/04/17	MB	n/a	n/a	V5V2387
D96343-1	5V42911.D	1	08/04/17	MB	n/a	n/a	V5V2387

The QC reported here applies to the following samples:

Method: SW846 8260B

D96256-2

CAS No.	Compound	D96343-1 ug/kg	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	2.5	56.5	44.3	74	55.7	39.4	66	12	43-135/30
100-41-4	Ethylbenzene	31.7	56.5	59.3	49	55.7	63.3	57	7	30-144/30
108-88-3	Toluene	28.2	56.5	61.7	59	55.7	62.0	61	0	27-144/30
1330-20-7	Xylene (total)	184	170	252	40	167	297	68	16	13-154/30

CAS No.	Surrogate Recoveries	MS	MSD	D96343-1	Limits
1868-53-7	Dibromofluoromethane	115%	117%	117%	70-130%
2037-26-5	Toluene-D8	99%	99%	98%	70-130%
460-00-4	4-Bromofluorobenzene	106%	111%	105%	65-142%
17060-07-0	1,2-Dichloroethane-D4	104%	108%	107%	70-130%

\* = Outside of Control Limits.

**GC Volatiles****QC Data Summaries**

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**Includes the following where applicable:**

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

Method Blank Summary

Job Number: D96256  
Account: RENOGCOA Renegade Oil & Gas  
Project: 126 B7

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB2036-MB	GB41257.D	1	08/02/17	MB	n/a	n/a	GGB2036

The QC reported here applies to the following samples: Method: SW846 8015B

D96256-1, D96256-2

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	10	5.0	mg/kg	

CAS No.	Surrogate Recoveries	Limits
120-82-1	1,2,4-Trichlorobenzene	84% 60-140%

Method Blank Summary

Job Number: D96256  
Account: RENOGCOA Renegade Oil & Gas  
Project: 126 B7

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB2036-MB	GB41271.D	1	08/02/17	MB	n/a	n/a	GGB2036

The QC reported here applies to the following samples: Method: SW846 8015B

D96256-1, D96256-2

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	10	5.0	mg/kg	

CAS No.	Surrogate Recoveries	Limits
120-82-1	1,2,4-Trichlorobenzene	84% 60-140%

Blank Spike Summary

Job Number: D96256  
Account: RENOGCOA Renegade Oil & Gas  
Project: 126 B7

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB2036-BS	GB41256.D	1	08/02/17	MB	n/a	n/a	GGB2036

The QC reported here applies to the following samples: Method: SW846 8015B

D96256-1, D96256-2

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (C6-C10)	110	117	106	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	87%	60-140%

\* = Outside of Control Limits.



Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D96256  
Account: RENOGCOA Renegade Oil & Gas  
Project: 126 B7

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D96247-10MS	GB41259.D	1	08/02/17	MB	n/a	n/a	GGB2036
D96247-10MSD	GB41260.D	1	08/02/17	MB	n/a	n/a	GGB2036
D96247-10	GB41258.D	1	08/02/17	MB	n/a	n/a	GGB2036

The QC reported here applies to the following samples: Method: SW846 8015B

D96256-1, D96256-2

CAS No.	Compound	D96247-10 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	Spike mg/kg	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	ND		135	136	101	135	135	100	1	70-131/30

CAS No.	Surrogate Recoveries	MS	MSD	D96247-10	Limits
120-82-1	1,2,4-Trichlorobenzene	90%	85%	82%	60-140%

\* = Outside of Control Limits.

**GC Semi-volatiles****QC Data Summaries**

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**Includes the following where applicable:**

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

Method Blank Summary

Job Number: D96256  
Account: RENOGCOA Renegade Oil & Gas  
Project: 126 B7

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP15328-MB	FI56620.D	1	08/07/17	GN	08/07/17	OP15328	GFI2366

The QC reported here applies to the following samples: Method: SW846-8015B

D96256-1, D96256-2

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	10	9.0	mg/kg	

CAS No.	Surrogate Recoveries	Limits
84-15-1	o-Terphenyl	86% 41-134%

8.1.1  
8

Method Blank Summary

Job Number: D96256  
Account: RENOGCOA Renegade Oil & Gas  
Project: 126 B7

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP15328-MB2	FI56633.D	1	08/07/17	GN	08/07/17	OP15328	GFI2367

The QC reported here applies to the following samples: Method: SW846-8015B

D96256-1, D96256-2

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	40	36	mg/kg	

CAS No.	Surrogate Recoveries	Limits
84-15-1	o-Terphenyl	83% 41-134%

8.1.2  
8

Blank Spike Summary

Job Number: D96256  
Account: RENOGCOA Renegade Oil & Gas  
Project: 126 B7

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP15328-BS	FI56622.D	1	08/07/17	GN	08/07/17	OP15328	GFI2366

The QC reported here applies to the following samples: Method: SW846-8015B

D96256-1, D96256-2

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-DRO (C10-C28)	250	156	62	35-130

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	81%	41-134%

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: D96256  
Account: RENOGCOA Renegade Oil & Gas  
Project: 126 B7

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP15328-MS	FI56692.D	10	08/08/17	GN	08/07/17	OP15328	GFI2368
OP15328-MSD	FI56694.D	10	08/08/17	GN	08/07/17	OP15328	GFI2368
D96256-2	FI56696.D	10	08/08/17	GN	08/07/17	OP15328	GFI2368

The QC reported here applies to the following samples:

Method: SW846-8015B

D96256-1, D96256-2

CAS No.	Compound	D96256-2 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	Spike mg/kg	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-DRO (C10-C28)	5250		293	4670	-75* a	293	5580	236* a	23	10-171/30

CAS No.	Surrogate Recoveries	MS	MSD	D96256-2	Limits
84-15-1	o-Terphenyl	125%	150%* b	147%* b	41-134%

(a) Outside control limits due to high level in sample relative to spike amount.

(b) Outside control limits due to dilution.

\* = Outside of Control Limits.

## Metals Analysis

### QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY  
Part 2 - Method Blanks

Login Number: D96256  
Account: RENOGCOA - Renegade Oil & Gas  
Project: 126 B7

QC Batch ID: MP22565  
Matrix Type: AQUEOUS

Methods: SW846 6010C, USDA HANDBOOK 60  
Units: ug/l

Prep Date: 08/04/17

Metal	RL	IDL	MDL	MB raw	final
Aluminum	500	55	65		
Antimony	150	11	44		
Arsenic	130	19	60		
Barium	50	1	6.5		
Beryllium	50	4.5	8		
Boron	250	4	18		
Cadmium	50	1	9.5		
Calcium	2000	12	50	2.0	<2000
Chromium	50	1.5	5.5		
Cobalt	25	2.5	6		
Copper	50	4	19		
Iron	350	7.5	35		
Lead	250	11	25		
Lithium	25	2	3.5		
Magnesium	1000	250	200	63.0	<1000
Manganese	25	2.5	4.5		
Molybdenum	50	2	18		
Nickel	150	2.5	14		
Phosphorus	500	75	170		
Potassium	5000	420	360		
Selenium	250	36	55		
Silicon	250	24	42		
Silver	150	1.5	3.1		
Sodium	2000	37	70	1590	* (a)
Strontium	25	.05	1.5		
Thallium	50	9	40		
Tin	250	60	60		
Titanium	50	.5	14		
Uranium	250	15	22		
Vanadium	50	2	3		
Zinc	150	2	18		

Associated samples MP22565: D96256-1A, D96256-2A

Results < IDL are shown as zero for calculation purposes  
(\*) Outside of QC limits



BLANK RESULTS SUMMARY  
Part 2 - Method Blanks

Login Number: D96256  
Account: RENOGCOA - Renegade Oil & Gas  
Project: 126 B7

QC Batch ID: MP22565  
Matrix Type: AQUEOUS

Methods: SW846 6010C, USDA HANDBOOK 60  
Units: ug/l

Prep Date: 08/04/17

Metal	RL	IDL	MDL	MB raw	final
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(anr) Analyte not requested

(a) All sample results < RL or > 10x MB concentration.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D96256  
 Account: RENOGCOA - Renegade Oil & Gas  
 Project: 126 B7

QC Batch ID: MP22565  
 Matrix Type: AQUEOUS

Methods: SW846 6010C, USDA HANDBOOK 60  
 Units: ug/l

Prep Date: 08/04/17

Metal	D96256-1A Original MS		Spikelot ICPAL2	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic					
Barium					
Beryllium					
Boron					
Cadmium					
Calcium	11300	138000	125000	101.4	75-125
Chromium					
Cobalt					
Copper					
Iron					
Lead					
Lithium					
Magnesium	3620	134000	125000	104.3	75-125
Manganese					
Molybdenum					
Nickel					
Phosphorus					
Potassium					
Selenium					
Silicon					
Silver					
Sodium	12400	145000	125000	105.0	75-125
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc					

Associated samples MP22565: D96256-1A, D96256-2A

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits

Login Number: D96256  
Account: RENOGCOA - Renegade Oil & Gas  
Project: 126 B7

Methods: SW846 6010C, USDA HANDBOOK 60  
Units: ug/l

08/04/17

Metal	D96256-1A	Spikelot	QC
	Original MS	ICPALL2 % Rec	Limits

(N) Matrix Spike Rec. outside of QC limits  
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D96256  
Account: RENOGCOA - Renegade Oil & Gas  
Project: 126 B7

QC Batch ID: MP22565  
Matrix Type: AQUEOUS

Methods: SW846 6010C, USDA HANDBOOK 60  
Units: ug/l

Prep Date: 08/04/17

Metal	D96256-1A Original MSD		Spikelot ICPALL2 % Rec		MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic						
Barium						
Beryllium						
Boron						
Cadmium						
Calcium	11300	137000	125000	100.6	0.7	20
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Lithium						
Magnesium	3620	132000	125000	102.7	1.5	20
Manganese						
Molybdenum						
Nickel						
Phosphorus						
Potassium						
Selenium						
Silicon						
Silver						
Sodium	12400	140000	125000	101.0	3.5	20
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc						

Associated samples MP22565: D96256-1A, D96256-2A

Results < IDL are shown as zero for calculation purposes  
(\*) Outside of QC limits

Login Number: D96256  
Account: RENOGCOA - Renegade Oil & Gas  
Project: 126 B7

Methods: SW846 6010C, USDA HANDBOOK 60  
Units: ug/l

08/04/17

	D96256-1A	Spikelot	MSD	QC
Metal	Original MSD	ICPALL2 % Rec	RPD	Limit

(N) Matrix Spike Rec. outside of QC limits  
(anr) Analyte not requested



## SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D96256

Account: RENOGCOA - Renegade Oil & Gas

Project: 126 B7

QC Batch ID: MP22565

Methods: SW846 6010C, USDA HANDBOOK 60

Matrix Type: AQUEOUS

Units: ug/l

Prep Date:

08/04/17

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
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(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: D96256  
Account: RENOGCOA - Renegade Oil & Gas  
Project: 126 B7

QC Batch ID: MP22565  
Matrix Type: AQUEOUS

Methods: SW846 6010C, USDA HANDBOOK 60  
Units: ug/l

Prep Date: 08/04/17

Metal	D96256-1A Original SDL 1:5		%DIF	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium	2270	2390	5.3	0-10
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Lithium				
Magnesium	723	776	7.3	0-10
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium				
Silicon				
Silver				
Sodium	2480	4120	50.0*(a)	0-10
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP22565: D96256-1A, D96256-2A

Results < IDL are shown as zero for calculation purposes  
(\*) Outside of QC limits



SERIAL DILUTION RESULTS SUMMARY

Login Number: D96256  
Account: RENOGCOA - Renegade Oil & Gas  
Project: 126 B7

QC Batch ID: MP22565  
Matrix Type: AQUEOUS

Methods: SW846 6010C, USDA HANDBOOK 60  
Units: ug/l

Prep Date: 08/04/17

	D96256-1A		QC
Metal	Original SDL 1:5	%DIF	Limits

(anr) Analyte not requested  
(a) Serial dilution indicates possible matrix interference.