

**SECTION D. CERTIFICATION**

I certify, under penalty of law, that I have personally examined and am familiar with the information submitted in this Annual Report and all attached documents and that based upon my inquiry of those individuals immediately responsible for obtaining the information, I verify that the submitted information is true, accurate and complete to the best of my knowledge. I understand that the submission of false information herein is made subject to the penalties of 18 Pa. C.S. §4904, relating to unsworn falsification to authorities, which include fine and imprisonment.

Check the following, if applicable:

I certify the information required in Section B-1, General Properties was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-2, Chemical Analysis was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

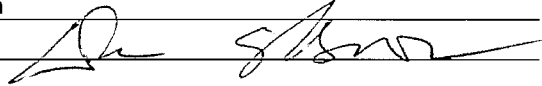
I certify the information required in Section B-3, Process Description and Schematic, was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

Name of Responsible Official \_\_\_\_\_ Title Environmental Specialist

Dina Brown \_\_\_\_\_

Signature  Date 2/25/11

LAB ID: 08-00380  
LAB ID: 39-00401

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169  
Fax: (570) 888-0717

Work Order: 10112525

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10112525  
PAGE: 1 of 2  
PO#: AF78425  
PWS ID#

PHONE: (607) 731-0145  
FAX: (607) 562-4001

**TEST REPORT**

01-023

RECEIVED FOR LAB BY: SCP

DATE: 11/16/2010 16:40

Page 1 of 2

SAMPLE: **Air Cuttings** Lab ID: 10112525-001A Grab  
SAMPLED BY: SG Sample Time: 11/16/2010 14:56

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst*
Total Petroleum Hydrocarbons	< 172 mg/Kg	EPA 9071	172	11/18/10 14:40	11/18/10	

Sample Note: Analysis performed by Microbac Laboratories, Inc-Erie Division.

SAMPLE: **Air Cuttings** Lab ID: 10112525-001B Grab  
SAMPLED BY: SG Sample Time: 11/16/2010 14:56

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst*
Moisture	25.2 %	Moisture Calc.	0.01	11/17/10 9:00	11/18/10	IC-SA
Free Liquid	< 0.1 %	EPA 9095A	0.1	11/17/10 9:00	11/17/10	IC-SA
pH	10.20@24.1°C	EPA 9045C		11/17/10 16:52	11/17/10	SG-SA

SAMPLE: **Air Cuttings** Lab ID: 10112525-001C Grab  
SAMPLED BY: SG Sample Time: 11/16/2010 14:56

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst*
Sodium	1390 mg/Kg-dry	EPA 6010B	100.0	11/18/10 9:00	11/18/10	GSR-CV
Chloride	429 mg/Kg-dry	EPA 300.0	67.1	11/18/10 15:13	11/19/10	HDP-CV
Percent Moisture	25.2 %	SM2540G		11/17/10 9:00	11/18/10	IC-SA

SAMPLE: **TCLP Leachate of Air Cuttings** Lab ID: 10112525-001E Grab  
SAMPLED BY: SG Sample Time: 11/17/2010 8:00

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst*
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.0008	11/17/10 9:00	11/18/10	KW-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	11/18/10 13:15	11/18/10	GSR-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	11/18/10 13:15	11/18/10	GSR-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	11/18/10 13:15	11/18/10	GSR-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	11/18/10 13:15	11/18/10	GSR-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	11/18/10 13:15	11/18/10	GSR-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

L Value above calibration range but within annually verified linear range

MANAGER

*Carrie M. Davis*

DATE: 11/19/2010

LAB ID: 08-00380  
LAB ID: 39-00401

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**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

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Horseheads, NY 14845

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Page 2 of 2

Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	11/18/10 13:15	11/18/10	GSR-CV
Nickel - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	11/18/10 13:15	11/18/10	GSR-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	11/18/10 13:15	11/18/10	GSR-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	11/18/10 13:15	11/18/10	GSR-CV
Zinc - TCLP extracted	40.1 mg/L	L EPA 6010B	0.200	11/18/10 13:15	11/18/10	GSR-CV

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L Value above calibration range but within annually verified linear range

MANAGER

*Cassie M. Davis*

DATE: 11/19/2010

**CHAIN OF CUSTODY**

**W/O#: 10112525**

**REPORT TO:** Talisman / UEG  
 geowetlands@aol.com

**CONTACT:** Steve Gridley  
 PH# 607-731-0145  
 FAX#  
**BILL TO:** Talisman

PO# AF78425  
 PROJECT DESCRIPTION 01-023  
 SAMPLER SIGNATURE / AFFILIATION [Signature] UEG  
 CONTAINER / SAMPLING POINT

REFRIGERATE SAMPLES  
 AFTER COLLECTION

**TRANSPORT  
 TO  
 LABORATORY  
 IN COOLER  
 WITH ICE**

RESULTS ARE BEING USED FOR:  
 NYDOH  NYDEC  PADEP  
 LANDFILL  
 PERSONAL OTHER

ARE SPECIAL DETECTION LIMITS  
 NEEDED:  YES  NO  
 IF YES, PLEASE ATTACH  
 IS A QC PACKAGE NEEDED?  
 YES  NO  
 IF YES, PLEASE ATTACH REQUIREMENTS

- DW DRINKING WATER SL SLUDGE
- GW GROUND WATER SO SOIL
- SW SURFACE WATER HZ HAZARDOUS
- WW WASTE WATER OTHER
- DE DEIONIZED WATER DI DISTILLED WATER

- H HYDROCHLORIC ACID OH SODIUM HYDROXIDE
- S SULFURIC ACID AS ASCORBIC ACID
- N NITRIC ACID AC ACETIC ACID
- SO<sub>3</sub> SODIUM SULFITE NH<sub>4</sub> AMMONIUM CHLORIDE
- Thio SODIUM THIOSULFATE ZN ZINC ACETATE
- NONE Hg MERCURIC CHLORIDE

An incomplete chain of custody may delay the  
 processing of your sample(s).

ANALYSIS TO BE PERFORMED  
 (PER CONTAINER)

COMPOSITED ON RECEIPT  
 PRESERVATIVE ADDED ON RECEIPT

Please fill out all  
 applicable areas  
 completely

LAB USE ONLY

1	Air Cuttings	11/16	1456	50	C	95	N	TPH			
2								pH, Chlorides, Sodium			
3								TCLP 8 RCRA Metals + Cu, Ni, Zn			
4	A - TPH							Free Liquids / % Moisture			
5	B - pH, free liquid, % moisture										
6	C - Anions, metals							Perform BTEX ONLY IF the TPH			
7	D - Total Sample							exceeds 100,000 mg/Kg			
8	E - TCLP metals										
9								<u>72</u> HOUR TURNAROUND			
10								DAY TURNAROUND			
11											

LAB USE ONLY  
 DELIVERED BY [Signature] TEMPERATURE UPON RECEIPT 13.5 C ARRIVAL ON ICE Y/N

RELINQUISHED BY: <u>[Signature]</u>	DATE: <u>11/16/10</u>	TIME: <u>1640</u>	RECEIVED BY:	DATE: <u>1/1</u>	TIME:
RELINQUISHED BY:	DATE: <u>1/1</u>	TIME:	RECEIVED BY:	DATE: <u>1/1</u>	TIME:
RELINQUISHED BY:	DATE: <u>1/1</u>	TIME:	RECEIVED BY: <u>[Signature]</u>	DATE: <u>11/16/10</u>	TIME: <u>16:40</u>



LAB ID: 08-00380  
LAB ID: 39-00401

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169  
Fax: (570) 888-0717

Work Order: 10120839

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10120839  
PAGE: 1 of 1  
PO#: AF78425  
PWS ID#

PHONE: (607) 731-0145  
FAX: (607) 562-4001

**TEST REPORT**

01-023

RECEIVED FOR LAB BY: CMS

DATE: 12/06/2010 15:40

Page 1 of 1

SAMPLE: <b>Inv. Cuttings</b>		Lab ID: 10120839-001A	Composite			
SAMPLED BY: SG		Sample Time: 12/06/2010 10:30				
<u>Test</u>	<u>Result</u>	<u>Method</u>	<u>SLOQ</u>	<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Total Petroleum Hydrocarbons	42500 mg/Kg	EPA 9071		12/08/10 14:20	12/08/10	
Sample Note: Analysis performed by Microbac Laboratories, Inc-Erie Division						

SAMPLE: <b>Inv. Cuttings</b>		Lab ID: 10120839-001B	Composite			
SAMPLED BY: SG		Sample Time: 12/06/2010 10:30				
<u>Test</u>	<u>Result</u>	<u>Method</u>	<u>SLOQ</u>	<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Moisture	37.7 %	Moisture Calc.	0.01	12/06/10 17:30	12/07/10	IC-SA
Free Liquid	<0.1 %	EPA 9095A	0.1	12/06/10 17:20	12/06/10	IC-SA
pH	8.23@21.7°C	EPA 9045C		12/07/10 14:20	12/07/10	MED-SA

SAMPLE: <b>TCLP Leachate of Inv. Cuttings</b>		Lab ID: 10120839-001E	Composite			
SAMPLED BY: SG		Sample Time: 12/07/2010 8:00				
<u>Test</u>	<u>Result</u>	<u>Method</u>	<u>SLOQ</u>	<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.0008	12/07/10 10:15	12/09/10	KW-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	12/08/10 12:15	12/08/10	GSR-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	12/08/10 12:15	12/08/10	GSR-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	12/08/10 12:15	12/08/10	GSR-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	12/08/10 12:15	12/08/10	GSR-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	12/08/10 12:15	12/08/10	GSR-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	12/08/10 12:15	12/08/10	GSR-CV
Nickel - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	12/08/10 12:15	12/08/10	GSR-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	12/08/10 12:15	12/08/10	GSR-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	12/08/10 12:15	12/08/10	GSR-CV
Zinc - TCLP extracted	39.5 mg/L	L EPA 6010B	0.200	12/08/10 12:15	12/08/10	GSR-CV

REMARKS:

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L Value above calibration range but within annually verified linear range

MANAGER

*Cassie M. Davis*

DATE: 12/10/2010

**CHAIN OF CUSTODY**

**REPORT TO:** Talisman / UEG  
 geowetlands@aol.com

**CONTACT:** Steve Gridley  
 PH# 607-731-0145  
 FAX#

**BILL TO:** Talisman

PO# AF78425  
 PROJECT DESCRIPTION: 01-023

SAMPLER SIGNATURE / AFFILIATION: *[Signature]* UEG  
 CONTAINER / SAMPLING POINT

REFRIGERATE SAMPLES  
 AFTER COLLECTION

**TRANSPORT  
 TO  
 LABORATORY  
 IN COOLER  
 WITH ICE**

**W/O#: 10120839**

- DW DRINKING WATER SL SLUDGE
- GW GROUND WATER SO SOIL
- SW SURFACE WATER HZ HAZARDOUS
- WW WASTE WATER OTHER
- DE DEIONIZED WATER DI DISTILLED WATER

- ANALYSIS TO BE USED FOR:
- NYDOH
  - NYDEC
  - PADEP
  - LANDFILL
  - PERSONAL
  - OTHER

**ARE SPECIAL DETECTION LIMITS  
 NEEDED:**  YES  NO

IF YES, PLEASE ATTACH

IS A QC PACKAGE NEEDED?  
 YES  NO

IF YES, PLEASE ATTACH REQUIREMENTS

- H HYDROCHLORIC ACID OH SODIUM HYDROXIDE
- S SULFURIC ACID AS ASCORBIC ACID
- N NITRIC ACID AC ACETIC ACID
- SO<sub>3</sub> SODIUM SULFITE NH<sub>4</sub> AMMONIUM CHLORIDE
- Thio SODIUM THIOSULFATE ZN ZINC ACETATE
- NONE Hg MERCURIC CHLORIDE

An incomplete chain of custody may delay the  
 processing of your sample(s).

ANALYSIS TO BE PERFORMED  
 (PER CONTAINER)

COMPOSITED ON RECEIPT  
 PRESERVATIVE ADDED ON RECEIPT

Please fill out all  
 applicable areas  
 completely

LAB USE ONLY

DATE SAMPLED	TIME OF SAMPLING	SAMPLE MATRIX	SAMPLE TYPE - GRAB / COMPOSITE	SAMPLER INITIALS	PRESERVATIVE	ANALYSIS TO BE PERFORMED (PER CONTAINER)	COMPOSITED ON RECEIPT	PRESERVATIVE ADDED ON RECEIPT
12/6/03	0500	SO	C	SO	N	TPH		
						pH		
						TCLP 8 RCRA Metals + Cu, Ni, Zn		
						Free Liquids / % Moisture		
						Perform BTEX ONLY IF the TPH exceeds 100,000 mg/Kg		
						72 HOUR TURNAROUND		
						DAY TURNAROUND		

LAB USE ONLY

DELIVERED BY: *[Signature]* TEMPERATURE UPON RECEIPT: 5 °C ARRIVAL ON ICE: 10

RELINQUISHED BY: <i>[Signature]</i>	DATE: 12/6/03	TIME: 1540	RECEIVED BY:	DATE: 1/1	TIME:
RELINQUISHED BY:	DATE: 1/1	TIME:	RECEIVED BY:	DATE: 1/1	TIME:
RELINQUISHED BY:	DATE: 1/1	TIME:	RECEIVED BY: <i>[Signature]</i>	DATE: 12/6/03	TIME: 1540

PA ID #: 08-00380  
NY ID #: 11216

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169  
Fax: (570) 888-0717

Work Order: 10121752

SEND DATA TO:

NAME: Dina Brown  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10121752  
PAGE: 1 of 3  
PO#: AF78425  
PWS ID#

PHONE: (607) 562-4000  
FAX: (607) 562-4001

**TEST REPORT**

01-023

RECEIVED FOR LAB BY: RML

DATE: 12/09/2010 15:45

Page 1 of 3

SAMPLE: **Inv. Cuttings** Lab ID: 10121752-001A Grab  
SAMPLED BY: SG Sample Time: 12/09/2010 12:04

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Ignitability	Neg ASIS °F	SW846 1030		12/15/10 13:30	12/15/10	

Sample Note: Analysis performed by QC Laboratories

SAMPLE: **Inv. Cuttings** Lab ID: 10121752-001C Grab  
SAMPLED BY: SG Sample Time: 12/09/2010 12:04

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Cyanide, Reactive	< 0.2 mg/Kg	SW 7.3.3.2	0.2	12/13/10 8:56	12/14/10	HDP-CV
Reactive Sulfide	1100 mg/Kg	Q SW846 7.3	32	12/14/10 12:30	12/14/10	LTW-CV

SAMPLE: **Inv. Cuttings** Lab ID: 10121752-001D Grab  
SAMPLED BY: SG Sample Time: 12/09/2010 12:04

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
% Solids	37.70 % Wght.	SM2540B	0.10	12/10/10 17:00	12/13/10	IC-SA
Total Volatile Solids	71.88 % Wght.	EPA 160.4	0.01	12/10/10 8:00	12/14/10	NFM-SA

SAMPLE: **TCLP Leachate of Inv. Cuttings** Lab ID: 10121752-001F Grab  
SAMPLED BY: SG Sample Time: 12/11/2010 12:45

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Pyridine	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
1,4-Dichlorobenzene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
o-Cresol	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
p-Cresol/m-Cresol	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Hexachloroethane	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Nitrobenzene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Hexachlorobutadiene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA

REMARKS:

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\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

B Analyte detected in the associated Method Blank

Q Due to matrix effects, not all quality control parameters met acceptance criteria

MANAGER

*Cassie M. Davis*

DATE: 12/16/2010

PA ID #: 08-00380  
NY ID # 11216

**Benchmark Analytics, Inc.**  
**Eastern Division**

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**TEST REPORT**

PWS ID#

01-023

RECEIVED FOR LAB BY: RML

DATE: 12/09/2010 15:45

Page 2 of 3

Test	Result	Method	Concentration	Time	Date	Analyst
2,4,6-Trichlorophenol	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
2,4,5-Trichlorophenol	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Pentachlorophenol	< 0.50 mg/L	EPA 8270C	0.50	12/15/10 7:48	12/15/10	RHH-SA
2,4-Dinitrotoluene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Hexachlorobenzene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Naphthalene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA

SAMPLE: **TCLP Leachate of Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10121752-001G Grab

Sample Time: 11/17/2010 8:00

SLOQ

Test	Result	Method	Concentration	Analysis Start	Analysis End	Analyst*
Strontium - TCLP extracted	< 0.050 mg/L	EPA 6010B	0.050	11/18/10 13:15	11/18/10	GSR-CV

Sample Note: Sample for TCLP extracted Strontium was received on 11/16/10 at 16:40 by SCP.

SAMPLE: **TCLP Leachate of Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10121752-001H Grab

Sample Time: 12/11/2010 12:45

SLOQ

Test	Result	Method	Concentration	Analysis Start	Analysis End	Analyst*
pH	5.10@16.9°C	SM4500H+B		12/14/10 8:00	12/14/10	SG-SA

SAMPLE: **ZHE Extract of Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10121752-001I Grab

Sample Time: 12/13/2010 8:45

SLOQ

Test	Result	Method	Concentration	Analysis Start	Analysis End	Analyst*
Benzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Carbon tetrachloride	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Chlorobenzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Chloroform	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
1,2-Dichloroethane	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
1,1-Dichloroethene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Ethylbenzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Isopropylbenzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA

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B Analyte detected in the associated Method Blank

Q Due to matrix effects, not all quality control parameters met acceptance criteria

MANAGER

*Cassie M. Davis*

DATE: 12/16/2010

PA ID #: 08-00380  
NY ID #: 11216

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PAGE: 3 of 3  
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PHONE: (607) 562-4000  
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## TEST REPORT

01-023

RECEIVED FOR LAB BY: RML

DATE: 12/09/2010 15:45

Page 3 of 3

Compound	Concentration	Method	Concentration	Analysis Start	Analysis End	Analyst
Tetrachloroethene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Toluene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Trichloroethene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
1,2,4-Trimethylbenzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
1,3,5-Trimethylbenzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Vinyl chloride	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Methyl tert-butyl ether	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
2-Butanone	< 0.0500 mg/L	EPA 8260B	0.0500	12/13/10 8:11	12/13/10	CTM-SA

SAMPLE: ASTM Extract of Inv. Cuttings  
SAMPLED BY: SG

Lab ID: 10121752-001J Grab

Sample Time: 12/10/2010 11:15

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst*
Chemical Oxygen Demand	548 mg/L	B HACH 8000	10	12/11/10 8:00	12/13/10	KMF-SA

SAMPLE: ASTM Extract of Inv. Cuttings  
SAMPLED BY: SG

Lab ID: 10121752-001L Grab

Sample Time: 12/10/2010 11:15

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst*
pH	6.80@17.9°C	SM4500H+B		12/14/10 8:00	12/14/10	SG-SA
Total Solids	720 mg/L	SM2540B	0.10	12/10/10 17:00	12/13/10	IC-SA

SAMPLE: Inv. Cuttings  
SAMPLED BY: SG

Lab ID: 10121752-001M Grab

Sample Time: 12/10/2010 10:25

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst*
Total Organic Halides	< 5.00 mg/kg	SW846/9023	5.00	12/15/10 15:45	12/15/10	

Sample Note: Analysis performed by Analytical Services, Inc.

**REMARKS:**

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

B Analyte detected in the associated Method Blank

Q Due to matrix effects, not all quality control parameters met acceptance criteria

MANAGER

*Carrie M. Davis*

DATE: 12/16/2010

**CHAIN OF CUSTODY**

**REPORT TO:** Talisman / UEG  
geowetlands@aol.com

**Benchmar**  
East  
2566 Pennsylvania  
Phone:  
Fax: (510) 000-0111

**W/O#: 10121752**

**SPECIAL DETECTION LIMITS**

REQUIRED:  YES  NO  
IF YES, PLEASE ATTACH  
IS A QC PACKAGE NEEDED?  
 YES  NO  
IF YES, PLEASE ATTACH REQUIREMENTS

**CONTACT** Steve Gridley

**PH#** 607-731-0145

**FAX#**

**BILL TO:** Talisman

**PO#** AF 78425

**PROJECT DESCRIPTION**  
[REDACTED] 284 01-023

**SAMPLER SIGNATURE / AFFILIATION**  
[Signature] UEG

**CONTAINER / SAMPLING POINT**

REFRIGERATE SAMPLES  
AFTER COLLECTION

**TRANSPORT  
TO  
LABORATORY  
IN COOLER  
WITH ICE**

DW DRINKING WATER SL SLUDGE  
GW GROUND WATER SO SOIL  
SW SURFACE WATER HZ HAZARDOUS  
WW WASTE WATER OTHER  
DE DEIONIZED WATER DI DISTILLED WATER

**RESULTS ARE BEING USED FOR:**  
 NYDOH  NYDEC  PADEP  
LANDFILL Mostoller  
 PERSONAL OTHER

H HYDROCHLORIC ACID OH SODIUM HYDROXIDE  
S SULFURIC ACID AS ASCORBIC ACID  
N NITRIC ACID AC ACETIC ACID  
SO<sub>3</sub> SODIUM SULFITE NH<sub>4</sub> AMMONIUM CHLORIDE  
Thio SODIUM THIOSULFATE ZN ZINC ACETATE  
- NONE Hg MERCURIC CHLORIDE

An incomplete chain of custody may delay the processing of your sample(s).

**ANALYSIS TO BE PERFORMED  
(PER CONTAINER)**

COMPOSITED ON RECEIPT  
PRESERVATIVE ADDED ON RECEIPT

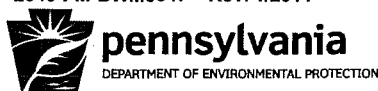
Please fill out all applicable areas completely

**LAB USE ONLY**

DATE SAMPLED	TIME OF SAMPLING	SAMPLE MATRIX	SAMPLE TYPE - GRAB / COMPOSITE	SAMPLER INITIALS	PRESERVATIVE	ANALYSIS TO BE PERFORMED (PER CONTAINER)	COMPOSITED ON RECEIPT	PRESERVATIVE ADDED ON RECEIPT
12A	1204	SO	C	SRN		Ignitability, Reactive Sulfide & Cyanide		
			C			PCBs, Total Solids		
			G			Total Volatile Solids		
			C			Ammonia-Nitrogen		
			C			Water Leaching Procedure: COD,		
			C			Total Solids, Oil & Grease,		
						36 HOUR TURNAROUND		
						DAY TURNAROUND		

**LAB USE ONLY**  
DELIVERED BY: [Signature] TEMPERATURE UPON RECEIPT: [ ] °C ARRIVAL ON ICE: [ ] MIN

RELINQUISHED BY: [Signature]	DATE: 12/9/10	TIME: 1530	RECEIVED BY: [Signature]	DATE: 1/1	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY: [Signature]	DATE: 12/9/10	TIME: 1315



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WASTE MANAGEMENT

**FORM 26R**  
**CHEMICAL ANALYSIS OF RESIDUAL WASTE**  
**ANNUAL REPORT BY THE GENERATOR**

This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form 26R, reference the item number and identify the date prepared. The date on attached sheets needs to match the date noted below.		<b>DEP USE ONLY</b>		
General Reference 287.54		Date Received & General Notes		
Date Prepared/Revised February 11, 2011				
<b>SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION</b>				
Company Name Talisman Energy USA Inc.				
If a Subsidiary, Name of Parent Company Talisman Energy Inc.			EPA Generator ID# N/A	
Company Mailing Address Line 1 50 Pennwood Place		Company Mailing Address Line 2		
Company Address Last Line – City Warrendale	State PA	Zip+4 15086	Phone (724) 814-5300	
Company Contact Last Name Brown	First Name Dina	MI	Suffix	
Municipality Warrendale	County Allegheny			
Contact Phone (724) 814-5321	Ext	Contact Email Address dybrown@talismanusa.com		
Is the waste generated at the Company Mailing Address (noted above)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
If 'No', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the (03-045) well pad site located at 504 Ballard Hill Road, Columbia Township, Bradford County, PA. Waste is stored in containers on site.				
Municipality Columbia	County Bradford	State PA		
<b>SECTION B. WASTE DESCRIPTION</b>				
Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure	Time Frame
810	Drill cuttings (oil and gas)	1,034	<input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton	<input type="checkbox"/> One Time
<b>1. GENERAL PROPERTIES</b>				
a.	pH Range 6.07 to 7.96 (based on analyses or knowledge)			
b.	Physical State <input type="checkbox"/> Liquid Waste (EPA Method 9095) <input checked="" type="checkbox"/> Solid (EPA Method 9095) <input type="checkbox"/> Gas (ambient temperature & pressure)			
c.	Physical Appearance Color <u>Greyish Black</u> Odor <u>Earthy/Slight Petroleum</u> Number of Solid or Liquid Phases of Separation <u>One</u> Describe each phase of separation. <u>Soil and Rock Fragments</u>			
<b>2. CHEMICAL ANALYSIS ATTACHMENTS</b>				
a.	The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
b.	A detailed description of the waste sampling method is attached.			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
c.	The quality assurance/quality control procedures employed by the laboratory(ies) is attached.			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
d.	The results of the hazardous waste determination is attached.			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
e.	If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.			<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A

<b>3. PROCESS DESCRIPTION &amp; SCHEMATIC ATTACHMENTS</b>																					
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																				
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																				
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached. <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A																				
<b>SECTION C. MANAGEMENT OF RESIDUAL WASTE</b>																					
<b>1. PROCESSING OR DISPOSAL FACILITY(IES)</b>																					
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.																					
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 100361																				
b.	<table border="0"> <tr> <td>Facility Name</td> <td colspan="3">McKean County Landfill</td> </tr> <tr> <td>Address Line 1</td> <td colspan="3">19 Ness Lane</td> </tr> <tr> <td>Address Line 1</td> <td colspan="3"></td> </tr> <tr> <td>Address City State ZIP</td> <td>Kane</td> <td>PA</td> <td>16735</td> </tr> <tr> <td>Municipality</td> <td>Sergeant Twp</td> <td>County</td> <td>McKean</td> </tr> </table>	Facility Name	McKean County Landfill			Address Line 1	19 Ness Lane			Address Line 1				Address City State ZIP	Kane	PA	16735	Municipality	Sergeant Twp	County	McKean
Facility Name	McKean County Landfill																				
Address Line 1	19 Ness Lane																				
Address Line 1																					
Address City State ZIP	Kane	PA	16735																		
Municipality	Sergeant Twp	County	McKean																		
c.	<table border="0"> <tr> <td>Facility Contact Name</td> <td colspan="3">Mike Manderfeld</td> </tr> <tr> <td>Title</td> <td colspan="3"></td> </tr> <tr> <td>Phone</td> <td>(814) 778-9931</td> <td>Email Address</td> <td>manderfeld@gmail.com</td> </tr> </table>	Facility Contact Name	Mike Manderfeld			Title				Phone	(814) 778-9931	Email Address	manderfeld@gmail.com								
Facility Contact Name	Mike Manderfeld																				
Title																					
Phone	(814) 778-9931	Email Address	manderfeld@gmail.com																		
d.	Volume of waste shipped to processing or disposal facility in the previous year. 503 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)																				
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 9-0232-00003																				
b.	<table border="0"> <tr> <td>Facility Name</td> <td colspan="3">Hyland Landfill</td> </tr> <tr> <td>Address Line 1</td> <td colspan="3">6653 Herdman Road</td> </tr> <tr> <td>Address Line 1</td> <td colspan="3"></td> </tr> <tr> <td>Address City State ZIP</td> <td>Angelica</td> <td>NY</td> <td>14709</td> </tr> <tr> <td>Municipality</td> <td>Angelica</td> <td>County</td> <td>Allegany</td> </tr> </table>	Facility Name	Hyland Landfill			Address Line 1	6653 Herdman Road			Address Line 1				Address City State ZIP	Angelica	NY	14709	Municipality	Angelica	County	Allegany
Facility Name	Hyland Landfill																				
Address Line 1	6653 Herdman Road																				
Address Line 1																					
Address City State ZIP	Angelica	NY	14709																		
Municipality	Angelica	County	Allegany																		
c.	<table border="0"> <tr> <td>Facility Contact Name</td> <td colspan="3">Larry Shilling</td> </tr> <tr> <td>Title</td> <td colspan="3"></td> </tr> <tr> <td>Phone</td> <td>(585) 466-7271</td> <td>Email Address</td> <td>larry.shilling@casella.com</td> </tr> </table>	Facility Contact Name	Larry Shilling			Title				Phone	(585) 466-7271	Email Address	larry.shilling@casella.com								
Facility Contact Name	Larry Shilling																				
Title																					
Phone	(585) 466-7271	Email Address	larry.shilling@casella.com																		
d.	Volume of waste shipped to processing or disposal facility in the previous year. 293 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)																				
<b>2. BENEFICIAL USE</b>																					
a.	Has the waste been approved for beneficial use? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If "Yes", list the general permit number or approval number.																				
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)																				



3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS			
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
SECTION C. MANAGEMENT OF RESIDUAL WASTE			
1. PROCESSING OR DISPOSAL FACILITY(IES)			
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.			
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 8-4630-00010		
b.	Facility Name	Hakes C&D Landfill	
	Address Line 1	4376 Manning Ridge Road	
	Address Line 1		
	Address City State ZIP	Painted Post NY 14870	
	Municipality	Erwin Twp County Steuben	
c.	Facility Contact Name	Joseph Boyles	
	Title		
	Phone	(607) 937-6044	Email Address joe.boyles@casella.com
		(585) 466-7271	
d.	Volume of waste shipped to processing or disposal facility in the previous year. 151 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 100945		
b.	Facility Name	Cumberland County Landfill	
	Address Line 1	135 Vaughn Road	
	Address Line 1		
	Address City State ZIP	Newburg PA 17240	
	Municipality	Newbug Boro County Cumberland	
c.	Facility Contact Name	Dusty Hilbert	
	Title	Compliance Manager	
	Phone	(717) 729-5261	Email Address dhilbert@iswaste.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 72 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
2. BENEFICIAL USE			
a.	Has the waste been approved for beneficial use? If "Yes", list the general permit number or approval number.		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		

3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS			
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
SECTION C. MANAGEMENT OF RESIDUAL WASTE			
1. PROCESSING OR DISPOSAL FACILITY(IES)			
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.			
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 101243		
b.	Facility Name	Chemung County Landfill	
	Address Line 1	1690 Lake Street	
	Address Line 1		
	Address City State ZIP	Elmira NY	14903
	Municipality	Elmira	County Chemung
c.	Facility Contact Name	Carla Canjar	
	Title	Environmental Manager	
	Phone	(585) 797-5941	Email Address carla.canjar@casella.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 15 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
a.	Solid waste permit number(s) for processing or disposal facility being utilized.		
b.	Facility Name		
	Address Line 1		
	Address Line 1		
	Address City State ZIP		
	Municipality	County	
c.	Facility Contact Name		
	Title		
	Phone	Email Address	
d.	Volume of waste shipped to processing or disposal facility in the previous year. <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		
2. BENEFICIAL USE			
a.	Has the waste been approved for beneficial use? If "Yes", list the general permit number or approval number.		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		

**SECTION D. CERTIFICATION**

I certify, under penalty of law, that I have personally examined and am familiar with the information submitted in this Annual Report and all attached documents and that based upon my inquiry of those individuals immediately responsible for obtaining the information, I verify that the submitted information is true, accurate and complete to the best of my knowledge. I understand that the submission of false information herein is made subject to the penalties of 18 Pa. C.S. §4904, relating to unsworn falsification to authorities, which include fine and imprisonment.

Check the following, if applicable:

I certify the information required in Section B-1, General Properties was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-2, Chemical Analysis was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-3, Process Description and Schematic, was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

Name of Responsible Official \_\_\_\_\_ Title Environmental Specialist

Dina Brown \_\_\_\_\_

Signature  \_\_\_\_\_ Date 2/25/11

LAB ID: 08-00380  
LAB ID: 39-00401

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10112530

Phone: (570) 888-0169  
Fax: (570) 888-0717

**SEND DATA TO:**

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10112530  
PAGE: 1 of 2  
PO#: AF76723  
PWS ID#

PHONE: (607) 731-0145  
FAX: (607) 562-4001

## TEST REPORT

03-045

RECEIVED FOR LAB BY: SCP

DATE: 11/16/2010 16:40

Page 1 of 2

SAMPLE: **Air Cuttings**  
SAMPLED BY: SG

Lab ID: 10112530-001A Grab  
Sample Time: 11/15/2010 18:39

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Total Petroleum Hydrocarbons	39400 mg/Kg	EPA 9071	170	11/18/10 14:40	11/18/10	

Sample Note: Analysis performed by Microbac Laboratories, Inc-Erie Division.

SAMPLE: **Air Cuttings**  
SAMPLED BY: SG

Lab ID: 10112530-001B Grab  
Sample Time: 11/15/2010 18:39

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Moisture	34.8 %	Moisture Calc.	0.01	11/17/10 9:00	11/18/10	IC-SA
Free Liquid	< 0.1 %	EPA 9095A	0.1	11/17/10 9:05	11/17/10	IC-SA
pH	7.96@24.3°C	EPA 9045C		11/17/10 16:52	11/17/10	SG-SA

SAMPLE: **Air Cuttings**  
SAMPLED BY: SG

Lab ID: 10112530-001C Grab  
Sample Time: 11/15/2010 18:39

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Sodium	294 mg/Kg-dry	EPA 6010B	132	11/18/10 9:00	11/18/10	GSR-CV
Chloride	1030 mg/Kg-dry	EPA 300.0	74.8	11/18/10 15:13	11/19/10	HDP-CV
Percent Moisture	34.8 %	SM2540G		11/17/10 9:00	11/18/10	IC-SA

SAMPLE: **TCLP Leachate of Air Cuttings**  
SAMPLED BY: SG

Lab ID: 10112530-001E Grab  
Sample Time: 11/17/2010 8:00

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.0008	11/17/10 9:00	11/18/10	KW-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	11/18/10 13:15	11/18/10	GSR-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	11/18/10 13:15	11/18/10	GSR-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	11/18/10 13:15	11/18/10	GSR-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	11/18/10 13:15	11/18/10	GSR-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	11/18/10 13:15	11/18/10	GSR-CV

**REMARKS:**

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER

*Cassie M. Davis*

DATE: 11/19/2010

LAB ID: 08-00380  
LAB ID: 39-00401

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10112530

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10112530  
PAGE: 2 of 2  
PO#: AF76723  
PWS ID#

PHONE: (607) 731-0145  
FAX: (607) 562-4001

**TEST REPORT**

03-045

RECEIVED FOR LAB BY: SCP

DATE: 11/16/2010 16:40

Page 2 of 2

Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	11/18/10 13:15	11/18/10	GSR-CV
Nickel - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	11/18/10 13:15	11/18/10	GSR-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	11/18/10 13:15	11/18/10	GSR-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	11/18/10 13:15	11/18/10	GSR-CV
Zinc - TCLP extracted	2.15 mg/L	EPA 6010B	0.200	11/18/10 13:15	11/18/10	GSR-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER

*Cassie M. Davis*

DATE: 11/19/2010

**CHAIN OF CUSTODY**

**W/O#: 10112530**

**REPORT TO:** Talisman / UEG  
 geowetlands@aol.com

**CONTACT:** Steve Gridley  
 PH# 607-731-0145  
 FAX#  
**BILL TO:** Talisman

PO# AF78489  
 PROJECT DESCRIPTION  
03-045  
 SAMPLER SIGNATURE / AFFILIATION  
SCG LAEG  
 CONTAINER SAMPLING POINT

REFRIGERATE SAMPLES  
 AFTER COLLECTION

**TRANSPORT  
 TO  
 LABORATORY  
 IN COOLER  
 WITH ICE**

RESULTS ARE BEING USED FOR:

<input type="checkbox"/> NYDOH	<input checked="" type="checkbox"/> NYDEC	<input checked="" type="checkbox"/> PADEP
<input type="checkbox"/> LANDFILL		
<input type="checkbox"/> PERSONAL	<input type="checkbox"/> OTHER	

**ARE SPECIAL DETECTION LIMITS  
 NEEDED:**  YES  NO

IF YES, PLEASE ATTACH

IS A QC PACKAGE NEEDED?  
 YES  NO

IF YES, PLEASE ATTACH REQUIREMENTS

DW	DRINKING WATER	SL	SLUDGE
GW	GROUND WATER	SO	SOIL
SW	SURFACE WATER	HZ	HAZARDOUS
WW	WASTE WATER	OTHER	
DE	DEIONIZED WATER	DI	DISTILLED WATER

H	HYDROCHLORIC ACID	OH	SODIUM HYDROXIDE
S	SULFURIC ACID	AS	ASCORBIC ACID
N	NITRIC ACID	AC	ACETIC ACID
SO <sub>3</sub>	SODIUM SULFITE	NH <sub>4</sub>	AMMONIUM CHLORIDE
Thio	SODIUM THIOSULFATE	ZN	ZINC ACETATE
-	NONE	Hg	MERCURIC CHLORIDE

DATE SAMPLED  
 TIME OF SAMPLING  
 SAMPLE MATRIX  
 SAMPLE TYPE - GRAB / COMPOSITE  
 SAMPLER INITIALS  
 PRESERVATIVE

An incomplete chain of custody may delay the processing of your sample(s).

ANALYSIS TO BE PERFORMED (PER CONTAINER)

COMPOSITED ON RECEIPT  
 PRESERVATIVE ADDED ON RECEIPT

LAB USE ONLY

Please fill out all applicable areas completely

1	Air Cuttings	11/5	1839	50	C	SO	N	TPH			
2								pH, Chlorides, Sodium			
3								TCLP 8 RCRA Metals + Cu, Ni, Zn			
4	A - TPH							Free Liquids / % Moisture			
5	B - pH, free liquid, % moisture										
6	C - Anions, metals							Perform BTEX ONLY IF the TPH			
7	D - total sample							exceeds 100,000 mg/Kg			
8	E - TCLP metals.										
9								<u>72</u> HOUR TURNAROUND			
10								DAY TURNAROUND			
11											

LAB USE ONLY

DELIVERED BY: [Signature] TEMPERATURE UPON RECEIPT: 13.5 °C ARRIVAL ON ICE: Y/N

RELINQUISHED BY: <u>[Signature]</u>	DATE: <u>11/16/10</u>	TIME: <u>1640</u>	RECEIVED BY:	DATE: <u>1/1</u>	TIME:
RELINQUISHED BY:	DATE: <u>1/1</u>	TIME:	RECEIVED BY:	DATE: <u>1/1</u>	TIME:
RELINQUISHED BY:	DATE: <u>1/1</u>	TIME:	RECEIVED BY: <u>[Signature]</u>	DATE: <u>11/16/10</u>	TIME: <u>16:40</u>

LAB ID: 08-00380  
LAB ID: 39-00401

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10120827

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10120827  
PAGE: 1 of 1  
PO#: AF78489  
PWS ID#

PHONE: (607) 731-0145  
FAX: (607) 562-4001

**TEST REPORT**

03-045

RECEIVED FOR LAB BY: CMS

DATE: 12/06/2010 15:40

Page 1 of 1

SAMPLE: **Inv Cuttings + Omni**  
SAMPLED BY: SG

Lab ID: 10120827-001A Composite

Sample Time: 12/06/2010 11:22

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Total Petroleum Hydrocarbons	22800 mg/Kg	EPA 9071		12/08/10 14:20	12/08/10	
Sample Note: Analysis performed by Microbac Laboratories, Inc-Erie Division						

SAMPLE: **Inv Cuttings + Omni**  
SAMPLED BY: SG

Lab ID: 10120827-001B Composite

Sample Time: 12/06/2010 11:22

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Moisture	33.1 %	Moisture Calc.	0.01	12/06/10 17:30	12/07/10	IC-SA
Free Liquid	< 0.1 %	EPA 9095A	0.1	12/06/10 17:00	12/06/10	IC-SA
pH	6.07@21.7°C	EPA 9045C		12/07/10 14:20	12/07/10	MED-SA

SAMPLE: **TCLP Leachate of Inv Cuttings + Omni**  
SAMPLED BY: SG

Lab ID: 10120827-001E Composite

Sample Time: 12/07/2010 8:00

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.0008	12/07/10 10:15	12/09/10	KW-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	12/08/10 12:15	12/08/10	GSR-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	12/08/10 12:15	12/08/10	GSR-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	12/08/10 12:15	12/08/10	GSR-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	12/08/10 12:15	12/08/10	GSR-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	12/08/10 12:15	12/08/10	GSR-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	12/08/10 12:15	12/08/10	GSR-CV
Nickel - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	12/08/10 12:15	12/08/10	GSR-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	12/08/10 12:15	12/08/10	GSR-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	12/08/10 12:15	12/08/10	GSR-CV
Zinc - TCLP extracted	0.250 mg/L	EPA 6010B	0.200	12/08/10 12:15	12/08/10	GSR-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER

*Cassie M. Davis*

DATE: 12/10/2010

**CHAIN OF CUSTODY**

**REPORT TO:** Talisman / UEG  
 geowetlands@aol.com

**CONTACT:** Steve Gridley  
 PH# 607-731-0145  
 FAX#

**BILL TO:** Talisman

PO# AF78489  
 PROJECT DESCRIPTION  
 03-045  
 SAMPLER SIGNATURE / AFFILIATION  
 SGC UEG  
 CONTAINER SAMPLING POINT

**W/O#: 10120827**

REFRIGERATE SAMPLES  
 AFTER COLLECTION

**TRANSPORT  
 TO  
 LABORATORY  
 IN COOLER  
 WITH ICE**

**RESULTS ARE BEING USED FOR:**

NYDOH  NYDEC  PADEP

LANDFILL  PERSONAL  OTHER

**ARE SPECIAL DETECTION LIMITS  
 NEEDED:**  YES  NO

IF YES, PLEASE ATTACH

**IS A QC PACKAGE NEEDED?**  
 YES  NO

IF YES, PLEASE ATTACH REQUIREMENTS

- |                    |                    |
|--------------------|--------------------|
| DW DRINKING WATER  | SL SLUDGE          |
| GW GROUND WATER    | SO SOIL            |
| SW SURFACE WATER   | HZ HAZARDOUS       |
| WW WASTE WATER     | OTHER              |
| DE DEIONIZED WATER | DI DISTILLED WATER |

- |                                |                                   |
|--------------------------------|-----------------------------------|
| H HYDROCHLORIC ACID            | OH SODIUM HYDROXIDE               |
| S SULFURIC ACID                | AS ASCORBIC ACID                  |
| N NITRIC ACID                  | AC ACETIC ACID                    |
| SO <sub>3</sub> SODIUM SULFITE | NH <sub>4</sub> AMMONIUM CHLORIDE |
| Thio SODIUM THIOSULFATE        | ZN ZINC ACETATE                   |
| - NONE                         | Hg MERCURIC CHLORIDE              |

DATE SAMPLED	TIME OF SAMPLING	SAMPLE MATRIX	SAMPLE TYPE - GRAB / COMPOSITE	SAMPLER INITIALS	PRESERVATIVE	ANALYSIS TO BE PERFORMED (PER CONTAINER)	COMPOSITED ON RECEIPT	PRESERVATIVE ADDED ON RECEIPT	LAB USE ONLY
12/6	1122	SO	C	SG	N	TPH			Please fill out all applicable areas completely
2						pH			
3						TCLP 8 RCRA Metals + Cu, Ni, Zn			
4						Free Liquids / % Moisture			
5						A- TPH			
6						B- pH, Free liquid, % moisture			
7						C- Anions, metals			
8						D- Total Sample			
9						E- TCLP metals			
10						72 HOUR TURNAROUND due to			
11						DAY TURNAROUND			

An incomplete chain of custody may delay the processing of your sample(s).

ANALYSIS TO BE PERFORMED (PER CONTAINER)

LAB USE ONLY

LAB USE ONLY

DELIVERED BY: *[Signature]*

TEMPERATURE UPON RECEIPT: 5 °C

ARRIVAL ON ICE: Y/N

RELINQUISHED BY: <i>[Signature]</i>	DATE: 12/6/10	TIME: 1540	RECEIVED BY:	DATE: 1/1	TIME:
RELINQUISHED BY:	DATE: 1/1	TIME:	RECEIVED BY:	DATE: 1/1	TIME:
RELINQUISHED BY:	DATE: 1/1	TIME:	RECEIVED BY: <i>[Signature]</i>	DATE: 12/6/10	TIME: 1540



PA ID #: 08-00380  
NY ID # 11216

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169  
Fax: (570) 888-0717

Work Order: 10121740

**SEND DATA TO:**

NAME: Dina Brown  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10121740  
PAGE: 1 of 3  
PO#: AF78489  
PWS ID#

PHONE: (607) 562-4000  
FAX: (607) 562-4001

## TEST REPORT

03-045

RECEIVED FOR LAB BY: RML

DATE: 12/09/2010 15:45

Page 1 of 3

SAMPLE: **Inv. Cuttings** Lab ID: 10121740-001A Grab  
SAMPLED BY: SG Sample Time: 12/08/2010 20:00

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Ignitability	Neg ASIS °F	SW846 1030		12/15/10 13:30	12/15/10	

Sample Note: Analysis performed by QC Laboratories

SAMPLE: **Inv. Cuttings** Lab ID: 10121740-001C Grab  
SAMPLED BY: SG Sample Time: 12/08/2010 20:00

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Cyanide, Reactive	0.2 mg/Kg	SW 7.3.3.2	0.2	12/13/10 8:56	12/14/10	HDP-CV
Reactive Sulfide	1300 mg/Kg	SW846 7.3	16	12/14/10 12:30	12/14/10	LTW-CV

SAMPLE: **Inv. Cuttings** Lab ID: 10121740-001D Grab  
SAMPLED BY: SG Sample Time: 12/08/2010 20:00

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
% Solids	59.58 % Wght.	SM2540B	0.10	12/10/10 17:00	12/13/10	IC-SA
Total Volatile Solids	30.21 % Wght.	EPA 160.4	0.01	12/10/10 8:00	12/14/10	NFM-SA

SAMPLE: **TCLP Leachate of Inv. Cuttings** Lab ID: 10121740-001F Grab  
SAMPLED BY: SG Sample Time: 12/11/2010 12:45

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Pyridine	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
1,4-Dichlorobenzene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
o-Cresol	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
p-Cresol/m-Cresol	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Hexachloroethane	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Nitrobenzene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Hexachlorobutadiene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA

**REMARKS:**

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

B Analyte detected in the associated Method Blank

E Value above quantitation range

MANAGER

*Cassie M. Davis*

DATE: 12/16/2010

PA ID #: 08-00380  
NY ID #: 11216

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169  
Fax: (570) 888-0717

Work Order: 10121740

SEND DATA TO:

NAME: Dina Brown  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10121740  
PAGE: 2 of 3  
PO#: AF78489  
PWS ID#

PHONE: (607) 562-4000  
FAX: (607) 562-4001

**TEST REPORT**

03-045

RECEIVED FOR LAB BY: RML

DATE: 12/09/2010 15:45

Page 2 of 3

Test	Result	Method	Concentration	Time	Date	Analyst
2,4,6-Trichlorophenol	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
2,4,5-Trichlorophenol	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Pentachlorophenol	< 0.50 mg/L	EPA 8270C	0.50	12/15/10 7:48	12/15/10	RHH-SA
2,4-Dinitrotoluene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Hexachlorobenzene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Naphthalene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA

SAMPLE: **TCLP Leachate of Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10121740-001G Grab

Sample Time: 11/17/2010 8:00

SLOQ

Test	Result	Method	Concentration	Analysis Start	Analysis End	Analyst *
Strontium - TCLP extracted	7.33 mg/L	EPA 6010B	0.050	11/18/10 13:15	11/18/10	GSR-CV

Sample Note: Sample for TCLP extracted Strontium was received on 11/16/10 at 16:40 by SCP.

SAMPLE: **TCLP Leachate of Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10121740-001H Grab

Sample Time: 12/11/2010 12:45

SLOQ

Test	Result	Method	Concentration	Analysis Start	Analysis End	Analyst *
pH	6.12@16.7°C	SM4500H+B		12/14/10 8:00	12/14/10	SG-SA

SAMPLE: **ZHE Extract of Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10121740-001I Grab

Sample Time: 12/13/2010 8:45

SLOQ

Test	Result	Method	Concentration	Analysis Start	Analysis End	Analyst *
Benzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Carbon tetrachloride	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Chlorobenzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Chloroform	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
1,2-Dichloroethane	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
1,1-Dichloroethene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Ethylbenzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Isopropylbenzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

B Analyte detected in the associated Method Blank

E Value above quantitation range

MANAGER

*Cassi M. Davis*

DATE:

12/16/2010

PA ID #: 08-00380  
NY ID #: 11216

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169  
Fax: (570) 888-0717

Work Order: 10121740

SEND DATA TO:

NAME: Dina Brown  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10121740  
PAGE: 3 of 3  
PO#: AF78489  
PWS ID#

PHONE: (607) 562-4000  
FAX: (607) 562-4001

**TEST REPORT**

03-045

RECEIVED FOR LAB BY: RML

DATE: 12/09/2010 15:45

Page 3 of 3

Compound	Concentration	Method	Concentration	Analysis Start	Analysis End	Analyst
Tetrachloroethene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Toluene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Trichloroethene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
1,2,4-Trimethylbenzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
1,3,5-Trimethylbenzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Vinyl chloride	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Methyl tert-butyl ether	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
2-Butanone	< 0.0500 mg/L	EPA 8260B	0.0500	12/13/10 8:11	12/13/10	CTM-SA

SAMPLE: ASTM Extract of Inv. Cuttings  
SAMPLED BY: SG

Lab ID: 10121740-001J Grab

Sample Time: 12/12/2010 13:10

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Chemical Oxygen Demand	222 mg/L	HACH 8000	10	12/11/10 8:00	12/13/10	KMF-SA

SAMPLE: ASTM Extract of Inv. Cuttings  
SAMPLED BY: SG

Lab ID: 10121740-001L Grab

Sample Time: 12/12/2010 13:10

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
pH	7.46@16.7°C	SM4500H+B		12/14/10 8:00	12/14/10	SG-SA
Total Solids	1210 mg/L	SM2540B	0.10	12/10/10 17:00	12/13/10	IC-SA

SAMPLE: Inv. Cuttings  
SAMPLED BY: SG

Lab ID: 10121740-001M Grab

Sample Time: 12/12/2010 13:10

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Total Organic Halides	< 5.00 mg/kg	SW846/9023	5.00	12/15/10 15:45	12/15/10	

Sample Note: Analysis performed by Analytical Services, Inc.

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

B Analyte detected in the associated Method Blank

E Value above quantitation range

MANAGER

*Cassie M. Davis*

DATE: 12/16/2010

**CHAIN OF CUSTODY**

**Benchm:**

E 1 OF 1

**REPORT TO:** Talisman / UEG  
geowetlands@aol.com

E2  
2566 Pennsylvan  
Phon:  
Fax: (310) 600-0111

**W/O#: 10121740**

**SPECIAL DETECTION LIMITS**

INCLUDED:  YES /  NO  
IF YES, PLEASE ATTACH  
IS A QC PACKAGE NEEDED?  
 YES  NO  
IF YES, PLEASE ATTACH REQUIREMENTS

REFRIGERATE SAMPLES  
AFTER COLLECTION

**TRANSPORT  
TO  
LABORATORY  
IN COOLER  
WITH ICE**

DW DRINKING WATER SL SLUDGE  
GW GROUND WATER SO SOIL  
SW SURFACE WATER HZ HAZARDOUS  
WW WASTE WATER OTHER  
DE DEIONIZED WATER DI DISTILLED WATER

RESULTS ARE BEING USED FOR:  
 NYDOH  NYDEC  PADEP  
LANDFILL Mostoller  
 PERSONAL OTHER

**CONTACT** Steve Gridley

PH# 607-731-0145

FAX#

**BILL TO:** Talisman

PO# AF78489

PROJECT DESCRIPTION  
03-045

SAMPLER SIGNATURE / AFFILIATION  
*[Signature]* UEG

CONTAINER SAMPLING POINT

DATE SAMPLED  
TIME OF SAMPLING  
SAMPLE MATRIX  
SAMPLE TYPE - GRAB / COMPOSITE  
SAMPLER INITIALS  
PRESERVATIVE

H HYDROCHLORIC ACID OH SODIUM HYDROXIDE  
S SULFURIC ACID AS ASCORBIC ACID  
N NITRIC ACID AC ACETIC ACID  
SO<sub>3</sub> SODIUM SULFITE NH<sub>4</sub> AMMONIUM CHLORIDE  
Thio SODIUM THIOSULFATE ZN ZINC ACETATE  
- NONE Hg MERCURIC CHLORIDE

An incomplete chain of custody may delay the  
processing of your sample(s).

ANALYSIS TO BE PERFORMED  
(PER CONTAINER)

COMPOSITED ON RECEIPT  
PRESERVATIVE ADDED ON RECEIPT

Please fill out all  
applicable areas  
completely

LAB USE ONLY

1	Inv Cuttings	12/8 2000	SO	C	SO-N	Ignitability, Reactive Sulfide & Cyanide		
2				C		PCBs, Total Solids		
3	A - Plastics, Ign.			G		Total Volatile Solids		
4	B - Reactivity			C		Ammonia-Nitrogen		
5	D - TS, TSS			C		Water Leaching Procedure: COD,		
6	E - T. Sample			C		Total Solids, Oil & Grease,		
7	F - TCLP BNA, Leaks.							
8	G - TCLP Aarbs Jr							
9	H - TCLP pH							
10	I - TCLP Vols.							
11	J - ASTM COD, etc							

36 HOUR TURNAROUND

DAY TURNAROUND

LAB USE ONLY

DELIVERED BY

TEMPERATURE UPON RECEIPT

ARRIVAL ON ICE Y/N

RELINQUISHED BY: <i>[Signature]</i>	DATE: 12/9/10	TIME: 1530	RECEIVED BY: <i>[Signature]</i>	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY: <i>[Signature]</i>	DATE: 12/9/10	TIME: 1545



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WASTE MANAGEMENT

**FORM 26R**  
**CHEMICAL ANALYSIS OF RESIDUAL WASTE**  
**ANNUAL REPORT BY THE GENERATOR**

This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form 26R, reference the item number and identify the date prepared. The date on attached sheets needs to match the date noted below.		<b>DEP USE ONLY</b>		
General Reference 287.54		Date Received & General Notes		
Date Prepared/Revised February 11, 2011				
<b>SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION</b>				
Company Name Talisman Energy USA Inc.				
If a Subsidiary, Name of Parent Company Talisman Energy Inc.			EPA Generator ID# N/A	
Company Mailing Address Line 1 50 Pennwood Place		Company Mailing Address Line 2		
Company Address Last Line – City Warrendale	State PA	Zip+4 15086	Phone (724) 814-5300	
Company Contact Last Name Brown	First Name Dina	MI	Suffix	
Municipality Warrendale	County Allegheny			
Contact Phone (724) 814-5321	Ext	Contact Email Address dybrown@talismanusa.com		
Is the waste generated at the Company Mailing Address (noted above)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
If 'No', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the (01-003) well pad site located at 1349 Buckwheat Road, Granville Township, Bradford County, PA. Waste is stored in containers on site.				
Municipality Granville	County Bradford	State PA		
<b>SECTION B. WASTE DESCRIPTION</b>				
Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure	Time Frame
810	Drill cuttings (oil and gas)	1,949	<input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton	<input type="checkbox"/> One Time
<b>1. GENERAL PROPERTIES</b>				
a.	pH Range	8.89 to 9.01	(based on analyses or knowledge)	
b.	Physical State	<input type="checkbox"/> Liquid Waste (EPA Method 9095) <input checked="" type="checkbox"/> Solid (EPA Method 9095) <input type="checkbox"/> Gas (ambient temperature & pressure)		
c.	Physical Appearance	Color Greyish Black	Odor	Earthy/Slight Petroleum
		Number of Solid or Liquid Phases of Separation	One	
		Describe each phase of separation. Soil and Rock Fragments		
<b>2. CHEMICAL ANALYSIS ATTACHMENTS</b>				
a.	The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A detailed description of the waste sampling method is attached.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	The quality assurance/quality control procedures employed by the laboratory(ies) is attached.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
d.	The results of the hazardous waste determination is attached.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
e.	If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.		<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A

3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS			
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
SECTION C. MANAGEMENT OF RESIDUAL WASTE			
1. PROCESSING OR DISPOSAL FACILITY(IES)			
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.			
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 8-4630-00010		
b.	Facility Name	Hakes C&D Landfill	
	Address Line 1	4376 Manning Ridge Road	
	Address Line 1		
	Address City State ZIP	Painted Post NY 14870	
	Municipality	Erwin Twp County Steuben	
c.	Facility Contact Name	Joseph Boyles	
	Title		
	Phone	(607) 937-6044	Email Address joe.boyles@casella.com
		(585) 466-7271	
d.	Volume of waste shipped to processing or disposal facility in the previous year. 1,087 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 9-0232-00003		
b.	Facility Name	Hyland Landfill	
	Address Line 1	6653 Herdman Road	
	Address Line 1		
	Address City State ZIP	Angelica NY 14709	
	Municipality	Angelica County Allegany	
c.	Facility Contact Name	Larry Shilling	
	Title		
	Phone	(585) 466-7271	Email Address larry.shilling@casella.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 620 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
2. BENEFICIAL USE			
a.	Has the waste been approved for beneficial use? If "Yes", list the general permit number or approval number.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		

3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS			
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
SECTION C. MANAGEMENT OF RESIDUAL WASTE			
1. PROCESSING OR DISPOSAL FACILITY(IES)			
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.			
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 8-0728-00004		
b.	Facility Name	Chemung County Landfill	
	Address Line 1	1690 Lake Street	
	Address Line 1		
	Address City State ZIP	Elmira NY	14903
	Municipality	Elmira	County Chemung
c.	Facility Contact Name	Carla Canjar	
	Title	Environmental Manager	
	Phone	(585) 797-5941	Email Address carla.canjar@casella.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 242 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
a.	Solid waste permit number(s) for processing or disposal facility being utilized.		
b.	Facility Name		
	Address Line 1		
	Address Line 1		
	Address City State ZIP		
	Municipality	County	
c.	Facility Contact Name		
	Title		
	Phone	Email Address	
d.	Volume of waste shipped to processing or disposal facility in the previous year. <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		
2. BENEFICIAL USE			
a.	Has the waste been approved for beneficial use? If "Yes", list the general permit number or approval number.		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		

**SECTION D. CERTIFICATION**

I certify, under penalty of law, that I have personally examined and am familiar with the information submitted in this Annual Report and all attached documents and that based upon my inquiry of those individuals immediately responsible for obtaining the information, I verify that the submitted information is true, accurate and complete to the best of my knowledge. I understand that the submission of false information herein is made subject to the penalties of 18 Pa. C.S. §4904, relating to unsworn falsification to authorities, which include fine and imprisonment.

Check the following, if applicable:

I certify the information required in Section B-1, General Properties was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-2, Chemical Analysis was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-3, Process Description and Schematic, was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

Name of Responsible Official \_\_\_\_\_ Title Environmental Specialist

Dina Brown \_\_\_\_\_

Signature  Date 2/25/11



LAB ID: 08-00380  
LAB ID: 39-00401

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10074058

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10074058  
PAGE: 1 of 1  
PO#: AF77406

PHONE: (607) 562-4000  
FAX: (607) 562-4001

## TEST REPORT

PWS ID#

RECEIVED FOR LAB BY: DLM2

DATE: 07/26/2010 15:15

Page 1 of 1

SAMPLE: **Inv. Cuttings**

Lab ID: 10074058-001A

Composite

SAMPLED BY: SG

Sample Time: 07/26/2010 11:45

<u>Test</u>	<u>Result</u>	<u>Method</u>	<u>SLOQ</u>	<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Total Petroleum Hydrocarbons	72400 mg/Kg	EPA 9071		07/27/10 12:00	07/27/10	

Sample Note: Analysis performed by Microbac-Erie

SAMPLE: **Inv. Cuttings**

Lab ID: 10074058-001B

Composite

SAMPLED BY: SG

Sample Time: 07/26/2010 11:45

<u>Test</u>	<u>Result</u>	<u>Method</u>	<u>SLOQ</u>	<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Moisture	21.7 %	Moisture Calc.	0.01	07/26/10 10:30	07/27/10	NFM-SA
Free Liquid	< 0.1 %	EPA 9095A	0.1	07/26/10 16:15	07/26/10	IC-SA
pH	9.01@21.0°C	EPA 9045C		07/27/10 12:20	07/27/10	NFM-SA

SAMPLE: **TCLP Leachate of Inv. Cuttings**

Lab ID: 10074058-001D

Grab

SAMPLED BY: SG

Sample Time: 07/26/2010 11:45

<u>Test</u>	<u>Result</u>	<u>Method</u>	<u>SLOQ</u>	<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Mercury - TCLP extracted	< 0.0010 mg/L	EPA 7470A	0.0010	07/29/10 9:00	07/29/10	RMD-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	07/29/10 9:50	07/29/10	GSR-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	07/29/10 9:50	07/29/10	GSR-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	07/29/10 9:50	07/29/10	GSR-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	07/29/10 9:50	07/29/10	GSR-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	07/29/10 9:50	07/29/10	GSR-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	07/29/10 9:50	07/29/10	GSR-CV
Nickel - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	07/29/10 9:50	07/29/10	GSR-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	07/29/10 9:50	07/29/10	GSR-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	07/29/10 9:50	07/29/10	GSR-CV
Zinc - TCLP extracted	8.30 mg/L	EPA 6010B	0.200	07/29/10 9:50	07/29/10	GSR-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

S Spike Recovery outside accepted recovery limits

MANAGER

*Carrie M. Davis*

DATE: 7/30/2010

LAB ID: 08-00380  
LAB ID: 39-00401

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10081723

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10081723  
PAGE: 1 of 2  
PO#: AF77406

PHONE: (607) 562-4000  
FAX: (607) 562-4001

**TEST REPORT**

PWS ID#

RECEIVED FOR LAB BY: DLM2

DATE: 08/10/2010 15:33

Page 1 of 2

SAMPLE: **Air Cuttings**

Lab ID: 10081723-001A

Grab

SAMPLED BY: SG

Sample Time: 08/09/2010 15:50

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>	<u>SLOQ</u>	<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Total Petroleum Hydrocarbons	1230 mg/Kg	EPA 9071		08/12/10 11:10	08/12/10	

Sample Note: Analysis performed by Microbac-Erie

SAMPLE: **Air Cuttings**

Lab ID: 10081723-001B

Grab

SAMPLED BY: SG

Sample Time: 08/09/2010 15:50

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>	<u>SLOQ</u>	<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Moisture	18.2 %	Moisture Calc.	0.01	08/12/10 8:45	08/13/10	MED-SA
Free Liquid	< 0.1 %	EPA 9095A	0.1	08/12/10 15:15	08/12/10	RHN-SA
pH	8.89@21.8°C	EPA 9045C		08/12/10 15:42	08/12/10	MED-SA

SAMPLE: **Air Cuttings**

Lab ID: 10081723-001C

Grab

SAMPLED BY: SG

Sample Time: 08/09/2010 15:50

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>	<u>SLOQ</u>	<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Sodium	941 mg/Kg-dry	EPA 6010B	108	08/13/10 9:40	08/13/10	RMD-CV
Chloride	370 mg/Kg-dry	EPA 300.0	61.1	08/11/10 14:31	08/12/10	HDP-CV
Percent Moisture	18.2 %	SM2540G		08/12/10 8:45	08/13/10	MED-SA

SAMPLE: **TCLP Leachate of Air Cuttings**

Lab ID: 10081723-001E

Grab

SAMPLED BY: SG

Sample Time: 08/09/2010 15:50

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>	<u>SLOQ</u>	<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.0008	08/12/10 8:30	08/13/10	KW-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	08/13/10 7:20	08/13/10	RMD-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	08/13/10 7:20	08/13/10	RMD-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	08/13/10 7:20	08/13/10	RMD-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	08/13/10 7:20	08/13/10	RMD-CV
Copper - TCLP extracted	0.112 mg/L	EPA 6010B	0.100	08/13/10 7:20	08/13/10	RMD-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	08/13/10 7:20	08/13/10	RMD-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER

*Amie M. Davis*

DATE: 8/13/2010

LAB ID: 08-00380  
LAB ID: 39-00401

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10081723

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10081723

PAGE: 2 of 2

PO#: AF77406

PHONE: (607) 562-4000  
FAX: (607) 562-4001

**TEST REPORT**

PWS ID#

RECEIVED FOR LAB BY: DLM2

DATE: 08/10/2010 15:33

Page 2 of 2

Nickel - TCLP extracted	0.230 mg/L	EPA 6010B	0.100	08/13/10 7:20	08/13/10	RMD-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	08/13/10 7:20	08/13/10	RMD-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	08/13/10 7:20	08/13/10	RMD-CV
Zinc - TCLP extracted	0.735 mg/L	EPA 6010B	0.200	08/13/10 7:20	08/13/10	RMD-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER

*Candice M. Davis*

DATE: 8/13/2010



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WASTE MANAGEMENT

**FORM 26R**  
**CHEMICAL ANALYSIS OF RESIDUAL WASTE**  
**ANNUAL REPORT BY THE GENERATOR**

This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form 26R, reference the item number and identify the date prepared. The date on attached sheets needs to match the date noted below.				<b>DEP USE ONLY</b>	
General Reference 287.54				Date Received & General Notes	
Date Prepared/Revised		February 11, 2011			
<b>SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION</b>					
Company Name Talisman Energy USA Inc.					
If a Subsidiary, Name of Parent Company Talisman Energy Inc.				EPA Generator ID# N/A	
Company Mailing Address Line 1 50 Pennwood Place			Company Mailing Address Line 2		
Company Address Last Line – City Warrendale		State PA	Zip+4 15086	Phone (724) 814-5300	Ext
Company Contact Last Name Brown		First Name Dina	MI MI	Suffix	
Municipality Warrendale		County Allegheny			
Contact Phone (724) 814-5321		Ext	Contact Email Address dybrown@talismanusa.com		
Is the waste generated at the Company Mailing Address (noted above)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
If 'No', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the (01-003) well pad site located at 1349 Buckwheat Road, Granville Township, Bradford County, PA. Waste is stored in containers on site.					
Municipality Granville		County Bradford	State PA		
<b>SECTION B. WASTE DESCRIPTION</b>					
Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure		Time Frame
810	Drill cuttings (oil and gas)	1,949	<input type="checkbox"/> cu yd	<input type="checkbox"/> gal	
			<input type="checkbox"/> lb	<input checked="" type="checkbox"/> ton	<input type="checkbox"/> One Time
<b>1. GENERAL PROPERTIES</b>					
a.	pH Range	8.89	to	9.01	(based on analyses or knowledge)
b.	Physical State	<input type="checkbox"/> Liquid Waste (EPA Method 9095) <input checked="" type="checkbox"/> Solid (EPA Method 9095) <input type="checkbox"/> Gas (ambient temperature & pressure)			
c.	Physical Appearance	Color	Greyish Black	Odor	Earthy/Slight Petroleum
		Number of Solid or Liquid Phases of Separation		One	
		Describe each phase of separation. Soil and Rock Fragments			
<b>2. CHEMICAL ANALYSIS ATTACHMENTS</b>					
a.	The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No
b.	A detailed description of the waste sampling method is attached.	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No
c.	The quality assurance/quality control procedures employed by the laboratory(ies) is attached.	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No
d.	The results of the hazardous waste determination is attached.	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No
e.	If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
				<input checked="" type="checkbox"/>	N/A

3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS			
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
SECTION C. MANAGEMENT OF RESIDUAL WASTE			
1. PROCESSING OR DISPOSAL FACILITY(IES)			
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.			
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 8-4630-00010		
b.	Facility Name	Hakes C&D Landfill	
	Address Line 1	4376 Manning Ridge Road	
	Address Line 1		
	Address City State ZIP	Painted Post NY 14870	
	Municipality	Erwin Twp County Steuben	
c.	Facility Contact Name	Joseph Boyles	
	Title		
	Phone	(607) 937-6044	Email Address joe.boyles@casella.com
		(585) 466-7271	
d.	Volume of waste shipped to processing or disposal facility in the previous year. 1,087 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 9-0232-00003		
b.	Facility Name	Hyland Landfill	
	Address Line 1	6653 Herdman Road	
	Address Line 1		
	Address City State ZIP	Angelica NY 14709	
	Municipality	Angelica County Allegany	
c.	Facility Contact Name	Larry Shilling	
	Title		
	Phone	(585) 466-7271	Email Address larry.shilling@casella.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 620 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
2. BENEFICIAL USE			
a.	Has the waste been approved for beneficial use? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If "Yes", list the general permit number or approval number.		
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		

3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS			
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
SECTION C. MANAGEMENT OF RESIDUAL WASTE			
1. PROCESSING OR DISPOSAL FACILITY(IES)			
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.			
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 8-0728-00004		
b.	Facility Name	Chemung County Landfill	
	Address Line 1	1690 Lake Street	
	Address Line 1		
	Address City State ZIP	Elmira NY 14903	
	Municipality	Elmira	County Chemung
c.	Facility Contact Name	Carla Canjar	
	Title	Environmental Manager	
	Phone	(585) 797-5941	Email Address carla.canjar@casella.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 242 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
a.	Solid waste permit number(s) for processing or disposal facility being utilized.		
b.	Facility Name		
	Address Line 1		
	Address Line 1		
	Address City State ZIP		
	Municipality	County	
c.	Facility Contact Name		
	Title		
	Phone	Email Address	
d.	Volume of waste shipped to processing or disposal facility in the previous year. <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		
2. BENEFICIAL USE			
a.	Has the waste been approved for beneficial use? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If "Yes", list the general permit number or approval number.		
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		

**SECTION D. CERTIFICATION**

I certify, under penalty of law, that I have personally examined and am familiar with the information submitted in this Annual Report and all attached documents and that based upon my inquiry of those individuals immediately responsible for obtaining the information, I verify that the submitted information is true, accurate and complete to the best of my knowledge. I understand that the submission of false information herein is made subject to the penalties of 18 Pa. C.S. §4904, relating to unsworn falsification to authorities, which include fine and imprisonment.

Check the following, if applicable:

I certify the information required in Section B-1, General Properties was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-2, Chemical Analysis was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

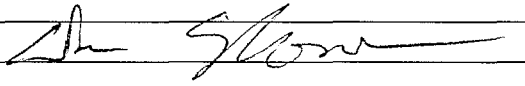
I certify the information required in Section B-3, Process Description and Schematic, was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

Name of Responsible Official \_\_\_\_\_ Title Environmental Specialist

Dina Brown

Signature  Date 2/25/10

LAB ID: 08-00380  
LAB ID: 39-00401

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10074058

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10074058  
PAGE: 1 of 1  
PO#: AF77406

PHONE: (607) 562-4000  
FAX: (607) 562-4001

**TEST REPORT**

PWS ID#

RECEIVED FOR LAB BY: DLM2

DATE: 07/26/2010 15:15

Page 1 of 1

SAMPLE: **Inv. Cuttings**

Lab ID: 10074058-001A

Composite

SAMPLED BY: SG

Sample Time: 07/26/2010 11:45

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>		<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Total Petroleum Hydrocarbons	72400 mg/Kg	EPA 9071		07/27/10 12:00	07/27/10	

Sample Note: Analysis performed by Microbac-Erie

SAMPLE: **Inv. Cuttings**

Lab ID: 10074058-001B

Composite

SAMPLED BY: SG

Sample Time: 07/26/2010 11:45

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>		<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Moisture	21.7 %	Moisture Calc.	0.01	07/26/10 10:30	07/27/10	NFM-SA
Free Liquid	< 0.1 %	EPA 9095A	0.1	07/26/10 16:15	07/26/10	IC-SA
pH	9.01@21.0°C	EPA 9045C		07/27/10 12:20	07/27/10	NFM-SA

SAMPLE: **TCLP Leachate of Inv. Cuttings**

Lab ID: 10074058-001D

Grab

SAMPLED BY: SG

Sample Time: 07/26/2010 11:45

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>		<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Mercury - TCLP extracted	< 0.0010 mg/L	EPA 7470A	0.0010	07/29/10 9:00	07/29/10	RMD-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	07/29/10 9:50	07/29/10	GSR-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	07/29/10 9:50	07/29/10	GSR-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	07/29/10 9:50	07/29/10	GSR-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	07/29/10 9:50	07/29/10	GSR-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	07/29/10 9:50	07/29/10	GSR-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	07/29/10 9:50	07/29/10	GSR-CV
Nickel - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	07/29/10 9:50	07/29/10	GSR-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	07/29/10 9:50	07/29/10	GSR-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	07/29/10 9:50	07/29/10	GSR-CV
Zinc - TCLP extracted	8.30 mg/L	EPA 6010B	0.200	07/29/10 9:50	07/29/10	GSR-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

S Spike Recovery outside accepted recovery limits

MANAGER

*Carrie M. Davis*

DATE: 7/30/2010



LAB ID: 08-00380  
LAB ID: 39-00401

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10081723

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10081723  
PAGE: 1 of 2  
PO#: AF77406  
PWS ID#

PHONE: (607) 562-4000  
FAX: (607) 562-4001

## TEST REPORT

RECEIVED FOR LAB BY: DLM2

DATE: 08/10/2010 15:33

Page 1 of 2

SAMPLE: **Air Cuttings**

Lab ID: 10081723-001A

Grab

SAMPLED BY: SG

Sample Time: 08/09/2010 15:50

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>		<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Total Petroleum Hydrocarbons	1230 mg/Kg	EPA 9071		08/12/10 11:10	08/12/10	

Sample Note: Analysis performed by Microbac-Erie

SAMPLE: **Air Cuttings**

Lab ID: 10081723-001B

Grab

SAMPLED BY: SG

Sample Time: 08/09/2010 15:50

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>		<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Moisture	18.2 %	Moisture Calc.	0.01	08/12/10 8:45	08/13/10	MED-SA
Free Liquid	< 0.1 %	EPA 9095A	0.1	08/12/10 15:15	08/12/10	RHN-SA
pH	8.89@21.8°C	EPA 9045C		08/12/10 15:42	08/12/10	MED-SA

SAMPLE: **Air Cuttings**

Lab ID: 10081723-001C

Grab

SAMPLED BY: SG

Sample Time: 08/09/2010 15:50

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>		<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Sodium	941 mg/Kg-dry	EPA 6010B	108	08/13/10 9:40	08/13/10	RMD-CV
Chloride	370 mg/Kg-dry	EPA 300.0	61.1	08/11/10 14:31	08/12/10	HDP-CV
Percent Moisture	18.2 %	SM2540G		08/12/10 8:45	08/13/10	MED-SA

SAMPLE: **TCLP Leachate of Air Cuttings**

Lab ID: 10081723-001E

Grab

SAMPLED BY: SG

Sample Time: 08/09/2010 15:50

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>		<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.0008	08/12/10 8:30	08/13/10	KW-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	08/13/10 7:20	08/13/10	RMD-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	08/13/10 7:20	08/13/10	RMD-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	08/13/10 7:20	08/13/10	RMD-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	08/13/10 7:20	08/13/10	RMD-CV
Copper - TCLP extracted	0.112 mg/L	EPA 6010B	0.100	08/13/10 7:20	08/13/10	RMD-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	08/13/10 7:20	08/13/10	RMD-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER

*Amie M. Davis*

DATE: 8/13/2010

LAB ID: 08-00380  
LAB ID: 39-00401

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

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**TEST REPORT**

RECEIVED FOR LAB BY: DLM2

DATE: 08/10/2010 15:33

Page 2 of 2

Nickel - TCLP extracted	0.230 mg/L	EPA 6010B	0.100	08/13/10 7:20	08/13/10	RMD-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	08/13/10 7:20	08/13/10	RMD-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	08/13/10 7:20	08/13/10	RMD-CV
Zinc - TCLP extracted	0.735 mg/L	EPA 6010B	0.200	08/13/10 7:20	08/13/10	RMD-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER

*Cami M. Davis*

DATE: 8/13/2010



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WASTE MANAGEMENT

**FORM 26R**  
**CHEMICAL ANALYSIS OF RESIDUAL WASTE**  
**ANNUAL REPORT BY THE GENERATOR**

This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form 26R, reference the item number and identify the date prepared. The date on attached sheets needs to match the date noted below.					<b>DEP USE ONLY</b>	
General Reference 287.54					Date Received & General Notes	
Date Prepared/Revised		February 11, 2011				
<b>SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION</b>						
Company Name Talisman Energy USA Inc.						
If a Subsidiary, Name of Parent Company Talisman Energy Inc.					EPA Generator ID# N/A	
Company Mailing Address Line 1 50 Pennwood Place			Company Mailing Address Line 2			
Company Address Last Line – City Warrendale		State PA	Zip+4 15086	Phone (724) 814-5300	Ext	
Company Contact Last Name Brown		First Name Dina	MI	Suffix		
Municipality Warrendale			County Allegheny			
Contact Phone (724) 814-5321	Ext	Contact Email Address dybrown@talismanusa.com				
Is the waste generated at the Company Mailing Address (noted above)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						
If 'No', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the (01-071) well pad site located at 5290 Fallbrook Road, Troy Township, Bradford County, PA. Waste is stored in containers on site.						
Municipality Troy		County Bradford	State PA			
<b>SECTION B. WASTE DESCRIPTION</b>						
Residual Waste Code	Residual Waste Code Description		Amount	Unit of Measure		Time Frame
810	Drill cuttings (oil and gas)		3,377	<input type="checkbox"/> cu yd <input type="checkbox"/> gal	<input type="checkbox"/> lb <input checked="" type="checkbox"/> ton	<input type="checkbox"/> One Time
<b>1. GENERAL PROPERTIES</b>						
a.	pH Range		7.90 to 9.67 (based on analyses or knowledge)			
b.	Physical State		<input type="checkbox"/> Liquid Waste (EPA Method 9095) <input checked="" type="checkbox"/> Solid (EPA Method 9095) <input type="checkbox"/> Gas (ambient temperature & pressure)			
c.	Physical Appearance		Color	Greyish Black	Odor	Earthy/Slight Petroleum
			Number of Solid or Liquid Phases of Separation		One	
Describe each phase of separation. Soil and Rock Fragments						
<b>2. CHEMICAL ANALYSIS ATTACHMENTS</b>						
a.	The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.					<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
b.	A detailed description of the waste sampling method is attached.					<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
c.	The quality assurance/quality control procedures employed by the laboratory(ies) is attached.					<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
d.	The results of the hazardous waste determination is attached.					<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
e.	If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.					<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A

3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS			
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
SECTION C. MANAGEMENT OF RESIDUAL WASTE			
1. PROCESSING OR DISPOSAL FACILITY(IES)			
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.			
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 9-0232-00003		
b.	Facility Name	Hyland Landfill	
	Address Line 1	6653 Herdman Road	
	Address Line 1		
	Address City State ZIP	Angelica NY 14709	
	Municipality	Angelica	County Allegany
c.	Facility Contact Name	Larry Shilling	
	Title		
	Phone	(585) 466-7271	Email Address larry.shilling@casella.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 2,218 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 8-4630-00010		
b.	Facility Name	Hakes C&D Landfill	
	Address Line 1	4376 Manning Ridge Road	
	Address Line 1		
	Address City State ZIP	Painted Post NY 14870	
	Municipality	Erwin Twp	County Steuben
c.	Facility Contact Name	Joseph Boyles	
	Title		
	Phone	(607) 937-6044	Email Address joe.boyles@casella.com
		(585) 466-7271	
d.	Volume of waste shipped to processing or disposal facility in the previous year. 907 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
2. BENEFICIAL USE			
a.	Has the waste been approved for beneficial use? If "Yes", list the general permit number or approval number.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		

3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS			
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
SECTION C. MANAGEMENT OF RESIDUAL WASTE			
1. PROCESSING OR DISPOSAL FACILITY(IES)			
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.			
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 100361		
b.	Facility Name	McKean County Landfill	
	Address Line 1	19 Ness Lane	
	Address Line 1		
	Address City State ZIP	Kane PA	16735
	Municipality	Sergeant Twp	County McKean
c.	Facility Contact Name	Mike Manderfeld	
	Title		
	Phone	(814) 778-9931	Email Address manderfeld@gmail.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 252 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
a.	Solid waste permit number(s) for processing or disposal facility being utilized.		
b.	Facility Name		
	Address Line 1		
	Address Line 1		
	Address City State ZIP		
	Municipality	County	
c.	Facility Contact Name		
	Title		
	Phone	Email Address	
d.	Volume of waste shipped to processing or disposal facility in the previous year. <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		
2. BENEFICIAL USE			
a.	Has the waste been approved for beneficial use? If "Yes", list the general permit number or approval number.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		

**SECTION D. CERTIFICATION**

I certify, under penalty of law, that I have personally examined and am familiar with the information submitted in this Annual Report and all attached documents and that based upon my inquiry of those individuals immediately responsible for obtaining the information, I verify that the submitted information is true, accurate and complete to the best of my knowledge. I understand that the submission of false information herein is made subject to the penalties of 18 Pa. C.S. §4904, relating to unsworn falsification to authorities, which include fine and imprisonment.

Check the following, if applicable:

I certify the information required in Section B-1, General Properties was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-2, Chemical Analysis was supplied to the Department for the year \_\_\_\_\_ and has not changed.

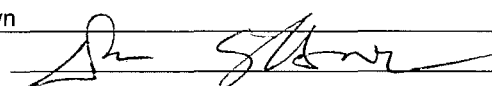
Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-3, Process Description and Schematic, was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

Name of Responsible Official	Title
Dina Brown	Environmental Specialist
Signature 	Date
	2/25/11

LAB ID: 08-00380  
LAB ID: 39-00401

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10092016

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10092016  
PAGE: 1 of 2  
PO#: AF77728  
PWS ID#

PHONE: (607) 562-4000  
FAX: (607) 562-4001

## TEST REPORT

01-071

RECEIVED FOR LAB BY: TJC

DATE: 09/13/2010 17:12

Page 1 of 2

SAMPLE: **Air Cuttings**  
SAMPLED BY: SG

Lab ID: 10092016-001A Grab

Sample Time: 09/13/2010 12:20

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Total Petroleum Hydrocarbons	< 209 mg/Kg	EPA 9071	209	09/19/10 10:20	09/19/10	

Sample Note: Analysis performed by Microbac Laboratories, Inc.-Erie Division

SAMPLE: **Air Cuttings**  
SAMPLED BY: SG

Lab ID: 10092016-001B Grab

Sample Time: 09/13/2010 12:20

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Moisture	25.3 %	Moisture Calc.	0.01	09/14/10 10:00	09/15/10	MED-SA
Free Liquid	< 0.1 %	EPA 9095A	0.1	09/14/10 15:05	09/14/10	IC-SA
pH	7.90@20.3°C	EPA 9045C		09/14/10 14:26	09/14/10	MED-SA

SAMPLE: **Air Cuttings**  
SAMPLED BY: SG

Lab ID: 10092016-001C Grab

Sample Time: 09/13/2010 12:20

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Sodium	< 180 mg/Kg-dry	EPA 6010B	180	09/16/10 8:30	09/16/10	RMD-CV
Chloride	< 66.9 mg/Kg-dry	MS EPA 300.0	66.9	09/15/10 15:09	09/16/10	HDP-CV
Percent Moisture	25.3 %	SM2540G		09/14/10 10:00	09/15/10	MED-SA

SAMPLE: **TCLP Leachate of Air Cuttings**  
SAMPLED BY: SG

Lab ID: 10092016-001E Grab

Sample Time: 09/15/2010 9:00

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.0008	09/15/10 9:00	09/16/10	KW-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	09/16/10 8:00	09/16/10	RMD-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	09/16/10 8:00	09/16/10	RMD-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	09/16/10 8:00	09/16/10	RMD-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	09/16/10 8:00	09/16/10	RMD-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	09/16/10 8:00	09/16/10	RMD-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	09/16/10 8:00	09/16/10	RMD-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MS Limit of detection increased due to matrix interference and spike recovery data

MANAGER

*Carmie M. Davis*

DATE: 9/20/2010

LAB ID: 08-00380  
LAB ID: 39-00401

**Benchmark Analytics, Inc.**  
**Eastern Division**

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**TEST REPORT**

01-071

RECEIVED FOR LAB BY: TJC

DATE: 09/13/2010 17:12

Page 2 of 2

Nickel - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	09/16/10 8:00	09/16/10	RMD-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	09/16/10 8:00	09/16/10	RMD-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	09/16/10 8:00	09/16/10	RMD-CV
Zinc - TCLP extracted	< 0.200 mg/L	EPA 6010B	0.200	09/16/10 8:00	09/16/10	RMD-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MS Limit of detection increased due to matrix interference and spike recovery data

MANAGER

*Amie M. Davis*

DATE: 9/20/2010



LAB ID: 08-00380  
LAB ID: 39-00401

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169  
Fax: (570) 888-0717

Work Order: 10103216

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10103216  
PAGE: 1 of 2  
PO#: AF77729  
PWS ID#

**TEST REPORT**

PHONE: (607) 731-0145  
FAX: (607) 562-4001

01-071

RECEIVED FOR LAB BY: TJC

DATE: 10/21/2010 11:37

Page 1 of 2

SAMPLE: **Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10103216-001A Composite  
Sample Time: 10/19/2010 10:39

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Total Petroleum Hydrocarbons	115000 mg/Kg	EPA 9071	170	10/23/10 9:00	10/23/10	

Sample Note: Analysis performed by Microbac Laboratories, Inc--Erie Division.

SAMPLE: **Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10103216-001B Composite  
Sample Time: 10/19/2010 10:39

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Moisture	11.1 %	Moisture Calc.	0.01	10/25/10 15:00	10/26/10	NFM-SA
Free Liquid	< 0.1 %	EPA 9095A	0.1	10/22/10 15:10	10/22/10	IC-SA
pH	9.67@23.0°C	EPA 9045C		10/26/10 8:50	10/26/10	NFM-SA

SAMPLE: **Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10103216-001C Composite  
Sample Time: 10/19/2010 10:39

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Sodium	704 mg/Kg-dry	EPA 6010B	92.5	10/22/10 10:40	10/22/10	RMD-CV
Chloride	329 mg/Kg-dry	EPA 300.0	55.1	10/22/10 15:07	10/23/10	HDP-CV
Percent Moisture	11.1 %	SM2540G		10/25/10 15:00	10/26/10	NFM-SA

SAMPLE: **TCLP Leachate of Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10103216-001E Composite  
Sample Time: 10/22/2010 7:30

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.0008	10/23/10 10:20	10/24/10	RMD-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	10/23/10 11:10	10/23/10	RMD-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	10/23/10 11:10	10/23/10	RMD-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	10/23/10 11:10	10/23/10	RMD-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	10/23/10 11:10	10/23/10	RMD-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	10/23/10 11:10	10/23/10	RMD-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER

*Cami M. Davis*

DATE: 10/26/2010

LAB ID: 08-00380  
LAB ID: 39-00401

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10103216

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10103216  
PAGE: 2 of 2  
PO#: AF77729

PHONE: (607) 731-0145  
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**TEST REPORT**

PWS ID#

01-071

RECEIVED FOR LAB BY: TJC

DATE: 10/21/2010 11:37

Page 2 of 2

Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	10/23/10 11:10	10/23/10	RMD-CV
Nickel - TCLP extracted	0.138 mg/L	EPA 6010B	0.100	10/23/10 11:10	10/23/10	RMD-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	10/23/10 11:10	10/23/10	RMD-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	10/23/10 11:10	10/23/10	RMD-CV
Zinc - TCLP extracted	0.217 mg/L	EPA 6010B	0.200	10/23/10 11:10	10/23/10	RMD-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER

*Cassie M. Davis*

DATE: 10/26/2010

CHAIN OF CUSTODY

10103216

PAGE 1 OF 1

**REPORT TO:** Talisman / UEG  
 geowetlands@aol.com  
 twollin@rallysolutions.ca

**CONTACT:** Steve Gridley  
 PH# 807-731-0145  
 FAX#

**BILL TO:** Talisman

PO# AF77729

TION 01-071

SAMPLER SIGNATURE / AFFILIATION  
 [Signature] UEG

CONTAINER / SAMPLING POINT

W/O#: 10103216

3840

REFRIGERATE SAMPLES  
 AFTER COLLECTION

TRANSPORT  
 TO  
 LABORATORY  
 IN COOLER  
 WITH ICE

RESULTS ARE BEING USED FOR:

NYDOH  NYDEC  PADEP

LANDFILL  PERSONAL  OTHER

ARE SPECIAL DETECTION LIMITS  
 NEEDED:  YES /  NO

IF YES, PLEASE ATTACH

IS A QC PACKAGE NEEDED?  
 YES /  NO

IF YES, PLEASE ATTACH REQUIREMENTS

DW	DRINKING WATER	SL	SLUDGE
GW	GROUND WATER	SO	SOIL
SW	SURFACE WATER	HZ	HAZARDOUS
WW	WASTE WATER	OTHER	
DE	DEIONIZED WATER	DI	DISTILLED WATER

H	HYDROCHLORIC ACID	OH	SODIUM HYDROXIDE
S	SULFURIC ACID	AS	ASCORBIC ACID
N	NITRIC ACID	AC	ACETIC ACID
SO <sub>3</sub>	SODIUM SULFITE	NH <sub>4</sub>	AMMONIUM CHLORIDE
Thio	SODIUM THIOSULFATE	ZN	ZINC ACETATE
-	NONE	Hg	MERCURIC CHLORIDE

DATE SAMPLED

TIME OF SAMPLING

SAMPLE MATRIX

SAMPLE TYPE - GRAB / COMPOSITE

SAMPLER INITIALS

PRESERVATIVE

An incomplete chain of custody may delay the  
 processing of your sample(s).

ANALYSIS TO BE PERFORMED  
 (PER CONTAINER)

COMPOSITED ON RECEIPT

PRESERVATIVE ADDED ON RECEIPT

Please fill out all  
 applicable areas  
 completely

LAB USE ONLY

1	Inv Cuttings	10/19/09	SO	C	8	N	TPH					
2							pH					
3							TCLP 8 RCRA Metals + Cu, Ni, Zn					
4	A. TPH						Free Liquids / % Moisture					
5	B. pH, Free Liquid, % Moisture						BTEX					
6	C. Cl, Na						TCLP 2009-2020 ONLY IF the TPH					
7	D. T. Samples						exceeds 10,000 mg/Kg					
8	TCLP Metals + Cu, Ni, Zn											
9							72 HOUR TURNAROUND					
10							DAY TURNAROUND					
11												

LAB USE ONLY

DELIVERED BY: SG

TEMPERATURE UPON RECEIPT: \_\_\_\_\_ °C

ARRIVAL ON ICE: Y/N

RELINQUISHED BY: [Signature]	DATE: 10/21/10	TIME: 11:37	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY: [Signature]	DATE: 10/21/10	TIME: 11:37

Ad Graphics Printing 570-884-0885



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WASTE MANAGEMENT

**FORM 26R**  
**CHEMICAL ANALYSIS OF RESIDUAL WASTE**  
**ANNUAL REPORT BY THE GENERATOR**

This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form 26R, reference the item number and identify the date prepared. The date on attached sheets needs to match the date noted below.		<b>DEP USE ONLY</b>		
General Reference 287.54		Date Received & General Notes		
Date Prepared/Revised February 11, 2011				
<b>SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION</b>				
Company Name Talisman Energy USA Inc.				
If a Subsidiary, Name of Parent Company Talisman Energy Inc.			EPA Generator ID# N/A	
Company Mailing Address Line 1 50 Pennwood Place		Company Mailing Address Line 2		
Company Address Last Line – City Warrendale	State PA	Zip+4 15086	Phone (724) 814-5300 Ext	
Company Contact Last Name Brown	First Name Dina	MI	Suffix	
Municipality Warrendale	County Allegheny			
Contact Phone (724) 814-5321	Ext	Contact Email Address dybrown@talismanusa.com		
Is the waste generated at the Company Mailing Address (noted above)?			<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
If 'No' describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the (01-032) well pad site located at 554 Alba Mountain Road, Canton Township, Bradford County, PA. Waste is stored in containers on site.				
Municipality Canton	County Bradford	State PA		
<b>SECTION B. WASTE DESCRIPTION</b>				
Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure	Time Frame
810	Drill cuttings (oil and gas)	4,091	<input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton	<input type="checkbox"/> One Time
<b>1. GENERAL PROPERTIES</b>				
a.	pH Range	9.18 to 10.33	(based on analyses or knowledge)	
b.	Physical State	<input type="checkbox"/> Liquid Waste (EPA Method 9095) <input checked="" type="checkbox"/> Solid (EPA Method 9095) <input type="checkbox"/> Gas (ambient temperature & pressure)		
c.	Physical Appearance	Color Greyish Black	Odor	Earthy/Slight Petroleum
		Number of Solid or Liquid Phases of Separation	One	
		Describe each phase of separation. Soil and Rock Fragments		
<b>2. CHEMICAL ANALYSIS ATTACHMENTS</b>				
a.	The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A detailed description of the waste sampling method is attached.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	The quality assurance/quality control procedures employed by the laboratory(ies) is attached.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
d.	The results of the hazardous waste determination is attached.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
e.	If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.		<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A

3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS			
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
SECTION C. MANAGEMENT OF RESIDUAL WASTE			
1. PROCESSING OR DISPOSAL FACILITY(IES)			
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.			
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 9-0232-00003		
b.	Facility Name	Hyland Landfill	
	Address Line 1	6653 Herdman Road	
	Address Line 1		
	Address City State ZIP	Angelica NY 14709	
	Municipality	Angelica	County Allegany
c.	Facility Contact Name	Larry Shilling	
	Title		
	Phone	(585) 466-7271	Email Address larry.shilling@casella.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 2,494 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 8-4630-00010		
b.	Facility Name	Hakes C&D Landfill	
	Address Line 1	4376 Manning Ridge Road	
	Address Line 1		
	Address City State ZIP	Painted Post NY 14870	
	Municipality	Erwin Twp	County Steuben
c.	Facility Contact Name	Joseph Boyles	
	Title		
	Phone	(607) 937-6044	Email Address joe.boyles@casella.com
		(585) 466-7271	
d.	Volume of waste shipped to processing or disposal facility in the previous year. 1,377 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
2. BENEFICIAL USE			
a.	Has the waste been approved for beneficial use? If "Yes", list the general permit number or approval number.		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		

3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS																					
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																				
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																				
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached. <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A																				
SECTION C. MANAGEMENT OF RESIDUAL WASTE																					
1. PROCESSING OR DISPOSAL FACILITY(IES)																					
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.																					
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 8-0728-00004																				
b.	<table border="0"> <tr> <td>Facility Name</td> <td colspan="3">Chemung County Landfill</td> </tr> <tr> <td>Address Line 1</td> <td colspan="3">1690 Lake Street</td> </tr> <tr> <td>Address Line 1</td> <td colspan="3"></td> </tr> <tr> <td>Address City State ZIP</td> <td>Elmira</td> <td>NY</td> <td>14903</td> </tr> <tr> <td>Municipality</td> <td>Elmira</td> <td>County</td> <td>Chemung</td> </tr> </table>	Facility Name	Chemung County Landfill			Address Line 1	1690 Lake Street			Address Line 1				Address City State ZIP	Elmira	NY	14903	Municipality	Elmira	County	Chemung
Facility Name	Chemung County Landfill																				
Address Line 1	1690 Lake Street																				
Address Line 1																					
Address City State ZIP	Elmira	NY	14903																		
Municipality	Elmira	County	Chemung																		
c.	<table border="0"> <tr> <td>Facility Contact Name</td> <td colspan="3">Carla Canjar</td> </tr> <tr> <td>Title</td> <td colspan="3">Environmental Manager</td> </tr> <tr> <td>Phone</td> <td>(585) 797-5941</td> <td>Email Address</td> <td>carla.canjar@casella.com</td> </tr> </table>	Facility Contact Name	Carla Canjar			Title	Environmental Manager			Phone	(585) 797-5941	Email Address	carla.canjar@casella.com								
Facility Contact Name	Carla Canjar																				
Title	Environmental Manager																				
Phone	(585) 797-5941	Email Address	carla.canjar@casella.com																		
d.	Volume of waste shipped to processing or disposal facility in the previous year. 164 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)																				
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 100361																				
b.	<table border="0"> <tr> <td>Facility Name</td> <td colspan="3">McKean County Landfill</td> </tr> <tr> <td>Address Line 1</td> <td colspan="3">19 Ness Lane</td> </tr> <tr> <td>Address Line 1</td> <td colspan="3"></td> </tr> <tr> <td>Address City State ZIP</td> <td>Kane</td> <td>PA</td> <td>16735</td> </tr> <tr> <td>Municipality</td> <td>Sergeant Twp</td> <td>County</td> <td>McKean</td> </tr> </table>	Facility Name	McKean County Landfill			Address Line 1	19 Ness Lane			Address Line 1				Address City State ZIP	Kane	PA	16735	Municipality	Sergeant Twp	County	McKean
Facility Name	McKean County Landfill																				
Address Line 1	19 Ness Lane																				
Address Line 1																					
Address City State ZIP	Kane	PA	16735																		
Municipality	Sergeant Twp	County	McKean																		
c.	<table border="0"> <tr> <td>Facility Contact Name</td> <td colspan="3">Mike Manderfeld</td> </tr> <tr> <td>Title</td> <td colspan="3"></td> </tr> <tr> <td>Phone</td> <td>(814) 778-9931</td> <td>Email Address</td> <td>manderfeld@gmail.com</td> </tr> </table>	Facility Contact Name	Mike Manderfeld			Title				Phone	(814) 778-9931	Email Address	manderfeld@gmail.com								
Facility Contact Name	Mike Manderfeld																				
Title																					
Phone	(814) 778-9931	Email Address	manderfeld@gmail.com																		
d.	Volume of waste shipped to processing or disposal facility in the previous year. 56 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)																				
2. BENEFICIAL USE																					
a.	Has the waste been approved for beneficial use? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If "Yes", list the general permit number or approval number.																				
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)																				

**SECTION D. CERTIFICATION**

I certify, under penalty of law, that I have personally examined and am familiar with the information submitted in this Annual Report and all attached documents and that based upon my inquiry of those individuals immediately responsible for obtaining the information, I verify that the submitted information is true, accurate and complete to the best of my knowledge. I understand that the submission of false information herein is made subject to the penalties of 18 Pa. C.S. §4904, relating to unsworn falsification to authorities, which include fine and imprisonment.

Check the following, if applicable:

I certify the information required in Section B-1, General Properties was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-2, Chemical Analysis was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-3, Process Description and Schematic, was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

Name of Responsible Official \_\_\_\_\_ Title Environmental Specialist  
Dina Brown  
Signature  Date 2/28/11

LAB ID: 08-00380  
LAB ID: 39-00401

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10074528

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10074528  
PAGE: 1 of 2  
PO#: AF76317

PHONE: (607) 562-4000  
FAX: (607) 562-4001

## TEST REPORT

PWS ID#

Well

RECEIVED FOR LAB BY: DLM2

DATE: 07/29/2010 9:32

Page 1 of 2

SAMPLE: **Air Cuttings**  
SAMPLED BY: SG

Lab ID: 10074528-001A Grab

Sample Time: 07/28/2010 15:00

SLOQ

Test	Result	Method		Analysis Start	Analysis End	Analyst *
Total Petroleum Hydrocarbons	890 mg/Kg	EPA 9071		08/02/10 10:05	08/02/10	

Sample Note: Analysis performed by Microbac- Erie

SAMPLE: **Air Cuttings**  
SAMPLED BY: SG

Lab ID: 10074528-001B Grab

Sample Time: 07/28/2010 15:00

SLOQ

Test	Result	Method		Analysis Start	Analysis End	Analyst *
Moisture	16.1 %	Moisture Calc.	0.01	07/29/10 14:30	07/30/10	NFM-SA
Free Liquid	< 0.1 %	EPA 9095A	0.1	07/30/10 17:10	07/30/10	IC-SA
pH	10.33@21.0°C	EPA 9045C		07/29/10 8:00	07/30/10	NFM-SA

SAMPLE: **Air Cuttings**  
SAMPLED BY: SG

Lab ID: 10074528-001C Grab

Sample Time: 07/28/2010 15:00

SLOQ

Test	Result	Method		Analysis Start	Analysis End	Analyst *
Sodium	1280 mg/Kg-dry	EPA 6010B	71.8	07/30/10 8:30	07/31/10	RMD-CV
Chloride	173 mg/Kg-dry	EPA 300.0	59.6	07/30/10 15:42	07/31/10	HDP-CV
Percent Moisture	16.1 %	SM2540G		07/29/10 14:30	07/30/10	NFM-SA

SAMPLE: **TCLP Leachate of Air Cuttings**  
SAMPLED BY: SG

Lab ID: 10074528-001E Grab

Sample Time: 07/30/2010 7:50

SLOQ

Test	Result	Method		Analysis Start	Analysis End	Analyst *
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.0008	07/30/10 12:50	08/03/10	KW-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	08/02/10 8:30	08/02/10	RMD-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	08/02/10 8:30	08/02/10	RMD-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	08/02/10 8:30	08/02/10	RMD-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	08/02/10 8:30	08/02/10	RMD-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	08/02/10 8:30	08/02/10	RMD-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	08/02/10 8:30	08/02/10	RMD-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER

*Cassie M. Davis*

DATE: 8/4/2010



LAB ID: 08-00380  
LAB ID: 39-00401

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10074528

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10074528  
PAGE: 2 of 2  
PO#: AF76317  
PWS ID#

PHONE: (607) 562-4000  
FAX: (607) 562-4001

**TEST REPORT**

Well

RECEIVED FOR LAB BY: DLM2

DATE: 07/29/2010 9:32

Page 2 of 2

Nickel - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	08/02/10 8:30	08/02/10	RMD-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	08/02/10 8:30	08/02/10	RMD-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	08/02/10 8:30	08/02/10	RMD-CV
Zinc - TCLP extracted	60.4 mg/L	EPA 6010B	1.80	08/02/10 8:30	08/02/10	RMD-CV

REMARKS:

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\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER

*Amie M. Davis*

DATE:

*8/4/2010*

LAB ID: 08-00380  
LAB ID: 39-00401

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10081716

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10081716  
PAGE: 1 of 1  
PO#: AF77446

PHONE: (607) 562-4000  
FAX: (607) 562-4001

## TEST REPORT

PWS ID#

RECEIVED FOR LAB BY: DLM2

DATE: 08/10/2010 15:33

Page 1 of 1

SAMPLE: **Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10081716-001A Grab  
Sample Time: 08/10/2010 12:10

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Total Petroleum Hydrocarbons	149000 mg/Kg	EPA 9071		08/12/10 11:10	08/12/10	
Sample Note: Analysis performed by Microbac-Erie						

SAMPLE: **Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10081716-001B Grab  
Sample Time: 08/10/2010 12:10

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Moisture	29.5 %	Moisture Calc.	0.01	08/12/10 8:45	08/13/10	MED-SA
Free Liquid	< 0.1 %	EPA 9095A	0.1	08/12/10 15:00	08/12/10	RHN-SA
pH	9.45@21.5°C	EPA 9045C		08/12/10 15:42	08/12/10	MED-SA

SAMPLE: **TCLP Leachate of Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10081716-001D Grab  
Sample Time: 08/10/2010 12:10

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.0008	08/12/10 8:30	08/13/10	KW-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	08/13/10 7:20	08/13/10	RMD-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	08/13/10 7:20	08/13/10	RMD-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	08/13/10 7:20	08/13/10	RMD-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	08/13/10 7:20	08/13/10	RMD-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	08/13/10 7:20	08/13/10	RMD-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	08/13/10 7:20	08/13/10	RMD-CV
Nickel - TCLP extracted	0.111 mg/L	EPA 6010B	0.100	08/13/10 7:20	08/13/10	RMD-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	08/13/10 7:20	08/13/10	RMD-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	08/13/10 7:20	08/13/10	RMD-CV
Zinc - TCLP extracted	0.214 mg/L	EPA 6010B	0.200	08/13/10 7:20	08/13/10	RMD-CV

REMARKS:

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MANAGER

*Carrie M. Davis*

DATE: 8/13/2010

LAB ID: 08-00380  
LAB ID: 39-00401

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10081719

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10081719  
PAGE: 1 of 1  
PO#: AF77446

PHONE: (607) 562-4000  
FAX: (607) 562-4001

## TEST REPORT

PWS ID#

RECEIVED FOR LAB BY: DLM2

DATE: 08/10/2010 15:33

Page 1 of 1

SAMPLE: **Inv. Cuttings & Biomatrix**  
SAMPLED BY: SG

Lab ID: 10081719-001A Grab

Sample Time: 08/10/2010 12:15

SLOQ

Test	Result	Method		Analysis Start	Analysis End	Analyst *
Total Petroleum Hydrocarbons	169000 mg/Kg	EPA 9071		08/12/10 11:10	08/12/10	
Sample Note: Analysis performed by Microbac-Erie						

SAMPLE: **Inv. Cuttings & Biomatrix**  
SAMPLED BY: SG

Lab ID: 10081719-001B Grab

Sample Time: 08/10/2010 12:15

SLOQ

Test	Result	Method		Analysis Start	Analysis End	Analyst *
Moisture	23.4 %	Moisture Calc.	0.01	08/12/10 8:45	08/13/10	MED-SA
Free Liquid	< 0.1 %	EPA 9095A	0.1	08/12/10 15:05	08/12/10	RHN-SA
pH	9.18@21.9°C	EPA 9045C		08/12/10 15:42	08/12/10	MED-SA

SAMPLE: **TCLP Leachate of Inv. Cuttings & Biomatrix**  
SAMPLED BY: SG

Lab ID: 10081719-001D Grab

Sample Time: 08/10/2010 12:15

SLOQ

Test	Result	Method		Analysis Start	Analysis End	Analyst *
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.0008	08/12/10 8:30	08/13/10	KW-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	08/13/10 7:20	08/13/10	RMD-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	08/13/10 7:20	08/13/10	RMD-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	08/13/10 7:20	08/13/10	RMD-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	08/13/10 7:20	08/13/10	RMD-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	08/13/10 7:20	08/13/10	RMD-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	08/13/10 7:20	08/13/10	RMD-CV
Nickel - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	08/13/10 7:20	08/13/10	RMD-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	08/13/10 7:20	08/13/10	RMD-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	08/13/10 7:20	08/13/10	RMD-CV
Zinc - TCLP extracted	< 0.200 mg/L	EPA 6010B	0.200	08/13/10 7:20	08/13/10	RMD-CV

REMARKS:

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MANAGER

*Carrie M. Davis*

DATE: 8/13/2010

PA ID #: 08-00380  
NY ID # 11216

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10082687

Phone: (570) 888-0169  
Fax: (570) 888-0717

**SEND DATA TO:**

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10082687  
PAGE: 1 of 2  
PO#:  
PWS ID#

PHONE: (607) 562-4000  
FAX: (607) 562-4001

## TEST REPORT

Relog of 10081719-001

RECEIVED FOR LAB BY: DLM2

DATE: 08/10/2010 15:33

Page 1 of 2

SAMPLE: **TCLP Leachate of Inv. Cuttings & Biomatrix** Lab ID: 10082687-001B Grab  
SAMPLED BY: SG Sample Time: 08/17/2010 8:18

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Pyridine	< 0.10 mg/L	EPA 8270C	0.10	08/18/10 15:52	08/18/10	RHH-SA
1,4-Dichlorobenzene	< 0.10 mg/L	EPA 8270C	0.10	08/18/10 15:52	08/18/10	RHH-SA
o-Cresol	< 0.10 mg/L	Y EPA 8270C	0.10	08/18/10 15:52	08/18/10	RHH-SA
p-Cresol/m-Cresol	< 0.10 mg/L	Y EPA 8270C	0.10	08/18/10 15:52	08/18/10	RHH-SA
Hexachloroethane	< 0.10 mg/L	EPA 8270C	0.10	08/18/10 15:52	08/18/10	RHH-SA
Nitrobenzene	< 0.10 mg/L	EPA 8270C	0.10	08/18/10 15:52	08/18/10	RHH-SA
Hexachlorobutadiene	< 0.10 mg/L	EPA 8270C	0.10	08/18/10 15:52	08/18/10	RHH-SA
2,4,6-Trichlorophenol	< 0.10 mg/L	EPA 8270C	0.10	08/18/10 15:52	08/18/10	RHH-SA
2,4,5-Trichlorophenol	< 0.10 mg/L	EPA 8270C	0.10	08/18/10 15:52	08/18/10	RHH-SA
Pentachlorophenol	< 0.50 mg/L	EPA 8270C	0.50	08/18/10 15:52	08/18/10	RHH-SA
2,4-Dinitrotoluene	< 0.10 mg/L	EPA 8270C	0.10	08/18/10 15:52	08/18/10	RHH-SA
Hexachlorobenzene	< 0.10 mg/L	EPA 8270C	0.10	08/18/10 15:52	08/18/10	RHH-SA

SAMPLE: **ZHE Extract of Inv. Cuttings & Biomatrix** Lab ID: 10082687-001C Grab  
SAMPLED BY: SG Sample Time: 08/17/2010 8:15

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Benzene	< 0.02 mg/L	EPA 8260B	0.02	08/17/10 20:26	08/18/10	RHH-SA
2-Butanone	< 0.20 mg/L	EPA 8260B	0.20	08/17/10 20:26	08/18/10	RHH-SA
Carbon tetrachloride	< 0.02 mg/L	EPA 8260B	0.02	08/17/10 20:26	08/18/10	RHH-SA
Chlorobenzene	< 0.02 mg/L	EPA 8260B	0.02	08/17/10 20:26	08/18/10	RHH-SA
Chloroform	< 0.02 mg/L	EPA 8260B	0.02	08/17/10 20:26	08/18/10	RHH-SA
1,4-Dichlorobenzene	< 0.02 mg/L	EPA 8260B	0.02	08/17/10 20:26	08/18/10	RHH-SA
1,2-Dichloroethane	< 0.02 mg/L	EPA 8260B	0.02	08/17/10 20:26	08/18/10	RHH-SA
1,1-Dichloroethene	< 0.02 mg/L	EPA 8260B	0.02	08/17/10 20:26	08/18/10	RHH-SA
Trichloroethene	< 0.02 mg/L	EPA 8260B	0.02	08/17/10 20:26	08/18/10	RHH-SA
Tetrachloroethene	< 0.02 mg/L	EPA 8260B	0.02	08/17/10 20:26	08/18/10	RHH-SA

**REMARKS:**

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\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

Y LFB % Recovery below acceptance limits. The result may be biased low.

MANAGER

*Carrie M. Davis*

DATE: 8/19/2010

PA ID #: 08-00380  
NY ID # 11216

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10082687

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10082687

PAGE: 2 of 2

PO#:

PWS ID#

PHONE: (607) 562-4000

**TEST REPORT**

FAX: (607) 562-4001

Relog of 10081719-001

RECEIVED FOR LAB BY: DLM2

DATE: 08/10/2010 15:33

Page 2 of 2

Vinyl chloride	< 0.02 mg/L	EPA 8260B	0.02	08/17/10 20:26	08/18/10	RHH-SA
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REMARKS:

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Y LFB % Recovery below acceptance limits. The result may be biased low.

MANAGER

*Carrie M. Davis*

DATE: 8/19/2010

PA ID #: 08-00380  
NY ID # 11216

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10082689

Phone: (570) 888-0169  
Fax: (570) 888-0717

**SEND DATA TO:**

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10082689

PAGE: 1 of 2

PO#:

PWS ID#

PHONE: (607) 562-4000

FAX: (607) 562-4001

## TEST REPORT

Relog of 10081716-001

RECEIVED FOR LAB BY: DLM2

DATE: 08/10/2010 15:33

Page 1 of 2

SAMPLE: **TCLP Leachate of Inv. Cuttings**

Lab ID: 10082689-001B

Grab

SAMPLED BY: SG

Sample Time: 08/17/2010 8:15

SLOQ

Test	Result	Method		Analysis Start	Analysis End	Analyst *
Pyridine	< 0.10 mg/L	EPA 8270C	0.10	08/18/10 15:52	08/18/10	RHH-SA
1,4-Dichlorobenzene	< 0.10 mg/L	EPA 8270C	0.10	08/18/10 15:52	08/18/10	RHH-SA
o-Cresol	< 0.10 mg/L	EPA 8270C	0.10	08/18/10 15:52	08/18/10	RHH-SA
p-Cresol/m-Cresol	< 0.10 mg/L	S EPA 8270C	0.10	08/18/10 15:52	08/18/10	RHH-SA
Hexachloroethane	< 0.10 mg/L	EPA 8270C	0.10	08/18/10 15:52	08/18/10	RHH-SA
Nitrobenzene	< 0.10 mg/L	EPA 8270C	0.10	08/18/10 15:52	08/18/10	RHH-SA
Hexachlorobutadiene	< 0.10 mg/L	EPA 8270C	0.10	08/18/10 15:52	08/18/10	RHH-SA
2,4,6-Trichlorophenol	< 0.10 mg/L	EPA 8270C	0.10	08/18/10 15:52	08/18/10	RHH-SA
2,4,5-Trichlorophenol	< 0.10 mg/L	EPA 8270C	0.10	08/18/10 15:52	08/18/10	RHH-SA
Pentachlorophenol	< 0.50 mg/L	EPA 8270C	0.50	08/18/10 15:52	08/18/10	RHH-SA
2,4-Dinitrotoluene	< 0.10 mg/L	EPA 8270C	0.10	08/18/10 15:52	08/18/10	RHH-SA
Hexachlorobenzene	< 0.10 mg/L	EPA 8270C	0.10	08/18/10 15:52	08/18/10	RHH-SA

SAMPLE: **ZHE Extract of Inv. Cuttings**

Lab ID: 10082689-001C

Grab

SAMPLED BY: SG

Sample Time: 08/17/2010 8:15

SLOQ

Test	Result	Method		Analysis Start	Analysis End	Analyst *
Benzene	< 0.02 mg/L	EPA 8260B	0.02	08/17/10 20:26	08/18/10	RHH-SA
2-Butanone	< 0.20 mg/L	EPA 8260B	0.20	08/17/10 20:26	08/18/10	RHH-SA
Carbon tetrachloride	< 0.02 mg/L	EPA 8260B	0.02	08/17/10 20:26	08/18/10	RHH-SA
Chlorobenzene	< 0.02 mg/L	EPA 8260B	0.02	08/17/10 20:26	08/18/10	RHH-SA
Chloroform	< 0.02 mg/L	EPA 8260B	0.02	08/17/10 20:26	08/18/10	RHH-SA
1,4-Dichlorobenzene	< 0.02 mg/L	EPA 8260B	0.02	08/17/10 20:26	08/18/10	RHH-SA
1,2-Dichloroethane	< 0.02 mg/L	EPA 8260B	0.02	08/17/10 20:26	08/18/10	RHH-SA
1,1-Dichloroethene	< 0.02 mg/L	EPA 8260B	0.02	08/17/10 20:26	08/18/10	RHH-SA
Trichloroethene	< 0.02 mg/L	EPA 8260B	0.02	08/17/10 20:26	08/18/10	RHH-SA
Tetrachloroethene	< 0.02 mg/L	EPA 8260B	0.02	08/17/10 20:26	08/18/10	RHH-SA

**REMARKS:**

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\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

S Spike Recovery outside accepted recovery limits

MANAGER

*Amie M. Davis*

DATE: 8/19/2010

PA ID #: 08-00380  
NY ID # 11216

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10082689

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10082689

PAGE: 2 of 2

PO#:

PWS ID#

PHONE: (607) 562-4000  
FAX: (607) 562-4001

**TEST REPORT**

Relog of 10081716-001

RECEIVED FOR LAB BY: DLM2

DATE: 08/10/2010 15:33

Page 2 of 2

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Vinyl chloride	< 0.02 mg/L	EPA 8260B	0.02	08/17/10 20:26	08/18/10	RHH-SA
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REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

S Spike Recovery outside accepted recovery limits

MANAGER

*Amie M. Davis*

DATE: 8/19/2010



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WASTE MANAGEMENT

**FORM 26R**  
**CHEMICAL ANALYSIS OF RESIDUAL WASTE**  
**ANNUAL REPORT BY THE GENERATOR**

This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form 26R, reference the item number and identify the date prepared. The date on attached sheets needs to match the date noted below.		<b>DEP USE ONLY</b>			
General Reference 287.54		Date Received & General Notes			
Date Prepared/Revised February 11, 2011					
<b>SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION</b>					
Company Name Talisman Energy USA Inc.					
If a Subsidiary, Name of Parent Company Talisman Energy Inc.			EPA Generator ID# N/A		
Company Mailing Address Line 1 50 Pennwood Place		Company Mailing Address Line 2			
Company Address Last Line – City Warrendale	State PA	Zip+4 15086	Phone (724) 814-5300		
Company Contact Last Name Brown	First Name Dina	MI MI	Suffix		
Municipality Warrendale	County Allegheny				
Contact Phone (724) 814-5321	Ext	Contact Email Address dybrown@talismanusa.com			
Is the waste generated at the Company Mailing Address (noted above)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
If 'No', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the Harvest Holdings (01-036) well pad site located at 909 Newell Road, Canton Township, Bradford County, PA. Waste is stored in containers on site.					
Municipality Canton	County Bradford	State PA			
<b>SECTION B. WASTE DESCRIPTION</b>					
Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure	Time Frame	
810	Drill cuttings (oil and gas)	6,211	<input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton	<input type="checkbox"/> One Time	
<b>1. GENERAL PROPERTIES</b>					
a.	pH Range	7.91 to 9.58	(based on analyses or knowledge)		
b.	Physical State	<input type="checkbox"/> Liquid Waste (EPA Method 9095) <input checked="" type="checkbox"/> Solid (EPA Method 9095) <input type="checkbox"/> Gas (ambient temperature & pressure)			
c.	Physical Appearance	Color	Greyish Black	Odor	Earthy/Slight Petroleum
		Number of Solid or Liquid Phases of Separation		One	
	Describe each phase of separation. Soil and Rock Fragments				
<b>2. CHEMICAL ANALYSIS ATTACHMENTS</b>					
a.	The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
b.	A detailed description of the waste sampling method is attached.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
c.	The quality assurance/quality control procedures employed by the laboratory(ies) is attached.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
d.	The results of the hazardous waste determination is attached.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
e.	If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.		<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	



3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS			
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
SECTION C. MANAGEMENT OF RESIDUAL WASTE			
1. PROCESSING OR DISPOSAL FACILITY(IES)			
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.			
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 9-0232-00003		
b.	Facility Name	Hyland Landfill	
	Address Line 1	6653 Herdman Road	
	Address Line 1		
	Address City State ZIP	Angelica NY	14709
	Municipality	Angelica	County Allegany
c.	Facility Contact Name	Larry Shilling	
	Title		
	Phone	(585) 466-7271	Email Address larry.shilling@casella.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 2,875 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 8-4630-00010		
b.	Facility Name	Hakes C&D Landfill	
	Address Line 1	4376 Manning Ridge Road	
	Address Line 1		
	Address City State ZIP	Painted Post NY	14870
	Municipality	Erwin Twp	County Steuben
c.	Facility Contact Name	Joseph Boyles	
	Title		
	Phone	(607) 937-6044	Email Address joe.boyles@casella.com
		(585) 466-7271	
d.	Volume of waste shipped to processing or disposal facility in the previous year. 2,176 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
2. BENEFICIAL USE			
a.	Has the waste been approved for beneficial use? If "Yes", list the general permit number or approval number.		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		

3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS																					
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																				
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																				
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached. <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A																				
SECTION C. MANAGEMENT OF RESIDUAL WASTE																					
1. PROCESSING OR DISPOSAL FACILITY(IES)																					
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.																					
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 8-0728-00004																				
b.	<table border="0"> <tr> <td>Facility Name</td> <td colspan="3">Chemung County Landfill</td> </tr> <tr> <td>Address Line 1</td> <td colspan="3">1690 Lake Street</td> </tr> <tr> <td>Address Line 1</td> <td colspan="3"></td> </tr> <tr> <td>Address City State ZIP</td> <td>Elmira</td> <td>NY</td> <td>14903</td> </tr> <tr> <td>Municipality</td> <td>Elmira</td> <td>County</td> <td>Chemung</td> </tr> </table>	Facility Name	Chemung County Landfill			Address Line 1	1690 Lake Street			Address Line 1				Address City State ZIP	Elmira	NY	14903	Municipality	Elmira	County	Chemung
Facility Name	Chemung County Landfill																				
Address Line 1	1690 Lake Street																				
Address Line 1																					
Address City State ZIP	Elmira	NY	14903																		
Municipality	Elmira	County	Chemung																		
c.	<table border="0"> <tr> <td>Facility Contact Name</td> <td colspan="3">Carla Canjar</td> </tr> <tr> <td>Title</td> <td colspan="3">Environmental Manager</td> </tr> <tr> <td>Phone</td> <td>(585) 797-5941</td> <td>Email Address</td> <td>carla.canjar@casella.com</td> </tr> </table>	Facility Contact Name	Carla Canjar			Title	Environmental Manager			Phone	(585) 797-5941	Email Address	carla.canjar@casella.com								
Facility Contact Name	Carla Canjar																				
Title	Environmental Manager																				
Phone	(585) 797-5941	Email Address	carla.canjar@casella.com																		
d.	Volume of waste shipped to processing or disposal facility in the previous year. 610 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)																				
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 100361																				
b.	<table border="0"> <tr> <td>Facility Name</td> <td colspan="3">McKean County Landfill</td> </tr> <tr> <td>Address Line 1</td> <td colspan="3">19 Ness Lane</td> </tr> <tr> <td>Address Line 1</td> <td colspan="3"></td> </tr> <tr> <td>Address City State ZIP</td> <td>Kane</td> <td>PA</td> <td>16735</td> </tr> <tr> <td>Municipality</td> <td>Sergeant Twp</td> <td>County</td> <td>McKean</td> </tr> </table>	Facility Name	McKean County Landfill			Address Line 1	19 Ness Lane			Address Line 1				Address City State ZIP	Kane	PA	16735	Municipality	Sergeant Twp	County	McKean
Facility Name	McKean County Landfill																				
Address Line 1	19 Ness Lane																				
Address Line 1																					
Address City State ZIP	Kane	PA	16735																		
Municipality	Sergeant Twp	County	McKean																		
c.	<table border="0"> <tr> <td>Facility Contact Name</td> <td colspan="3">Mike Manderfeld</td> </tr> <tr> <td>Title</td> <td colspan="3"></td> </tr> <tr> <td>Phone</td> <td>(814) 778-9931</td> <td>Email Address</td> <td>manderfeld@gmail.com</td> </tr> </table>	Facility Contact Name	Mike Manderfeld			Title				Phone	(814) 778-9931	Email Address	manderfeld@gmail.com								
Facility Contact Name	Mike Manderfeld																				
Title																					
Phone	(814) 778-9931	Email Address	manderfeld@gmail.com																		
d.	Volume of waste shipped to processing or disposal facility in the previous year. 550 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)																				
2. BENEFICIAL USE																					
a.	Has the waste been approved for beneficial use? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If "Yes", list the general permit number or approval number.																				
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)																				

**SECTION D. CERTIFICATION**

I certify, under penalty of law, that I have personally examined and am familiar with the information submitted in this Annual Report and all attached documents and that based upon my inquiry of those individuals immediately responsible for obtaining the information, I verify that the submitted information is true, accurate and complete to the best of my knowledge. I understand that the submission of false information herein is made subject to the penalties of 18 Pa. C.S. §4904, relating to unsworn falsification to authorities, which include fine and imprisonment.

Check the following, if applicable:

I certify the information required in Section B-1, General Properties was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-2, Chemical Analysis was supplied to the Department for the year \_\_\_\_\_ and has not changed.


Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-3, Process Description and Schematic, was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

Name of Responsible Official \_\_\_\_\_ Title Environmental Specialist  
Dina Brown  
Signature  Date 2/25/11

LAB ID: 08-00380  
LAB ID: 39-00401

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10081720

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10081720

PAGE: 1 of 2

PO#: AF76723

PHONE: (607) 562-4000

FAX: (607) 562-4001

## TEST REPORT

PWS ID#

Harvest Holdings

RECEIVED FOR LAB BY: DLM2

DATE: 08/10/2010 15:33

Page 1 of 2

SAMPLE: **Air Cuttings**

Lab ID: 10081720-001A

Grab

SAMPLED BY: SG

Sample Time: 08/09/2010 16:00

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>		<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Total Petroleum Hydrocarbons	272 mg/Kg	EPA 9071		08/12/10 11:10	08/12/10	

Sample Note: Analysis performed by Microbac-Erie

SAMPLE: **Air Cuttings**

Lab ID: 10081720-001B

Grab

SAMPLED BY: SG

Sample Time: 08/09/2010 16:00

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>		<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Moisture	17.0 %	Moisture Calc.	0.01	08/12/10 8:45	08/13/10	MED-SA
Free Liquid	2.6 %	EPA 9095A	0.1	08/12/10 15:10	08/12/10	RHN-SA
pH	8.63@21.7°C	EPA 9045C		08/12/10 15:42	08/12/10	MED-SA

SAMPLE: **Air Cuttings**

Lab ID: 10081720-001C

Grab

SAMPLED BY: SG

Sample Time: 08/09/2010 16:00

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>		<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Sodium	< 556 mg/Kg-dry	EPA 6010B	556	08/13/10 9:40	08/13/10	RMD-CV
Chloride	402 mg/Kg-dry	EPA 300.0	60.2	08/11/10 14:31	08/12/10	HDP-CV
Percent Moisture	17.0 %	SM2540G		08/12/10 8:45	08/13/10	MED-SA

SAMPLE: **TCLP Leachate of Air Cuttings**

Lab ID: 10081720-001E

Grab

SAMPLED BY: SG

Sample Time: 08/09/2010 16:00

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>		<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.0008	08/12/10 8:30	08/13/10	KW-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	08/13/10 7:20	08/13/10	RMD-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	08/13/10 7:20	08/13/10	RMD-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	08/13/10 7:20	08/13/10	RMD-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	08/13/10 7:20	08/13/10	RMD-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	08/13/10 7:20	08/13/10	RMD-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	08/13/10 7:20	08/13/10	RMD-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

L Value above calibration range but within annually verified linear range

MANAGER

*Amie M. Davis*

DATE: 8/13/2010

LAB ID: 08-00380  
LAB ID: 39-00401

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10081720

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10081720  
PAGE: 2 of 2  
PO#: AF76723

PHONE: (607) 562-4000  
FAX: (607) 562-4001

**TEST REPORT**

PWS ID#

Harvest Holdings

RECEIVED FOR LAB BY: DLM2

DATE: 08/10/2010 15:33

Page 2 of 2

Nickel - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	08/13/10 7:20	08/13/10	RMD-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	08/13/10 7:20	08/13/10	RMD-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	08/13/10 7:20	08/13/10	RMD-CV
Zinc - TCLP extracted	28.6 mg/L	L EPA 6010B	0.200	08/13/10 7:20	08/13/10	RMD-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

L Value above calibration range but within annually verified linear range

MANAGER

*Carrie M. Davis*

DATE:

8/13/2010

LAB ID: 08-00380  
LAB ID: 39-00401

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169  
Fax: (570) 888-0717

Work Order: 10110477

**SEND DATA TO:**

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10110477  
PAGE: 1 of 1  
PO#: AF 76719  
PWS ID#

PHONE: (607) 731-0145  
FAX: (607) 562-4001

**TEST REPORT**

Harvest Holdings

RECEIVED FOR LAB BY: RML

DATE: 11/03/2010 12:36

Page 1 of 1

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Specific Conductance	4130 µmho/cm@25°C	SM2510B	1.0	11/04/10 11:00	11/04/10	IC-SA
pH	7.87@23.4°C	EPA 9045C		11/04/10 15:32	11/04/10	SG-SA
Total Dissolved Solids	14300 mg/kg	X SM2540C	10	11/03/10 10:00	11/03/10	NFM-SA

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Sodium	< 273 mg/Kg	MS EPA 6010B	273	11/04/10 7:50	11/04/10	RMD-CV
Chloride	105 mg/Kg	EPA 300.0	50.0	11/03/10 14:32	11/04/10	HDP-CV

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Total Petroleum Hydrocarbons	193 mg/Kg	EPA 9071	193	11/04/10 14:30	11/04/10	

Sample Note: Analysis performed by Microbac Laboratories, Inc-Erie Division.

**REMARKS:**

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MS Limit of detection increased due to matrix interference and spike recovery data

X Value exceeds Maximum Contaminant Level

MANAGER

*Cassie M. Davis*

DATE: 11/5/2010

**CHAIN OF CUSTODY**

**B**

**REPORT TO:** Talisman / UEG  
 geowetlands@aol.com  
 twollin@rallysolutions.ca

**CONTACT:** Steve Gridley  
 PH# 607-731-0145  
 FAX#

**BILL TO:** Talisman

PO# AF 76719

PROJECT DESCRIPTION:  
Harcourt Holdings CU

SAMPLER SIGNATURE / AFFILIATION:  
[Signature] UEG

CONTAINER / SAMPLING POINT

REFRIGERATE SAMPLES  
 AFTER COLLECTION

TRANSPORT  
 TO  
 LABORATORY  
 IN COOLER  
 WITH ICE

2566 Pe

**W/O#: 10110477**

RESULTS ARE BEING USED FOR:

NYDOH  NYDEC  PADEP

LANDFILL  PERSONAL  OTHER

ARE SPECIAL DETECTION LIMITS  
 NEEDED:  YES  NO

IF YES, PLEASE ATTACH

IS A QC PACKAGE NEEDED?  
 YES  NO

IF YES, PLEASE ATTACH REQUIREMENTS

DW	DRINKING WATER	SL	SLUDGE
GW	GROUND WATER	SO	SOIL
SW	SURFACE WATER	HZ	HAZARDOUS
WW	WASTE WATER	OTHER	
DE	DEIONIZED WATER	DI	DISTILLED WATER
H	HYDROCHLORIC ACID	OH	SODIUM HYDROXIDE
S	SULFURIC ACID	AS	ASCORBIC ACID
N	NITRIC ACID	AC	ACETIC ACID
SO <sub>3</sub>	SODIUM SULFITE	NH <sub>4</sub>	AMMONIUM CHLORIDE
Thio	SODIUM THIOSULFATE	ZN	ZINC ACETATE
-	NONE	Hg	MERCURIC CHLORIDE

DATE SAMPLED	TIME OF SAMPLING	SAMPLE MATRIX	SAMPLE TYPE - GRAB / COMPOSITE	SAMPLER INITIALS	PRESERVATIVE	ANALYSIS TO BE PERFORMED (PER CONTAINER)	COMPOSITED ON RECEIPT	PRESERVATIVE ADDED ON RECEIPT	LAB USE ONLY
<u>10/3</u>	<u>1445</u>	<u>SO</u>	<u>C</u>	<u>SG</u>	<u>N</u>	TDS, Conductivity, pH pH, Chlorides, Sodium, Moist Salinity TPH			<u>-0.01A</u> <u>B</u> <u>C</u>

An incomplete chain of custody may delay the processing of your sample(s).

Please fill out all applicable areas completely

ANALYSIS TO BE PERFORMED (PER CONTAINER)

LAB USE ONLY

24 HOUR TURNAROUND  
 \_\_\_\_\_ DAY TURNAROUND

LAB USE ONLY

DELIVERED BY: [Signature] TEMPERATURE UPON RECEIPT: \_\_\_\_\_ °C ARRIVAL ON ICE:

RELINQUISHED BY: <u>[Signature]</u>	DATE: <u>11/3/10</u>	TIME: <u>1236</u>	RECEIVED BY: <u>[Signature]</u>	DATE: <u>11/3/10</u>	TIME: <u>1236</u>
RELINQUISHED BY:	DATE: <u>1/1</u>	TIME:	RECEIVED BY:	DATE: <u>1/1</u>	TIME:
RELINQUISHED BY:	DATE: <u>1/1</u>	TIME:	RECEIVED BY:	DATE: <u>11/3/10</u>	TIME: <u>1236</u>

LAB ID: 08-00380  
LAB ID: 39-00401

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10071880

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10071880

PAGE: 1 of 1

PO#: AF76719

PHONE: (607) 562-4000

FAX: (607) 562-4001

## TEST REPORT

PWS ID#

Harvest Hldgs Well

RECEIVED FOR LAB BY: WCB

DATE: 07/13/2010 13:15

Page 1 of 1

SAMPLE: **Inv. Cuttings**

Lab ID: 10071880-001A

Grab

SAMPLED BY: SG

Sample Time: 07/12/2010 12:45

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>		<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Total Petroleum Hydrocarbons	16300 mg/Kg	EPA 9071		07/15/10 0:00	07/15/10	

Sample Note: Analysis performed by Microbac-Erie

SAMPLE: **Inv. Cuttings**

Lab ID: 10071880-001B

Grab

SAMPLED BY: SG

Sample Time: 07/12/2010 12:45

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>		<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Moisture	31.7 %	Moisture Calc.	0.01	07/14/10 14:30	07/15/10	NFM-SA
Free Liquid	< 0.1 %	EPA 9095A	0.1	07/14/10 8:35	07/14/10	IC-SA
pH	9.58@22.2°C	EPA 9045C		07/14/10 12:23	07/14/10	DLM-SA

SAMPLE: **TCLP Leachate of Inv. Cuttings**

Lab ID: 10071880-001D

Grab

SAMPLED BY: SG

Sample Time: 07/12/2010 12:45

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>		<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.0008	07/16/10 9:00	07/18/10	RMD-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	07/16/10 15:00	07/17/10	RMD-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	07/16/10 15:00	07/17/10	RMD-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	07/16/10 15:00	07/17/10	RMD-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	07/16/10 15:00	07/17/10	RMD-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	07/16/10 15:00	07/17/10	RMD-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	07/16/10 15:00	07/17/10	RMD-CV
Nickel - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	07/16/10 15:00	07/17/10	RMD-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	07/16/10 15:00	07/17/10	RMD-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	07/16/10 15:00	07/17/10	RMD-CV
Zinc - TCLP extracted	29.4 mg/L	EPA 6010B	0.200	07/16/10 15:00	07/17/10	RMD-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

L Value above calibration range but within annually verified linear range

MANAGER

*Amie M. Davis*

DATE: 7/20/2010



LAB ID: 08-00380  
LAB ID: 39-00401

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10110480

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10110480  
PAGE: 1 of 1  
PO#: AF76719  
PWS ID#

PHONE: (607) 731-0145  
FAX: (607) 562-4001

**TEST REPORT**

Harvest Holdings-cu

RECEIVED FOR LAB BY: RML

DATE: 11/03/2010 12:36

Page 1 of 1

SAMPLE: **Invert** Lab ID: 10110480-001A Grab  
SAMPLED BY: SG Sample Time: 11/03/2010 10:45

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst*
Total Petroleum Hydrocarbons	230 mg/Kg	EPA 9071		11/04/10 14:30	11/04/10	

Sample Note: Analysis performed by Microbac Laboratories, Inc-Erie Division.

SAMPLE: **Invert** Lab ID: 10110480-001B Grab  
SAMPLED BY: SG Sample Time: 11/03/2010 10:45

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst*
Moisture	8.02 %	Moisture Calc.	0.01	11/03/10 14:45	11/04/10	IC-SA
Free Liquid	< 0.1 %	EPA 9095A	0.1	11/03/10 14:30	11/03/10	IC-SA
pH	7.91@23.4°C	EPA 9045C		11/04/10 15:32	11/04/10	SG-SA

SAMPLE: **TCLP Leachate of Invert** Lab ID: 10110480-001D Grab  
SAMPLED BY: SG Sample Time: 11/04/2010 7:30

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst*
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.0008	11/04/10 13:15	11/04/10	RMD-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	11/04/10 14:05	11/04/10	RMD-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	11/04/10 14:05	11/04/10	RMD-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	11/04/10 14:05	11/04/10	RMD-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	11/04/10 14:05	11/04/10	RMD-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	11/04/10 14:05	11/04/10	RMD-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	11/04/10 14:05	11/04/10	RMD-CV
Nickel - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	11/04/10 14:05	11/04/10	RMD-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	11/04/10 14:05	11/04/10	RMD-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	11/04/10 14:05	11/04/10	RMD-CV
Zinc - TCLP extracted	< 0.200 mg/L	EPA 6010B	0.200	11/04/10 14:05	11/04/10	RMD-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER

*Cassie M. Davis*

DATE: 11/5/2010

**CHAIN OF CUSTODY**

**REPORT TO:** Talisman / UEG  
 geowetlands@aol.com  
 twollin@rallysolutions.ca

**CONTACT:** Steve Gridley  
 PH# 607-731-0145  
 FAX#

**BILL TO:** Talisman

PO# AF 76719

**PROJECT DESCRIPTION:** Harvest Holdings cu  
 SAMPLER SIGNATURE / AFFILIATION: [Signature] UEG  
 CONTAINER (SAMPLING POINT)

2566 F

**W/O#: 10110480**

REFRIGERATE SAMPLES AFTER COLLECTION

TRANSPORT TO LABORATORY IN COOLER WITH ICE

RESULTS ARE BEING USED FOR:

NYDOH  NYDEC  PADEP

LANDFILL  PERSONAL  OTHER

ARE SPECIAL DETECTION LIMITS NEEDED?  YES  NO

IF YES, PLEASE ATTACH

IS A QC PACKAGE NEEDED?  YES  NO

IF YES, PLEASE ATTACH REQUIREMENTS

DW	DRINKING WATER	SL	SLUDGE
GW	GROUND WATER	SO	SOIL
SW	SURFACE WATER	HZ	HAZARDOUS
WW	WASTE WATER	OTHER	
DE	DEIONIZED WATER	DI	DISTILLED WATER

H	HYDROCHLORIC ACID	OH	SODIUM HYDROXIDE
S	SULFURIC ACID	AS	ASCORBIC ACID
N	NITRIC ACID	AC	ACETIC ACID
SO <sub>3</sub>	SODIUM SULFITE	NH <sub>4</sub>	AMMONIUM CHLORIDE
Thio	SODIUM THIOSULFATE	ZN	ZINC ACETATE
-	NONE	Hg	MERCURIC CHLORIDE

DATE SAMPLED  
 TIME OF SAMPLING  
 SAMPLE MATRIX  
 SAMPLE TYPE - GRAB / COMPOSITE  
 SAMPLER INITIALS  
 PRESERVATIVE

ANALYSIS TO BE PERFORMED (PER CONTAINER)

An incomplete chain of custody may delay the processing of your sample(s).

COMPOSITED ON RECEIPT  
 PRESERVATIVE ADDED ON RECEIPT

Please fill out all applicable areas completely

LAB USE ONLY

CONTAINER	DATE SAMPLED	TIME OF SAMPLING	SAMPLE MATRIX	SAMPLE TYPE - GRAB / COMPOSITE	SAMPLER INITIALS	PRESERVATIVE	ANALYSIS TO BE PERFORMED (PER CONTAINER)	COMPOSITED ON RECEIPT	PRESERVATIVE ADDED ON RECEIPT	LAB USE ONLY
1	11/3	1045	SO	C	SB	N	TPH			-001 A
2							pH			B
3							TCLP 8 RCRA Metals + Cu, Ni, Zn			C, D
4							Free Liquids / % Moisture			B
5										
6							TCLP 8260 / 8270 ONLY IF the TPH			
7							exceeds 120,000 mg/Kg			
8										
9							24 HOUR TURNAROUND			
10							DAY TURNAROUND			
11										

LAB USE ONLY

DELIVERED BY: [Signature] TEMPERATURE UPON RECEIPT: °C ARRIVAL ON ICE: Y/N

RELINQUISHED BY: [Signature]	DATE: 11/3/10	TIME: 1236	RECEIVED BY: [Signature]	DATE: 11/3/10	TIME: 1236
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY: [Signature]	DATE: 11/3/10	TIME: 1236



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WASTE MANAGEMENT

**FORM 26R**  
**CHEMICAL ANALYSIS OF RESIDUAL WASTE**  
**ANNUAL REPORT BY THE GENERATOR**

This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form 26R, reference the item number and identify the date prepared. The date on attached sheets needs to match the date noted below.  General Reference 287.54		<b>DEP USE ONLY</b> Date Received & General Notes		
Date Prepared/Revised February 11, 2011				
<b>SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION</b>				
Company Name Talisman Energy USA Inc.				
If a Subsidiary, Name of Parent Company Talisman Energy Inc.			EPA Generator ID# N/A	
Company Mailing Address Line 1 50 Pennwood Place		Company Mailing Address Line 2		
Company Address Last Line – City Warrendale		State PA	Zip+4 15086	
		Phone (724) 814-5300	Ext	
Company Contact Last Name Brown		First Name Dina	MI Suffix	
Municipality Warrendale		County Allegheny		
Contact Phone (724) 814-5321		Ext	Contact Email Address dybrown@talismanusa.com	
Is the waste generated at the Company Mailing Address (noted above)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If 'No', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the (01-017) well pad site located at 13766 Route 14, Canton Township, Bradford County, PA. Waste is stored in containers on site.				
Municipality Canton		County Bradford	State PA	
<b>SECTION B. WASTE DESCRIPTION</b>				
Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure	Time Frame
810	Drill cuttings (oil and gas)	3,382	<input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton	<input type="checkbox"/> One Time
<b>1. GENERAL PROPERTIES</b>				
a.	pH Range 8.9 to 11.3 (based on analyses or knowledge)			
b.	Physical State <input type="checkbox"/> Liquid Waste (EPA Method 9095) <input checked="" type="checkbox"/> Solid (EPA Method 9095) <input type="checkbox"/> Gas (ambient temperature & pressure)			
c.	Physical Appearance Color Greyish Black Odor Earthy/slight petroleum Number of Solid or Liquid Phases of Separation One Describe each phase of separation. Soil and Rock Fragments			
<b>2. CHEMICAL ANALYSIS ATTACHMENTS</b>				
a.	The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
b.	A detailed description of the waste sampling method is attached.			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
c.	The quality assurance/quality control procedures employed by the laboratory(ies) is attached.			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
d.	The results of the hazardous waste determination is attached.			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
e.	If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.			<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A

3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS			
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
SECTION C. MANAGEMENT OF RESIDUAL WASTE			
1. PROCESSING OR DISPOSAL FACILITY(IES)			
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.			
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 101243		
b.	Facility Name	Northern Tier Solid Waste Authority - Bradford County	
	Address Line 1	108 Steam Hollow Road	
	Address Line 1		
	Address City State ZIP	Troy PA	16947
	Municipality	West Burlington Twp	County Bradford
c.	Facility Contact Name	Charles Woodward	
	Title	Recycling Coordinator	
	Phone	(570) 297-4177	Email Address chuckwoodward@epix.net
d.	Volume of waste shipped to processing or disposal facility in the previous year. 1,227 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 9-0232-00003		
b.	Facility Name	Hyland Landfill	
	Address Line 1	6653 Herdman Road	
	Address Line 1		
	Address City State ZIP	Angelica NY	14709
	Municipality	Angelica	County Allegany
c.	Facility Contact Name	Larry Shilling	
	Title		
	Phone	(585) 466-7271	Email Address larry.shilling@casella.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 1,158 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
2. BENEFICIAL USE			
a.	Has the waste been approved for beneficial use? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If "Yes", list the general permit number or approval number.		
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		

3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS			
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
SECTION C. MANAGEMENT OF RESIDUAL WASTE			
1. PROCESSING OR DISPOSAL FACILITY(IES)			
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.			
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 8-0728-00004		
b.	Facility Name	Chemung County Landfill	
	Address Line 1	1690 Lake Street	
	Address Line 1		
	Address City State ZIP	Elmira NY	14903
	Municipality	Elmira	County Chemung
c.	Facility Contact Name	Carla Canjar	
	Title	Environmental Manager	
	Phone	(585) 797-5941	Email Address carla.canjar@casella.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 889 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 8-4630-00010		
b.	Facility Name	Hakes C&D Landfill	
	Address Line 1	4376 Manning Ridge Road	
	Address Line 1		
	Address City State ZIP	Painted Post NY	14870
	Municipality	Erwin Twp	County Steuben
c.	Facility Contact Name	Joseph Boyles	
	Title		
	Phone	(607) 937-6044	Email Address joe.boyles@casella.com
		(585) 466-7271	
d.	Volume of waste shipped to processing or disposal facility in the previous year. 108 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
2. BENEFICIAL USE			
a.	Has the waste been approved for beneficial use? If "Yes", list the general permit number or approval number.		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		

**SECTION D. CERTIFICATION**

I certify, under penalty of law, that I have personally examined and am familiar with the information submitted in this Annual Report and all attached documents and that based upon my inquiry of those individuals immediately responsible for obtaining the information, I verify that the submitted information is true, accurate and complete to the best of my knowledge. I understand that the submission of false information herein is made subject to the penalties of 18 Pa. C.S. §4904, relating to unsworn falsification to authorities, which include fine and imprisonment.

Check the following, if applicable:

I certify the information required in Section B-1, General Properties was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-2, Chemical Analysis was supplied to the Department for the year \_\_\_\_\_ and has not changed.

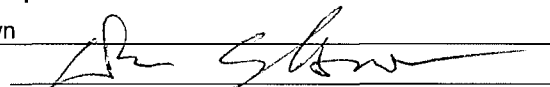
Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-3, Process Description and Schematic, was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

Name of Responsible Official	Title
Dina Brown	Environmental Specialist
Signature 	Date
	2/25/11



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WASTE MANAGEMENT

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**ANNUAL REPORT BY THE GENERATOR**

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Company Name Talisman Energy USA Inc.				
If a Subsidiary, Name of Parent Company Talisman Energy Inc.			EPA Generator ID# N/A	
Company Mailing Address Line 1 50 Pennwood Place		Company Mailing Address Line 2		
Company Address Last Line – City Warrendale	State PA	Zip+4 15086	Phone Ext (724) 814-5300	
Company Contact Last Name Brown	First Name Dina	MI	Suffix	
Municipality Warrendale	County Allegheny			
Contact Phone (724) 814-5321	Ext	Contact Email Address dybrown@talismanusa.com		
Is the waste generated at the Company Mailing Address (noted above)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
If 'No', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the (01-024) well pad site located at 720 Knights Drive, Troy Township, Bradford County, PA. Waste is stored in containers on site.				
Municipality Troy	County Bradford	State PA		
<b>SECTION B. WASTE DESCRIPTION</b>				
Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure	Time Frame
810	Drill cuttings (oil and gas)	673	<input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton	<input type="checkbox"/> One Time
<b>1. GENERAL PROPERTIES</b>				
a. pH Range	9.74 to 10.61 (based on analyses or knowledge)			
b. Physical State	<input type="checkbox"/> Liquid Waste (EPA Method 9095) <input checked="" type="checkbox"/> Solid (EPA Method 9095) <input type="checkbox"/> Gas (ambient temperature & pressure)			
c. Physical Appearance	Color Greyish Black Odor Earthy/ slight petroleum Number of Solid or Liquid Phases of Separation One Describe each phase of separation. Soil and Rock Fragments			
<b>2. CHEMICAL ANALYSIS ATTACHMENTS</b>				
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d.	The results of the hazardous waste determination is attached.			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
e.	If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.			<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A

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Facility Contact Name	Charles Woodward																				
Title																					
Phone	(570) 297-4177	Email Address	chuckwoodward@epix.net																		
d.	Volume of waste shipped to processing or disposal facility in the previous year. 603 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)																				
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 8-0728-00004																				
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Title	Environmental Manager																				
Phone	(585) 797-5941	Email Address	carla.canjar@casella.com																		
d.	Volume of waste shipped to processing or disposal facility in the previous year. 70 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)																				
<b>2. BENEFICIAL USE</b>																					
a.	Has the waste been approved for beneficial use? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If "Yes", list the general permit number or approval number.																				
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)																				



**SECTION D. CERTIFICATION**

I certify, under penalty of law, that I have personally examined and am familiar with the information submitted in this Annual Report and all attached documents and that based upon my inquiry of those individuals immediately responsible for obtaining the information, I verify that the submitted information is true, accurate and complete to the best of my knowledge. I understand that the submission of false information herein is made subject to the penalties of 18 Pa. C.S. §4904, relating to unsworn falsification to authorities, which include fine and imprisonment.

Check the following, if applicable:

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Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-2, Chemical Analysis was supplied to the Department for the year \_\_\_\_\_ and has not changed.

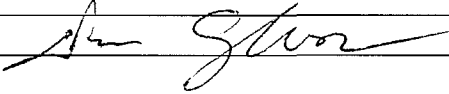
Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-3, Process Description and Schematic, was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

Name of Responsible Official	Title
Dina Brown	Environmental Specialist
Signature 	Date
	2/25/11



**ANALYTICAL  
LABORATORY  
SERVICES, INC.**

*www.analyticallab.com*  
NELAP Accredited  
PA 22-293 NJ PA010



**34 Dogwood Lane - Middletown, PA 17057 Phone: 717-944-5541 Fax: 717-944-1430**

## Certificate of Analysis

Project Name:	Marcellus Shale	Workorder:	9814714
Purchase Order:		Workorder ID:	[REDACTED] L2H Well Pad:INV+Cut.

Mr. Steve Gridley  
Fortuna  
337 Daniel Zenker Drive  
Horseheads, NY 14845

October 23, 2009

Dear Mr. Gridley,

Enclosed are the analytical results for samples received by the laboratory on Wednesday, October 21, 2009

ALSI is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Denise Brooks (Project Coordinator) or Anna G Milliken (Laboratory Manager) at (717) 944-5541.

Please visit us at [www.analyticallab.com](http://www.analyticallab.com) for a listing of ALSI's NELAP accreditations and Scope of Work, as well as other links to Water Quality documentation on the internet.

This laboratory report may not be reproduced, except in full, without the written approval of ALSI.

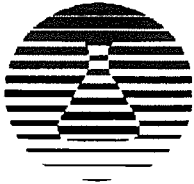
NOTE: ALSI has changed the report generation tool and while we have tried to retain the existing format, you will notice some changes in the laboratory report. Please feel free to contact ALSI in case you have any questions.

Analytical Laboratory Services, Inc.

CC: Phyllis, Accounts Payable

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*

  
Anna G Milliken  
Laboratory Manager



SAMPLE SUMMARY

Workorder 9814714 [redacted] L2H Well Pad:INV+Cut.

Discard Date: 11/06/2009

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
9814714001	[redacted] L2H - Inv Cuttings Bin	Solid	10/20/09 13:20	10/21/09 09:15	Steve Gridley

**Workorder Comments:**

**Notes**

- Samples collected by ALSI personnel are done so in accordance with the procedures set forth in the ALSI Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.

**Standard Acronyms/Flags**

- J, B Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
- U Indicates that the analyte was Not Detected (ND)
- MDL Method Detection Limit
- PQL Practical Quantitation Limit
- RDL Reporting Detection Limit
- ND Not Detected - indicates that the analyte was Not Detected at the RDL
- Cntr Analysis was performed using this container
- RegLmt Regulatory Limit
- LCS Laboratory Control Sample
- MS Matrix Spike
- MSD Matrix Spike Duplicate
- DUP Sample Duplicate
- %Rec Percent Recovery
- RPD Relative Percent Difference



ANALYTICAL RESULTS

Workorder: 9814714 [redacted] L2H Well Pad:INV+Cut.

Lab ID: 9814714001 Date Collected: 10/20/2009 13:20 Matrix: Solid  
Sample ID: [redacted] L2H - Inv Cuttings Bin Date Received: 10/21/2009 09:15

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>PETROLEUM HC's</b>										
Total Petroleum Hydrocarbons (TPH)	202000		mg/kg	16300	SW846 8015D	10/21/09	RSS	10/23/09 14:16	JJH	A1
<b>WET CHEMISTRY</b>										
Free Liquids	Negative				SW846 9095			10/22/09 12:15	SDL	A
Moisture	18.8		%	0.1	SM20-2540 G			10/21/09 22:45	MBR	A
pH	10.61	1.2	pH_Units		SW846 9045D			10/22/09 07:44	SAD	A
Total Solids	81.2		%	0.1	SM20-2540 G			10/21/09 22:45	MBR	A
<b>TCLP METALS</b>										
Arsenic, Total	ND		mg/L	0.18	SW846 6010C	10/23/09	MNP	10/23/09 12:07	TED	A3
Barium, Total	0.37		mg/L	0.22	SW846 6010C	10/23/09	MNP	10/23/09 12:07	TED	A3
Cadmium, Total	0.16		mg/L	0.044	SW846 6010C	10/23/09	MNP	10/23/09 12:07	TED	A3
Chromium, Total	ND		mg/L	0.12	SW846 6010C	10/23/09	MNP	10/23/09 12:07	TED	A3
Copper, Total	ND		mg/L	0.22	SW846 6010C	10/23/09	MNP	10/23/09 12:07	TED	A3
Lead, Total	0.20		mg/L	0.13	SW846 6010C	10/23/09	MNP	10/23/09 12:07	TED	A3
Mercury, Total	ND		mg/L	0.0020	SW846 7470A	10/23/09	BLB	10/23/09 11:04	BLB	A2
Nickel, Total	ND		mg/L	0.44	SW846 6010C	10/23/09	MNP	10/23/09 12:07	TED	A3
Selenium, Total	ND		mg/L	0.44	SW846 6010C	10/23/09	MNP	10/23/09 12:07	TED	A3
Silver, Total	ND		mg/L	0.088	SW846 6010C	10/23/09	MNP	10/23/09 12:07	TED	A3
Zinc, Total	172		mg/L	0.44	SW846 6010C	10/23/09	MNP	10/23/09 12:07	TED	A3
<b>TCLP LEACHATE</b>										
Extraction Fluid Used	2				SW846 1311			10/22/09 07:00	EL	A
Final pH	5.28		pH_Units		SW846 1311			10/22/09 07:00	EL	A
Preliminary pH after DI water	8.01		pH_Units		SW846 1311			10/22/09 07:00	EL	A
Preliminary pH after HCl	5.01		pH_Units		SW846 1311			10/22/09 07:00	EL	A

Sample Comments:

Due to spectral interference from Zinc, this sample was diluted 1/20 for the 6010C metals analysis. The detection limits were raised accordingly. TED 10/23/09

This sample was analyzed at a dilution in the 8015 diesel range organics analysis due to the level of analyte detected. Reporting limits were adjusted accordingly. Surrogate recovery could not be evaluated as a result of the dilution.

*Anna G Milliken*  
Anna G Milliken  
Laboratory Manager



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ANALYTICAL RESULTS QUALIFIERS\FLAGS

Workorder: 9814714 [REDACTED] L2H Well Pad:INV+Cut.

---

PARAMETER QUALIFIERS\FLAGS

- [1] The solid pH measured in water was 10.614 at 21.4 degrees C.
- [2] Analyte was analyzed past the 24 hour holding time.



**CHAIN OF CUSTODY/  
REQUEST FOR ANALYSIS**

Generated by AL



Pg. 1  
of  
1

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AL: SHADED AREAS MUST BE COMPLETED BY THE CLIENT /  
SAMPLER INSTRUCTIONS ON THE BACK

Client Name: Fortuna Energy Inc. (FEI)			Container Type: Glass Glass Glass Glass				Receipt Information (completed by Receiving Lab)					
Address: 337 Daniel Zenker Drive Horseheads, New York 14845			Container Size: 4-OZ 4-OZ 4-OZ 4-OZ				Cooler Temp: 6° Therm ID: 51023557					
Contact: Steve Girdley			Preservative: N N N N				No. of Coolers: Y N Initial					
Project Name: 2H Well Pad: INV + Cuttings			ANALYSES/METHOD REQUESTED								Custody Seals Present? <input checked="" type="checkbox"/> KLM	
Bill To: FEI: AF #73289											COC Labels Complete/Accurate? <input checked="" type="checkbox"/>	
TAT: <input checked="" type="checkbox"/> Normal-Standard TAT is 10-12 business days. <input checked="" type="checkbox"/> Rush-Subject to ALSI approval and surcharges.			TOLP Metals: Al, Ba, Ca, Cr, Pb, Hg, Se, Ag, Cu, Ni, Zn TPH HAPs Free Liquids (% Moisture)				Correct Preservation? <input checked="" type="checkbox"/>		Headspace/Volatiles? <input checked="" type="checkbox"/>			
Date Required: 48-Hr. @ \$283 Approved By: Scott B.							Enter Number of Containers Per Sample or Field Results Below.				Courier/Tracking #: 8577 6333 6956	
Email? <input checked="" type="checkbox"/> Y geowellands@aol.com & see comments			Sample Description/Location (as it will appear on the lab report)				Sample/COC Comments					
Fax? <input type="checkbox"/> Y No:			1 Knights L2H-Inv Cuttings-Bin				Drill Cuttings w residual oil-based drilling fluid					
			2				IF TPH IS > 120,000 mg/Kg - RUN EPA 8260 & 8270 WITH RUSH					
			3									
			4									
			5									
			6									
			7									
			8									
			9									
			10									
COMMENTS: Also Email Results to: two@in@crabysolutions.ca & phyllis@waynawhplandfill.com & kathymstrong@epix.net			LOGGED BY (signature): [Signature] 10/21/09 #1224				Special Processing					
			REVIEWED BY (signature): [Signature] 10/22/09				USACE <input type="checkbox"/>					
Relinquished By / Company Name			Date		Time		Received By / Company Name		Date		Time	
1 [Signature] WEG			102009		1600		2 FedEx #959783336956		1020		1800	
3							4 [Signature] ALSI		10/29		0915	
5							5					
7							6					
9							10					
			Reportable to PADEP? Yes <input checked="" type="checkbox"/> #237861				Sample Disposal Lab <input checked="" type="checkbox"/>					
			PWSID # 101243				Special <input type="checkbox"/>					
			EDDS: Format Type									

\* G=Grab; C=Composite \*\*Matrix - AL=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipes; WW=Wastewater

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## Certificate of Analysis

Project Name:	Marcellus Shale	Workorder:	9815605
Purchase Order:		Workorder ID:	██████ L2H

Mr Steve Gridley  
Fortuna  
337 Daniel Zenker Drive  
Horseheads, NY 14845

October 29, 2009

Dear Mr Gridley,

Enclosed are the analytical results for samples received by the laboratory on Tuesday, October 27, 2009

ALSI is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Denise Brooks (Project Coordinator) or Anna G Milliken (Laboratory Manager) at (717) 944-5541.

Please visit us at [www.analyticalab.com](http://www.analyticalab.com) for a listing of ALSI's NELAP accreditations and Scope of Work, as well as other links to Water Quality documentation on the internet.

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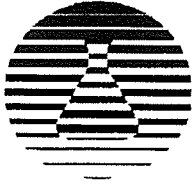
NOTE: ALSI has changed the report generation tool and while we have tried to retain the existing format, you will notice some changes in the laboratory report. Please feel free to contact ALSI in case you have any questions.

Analytical Laboratory Services, Inc.

CC: Phyllis

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*

  
Anna G Milliken  
Laboratory Manager



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**SAMPLE SUMMARY**

Workorder: 9815605 [REDACTED] L2H

Discard Date: 11/12/2009

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
9815605001	Inv-Cuttings	Solid	10/26/09 10:15	10/27/09 09:30	Steve Gridley

**Workorder Comments:**

**Notes**

- Samples collected by ALSI personnel are done so in accordance with the procedures set forth in the ALSI Field Sampling Plan (20 - Field Services Sampling Plan)
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.

**Standard Acronyms/Flags**

- J, B Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
- U Indicates that the analyte was Not Detected (ND)
- MDL Method Detection Limit
- PQL Practical Quantitation Limit
- RDL Reporting Detection Limit
- ND Not Detected - indicates that the analyte was Not Detected at the RDL
- Cntr Analysis was performed using this container
- RegLmt Regulatory Limit
- LCS Laboratory Control Sample
- MS Matrix Spike
- MSD Matrix Spike Duplicate
- DUP Sample Duplicate
- %Rec Percent Recovery
- RPD Relative Percent Difference





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ANALYTICAL RESULTS

Workorder: 9815605 [REDACTED] L2H

Lab ID: 9815605001 Date Collected: 10/26/2009 10:15 Matrix: Solid  
Sample ID: Inv-Cuttings Date Received: 10/27/2009 09:30

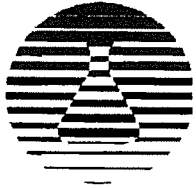
Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>PETROLEUM HC's</b>										
Total Petroleum Hydrocarbons (TPH)	176000		mg/kg	32300	SW846 8015D	10/28/09	GMG	10/28/09 21:21	KJH	B1
<b>WET CHEMISTRY</b>										
Moisture	18.5		%	0.1	SM20-2540 G			10/28/09 04:00	KMW	A
pH	9.74	1.2	pH_Units		SW846 9045D			10/28/09 01:10	SAD	A
Total Solids	81.5		%	0.1	SM20-2540 G			10/28/09 04:00	KMW	A
<b>TCLP METALS</b>										
Arsenic, Total	ND		mg/L	0.0090	SW846 6010C	10/29/09	MNP	10/29/09 10:42	JWK	A1
Barium, Total	0.77		mg/L	0.011	SW846 6010C	10/29/09	MNP	10/29/09 10:42	JWK	A1
Cadmium, Total	0.012		mg/L	0.0022	SW846 6010C	10/29/09	MNP	10/29/09 10:42	JWK	A1
Chromium, Total	ND		mg/L	0.0060	SW846 6010C	10/29/09	MNP	10/29/09 10:42	JWK	A1
Copper, Total	0.067		mg/L	0.011	SW846 6010C	10/29/09	MNP	10/29/09 10:42	JWK	A1
Lead, Total	0.055		mg/L	0.0067	SW846 6010C	10/29/09	MNP	10/29/09 10:42	JWK	A1
Mercury, Total	ND		mg/L	0.0020	SW846 7470A	10/29/09	BLB	10/29/09 12:42	BLB	A2
Nickel Total	0.18		mg/L	0.022	SW846 6010C	10/29/09	MNP	10/29/09 10:42	JWK	A1
Selenium Total	ND		mg/L	0.022	SW846 6010C	10/29/09	MNP	10/29/09 10:42	JWK	A1
Silver, Total	ND		mg/L	0.0044	SW846 6010C	10/29/09	MNP	10/29/09 10:42	JWK	A1
Zinc, Total	12.9		mg/L	0.044	SW846 6010C	10/29/09	MNP	10/29/09 12:17	JWK	A1
<b>TCLP LEACHATE</b>										
Extraction Fluid Used	1				SW846 1311			10/28/09 07:20	EL	A
Final pH	5.94		pH_Units		SW846 1311			10/28/09 07:20	EL	A
Preliminary pH after DI water	7.23		pH_Units		SW846 1311			10/28/09 07:20	EL	A
Preliminary pH after HCl	1.84		pH_Units		SW846 1311			10/28/09 07:20	EL	A

Sample Comments:

EPA Methods require samples to be transported at 4 degrees centigrade. This can be accomplished by adding ice to the cooler before transporting to the lab. The temperature of this sample was above 4 degrees centigrade when received.

This sample was analyzed at a dilution in the 8015 diesel range organics analysis due to the level of analyte detected in the sample. Reporting limits were adjusted accordingly. Surrogate recovery could not be evaluated as a result of the dilution.

  
Anna G Milliken  
Laboratory Manager



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ANALYTICAL RESULTS QUALIFIERS\FLAGS

Workorder: 9815605 [REDACTED] L2H

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PARAMETER QUALIFIERS\FLAGS

- {1} The solid pH measured in water was 9.739 at 19.9 degrees C.
- {2} Analyte was analyzed past the 24 hour holding time.



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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT/SAMPLER. INSTRUCTIONS ON THE BACK.

Page 1 of 1 Courier: Tracking #: 868333837707



Co. Name: Portuna Energy Contact (Person): Steve Grindley Address: Phone: 607 731-0145

Bill to (if different than Report to): Portuna PO#: Project Name/#: ALSI Quote #: TAT: Normal-Standard TAT is 10-12 business days. Date Required: 48 hr. Email? on file + geowetlands@aol.com

Table with columns for Container Type, Container Size, Preservative, and ANALYSES/METHOD REQUESTED. Includes handwritten notes like 'TCLP, 8 PCBs, Ni, Cu, Zn' and 'TPH'.

Receipt Information: Cooler Temp: 110C, Thermo ID: 124389, No. of Coolers: 1

Table with columns: Sample Description/Location, COC Comments, Sample Date, Military Time, # of Containers Per Analysis. Row 1: Env - Cuttings, Drill Cuttings, 10/26/05, 1015, C50, 1, 1, 1, 1.

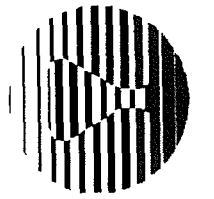
Correct containers? Correct sample volume? Correct preservation? Headspace/Volatiles? Circle appropriate Y or N.

SAMPLED BY (Please Print): Steve Grindley LOGGED BY (Signature): Kelli Sewell 10/27/09 1006 Steve Grindley REVIEWED BY (Signature): [Signature] 10/28/09 1006

Data Deliverables: Standard, CLP-like, NJ-Reduced, NJ-Full. State Samples Collected in? MD, NJ, NY, PA.

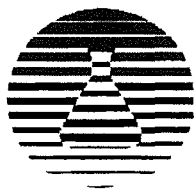
ALSI FIELD SERVICES: Pickup, Labor, Composite Sampling, Rental Equipment, Other.

\* G=Grab; C=Composite \*\*Matrix: Al=Air; DW=Drinking Water; GW=Groundwater; OP=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; YP=Yield; WW=Wastewater \*\*\*Container Type: AQ-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 5oz, etc. Preservative: HCl, HNO3, H2O2, etc.



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## Certificate of Analysis

Project Name:	Marcellus Shale	Workorder:	9816272
Purchase Order		Workorder ID:	██████ L2H

Mr Steve Gridley  
Fortuna  
337 Daniel Zenker Drive  
Horseheads, NY 14845

November 3, 2009

Dear Mr Gridley,

Enclosed are the analytical results for samples received by the laboratory on Tuesday, October 27, 2009

ALSI is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Denise Brooks (Project Coordinator) or Anna G Milliken (Laboratory Manager) at (717) 944-5541.

Please visit us at [www.analyticallab.com](http://www.analyticallab.com) for a listing of ALSI's NELAP accreditations and Scope of Work, as well as other links to Water Quality documentation on the internet.

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NOTE: ALSI has changed the report generation tool and while we have tried to retain the existing format, you will notice some changes in the laboratory report. Please feel free to contact ALSI in case you have any questions.

Analytical Laboratory Services, Inc.

CC: Phyllis Twolling, Ms. Kathy Murphy-Strong

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*

  
Anna G Milliken  
Laboratory Manager



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**SAMPLE SUMMARY**

Workorder: 9816272 [REDACTED] L2H

Discard Date: 11/17/2009

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
9816272001	Inv - Cuttings	Solid	10/26/09 10:15	10/27/09 09:30	Customer

**Workorder Comments:**

**Notes**

- Samples collected by ALSI personnel are done so in accordance with the procedures set forth in the ALSI Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis
- The Chain of Custody document is included as part of this report.

**Standard Acronyms/Flags**

- J, B Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
- U Indicates that the analyte was Not Detected (ND)
- MDL Method Detection Limit
- PQL Practical Quantitation Limit
- RDL Reporting Detection Limit
- ND Not Detected - indicates that the analyte was Not Detected at the RDL
- Cntr Analysis was performed using this container
- RegLmt Regulatory Limit
- LCS Laboratory Control Sample
- MS Matrix Spike
- MSD Matrix Spike Duplicate
- DUP Sample Duplicate
- %Rec Percent Recovery
- RPD Relative Percent Difference



ANALYTICAL RESULTS

Workorder: 9816272 L2H

Lab ID: 9816272001  
Sample ID: Inv - Cuttings

Date Collected: 10/26/2009 10:15  
Date Received: 10/27/2009 09:30

Matrix: Solid

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>TCLP VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	20.0	SW846 8260B			11/3/09 10:29	MES	A
2-Butanone	ND		ug/L	200	SW846 8260B			11/3/09 10:29	MES	A
Carbon Tetrachloride	ND		ug/L	20.0	SW846 8260B			11/3/09 10:29	MES	A
Chlorobenzene	ND		ug/L	20.0	SW846 8260B			11/3/09 10:29	MES	A
Chloroform	ND		ug/L	20.0	SW846 8260B			11/3/09 10:29	MES	A
1,2-Dichloroethane	ND		ug/L	20.0	SW846 8260B			11/3/09 10:29	MES	A
1,1-Dichloroethene	ND		ug/L	20.0	SW846 8260B			11/3/09 10:29	MES	A
Tetrachloroethene	ND		ug/L	20.0	SW846 8260B			11/3/09 10:29	MES	A
Trichloroethene	ND		ug/L	20.0	SW846 8260B			11/3/09 10:29	MES	A
Vinyl Chloride	ND		ug/L	20.0	SW846 8260B			11/3/09 10:29	MES	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	5		%	62-133	SW846 8260B			11/3/09 10:29	MES	A
4-Bromofluorobenzene (S)	4.6		%	79-114	SW846 8260B			11/3/09 10:29	MES	A
Dibromofluoromethane (S)	4.4		%	78-116	SW846 8260B			11/3/09 10:29	MES	A
Toluene-d8 (S)	4.9		%	76-127	SW846 8260B			11/3/09 10:29	MES	A
<b>TCLP SEMI-VOLATILES</b>										
mp-Cresol	ND		ug/L	160	SW846 8270D	11/2/09	TNC	11/2/09 22:08	CGS	A1
o-Cresol	ND		ug/L	160	SW846 8270D	11/2/09	TNC	11/2/09 22:08	CGS	A1
1,4-Dichlorobenzene	ND		ug/L	60.0	SW846 8270D	11/2/09	TNC	11/2/09 22:08	CGS	A1
2,4-Dinitrotoluene	ND		ug/L	60.0	SW846 8270D	11/2/09	TNC	11/2/09 22:08	CGS	A1
Hexachlorobenzene	ND		ug/L	60.0	SW846 8270D	11/2/09	TNC	11/2/09 22:08	CGS	A1
Hexachlorobutadiene	ND		ug/L	60.0	SW846 8270D	11/2/09	TNC	11/2/09 22:08	CGS	A1
Hexachloroethane	ND		ug/L	60.0	SW846 8270D	11/2/09	TNC	11/2/09 22:08	CGS	A1
Nitrobenzene	ND		ug/L	60.0	SW846 8270D	11/2/09	TNC	11/2/09 22:08	CGS	A1
Pentachlorophenol	ND		ug/L	320	SW846 8270D	11/2/09	TNC	11/2/09 22:08	CGS	A1
Pyridine	ND		ug/L	160	SW846 8270D	11/2/09	TNC	11/2/09 22:08	CGS	A1
2,4,5-Trichlorophenol	ND		ug/L	160	SW846 8270D	11/2/09	TNC	11/2/09 22:08	CGS	A1
2,4,6-Trichlorophenol	ND		ug/L	160	SW846 8270D	11/2/09	TNC	11/2/09 22:08	CGS	A1
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
2,4,6-Tribromophenol (S)	85.5		%	40-125	SW846 8270D	11/2/09	TNC	11/2/09 22:08	CGS	A1
Phenol-d5 (S)	33.2		%	13-49	SW846 8270D	11/2/09	TNC	11/2/09 22:08	CGS	A1
Terphenyl-d14 (S)	80		%	50-122	SW846 8270D	11/2/09	TNC	11/2/09 22:08	CGS	A1
Nitrobenzene-d5 (S)	82		%	40-110	SW846 8270D	11/2/09	TNC	11/2/09 22:08	CGS	A1
2-Fluorobiphenyl (S)	69.9		%	50-110	SW846 8270D	11/2/09	TNC	11/2/09 22:08	CGS	A1
2-Fluorophenol (S)	48.7		%	20-75	SW846 8270D	11/2/09	TNC	11/2/09 22:08	CGS	A1
<b>TCLP LEACHATE</b>										
Extraction Fluid Used	1				SW846 1311			10/30/09 06:45	EL	A
Final pH	6.14		pH_Units		SW846 1311			10/30/09 06:45	EL	A
Preliminary pH after DI water	7.23		pH_Units		SW846 1311			10/30/09 06:45	EL	A
Preliminary pH after HCl	1.84		pH_Units		SW846 1311			10/30/09 06:45	EL	A



**ANALYTICAL  
LABORATORY  
SERVICES, INC.**

www.analyticalab.com

NELAP Accredited  
PA 22-293 NJ PA010



34 Dogwood Lane - Middletown, PA 17057 Phone: 717-944-5541 Fax: 717-944-1430

ANALYTICAL RESULTS

Workorder: 9816272 [REDACTED] L2H

Lab ID: 9816272001

Date Collected: 10/26/2009 10:15

Matrix: Solid

Sample ID: Inv - Cuttings

Date Received: 10/27/2009 09:30

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	Cntr
------------	---------	------	-------	-----	--------	-------------	-------------	------

Sample Comments:

Anna G Milliken  
Laboratory Manager



# ANALYTICAL LABORATORY SERVICES, INC.

www.analyticalab.com

NELAP Accredited  
PA 22-293 NJ PA010



34 Dogwood Lane - Middletown, PA 17057 Phone: 717-944-5541 Fax: 717-944-1430

9816272

## CHAIN OF CUSTODY / REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK

Analytical Laboratory Services, Inc.  
Entrepreneur - Investor - Operator - Field Services

34 Dogwood Lane - Middletown, PA 17057 - 717-944-5541 - Fax 717-944-1430

Co. Name: Portuna Energy  
Contact (print): Steve Conditley  
Address: Portuna  
Phone: 607 791-0145

Project Name: LRH ALSI Quota #:  
TAT:  Direct Sampling TAT in 14-12 business days  
 Sample Subject to ALSI Approval and Exchange  
Email: on file + geowestlands@aol.com  
Fac # Y No:  
Sample Description/Location: Drill Coretings  
Date Collected: 10/16/15  
COC Comments: Drill Coretings

ANALYSIS/METHOD REQUESTED  
Enter Number of Containers Per Analysis

Container Type	Condition	Sub	Preparation	Enter Number of Containers Per Analysis	Matrix	Sample Date	Sample Time	LOGGED BY (Print)	Time	RECEIVED BY (Print)	Date	Time
G	G	G	G	1	C50	10/16	1015	Steve Conditley	11:20	Steve Conditley	10/16	1500

ALL FIELD SERVICES  
Name: Steve Conditley  
Labor: Steve Conditley  
Composite Sampling: Steve Conditley  
Weight Enclosure: Steve Conditley  
Other: Steve Conditley

9816272  
Page 4 of 4  
Count: 62  
Tracking #: 86833383770

Receipt Information	Container ID	Field No.	Field Date	Field Time	Field Location	Field Conditions	Field Remarks
Lab #	110C	110C	10/16	1015	Drill Coretings	C50	10/16/15





COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WASTE MANAGEMENT

**FORM 26R**  
**CHEMICAL ANALYSIS OF RESIDUAL WASTE**  
**ANNUAL REPORT BY THE GENERATOR**

<p>This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form 26R, reference the item number and identify the date prepared. The date on attached sheets needs to match the date noted below.</p> <p><b>General Reference 287.54</b></p> <p>Date Prepared/Revised February 11, 2011</p>		<p><b>DEP USE ONLY</b></p> <p>Date Received &amp; General Notes</p>		
<b>SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION</b>				
Company Name Talisman Energy USA Inc.				
If a Subsidiary, Name of Parent Company Talisman Energy Inc.			EPA Generator ID# N/A	
Company Mailing Address Line 1 50 Pennwood Place		Company Mailing Address Line 2		
Company Address Last Line – City Warrendale	State PA	Zip+4 15086	Phone (724) 814-5300	
Company Contact Last Name Brown	First Name Dina	MI	Suffix	
Municipality Warrendale	County Allegheny			
Contact Phone (724) 814-5321	Ext	Contact Email Address dybrown@talismanusa.com		
Is the waste generated at the Company Mailing Address (noted above)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
If 'No', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the (03-008) well pad site located at 2202 Wolfe Hollow Road, Columbia Township, Bradford County, PA. Waste is stored in containers on site.				
Municipality Columbia	County Bradford	State PA		
<b>SECTION B. WASTE DESCRIPTION</b>				
Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure	Time Frame
810	Drill cuttings (oil and gas)	8,491	<input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton	<input type="checkbox"/> One Time
<b>1. GENERAL PROPERTIES</b>				
a.	pH Range 9.79 to 11.10 (based on analyses or knowledge)			
b.	Physical State <input type="checkbox"/> Liquid Waste (EPA Method 9095) <input checked="" type="checkbox"/> Solid (EPA Method 9095) <input type="checkbox"/> Gas (ambient temperature & pressure)			
c.	Physical Appearance Color Greyish Black Odor Earthy/Slight Petroleum Number of Solid or Liquid Phases of Separation One Describe each phase of separation. Soil and Rock Fragments			
<b>2. CHEMICAL ANALYSIS ATTACHMENTS</b>				
a.	The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
b.	A detailed description of the waste sampling method is attached.			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
c.	The quality assurance/quality control procedures employed by the laboratory(ies) is attached.			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
d.	The results of the hazardous waste determination is attached.			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
e.	If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.			<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A

3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS			
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
SECTION C. MANAGEMENT OF RESIDUAL WASTE			
1. PROCESSING OR DISPOSAL FACILITY(IES)			
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.			
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 9-0232-00003		
b.	Facility Name	Hyland Landfill	
	Address Line 1	6653 Herdman Road	
	Address Line 1		
	Address City State ZIP	Angelica NY	14709
	Municipality	Angelica	County Allegany
c.	Facility Contact Name	Larry Shilling	
	Title		
	Phone	(585) 466-7271	Email Address larry.shilling@casella.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 3,773 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 8-4630-00010		
b.	Facility Name	Hakes C&D Landfill	
	Address Line 1	4376 Manning Ridge Road	
	Address Line 1		
	Address City State ZIP	Painted Post NY	14870
	Municipality	Erwin Twp	County Steuben
c.	Facility Contact Name	Joseph Boyles	
	Title		
	Phone	(607) 937-6044	Email Address joe.boyles@casella.com
		(585) 466-7271	
d.	Volume of waste shipped to processing or disposal facility in the previous year. 3,387 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
2. BENEFICIAL USE			
a.	Has the waste been approved for beneficial use? If "Yes", list the general permit number or approval number.		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		

3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS			
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
SECTION C. MANAGEMENT OF RESIDUAL WASTE			
1. PROCESSING OR DISPOSAL FACILITY(IES)			
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.			
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 8-0728-00004		
b.	Facility Name	Chemung County Landfill	
	Address Line 1	1690 Lake Street	
	Address Line 1		
	Address City State ZIP	Elmira NY	14903
	Municipality	Elmira	County Chemung
c.	Facility Contact Name	Carla Canjar	
	Title	Environmental Manager	
	Phone	(585) 797-5941	Email Address carla.canjar@casella.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 1,331 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
a.	Solid waste permit number(s) for processing or disposal facility being utilized.		
b.	Facility Name		
	Address Line 1		
	Address Line 1		
	Address City State ZIP		
	Municipality	County	
c.	Facility Contact Name		
	Title		
	Phone	Email Address	
d.	Volume of waste shipped to processing or disposal facility in the previous year. <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		
2. BENEFICIAL USE			
a.	Has the waste been approved for beneficial use? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If "Yes", list the general permit number or approval number.		
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		

**SECTION D. CERTIFICATION**

I certify, under penalty of law, that I have personally examined and am familiar with the information submitted in this Annual Report and all attached documents and that based upon my inquiry of those individuals immediately responsible for obtaining the information, I verify that the submitted information is true, accurate and complete to the best of my knowledge. I understand that the submission of false information herein is made subject to the penalties of 18 Pa. C.S. §4904, relating to unsworn falsification to authorities, which include fine and imprisonment.

Check the following, if applicable:

I certify the information required in Section B-1, General Properties was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-2, Chemical Analysis was supplied to the Department for the year \_\_\_\_\_ and has not changed.

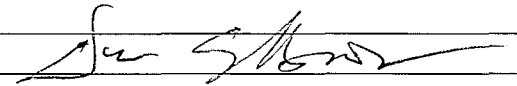
Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-3, Process Description and Schematic, was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

Name of Responsible Official	Title
Dina Brown	Environmental Specialist
Signature 	Date
	2/25/11

LAB ID: 08-00380  
LAB ID: 39-00401

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10071897

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10071897  
PAGE: 1 of 1  
PO#: AF76834

PHONE: (607) 562-4000  
FAX: (607) 562-4001

## TEST REPORT

PWS ID#

Well

RECEIVED FOR LAB BY: WCB

DATE: 07/13/2010 13:15

Page 1 of 1

SAMPLE: **Inv. Cuttings**

Lab ID: 10071897-001A

Grab

SAMPLED BY: SG

Sample Time: 07/12/2010 15:00

SLOQ

Test	Result	Method		Analysis Start	Analysis End	Analyst *
Total Petroleum Hydrocarbons	105000 mg/Kg	EPA 9071		07/15/10 0:00	07/15/10	

Sample Note: Analysis performed by Microbac-Erie

SAMPLE: **Inv. Cuttings**

Lab ID: 10071897-001B

Grab

SAMPLED BY: SG

Sample Time: 07/12/2010 15:00

SLOQ

Test	Result	Method		Analysis Start	Analysis End	Analyst *
Moisture	13.8 %	Moisture Calc.	0.01	07/14/10 14:30	07/15/10	NFM-SA
Free Liquid	< 0.1 %	EPA 9095A	0.1	07/14/10 8:50	07/14/10	IC-SA
pH	9.79@22.2°C	EPA 9045C		07/14/10 12:23	07/14/10	DLM-SA

SAMPLE: **TCLP Leachate of Inv. Cuttings**

Lab ID: 10071897-001D

Grab

SAMPLED BY: SG

Sample Time: 07/12/2010 15:00

SLOQ

Test	Result	Method		Analysis Start	Analysis End	Analyst *
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.0008	07/16/10 9:00	07/18/10	RMD-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	07/16/10 15:00	07/17/10	RMD-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	07/16/10 15:00	07/17/10	RMD-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	07/16/10 15:00	07/17/10	RMD-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	07/16/10 15:00	07/17/10	RMD-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	07/16/10 15:00	07/17/10	RMD-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	07/16/10 15:00	07/17/10	RMD-CV
Nickel - TCLP extracted	0.166 mg/L	EPA 6010B	0.100	07/16/10 15:00	07/17/10	RMD-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	07/16/10 15:00	07/17/10	RMD-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	07/16/10 15:00	07/17/10	RMD-CV
Zinc - TCLP extracted	< 0.200 mg/L	EPA 6010B	0.200	07/16/10 15:00	07/17/10	RMD-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER

*Carrie M. Davis*

DATE: 7/20/2010

LAB ID: 08-00380  
LAB ID: 39-00401

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10074055

Phone: (570) 888-0169  
Fax: (570) 888-0717

**SEND DATA TO:**

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10074055  
PAGE: 1 of 2  
PO#: AF77442

PHONE: (607) 562-4000  
FAX: (607) 562-4001

## TEST REPORT

PWS ID#

RECEIVED FOR LAB BY: DLM2

DATE: 07/26/2010 15:15

Page 1 of 2

SAMPLE: **Air Cuttings & Gypsum**  
SAMPLED BY: SG

Lab ID: 10074055-001A

Composite

Sample Time: 07/26/2010 12:38

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Sodium	723 mg/Kg-dry	EPA 6010B	105	07/28/10 10:30	07/28/10	GSR-CV
Chloride	615 mg/Kg-dry	EPA 300.0	66.9	07/27/10 15:16	07/28/10	HDP-CV
Percent Moisture	25.3 %	SM2540G		07/26/10 10:30	07/27/10	NFM-SA

SAMPLE: **Air Cuttings & Gypsum**  
SAMPLED BY: SG

Lab ID: 10074055-001B

Composite

Sample Time: 07/26/2010 12:38

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Moisture	25.3 %	Moisture Calc.	0.01	07/26/10 10:30	07/27/10	NFM-SA
Free Liquid	< 0.1 %	EPA 9095A	0.1	07/26/10 16:35	07/26/10	IC-SA
pH	11.10@20.8°C	EPA 9045C		07/27/10 12:20	07/27/10	NFM-SA

SAMPLE: **Air Cuttings & Gypsum**  
SAMPLED BY: SG

Lab ID: 10074055-001C

Composite

Sample Time: 07/26/2010 12:38

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Total Petroleum Hydrocarbons	154 mg/Kg	EPA 9071		07/27/10 12:00	07/27/10	
Sample Note: Analysis performed by Microbac-Erie						

SAMPLE: **TLCP of Air Cuttings & Gypsum**  
SAMPLED BY: SG

Lab ID: 10074055-001E

Grab

Sample Time: 07/26/2010 12:38

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Mercury - TCLP extracted	< 0.0010 mg/L	EPA 7470A	0.0010	07/29/10 9:00	07/29/10	RMD-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	07/29/10 9:50	07/29/10	GSR-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	07/29/10 9:50	07/29/10	GSR-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	07/29/10 9:50	07/29/10	GSR-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	07/29/10 9:50	07/29/10	GSR-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	07/29/10 9:50	07/29/10	GSR-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	07/29/10 9:50	07/29/10	GSR-CV

**REMARKS:**

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

S Spike Recovery outside accepted recovery limits

MANAGER

*Carrie M. Davis*

DATE: 7/30/2010

LAB ID: 08-00380  
LAB ID: 39-00401

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10074055

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10074055  
PAGE: 2 of 2  
PO#: AF77442

PHONE: (607) 562-4000  
FAX: (607) 562-4001

**TEST REPORT**

PWS ID#

RECEIVED FOR LAB BY: DLM2

DATE: 07/26/2010 15:15

Page 2 of 2

Nickel - TCLP extracted	< 0.100 mg/L		EPA 6010B	0.100	07/29/10 9:50	07/29/10	GSR-CV
Selenium - TCLP extracted	< 0.500 mg/L	S	EPA 6010B	0.500	07/29/10 9:50	07/29/10	GSR-CV
Silver - TCLP extracted	< 0.100 mg/L		EPA 6010B	0.100	07/29/10 9:50	07/29/10	GSR-CV
Zinc - TCLP extracted	< 0.200 mg/L		EPA 6010B	0.200	07/29/10 9:50	07/29/10	GSR-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

S Spike Recovery outside accepted recovery limits

MANAGER

*Carrie M. Davis*

DATE: 7/30/2010



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WASTE MANAGEMENT

**FORM 26R**  
**CHEMICAL ANALYSIS OF RESIDUAL WASTE**  
**ANNUAL REPORT BY THE GENERATOR**

This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form 26R, reference the item number and identify the date prepared. The date on attached sheets needs to match the date noted below.				<b>DEP USE ONLY</b>	
General Reference 287.54				Date Received & General Notes	
Date Prepared/Revised		February 11, 2011			
<b>SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION</b>					
Company Name Talisman Energy USA Inc.					
If a Subsidiary, Name of Parent Company Talisman Energy Inc.				EPA Generator ID# N/A	
Company Mailing Address Line 1 50 Pennwood Place			Company Mailing Address Line 2		
Company Address Last Line – City Warrendale		State PA	Zip+4 15086	Phone (724) 814-5300	Ext
Company Contact Last Name Brown		First Name Dina	MI	Suffix	
Municipality Warrendale		County Allegheny			
Contact Phone (724) 814-5321		Ext	Contact Email Address dybrown@talismanusa.com		
Is the waste generated at the Company Mailing Address (noted above)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
If 'No', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the (01-015) well pad site located at 225 Buckwheat Road, Troy Township, Bradford County, PA. Waste is stored in containers on site.					
Municipality Troy		County Bradford	State PA		
<b>SECTION B. WASTE DESCRIPTION</b>					
Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure		Time Frame
810	Drill cuttings (oil and gas)	3,161	<input type="checkbox"/> cu yd	<input type="checkbox"/> gal	
			<input type="checkbox"/> lb	<input checked="" type="checkbox"/> ton	<input type="checkbox"/> One Time
<b>1. GENERAL PROPERTIES</b>					
a.	pH Range	10.65 to ---	(based on analyses or knowledge)		
b.	Physical State	<input type="checkbox"/> Liquid Waste (EPA Method 9095) <input checked="" type="checkbox"/> Solid (EPA Method 9095) <input type="checkbox"/> Gas (ambient temperature & pressure)			
c.	Physical Appearance	Color	Greyish Black	Odor	Earthy/Slight Petroleum
		Number of Solid or Liquid Phases of Separation		One	
		Describe each phase of separation. Soil and Rock Fragments			
<b>2. CHEMICAL ANALYSIS ATTACHMENTS</b>					
a.	The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.			<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A detailed description of the waste sampling method is attached.			<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	The quality assurance/quality control procedures employed by the laboratory(ies) is attached.			<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
d.	The results of the hazardous waste determination is attached.			<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
e.	If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.			<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A



3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS			
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
SECTION C. MANAGEMENT OF RESIDUAL WASTE			
1. PROCESSING OR DISPOSAL FACILITY(IES)			
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.			
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 8-4630-00010		
b.	Facility Name	Hakes C&D Landfill	
	Address Line 1	4376 Manning Ridge Road	
	Address Line 1		
	Address City State ZIP	Painted Post	NY 14870
	Municipality	Erwin Twp	County Steuben
c.	Facility Contact Name	Joseph Boyles	
	Title		
	Phone	(607) 937-6044	Email Address joe.boyles@casella.com
		(585) 466-7271	
d.	Volume of waste shipped to processing or disposal facility in the previous year. 1,566 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 9-0232-00003		
b.	Facility Name	Hyland Landfill	
	Address Line 1	6653 Herdman Road	
	Address Line 1		
	Address City State ZIP	Angelica	NY 14709
	Municipality	Angelica	County Allegany
c.	Facility Contact Name	Larry Shilling	
	Title		
	Phone	(585) 466-7271	Email Address larry.shilling@casella.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 855 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
2. BENEFICIAL USE			
a.	Has the waste been approved for beneficial use? If "Yes", list the general permit number or approval number.		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		

3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS																					
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																				
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																				
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached. <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A																				
SECTION C. MANAGEMENT OF RESIDUAL WASTE																					
1. PROCESSING OR DISPOSAL FACILITY(IES)																					
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.																					
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 8-0728-00004																				
b.	<table border="0"> <tr> <td>Facility Name</td> <td colspan="3">Chemung County Landfill</td> </tr> <tr> <td>Address Line 1</td> <td colspan="3">1690 Lake Street</td> </tr> <tr> <td>Address Line 1</td> <td colspan="3"></td> </tr> <tr> <td>Address City State ZIP</td> <td>Elmira</td> <td>NY</td> <td>14903</td> </tr> <tr> <td>Municipality</td> <td>Elmira</td> <td>County</td> <td>Chemung</td> </tr> </table>	Facility Name	Chemung County Landfill			Address Line 1	1690 Lake Street			Address Line 1				Address City State ZIP	Elmira	NY	14903	Municipality	Elmira	County	Chemung
Facility Name	Chemung County Landfill																				
Address Line 1	1690 Lake Street																				
Address Line 1																					
Address City State ZIP	Elmira	NY	14903																		
Municipality	Elmira	County	Chemung																		
c.	<table border="0"> <tr> <td>Facility Contact Name</td> <td colspan="3">Carla Canjar</td> </tr> <tr> <td>Title</td> <td colspan="3">Environmental Manager</td> </tr> <tr> <td>Phone</td> <td>(585) 797-5941</td> <td>Email Address</td> <td>carla.canjar@casella.com</td> </tr> </table>	Facility Contact Name	Carla Canjar			Title	Environmental Manager			Phone	(585) 797-5941	Email Address	carla.canjar@casella.com								
Facility Contact Name	Carla Canjar																				
Title	Environmental Manager																				
Phone	(585) 797-5941	Email Address	carla.canjar@casella.com																		
d.	Volume of waste shipped to processing or disposal facility in the previous year. 573 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)																				
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 100361																				
b.	<table border="0"> <tr> <td>Facility Name</td> <td colspan="3">McKean County Landfill</td> </tr> <tr> <td>Address Line 1</td> <td colspan="3">19 Ness Lane</td> </tr> <tr> <td>Address Line 1</td> <td colspan="3"></td> </tr> <tr> <td>Address City State ZIP</td> <td>Kane</td> <td>PA</td> <td>16735</td> </tr> <tr> <td>Municipality</td> <td>Sergeant Twp</td> <td>County</td> <td>McKean</td> </tr> </table>	Facility Name	McKean County Landfill			Address Line 1	19 Ness Lane			Address Line 1				Address City State ZIP	Kane	PA	16735	Municipality	Sergeant Twp	County	McKean
Facility Name	McKean County Landfill																				
Address Line 1	19 Ness Lane																				
Address Line 1																					
Address City State ZIP	Kane	PA	16735																		
Municipality	Sergeant Twp	County	McKean																		
c.	<table border="0"> <tr> <td>Facility Contact Name</td> <td colspan="3">Mike Manderfeld</td> </tr> <tr> <td>Title</td> <td colspan="3"></td> </tr> <tr> <td>Phone</td> <td>(814) 778-9931</td> <td>Email Address</td> <td>manderfeld@gmail.com</td> </tr> </table>	Facility Contact Name	Mike Manderfeld			Title				Phone	(814) 778-9931	Email Address	manderfeld@gmail.com								
Facility Contact Name	Mike Manderfeld																				
Title																					
Phone	(814) 778-9931	Email Address	manderfeld@gmail.com																		
d.	Volume of waste shipped to processing or disposal facility in the previous year. 167 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)																				
2. BENEFICIAL USE																					
a.	Has the waste been approved for beneficial use? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If "Yes", list the general permit number or approval number.																				
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)																				

**SECTION D. CERTIFICATION**

I certify, under penalty of law, that I have personally examined and am familiar with the information submitted in this Annual Report and all attached documents and that based upon my inquiry of those individuals immediately responsible for obtaining the information, I verify that the submitted information is true, accurate and complete to the best of my knowledge. I understand that the submission of false information herein is made subject to the penalties of 18 Pa. C.S. §4904, relating to unsworn falsification to authorities, which include fine and imprisonment.

Check the following, if applicable:

I certify the information required in Section B-1, General Properties was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-2, Chemical Analysis was supplied to the Department for the year \_\_\_\_\_ and has not changed.

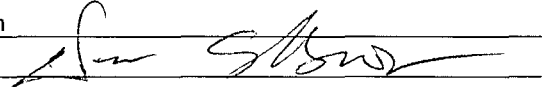
Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-3, Process Description and Schematic, was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

Name of Responsible Official	Title
Dina Brown	Environmental Specialist
Signature 	Date
	2/25/11

LAB ID # 11216  
LAB ID # 11827

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10041878

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10041878  
PAGE: 1 of 1  
PO#: AF76509

PHONE: (607) 562-4000  
FAX: (607) 562-4001

**TEST REPORT**

PWS ID#

5H

RECEIVED FOR LAB BY: DLM2

DATE: 04/14/2010 10:50

Page 1 of 1

SAMPLE: **Inv. Cuttings**

Lab ID: 10041878-001A

Composite

SAMPLED BY: SG

Sample Time: 04/12/2010 17:00

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>	<u>SLOQ</u>	<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.0008	04/15/10 11:30	04/15/10	RMD-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	04/15/10 11:45	04/15/10	RMD-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	04/15/10 11:45	04/15/10	RMD-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	04/15/10 11:45	04/15/10	RMD-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	04/15/10 11:45	04/15/10	RMD-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	04/15/10 11:45	04/15/10	RMD-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	04/15/10 11:45	04/15/10	RMD-CV
Nickel - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	04/15/10 11:45	04/15/10	RMD-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	04/15/10 11:45	04/15/10	RMD-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	04/15/10 11:45	04/15/10	RMD-CV
Zinc - TCLP extracted	2.20 mg/L	EPA 6010B	0.200	04/15/10 11:45	04/15/10	RMD-CV
pH	10.65 @ 21.5°C	EPA 9045D		04/15/10 10:45	04/15/10	SMH-CV
Percent Moisture	30.4 %	SM2540G		04/15/10 8:00	04/15/10	DTG-CV
Total Petroleum Hydrocarbons	59000 mg/Kg-dry	EPA 1664A	1400	04/15/10 8:25	04/15/10	DTG-CV

Sample Note: The temperature of the extraction room exceeded the range of 23 ± 2°C

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER

*Carmie M. Davis*

DATE: 4/15/2010



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WASTE MANAGEMENT

**FORM 26R**  
**CHEMICAL ANALYSIS OF RESIDUAL WASTE**  
**ANNUAL REPORT BY THE GENERATOR**

This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form 26R, reference the item number and identify the date prepared. The date on attached sheets needs to match the date noted below.  General Reference 287.54		<b>DEP USE ONLY</b> Date Received & General Notes		
Date Prepared/Revised February 11, 2011				
<b>SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION</b>				
Company Name Talisman Energy USA Inc.				
If a Subsidiary, Name of Parent Company Talisman Energy Inc.			EPA Generator ID# N/A	
Company Mailing Address Line 1 50 Pennwood Place		Company Mailing Address Line 2		
Company Address Last Line – City Warrendale		State PA	Zip+4 15086	
		Phone (724) 814-5300	Ext	
Company Contact Last Name Brown		First Name Dina	MI Suffix	
Municipality Warrendale		County Allegheny		
Contact Phone (724) 814-5321		Ext Contact Email Address dybrown@talismanusa.com		
Is the waste generated at the Company Mailing Address (noted above)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If 'No', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the (03-036) well pad site located at 1185 Garrison Road, Wells Township, Bradford County, PA. Waste is stored in containers on site.				
Municipality Wells		County Bradford	State PA	
<b>SECTION B. WASTE DESCRIPTION</b>				
Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure	Time Frame
810	Drill cuttings (oil and gas)	721	<input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton	<input type="checkbox"/> One Time
<b>1. GENERAL PROPERTIES</b>				
a.	pH Range 7.78 to 8.20 (based on analyses or knowledge)			
b.	Physical State <input type="checkbox"/> Liquid Waste (EPA Method 9095) <input checked="" type="checkbox"/> Solid (EPA Method 9095) <input type="checkbox"/> Gas (ambient temperature & pressure)			
c.	Physical Appearance Color Greyish Black Odor Earthy/Slight Petroleum Number of Solid or Liquid Phases of Separation One Describe each phase of separation. Soil and Rock Fragments			
<b>2. CHEMICAL ANALYSIS ATTACHMENTS</b>				
a.	The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A detailed description of the waste sampling method is attached.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	The quality assurance/quality control procedures employed by the laboratory(ies) is attached.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
d.	The results of the hazardous waste determination is attached.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
e.	If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.		<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A

<b>3. PROCESS DESCRIPTION &amp; SCHEMATIC ATTACHMENTS</b>																					
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																				
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																				
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached. <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A																				
<b>SECTION C. MANAGEMENT OF RESIDUAL WASTE</b>																					
<b>1. PROCESSING OR DISPOSAL FACILITY(IES)</b>																					
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.																					
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 9-0232-00003																				
b.	<table border="0"> <tr> <td>Facility Name</td> <td colspan="3">Hyland Landfill</td> </tr> <tr> <td>Address Line 1</td> <td colspan="3">6653 Herdman Road</td> </tr> <tr> <td>Address Line 1</td> <td colspan="3"></td> </tr> <tr> <td>Address City State ZIP</td> <td>Angelica</td> <td>NY</td> <td>14709</td> </tr> <tr> <td>Municipality</td> <td>Angelica</td> <td>County</td> <td>Allegany</td> </tr> </table>	Facility Name	Hyland Landfill			Address Line 1	6653 Herdman Road			Address Line 1				Address City State ZIP	Angelica	NY	14709	Municipality	Angelica	County	Allegany
Facility Name	Hyland Landfill																				
Address Line 1	6653 Herdman Road																				
Address Line 1																					
Address City State ZIP	Angelica	NY	14709																		
Municipality	Angelica	County	Allegany																		
c.	<table border="0"> <tr> <td>Facility Contact Name</td> <td colspan="3">Larry Shilling</td> </tr> <tr> <td>Title</td> <td colspan="3"></td> </tr> <tr> <td>Phone</td> <td>(585) 466-7271</td> <td>Email Address</td> <td>larry.shilling@casella.com</td> </tr> </table>	Facility Contact Name	Larry Shilling			Title				Phone	(585) 466-7271	Email Address	larry.shilling@casella.com								
Facility Contact Name	Larry Shilling																				
Title																					
Phone	(585) 466-7271	Email Address	larry.shilling@casella.com																		
d.	Volume of waste shipped to processing or disposal facility in the previous year. 423 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)																				
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 100361																				
b.	<table border="0"> <tr> <td>Facility Name</td> <td colspan="3">McKean County Landfill</td> </tr> <tr> <td>Address Line 1</td> <td colspan="3">19 Ness Lane</td> </tr> <tr> <td>Address Line 1</td> <td colspan="3"></td> </tr> <tr> <td>Address City State ZIP</td> <td>Kane</td> <td>PA</td> <td>16735</td> </tr> <tr> <td>Municipality</td> <td>Sergeant Twp</td> <td>County</td> <td>McKean</td> </tr> </table>	Facility Name	McKean County Landfill			Address Line 1	19 Ness Lane			Address Line 1				Address City State ZIP	Kane	PA	16735	Municipality	Sergeant Twp	County	McKean
Facility Name	McKean County Landfill																				
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Address City State ZIP	Kane	PA	16735																		
Municipality	Sergeant Twp	County	McKean																		
c.	<table border="0"> <tr> <td>Facility Contact Name</td> <td colspan="3">Mike Manderfeld</td> </tr> <tr> <td>Title</td> <td colspan="3"></td> </tr> <tr> <td>Phone</td> <td>(814) 778-9931</td> <td>Email Address</td> <td>manderfeld@gmail.com</td> </tr> </table>	Facility Contact Name	Mike Manderfeld			Title				Phone	(814) 778-9931	Email Address	manderfeld@gmail.com								
Facility Contact Name	Mike Manderfeld																				
Title																					
Phone	(814) 778-9931	Email Address	manderfeld@gmail.com																		
d.	Volume of waste shipped to processing or disposal facility in the previous year. 298 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)																				
<b>2. BENEFICIAL USE</b>																					
a.	Has the waste been approved for beneficial use? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If "Yes", list the general permit number or approval number.																				
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)																				

**SECTION D. CERTIFICATION**

I certify, under penalty of law, that I have personally examined and am familiar with the information submitted in this Annual Report and all attached documents and that based upon my inquiry of those individuals immediately responsible for obtaining the information, I verify that the submitted information is true, accurate and complete to the best of my knowledge. I understand that the submission of false information herein is made subject to the penalties of 18 Pa. C.S. §4904, relating to unsworn falsification to authorities, which include fine and imprisonment.

Check the following, if applicable:

I certify the information required in Section B-1, General Properties was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-2, Chemical Analysis was supplied to the Department for the year \_\_\_\_\_ and has not changed.

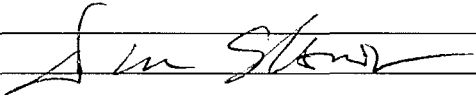
Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-3, Process Description and Schematic, was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

<b>Name of Responsible Official</b>	<b>Title</b> <u>Environmental Specialist</u>
<u>Dina Brown</u>	
<b>Signature</b> <u></u>	<b>Date</b> <u>2/25/11</u>

LAB ID: 08-00380  
LAB ID: 39-00401

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10113523

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10113523  
PAGE: 1 of 1  
PO#: AF76888  
PWS ID#

PHONE: (607) 731-0145  
FAX: (607) 562-4001

**TEST REPORT**

RECEIVED FOR LAB BY: SCP

DATE: 11/22/2010 12:33

Page 1 of 1

SAMPLE: **Inv. Cuttings** Lab ID: 10113523-001A Grab  
SAMPLED BY: SG Sample Time: 11/21/2010 9:00

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Total Petroleum Hydrocarbons	54000 mg/Kg	EPA 9071	170	11/23/10 0:00	11/23/10	

Sample Note: Analysis performed by Microbac Laboratories, Inc.-Erie Division

SAMPLE: **Inv. Cuttings** Lab ID: 10113523-001B Grab  
SAMPLED BY: SG Sample Time: 11/21/2010 9:00

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Moisture	36.9 %	Moisture Calc.	0.01	11/24/10 10:30	11/29/10	IC-SA
Free Liquid	< 0.1 %	EPA 9095A	0.1	11/23/10 17:10	11/23/10	IC-SA
pH	7.78@24.2°C	EPA 9045C		11/23/10 14:00	11/23/10	SG-SA

SAMPLE: **TCLP Leachate of Inv. Cuttings** Lab ID: 10113523-001D Grab  
SAMPLED BY: SG Sample Time: 11/24/2010 8:00

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.0008	11/27/10 12:35	11/28/10	RMD-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	11/27/10 8:15	11/27/10	JRA-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	11/27/10 8:15	11/27/10	JRA-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	11/27/10 8:15	11/27/10	JRA-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	11/27/10 8:15	11/27/10	JRA-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	11/27/10 8:15	11/27/10	JRA-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	11/27/10 8:15	11/27/10	JRA-CV
Nickel - TCLP extracted	< 0.100 mg/L	Z EPA 6010B	0.100	11/27/10 8:15	11/27/10	JRA-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	11/27/10 8:15	11/27/10	JRA-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	11/27/10 8:15	11/27/10	JRA-CV
Zinc - TCLP extracted	19.9 mg/L	L EPA 6010B	0.200	11/27/10 8:15	11/27/10	JRA-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

L Value above calibration range but within annually verified linear range

Z Due to matrix bias, spike recovery was outside acceptance limits

MANAGER

*Cassie M. Davis*

DATE: 11/30/2010



**CHAIN OF CUSTODY**

**REPORT TO:** Talisman / UEG  
 geowetlands@aol.com

**CONTACT:** Steve Gridley  
 PH# 607-731-0145  
 FAX#  
**BILL TO:** Talisman

PO# AF 76888

**PROJECT DESCRIPTION:**  
 [REDACTED]

**SAMPLER SIGNATURE / AFFILIATION:**  
 [Signature] UEG

**CONTAINER / SAMPLING POINT:**

**W/O#: 10113523**

140

REFRIGERATE SAMPLES  
 AFTER COLLECTION

**TRANSPORT TO LABORATORY IN COOLER WITH ICE**

**RESULTS ARE BEING USED FOR:**

NYDOH  NYDEC  PADEP

LANDFILL  PERSONAL  OTHER

**ARE SPECIAL DETECTION LIMITS NEEDED?**  YES  NO

IF YES, PLEASE ATTACH

**IS A QC PACKAGE NEEDED?**  YES  NO

IF YES, PLEASE ATTACH REQUIREMENTS

DW	DRINKING WATER	SL	SLUDGE
GW	GROUND WATER	SO	SOIL
SW	SURFACE WATER	HZ	HAZARDOUS
WW	WASTE WATER	OTHER	
DE	DEIONIZED WATER	DI	DISTILLED WATER
H	HYDROCHLORIC ACID	OH	SODIUM HYDROXIDE
S	SULFURIC ACID	AS	ASCORBIC ACID
N	NITRIC ACID	AC	ACETIC ACID
SO <sub>3</sub>	SODIUM SULFITE	NH <sub>4</sub>	AMMONIUM CHLORIDE
Thio	SODIUM THIOSULFATE	ZN	ZINC ACETATE
-	NONE	Hg	MERCURIC CHLORIDE

DATE SAMPLED	TIME OF SAMPLING	SAMPLE MATRIX	SAMPLE TYPE - GRAB / COMPOSITE	SAMPLER INITIALS	PRESERVATIVE	ANALYSIS TO BE PERFORMED (PER CONTAINER)
11/21	1000	SD	C	SG	N	TPH
						pH
						TCLP 8 RCRA Metals + Cu, Ni, Zn
						Free Liquids / % Moisture
						Perform BTEX ONLY IF the TPH exceeds 100,000 mg/Kg
						<u>72</u> HOUR TURNAROUND
						DAY TURNAROUND
						<u>due 11/22/10</u>

**COMPOSITED ON RECEIPT**

**PRESERVATIVE ADDED ON RECEIPT**

Please fill out all applicable areas completely

**LAB USE ONLY**

**LAB USE ONLY**

DELIVERED BY: [Signature] TEMPERATURE UPON RECEIPT: [ ] °C ARRIVAL ONICE: [ ]

RELINQUISHED BY: [Signature]	DATE: 11/22/10	TIME: 1231	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY: [Signature]	DATE: 11/22/10	TIME: 12:33

**Benchmark Analytics, Inc.  
Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169  
Fax: (570) 888-0717

Work Order: 10110482

COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10110482  
PAGE: 1 of 1  
PO#: AF 76888  
PWS ID#

PHONE: (607) 731-0145  
FAX: (607) 562-4001

**TEST REPORT**

12H

RECEIVED FOR LAB BY: RML

DATE: 11/03/2010 12:36

Page 1 of 1

SAMPLE: **Air Cuttings**  
SAMPLED BY: SG

Lab ID: 10110482-001A Grab

Sample Time: 11/03/2010 19:40

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>	<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Total Petroleum Hydrocarbons	1110 mg/Kg	EPA 9071	11/04/10 14:30	11/04/10	

Sample Note: Analysis performed by Microbac Laboratories, Inc-Erie Division.

SAMPLE: **Air Cuttings**  
SAMPLED BY: SG

Lab ID: 10110482-001B Grab

Sample Time: 11/03/2010 19:40

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>	<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Moisture	33.7 %	Moisture Calc.	11/03/10 14:45	11/04/10	IC-SA
Free Liquid	<0.1 %	EPA 9095A	11/03/10 14:40	11/03/10	IC-SA
pH	8.20@23.6°C	EPA 9045C	11/04/10 15:32	11/04/10	SG-SA

SAMPLE: **TCLP Leachate of Air Cuttings**  
SAMPLED BY: SG

Lab ID: 10110482-001D Grab

Sample Time: 11/04/2010 7:30

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>	<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	11/04/10 13:15	11/04/10	RMD-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	11/04/10 14:05	11/04/10	RMD-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	11/04/10 14:05	11/04/10	RMD-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	11/04/10 14:05	11/04/10	RMD-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	11/04/10 14:05	11/04/10	RMD-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	11/04/10 14:05	11/04/10	RMD-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	11/04/10 14:05	11/04/10	RMD-CV
Nickel - TCLP extracted	< 0.100 mg/L	EPA 6010B	11/04/10 14:05	11/04/10	RMD-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	11/04/10 14:05	11/04/10	RMD-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	11/04/10 14:05	11/04/10	RMD-CV
Zinc - TCLP extracted	< 0.200 mg/L	EPA 6010B	11/04/10 14:05	11/04/10	RMD-CV

**REMARKS:**

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER

*Cassie M. Davis*

DATE:

11/5/2010

### CHAIN OF CUSTODY

**Bench**

GE 1 OF 1

**REPORT TO:** Talisman / UEG  
 geowetlands@aol.com  
 twollin@rallysolutions.ca

2566 Pennsyt  
 Pr.  
 Fax: (570) 888-0717

**W/O#: 10110482**

**IE SPECIAL DETECTION LIMITS**  
 NEEDED:  YES /  NO  
 IF YES, PLEASE ATTACH  
 IS A QC PACKAGE NEEDED?  
 YES /  NO  
 IF YES, PLEASE ATTACH REQUIREMENTS

**CONTACT** Steve Gridley  
 PH# 607-731-0145  
 FAX#  
**BILL TO:** Talisman

REFRIGERATE SAMPLES  
 AFTER COLLECTION

**TRANSPORT  
 TO  
 LABORATORY  
 IN COOLER  
 WITH ICE**

**RESULTS ARE BEING USED FOR:**  
 NYDOH  NYDEC  PADEP  
 LANDFILL  
 PERSONAL OTHER

DW DRINKING WATER SL SLUDGE  
 GW GROUND WATER SO SOIL  
 SW SURFACE WATER HZ HAZARDOUS  
 WW WASTE WATER OTHER  
 DE DEIONIZED WATER DI DISTILLED WATER

H HYDROCHLORIC ACID OH SODIUM HYDROXIDE  
 S SULFURIC ACID AS ASCORBIC ACID  
 N NITRIC ACID AC ACETIC ACID  
 SO<sub>3</sub> SODIUM SULFITE NH<sub>3</sub> AMMONIUM CHLORIDE  
 Thio SODIUM THIOSULFATE ZN ZINC ACETATE  
 - NONE Hg MERCURIC CHLORIDE

PO# **AF 76888**  
 PROJECT DESCRIPTION  
 [Redacted] **J2H**  
 SAMPLER SIGNATURE / AFFILIATION  
 [Signature] **UEG**  
 CONTAINER / SAMPLING POINT

DATE SAMPLED  
 TIME OF SAMPLING  
 SAMPLE MATRIX  
 SAMPLE TYPE - GRAB / COMPOSITE  
 SAMPLER INITIALS  
 PRESERVATIVE

An incomplete chain of custody may delay the  
 processing of your sample(s).  
 ANALYSIS TO BE PERFORMED  
 (PER CONTAINER)

COMPOSITED ON RECEIPT  
 PRESERVATIVE ADDED ON RECEIPT

Please fill out all  
 applicable areas  
 completely

LAB USE ONLY

1	Air Cuttings	1/3	1940	SO	C	SO	N	TPH					
2								pH, Chlorides, Sodium					
3								TCLP 8 RCRA Metals + Cu, Ni, Zn					
4								Free Liquids / % Moisture					
5								<del>BTEX</del>					
6								<del>TCLP 8260 / 8270 ONLY IF BTEX</del>					
7								exceeds 100,000 mg/Kg					
8													
9								72 HOUR TURNAROUND					
10								DAY TURNAROUND					
11													

LAB USE ONLY  
 DELIVERED BY *Client* TEMPERATURE UPON RECEIPT \_\_\_\_\_ °C ARRIVAL ON ICE

RELINQUISHED BY: <i>[Signature]</i>	DATE: 11/13/10	TIME: 1236	RECEIVED BY: <i>[Signature]</i>	DATE: 11/13/10	TIME: 1236
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY: <i>[Signature]</i>	DATE: 11/13/10	TIME: 1236



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WASTE MANAGEMENT

**FORM 26R**  
**CHEMICAL ANALYSIS OF RESIDUAL WASTE**  
**ANNUAL REPORT BY THE GENERATOR**

<p>This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form 26R, reference the item number and identify the date prepared. The date on attached sheets needs to match the date noted below.</p>		<p><b>DEP USE ONLY</b></p> <p>Date Received &amp; General Notes</p>		
<p>General Reference 287.54</p>				
<p>Date Prepared/Revised February 11, 2011</p>				
<p><b>SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION</b></p>				
<p>Company Name Talisman Energy USA Inc.</p>				
<p>If a Subsidiary, Name of Parent Company Talisman Energy Inc.</p>			<p>EPA Generator ID# N/A</p>	
<p>Company Mailing Address Line 1 50 Pennwood Place</p>		<p>Company Mailing Address Line 2</p>		
<p>Company Address Last Line – City Warrendale</p>		<p>State PA</p>	<p>Zip+4 15086</p>	
		<p>Phone (724) 841-5300</p>	<p>Ext</p>	
<p>Company Contact Last Name Brown</p>		<p>First Name Dina</p>	<p>MI MI</p>	
		<p>Suffix</p>		
<p>Municipality Warrendale</p>		<p>County Allegheny</p>		
<p>Contact Phone (724) 814-5321</p>		<p>Ext</p>	<p>Contact Email Address dybrown@talismanusa.com</p>	
<p>Is the waste generated at the Company Mailing Address (noted above)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>				
<p>If 'No', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the (01-074) well pad site located at 2018 Mountain Avenue, Armenia Township, Bradford County, PA. Waste is stored in containers on site.</p>				
<p>Municipality Armenia</p>		<p>County Bradford</p>	<p>State PA</p>	
<p><b>SECTION B. WASTE DESCRIPTION</b></p>				
Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure	Time Frame
810	Drill cuttings (oil and gas)	5,619	<input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton	<input type="checkbox"/> One Time
<p><b>1. GENERAL PROPERTIES</b></p>				
a.	<p>pH Range 8.26 to 8.89 (based on analyses or knowledge)</p>			
b.	<p>Physical State <input type="checkbox"/> Liquid Waste (EPA Method 9095)  <input checked="" type="checkbox"/> Solid (EPA Method 9095)  <input type="checkbox"/> Gas (ambient temperature &amp; pressure)</p>			
c.	<p>Physical Appearance Color Greyish Black Odor Earthy/Slight Petroleum                  Number of Solid or Liquid Phases of Separation One                  Describe each phase of separation. Soil and Rock Fragments</p>			
<p><b>2. CHEMICAL ANALYSIS ATTACHMENTS</b></p>				
a.	<p>The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.</p>			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
b.	<p>A detailed description of the waste sampling method is attached.</p>			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
c.	<p>The quality assurance/quality control procedures employed by the laboratory(ies) is attached.</p>			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
d.	<p>The results of the hazardous waste determination is attached.</p>			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
e.	<p>If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.</p>			<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A

3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS			
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
SECTION C. MANAGEMENT OF RESIDUAL WASTE			
1. PROCESSING OR DISPOSAL FACILITY(IES)			
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.			
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 8-4630-00010		
b.	Facility Name	Hakes C&D Landfill	
	Address Line 1	4376 Manning Ridge Road	
	Address Line 1		
	Address City State ZIP	Painted Post NY 14870	
	Municipality	Erwin Twp County	Steuben
c.	Facility Contact Name	Joseph Boyles	
	Title		
	Phone	(607) 937-6044	Email Address joe.boyles@casella.com
		(585) 466-7271	
d.	Volume of waste shipped to processing or disposal facility in the previous year. 2,512 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 9-0232-00003		
b.	Facility Name	Hyland Landfill	
	Address Line 1	6653 Herdman Road	
	Address Line 1		
	Address City State ZIP	Angelica NY 14709	
	Municipality	Angelica County	Allegany
c.	Facility Contact Name	Larry Shilling	
	Title		
	Phone	(585) 466-7271	Email Address larry.shilling@casella.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 2,139 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
2. BENEFICIAL USE			
a.	Has the waste been approved for beneficial use? If "Yes", list the general permit number or approval number.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		

3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS			
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
SECTION C. MANAGEMENT OF RESIDUAL WASTE			
1. PROCESSING OR DISPOSAL FACILITY(IES)			
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.			
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 100361		
b.	Facility Name	McKean County Landfill	
	Address Line 1	19 Ness Lane	
	Address Line 1		
	Address City State ZIP	Kane PA	16735
	Municipality	Sergeant Twp County	McKean
c.	Facility Contact Name	Mike Manderfeld	
	Title		
	Phone	(814) 778-9931	Email Address manderfeld@gmail.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 938 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 100945		
b.	Facility Name	Cumberland County Landfill	
	Address Line 1	135 Vaughn Road	
	Address Line 1		
	Address City State ZIP	Newburg PA	17240
	Municipality	Newburg Boro County	Cumberland
c.	Facility Contact Name	Dusty Hilbert	
	Title	Compliance Manager	
	Phone	(717) 729-5261	Email Address dhilbert@iswaste.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 30 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
2. BENEFICIAL USE			
a.	Has the waste been approved for beneficial use? If "Yes", list the general permit number or approval number.		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		

**SECTION D. CERTIFICATION**

I certify, under penalty of law, that I have personally examined and am familiar with the information submitted in this Annual Report and all attached documents and that based upon my inquiry of those individuals immediately responsible for obtaining the information, I verify that the submitted information is true, accurate and complete to the best of my knowledge. I understand that the submission of false information herein is made subject to the penalties of 18 Pa. C.S. §4904, relating to unsworn falsification to authorities, which include fine and imprisonment.

Check the following, if applicable:

I certify the information required in Section B-1, General Properties was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-2, Chemical Analysis was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_


I certify the information required in Section B-3, Process Description and Schematic, was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

Name of Responsible Official \_\_\_\_\_ Title Environmental Specialist

Dina Brown

Signature  Date 2/25/11

LAB ID: 08-00380  
LAB ID: 39-00401

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10083653

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10083653  
PAGE: 1 of 2  
PO#: AF77717  
PWS ID#

PHONE: (607) 562-4000  
FAX: (607) 562-4001

## TEST REPORT

01-074-01

RECEIVED FOR LAB BY: DLM2

DATE: 08/20/2010 11:51

Page 1 of 2

SAMPLE: **Air Cuttings**  
SAMPLED BY: SG

Lab ID: 10083653-001A Composite  
Sample Time: 08/19/2010 15:06

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Sodium	1830 mg/Kg	EPA 6010B	60.0	08/24/10 15:00	08/24/10	RMD-CV
pH	8.30 @ 17.8°C	EPA 9045D		08/25/10 10:25	08/25/10	TLB-CV
Chloride	223 mg/Kg	EPA 300.0	50.0	08/23/10 14:05	08/23/10	HDP-CV

SAMPLE: **Air Cuttings**  
SAMPLED BY: SG

Lab ID: 10083653-001B Composite  
Sample Time: 08/19/2010 15:06

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Moisture	35.0 %	Moisture Calc.	0.01	08/23/10 13:30	08/24/10	MED-SA
Free Liquid	< 0.1 %	EPA 9095A	0.1	08/23/10 15:25	08/23/10	IC-SA

SAMPLE: **Air Cuttings**  
SAMPLED BY: SG

Lab ID: 10083653-001C Composite  
Sample Time: 08/19/2010 15:06

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Total Petroleum Hydrocarbons	5400 mg/Kg	EPA 9071		08/23/10 11:15	08/23/10	
Sample Note: Analysis performed by Microbac-Erie						

SAMPLE: **TCLP Leachate of Air Cuttings**  
SAMPLED BY: SG

Lab ID: 10083653-001E Composite  
Sample Time: 08/21/2010 9:00

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.0008	08/24/10 8:45	08/24/10	KW-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	08/24/10 10:50	08/24/10	RMD-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	08/24/10 10:50	08/24/10	RMD-CV
Cadmium - TCLP extracted	0.101 mg/L	EPA 6010B	0.100	08/24/10 10:50	08/24/10	RMD-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	08/24/10 10:50	08/24/10	RMD-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	08/24/10 10:50	08/24/10	RMD-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	08/24/10 10:50	08/24/10	RMD-CV
Nickel - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	08/24/10 10:50	08/24/10	RMD-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

L Value above calibration range but within annually verified linear range

MANAGER

*Carrie M. Davis*

DATE: 8/25/2010



LAB ID: 08-00380  
LAB ID: 39-00401

### Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169  
Fax: (570) 888-0717

Work Order: 10083653

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10083653

PAGE: 2 of 2

PO#: AF77717

PHONE: (607) 562-4000  
FAX: (607) 562-4001

### TEST REPORT

PWS ID#

01-074-01

RECEIVED FOR LAB BY: DLM2

DATE: 08/20/2010 11:51

Page 2 of 2

Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	08/24/10 10:50	08/24/10	RMD-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	08/24/10 10:50	08/24/10	RMD-CV
Zinc - TCLP extracted	115 mg/L	L EPA 6010B	0.200	08/24/10 10:50	08/24/10	RMD-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

L Value above calibration range but within annually verified linear range

MANAGER

*Carrie M. Davis*

DATE: 8/25/2010

LAB ID: 08-00380  
LAB ID: 39-00401

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10092004

Phone: (570) 888-0169  
Fax: (570) 888-0717

**SEND DATA TO:**

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10092004  
PAGE: 1 of 1  
PO#: AF77717

PHONE: (607) 562-4000  
FAX: (607) 562-4001

## TEST REPORT

PWS ID#

RECEIVED FOR LAB BY: TJC

DATE: 09/13/2010 17:12

Page 1 of 1

SAMPLE: **Inv. Cuttings**

Lab ID: 10092004-001A

Grab

SAMPLED BY: SG

Sample Time: 09/13/2010 12:05

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>	<u>SLOQ</u>	<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Total Petroleum Hydrocarbons	77900 mg/Kg	EPA 9071		09/19/10 10:20	09/19/10	

Sample Note: Analysis performed by Microbac Laboratories, Inc.-Erie Division

SAMPLE: **Inv. Cuttings**

Lab ID: 10092004-001B

Grab

SAMPLED BY: SG

Sample Time: 09/13/2010 12:05

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>	<u>SLOQ</u>	<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Moisture	22.9 %	Moisture Calc.	0.01	09/14/10 10:00	09/15/10	MED-SA
Free Liquid	< 0.1 %	EPA 9095A	0.1	09/14/10 15:00	09/14/10	IC-SA
pH	8.89@20.3°C	EPA 9045C		09/14/10 14:26	09/14/10	MED-SA

SAMPLE: **TCLP Leachate of Inv. Cuttings**

Lab ID: 10092004-001D

Grab

SAMPLED BY: SG

Sample Time: 09/15/2010 9:00

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>	<u>SLOQ</u>	<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.0008	09/15/10 9:00	09/16/10	KW-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	09/16/10 8:00	09/16/10	RMD-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	09/16/10 8:00	09/16/10	RMD-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	09/16/10 8:00	09/16/10	RMD-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	09/16/10 8:00	09/16/10	RMD-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	09/16/10 8:00	09/16/10	RMD-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	09/16/10 8:00	09/16/10	RMD-CV
Nickel - TCLP extracted	0.114 mg/L	EPA 6010B	0.100	09/16/10 8:00	09/16/10	RMD-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	09/16/10 8:00	09/16/10	RMD-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	09/16/10 8:00	09/16/10	RMD-CV
Zinc - TCLP extracted	44.6 mg/L	EPA 6010B	0.200	09/16/10 8:00	09/16/10	RMD-CV

**REMARKS:**

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

L Value above calibration range but within annually verified linear range

MANAGER

*Carrie M. Davis*

DATE: 9/20/2010

LAB ID # 11216  
LAB ID # 11827

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10094268

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10094268  
PAGE: 1 of 1  
PO#: AF77718  
PWS ID#

PHONE: (607) 562-4000  
FAX: (607) 562-4001

## TEST REPORT

01-074

RECEIVED FOR LAB BY: BMM

DATE: 09/27/2010 14:48

Page 1 of 1

SAMPLE: **Gel Cuttings**

Lab ID: 10094268-001B

Composite

SAMPLED BY: SG

Sample Time: 09/25/2010 17:19

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Moisture	26.7 %	Moisture Calc.	0.01	09/27/10 17:00	09/28/10	IC-SA
Free Liquid	< 0.1 %	EPA 9095A	0.1	09/27/10 16:10	09/27/10	IC-SA
pH	8.26@21.4°C	EPA 9045C		09/27/10 16:28	09/27/10	MED-SA

SAMPLE: **TCLP Leachate of Gel Cuttings**

Lab ID: 10094268-001C

Composite

SAMPLED BY: SG

Sample Time: 09/28/2010 7:30

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.0008	09/28/10 14:15	09/28/10	JRA-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	09/28/10 14:00	09/28/10	JRA-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	09/28/10 14:00	09/28/10	JRA-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	09/28/10 14:00	09/28/10	JRA-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	09/28/10 14:00	09/28/10	JRA-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	09/28/10 14:00	09/28/10	JRA-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	09/28/10 14:00	09/28/10	JRA-CV
Nickel - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	09/28/10 14:00	09/28/10	JRA-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	09/28/10 14:00	09/28/10	JRA-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	09/28/10 14:00	09/28/10	JRA-CV
Zinc - TCLP extracted	28.7 mg/L	L EPA 6010B	0.200	09/28/10 14:00	09/28/10	JRA-CV

SAMPLE: **Gel Cuttings**

Lab ID: 10094268-001D

Composite

SAMPLED BY: SG

Sample Time: 09/25/2010 17:19

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Total Petroleum Hydrocarbons	5220 mg/Kg	EPA 9071		09/28/10 12:58	09/28/10	

Sample Note: Analysis performed by Microbac Erie

REMARKS:

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\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

L Value above calibration range but within annually verified linear range

MANAGER

*Carrie M. Davis*

DATE: 9/30/2010

LAB ID # 11216  
LAB ID # 11827

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10101808

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10101808  
PAGE: 1 of 1  
PO#: AF77717  
PWS ID#

**TEST REPORT**

PHONE: (607) 731-0145  
FAX: (607) 562-4001

Pad Inv. Spill

RECEIVED FOR LAB BY: BMM

DATE: 10/12/2010 16:22

Page 1 of 1

SAMPLE: **Clean Soil**  
SAMPLED BY: SG

Lab ID: 10101808-001A Composite  
Sample Time: 09/28/2010 19:55

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Total Petroleum Hydrocarbons	<118 mg/Kg	EPA 9071	118	10/14/10 10:25	10/14/10	

Sample Note: This sample was analyzed by Microbac Laboratories, Inc.-Erie Division

SAMPLE: **Clean Soil**  
SAMPLED BY: SG

Lab ID: 10101808-001B Composite  
Sample Time: 09/28/2010 19:55

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Moisture	9.12 %	K Moisture Calc.	0.01	10/13/10 17:00	10/15/10	IC-SA
Free Liquid	< 0.1 %	EPA 9095A	0.1	10/13/10 15:10	10/13/10	IC-SA
pH	8.35@22.8°C	K EPA 9045C		10/15/10 17:00	10/15/10	IC-SA

SAMPLE: **TCLP Leachate of Clean Soil**  
SAMPLED BY: SG

Lab ID: 10101808-001D Composite  
Sample Time: 10/14/2010 7:30

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.0008	10/16/10 9:35	10/17/10	RMD-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	10/16/10 10:15	10/16/10	RMD-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	10/16/10 10:15	10/16/10	RMD-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	10/16/10 10:15	10/16/10	RMD-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	10/16/10 10:15	10/16/10	RMD-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	10/16/10 10:15	10/16/10	RMD-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	10/16/10 10:15	10/16/10	RMD-CV
Nickel - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	10/16/10 10:15	10/16/10	RMD-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	10/16/10 10:15	10/16/10	RMD-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	10/16/10 10:15	10/16/10	RMD-CV
Zinc - TCLP extracted	0.588 mg/L	EPA 6010B	0.200	10/16/10 10:15	10/16/10	RMD-CV

REMARKS:

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K Sample was received past holding time.

MANAGER

*Cami M. Davis*

DATE: 10/18/2010

**CHAIN OF CUSTODY**

**Benchmark Analytics, Inc.**  
Eastern Division

**REPORT TO:** Talisman / UEG  
 geowetlands@aol.com  
 twollin@rallysolutions.ca

**CONTACT:** Steve Gridley  
 PH# 607-731-0145  
 FAX#

**BILL TO:** Talisman

PO# AR77717

**PROJECT DESCRIPTION:**  
Rad Ion Spill

**SAMPLER SIGNATURE / AFFILIATION:**  
[Signature] UEG

**CONTAINER / SAMPLING POINT:**

REFRIGERATE SAMP  
AFTER COLLECTION

**TRANSPORT  
TO  
LABORATORY  
IN COOLER  
WITH ICE**

**W/O#: 10101808**

BEING USED FOR:  
 NYDEC  PADEP

LANDFILL \_\_\_\_\_

**ARE SPECIAL DETECTION LIMITS  
NEEDED:**  YES  NO

IF YES, PLEASE ATTACH \_\_\_\_\_

**IS A QC PACKAGE NEEDED?**  
 YES  NO

IF YES, PLEASE ATTACH REQUIREMENTS \_\_\_\_\_

SW SURFACE WATER HZ HAZARDOUS  
 WW WASTE WATER OTHER  
 DE DEIONIZED WATER DI DISTILLED WATER PERSONAL OTHER

H	HYDROCHLORIC ACID	OH	SODIUM HYDROXIDE
S	SULFURIC ACID	AS	ASCORBIC ACID
N	NITRIC ACID	AC	ACETIC ACID
SO <sub>3</sub>	SODIUM SULFITE	NH <sub>4</sub>	AMMONIUM CHLORIDE
Thio	SODIUM THIOSULFATE	ZN	ZINC ACETATE
-	NONE	Hg	MERCURIC CHLORIDE

An incomplete chain of custody may delay the processing of your sample(s).

ANALYSIS TO BE PERFORMED  
(PER CONTAINER)

Please fill out all applicable areas completely

	DATE SAMPLED	TIME OF SAMPLING	SAMPLE MATRIX	SAMPLE TYPE - GRAB / COMPOSITE	SAMPLER INITIALS	PRESERVATIVE	ANALYSIS TO BE PERFORMED (PER CONTAINER)	COMPOSITED ON RECEIPT	PRESERVATIVE ADDED ON RECEIPT	LAB USE ONLY
1	9-28-14	1455	SC	C	SC	N	TPH			CO1A
2							pH			CO1B
3							TCLP 8 RCRA Metals + Cu, Ni, Zn			CO1C
4							Free Liquids / % Moisture			CO1B
5										
6							TCLP 8260 / 8270 ONLY IF the TPH exceeds 120,000 mg/Kg			
7										
8										
9							<u>72</u> HOUR TURNAROUND			
10							DAY TURNAROUND			
11										

LAB USE ONLY

DELIVERED BY Client

TEMPERATURE UPON RECEIPT 1 °C

ARRIVAL ON ICE  Y  N

RELINQUISHED BY: <u>[Signature]</u>	DATE: <u>10/12/10</u>	TIME: <u>1622</u>	RECEIVED BY:	DATE: <u>1</u>	TIME:
RELINQUISHED BY:	DATE: <u>1</u>	TIME:	RECEIVED BY:	DATE: <u>1</u>	TIME:
RELINQUISHED BY:	DATE: <u>1</u>	TIME:	RECEIVED BY: <u>Debbie McCarty</u>	DATE: <u>10/12/10</u>	TIME: <u>1622</u>

PA ID #: 08-00380  
NY ID # 11216

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169  
Fax: (570) 888-0717

Work Order: 10121720

SEND DATA TO:

NAME: Dina Brown  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10121720  
PAGE: 1 of 3  
PO#: AF77720  
PWS ID#

PHONE: (607) 562-4000  
FAX: (607) 562-4001

**TEST REPORT**

01-074

RECEIVED FOR LAB BY: RML

DATE: 12/09/2010 15:45

Page 1 of 3

SAMPLE: **Air or Gel Cuttings**  
SAMPLED BY: SG

Lab ID: 10121720-001A Grab

Sample Time: 12/08/2010 19:23

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>		<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Ignitability	Neg ASIS °F	SW846 1030		12/15/10 13:30	12/15/10	

Sample Note: Analysis performed by QC Laboratories

SAMPLE: **Air or Gel Cuttings**  
SAMPLED BY: SG

Lab ID: 10121720-001C Grab

Sample Time: 12/08/2010 19:23

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>		<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Cyanide, Reactive	< 0.2 mg/Kg	SW 7.3.3.2	0.2	12/13/10 8:56	12/14/10	HDP-CV
Reactive Sulfide	16 mg/Kg	SW846 7.3	16	12/14/10 12:30	12/14/10	LTW-CV

SAMPLE: **Air or Gel Cuttings**  
SAMPLED BY: SG

Lab ID: 10121720-001D Grab

Sample Time: 12/08/2010 19:23

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>		<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
% Solids	64.88 % Wght.	SM2540B	0.10	12/10/10 17:00	12/13/10	JC-SA
Total Volatile Solids	13.81 % Wght.	EPA 160.4	0.01	12/10/10 8:00	12/14/10	NFM-SA

SAMPLE: **TCLP Leachate of Air or Gel Cuttings**  
SAMPLED BY: SG

Lab ID: 10121720-001F Grab

Sample Time: 12/11/2010 12:45

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>		<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Pyridine	< 0.10 mg/L	EPA 8270C	0.10	12/14/10 8:37	12/14/10	RHH-SA
1,4-Dichlorobenzene	< 0.10 mg/L	EPA 8270C	0.10	12/14/10 8:37	12/14/10	RHH-SA
o-Cresol	< 0.10 mg/L	EPA 8270C	0.10	12/14/10 8:37	12/14/10	RHH-SA
p-Cresol/m-Cresol	< 0.10 mg/L	EPA 8270C	0.10	12/14/10 8:37	12/14/10	RHH-SA
Hexachloroethane	< 0.10 mg/L	EPA 8270C	0.10	12/14/10 8:37	12/14/10	RHH-SA
Nitrobenzene	< 0.10 mg/L	EPA 8270C	0.10	12/14/10 8:37	12/14/10	RHH-SA
Hexachlorobutadiene	< 0.10 mg/L	EPA 8270C	0.10	12/14/10 8:37	12/14/10	RHH-SA
2,4,6-Trichlorophenol	< 0.10 mg/L	EPA 8270C	0.10	12/14/10 8:37	12/14/10	RHH-SA

REMARKS:

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\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

B Analyte detected in the associated Method Blank

MANAGER

*Cassie M. Davis*

DATE: 12/16/2010

PA ID #: 08-00380  
NY ID #: 11216

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169  
Fax: (570) 888-0717

Work Order: 10121720

**SEND DATA TO:**

NAME: Dina Brown  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10121720  
PAGE: 2 of 3  
PO#: AF77720

PHONE: (607) 562-4000  
FAX: (607) 562-4001

## TEST REPORT

PWS ID#

01-074

RECEIVED FOR LAB BY: RML

DATE: 12/09/2010 15:45

Page 2 of 3

Test	Result	Method	Concentration	Analysis Start	Analysis End	Analyst
2,4,5-Trichlorophenol	< 0.10 mg/L	EPA 8270C	0.10	12/14/10 8:37	12/14/10	RHH-SA
Pentachlorophenol	< 0.50 mg/L	EPA 8270C	0.50	12/14/10 8:37	12/14/10	RHH-SA
2,4-Dinitrotoluene	< 0.10 mg/L	EPA 8270C	0.10	12/14/10 8:37	12/14/10	RHH-SA
Hexachlorobenzene	< 0.10 mg/L	EPA 8270C	0.10	12/14/10 8:37	12/14/10	RHH-SA
Naphthalene	< 0.10 mg/L	EPA 8270C	0.10	12/14/10 8:37	12/14/10	RHH-SA

SAMPLE: **TCLP Leachate of Air or Gel Cuttings**

Lab ID: 10121720-001G

Grab

SAMPLED BY: SG

Sample Time: 08/21/2010 9:00

SLOQ

Test	Result	Method	Concentration	Analysis Start	Analysis End	Analyst
Strontium - TCLP extracted	0.110 mg/L	EPA 6010B	0.010	08/24/10 10:50	08/24/10	RMD-CV

Sample Note: Sample for TCLP extracted Strontium was received on 8/20/10 at 11:51 by DLM2.

SAMPLE: **TCLP Leachate of Air or Gel Cuttings**

Lab ID: 10121720-001H

Grab

SAMPLED BY: SG

Sample Time: 12/11/2010 12:45

SLOQ

Test	Result	Method	Concentration	Analysis Start	Analysis End	Analyst
pH	5.72@16.8°C	SM4500H+B		12/14/10 8:00	12/14/10	SG-SA

SAMPLE: **ZHE Extract of Air or Gel Cuttings**

Lab ID: 10121720-001I

Grab

SAMPLED BY: SG

Sample Time: 12/11/2010 12:45

SLOQ

Test	Result	Method	Concentration	Analysis Start	Analysis End	Analyst
Benzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Carbon tetrachloride	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Chlorobenzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Chloroform	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
1,2-Dichloroethane	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
1,1-Dichloroethene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Ethylbenzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Isopropylbenzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Tetrachloroethene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Toluene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA

**REMARKS:**

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\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

B Analyte detected in the associated Method Blank

MANAGER

*Cassie M. Davis*

DATE: 12/16/2010

PA ID #: 08-00380  
NY ID # 11216

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169  
Fax: (570) 888-0717

Work Order: 10121720

SEND DATA TO:

NAME: Dina Brown  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10121720  
PAGE: 3 of 3  
PO#: AF77720  
PWS ID#

PHONE: (607) 562-4000  
FAX: (607) 562-4001

**TEST REPORT**

01-074

RECEIVED FOR LAB BY: RML

DATE: 12/09/2010 15:45

Page 3 of 3

Compound	Concentration	Method	Concentration	Time	Time	Time	Time
Trichloroethene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA	
1,2,4-Trimethylbenzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA	
1,3,5-Trimethylbenzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA	
Vinyl chloride	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA	
Methyl tert-butyl ether	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA	
2-Butanone	< 0.0500 mg/L	EPA 8260B	0.0500	12/13/10 8:11	12/13/10	CTM-SA	

**SAMPLE: ASTM Extract of Air or Gel Cuttings**

Lab ID: 10121720-001J Grab

SAMPLED BY: SG

Sample Time: 12/10/2010 11:15

SLOQ

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Chemical Oxygen Demand	91 mg/L	B HACH 8000	10	12/11/10 8:00	12/13/10	KMF-SA

**SAMPLE: ASTM Extract of Air or Gel Cuttings**

Lab ID: 10121720-001L Grab

SAMPLED BY: SG

Sample Time: 12/10/2010 11:15

SLOQ

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
pH	7.10@16.5°C	SM4500H+B		12/14/10 8:00	12/14/10	SG-SA
Total Solids	196 mg/L	SM2540B	0.10	12/10/10 17:00	12/13/10	IC-SA

**SAMPLE: Air or Gel Cuttings**

Lab ID: 10121720-001M Grab

SAMPLED BY: SG

Sample Time: 12/10/2010 10:25

SLOQ

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Total Organic Halides	< 5.00 mg/kg	SW846/9023	5.00	12/15/10 15:45	12/15/10	

Sample Note: Analysis performed by Analytical Services, Inc.

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

B Analyte detected in the associated Method Blank

MANAGER

*Cami M. Davis*

DATE:

12/16/2010



**CHAIN OF CUSTODY**

**Benchma**

**REPORT TO:** Talisman / UEG  
 geowetlands@aol.com

**CONTACT:** Steve Gridley

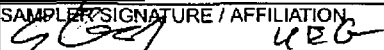
PH# 607-731-0145

FAX#

**BILL TO:** Talisman

PO# AP77720

PROJECT DESCRIPTION  
01-074

SAMPLER SIGNATURE / AFFILIATION  
 UEG

CONTAINER / SAMPLING POINT

Eas  
 2566 Pennsylvania  
 Phone:  
 Fax: (

**W/O#: 10121720**

**SPECIAL DETECTION LIMITS**

LD:  YES /  NO

IF YES, PLEASE ATTACH

IS A QC PACKAGE NEEDED?  
 YES /  NO

IF YES, PLEASE ATTACH REQUIREMENTS

REFRIGERATE SAMPLES  
 AFTER COLLECTION

**TRANSPORT  
 TO  
 LABORATORY  
 IN COOLER  
 WITH ICE**

DATE SAMPLED  
 TIME OF SAMPLING  
 SAMPLE MATRIX  
 SAMPLE TYPE - GRAB / COMPOSITE  
 SAMPLER INITIALS  
 PRESERVATIVE

RESULTS ARE BEING USED FOR:

NYDOH  NYDEC  PADEP

LANDFILL Mostoller

PERSONAL  OTHER

H	HYDROCHLORIC ACID	OH	SODIUM HYDROXIDE
S	SULFURIC ACID	AS	ASCORBIC ACID
N	NITRIC ACID	AC	ACETIC ACID
SO <sub>3</sub>	SODIUM SULFITE	NH <sub>4</sub>	AMMONIUM CHLORIDE
Thio	SODIUM THIOSULFATE	ZN	ZINC ACETATE
-	NONE	Hg	MERCURIC CHLORIDE

An incomplete chain of custody may delay the processing of your sample(s).

ANALYSIS TO BE PERFORMED (PER CONTAINER)

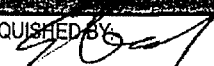
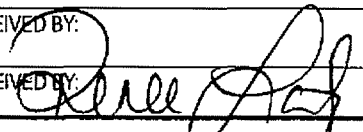
COMPOSITED ON RECEIPT  
 PRESERVATIVE ADDED ON RECEIPT

Please fill out all applicable areas completely

LAB USE ONLY

1	Air or Gel Cuttings	12/8/1923	50	C	SG	N	Ignitability, Reactive Sulfide & Cyanide
2				C			PCBs, Total Solids
3	A - <del>Ammonia</del> , Ign.			G			Total Volatile Solids
4	C - Reactivity			C			Ammonia-Nitrogen
5	D - 20TS, TDS			C			Water Leaching Procedure: COD,
6	E - T. Sample			C			Total Solids, Oil & Grease,
7	F - TCLP 8270, <del>pests</del> .						
8	G - TCLP Metals, Sr						
9	H - TCLP pH						36 HOUR TURNAROUND
10	I - TCLP Vols.						DAY TURNAROUND
11	J - ASTM COD, <del>metals</del>						

LAB USE ONLY

RELINQUISHED BY: 	DATE: 12/19/10	TIME: 1530	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY: 	DATE: 12/19/10	TIME: 1545

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169

Fax: (570) 888-0717

December 17, 2010

Attn: Dina Brown  
Talisman Energy USA, Inc.  
337 Daniel Zenker Dr  
Horseheads, NY 14845

Dear Dina Brown:

The enclosed corrected test report for work order 10121754 is a replacement for a test report sent earlier. We did not report the COD analysis (ASTM) with a B qualifier, indicating that the analyte was detected in the associated ASTM blank. I apologize for any inconvenience that this may have caused. Thank you.

Sincerely Yours,

Carrie Davis  
Quality Assurance Officer

PA ID #: 08-00380  
NY ID #: 11216

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169

Fax: (570) 888-0717

Work Order: 10121754

**SEND DATA TO:**

NAME: Dina Brown  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10121754

PAGE: 1 of 3

PO#: AF77720

PWS ID#

PHONE: (607) 562-4000

FAX: (607) 562-4001

## TEST REPORT

01-074

RECEIVED FOR LAB BY: RML

DATE: 12/09/2010 15:45

Page 1 of 3

SAMPLE: **Inv. Cuttings**

Lab ID: 10121754-001A Grab

SAMPLED BY: SG

Sample Time: 12/08/2010 19:15

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>		<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Ignitability	Neg ASIS °F	SW846 1030		12/15/10 13:30	12/15/10	

Sample Note: Analysis performed by QC Laboratories

SAMPLE: **Inv. Cuttings**

Lab ID: 10121754-001C Grab

SAMPLED BY: SG

Sample Time: 12/08/2010 19:15

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>		<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Cyanide, Reactive	0.2 mg/Kg	SW 7.3.3.2	0.2	12/13/10 8:56	12/14/10	HDP-CV
Reactive Sulfide	80 mg/Kg	SW846 7.3	16	12/14/10 12:30	12/14/10	LTW-CV

SAMPLE: **Inv. Cuttings**

Lab ID: 10121754-001D Grab

SAMPLED BY: SG

Sample Time: 12/08/2010 19:15

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>		<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
% Solids	77.07 % Wght.	SM2540B	0.10	12/10/10 17:00	12/13/10	IC-SA
Total Volatile Solids	8.78 % Wght.	EPA 160.4	0.01	12/10/10 8:00	12/14/10	NFM-SA

SAMPLE: **TCLP Leachate of Inv. Cuttings**

Lab ID: 10121754-001F Grab

SAMPLED BY: SG

Sample Time: 12/11/2010 12:45

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>		<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Pyridine	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
1,4-Dichlorobenzene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
o-Cresol	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
p-Cresol/m-Cresol	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Hexachloroethane	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Nitrobenzene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Hexachlorobutadiene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
2,4,6-Trichlorophenol	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA

**REMARKS:**

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER

*Carrie M. Davis*

DATE: 12/16/2010

PA ID #: 08-00380  
NY ID #: 11216

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169

Fax: (570) 888-0717

Work Order: 10121754

SEND DATA TO:

NAME: Dina Brown  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10121754

PAGE: 2 of 3

PO#: AF77720

PWS ID#

PHONE: (607) 562-4000

FAX: (607) 562-4001

**TEST REPORT**

01-074

RECEIVED FOR LAB BY: RML

DATE: 12/09/2010 15:45

Page 2 of 3

Test	Result	Method	Concentration	Analysis Start	Analysis End	Analyst
2,4,5-Trichlorophenol	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Pentachlorophenol	< 0.50 mg/L	EPA 8270C	0.50	12/15/10 7:48	12/15/10	RHH-SA
2,4-Dinitrotoluene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Hexachlorobenzene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Naphthalene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA

SAMPLE: **TCLP Leachate of Inv. Cuttings**

Lab ID: 10121754-001G Grab

SAMPLED BY: SG

Sample Time: 09/15/2010 9:00

SLOQ

Test	Result	Method	Concentration	Analysis Start	Analysis End	Analyst
Strontium - TCLP extracted	0.212 mg/L	EPA 6010B	0.050	09/16/10 8:00	09/16/10	RMD-CV

Sample Note: Sample for TCLP extracted Strontium was received on 9/13/10 at 17:12 by TJC.

SAMPLE: **TCLP Leachate of Inv. Cuttings**

Lab ID: 10121754-001H Grab

SAMPLED BY: SG

Sample Time: 12/11/2010 12:45

SLOQ

Test	Result	Method	Concentration	Analysis Start	Analysis End	Analyst
pH	6.03@16.9°C	SM4500H+B		12/14/10 8:00	12/14/10	SG-SA

SAMPLE: **ZHE Extract of Inv. Cuttings**

Lab ID: 10121754-001I Grab

SAMPLED BY: SG

Sample Time: 12/13/2010 8:45

SLOQ

Test	Result	Method	Concentration	Analysis Start	Analysis End	Analyst
Benzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Carbon tetrachloride	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Chlorobenzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Chloroform	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
1,2-Dichloroethane	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
1,1-Dichloroethene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Ethylbenzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Isopropylbenzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Tetrachloroethene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Toluene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER

*Cari M. Davis*

DATE: 12/16/2010

PA ID #: 08-00380  
NY ID #: 11216

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169  
Fax: (570) 888-0717

Work Order: 10121754

SEND DATA TO:

NAME: Dina Brown  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10121754  
PAGE: 3 of 3  
PO#: AF77720  
PWS ID#

PHONE: (607) 562-4000  
FAX: (607) 562-4001

**TEST REPORT**

01-074

RECEIVED FOR LAB BY: RML

DATE: 12/09/2010 15:45

Page 3 of 3

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Trichloroethene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
1,2,4-Trimethylbenzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
1,3,5-Trimethylbenzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Vinyl chloride	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Methyl tert-butyl ether	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
2-Butanone	< 0.0500 mg/L	EPA 8260B	0.0500	12/13/10 8:11	12/13/10	CTM-SA

SAMPLE: **ASTM Extract of Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10121754-001J Grab  
Sample Time: 12/10/2010 11:15

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Chemical Oxygen Demand	276 mg/L	HACH 8000	1	12/15/10 10:00	12/15/10	KAL-SA

SAMPLE: **ASTM Extract of Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10121754-001L Grab  
Sample Time: 12/10/2010 11:15

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
pH	8.19@17.2°C	SM4500H+B		12/14/10 8:00	12/14/10	SG-SA
Total Solids	442 mg/L	SM2540B	0.10	12/10/10 17:00	12/13/10	IC-SA

SAMPLE: **Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10121754-001M Grab  
Sample Time: 12/10/2010 10:25

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Total Organic Halides	< 5.00 mg/kg	SW846/9023	5.00	12/15/10 15:45	12/15/10	

Sample Note: Analysis performed by Analytical Services, Inc.

REMARKS:

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\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER

*Cami M. Davis*

DATE: 12/16/2010

**CHAIN OF CUSTODY**

**Benc**

**REPORT TO:** Talisman / UEG  
 geowetlands@aol.com

**CONTACT:** Steve Gridley  
 PH# 607-731-0145  
 FAX#

**BILL TO:** Talisman

PO# AF 77720

PROJECT DESCRIPTION  
01-074

SAMPLER SIGNATURE / AFFILIATION  
[Signature] USB

CONTAINER / SAMPLING POINT

2566 Penns  
 F

**W/O#: 10121754**

REFRIGERATE SAMPLES  
 AFTER COLLECTION

TRANSPORT  
 TO  
 LABORATORY  
 IN COOLER  
 WITH ICE

DW DRINKING WATER SL SLUDGE  
 GW GROUND WATER SO SOIL  
 SW SURFACE WATER HZ HAZARDOUS  
 WW WASTE WATER OTHER  
 DE DEIONIZED WATER DI DISTILLED WATER

RESULTS ARE BEING USED FOR:  
 NYDOH  NYDEC  PADEP  
 LANDFILL Mostoller  
 PERSONAL  OTHER

ARE SPECIAL DETECTION LIMITS  
 NEEDED:  YES /  NO

IF YES, PLEASE ATTACH

IS A QC PACKAGE NEEDED?  
 YES  NO

IF YES, PLEASE ATTACH REQUIREMENTS

H HYDROCHLORIC ACID OH SODIUM HYDROXIDE  
 S SULFURIC ACID AS ASCORBIC ACID  
 N NITRIC ACID AC ACETIC ACID  
 SO<sub>3</sub> SODIUM SULFITE NH<sub>4</sub> AMMONIUM CHLORIDE  
 Thio SODIUM THIOSULFATE ZN ZINC ACETATE  
 - NONE Hg MERCURIC CHLORIDE

An incomplete chain of custody may delay the  
 processing of your sample(s).

ANALYSIS TO BE PERFORMED  
 (PER CONTAINER)

COMPOSITED ON RECEIPT  
 PRESERVATIVE ADDED ON RECEIPT

Please fill out all  
 applicable areas  
 completely

LAB USE ONLY

1	Inv Cuttings	12/8	1915	50	C	SB	N	Ignitability, Reactive Sulfide & Cyanide
2					C			PCBs, Total Solids
3	A - Alkanols, Ign				G			Total Volatile Solids
4	C - Reactivity				C			Ammonia-Nitrogen
5	D - TS, TVS				C			Water Leaching Procedure: COD,
6	E - T. Sample				C			Total Solids, Oil & Grease,
7	F - TCLP DNA, Feeds.							
8	G - TCLP Herb. Sr							
9	H - TCLP pH							36 HOUR TURNAROUND
10	I - TCLP Vols.							DAY TURNAROUND
11	J - Astm COD, NH <sub>3</sub>							

LAB USE ONLY

DELIVERED BY: \_\_\_\_\_ TEMPERATURE UPON RECEIPT: \_\_\_\_\_ ARRIVAL ON ICE Y/N: \_\_\_\_\_

RELINQUISHED BY: <u>[Signature]</u>	DATE: <u>12/9/10</u>	TIME: <u>1530</u>	RECEIVED BY: <u>[Signature]</u>	DATE: <u>1/1</u>	TIME: <u></u>
RELINQUISHED BY:	DATE: <u>1/1</u>	TIME: <u></u>	RECEIVED BY:	DATE: <u>1/1</u>	TIME: <u></u>
RELINQUISHED BY:	DATE: <u>1/1</u>	TIME: <u></u>	RECEIVED BY: <u>[Signature]</u>	DATE: <u>12/9/10</u>	TIME: <u>1345</u>



**pennsylvania**  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WASTE MANAGEMENT

**FORM 26R**  
**CHEMICAL ANALYSIS OF RESIDUAL WASTE**  
**ANNUAL REPORT BY THE GENERATOR**

This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form 26R, reference the item number and identify the date prepared. The date on attached sheets needs to match the date noted below.		<b>DEP USE ONLY</b>		
General Reference 287.54		Date Received & General Notes		
Date Prepared/Revised	February 11, 2011			
<b>SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION</b>				
Company Name Talisman Energy USA Inc.				
If a Subsidiary, Name of Parent Company Talisman Energy Inc.			EPA Generator ID# N/A	
Company Mailing Address Line 1 50 Pennwood Place		Company Mailing Address Line 2		
Company Address Last Line – City Warrendale	State PA	Zip+4 15086	Phone (724) 814-5300 Ext	
Company Contact Last Name Brown	First Name Dina	MI	Suffix	
Municipality Warrendale	County Allegheny			
Contact Phone (724) 814-5321	Ext	Contact Email Address dybrown@talismanusa.com		
Is the waste generated at the Company Mailing Address (noted above)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
If 'No', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the [REDACTED] (01-076) well pad site located at 3637 Fallbrook Road, Armenia Township, Bradford County, PA. Waste is stored in containers on site.				
Municipality	Armenia	County	Bradford State PA	
<b>SECTION B. WASTE DESCRIPTION</b>				
Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure	Time Frame
810	Drill cuttings (oil and gas)	7,364	<input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton	<input type="checkbox"/> One Time
<b>1. GENERAL PROPERTIES</b>				
a. pH Range	8.81 to 11.27 (based on analyses or knowledge)			
b. Physical State	<input type="checkbox"/> Liquid Waste (EPA Method 9095) <input checked="" type="checkbox"/> Solid (EPA Method 9095) <input type="checkbox"/> Gas (ambient temperature & pressure)			
c. Physical Appearance	Color <u>Greyish Black</u> Odor <u>Earthy / Slight Petroleum</u> Number of Solid or Liquid Phases of Separation <u>One</u> Describe each phase of separation. <u>Soil and Rock Fragments</u>			
<b>2. CHEMICAL ANALYSIS ATTACHMENTS</b>				
a.	The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
b.	A detailed description of the waste sampling method is attached.			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
c.	The quality assurance/quality control procedures employed by the laboratory(ies) is attached.			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
d.	The results of the hazardous waste determination is attached.			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
e.	If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.			<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A

3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS			
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
SECTION C. MANAGEMENT OF RESIDUAL WASTE			
1. PROCESSING OR DISPOSAL FACILITY(IES)			
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.			
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 9-0232-00003		
b.	Facility Name	Hyland Landfill	
	Address Line 1	6653 Herdman Road	
	Address Line 1		
	Address City State ZIP	Angelica NY	14709
	Municipality	Angelica	County Allegany
c.	Facility Contact Name	Larry Shilling	
	Title		
	Phone	(585) 466-7271	Email Address larry.shilling@casella.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 4,157 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 8-4630-00010		
b.	Facility Name	Hakes C&D Landfill	
	Address Line 1	4376 Manning Ridge Road	
	Address Line 1		
	Address City State ZIP	Painted Post NY	14870
	Municipality	Erwin Twp	County Steuben
c.	Facility Contact Name	Joseph Boyles	
	Title		
	Phone	(607) 937-6044	Email Address joe.boyles@casella.com
		(585) 466-7271	
d.	Volume of waste shipped to processing or disposal facility in the previous year. 2,796 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
2. BENEFICIAL USE			
a.	Has the waste been approved for beneficial use? If "Yes", list the general permit number or approval number.		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		



3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS			
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
SECTION C. MANAGEMENT OF RESIDUAL WASTE			
1. PROCESSING OR DISPOSAL FACILITY(IES)			
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.			
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 8-0728-00004		
b.	Facility Name	Chemung County Landfill	
	Address Line 1	1690 Lake Street	
	Address Line 1		
	Address City State ZIP	Elmira	NY 14903
	Municipality	Elmira	County Chemung
c.	Facility Contact Name	Carla Canjar	
	Title	Environmental Manager	
	Phone	(585) 797-5941	Email Address carla.canjar@casella.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 1,172 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 100361		
b.	Facility Name	McKean County Landfill	
	Address Line 1	19 Ness Lane	
	Address Line 1		
	Address City State ZIP	Kane	PA 16735
	Municipality	Sergeant Twp	County McKean
c.	Facility Contact Name	Mike Manderfeld	
	Title		
	Phone	(814) 778-9931	Email Address manderfeld@gmail.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 21 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
2. BENEFICIAL USE			
a.	Has the waste been approved for beneficial use? If "Yes", list the general permit number or approval number.		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		

**SECTION D. CERTIFICATION**

I certify, under penalty of law, that I have personally examined and am familiar with the information submitted in this Annual Report and all attached documents and that based upon my inquiry of those individuals immediately responsible for obtaining the information, I verify that the submitted information is true, accurate and complete to the best of my knowledge. I understand that the submission of false information herein is made subject to the penalties of 18 Pa. C.S. §4904, relating to unsworn falsification to authorities, which include fine and imprisonment.

Check the following, if applicable:

I certify the information required in Section B-1, General Properties was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-2, Chemical Analysis was supplied to the Department for the year \_\_\_\_\_ and has not changed.

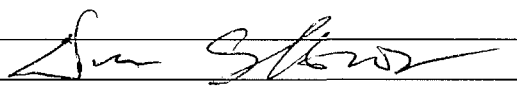
Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-3, Process Description and Schematic, was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

<b>Name of Responsible Official</b>	<b>Title</b> <u>Environmental Specialist</u>
Dina Brown	
<b>Signature</b> <u></u>	<b>Date</b> <u>2/25/11</u>

LAB ID: 08-00380  
LAB ID: 39-00401

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10041885

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10041885

PAGE: 1 of 1

PO#:

PHONE: (607) 562-4000  
FAX: (607) 562-4001

## TEST REPORT

PWS ID#

76

RECEIVED FOR LAB BY: DLM2

DATE: 04/14/2010 10:47

Page 1 of 1

SAMPLE: **Air Cuttings**

Lab ID: 10041885-001A

Composite

SAMPLED BY: SG

Sample Time: 04/12/2010 17:30

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.0008	04/15/10 11:30	04/15/10	RMD-CV
Sodium	658 mg/Kg	EPA 6010B	103	04/16/10 15:25	04/19/10	RMD-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	04/15/10 11:45	04/15/10	RMD-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	04/15/10 11:45	04/15/10	RMD-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	04/15/10 11:45	04/15/10	RMD-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	04/15/10 11:45	04/15/10	RMD-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	04/15/10 11:45	04/15/10	RMD-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	04/15/10 11:45	04/15/10	RMD-CV
Nickel - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	04/15/10 11:45	04/15/10	RMD-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	04/15/10 11:45	04/15/10	RMD-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	04/15/10 11:45	04/15/10	RMD-CV
Zinc - TCLP extracted	0.297 mg/L	EPA 6010B	0.200	04/15/10 11:45	04/15/10	RMD-CV
pH	8.81 @ 25.2 °C	EPA 9045D		04/20/10 13:25	04/20/10	SMH-CV
Total Petroleum Hydrocarbons	< 330 mg/Kg	EPA 9071	330	04/20/10 8:30	04/20/10	
Chloride	621 mg/Kg	EPA 300.0	50.0	04/15/10 15:51	04/16/10	HDP-CV

Sample Note: TPH analysis performed by Microbac Lab - Erie Div.

Sample Note: The temperature of the extraction room exceeded the range of 23 ± 2°C

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER

*Amie M. Davis*

DATE: 4/22/2010

LAB ID: 08-00380  
LAB ID: 39-00401

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10074059

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10074059

PAGE: 1 of 1

PO#: AF76709

PHONE: (607) 562-4000  
FAX: (607) 562-4001

## TEST REPORT

PWS ID#

76

RECEIVED FOR LAB BY: DLM2

DATE: 07/26/2010 15:15

Page 1 of 1

SAMPLE: **Inv. Cuttings & Gypsum**  
SAMPLED BY: SG

Lab ID: 10074059-001A

Composite

Sample Time: 07/26/2010 10:45

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Total Petroleum Hydrocarbons	122000 mg/Kg	EPA 9071	170	07/27/10 12:00	07/27/10	
Sample Note: Analysis performed by Microbac-Erie						

SAMPLE: **Inv. Cuttings & Gypsum**  
SAMPLED BY: SG

Lab ID: 10074059-001B

Composite

Sample Time: 07/26/2010 10:45

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Moisture	14.0 %	Moisture Calc.	0.01	07/26/10 10:30	07/27/10	NFM-SA
Free Liquid	< 0.1 %	EPA 9095A	0.1	07/26/10 16:20	07/26/10	IC-SA
pH	11.27@20.8°C	EPA 9045C		07/27/10 12:20	07/27/10	NFM-SA

SAMPLE: **TCLP Leachate of Inv. Cuttings & Gypsum**  
SAMPLED BY: SG

Lab ID: 10074059-001D

Grab

Sample Time: 07/26/2010 10:45

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Mercury - TCLP extracted	< 0.0010 mg/L	EPA 7470A	0.0010	07/29/10 9:00	07/29/10	RMD-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	07/29/10 9:50	07/29/10	GSR-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	07/29/10 9:50	07/29/10	GSR-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	07/29/10 9:50	07/29/10	GSR-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	07/29/10 9:50	07/29/10	GSR-CV
Copper - TCLP extracted	0.118 mg/L	EPA 6010B	0.100	07/29/10 9:50	07/29/10	GSR-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	07/29/10 9:50	07/29/10	GSR-CV
Nickel - TCLP extracted	0.201 mg/L	EPA 6010B	0.100	07/29/10 9:50	07/29/10	GSR-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	07/29/10 9:50	07/29/10	GSR-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	07/29/10 9:50	07/29/10	GSR-CV
Zinc - TCLP extracted	< 0.200 mg/L	EPA 6010B	0.200	07/29/10 9:50	07/29/10	GSR-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

S Spike Recovery outside accepted recovery limits

MANAGER

*Carrie M. Davis*

DATE: 7/30/2010

LAB ID: 08-00380  
LAB ID: 39-00401

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10074060

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10074060

PAGE: 1 of 1

PO#: AF76709

PHONE: (607) 562-4000  
FAX: (607) 562-4001

## TEST REPORT

PWS ID#

76

RECEIVED FOR LAB BY: DLM2

DATE: 07/26/2010 15:15

Page 1 of 1

SAMPLE: **Inv. Cuttings**

Lab ID: 10074060-001A

Composite

SAMPLED BY: SG

Sample Time: 07/26/2010 10:45

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Total Petroleum Hydrocarbons	111000 mg/Kg	EPA 9071		07/27/10 12:00	07/27/10	
Sample Note: Analysis performed by Microbac-Erie						

SAMPLE: **Inv. Cuttings**

Lab ID: 10074060-001B

Composite

SAMPLED BY: SG

Sample Time: 07/26/2010 10:45

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Moisture	9.69 %	Moisture Calc.	0.01	07/26/10 10:30	07/27/10	NFM-SA
Free Liquid	< 0.1 %	EPA 9095A	0.1	07/26/10 16:25	07/26/10	IC-SA
pH	10.30@21.0°C	EPA 9045C		07/27/10 12:20	07/27/10	NFM-SA

SAMPLE: **TCLP Leachate of Inv. Cuttings**

Lab ID: 10074060-001D

Composite

SAMPLED BY: SG

Sample Time: 07/26/2010 10:45

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Mercury - TCLP extracted	< 0.0010 mg/L	EPA 7470A	0.0010	07/29/10 9:00	07/29/10	RMD-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	07/29/10 9:50	07/29/10	GSR-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	07/29/10 9:50	07/29/10	GSR-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	07/29/10 9:50	07/29/10	GSR-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	07/29/10 9:50	07/29/10	GSR-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	07/29/10 9:50	07/29/10	GSR-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	07/29/10 9:50	07/29/10	GSR-CV
Nickel - TCLP extracted	0.150 mg/L	EPA 6010B	0.100	07/29/10 9:50	07/29/10	GSR-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	07/29/10 9:50	07/29/10	GSR-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	07/29/10 9:50	07/29/10	GSR-CV
Zinc - TCLP extracted	< 0.200 mg/L	EPA 6010B	0.200	07/29/10 9:50	07/29/10	GSR-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

S Spike Recovery outside accepted recovery limits

MANAGER

*Candice M. Davis*

DATE: 7/30/2010

LAB ID: 08-00380  
LAB ID: 39-00401

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169

Fax: (570) 888-0717

Work Order: 10074062

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10074062

PAGE: 1 of 1

PO#: AF76709

PHONE: (607) 562-4000

FAX: (607) 562-4001

## TEST REPORT

PWS ID#

76

RECEIVED FOR LAB BY: DLM2

DATE: 07/26/2010 15:15

Page 1 of 1

SAMPLE: **Inv. Cuttings-Raw**

Lab ID: 10074062-001A

Composite

SAMPLED BY: SG

Sample Time: 07/26/2010 10:45

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>		<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Total Petroleum Hydrocarbons	118000 mg/Kg	EPA 9071		07/27/10 12:00	07/27/10	

Sample Note: Analysis performed by Microbac-Erie

SAMPLE: **Inv. Cuttings-Raw**

Lab ID: 10074062-001B

Composite

SAMPLED BY: SG

Sample Time: 07/26/2010 10:45

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>		<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Moisture	11.5 %	Moisture Calc.	0.01	07/26/10 10:30	07/27/10	NFM-SA
Free Liquid	< 0.1 %	EPA 9095A	0.1	07/26/10 16:30	07/26/10	IC-SA
pH	11.0@20.8°C	EPA 9045C		07/27/10 12:20	07/27/10	NFM-SA

SAMPLE: **TCLP Leachate of Inv. Cuttings-Raw**

Lab ID: 10074062-001D

Grab

SAMPLED BY: SG

Sample Time: 07/26/2010 10:45

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>		<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Mercury - TCLP extracted	< 0.0010 mg/L	EPA 7470A	0.0010	07/29/10 9:00	07/29/10	RMD-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	07/29/10 9:50	07/29/10	GSR-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	07/29/10 9:50	07/29/10	GSR-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	07/29/10 9:50	07/29/10	GSR-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	07/29/10 9:50	07/29/10	GSR-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	07/29/10 9:50	07/29/10	GSR-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	07/29/10 9:50	07/29/10	GSR-CV
Nickel - TCLP extracted	0.143 mg/L	EPA 6010B	0.100	07/29/10 9:50	07/29/10	GSR-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	07/29/10 9:50	07/29/10	GSR-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	07/29/10 9:50	07/29/10	GSR-CV
Zinc - TCLP extracted	< 0.200 mg/L	EPA 6010B	0.200	07/29/10 9:50	07/29/10	GSR-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

S Spike Recovery outside accepted recovery limits

MANAGER

*Ami M. Davis*

DATE: 7/30/2010



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WASTE MANAGEMENT

**FORM 26R**  
**CHEMICAL ANALYSIS OF RESIDUAL WASTE**  
**ANNUAL REPORT BY THE GENERATOR**

This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form 26R, reference the item number and identify the date prepared. The date on attached sheets needs to match the date noted below.				<b>DEP USE ONLY</b>	
General Reference 287.54				Date Received & General Notes	
Date Prepared/Revised		February 11, 2011			
<b>SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION</b>					
Company Name Talisman Energy USA Inc.					
If a Subsidiary, Name of Parent Company Talisman Energy Inc.				EPA Generator ID# N/A	
Company Mailing Address Line 1 50 Pennwood Place			Company Mailing Address Line 2		
Company Address Last Line – City Warrendale		State PA	Zip+4 15086	Phone (724) 814-5300	Ext
Company Contact Last Name Brown		First Name Dina	MI	Suffix	
Municipality Warrendale			County Allegheny		
Contact Phone (724) 814-5321	Ext	Contact Email Address dybrown@talismanusa.com			
Is the waste generated at the Company Mailing Address (noted above)?				<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
If 'No', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the [REDACTED] (01-077) well pad site located at 2871 Fallbrook Road, Armenia Township, Bradford County, PA. Waste is stored in containers on site.					
Municipality	Armenia	County	Bradford	State	PA
<b>SECTION B. WASTE DESCRIPTION</b>					
Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure		Time Frame
810	Drill cuttings (oil and gas)	8,477	<input type="checkbox"/> cu yd	<input type="checkbox"/> gal	<input type="checkbox"/> One Time
			<input type="checkbox"/> lb	<input checked="" type="checkbox"/> ton	
<b>1. GENERAL PROPERTIES</b>					
a.	pH Range	9.13	to	12.24	(based on analyses or knowledge)
b.	Physical State	<input type="checkbox"/> Liquid Waste (EPA Method 9095) <input checked="" type="checkbox"/> Solid (EPA Method 9095) <input type="checkbox"/> Gas (ambient temperature & pressure)			
c.	Physical Appearance	Color	Greyish Black	Odor	Earthy / Slight Petroleum
		Number of Solid or Liquid Phases of Separation		One	
		Describe each phase of separation. Soil and Rock Fragments			
<b>2. CHEMICAL ANALYSIS ATTACHMENTS</b>					
a.	The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.			<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A detailed description of the waste sampling method is attached.			<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	The quality assurance/quality control procedures employed by the laboratory(ies) is attached.			<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
d.	The results of the hazardous waste determination is attached.			<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
e.	If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.			<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A

3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS			
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
SECTION C. MANAGEMENT OF RESIDUAL WASTE			
1. PROCESSING OR DISPOSAL FACILITY(IES)			
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.			
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 8-4630-00010		
b.	Facility Name	Hakes C&D Landfill	
	Address Line 1	4376 Manning Ridge Road	
	Address Line 1		
	Address City State ZIP	Painted Post NY 14870	
	Municipality	Erwin Twp County	Steuben
c.	Facility Contact Name	Joseph Boyles	
	Title		
	Phone	(607) 937-6044	Email Address joe.boyles@casella.com
		(585) 797-5941	
d.	Volume of waste shipped to processing or disposal facility in the previous year. 3,701 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 9-0232-00003		
b.	Facility Name	Hyland Landfill	
	Address Line 1	6653 Herdman Road	
	Address Line 1		
	Address City State ZIP	Angelica NY 14709	
	Municipality	Angelica County	Allegany
c.	Facility Contact Name	Larry Shilling	
	Title		
	Phone	(585) 466-7271	Email Address larry.shilling@casella.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 3,583 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
2. BENEFICIAL USE			
a.	Has the waste been approved for beneficial use? If "Yes", list the general permit number or approval number.		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		



3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS			
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
SECTION C. MANAGEMENT OF RESIDUAL WASTE			
1. PROCESSING OR DISPOSAL FACILITY(IES)			
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.			
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 8-0728-00004		
b.	Facility Name	Chemung County Landfill	
	Address Line 1	1690 Lake Street	
	Address Line 1		
	Address City State ZIP	Elmira NY 14903	
	Municipality	Elmira County	Chemung
c.	Facility Contact Name	Carla Canjar	
	Title	Environmental Manager	
	Phone	(585) 797-5941	Email Address carla.canjar@casella.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 1,172 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 100361		
b.	Facility Name	McKean County Landfill	
	Address Line 1	19 Ness Lane	
	Address Line 1		
	Address City State ZIP	Kane PA 16735	
	Municipality	Sergeant Twp County	McKean
c.	Facility Contact Name	Mike Manderfeld	
	Title		
	Phone	(814) 778-9931	Email Address manderfeld@gmail.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 21 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
2. BENEFICIAL USE			
a.	Has the waste been approved for beneficial use? If "Yes", list the general permit number or approval number.		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		

**SECTION D. CERTIFICATION**

I certify, under penalty of law, that I have personally examined and am familiar with the information submitted in this Annual Report and all attached documents and that based upon my inquiry of those individuals immediately responsible for obtaining the information, I verify that the submitted information is true, accurate and complete to the best of my knowledge. I understand that the submission of false information herein is made subject to the penalties of 18 Pa. C.S. §4904, relating to unsworn falsification to authorities, which include fine and imprisonment.

Check the following, if applicable:

I certify the information required in Section B-1, General Properties was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-2, Chemical Analysis was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-3, Process Description and Schematic, was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

Name of Responsible Official \_\_\_\_\_ Title Environmental Specialist

Dina Brown

Signature 

Date 2/25/11

LAB ID # 11216  
LAB ID # 11827

### Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10030703

Phone: (570) 888-0169  
Fax: (570) 888-0717

**SEND DATA TO:**

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10030703

PAGE: 1 of 1

PO#:

PWS ID#

PHONE: (607) 731-0145  
FAX: (607) 562-4001

### TEST REPORT

NTSW TCLP Metals/TPH/pH/%Moisture

RECEIVED FOR LAB BY: WCB

DATE: 03/03/2010 9:38

Page 1 of 1

SAMPLE: Air Cuttings P-1  
SAMPLED BY: SG

Lab ID: 10030703-001A Composite

Sample Time: 03/01/2010 11:45

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst*
pH	9.44 @ 25.9°C	EPA 9045D		03/08/10 14:37	03/08/10	NC-CV
Chloride	74.3 mg/Kg	EPA 300.0	50.0	03/10/10 14:03	03/11/10	HDP-CV
Total Petroleum Hydrocarbons	< 170 mg/Kg	EPA 1664A	170	03/16/10 13:30	03/16/10	DTG-CV

SAMPLE: TCLP Leachate of Air Cuttings P-1  
SAMPLED BY: SG

Lab ID: 10030703-001C Composite

Sample Time: 03/01/2010 11:45

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst*
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.0008	03/11/10 8:30	03/12/10	KW-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 8010B	0.500	03/10/10 13:40	03/11/10	RMD-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	03/10/10 13:40	03/11/10	RMD-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	03/10/10 13:40	03/11/10	RMD-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	03/10/10 13:40	03/11/10	RMD-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	03/10/10 13:40	03/11/10	RMD-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	03/10/10 13:40	03/11/10	RMD-CV
Nickel - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	03/10/10 13:40	03/11/10	RMD-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	03/10/10 13:40	03/11/10	RMD-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	03/10/10 13:40	03/11/10	RMD-CV
Zinc - TCLP extracted	< 0.200 mg/L	EPA 6010B	0.200	03/10/10 13:40	03/11/10	RMD-CV

**REMARKS:**

The above test procedures meet all the requirements of NELAC and relate only to these samples.  
\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER

*Cassie M. Davis*

DATE: 3/17/2010

**CHAIN OF CUSTODY**

**Benchmark Analytics, Inc.**

Eastern Division  
 2566 Pennsylvania Avenue • Sayre, PA 18840  
 Phone: (570) 888-0169  
 Fax: (570) 888-0717

REPORT TO: Talisman

CONTACT: Steve Crowley

PH# 607-731-0145

FAX#

BILL TO: Talisman

PO#

RECEIPT DESCRIPTION

SAMPLER SIGNATURE / AFFILIATION  
Steve Crowley UEG

REFRIGERATE SAMPLES  
 AFTER COLLECTION

TRANSPORT  
 TO  
 LABORATORY  
 IN COOLER  
 WITH ICE

DW	DRINKING WATER	SL	SLUDGE
GW	GROUND WATER	SO	SOIL
SW	SURFACE WATER	HZ	HAZARDOUS
WW	WASTE WATER		

RESULTS ARE BEING USED FOR:

NYDOH  NYDEC  PADEP

LANDFILL \_\_\_\_\_

LAB OTHER \_\_\_\_\_

ARE SPECIAL DETECTION LIMITS  
 NEEDED: YES /  NO

IF YES, PLEASE ATTACH \_\_\_\_\_

IS A QC PACKAGE NEEDED?  
 YES  NO

IF YES, PLEASE ATTACH REQUIREMENTS \_\_\_\_\_

PWS ID# \_\_\_\_\_

Location \_\_\_\_\_

Sample Point \_\_\_\_\_

**W/O#: 10030703**

An incomplete chain of custody may delay the  
 processing of your sample(s).

ANALYSIS TO BE PERFORMED  
 (PER CONTAINER)

COMPOSITED ON  
 RECEIPT \_\_\_\_\_

PRESERVATIVE  
 ADDED ON RECEIPT \_\_\_\_\_

Please fill  
 out all  
 applicable  
 areas  
 completely.

LAB USE ONLY

Container	Sample Point No./Type	DATE SAMPLED	TIME OF SAMPLING	SAMPLE MATRIX	SAMPLE TYPE - C	SAMPLER INITIAL	PRESERVATIVE	Chlorine Residual Total	Free	ANALYSIS TO BE PERFORMED (PER CONTAINER)	COMPOSITED ON RECEIPT	PRESERVATIVE ADDED ON RECEIPT	LAB USE ONLY
1	Air Cuttings P-1	3/1	1145	SO	C	SN				TPH pH TCLP <del>for</del> 8 RCRA Metals + Cu, Ni, Zn.			001 A-C
2													
3													
4													
5										A - TPH, pH, Cl			
6										B - Total Sample			
7										C - TCLP Metals			
8													
9													
10													
11													

Due: 3/18/10

LAB USE ONLY

DELIVERED BY: C. V. [Signature] TEMPERATURE UPON RECEIPT: 5 °C ARRIVAL ON ICE: SN

RELINQUISHED BY: <u>[Signature]</u>	DATE: <u>3/13/10</u>	TIME: <u>9:38</u>	RECEIVED BY:	DATE: <u>1/1</u>	TIME:
RELINQUISHED BY:	DATE: <u>1/1</u>	TIME:	RECEIVED BY:	DATE: <u>1/1</u>	TIME:
RELINQUISHED BY:	DATE: <u>1/1</u>	TIME:	RECEIVED BY: <u>Debbie McCarty</u>	DATE: <u>3/10/10</u>	TIME: <u>9:38</u>

LAB ID # 11216  
LAB ID # 11827

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10064652

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10064652

PAGE: 1 of 1

PO#:

PHONE: (607) 562-4000  
FAX: (607) 562-4001

## TEST REPORT

PWS ID#

Truck Accident 030810

RECEIVED FOR LAB BY: DLM2

DATE: 06/29/2010 14:40

Page 1 of 1

SAMPLE: **Inv. Cuttings Rig 56 Bin`s**

Lab ID: 10064652-001A

Composite

SAMPLED BY: LS

Sample Time: 06/28/2010 10:00

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Moisture	46.1 %	Moisture Calc.	0.01	06/29/10 15:55	06/30/10	IC-SA
Free Liquid	< 0.1 %	EPA 9095A	0.1	06/29/10 16:00	06/29/10	IC-SA
pH	12.24@25.3°C	EPA 9045C		06/29/10 15:23	06/29/10	MED-SA

SAMPLE: **Inv. Cuttings Rig 56 Bin`s**

Lab ID: 10064652-001B

Composite

SAMPLED BY: LS

Sample Time: 06/28/2010 10:00

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Total Petroleum Hydrocarbons	10200 mg/Kg	EPA 9071		07/01/10 0:00	07/01/10	

Sample Note: Analysis performed by Microbac-Erie

SAMPLE: **TCLP Leachate of Inv. Cuttings Rig 56 Bin's**

Lab ID: 10064652-001D

Composite

SAMPLED BY: LS

Sample Time: 06/28/2010 10:00

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.0008	06/29/10 11:15	07/01/10	KW-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	07/01/10 8:45	07/01/10	GSR-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	07/01/10 8:45	07/01/10	GSR-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	07/01/10 8:45	07/01/10	GSR-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	07/01/10 8:45	07/01/10	GSR-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	07/01/10 8:45	07/01/10	GSR-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	07/01/10 8:45	07/01/10	GSR-CV
Nickel - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	07/01/10 8:45	07/01/10	GSR-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	07/01/10 8:45	07/01/10	GSR-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	07/01/10 8:45	07/01/10	GSR-CV
Zinc - TCLP extracted	< 0.200 mg/L	EPA 6010B	0.200	07/01/10 8:45	07/01/10	GSR-CV

Sample Note: The temperature of the extraction room exceeded the range of 23 ± 2°C

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER

*Candice M. Davis*

DATE: 7/2/2010

LAB ID: 08-00380  
LAB ID: 39-00401

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10071871

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10071871

PAGE: 1 of 1

PO#: AF76317

PHONE: (607) 562-4000  
FAX: (607) 562-4001

## TEST REPORT

PWS ID#

77 Well

RECEIVED FOR LAB BY: WCB

DATE: 07/13/2010 13:15

Page 1 of 1

SAMPLE: **Inv. Cuttings**

Lab ID: 10071871-001A

Grab

SAMPLED BY: SG

Sample Time: 07/12/2010 12:05

Test	Result	Method	Reg Limit	Analysis Start	Analysis End	Analyst *
Total Petroleum Hydrocarbons	73700 mg/Kg	EPA 9071		07/15/10 0:00	07/15/10	
Sample Note: Analysis performed by Microbac-Erie						

SAMPLE: **Inv. Cuttings**

Lab ID: 10071871-001B

Grab

SAMPLED BY: SG

Sample Time: 07/12/2010 12:05

Test	Result	Method	Reg Limit	Analysis Start	Analysis End	Analyst *
Moisture	14.4 %	Moisture Calc.		07/14/10 14:30	07/15/10	NFM-SA
Free Liquid	< 0.1 %	EPA 9095A		07/14/10 8:30	07/14/10	IC-SA
pH	9.27@22.4°C	EPA 9045C		07/14/10 12:23	07/14/10	DLM-SA

SAMPLE: **TCLP Leachate of Inv. Cuttings**

Lab ID: 10071871-001D

Grab

SAMPLED BY: SG

Sample Time: 07/12/2010 12:05

Test	Result	Method	Reg Limit	Analysis Start	Analysis End	Analyst *
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.2	07/16/10 9:00	07/18/10	RMD-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	5	07/16/10 15:00	07/17/10	RMD-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	100	07/16/10 15:00	07/17/10	RMD-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	1	07/16/10 15:00	07/17/10	RMD-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	5	07/16/10 15:00	07/17/10	RMD-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B		07/16/10 15:00	07/17/10	RMD-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	5	07/16/10 15:00	07/17/10	RMD-CV
Nickel - TCLP extracted	< 0.100 mg/L	EPA 6010B		07/16/10 15:00	07/17/10	RMD-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	1	07/16/10 15:00	07/17/10	RMD-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	5	07/16/10 15:00	07/17/10	RMD-CV
Zinc - TCLP extracted	46.4 mg/L	EPA 6010B	L	07/16/10 15:00	07/17/10	RMD-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

L Value above calibration range but within annually verified linear range

MANAGER

*Ami M. Davis*

DATE: 7/20/2010

LAB ID: 08-00380  
LAB ID: 39-00401

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10073110

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10073110  
PAGE: 1 of 2  
PO#: AF76323  
PWS ID#

PHONE: (607) 562-4000  
FAX: (607) 562-4001

## TEST REPORT

██████████ 7

RECEIVED FOR LAB BY: WCB

DATE: 07/20/2010 13:25

Page 1 of 2

SAMPLE: **Inv. Clean Soil**  
SAMPLED BY: SG

Lab ID: 10073110-001A Composite  
Sample Time: 07/13/2010 18:40

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Sodium	< 123 mg/Kg-dry	EPA 6010B	123	07/22/10 7:00	07/22/10	GSR-CV
Chloride	66.2 mg/Kg-dry	EPA 300.0	51.8	07/21/10 12:33	07/22/10	HDP-CV
MBAS, calculated as LAS, mol wt 342 g/mol	15 mg/Kg	Z N SM5540C	13	07/20/10 8:25	07/20/10	BJW-CV
Percent Moisture	3.4 %	SM2540G		07/21/10 16:00	07/22/10	BJW-CV

SAMPLE: **Inv. Clean Soil**  
SAMPLED BY: SG

Lab ID: 10073110-001B Composite  
Sample Time: 07/13/2010 18:40

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Moisture	3.26 %	Moisture Calc.	0.01	07/21/10 9:40	07/22/10	NFM-SA
Free Liquid	< 0.1 %	EPA 9095A	0.1	07/22/10 10:05	07/22/10	IC-SA
pH	8.57@21.6°C	EPA 9045C		07/21/10 12:15	07/21/10	NFM-SA
Phosphorus	246 mg/kg-dry	EPA 365.3	5	07/22/10 11:00	07/23/10	MED-SA

SAMPLE: **Inv. Clean Soil**  
SAMPLED BY: SG

Lab ID: 10073110-001C Composite  
Sample Time: 07/13/2010 18:40

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Total Petroleum Hydrocarbons	299 mg/Kg	EPA 9071		07/22/10 11:10	07/22/10	
Sample Note: Analysis performed by Microbac-Erie						

SAMPLE: **TCLP Leachate of Inv. Clean Soil**  
SAMPLED BY: SG

Lab ID: 10073110-001E Composite  
Sample Time: 07/13/2010 18:40

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.0008	07/22/10 9:00	07/23/10	KW-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	07/22/10 12:30	07/22/10	GSR-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	07/22/10 12:30	07/22/10	GSR-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

N Parameter is not NELAC certified

Z Due to matrix bias, spike recovery was outside acceptance limits

MANAGER

*Candice M. Davis*

DATE: 7/27/2010

LAB ID: 08-00380  
LAB ID: 39-00401

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10073110

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10073110  
PAGE: 2 of 2  
PO#: AF76323  
PWS ID#

PHONE: (607) 562-4000  
FAX: (607) 562-4001

**TEST REPORT**

77

RECEIVED FOR LAB BY: WCB

DATE: 07/20/2010 13:25

Page 2 of 2

Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	07/22/10 12:30	07/22/10	GSR-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	07/22/10 12:30	07/22/10	GSR-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	07/22/10 12:30	07/22/10	GSR-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	07/22/10 12:30	07/22/10	GSR-CV
Nickel - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	07/22/10 12:30	07/22/10	GSR-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	07/22/10 12:30	07/22/10	GSR-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	07/22/10 12:30	07/22/10	GSR-CV
Zinc - TCLP extracted	< 0.200 mg/L	EPA 6010B	0.200	07/22/10 12:30	07/22/10	GSR-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

N Parameter is not NELAC certified

Z Due to matrix bias, spike recovery was outside acceptance limits

MANAGER

*Carrie M. Davis*

DATE: 7/27/2010



LAB ID: 08-00380  
LAB ID: 39-00401

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10080733

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10080733

PAGE: 1 of 1

PO#: AF76709

PHONE: (607) 562-4000  
FAX: (607) 562-4001

## TEST REPORT

PWS ID#

77

RECEIVED FOR LAB BY: DLM2

DATE: 08/05/2010 9:50

Page 1 of 1

SAMPLE: **Inv. Cuttings & Gypsum**  
SAMPLED BY: SG

Lab ID: 10080733-001A

Grab

Sample Time: 08/04/2010 11:00

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>	<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Total Petroleum Hydrocarbons	96900 mg/Kg	EPA 9071	08/09/10 11:25	08/09/10	
Sample Note: Analysis performed by Microbac-Erie					

SAMPLE: **Inv. Cuttings & Gypsum**  
SAMPLED BY: SG

Lab ID: 10080733-001B

Grab

Sample Time: 08/04/2010 11:00

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>	<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Moisture	14.1 %	Moisture Calc.	0.01 08/09/10 14:45	08/10/10	NFM-SA
Free Liquid	< 0.1 %	EPA 9095A	0.1 08/05/10 14:15	08/05/10	IC-SA
pH	9.13@22.3°C	EPA 9045C	08/06/10 14:21	08/06/10	SG-SA

SAMPLE: **TCLP Leachate of Inv. Cuttings & Gypsum**  
SAMPLED BY: SG

Lab ID: 10080733-001D

Grab

Sample Time: 08/06/2010 7:45

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>	<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.0008 08/09/10 9:00	08/10/10	KW-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500 08/09/10 10:30	08/09/10	RMD-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00 08/09/10 10:30	08/09/10	RMD-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100 08/09/10 10:30	08/09/10	RMD-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500 08/09/10 10:30	08/09/10	RMD-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100 08/09/10 10:30	08/09/10	RMD-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500 08/09/10 10:30	08/09/10	RMD-CV
Nickel - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100 08/09/10 10:30	08/09/10	RMD-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500 08/09/10 10:30	08/09/10	RMD-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100 08/09/10 10:30	08/09/10	RMD-CV
Zinc - TCLP extracted	< 0.200 mg/L	EPA 6010B	0.200 08/09/10 10:30	08/09/10	RMD-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER

*Carrie M. Davis*

DATE: 8/10/2010

LAB ID: 08-00380  
LAB ID: 39-00401

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10080746

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10080746

PAGE: 1 of 1

PO#: AF76709

PHONE: (607) 562-4000  
FAX: (607) 562-4001

## TEST REPORT

PWS ID#

██████████ 7

RECEIVED FOR LAB BY: DLM2

DATE: 08/05/2010 9:50

Page 1 of 1

SAMPLE: **Inv. Cuttings & Cool Ash 1**  
SAMPLED BY: SG

Lab ID: 10080746-001A Grab  
Sample Time: 08/04/2010 11:00

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Total Petroleum Hydrocarbons	59300 mg/Kg	EPA 9071		08/09/10 11:25	08/09/10	
Sample Note: Analysis performed by Microbac-Erie						

SAMPLE: **Inv. Cuttings & Cool Ash 1**  
SAMPLED BY: SG

Lab ID: 10080746-001B Grab  
Sample Time: 08/04/2010 11:00

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Moisture	15.7 %	Moisture Calc.	0.01	08/09/10 14:45	08/10/10	NFM-SA
Free Liquid	< 0.1 %	EPA 9095A	0.1	08/05/10 14:20	08/05/10	IC-SA
pH	9.64@22.3°C	EPA 9045C		08/06/10 14:21	08/06/10	SG-SA

SAMPLE: **TCLP Leachate of Inv. Cuttings & Cool Ash 1**  
SAMPLED BY: SG

Lab ID: 10080746-001D Grab  
Sample Time: 08/06/2010 7:45

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.0008	08/09/10 9:00	08/10/10	KW-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	08/09/10 10:30	08/09/10	RMD-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	08/09/10 10:30	08/09/10	RMD-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	08/09/10 10:30	08/09/10	RMD-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	08/09/10 10:30	08/09/10	RMD-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	08/09/10 10:30	08/09/10	RMD-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	08/09/10 10:30	08/09/10	RMD-CV
Nickel - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	08/09/10 10:30	08/09/10	RMD-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	08/09/10 10:30	08/09/10	RMD-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	08/09/10 10:30	08/09/10	RMD-CV
Zinc - TCLP extracted	< 0.200 mg/L	EPA 6010B	0.200	08/09/10 10:30	08/09/10	RMD-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER

*Candice M. Davis*

DATE: 8/10/2010

LAB ID: 08-00380  
LAB ID: 39-00401

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10080752

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10080752

PAGE: 1 of 1

PO#: AF76709

PWS ID#

PHONE: (607) 562-4000  
FAX: (607) 562-4001

## TEST REPORT

77

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DATE: 08/05/2010 9:50

Page 1 of 1

SAMPLE: **Inv. Cuttings & Cool Ash 2**

Lab ID: 10080752-001A

Grab

SAMPLED BY: SG

Sample Time: 08/04/2010 11:00

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>	<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Total Petroleum Hydrocarbons	81100 mg/Kg	EPA 9071	08/09/10 11:25	08/09/10	
Sample Note: Analysis performed by Microbac-Erie					

SAMPLE: **Inv. Cuttings & Cool Ash 2**

Lab ID: 10080752-001B

Grab

SAMPLED BY: SG

Sample Time: 08/04/2010 11:00

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>	<u>SLOQ</u>	<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Moisture	15.3 %	Moisture Calc.	0.01	08/09/10 14:45	08/10/10	NFM-SA
Free Liquid	< 0.1 %	EPA 9095A	0.1	08/05/10 14:25	08/05/10	IC-SA
pH	9.33@22.4°C	EPA 9045C		08/06/10 14:21	08/06/10	SG-SA

SAMPLE: **TCLP Leachate of Inv. Cuttings & Cool Ash 2**

Lab ID: 10080752-001D

Grab

SAMPLED BY: SG

Sample Time: 08/06/2010 7:45

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>	<u>SLOQ</u>	<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.0008	08/09/10 9:00	08/10/10	KW-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	08/09/10 10:30	08/09/10	RMD-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	08/09/10 10:30	08/09/10	RMD-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	08/09/10 10:30	08/09/10	RMD-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	08/09/10 10:30	08/09/10	RMD-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	08/09/10 10:30	08/09/10	RMD-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	08/09/10 10:30	08/09/10	RMD-CV
Nickel - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	08/09/10 10:30	08/09/10	RMD-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	08/09/10 10:30	08/09/10	RMD-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	08/09/10 10:30	08/09/10	RMD-CV
Zinc - TCLP extracted	< 0.200 mg/L	EPA 6010B	0.200	08/09/10 10:30	08/09/10	RMD-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER

*Cassie M. Davis*

DATE: 8/10/2010



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WASTE MANAGEMENT

**FORM 26R**  
**CHEMICAL ANALYSIS OF RESIDUAL WASTE**  
**ANNUAL REPORT BY THE GENERATOR**

This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form 26R, reference the item number and identify the date prepared. The date on attached sheets needs to match the date noted below.				<b>DEP USE ONLY</b>	
General Reference 287.54				Date Received & General Notes	
Date Prepared/Revised		February 11, 2011			
<b>SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION</b>					
Company Name Talisman Energy USA Inc.					
If a Subsidiary, Name of Parent Company Talisman Energy Inc.				EPA Generator ID# N/A	
Company Mailing Address Line 1 50 Pennwood Place			Company Mailing Address Line 2		
Company Address Last Line – City Warrendale		State PA	Zip+4 15086	Phone (724) 814-5300	Ext
Company Contact Last Name Brown		First Name Dina	MI	Suffix	
Municipality Warrendale			County Allegheny		
Contact Phone (724) 814-5321		Ext	Contact Email Address dybrown@talismanusa.com		
Is the waste generated at the Company Mailing Address (noted above)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
If 'No', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the (03-006) well pad site located at 431 Bradford Street, Troy Borough, Bradford County, PA. Waste is stored in containers on site.					
Municipality Troy		County Bradford	State PA		
<b>SECTION B. WASTE DESCRIPTION</b>					
Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure		Time Frame
810	Drill cuttings (oil and gas)	570	<input type="checkbox"/> cu yd	<input type="checkbox"/> gal	
			<input type="checkbox"/> lb	<input checked="" type="checkbox"/> ton	<input type="checkbox"/> One Time
<b>1. GENERAL PROPERTIES</b>					
a.	pH Range	11.51	to	---	(based on analyses or knowledge)
b.	Physical State	<input type="checkbox"/> Liquid Waste (EPA Method 9095) <input checked="" type="checkbox"/> Solid (EPA Method 9095) <input type="checkbox"/> Gas (ambient temperature & pressure)			
c.	Physical Appearance	Color	Greyish Black	Odor	Earthy / Slight Petroleum
		Number of Solid or Liquid Phases of Separation		One	
		Describe each phase of separation. Soil and Rock Fragments			
<b>2. CHEMICAL ANALYSIS ATTACHMENTS</b>					
a.	The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.			<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A detailed description of the waste sampling method is attached.			<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	The quality assurance/quality control procedures employed by the laboratory(ies) is attached.			<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
d.	The results of the hazardous waste determination is attached.			<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
e.	If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.			<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A

3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS			
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
SECTION C. MANAGEMENT OF RESIDUAL WASTE			
1. PROCESSING OR DISPOSAL FACILITY(IES)			
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.			
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 8-4630-00010		
b.	Facility Name	Hakes C&D Landfill	
	Address Line 1	4376 Manning Ridge Road	
	Address Line 1		
	Address City State ZIP	Painted Post NY 14870	
	Municipality	Erwin Twp County Steuben	
c.	Facility Contact Name	Joe Boyles	
	Title		
	Phone	(607) 937-6044	Email Address joe.boyles@casella.com
		(585) 466-7271	
d.	Volume of waste shipped to processing or disposal facility in the previous year. 204 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 9-0232-00003		
b.	Facility Name	Hyland Landfill	
	Address Line 1	6653 Herdman Road	
	Address Line 1		
	Address City State ZIP	Angelica NY 14709	
	Municipality	Angelica County Allegany	
c.	Facility Contact Name	Larry Shilling	
	Title		
	Phone	(585) 466-7271	Email Address larry.shilling@casella.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 181 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
2. BENEFICIAL USE			
a.	Has the waste been approved for beneficial use? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If "Yes", list the general permit number or approval number.		
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		

3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS			
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
SECTION C. MANAGEMENT OF RESIDUAL WASTE			
1. PROCESSING OR DISPOSAL FACILITY(IES)			
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.			
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 8-0728-00004		
b.	Facility Name	Chemung County Landfill	
	Address Line 1	1690 Lake Street	
	Address Line 1		
	Address City State ZIP	Elmira	NY 14903
	Municipality	Elmira	County Chemung
c.	Facility Contact Name	Carla Canjar	
	Title	Environmental Manager	
	Phone	(585) 797-5941	Email Address carla.canjar@casella.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 127 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 100361		
b.	Facility Name	McKean County Landfill	
	Address Line 1	19 Ness Lane	
	Address Line 1		
	Address City State ZIP	Kane	PA 16735
	Municipality	Sergeant Twp	County McKean
c.	Facility Contact Name	Mike Manderfeld	
	Title		
	Phone	(814) 778-9931	Email Address manderfeld@gmail.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 58 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
2. BENEFICIAL USE			
a.	Has the waste been approved for beneficial use? If "Yes", list the general permit number or approval number.		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		

**SECTION D. CERTIFICATION**

I certify, under penalty of law, that I have personally examined and am familiar with the information submitted in this Annual Report and all attached documents and that based upon my inquiry of those individuals immediately responsible for obtaining the information, I verify that the submitted information is true, accurate and complete to the best of my knowledge. I understand that the submission of false information herein is made subject to the penalties of 18 Pa. C.S. §4904, relating to unsworn falsification to authorities, which include fine and imprisonment.

Check the following, if applicable:

I certify the information required in Section B-1, General Properties was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-2, Chemical Analysis was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

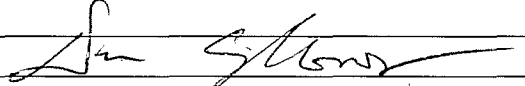
I certify the information required in Section B-3, Process Description and Schematic, was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

Name of Responsible Official \_\_\_\_\_ Title Environmental Specialist

Dina Brown \_\_\_\_\_

Signature  Date 2/25/11

LAB ID: 08-00380  
LAB ID: 39-00401

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169  
Fax: (570) 888-0717

Work Order: 10123993

SEND DATA TO:

NAME: Dina Brown  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10123993  
PAGE: 1 of 3  
PO#: AF 78732

PHONE: (607) 562-4000  
FAX: (607) 562-4001

## TEST REPORT

PWS ID#

A4H Well Pad

RECEIVED FOR LAB BY: CMS

DATE: 12/28/2010 13:50

Page 1 of 3

SAMPLE: **Air Cuttings**

Lab ID: 10123993-001A

Grab

SAMPLED BY: DJD

Sample Time: 12/28/2010 10:50

SLOQ

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Total Petroleum Hydrocarbons	560 mg/Kg	EPA 9071	170	12/29/10 15:10	12/29/10	

Sample Note: Analysis performed by Microbac Laboratories, Inc-Erie Division.

SAMPLE: **Air Cuttings**

Lab ID: 10123993-001B

Grab

SAMPLED BY: DJD

Sample Time: 12/28/2010 10:50

SLOQ

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Moisture	40.7 %	Moisture Calc.	0.01	01/03/11 11:30	01/04/11	KMF-SA
Free Liquid	< 0.1 %	EPA 9095A	0.1	12/28/10 17:00	12/28/10	IC-SA
pH	11.51@19.8°C	EPA 9045C		12/29/10 11:41	12/29/10	SG-SA

SAMPLE: **Air Cuttings**

Lab ID: 10123993-001C

Grab

SAMPLED BY: DJD

Sample Time: 12/28/2010 10:50

SLOQ

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Sodium	636 mg/Kg	EPA 6010B	67.0	12/30/10 10:00	01/03/11	GSR-CV
Chloride	1020 mg/Kg	EPA 300.0	48.4	01/04/11 12:43	01/05/11	HDP-CV
ASTM D Chloride	< 25.0 mg/L	EPA 300.0	25.0	01/07/11 15:12	01/07/11	HDP-CV
ASTM D Ph	10.34 @ 19.2°C	SM4500H+B		01/07/11 14:22	01/07/11	LTW-CV
Cyanide, Reactive	< 0.2 mg/Kg	SW 7.3.3.2	0.2	01/06/11 9:28	01/07/11	HDP-CV
Reactive Sulfide	< 64 mg/Kg	SW846 7.3	64	01/10/11 8:55	01/10/11	LTW-CV

SAMPLE: **TCLP Leachate of Air Cuttings**

Lab ID: 10123993-001E

Grab

SAMPLED BY: DJD

Sample Time: 12/29/2010 8:00

SLOQ

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.0008	12/30/10 11:30	01/03/11	KW-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	12/30/10 9:30	01/03/11	GSR-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	12/30/10 9:30	01/03/11	GSR-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	12/30/10 9:30	01/03/11	GSR-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

L Value above calibration range but within annually verified linear range

MANAGER

*Cami M. Davis*

DATE: 1/12/2011



LAB ID: 08-00380  
LAB ID: 39-00401

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169  
Fax: (570) 888-0717

Work Order: 10123993

**SEND DATA TO:**

NAME: Dina Brown  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10123993  
PAGE: 2 of 3  
PO#: AF 78732  
PWS ID#

PHONE: (607) 562-4000  
FAX: (607) 562-4001

## TEST REPORT

A4H Well Pad

RECEIVED FOR LAB BY: CMS

DATE: 12/28/2010 13:50

Page 2 of 3

Component	Concentration	Method	Concentration	Time	Date	Analyst
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	12/30/10 9:30	01/03/11	GSR-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	12/30/10 9:30	01/03/11	GSR-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	12/30/10 9:30	01/03/11	GSR-CV
Nickel - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	12/30/10 9:30	01/03/11	GSR-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	12/30/10 9:30	01/03/11	GSR-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	12/30/10 9:30	01/03/11	GSR-CV
Strontium - TCLP extracted	2.13 mg/L	L EPA 6010B	0.050	12/30/10 9:30	01/03/11	GSR-CV
Zinc - TCLP extracted	0.577 mg/L	EPA 6010B	0.200	12/30/10 9:30	01/03/11	GSR-CV

SAMPLE: **TCLP Leachate of Air Cuttings**  
SAMPLED BY: DJD

Lab ID: 10123993-001F  
Sample Time: 01/06/2011 8:00

Grab

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Pyridine	< 0.10 mg/L	EPA 8270C	0.10	01/10/11 10:20	01/10/11	RHH-SA
1,4-Dichlorobenzene	< 0.10 mg/L	EPA 8270C	0.10	01/10/11 10:20	01/10/11	RHH-SA
o-Cresol	< 0.10 mg/L	EPA 8270C	0.10	01/10/11 10:20	01/10/11	RHH-SA
p-Cresol/m-Cresol	< 0.10 mg/L	EPA 8270C	0.10	01/10/11 10:20	01/10/11	RHH-SA
Hexachloroethane	< 0.10 mg/L	EPA 8270C	0.10	01/10/11 10:20	01/10/11	RHH-SA
Nitrobenzene	< 0.10 mg/L	EPA 8270C	0.10	01/10/11 10:20	01/10/11	RHH-SA
Hexachlorobutadiene	< 0.10 mg/L	EPA 8270C	0.10	01/10/11 10:20	01/10/11	RHH-SA
2,4,6-Trichlorophenol	< 0.10 mg/L	EPA 8270C	0.10	01/10/11 10:20	01/10/11	RHH-SA
2,4,5-Trichlorophenol	< 0.10 mg/L	EPA 8270C	0.10	01/10/11 10:20	01/10/11	RHH-SA
Pentachlorophenol	< 0.50 mg/L	EPA 8270C	0.50	01/10/11 10:20	01/10/11	RHH-SA
2,4-Dinitrotoluene	< 0.10 mg/L	EPA 8270C	0.10	01/10/11 10:20	01/10/11	RHH-SA
Hexachlorobenzene	< 0.10 mg/L	EPA 8270C	0.10	01/10/11 10:20	01/10/11	RHH-SA

SAMPLE: **TCLP Leachate of Air Cuttings**  
SAMPLED BY:

Lab ID: 10123993-001G  
Sample Time: 01/06/2011 8:00

Grab

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Benzene	< 0.0250 mg/L	EPA 8260B	0.0250	01/07/11 9:22	01/07/11	CTM-SA
Carbon tetrachloride	< 0.0250 mg/L	EPA 8260B	0.0250	01/07/11 9:22	01/07/11	CTM-SA

**REMARKS:**

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

L Value above calibration range but within annually verified linear range

MANAGER

*Ami M. Davis*

DATE: 1/12/2011

LAB ID: 08-00380  
LAB ID: 39-00401

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169  
Fax: (570) 888-0717

Work Order: 10123993

SEND DATA TO:

NAME: Dina Brown  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10123993  
PAGE: 3 of 3  
PO#: AF 78732  
PWS ID#

PHONE: (607) 562-4000  
FAX: (607) 562-4001

**TEST REPORT**

A4H Well Pad

RECEIVED FOR LAB BY: CMS

DATE: 12/28/2010 13:50

Page 3 of 3

Compound	Concentration	Method	Concentration	Analysis Start	Analysis End	Analyst
Chlorobenzene	< 0.0250 mg/L	EPA 8260B	0.0250	01/07/11 9:22	01/07/11	CTM-SA
Chloroform	< 0.0250 mg/L	EPA 8260B	0.0250	01/07/11 9:22	01/07/11	CTM-SA
1,2-Dichloroethane	< 0.0250 mg/L	EPA 8260B	0.0250	01/07/11 9:22	01/07/11	CTM-SA
1,1-Dichloroethane	< 0.0250 mg/L	EPA 8260B	0.0250	01/07/11 9:22	01/07/11	CTM-SA
Ethylbenzene	< 0.0250 mg/L	EPA 8260B	0.0250	01/07/11 9:22	01/07/11	CTM-SA
Isopropylbenzene	< 0.0250 mg/L	EPA 8260B	0.0250	01/07/11 9:22	01/07/11	CTM-SA
Tetrachloroethene	< 0.0250 mg/L	EPA 8260B	0.0250	01/07/11 9:22	01/07/11	CTM-SA
Toluene	< 0.0250 mg/L	EPA 8260B	0.0250	01/07/11 9:22	01/07/11	CTM-SA
Trichloroethene	< 0.0250 mg/L	EPA 8260B	0.0250	01/07/11 9:22	01/07/11	CTM-SA
1,2,4-Trimethylbenzene	< 0.0250 mg/L	EPA 8260B	0.0250	01/07/11 9:22	01/07/11	CTM-SA
1,3,5-Trimethylbenzene	< 0.0250 mg/L	EPA 8260B	0.0250	01/07/11 9:22	01/07/11	CTM-SA
Vinyl chloride	< 0.0250 mg/L	EPA 8260B	0.0250	01/07/11 9:22	01/07/11	CTM-SA
Methyl tert-butyl ether	< 0.0250 mg/L	EPA 8260B	0.0250	01/07/11 9:22	01/07/11	CTM-SA
2-Butanone	< 0.0500 mg/L	EPA 8260B	0.0500	01/07/11 9:22	01/07/11	CTM-SA

SAMPLE: **Air Cuttings**

Lab ID: 10123993-001H

Grab

SAMPLED BY: DJD

Sample Time: 12/29/2010 8:00

SLOQ

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Total Organic Halides	< 5.00 mg/kg	SW846/9023	5.00	01/11/11 15:00	01/11/11	

Sample Note: Analysis performed by Analytical Services, Inc.

SAMPLE: **Air Cuttings**

Lab ID: 10123993-001I

Grab

SAMPLED BY: DJD

Sample Time: 12/29/2010 8:00

SLOQ

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Ignitability	Negative AS IS	SW846 1030		01/07/11 14:00	01/07/11	

Sample Note: Analysis performed by QC Laboratories.

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

L Value above calibration range but within annually verified linear range

MANAGER

*Anni M. Davis*

DATE: 1/12/2011



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WASTE MANAGEMENT

**FORM 26R**  
**CHEMICAL ANALYSIS OF RESIDUAL WASTE**  
**ANNUAL REPORT BY THE GENERATOR**

This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form 26R, reference the item number and identify the date prepared. The date on attached sheets needs to match the date noted below.		<b>DEP USE ONLY</b>	
General Reference 287.54		Date Received & General Notes	
Date Prepared/Revised	February 11, 2011		
<b>SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION</b>			
Company Name		Talisman Energy USA Inc.	
If a Subsidiary, Name of Parent Company		EPA Generator ID#	
Talisman Energy Inc.		N/A	
Company Mailing Address Line 1		Company Mailing Address Line 2	
50 Pennwood Place			
Company Address Last Line – City	State	Zip+4	Phone
Warrendale	PA	15086	(724) 814-5300
Company Contact Last Name	First Name	MI	Suffix
Brown	Dina		
Municipality	County		
Warrendale	Allegheny		
Contact Phone	Ext	Contact Email Address	
(724) 814-5321		dybrown@talismanusa.com	
Is the waste generated at the Company Mailing Address (noted above)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
If 'No', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the (01-075) well pad site located at 311 Stump Road, Granville Township, Bradford County, PA. Waste is stored in			
containers on site.			
Municipality	Granville	County	Bradford
		State	PA
<b>SECTION B. WASTE DESCRIPTION</b>			
Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure
810	Drilling Cuttings (Oil and Gas)	1,109	<input type="checkbox"/> cu yd <input type="checkbox"/> gal
			<input type="checkbox"/> lb <input checked="" type="checkbox"/> ton <input type="checkbox"/> One Time
<b>1. GENERAL PROPERTIES</b>			
a. pH Range	6.53	to	8.24 (based on analyses or knowledge)
b. Physical State	<input type="checkbox"/> Liquid Waste (EPA Method 9095) <input checked="" type="checkbox"/> Solid (EPA Method 9095) <input type="checkbox"/> Gas (ambient temperature & pressure)		
c. Physical Appearance	Color	Greyish Black	Odor
			Earthy / Slight Petroleum
	Number of Solid or Liquid Phases of Separation		
	One		
	Describe each phase of separation. Soil and Rock Fragments		
<b>2. CHEMICAL ANALYSIS ATTACHMENTS</b>			
a.	The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A detailed description of the waste sampling method is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	The quality assurance/quality control procedures employed by the laboratory(ies) is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
d.	The results of the hazardous waste determination is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
e.	If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A

3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS			
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
SECTION C. MANAGEMENT OF RESIDUAL WASTE			
1. PROCESSING OR DISPOSAL FACILITY(IES)			
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.			
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 100361		
b.	Facility Name	McKean County Landfill	
	Address Line 1	19 Ness Lane	
	Address Line 1		
	Address City State ZIP	Kane PA	16735
	Municipality	Sergeant Twp County	McKean
c.	Facility Contact Name	Mike Manderfeld	
	Title		
	Phone	(814) 778-9931	Email Address manderfeld@gmail.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 518 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 8-4630-00010		
b.	Facility Name	Hakes C&D Landfill	
	Address Line 1	4376 Manning Ridge Road	
	Address Line 1		
	Address City State ZIP	Painted Post NY	14870
	Municipality	Erwin Twp County	Steuben
c.	Facility Contact Name	Joseph Boyles	
	Title		
	Phone	(607) 937-6044	Email Address joe.boyles@casella.com
		(585) 466-7271	
d.	Volume of waste shipped to processing or disposal facility in the previous year. 268 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
2. BENEFICIAL USE			
a.	Has the waste been approved for beneficial use? If "Yes", list the general permit number or approval number.		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		

3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS			
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
SECTION C. MANAGEMENT OF RESIDUAL WASTE			
1. PROCESSING OR DISPOSAL FACILITY(IES)			
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.			
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 9-0232-00003		
b.	Facility Name	Hyland Landfill	
	Address Line 1	6653 Herdman Road	
	Address Line 1		
	Address City State ZIP	Angelica NY 14709	
	Municipality	Angelica	County Allegany
c.	Facility Contact Name	Larry Shilling	
	Title		
	Phone	(585) 466-7271	Email Address larry.shilling@casella.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 181 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 8-0728-00004		
b.	Facility Name	Chemung County Landfill	
	Address Line 1	1690 Lake Street	
	Address Line 1		
	Address City State ZIP	Elmira NY 14903	
	Municipality	Elmira	County Chemung
c.	Facility Contact Name	Carla Canjar	
	Title	Environmental Manager	
	Phone	(585)797-5941	Email Address carla.canjar@casella.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 142 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
2. BENEFICIAL USE			
a.	Has the waste been approved for beneficial use? If "Yes", list the general permit number or approval number.		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		

**SECTION D. CERTIFICATION**

I certify, under penalty of law, that I have personally examined and am familiar with the information submitted in this Annual Report and all attached documents and that based upon my inquiry of those individuals immediately responsible for obtaining the information, I verify that the submitted information is true, accurate and complete to the best of my knowledge. I understand that the submission of false information herein is made subject to the penalties of 18 Pa. C.S. §4904, relating to unsworn falsification to authorities, which include fine and imprisonment.

Check the following, if applicable:

I certify the information required in Section B-1, General Properties was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-2, Chemical Analysis was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-3, Process Description and Schematic, was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

Name of Responsible Official

Title Environmental Specialist

Dina Brown

Signature 

Date 2/25/11

LAB ID: 08-00380  
LAB ID: 39-00401

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169  
Fax: (570) 888-0717

Work Order: 10120835

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10120835  
PAGE: 1 of 1  
PO#: AF77715  
PWS ID#

PHONE: (607) 731-0145  
FAX: (607) 562-4001

**TEST REPORT**

01-075

RECEIVED FOR LAB BY: CMS

DATE: 12/06/2010 15:40

Page 1 of 1

SAMPLE: **Inv Cuttings**  
SAMPLED BY: SG

Lab ID: 10120835-001A Composite

Sample Time: 12/06/2010 10:05

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Total Petroleum Hydrocarbons	96400 mg/Kg	EPA 9071		12/08/10 14:20	12/08/10	
Sample Note: Analysis performed by Microbac Laboratories, Inc-Erie Division						

SAMPLE: **Inv Cuttings**  
SAMPLED BY: SG

Lab ID: 10120835-001B Composite

Sample Time: 12/06/2010 10:05

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Moisture	13.8 %	Moisture Calc.	0.01	12/06/10 17:30	12/07/10	IC-SA
Free Liquid	< 0.1 %	EPA 9095A	0.1	12/06/10 17:15	12/06/10	IC-SA
pH	8.24@22.3°C	EPA 9045C		12/07/10 14:20	12/07/10	MED-SA

SAMPLE: **TCLP Leachate of Inv Cuttings**  
SAMPLED BY: SG

Lab ID: 10120835-001E Composite

Sample Time: 12/07/2010 8:00

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.0008	12/07/10 10:15	12/09/10	KW-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	12/08/10 12:15	12/08/10	GSR-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	12/08/10 12:15	12/08/10	GSR-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	12/08/10 12:15	12/08/10	GSR-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	12/08/10 12:15	12/08/10	GSR-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	12/08/10 12:15	12/08/10	GSR-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	12/08/10 12:15	12/08/10	GSR-CV
Nickel - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	12/08/10 12:15	12/08/10	GSR-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	12/08/10 12:15	12/08/10	GSR-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	12/08/10 12:15	12/08/10	GSR-CV
Zinc - TCLP extracted	< 0.200 mg/L	EPA 6010B	0.200	12/08/10 12:15	12/08/10	GSR-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER

*Cassie M. Davis*

DATE: 12/10/2010

**CHAIN OF CUSTODY**

**REPORT TO:** Talisman / UEG  
 geowetlands@aol.com

**CONTACT:** Steve Gridley  
 PH# 607-731-0145  
 FAX#

**BILL TO:** Talisman

PO# AF 78557

PROJECT DESCRIPTION  
01-075

SAMPLER SIGNATURE / AFFILIATION  
SG UEG

CONTAINER / SAMPLING POINT

**W/O#: 10120835**

REFRIGERATE SAMPLE AFTER COLLECTION

TRANSPORT TO LABORATORY IN COOLER WITH ICE

- DW DRINKING WATER SL SLUDGE
- GW GROUND WATER SO SOIL
- SW SURFACE WATER HZ HAZARDOUS
- WW WASTE WATER OTHER
- DE DEIONIZED WATER DI DISTILLED WATER

RESULTS ARE BEING USED FOR:

NYDOH  NYDEC  PADEP

LANDFILL  PERSONAL OTHER

ARE SPECIAL DETECTION LIMITS NEEDED:  YES  NO

IF YES, PLEASE ATTACH

IS A QC PACKAGE NEEDED?  YES  NO

IF YES, PLEASE ATTACH REQUIREMENTS

- H HYDROCHLORIC ACID OH SODIUM HYDROXIDE
- S SULFURIC ACID AS ASCORBIC ACID
- N NITRIC ACID AC ACETIC ACID
- SO<sub>3</sub> SODIUM SULFITE NH<sub>4</sub> AMMONIUM CHLORIDE
- Thio SODIUM THIOSULFATE ZN ZINC ACETATE
- NONE Hg MERCURIC CHLORIDE

An incomplete chain of custody may delay the processing of your sample(s).

ANALYSIS TO BE PERFORMED (PER CONTAINER)

COMPOSITED ON RECEIPT  
 PRESERVATIVE ADDED ON RECEIPT

Please fill out all applicable areas completely

LAB USE ONLY

1	Inv Cuttings	12/6	1005	SO	C	SG	N	TPH			
2								pH			
3								TCLP 8 RCRA Metals + Cu, Ni, Zn			
4								Free Liquids / % Moisture			
5	A- TPH										
6	B- pH, Free liquid, % moisture							Perform BTEX ONLY IF the TPH exceeds 100,000 mg/Kg			
7	C- Anions, metals										
8	D- Total Sample										
9	E- TCLP metals										
10								72 HOUR TURNAROUND			
11								DAY TURNAROUND			

LAB USE ONLY

DELIVERED BY: Charles McLean TEMPERATURE UPON RECEIPT: 5 °C ARRIVAL ON ICE: Y/N

RELINQUISHED BY: <u>SG</u>	DATE: <u>12/6/10</u>	TIME: <u>1540</u>	RECEIVED BY:	DATE: <u>1 1</u>	TIME:
RELINQUISHED BY:	DATE: <u>1 1</u>	TIME:	RECEIVED BY:	DATE: <u>1 1</u>	TIME:
RELINQUISHED BY:	DATE: <u>1 1</u>	TIME:	RECEIVED BY: <u>Charles McLean</u>	DATE: <u>12/6/10</u>	TIME: <u>1540</u>



PA ID #: 08-00380  
NY ID #: 11216

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169  
Fax: (570) 888-0717

Work Order: 10121734

SEND DATA TO:

NAME: Dina Brown  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10121734  
PAGE: 1 of 3  
PO#: AF78557  
PWS ID#

PHONE: (607) 562-4000  
FAX: (607) 562-4001

**TEST REPORT**

01-075

RECEIVED FOR LAB BY: RML

DATE: 12/09/2010 15:45

Page 1 of 3

SAMPLE: **Inv. Cuttings** Lab ID: 10121734-001A Grab  
SAMPLED BY: SG Sample Time: 12/09/2010 11:42

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Ignitability	Neg ASIS °F	SW846 1030		12/15/10 13:30	12/15/10	

Sample Note: Analysis performed by QC Laboratories

SAMPLE: **Inv. Cuttings** Lab ID: 10121734-001C Grab  
SAMPLED BY: SG Sample Time: 12/09/2010 11:42

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Cyanide, Reactive	0.2 mg/Kg	SW 7.3.3.2	0.2	12/13/10 8:56	12/14/10	HDP-CV
Reactive Sulfide	1200 mg/Kg	SW846 7.3	16	12/14/10 12:30	12/14/10	LTW-CV

SAMPLE: **Inv. Cuttings** Lab ID: 10121734-001D Grab  
SAMPLED BY: SG Sample Time: 12/09/2010 11:42

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
% Solids	76.55 % Wght.	SM2540B	0.10	12/10/10 17:00	12/13/10	IC-SA
Total Volatile Solids	15.07 % Wght.	EPA 160.4	0.01	12/10/10 8:00	12/14/10	NFM-SA

SAMPLE: **TCLP Leachate of Inv. Cuttings** Lab ID: 10121734-001F Grab  
SAMPLED BY: SG Sample Time: 12/11/2010 12:45

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Pyridine	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
1,4-Dichlorobenzene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
o-Cresol	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
p-Cresol/m-Cresol	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Hexachloroethane	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Nitrobenzene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Hexachlorobutadiene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

B Analyte detected in the associated Method Blank

L Value above calibration range but within annually verified linear range

MANAGER

*Carrie M. Davis*

DATE: 12/16/2010

PA ID #: 08-00380  
NY ID #: 11216

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169  
Fax: (570) 888-0717

Work Order: 10121734

**SEND DATA TO:**

NAME: Dina Brown  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10121734  
PAGE: 2 of 3  
PO#: AF78557  
PWS ID#

PHONE: (607) 562-4000  
FAX: (607) 562-4001

## TEST REPORT

01-075

RECEIVED FOR LAB BY: RML

DATE: 12/09/2010 15:45

Page 2 of 3

Test	Result	Method	Concentration	Analysis Start	Analysis End	Analyst
2,4,6-Trichlorophenol	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
2,4,5-Trichlorophenol	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Pentachlorophenol	< 0.50 mg/L	EPA 8270C	0.50	12/15/10 7:48	12/15/10	RHH-SA
2,4-Dinitrotoluene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Hexachlorobenzene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Naphthalene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA

SAMPLE: **TCLP Leachate of Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10121734-001G Grab  
Sample Time: 12/07/2010 8:00

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Strontium - TCLP extracted	17.8 mg/L	EPA 6010B	0.050	12/08/10 12:15	12/08/10	GSR-CV

Sample Note: Sample for TCLP extracted Strontium was received on 12/6/10 at 15:40 by CMS.

SAMPLE: **TCLP Leachate of Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10121734-001H Grab  
Sample Time: 12/11/2010 12:45

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
pH	6.53@16.6°C	SM4500H+B		12/14/10 8:00	12/14/10	SG-SA

SAMPLE: **ZHE Extract of Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10121734-001I Grab  
Sample Time: 12/12/2010 13:10

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Benzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Carbon tetrachloride	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Chlorobenzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Chloroform	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
1,2-Dichloroethane	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
1,1-Dichloroethene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Ethylbenzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Isopropylbenzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA

**REMARKS:**

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

B Analyte detected in the associated Method Blank

L Value above calibration range but within annually verified linear range

MANAGER

*Cassie M. Davis*

DATE: 12/16/2010

PA ID #: 08-00380  
NY ID #: 11216

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169  
Fax: (570) 888-0717

Work Order: 10121734

**SEND DATA TO:**

NAME: Dina Brown  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10121734  
PAGE: 3 of 3  
PO#: AF78557  
PWS ID#

PHONE: (607) 562-4000  
FAX: (607) 562-4001

## TEST REPORT

01-075

RECEIVED FOR LAB BY: RML

DATE: 12/09/2010 15:45

Page 3 of 3

Compound	Concentration	Method	Result	Analysis Start	Analysis End	Analyst
Tetrachloroethene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Toluene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Trichloroethene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
1,2,4-Trimethylbenzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
1,3,5-Trimethylbenzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Vinyl chloride	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Methyl tert-butyl ether	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
2-Butanone	< 0.0500 mg/L	EPA 8260B	0.0500	12/13/10 8:11	12/13/10	CTM-SA

SAMPLE: ASTM Extract of Inv. Cuttings  
SAMPLED BY: SG

Lab ID: 10121734-001J Grab

Sample Time: 12/10/2010 11:15

SLOQ

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst*
Chemical Oxygen Demand	227 mg/L	B HACH 8000	10	12/11/10 8:00	12/13/10	KMF-SA

SAMPLE: ASTM Extract of Inv. Cuttings  
SAMPLED BY: SG

Lab ID: 10121734-001L Grab

Sample Time: 12/10/2010 11:15

SLOQ

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst*
pH	8.00@16.7°C	SM4500H+B		12/14/10 8:00	12/14/10	SG-SA
Total Solids	2080 mg/L	SM2540B	0.10	12/10/10 17:00	12/13/10	IC-SA

SAMPLE: Inv. Cuttings  
SAMPLED BY: SG

Lab ID: 10121734-001M Grab

Sample Time: 12/10/2010 10:25

SLOQ

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst*
Total Organic Halides	< 5.00 mg/kg	SW846/9023	5.00	12/15/10 15:45	12/15/10	

Sample Note: Analysis performed by Analytical Services, Inc.

**REMARKS:**

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

B Analyte detected in the associated Method Blank

L Value above calibration range but within annually verified linear range

MANAGER

*Cassie M. Davis*

DATE: 12/16/2010

**CHAIN OF CUSTODY**

**Bench**

**REPORT TO:** Talisman / UEG  
 geowetlands@aol.com

**CONTACT:** Steve Gridley  
 PH# 607-731-0145  
 FAX#

**BILL TO:** Talisman

PO# AR 78557

PROJECT DESCRIPTION  
01-075

SAMPLER SIGNATURE / AFFILIATION  
[Signature] UEG

CONTAINER / SAMPLING POINT

2566 Pennsylv  
 Phoi  
 Fa:

**W/O#: 10121734**

**SPECIAL DETECTION LIMITS**  
 EDED:  YES /  NO

IF YES, PLEASE ATTACH

IS A QC PACKAGE NEEDED?  
 YES /  NO

IF YES, PLEASE ATTACH REQUIREMENTS

REFRIGERATE SAMPLES  
 AFTER COLLECTION

TRANSPORT  
 TO  
 LABORATORY  
 IN COOLER  
 WITH ICE

RESULTS ARE BEING USED FOR:

NYDOH  NYDEC  PADEP

LANDFILL Mostoller

PERSONAL  OTHER

- DW DRINKING WATER SL SLUDGE
- GW GROUND WATER SO SOIL
- SW SURFACE WATER HZ HAZARDOUS
- WW WASTE WATER OTHER
- DE DEIONIZED WATER DI DISTILLED WATER

- H HYDROCHLORIC ACID OH SODIUM HYDROXIDE
- S SULFURIC ACID AS ASCORBIC ACID
- N NITRIC ACID AC ACETIC ACID
- SO<sub>3</sub> SODIUM SULFITE NH<sub>4</sub> AMMONIUM CHLORIDE
- Thio SODIUM THIOSULFATE ZN ZINC ACETATE
- NONE Hg MERCURIC CHLORIDE

DATE SAMPLED	TIME OF SAMPLING	SAMPLE MATRIX	SAMPLE TYPE - GRAB / COMPOSITE	SAMPLER INITIALS	PRESERVATIVE	ANALYSIS TO BE PERFORMED (PER CONTAINER)	COMPOSITED ON RECEIPT	PRESERVATIVE ADDED ON RECEIPT	LAB USE ONLY
						Ignitability, Reactive Sulfide & Cyanide			
						PCBs, Total Solids			
						Total Volatile Solids			
						Ammonia-Nitrogen			
						Water Leaching Procedure: COD,			
						Total Solids, Oil & Grease,			

An incomplete chain of custody may delay the processing of your sample(s).

Please fill out all applicable areas completely

ANALYSIS TO BE PERFORMED (PER CONTAINER)

LAB USE ONLY

1	Inv Cuttings	12/9	1142	SO	C	SO	N				
2					C						
3	A - Rheostat, Ign.				G						
4	C - Reactivity				C						
5	D - TS, TDS				C						
6	E - T. Sample				C						
7	F - TCLP BNA, Repts.										
8	G - TCLP Metals Sr										
9	H - TCLP pH										
10	I - TCLP Vols.										
11	J - ASTM COD, with										

36 HOUR TURNAROUND  
DAY TURNAROUND

LAB USE ONLY: DELIVERED BY: TEMPERATURE UPON RECEIPT: ARRIVAL ON ICE: Y/N

RELINQUISHED BY: <u>[Signature]</u>	DATE: 12/9/10	TIME: 7530	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY: <u>[Signature]</u>	DATE: 12/9/10	TIME: 1315



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WASTE MANAGEMENT

**FORM 26R**  
**CHEMICAL ANALYSIS OF RESIDUAL WASTE**  
**ANNUAL REPORT BY THE GENERATOR**

<p>This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form 26R, reference the item number and identify the date prepared. The date on attached sheets needs to match the date noted below.</p>		<b>DEP USE ONLY</b>	
<p>General Reference 287.54</p>		<p>Date Received &amp; General Notes</p>	
<p>Date Prepared/Revised February 11, 2011</p>			
SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION			
<p>Company Name Talisman Energy USA Inc.</p>			
<p>If a Subsidiary, Name of Parent Company Talisman Energy Inc.</p>			<p>EPA Generator ID# N/A</p>
<p>Company Mailing Address Line 1 50 Pennwood Place</p>		<p>Company Mailing Address Line 2</p>	
<p>Company Address Last Line – City Warrendale</p>		<p>State PA</p>	<p>Zip+4 15086</p>
		<p>Phone (724) 814-5300</p>	<p>Ext</p>
<p>Company Contact Last Name Brown</p>		<p>First Name Dina</p>	<p>MI MI</p>
		<p>Suffix</p>	
<p>Municipality Warrendale</p>		<p>County Allegheny</p>	
<p>Contact Phone (724) 814-5321</p>		<p>Ext</p>	<p>Contact Email Address dybrown@talismanusa.com</p>
<p>Is the waste generated at the Company Mailing Address (noted above)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>			
<p>If 'No', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the (03-035) well pad site located at 1314 Aameah Valley Road, Wells Township, Bradford County, PA. Waste is stored in containers on site.</p>			
<p>Municipality Wells</p>		<p>County Bradford</p>	<p>State PA</p>
SECTION B. WASTE DESCRIPTION			
Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure
810	Drill cuttings (oil and gas)	1,970	<input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton <input type="checkbox"/> One Time
1. GENERAL PROPERTIES			
a.	<p>pH Range 8.05 to 11.26 (based on analyses or knowledge)</p>		
b.	<p>Physical State <input type="checkbox"/> Liquid Waste (EPA Method 9095)  <input checked="" type="checkbox"/> Solid (EPA Method 9095)  <input type="checkbox"/> Gas (ambient temperature &amp; pressure)</p>		
c.	<p>Physical Appearance Color Greyish Black Odor Earthy / Slight Petroleum                  Number of Solid or Liquid Phases of Separation One                  Describe each phase of separation. Soil and Rock Fragments</p>		
2. CHEMICAL ANALYSIS ATTACHMENTS			
a.	<p>The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.</p>		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
b.	<p>A detailed description of the waste sampling method is attached.</p>		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
c.	<p>The quality assurance/quality control procedures employed by the laboratory(ies) is attached.</p>		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
d.	<p>The results of the hazardous waste determination is attached.</p>		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
e.	<p>If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.</p>		<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A

3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS			
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
SECTION C. MANAGEMENT OF RESIDUAL WASTE			
1. PROCESSING OR DISPOSAL FACILITY(IES)			
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.			
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 8-4630-00010		
b.	Facility Name	Hakes C&D Landfill	
	Address Line 1	4376 Manning Ridge Road	
	Address Line 1		
	Address City State ZIP	Painted Post NY 14870	
	Municipality	Erwin Twp County	Steuben
c.	Facility Contact Name	Joseph Boyles	
	Title		
	Phone	(607) 937-6044	Email Address joe.boyles@casella.com
		(585) 466-7271	
d.	Volume of waste shipped to processing or disposal facility in the previous year. 1,034 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 9-0232-00003		
b.	Facility Name	Hyland Landfill	
	Address Line 1	6653 Herdman Road	
	Address Line 1		
	Address City State ZIP	Angelica NY 14709	
	Municipality	Angelica County	Allegany
c.	Facility Contact Name	Larry Shilling	
	Title		
	Phone	(585) 466-7271	Email Address larry.shilling@casella.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 896 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
2. BENEFICIAL USE			
a.	Has the waste been approved for beneficial use? If "Yes", list the general permit number or approval number.		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		

3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS			
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
SECTION C. MANAGEMENT OF RESIDUAL WASTE			
1. PROCESSING OR DISPOSAL FACILITY(IES)			
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.			
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 100361		
b.	Facility Name	McKean County Landfill	
	Address Line 1	19 Ness Lane	
	Address Line 1		
	Address City State ZIP	Kane PA	16735
	Municipality	Sergeant Twp	County McKean
c.	Facility Contact Name	Mike Manderfeld	
	Title		
	Phone	(814) 778-9931	Email Address manderfeld@gmail.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 40 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
a.	Solid waste permit number(s) for processing or disposal facility being utilized.		
b.	Facility Name		
	Address Line 1		
	Address Line 1		
	Address City State ZIP		
	Municipality	County	
c.	Facility Contact Name		
	Title		
	Phone	Email Address	
d.	Volume of waste shipped to processing or disposal facility in the previous year. <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		
2. BENEFICIAL USE			
a.	Has the waste been approved for beneficial use? If "Yes", list the general permit number or approval number.		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		

**SECTION D. CERTIFICATION**

I certify, under penalty of law, that I have personally examined and am familiar with the information submitted in this Annual Report and all attached documents and that based upon my inquiry of those individuals immediately responsible for obtaining the information, I verify that the submitted information is true, accurate and complete to the best of my knowledge. I understand that the submission of false information herein is made subject to the penalties of 18 Pa. C.S. §4904, relating to unsworn falsification to authorities, which include fine and imprisonment.

Check the following, if applicable:

I certify the information required in Section B-1, General Properties was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-2, Chemical Analysis was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-3, Process Description and Schematic, was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

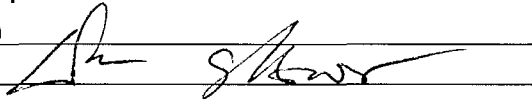
Date Submitted: \_\_\_\_\_

Name of Responsible Official

Title Environmental Specialist

Dina Brown

Signature



Date

7/28/11



LAB ID: 08-00380  
LAB ID: 39-00401

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10100746

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10100746  
PAGE: 1 of 2  
PO#: AF78035  
PWS ID#

PHONE: (607) 731-0145  
FAX: (607) 562-4001

**TEST REPORT**

03-035

RECEIVED FOR LAB BY: DLM2

DATE: 10/06/2010 9:55

Page 1 of 2

**SAMPLE: Air Cuttings**

Lab ID: 10100746-001A

Composite

SAMPLED BY: SG

Sample Time: 10/05/2010 16:50

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>		<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Total Petroleum Hydrocarbons	360 mg/Kg	EPA 9071		10/08/10 14:00	10/08/10	

Sample Note: Analysis performed by Microbac-Erie

**SAMPLE: Air Cuttings**

Lab ID: 10100746-001B

Composite

SAMPLED BY: SG

Sample Time: 10/05/2010 16:50

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>		<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Moisture	22.7 %	Moisture Calc.	0.01	10/06/10 10:30	10/07/10	NFM-SA
Free Liquid	< 0.1 %	EPA 9095A	0.1	10/08/10 11:05	10/08/10	IC-SA
pH	11.26@20.4C	EPA 9045C		10/06/10 16:30	10/06/10	NFM-SA

**SAMPLE: Air Cuttings**

Lab ID: 10100746-001C

Composite

SAMPLED BY: SG

Sample Time: 10/05/2010 16:50

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>		<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Sodium	320 mg/Kg-dry	EPA 6010B	78.9	10/07/10 12:30	10/08/10	GSR-CV
Chloride	166 mg/Kg-dry	EPA 300.0	60.6	10/07/10 14:51	10/08/10	HDP-CV
Percent Moisture	22.7 %	SM2540G		10/06/10 10:30	10/07/10	NFM-SA

**SAMPLE: TCLP Leachate of Air Cuttings**

Lab ID: 10100746-001E

Composite

SAMPLED BY: SG

Sample Time: 10/07/2010 9:15

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>		<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.0008	10/08/10 8:40	10/11/10	KW-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	10/08/10 12:30	10/08/10	GSR-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	10/08/10 12:30	10/08/10	GSR-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	10/08/10 12:30	10/08/10	GSR-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	10/08/10 12:30	10/08/10	GSR-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	10/08/10 12:30	10/08/10	GSR-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER

*Ann M. Davis*

DATE: 10/12/2010

LAB ID: 08-00380  
LAB ID: 39-00401

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169  
Fax: (570) 888-0717

Work Order: 10100746

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10100746

PAGE: 2 of 2

PO#: AF78035

PHONE: (607) 731-0145  
FAX: (607) 562-4001

**TEST REPORT**

PWS ID#

03-035

RECEIVED FOR LAB BY: DLM2

DATE: 10/06/2010 9:55

Page 2 of 2

Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	10/08/10 12:30	10/08/10	GSR-CV
Nickel - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	10/08/10 12:30	10/08/10	GSR-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	10/08/10 12:30	10/08/10	GSR-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	10/08/10 12:30	10/08/10	GSR-CV
Zinc - TCLP extracted	0.206 mg/L	EPA 6010B	0.200	10/08/10 12:30	10/08/10	GSR-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER

*Cassie M. Davis*

DATE: 10/12/2010

**CHAIN OF CUSTODY**

REPORT TO: Talisman / UEG

geowetlands@aol.com

twollin@rallysolutions.ca

2566 F

**W/O#: 10100746**

ARE SPECIAL DETECTION LIMITS NEEDED:  YES /  NO  
 IF YES, PLEASE ATTACH  
 IS A QC PACKAGE NEEDED?  YES /  NO  
 IF YES, PLEASE ATTACH REQUIREMENTS

CONTACT Steve Gridley

PH# 607-731-0145

FAX#

BILL TO: Talisman

PO# AF 78035

PROJECT DESCRIPTION

03-035

SAMPLER SIGNATURE / AFFILIATION

CONTAINER (SAMPLING POINT)

REFRIGERATE SAMPLES AFTER COLLECTION

TRANSPORT TO LABORATORY IN COOLER WITH ICE

DW DRINKING WATER SL SLUDGE NYDOH NYDEC  
 GW GROUND WATER SO SOIL PADEP  
 SW SURFACE WATER HZ HAZARDOUS LANDFILL  
 WW WASTE WATER OTHER  
 DE DEIONIZED WATER DI DISTILLED WATER PERSONAL OTHER

H HYDROCHLORIC ACID OH SODIUM HYDROXIDE  
 S SULFURIC ACID AS ASCORBIC ACID  
 N NITRIC ACID AC ACETIC ACID  
 SO<sub>3</sub> SODIUM SULFITE NH<sub>4</sub> AMMONIUM CHLORIDE  
 TNo SODIUM THIOSULFATE ZN ZINC ACETATE  
 - NONE Hg MERCURIC CHLORIDE

An incomplete chain of custody may delay the processing of your sample(s).

ANALYSIS TO BE PERFORMED (PER CONTAINER)

Please fill out all applicable areas completely

LAB USE ONLY

1	Air Cuttings	10/5	1550	50	C	SG-N	TPH						
2							pH, Chlorides, Sodium						
3							TCLP 8 RCRA Metals + Cu, Ni, Zn						
4	A-TPH						Free Liquids / % Moisture						
5	B- pH, Free Liquid % Moisture												
6	C- Cl, Na						TCLP 8260 / 8270 ONLY IF the TPH						
7	D T-Sample						exceeds 120,000 mg/Kg						
8	E TCLP Metals + Cu, Ni, Zn												
9							72 HOUR TURNAROUND						
10							DAY TURNAROUND						
11													Due 10/11/10

LAB USE ONLY DELIVERED BY: SG TEMPERATURE UPON RECEIPT: °C ARRIVAL ON ICE: Y/N

RELINQUISHED BY: <i>[Signature]</i>	DATE: 10/6/10	TIME: 9:54	RECEIVED BY: <i>[Signature]</i>	DATE: 10/6/10	TIME: 9:55
RELINQUISHED BY:	DATE: , ,	TIME:	RECEIVED BY:	DATE: , ,	TIME:
RELINQUISHED BY:	DATE: , ,	TIME:	RECEIVED BY:	DATE: , ,	TIME:

LAB ID: 08-00380  
LAB ID: 39-00401

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10104059

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10104059  
PAGE: 1 of 1  
PO#: AF76834  
PWS ID#

**TEST REPORT**

PHONE: (607) 731-0145  
FAX: (607) 562-4001

03-035

RECEIVED FOR LAB BY: SCP

DATE: 10/27/2010 14:15

Page 1 of 1

SAMPLE: **Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10104059-001A Grab  
Sample Time: 10/26/2010 11:40

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Total Petroleum Hydrocarbons	7600 mg/Kg	EPA 9071	170	10/28/10 14:20	10/28/10	

Sample Note: Analysis performed by Microbac Laboratories, Inc.-Erie Division

SAMPLE: **Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10104059-001B Grab  
Sample Time: 10/26/2010 11:40

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Moisture	19.3 %	Moisture Calc.	0.01	10/29/10 10:30	11/01/10	NFM-SA
Free Liquid	< 0.1 %	EPA 9095A	0.1	10/28/10 11:05	10/28/10	IC-SA
pH	10.83@22.4°C	EPA 9045C		11/01/10 14:00	11/01/10	NFM-SA

SAMPLE: **TCLP Leachate of Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10104059-001D Grab  
Sample Time: 10/28/2010 8:00

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.0008	10/30/10 8:45	10/31/10	RMD-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	10/30/10 13:40	10/31/10	RMD-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	10/30/10 13:40	10/31/10	RMD-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	10/30/10 13:40	10/31/10	RMD-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	10/30/10 13:40	10/31/10	RMD-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	10/30/10 13:40	10/31/10	RMD-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	10/30/10 13:40	10/31/10	RMD-CV
Nickel - TCLP extracted	0.243 mg/L	EPA 6010B	0.100	10/30/10 13:40	10/31/10	RMD-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	10/30/10 13:40	10/31/10	RMD-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	10/30/10 13:40	10/31/10	RMD-CV
Zinc - TCLP extracted	< 0.200 mg/L	EPA 6010B	0.200	10/30/10 13:40	10/31/10	RMD-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER

*Cassie M. Davis*

DATE: 11/1/2010

**CHAIN OF CUSTODY**

**REPORT TO:** Talisman / UEG  
 geowetlands@aol.com  
 twollin@rallysolutions.ca

**CONTACT:** Steve Gridley  
 PH# 607-731-0145  
 FAX#  
**BILL TO:** Talisman

PO# AF 76834  
 PROJECT DESCRIPTION  
03-035  
 SAMPLER SIGNATURE / AFFILIATION  
*[Signature]*  
 CONTAINER SAMPLING POINT

REFRIGERATE SAMPLES  
AFTER COLLECTION

TRANSPORT  
TO  
LABORATORY  
IN COOLER  
WITH ICE

**W/O#: 10104059**

DW DRINKING WATER SL SLUDGE  
 GW GROUND WATER SO SOIL  
 SW SURFACE WATER HZ HAZARDOUS  
 WW WASTE WATER OTHER  
 DE DEIONIZED WATER DI DISTILLED WATER

RESULTS ARE BEING USED FOR:  
 NYDOH  NYDEC  PADEP  
 LANDFILL \_\_\_\_\_  
 PERSONAL  OTHER

**ARE SPECIAL DETECTION LIMITS  
NEEDED:**  YES  NO  
 IF YES, PLEASE ATTACH \_\_\_\_\_  
**IS A QC PACKAGE NEEDED?**  
 YES  NO  
 IF YES, PLEASE ATTACH REQUIREMENTS \_\_\_\_\_

H HYDROCHLORIC ACID OH SODIUM HYDROXIDE  
 S SULFURIC ACID AS ASCORBIC ACID  
 N NITRIC ACID AC ACETIC ACID  
 SO<sub>3</sub> SODIUM SULFITE NH<sub>4</sub> AMMONIUM CHLORIDE  
 Thio SODIUM THIOSULFATE ZN ZINC ACETATE  
 - NONE Hg MERCURIC CHLORIDE

An incomplete chain of custody may delay the  
processing of your sample(s).

ANALYSIS TO BE PERFORMED  
(PER CONTAINER)

COMPOSITED ON RECEIPT  
 PRESERVATIVE ADDED ON RECEIPT

Please fill out all  
applicable areas  
completely

LAB USE ONLY

1	Inv Cuttings	DATE SAMPLED	TIME OF SAMPLING	SAMPLE MATRIX	SAMPLE TYPE - GRAB / COMPOSITE	SAMPLER INITIALS	PRESERVATIVE	ANALYSIS TO BE PERFORMED (PER CONTAINER)	COMPOSITED ON RECEIPT	PRESERVATIVE ADDED ON RECEIPT	LAB USE ONLY
1	Inv Cuttings	10/26	11:45	C	18	N	TPH				COA-D
2							pH				
3							TCLP 8 RCRA Metals + Cu, Ni, Zn				
4							Free Liquids / % Moisture				
5	A- TPH						<del>RTX</del>				
6	B- pH, free Liquids, % Moisture						TCLP 8200-10270 ONLY IF the TPH				
7	C- T. Sample						exceeds 100,000 mg/Kg				
8	D- TCLP metals + Cu, Ni, Zn										
9							72 HOUR TURNAROUND				
10							DAY TURNAROUND				
11											

LAB USE ONLY  
 DELIVERED BY \_\_\_\_\_ TEMPERATURE UPON RECEIPT 19 °C ARRIVAL ON ICE Y/N

RELINQUISHED BY: <i>[Signature]</i>	DATE: 10/26/10	TIME: 1:30 PM	RECEIVED BY: <i>[Signature]</i>	DATE: 10/26/10	TIME: 1:30
RELINQUISHED BY: <i>[Signature]</i>	DATE: 10/27/10	TIME: 1:15	RECEIVED BY:	DATE: 10/27/10	TIME:
RELINQUISHED BY:	DATE: 1/1	TIME:	RECEIVED BY: <i>[Signature]</i>	DATE: 10/27/10	TIME: 1:15

LAB ID: 08-00380  
LAB ID: 39-00401

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10110485

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10110485  
PAGE: 1 of 1  
PO#: AF 78035  
PWS ID#

PHONE: (607) 731-0145  
FAX: (607) 562-4001

## TEST REPORT

03-035

RECEIVED FOR LAB BY: RML

DATE: 11/03/2010 12:36

Page 1 of 1

SAMPLE: **Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10110485-001A Grab  
Sample Time: 11/01/2010 19:20

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Total Petroleum Hydrocarbons	59000 mg/Kg	EPA 9071		11/04/10 14:30	11/04/10	
Sample Note: Analysis performed by Microbac Laboratories, Inc-Erie Division.						

SAMPLE: **Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10110485-001B Grab  
Sample Time: 11/01/2010 19:20

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Moisture	23.9 %	Moisture Calc.	0.01	11/03/10 14:45	11/04/10	IC-SA
Free Liquid	< 0.1 %	EPA 9095A	0.1	11/03/10 14:45	11/03/10	IC-SA
pH	8.25@23.6°C	EPA 9045C		11/04/10 15:32	11/04/10	SG-SA

SAMPLE: **TCLP Leachate of Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10110485-001D Grab  
Sample Time: 11/04/2010 7:30

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.0008	11/04/10 13:15	11/04/10	RMD-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	11/04/10 14:05	11/04/10	RMD-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	11/04/10 14:05	11/04/10	RMD-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	11/04/10 14:05	11/04/10	RMD-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	11/04/10 14:05	11/04/10	RMD-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	11/04/10 14:05	11/04/10	RMD-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	11/04/10 14:05	11/04/10	RMD-CV
Nickel - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	11/04/10 14:05	11/04/10	RMD-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	11/04/10 14:05	11/04/10	RMD-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	11/04/10 14:05	11/04/10	RMD-CV
Zinc - TCLP extracted	< 0.200 mg/L	EPA 6010B	0.200	11/04/10 14:05	11/04/10	RMD-CV

REMARKS:

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\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER

*Cassie M. Davis*

DATE: 11/5/2010

**CHAIN OF CUSTODY**

REPORT TO: Talisman / UEG  
 geowetlands@aol.com  
 twollin@rallysolutions.ca

CONTACT: Steve Gridley  
 PH# 607-731-0146  
 FAX#

BILL TO: Talisman

PO# AF78035  
 PROJECT DESCRIPTION: 03-035  
 SAMPLER SIGNATURE / AFFILIATION: [Signature] UEG  
 CONTAINER / SAMPLING POINT:

25661

**W/O#: 10110485**

REFRIGERATE SAMPLES AFTER COLLECTION

TRANSPORT TO LABORATORY IN COOLER WITH ICE

RESULTS ARE BEING USED FOR:

<input type="checkbox"/> NYDOH	<input checked="" type="checkbox"/> NYDEC	<input checked="" type="checkbox"/> PADEP
LANDFILL		
<input type="checkbox"/> PERSONAL	<input type="checkbox"/> OTHER	

ARE SPECIAL DETECTION LIMITS NEEDED:  YES /  NO

IF YES, PLEASE ATTACH

IS A QC PACKAGE NEEDED?  YES /  NO

IF YES, PLEASE ATTACH REQUIREMENTS

H	HYDROCHLORIC ACID	OH	SODIUM HYDROXIDE
S	SULFURIC ACID	AS	ASCORBIC ACID
N	NITRIC ACID	AC	ACETIC ACID
SO <sub>2</sub>	SODIUM SULFITE	NH <sub>4</sub>	AMMONIUM CHLORIDE
Thio	SODIUM THIOSULFATE	ZN	ZINC ACETATE
-	NONE	Hg	MERCURIC CHLORIDE

An incomplete chain of custody may delay the processing of your sample(s).

ANALYSIS TO BE PERFORMED (PER CONTAINER)

COMPOSITED ON RECEIPT  
 PRESERVATIVE ADDED ON RECEIPT

Please fill out all applicable areas completely

LAB USE ONLY

CONTAINER	SAMPLING POINT	DATE SAMPLED	TIME OF SAMPLING	SAMPLE MATRIX	SAMPLE TYPE - GRAB / COMPOSITE	SAMPLER INITIALS	PRESERVATIVE	ANALYSIS TO BE PERFORMED (PER CONTAINER)	COMPOSITED ON RECEIPT	PRESERVATIVE ADDED ON RECEIPT	LAB USE ONLY
1	Inv Cuttings	11/1	1920	SO	C	SG	N	TPH			001A
2								pH			B
3								TCLP 8 RCRA Metals + Cu, Ni, Zn			LD
4								Free Liquids / % Moisture			B
5								<del>BTEX</del>			
6								<del>TCLP 8260 / 8270 ONLY IF ALL TPH</del>			
7								exceeds 100,000 mg/Kg			
8											
9								72 HOUR TURNAROUND			
10								DAY TURNAROUND			
11											

LAB USE ONLY

DELIVERED BY: client

TEMPERATURE UPON RECEIPT: °C

ARRIVAL ON ICE: Y/N

RELINQUISHED BY: [Signature]	DATE: 11/13/10	TIME: 1230	RECEIVED BY: [Signature]	DATE: 11/13/10	TIME: 1230
RELINQUISHED BY:	DATE: 1/1	TIME:	RECEIVED BY:	DATE: 1/1	TIME:
RELINQUISHED BY:	DATE: 1/1	TIME:	RECEIVED BY: [Signature]	DATE: 11/13/10	TIME: 1230

LAB ID: 08-00380  
LAB ID: 39-00401

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10114050

Phone: (570) 888-0169  
Fax: (570) 888-0717

**SEND DATA TO:**

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10114050  
PAGE: 1 of 2  
PO#: AF77414  
PWS ID#

PHONE: (607) 731-0145  
FAX: (607) 562-4001

## TEST REPORT

Pad

RECEIVED FOR LAB BY: SCP

DATE: 11/29/2010 10:06

Page 1 of 2

SAMPLE: **Pad Soil** Lab ID: 10114050-001A Composite  
SAMPLED BY: SG Sample Time: 11/24/2010 11:25

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Total Petroleum Hydrocarbons	< 171 mg/Kg	EPA 9071	171	12/01/10 16:00	12/01/10	

Sample Note: Analysis performed by Microbac Laboratories, Inc-Erie Division

SAMPLE: **Pad Soil** Lab ID: 10114050-001B Composite  
SAMPLED BY: SG Sample Time: 11/24/2010 11:25

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Moisture	11.6 %	Moisture Calc.	0.01	11/30/10 9:40	12/01/10	NFM-SA
Free Liquid	< 0.1 %	EPA 9095A	0.1	11/29/10 17:00	11/29/10	IC-SA
pH	8.05@22.7°C	EPA 9045C		11/30/10 8:00	11/30/10	NFM-SA

SAMPLE: **Pad Soil** Lab ID: 10114050-001C Composite  
SAMPLED BY: SG Sample Time: 11/24/2010 11:25

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Sodium	< 162 mg/Kg	MS EPA 6010B	162	11/30/10 10:10	12/01/10	JRA-CV
Chloride	< 50.1 mg/Kg	EPA 300.0	50.1	11/30/10 14:49	12/01/10	HDP-CV

SAMPLE: **TCLP Leachate of Pad Soil** Lab ID: 10114050-001E Composite  
SAMPLED BY: SG Sample Time: 11/30/2010 8:00

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.0008	11/29/10 9:30	12/01/10	KW-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	11/30/10 13:15	11/30/10	GSR-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	11/30/10 13:15	11/30/10	GSR-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	11/30/10 13:15	11/30/10	GSR-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	11/30/10 13:15	11/30/10	GSR-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	11/30/10 13:15	11/30/10	GSR-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	11/30/10 13:15	11/30/10	GSR-CV

**REMARKS:**

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MS Limit of detection increased due to matrix interference and spike recovery data

MANAGER

*Cassie M. Davis*

DATE: 12/2/2010



LAB ID: 08-00380  
LAB ID: 39-00401

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10114050

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10114050  
PAGE: 2 of 2  
PO#: AF77414  
PWS ID#

PHONE: (607) 731-0145  
FAX: (607) 562-4001

**TEST REPORT**

Pad

RECEIVED FOR LAB BY: SCP

DATE: 11/29/2010 10:06

Page 2 of 2

Nickel - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	11/30/10 13:15	11/30/10	GSR-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	11/30/10 13:15	11/30/10	GSR-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	11/30/10 13:15	11/30/10	GSR-CV
Zinc - TCLP extracted	< 0.200 mg/L	EPA 6010B	0.200	11/30/10 13:15	11/30/10	GSR-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MS Limit of detection increased due to matrix interference and spike recovery data

MANAGER

*Cassie M. Davis*

DATE:

12/2/2010

**CHAIN OF CUSTODY**

**REPORT TO:** Talisman / UEG  
 geowetlands@aol.com

**CONTACT:** Steve Gridley  
 PH# 607-731-0145  
 FAX#

**BILL TO:** Talisman

PO# AF 77414

**PROJECT DESCRIPTION:** Pad

**SAMPLER SIGNATURE / AFFILIATION:** [Signature] UEG

**CONTAINER / SAMPLING POINT:**

REFRIGERATE SAMPLES  
AFTER COLLECTION

**TRANSPORT  
TO  
LABORATORY  
IN COOLER  
WITH ICE**

**W/O#: 10114050**

RESULTS ARE BEING USED FOR:

NYDOH  NYDEC  PADEP

LANDFILL  PERSONAL  OTHER

DW DRINKING WATER SL SLUDGE  
 GW GROUND WATER SO SOIL  
 SW SURFACE WATER HZ HAZARDOUS  
 WW WASTE WATER OTHER  
 DE DEIONIZED WATER DI DISTILLED WATER

ARE SPECIAL DETECTION LIMITS  
NEEDED:  YES /  NO

IF YES, PLEASE ATTACH

IS A QC PACKAGE NEEDED?  
 YES  NO

IF YES, PLEASE ATTACH REQUIREMENTS

- ANALYSIS TO BE PERFORMED (PER CONTAINER)
- H HYDROCHLORIC ACID OH SODIUM HYDROXIDE
  - S SULFURIC ACID AS ASCORBIC ACID
  - N NITRIC ACID AC ACETIC ACID
  - SO<sub>3</sub> SODIUM SULFITE NH<sub>4</sub> AMMONIUM CHLORIDE
  - Thio SODIUM THIOSULFATE ZN ZINC ACETATE
  - NONE Hg MERCURIC CHLORIDE

DATE SAMPLED	TIME OF SAMPLING	SAMPLE MATRIX	SAMPLE TYPE - GRAB / COMPOSITE	SAMPLER INITIALS	PRESERVATIVE	ANALYSIS TO BE PERFORMED (PER CONTAINER)	COMPOSITED ON RECEIPT	PRESERVATIVE ADDED ON RECEIPT	LAB USE ONLY
						TPH, Sodium, Chlorides			
						pH			
						TCLP 8 RCRA Metals + Cu, Ni, Zn			
						Free Liquids / % Moisture			
						Perform BTEX ONLY IF the TPH exceeds 100,000 mg/Kg			
						<u>48</u> HOUR TURNAROUND			
						DAY TURNAROUND			

LAB USE ONLY	DELIVERED BY	TEMPERATURE UPON RECEIPT	ARRIVAL ON ICE

RELINQUISHED BY: <u>[Signature]</u>	DATE: <u>11/29/10</u>	TIME: <u>1003</u>	RECEIVED BY:	DATE: <u>11</u>	TIME:
RELINQUISHED BY:	DATE: <u>11</u>	TIME:	RECEIVED BY:	DATE: <u>11</u>	TIME:
RELINQUISHED BY:	DATE: <u>11</u>	TIME:	RECEIVED BY: <u>[Signature]</u>	DATE: <u>11/29/10</u>	TIME: <u>10:06</u>



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WASTE MANAGEMENT

FORM 26R  
CHEMICAL ANALYSIS OF RESIDUAL WASTE  
ANNUAL REPORT BY THE GENERATOR

This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form 26R, reference the item number and identify the date prepared. The date on attached sheets needs to match the date noted below.		<b>DEP USE ONLY</b>		
General Reference 287.54		Date Received & General Notes		
Date Prepared/Revised	February 11, 2011			
<b>SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION</b>				
Company Name Talisman Energy USA Inc.				
If a Subsidiary, Name of Parent Company Talisman Energy Inc.			EPA Generator ID# N/A	
Company Mailing Address Line 1 50 Pennwood Place		Company Mailing Address Line 2		
Company Address Last Line -- City Warrendale	State PA	Zip+4 15086	Phone (724) 814-5300 Ext	
Company Contact Last Name Brown	First Name Dina	MI	Suffix	
Municipality Warrendale	County Allegheny			
Contact Phone (724) 814-5321	Ext	Contact Email Address dybrown@talismanusa.com		
Is the waste generated at the Company Mailing Address (noted above)?			<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
If 'No', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the (05-026) well pad site located at 733 Regan Hill Road, Warren Township, Bradford County, PA. Waste is stored in containers on site.				
Municipality	Warren	County	Bradford	
		State	PA	
<b>SECTION B. WASTE DESCRIPTION</b>				
Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure	Time Frame
810	Drill cuttings (oil and gas)	280	<input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton	<input type="checkbox"/> One Time
<b>1. GENERAL PROPERTIES</b>				
a.	pH Range	8.9	to	11.3 (based on analyses or knowledge)
b.	Physical State	<input type="checkbox"/> Liquid Waste (EPA Method 9095) <input checked="" type="checkbox"/> Solid (EPA Method 9095) <input type="checkbox"/> Gas (ambient temperature & pressure)		
c.	Physical Appearance	Color	Greyish Black	Odor
				Earthy / Slight Petroleum
		Number of Solid or Liquid Phases of Separation		
		One		
		Describe each phase of separation. Soil and Rock Fragments		
<b>2. CHEMICAL ANALYSIS ATTACHMENTS</b>				
a.	The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A detailed description of the waste sampling method is attached.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	The quality assurance/quality control procedures employed by the laboratory(ies) is attached.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
d.	The results of the hazardous waste determination is attached.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
e.	If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.		<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A

3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS			
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
SECTION C. MANAGEMENT OF RESIDUAL WASTE			
1. PROCESSING OR DISPOSAL FACILITY(IES)			
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.			
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 8-0728-00004		
b.	Facility Name	Chemung County Landfill	
	Address Line 1	1690 Lake Street	
	Address Line 1		
	Address City State ZIP	Elmira	NY 14903
	Municipality	Elmira	County Chemung
c.	Facility Contact Name	Carla Canjar	
	Title	Environmental Manager	
	Phone	(585) 797-5941	Email Address carla.canjar@casella.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 123 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 8-4630-00010		
b.	Facility Name	Hakes C&D Landfill	
	Address Line 1	4376 Manning Ridge Road	
	Address Line 1		
	Address City State ZIP	Painted Post	NY 14870
	Municipality	Erwin Twp	County Steuben
c.	Facility Contact Name	Joseph Boyles	
	Title		
	Phone	(607) 937-6044	Email Address joe.boyles@casella.com
		(585) 466-7271	
d.	Volume of waste shipped to processing or disposal facility in the previous year. 103 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
2. BENEFICIAL USE			
a.	Has the waste been approved for beneficial use?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
	If "Yes", list the general permit number or approval number.		
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		

**SECTION D. CERTIFICATION**

I certify, under penalty of law, that I have personally examined and am familiar with the information submitted in this Annual Report and all attached documents and that based upon my inquiry of those individuals immediately responsible for obtaining the information, I verify that the submitted information is true, accurate and complete to the best of my knowledge. I understand that the submission of false information herein is made subject to the penalties of 18 Pa. C.S. §4904, relating to unsworn falsification to authorities, which include fine and imprisonment.

Check the following, if applicable:

I certify the information required in Section B-1, General Properties was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-2, Chemical Analysis was supplied to the Department for the year \_\_\_\_\_ and has not changed.

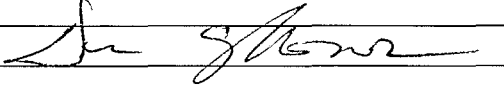
Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-3, Process Description and Schematic, was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

Name of Responsible Official \_\_\_\_\_ Title Environmental Specialist  
Dina Brown \_\_\_\_\_  
Signature  Date 2/25/14

LAB ID: 08-00380  
LAB ID: 39-00401

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10120831

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10120831  
PAGE: 1 of 1  
PO#: AF78267  
PWS ID#

PHONE: (607) 731-0145  
FAX: (607) 562-4001

**TEST REPORT**

05-005

RECEIVED FOR LAB BY: CMS

DATE: 12/06/2010 15:40

Page 1 of 1

SAMPLE: **Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10120831-001A Composite  
Sample Time: 12/06/2010 13:47

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Total Petroleum Hydrocarbons	94900 mg/Kg	EPA 9071		12/08/10 14:20	12/08/10	
Sample Note: Analysis performed by Microbac Laboratories, Inc-Erie Division						

SAMPLE: **Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10120831-001B Composite  
Sample Time: 12/06/2010 13:47

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Moisture	16.4 %	Moisture Calc.	0.01	12/06/10 17:30	12/07/10	IC-SA
Free Liquid	< 0.1 %	EPA 9095A	0.1	12/06/10 17:10	12/06/10	IC-SA
pH	7.97@21.7°C	EPA 9045C		12/07/10 14:20	12/07/10	MED-SA

SAMPLE: **TCLP Leachate of Inv.Cuttings**  
SAMPLED BY: SG

Lab ID: 10120831-001E Composite  
Sample Time: 12/07/2010 8:00

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.0008	12/07/10 10:15	12/09/10	KW-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	12/08/10 12:15	12/08/10	GSR-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	12/08/10 12:15	12/08/10	GSR-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	12/08/10 12:15	12/08/10	GSR-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	12/08/10 12:15	12/08/10	GSR-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	12/08/10 12:15	12/08/10	GSR-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	12/08/10 12:15	12/08/10	GSR-CV
Nickel - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	12/08/10 12:15	12/08/10	GSR-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	12/08/10 12:15	12/08/10	GSR-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	12/08/10 12:15	12/08/10	GSR-CV
Zinc - TCLP extracted	< 0.200 mg/L	EPA 6010B	0.200	12/08/10 12:15	12/08/10	GSR-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER

*Cassie M. Davis*

DATE: 12/10/2010

**CHAIN OF CUSTODY**

**REPORT TO:** Talisman / UEG  
 geowetlands@aol.com

**CONTACT:** Steve Gridley  
 PH# 607-731-0145  
 FAX#

**BILL TO:** Talisman

PO# AF78267

PROJECT DESCRIPTION  
05-005

SAMPLER SIGNATURE / AFFILIATION  
SG UEG

CONTAINER SAMPLING POINT

REFRIGERATE SAMPLES  
 AFTER COLLECTION

TRANSPORT  
 TO  
 LABORATORY  
 IN COOLER  
 WITH ICE

**W/O#: 10120831**

NG USED FOR:

NYDOH  NYDEC  PADEP

LANDFILL  PERSONAL  OTHER

DW DRINKING WATER SL SLUDGE  
 GW GROUND WATER SO SOIL  
 SW SURFACE WATER HZ HAZARDOUS  
 WW WASTE WATER OTHER  
 DE DEIONIZED WATER DI DISTILLED WATER

**ARE SPECIAL DETECTION LIMITS**  
 NEEDED:  YES  NO

IF YES, PLEASE ATTACH

IS A QC PACKAGE NEEDED?  
 YES  NO

IF YES, PLEASE ATTACH REQUIREMENTS

H	HYDROCHLORIC ACID	OH	SODIUM HYDROXIDE
S	SULFURIC ACID	AS	ASCORBIC ACID
N	NITRIC ACID	AC	ACETIC ACID
SO <sub>3</sub>	SODIUM SULFITE	NH <sub>4</sub>	AMMONIUM CHLORIDE
Thio	SODIUM THIOSULFATE	ZN	ZINC ACETATE
-	NONE	Hg	MERCURIC CHLORIDE

An incomplete chain of custody may delay the  
 processing of your sample(s).

ANALYSIS TO BE PERFORMED  
 (PER CONTAINER)

COMPOSITED ON RECEIPT  
 PRESERVATIVE ADDED ON RECEIPT

Please fill out all  
 applicable areas  
 completely

LAB USE ONLY

DATE SAMPLED	TIME OF SAMPLING	SAMPLE MATRIX	SAMPLE TYPE - GRAB / COMPOSITE	SAMPLER INITIALS	PRESERVATIVE	ANALYSIS TO BE PERFORMED (PER CONTAINER)	COMPOSITED ON RECEIPT	PRESERVATIVE ADDED ON RECEIPT
12/6	1347	SO	C	SG	N	TPH		
2						pH		
3						TCLP 8 RCRA Metals + Cu, Ni, Zn		
4						Free Liquids / % Moisture		
5						A- TPH		
6						B- pH, Free liquids, % moisture		
7						C- Amoms, metals		
8						D- Total Sample		
9						E- TCLP metals		
10						<u>72</u> HOUR TURNAROUND		
11						DAY TURNAROUND		

LAB USE ONLY

DELIVERED BY: [Signature] TEMPERATURE UPON RECEIPT: 5 °C ARRIVAL ON: 12/6/10

RELINQUISHED BY: <u>[Signature]</u>	DATE: <u>12/6/10</u>	TIME: <u>1540</u>	RECEIVED BY:	DATE: <u>1/1</u>	TIME:
RELINQUISHED BY:	DATE: <u>1/1</u>	TIME:	RECEIVED BY:	DATE: <u>1/1</u>	TIME:
RELINQUISHED BY:	DATE: <u>1/1</u>	TIME:	RECEIVED BY: <u>[Signature]</u>	DATE: <u>12/6/10</u>	TIME: <u>1540</u>

PA ID #: 08-00380  
NY ID #: 11216

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169  
Fax: (570) 888-0717

Work Order: 10121729

SEND DATA TO:

NAME: Dina Brown  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10121729  
PAGE: 1 of 3  
PO#: AF78267  
PWS ID#

PHONE: (607) 562-4000  
FAX: (607) 562-4001

**TEST REPORT**

05-005

RECEIVED FOR LAB BY: RML

DATE: 12/09/2010 15:45

Page 1 of 3

SAMPLE: **Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10121729-001A Grab  
Sample Time: 12/09/2010 13:28

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>	<u>SLOQ</u>	<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst*</u>
Ignitability	Neg ASIS °F	SW846 1030		12/15/10 13:30	12/15/10	

Sample Note: Analysis performed by QC Laboratories

SAMPLE: **Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10121729-001C Grab  
Sample Time: 12/09/2010 13:28

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>	<u>SLOQ</u>	<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst*</u>
Cyanide, Reactive	< 0.2 mg/Kg	SW 7.3.3.2	0.2	12/13/10 8:56	12/14/10	HDP-CV
Reactive Sulfide	1100 mg/Kg	SW846 7.3	16	12/14/10 12:30	12/14/10	LTW-CV

SAMPLE: **Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10121729-001D Grab  
Sample Time: 12/09/2010 13:28

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>	<u>SLOQ</u>	<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst*</u>
% Solids	74.47 % Wght.	SM2540B	0.10	12/10/10 17:00	12/13/10	IC-SA
Total Volatile Solids	9.31 % Wght.	EPA 160.4	0.01	12/10/10 8:00	12/14/10	NFM-SA

SAMPLE: **TCLP Leachate of Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10121729-001F Grab  
Sample Time: 12/11/2010 12:45

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>	<u>SLOQ</u>	<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst*</u>
Pyridine	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
1,4-Dichlorobenzene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
o-Cresol	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
p-Cresol/m-Cresol	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Hexachloroethane	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Nitrobenzene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Hexachlorobutadiene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
2,4,6-Trichlorophenol	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

B Analyte detected in the associated Method Blank

MANAGER

*Carrie M. Davis*

DATE:

12/16/2010



PA ID #: 08-00380  
NY ID # 11216

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169  
Fax: (570) 888-0717

Work Order: 10121729

**SEND DATA TO:**

NAME: Dina Brown  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10121729  
PAGE: 2 of 3  
PO#: AF78267  
PWS ID#

PHONE: (607) 562-4000  
FAX: (607) 562-4001

**TEST REPORT**

05-005

RECEIVED FOR LAB BY: RML

DATE: 12/09/2010 15:45

Page 2 of 3

Test	Result	Method	Concentration	Analysis Start	Analysis End	Analyst
2,4,5-Trichlorophenol	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Pentachlorophenol	< 0.50 mg/L	EPA 8270C	0.50	12/15/10 7:48	12/15/10	RHH-SA
2,4-Dinitrotoluene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Hexachlorobenzene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Naphthalene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA

SAMPLE: **TCLP Leachate of Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10121729-001G Grab

Sample Time: 12/07/2010 8:00

SLOQ

Test	Result	Method	Concentration	Analysis Start	Analysis End	Analyst
Strontium - TCLP extracted	< 0.050 mg/L	EPA 6010B	0.050	12/08/10 12:15	12/08/10	GSR-CV

Sample Note: Sample for TCLP extracted Strontium was received on 12/6/10 at 15:40 by CMS.

SAMPLE: **TCLP Leachate of Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10121729-001H Grab

Sample Time: 12/11/2010 12:45

SLOQ

Test	Result	Method	Concentration	Analysis Start	Analysis End	Analyst
pH	6.26@16.6°C	SM4500H+B		12/14/10 8:00	12/14/10	SG-SA

SAMPLE: **ZHE Extract of Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10121729-001I Grab

Sample Time: 12/12/2010 13:10

SLOQ

Test	Result	Method	Concentration	Analysis Start	Analysis End	Analyst
Benzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Carbon tetrachloride	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Chlorobenzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Chloroform	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
1,2-Dichloroethane	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
1,1-Dichloroethene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Ethylbenzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Isopropylbenzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Trichloroethene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
1,2,4-Trimethylbenzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA

**REMARKS:**

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

B Analyte detected in the associated Method Blank

MANAGER

*Carrie M. Davis*

DATE: 12/16/2010

PA ID #: 08-00380  
NY ID #: 11216

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169  
Fax: (570) 888-0717

Work Order: 10121729

SEND DATA TO:

NAME: Dina Brown  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10121729  
PAGE: 3 of 3  
PO#: AF78267

PHONE: (607) 562-4000  
FAX: (607) 562-4001

**TEST REPORT**

PWS ID#

05-005

RECEIVED FOR LAB BY: RML

DATE: 12/09/2010 15:45

Page 3 of 3

Component	Concentration	Method	Concentration	Time	Date	Analyst
1,3,5-Trimethylbenzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Vinyl chloride	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Methyl tert-butyl ether	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
2-Butanone	< 0.0500 mg/L	EPA 8260B	0.0500	12/13/10 8:11	12/13/10	CTM-SA

SAMPLE: ASTM Extract of Inv. Cuttings  
SAMPLED BY: SG

Lab ID: 10121729-001J Grab  
Sample Time: 12/10/2010 11:15

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Chemical Oxygen Demand	178 mg/L	B HACH 8000	10	12/11/10 8:00	12/13/10	KMF-SA

SAMPLE: ASTM Extract of Inv. Cuttings  
SAMPLED BY: SG

Lab ID: 10121729-001L Grab  
Sample Time: 12/10/2010 11:15

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
pH	7.34@16.7°C	SM4500H+B		12/14/10 8:00	12/14/10	SG-SA
Total Solids	1890 mg/L	SM2540B	0.10	12/10/10 17:00	12/13/10	IC-SA

SAMPLE: Inv. Cuttings  
SAMPLED BY: SG

Lab ID: 10121729-001M Grab  
Sample Time: 12/10/2010 10:25

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Total Organic Halides	< 5.00 mg/kg	SW846/9023	5.00	12/15/10 15:45	12/15/10	

Sample Note: Analysis performed by Analytical Services, Inc.

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

B Analyte detected in the associated Method Blank

MANAGER

*Carrie M. Davis*

DATE: 12/16/2010

**CHAIN OF CUSTODY**

**Benchmark**  
 Ea  
 2566 Pennsylvan  
 Phone  
 Fax: (570) 888-0717

**W/O#: 10121729**

**REPORT TO:** Talisman / UEG  
 geowetlands@aol.com

**CONTACT:** Steve Gridley  
 PH# 607-731-0145  
 FAX#

**BILL TO:** Talisman

PO# *HF 78267*

PROJECT DESCRIPTION  
*05-005*

SAMPLER SIGNATURE / AFFILIATION  
*[Signature] UEG*

CONTAINER SAMPLING POINT

REFRIGERATE SAMPLES  
 AFTER COLLECTION

**TRANSPORT  
 TO  
 LABORATORY  
 IN COOLER  
 WITH ICE**

RESULTS ARE BEING USED FOR:

<input type="checkbox"/> NYDOH	<input checked="" type="checkbox"/> NYDEC	<input checked="" type="checkbox"/> PADEP
<input type="checkbox"/> PERSONAL	<input type="checkbox"/> OTHER	LANDFILL <u>Mostoller</u>

**SPECIAL DETECTION LIMITS**

NEEDED:  YES /  NO

IF YES, PLEASE ATTACH

IS A QC PACKAGE NEEDED?  
 YES /  NO

IF YES, PLEASE ATTACH REQUIREMENTS

- |                    |                    |
|--------------------|--------------------|
| DW DRINKING WATER  | SL SLUDGE          |
| GW GROUND WATER    | SO SOIL            |
| SW SURFACE WATER   | HZ HAZARDOUS       |
| WW WASTE WATER     | OTHER              |
| DE DEIONIZED WATER | DI DISTILLED WATER |
- 
- |                                |                                   |
|--------------------------------|-----------------------------------|
| H HYDROCHLORIC ACID            | OH SODIUM HYDROXIDE               |
| S SULFURIC ACID                | AS ASCORBIC ACID                  |
| N NITRIC ACID                  | AC ACETIC ACID                    |
| SO <sub>3</sub> SODIUM SULFITE | NH <sub>4</sub> AMMONIUM CHLORIDE |
| Thio SODIUM THIOSULFATE        | ZN ZINC ACETATE                   |
| - NONE                         | Hg MERCURIC CHLORIDE              |

An incomplete chain of custody may delay the  
 processing of your sample(s).

ANALYSIS TO BE PERFORMED  
 (PER CONTAINER)

COMPOSITED ON RECEIPT  
 PRESERVATIVE ADDED ON RECEIPT

Please fill out all  
 applicable areas  
 completely

LAB USE ONLY

1	Inv Cuttings	12/6	1328	10	C	SB	N	Ignitability, Reactive Sulfide & Cyanide
2					C			PCBs, Total Solids
3	A - <del>Phenols</del> , Ign.				G			Total Volatile Solids
4	C - Reactivity				C			Ammonia-Nitrogen
5	D - TS, TOS				C			Water Leaching Procedure: COD,
6	E - Total Sample	✓	✓	✓	C	✓	✓	Total Solids, Oil & Grease,
7	F - TCLP BNA, <del>frsts.</del>							
8	G - TCLP <del>Acetate Sr</del>							
9	H - TCLP pH							<b>36</b> HOUR TURNAROUND
10	I - TCLP <del>Urb.</del>							DAY TURNAROUND
11	J - ASTM <del>cod, mthg</del>							

LAB USE ONLY

RELINQUISHED BY: <i>[Signature]</i>	DATE: 12/9/10	TIME: 1530	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY: <i>[Signature]</i>	DATE: 12/9/10	TIME: 1545



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WASTE MANAGEMENT

**FORM 26R**  
**CHEMICAL ANALYSIS OF RESIDUAL WASTE**  
**ANNUAL REPORT BY THE GENERATOR**

This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form 26R, reference the item number and identify the date prepared. The date on attached sheets needs to match the date noted below.		<b>DEP USE ONLY</b>		
General Reference 287.54		Date Received & General Notes		
Date Prepared/Revised February 11, 2011				
<b>SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION</b>				
Company Name Talisman Energy USA Inc.				
If a Subsidiary, Name of Parent Company Talisman Energy Inc.			EPA Generator ID# N/A	
Company Mailing Address Line 1 50 Pennwood Place		Company Mailing Address Line 2		
Company Address Last Line – City Warrendale	State PA	Zip+4 15086	Phone (724) 814-5300 Ext	
Company Contact Last Name Brown	First Name Dina	MI	Suffix	
Municipality Warrendale	County Allegheny			
Contact Phone (724) 814-5321	Ext	Contact Email Address dybrown@talismanusa.com		
Is the waste generated at the Company Mailing Address (noted above)?			<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
If 'No' describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the [REDACTED] 1H-4H (038) well pad site located at 706 Thomas Lane, Troy Township, Bradford County, PA. Waste is stored in containers on site.				
Municipality Troy	County Bradford	State PA		
<b>SECTION B. WASTE DESCRIPTION</b>				
Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure	Time Frame
810	Drill cuttings (oil and gas)	2,175	<input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton	<input type="checkbox"/> One Time
<b>1. GENERAL PROPERTIES</b>				
a. pH Range	8.9	to	11.3	(based on analyses or knowledge)
b. Physical State	<input type="checkbox"/> Liquid Waste (EPA Method 9095) <input checked="" type="checkbox"/> Solid (EPA Method 9095) <input type="checkbox"/> Gas (ambient temperature & pressure)			
c. Physical Appearance	Color	Greyish Black	Odor	Earthy / Slight Petroleum
	Number of Solid or Liquid Phases of Separation	One		
	Describe each phase of separation. Soil and Rock Fragments			
<b>2. CHEMICAL ANALYSIS ATTACHMENTS</b>				
a.	The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
b.	A detailed description of the waste sampling method is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
c.	The quality assurance/quality control procedures employed by the laboratory(ies) is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
d.	The results of the hazardous waste determination is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
e.	If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A

3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS			
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
SECTION C. MANAGEMENT OF RESIDUAL WASTE			
1. PROCESSING OR DISPOSAL FACILITY(IES)			
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.			
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 9-0232-00003		
b.	Facility Name	Hyland Landfill	
	Address Line 1	6653 Herdman Road	
	Address Line 1		
	Address City State ZIP	Angelica NY 14709	
	Municipality	Angelica	County Allegany
c.	Facility Contact Name	Larry Shilling	
	Title		
	Phone	(585) 466-7271	Email Address larry.shilling@casella.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 1,255 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 8-0728-00004		
b.	Facility Name	Chemung County Landfill	
	Address Line 1	1690 Lake Street	
	Address Line 1		
	Address City State ZIP	Elmira NY 14903	
	Municipality	Elmira	County Chemung
c.	Facility Contact Name	Carla Canjar	
	Title	Environmental Manager	
	Phone	(585) 797-5941	Email Address carla.canjar@casella.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 548 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
2. BENEFICIAL USE			
a.	Has the waste been approved for beneficial use? If "Yes", list the general permit number or approval number.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		

3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS			
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
SECTION C. MANAGEMENT OF RESIDUAL WASTE			
1. PROCESSING OR DISPOSAL FACILITY(IES)			
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.			
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 101243		
b.	Facility Name	Northern Tier Solid Waste Authority	
	Address Line 1	108 Steam Hollow Road	
	Address Line 1		
	Address City State ZIP	Troy PA	16947
	Municipality	West Burlington Twp	County Bradford
c.	Facility Contact Name	Charles Woodward	
	Title		
	Phone	(570) 297-4177	Email Address chuckwoodward@epix.net
d.	Volume of waste shipped to processing or disposal facility in the previous year. 372 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
a.	Solid waste permit number(s) for processing or disposal facility being utilized.		
b.	Facility Name	_____	
	Address Line 1	_____	
	Address Line 1	_____	
	Address City State ZIP	_____	
	Municipality	County _____	
c.	Facility Contact Name	_____	
	Title	_____	
	Phone	Email Address _____	
d.	Volume of waste shipped to processing or disposal facility in the previous year. <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		
2. BENEFICIAL USE			
a.	Has the waste been approved for beneficial use? If "Yes", list the general permit number or approval number.		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		

**SECTION D. CERTIFICATION**

I certify, under penalty of law, that I have personally examined and am familiar with the information submitted in this Annual Report and all attached documents and that based upon my inquiry of those individuals immediately responsible for obtaining the information, I verify that the submitted information is true, accurate and complete to the best of my knowledge. I understand that the submission of false information herein is made subject to the penalties of 18 Pa. C.S. §4904, relating to unsworn falsification to authorities, which include fine and imprisonment.

Check the following, if applicable:

I certify the information required in Section B-1, General Properties was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-2, Chemical Analysis was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-3, Process Description and Schematic, was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

Name of Responsible Official	Title <u>Environmental Specialist</u>
Dina Brown	
Signature <u></u>	Date <u>2/25/11</u>

LAB ID: 08-00380  
LAB ID: 39-00401

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10032816

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 50 Pennwood Place  
Warrendale, PA 15086

WO#: 10032816  
PAGE: 1 of 1  
PO#:  
PWS ID#

PHONE: (607) 562-4000  
FAX: (607) 562-4001

**TEST REPORT**

FT5H

RECEIVED FOR LAB BY: DLM2

DATE: 03/17/2010 14:47

Page 1 of 1

SAMPLE: **Inv. Cuttings**

Lab ID: 10032816-001A

Grab

SAMPLED BY: -

Sample Time: 03/16/2010 0:00

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>	<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Unknown	See Attached	Subcontract	04/20/10 0:00	04/20/10	

Sample Note: Analysis performed by Texas Oil Tech Laboratories, Inc.

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER

*Candice M. Davis*

DATE:

4/21/2010



**CHAIN OF CUSTODY**

**Benchmark Analytcs. Inc.**

REPORT TO: Talisman / UEG  
geowetlands

CONTACT: Steve Cradley

PH#

FAX#

BILL TO: Talisman

PO# AF 75715

PROJECT DESCRIPTION

SAMPLER SIGNATURE / AFFILIATION  
Steve Cradley UEG

Container Sample Point No./Type

East  
 2566 Pennsylvania  
 Phone: 1  
 Fax: (5

**10032816**

03/17/10 14:47

ELS

SPECIAL DETECTION LIMITS

ED: YES / **NO**

PLEASE ATTACH

IS A QC PACKAGE NEEDED?

YES **NO**

IF YES, PLEASE ATTACH REQUIREMENTS

REFRIGERATE SAMPLES  
 AFTER COLLECTION

TRANSPORT  
 TO  
 LABORATORY  
 IN COOLER  
 WITH ICE

DW	DRINKING WA...	SO	SOIL	NYDOH	NYDEC	PADEP
GW	GROUND WATER	HZ	HAZARDOUS	LANDFILL		
SW	SURFACE WATER	DI	DISTILLED WATER	PERSONAL	OTHER	
YW	WASTE WATER					
DE	DEIONIZED WATER					

H	HYDROCHLORIC ACID	OH	SODIUM HYDROXIDE
S	SULFURIC ACID	AS	ASCORBIC ACID
N	NITRIC ACID	AC	ACETIC ACID
SO <sub>3</sub>	SODIUM SULFITE	NH <sub>4</sub>	AMMONIUM CHLORIDE
Thio	SODIUM THIOSULFATE	ZN	ZINC ACETATE
-	NONE	Hg	MERCURIC CHLORIDE

PWS ID#

Location

Sample Point

DATE SAMPLED	TIME OF SAMPLING	SAMPLE MATRIX	SAMPLE TYPE - GRAB / COMPOSITE	SAMPLER INITIALS	PRESERVATIVE	Chlorine Residual Total <input type="checkbox"/> Free <input type="checkbox"/>
--------------	------------------	---------------	--------------------------------	------------------	--------------	--

An incomplete chain of custody may delay the processing of your sample(s).

ANALYSIS TO BE PERFORMED (PER CONTAINER)

COMPOSITED ON RECEIPT

PRESERVATIVE ADDED ON RECEIPT

Please fill out all applicable areas completely.

LAB USE ONLY

1	<u>Inv Cuttings</u>	<u>3/16</u>	<u>-50</u>	<u>G</u>	<u>-</u>	<u>N</u>	<u>Barite</u>	<u>by X-Ray</u>			<u>-001A</u>
2							<u>Sweetite</u>	<u>Diffraction</u>			
3							<u>Clay mineralogy</u>	<u>o/s</u>			
4											
5							<u>Anthracite Coal</u>	<u>o/s of in</u>			
6							<u>Bituminous Coal</u>				
7							<u>2 Organic carbon</u>				
8							<u>Crude Oil</u>	<u>normal</u>			
9							<u>POLYMER'S</u>				
10							<u>4-8 Hr Turnover</u>				
11											

LAB USE ONLY

DELIVERED BY: SG TEMPERATURE UPON RECEIPT: 4 °C ARRIVAL ON ICE: normal

RELINQUISHED BY: <u>Steve Cradley</u>	DATE: <u>3/17/10</u>	TIME: <u>1447</u>	RECEIVED BY:	DATE: <u>1/1</u>	TIME:
RELINQUISHED BY:	DATE: <u>1/1</u>	TIME:	RECEIVED BY:	DATE: <u>1/1</u>	TIME:
RELINQUISHED BY:	DATE: <u>1/1</u>	TIME:	RECEIVED BY: <u>Ben G... ..</u>	DATE: <u>3/17/10</u>	TIME: <u>14:47</u>

# Certificate of Analysis



**SINCE 1985**

*Quality Controlled Through Analysis*

10630 FALLSTONE RD. HOUSTON, TEXAS 77099  
P.O. BOX 741905, HOUSTON, TEXAS 77274

TEL: (281) 495-2400  
FAX: (281) 495-2410

*Talisman*

<b>CLIENT:</b>	Benchmark Analytics, Inc.	<b>REQUESTED BY:</b>	Mr. Tracy Cole
<b>SAMPLE:</b>	10032816-001A	<b>REPORT DATE:</b>	April 20, 2010
<b>LABORATORY NO:</b>	58869	<b>PURCHASE ORDER NO:</b>	Pending

**TEST**

**RESULTS**

Anthracite Coal, wt% .....	<1.0
Bituminous Coal, wt% .....	<1.0
Organic Carbon Content, wt% .....	6.44
Crude Oil	3.84
Polymer	<1.0

***X-Ray Diffraction Analysis***

<b><i>Mineral Phases</i></b>	<b><i>Amount Found, wt%</i></b>
Quartz (SiO <sub>2</sub> )	28
Barite (BaSO <sub>4</sub> )	55
Calcite (CaCO <sub>3</sub> )	ND
Magnetite (Fe <sub>3</sub> O <sub>4</sub> )	7
Non-Diffractive Solids	10

Respectfully submitted  
For Texas OilTech Laboratories, L.P.

A. Phil Sorubakhsh  
Director of Laboratory Operations



These analyses, opinions or interpretations are based on material supplied by the client to whom, and for whose exclusive and confidential use this report is made. Texas Oiltech Laboratories, Inc. and its officers assume no responsibility and make no warranty for proper operations of any petroleum, oil, gas or any other material in connection with which this report is used or relied on.





**pennsylvania**  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WASTE MANAGEMENT

**FORM 26R**  
**CHEMICAL ANALYSIS OF RESIDUAL WASTE**  
**ANNUAL REPORT BY THE GENERATOR**

This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form 26R, reference the item number and identify the date prepared. The date on attached sheets needs to match the date noted below.		<b>DEP USE ONLY</b>	
General Reference 287.54		Date Received & General Notes	
Date Prepared/Revised	February 11, 2011		
<b>SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION</b>			
Company Name Talisman Energy USA Inc.			
If a Subsidiary, Name of Parent Company Talisman Energy Inc.			EPA Generator ID# N/A
Company Mailing Address Line 1 50 Pennwood Place		Company Mailing Address Line 2	
Company Address Last Line – City Warrendale		State PA	Zip+4 15086
Company Contact Last Name Brown		First Name Dina	MI MI
Municipality Warrendale		County Allegheny	
Contact Phone (724) 814-5321	Ext	Contact Email Address dybrown@talismanusa.com	
Is the waste generated at the Company Mailing Address (noted above)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
If 'No', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the TWL Associates (01-016) well pad site located at 1242 Swamp Road, Armenia Township, Bradford County, PA. Waste is stored in containers on site.			
Municipality Armenia	County Bradford	State PA	
<b>SECTION B. WASTE DESCRIPTION</b>			
Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure
810	Drill cuttings (oil and gas)	5,840	<input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton <input type="checkbox"/> One Time
<b>1. GENERAL PROPERTIES</b>			
a. pH Range	7.99 to 8.14 (based on analyses or knowledge)		
b. Physical State	<input type="checkbox"/> Liquid Waste (EPA Method 9095) <input checked="" type="checkbox"/> Solid (EPA Method 9095) <input type="checkbox"/> Gas (ambient temperature & pressure)		
c. Physical Appearance	Color Greyish Black Odor Earthy / Slight Petroleum Number of Solid or Liquid Phases of Separation One Describe each phase of separation. Soil and Rock Fragments		
<b>2. CHEMICAL ANALYSIS ATTACHMENTS</b>			
a.	The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
b.	A detailed description of the waste sampling method is attached.		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
c.	The quality assurance/quality control procedures employed by the laboratory(ies) is attached.		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
d.	The results of the hazardous waste determination is attached.		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
e.	If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.		<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A

3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS			
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
SECTION C. MANAGEMENT OF RESIDUAL WASTE			
1. PROCESSING OR DISPOSAL FACILITY(IES)			
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.			
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 9-0232-00003		
b.	Facility Name	Hyland Landfill	
	Address Line 1	6653 Herdman Road	
	Address Line 1		
	Address City State ZIP	Angelica NY	14709
	Municipality	Angelica	County Allegany
c.	Facility Contact Name	Larry Shilling	
	Title		
	Phone	(585) 466-7271	Email Address larry.shilling@casella.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 2,226 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 8-4630-00010		
b.	Facility Name	Hakes C&D Landfill	
	Address Line 1	4376 Manning Ridge Road	
	Address Line 1		
	Address City State ZIP	Painted Post NY	14870
	Municipality	Erwin Twp	County Steuben
c.	Facility Contact Name	Joseph Boyles	
	Title		
	Phone	(607) 937-6044	Email Address joe.boyles@casella.com
		(585) 466-7271	
d.	Volume of waste shipped to processing or disposal facility in the previous year. 2,143 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
2. BENEFICIAL USE			
a.	Has the waste been approved for beneficial use? If "Yes", list the general permit number or approval number.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		

3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS			
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
SECTION C. MANAGEMENT OF RESIDUAL WASTE			
1. PROCESSING OR DISPOSAL FACILITY(IES)			
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.			
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 8-0728-00004		
b.	Facility Name	Chemung County Landfill	
	Address Line 1	1690 Lake Street	
	Address Line 1		
	Address City State ZIP	Elmira	NY 14903
	Municipality	Elmira	County Chemung
c.	Facility Contact Name	Carla Canjar	
	Title	Environmental Manager	
	Phone	(585) 797-5941	Email Address carla.canjar@casella.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 661 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 101243		
b.	Facility Name	Northern Tier Solid Waste Authority	
	Address Line 1	108 Steam Hollow Road	
	Address Line 1		
	Address City State ZIP	Troy	PA 16947
	Municipality	West Burlington Twp	County Bradford
c.	Facility Contact Name	Charles Woodward	
	Title		
	Phone	(570) 297-4177	Email Address chuckwoodward@epix.net
d.	Volume of waste shipped to processing or disposal facility in the previous year. 476 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
2. BENEFICIAL USE			
a.	Has the waste been approved for beneficial use? If "Yes", list the general permit number or approval number.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		

3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS			
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
SECTION C. MANAGEMENT OF RESIDUAL WASTE			
1. PROCESSING OR DISPOSAL FACILITY(IES)			
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.			
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 100361		
b.	Facility Name	McKean County Landfill	
	Address Line 1	19 Ness Lane	
	Address Line 1		
	Address City State ZIP	Kane PA	16735
	Municipality	Sergeant Twp	County McKean
c.	Facility Contact Name	Mike Manderfeld	
	Title		
	Phone	(814) 778-9931	Email Address manderfeld@gmail.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 334 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
a.	Solid waste permit number(s) for processing or disposal facility being utilized.		
b.	Facility Name		
	Address Line 1		
	Address Line 1		
	Address City State ZIP		
	Municipality	County	
c.	Facility Contact Name		
	Title		
	Phone	Email Address	
d.	Volume of waste shipped to processing or disposal facility in the previous year. <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		
2. BENEFICIAL USE			
a.	Has the waste been approved for beneficial use? If "Yes", list the general permit number or approval number.		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		

**SECTION D. CERTIFICATION**

I certify, under penalty of law, that I have personally examined and am familiar with the information submitted in this Annual Report and all attached documents and that based upon my inquiry of those individuals immediately responsible for obtaining the information, I verify that the submitted information is true, accurate and complete to the best of my knowledge. I understand that the submission of false information herein is made subject to the penalties of 18 Pa. C.S. §4904, relating to unsworn falsification to authorities, which include fine and imprisonment.

Check the following, if applicable:

I certify the information required in Section B-1, General Properties was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-2, Chemical Analysis was supplied to the Department for the year \_\_\_\_\_ and has not changed.

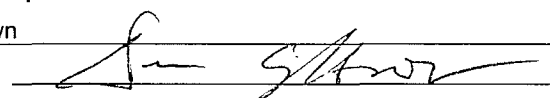
Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-3, Process Description and Schematic, was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

Name of Responsible Official	Title
Dina Brown	Environmental Specialist
Signature 	Date
	2/23/11

LAB ID # 11216  
LAB ID # 11827

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169  
Fax: (570) 888-0717

Work Order: 10040648

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10040648  
PAGE: 1 of 3  
PO#: AFE 76067  
PWS ID#

PHONE: (607) 731-0145  
FAX: (607) 562-4001

**TEST REPORT**

TWL 01-016-04

RECEIVED FOR LAB BY: WCB

DATE: 04/06/2010 8:45

Page 1 of 3

SAMPLE: **In Cuttings - Bin** Lab ID: 10040648-001A Grab  
SAMPLED BY: DB Sample Time: 04/05/2010 18:00

Test	Result	Method	Reg Limit	Analysis Start	Analysis End	Analyst *
pH	7.99 @ 23.4°C	EPA 9045D		04/07/10 11:55	04/07/10	NC-CV
Total Petroleum Hydrocarbons	57000 mg/Kg	EPA 1664A		04/07/10 12:40	04/07/10	DTG-CV

SAMPLE: **In Cuttings - Bin** Lab ID: 10040648-001B Grab  
SAMPLED BY: DB Sample Time: 04/05/2010 18:00

Test	Result	Method	Reg Limit	Analysis Start	Analysis End	Analyst *
% Solids	75.37 % Wght.	SM2540B		04/06/10 14:30	04/07/10	NFM-SA

SAMPLE: **TCLP Leachate of In Cuttings - Bin** Lab ID: 10040648-001D Grab  
SAMPLED BY: DB Sample Time: 04/07/2010 6:45

Test	Result	Method	Reg Limit	Analysis Start	Analysis End	Analyst *
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.008	04/07/10 11:30	04/07/10	RMD-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	5	04/07/10 11:45	04/07/10	RMD-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	100	04/07/10 11:45	04/07/10	RMD-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	1	04/07/10 11:45	04/07/10	RMD-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	5	04/07/10 11:45	04/07/10	RMD-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B		04/07/10 11:45	04/07/10	RMD-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	5	04/07/10 11:45	04/07/10	RMD-CV
Nickel - TCLP extracted	< 0.100 mg/L	EPA 6010B		04/07/10 11:45	04/07/10	RMD-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	1	04/07/10 11:45	04/07/10	RMD-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	5	04/07/10 11:45	04/07/10	RMD-CV
Zinc - TCLP extracted	0.939 mg/L	EPA 6010B		04/07/10 11:45	04/07/10	RMD-CV

REMARKS:

The above test procedures meet all the requirements of NELAC and relate only to these samples.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

S Spike Recovery outside accepted recovery limits

MANAGER

*Cassie M. Davis*

DATE: 4/8/2010



LAB ID # 11216  
LAB ID # 11827

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169

Fax: (570) 888-0717

Work Order: 10040648

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10040648  
PAGE: 2 of 3  
PO#: AFE 76067

PWS ID#

PHONE: (607) 731-0145  
FAX: (607) 562-4001

**TEST REPORT**

TWL 01-016-04

RECEIVED FOR LAB BY: WCB

DATE: 04/06/2010 8:45

Page 2 of 3

SAMPLE: **TCLP Leachate of In Cuttings - Bin**

Lab ID: 10040648-001E

Grab

SAMPLED BY: DB

Sample Time: 04/07/2010 6:45

Test	Result	Method	Reg Limit	Analysis Start	Analysis End	Analyst *
Pyridine	< 0.10 mg/L	EPA 8270C	5	04/07/10 16:52	04/07/10	RHH-SA
1,4-Dichlorobenzene	< 0.10 mg/L	EPA 8270C	7.5	04/07/10 16:52	04/07/10	RHH-SA
o-Cresol	< 0.10 mg/L	EPA 8270C	200	04/07/10 16:52	04/07/10	RHH-SA
p-Cresol/m-Cresol	< 0.10 mg/L	EPA 8270C	200	04/07/10 16:52	04/07/10	RHH-SA
Hexachloroethane	< 0.10 mg/L	EPA 8270C	3	04/07/10 16:52	04/07/10	RHH-SA
Nitrobenzene	< 0.10 mg/L	s EPA 8270C	2	04/07/10 16:52	04/07/10	RHH-SA
Hexachlorobutadiene	< 0.10 mg/L	EPA 8270C	0.5	04/07/10 16:52	04/07/10	RHH-SA
2,4,6-Trichlorophenol	< 0.10 mg/L	EPA 8270C	2	04/07/10 16:52	04/07/10	RHH-SA
2,4,5-Trichlorophenol	< 0.10 mg/L	EPA 8270C	400	04/07/10 16:52	04/07/10	RHH-SA
Pentachlorophenol	< 0.50 mg/L	EPA 8270C	100	04/07/10 16:52	04/07/10	RHH-SA
2,4-Dinitrotoluene	< 0.10 mg/L	EPA 8270C	0.13	04/07/10 16:52	04/07/10	RHH-SA
Hexachlorobenzene	< 0.10 mg/L	EPA 8270C	0.13	04/07/10 16:52	04/07/10	RHH-SA

SAMPLE: **ZHE Extract of In Cuttings - Bin**

Lab ID: 10040648-001F

Grab

SAMPLED BY: DB

Sample Time: 04/07/2010 6:45

Test	Result	Method	Reg Limit	Analysis Start	Analysis End	Analyst *
Benzene - TCLP extracted	< 0.100 mg/L	EPA 8260B	0.5	04/07/10 14:19	04/08/10	DN-CV
Carbon tetrachloride - TCLP extracted	< 0.100 mg/L	EPA 8260B	0.5	04/07/10 14:19	04/08/10	DN-CV
Chlorobenzene - TCLP extracted	< 0.100 mg/L	EPA 8260B	100	04/07/10 14:19	04/08/10	DN-CV
Chloroform - TCLP extracted	< 0.100 mg/L	EPA 8260B	3	04/07/10 14:19	04/08/10	DN-CV
1,4-Dichlorobenzene - TCLP extracted	< 0.100 mg/L	EPA 8260B	7.5	04/07/10 14:19	04/08/10	DN-CV
1,2-Dichloroethane - TCLP extracted	< 0.100 mg/L	EPA 8260B	0.5	04/07/10 14:19	04/08/10	DN-CV

REMARKS:

The above test procedures meet all the requirements of NELAC and relate only to these samples.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

S Spike Recovery outside accepted recovery limits

MANAGER

*Cami M. Davis*

DATE: 4/8/2010

LAB ID # 11216  
LAB ID # 11827

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169  
Fax: (570) 888-0717

Work Order: 10040648

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10040648  
PAGE: 3 of 3  
PO#: AFE 76067  
PWS ID#

PHONE: (607) 731-0145  
FAX: (607) 562-4001

**TEST REPORT**

TWL 01-016-04

RECEIVED FOR LAB BY: WCB

DATE: 04/06/2010 8:45

Page 3 of 3

1,1-Dichloroethene - TCLP extracted	< 0.100 mg/L	EPA 8260B	0.7	04/07/10 14:19	04/08/10	DN-CV
Methyl ethyl ketone - TCLP extracted	< 0.500 mg/L	EPA 8260B	200	04/07/10 14:19	04/08/10	DN-CV
Tetrachloroethene - TCLP extracted	< 0.100 mg/L	EPA 8260B	0.7	04/07/10 14:19	04/08/10	DN-CV
Trichloroethene - TCLP extracted	< 0.100 mg/L	EPA 8260B	0.5	04/07/10 14:19	04/08/10	DN-CV
Vinyl chloride - TCLP extracted	< 0.100 mg/L	EPA 8260B	0.2	04/07/10 14:19	04/08/10	DN-CV

Sample Note: Limit of detection increased due to sample foaming

REMARKS:

The above test procedures meet all the requirements of NELAC and relate only to these samples.  
\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA  
S Spike Recovery outside accepted recovery limits

MANAGER

*Carrie M. Davis*

DATE: 4/8/2010

**CHAIN OF CUSTODY**

**Benchmark Analytics, Inc.**

REPORT TO:  
**Talisman Energy**

Eastern Division  
2566 Pennsylvania Avenue • Sayre, PA 18840  
Phone: (570) 888-0169  
Fax: (570) 888-0717

ARE SPECIAL DETECTION LIMITS  
NEEDED: YES / NO

IF YES, PLEASE ATTACH

IS A QC PACKAGE NEEDED?  
YES NO

IF YES, PLEASE ATTACH REQUIREMENTS

RESULTS ARE BEING USED FOR:  
NYDOH NYDEC PADEP  
LANDFILL \_\_\_\_\_  
OTHER \_\_\_\_\_

PWS ID# \_\_\_\_\_  
Location \_\_\_\_\_  
Sample Point \_\_\_\_\_

CONTACT  
**Steve Gridley**  
PH# **607-731-0145**  
FAX#

REFRIGERATE SAMPLES  
AFTER COLLECTION

DW DRINKING WATER SL SLUDGE  
GW GROUND WATER SO SOIL  
SW SURFACE WATER HZ HAZARDOUS  
WW WASTE WATER OTHER

TRANSPORT  
TO  
LABORATORY  
IN COOLER  
WITH ICE

BILL TO: **Talisman Energy**  
**Saxon 170**  
PO# **AEE 76067**

**WIO#: 10040648**

PROJECT DESCRIPTION  
**TWL 01-016-04**  
SAMPLER SIGNATURE / AFFILIATION  
**Carmen Arvey**

An incomplete chain of custody may delay the  
processing of your sample(s).

ANALYSIS TO BE PERFORMED  
(PER CONTAINER)

COMPOSITED ON  
RECEIPT  
PRESERVATIVE  
ADDED ON RECEIPT  
Please fill  
out all  
applicable  
areas  
completely.

Container	Sample Point No./Type	DATE SAMPLED	TIME OF SAMPLING	SAMPLE MATRIX	SAMPLE TYPE	SAMPLER INITIAL	PRESERVATIVE	Chlorine Residual Total <input type="checkbox"/> Free <input type="checkbox"/>	ANALYSIS TO BE PERFORMED (PER CONTAINER)	COMPOSITED ON RECEIPT	PRESERVATIVE ADDED ON RECEIPT	LAB USE ONLY
1		4/15/10	18:00	SO	C	N			TCLP RCRH METALS, Cu, Ni, Zn			001 D
2									TCLP N' & N			
3									TPH			001 A
4									PH			1 A
5	001C - Total Sample								% Solids			001 B
6									TCLP 8260-8270 * Due: 4/8/10			001 E, F
7									(F) (E)			
8									(24 hr Rush)			
9												
10												
11									Due: 4/7/10			

LAB USE ONLY  
DELIVERED BY: **Client** TEMPERATURE UPON RECEIPT: **15** °C ARRIVAL ON ICE: **Y/N**

RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY: <b>Carmen Arvey/BBC</b>	DATE: <b>4/16/10</b>	TIME: <b>8:45a</b>	RECEIVED BY: <b>Debbie McCarty</b>	DATE: <b>4/16/10</b>	TIME: <b>8:45</b>

LAB ID # 11216  
LAB ID # 11827

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169  
Fax: (570) 888-0717

Work Order: 10030695

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10030695  
PAGE: 1 of 1  
PO#:  
PWS ID#

PHONE: (607) 731-0145  
FAX: (607) 562-4001

## TEST REPORT

NTSW TCLP Metals/TPH/pH/%Moisture

RECEIVED FOR LAB BY: WCB

DATE: 03/03/2010 9:38

Page 1 of 1

SAMPLE: **Air Cuttings TWL-1**

Lab ID: 10030695-001A Grab

SAMPLED BY: SG

Sample Time: 03/02/2010 11:00

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>		<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
pH	8.14 @ 25.3°C	EPA 9045D		03/08/10 14:37	03/08/10	NC-CV
Chloride	466 mg/Kg	EPA 300.0	50.0	03/10/10 14:03	03/11/10	HDP-CV
Total Petroleum Hydrocarbons	< 170 mg/Kg	EPA 1664A	170	03/16/10 13:30	03/16/10	DTG-CV

SAMPLE: **TCLP Leachate of Air Cuttings TWL-1**

Lab ID: 10030695-001C Grab

SAMPLED BY: SG

Sample Time: 03/02/2010 11:00

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>		<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.0008	03/11/10 8:30	03/12/10	KW-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	03/10/10 13:40	03/11/10	RMD-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	03/10/10 13:40	03/11/10	RMD-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	03/10/10 13:40	03/11/10	RMD-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	03/10/10 13:40	03/11/10	RMD-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	03/10/10 13:40	03/11/10	RMD-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	03/10/10 13:40	03/11/10	RMD-CV
Nickel - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	03/10/10 13:40	03/11/10	RMD-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	03/10/10 13:40	03/11/10	RMD-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	03/10/10 13:40	03/11/10	RMD-CV
Zinc - TCLP extracted	< 0.200 mg/L	EPA 6010B	0.200	03/10/10 13:40	03/11/10	RMD-CV

REMARKS:

The above test procedures meet all the requirements of NELAC and relate only to these samples.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER

*Cassie M. Davis*

DATE: 3/17/2010

**CHAIN OF CUSTODY**

**Benchmark Analytics, Inc.**

REPORT TO: Talisman

CONTACT: Gleese Gindkey

PH#: 607-731-0149

BILL TO: Talisman

Eastern Division  
 2566 Pennsylvania Avenue • Sayre, PA 18840  
 Phone: (570) 888-0169  
 Fax: (570) 888-0717

REFRIGERATE SAMPLES  
 AFTER COLLECTION

TRANSPORT  
 TO  
 LABORATORY  
 IN COOLER  
 WITH ICE

- DW DRINKING WATER
- GW GROUND WATER
- SW SURFACE WATER
- SL SLUDGE
- SO SOIL
- HZ HAZARDOUS

RESULTS ARE BEING USED FOR:

NYDOH  NYDEC  PADEP

LANDFILL

ARE SPECIAL DETECTION LIMITS  
 NEEDED: YES /  NO

IF YES, PLEASE ATTACH

IS A QC PACKAGE NEEDED?  
 YES /  NO

IF YES, PLEASE ATTACH REQUIREMENTS

**W/O#: 10030695**

PROJECT DESCRIPTION  
TWC ASOC

SAMPLER SIGNATURE / AFFILIATION  
Gleese Gindkey URB

Container Sample Point No./Type

DATE SAMPLED

TIME OF SAMPLING

SAMPLE MATRIX

SAMPLE TYPE - GA

SAMPLER INITIALS

PRESERVATIVE

Chlorine Residual  
 Total  Free

An incomplete chain of custody may delay the processing of your sample(s).

ANALYSIS TO BE PERFORMED (PER CONTAINER)

COMPOSITED ON RECEIPT

PRESERVATIVE ADDED ON RECEIPT

LAB USE ONLY

Container	Sample Point No./Type	DATE SAMPLED	TIME OF SAMPLING	SAMPLE MATRIX	SAMPLE TYPE - GA	SAMPLER INITIALS	PRESERVATIVE	Chlorine Residual Total <input type="checkbox"/> Free <input type="checkbox"/>	ANALYSIS TO BE PERFORMED (PER CONTAINER)	COMPOSITED ON RECEIPT	PRESERVATIVE ADDED ON RECEIPT	LAB USE ONLY
1	<u>Air Cuttings - TWC-1</u>	<u>3/2</u>	<u>110050</u>	<u>G-GB-N</u>					<u>TPH, pH, Cl</u>			<u>001A-C</u>
2									<u>TCLP &amp; RCRA Metals + Ni, Cu, Zn</u>			
3												
4									<u>A - TPH, pH, Cl</u>			
5									<u>B - TSP Total Sample</u>			
6									<u>C - TCLP Metals</u>			
7												
8												
9												
10												
11												

Due: 3/18/10

LAB USE ONLY

DELIVERED BY: Client TEMPERATURE UPON RECEIPT: 5 °C ARRIVAL ON ICE  N

RELINQUISHED BY: <u>Gleese Gindkey</u>	DATE: <u>3/31/10</u>	TIME: <u>4:38</u>	RECEIVED BY:	DATE: <u>   </u>	TIME: <u>   </u>
RELINQUISHED BY:	DATE: <u>   </u>	TIME: <u>   </u>	RECEIVED BY:	DATE: <u>   </u>	TIME: <u>   </u>
RELINQUISHED BY:	DATE: <u>   </u>	TIME: <u>   </u>	RECEIVED BY: <u>Dabbi McCarty</u>	DATE: <u>3/31/10</u>	TIME: <u>9:38</u>



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WASTE MANAGEMENT

**FORM 26R**  
**CHEMICAL ANALYSIS OF RESIDUAL WASTE**  
**ANNUAL REPORT BY THE GENERATOR**

This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form 26R, reference the item number and identify the date prepared. The date on attached sheets needs to match the date noted below.		<b>DEP USE ONLY</b>		
General Reference 287.54		Date Received & General Notes		
Date Prepared/Revised February 11, 2011				
<b>SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION</b>				
Company Name Talisman Energy USA Inc.				
If a Subsidiary, Name of Parent Company Talisman Energy Inc.			EPA Generator ID# N/A	
Company Mailing Address Line 1 50 Pennwood Place		Company Mailing Address Line 2		
Company Address Last Line – City Warrendale	State PA	Zip+4 15086	Phone (724) 814-5300	
Company Contact Last Name Brown	First Name Dina	MI MI	Ext Suffix	
Municipality Warrendale	County Allegheny			
Contact Phone (724) 814-5321	Ext	Contact Email Address dybrown@talismanusa.com		
Is the waste generated at the Company Mailing Address (noted above)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
If 'No', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the (03-004) well pad site located at 1226 Besley Road, Columbia Township, Bradford County, PA. Waste is stored in containers on site.				
Municipality Columbia	County Bradford	State PA		
<b>SECTION B. WASTE DESCRIPTION</b>				
Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure	Time Frame
810	Drill cuttings (oil and gas)	6,866	<input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton	<input type="checkbox"/> One Time
<b>1. GENERAL PROPERTIES</b>				
a.	pH Range 8.9 to 11.3 (based on analyses or knowledge)			
b.	Physical State <input type="checkbox"/> Liquid Waste (EPA Method 9095) <input checked="" type="checkbox"/> Solid (EPA Method 9095) <input type="checkbox"/> Gas (ambient temperature & pressure)			
c.	Physical Appearance Color <u>Greyish Black</u> Odor <u>Earthy / Slight Petroleum</u> Number of Solid or Liquid Phases of Separation <u>One</u> Describe each phase of separation. <u>Soil and Rock Fragments</u>			
<b>2. CHEMICAL ANALYSIS ATTACHMENTS</b>				
a.	The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
b.	A detailed description of the waste sampling method is attached.			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
c.	The quality assurance/quality control procedures employed by the laboratory(ies) is attached.			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
d.	The results of the hazardous waste determination is attached.			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
e.	If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.			<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A

3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS																					
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																				
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																				
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached. <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A																				
SECTION C. MANAGEMENT OF RESIDUAL WASTE																					
1. PROCESSING OR DISPOSAL FACILITY(IES)																					
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.																					
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 9-0232-00003																				
b.	<table border="0"> <tr> <td>Facility Name</td> <td colspan="3">Hyland Landfill</td> </tr> <tr> <td>Address Line 1</td> <td colspan="3">6653 Herdman Road</td> </tr> <tr> <td>Address Line 1</td> <td colspan="3"></td> </tr> <tr> <td>Address City State ZIP</td> <td>Angelica</td> <td>NY</td> <td>14709</td> </tr> <tr> <td>Municipality</td> <td>Angelica</td> <td>County</td> <td>Allegany</td> </tr> </table>	Facility Name	Hyland Landfill			Address Line 1	6653 Herdman Road			Address Line 1				Address City State ZIP	Angelica	NY	14709	Municipality	Angelica	County	Allegany
Facility Name	Hyland Landfill																				
Address Line 1	6653 Herdman Road																				
Address Line 1																					
Address City State ZIP	Angelica	NY	14709																		
Municipality	Angelica	County	Allegany																		
c.	<table border="0"> <tr> <td>Facility Contact Name</td> <td colspan="3">Larry Shilling</td> </tr> <tr> <td>Title</td> <td colspan="3"></td> </tr> <tr> <td>Phone</td> <td>(585) 466-7271</td> <td>Email Address</td> <td>larry.shilling@casella.com</td> </tr> </table>	Facility Contact Name	Larry Shilling			Title				Phone	(585) 466-7271	Email Address	larry.shilling@casella.com								
Facility Contact Name	Larry Shilling																				
Title																					
Phone	(585) 466-7271	Email Address	larry.shilling@casella.com																		
d.	Volume of waste shipped to processing or disposal facility in the previous year. 2,852 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)																				
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 8-4630-00010																				
b.	<table border="0"> <tr> <td>Facility Name</td> <td colspan="3">Hakes C&amp;D Landfill</td> </tr> <tr> <td>Address Line 1</td> <td colspan="3">4376 Manning Ridge Road</td> </tr> <tr> <td>Address Line 1</td> <td colspan="3"></td> </tr> <tr> <td>Address City State ZIP</td> <td>Painted Post</td> <td>NY</td> <td>14870</td> </tr> <tr> <td>Municipality</td> <td>Erwin Twp</td> <td>County</td> <td>Steuben</td> </tr> </table>	Facility Name	Hakes C&D Landfill			Address Line 1	4376 Manning Ridge Road			Address Line 1				Address City State ZIP	Painted Post	NY	14870	Municipality	Erwin Twp	County	Steuben
Facility Name	Hakes C&D Landfill																				
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Address Line 1																					
Address City State ZIP	Painted Post	NY	14870																		
Municipality	Erwin Twp	County	Steuben																		
c.	<table border="0"> <tr> <td>Facility Contact Name</td> <td colspan="3">Joseph Boyles</td> </tr> <tr> <td>Title</td> <td colspan="3"></td> </tr> <tr> <td>Phone</td> <td>(607) 937-6044</td> <td>Email Address</td> <td>joe.boyles@casella.com</td> </tr> <tr> <td></td> <td>(585) 466-7271</td> <td></td> <td></td> </tr> </table>	Facility Contact Name	Joseph Boyles			Title				Phone	(607) 937-6044	Email Address	joe.boyles@casella.com		(585) 466-7271						
Facility Contact Name	Joseph Boyles																				
Title																					
Phone	(607) 937-6044	Email Address	joe.boyles@casella.com																		
	(585) 466-7271																				
d.	Volume of waste shipped to processing or disposal facility in the previous year. 1,799 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)																				
2. BENEFICIAL USE																					
a.	Has the waste been approved for beneficial use? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If "Yes", list the general permit number or approval number.																				
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)																				

3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS																					
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																				
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SECTION C. MANAGEMENT OF RESIDUAL WASTE																					
1. PROCESSING OR DISPOSAL FACILITY(IES)																					
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.																					
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 101243																				
b.	<table border="0"> <tr> <td>Facility Name</td> <td colspan="3">Northern Tier Solid Waste Authority</td> </tr> <tr> <td>Address Line 1</td> <td colspan="3">108 Steam Hollow Road</td> </tr> <tr> <td>Address Line 1</td> <td colspan="3"></td> </tr> <tr> <td>Address City State ZIP</td> <td>Troy</td> <td>PA</td> <td>16947</td> </tr> <tr> <td>Municipality</td> <td>West Burlington Twp</td> <td>County</td> <td>Bradford</td> </tr> </table>	Facility Name	Northern Tier Solid Waste Authority			Address Line 1	108 Steam Hollow Road			Address Line 1				Address City State ZIP	Troy	PA	16947	Municipality	West Burlington Twp	County	Bradford
Facility Name	Northern Tier Solid Waste Authority																				
Address Line 1	108 Steam Hollow Road																				
Address Line 1																					
Address City State ZIP	Troy	PA	16947																		
Municipality	West Burlington Twp	County	Bradford																		
c.	<table border="0"> <tr> <td>Facility Contact Name</td> <td colspan="3">Charles Woodward</td> </tr> <tr> <td>Title</td> <td colspan="3"></td> </tr> <tr> <td>Phone</td> <td>(570) 297-4177</td> <td>Email Address</td> <td>chuckwoodward@epix.net</td> </tr> </table>	Facility Contact Name	Charles Woodward			Title				Phone	(570) 297-4177	Email Address	chuckwoodward@epix.net								
Facility Contact Name	Charles Woodward																				
Title																					
Phone	(570) 297-4177	Email Address	chuckwoodward@epix.net																		
d.	Volume of waste shipped to processing or disposal facility in the previous year. 1,001 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)																				
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 8-0728-00004																				
b.	<table border="0"> <tr> <td>Facility Name</td> <td colspan="3">Chemung County Landfill</td> </tr> <tr> <td>Address Line 1</td> <td colspan="3">1690 Lake Street</td> </tr> <tr> <td>Address Line 1</td> <td colspan="3"></td> </tr> <tr> <td>Address City State ZIP</td> <td>Elmira</td> <td>NY</td> <td>14903</td> </tr> <tr> <td>Municipality</td> <td>Elmira</td> <td>County</td> <td>Chemung</td> </tr> </table>	Facility Name	Chemung County Landfill			Address Line 1	1690 Lake Street			Address Line 1				Address City State ZIP	Elmira	NY	14903	Municipality	Elmira	County	Chemung
Facility Name	Chemung County Landfill																				
Address Line 1	1690 Lake Street																				
Address Line 1																					
Address City State ZIP	Elmira	NY	14903																		
Municipality	Elmira	County	Chemung																		
c.	<table border="0"> <tr> <td>Facility Contact Name</td> <td colspan="3">Carla Canjar</td> </tr> <tr> <td>Title</td> <td colspan="3">Environmental Manager</td> </tr> <tr> <td>Phone</td> <td>(585) 797-5941</td> <td>Email Address</td> <td>carla.canjar@casella.com</td> </tr> </table>	Facility Contact Name	Carla Canjar			Title	Environmental Manager			Phone	(585) 797-5941	Email Address	carla.canjar@casella.com								
Facility Contact Name	Carla Canjar																				
Title	Environmental Manager																				
Phone	(585) 797-5941	Email Address	carla.canjar@casella.com																		
d.	Volume of waste shipped to processing or disposal facility in the previous year. 883 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)																				
2. BENEFICIAL USE																					
a.	Has the waste been approved for beneficial use? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If "Yes", list the general permit number or approval number.																				
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)																				



3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS																					
<b>a.</b>	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached. <span style="float: right;"><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</span>																				
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<b>a.</b>	Solid waste permit number(s) for processing or disposal facility being utilized. 100361																				
<b>b.</b>	<table style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">Facility Name</td> <td colspan="3">McKean County Landfill</td> </tr> <tr> <td>Address Line 1</td> <td colspan="3">19 Ness Lane</td> </tr> <tr> <td>Address Line 1</td> <td colspan="3"></td> </tr> <tr> <td>Address City State ZIP</td> <td>Kane</td> <td>PA</td> <td>16735</td> </tr> <tr> <td>Municipality</td> <td>Sergeant Twp</td> <td>County</td> <td>McKean</td> </tr> </table>	Facility Name	McKean County Landfill			Address Line 1	19 Ness Lane			Address Line 1				Address City State ZIP	Kane	PA	16735	Municipality	Sergeant Twp	County	McKean
Facility Name	McKean County Landfill																				
Address Line 1	19 Ness Lane																				
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Address City State ZIP	Kane	PA	16735																		
Municipality	Sergeant Twp	County	McKean																		
<b>c.</b>	<table style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">Facility Contact Name</td> <td colspan="3">Mike Manderfeld</td> </tr> <tr> <td>Title</td> <td colspan="3"></td> </tr> <tr> <td>Phone</td> <td>(814) 778-9931</td> <td>Email Address</td> <td>manderfeld@gmail.com</td> </tr> </table>	Facility Contact Name	Mike Manderfeld			Title				Phone	(814) 778-9931	Email Address	manderfeld@gmail.com								
Facility Contact Name	Mike Manderfeld																				
Title																					
Phone	(814) 778-9931	Email Address	manderfeld@gmail.com																		
<b>d.</b>	Volume of waste shipped to processing or disposal facility in the previous year. 331 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)																				
<b>a.</b>	Solid waste permit number(s) for processing or disposal facility being utilized.																				
<b>b.</b>	<table style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">Facility Name</td> <td colspan="3"></td> </tr> <tr> <td>Address Line 1</td> <td colspan="3"></td> </tr> <tr> <td>Address Line 1</td> <td colspan="3"></td> </tr> <tr> <td>Address City State ZIP</td> <td colspan="3"></td> </tr> <tr> <td>Municipality</td> <td colspan="3" style="text-align: center;">County</td> </tr> </table>	Facility Name				Address Line 1				Address Line 1				Address City State ZIP				Municipality	County		
Facility Name																					
Address Line 1																					
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Title																					
Phone	Email Address																				
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<b>b.</b>	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)																				

**SECTION D. CERTIFICATION**

I certify, under penalty of law, that I have personally examined and am familiar with the information submitted in this Annual Report and all attached documents and that based upon my inquiry of those individuals immediately responsible for obtaining the information, I verify that the submitted information is true, accurate and complete to the best of my knowledge. I understand that the submission of false information herein is made subject to the penalties of 18 Pa. C.S. §4904, relating to unsworn falsification to authorities, which include fine and imprisonment.

Check the following, if applicable:

I certify the information required in Section B-1, General Properties was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-2, Chemical Analysis was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-3, Process Description and Schematic, was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

Name of Responsible Official	Title
Dina Brown	Environmental Specialist
Signature 	Date
	2/25/11

LAB ID: 08-00380  
LAB ID: 39-00401

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10090956

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10090956

PAGE: 1 of 1

PO#: AF77049

PHONE: (607) 562-4000

FAX: (607) 562-4001

## TEST REPORT

PWS ID#

03-054

RECEIVED FOR LAB BY: DLM2

DATE: 09/07/2010 16:25

Page 1 of 1

SAMPLE: **Inv. Cuttings**

Lab ID: 10090956-001A

Composite

SAMPLED BY: LS

Sample Time: 08/30/2010 12:12

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>	<u>SLOQ</u>	<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Moisture	12.5 %	K Moisture Calc.	0.01	09/09/10 12:30	09/10/10	SG-SA
Free Liquid	< 0.1 %	EPA 9095A	0.1	09/07/10 17:00	09/07/10	IC-SA
pH	9.30@19.8°C	EPA 9045C		09/10/10 10:00	09/10/10	SG-SA

SAMPLE: **Inv. Cuttings**

Lab ID: 10090956-001B

Composite

SAMPLED BY: LS

Sample Time: 08/30/2010 12:12

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>	<u>SLOQ</u>	<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Total Petroleum Hydrocarbons	89000 mg/Kg	EPA 9071		09/08/10 14:30	09/08/10	

Sample Note: Analysis performed by Microbac Laboratories, Inc.-Erie Division

SAMPLE: **TCLP Leachate of Inv. Cuttings**

Lab ID: 10090956-001D

Composite

SAMPLED BY: LS

Sample Time: 09/08/2010 10:00

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>	<u>SLOQ</u>	<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.0008	09/09/10 10:00	09/09/10	KW-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	09/09/10 12:45	09/09/10	RMD-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	09/09/10 12:45	09/09/10	RMD-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	09/09/10 12:45	09/09/10	RMD-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	09/09/10 12:45	09/09/10	RMD-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	09/09/10 12:45	09/09/10	RMD-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	09/09/10 12:45	09/09/10	RMD-CV
Nickel - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	09/09/10 12:45	09/09/10	RMD-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	09/09/10 12:45	09/09/10	RMD-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	09/09/10 12:45	09/09/10	RMD-CV
Zinc - TCLP extracted	< 0.200 mg/L	EPA 6010B	0.200	09/09/10 12:45	09/09/10	RMD-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

K Sample was received past holding time.

MANAGER

*Anni M. Davis*

DATE: 9/13/2010

PA ID #: 08-00380  
NY ID # 11216

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169  
Fax: (570) 888-0717

Work Order: 10121731

SEND DATA TO:

NAME: Dina Brown  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10121731

PAGE: 1 of 3

PO#: AF77716

PHONE: (607) 562-4000  
FAX: (607) 562-4001

## TEST REPORT

PWS ID#

03-054

RECEIVED FOR LAB BY: RML

DATE: 12/09/2010 15:45

Page 1 of 3

SAMPLE: **Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10121731-001A Grab

Sample Time: 12/08/2010 21:27

SLOQ

Test	Result	Method		Analysis Start	Analysis End	Analyst*
Ignitability	Neg ASIS °F	SW846 1030		12/15/10 13:30	12/15/10	

Sample Note: Analysis performed by QC Laboratories

SAMPLE: **Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10121731-001C Grab

Sample Time: 12/08/2010 21:27

SLOQ

Test	Result	Method		Analysis Start	Analysis End	Analyst*
Cyanide, Reactive	< 0.2 mg/Kg	SW 7.3.3.2	0.2	12/13/10 8:56	12/14/10	HDP-CV
Reactive Sulfide	990 mg/Kg	SW846 7.3	16	12/14/10 12:30	12/14/10	LTW-CV

SAMPLE: **Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10121731-001D Grab

Sample Time: 12/08/2010 21:27

SLOQ

Test	Result	Method		Analysis Start	Analysis End	Analyst*
% Solids	78.73 % Wght.	SM2540B	0.10	12/10/10 17:00	12/13/10	IC-SA
Total Volatile Solids	22.37 % Wght.	EPA 160.4	0.01	12/10/10 8:00	12/14/10	NFM-SA

SAMPLE: **TCLP Leachate of Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10121731-001F Grab

Sample Time: 12/11/2010 12:45

SLOQ

Test	Result	Method		Analysis Start	Analysis End	Analyst*
Pyridine	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
1,4-Dichlorobenzene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
o-Cresol	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
p-Cresol/m-Cresol	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Hexachloroethane	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Nitrobenzene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Hexachlorobutadiene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
2,4,6-Trichlorophenol	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

B Analyte detected in the associated Method Blank

MANAGER

*Carrie M. Davis*

DATE:

12/16/2010

PA ID #: 08-00380  
NY ID #: 11216

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169  
Fax: (570) 888-0717

Work Order: 10121731

SEND DATA TO:

NAME: Dina Brown  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10121731  
PAGE: 2 of 3  
PO#: AF77716  
PWS ID#

PHONE: (607) 562-4000  
FAX: (607) 562-4001

**TEST REPORT**

03-054

RECEIVED FOR LAB BY: RML

DATE: 12/09/2010 15:45

Page 2 of 3

Test	Result	Method	Concentration	Analysis Start	Analysis End	Analyst
2,4,5-Trichlorophenol	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Pentachlorophenol	< 0.50 mg/L	EPA 8270C	0.50	12/15/10 7:48	12/15/10	RHH-SA
2,4-Dinitrotoluene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Hexachlorobenzene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Naphthalene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA

SAMPLE: **TCLP Leachate of Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10121731-001G Grab

Sample Time: 09/08/2010 10:00

SLOQ

Test	Result	Method	Concentration	Analysis Start	Analysis End	Analyst
Strontium - TCLP extracted	0.056 mg/L	EPA 6010B	0.050	09/09/10 12:45	09/09/10	RMD-CV

Sample Note: Sample for TCLP extracted Strontium was received on 9/07/10 at 16:25 by DLM2.

SAMPLE: **TCLP Leachate of Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10121731-001H Grab

Sample Time: 12/11/2010 12:45

SLOQ

Test	Result	Method	Concentration	Analysis Start	Analysis End	Analyst
pH	5.97@16.8°C	SM4500H+B		12/14/10 8:00	12/14/10	SG-SA

SAMPLE: **ZHE Extract of Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10121731-001I Grab

Sample Time: 12/12/2010 13:10

SLOQ

Test	Result	Method	Concentration	Analysis Start	Analysis End	Analyst
Benzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Carbon tetrachloride	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Chlorobenzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Chloroform	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
1,2-Dichloroethane	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
1,1-Dichloroethene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Ethylbenzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Isopropylbenzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Tetrachloroethene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Trichloroethene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA

REMARKS:

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\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

B Analyte detected in the associated Method Blank

MANAGER

*Cassie M. Davis*

DATE:

12/16/2010

PA ID #: 08-00380  
NY ID # 11216

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169  
Fax: (570) 888-0717

Work Order: 10121731

**SEND DATA TO:**

NAME: Dina Brown  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10121731  
PAGE: 3 of 3  
PO#: AF77716  
PWS ID#

PHONE: (607) 562-4000  
FAX: (607) 562-4001

**TEST REPORT**

03-054

RECEIVED FOR LAB BY: RML

DATE: 12/09/2010 15:45

Page 3 of 3

Compound	Concentration	Method	Concentration	Date/Time	Date/Time	Analyst
1,2,4-Trimethylbenzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
1,3,5-Trimethylbenzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Vinyl chloride	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Methyl tert-butyl ether	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
2-Butanone	< 0.0500 mg/L	EPA 8260B	0.0500	12/13/10 8:11	12/13/10	CTM-SA

SAMPLE: **ASTM Extract of Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10121731-001J Grab

Sample Time: 12/10/2010 11:15

SLOQ

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Chemical Oxygen Demand	234 mg/L	B HACH 8000	10	12/11/10 8:00	12/13/10	KMF-SA

SAMPLE: **ASTM Extract of Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10121731-001L Grab

Sample Time: 12/10/2010 11:15

SLOQ

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
pH	7.57@16.6°C	SM4500H+B		12/14/10 8:00	12/14/10	SG-SA
Total Solids	1840 mg/L	SM2540B	0.10	12/10/10 17:00	12/13/10	IC-SA

SAMPLE: **Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10121731-001M Grab

Sample Time: 12/10/2010 10:25

SLOQ

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Total Organic Halides	< 5.00 mg/kg	SW846/9023	5.00	12/15/10 15:45	12/15/10	

Sample Note: Analysis performed by Analytical Services, Inc.

**REMARKS:**

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\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

B Analyte detected in the associated Method Blank

MANAGER

*Cassie M. Davis*

DATE:

12/16/2010

**CHAIN OF CUSTODY**

**Bench**

SE 1 OF 1

REPORT TO: Talisman / UEG  
geowetlands@aol.com

E  
2566 Pennsylva  
Phoi  
Fax.

**W/O#: 10121731**

**SPECIAL DETECTION LIMITS**  
EDED:  YES /  NO  
IF YES, PLEASE ATTACH  
IS A QC PACKAGE NEEDED?  
 YES /  NO  
IF YES, PLEASE ATTACH REQUIREMENTS

REFRIGERATE SAMPLES  
AFTER COLLECTION

TRANSPORT  
TO  
LABORATORY  
IN COOLER  
WITH ICE

RESULTS ARE BEING USED FOR:  
 NYDOH  NYDEC  PADEP  
LANDFILL Mostoller  
 PERSONAL OTHER

CONTACT **Steve Gridley**

PH# 607-731-0145

FAX#

BILL TO: Talisman

PO# **AR 77716**

PROJECT DESCRIPTION

**03-054**

SAMPLER SIGNATURE / AFFILIATION

*[Signature]* **UEG**

CONTAINER / SAMPLING POINT

DW DRINKING WATER SL SLUDGE  
GW GROUND WATER SO SOIL  
SW SURFACE WATER HZ HAZARDOUS  
WW WASTE WATER OTHER  
DE DEIONIZED WATER DI DISTILLED WATER

H HYDROCHLORIC ACID OH SODIUM HYDROXIDE  
S SULFURIC ACID AS ASCORBIC ACID  
N NITRIC ACID AC ACETIC ACID  
SO<sub>3</sub> SODIUM SULFITE NH<sub>4</sub> AMMONIUM CHLORIDE  
Thio SODIUM THIOSULFATE ZN ZINC ACETATE  
- NONE Hg MERCURIC CHLORIDE

An incomplete chain of custody may delay the  
processing of your sample(s).

ANALYSIS TO BE PERFORMED  
(PER CONTAINER)

COMPOSITED ON RECEIPT  
PRESERVATIVE ADDED ON RECEIPT

Please fill out all  
applicable areas  
completely

LAB USE ONLY

1	Inv Cuttings	12/8	2127	50	C	SB	N	Ignitability, Reactive Sulfide & Cyanide
2					C			PCBs, Total Solids
3	A - Activated, Ign.				G			Total Volatile Solids
4	C - Reactivity				C			Ammonia-Nitrogen
5	D - TS, TSS				C			Water Leaching Procedure: COD,
6	E - T. Sample				C			Total Solids, Oil & Grease,
7	F - TCLP DNA, Leach.							
8	G - TCLP - Metals, Sr							
9	H - TCLP pH							36 HOUR TURNAROUND
10	I - TCLP Vols.							DAY TURNAROUND
11	J - ASTM COD, nH <sub>2</sub>							

LAB USE ONLY  
DELIVERED BY: *[Signature]* TEMPERATURE UPON RECEIPT: ARRIVAL ON ICE: *[Signature]*

RELINQUISHED BY: <i>[Signature]</i>	DATE: 12/9/10	TIME: 1550	RECEIVED BY: <i>[Signature]</i>	DATE: 1/1	TIME:
RELINQUISHED BY:	DATE: 1/1	TIME:	RECEIVED BY:	DATE: 1/1	TIME:
RELINQUISHED BY:	DATE: 1/1	TIME:	RECEIVED BY: <i>[Signature]</i>	DATE: 12/19/10	TIME: 1545

LAB ID: 08-00380  
LAB ID: 39-00401

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10103214

Phone: (570) 888-0169  
Fax: (570) 888-0717

**SEND DATA TO:**

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10103214  
PAGE: 1 of 2  
PO#: AF77715  
PWS ID#

PHONE: (607) 731-0145  
FAX: (607) 562-4001

## TEST REPORT

03-054

RECEIVED FOR LAB BY: DLM2

DATE: 10/21/2010 11:37

Page 1 of 2

SAMPLE: **Air Cuttings** Lab ID: 10103214-001A Composite  
SAMPLED BY: SG Sample Time: 10/19/2010 9:55

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Total Petroleum Hydrocarbons	640 mg/Kg	EPA 9071	170	10/23/10 9:00	10/23/10	

Sample Note: Analysis performed by Microbac Laboratories, Inc--Erie Division.

SAMPLE: **Air Cuttings** Lab ID: 10103214-001B Composite  
SAMPLED BY: SG Sample Time: 10/19/2010 9:55

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Moisture	42.9 %	Moisture Calc.	0.01	10/25/10 15:00	10/26/10	NFM-SA
Free Liquid	< 0.1 %	EPA 9095A	0.1	10/22/10 15:05	10/22/10	IC-SA
pH	12.01@23.1°C	EPA 9045C		10/26/10 8:50	10/26/10	NFM-SA

SAMPLE: **Air Cuttings** Lab ID: 10103214-001C Composite  
SAMPLED BY: SG Sample Time: 10/19/2010 9:55

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Sodium	391 mg/Kg-dry	EPA 6010B	214	10/22/10 10:40	10/22/10	RMD-CV
Chloride	590 mg/Kg-dry	EPA 300.0	86.8	10/22/10 15:07	10/23/10	HDP-CV
Percent Moisture	42.9 %	SM2540G		10/25/10 15:00	10/26/10	NFM-SA

SAMPLE: **TCLP Leachate of Air Cuttings** Lab ID: 10103214-001E Composite  
SAMPLED BY: SG Sample Time: 10/22/2010 7:30

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.0008	10/23/10 10:20	10/24/10	RMD-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	10/23/10 11:10	10/23/10	RMD-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	10/23/10 11:10	10/23/10	RMD-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	10/23/10 11:10	10/23/10	RMD-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	10/23/10 11:10	10/23/10	RMD-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	10/23/10 11:10	10/23/10	RMD-CV

**REMARKS:**

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\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER

*Cassie M. Davis*

DATE: 10/26/2010



LAB ID: 08-00380  
LAB ID: 39-00401

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10103214

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10103214

PAGE: 2 of 2

PO#: AF77715

PHONE: (607) 731-0145  
FAX: (607) 562-4001

**TEST REPORT**

PWS ID#

03-054

RECEIVED FOR LAB BY: DLM2

DATE: 10/21/2010 11:37

Page 2 of 2

Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	10/23/10 11:10	10/23/10	RMD-CV
Nickel - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	10/23/10 11:10	10/23/10	RMD-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	10/23/10 11:10	10/23/10	RMD-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	10/23/10 11:10	10/23/10	RMD-CV
Zinc - TCLP extracted	< 0.200 mg/L	EPA 6010B	0.200	10/23/10 11:10	10/23/10	RMD-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER

*Carrie M. Davis*

DATE: 10/26/2010

**CHAIN OF CUSTODY**

**REPORT TO:** Talisman / UEG  
 geowetlands@aol.com  
 twollin@rallysolutions.ca

**CONTACT:** Steve Gridley  
 PH# 607-731-0145  
 FAX#

**BILL TO:** Talisman

PO# AF 77715  
 PROJECT DESCRIPTION 03-054  
 SAMPLER SIGNATURE / AFFILIATION [Signature] UEG  
 CONTAINER SAMPLING POINT

REFRIGERATE SAMPLES AFTER COLLECTION

TRANSPORT TO LABORATORY IN COOLER WITH ICE

**Benchmark /**  
 Eastern  
 2566 Pennsylvania Ave  
 Phone: (571)  
 Fax: (570) 688-0117

**W/O#: 10103214**

OF 1

RESULTS ARE BEING USED FOR:

NYDOH  NYDEC  PADEP

LANDFILL  PERSONAL  OTHER

NEEDED: YES /  NO

IF YES, PLEASE ATTACH

IS A QC PACKAGE NEEDED?  YES  NO

IF YES, PLEASE ATTACH REQUIREMENTS

DW DRINKING WATER SL SLUDGE  
 GW GROUND WATER SO SOIL  
 SW SURFACE WATER HZ HAZARDOUS  
 WW WASTE WATER OTHER  
 DE DEIONIZED WATER DI DISTILLED WATER

H HYDROCHLORIC ACID OH SODIUM HYDROXIDE  
 S SULFURIC ACID AS ASCORBIC ACID  
 N NITRIC ACID AC ACETIC ACID  
 SO<sub>2</sub> SODIUM SULFITE NH<sub>4</sub> AMMONIUM CHLORIDE  
 Thio SODIUM THIOSULFATE ZN ZINC ACETATE  
 - NONE Hg MERCURIC CHLORIDE

An incomplete chain of custody may delay the processing of your sample(s).

ANALYSIS TO BE PERFORMED (PER CONTAINER)

COMPOSITED ON RECEIPT  
 PRESERVATIVE ADDED ON RECEIPT

Please fill out all applicable areas completely

LAB USE ONLY

1	Air Cuttings	10/19/95	SO	C	SG	N	TPH					
2							pH, Chlorides, Sodium					
3							TCLP 8 RCRA Metals + Cu, Ni, Zr					
4	A. TPH						Free Liquids / % Moisture					
5	B. pH, Free Liquid, % Moisture						<del>BTEX</del>					
6	C. Cl, Na, P, Moist						TCLP 2200-71370 ONLY IF the TPH					
7	D. T. Sample						exceeds 100,000 mg/Kg					
8												
9							72 HOUR TURNAROUND					
10							DAY TURNAROUND					
11												

LAB USE ONLY

DELIVERED BY SG TEMPERATURE UPON RECEIPT \_\_\_\_\_ °C ARRIVAL ON ICE Y / N

RELINQUISHED BY: [Signature]	DATE: 10/21/10	TIME: 11:37	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY: [Signature]	DATE: 10/21/10	TIME: 11:37



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WASTE MANAGEMENT

**FORM 26R**  
**CHEMICAL ANALYSIS OF RESIDUAL WASTE**  
**ANNUAL REPORT BY THE GENERATOR**

This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form 26R, reference the item number and identify the date prepared. The date on attached sheets needs to match the date noted below.		<b>DEP USE ONLY</b>		
General Reference 287.54		Date Received & General Notes		
Date Prepared/Revised February 11, 2011				
<b>SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION</b>				
Company Name Talisman Energy USA Inc.				
If a Subsidiary, Name of Parent Company Talisman Energy Inc.			EPA Generator ID# N/A	
Company Mailing Address Line 1 50 Pennwood Place		Company Mailing Address Line 2		
Company Address Last Line – City Warrendale	State PA	Zip+4 15086	Phone (724) 814-5300	
Company Contact Last Name Brown	First Name Dina	MI	Suffix	
Municipality Warrendale	County Allegheny			
Contact Phone (724) 814-5321	Ext	Contact Email Address dybrown@talismanusa.com		
Is the waste generated at the Company Mailing Address (noted above)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
If 'No', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the (03-054) well pad site located at 847 Fairbanks Road, Columbia Township, Bradford County, PA. Waste is stored in containers on site.				
Municipality Columbia	County Bradford	State PA		
<b>SECTION B. WASTE DESCRIPTION</b>				
Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure	Time Frame
810	Drill cuttings (oil and gas)	5,256	<input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton	<input type="checkbox"/> One Time
<b>1. GENERAL PROPERTIES</b>				
a.	pH Range	5.97 to 12.01	(based on analyses or knowledge)	
b.	Physical State	<input type="checkbox"/> Liquid Waste (EPA Method 9095) <input checked="" type="checkbox"/> Solid (EPA Method 9095) <input type="checkbox"/> Gas (ambient temperature & pressure)		
c.	Physical Appearance	Color Greyish Black	Odor	Earthy / Slight Petroleum
		Number of Solid or Liquid Phases of Separation One		
		Describe each phase of separation. Soil and Rock Fragments		
<b>2. CHEMICAL ANALYSIS ATTACHMENTS</b>				
a.	The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A detailed description of the waste sampling method is attached.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	The quality assurance/quality control procedures employed by the laboratory(ies) is attached.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
d.	The results of the hazardous waste determination is attached.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
e.	If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.		<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A

3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS			
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
SECTION C. MANAGEMENT OF RESIDUAL WASTE			
1. PROCESSING OR DISPOSAL FACILITY(IES)			
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.			
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 9-0232-00003		
b.	Facility Name	Hyland Landfill	
	Address Line 1	6653 Herdman Road	
	Address Line 1		
	Address City State ZIP	Angelica NY	14709
	Municipality	Angelica	County Allegany
c.	Facility Contact Name	Larry Shilling	
	Title		
	Phone	(585) 466-7271	Email Address larry.shilling@casella.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 2,795 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 100361		
b.	Facility Name	McKean County Landfill	
	Address Line 1	19 Ness Lane	
	Address Line 1		
	Address City State ZIP	Kane PA	16735
	Municipality	Sergeant Twp	County McKean
c.	Facility Contact Name	Mike Manderfeld	
	Title		
	Phone	(814) 778-9931	Email Address manderfeld@gmail.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 1,342 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
2. BENEFICIAL USE			
a.	Has the waste been approved for beneficial use? If "Yes", list the general permit number or approval number.		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		

3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS			
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
SECTION C. MANAGEMENT OF RESIDUAL WASTE			
1. PROCESSING OR DISPOSAL FACILITY(IES)			
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.			
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 8-4630-00010		
b.	Facility Name	Hakes C&D Landfill	
	Address Line 1	4376 Manning Ridge Road	
	Address Line 1		
	Address City State ZIP	Painted Post NY 14870	
	Municipality	Erwin Twp County Steuben	
c.	Facility Contact Name	Joe Boyles	
	Title		
	Phone	(607) 937-6044	Email Address joe.boyles@casella.com
		(585) 466-7271	
d.	Volume of waste shipped to processing or disposal facility in the previous year. 1,031 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 100945		
b.	Facility Name	Cumberland County Landfill	
	Address Line 1	135 Vaughn Road	
	Address Line 1		
	Address City State ZIP	Newburg PA 17240	
	Municipality	Newburg Boro County Cumberland	
c.	Facility Contact Name	Dusty Hilbert	
	Title	Compliance Manager	
	Phone	(717) 729-5261	Email Address dhilbert@iswaste.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 88 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
2. BENEFICIAL USE			
a.	Has the waste been approved for beneficial use? If "Yes", list the general permit number or approval number.		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		

**SECTION D. CERTIFICATION**

I certify, under penalty of law, that I have personally examined and am familiar with the information submitted in this Annual Report and all attached documents and that based upon my inquiry of those individuals immediately responsible for obtaining the information, I verify that the submitted information is true, accurate and complete to the best of my knowledge. I understand that the submission of false information herein is made subject to the penalties of 18 Pa. C.S. §4904, relating to unsworn falsification to authorities, which include fine and imprisonment.

Check the following, if applicable:

I certify the information required in Section B-1, General Properties was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-2, Chemical Analysis was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-3, Process Description and Schematic, was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

Name of Responsible Official \_\_\_\_\_ Title Environmental Specialist

Dina Brown \_\_\_\_\_

Signature  Date 2/25/11

PA ID #: 08-00380  
NY ID #: 11216

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169  
Fax: (570) 888-0717

Work Order: 10121731

**SEND DATA TO:**

NAME: Dina Brown  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10121731  
PAGE: 1 of 3  
PO#: AF77716

PHONE: (607) 562-4000  
FAX: (607) 562-4001

## TEST REPORT

PWS ID#

03-054

RECEIVED FOR LAB BY: RML

DATE: 12/09/2010 15:45

Page 1 of 3

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst*
<b>SAMPLE: Inv. Cuttings</b> Lab ID: 10121731-001A Grab						
SAMPLED BY: SG Sample Time: 12/08/2010 21:27						
Ignitability	Neg ASIS °F	SW846 1030		12/15/10 13:30	12/15/10	
Sample Note: Analysis performed by QC Laboratories						
<b>SAMPLE: Inv. Cuttings</b> Lab ID: 10121731-001C Grab						
SAMPLED BY: SG Sample Time: 12/08/2010 21:27						
Cyanide, Reactive	< 0.2 mg/Kg	SW 7.3.3.2	0.2	12/13/10 8:56	12/14/10	HDP-CV
Reactive Sulfide	990 mg/Kg	SW846 7.3	16	12/14/10 12:30	12/14/10	LTW-CV
<b>SAMPLE: Inv. Cuttings</b> Lab ID: 10121731-001D Grab						
SAMPLED BY: SG Sample Time: 12/08/2010 21:27						
% Solids	78.73 % Wght.	SM2540B	0.10	12/10/10 17:00	12/13/10	IC-SA
Total Volatile Solids	22.37 % Wght.	EPA 160.4	0.01	12/10/10 8:00	12/14/10	NFM-SA
<b>SAMPLE: TCLP Leachate of Inv. Cuttings</b> Lab ID: 10121731-001F Grab						
SAMPLED BY: SG Sample Time: 12/11/2010 12:45						
Pyridine	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
1,4-Dichlorobenzene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
o-Cresol	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
p-Cresol/m-Cresol	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Hexachloroethane	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Nitrobenzene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Hexachlorobutadiene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
2,4,6-Trichlorophenol	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA

**REMARKS:**

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

B Analyte detected in the associated Method Blank

MANAGER

*Cassie M. Davis*

DATE: 12/16/2010

PA ID #: 08-00380  
NY ID #: 11216

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169  
Fax: (570) 888-0717

Work Order: 10121731

SEND DATA TO:

NAME: Dina Brown  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10121731  
PAGE: 2 of 3  
PO#: AF77716

PHONE: (607) 562-4000  
FAX: (607) 562-4001

**TEST REPORT**

PWS ID#

03-054

RECEIVED FOR LAB BY: RML

DATE: 12/09/2010 15:45

Page 2 of 3

Test	Result	Method	Concentration	Analysis Start	Analysis End	Analyst
2,4,5-Trichlorophenol	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Pentachlorophenol	< 0.50 mg/L	EPA 8270C	0.50	12/15/10 7:48	12/15/10	RHH-SA
2,4-Dinitrotoluene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Hexachlorobenzene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Naphthalene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA

SAMPLE: **TCLP Leachate of Inv. Cuttings**

Lab ID: 10121731-001G Grab

SAMPLED BY: SG

Sample Time: 09/08/2010 10:00

SLOQ

Test	Result	Method	Concentration	Analysis Start	Analysis End	Analyst
Strontium - TCLP extracted	0.056 mg/L	EPA 6010B	0.050	09/09/10 12:45	09/09/10	RMD-CV

Sample Note: Sample for TCLP extracted Strontium was received on 9/07/10 at 16:25 by DLM2.

SAMPLE: **TCLP Leachate of Inv. Cuttings**

Lab ID: 10121731-001H Grab

SAMPLED BY: SG

Sample Time: 12/11/2010 12:45

SLOQ

Test	Result	Method	Concentration	Analysis Start	Analysis End	Analyst
pH	5.97@16.6°C	SM4500H+B		12/14/10 8:00	12/14/10	SG-SA

SAMPLE: **ZHE Extract of Inv. Cuttings**

Lab ID: 10121731-001I Grab

SAMPLED BY: SG

Sample Time: 12/12/2010 13:10

SLOQ

Test	Result	Method	Concentration	Analysis Start	Analysis End	Analyst
Benzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Carbon tetrachloride	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Chlorobenzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Chloroform	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
1,2-Dichloroethane	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
1,1-Dichloroethene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Ethylbenzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Isopropylbenzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Tetrachloroethene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Trichloroethene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

B Analyte detected in the associated Method Blank

MANAGER

*Cassie M. Davis*

DATE:

12/16/2010



PA ID #: 08-00380  
NY ID #: 11216

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169  
Fax: (570) 888-0717

Work Order: 10121731

SEND DATA TO:

NAME: Dina Brown  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10121731

PAGE: 3 of 3

PO#: AF77716

PHONE: (607) 562-4000  
FAX: (607) 562-4001

**TEST REPORT**

PWS ID#

03-054

RECEIVED FOR LAB BY: RML

DATE: 12/09/2010 15:45

Page 3 of 3

Test	Result	Method	Concentration	Analysis Start	Analysis End	Analyst
1,2,4-Trimethylbenzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
1,3,5-Trimethylbenzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Vinyl chloride	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Methyl tert-butyl ether	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
2-Butanone	< 0.0500 mg/L	EPA 8260B	0.0500	12/13/10 8:11	12/13/10	CTM-SA

SAMPLE: **ASTM Extract of Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10121731-001J Grab

Sample Time: 12/10/2010 11:15

SLOQ

Test	Result	Method	Concentration	Analysis Start	Analysis End	Analyst
Chemical Oxygen Demand	234 mg/L	B HACH 8000	10	12/11/10 8:00	12/13/10	KMF-SA

SAMPLE: **ASTM Extract of Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10121731-001L Grab

Sample Time: 12/10/2010 11:15

SLOQ

Test	Result	Method	Concentration	Analysis Start	Analysis End	Analyst
pH	7.57@16.6°C	SM4500H+B		12/14/10 8:00	12/14/10	SG-SA
Total Solids	1840 mg/L	SM2540B	0.10	12/10/10 17:00	12/13/10	IC-SA

SAMPLE: **Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10121731-001M Grab

Sample Time: 12/10/2010 10:25

SLOQ

Test	Result	Method	Concentration	Analysis Start	Analysis End	Analyst
Total Organic Halides	< 5.00 mg/kg	SW846/9023	5.00	12/15/10 15:45	12/15/10	

Sample Note: Analysis performed by Analytical Services, Inc.

REMARKS:

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\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

B Analyte detected in the associated Method Blank

MANAGER

*Cassie M. Davis*

DATE: 12/16/2010

**CHAIN OF CUSTODY**

**Bench**

SE 1 OF 1

**REPORT TO:** Talisman / UEG  
 geowetlands@aol.com

**CONTACT:** Steve Gridley  
 PH# 607-731-0145  
 FAX#  
**BILL TO:** Talisman

PO# AF 77716

**PROJECT DESCRIPTION:** 03-054

**SAMPLER SIGNATURE / AFFILIATION:** [Signature] UEG

**CONTAINER / SAMPLING POINT:**

2566 Pennsylv  
 Phor  
 Fax.

**W/O#: 10121731**

**SPECIAL DETECTION LIMITS**

DETECTED:  YES  NO

IF YES, PLEASE ATTACH

IS A QC PACKAGE NEEDED?  
 YES  NO

IF YES, PLEASE ATTACH REQUIREMENTS

REFRIGERATE SAMPLES  
 AFTER COLLECTION

**TRANSPORT  
 TO  
 LABORATORY  
 IN COOLER  
 WITH ICE**

- DW DRINKING WATER
- GW GROUND WATER
- SW SURFACE WATER
- WW WASTE WATER
- DE DEIONIZED WATER
- SL SLUDGE
- SO SOIL
- HZ HAZARDOUS
- OTHER
- DI DISTILLED WATER

**RESULTS ARE BEING USED FOR:**

NYDOH  NYDEC  PADEP

LANDFILL Mostoller

PERSONAL  OTHER

- H HYDROCHLORIC ACID
- S SULFURIC ACID
- N NITRIC ACID
- SO<sub>2</sub> SODIUM SULFITE
- Thio SODIUM THIOSULFATE
- NONE
- OH SODIUM HYDROXIDE
- AS ASCORBIC ACID
- AC ACETIC ACID
- NH<sub>4</sub> AMMONIUM CHLORIDE
- ZN ZINC ACETATE
- Hg MERCURIC CHLORIDE

DATE SAMPLED	TIME OF SAMPLING	SAMPLE MATRIX	SAMPLE TYPE - GRAB / COMPOSITE	SAMPLER INITIALS	PRESERVATIVE
12/8	2127	SO	C	SB	N

An incomplete chain of custody may delay the processing of your sample(s).

**ANALYSIS TO BE PERFORMED (PER CONTAINER)**

COMPOSITED ON RECEIPT

PRESERVATIVE ADDED ON RECEIPT

Please fill out all applicable areas completely

**LAB USE ONLY**

CONTAINER	SAMPLING POINT	DATE SAMPLED	TIME OF SAMPLING	SAMPLE MATRIX	SAMPLE TYPE - GRAB / COMPOSITE	SAMPLER INITIALS	PRESERVATIVE	ANALYSIS TO BE PERFORMED (PER CONTAINER)	COMPOSITED ON RECEIPT	PRESERVATIVE ADDED ON RECEIPT	LAB USE ONLY
1	Inv Cuttings	12/8	2127	SO	C	SB	N	Ignitability, Reactive Sulfide & Cyanide			
2					C			PCBs, Total Solids			
3	A - Herbicide, Ign.				G			Total Volatile Solids			
4	C - Reactivity				C			Ammonia-Nitrogen			
5	D - TS, TSS				C			Water Leaching Procedure: COD,			
6	E - T. Sample				C			Total Solids, Oil & Grease,			
7	F - TELP DNA, Leaks										
8	G - TELP - Herb. Sr										
9	H - TELP pH										
10	I - TELP Vols.										
11	J - ASTM COD, NH <sub>3</sub>										

**LAB USE ONLY**

DELIVERED BY: \_\_\_\_\_ TEMPERATURE (F/C) (F/C) \_\_\_\_\_ ARRIVAL ON ICE (Y/N)

RELINQUISHED BY: <u>[Signature]</u>	DATE: 12/9/10	TIME: 15:50	RECEIVED BY: <u>[Signature]</u>	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY: <u>[Signature]</u>	DATE: 12/9/10	TIME: 15:45

LAB ID: 08-00380  
LAB ID: 39-00401

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10103214

Phone: (570) 888-0169  
Fax: (570) 888-0717

**SEND DATA TO:**

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10103214  
PAGE: 1 of 2  
PO#: AF77715

PHONE: (607) 731-0145  
FAX: (607) 562-4001

## TEST REPORT

PWS ID#

03-054

RECEIVED FOR LAB BY: DLM2

DATE: 10/21/2010 11:37

Page 1 of 2

SAMPLE: **Air Cuttings**  
SAMPLED BY: SG

Lab ID: 10103214-001A

Composite

Sample Time: 10/19/2010 9:55

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>		<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Total Petroleum Hydrocarbons	640 mg/Kg	EPA 9071	170	10/23/10 9:00	10/23/10	

Sample Note: Analysis performed by Microbac Laboratories, Inc--Erie Division.

SAMPLE: **Air Cuttings**  
SAMPLED BY: SG

Lab ID: 10103214-001B

Composite

Sample Time: 10/19/2010 9:55

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>		<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Moisture	42.9 %	Moisture Calc.	0.01	10/25/10 15:00	10/26/10	NFM-SA
Free Liquid	< 0.1 %	EPA 9095A	0.1	10/22/10 15:05	10/22/10	IC-SA
pH	12.01@23.1°C	EPA 9045C		10/26/10 8:50	10/26/10	NFM-SA

SAMPLE: **Air Cuttings**  
SAMPLED BY: SG

Lab ID: 10103214-001C

Composite

Sample Time: 10/19/2010 9:55

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>		<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Sodium	391 mg/Kg-dry	EPA 6010B	214	10/22/10 10:40	10/22/10	RMD-CV
Chloride	590 mg/Kg-dry	EPA 300.0	86.8	10/22/10 15:07	10/23/10	HDP-CV
Percent Moisture	42.9 %	SM2540G		10/25/10 15:00	10/26/10	NFM-SA

SAMPLE: **TCLP Leachate of Air Cuttings**  
SAMPLED BY: SG

Lab ID: 10103214-001E

Composite

Sample Time: 10/22/2010 7:30

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>		<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.0008	10/23/10 10:20	10/24/10	RMD-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	10/23/10 11:10	10/23/10	RMD-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	10/23/10 11:10	10/23/10	RMD-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	10/23/10 11:10	10/23/10	RMD-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	10/23/10 11:10	10/23/10	RMD-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	10/23/10 11:10	10/23/10	RMD-CV

**REMARKS:**

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER

*Cassie M. Davis*

DATE: 10/26/2010

LAB ID: 08-00380  
LAB ID: 39-00401

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10103214

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10103214

PAGE: 2 of 2

PO#: AF77715

PWS ID#

PHONE: (607) 731-0145  
FAX: (607) 562-4001

**TEST REPORT**

03-054

RECEIVED FOR LAB BY: DLM2

DATE: 10/21/2010 11:37

Page 2 of 2

Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	10/23/10 11:10	10/23/10	RMD-CV
Nickel - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	10/23/10 11:10	10/23/10	RMD-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	10/23/10 11:10	10/23/10	RMD-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	10/23/10 11:10	10/23/10	RMD-CV
Zinc - TCLP extracted	< 0.200 mg/L	EPA 6010B	0.200	10/23/10 11:10	10/23/10	RMD-CV

REMARKS:

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\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER

*Carrie M. Davis*

DATE: 10/26/2010

**CHAIN OF CUSTODY**

**REPORT TO:** Talisman / UEG  
 geowetlands@aol.com  
 twollin@rallysolutions.ca

**CONTACT:** Steve Gridley  
 PH# 607-731-0145  
 FAX#

**BILL TO:** Talisman

PO# AF 77715  
 PROJECT DESCRIPTION 03-054  
 SAMPLER SIGNATURE / AFFILIATION [Signature] UEG  
 CONTAINER SAMPLING POINT

REFRIGERATE SAMPLES AFTER COLLECTION

TRANSPORT TO LABORATORY IN COOLER WITH ICE

**Benchmark /**  
 Eastern  
 2566 Pennsylvania Ave  
 Phone: (571)  
 Fax: (570) 888-0111

**W/O#: 10103214**

OF 1

RESULTS ARE BEING USED FOR:  
 NYDOH  NYDEC  PADEP  
 LANDFILL  
 PERSONAL OTHER

NEEDED: YES /  NO  
 IF YES, PLEASE ATTACH  
 IS A QC PACKAGE NEEDED?  
 YES  NO  
 IF YES, PLEASE ATTACH REQUIREMENTS

DW DRINKING WATER SL SLUDGE  
 GW GROUND WATER SO SOIL  
 SW SURFACE WATER HZ HAZARDOUS  
 WW WASTE WATER OTHER  
 DE DEIONIZED WATER DI DISTILLED WATER

H HYDROCHLORIC ACID OH SODIUM HYDROXIDE  
 S SULFURIC ACID AS ASCORBIC ACID  
 N NITRIC ACID AC ACETIC ACID  
 SO<sub>2</sub> SODIUM SULFITE NH<sub>4</sub> AMMONIUM CHLORIDE  
 Thio SODIUM THIOSULFATE ZN ZINC ACETATE  
 - NONE Hg MERCURIC CHLORIDE

An incomplete chain of custody may delay the processing of your sample(s).

ANALYSIS TO BE PERFORMED (PER CONTAINER)

COMPOSITED ON RECEIPT  
 PRESERVATIVE ADDED ON RECEIPT

Please fill out all applicable areas completely

LAB USE ONLY

DATE SAMPLED	TIME OF SAMPLING	SAMPLE MATRIX	SAMPLE TYPE: GRAB / COMPOSITE	SAMPLER INITIALS	PRESERVATIVE	ANALYSIS TO BE PERFORMED (PER CONTAINER)	COMPOSITED ON RECEIPT	PRESERVATIVE ADDED ON RECEIPT	LAB USE ONLY
10/19/95	50	C	SG	N		TPH			- COMPLETED
						pH, Chlorides, Sodium			
						TCLP 8 RCRA Metals + Cu, Ni, Zr			
						Free Liquids / % Moisture			
						<del>TPH</del> ONLY IF the TPH			
						exceeds 100,000 mg/Kg			
						72 HOUR TURNAROUND			
						DAY TURNAROUND			
									Due 10/26/10

LAB USE ONLY  
 DELIVERED BY SG TEMPERATURE UPON RECEIPT \_\_\_\_\_ °C ARRIVAL ON ICE Y/N

RELINQUISHED BY: [Signature]	DATE: 10/21/10	TIME: 11:37	RECEIVED BY:	DATE: 1/1	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY: [Signature]	DATE: 10/21/10	TIME: 11:37

LAB ID: 08-00380  
LAB ID: 39-00401

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169  
Fax: (570) 888-0717

Work Order: 10090956

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10090956  
PAGE: 1 of 1  
PO#: AF77049  
PWS ID#

PHONE: (607) 562-4000  
FAX: (607) 562-4001

## TEST REPORT

03-054

RECEIVED FOR LAB BY: DLM2

DATE: 09/07/2010 16:25

Page 1 of 1

SAMPLE: **Inv. Cuttings**

Lab ID: 10090956-001A

Composite

SAMPLED BY: LS

Sample Time: 08/30/2010 12:12

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>	<u>SLOQ</u>	<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>	
Moisture	12.5 %	K	Moisture Calc.	0.01	09/09/10 12:30	09/10/10	SG-SA
Free Liquid	< 0.1 %		EPA 9095A	0.1	09/07/10 17:00	09/07/10	IC-SA
pH	9.30@19.8°C		EPA 9045C		09/10/10 10:00	09/10/10	SG-SA

SAMPLE: **Inv. Cuttings**

Lab ID: 10090956-001B

Composite

SAMPLED BY: LS

Sample Time: 08/30/2010 12:12

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>	<u>SLOQ</u>	<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>	
Total Petroleum Hydrocarbons	89000 mg/Kg		EPA 9071		09/08/10 14:30	09/08/10	

Sample Note: Analysis performed by Microbac Laboratories, Inc.-Erie Division

SAMPLE: **TCLP Leachate of Inv. Cuttings**

Lab ID: 10090956-001D

Composite

SAMPLED BY: LS

Sample Time: 09/08/2010 10:00

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>	<u>SLOQ</u>	<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.0008	09/09/10 10:00	09/09/10	KW-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	09/09/10 12:45	09/09/10	RMD-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	09/09/10 12:45	09/09/10	RMD-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	09/09/10 12:45	09/09/10	RMD-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	09/09/10 12:45	09/09/10	RMD-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	09/09/10 12:45	09/09/10	RMD-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	09/09/10 12:45	09/09/10	RMD-CV
Nickel - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	09/09/10 12:45	09/09/10	RMD-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	09/09/10 12:45	09/09/10	RMD-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	09/09/10 12:45	09/09/10	RMD-CV
Zinc - TCLP extracted	< 0.200 mg/L	EPA 6010B	0.200	09/09/10 12:45	09/09/10	RMD-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

K Sample was received past holding time.

MANAGER

*Carrie M. Davis*

DATE: 9/13/2010



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WASTE MANAGEMENT

**FORM 26R**  
**CHEMICAL ANALYSIS OF RESIDUAL WASTE**  
**ANNUAL REPORT BY THE GENERATOR**

This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form 26R, reference the item number and identify the date prepared. The date on attached sheets needs to match the date noted below.		<b>DEP USE ONLY</b>		
General Reference 287.54		Date Received & General Notes		
Date Prepared/Revised	February 11, 2011			
<b>SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION</b>				
Company Name Talisman Energy USA Inc.				
If a Subsidiary, Name of Parent Company Talisman Energy Inc.			EPA Generator ID# N/A	
Company Mailing Address Line 1 50 Pennwood Place		Company Mailing Address Line 2		
Company Address Last Line – City Warrendale	State PA	Zip+4 15086	Phone (724) 814-5300	
Company Contact Last Name Brown	First Name Dina	MI	Suffix	
Municipality Warrendale	County Allegheny			
Contact Phone (724) 814-5321	Ext	Contact Email Address dybrown@talismanusa.com		
Is the waste generated at the Company Mailing Address (noted above)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
If 'No', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the (03-025) well pad site located at 1042 Antler Road, Columbia Township, Bradford County, PA. Waste is stored in containers on site.				
Municipality	Columbia	County	Bradford	
State	PA			
<b>SECTION B. WASTE DESCRIPTION</b>				
Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure	Time Frame
810	Drill Cuttings (Oil and Gas)	458	<input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton	<input type="checkbox"/> One Time
<b>1. GENERAL PROPERTIES</b>				
a. pH Range	6.51	to	---	(based on analyses or knowledge)
b. Physical State	<input type="checkbox"/> Liquid Waste (EPA Method 9095) <input checked="" type="checkbox"/> Solid (EPA Method 9095) <input type="checkbox"/> Gas (ambient temperature & pressure)			
c. Physical Appearance	Color	Greyish Black	Odor	Earthy / Slight Petroleum
	Number of Solid or Liquid Phases of Separation	One		
	Describe each phase of separation. Soil and Rock Fragments			
<b>2. CHEMICAL ANALYSIS ATTACHMENTS</b>				
a.	The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
b.	A detailed description of the waste sampling method is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
c.	The quality assurance/quality control procedures employed by the laboratory(ies) is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
d.	The results of the hazardous waste determination is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
e.	If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A

3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS			
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
SECTION C. MANAGEMENT OF RESIDUAL WASTE			
1. PROCESSING OR DISPOSAL FACILITY(IES)			
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.			
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 100361		
b.	Facility Name	McKean County Landfill	
	Address Line 1	19 Ness Lane	
	Address Line 1		
	Address City State ZIP	Kane PA	16735
	Municipality	Sergeant Twp County	McKean
c.	Facility Contact Name	Mike Manderfeld	
	Title		
	Phone	(814) 778-9931	Email Address manderfeld@gmail.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 264 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 9-0232-00003		
b.	Facility Name	Hyland Landfill	
	Address Line 1	6653 Herdman Road	
	Address Line 1		
	Address City State ZIP	Angelica NY	14709
	Municipality	Angelica County	Allegany
c.	Facility Contact Name	Larry Shilling	
	Title		
	Phone	(585) 466-7271	Email Address larry.shilling@casella.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 105 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
2. BENEFICIAL USE			
a.	Has the waste been approved for beneficial use? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If "Yes", list the general permit number or approval number.		
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		



3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS			
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
SECTION C. MANAGEMENT OF RESIDUAL WASTE			
1. PROCESSING OR DISPOSAL FACILITY(IES)			
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.			
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 8-4630-00010		
b.	Facility Name	Hakes C&D Landfill	
	Address Line 1	4376 Manning Ridge Road	
	Address Line 1		
	Address City State ZIP	Painted Post NY 14870	
	Municipality	Erwin Twp County Steuben	
c.	Facility Contact Name	Joe Boyles	
	Title		
	Phone	(607) 937-6044	Email Address joe.boyles@casella.com
		(585) 466-7271	
d.	Volume of waste shipped to processing or disposal facility in the previous year. 66 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 100945		
b.	Facility Name	Cumberland County Landfill	
	Address Line 1	135 Vaughn Road	
	Address Line 1		
	Address City State ZIP	Newburg PA 17240	
	Municipality	Newburg Boro County Cumberland	
c.	Facility Contact Name	Dusty Hilbert	
	Title	Compliance Manager	
	Phone	(717) 729-5261	Email Address dhilbert@iswaste.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 23 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
2. BENEFICIAL USE			
a.	Has the waste been approved for beneficial use? If "Yes", list the general permit number or approval number.		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		

**SECTION D. CERTIFICATION**

I certify, under penalty of law, that I have personally examined and am familiar with the information submitted in this Annual Report and all attached documents and that based upon my inquiry of those individuals immediately responsible for obtaining the information, I verify that the submitted information is true, accurate and complete to the best of my knowledge. I understand that the submission of false information herein is made subject to the penalties of 18 Pa. C.S. §4904, relating to unsworn falsification to authorities, which include fine and imprisonment.

Check the following, if applicable:

I certify the information required in Section B-1, General Properties was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-2, Chemical Analysis was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-3, Process Description and Schematic, was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

Name of Responsible Official \_\_\_\_\_ Title Environmental Specialist

Dina Brown

Signature  Date 2/25/11

LAB ID: 08-00380  
LAB ID: 39-00401

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169

Fax: (570) 888-0717

Work Order: 10120828

**SEND DATA TO:**

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10120828

PAGE: 1 of 2

PO#: AF78554

PWS ID#

PHONE: (607) 731-0145

FAX: (607) 562-4001

## TEST REPORT

03-025

RECEIVED FOR LAB BY: CMS

DATE: 12/06/2010 15:40

Page 1 of 2

SAMPLE: **Air Cuttings**

Lab ID: 10120828-001A

Composite

SAMPLED BY: SG

Sample Time: 12/06/2010 11:48

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>	<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Total Petroleum Hydrocarbons	212 mg/Kg	EPA 9071	12/08/10 14:20	12/08/10	

Sample Note: Analysis performed by Microbac Laboratories, Inc-Erie Division

SAMPLE: **Air Cuttings**

Lab ID: 10120828-001B

Composite

SAMPLED BY: SG

Sample Time: 12/06/2010 11:48

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>	<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Moisture	41.8 %	Moisture Calc.	0.01 12/06/10 17:30	12/07/10	IC-SA
Free Liquid	< 0.1 %	EPA 9095A	0.1 12/06/10 17:05	12/06/10	IC-SA
pH	6.51@22.0°C	EPA 9045C	12/07/10 14:20	12/07/10	MED-SA

SAMPLE: **Air Cuttings**

Lab ID: 10120828-001C

Composite

SAMPLED BY: SG

Sample Time: 12/06/2010 11:48

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>	<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Sodium	393 mg/Kg	EPA 6010B	37.8 12/07/10 12:10	12/07/10	GSR-CV
Chloride	301 mg/Kg	Z EPA 300.0	46.9 12/07/10 13:24	12/08/10	HDP-CV

SAMPLE: **TCLP Leachate of Air Cuttings**

Lab ID: 10120828-001E

Composite

SAMPLED BY: SG

Sample Time: 12/07/2010 8:00

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>	<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.0008 12/07/10 10:15	12/09/10	KW-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500 12/08/10 12:15	12/08/10	GSR-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00 12/08/10 12:15	12/08/10	GSR-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100 12/08/10 12:15	12/08/10	GSR-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500 12/08/10 12:15	12/08/10	GSR-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100 12/08/10 12:15	12/08/10	GSR-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500 12/08/10 12:15	12/08/10	GSR-CV

**REMARKS:**

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

Z Due to matrix bias, spike recovery was outside acceptance limits

MANAGER

*Carrie M. Davis*

DATE: 12/10/2010

LAB ID: 08-00380  
LAB ID: 39-00401

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169  
Fax: (570) 888-0717

Work Order: 10120828

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10120828  
PAGE: 2 of 2  
PO#: AF78554  
PWS ID#

PHONE: (607) 731-0145  
FAX: (607) 562-4001

**TEST REPORT**

03-025

RECEIVED FOR LAB BY: CMS

DATE: 12/06/2010 15:40

Page 2 of 2

Nickel - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	12/08/10 12:15	12/08/10	GSR-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	12/08/10 12:15	12/08/10	GSR-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	12/08/10 12:15	12/08/10	GSR-CV
Zinc - TCLP extracted	< 0.200 mg/L	EPA 6010B	0.200	12/08/10 12:15	12/08/10	GSR-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

Z Due to matrix bias, spike recovery was outside acceptance limits

MANAGER

*Cassie M. Davis*

DATE: 12/10/2010

**CHAIN OF CUSTODY**

**REPORT TO:** Talisman / UEG  
 geowetlands@aol.com

**CONTACT:** Steve Gridley  
 PH# 607-731-0145  
 FAX#

**BILL TO:** Talisman

PO# AF78554  
 PROJECT DESCRIPTION 03-025  
 SAMPLER SIGNATURE / AFFILIATION [Signature] UICB  
 CONTAINER / SAMPLING POINT

REFRIGERATE SAMPLES  
 AFTER COLLECTION

**TRANSPORT  
 TO  
 LABORATORY  
 IN COOLER  
 WITH ICE**

**W/O#: 10120828**

BEING USED FOR:  
 NYDEC  PADEP  
 NYDOH  LANDFILL  
 PERSONAL  OTHER

**ARE SPECIAL DETECTION LIMITS  
 NEEDED:**  YES /  NO  
 IF YES, PLEASE ATTACH  
 IS A QC PACKAGE NEEDED?  
 YES  NO  
 IF YES, PLEASE ATTACH REQUIREMENTS

DW	DRINKING WATER	SL	SLUDGE
GW	GROUND WATER	SO	SOIL
SW	SURFACE WATER	HZ	HAZARDOUS
WW	WASTE WATER	OTHER	
DE	DEIONIZED WATER	DI	DISTILLED WATER

DATE SAMPLED	TIME OF SAMPLING	SAMPLE MATRIX	SAMPLE TYPE - GRAB / COMPOSITE	SAMPLER INITIALS	PRESERVATIVE
--------------	------------------	---------------	--------------------------------	------------------	--------------

H	HYDROCHLORIC ACID	OH	SODIUM HYDROXIDE
S	SULFURIC ACID	AS	ASCORBIC ACID
N	NITRIC ACID	AC	ACETIC ACID
SO <sub>3</sub>	SODIUM SULFITE	NH <sub>4</sub>	AMMONIUM CHLORIDE
Thio	SODIUM THIOSULFATE	ZN	ZINC ACETATE
-	NONE	Hg	MERCURIC CHLORIDE

An incomplete chain of custody may delay the  
 processing of your sample(s).

ANALYSIS TO BE PERFORMED  
 (PER CONTAINER)

COMPOSITED ON RECEIPT  
 PRESERVATIVE ADDED ON RECEIPT

Please fill out all  
 applicable areas  
 completely

LAB USE ONLY

CONTAINER	SAMPLING POINT	DATE SAMPLED	TIME OF SAMPLING	SAMPLE MATRIX	SAMPLE TYPE - GRAB / COMPOSITE	SAMPLER INITIALS	PRESERVATIVE	ANALYSIS TO BE PERFORMED (PER CONTAINER)	COMPOSITED ON RECEIPT	PRESERVATIVE ADDED ON RECEIPT	LAB USE ONLY
1	Air Cuttings	12/6	1148	SO	C	S	N	TPH			
2								pH, Chlorides, Sodium			
3								TCLP 8 RCRA Metals + Cu, Ni, Zn			
4								Free Liquids / % Moisture			
5	A- TPH										
6	B- pH, Free liquid, % moisture							Perform BTEX ONLY IF the TPH exceeds 100,000 mg/Kg			
7	C- Anions, metals										
8	D- total Sample										
9	E- TCLP metals							<u>72</u> HOUR TURNAROUND du			
10								DAY TURNAROUND			
11											

LAB USE ONLY  
 DELIVERED BY: [Signature] TEMPERATURE (IF NOT RECEIVED): 0 °C ARRIVAL ON ICE: 0 °C

RELINQUISHED BY: <u>[Signature]</u>	DATE: 12/6/10	TIME: 1540	RECEIVED BY:	DATE: 1/1	TIME:
RELINQUISHED BY:	DATE: 1/1	TIME:	RECEIVED BY:	DATE: 1/1	TIME:
RELINQUISHED BY:	DATE: 1/1	TIME:	RECEIVED BY: <u>Charlene Nelson</u>	DATE: 12/6/10	TIME: 1540

PA ID #: 08-00380  
NY ID #: 11216

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169  
Fax: (570) 888-0717

Work Order: 10121730

SEND DATA TO:

NAME: Dina Brown  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10121730  
PAGE: 1 of 3  
PO#: AF78554

PHONE: (607) 562-4000  
FAX: (607) 562-4001

## TEST REPORT

PWS ID#

E1 H

RECEIVED FOR LAB BY: RML

DATE: 12/09/2010 15:45

Page 1 of 3

SAMPLE: **Inv. Cuttings**

Lab ID: 10121730-001A Grab

SAMPLED BY: SG

Sample Time: 12/08/2010 21:56

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Ignitability	Neg ASIS °F	SW846 1030		12/15/10 13:30	12/15/10	
Sample Note: Analysis performed by QC Laboratories						

SAMPLE: **Inv. Cuttings**

Lab ID: 10121730-001C Grab

SAMPLED BY: SG

Sample Time: 12/08/2010 21:56

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Cyanide, Reactive	< 0.2 mg/Kg	SW 7.3.3.2	0.2	12/13/10 8:56	12/14/10	HDP-CV
Reactive Sulfide	16 mg/Kg	SW846 7.3	16	12/14/10 12:30	12/14/10	LTW-CV

SAMPLE: **Inv. Cuttings**

Lab ID: 10121730-001D Grab

SAMPLED BY: SG

Sample Time: 12/08/2010 21:56

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
% Solids	75.20 % Wght.	SM2540B	0.10	12/10/10 17:00	12/13/10	IC-SA
Total Volatile Solids	12.95 % Wght.	EPA 160.4	0.01	12/10/10 8:00	12/14/10	NFM-SA

SAMPLE: **TCLP Leachate of Inv. Cuttings**

Lab ID: 10121730-001F Grab

SAMPLED BY: SG

Sample Time: 12/11/2010 12:45

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Pyridine	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
1,4-Dichlorobenzene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
o-Cresol	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
p-Cresol/m-Cresol	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Hexachloroethane	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Nitrobenzene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Hexachlorobutadiene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

B Analyte detected in the associated Method Blank

R RPD outside accepted recovery limits

MANAGER

*Cassie M. Davis*

DATE: 12/16/2010

PA ID #: 08-00380  
NY ID #: 11216

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169  
Fax: (570) 888-0717

Work Order: 10121730

SEND DATA TO:

NAME: Dina Brown  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10121730  
PAGE: 2 of 3  
PO#: AF78554  
PWS ID#

PHONE: (607) 562-4000  
FAX: (607) 562-4001

**TEST REPORT**

E1 H

RECEIVED FOR LAB BY: RML

DATE: 12/09/2010 15:45

Page 2 of 3

Test	Result	Method	Concentration	Analysis Start	Analysis End	Analyst
2,4,6-Trichlorophenol	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
2,4,5-Trichlorophenol	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Pentachlorophenol	< 0.50 mg/L	EPA 8270C	0.50	12/15/10 7:48	12/15/10	RHH-SA
2,4-Dinitrotoluene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Hexachlorobenzene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA
Naphthalene	< 0.10 mg/L	EPA 8270C	0.10	12/15/10 7:48	12/15/10	RHH-SA

SAMPLE: **TCLP Leachate of Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10121730-001G

Grab

Sample Time: 12/07/2010 8:00

Test	Result	Method	Concentration	Analysis Start	Analysis End	Analyst
Strontium - TCLP extracted	< 0.050 mg/L	EPA 6010B	0.050	12/08/10 12:15	12/08/10	GSR-CV

Sample Note: Sample for TCLP extracted Strontium was received on 12/6/10 at 15:40 by CMS.

SAMPLE: **TCLP Leachate of Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10121730-001H

Grab

Sample Time: 12/11/2010 12:45

Test	Result	Method	Concentration	Analysis Start	Analysis End	Analyst
pH	6.17@16.4°C	SM4500H+B		12/14/10 8:00	12/14/10	SG-SA

SAMPLE: **ZHE Extract of Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10121730-001I

Grab

Sample Time: 12/12/2010 13:10

Test	Result	Method	Concentration	Analysis Start	Analysis End	Analyst
Benzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Carbon tetrachloride	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Chlorobenzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Chloroform	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
1,2-Dichloroethane	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
1,1-Dichloroethene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Ethylbenzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Isopropylbenzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

B Analyte detected in the associated Method Blank

R RPD outside accepted recovery limits

MANAGER

*Cassie M. Davis*

DATE: 12/16/2010

PA ID #: 08-00380  
NY ID # 11216

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169  
Fax: (570) 888-0717

Work Order: 10121730

SEND DATA TO:

NAME: Dina Brown  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10121730  
PAGE: 3 of 3  
PO#: AF78554  
PWS ID#

PHONE: (607) 562-4000  
FAX: (607) 562-4001

**TEST REPORT**

E1 H

RECEIVED FOR LAB BY: RML

DATE: 12/09/2010 15:45

Page 3 of 3

Test	Result	Method	Concentration	Analysis Date	Analysis Time	Analyst
Tetrachloroethene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Toluene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Trichloroethene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
1,2,4-Trimethylbenzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
1,3,5-Trimethylbenzene	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Vinyl chloride	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
Methyl tert-butyl ether	< 0.0250 mg/L	EPA 8260B	0.0250	12/13/10 8:11	12/13/10	CTM-SA
2-Butanone	< 0.0500 mg/L	EPA 8260B	0.0500	12/13/10 8:11	12/13/10	CTM-SA

SAMPLE: **ASTM Extract of Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10121730-001J Grab  
Sample Time: 12/10/2010 11:15

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Chemical Oxygen Demand	152 mg/L	B HACH 8000	10	12/11/10 8:00	12/13/10	KMF-SA

SAMPLE: **ASTM Extract of Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10121730-001L Grab  
Sample Time: 12/10/2010 11:15

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
pH	7.05@16.7°C	SM4500H+B		12/14/10 8:00	12/14/10	SG-SA
Total Solids	342 mg/L	R SM2540B	0.10	12/10/10 17:00	12/13/10	IC-SA

SAMPLE: **Inv. Cuttings**  
SAMPLED BY: SG

Lab ID: 10121730-001M Grab  
Sample Time: 12/10/2010 10:25

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Total Organic Halides	< 5.00 mg/kg	SW846/9023	5.00	12/15/10 15:45	12/15/10	

Sample Note: Analysis performed by Analytical Services, Inc.

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

B Analyte detected in the associated Method Blank

R RPD outside accepted recovery limits

MANAGER

*Cassie M. Davis*

DATE: 12/16/2010



**CHAIN OF CUSTODY**

**Benc**

REPORT TO: Talisman / UEG  
geowetlands@aol.com

2566 Penns  
F

**W/O#: 10121730**

ARE SPECIAL DETECTION LIMITS NEEDED:  YES /  NO  
IF YES, PLEASE ATTACH  
IS A QC PACKAGE NEEDED?  YES /  NO  
IF YES, PLEASE ATTACH REQUIREMENTS

CONTACT **Steve Gridley**  
PH# 607-731-0145  
FAX#  
BILL TO: Talisman

REFRIGERATE SAMPLES AFTER COLLECTION

TRANSPORT TO LABORATORY IN COOLER WITH ICE

RESULTS ARE BEING USED FOR:  
 NYDOH  NYDEC  PADEP  
LANDFILL Mostoller  
 PERSONAL  OTHER

PO# **AF 78554**  
PROJECT DESCRIPTION **BIH**  
SAMPLER SIGNATURE / AFFILIATION *[Signature]* **UEG**  
CONTAINER / SAMPLING POINT

DW DRINKING WATER SL SLUDGE  
GW GROUND WATER SO SOIL  
SW SURFACE WATER HZ HAZARDOUS  
WW WASTE WATER OTHER  
DE DEIONIZED WATER DI DISTILLED WATER

H HYDROCHLORIC ACID OH SODIUM HYDROXIDE  
S SULFURIC ACID AS ASCORBIC ACID  
N NITRIC ACID AC ACETIC ACID  
SO<sub>3</sub> SODIUM SULFITE NH<sub>4</sub> AMMONIUM CHLORIDE  
Thio SODIUM THIOSULFATE ZN ZINC ACETATE  
- NONE Hg MERCURIC CHLORIDE

DATE SAMPLED  
TIME OF SAMPLING  
SAMPLE MATRIX  
SAMPLE TYPE - GRAB / COMPOSITE  
SAMPLER INITIALS  
PRESERVATIVE

An incomplete chain of custody may delay the processing of your sample(s).

ANALYSIS TO BE PERFORMED (PER CONTAINER)

COMPOSITED ON RECEIPT  
PRESERVATIVE ADDED ON RECEIPT

Please fill out all applicable areas completely

LAB USE ONLY

1	Inv Cuttings	12/8	2156	SO	C	SO	N	Ignitability, Reactive Sulfide & Cyanide
2					C			PCBs, Total Solids
3	A - flouids, Ign.				G			Total Volatile Solids
4	C - Reactivity				C			Ammonia-Nitrogen
5	D - TS, TSS				C			Water Leaching Procedure: COD,
6	E - T. Sample	✓	✓	✓	C	✓	✓	Total Solids, Oil & Grease,
7	F - TCLP DNA tests.							
8	G - TCLP Metals. Jr							
9	H - TCLP pH							36 HOUR TURNAROUND
10	I - TCLP Volc.							DAY TURNAROUND
11	J - ASTM COD, etc				M	TOX		

LAB USE ONLY  
DELIVERED BY: [Signature] TEMPERATURE UPON RECEIPT: [ ] ARRIVAL ON ICE: [ ]

RELINQUISHED BY: <i>[Signature]</i>	DATE: 12/19/10	TIME: 1530	RECEIVED BY: <i>[Signature]</i>	DATE: 1/1	TIME:
RELINQUISHED BY:	DATE: 1/1	TIME:	RECEIVED BY:	DATE: 1/1	TIME:
RELINQUISHED BY:	DATE: 1/1	TIME:	RECEIVED BY: <i>[Signature]</i>	DATE: 12/19/10	TIME: 1545



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WASTE MANAGEMENT

**FORM 26R  
CHEMICAL ANALYSIS OF RESIDUAL WASTE  
ANNUAL REPORT BY THE GENERATOR**

This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form 26R, reference the item number and identify the date prepared. The date on attached sheets needs to match the date noted below.  General Reference 287.54		<b>DEP USE ONLY</b> Date Received & General Notes		
Date Prepared/Revised February 11, 2011				
<b>SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION</b>				
Company Name Talisman Energy USA Inc.				
If a Subsidiary, Name of Parent Company Talisman Energy Inc.			EPA Generator ID# N/A	
Company Mailing Address Line 1 50 Pennwood Place		Company Mailing Address Line 2		
Company Address Last Line – City Warrendale	State PA	Zip+4 15086	Phone (724) 814-5300	
Company Contact Last Name Brown	First Name Dina	MI	Ext Suffix	
Municipality Warrendale		County Allegheny		
Contact Phone (724) 814-5321	Ext	Contact Email Address dybrown@talismanusa.com		
Is the waste generated at the Company Mailing Address (noted above)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If 'No', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the (01-041/042) well pad site located at 778 Cease Drive, Troy Township, Bradford County, PA. Waste is stored in containers on site.				
Municipality Troy	County Bradford	State PA		
<b>SECTION B. WASTE DESCRIPTION</b>				
Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure	Time Frame
810	Drill cuttings (oil and gas)	1,094	<input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton	<input type="checkbox"/> One Time
<b>1. GENERAL PROPERTIES</b>				
a.	pH Range 8.87 to --- (based on analyses or knowledge)			
b.	Physical State <input type="checkbox"/> Liquid Waste (EPA Method 9095) <input checked="" type="checkbox"/> Solid (EPA Method 9095) <input type="checkbox"/> Gas (ambient temperature & pressure)			
c.	Physical Appearance Color <u>Greyish Black</u> Odor <u>Earthy / Slight Petroleum</u> Number of Solid or Liquid Phases of Separation <u>One</u> Describe each phase of separation. <u>Soil and Rock Fragments</u>			
<b>2. CHEMICAL ANALYSIS ATTACHMENTS</b>				
a.	The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
b.	A detailed description of the waste sampling method is attached.			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
c.	The quality assurance/quality control procedures employed by the laboratory(ies) is attached.			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
d.	The results of the hazardous waste determination is attached.			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
e.	If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.			<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A

3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS																					
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached. <span style="float: right;"><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</span>																				
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached. <span style="float: right;"><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</span>																				
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached. <span style="float: right;"><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A</span>																				
SECTION C. MANAGEMENT OF RESIDUAL WASTE																					
1. PROCESSING OR DISPOSAL FACILITY(IES)																					
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.																					
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 101243																				
b.	<table style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Facility Name</td> <td colspan="3">Northern Tier Solid Waste Authority</td> </tr> <tr> <td>Address Line 1</td> <td colspan="3">108 Steam Hollow Road</td> </tr> <tr> <td>Address Line 1</td> <td colspan="3"></td> </tr> <tr> <td>Address City State ZIP</td> <td>Troy</td> <td>PA</td> <td>16947</td> </tr> <tr> <td>Municipality</td> <td>West Burlington Twp</td> <td>County</td> <td>Bradford</td> </tr> </table>	Facility Name	Northern Tier Solid Waste Authority			Address Line 1	108 Steam Hollow Road			Address Line 1				Address City State ZIP	Troy	PA	16947	Municipality	West Burlington Twp	County	Bradford
Facility Name	Northern Tier Solid Waste Authority																				
Address Line 1	108 Steam Hollow Road																				
Address Line 1																					
Address City State ZIP	Troy	PA	16947																		
Municipality	West Burlington Twp	County	Bradford																		
c.	<table style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Facility Contact Name</td> <td colspan="3">Charles Woodward</td> </tr> <tr> <td>Title</td> <td colspan="3"></td> </tr> <tr> <td>Phone</td> <td>(570) 297-4177</td> <td>Email Address</td> <td>chuckwoodward@epix.net</td> </tr> </table>	Facility Contact Name	Charles Woodward			Title				Phone	(570) 297-4177	Email Address	chuckwoodward@epix.net								
Facility Contact Name	Charles Woodward																				
Title																					
Phone	(570) 297-4177	Email Address	chuckwoodward@epix.net																		
d.	Volume of waste shipped to processing or disposal facility in the previous year. 1,094 <span style="margin-left: 20px;"><input type="checkbox"/> cu yd</span> <span style="margin-left: 20px;"><input type="checkbox"/> gal</span> <span style="margin-left: 20px;"><input type="checkbox"/> lb</span> <span style="margin-left: 20px;"><input checked="" type="checkbox"/> ton</span> (check one)																				
a.	Solid waste permit number(s) for processing or disposal facility being utilized.																				
b.	<table style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Facility Name</td> <td colspan="3"></td> </tr> <tr> <td>Address Line 1</td> <td colspan="3"></td> </tr> <tr> <td>Address Line 1</td> <td colspan="3"></td> </tr> <tr> <td>Address City State ZIP</td> <td colspan="3"></td> </tr> <tr> <td>Municipality</td> <td></td> <td>County</td> <td></td> </tr> </table>	Facility Name				Address Line 1				Address Line 1				Address City State ZIP				Municipality		County	
Facility Name																					
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Address City State ZIP																					
Municipality		County																			
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Facility Contact Name																					
Title																					
Phone		Email Address																			
d.	Volume of waste shipped to processing or disposal facility in the previous year. <span style="margin-left: 20px;"><input type="checkbox"/> cu yd</span> <span style="margin-left: 20px;"><input type="checkbox"/> gal</span> <span style="margin-left: 20px;"><input type="checkbox"/> lb</span> <span style="margin-left: 20px;"><input type="checkbox"/> ton</span> (check one)																				
2. BENEFICIAL USE																					
a.	Has the waste been approved for beneficial use? <span style="float: right;"><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</span> If "Yes", list the general permit number or approval number.																				
b.	Volume of waste beneficially used in the previous year. 0 <span style="margin-left: 20px;"><input type="checkbox"/> cu yd</span> <span style="margin-left: 20px;"><input type="checkbox"/> gal</span> <span style="margin-left: 20px;"><input type="checkbox"/> lb</span> <span style="margin-left: 20px;"><input type="checkbox"/> ton</span> (check one)																				

**SECTION D. CERTIFICATION**

I certify, under penalty of law, that I have personally examined and am familiar with the information submitted in this Annual Report and all attached documents and that based upon my inquiry of those individuals immediately responsible for obtaining the information, I verify that the submitted information is true, accurate and complete to the best of my knowledge. I understand that the submission of false information herein is made subject to the penalties of 18 Pa. C.S. §4904, relating to unsworn falsification to authorities, which include fine and imprisonment.

Check the following, if applicable:

I certify the information required in Section B-1, General Properties was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-2, Chemical Analysis was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-3, Process Description and Schematic, was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

Name of Responsible Official \_\_\_\_\_ Title Environmental Specialist

Dina Brown

Signature  Date 2/25/14

LAB ID: 08-00380  
LAB ID: 39-00401

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10030587

Phone: (570) 888-0169

Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10030587

PAGE: 1 of 1

PO#:

PWS ID#

PHONE: (607) 562-4000

FAX: (607) 562-4001

## TEST REPORT

Inv. Spill

RECEIVED FOR LAB BY: DLM2

DATE: 03/03/2010 9:38

Page 1 of 1

SAMPLE: **Pad-Clean Soil-W1**

Lab ID: 10030587-001A

Composite

SAMPLED BY: SG

Sample Time: 03/02/2010 12:00

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>		<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
pH	8.87 @ 24.2°C	EPA 9045D		03/08/10 14:37	03/08/10	NC-CV
Total Petroleum Hydrocarbons	< 170 mg/Kg	EPA 1664A	170	03/11/10 9:00	03/11/10	DTG-CV

SAMPLE: **Pad-Clean Soil-W1**

Lab ID: 10030587-001C

Composite

SAMPLED BY: SG

Sample Time: 03/02/2010 12:00

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>		<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.0008	03/11/10 8:30	03/12/10	KW-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	03/10/10 13:40	03/11/10	RMD-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	03/10/10 13:40	03/11/10	RMD-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	03/10/10 13:40	03/11/10	RMD-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	03/10/10 13:40	03/11/10	RMD-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	03/10/10 13:40	03/11/10	RMD-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	03/10/10 13:40	03/11/10	RMD-CV
Nickel - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	03/10/10 13:40	03/11/10	RMD-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	03/10/10 13:40	03/11/10	RMD-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	03/10/10 13:40	03/11/10	RMD-CV
Zinc - TCLP extracted	6.15 mg/L	EPA 6010B	0.200	03/10/10 13:40	03/11/10	RMD-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER

*Annie M. Davis*

DATE: 3/12/2010



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WASTE MANAGEMENT

**FORM 26R**  
**CHEMICAL ANALYSIS OF RESIDUAL WASTE**  
**ANNUAL REPORT BY THE GENERATOR**

This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form 26R, reference the item number and identify the date prepared. The date on attached sheets needs to match the date noted below.  General Reference 287.54		<b>DEP USE ONLY</b> Date Received & General Notes		
Date Prepared/Revised February 11, 2011				
<b>SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION</b>				
Company Name Talisman Energy USA Inc.				
If a Subsidiary, Name of Parent Company Talisman Energy Inc.			EPA Generator ID# N/A	
Company Mailing Address Line 1 50 Pennwood Place		Company Mailing Address Line 2		
Company Address Last Line – City Warrendale	State PA	Zip+4 15086	Phone (724) 814-5300	
Company Contact Last Name Brown	First Name Dina	MI MI	Suffix Suffix	
Municipality Warrendale		County Allegheny		
Contact Phone (724) 814-5321	Ext ---	Contact Email Address dybrown@talismanusa.com		
Is the waste generated at the Company Mailing Address (noted above)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If 'No', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the (03-014) well pad site located at 1749 Lodge Hill Road, Columbia Township, Bradford County, PA. Waste is stored in containers on site.				
Municipality Columbia		County Bradford	State PA	
<b>SECTION B. WASTE DESCRIPTION</b>				
Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure	Time Frame
810	Drilling Cuttings (Oil and Gas)	240	<input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton	<input type="checkbox"/> One Time
<b>1. GENERAL PROPERTIES</b>				
a.	pH Range	12.24 to ---	(based on analyses or knowledge)	
b.	Physical State	<input type="checkbox"/> Liquid Waste (EPA Method 9095) <input checked="" type="checkbox"/> Solid (EPA Method 9095) <input type="checkbox"/> Gas (ambient temperature & pressure)		
c.	Physical Appearance	Color Greyish Black	Odor	Earthy / Slight Petroleum
		Number of Solid or Liquid Phases of Separation One Describe each phase of separation. Soil and Rock Fragments		
<b>2. CHEMICAL ANALYSIS ATTACHMENTS</b>				
a.	The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
b.	A detailed description of the waste sampling method is attached.			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
c.	The quality assurance/quality control procedures employed by the laboratory(ies) is attached.			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
d.	The results of the hazardous waste determination is attached.			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
e.	If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.			<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A

3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS			
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
SECTION C. MANAGEMENT OF RESIDUAL WASTE			
1. PROCESSING OR DISPOSAL FACILITY(IES)			
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.			
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 100361		
b.	Facility Name	McKean County Landfill	
	Address Line 1	19 Ness Lane	
	Address Line 1		
	Address City State ZIP	Kane PA	16735
	Municipality	Sergeant Twp County	McKean
c.	Facility Contact Name	Mike Manderfeld	
	Title		
	Phone	(814) 778-9931	Email Address manderfeld@gmail.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 114 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 8-4630-00010		
b.	Facility Name	Hakes C&D Landfill	
	Address Line 1	4376 Manning Ridge Road	
	Address Line 1		
	Address City State ZIP	Painted Post NY	14870
	Municipality	Erwin Twp County	Steuben
c.	Facility Contact Name	Joseph Boyles	
	Title		
	Phone	(607) 937-6044	Email Address joe.boyles@casella.com
		(585) 466-7271	
d.	Volume of waste shipped to processing or disposal facility in the previous year. 50 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
2. BENEFICIAL USE			
a.	Has the waste been approved for beneficial use? If "Yes", list the general permit number or approval number.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		

3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS			
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
SECTION C. MANAGEMENT OF RESIDUAL WASTE			
1. PROCESSING OR DISPOSAL FACILITY(IES)			
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.			
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 9-0232-00003		
b.	Facility Name	Hyland Landfill	
	Address Line 1	6653 Herdman Road	
	Address Line 1		
	Address City State ZIP	Angelica NY	14709
	Municipality	Angelica	County Allegany
c.	Facility Contact Name	Larry Shilling	
	Title		
	Phone	(585) 466-7271	Email Address larry.shilling@casella.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 38 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 8-0728-00004		
b.	Facility Name	Chemung County Landfill	
	Address Line 1	1690 Lake Street	
	Address Line 1		
	Address City State ZIP	Elmira NY	14903
	Municipality	Elmira	County Chemung
c.	Facility Contact Name	Carla Canjar	
	Title	Environmental Manager	
	Phone	(585) 797-5941	Email Address carla.canjar@casella.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 20 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
2. BENEFICIAL USE			
a.	Has the waste been approved for beneficial use? If "Yes", list the general permit number or approval number.		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		



3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS			
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
SECTION C. MANAGEMENT OF RESIDUAL WASTE			
1. PROCESSING OR DISPOSAL FACILITY(IES)			
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.			
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 100945		
b.	Facility Name	Cumberland County Landfill	
	Address Line 1	135 Vaughn Road	
	Address Line 1		
	Address City State ZIP	Newburg PA	17240
	Municipality	Newburg Boro	County Cumberland
c.	Facility Contact Name	Dusty Hilbert	
	Title	Compliance Manager	
	Phone	(717) 729-5261	Email Address dhilbert@iswaste.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 18 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
a.	Solid waste permit number(s) for processing or disposal facility being utilized.		
b.	Facility Name		
	Address Line 1		
	Address Line 1		
	Address City State ZIP		
	Municipality	County	
c.	Facility Contact Name		
	Title		
	Phone	Email Address	
d.	Volume of waste shipped to processing or disposal facility in the previous year. <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		
2. BENEFICIAL USE			
a.	Has the waste been approved for beneficial use? If "Yes", list the general permit number or approval number.		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		

**SECTION D. CERTIFICATION**

I certify, under penalty of law, that I have personally examined and am familiar with the information submitted in this Annual Report and all attached documents and that based upon my inquiry of those individuals immediately responsible for obtaining the information, I verify that the submitted information is true, accurate and complete to the best of my knowledge. I understand that the submission of false information herein is made subject to the penalties of 18 Pa. C.S. §4904, relating to unsworn falsification to authorities, which include fine and imprisonment.

Check the following, if applicable:

I certify the information required in Section B-1, General Properties was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-2, Chemical Analysis was supplied to the Department for the year \_\_\_\_\_ and has not changed.


Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-3, Process Description and Schematic, was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

Name of Responsible Official	Title
Dina Brown	Environmental Specialist
Signature 	Date
	2/28/11

LAB ID: 08-00380  
LAB ID: 39-00401

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10124000

Phone: (570) 888-0169  
Fax: (570) 888-0717

**SEND DATA TO:**

NAME: Dina Brown  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10124000  
PAGE: 1 of 4  
PO#: AF 78737  
PWS ID#

PHONE: (607) 562-4000  
FAX: (607) 562-4001

## TEST REPORT

J4H Well Pad

RECEIVED FOR LAB BY: CMS

DATE: 12/28/2010 13:50

Page 1 of 4

SAMPLE: **Air Cuttings** Lab ID: 10124000-001A Grab  
SAMPLED BY: DJD Sample Time: 12/28/2010 9:45

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Total Petroleum Hydrocarbons	<190 mg/Kg	EPA 9071	190	12/29/10 15:10	12/29/10	

Sample Note: Analysis performed by Microbac Laboratories, Inc-Erie Division.

SAMPLE: **Air Cuttings** Lab ID: 10124000-001B Grab  
SAMPLED BY: DJD Sample Time: 12/28/2010 9:45

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Moisture	71.4 %	Moisture Calc.	0.01	01/03/11 11:30	01/04/11	KMF-SA
Free Liquid	< 0.1 %	EPA 9095A	0.1	12/28/10 17:05	12/28/10	IC-SA
pH	12.24@19.8°C	EPA 9045C		12/29/10 11:41	12/29/10	SG-SA

SAMPLE: **Air Cuttings** Lab ID: 10124000-001C Grab  
SAMPLED BY: DJD Sample Time: 12/28/2010 9:45

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Sodium	941 mg/Kg	EPA 6010B	69.4	12/30/10 10:00	01/03/11	GSR-CV
Chloride	926 mg/Kg	EPA 300.0	48.0	01/04/11 12:43	01/05/11	HDP-CV
ASTMD Chloride	43.7 mg/L	EPA 300.0	25.0	01/07/11 15:12	01/07/11	HDP-CV
ASTMD pH	12.25 @ 19.3°C	SM4500H+B		01/07/11 14:22	01/07/11	LTW-CV
Cyanide, Reactive	< 0.2 mg/Kg	SW 7.3.3.2	0.2	01/06/11 9:28	01/07/11	HDP-CV
Reactive Sulfide	< 64 mg/Kg	SW846 7.3	64	01/10/11 8:55	01/10/11	LTW-CV

SAMPLE: **TCLP Leachate of Air Cuttings** Lab ID: 10124000-001E Grab  
SAMPLED BY: DJD Sample Time: 12/29/2010 8:00

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.0008	12/30/10 11:30	01/03/11	KW-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	12/30/10 9:30	01/03/11	GSR-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	12/30/10 9:30	01/03/11	GSR-CV

**REMARKS:**

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

L Value above calibration range but within annually verified linear range

MANAGER

*Cassie M. Davis*

DATE: 1/12/2011

LAB ID: 08-00380  
LAB ID: 39-00401

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169  
Fax: (570) 888-0717

Work Order: 10124000

**SEND DATA TO:**

NAME: Dina Brown  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10124000  
PAGE: 2 of 4  
PO#: AF 78737  
PWS ID#

PHONE: (607) 562-4000  
FAX: (607) 562-4001

## TEST REPORT

J4H Well Pad

RECEIVED FOR LAB BY: CMS

DATE: 12/28/2010 13:50

Page 2 of 4

Component	Concentration	Method	Concentration	Time	Date	Analyst
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	12/30/10 9:30	01/03/11	GSR-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	12/30/10 9:30	01/03/11	GSR-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	12/30/10 9:30	01/03/11	GSR-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	12/30/10 9:30	01/03/11	GSR-CV
Nickel - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	12/30/10 9:30	01/03/11	GSR-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	12/30/10 9:30	01/03/11	GSR-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	12/30/10 9:30	01/03/11	GSR-CV
Strontium - TCLP extracted	3.02 mg/L	EPA 6010B	0.050	12/30/10 9:30	01/03/11	GSR-CV
Zinc - TCLP extracted	< 0.200 mg/L	EPA 6010B	0.200	12/30/10 9:30	01/03/11	GSR-CV

SAMPLE: **TCLP Leachate of Air Cuttings**  
SAMPLED BY:

Lab ID: 10124000-001F Grab  
Sample Time: 01/06/2011 8:00

**SLOQ**

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Pyridine	< 0.10 mg/L	EPA 8270C	0.10	01/10/11 10:20	01/10/11	RHH-SA
1,4-Dichlorobenzene	< 0.10 mg/L	EPA 8270C	0.10	01/10/11 10:20	01/10/11	RHH-SA
o-Cresol	< 0.10 mg/L	EPA 8270C	0.10	01/10/11 10:20	01/10/11	RHH-SA
p-Cresol/m-Cresol	< 0.10 mg/L	EPA 8270C	0.10	01/10/11 10:20	01/10/11	RHH-SA
Hexachloroethane	< 0.10 mg/L	EPA 8270C	0.10	01/10/11 10:20	01/10/11	RHH-SA
Nitrobenzene	< 0.10 mg/L	EPA 8270C	0.10	01/10/11 10:20	01/10/11	RHH-SA
Hexachlorobutadiene	< 0.10 mg/L	EPA 8270C	0.10	01/10/11 10:20	01/10/11	RHH-SA
2,4,6-Trichlorophenol	< 0.10 mg/L	EPA 8270C	0.10	01/10/11 10:20	01/10/11	RHH-SA
2,4,5-Trichlorophenol	< 0.10 mg/L	EPA 8270C	0.10	01/10/11 10:20	01/10/11	RHH-SA
Pentachlorophenol	< 0.50 mg/L	EPA 8270C	0.50	01/10/11 10:20	01/10/11	RHH-SA
2,4-Dinitrotoluene	< 0.10 mg/L	EPA 8270C	0.10	01/10/11 10:20	01/10/11	RHH-SA
Hexachlorobenzene	< 0.10 mg/L	EPA 8270C	0.10	01/10/11 10:20	01/10/11	RHH-SA
Naphthalene	< 0.10 mg/L	EPA 8270C	0.10	01/11/11 8:25	01/11/11	RHH-SA

**REMARKS:**

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

L Value above calibration range but within annually verified linear range

MANAGER

*Carrie M. Davis*

DATE: 1/12/2011

LAB ID: 08-00380  
LAB ID: 39-00401

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169  
Fax: (570) 888-0717

Work Order: 10124000

SEND DATA TO:

NAME: Dina Brown  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10124000  
PAGE: 3 of 4  
PO#: AF 78737  
PWS ID#

PHONE: (607) 562-4000  
FAX: (607) 562-4001

**TEST REPORT**

J4H Well Pad

RECEIVED FOR LAB BY: CMS

DATE: 12/28/2010 13:50

Page 3 of 4

SAMPLE: **TCLP Leachate of Air Cuttings**

Lab ID: 10124000-001G

Grab

SAMPLED BY:

Sample Time: 01/06/2011 8:00

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>	<u>SLOQ</u>	<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst*</u>
Benzene	< 0.0250 mg/L	EPA 8260B	0.0250	01/07/11 9:22	01/07/11	CTM-SA
Carbon tetrachloride	< 0.0250 mg/L	EPA 8260B	0.0250	01/07/11 9:22	01/07/11	CTM-SA
Chlorobenzene	< 0.0250 mg/L	EPA 8260B	0.0250	01/07/11 9:22	01/07/11	CTM-SA
Chloroform	< 0.0250 mg/L	EPA 8260B	0.0250	01/07/11 9:22	01/07/11	CTM-SA
1,2-Dichloroethane	< 0.0250 mg/L	EPA 8260B	0.0250	01/07/11 9:22	01/07/11	CTM-SA
1,1-Dichloroethene	< 0.0250 mg/L	EPA 8260B	0.0250	01/07/11 9:22	01/07/11	CTM-SA
Ethylbenzene	< 0.0250 mg/L	EPA 8260B	0.0250	01/07/11 9:22	01/07/11	CTM-SA
Isopropylbenzene	< 0.0250 mg/L	EPA 8260B	0.0250	01/07/11 9:22	01/07/11	CTM-SA
Tetrachloroethene	0.0260 mg/L	EPA 8260B		01/07/11 9:22	01/07/11	CTM-SA
Toluene	< 0.0250 mg/L	EPA 8260B	0.0250	01/07/11 9:22	01/07/11	CTM-SA
Trichloroethene	< 0.0250 mg/L	EPA 8260B	0.0250	01/07/11 9:22	01/07/11	CTM-SA
1,2,4-Trimethylbenzene	< 0.0250 mg/L	EPA 8260B	0.0250	01/07/11 9:22	01/07/11	CTM-SA
1,3,5-Trimethylbenzene	< 0.0250 mg/L	EPA 8260B	0.0250	01/07/11 9:22	01/07/11	CTM-SA
Vinyl chloride	< 0.0250 mg/L	EPA 8260B	0.0250	01/07/11 9:22	01/07/11	CTM-SA
Methyl tert-butyl ether	< 0.0250 mg/L	EPA 8260B	0.0250	01/07/11 9:22	01/07/11	CTM-SA
2-Butanone	< 0.0500 mg/L	EPA 8260B	0.0500	01/07/11 9:22	01/07/11	CTM-SA

SAMPLE: **Air Cuttings**

Lab ID: 10124000-001H

Grab

SAMPLED BY: DJD

Sample Time: 12/29/2010 8:00

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>	<u>SLOQ</u>	<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst*</u>
Total Organic Halides	< 5.00 mg/kg	SW846/9023	5.00	01/11/11 15:00	01/11/11	

Sample Note: Analysis performed by Analytical Services, Inc.

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

L Value above calibration range but within annually verified linear range

MANAGER

*Carrie M. Davis*

DATE:

1/12/2011

LAB ID: 08-00380  
LAB ID: 39-00401

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Phone: (570) 888-0169  
Fax: (570) 888-0717

Work Order: 10124000

SEND DATA TO:

NAME: Dina Brown  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10124000  
PAGE: 4 of 4  
PO#: AF 78737  
PWS ID#

PHONE: (607) 562-4000  
FAX: (607) 562-4001

**TEST REPORT**

J4H Well Pad

RECEIVED FOR LAB BY: CMS

DATE: 12/28/2010 13:50

Page 4 of 4

SAMPLE: **Air Cuttings**  
SAMPLED BY: DJD

Lab ID: 10124000-0011  
Sample Time: 12/29/2010 8:00

Grab

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>	<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst*</u>
Ignitability	Negative AS IS	SW846 1030	01/07/11 14:00	01/07/11	

Sample Note: Analysis performed by QC Laboratories.

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

L Value above calibration range but within annually verified linear range

MANAGER

*Cassie M. Davis*

DATE: 1/12/2011

**CHAIN OF CUSTODY**

**REPORT TO:** Talisman / UEG  
 geowetlands@aol.com  
 twollin@rallysolutions.ca

**CONTACT:** *Dina Beann*  
*[Signature]*

PH# ~~416-745-7245~~ 724-214-5321  
 FAX#

**BILL TO:** Talisman

PO# *AF # AF 78737*

**DESCRIPTION:** *Wet Cell Pad*

**SAMPLER SIGNATURE / AFFILIATION:** *[Signature] / GCS*

**CONTAINER / SAMPLING POINT:** *JAL / Shale bin*

**W/O#: 10124000**

REFRIGERATE SAMPLES AFTER COLLECTION

TRANSPORT TO LABORATORY IN COOLER WITH ICE

RESULTS ARE BEING USED FOR:

<input type="checkbox"/> NYDOH	<input checked="" type="checkbox"/> NYDEC	<input checked="" type="checkbox"/> PADEP
<input type="checkbox"/> LANDFILL	<input type="checkbox"/> PERSONAL	<input type="checkbox"/> OTHER

ARE SPECIAL DETECTION LIMITS NEEDED:  YES  NO

IF YES, PLEASE ATTACH

IS A QC PACKAGE NEEDED?  YES  NO

IF YES, PLEASE ATTACH REQUIREMENTS

DW	DRINKING WATER	SL	SLUDGE
GW	GROUND WATER	SO	SOIL
SW	SURFACE WATER	HZ	HAZARDOUS
WW	WASTE WATER	OTHER	
DE	DEIONIZED WATER	DI	DISTILLED WATER
H	HYDROCHLORIC ACID	OH	SODIUM HYDROXIDE
S	SULFURIC ACID	AS	ASCORBIC ACID
N	NITRIC ACID	AC	ACETIC ACID
SO <sub>3</sub>	SODIUM SULFITE	NH <sub>4</sub>	AMMONIUM CHLORIDE
Thio	SODIUM THIOSULFATE	ZN	ZINC ACETATE
-	NONE	Hg	MERCURIC CHLORIDE

DATE SAMPLED	TIME OF SAMPLING	SAMPLE MATRIX	SAMPLE TYPE	SAMPLER INITIALS	PRESERVATIVE	ANALYSIS TO BE PERFORMED (PER CONTAINER)
<i>12/19/10</i>	<i>9:45 AM</i>	<i>SO</i>	<i>G</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>TPH</i>
						<i>pH, Chlorides, Sodium</i>
						<i>TCLP 8 RCRA Metals + Cu, Ni, Zn</i>
						<i>Free Liquids / % Moisture</i>
						<i>TCLP 8260 / 8270 ONLY IF the TPH exceeds 120,000 mg/Kg</i>
						<i>HOUR TURNAROUND</i>
						<i>7-14 Day DAY TURNAROUND</i>

COMPOSITED ON RECEIPT

PRESERVATIVE ADDED ON RECEIPT

LAB USE ONLY

*-001A-E*

Please fill out all applicable areas completely

An incomplete chain of custody may delay the processing of your sample(s).

1	Air Cuttings	<i>12/19/10</i>	<i>9:45 AM</i>	<i>SO</i>	<i>G</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>TPH</i>			
2								<i>pH, Chlorides, Sodium</i>			
3								<i>TCLP 8 RCRA Metals + Cu, Ni, Zn</i>			
4	<i>A- TPH</i>							<i>Free Liquids / % Moisture</i>			
5	<i>B- Wet Chem</i>										
6	<i>C- Anion Metals, As, Pb, Cd, RSCN</i>							<i>TCLP 8260 / 8270 ONLY IF the TPH exceeds 120,000 mg/Kg</i>			
7	<i>D- Total Sample</i>										
8	<i>E- TCLP Metals</i>										
9	<i>F- 8260 TCLP</i>										
10	<i>G- 8270 TCLP</i>										
11	<i>H- TOC</i>										
	<i>I- TPH</i>										

*due 1/5/11*

DELIVERED BY: *DAVID J. DENKO* TEMPERATURE UPON RECEIPT: *14* °C ARRIVAL ON ICE: *Y*

RELINQUISHED BY: <i>[Signature]</i>	DATE: <i>12/28/10</i>	TIME: <i>1:50 p</i>	RECEIVED BY:	DATE: <i>1/1</i>	TIME:
RELINQUISHED BY:	DATE: <i>1/1</i>	TIME:	RECEIVED BY:	DATE: <i>1/1</i>	TIME:
RELINQUISHED BY:	DATE: <i>1/1</i>	TIME:	RECEIVED BY: <i>[Signature]</i>	DATE: <i>12/28/10</i>	TIME: <i>1:50</i>



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WASTE MANAGEMENT

**FORM 26R**  
**CHEMICAL ANALYSIS OF RESIDUAL WASTE**  
**ANNUAL REPORT BY THE GENERATOR**

This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form 26R, reference the item number and identify the date prepared. The date on attached sheets needs to match the date noted below.				<b>DEP USE ONLY</b>	
General Reference 287.54				Date Received & General Notes	
Date Prepared/Revised		February 11, 2011			
<b>SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION</b>					
Company Name Talisman Energy USA Inc.					
If a Subsidiary, Name of Parent Company Talisman Energy Inc.				EPA Generator ID# N/A	
Company Mailing Address Line 1 50 Pennwood Place			Company Mailing Address Line 2		
Company Address Last Line – City Warrendale		State PA	Zip+4 15086	Phone (724) 814-5300	Ext
Company Contact Last Name Brown		First Name Dina	MI	Suffix	
Municipality Warrendale		County Allegheny			
Contact Phone (724) 814-5321		Ext	Contact Email Address dybrown@talismanusa.com		
Is the waste generated at the Company Mailing Address (noted above)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
If 'No', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the (03-001) well pad site located at 765 Peackham Hill Road, Columbia Township, Bradford County, PA. The waste is stored in containers on site.					
Municipality Columbia		County Bradford	State PA		
<b>SECTION B. WASTE DESCRIPTION</b>					
Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure		Time Frame
810	Drill cuttings (oil and gas)	4,981	<input type="checkbox"/> cu yd	<input type="checkbox"/> gal	
			<input type="checkbox"/> lb	<input checked="" type="checkbox"/> ton	<input type="checkbox"/> One Time
<b>1. GENERAL PROPERTIES</b>					
a.	pH Range	6.29	to	12.07	(based on analyses or knowledge)
b.	Physical State	<input type="checkbox"/> Liquid Waste (EPA Method 9095) <input checked="" type="checkbox"/> Solid (EPA Method 9095) <input type="checkbox"/> Gas (ambient temperature & pressure)			
c.	Physical Appearance	Color	Greyish Black	Odor	Earthy / Slight Petroleum
		Number of Solid or Liquid Phases of Separation		One	
		Describe each phase of separation. Soil and Rock Fragments			
<b>2. CHEMICAL ANALYSIS ATTACHMENTS</b>					
a.	The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.			<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A detailed description of the waste sampling method is attached.			<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	The quality assurance/quality control procedures employed by the laboratory(ies) is attached.			<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
d.	The results of the hazardous waste determination is attached.			<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
e.	If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.			<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A



3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS			
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
SECTION C. MANAGEMENT OF RESIDUAL WASTE			
1. PROCESSING OR DISPOSAL FACILITY(IES)			
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.			
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 9-0232-00003		
b.	Facility Name	Hyland Landfill	
	Address Line 1	6653 Herdman Road	
	Address Line 1		
	Address City State ZIP	Angelica NY	14709
	Municipality	Angelica	County Allegany
c.	Facility Contact Name	Larry Shilling	
	Title		
	Phone	(585) 466-7271	Email Address larry.shilling@casella.com
d.	Volume of waste shipped to processing or disposal facility in the previous year. 3,148 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 8-4630-00010		
b.	Facility Name	Hakes C&D Landfill	
	Address Line 1	4376 Manning Ridge Road	
	Address Line 1		
	Address City State ZIP	Painted Post NY	14870
	Municipality	Erwin Twp	County Steuben
c.	Facility Contact Name	Joseph Boyles	
	Title		
	Phone	(607) 937-6044	Email Address joe.boyles@casella.com
		(585) 466-7271	
d.	Volume of waste shipped to processing or disposal facility in the previous year. 1,549 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)		
2. BENEFICIAL USE			
a.	Has the waste been approved for beneficial use? If "Yes", list the general permit number or approval number.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)		

3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS																					
a.	A detailed description of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached. <span style="float: right;"><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</span>																				
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached. <span style="float: right;"><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</span>																				
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached. <span style="float: right;"><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A</span>																				
SECTION C. MANAGEMENT OF RESIDUAL WASTE																					
1. PROCESSING OR DISPOSAL FACILITY(IES)																					
The area below (a.-d.) will accommodate the identification of two facilities. Attach additional sheets if necessary.																					
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 100361																				
b.	<table style="width:100%; border-collapse: collapse;"> <tr><td style="width: 25%;">Facility Name</td><td colspan="3">McKean County Landfill</td></tr> <tr><td>Address Line 1</td><td colspan="3">19 Ness Lane</td></tr> <tr><td>Address Line 1</td><td colspan="3"></td></tr> <tr><td>Address City State ZIP</td><td>Kane</td><td>PA</td><td>16735</td></tr> <tr><td>Municipality</td><td>Sergeant Twp</td><td>County</td><td>McKean</td></tr> </table>	Facility Name	McKean County Landfill			Address Line 1	19 Ness Lane			Address Line 1				Address City State ZIP	Kane	PA	16735	Municipality	Sergeant Twp	County	McKean
Facility Name	McKean County Landfill																				
Address Line 1	19 Ness Lane																				
Address Line 1																					
Address City State ZIP	Kane	PA	16735																		
Municipality	Sergeant Twp	County	McKean																		
c.	<table style="width:100%; border-collapse: collapse;"> <tr><td style="width: 25%;">Facility Contact Name</td><td colspan="3">Mike Manderfeld</td></tr> <tr><td>Title</td><td colspan="3"></td></tr> <tr><td>Phone</td><td>(814) 778-9931</td><td>Email Address</td><td>manderfeld@gmail.com</td></tr> </table>	Facility Contact Name	Mike Manderfeld			Title				Phone	(814) 778-9931	Email Address	manderfeld@gmail.com								
Facility Contact Name	Mike Manderfeld																				
Title																					
Phone	(814) 778-9931	Email Address	manderfeld@gmail.com																		
d.	Volume of waste shipped to processing or disposal facility in the previous year. 151 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)																				
a.	Solid waste permit number(s) for processing or disposal facility being utilized. 8-0728-00004																				
b.	<table style="width:100%; border-collapse: collapse;"> <tr><td style="width: 25%;">Facility Name</td><td colspan="3">Chemung County Landfill</td></tr> <tr><td>Address Line 1</td><td colspan="3">1690 Lake Street</td></tr> <tr><td>Address Line 1</td><td colspan="3"></td></tr> <tr><td>Address City State ZIP</td><td>Elmira</td><td>NY</td><td>14903</td></tr> <tr><td>Municipality</td><td>Elmira</td><td>County</td><td>Chemung</td></tr> </table>	Facility Name	Chemung County Landfill			Address Line 1	1690 Lake Street			Address Line 1				Address City State ZIP	Elmira	NY	14903	Municipality	Elmira	County	Chemung
Facility Name	Chemung County Landfill																				
Address Line 1	1690 Lake Street																				
Address Line 1																					
Address City State ZIP	Elmira	NY	14903																		
Municipality	Elmira	County	Chemung																		
c.	<table style="width:100%; border-collapse: collapse;"> <tr><td style="width: 25%;">Facility Contact Name</td><td colspan="3">Carla Canjar</td></tr> <tr><td>Title</td><td colspan="3">Environmental Manager</td></tr> <tr><td>Phone</td><td>(585) 797-5941</td><td>Email Address</td><td>carla.canjar@casella.com</td></tr> </table>	Facility Contact Name	Carla Canjar			Title	Environmental Manager			Phone	(585) 797-5941	Email Address	carla.canjar@casella.com								
Facility Contact Name	Carla Canjar																				
Title	Environmental Manager																				
Phone	(585) 797-5941	Email Address	carla.canjar@casella.com																		
d.	Volume of waste shipped to processing or disposal facility in the previous year. 133 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton (check one)																				
2. BENEFICIAL USE																					
a.	Has the waste been approved for beneficial use? <span style="float: right;"><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</span> If "Yes", list the general permit number or approval number.																				
b.	Volume of waste beneficially used in the previous year. 0 <input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input type="checkbox"/> ton (check one)																				

**SECTION D. CERTIFICATION**

I certify, under penalty of law, that I have personally examined and am familiar with the information submitted in this Annual Report and all attached documents and that based upon my inquiry of those individuals immediately responsible for obtaining the information, I verify that the submitted information is true, accurate and complete to the best of my knowledge. I understand that the submission of false information herein is made subject to the penalties of 18 Pa. C.S. §4904, relating to unsworn falsification to authorities, which include fine and imprisonment.

Check the following, if applicable:

I certify the information required in Section B-1, General Properties was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the information required in Section B-2, Chemical Analysis was supplied to the Department for the year \_\_\_\_\_ and has not changed.


Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

I certify the Information required in Section B-3, Process Description and Schematic, was supplied to the Department for the year \_\_\_\_\_ and has not changed.

Form Submitted:  Form 26R  
 Other (specify) \_\_\_\_\_

Date Submitted: \_\_\_\_\_

Name of Responsible Official \_\_\_\_\_ Title Environmental Specialist  
Dina Brown  
Signature  Date 2/25/14

LAB ID: 08-00380  
LAB ID: 39-00401

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10084198

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10084198  
PAGE: 1 of 1  
PO#: AF 76907

PHONE: (607) 562-4000  
FAX: (607) 562-4001

## TEST REPORT

PWS ID#

01-003

RECEIVED FOR LAB BY: DLM2

DATE: 08/24/2010 15:10

Page 1 of 1

SAMPLE: **Inv. Cuttings & Gypsum Biomatrix**

Lab ID: 10084198-001A

Grab

SAMPLED BY: SG

Sample Time: 08/24/2010 10:20

Test	Result	Method	Req Limit	Analysis Start	Analysis End	Analyst *
Total Petroleum Hydrocarbons	4800 mg/Kg	EPA 9071		08/30/10 10:40	08/30/10	
Sample Note: Analysis performed by Microbac- Erie						

SAMPLE: **Inv. Cuttings & Gypsum Biomatrix**

Lab ID: 10084198-001B

Grab

SAMPLED BY: SG

Sample Time: 08/24/2010 10:20

Test	Result	Method	Req Limit	Analysis Start	Analysis End	Analyst *
Moisture	42.6 %	Moisture Calc.		08/26/10 14:30	08/27/10	IC-SA
Free Liquid	< 0.1 %	EPA 9095A		08/25/10 14:30	08/25/10	IC-SA
pH	6.29@20.0°C	EPA 9045C		08/26/10 16:50	08/26/10	SG-SA

SAMPLE: **TCLP Leachate of Inv. Cuttings & Gypsum Biomatrix**

Lab ID: 10084198-001D

Grab

SAMPLED BY: SG

Sample Time: 08/25/2010 8:00

Test	Result	Method	Req Limit	Analysis Start	Analysis End	Analyst *
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.2	08/25/10 10:30	08/27/10	KW-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	5	08/26/10 10:30	08/26/10	RMD-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	100	08/26/10 10:30	08/26/10	RMD-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	1	08/26/10 10:30	08/26/10	RMD-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	5	08/26/10 10:30	08/26/10	RMD-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B		08/26/10 10:30	08/26/10	RMD-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	5	08/26/10 10:30	08/26/10	RMD-CV
Nickel - TCLP extracted	< 0.100 mg/L	EPA 6010B		08/26/10 10:30	08/26/10	RMD-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	1	08/26/10 10:30	08/26/10	RMD-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	5	08/26/10 10:30	08/26/10	RMD-CV
Zinc - TCLP extracted	8.59 mg/L	EPA 6010B		08/26/10 10:30	08/26/10	RMD-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER

*Carrie M. Davis*

DATE: 8/31/2010

LAB ID: 08-00380  
LAB ID: 39-00401

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10081725

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10081725  
PAGE: 1 of 2  
PO#: AF76907

PHONE: (607) 562-4000  
FAX: (607) 562-4001

**TEST REPORT**

PWS ID#

RECEIVED FOR LAB BY: DLM2

DATE: 08/10/2010 15:33

Page 1 of 2

SAMPLE: **Air Cuttings**  
SAMPLED BY: SG

Lab ID: 10081725-001A  
Sample Time: 08/09/2010 15:00

Grab

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>		<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Total Petroleum Hydrocarbons	491 mg/Kg	EPA 9071		08/12/10 11:10	08/12/10	

Sample Note: Analysis performed by Microbac-Erie

SAMPLE: **Air Cuttings**  
SAMPLED BY: SG

Lab ID: 10081725-001B  
Sample Time: 08/09/2010 15:00

Grab

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>		<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Moisture	40.6 %	Moisture Calc.	0.01	08/12/10 8:45	08/13/10	MED-SA
Free Liquid	< 0.1 %	EPA 9095A	0.1	08/12/10 15:20	08/12/10	RHN-SA
pH	12.07@21.6°C	EPA 9045C		08/12/10 15:42	08/12/10	MED-SA

SAMPLE: **Air Cuttings**  
SAMPLED BY: SG

Lab ID: 10081725-001C  
Sample Time: 08/09/2010 15:00

Grab

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>		<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Sodium	331 mg/Kg-dry	EPA 6010B	230	08/13/10 9:40	08/13/10	RMD-CV
Chloride	1550 mg/Kg-dry	EPA 300.0	84.2	08/11/10 14:31	08/12/10	HDP-CV
Percent Moisture	40.6 %	SM2540G		08/12/10 8:45	08/13/10	MED-SA

SAMPLE: **TCLP Leachate of Air Cuttings**  
SAMPLED BY: SG

Lab ID: 10081725-001E  
Sample Time: 08/09/2010 15:00

Grab

SLOQ

<u>Test</u>	<u>Result</u>	<u>Method</u>		<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Mercury - TCLP extracted	< 0.0008 mg/L	EPA 7470A	0.0008	08/12/10 8:30	08/13/10	KW-CV
Arsenic - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	08/13/10 7:20	08/13/10	RMD-CV
Barium - TCLP extracted	< 10.00 mg/L	EPA 6010B	10.00	08/13/10 7:20	08/13/10	RMD-CV
Cadmium - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	08/13/10 7:20	08/13/10	RMD-CV
Chromium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	08/13/10 7:20	08/13/10	RMD-CV
Copper - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	08/13/10 7:20	08/13/10	RMD-CV
Lead - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	08/13/10 7:20	08/13/10	RMD-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER

*Carrie M. Davis*

DATE: 8/13/2010

LAB ID: 08-00380  
LAB ID: 39-00401

**Benchmark Analytics, Inc.**  
**Eastern Division**

2566 Pennsylvania Ave.  
Sayre, PA 18840

Work Order: 10081725

Phone: (570) 888-0169  
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley  
COMPANY: Talisman Energy USA, Inc.  
ADDRESS: 337 Daniel Zenker Dr  
Horseheads, NY 14845

WO#: 10081725

PAGE: 2 of 2

PO#: AF76907

PHONE: (607) 562-4000  
FAX: (607) 562-4001

**TEST REPORT**

PWS ID#

RECEIVED FOR LAB BY: DLM2

DATE: 08/10/2010 15:33

Page 2 of 2

Nickel - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	08/13/10 7:20	08/13/10	RMD-CV
Selenium - TCLP extracted	< 0.500 mg/L	EPA 6010B	0.500	08/13/10 7:20	08/13/10	RMD-CV
Silver - TCLP extracted	< 0.100 mg/L	EPA 6010B	0.100	08/13/10 7:20	08/13/10	RMD-CV
Zinc - TCLP extracted	< 0.200 mg/L	EPA 6010B	0.200	08/13/10 7:20	08/13/10	RMD-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

\* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER

*Cami M. Davis*

DATE: 8/13/2010

**PRODUCED WATER APRIL 19 - MAY 12**

**Gallons per well total April 19 - May 12**

Sum of Water Produced in Gal		
Pad Name	Well Name	Total
264	EAST RES ALLEN 264 1H	
264 Total		
(03-015)	TEUSA (03-015-01) J 1H	23,773
	TEUSA (03-015-02) J 2H	14,764
	TEUSA (03-015-03) J 3H	15,521
	TEUSA (03-015-04) J 4H	20,933
(03-015) Total		74,991
(03-009)	FEI (03-009-05) L 5H	35,194
	FEI (03-009-06) L 6H	40,880
	FEI (03-009-07) L 7H	34,813
	FEI (03-009-08) L 8H	51,096
(03-009) Total		161,984
(01-025/070)	FEI B 1H (01-025-01) - API 37-015-	1,519
	FEI B 2H (01-025-02) - API 37-015-	3,864
	FEI B 3H (01-070-01) - API 37-015-	3,525
	FEI B 4H (01-070-02) - API 37-015-	946
(01-025/070) Total		9,853
(01-047)	FEI (01-047-01) J 1H	17,902
	FEI (01-047-02) J 2H	16,593
	FEI (01-047-03) J 3H	27,694
	FEI (01-047-04) J 4H	12,035
	FEI (01-047-05) J 5H	10,532
	FEI (01-047-06) J 6H	13,032
(01-047) Total		97,788
(01-005/008)	FEI (01-005-01) R1H - API 37-015-2	12,396
	FEI (01-005-02) R3H - API 37-015-2	15,821
	FEI (01-008-01) R2H - API 37-015-2	12,594
(01-005/008) Total		40,611
DCNR 587 (02-001) PAD	DCNR 587 (02-001-04)	14,235
	DCNR 587 (02-001-05)	6,103
	DCNR 587 (02-001-06)	19,461
DCNR 587 (02-001) PAD Total		39,799
DCNR 587 (02-002) PAD	DCNR 587 (02-002-01)	3,932
	DCNR 587 (02-002-02)	2,909
	DCNR 587 (02-002-03)	2,393
	DCNR 587 (02-002-04)	3,652
DCNR 587 (02-002) PAD Total		12,886
DCNR 587 (02-004) PAD	DCNR 587 (02-004-02)	25,434
	DCNR 587 (02-004-06)	37,492
DCNR 587 (02-004) PAD Total		62,925
DCNR 587 (02-008)	FEI DCNR 587 (02-008-03) 3H	20,026
	FEI DCNR 587 (02-008-04) 4H	18,602
	FEI DCNR 587 (02-008-05) 5H	16,830
	FEI DCNR 587 (02-008-06) 6H	23,416
DCNR 587 (02-008) Total		78,874
DCNR 587 (02-009) PAD	FEI DCNR 587 (02-009-01)	8,286
	FEI DCNR 587 (02-009-02)	5,299

DCNR 587 (02-009) PAD	FEI DCNR 587 (02-009-03)	5,901
	FEI DCNR 587 (02-009-04)	4,174
	FEI DCNR 587 (02-009-05)	5,507
	FEI DCNR 587 (02-009-06)	9,512
DCNR 587 (02-009) PAD Total		38,679
DCNR 587 (02-013)	TEUSA DCNR 587 (02-013-01) 1H	31,290
	TEUSA DCNR 587 (02-013-02) 2H	31,208
	TEUSA DCNR 587 (02-013-03) 3H	30,786
	TEUSA DCNR 587 (02-013-04) 4H	30,828
DCNR 587 (02-013) Total		124,110
DCNR 587 (02-014)	TEUSA DCNR 587 (02-014-01) 1H	67,956
	TEUSA DCNR 587 (02-014-02) 2H	81,950
	TEUSA DCNR 587 (02-014-03) 3H	163,254
DCNR 587 (02-014) Total		293,160
DCNR 587 (02-017) PAD	DCNR 587 (02-017-01)	8,279
	DCNR 587 (02-017-02)	5,356
	DCNR 587 (02-017-03)	9,353
	DCNR 587 (02-017-04)	15,749
DCNR 587 (02-017) PAD Total		38,737
DCNR 587 (02-018) PAD	FEI DCNR 587 (02-018-01) 1H	13,787
	FEI DCNR 587 (02-018-02) 2H	17,751
	FEI DCNR 587 (02-018-03) 3H	6,122
	FEI DCNR 587 (02-018-04) 4H	15,878
	FEI DCNR 587 (02-018-05) 5H	9,033
	FEI DCNR 587 (02-018-06) 6H	6,140
DCNR 587 (02-018) PAD Total		68,712
(03-013)	FEI (03-013-01) W 1H	1,944
	FEI (03-013-02) W 2H	11,575
	FEI (03-013-03) W 3H	14,443
	FEI (03-013-04) W 4H	14,811
	FEI (03-013-05) W 5H	13,780
	FEI (03-013-06) W 6H	3,187
	FEI (03-013-07) W 7H	20,380
	FEI (03-013-08) W 8H	23,291
(03-013) Total		103,410
R (03-045)	TEUSA (03-045-01) J 1H	50,755
	TEUSA (03-045-02) J 2H	31,925
R (03-045) Total		82,680
(01-003)	FEI (01-003-01) J 1H (01-003-01) - API 37-015-	-
(01-003) Total		-
(01-071)	TEUSA (01-071-01) D 1H	31,550
	TEUSA (01-071-02) D 2H	44,207
	TEUSA (01-071-03) D 3H	44,047
(01-071) Total		119,803
(01-004)	FEI (01-004-01) M1H - API 37-015-	6,859
	FEI (01-004-03) M 5H - API 37-015	4,545
	FEI (01-004-02) M 3H (01-004-02) - API 37-015	4,774
(01-004) Total		15,978
(01-012)	FEI (01-012-01) A1H - API 37-015-	15,905
	FEI (01-012-02) A2H - API 37-015-	12,196
(01-012) Total		28,101
HOLDING (01-036)	FEI HOLDINGS (01-036-01) 1H	28,975



[REDACTED] HOLDING (01-036)	FEI [REDACTED]	HOLDINGS (01-036-02) 2H	36,293
	FEI [REDACTED]	HOLDINGS (01-036-03) 3H	44,181
	FEI [REDACTED]	HOLDINGS (01-036-04) 4H	35,451
[REDACTED] HOLDING (01-036) Total			144,900
[REDACTED] (01-017)	FEI [REDACTED]	(01-017-05) G 5H	11,818
	FEI [REDACTED]	(01-017-06) G 6H	9,473
	FEI [REDACTED]	(01-017-07) G 7H	10,008
	FEI [REDACTED]	(01-017-08) G 8H	15,269
[REDACTED] (01-017) Total			46,368
[REDACTED] 257	EAST RES [REDACTED]	257 1H	8,134
[REDACTED] 257 Total			8,134
[REDACTED] 261	EAST RES [REDACTED]	261 1H	5,822
	EAST RES [REDACTED]	261 2H	881
	EAST RES [REDACTED]	261 3H	524
	EAST RES [REDACTED]	261 4H	2,968
	EAST RES [REDACTED]	261 5H	2,265
	EAST RES [REDACTED]	261 6H	1,530
[REDACTED] 261 Total			14,007
[REDACTED] (01-014)	FEI [REDACTED]	(01-014-02) R 2H	23,424
	FEI [REDACTED]	(01-014-03) R 3H	21,193
	FEI [REDACTED]	(01-014-04) R 4H	17,314
[REDACTED] (01-014) Total			61,931
[REDACTED] (01-014)	FEI [REDACTED]	(01-014-01) R 1H	18,566
[REDACTED] (01-014) Total			18,566
[REDACTED] 271	EAST RES [REDACTED]	271 1H	-
[REDACTED] 271 Total			-
[REDACTED] (01-024)	FEI [REDACTED]	(01-024-03) L 8H - API 37-01	18,721
	FEI [REDACTED]	(01-024-04) L 9H - API 37-01	15,478
[REDACTED] (01-024) Total			34,198
[REDACTED] (01-044)	FEI [REDACTED]	(01-044-01) L 1H	8,951
	FEI [REDACTED]	(01-044-02) L 2H	11,142
[REDACTED] (01-044) Total			20,093
[REDACTED] (03-008)	FEI [REDACTED]	(03-008-01) G 1H	26,438
	FEI [REDACTED]	(03-008-02) G 2H	36,794
	FEI [REDACTED]	(03-008-03) G 3H	40,880
	FEI [REDACTED]	(03-008-04) G 4H	55,582
	FEI [REDACTED]	(03-008-05) G 5H	58,707
	FEI [REDACTED]	(03-008-06) G 6H	3,914
	FEI [REDACTED]	(03-008-07) G 7H	41,393
	FEI [REDACTED]	(03-008-08) G 8H	62,878
[REDACTED] (03-008) Total			324,537
[REDACTED] (01-001)	FEI [REDACTED]	(01-001-02) T1V - API 37-015-20	-
[REDACTED] (01-001) Total			-
[REDACTED] (01-007)	FEI [REDACTED]	(01-007-01) T2H - API 37-015-20	5,313
[REDACTED] (01-007) Total			5,313
[REDACTED] (01-015)	FEI [REDACTED]	(01-015-01) T 3H	18,170
	FEI [REDACTED]	(01-015-02) T 4H	16,739
	FEI [REDACTED]	(01-015-03) T 5H	10,670
[REDACTED] (01-015) Total			54,579
[REDACTED] (01-074)	TEUSA [REDACTED]	(01-074-01) W 1H	91,812
	TEUSA [REDACTED]	(01-074-02) W 2H	89,502
	TEUSA [REDACTED]	(01-074-03) W 3H	107,100

(01-074)	TEUSA MORGAN (01-074-04) W 4H	110,544
(01-074) Total		398,958
(01-006)	TEUSA (01-006-01) J 1H	6,398
	TEUSA (01-006-02) J 2H	7,760
	TEUSA (01-006-03) J 3H	-
	TEUSA (01-006-04) J 4H	7,984
(01-006) Total		22,121
(01-076)	FEI (01-076-01) L 7H	34,535
	FEI (01-076-02) L 8H	24,821
	FEI (01-076-03) L 9H	26,804
	FEI (01-076-04) L 10H	36,747
	FEI (01-076-05) L 11H	43,176
	FEI (01-076-06) L 12H	47,082
	FEI (01-076-07) L 13H	57,126
(01-076) Total		284,285
(01-077)	FEI (01-077-01) L 1H	33,510
	FEI (01-077-02) L 2H	36,511
	FEI (01-077-04) L 4H	30,171
	FEI (01-077-05) L 5H	20,568
	FEI (01-077-06) L 6H	22,961
(01-077) Total		143,721
1	EAST RES 1	-
1 Total		-
T 259	EAST RES 259 1H	5,045
	EAST RES 259 2H	59,290
	EAST RES 259 3H	61,722
	EAST RES 259 4H	3,182
	EAST RES 259 5H	21,187
	EAST RES 259 6H	-
T 259 Total		150,426
(01-026/027)	FEI (01-027-01) D 3H - API 37-01	12,721
	FEI D 1H (01-026-01) - API 37-01	10,991
	FEI D 2H (01-026-02) - API 37-01	10,330
(01-026/027) Total		34,042
(01-043/013)	FEI D 4H (01-043-01) - API 37-01	6,528
	FEI D 5H (01-043-02) - API 37-01	5,105
	FEI D 6H (01-013-01) - API 37-01	4,852
	FEI D 7H (01-013-02) - API 37-01	4,485
	FEI D 8H (01-013-03) - API 37-01	5,916
	FEI D 9H (01-043-03) - API 37-01	4,316
(01-043/013) Total		31,202
269	EAST RES 269 1H	-
269 Total		-
(01-001)	FEI (01-001-01) FT1H - API 37-015	6,144
(01-001) Total		6,144
(01-002)	FEI (01-002-01) FT2H - API 37-015	8,269
(01-002) Total		8,269
(01-038)	FEI (01-038-01) FT 3H	2,841
	FEI (01-038-02) FT 4H	3,083
	FEI (01-038-03) FT 5H	3,800
	FEI (01-038-05) FT 7H	3,607
THOMAS (01-038) Total		13,331

TWL ASSOCIATES (01-016)	FEI TWL ASSOCIATES 1H (01-016-01)	21,890
	FEI TWL ASSOCIATES 2H (01-016-02)	15,348
	FEI TWL ASSOCIATES 3H (01-016-03)	12,923
	FEI TWL ASSOCIATES 4H (01-016-04)	15,152
TWL ASSOCIATES (01-016) Total		65,311
(b) (3-004)	FEI (b) (03-004-01) R 1H	14,615
	FEI (b) (03-004-02) R 2H	13,589
	FEI (b) (03-004-03) R 3H	13,851
	FEI (b) (03-004-04) R 4H	18,652
	FEI (b) (03-004-05) R 5H	17,357
(b) (3-004) Total		78,062
(b) (3-054)	TEUSA (b) (03-054-01) J 1H	-
	TEUSA (b) (03-054-02) J 2H	-
	TEUSA (b) (03-054-03) J 3H	-
	TEUSA (b) (03-054-04) J 4H	-
(b) (3-054) Total		-
268	EAST RES (b) 268 1H	25,300
268 Total		25,300
262	EAST RES (b) 262 1 H	-
262 Total		-
(b) (01-041/042)	FEI (b) (01-041-01) R 1H - API 37-0	8,044
	FEI (b) (01-041-02) R 3H - API 37-0	8,160
	FEI (b) (01-041-03) R 5H - API 37-0	8,928
	FEI (b) (01-042-01) R 2H - API 37-0	8,978
	FEI (b) (01-042-02) R 4H - API 37-0	8,059
	FEI (b) (01-042-03) R 6H - API 37-0	8,538
(b) (01-041/042) Total		50,715
(b) (03-001)	TEUSA (b) (03-001-01) E 1H	33,264
	TEUSA (b) (03-001-02) E 2H	12,264
	TEUSA (b) (03-001-03) E 3H	34,188
	TEUSA (b) (03-001-04) E 4H	28,728
(b) (03-001) Total		108,444
(blank)	(blank)	
(blank) Total		
(b) (03-014) J PAD	TEUSA (b) (03-014-04) J 4H	28,980
(b) (03-014) J PAD Total		28,980
Grand Total		3,654,595

Event date	Location	State	Material released	Volume	Environmental media
2009 04 15	Appalachia	US-PA	Oil based drilling fluids	0.10	Land
2009 04 22	Appalachia	US-PA	Stormwater	1.91	Land
2009 06 10		US-PA	Flowback / Completions Fluids Water	0.01	Land
2009 06 30	Appalachia	US-PA	Other - Chemical Product or Mixture	1.15	Land
2009 07 30	Mountain Ridge Road	US-PA	Hydraulic Fluids	0.0190	Land
2009 08 17	Appalachia	US-PA	Oil based drilling fluids	0.1190	Land
2009 08 17		US-PA	Produced Water	0.0314	Land
2009 08 23	Appalachia	US-PA	Produced Water	3.18	Land
2009 09 22	Appalachia	US-PA	Rig wash water (surfactant and residual oil based drilling fluid)	2.38	Land
2009 10 16	Appalachia	US-PA	Produced Water	0.2840	Land
2009 10 26		US-PA	Produced Water	0.0190	Land
2009 11 12	Appalachia	US-PA	Flowback / Completions Fluids Water	0.0020	Land
2009 11 12	Appalachia	US-PA	Flowback / Completions Fluids Water	0.7950	Land
2009 11 21	4H	US-PA	Flowback / Completions Fluids Water	0.03	Land
2009 11 22	Appalachia	US-PA	Oil based drilling fluids	1.19	Land
2009 11 26	Stateland	US-PA	Flowback / Completions Fluids Water	4.77	Land
2009 12 07	Appalachia	US-PA	Oil based drilling fluids	0.06	Land
2009 12 08		US-PA	Produced Water	4.77	Land
2009 12 29	Appalachia	US-PA	Anti-freeze	0.01	Land
2010 01 01	Marcellus	US-PA	Oil based drilling fluids	0.20	Land
2010 01 10	03-013-01 W 1H	US-PA	Oil based drilling fluids	0.18	Land
2010 01 11	(01-013-03) D8H	US-PA	Flowback / Completions Fluids Water	0.0002	Land
2010 01 12	(01-006-03) J3H	US-PA	Diesel Fuel	0.132480	Land
2010 01 12	(01-006-03) J3H	US-PA	Diesel Fuel	0.132480	Land/Poolled rainwater on-site
2010 01 16	DCNR 587 02-002-01	US-PA	Oil based drilling fluids	0.3028	Land
2010 01 21	h R 4H	US-PA	Lubricating Oil	0.0038	Land
2010 01 23	01-042-01 R2H	US-PA	Oil based drilling fluids	0.4770	Land
2010 01 27	L6H - L9H (In L6H in Wellview)	US-PA	Oil based drilling fluids	0.0189	Land
2010 02 04	DCNR 587 (02-017-03)	US-PA	Oil based drilling fluids	1.59	Land
2010 02 22	h (01-077-06) L 6H	US-PA	Diesel Fuel	0.01	Land
2010 02 22	DCNR 587 (02-002-03)	US-PA	Oil based drilling fluids	0.09	Land
2010 02 23	ns (01-042-02) R 4H	US-PA	Hydraulic Fluids	0.04	Land
2010 02 24	Wheeler-Jackson Township	US-PA	Diesel Fuel	0.11	Land
2010 02 26	h (01-077-01) L 1H	US-PA	Hydraulic Fluids	0.0160	Land
2010 03 06	Marcellus Field Area	US-PA	Oil based drilling fluids	0.05	Land
2010 03 08	Putnam (01-077-05) L 5H	US-PA	Diesel Fuel	0.80	Land/Wetland
2010 03 08	FEI (01-077-05) L 5H	US-PA	Air drill cuttings	17.24	Land
2010 03 09	Marcellus Field Area	US-PA	Hydraulic Oil	0.0080	Land
2010 03 16	FEI h (03-004-05) R 5H - Pioneer 59	US-PA	Diesel Fuel	0.0750	Land
2010 03 16	FEI h (03-004-05) R 5H - Pioneer 59	US-PA	Oil based drilling fluids	0.06	Land
2010 03 17	Marcellus Field Area	US-PA	Oil based drilling fluids	0.02	Land
2010 03 20	Appalachia ( FT 1 Pad)	US-PA	Flowback / Completions Fluids Water	1.60	Land
2010 03 21	DCNR 587 (02-002-04)	US-PA	Oil based drilling fluids	1.30	Land
2010 03 25	Appalachia - Thomas (01-038-05) FT 7H (Rig 207)	US-PA	Oil based drilling fluids	0.02	Land
2010 03 27	(01-024-04) R 5H	US-PA	Produced Water	0.02	Land
2010 03 29	B Train #1	US-PA	Lubricating Oil	0.04	Land
2010 04 04	Appalachia - Williams (01-041-01)R 1H	US-PA	Produced Water	0.30	Land



2010 04 08	Cease #3	US-PA	Produced Water	0.0080	Land
2010 04 13	Appalachia - TWL (01-016-04)4H	US-PA	Oil based drilling fluids	0.0750	Land
2010 04 13	Appalachia - Vanblarcom (03-004-01) R 1H	US-PA	Oil based drilling fluids	0.0160	Land
2010 04 14	Appalachia - DCNR 587 (02-004-02)	US-PA	Produced Water	0.16	Land
2010 04 18	Appalachia - Eick (03-013-06) W 6H	US-PA	Hydraulic Fluids	0.0050	Land
2010 05 02	(03-015-02) J 2H (Dallas Morris 16)	US-PA	Hydraulic Fluids	0.0190	Land
2010 05 06	(03-008-08) G 8H (Saxon 171)	US-PA	Oil based drilling fluids	0.06	Land
2010 05 06	DCNR 587 (02-017-04)	US-PA	Fracwater	0.80	Land
2010 05 11	DCNR 587 (02-018-02) (Patterson 56)	US-PA	Oil based drilling fluids	0.05	Land
2010 05 13	(01-041-01) R 1H	US-PA	Hydraulic Fluids	0.0030	Land
2010 05 24	DCNR 587 (02-017-04) (Cudd)	US-PA	Flowback / Completions Fluids Water	0.08	Land
2010 05 25	TWL Associates (01-016-01) 1H	US-PA	Cement with residual oil based drilling fluid	0.07	Land
2010 05 27	Marcellus Field Area	US-PA	Hydraulic Fluids	0.04	Land
2010 06 03	(03-009)	US-PA	Diesel Fuel	0.0020	Land
2010 06 03	(03-004-04) R 4H	US-PA	Oil based drilling fluids	0.0150	Land
2010 07 04	(01-003-01) J 1H	US-PA	Produced Water	0.0190	Land
2010 07 13	(01-077-01) L1H - Precision 209	US-PA	Oil based drilling fluids	2	Land
2010 08 03	Fallbrook Road	US-PA	Hydraulic Fluids	0.0080	Land
2010 08 06		US-PA	Natural gas	0.003790	Air
2010 08 13	Besley Road, Columbia Township	US-PA	Anti-freeze	0.0040	Land
2010 08 20	Bradford County, Troy PA 3 1/2 miles East of route 14	US-PA	Diesel Fuel	0.0950	Land
2010 08 22	(03-013-05) W5H	US-PA	Lubricating Oil	0.0080	Land
2010 09 01	(03-001-02) E 2H	US-PA	Oil based drilling fluids	0.007570	Land
2010 09 02	M Wellsite WL 142157	US-PA	Produced water	0.011350	Land
2010 09 09	DCNR 587 (02-008-04)	US-PA	Diesel Fuel	0.19	Land
2010 09 20	(01-077-01) L 1H	US-PA	Fracwater	0.07	Land
2010 09 20	DCNR 587 (02-018)	US-PA	Produced water	0.01	Land
2010 09 23	DCNR 587 (02-013-02)	US-PA	Lubricating Oil	0.0010	Land
2010 09 23	(01-026-01) D 1	US-PA	Produced water	0.0114	Land
2010 09 27	(01-074-02) W2H	US-PA	Oil based drilling fluids	0.0379	Land
2010 10 05	(01-074-02) W2H	US-PA	Drill cuttings and fresh water based drilling fluid	1.91	Land
2010 10 06	Harvest Holdings 01-036-04 4H	US-PA	Diesel Fuel	0.0189	Land
2010 10 08	(01-076-07) L 13H - Saxon 170	US-PA	Spray paint	0.0010	Land
2010 10 12	(03-067-02) O 2H	US-PA	Oil based drilling fluids	0.015140	Land
2010 10 14		US-PA	Produced Water	0.0114	Land
2010 10 21	Mountain Ridge meter station	US-PA	Methane gas	0.0010	Air
2010 10 23	DCNR 5-587-02-005-03	US-PA	Diesel Fuel	0.08	Land
2010 10 27	Harvest Holdings (01-036-04) 4H	US-PA	Anti-freeze	0.0018	Land
2010 10 28	DCNR 587 StateLands Compressor Station Train #2	US-PA	Glycol	0.0757	Land
2010 11 29	(05-005-01) K1H Saxon Rig 173	US-PA	Oil based drilling fluids	0.0340	Land
2010 12 08	(01-076)	US-PA	Fracwater	6.06	Land
2010 12 14	(05-005-01) K 1H - Saxon 173	US-PA	Diesel Fuel	0.0080	Land
2010 12 17	(01-074-02) 4H - Saxon 172	US-PA	Anti-freeze	0.0010	Land
2010 12 18	Castle pad	US-PA	Produced water	0.0080	Land
2010 12 20	ad	US-PA	Diesel Fuel	0.0080	Land
2010 12 20	(01-075-04) L4H - PD329	US-PA	Hydraulic Fluids	0.007570	Land
2010 12 29	DCNR 587 (02-005-04) - Patterson 56	US-PA	Hydraulic Fluids	0.0040	Land
2010 12 30	DCNR 587 (02-005-05) - Patterson 56	US-PA	Oil based drilling fluids	0.0110	Land

2011 01 06	[REDACTED] (03-008)	US-PA	Anti-freeze	0.009460	Land
2011 01 10	[REDACTED] (03-008)	US-PA	Flowback / Completions Fluids Water	0.2380	Land
2011 01 16	[REDACTED] (03-008)	US-PA	Flowback / Completions Fluids Water	9.54	Land
2011 01 17	[REDACTED] am (01-076) - 3637 Fallbrook Road	US-PA	Flowback / Completions Fluids Water	7.95	Land
2011 01 17	DCNR 587-02-008-05	US-PA	Flowback / Completions Fluids Water	0.16	Land
2011 01 18	Noble Pad - Precision 228	US-PA	Anti-freeze	0.0189	Land
2011 01 22	Harvest Holdings (01-036)	US-PA	Flowback / Completions Fluids Water	0.4770	Land
2011 01 24	FEI Longenecker (03-008)	US-PA	Flowback / Completions Fluids Water	0.7950	Land
2011 01 25	[REDACTED] #1 wellsite	US-PA	Produced water	8.33	Land
2011 02 02	[REDACTED] (03-46-08) B 8H - Saxon 171	US-PA	Hydraulic Fluids	0.003790	Land
2011 02 06	[REDACTED] (03-029-01) S 1H	US-PA	Water based drilling fluid	0.1590	Land
2011 02 12	[REDACTED] G1V	US-PA	Cement spacer fluid (barite, solvent and other additives)	0.4770	Land
2011 02 14	[REDACTED] 01-076	US-PA	Anti-freeze	0.001890	Land
2011 02 15	Bates Pipeline	US-PA	Diesel Fuel	0.001890	Land
2011 02 17	DCNR 587-02-006-04 - Pioneer 64	US-PA	Solid barite	0.0283	Land
2011 02 18	Thomas Compressor Station	US-PA	Lubricating Oil	0.0001	Land
2011 03 06	[REDACTED] (05 034 01) H1H	US-PA	Oil based drilling fluids	1.11	Land
2011 03 08	DCNR-587-(02-006-01) - Pioneer 64	US-PA	Diesel Fuel	0.0946	Land
2011 03 10	DCNR 587 02-005-06	US-PA	Stormwater	0.0001	Land
2011 03 11	DCNR 587 02-005-06	US-PA	Hydraulic Fluids	0.007570	Land
2011 03 15	[REDACTED] (01-076)	US-PA	Flowback / Completions Fluids Water	7.95	Land
2011 03 18	Statelands Compressor Station	US-PA	Lubricating Oil	0.0040	Land
2011 03 28	DCNR 587 (02-001) Pad 1	US-PA	Diesel Fuel	0.0020	Land
2011 03 29	[REDACTED] r to [REDACTED] Pipeline	US-PA	Pipeline boring mud (bentonite and water)	0.0010	Land/Wetland
2011 04 10	Ironmine Rd. Columbia Township, PA	US-PA	Pipeline boring mud (bentonite and water)	0.0379	Land
2011 04 12	[REDACTED] Pad	US-PA	Sewage	0.011	Land
2011 04 13	Shedden Meter Station	US-PA	Produced water	1.59	Land
2011 04 21	[REDACTED] to [REDACTED] er Pipeline	US-PA	Pipeline boring mud (bentonite and water)	0.3790	Land
2011 05 05	[REDACTED]	US-PA	Produced water	0.0080	Land
2011 05 08	[REDACTED]	US-PA	Hydraulic Fluids	0.0040	Land/Pooled rainwater on-site