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 Dina Brown **Title** 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

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

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

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

TEST REPORT

[redacted]01-023

RECEIVED FOR LAB BY: SCP DATE: 11/16/2010 16:40

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

Benchmark Analytics, Inc.
Eastern Division

2566 Pennsylvania Ave.
Sayre, PA 18840

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

TEST REPORT

[redacted]01-023

RECEIVED FOR LAB BY: SCP DATE: 11/16/2010 16:40

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 Carrie 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	[redacted] 01-023
SAMPLER SIGNATURE / AFFILIATION	UEG
CONTAINER / SAMPLING POINT	

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 ☐ PERSONAL OTHER ____ LANDFILL ____

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 · S SULFURIC ACID · N NITRIC ACID · SO_3 SODIUM SULFITE · Thio SODIUM THIOSULFATE · – NONE · OH SODIUM HYDROXIDE · AS ASCORBIC ACID · AC ACETIC ACID · NH_4 AMMONIUM CHLORIDE · ZN ZINC ACETATE · Hg MERCURIC CHLORIDE

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

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	Air Cuttings	11/16	1456	SO	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 - Anions, metals							Perform BTEX ONLY IF the TPH			
7	D - Total Sample							exceeds 100,000 mg/Kg			
8	E - TCLP metals										
9								72 HOUR TURNAROUND			
10								____ DAY TURNAROUND			
11											

LAB USE ONLY DELIVERED BY: [illegible] TEMPERATURE UPON RECEIPT 13.6 °C ARRIVAL ON ICE Y / N

RELINQUISHED BY:	DATE: 11/16/10	TIME: 1640	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: 11/16/10	TIME: 16:40

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

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

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

TEST REPORT

[redacted]01-023

RECEIVED FOR LAB BY: CMS DATE: 12/06/2010 15:40

SAMPLE: **Inv. Cuttings** Lab ID: 10120839-001A Composite
SAMPLED BY: SG Sample Time: 12/06/2010 10:30

Test	Result		Method	SLOQ	Analysis Start	Analysis End	Analyst *
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: **Inv. Cuttings** Lab ID: 10120839-001B Composite
SAMPLED BY: SG Sample Time: 12/06/2010 10:30

Test	Result		Method	SLOQ	Analysis Start	Analysis End	Analyst *
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: **TCLP Leachate of Inv. Cuttings** Lab ID: 10120839-001E Composite
SAMPLED BY: SG 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	39.5 mg/L	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.

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L Value above calibration range but within annually verified linear range

MANAGER Carrie M. Davis DATE: 12/10/2010

CHAIN OF CUSTODY

PAGE 1 OF 1

REPORT TO: Talisman / UEG
geowetlands@aol.com

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

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

W/O#: 10120839

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 ☐ 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_3 SODIUM SULFITE NH_4 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).

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	Inv Cuttings	12/6	1030	SO	C	SO	N	TPH			
2								pH			
3								TCLP 8 RCRA Metals + Cu, Ni, Zn			
4								Free Liquids / % Moisture			
5	001A - TPH										
6	B- pH, Free liquid, % moisture							Perform BTEX ONLY IF the TPH			
7	C- Anions, metals							exceeds 100,000 mg/Kg			
8	D- Total Sample										
9	E- TCLP metals.							72 HOUR TURNAROUND			
10								___ DAY TURNAROUND			
11											

LAB USE ONLY DELIVERED BY: [illegible] TEMPERATURE UPON RECEIPT 5 °C ARRIVAL ON ICE Y/N

RELINQUISHED BY:	DATE: 12/6/10	TIME: 1540	RECEIVED BY:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY: DATE: 12/6/10 TIME: 1540

Ad Graphics Printing 570-888-0685

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

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

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

TEST REPORT

[redacted]01-023

RECEIVED FOR LAB BY: RML DATE: 12/09/2010 15:45

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 Carrie M. Davis DATE: 12/16/2010

PA ID #: 08-00380
NY ID # 11216

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TEST REPORT

[redacted]01-023

RECEIVED FOR LAB BY: RML DATE: 12/09/2010 15:45

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** Lab ID: 10121752-001G Grab
SAMPLED BY: SG Sample Time: 11/17/2010 8:00

Test	Result	Method	SLOQ	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** Lab ID: 10121752-001H Grab
SAMPLED BY: SG Sample Time: 12/11/2010 12:45

Test	Result	Method	SLOQ	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** Lab ID: 10121752-001I Grab
SAMPLED BY: SG Sample Time: 12/13/2010 8:45

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

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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 Carrie M. Davis DATE: 12/16/2010

PA ID #: 08-00380
NY ID # 11216

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

TEST REPORT

[redacted]01-023

RECEIVED FOR LAB BY: RML DATE: 12/09/2010 15:45

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** Lab ID: 10121752-001J Grab
SAMPLED BY: SG 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** Lab ID: 10121752-001L Grab
SAMPLED BY: SG 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** Lab ID: 10121752-001M Grab
SAMPLED BY: SG 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

Benchmar
East
2566 Pennsylvania
Phone:
Fax: (570) 000-0717

W/O#: 10121752

REPORT TO:	Talisman / UEG
	geowetlands@aol.com
CONTACT	Steve Gridley
PH#	607-731-0145
FAX#	
BILL TO:	Talisman
PO#	AF 78425
PROJECT DESCRIPTION	[redacted] 12H 01-023
SAMPLER SIGNATURE / AFFILIATION	UEG
CONTAINER / SAMPLING POINT	

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

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 · S SULFURIC ACID · N NITRIC ACID · SO_3 SODIUM SULFITE · Thio SODIUM THIOSULFATE · – NONE · OH SODIUM HYDROXIDE · AS ASCORBIC ACID · AC ACETIC ACID · NH_4 AMMONIUM CHLORIDE · ZN ZINC ACETATE · Hg MERCURIC CHLORIDE

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

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	Inv Cuttings	12/9	1204	SO	C	SB	N	Ignitability, Reactive Sulfide & Cyanide			
2					C			PCBs, Total Solids			
3	A - ~~Phenols~~, 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 BNA, ~~Pests~~.										
8	G - TCLP ~~Herbs~~ Sr		~~K - ASTM O&G~~								
9	H - TCLP pH		L - ASTM		~~TS~~, pH			36 HOUR TURNAROUND			
10	I - TCLP Vols.		M - TOX					____ DAY TURNAROUND			
11	J - ASTM COD, ~~Oil & Grease~~										

LAB USE ONLY — DELIVERED BY: — TEMPERATURE UPON RECEIPT: ___ °C — ARRIVAL ON ICE: Y/N

RELINQUISHED BY:	DATE: 12/9/10	TIME: 1530	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: 12/9/10	TIME: 1815

2540-PM-BWM0347 Rev. 1/2011

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.	DEP USE ONLY Date Received & General Notes
General Reference 287.54	
Date Prepared/Revised February 11, 2011	

SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION

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**	**Ext**
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)? ☐ Yes ☒ No

If 'No', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the [redacted] (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

SECTION B. WASTE DESCRIPTION

Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure	Time Frame
810	Drill cuttings (oil and gas)	1,034	☐ cu yd ☐ gal ☐ lb ☒ ton	☐ One Time

1. GENERAL PROPERTIES

a. pH Range 6.07 to 7.96 (based on analyses or knowledge)

b. Physical State
- ☐ Liquid Waste (EPA Method 9095)
- ☒ Solid (EPA Method 9095)
- ☐ 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

2. CHEMICAL ANALYSIS ATTACHMENTS

a.	**The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.**	☒ Yes	☐ No	
b.	**A detailed description of the waste sampling method is attached.**	☒ Yes	☐ No	
c.	**The quality assurance/quality control procedures employed by the laboratory(ies) is attached.**	☒ Yes	☐ No	
d.	**The results of the hazardous waste determination is attached.**	☒ Yes	☐ No	
e.	**If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.**	☐ Yes	☐ No	☒ 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.	☒ Yes	☐ No	
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No	
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes	☐ No	☒ 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.
503 ☐ cu yd ☐ gal ☐ lb ☒ 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.
293 ☐ cu yd ☐ gal ☐ lb ☒ ton (check one)

2. Beneficial Use

a. Has the waste been approved for beneficial use? ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. Volume of waste beneficially used in the previous year.
0 ☐ cu yd ☐ gal ☐ lb ☐ 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.	☒ Yes	☐ No	
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No	
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes	☐ No	☒ 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 (585) 466-7271	**Email Address**	joe.boyles@casella.com

d. Volume of waste shipped to processing or disposal facility in the previous year.
151 ☐ cu yd ☐ gal ☐ lb ☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ ton (check one)

2. Beneficial Use

a. Has the waste been approved for beneficial use? ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. Volume of waste beneficially used in the previous year.
0 ☐ cu yd ☐ gal ☐ lb ☐ 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.	☒ Yes	☐ No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes ☐ No	☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ 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.
☐ cu yd ☐ gal ☐ lb ☐ ton (check one)

2. Beneficial Use

a. Has the waste been approved for beneficial use? ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. Volume of waste beneficially used in the previous year.
0 ☐ cu yd ☐ gal ☐ lb ☐ 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 Dina Brown

Title 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

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

Work Order: 10112530

SEND DATA TO:

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

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

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

TEST REPORT

[redacted]03-045

RECEIVED FOR LAB BY: SCP DATE: 11/16/2010 16:40

SAMPLE: **Air Cuttings** Lab ID: 10112530-001A Grab
SAMPLED BY: SG 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** Lab ID: 10112530-001B Grab
SAMPLED BY: SG 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	SC-SA

SAMPLE: **Air Cuttings** Lab ID: 10112530-001C Grab
SAMPLED BY: SG 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** Lab ID: 10112530-001E 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

MANAGER Carrie 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

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

Work Order: 10112530

SEND DATA TO:

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

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

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

TEST REPORT

[redacted] 03-045

RECEIVED FOR LAB BY: SCP DATE: 11/16/2010 16:40

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 Carrie 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	[redacted] 03-045
SAMPLER SIGNATURE / AFFILIATION	S Gridley UEG

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 ☐ PERSONAL · LANDFILL _____ · 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 · S SULFURIC ACID · N NITRIC ACID · SO_3 SODIUM SULFITE · Thio SODIUM THIOSULFATE · – NONE · OH SODIUM HYDROXIDE · AS ASCORBIC ACID · AC ACETIC ACID · NH_4 AMMONIUM CHLORIDE · ZN ZINC ACETATE · Hg MERCURIC CHLORIDE

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

Please fill out all applicable areas completely

	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	11/15	1839	SO	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 - Anions, metals							Perform BTEX ONLY IF the TPH			
7	D - Total Sample							exceeds 100,000 mg/Kg			
8	E - TCLP metals.										
9								72 HOUR TURNAROUND			
10								_____ DAY TURNAROUND			
11											

LAB USE ONLY — DELIVERED BY: Client — TEMPERATURE UPON RECEIPT 13.5 °C — ARRIVAL ON ICE Y / N

RELINQUISHED BY:	DATE: 11/16/10	TIME: 1640	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: 11/16/10	TIME: 16:40

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: 10120827

SEND DATA TO:

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

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

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

TEST REPORT

[redacted]03-045

RECEIVED FOR LAB BY: CMS DATE: 12/06/2010 15:40 Page 1 of 1

SAMPLE: **Inv Cuttings + Omni** Lab ID: 10120827-001A Composite
SAMPLED BY: SG 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** Lab ID: 10120827-001B Composite
SAMPLED BY: SG 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** Lab ID: 10120827-001E Composite
SAMPLED BY: SG 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 Carrie M. Davis DATE: 12/10/2010

CHAIN OF CUSTODY

PAGE 1 OF 1

W/O#: 10120827

REPORT TO:	Talisman / UEG
	geowetlands@aol.com
CONTACT	Steve Gridley
PH#	607-731-0145
FAX#	
BILL TO:	Talisman
PO#	AF78489
PROJECT DESCRIPTION	[redacted] 03-045
SAMPLER SIGNATURE / AFFILIATION	UEG

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 ☐ PERSONAL; LANDFILL_____ 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; S SULFURIC ACID; N NITRIC ACID; SO_3 SODIUM SULFITE; Thio SODIUM THIOSULFATE; – NONE; OH SODIUM HYDROXIDE; AS ASCORBIC ACID; AC ACETIC ACID; NH_4 AMMONIUM CHLORIDE; ZN ZINC ACETATE; Hg MERCURIC CHLORIDE

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

Please fill out all applicable areas completely

	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 + Omni	12/6	1122	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			
7	C - Anions, metals							exceeds 100,000 mg/Kg			
8	D - Total Sample										
9	E - TCLP metals.							72 HOUR TURNAROUND due 12/9			
10								____ DAY TURNAROUND			
11											

LAB USE ONLY — DELIVERED BY: Client — TEMPERATURE UPON RECEIPT 5 °C — ARRIVAL ON ICE: Y / N

RELINQUISHED BY:	DATE: 12/6/10	TIME: 1540	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	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

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

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

TEST REPORT

[redacted]03-045

RECEIVED FOR LAB BY: RML DATE: 12/09/2010 15:45

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 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: 10121740

SEND DATA TO:

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

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

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

TEST REPORT

[redacted] 03-045

RECEIVED FOR LAB BY: RML DATE: 12/09/2010 15:45

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** Lab ID: 10121740-001G Grab
SAMPLED BY: SG Sample Time: 11/17/2010 8:00

Test	Result		Method	SLOQ	Analysis Start	Analysis End	Analyst *
Strontium - TCLP extracted	7.33 mg/L	E	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** Lab ID: 10121740-001H Grab
SAMPLED BY: SG Sample Time: 12/11/2010 12:45

Test	Result	Method	SLOQ	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** Lab ID: 10121740-001I Grab
SAMPLED BY: SG Sample Time: 12/13/2010 8:45

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

E Value above quantitation 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: 10121740

SEND DATA TO:

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

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

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

TEST REPORT

[redacted]03-045

RECEIVED FOR LAB BY: RML DATE: 12/09/2010 15:45

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** Lab ID: 10121740-001J Grab
SAMPLED BY: SG Sample Time: 12/12/2010 13:10

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

SAMPLE: **ASTM Extract of Inv. Cuttings** Lab ID: 10121740-001L Grab
SAMPLED BY: SG 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** Lab ID: 10121740-001M Grab
SAMPLED BY: SG 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 Carri M. Davis DATE: 12/16/2010

CHAIN OF CUSTODY

Benchm
Ea
2566 Pennsylvan
Phon
Fax: (570) 888-0711

E 1 OF 1

W/O#: 10121740

REPORT TO:	Talisman / UEG
	geowetlands@aol.com
CONTACT	Steve Gridley
PH#	607-731-0145
FAX#	
BILL TO:	Talisman
PO#	AF78489
PROJECT DESCRIPTION	[redacted] 03-045
SAMPLER SIGNATURE / AFFILIATION	UEG
CONTAINER / SAMPLING POINT	

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 ☐ PERSONAL OTHER LANDFILL Mostoller

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 · S SULFURIC ACID · N NITRIC ACID · SO_3 SODIUM SULFITE · Thio SODIUM THIOSULFATE · – NONE · OH SODIUM HYDROXIDE · AS ASCORBIC ACID · AC ACETIC ACID · NH_4 AMMONIUM CHLORIDE · ZN ZINC ACETATE · Hg MERCURIC CHLORIDE

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

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	Inv Cuttings	12/8	2000	SO	C	SS	N	Ignitability, Reactive Sulfide & Cyanide			
2					C			PCBs, Total Solids			
3	A- ~~Phenols~~, Jgn.				G			Total Volatile Solids			
4	B - 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 BNA, ~~Pesticides~~										
8	G - TCLP ~~Herbicides~~ Sr										
9	H - TCLP pH		~~E - ASTM O&G~~					36 HOUR TURNAROUND			
10	I - TCLP Vols.		L - ASTM - TS, pH					____ DAY TURNAROUND			
11	J - ASTM COD, ~~NH3~~		M - TOX								

LAB USE ONLY — DELIVERED BY: — TEMPERATURE UPON RECEIPT: 3.2 °C — ARRIVAL ON ICE: Y / N

RELINQUISHED BY:		DATE: 12/9/10	TIME: 1530	RECEIVED BY:		DATE: / /	TIME:
RELINQUISHED BY:		DATE: / /	TIME:	RECEIVED BY:		DATE: / /	TIME:
RELINQUISHED BY:		DATE: / /	TIME:	RECEIVED BY:		DATE: 12/9/10	TIME: 1545

2540-PM-BWM0347 Rev. 1/2011

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.	DEP USE ONLY
General Reference 287.54	Date Received & General Notes
Date Prepared/Revised February 11, 2011	

SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION

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)? ☐ Yes ☒ No

If 'No', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the [redacted] (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

SECTION B. WASTE DESCRIPTION

Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure	Time Frame
810	Drill cuttings (oil and gas)	1,949	☐ cu yd ☐ gal ☐ lb ☒ ton	☐ One Time

1. GENERAL PROPERTIES

a.	**pH Range**	8.89 to 9.01	(based on analyses or knowledge)
b.	**Physical State**	☐ Liquid Waste (EPA Method 9095) ☒ Solid (EPA Method 9095) ☐ 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	

2. CHEMICAL ANALYSIS ATTACHMENTS

a.	**The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.**	☒ Yes	☐ No	
b.	**A detailed description of the waste sampling method is attached.**	☒ Yes	☐ No	
c.	**The quality assurance/quality control procedures employed by the laboratory(ies) is attached.**	☒ Yes	☐ No	
d.	**The results of the hazardous waste determination is attached.**	☒ Yes	☐ No	
e.	**If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.**	☐ Yes	☐ No	☒ 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.	☒ Yes	☐ No	
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No	
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes	☐ No	☒ 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 (585) 466-7271	Email Address	joe.boyles@casella.com
d.	Volume of waste shipped to processing or disposal facility in the previous year.			
	1,087	☐ cu yd ☐ gal ☐ lb ☒ 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	☐ cu yd ☐ gal ☐ lb ☒ 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.	☐ Yes	☒ No
b.	Volume of waste beneficially used in the previous year. 0 ☐ cu yd ☐ gal ☐ lb ☐ 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.	☒ Yes	☐ No	
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No	
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes	☐ No	☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ 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.
☐ cu yd ☐ gal ☐ lb ☐ ton (check one)

2. Beneficial Use

a. Has the waste been approved for beneficial use? ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. Volume of waste beneficially used in the previous year.
0 ☐ cu yd ☐ gal ☐ lb ☐ 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 Dina Brown **Title** 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

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

Work Order: 10074058

SEND DATA TO:

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

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

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

TEST REPORT

[redacted]

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

Test	Result		Method	SLOQ	Analysis Start	Analysis End	Analyst *
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

Test	Result		Method	SLOQ	Analysis Start	Analysis End	Analyst *
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

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	< 0.100 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	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

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

Work Order: 10081723

SEND DATA TO:

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

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

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

TEST REPORT

[redacted]

RECEIVED FOR LAB BY: DLM2 DATE: 08/10/2010 15:33

SAMPLE: **Air Cuttings** Lab ID: 10081723-001A Grab
SAMPLED BY: SG Sample Time: 08/09/2010 15:50

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
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

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
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

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
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

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	0.112 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:

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MANAGER Carrie M. Davis DATE: 8/13/2010

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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:

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MANAGER Carrie M. Davis DATE: 8/13/2010

2540-PM-BWM0347 Rev. 1/2011

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.	DEP USE ONLY
General Reference 287.54	Date Received & General Notes
Date Prepared/Revised February 11, 2011	

SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION

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)? ☐ Yes ☒ No

If 'No', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the [redacted](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

SECTION B. WASTE DESCRIPTION

Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure	Time Frame
810	Drill cuttings (oil and gas)	1,949	☐ cu yd ☐ gal ☐ lb ☒ ton	☐ One Time

1. GENERAL PROPERTIES

a.	**pH Range**	8.89 to 9.01	(based on analyses or knowledge)
b.	**Physical State**	☐ Liquid Waste (EPA Method 9095) ☒ Solid (EPA Method 9095) ☐ 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	

2. CHEMICAL ANALYSIS ATTACHMENTS

a.	**The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.**	☒ Yes	☐ No	
b.	**A detailed description of the waste sampling method is attached.**	☒ Yes	☐ No	
c.	**The quality assurance/quality control procedures employed by the laboratory(ies) is attached.**	☒ Yes	☐ No	
d.	**The results of the hazardous waste determination is attached.**	☒ Yes	☐ No	
e.	**If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.**	☐ Yes	☐ No	☒ 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.	☒ Yes	☐ No	
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No	
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes	☐ No	☒ 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 (585) 466-7271	**Email Address**	joe.boyles@casella.com

d. Volume of waste shipped to processing or disposal facility in the previous year.
1,087 ☐ cu yd ☐ gal ☐ lb ☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ ton (check one)

2. Beneficial Use

a. Has the waste been approved for beneficial use? ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. Volume of waste beneficially used in the previous year.
0 ☐ cu yd ☐ gal ☐ lb ☐ 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.	☒ Yes	☐ No	
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No	
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes	☐ No	☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ 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.
☐ cu yd ☐ gal ☐ lb ☐ ton (check one)

2. Beneficial Use

a. Has the waste been approved for beneficial use? ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. Volume of waste beneficially used in the previous year.
0 ☐ cu yd ☐ gal ☐ lb ☐ 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 Dina Brown **Title** 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

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

Work Order: 10074058

SEND DATA TO:

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

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

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

TEST REPORT

[redacted]

RECEIVED FOR LAB BY: DLM2 DATE: 07/26/2010 15:15

SAMPLE: **Inv. Cuttings** Lab ID: 10074058-001A Composite
SAMPLED BY: SG Sample Time: 07/26/2010 11:45

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
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

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
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

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	< 0.100 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	8.30 mg/L		EPA 6010B	0.200	07/29/10 9:50	07/29/10	GSR-CV

REMARKS:

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S Spike Recovery outside accepted recovery limits

MANAGER Carrie M. Davis DATE: 7/30/2010

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TEST REPORT

[redacted]

RECEIVED FOR LAB BY: DLM2 DATE: 08/10/2010 15:33

SAMPLE: **Air Cuttings** Lab ID: 10081723-001A Grab
SAMPLED BY: SG Sample Time: 08/09/2010 15:50

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
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

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
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

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
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

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	0.112 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

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TEST REPORT

[redacted]

RECEIVED FOR LAB BY: DLM2 DATE: 08/10/2010 15:33

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

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MANAGER Carrie M. Davis DATE: 8/13/2010

2540-PM-BWM0347 Rev. 1/2011

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COMMONWEALTH OF PENNSYLVANIA
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BUREAU OF WASTE MANAGEMENT

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Date Prepared/Revised February 11, 2011

DEP USE ONLY
Date Received & General Notes

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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	State	Zip+4	Phone	Ext
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)? ☐ Yes ☒ No

If 'No', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the [redacted] (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

SECTION B. WASTE DESCRIPTION

Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure	Time Frame
810	Drill cuttings (oil and gas)	3,377	☐ cu yd ☐ gal ☐ lb ☒ ton	☐ One Time

1. GENERAL PROPERTIES

a. pH Range 7.90 to 9.67 (based on analyses or knowledge)

b. Physical State
- ☐ Liquid Waste (EPA Method 9095)
- ☒ Solid (EPA Method 9095)
- ☐ 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

2. CHEMICAL ANALYSIS ATTACHMENTS

a.	The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.	☒ Yes	☐ No	
b.	A detailed description of the waste sampling method is attached.	☒ Yes	☐ No	
c.	The quality assurance/quality control procedures employed by the laboratory(ies) is attached.	☒ Yes	☐ No	
d.	The results of the hazardous waste determination is attached.	☒ Yes	☐ No	
e.	If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.	☐ Yes	☐ No	☒ 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.	☒ Yes	☐ No	
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No	
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes	☐ No	☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ 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 (585) 466-7271	Email Address	joe.boyles@casella.com

d. Volume of waste shipped to processing or disposal facility in the previous year.
907 ☐ cu yd ☐ gal ☐ lb ☒ ton (check one)

2. Beneficial Use

a. Has the waste been approved for beneficial use? ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. Volume of waste beneficially used in the previous year.
0 ☐ cu yd ☐ gal ☐ lb ☐ 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.	☒ Yes	☐ No	
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No	
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes	☐ No	☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ 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.
☐ cu yd ☐ gal ☐ lb ☐ ton (check one)

2. Beneficial Use

a. Has the waste been approved for beneficial use? ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. Volume of waste beneficially used in the previous year.
0 ☐ cu yd ☐ gal ☐ lb ☐ 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 Dina Brown **Title** 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

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

Work Order: 10092016

SEND DATA TO:

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

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

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

TEST REPORT

[redacted]01-071

RECEIVED FOR LAB BY: TJC DATE: 09/13/2010 17:12

SAMPLE: **Air Cuttings** Lab ID: 10092016-001A Grab
SAMPLED BY: SG 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** Lab ID: 10092016-001B Grab
SAMPLED BY: SG 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** Lab ID: 10092016-001C Grab
SAMPLED BY: SG 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** Lab ID: 10092016-001E Grab
SAMPLED BY: SG 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 Carrie 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: 10092016

SEND DATA TO:

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

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

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

TEST REPORT

[redacted]01-071

RECEIVED FOR LAB BY: TJC DATE: 09/13/2010 17:12

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 Carrie 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

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

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

TEST REPORT

[redacted]01-071

RECEIVED FOR LAB BY: TJC DATE: 10/21/2010 11:37

SAMPLE: **Inv. Cuttings** Lab ID: 10103216-001A Composite
SAMPLED BY: SG 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** Lab ID: 10103216-001B Composite
SAMPLED BY: SG 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** Lab ID: 10103216-001C Composite
SAMPLED BY: SG 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** Lab ID: 10103216-001E 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:

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

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

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

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

TEST REPORT

[redacted]01-071

RECEIVED FOR LAB BY: TJC DATE: 10/21/2010 11:37

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 Carrie M. Davis DATE: 10/26/2010

CHAIN OF CUSTODY

10103216

PAGE 1 OF 1

W/O#: 10103216

3840

REPORT TO:	Talisman / UEG
	geowetlands@aol.com
	twollin@rallysolutions.ca
CONTACT	Steve Gridley
PH#	607-731-0145
FAX#	
BILL TO:	Talisman
PO#	AF77729
[redacted]TION	01-071
SAMPLER SIGNATURE / AFFILIATION	UEG
CONTAINER / SAMPLING POINT	

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

H HYDROCHLORIC ACID · S SULFURIC ACID · N NITRIC ACID · SO_3 SODIUM SULFITE · Thio SODIUM THIOSULFATE · – NONE · OH SODIUM HYDROXIDE · AS ASCORBIC ACID · AC ACETIC ACID · NH_4 AMMONIUM CHLORIDE · ZN ZINC ACETATE · Hg MERCURIC CHLORIDE

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

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

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	Inv Cuttings	10/9	1039	SO	C	S	N	TPH			-001 H-D
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							~~TCL~~ ~~8260/8270~~ ONLY IF the TPH			
7	D - T. Sample							exceeds 10,000 mg/Kg			
8	TCLP Metals + Cu, Ni, Zn										
9								72 HOUR TURNAROUND			
10								___ DAY TURNAROUND			
11											Due 10/26/10

LAB USE ONLY DELIVERED BY: SG TEMPERATURE UPON RECEIPT: ___ °C ARRIVAL ON ICE Y / N

RELINQUISHED BY:	DATE: 10/21/10	TIME: 1137	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: 10/21/10	TIME: 1137

2540-PM-BWM0347 Rev. 1/2011

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.	DEP USE ONLY Date Received & General Notes
General Reference 287.54	
Date Prepared/Revised February 11, 2011	

SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION

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**	**Ext**
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)? ☐ Yes ☒ No

If 'No', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the [redacted] (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

SECTION B. WASTE DESCRIPTION

Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure	Time Frame
810	Drill cuttings (oil and gas)	4,091	☐ cu yd ☐ gal ☐ lb ☒ ton	☐ One Time

1. GENERAL PROPERTIES

a.	**pH Range**	9.18 to 10.33 (based on analyses or knowledge)
b.	**Physical State**	☐ Liquid Waste (EPA Method 9095) ☒ Solid (EPA Method 9095) ☐ 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

2. CHEMICAL ANALYSIS ATTACHMENTS

a.	**The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.**	☒ Yes	☐ No	
b.	**A detailed description of the waste sampling method is attached.**	☒ Yes	☐ No	
c.	**The quality assurance/quality control procedures employed by the laboratory(ies) is attached.**	☒ Yes	☐ No	
d.	**The results of the hazardous waste determination is attached.**	☒ Yes	☐ No	
e.	**If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.**	☐ Yes	☐ No	☒ 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.	☒ Yes	☐ No	
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No	
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes	☐ No	☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ 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 (585) 466-7271	Email Address	joe.boyles@casella.com

d. Volume of waste shipped to processing or disposal facility in the previous year.
1,377 ☐ cu yd ☐ gal ☐ lb ☒ ton (check one)

2. Beneficial Use

a. Has the waste been approved for beneficial use? ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. Volume of waste beneficially used in the previous year.
0 ☐ cu yd ☐ gal ☐ lb ☐ 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.	☒ Yes	☐ No	
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No	
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes	☐ No	☒ 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.**
164 ☐ cu yd ☐ gal ☐ lb ☒ 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.**
56 ☐ cu yd ☐ gal ☐ lb ☒ ton (check one)

2. Beneficial Use

a. **Has the waste been approved for beneficial use?** ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. **Volume of waste beneficially used in the previous year.**
0 ☐ cu yd ☐ gal ☐ lb ☐ 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 Dina Brown **Title** 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

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

Work Order: 10074528

SEND DATA TO:

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

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

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

TEST REPORT

[redacted]Well

RECEIVED FOR LAB BY: DLM2 DATE: 07/29/2010 9:32

SAMPLE: **Air Cuttings** Lab ID: 10074528-001A Grab
SAMPLED BY: SG Sample Time: 07/28/2010 15:00

Test	Result	Method	SLOQ	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** Lab ID: 10074528-001B Grab
SAMPLED BY: SG Sample Time: 07/28/2010 15:00

Test	Result	Method	SLOQ	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** Lab ID: 10074528-001C Grab
SAMPLED BY: SG Sample Time: 07/28/2010 15:00

Test	Result	Method	SLOQ	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** Lab ID: 10074528-001E Grab
SAMPLED BY: SG Sample Time: 07/30/2010 7:50

Test	Result	Method	SLOQ	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 Carrie M. Davis DATE: 8/4/2010

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

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Eastern Division

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

TEST REPORT

[redacted] Well

RECEIVED FOR LAB BY: DLM2 DATE: 07/29/2010 9:32

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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MANAGER Carrie M. Davis DATE: 8/4/2010

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

Benchmark Analytics, Inc.
Eastern Division

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

TEST REPORT

[redacted]

RECEIVED FOR LAB BY: DLM2 DATE: 08/10/2010 15:33 Page 1 of 1

SAMPLE: **Inv. Cuttings** Lab ID: 10081716-001A Grab
SAMPLED BY: SG 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** Lab ID: 10081716-001B Grab
SAMPLED BY: SG 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** Lab ID: 10081716-001D Grab
SAMPLED BY: SG 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

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

TEST REPORT

[redacted]

RECEIVED FOR LAB BY: DLM2 DATE: 08/10/2010 15:33

SAMPLE: **Inv. Cuttings & Biomatrix** Lab ID: 10081719-001A Grab
SAMPLED BY: SG Sample Time: 08/10/2010 12:15

Test	Result	Method	SLOQ	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** Lab ID: 10081719-001B Grab
SAMPLED BY: SG Sample Time: 08/10/2010 12:15

Test	Result	Method	SLOQ	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** Lab ID: 10081719-001D Grab
SAMPLED BY: SG Sample Time: 08/10/2010 12:15

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	< 0.100 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

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MANAGER Carrie M. Davis DATE: 8/13/2010

PA ID #: 08-00380
NY ID # 11216

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Work Order: 10082687

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

TEST REPORT

Relog of 10081719-001

RECEIVED FOR LAB BY: DLM2 DATE: 08/10/2010 15:33

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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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

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Work Order: 10082687

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WO#: 10082687
PAGE: 2 of 2
PO#:
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TEST REPORT

Relog of 10081719-001

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

REMARKS:

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MANAGER Carrie M. Davis DATE: 8/19/2010

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NY ID # 11216

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WO#: 10082689
PAGE: 1 of 2
PO#:
PWS ID#

TEST REPORT

Relog of 10081716-001

RECEIVED FOR LAB BY: DLM2 DATE: 08/10/2010 15:33

SAMPLE: **TCLP Leachate of Inv. Cuttings** Lab ID: 10082689-001B Grab
SAMPLED BY: SG Sample Time: 08/17/2010 8:15

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		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

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

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S Spike Recovery outside accepted recovery limits

MANAGER Carrie M. Davis DATE: 8/19/2010

PA ID #: 08-00380
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Eastern Division

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SEND DATA TO:

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

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

WO#: 10082689
PAGE: 2 of 2
PO#:
PWS ID#

TEST REPORT

Relog of 10081716-001

RECEIVED FOR LAB BY: DLM2 DATE: 08/10/2010 15:33

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

S Spike Recovery outside accepted recovery limits

MANAGER Carrie M. Davis DATE: 8/19/2010

2540-PM-BWM0347 Rev. 1/2011

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.	DEP USE ONLY
General Reference 287.54	Date Received & General Notes
Date Prepared/Revised February 11, 2011	

SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION

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)? ☐ Yes ☒ 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

SECTION B. WASTE DESCRIPTION

Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure	Time Frame
810	Drill cuttings (oil and gas)	6,211	☐ cu yd ☐ gal ☐ lb ☒ ton	☐ One Time

1. GENERAL PROPERTIES

a. pH Range 7.91 to 9.58 (based on analyses or knowledge)

b. Physical State
- ☐ Liquid Waste (EPA Method 9095)
- ☒ Solid (EPA Method 9095)
- ☐ 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

2. CHEMICAL ANALYSIS ATTACHMENTS

a.	The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.	☒ Yes	☐ No	
b.	A detailed description of the waste sampling method is attached.	☒ Yes	☐ No	
c.	The quality assurance/quality control procedures employed by the laboratory(ies) is attached.	☒ Yes	☐ No	
d.	The results of the hazardous waste determination is attached.	☒ Yes	☐ No	
e.	If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.	☐ Yes	☐ No	☒ 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.	☒ Yes	☐ No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes ☐ No	☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ 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 (585) 466-7271	Email Address	joe.boyles@casella.com

d. Volume of waste shipped to processing or disposal facility in the previous year.
2,176 ☐ cu yd ☐ gal ☐ lb ☒ ton (check one)

2. Beneficial Use

a. Has the waste been approved for beneficial use? ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. Volume of waste beneficially used in the previous year.
0 ☐ cu yd ☐ gal ☐ lb ☐ 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.	☒ Yes	☐ No	
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No	
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes	☐ No	☒ 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.
610 ☐ cu yd ☐ gal ☐ lb ☒ 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.
550 ☐ cu yd ☐ gal ☐ lb ☒ ton (check one)

2. Beneficial Use

a. Has the waste been approved for beneficial use? ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. Volume of waste beneficially used in the previous year.
0 ☐ cu yd ☐ gal ☐ lb ☐ 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 Dina Brown **Title** 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

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

Work Order: 10081720

SEND DATA TO:

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

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

WO#: 10081720
PAGE: 1 of 2
PO#: AF76723
PWS ID#

TEST REPORT

Harvest Holdings

RECEIVED FOR LAB BY: DLM2 DATE: 08/10/2010 15:33

SAMPLE: **Air Cuttings** Lab ID: 10081720-001A Grab
SAMPLED BY: SG Sample Time: 08/09/2010 16:00

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
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

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
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

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
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

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

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: 10081720

SEND DATA TO:

NAME: Steve Gridley
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ADDRESS: 337 Daniel Zenker Dr
Horseheads, NY 14845

PHONE: (607) 562-4000
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WO#: 10081720
PAGE: 2 of 2
PO#: AF76723
PWS ID#

TEST REPORT

Harvest Holdings

RECEIVED FOR LAB BY: DLM2 DATE: 08/10/2010 15:33

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:

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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

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

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

TEST REPORT

Harvest Holdings

RECEIVED FOR LAB BY: RML DATE: 11/03/2010 12:36

SAMPLE: **Pad Soil** Lab ID: 10110477-001A Composite
SAMPLED BY: SG Sample Time: 11/03/2010 10:45

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

SAMPLE: **Pad Soil** Lab ID: 10110477-001B Composite
SAMPLED BY: SG Sample Time: 11/03/2010 10:45

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

SAMPLE: **Pad Soil** Lab ID: 10110477-001C Composite
SAMPLED BY: SG Sample Time: 11/03/2010 10:45

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:

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* 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 Carrie M. Davis DATE: 11/5/2010

CHAIN OF CUSTODY

B

2566 Pe

PAGE 1 OF 1

W/O#: 10110477

REPORT TO:	Talisman / UEG
	geowetlands@aol.com
	twollin@rallysolutions.ca
CONTACT	Steve Gridley
PH#	607-731-0145
FAX#	
BILL TO:	Talisman
PO#	AR 76719
PROJECT DESCRIPTION	Harvest Holdings CU
SAMPLER SIGNATURE / AFFILIATION	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_____
☐ 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_3 SODIUM SULFITE | NH_4 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).

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	~~Water Spill Soil~~ Pad Soil	11/3	1645	SO	C	SS	N	TDS, Conductivity, pH			-001A
2								pH, Chlorides, Sodium, Moist			B
3								~~Salinity~~			
4								TPH			C
5											
6											
7											
8											
9								24 HOUR TURNAROUND			
10								____ DAY TURNAROUND			
11											

LAB USE ONLY DELIVERED BY: client TEMPERATURE UPON RECEIPT _____ °C ARRIVAL ON ICE Y / N

RELINQUISHED BY:	DATE: 11 13 10	TIME: 1236	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: 11/13/10	TIME: 1236

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: 10071880

SEND DATA TO:

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

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

WO#: 10071880
PAGE: 1 of 1
PO#: AF76719
PWS ID#

TEST REPORT

Harvest Hldgs Well

RECEIVED FOR LAB BY: WCB DATE: 07/13/2010 13:15

SAMPLE: **Inv. Cuttings** Lab ID: 10071880-001A Grab
SAMPLED BY: SG Sample Time: 07/12/2010 12:45

Test	Result		Method	SLOQ	Analysis Start	Analysis End	Analyst *
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

Test	Result		Method	SLOQ	Analysis Start	Analysis End	Analyst *
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

Test	Result		Method	SLOQ	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	< 0.100 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	L	EPA 6010B	0.200	07/16/10 15:00	07/17/10	RMD-CV

REMARKS:

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L Value above calibration range but within annually verified linear range

MANAGER Carrie M. Davis DATE: 7/20/2010

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

Benchmark Analytics, Inc.
Eastern Division

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Work Order: 10110480

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

TEST REPORT

Harvest Holdings-cu

RECEIVED FOR LAB BY: RML DATE: 11/03/2010 12:36

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 Carrie M. Davis DATE: 11/5/2010

CHAIN OF CUSTODY

PAGE 1 OF 1

2566 F

W/O#: 10110480

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

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______ ☐ 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_3	SODIUM SULFITE	NH_4	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).

Please fill out all applicable areas completely

#	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~~ Ervert	11/3	1045	SO	C	SG	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______ TEMPERATURE UPON RECEIPT______ °C ARRIVAL ON ICE Y / N

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

Ad Graphics Printing 570-888-0686

2540-PM-BWM0347 Rev. 1/2011

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.	DEP USE ONLY Date Received & General Notes
General Reference 287.54	
Date Prepared/Revised February 11, 2011	

SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION

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	State	Zip+4	Phone	Ext
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)? ☐ Yes ☒ No

If 'No', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the [redacted] (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

SECTION B. WASTE DESCRIPTION

Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure	Time Frame
810	Drill cuttings (oil and gas)	3,382	☐ cu yd ☐ gal ☐ lb ☒ ton	☐ One Time

1. GENERAL PROPERTIES

a. pH Range 8.9 to 11.3 (based on analyses or knowledge)

b. Physical State
☐ Liquid Waste (EPA Method 9095)
☒ Solid (EPA Method 9095)
☐ 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

2. CHEMICAL ANALYSIS ATTACHMENTS

a.	The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.	☒ Yes	☐ No	
b.	A detailed description of the waste sampling method is attached.	☒ Yes	☐ No	
c.	The quality assurance/quality control procedures employed by the laboratory(ies) is attached.	☒ Yes	☐ No	
d.	The results of the hazardous waste determination is attached.	☒ Yes	☐ No	
e.	If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.	☐ Yes	☐ No	☒ 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.	☒ Yes	☐ No	
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No	
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes	☐ No	☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ ton (check one)

2. Beneficial Use

a. Has the waste been approved for beneficial use? ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. Volume of waste beneficially used in the previous year.
0 ☐ cu yd ☐ gal ☐ lb ☐ 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.	☒ Yes	☐ No	
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No	
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes	☐ No	☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ 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 (585) 466-7271	**Email Address**	joe.boyles@casella.com

d. **Volume of waste shipped to processing or disposal facility in the previous year.**
108 ☐ cu yd ☐ gal ☐ lb ☒ 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.**	☐ Yes	☒ No

b. **Volume of waste beneficially used in the previous year.**
0 ☐ cu yd ☐ gal ☐ lb ☐ 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 Dina Brown

Title Environmental Specialist

Signature _____

Date 2/25/11

2540-PM-BWM0347 Rev. 1/2011

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

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General Reference 287.54	Date Received & General Notes
Date Prepared/Revised February 11, 2011	

SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION

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	State	Zip+4	Phone	Ext
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)? ☐ Yes ☒ No

If 'No', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the [redacted] (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

SECTION B. WASTE DESCRIPTION

Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure	Time Frame
810	Drill cuttings (oil and gas)	673	☐ cu yd ☐ gal ☐ lb ☒ ton	☐ One Time

1. GENERAL PROPERTIES

a. pH Range 9.74 to 10.61 (based on analyses or knowledge)

b. Physical State
☐ Liquid Waste (EPA Method 9095)
☒ Solid (EPA Method 9095)
☐ 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

2. CHEMICAL ANALYSIS ATTACHMENTS

a.	The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.	☒ Yes	☐ No	
b.	A detailed description of the waste sampling method is attached.	☒ Yes	☐ No	
c.	The quality assurance/quality control procedures employed by the laboratory(ies) is attached.	☒ Yes	☐ No	
d.	The results of the hazardous waste determination is attached.	☒ Yes	☐ No	
e.	If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.	☐ Yes	☐ No	☒ 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.	☒ Yes	☐ No
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SECTION C. MANAGEMENT OF RESIDUAL WASTE

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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.
603 ☐ cu yd ☐ gal ☐ lb ☒ 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.
70 ☐ cu yd ☐ gal ☐ lb ☒ ton (check one)

2. Beneficial Use

a. Has the waste been approved for beneficial use? ☐ Yes ☒ No

If "Yes", list the general permit number or approval number.

b. Volume of waste beneficially used in the previous year.
0 ☐ cu yd ☐ gal ☐ lb ☐ 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.

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☐ Other (specify) _____

Date Submitted: _____

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☐ 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 Dina Brown **Title** Environmental Specialist

Signature _____ **Date** 2/25/11

ANALYTICAL LABORATORY SERVICES, INC.

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

ACCREDITED IN ACCORDANCE WITH nelac

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 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

ANALYTICAL LABORATORY SERVICES, INC.

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

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

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

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
PETROLEUM HC's										
Total Petroleum Hydrocarbons (TPH)	202000		mg/kg	16300	SW846 8015D	10/21/09	RSS	10/23/09 14:16	JJH	A1
WET CHEMISTRY										
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
TCLP METALS										
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
TCLP LEACHATE										
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
Laboratory Manager

ANALYTICAL LABORATORY SERVICES, INC.
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PA 22-295 NJ PA010
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34 Dogwood Lane - Middletown, PA 17057 Phone: 717-944-5541 Fax: 717-944-1430

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.

Report ID: 9814714

Analytical Laboratory Services, Inc.
Environmental ▪ Industrial Hygiene ▪ Field Services
34 Dogwood Lane ▪ Middletown, PA 17057 ▪ 717.944.5541 ▪ Fax: 717.944.1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Generated by AL

9814714

Pg. 1 of 1

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

Client Name: Fortuna Energy Inc. (FEI)
Address: 337 Daniel Zenker Drive
Horseheads, New York 14845
Contact: Steve Gridley
Phone#: 607-731-0145
Project Name/#: [redacted] 2H Well Pad: INV + Cuttings
Bill To: FEI: AF #73289
TAT: [ ] Normal-Standard TAT is 10-12 business days. [X] Rush-Subject to ALSI approval and surcharges.
Date Required: 48-Hr. @ $283 Approved By: Scott B.
Email? [X] Y geowetlands@aol.com & see comments
Fax? [ ] Y No.:

Container Type	Glass	Glass	Glass	Glass							
Container Size	4-oz	4-oz	4-oz	4-oz							
Preservative	N	N	N	N							

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	TCLP Metals: As, Ba, Cd, Cr, Pb, Hg, Se, Ag, Cu, Ni, Zn	TPH	PHC	Free Liquids (% Moisture)								
			Enter Number of Containers Per Sample or Field Results Below.													
1 Knights L2H-Inv Cuttings-Bin	102009	1525	C	SO	X	X	X	X	2	4oz	30z					
2 [redacted]	[redacted]	[redacted]														
3 [redacted]	[redacted]	[redacted]									10/21/09					
4 [redacted]																
5																
6																
7																
8																
9																
10																

Receipt Information (completed by Receiving Lab)

Cooler Temp: 6° Therm ID: 5102355
No. of Coolers:

	Y	N	Initial
Custody Seals Present?			
(If present) Seals Intact?			
Received on Ice?	✓		
COC/Labels Complete/Accurate?	✓		
Cont. in Good Cond.?	✓		
Correct Containers?	✓		
Correct Sample Volumes?	✓		
Correct Preservation?	✓		
Headspace/Volatiles?			

Courier/Tracking #: 8597 6333 6956

Sample/COC Comments
Drill Cuttings w residual oil-based drilling fluid

IF TPH IS > 120,000 mg/Kg - RUN EPA 8260 &8270
WITH RUSH

ALSI Field Services: oPickup oLabor oComposite Sampling oRental Equipment oOther:

COMMENTS: Also Email Results to: twollin@rallysolutions.ca & phyllis@waynetwplandfill.com & kathymstrong@epix.net

LOGGED BY (signature): [signature] Date: 10/21/09 Time: 1124

REVIEWED BY (signature): [signature] Date: 10/22/09

Data Deliverables: [X] Standard; [ ] CLP-like; [ ] USACE
Special Processing: [ ] USACE; [ ] Navy
State: [ ] NY; [ ] NJ; [X] PA; [ ] NC

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature] WBG	102009	1600	2 Fedex #8597 8336956	1020	1600
3			4 [signature] ALSI	10/22/09	0915
5			6		
7			8		
9			10		

Reportable to PADEP? Yes [X] #237861
PWSID # 101243
Sample Disposal: Lab [X] Special [ ]
EDDS: Format Type:

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

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Certificate of Analysis

Project Name:	**Marcellus Shale**	Workorder:	9815605
Purchase Order:		Workorder ID:	[redacted]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.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

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
PETROLEUM HC's										
Total Petroleum Hydrocarbons (TPH)	176000		mg/kg	32300	SW846 8015D	10/28/09	GMG	10/28/09 21:21	KJH	B1
WET CHEMISTRY										
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
TCLP METALS										
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
TCLP LEACHATE										
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

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.

Report ID: 9815605

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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

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Page 1 of 1
Courier: FX
Tracking #: 868333837707

9815605

Co. Name: Fortuna Energy
Contact (Report to): Steve Gridley
Address:
Phone: 607 731-0145

Bill to (if different than Report to): Fortuna
PO#:

Project Name/#: [redacted] L2H
ALSI Quote #:

TAT: Normal-Standard TAT is 10-12 business days. / X Rush-Subject to ALSI approval and surcharges.
Date Required: 48 hr.
Approved By: Scott

Email? X Y on file + geowetlands@aol.com
Fax? Y No.:

	G	G	G	G
**Container Type	G	G	G	G
**Container Size	4	4	4	4
Preservative	N	N	N	N

ANALYSES/METHOD REQUESTED: TCLP 8 RCRA Metals + Ni, Cu, Zn | TPH | % moisture | pH — (2) 4oz Soil Jars 10/27

	Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	TCLP 8 RCRA Metals + Ni, Cu, Zn	TPH	% moisture	pH
1	Env-Cuttings	Drill Cuttings	10/26	1015	C	SO	1	1	1	1
2										
3										
4										
5										
6										
7										
8										

Enter Number of Containers Per Analysis

Receipt Information (completed by Sample Receiving)
Performed by: DLS
Cooler Temp: 11°C
Therm. ID: SLA3519
No. of Coolers:
Notes: Gave Steve G temp info 10/28/09 - he stated to proceed with testing. TMH 10/28/09

Correct containers? Y; Correct sample volume? Y; Correct preservation? Y; Headspace/Volatiles? N; Custody seals Present? N; (If present) Seals intact?; Received on Ice? N; COC/Labels complete/accurate? Y; Container in good condition? Y
Circle appropriate Y or N.

SAMPLED BY (Please Print): Steve Gridley
Steve Gridley
LOGGED BY (signature): [signature] 10/27/09 1000
REVIEWED BY (signature): [signature] 10/28/09 [illegible]

	Relinquished By / Company Name	Date	Time		Received By / Company Name	Date	Time
1	S. Gridley / WEG	10/26/09	1500	2	FedEx# 868333837707	10/26	1500
3				4			
5				6	[signature]	10/27/09	0930
7				8			
9				10			

Data Deliverables: Standard / CLP-like / NJ-Reduced / NJ-Full / ____
SDWA Forms? yes / yes / yes / yes; Other
State Samples Collected In? MD / NJ / NY / PA
EDDs Required? If yes, format type:
Enter PWSID No.
DOD Criteria Required?

ALSI FIELD SERVICES: Pickup / Labor / Composite Sampling / Rental Equipment / Other:

* G=Grab; C=Composite **Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater
Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY ***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc. Rev 6/07

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Certificate of Analysis

Project Name:	**Marcellus Shale**	Workorder:	9816272
Purchase Order:		Workorder ID:	[redacted]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.

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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

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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
TCLP VOLATILE ORGANICS										
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
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
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
TCLP SEMI-VOLATILES										
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
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
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
TCLP LEACHATE										
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

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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

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9816272

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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: Fx
Tracking #: 868333837707
9816272

Co. Name: Fortuna Energy
Contact (Report to): Steve Gradley
Phone: 607 731-0145
Address:

Bill to (if different than Report to): Fortuna
PO#:

Project Name/#: [redacted] L2H
ALSI Quote #:

TAT: ☐ Normal-Standard TAT is 10-12 business days. ☒ Rush-Subject to ALSI approval and surcharges.
Date Required: 48 hr.
Approved By: Scott

Email? ☒ Y on file + geowetlands@aol.com
Fax? Y No:

	Container Type**	Container Size**	Preservative**
TCLP 8 RCRA metals + Ni, Cu, Zn	G	4	N
TPH	G	4	N
~~TCLP 10/28~~	~~G~~	~~4~~	~~N~~
~~% moisture~~	~~G~~	~~4~~	~~N~~
pH			
TCLP 8260/8270 (2) 4 oz. Soil Jars w/ 27			

ANALYSES/METHOD REQUESTED

	Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	TCLP 8 RCRA metals + Ni, Cu, Zn	TPH	~~TCLP~~	~~% moisture~~
1	Env - Cuttings	Drill Cuttings	10/26	1015	C	SO	1	1	~~1~~	~~1~~
2			"							
3			"							
4	Per client request please									
5	Run TCLP VOA + TCLP Semi VOA									
6	"	"	"							
7	DLB 11-2-09 1133		"							
8										

Enter Number of Containers Per Analysis

SAMPLED BY (Please Print): Steve Gradley
Steve Gradley

LOGGED BY (signature): [signature] 10/27/09 1006
REVIEWED BY (signature): [signature] 10/27/09

	Relinquished By / Company Name	Date	Time		Received By / Company Name	Date	Time
1	[signature] WEG	10/26/09	1500	2	FedEx# 868333837707	10/26	1500
3				4			
5				6	[signature]	10/27/09	0930
7				8			
9				10			

Data Deliverables: ☐ Standard ☐ CLP-like ☐ NJ-Reduced ☐ NJ-Full ☐
EDDs Required? ☐ If yes, format type: Other
SDWA Forms? yes ☐ yes ☐ yes ☐ yes ☐
State Samples Collected In? PA ☐ NJ ☐ NY ☐ PA ☐
Enter PWSID #
BOD Criteria Required?

Receipt Information (completed by Sample Receiving)
Received by: DLB
Cooler Temp: 11°C
Therm. ID: 5(a)3519
No. of Coolers:
Notes: Gave Steve G temp info. 10/26/09. He stated to proceed w/ testing. 7/10/09 10/26/09

Correct containers?	(Y)	N
Correct sample volumes?	(Y)	N
Correct preservation?	(Y)	N
Headspace/Volatiles?	Y	(N)
Circle appropriate Y or N.		
Custody seals Present?	Y	(N)
(If present) Seals intact?	Y	N
Received on ice?	Y	(N)
COC/Labels complete/accurate?	(Y)	N
Container in good condition?	(Y)	N

ALSI FIELD SERVICES
☐ Pickup
☐ Labor
☐ Composite Sampling
☐ Rental Equipment
☐ Other

* G=Grab; C=Composite
**Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater
***Container Type: AG-Amber Glass; CG-Clear Glass; PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY
Rev 6/07

2540-PM-BWM0347 Rev. 1/2011

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.	DEP USE ONLY
General Reference 287.54	Date Received & General Notes
Date Prepared/Revised February 11, 2011	

SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION

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)? ☐ Yes ☒ No

If 'No', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the [redacted](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

SECTION B. WASTE DESCRIPTION

Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure	Time Frame
810	Drill cuttings (oil and gas)	8,491	☐ cu yd ☐ gal ☐ lb ☒ ton	☐ One Time

1. GENERAL PROPERTIES

a.	**pH Range**	9.79 to 11.10	(based on analyses or knowledge)
b.	**Physical State**	☐ Liquid Waste (EPA Method 9095) ☒ Solid (EPA Method 9095) ☐ 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	

2. CHEMICAL ANALYSIS ATTACHMENTS

a.	**The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.**	☒ Yes	☐ No	
b.	**A detailed description of the waste sampling method is attached.**	☒ Yes	☐ No	
c.	**The quality assurance/quality control procedures employed by the laboratory(ies) is attached.**	☒ Yes	☐ No	
d.	**The results of the hazardous waste determination is attached.**	☒ Yes	☐ No	
e.	**If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.**	☐ Yes	☐ No	☒ 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.	☒ Yes	☐ No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes ☐ No	☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ 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 (585) 466-7271	Email Address	joe.boyles@casella.com

d. Volume of waste shipped to processing or disposal facility in the previous year.
3,387 ☐ cu yd ☐ gal ☐ lb ☒ ton (check one)

2. Beneficial Use

a. Has the waste been approved for beneficial use? ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. Volume of waste beneficially used in the previous year.
0 ☐ cu yd ☐ gal ☐ lb ☐ 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.	☒ Yes	☐ No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes ☐ No	☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ 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.
☐ cu yd ☐ gal ☐ lb ☐ 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.	☐ Yes	☒ No

b. Volume of waste beneficially used in the previous year.
0 ☐ cu yd ☐ gal ☐ lb ☐ 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 Dina Brown **Title** 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

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

Work Order: 10071897

SEND DATA TO:

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

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

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

TEST REPORT

[redacted] Well

RECEIVED FOR LAB BY: WCB DATE: 07/13/2010 13:15

SAMPLE: **Inv. Cuttings** Lab ID: 10071897-001A Grab
SAMPLED BY: SG Sample Time: 07/12/2010 15:00

Test	Result	Method	SLOQ	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

Test	Result	Method	SLOQ	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

Test	Result	Method	SLOQ	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

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

Work Order: 10074055

SEND DATA TO:

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

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

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

TEST REPORT

[redacted]

RECEIVED FOR LAB BY: DLM2 DATE: 07/26/2010 15:15

SAMPLE: **Air Cuttings & Gypsum** Lab ID: 10074055-001A Composite
SAMPLED BY: SG 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** Lab ID: 10074055-001B Composite
SAMPLED BY: SG 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** Lab ID: 10074055-001C Composite
SAMPLED BY: SG 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** Lab ID: 10074055-001E Grab
SAMPLED BY: SG 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

Phone: (570) 888-0169
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COMPANY: Talisman Energy USA, Inc.
ADDRESS: 337 Daniel Zenker Dr
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PHONE: (607) 562-4000
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WO#: 10074055
PAGE: 2 of 2
PO#: AF77442
PWS ID#

TEST REPORT

[redacted]

RECEIVED FOR LAB BY: DLM2 DATE: 07/26/2010 15:15

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

2540-PM-BWM0347 Rev. 1/2011

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.	DEP USE ONLY
General Reference 287.54	Date Received & General Notes
Date Prepared/Revised February 11, 2011	

SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION

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)? ☐ Yes ☒ No

If 'No', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the [redacted](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

SECTION B. WASTE DESCRIPTION

Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure	Time Frame
810	Drill cuttings (oil and gas)	3,161	☐ cu yd ☐ gal ☐ lb ☒ ton	☐ One Time

1. GENERAL PROPERTIES

a. pH Range 10.65 to --- (based on analyses or knowledge)

b. Physical State
- ☐ Liquid Waste (EPA Method 9095)
- ☒ Solid (EPA Method 9095)
- ☐ 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

2. CHEMICAL ANALYSIS ATTACHMENTS

a.	The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.	☒ Yes	☐ No	
b.	A detailed description of the waste sampling method is attached.	☒ Yes	☐ No	
c.	The quality assurance/quality control procedures employed by the laboratory(ies) is attached.	☒ Yes	☐ No	
d.	The results of the hazardous waste determination is attached.	☒ Yes	☐ No	
e.	If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.	☐ Yes	☐ No	☒ 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.	☒ Yes	☐ No	
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No	
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes	☐ No	☒ 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 (585) 466-7271	**Email Address**	joe.boyles@casella.com

d. Volume of waste shipped to processing or disposal facility in the previous year.
1,566 ☐ cu yd ☐ gal ☐ lb ☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ ton (check one)

2. Beneficial Use

a. Has the waste been approved for beneficial use? ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. Volume of waste beneficially used in the previous year.
0 ☐ cu yd ☐ gal ☐ lb ☐ 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.	☒ Yes	☐ No	
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No	
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes	☐ No	☒ 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.
573 ☐ cu yd ☐ gal ☐ lb ☒ 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.
167 ☐ cu yd ☐ gal ☐ lb ☒ ton (check one)

2. Beneficial Use

a. Has the waste been approved for beneficial use? ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. Volume of waste beneficially used in the previous year.
0 ☐ cu yd ☐ gal ☐ lb ☐ 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 Dina Brown **Title** Environmental Specialist

Signature _____ **Date** 2/25/11

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: 10041878

SEND DATA TO:

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

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

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

TEST REPORT

[redacted]T5H

RECEIVED FOR LAB BY: DLM2 DATE: 04/14/2010 10:50

SAMPLE: **Inv. Cuttings** Lab ID: 10041878-001A Composite
SAMPLED BY: SG Sample Time: 04/12/2010 17:00

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
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 Carrie M. Davis DATE: 4/15/2010

2540-PM-BWM0347 Rev. 1/2011

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.	DEP USE ONLY
General Reference 287.54	Date Received & General Notes
Date Prepared/Revised February 11, 2011	

SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION

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)? ☐ Yes ☒ No

If 'No', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the [redacted] (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

SECTION B. WASTE DESCRIPTION

Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure	Time Frame
810	Drill cuttings (oil and gas)	721	☐ cu yd ☐ gal ☐ lb ☒ ton	☐ One Time

1. GENERAL PROPERTIES

a.	**pH Range**	7.78 to 8.20	(based on analyses or knowledge)
b.	**Physical State**	☐ Liquid Waste (EPA Method 9095) ☒ Solid (EPA Method 9095) ☐ 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	

2. CHEMICAL ANALYSIS ATTACHMENTS

a.	**The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.**	☒ Yes	☐ No	
b.	**A detailed description of the waste sampling method is attached.**	☒ Yes	☐ No	
c.	**The quality assurance/quality control procedures employed by the laboratory(ies) is attached.**	☒ Yes	☐ No	
d.	**The results of the hazardous waste determination is attached.**	☒ Yes	☐ No	
e.	**If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.**	☐ Yes	☐ No	☒ 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.	☒ Yes	☐ No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes ☐ No	☒ 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.
423 ☐ cu yd ☐ gal ☐ lb ☒ 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.
298 ☐ cu yd ☐ gal ☐ lb ☒ ton (check one)

2. Beneficial Use

a. Has the waste been approved for beneficial use? ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. Volume of waste beneficially used in the previous year.
0 ☐ cu yd ☐ gal ☐ lb ☐ 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 Dina Brown **Title** 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

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

Work Order: 10113523

SEND DATA TO:

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

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

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

TEST REPORT

[redacted]

RECEIVED FOR LAB BY: SCP DATE: 11/22/2010 12:33

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 Carrie M. Davis DATE: 11/30/2010

CHAIN OF CUSTODY

PAGE 1 OF 1

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 UEG
CONTAINER / SAMPLING POINT

W/O#: 10113523

:40

REFRIGE... 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
☐ PERSONAL OTHER LANDFILL

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_3 SODIUM SULFITE | NH_4 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).

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	Inv Cuttings	11/21	1000	SO	C	[redacted]	N	TPH			
2								pH			
3								TCLP 8 RCRA Metals + Cu, Ni, Zn			
4								Free Liquids / % Moisture			
5	A- TPH										
6	B- Wetchem							Perform BTEX ONLY IF the TPH			
7	C- Total Sample							exceeds 100,000 mg/Kg			
8	D- TCLP Metals										
9								72 HOUR TURNAROUND			
10								___ DAY TURNAROUND			
11								due 11/29/10			

LAB USE ONLY — DELIVERED BY: [redacted] — TEMPERATURE UPON RECEIPT 1.5 °C — ARRIVAL ON ICE Y/N

RELINQUISHED BY: [redacted]	DATE: 11/22/10	TIME: 1231	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY: [redacted]	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

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

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

WO#: 10110482
PAGE: 1 of 1
PO#: AF 76888
PWS ID#

TEST REPORT

[redacted]J2H

RECEIVED FOR LAB BY: RML DATE: 11/03/2010 12:36 Page 1 of 1

SAMPLE: **Air Cuttings** Lab ID: 10110482-001A Grab
SAMPLED BY: SG Sample Time: 11/03/2010 19:40

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
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** Lab ID: 10110482-001B Grab
SAMPLED BY: SG Sample Time: 11/03/2010 19:40

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
Moisture	33.7 %	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 14:40	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** Lab ID: 10110482-001D 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 Carrie M. Davis DATE: 11/5/2010

CHAIN OF CUSTODY

Bench

2566 Pennsyl
Ph:
Fax: (570) 888-0717

W/O#: 10110482

GE 1 OF 1

REPORT TO:	Talisman / UEG
	geowetlands@aol.com
	twollin@rallysolutions.ca
CONTACT	Steve Gridley
PH#	607-731-0145
FAX#	
BILL TO:	Talisman
PO#	AF 76888
PROJECT DESCRIPTION	[redacted] J2H
SAMPLER SIGNATURE / AFFILIATION	UEO
CONTAINER / SAMPLING POINT	

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 ☐ PERSONAL OTHER

IE 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 · S SULFURIC ACID · N NITRIC ACID · SO_3 SODIUM SULFITE · Thio SODIUM THIOSULFATE · – NONE · OH SODIUM HYDROXIDE · AS ASCORBIC ACID · AC ACETIC ACID · NH_4 AMMONIUM CHLORIDE · ZN ZINC ACETATE · Hg MERCURIC CHLORIDE

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

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	Air Cuttings	11/3	1940	SO	C	SO	U	TPH			307A
2								pH, Chlorides, Sodium			B
3								TCLP 8 RCRA Metals + Cu, Ni, Zn			C, D
4								Free Liquids / % Moisture			B
5								BTEX			
6								~~TCLP 8260 / 8270 ONLY IF >50,000 TPH~~			
7								exceeds 100,000 mg/Kg			
8											
9								72 HOUR TURNAROUND			
10								____ DAY TURNAROUND			
11											

LAB USE ONLY — DELIVERED BY: Efficient — TEMPERATURE UPON RECEIPT ____ °C — ARRIVAL ON ICE: Y / N

RELINQUISHED BY:	DATE: 11/3/10	TIME: 1236	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: 11/3/10	TIME: 1236

2540-PM-BWM0347 Rev. 1/2011

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.	DEP USE ONLY Date Received & General Notes
General Reference 287.54	
Date Prepared/Revised February 11, 2011	

SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION

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	State	Zip+4	Phone	Ext
Warrendale	PA	15086	(724) 841-5300	

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)? ☐ Yes ☒ No

If 'No', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the [redacted](01-074) well pad site located at 2018 Mountain Avenue, Armenia Township, Bradford County, PA. Waste is stored in containers on site.

Municipality Armenia **County** Bradford **State** PA

SECTION B. WASTE DESCRIPTION

Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure	Time Frame
810	Drill cuttings (oil and gas)	5,619	☐ cu yd ☐ gal ☐ lb ☒ ton	☐ One Time

1. GENERAL PROPERTIES

a. pH Range 8.26 to 8.89 (based on analyses or knowledge)

b. Physical State
- ☐ Liquid Waste (EPA Method 9095)
- ☒ Solid (EPA Method 9095)
- ☐ 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

2. CHEMICAL ANALYSIS ATTACHMENTS

a.	The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.	☒ Yes	☐ No	
b.	A detailed description of the waste sampling method is attached.	☒ Yes	☐ No	
c.	The quality assurance/quality control procedures employed by the laboratory(ies) is attached.	☒ Yes	☐ No	
d.	The results of the hazardous waste determination is attached.	☒ Yes	☐ No	
e.	If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.	☐ Yes	☐ No	☒ 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.	☒ Yes	☐ No	
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No	
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes	☐ No	☒ 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 (585) 466-7271	**Email Address**	joe.boyles@casella.com

d. **Volume of waste shipped to processing or disposal facility in the previous year.**
2,512 ☐ cu yd ☐ gal ☐ lb ☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ ton (check one)

2. Beneficial Use

a. **Has the waste been approved for beneficial use?** ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. **Volume of waste beneficially used in the previous year.**
0 ☐ cu yd ☐ gal ☐ lb ☐ 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.	☒ Yes	☐ No	
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No	
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes	☐ No	☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ ton (check one)

2. Beneficial Use

a. Has the waste been approved for beneficial use? ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. Volume of waste beneficially used in the previous year.
0 ☐ cu yd ☐ gal ☐ lb ☐ 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 Dina Brown **Title** Environmental Specialist

Signature _____ **Date** 2/25/14

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

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

WO#: 10083653
PAGE: 1 of 2
PO#: AF77717
PWS ID#

TEST REPORT

[redacted]01-074-01

RECEIVED FOR LAB BY: DLM2 DATE: 08/20/2010 11:51

SAMPLE: **Air Cuttings** Lab ID: 10083653-001A Composite
SAMPLED BY: SG 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** Lab ID: 10083653-001B Composite
SAMPLED BY: SG 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** Lab ID: 10083653-001C Composite
SAMPLED BY: SG 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** Lab ID: 10083653-001E Composite
SAMPLED BY: SG 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.
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Horseheads, NY 14845

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

WO#: 10083653
PAGE: 2 of 2
PO#: AF77717
PWS ID#

TEST REPORT

[redacted]01-074-01

RECEIVED FOR LAB BY: DLM2 DATE: 08/20/2010 11:51

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.

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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
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Work Order: 10092004

SEND DATA TO:

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

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

WO#: 10092004
PAGE: 1 of 1
PO#: AF77717
PWS ID#

TEST REPORT

[redacted]

RECEIVED FOR LAB BY: TJC DATE: 09/13/2010 17:12

SAMPLE: **Inv. Cuttings** Lab ID: 10092004-001A Grab
SAMPLED BY: SG Sample Time: 09/13/2010 12:05

Test	Result		Method	SLOQ	Analysis Start	Analysis End	Analyst *
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

Test	Result		Method	SLOQ	Analysis Start	Analysis End	Analyst *
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

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
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	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.

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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

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

Work Order: 10094268

SEND DATA TO:

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

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

WO#: 10094268
PAGE: 1 of 1
PO#: AF77718
PWS ID#

TEST REPORT

[redacted]01-074

RECEIVED FOR LAB BY: BMM DATE: 09/27/2010 14:48

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:

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: 9/30/2010

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: 10101808

SEND DATA TO:

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

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

WO#: 10101808
PAGE: 1 of 1
PO#: AF77717
PWS ID#

TEST REPORT

[redacted] Pad Inv. Spill

RECEIVED FOR LAB BY: BMM DATE: 10/12/2010 16:22

SAMPLE: **Clean Soil** Lab ID: 10101808-001A Composite
SAMPLED BY: SG 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** Lab ID: 10101808-001B Composite
SAMPLED BY: SG 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** Lab ID: 10101808-001D Composite
SAMPLED BY: SG 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:

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: 10/18/2010

CHAIN OF CUSTODY

Benchmark Analytics, Inc.
Eastern Division

PAGE 1 OF 1

W/O#: 10101808

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

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

PO# 1R77717
PROJECT DESCRIPTION [redacted] Pad Inv Spill
SAMPLER SIGNATURE / AFFILIATION UEG
CONTAINER / SAMPLING POINT

REFRIGERATE SAMP AFTER COLLECTION

TRANSPORT TO LABORATORY IN COOLER WITH ICE

BEING USED FOR: ☑ NYDEC ☑ PADEP

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 LANDFILL

H	HYDROCHLORIC ACID	OH	SODIUM HYDROXIDE
S	SULFURIC ACID	AS	ASCORBIC ACID
N	NITRIC ACID	AC	ACETIC ACID
SO_3	SODIUM SULFITE	NH_4	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).

Please fill out all applicable areas completely

	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~~ Clean Soil	9-28	1455	SO	C	SO	U	TPH			001 A
2								pH			001 B
3								TCLP 8 RCRA Metals + Cu, Ni, Zn			001 C
4								Free Liquids / % Moisture			001 D
5											
6								TCLP 8260 / 8270 ONLY IF the TPH			
7								exceeds 120,000 mg/Kg			
8											
9								72 HOUR TURNAROUND			
10								____ DAY TURNAROUND			
11											

LAB USE ONLY

DELIVERED BY: Client TEMPERATURE UPON RECEIPT 1 °C ARRIVAL ON ICE (Y) N

RELINQUISHED BY:	DATE: 10/12/10	TIME: 1622	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY: Debbie McCarty	DATE: 10/12/10	TIME: 1622

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

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

WO#: 10121720
PAGE: 1 of 3
PO#: AF77720
PWS ID#

TEST REPORT

[redacted]01-074

RECEIVED FOR LAB BY: RML DATE: 12/09/2010 15:45 Page 1 of 3

SAMPLE: **Air or Gel Cuttings** Lab ID: 10121720-001A Grab
SAMPLED BY: SG Sample Time: 12/08/2010 19:23

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: **Air or Gel Cuttings** Lab ID: 10121720-001C Grab
SAMPLED BY: SG Sample Time: 12/08/2010 19:23

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: **Air or Gel Cuttings** Lab ID: 10121720-001D Grab
SAMPLED BY: SG Sample Time: 12/08/2010 19:23

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
% Solids	64.88 % Wght.	SM2540B	0.10	12/10/10 17:00	12/13/10	IC-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** Lab ID: 10121720-001F 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	12/14/10 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:

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: 10121720

SEND DATA TO:

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

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

WO#: 10121720
PAGE: 2 of 3
PO#: AF77720
PWS ID#

TEST REPORT

[redacted]01-074

RECEIVED FOR LAB BY: RML DATE: 12/09/2010 15:45

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

Test	Result	Method	SLOQ	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

Test	Result	Method	SLOQ	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

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
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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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: 10121720

SEND DATA TO:

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

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

WO#: 10121720
PAGE: 3 of 3
PO#: AF77720
PWS ID#

TEST REPORT

[redacted]01-074

RECEIVED FOR LAB BY: RML DATE: 12/09/2010 15:45

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

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

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

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.

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B Analyte detected in the associated Method Blank

MANAGER Carrie M. Davis DATE: 12/16/2010

CHAIN OF CUSTODY

Benchma
Eas
2566 Pennsylvania
Phone:
Fax: (

W/O#: 10121720

REPORT TO:	Talisman / UEG
	geowetlands@aol.com
CONTACT	Steve Gridley
PH#	607-731-0145
FAX#	
BILL TO:	Talisman
PO#	AP77720
PROJECT DESCRIPTION	[redacted] 01-074
SAMPLER SIGNATURE / AFFILIATION	UEG

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 ☐ PERSONAL
LANDFILL Mostoller
OTHER

SPECIAL DETECTION LIMITS
ID: ☐ YES / ☑ NO

IF YES, PLEASE ATTACH
IS A QC PACKAGE NEEDED?
☐ YES ☑ NO
IF YES, PLEASE ATTACH REQUIREMENTS

H HYDROCHLORIC ACID · S SULFURIC ACID · N NITRIC ACID · SO_3 SODIUM SULFITE · Thio SODIUM THIOSULFATE · – NONE · OH SODIUM HYDROXIDE · AS ASCORBIC ACID · AC ACETIC ACID · NH_4 AMMONIUM CHLORIDE · ZN ZINC ACETATE · Hg MERCURIC CHLORIDE

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

Please fill out all applicable areas completely

	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 or Gel Cuttings	12/8	1923	SO	C	SG	N	Ignitability, Reactive Sulfide & Cyanide			
2					C			~~PCBs~~, Total Solids			
3	A - ~~Phenol~~, 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 8270, ~~Pest~~.										
8	G - TCLP ~~Herbs~~. Sr	~~K - ASTM VOC~~									
9	H - TCLP pH	L - ASTM		TS, pH				36 HOUR TURNAROUND			
10	I - TCLP Vols.	M - TOX						____ DAY TURNAROUND			
11	J - ASTM COD, ~~NH3~~										

LAB USE ONLY

RELINQUISHED BY:		DATE: 12/9/10	TIME: 1530	RECEIVED BY:		DATE: / /	TIME:
RELINQUISHED BY:		DATE: / /	TIME:	RECEIVED BY:		DATE: / /	TIME:
RELINQUISHED BY:		DATE: / /	TIME:	RECEIVED BY:		DATE: 12/9/10	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 qualfier, 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

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

WO#: 10121754
PAGE: 1 of 3
PO#: AF77720
PWS ID#

TEST REPORT

[redacted]01-074

RECEIVED FOR LAB BY: RML DATE: 12/09/2010 15:45

SAMPLE: **Inv. Cuttings** Lab ID: 10121754-001A Grab
SAMPLED BY: SG Sample Time: 12/08/2010 19:15

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: 10121754-001C Grab
SAMPLED BY: SG Sample Time: 12/08/2010 19:15

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	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

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
% 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

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
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

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

WO#: 10121754
PAGE: 2 of 3
PO#: AF77720
PWS ID#

TEST REPORT

[redacted]01-074

RECEIVED FOR LAB BY: RML DATE: 12/09/2010 15:45

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

Test	Result	Method	SLOQ	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

Test	Result	Method	SLOQ	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

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
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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MANAGER Carrie M. Davis DATE: 12/16/2010

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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

PHONE: (607) 562-4000
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WO#: 10121754
PAGE: 3 of 3
PO#: AF77720
PWS ID#

TEST REPORT

[redacted]01-074

RECEIVED FOR LAB BY: RML DATE: 12/09/2010 15:45

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** Lab ID: 10121754-001J Grab
SAMPLED BY: SG 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** Lab ID: 10121754-001L Grab
SAMPLED BY: SG 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** Lab ID: 10121754-001M Grab
SAMPLED BY: SG 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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MANAGER Carrie M. Davis DATE: 12/16/2010

CHAIN OF CUSTODY

Benc

2566 Penns
F

PAGE 1 OF 1

W/O#: 10121754

REPORT TO: Talisman / UEG
geowetlands@aol.com

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

PO# AF 77720
PROJECT DESCRIPTION [redacted] 01-074
SAMPLER SIGNATURE / AFFILIATION UBG
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

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_3 SODIUM SULFITE | NH_4 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).

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	Inv Cuttings	12/8	1915	SO	C	SB	N	Ignitability, Reactive Sulfide & Cyanide			
2					C			PCBs, Total Solids			
3	A - ~~Phenols~~, 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 BNA, ~~Pest~~s.										
8	G - TCLP ~~Herbs~~. Sr		K -	ASTM	~~grab~~						
9	H - TCLP pH		L -	A STM	TS	pH		36 HOUR TURNAROUND			
10	I - TCLP Vols.		M -	TOX				____ DAY TURNAROUND			
11	J - ASTM COD, ~~NH3~~										

LAB USE ONLY — DELIVERED BY: _____ TEMPERATURE UPON RECEIPT: _____ °C ARRIVAL ON ICE: Y / N

RELINQUISHED BY:	DATE: 12/9/10	TIME: 1530	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: 12.9.10	TIME: 1545

Ad Graphics Printing 570-888-0685

2540-PM-BWM0347 Rev. 1/2011

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.	DEP USE ONLY
General Reference 287.54	Date Received & General Notes
Date Prepared/Revised February 11, 2011	

SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION

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	State	Zip+4	Phone	Ext
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)? ☐ Yes ☒ 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

SECTION B. WASTE DESCRIPTION

Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure	Time Frame
810	Drill cuttings (oil and gas)	7,364	☐ cu yd ☐ gal ☐ lb ☒ ton	☐ One Time

1. GENERAL PROPERTIES

a. pH Range 8.81 to 11.27 (based on analyses or knowledge)

b. Physical State
- ☐ Liquid Waste (EPA Method 9095)
- ☒ Solid (EPA Method 9095)
- ☐ 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

2. CHEMICAL ANALYSIS ATTACHMENTS

a.	The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.	☒ Yes	☐ No	
b.	A detailed description of the waste sampling method is attached.	☒ Yes	☐ No	
c.	The quality assurance/quality control procedures employed by the laboratory(ies) is attached.	☒ Yes	☐ No	
d.	The results of the hazardous waste determination is attached.	☒ Yes	☐ No	
e.	If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.	☐ Yes	☐ No	☒ 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.	☒ Yes	☐ No	
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No	
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes	☐ No	☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ 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 (585) 466-7271	**Email Address**	joe.boyles@casella.com

d. Volume of waste shipped to processing or disposal facility in the previous year.
2,796 ☐ cu yd ☐ gal ☐ lb ☒ ton (check one)

2. Beneficial Use

a. Has the waste been approved for beneficial use? ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. Volume of waste beneficially used in the previous year.
0 ☐ cu yd ☐ gal ☐ lb ☐ 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.	☒ Yes	☐ No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes ☐ No	☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ ton (check one)

2. Beneficial Use

a. **Has the waste been approved for beneficial use?** ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. **Volume of waste beneficially used in the previous year.**
0 ☐ cu yd ☐ gal ☐ lb ☐ 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 Dina Brown **Title** 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

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

Work Order: 10041885

SEND DATA TO:

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

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

WO#: 10041885
PAGE: 1 of 1
PO#:
PWS ID#

TEST REPORT

[redacted]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 Carrie 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

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

Work Order: 10074059

SEND DATA TO:

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

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

WO#: 10074059
PAGE: 1 of 1
PO#: AF76709
PWS ID#

TEST REPORT

[redacted]76

RECEIVED FOR LAB BY: DLM2 DATE: 07/26/2010 15:15

SAMPLE: **Inv. Cuttings & Gypsum** Lab ID: 10074059-001A Composite
SAMPLED BY: SG 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** Lab ID: 10074059-001B Composite
SAMPLED BY: SG 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** Lab ID: 10074059-001D Grab
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	0.118 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	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

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: 10074060

SEND DATA TO:

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

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

WO#: 10074060
PAGE: 1 of 1
PO#: AF76709
PWS ID#

TEST REPORT

[redacted]76

RECEIVED FOR LAB BY: DLM2 DATE: 07/26/2010 15:15

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	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

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

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

WO#: 10074062
PAGE: 1 of 1
PO#: AF76709
PWS ID#

TEST REPORT

[redacted]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

Test	Result		Method	SLOQ	Analysis Start	Analysis End	Analyst *
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

Test	Result		Method	SLOQ	Analysis Start	Analysis End	Analyst *
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

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	0.143 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

2540-PM-BWM0347 Rev. 1/2011

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.	DEP USE ONLY
General Reference 287.54	Date Received & General Notes
Date Prepared/Revised February 11, 2011	

SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION

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)? ☐ Yes ☒ 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

SECTION B. WASTE DESCRIPTION

Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure	Time Frame
810	Drill cuttings (oil and gas)	8,477	☐ cu yd ☐ gal ☐ lb ☒ ton	☐ One Time

1. GENERAL PROPERTIES

a.	**pH Range**	9.13 to 12.24 (based on analyses or knowledge)
b.	**Physical State**	☐ Liquid Waste (EPA Method 9095) ☒ Solid (EPA Method 9095) ☐ 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

2. CHEMICAL ANALYSIS ATTACHMENTS

a.	**The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.**	☒ Yes	☐ No	
b.	**A detailed description of the waste sampling method is attached.**	☒ Yes	☐ No	
c.	**The quality assurance/quality control procedures employed by the laboratory(ies) is attached.**	☒ Yes	☐ No	
d.	**The results of the hazardous waste determination is attached.**	☒ Yes	☐ No	
e.	**If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.**	☐ Yes	☐ No	☒ 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.	☒ Yes	☐ No	
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No	
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes	☐ No	☒ 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 (585) 797-5941	Email Address	joe.boyles@casella.com

d. Volume of waste shipped to processing or disposal facility in the previous year.
3,701 ☐ cu yd ☐ gal ☐ lb ☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ ton (check one)

2. Beneficial Use

a. Has the waste been approved for beneficial use? ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. Volume of waste beneficially used in the previous year.
0 ☐ cu yd ☐ gal ☐ lb ☐ 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.	☒ Yes	☐ No	
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No	
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes	☐ No	☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ ton (check one)

2. Beneficial Use

a. Has the waste been approved for beneficial use? ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. Volume of waste beneficially used in the previous year.
0 ☐ cu yd ☐ gal ☐ lb ☐ 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 Dina Brown **Title** Environmental Specialist

Signature _____ **Date** 2/25/11

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: 10030703

SEND DATA TO:

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

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

WO#: 10030703
PAGE: 1 of 1
PO#:
PWS ID#

TEST REPORT

NTSW TCLP Metals/TPH/pH/%Moisture

RECEIVED FOR LAB BY: WCB DATE: 03/03/2010 9:38

SAMPLE: **Air Cuttings P-1** Lab ID: 10030703-001A Composite
SAMPLED BY: SG 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** Lab ID: 10030703-001C Composite
SAMPLED BY: SG 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 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 Carrie 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

PAGE 1 OF 1

REPORT TO: Talisman

CONTACT Steve Gradley
PH# 607-731-0145
FAX#
BILL TO: Talisman
PO#
[redacted]TION
SAMPLER SIGNATURE / AFFILIATION [signature] 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 (circled) PADEP (circled)
LANDFILL
AL OTHER

DROXIDE
ACID
CHLORIDE
E
CHLORIDE

W/O#: 10030703

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

PWS ID#
Location
Sample Point

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

Please fill out all applicable areas completely.

Container	Sample Point No./Type	DATE SAMPLED	TIME OF SAMPLING	SAMPLE MATRIX	SAMPLE TYPE - C	SAMPLER INITIAL	PRESERVATIVE	Chlorine Residual Free / Total	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	[initials]	N		TPH pH			001 A-C
2									TCLP 8 RCRA Metals +			
3									Cu, Ni, Zn.			
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: Client TEMPERATURE UPON RECEIPT 5 °C ARRIVAL ON ICE Y/N

RELINQUISHED BY: [signature]	DATE: 3/3/10	TIME: 938	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY: Debbie McCarty	DATE: 3/3/10	TIME: 938

Ad Graphics Printing 570-888-0585

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: 10064652

SEND DATA TO:

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

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

WO#: 10064652
PAGE: 1 of 1
PO#:
PWS ID#

TEST REPORT

Truck Accident 030810

RECEIVED FOR LAB BY: DLM2 DATE: 06/29/2010 14:40

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 Carrie 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

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

Work Order: 10071871

SEND DATA TO:

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

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

WO#: 10071871
PAGE: 1 of 1
PO#: AF76317
PWS ID#

TEST REPORT

[redacted]77 Well

RECEIVED FOR LAB BY: WCB DATE: 07/13/2010 13:15

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	L	EPA 6010B		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 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

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

Work Order: 10073110

SEND DATA TO:

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

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

WO#: 10073110
PAGE: 1 of 2
PO#: AF76323
PWS ID#

TEST REPORT

[redacted]7

RECEIVED FOR LAB BY: WCB DATE: 07/20/2010 13:25

SAMPLE: **Inv. Clean Soil** Lab ID: 10073110-001A Composite
SAMPLED BY: SG 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** Lab ID: 10073110-001B Composite
SAMPLED BY: SG 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** Lab ID: 10073110-001C Composite
SAMPLED BY: SG 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** Lab ID: 10073110-001E Composite
SAMPLED BY: SG 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 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

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

Work Order: 10073110

SEND DATA TO:

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

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

WO#: 10073110
PAGE: 2 of 2
PO#: AF76323
PWS ID#

TEST REPORT

[redacted]77

RECEIVED FOR LAB BY: WCB DATE: 07/20/2010 13:25

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

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

Work Order: 10080733

SEND DATA TO:

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

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

WO#: 10080733
PAGE: 1 of 1
PO#: AF76709
PWS ID#

TEST REPORT

[redacted]7

RECEIVED FOR LAB BY: DLM2 DATE: 08/05/2010 9:50 Page 1 of 1

SAMPLE: **Inv. Cuttings & Gypsum** Lab ID: 10080733-001A Grab
SAMPLED BY: SG Sample Time: 08/04/2010 11:00

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
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** Lab ID: 10080733-001B Grab
SAMPLED BY: SG Sample Time: 08/04/2010 11:00

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
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** Lab ID: 10080733-001D Grab
SAMPLED BY: SG 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 Carrie M. Davis DATE: 8/10/2010

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

Benchmark Analytics, Inc.
Eastern Division

2566 Pennsylvania Ave.
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Phone: (570) 888-0169
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Work Order: 10080746

SEND DATA TO:

NAME: Steve Gridley
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Horseheads, NY 14845

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

WO#: 10080746
PAGE: 1 of 1
PO#: AF76709
PWS ID#

TEST REPORT

[redacted]7

RECEIVED FOR LAB BY: DLM2 DATE: 08/05/2010 9:50

SAMPLE: **Inv. Cuttings & Cool Ash 1** Lab ID: 10080746-001A Grab
SAMPLED BY: SG 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** Lab ID: 10080746-001B Grab
SAMPLED BY: SG 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** Lab ID: 10080746-001D Grab
SAMPLED BY: SG 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.

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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

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Work Order: 10080752

SEND DATA TO:

NAME: Steve Gridley
COMPANY: Talisman Energy USA, Inc.
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PHONE: (607) 562-4000
FAX: (607) 562-4001

WO#: 10080752
PAGE: 1 of 1
PO#: AF76709
PWS ID#

TEST REPORT

[redacted]77

RECEIVED FOR LAB BY: DM3 DATE: 08/05/2010 9:50

SAMPLE: **Inv. Cuttings & Cool Ash 2** Lab ID: 10080752-001A Grab
SAMPLED BY: SG Sample Time: 08/04/2010 11:00

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
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

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
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

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 Carrie M. Davis DATE: 8/10/2010

2540-PM-BWM0347 Rev. 1/2011

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.	DEP USE ONLY
General Reference 287.54	Date Received & General Notes
Date Prepared/Revised February 11, 2011	

SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION

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	State	Zip+4	Phone	Ext
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)? ☐ Yes ☒ No

If 'No', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the [redacted] (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

SECTION B. WASTE DESCRIPTION

Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure	Time Frame
810	Drill cuttings (oil and gas)	570	☐ cu yd ☐ gal ☐ lb ☒ ton	☐ One Time

1. GENERAL PROPERTIES

a. **pH Range** 11.51 to --- (based on analyses or knowledge)

b. **Physical State**
- ☐ Liquid Waste (EPA Method 9095)
- ☒ Solid (EPA Method 9095)
- ☐ 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

2. CHEMICAL ANALYSIS ATTACHMENTS

a.	The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.	☒ Yes	☐ No	
b.	A detailed description of the waste sampling method is attached.	☒ Yes	☐ No	
c.	The quality assurance/quality control procedures employed by the laboratory(ies) is attached.	☒ Yes	☐ No	
d.	The results of the hazardous waste determination is attached.	☒ Yes	☐ No	
e.	If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.	☐ Yes	☐ No	☒ 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.	☒ Yes	☐ No	
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No	
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes	☐ No	☒ 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 (585) 466-7271	Email Address	joe.boyles@casella.com

d. Volume of waste shipped to processing or disposal facility in the previous year.
204 ☐ cu yd ☐ gal ☐ lb ☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ ton (check one)

2. Beneficial Use

a. Has the waste been approved for beneficial use? ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. Volume of waste beneficially used in the previous year.
0 ☐ cu yd ☐ gal ☐ lb ☐ 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.	☒ Yes	☐ No	
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No	
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes	☐ No	☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ ton (check one)

2. Beneficial Use

a. Has the waste been approved for beneficial use? ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. Volume of waste beneficially used in the previous year.
0 ☐ cu yd ☐ gal ☐ lb ☐ 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 Dina Brown **Title** 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

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

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

WO#: 10123993
PAGE: 1 of 3
PO#: AF 78732
PWS ID#

TEST REPORT

[redacted]A4H Well Pad

RECEIVED FOR LAB BY: CMS DATE: 12/28/2010 13:50

SAMPLE: **Air Cuttings** Lab ID: 10123993-001A Grab
SAMPLED BY: DJD Sample Time: 12/28/2010 10:50

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

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

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

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 Carrie M. Davis DATE: 1/12/2011

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

Benchmark Analytics, Inc.
Eastern Division

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Sayre, PA 18840

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WO#: 10123993
PAGE: 2 of 3
PO#: AF 78732
PWS ID#

TEST REPORT

[redacted] A4H Well Pad

RECEIVED FOR LAB BY: CMS DATE: 12/28/2010 13:50

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** Lab ID: 10123993-001F Grab
SAMPLED BY: DJD Sample Time: 01/06/2011 8:00

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** Lab ID: 10123993-001G Grab
SAMPLED BY: Sample Time: 01/06/2011 8:00

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 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: 10123993

SEND DATA TO:

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

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

WO#: 10123993
PAGE: 3 of 3
PO#: AF 78732
PWS ID#

TEST REPORT

[redacted]A4H Well Pad

RECEIVED FOR LAB BY: CMS DATE: 12/28/2010 13:50

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	< 0.0250 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

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

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 Carrie M. Davis DATE: 1/12/2011

2540-PM-BWM0347 Rev. 1/2011

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.	DEP USE ONLY Date Received & General Notes
General Reference 287.54	
Date Prepared/Revised February 11, 2011	

SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION

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	State	Zip+4	Phone	Ext
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)? ☐ Yes ☒ No

If 'No', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the [redacted](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

SECTION B. WASTE DESCRIPTION

Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure	Time Frame
810	Drilling Cuttings (Oil and Gas)	1,109	☐ cu yd ☐ gal ☐ lb ☒ ton	☐ One Time

1. GENERAL PROPERTIES

a. **pH Range** 6.53 to 8.24 (based on analyses or knowledge)

b. **Physical State**
- ☐ Liquid Waste (EPA Method 9095)
- ☒ Solid (EPA Method 9095)
- ☐ 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

2. CHEMICAL ANALYSIS ATTACHMENTS

a.	**The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.**	☒ Yes	☐ No	
b.	**A detailed description of the waste sampling method is attached.**	☒ Yes	☐ No	
c.	**The quality assurance/quality control procedures employed by the laboratory(ies) is attached.**	☒ Yes	☐ No	
d.	**The results of the hazardous waste determination is attached.**	☒ Yes	☐ No	
e.	**If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.**	☐ Yes	☐ No	☒ 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.	☒ Yes	☐ No	
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No	
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes	☐ No	☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ 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 (585) 466-7271	Email Address	joe.boyles@casella.com

d. Volume of waste shipped to processing or disposal facility in the previous year.
268 ☐ cu yd ☐ gal ☐ lb ☒ ton (check one)

2. Beneficial Use

a. Has the waste been approved for beneficial use? ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. Volume of waste beneficially used in the previous year.
0 ☐ cu yd ☐ gal ☐ lb ☐ 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.	☒ Yes	☐ No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes ☐ No	☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ ton (check one)

2. Beneficial Use

a. Has the waste been approved for beneficial use? ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. Volume of waste beneficially used in the previous year.
0 ☐ cu yd ☐ gal ☐ lb ☐ 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 Dina Brown **Title** 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

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

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

WO#: 10120835
PAGE: 1 of 1
PO#: AF77715
PWS ID#

TEST REPORT

[redacted]01-075

RECEIVED FOR LAB BY: CMS DATE: 12/06/2010 15:40

SAMPLE: **Inv Cuttings** Lab ID: 10120835-001A Composite
SAMPLED BY: SG 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** Lab ID: 10120835-001B Composite
SAMPLED BY: SG 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** Lab ID: 10120835-001E Composite
SAMPLED BY: SG 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 Carrie M. Davis DATE: 12/10/2010

CHAIN OF CUSTODY

W/O#: 10120835

REPORT TO:	Talisman / UEG
	geowetlands@aol.com
CONTACT	Steve Gridley
PH#	607-731-0145
FAX#	
BILL TO:	Talisman
PO#	AF 78557
PROJECT DESCRIPTION	[redacted]01-075
SAMPLER SIGNATURE / AFFILIATION	UEG
CONTAINER / SAMPLING POINT	

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 ☐ PERSONAL OTHER ____ LANDFILL ____

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 · S SULFURIC ACID · N NITRIC ACID · SO_3 SODIUM SULFITE · Thio SODIUM THIOSULFATE · – NONE · OH SODIUM HYDROXIDE · AS ASCORBIC ACID · AC ACETIC ACID · NH_4 AMMONIUM CHLORIDE · ZN ZINC ACETATE · Hg MERCURIC CHLORIDE

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

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	Inv Cuttings	12/6	1005	SO	C	SO	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			
7	C- Anions, metals							exceeds 100,000 mg/Kg			
8	D- Total Sample										
9	E- TCLP Metals							72 HOUR TURNAROUND			
10								____ DAY TURNAROUND			
11											

LAB USE ONLY — DELIVERED BY: [illegible] TEMPERATURE UPON RECEIPT: 5 °C ARRIVAL ON ICE: Y / N

RELINQUISHED BY:	DATE: 12/6/10	TIME: 1540	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY: Charles McSpa	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: 10121734

SEND DATA TO:

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

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

WO#: 10121734
PAGE: 1 of 3
PO#: AF78557
PWS ID#

TEST REPORT

[redacted]01-075

RECEIVED FOR LAB BY: RML DATE: 12/09/2010 15:45

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

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

WO#: 10121734
PAGE: 2 of 3
PO#: AF78557
PWS ID#

TEST REPORT

[redacted] 01-075

RECEIVED FOR LAB BY: RML DATE: 12/09/2010 15:45

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** Lab ID: 10121734-001G Grab
SAMPLED BY: SG Sample Time: 12/07/2010 8:00

Test	Result		Method	SLOQ	Analysis Start	Analysis End	Analyst *
Strontium - TCLP extracted	17.8 mg/L	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** Lab ID: 10121734-001H Grab
SAMPLED BY: SG 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** Lab ID: 10121734-001I Grab
SAMPLED BY: SG 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 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

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

WO#: 10121734
PAGE: 3 of 3
PO#: AF78557
PWS ID#

TEST REPORT

[redacted]01-075

RECEIVED FOR LAB BY: RML DATE: 12/09/2010 15:45

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** Lab ID: 10121734-001J Grab
SAMPLED BY: SG Sample Time: 12/10/2010 11:15

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** Lab ID: 10121734-001L Grab
SAMPLED BY: SG Sample Time: 12/10/2010 11:15

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** Lab ID: 10121734-001M Grab
SAMPLED BY: SG 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

L Value above calibration range but within annually verified linear range

MANAGER Carrie M. Davis DATE: 12/16/2010

CHAIN OF CUSTODY

Benchm
E
2566 Pennsylva
Pho
Fa

W/O#: 10121734

PAGE 1 OF 1

REPORT TO:	Talisman / UEG
	geowetlands@aol.com
CONTACT	Steve Gridley
PH#	607-731-0145
FAX#	
BILL TO:	Talisman
PO#	AF78557
PROJECT DESCRIPTION	[redacted]07-075
SAMPLER SIGNATURE / AFFILIATION	UEG
CONTAINER / SAMPLING POINT	

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 ☐ PERSONAL OTHER ____ LANDFILL Mostoller

E SPECIAL DETECTION LIMITS
EDED: ☐ YES / ☑ NO
IF YES, PLEASE ATTACH
IS A QC PACKAGE NEEDED?
☐ YES ☑ NO
IF YES, PLEASE ATTACH REQUIREMENTS

H HYDROCHLORIC ACID · S SULFURIC ACID · N NITRIC ACID · SO_3 SODIUM SULFITE · Thio SODIUM THIOSULFATE · – NONE · OH SODIUM HYDROXIDE · AS ASCORBIC ACID · AC ACETIC ACID · NH_4 AMMONIUM CHLORIDE · ZN ZINC ACETATE · Hg MERCURIC CHLORIDE

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

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	Inv Cuttings	12/9	1142	SO	C	SG	N	Ignitability, Reactive Sulfide & Cyanide			
2					C			PCBs, Total Solids			
3	A - Reactivity, 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 BNA, Metals										
8	G - TCLP Metals Sr										
9	H - TCLP pH		K - [illegible]					36 HOUR TURNAROUND			
10	I - TCLP Vols.		L - ASTM		TS	pH		____ DAY TURNAROUND			
11	J - ASTM COD, with H_2SO_4		M - TOX								

LAB USE ONLY — DELIVERED BY: ____ TEMPERATURE UPON RECEIPT: ____ °C ARRIVAL ON ICE: Y/N

RELINQUISHED BY:		DATE: 12/9/10	TIME: 1530	RECEIVED BY:		DATE: / /	TIME:
RELINQUISHED BY:		DATE: / /	TIME:	RECEIVED BY:		DATE: / /	TIME:
RELINQUISHED BY:		DATE: / /	TIME:	RECEIVED BY:		DATE: 12/9/10	TIME: 1815

Ad Graphics Printing 570-888-0685

2540-PM-BWM0347 Rev. 1/2011

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.	DEP USE ONLY Date Received & General Notes
General Reference 287.54	
Date Prepared/Revised February 11, 2011	

SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION

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)? ☐ Yes ☒ No

If 'No', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the [redacted] (03-035) well pad site located at 1314 Ameah Valley Road, Wells Township, Bradford County, PA. Waste is stored in containers on site.

Municipality Wells **County** Bradford **State** PA

SECTION B. WASTE DESCRIPTION

Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure	Time Frame
810	Drill cuttings (oil and gas)	1,970	☐ cu yd ☐ gal ☐ lb ☒ ton	☐ One Time

1. GENERAL PROPERTIES

a.	**pH Range**	8.05 to 11.26	(based on analyses or knowledge)
b.	**Physical State**	☐ Liquid Waste (EPA Method 9095) ☒ Solid (EPA Method 9095) ☐ 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	

2. CHEMICAL ANALYSIS ATTACHMENTS

a.	**The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.**	☒ Yes	☐ No	
b.	**A detailed description of the waste sampling method is attached.**	☒ Yes	☐ No	
c.	**The quality assurance/quality control procedures employed by the laboratory(ies) is attached.**	☒ Yes	☐ No	
d.	**The results of the hazardous waste determination is attached.**	☒ Yes	☐ No	
e.	**If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.**	☐ Yes	☐ No	☒ 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.	☒ Yes	☐ No	
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No	
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes	☐ No	☒ 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 (585) 466-7271	Email Address	joe.boyles@casella.com

d. Volume of waste shipped to processing or disposal facility in the previous year.
1,034 ☐ cu yd ☐ gal ☐ lb ☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ ton (check one)

2. Beneficial Use

a. Has the waste been approved for beneficial use? ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. Volume of waste beneficially used in the previous year.
0 ☐ cu yd ☐ gal ☐ lb ☐ 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. ☒ Yes ☐ No

b. A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached. ☒ Yes ☐ No

c. If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached. ☐ Yes ☐ No ☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ 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.
☐ cu yd ☐ gal ☐ lb ☐ ton (check one)

2. Beneficial Use

a. Has the waste been approved for beneficial use? ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. Volume of waste beneficially used in the previous year.
0 ☐ cu yd ☐ gal ☐ lb ☐ 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 Dina Brown **Title** 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

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

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

WO#: 10100746
PAGE: 1 of 2
PO#: AF78035
PWS ID#

TEST REPORT

[redacted]03-035

RECEIVED FOR LAB BY: DLM2 DATE: 10/06/2010 9:55

SAMPLE: **Air Cuttings** Lab ID: 10100746-001A Composite
SAMPLED BY: SG Sample Time: 10/05/2010 16:50

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
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

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
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

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
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

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
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 Carrie 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

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

WO#: 10100746
PAGE: 2 of 2
PO#: AF78035
PWS ID#

TEST REPORT

[redacted]03-035

RECEIVED FOR LAB BY: DLM2 DATE: 10/06/2010 9:55

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 Carrie M. Davis DATE: 10/12/2010

CHAIN OF CUSTODY

PAGE 1 OF 1

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

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

PO# AF 78035
PROJECT DESCRIPTION [redacted]03-035
SAMPLER SIGNATURE / AFFILIATION SG / UEG
CONTAINER / SAMPLING POINT

2566 F

REFRIGERATE SAMPLES AFTER COLLECTION

TRANSPORT TO LABORATORY IN COOLER WITH ICE

W/O#: 10100746

IR: 1

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

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 | S SULFURIC ACID | N NITRIC ACID | SO_3 SODIUM SULFITE | Thio SODIUM THIOSULFATE | – NONE
OH SODIUM HYDROXIDE | AS ASCORBIC ACID | AC ACETIC ACID | NH_4 AMMONIUM CHLORIDE | ZN ZINC ACETATE | Hg MERCURIC CHLORIDE

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

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	Air Cuttings	10/5	1550	SO	C	SG	N	TPH			700 A E
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:	DATE: 10/6/10	TIME: 954	RECEIVED BY: C Miller	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

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

Work Order: 10104059

SEND DATA TO:

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

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

WO#: 10104059
PAGE: 1 of 1
PO#: AF76834
PWS ID#

TEST REPORT

[redacted]03-035

RECEIVED FOR LAB BY: SCP DATE: 10/27/2010 14:15

SAMPLE: **Inv. Cuttings** Lab ID: 10104059-001A Grab
SAMPLED BY: SG 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** Lab ID: 10104059-001B Grab
SAMPLED BY: SG 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** Lab ID: 10104059-001D Grab
SAMPLED BY: SG 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 Carrie M. Davis DATE: 11/1/2010

CHAIN OF CUSTODY

PAGE 1 OF 1

W/O#: 10104059

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	[redacted] 03-035
SAMPLER SIGNATURE / AFFILIATION	

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 ☐ PERSONAL OTHER ____ LANDFILL ____

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 · S SULFURIC ACID · N NITRIC ACID · SO_3 SODIUM SULFITE · Thio SODIUM THIOSULFATE · – NONE · OH SODIUM HYDROXIDE · AS ASCORBIC ACID · AC ACETIC ACID · NH_4 AMMONIUM CHLORIDE · ZN ZINC ACETATE · Hg MERCURIC CHLORIDE

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

Please fill out all applicable areas completely

	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		10/26	11:45	50	C	LB	N	TPH			COLA-D
2									pH			
3									TCLP 8 RCRA Metals + Cu, Ni, Zn			
4									Free Liquids / % Moisture			
5	A - TPH								BTEX			
6	B - pH, free Liquids, % Moisture								~~TCLP 8260 / 8270~~ ONLY IF the TPH			
7	C - T. Sample								exceeds ~~1~~20,000 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

	DATE:	TIME:		DATE:	TIME:
RELINQUISHED BY: Lee Dunn	10/26/10	1:30 PM	RECEIVED BY: S Gridley	10/26/10	1330
RELINQUISHED BY: S Gridley	10/27/10	1415	RECEIVED BY:	/	
RELINQUISHED BY:	/ /		RECEIVED BY:	10/27/10	14:15

Ad Graphics Printing 570-888-0886

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: 10110485

SEND DATA TO:

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

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

WO#: 10110485
PAGE: 1 of 1
PO#: AF 78035
PWS ID#

TEST REPORT

[redacted]03-035

RECEIVED FOR LAB BY: RML DATE: 11/03/2010 12:36

SAMPLE: **Inv. Cuttings** Lab ID: 10110485-001A Grab
SAMPLED BY: SG 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** Lab ID: 10110485-001B Grab
SAMPLED BY: SG 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** Lab ID: 10110485-001D 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 Carrie M. Davis DATE: 11/5/2010

CHAIN OF CUSTODY

PAGE 1 OF 1

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

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

PO# AF78035
PROJECT DESCRIPTION [redacted]03-035
SAMPLER SIGNATURE / AFFILIATION UEG
CONTAINER / SAMPLING POINT

25661

W/O#: 10110485

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 ☐ PERSONAL LANDFILL_____ 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_3	SODIUM SULFITE	NH_4	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).

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	Inv Cuttings	11/1	1920	SO	C	SG	N	TPH			-001A
2								pH			B
3								TCLP 8 RCRA Metals + Cu, Ni, Zn			C,D
4								Free Liquids / % Moisture			B
5								BTEX			
6								~~TCLP 8260 / 8270 ONLY if the TPH~~			
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

	DATE:	TIME:		DATE:	TIME:
RELINQUISHED BY:	11/3/10	1230	RECEIVED BY:	/ /	
RELINQUISHED BY:	/ /		RECEIVED BY:	/ /	
RELINQUISHED BY:	/ /		RECEIVED BY:	11/3/10	1230

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: 10114050

SEND DATA TO:

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

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

WO#: 10114050
PAGE: 1 of 2
PO#: AF77414
PWS ID#

TEST REPORT

[redacted] Pad

RECEIVED FOR LAB BY: SCP DATE: 11/29/2010 10:06

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 Carrie 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

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

Work Order: 10114050

SEND DATA TO:

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

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

WO#: 10114050
PAGE: 2 of 2
PO#: AF77414
PWS ID#

TEST REPORT

[redacted] Pad

RECEIVED FOR LAB BY: SCP DATE: 11/29/2010 10:06

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 Carrie M. Davis DATE: 12/2/2010

CHAIN OF CUSTODY

W/O#: 10114050

REPORT TO:	Talisman / UEG
	geowetlands@aol.com
CONTACT	Steve Gridley
PH#	607-731-0145
FAX#	
BILL TO:	Talisman
PO#	AF 77414
PROJECT DESCRIPTION	[redacted] Pad
SAMPLER SIGNATURE / AFFILIATION	UEG
CONTAINER / SAMPLING POINT	

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 ☐ PERSONAL LANDFILL_____ 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 · S SULFURIC ACID · N NITRIC ACID · SO_3 SODIUM SULFITE · Thio SODIUM THIOSULFATE · – NONE · OH SODIUM HYDROXIDE · AS ASCORBIC ACID · AC ACETIC ACID · NH_4 AMMONIUM CHLORIDE · ZN ZINC ACETATE · Hg MERCURIC CHLORIDE

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

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	~~Inv Cuttings~~ · Pad Soil	11/24	1125	SO	C	SO	N	TPH, Sodium, Chlorides			
2								pH			
3								TCLP 8 RCRA Metals + Cu, Ni, Zn			
4								Free Liquids / % Moisture			
5	A - TPH										
6	B - pH, Free liquids, % moist.							Perform BTEX ONLY IF the TPH			
7	C - Anions, metals, % moist							exceeds 100,000 mg/Kg			
8	D - Total Sample										
9	E - TCLP metals.							48 HOUR TURNAROUND			
10								____ DAY TURNAROUND			
11											

LAB USE ONLY — DELIVERED BY: [redacted] TEMPERATURE UPON RECEIPT 1.5 °C ARRIVAL ON ICE? Y N

RELINQUISHED BY:	DATE: 11/29/10	TIME: 1003	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: 11/29/10	TIME: 10:06

2540-PM-BWM0347 Rev. 1/2011

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.	DEP USE ONLY Date Received & General Notes
General Reference 287.54	
Date Prepared/Revised February 11, 2011	

SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION

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	State	Zip+4	Phone	Ext
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)? ☐ Yes ☒ No

If 'No', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the [redacted] (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

SECTION B. WASTE DESCRIPTION

Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure	Time Frame
810	Drill cuttings (oil and gas)	280	☐ cu yd ☐ gal ☐ lb ☒ ton	☐ One Time

1. GENERAL PROPERTIES

a. pH Range 8.9 to 11.3 (based on analyses or knowledge)

b. Physical State
- ☐ Liquid Waste (EPA Method 9095)
- ☒ Solid (EPA Method 9095)
- ☐ 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

2. CHEMICAL ANALYSIS ATTACHMENTS

a.	The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.	☒ Yes	☐ No
b.	A detailed description of the waste sampling method is attached.	☒ Yes	☐ No
c.	The quality assurance/quality control procedures employed by the laboratory(ies) is attached.	☒ Yes	☐ No
d.	The results of the hazardous waste determination is attached.	☒ Yes	☐ No
e.	If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.	☐ Yes ☐ No	☒ 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.	☒ Yes	☐ No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes ☐ No	☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ 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 (585) 466-7271	Email Address	joe.boyles@casella.com

d. Volume of waste shipped to processing or disposal facility in the previous year.
103 ☐ cu yd ☐ gal ☐ lb ☒ ton (check one)

2. Beneficial Use

a. Has the waste been approved for beneficial use? ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. Volume of waste beneficially used in the previous year.
0 ☐ cu yd ☐ gal ☐ lb ☐ 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 Dina Brown **Title** Environmental Specialist

Signature _____ **Date** 2/25/14

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: 10120831

SEND DATA TO:

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

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

WO#: 10120831
PAGE: 1 of 1
PO#: AF78267
PWS ID#

TEST REPORT

[redacted]05-005

RECEIVED FOR LAB BY: CMS DATE: 12/06/2010 15:40

SAMPLE: **Inv. Cuttings** Lab ID: 10120831-001A Composite
SAMPLED BY: SG 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** Lab ID: 10120831-001B Composite
SAMPLED BY: SG 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** Lab ID: 10120831-001E Composite
SAMPLED BY: SG 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 Carrie M. Davis DATE: 12/10/2010

CHAIN OF CUSTODY

PAGE 1 OF 1

REPORT TO: Talisman / UEG
geowetlands@aol.com

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

PO# AF78267
PROJECT DESCRIPTION [redacted]05-005
SAMPLER SIGNATURE / AFFILIATION UEG
CONTAINER / SAMPLING POINT

W/O#: 10120831

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

NG 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_3 SODIUM SULFITE | NH_4 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).

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	Inv Cuttings	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 liquid, % Moisture							Perform BTEX ONLY IF the TPH			
7	C- Anions, metals							exceeds 100,000 mg/Kg			
8	D- Total Sample										
9	E- TCLP metals							72 HOUR TURNAROUND			
10								____ DAY TURNAROUND			
11											

LAB USE ONLY — DELIVERED BY: [signature] TEMPERATURE UPON RECEIPT 5 °C ARRIVAL ON ICE (Y) N

RELINQUISHED BY: [signature]	DATE: 12/6/10	TIME: 1540	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY: [signature]	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: 10121729

SEND DATA TO:

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

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

WO#: 10121729
PAGE: 1 of 3
PO#: AF78267
PWS ID#

TEST REPORT

[redacted]05-005

RECEIVED FOR LAB BY: RML DATE: 12/09/2010 15:45

SAMPLE: **Inv. Cuttings** Lab ID: 10121729-001A Grab
SAMPLED BY: SG Sample Time: 12/09/2010 13:28

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: 10121729-001C Grab
SAMPLED BY: SG Sample Time: 12/09/2010 13:28

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	SW846 7.3	16	12/14/10 12:30	12/14/10	LTW-CV

SAMPLE: **Inv. Cuttings** Lab ID: 10121729-001D Grab
SAMPLED BY: SG Sample Time: 12/09/2010 13:28

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
% 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** Lab ID: 10121729-001F 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
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

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

WO#: 10121729
PAGE: 2 of 3
PO#: AF78267
PWS ID#

TEST REPORT

[redacted]05-005

RECEIVED FOR LAB BY: RML DATE: 12/09/2010 15:45

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: 10121729-001G Grab
SAMPLED BY: SG Sample Time: 12/07/2010 8:00

Test	Result	Method	SLOQ	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** Lab ID: 10121729-001H Grab
SAMPLED BY: SG Sample Time: 12/11/2010 12:45

Test	Result	Method	SLOQ	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** Lab ID: 10121729-001I Grab
SAMPLED BY: SG 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
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:

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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 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

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

WO#: 10121729
PAGE: 3 of 3
PO#: AF78267
PWS ID#

TEST REPORT

[redacted]05-005
RECEIVED FOR LAB BY: RML DATE: 12/09/2010 15:45

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** Lab ID: 10121729-001J Grab
SAMPLED BY: SG 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** Lab ID: 10121729-001L Grab
SAMPLED BY: SG 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** Lab ID: 10121729-001M Grab
SAMPLED BY: SG 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

Benchm
Ea
2566 Pennsylvan
Phone
Fax: (570) 888-0717

W/O#: 10121729

E 1 OF 1

REPORT TO:	Talisman / UEG
	geowetlands@aol.com
CONTACT	Steve Gridley
PH#	607-731-0145
FAX#	
BILL TO:	Talisman
PO#	AF 78267
PROJECT DESCRIPTION	[redacted] 05-005
SAMPLER SIGNATURE / AFFILIATION	UEG
CONTAINER / SAMPLING POINT	

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 ☐ PERSONAL OTHER LANDFILL Mostoller

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 · S SULFURIC ACID · N NITRIC ACID · SO_3 SODIUM SULFITE · Thio SODIUM THIOSULFATE · – NONE · OH SODIUM HYDROXIDE · AS ASCORBIC ACID · AC ACETIC ACID · NH_4 AMMONIUM CHLORIDE · ZN ZINC ACETATE · Hg MERCURIC CHLORIDE

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

Please fill out all applicable areas completely

LAB USE ONLY

	ANALYSIS TO BE PERFORMED (PER CONTAINER)	DATE SAMPLED	TIME OF SAMPLING	SAMPLE MATRIX	SAMPLE TYPE - GRAB / COMPOSITE	SAMPLER INITIALS	PRESERVATIVE	COMPOSITED ON RECEIPT	PRESERVATIVE ADDED ON RECEIPT
1	Inv Cuttings	12/9	1328	SO	C	SB	N		
2					C				
3	A - ~~Plants~~, Ign.				G				
4	C - ~~Reactivity~~				C				
5	D - TS, TDS				C				
6	E - Total Sample	✓	✓	✓	C	✓	✓		
7	F - TCLP BNA, ~~Pests~~.								
8	G - TCLP ~~Herbs~~ Sr								
9	H - TCLP pH		~~K - ASTM Cl~~						
10	I - TCLP Vols.		L - ASTM		TS, pH				
11	J - ASTM COD, ~~24~~		M - TOX						

36 HOUR TURNAROUND
____ DAY TURNAROUND

LAB USE ONLY [redacted]

RELINQUISHED BY:		DATE: 12/9/10	TIME: 1530	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:		DATE: / /	TIME:	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:		DATE: / /	TIME:	RECEIVED BY:	DATE: 12/9/10	TIME: 1535

2540-PM-BWM0347 Rev. 1/2011

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.	DEP USE ONLY
General Reference 287.54	Date Received & General Notes
Date Prepared/Revised February 11, 2011	

SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION

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	State	Zip+4	Phone	Ext
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)? ☐ Yes ☒ 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

SECTION B. WASTE DESCRIPTION

Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure	Time Frame
810	Drill cuttings (oil and gas)	2,175	☐ cu yd ☐ gal ☐ lb ☒ ton	☐ One Time

1. GENERAL PROPERTIES

a. **pH Range** 8.9 to 11.3 (based on analyses or knowledge)

b. **Physical State**
☐ Liquid Waste (EPA Method 9095)
☒ Solid (EPA Method 9095)
☐ 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

2. CHEMICAL ANALYSIS ATTACHMENTS

a.	The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.	☒ Yes	☐ No	
b.	A detailed description of the waste sampling method is attached.	☒ Yes	☐ No	
c.	The quality assurance/quality control procedures employed by the laboratory(ies) is attached.	☒ Yes	☐ No	
d.	The results of the hazardous waste determination is attached.	☒ Yes	☐ No	
e.	If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.	☐ Yes	☐ No	☒ 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.	☒ Yes	☐ No	
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No	
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes	☐ No	☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ ton (check one)

2. Beneficial Use

a. Has the waste been approved for beneficial use? ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. Volume of waste beneficially used in the previous year.
0 ☐ cu yd ☐ gal ☐ lb ☐ 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.	☒ Yes	☐ No	
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No	
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes	☐ No	☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ 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.**
☐ cu yd ☐ gal ☐ lb ☐ ton (check one)

2. Beneficial Use

a. **Has the waste been approved for beneficial use?** ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. **Volume of waste beneficially used in the previous year.**
0 ☐ cu yd ☐ gal ☐ lb ☐ 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 Dina Brown **Title** 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

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

Work Order: 10032816

SEND DATA TO:

NAME: Steve Gridley
COMPANY: Talisman Energy USA, Inc.
ADDRESS: 50 Pennwood Place
Warrendale, PA 15086

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

WO#: 10032816
PAGE: 1 of 1
PO#:
PWS ID#

TEST REPORT

[redacted]FT5H

RECEIVED FOR LAB BY: DLM2 DATE: 03/17/2010 14:47

SAMPLE: **Inv. Cuttings** Lab ID: 10032816-001A Grab
SAMPLED BY: - Sample Time: 03/16/2010 0:00

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
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 Carrie M. Davis DATE: 4/21/2010

CHAIN OF CUSTODY

Benchmark Analytics, Inc.
East
2566 Pennsylvania
Phone: (
Fax: (5

PAGE 1 OF 1

10032816 03/17/10 14:47 ELS

Talisman Energy USA, Inc.
Thomas FT5H

REPORT TO: Talisman / LEG
Geowetlands

CONTACT Steve Cridley
PH#
FAX#
BILL TO: Talisman
PO# AF 75715
PROJECT DESCRIPTION [redacted] FT5H
SAMPLER SIGNATURE / AFFILIATION LEG

REFRIGERATE SAMPLES AFTER COLLECTION

TRANSPORT TO LABORATORY IN COOLER WITH ICE

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

NYDOH NYDEC PADEP LANDFILL PERSONAL OTHER

SPECIAL DETECTION LIMITS
ED: YES / NO
S, PLEASE ATTACH

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

H HYDROCHLORIC ACID S SULFURIC ACID N NITRIC ACID SO_3 SODIUM SULFITE Thio SODIUM THIOSULFATE - NONE
OH SODIUM HYDROXIDE AS ASCORBIC ACID AC ACETIC ACID NH_4 AMMONIUM CHLORIDE ZN ZINC ACETATE Hg MERCURIC CHLORIDE

PWS ID#
Location
Sample Point

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

Container	Sample Point No./Type	DATE SAMPLED	TIME OF SAMPLING	SAMPLE MATRIX	SAMPLE TYPE - GRAB / COMPOSITE	SAMPLER INITIALS	PRESERVATIVE	Chlorine Residual Free ☐ Total ☐	ANALYSIS TO BE PERFORMED (PER CONTAINER)	COMPOSITED ON RECEIPT	PRESERVATIVE ADDED ON RECEIPT	LAB USE ONLY
1	Inv Cuttings	3/16	—	SO	G	—	N		Barite / Smectite / Clay mineralogy — by X-Ray Diffraction w/o			-001A
2												
3												
4												
5									Anthracite Coal / Bituminous Coal — w/o of m			
6												
7									% Organic carbon — normal			
8									Crude Oil			
9									Polymers 48 Hr Turnaround			
10												
11									Due 3/30/10 - OK per Connie			

LAB USE ONLY DELIVERED BY: SG TEMPERATURE UPON RECEIPT: 4 °C ARRIVAL ON ICE: Y / N

RELINQUISHED BY:	DATE: 3/17/10	TIME: 1447	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: 3/17/10	TIME: 14:47

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

Tallman

CLIENT:	Benchmark Analytics, Inc.	**REQUESTED BY:**	Mr. Tracy Cole
SAMPLE:	10032816-001A	**REPORT DATE:**	April 20, 2010
LABORATORY NO:	58869	**PURCHASE ORDER NO:**	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

Mineral Phases	***Amount Found, wt%***
Quartz (SiO_2)	28
Barite ($BaSO_4$)	55
Calcite ($CaCO_3$)	ND
Magnetite (Fe_3O_4)	7
Non-Diffractive Solids	10

Respectfully submitted
For Texas OilTech Laboratories, L.P.

A. Phil Sourbakhsh
Director of Laboratory Operations

2540-PM-BWM0347 Rev. 1/2011

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.

General Reference 287.54

Date Prepared/Revised February 11, 2011

DEP USE ONLY
Date Received & General Notes

SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION

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	State	Zip+4	Phone	Ext
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)? ☐ Yes ☒ 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

SECTION B. WASTE DESCRIPTION

Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure	Time Frame
810	Drill cuttings (oil and gas)	5,840	☐ cu yd ☐ gal ☐ lb ☒ ton	☐ One Time

1. GENERAL PROPERTIES

a. pH Range 7.99 to 8.14 (based on analyses or knowledge)

b. Physical State
☐ Liquid Waste (EPA Method 9095)
☒ Solid (EPA Method 9095)
☐ 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

2. CHEMICAL ANALYSIS ATTACHMENTS

a.	The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.	☒ Yes	☐ No
b.	A detailed description of the waste sampling method is attached.	☒ Yes	☐ No
c.	The quality assurance/quality control procedures employed by the laboratory(ies) is attached.	☒ Yes	☐ No
d.	The results of the hazardous waste determination is attached.	☒ Yes	☐ No
e.	If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.	☐ Yes ☐ No	☒ 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.	☒ Yes	☐ No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes ☐ No	☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ 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 (585) 466-7271	Email Address	joe.boyles@casella.com

d. Volume of waste shipped to processing or disposal facility in the previous year.
2,143 ☐ cu yd ☐ gal ☐ lb ☒ ton (check one)

2. Beneficial Use

a. Has the waste been approved for beneficial use? ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. Volume of waste beneficially used in the previous year.
0 ☐ cu yd ☐ gal ☐ lb ☐ 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.	☒ Yes	☐ No	
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No	
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes	☐ No	☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ ton (check one)

2. Beneficial Use

a. Has the waste been approved for beneficial use? ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. Volume of waste beneficially used in the previous year.
0 ☐ cu yd ☐ gal ☐ lb ☐ 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.	☒ Yes	☐ No	
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No	
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes	☐ No	☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ 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.
☐ cu yd ☐ gal ☐ lb ☐ ton (check one)

2. Beneficial Use

a. Has the waste been approved for beneficial use? ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. Volume of waste beneficially used in the previous year.
0 ☐ cu yd ☐ gal ☐ lb ☐ 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 Dina Brown

Title 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

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

WO#: 10040648
PAGE: 1 of 3
PO#: AFE 76067
PWS ID#

TEST REPORT

TWL 01-016-04

RECEIVED FOR LAB BY: WCB DATE: 04/06/2010 8:45

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 Carrie 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

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

WO#: 10040648
PAGE: 2 of 3
PO#: AFE 76067
PWS ID#

TEST REPORT

TWL 01-016-04

RECEIVED FOR LAB BY: WCB DATE: 04/06/2010 8:45

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 Carrie 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

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

WO#: 10040648
PAGE: 3 of 3
PO#: AFE 76067
PWS ID#

TEST REPORT

TWL 01-016-04

RECEIVED FOR LAB BY: WCB DATE: 04/06/2010 8:45

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.
Eastern Division
2566 Pennsylvania Avenue • Sayre, PA 18840
Phone: (570) 888-0169
Fax: (570) 888-0717

PAGE_____ OF_____

REPORT TO: Talisman Energy

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

BILL TO: Talisman Energy
Saxon 170
PO# AFE 760167
PROJECT DESCRIPTION TWL 01-0116-04
SAMPLER SIGNATURE / AFFILIATION Carmen Arey

REFRIGERATE SAMPLES AFTER COLLECTION

TRANSPORT TO LABORATORY IN COOLER WITH ICE

DW DRINKING WATER · GW GROUND WATER · SW SURFACE WATER · WW WASTE WATER · SL SLUDGE · SO SOIL · HZ HAZARDOUS · OTHER

RESULTS ARE BEING USED FOR: NYDOH NYDEC PADEP LANDFILL_____ OTHER_____

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

OXIDE D · LORIDE · .ORIDE
PWS ID#_____
Location_____
Sample Point_____

W/O#: 10040648

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

	Container	Sample Point No./Type	DATE SAMPLED	TIME OF SAMPLING	SAMPLE MATRIX	SAMPLE TYPE	SAMPLER INITIALS	PRESERVATIVE	Chlorine Residual Free ☐ Total ☐	ANALYSIS TO BE PERFORMED (PER CONTAINER)	COMPOSITED ON RECEIPT	PRESERVATIVE ADDED ON RECEIPT	LAB USE ONLY
1			4/5/10	18:00	SO	C		N		TCLP RCRH Metals, Cu, Ni, Zn			001 D
2										~~TCLP N' 2N~~			
3										TPH			001 A
4										PH			1 A
5		001 C - Total Sample								% Solids			001 B
6										TCLP 8260 - 8270 (F) (E) * Due: 4/8/10			001 E, F
7													
8										(24 hr Rush)			
9													
10													
11										Due: 4/7/10			

Please fill out all applicable areas completely.

LAB USE ONLY

DELIVERED BY: Client TEMPERATURE UPON RECEIPT: 1.5 °C ARRIVAL ON ICE Y/N

RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:	DATE:	TIME:
	/ /			/ /	
	/ /			/ /	
Carmen Arey / BBC	4/6/10	8:45a	Debbie McCarty	4/6/10	845

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

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

WO#: 10030695
PAGE: 1 of 1
PO#:
PWS ID#

TEST REPORT

NTSW TCLP Metals/TPH/pH/%Moisture

RECEIVED FOR LAB BY: WCB DATE: 03/03/2010 9:38

SAMPLE: **Air Cuttings TWL-1** Lab ID: 10030695-001A Grab
SAMPLED BY: SG Sample Time: 03/02/2010 11:00

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
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

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 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 Carri 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 Cridlebaugh

PH# 607-731-0145

FAX#

BILL TO: Talisman

PO#

PROJECT DESCRIPTION TWL A50C

SAMPLER SIGNATURE / AFFILIATION SCridlebaugh UBL

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____ OTHER____

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

DE RIDE RIDE

PWS ID#____
Location____
Sample Point____

W/O#: 10030695

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

Container	Sample Point No./Type	DATE SAMPLED	TIME OF SAMPLING	SAMPLE MATRIX	SAMPLE TYPE - GR	SAMPLER INITIALS	PRESERVATIVE	Chlorine Residual Free ☐ Total ☐	ANALYSIS TO BE PERFORMED (PER CONTAINER)	COMPOSITED ON RECEIPT	PRESERVATIVE ADDED ON RECEIPT	LAB USE ONLY
1	Air Cuttings - TWL-1	3/2	1100	SO	G	SB	N		TPH, pH, Cl			001 A-C
2									TCLP & RCRA Metals + Ni, Cu, Zn			
3												
4									A - TPH, pH, Cl			
5									B - ~~TCLP~~ Total Sample			
6									C - TCLP Metals			
7												
8												
9												
10												
11									Due: 3/18/10			

Please fill out all applicable areas completely.

LAB USE ONLY

DELIVERED BY: Client TEMPERATURE UPON RECEIPT: 5 °C ARRIVAL ON ICE Y/N

RELINQUISHED BY: SCridlebaugh	DATE: 3/3/10	TIME: 938	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY: Debbie McCarty	DATE: 3/3/10	TIME: 938

2540-PM-BWM0347 Rev. 1/2011

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.	DEP USE ONLY
General Reference 287.54	Date Received & General Notes
Date Prepared/Revised February 11, 2011	

SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION

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)? ☐ Yes ☒ No

If 'No', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the [redacted] (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

SECTION B. WASTE DESCRIPTION

Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure	Time Frame
810	Drill cuttings (oil and gas)	6,866	☐ cu yd ☐ gal ☐ lb ☒ ton	☐ One Time

1. GENERAL PROPERTIES

a. pH Range 8.9 to 11.3 (based on analyses or knowledge)

b. Physical State
- ☐ Liquid Waste (EPA Method 9095)
- ☒ Solid (EPA Method 9095)
- ☐ 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

2. CHEMICAL ANALYSIS ATTACHMENTS

a.	**The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.**	☒ Yes	☐ No	
b.	**A detailed description of the waste sampling method is attached.**	☒ Yes	☐ No	
c.	**The quality assurance/quality control procedures employed by the laboratory(ies) is attached.**	☒ Yes	☐ No	
d.	**The results of the hazardous waste determination is attached.**	☒ Yes	☐ No	
e.	**If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.**	☐ Yes	☐ No	☒ 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.	☒ Yes	☐ No	
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No	
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes	☐ No	☒ 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.
2,852 ☐ cu yd ☐ gal ☐ lb ☒ 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 (585) 466-7271	Email Address	joe.boyles@casella.com

d. Volume of waste shipped to processing or disposal facility in the previous year.
1,799 ☐ cu yd ☐ gal ☐ lb ☒ ton (check one)

2. Beneficial Use

a. Has the waste been approved for beneficial use? ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. Volume of waste beneficially used in the previous year.
0 ☐ cu yd ☐ gal ☐ lb ☐ 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.	☒ Yes	☐ No	
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No	
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes	☐ No	☒ 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.
1,001 ☐ cu yd ☐ gal ☐ lb ☒ 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.
883 ☐ cu yd ☐ gal ☐ lb ☒ ton (check one)

2. Beneficial Use

a. Has the waste been approved for beneficial use? ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. Volume of waste beneficially used in the previous year.
0 ☐ cu yd ☐ gal ☐ lb ☐ 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.	☒ Yes	☐ No	
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No	
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes	☐ No	☒ 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.
331 ☐ cu yd ☐ gal ☐ lb ☒ 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.
☐ cu yd ☐ gal ☐ lb ☐ 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.	☐ Yes	☒ No

b. Volume of waste beneficially used in the previous year.
0 ☐ cu yd ☐ gal ☐ lb ☐ 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 Dina Brown **Title** 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

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

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

WO#: 10090956
PAGE: 1 of 1
PO#: AF77049
PWS ID#

TEST REPORT

[redacted]03-054

RECEIVED FOR LAB BY: DLM2 DATE: 09/07/2010 16:25

SAMPLE: **Inv. Cuttings** Lab ID: 10090956-001A Composite
SAMPLED BY: LS Sample Time: 08/30/2010 12:12

Test	Result		Method	SLOQ	Analysis Start	Analysis End	Analyst *
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

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
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

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
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

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

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

WO#: 10121731
PAGE: 1 of 3
PO#: AF77716
PWS ID#

TEST REPORT

[redacted]03-054
RECEIVED FOR LAB BY: RML DATE: 12/09/2010 15:45

SAMPLE: **Inv. Cuttings** Lab ID: 10121731-001A Grab
SAMPLED BY: SG Sample Time: 12/08/2010 21:27

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: 10121731-001C Grab
SAMPLED BY: SG Sample Time: 12/08/2010 21:27

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	990 mg/Kg	SW846 7.3	16	12/14/10 12:30	12/14/10	LTW-CV

SAMPLE: **Inv. Cuttings** Lab ID: 10121731-001D Grab
SAMPLED BY: SG Sample Time: 12/08/2010 21:27

Test	Result	Method	SLOQ	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** Lab ID: 10121731-001F 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
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

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

WO#: 10121731
PAGE: 2 of 3
PO#: AF77716
PWS ID#

TEST REPORT

[redacted]03-054

RECEIVED FOR LAB BY: RML DATE: 12/09/2010 15:45

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

Test	Result	Method	SLOQ	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

Test	Result	Method	SLOQ	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

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
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 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

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

WO#: 10121731
PAGE: 3 of 3
PO#: AF77716
PWS ID#

TEST REPORT

[redacted]03-054

RECEIVED FOR LAB BY: RML DATE: 12/09/2010 15:45

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** Lab ID: 10121731-001J Grab
SAMPLED BY: SG Sample Time: 12/10/2010 11:15

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** Lab ID: 10121731-001L Grab
SAMPLED BY: SG Sample Time: 12/10/2010 11:15

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** Lab ID: 10121731-001M Grab
SAMPLED BY: SG 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

Benchm
E
2566 Pennsylva
Phoı
Fa›.

W/O#: 10121731

PAGE 1 OF 1

REPORT TO: Talisman / UEG
geowetlands@aol.com

CONTACT Steve Gridley
PH# 607-731-0145
FAX#
BILL TO: Talisman
PO# AF77716
PROJECT DESCRIPTION
[redacted] 03-054
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 ____

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_3	SODIUM SULFITE	NH_4	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).

Please fill out all applicable areas completely

#	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	SG	N	Ignitability, Reactive Sulfide & Cyanide			
2		↓	↓	↓	C	↓	↓	PCBs, Total Solids			
3	A- ~~Phenols~~, 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 BNA, ~~Pests~~.										
8	G- TCLP ~~Herbs~~. Sr		~~K- ASTM O+G~~								
9	H- TCLP pH		L- ASTM		TS, pH			36 HOUR TURNAROUND			
10	I- TCLP Vols.		M- TOX					____ DAY TURNAROUND			
11	J- ASTM COD, NH_3										

LAB USE ONLY: DELIVERED BY ____ TEMPERATURE UPON RECEIPT ____ °C ARRIVAL ON ICE Y/N

RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:	DATE:	TIME:
[signature]	12/9/10	1550		/ /	
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY: [signature]	12/9/10	1545

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: 10103214

SEND DATA TO:

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

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

WO#: 10103214
PAGE: 1 of 2
PO#: AF77715
PWS ID#

TEST REPORT

[redacted]03-054

RECEIVED FOR LAB BY: DLM2 DATE: 10/21/2010 11:37

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

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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

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: 10103214

SEND DATA TO:

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

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

WO#: 10103214
PAGE: 2 of 2
PO#: AF77715
PWS ID#

TEST REPORT

[redacted]03-054

RECEIVED FOR LAB BY: DLM2 DATE: 10/21/2010 11:37

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

Benchmark /
Eastern
2566 Pennsylvania Ave
Phone: (57
Fax: (570) 888-0717

W/O#: 10103214

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	[redacted] 03-054
SAMPLER SIGNATURE / AFFILIATION	UEO
CONTAINER / SAMPLING POINT	

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 ☐ PERSONAL OTHER

DETECTION LIMITS NEEDED: ☐ YES / ☑ NO
IF YES, PLEASE ATTACH
IS A QC PACKAGE NEEDED? ☐ YES ☑ NO
IF YES, PLEASE ATTACH REQUIREMENTS

H HYDROCHLORIC ACID · S SULFURIC ACID · N NITRIC ACID · SO_3 SODIUM SULFITE · Thio SODIUM THIOSULFATE · – NONE
OH SODIUM HYDROXIDE · AS ASCORBIC ACID · AC ACETIC ACID · NH_4 AMMONIUM CHLORIDE · ZN ZINC ACETATE · Hg MERCURIC CHLORIDE

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

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	Air Cuttings	10/19	955	SO	C	SG	N	TPH			-001A-D
2								pH, Chlorides, Sodium			
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, % Moist							~~TCLP 8260 + 8270~~ ONLY IF the TPH			
7	D - T. Sample							exceeds 100,000 mg/Kg			
8											
9								72 HOUR TURNAROUND			
10								____ DAY TURNAROUND			
11											Due 10/26/10

LAB USE ONLY DELIVERED BY: SG TEMPERATURE UPON RECEIPT: ____ °C ARRIVAL ON ICE: Y / N

RELINQUISHED BY:	DATE: 10/21/10	TIME: 1137	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: 10/21/10	TIME: 1137

2540-PM-BWM0347 Rev. 1/2011

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.	DEP USE ONLY
General Reference 287.54	Date Received & General Notes
Date Prepared/Revised February 11, 2011	

SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION

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)? ☐ Yes ☒ No

If 'No', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the [redacted] (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

SECTION B. WASTE DESCRIPTION

Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure	Time Frame
810	Drill cuttings (oil and gas)	5,256	☐ cu yd ☐ gal ☐ lb ☒ ton	☐ One Time

1. GENERAL PROPERTIES

a. pH Range 5.97 to 12.01 (based on analyses or knowledge)

b. Physical State
- ☐ Liquid Waste (EPA Method 9095)
- ☒ Solid (EPA Method 9095)
- ☐ 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

2. CHEMICAL ANALYSIS ATTACHMENTS

a.	The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.	☒ Yes	☐ No	
b.	A detailed description of the waste sampling method is attached.	☒ Yes	☐ No	
c.	The quality assurance/quality control procedures employed by the laboratory(ies) is attached.	☒ Yes	☐ No	
d.	The results of the hazardous waste determination is attached.	☒ Yes	☐ No	
e.	If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.	☐ Yes	☐ No	☒ 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.	☒ Yes	☐ No	
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No	
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes	☐ No	☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ ton (check one)

2. Beneficial Use

a. Has the waste been approved for beneficial use? ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. Volume of waste beneficially used in the previous year.
0 ☐ cu yd ☐ gal ☐ lb ☐ 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.	☒ Yes	☐ No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes ☐ No	☒ 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 (585) 466-7271	Email Address	joe.boyles@casella.com

d. Volume of waste shipped to processing or disposal facility in the previous year.
1,031 ☐ cu yd ☐ gal ☐ lb ☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ ton (check one)

2. Beneficial Use

a. Has the waste been approved for beneficial use? ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. Volume of waste beneficially used in the previous year.
0 ☐ cu yd ☐ gal ☐ lb ☐ 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 Dina Brown

Title Environmental Specialist

Signature Dina S Brown

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

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

WO#: 10121731
PAGE: 1 of 3
PO#: AF77716
PWS ID#

TEST REPORT

[redacted] 03-054

RECEIVED FOR LAB BY: RML DATE: 12/09/2010 15:45

SAMPLE: **Inv. Cuttings** Lab ID: 10121731-001A Grab
SAMPLED BY: SG Sample Time: 12/08/2010 21:27

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: 10121731-001C Grab
SAMPLED BY: SG Sample Time: 12/08/2010 21:27

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	990 mg/Kg	SW846 7.3	16	12/14/10 12:30	12/14/10	LTW-CV

SAMPLE: **Inv. Cuttings** Lab ID: 10121731-001D Grab
SAMPLED BY: SG Sample Time: 12/08/2010 21:27

Test	Result	Method	SLOQ	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** Lab ID: 10121731-001F 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
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

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WO#: 10121731
PAGE: 2 of 3
PO#: AF77716
PWS ID#

TEST REPORT

[redacted]03-054

RECEIVED FOR LAB BY: RML DATE: 12/09/2010 15:45

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

Test	Result	Method	SLOQ	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

Test	Result	Method	SLOQ	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

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
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 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

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

WO#: 10121731
PAGE: 3 of 3
PO#: AF77716
PWS ID#

TEST REPORT

[redacted] 03-054

RECEIVED FOR LAB BY: RML DATE: 12/09/2010 15:45

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** Lab ID: 10121731-001J Grab
SAMPLED BY: SG Sample Time: 12/10/2010 11:15

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** Lab ID: 10121731-001L Grab
SAMPLED BY: SG Sample Time: 12/10/2010 11:15

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** Lab ID: 10121731-001M Grab
SAMPLED BY: SG 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

Benchm
E
2566 Pennsylva
Phor
Fax

PAGE 1 OF 1

W/O#: 10121731

REPORT TO:	Talisman / UEG
	geowetlands@aol.com
CONTACT	Steve Gridley
PH#	607-731-0145
FAX#	
BILL TO:	Talisman
PO#	AF77716
PROJECT DESCRIPTION	[redacted]03-054
SAMPLER SIGNATURE / AFFILIATION	UEG
CONTAINER / SAMPLING POINT	

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 ☐ PERSONAL OTHER LANDFILL Mostoller

E SPECIAL DETECTION LIMITS
EDED: ☐ YES / ☑ NO
IF YES, PLEASE ATTACH
IS A QC PACKAGE NEEDED?
☐ YES ☑ NO
IF YES, PLEASE ATTACH REQUIREMENTS

H HYDROCHLORIC ACID · S SULFURIC ACID · N NITRIC ACID · SO_3 SODIUM SULFITE · Thio SODIUM THIOSULFATE · – NONE
OH SODIUM HYDROXIDE · AS ASCORBIC ACID · AC ACETIC ACID · NH_4 AMMONIUM CHLORIDE · ZN ZINC ACETATE · Hg MERCURIC CHLORIDE

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

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	Inv Cuttings	12/8	2127	SO	C	SG	N	Ignitability, Reactive Sulfide & Cyanide			
2					C			PCBs, Total Solids			
3	A-~~Filtrate~~, 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 BNA, ~~Pests~~.										
8	G- TCLP ~~Herbs~~. Sr		~~K- Asbestos~~								
9	H- TCLP pH		L- ASTM		TS, pH			36 HOUR TURNAROUND			
10	I- TCLP Vols.		M- TOX					____ DAY TURNAROUND			
11	J- ASTM COD, ~~Nitr~~										

LAB USE ONLY — DELIVERED BY: _____ TEMPERATURE UPON RECEIPT: _____ °C ARRIVAL ON ICE: Y / N

RELINQUISHED BY:	DATE: 12/9/10	TIME: 1550	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: 12/9/10	TIME: 1545

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: 10103214

SEND DATA TO:

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

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

WO#: 10103214
PAGE: 1 of 2
PO#: AF77715
PWS ID#

TEST REPORT

[redacted]03-054

RECEIVED FOR LAB BY: DLM2 DATE: 10/21/2010 11:37

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:

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

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

Benchmark Analytics, Inc.
Eastern Division

2566 Pennsylvania Ave.
Sayre, PA 18840

Phone: (570) 888-0169
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Work Order: 10103214

SEND DATA TO:

NAME: Steve Gridley
COMPANY: Talisman Energy USA, Inc.
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WO#: 10103214
PAGE: 2 of 2
PO#: AF77715
PWS ID#

TEST REPORT

[redacted] 03-054

RECEIVED FOR LAB BY: DLM2 DATE: 10/21/2010 11:37

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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MANAGER Carrie M. Davis DATE: 10/26/2010

CHAIN OF CUSTODY

Benchmark /
Eastern
2566 Pennsylvania Ave
Phone: (57
Fax: (570) 888-07 17

W/O#: 10103214

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 [redacted]03-054
SAMPLER SIGNATURE / AFFILIATION UEG
CONTAINER / SAMPLING POINT

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 ☐ PERSONAL OTHER LANDFILL

DETECTION LIMITS NEEDED: ☐ YES / ☑ NO
IF YES, PLEASE ATTACH
IS A QC PACKAGE NEEDED? ☐ YES ☑ NO
IF YES, PLEASE ATTACH REQUIREMENTS

H HYDROCHLORIC ACID | S SULFURIC ACID | N NITRIC ACID | SO_3 SODIUM SULFITE | Thio SODIUM THIOSULFATE | – NONE
OH SODIUM HYDROXIDE | AS ASCORBIC ACID | AC ACETIC ACID | NH_4 AMMONIUM CHLORIDE | ZN ZINC ACETATE | Hg MERCURIC CHLORIDE

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

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	Air Cuttings	10/19	955	SO	C	~~SG~~	N	TPH			-001A-D
2								pH, Chlorides, Sodium			
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, % Moist							TCLP [redacted]70 ONLY IF the TPH			
7	D - T. Sample							exceeds 10,000 mg/Kg			
8											
9								72 HOUR TURNAROUND			
10								____ DAY TURNAROUND			
11											Due: 10/26/10

LAB USE ONLY DELIVERED BY SG TEMPERATURE UPON RECEIPT ____ °C ARRIVAL ON ICE: Y / N

RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:	DATE:	TIME:
[signature]	10/21/10	1137		/ /	
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY: [signature]	DATE: 10/21/10	TIME: 1137

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

Benchmark Analytics, Inc.
Eastern Division

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Work Order: 10090956

SEND DATA TO:

NAME: Steve Gridley
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PHONE: (607) 562-4000
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WO#: 10090956
PAGE: 1 of 1
PO#: AF77049
PWS ID#

TEST REPORT

[redacted]03-054

RECEIVED FOR LAB BY: DLM2 DATE: 09/07/2010 16:25

SAMPLE: **Inv. Cuttings** Lab ID: 10090956-001A Composite
SAMPLED BY: LS Sample Time: 08/30/2010 12:12

Test	Result		Method	SLOQ	Analysis Start	Analysis End	Analyst *
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

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
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

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
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

2540-PM-BWM0347 Rev. 1/2011

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.	DEP USE ONLY
General Reference 287.54	Date Received & General Notes
Date Prepared/Revised February 11, 2011	

SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION

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	State	Zip+4	Phone	Ext
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)? ☐ Yes ☒ No

If 'No', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the [redacted] (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

SECTION B. WASTE DESCRIPTION

Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure	Time Frame
810	Drill Cuttings (Oil and Gas)	458	☐ cu yd ☐ gal ☐ lb ☒ ton	☐ One Time

1. GENERAL PROPERTIES

a. pH Range 6.51 to --- (based on analyses or knowledge)

b. Physical State
- ☐ Liquid Waste (EPA Method 9095)
- ☒ Solid (EPA Method 9095)
- ☐ 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

2. CHEMICAL ANALYSIS ATTACHMENTS

a.	The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.	☒ Yes	☐ No	
b.	A detailed description of the waste sampling method is attached.	☒ Yes	☐ No	
c.	The quality assurance/quality control procedures employed by the laboratory(ies) is attached.	☒ Yes	☐ No	
d.	The results of the hazardous waste determination is attached.	☒ Yes	☐ No	
e.	If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.	☐ Yes	☐ No	☒ 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.	☒ Yes	☐ No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes ☐ No	☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ ton (check one)

2. Beneficial Use

a. Has the waste been approved for beneficial use? ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. Volume of waste beneficially used in the previous year.
0 ☐ cu yd ☐ gal ☐ lb ☐ 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.	☒ Yes	☐ No
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes ☐ No	☒ 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 (585) 466-7271	Email Address	joe.boyles@casella.com

d. Volume of waste shipped to processing or disposal facility in the previous year.
66 ☐ cu yd ☐ gal ☐ lb ☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ ton (check one)

2. Beneficial Use

a. Has the waste been approved for beneficial use? ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. Volume of waste beneficially used in the previous year.
0 ☐ cu yd ☐ gal ☐ lb ☐ 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 Dina Brown **Title** 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

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

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

WO#: 10120828
PAGE: 1 of 2
PO#: AF78554
PWS ID#

TEST REPORT

[redacted]03-025

RECEIVED FOR LAB BY: CMS DATE: 12/06/2010 15:40

SAMPLE: **Air Cuttings** Lab ID: 10120828-001A Composite
SAMPLED BY: SG Sample Time: 12/06/2010 11:48

Test	Result		Method	SLOQ	Analysis Start	Analysis End	Analyst *
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

Test	Result		Method	SLOQ	Analysis Start	Analysis End	Analyst *
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

Test	Result		Method	SLOQ	Analysis Start	Analysis End	Analyst *
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

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

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

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

WO#: 10120828
PAGE: 2 of 2
PO#: AF78554
PWS ID#

TEST REPORT

[redacted]03-025

RECEIVED FOR LAB BY: CMS DATE: 12/06/2010 15:40

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:

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Z Due to matrix bias, spike recovery was outside acceptance limits

MANAGER Carrie M. Davis DATE: 12/10/2010

CHAIN OF CUSTODY

PAGE 1 OF 1

W/O#: 10120828

REPORT TO:	Talisman / UEG
	geowetlands@aol.com
CONTACT	Steve Gridley
PH#	607-731-0145
FAX#	
BILL TO:	Talisman
PO#	AF78554
PROJECT DESCRIPTION	[redacted] 03-025
SAMPLER SIGNATURE / AFFILIATION	4120
CONTAINER / SAMPLING POINT	

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

BEING USED FOR: ☐ NYDOH ☑ NYDEC ☑ PADEP ☐ PERSONAL LANDFILL_____ 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; S SULFURIC ACID; N NITRIC ACID; SO_3 SODIUM SULFITE; Thio SODIUM THIOSULFATE; – NONE; OH SODIUM HYDROXIDE; AS ASCORBIC ACID; AC ACETIC ACID; NH_4 AMMONIUM CHLORIDE; ZN ZINC ACETATE; Hg MERCURIC CHLORIDE

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

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	Air Cuttings	12/6	1148	SO	C	SG	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			
7	C - Anions, metals							exceeds 100,000 mg/Kg			
8	D - Total Sample										
9	E - TCLP metals							72 HOUR TURNAROUND			
10								____ DAY TURNAROUND			
11											

LAB USE ONLY — DELIVERED BY: [illegible] — TEMPERATURE UPON RECEIPT: 5 °C — ARRIVAL ON ICE: Y N

RELINQUISHED BY:	DATE: 12/6/10	TIME: 1540	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY: [signature]	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

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

WO#: 10121730
PAGE: 1 of 3
PO#: AF78554
PWS ID#

TEST REPORT

[redacted] E1 H

RECEIVED FOR LAB BY: RML DATE: 12/09/2010 15:45

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:

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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

R RPD outside accepted recovery limits

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: 10121730

SEND DATA TO:

NAME: Dina Brown
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WO#: 10121730
PAGE: 2 of 3
PO#: AF78554
PWS ID#

TEST REPORT

[redacted]E1 H

RECEIVED FOR LAB BY: RML DATE: 12/09/2010 15:45

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** Lab ID: 10121730-001G Grab
SAMPLED BY: SG Sample Time: 12/07/2010 8:00

Test	Result	Method	SLOQ	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** Lab ID: 10121730-001H Grab
SAMPLED BY: SG Sample Time: 12/11/2010 12:45

Test	Result	Method	SLOQ	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** Lab ID: 10121730-001I Grab
SAMPLED BY: SG 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

R RPD outside accepted recovery limits

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: 10121730

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

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

WO#: 10121730
PAGE: 3 of 3
PO#: AF78554
PWS ID#

TEST REPORT

[redacted] E1 H

RECEIVED FOR LAB BY: RML DATE: 12/09/2010 15:45

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** Lab ID: 10121730-001J Grab
SAMPLED BY: SG 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** Lab ID: 10121730-001L Grab
SAMPLED BY: SG 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** Lab ID: 10121730-001M Grab
SAMPLED BY: SG 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 Carrie M. Davis DATE: 12/16/2010

CHAIN OF CUSTODY

Benc

PAGE 1 OF 1

REPORT TO: Talisman / UEG
geowetlands@aol.com

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

BILL TO: Talisman

PO# AF 78554
PROJECT DESCRIPTION [redacted] BTH
SAMPLER SIGNATURE / AFFILIATION UEG
CONTAINER / SAMPLING POINT

2566 Pennsy P

W/O#: 10121730

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_3 SODIUM SULFITE NH_4 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).

Please fill out all applicable areas completely

	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	2156	SO	C	SE	N	Ignitability, Reactive Sulfide & Cyanide			
2					C			PCBs, Total Solids			
3	A ~~Phenols~~, Iso.				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 BNA ~~Pests.~~										
8	G - TCLP ~~Herbs.~~ Sr										
9	H - TCLP pH		~~K - ASTM O&G~~					36 HOUR TURNAROUND			
10	I - TCLP Vols.		L - ASTM - TS, pH					____ DAY TURNAROUND			
11	J - ASTM COD, ~~Nitr~~		M	TOX							

LAB USE ONLY — DELIVERED BY: _____ TEMPERATURE UPON RECEIPT: _____ °C ARRIVAL ON ICE: Y/N

RELINQUISHED BY:	DATE: 12/9/10	TIME: 1530	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: 12/9/10	TIME: 1545

2540-PM-BWM0347 Rev. 1/2011

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.	DEP USE ONLY Date Received & General Notes
General Reference 287.54	
Date Prepared/Revised February 11, 2011	

SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION

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	State	Zip+4	Phone	Ext
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)? ☐ Yes ☒ No

If 'No', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the [redacted](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

SECTION B. WASTE DESCRIPTION

Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure	Time Frame
810	Drill cuttings (oil and gas)	1,094	☐ cu yd ☐ gal ☐ lb ☒ ton	☐ One Time

1. GENERAL PROPERTIES

a. **pH Range** 8.87 to --- (based on analyses or knowledge)

b. **Physical State**
- ☐ Liquid Waste (EPA Method 9095)
- ☒ Solid (EPA Method 9095)
- ☐ 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

2. CHEMICAL ANALYSIS ATTACHMENTS

a.	**The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.**	☒ Yes	☐ No	
b.	**A detailed description of the waste sampling method is attached.**	☒ Yes	☐ No	
c.	**The quality assurance/quality control procedures employed by the laboratory(ies) is attached.**	☒ Yes	☐ No	
d.	**The results of the hazardous waste determination is attached.**	☒ Yes	☐ No	
e.	**If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.**	☐ Yes	☐ No	☒ 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.	☒ Yes	☐ No	
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No	
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes	☐ No	☒ 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.
1,094 ☐ cu yd ☐ gal ☐ lb ☒ 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.
☐ cu yd ☐ gal ☐ lb ☐ ton (check one)

2. Beneficial Use

a. Has the waste been approved for beneficial use? ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. Volume of waste beneficially used in the previous year.
0 ☐ cu yd ☐ gal ☐ lb ☐ 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 Dina Brown **Title** Environmental Specialist

Signature _____ **Date** 2/25/14

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: 10030587

SEND DATA TO:

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

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

WO#: 10030587
PAGE: 1 of 1
PO#:
PWS ID#

TEST REPORT

[redacted] Inv. Spill

RECEIVED FOR LAB BY: DLM2 DATE: 03/03/2010 9:38

SAMPLE: **Pad-Clean Soil-W1** Lab ID: 10030587-001A Composite
SAMPLED BY: SG Sample Time: 03/02/2010 12:00

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
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

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 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 Carrie M. Davis DATE: 3/12/2010

2540-PM-BWM0347 Rev. 1/2011

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.	DEP USE ONLY
General Reference 287.54	Date Received & General Notes
Date Prepared/Revised February 11, 2011	

SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION

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)? ☐ Yes ☒ No

If 'No', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the [redacted] (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

SECTION B. WASTE DESCRIPTION

Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure	Time Frame
810	Drilling Cuttings (Oil and Gas)	240	☐ cu yd ☐ gal ☐ lb ☒ ton	☐ One Time

1. GENERAL PROPERTIES

a.	**pH Range**	12.24 to ---	(based on analyses or knowledge)
b.	**Physical State**	☐ Liquid Waste (EPA Method 9095) ☒ Solid (EPA Method 9095) ☐ 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	

2. CHEMICAL ANALYSIS ATTACHMENTS

a.	**The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.**	☒ Yes	☐ No	
b.	**A detailed description of the waste sampling method is attached.**	☒ Yes	☐ No	
c.	**The quality assurance/quality control procedures employed by the laboratory(ies) is attached.**	☒ Yes	☐ No	
d.	**The results of the hazardous waste determination is attached.**	☒ Yes	☐ No	
e.	**If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.**	☐ Yes	☐ No	☒ 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.	☒ Yes	☐ No	
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No	
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes	☐ No	☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ 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 (585) 466-7271	Email Address	joe.boyles@casella.com

d. Volume of waste shipped to processing or disposal facility in the previous year.
50 ☐ cu yd ☐ gal ☐ lb ☒ ton (check one)

2. Beneficial Use

a. Has the waste been approved for beneficial use? ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. Volume of waste beneficially used in the previous year.
0 ☐ cu yd ☐ gal ☐ lb ☐ 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.	☒ Yes	☐ No	
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No	
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes	☐ No	☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ ton (check one)

2. Beneficial Use

a. **Has the waste been approved for beneficial use?** ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. **Volume of waste beneficially used in the previous year.**
0 ☐ cu yd ☐ gal ☐ lb ☐ 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.	☒ Yes	☐ No	
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No	
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes	☐ No	☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ 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.**
☐ cu yd ☐ gal ☐ lb ☐ ton (check one)

2. Beneficial Use

a. **Has the waste been approved for beneficial use?** ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. **Volume of waste beneficially used in the previous year.**
0 ☐ cu yd ☐ gal ☐ lb ☐ 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 Dina Brown **Title** 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

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

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

WO#: 10124000
PAGE: 1 of 4
PO#: AF 78737
PWS ID#

TEST REPORT

[redacted] J4H Well Pad

RECEIVED FOR LAB BY: CMS DATE: 12/28/2010 13:50

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 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

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

WO#: 10124000
PAGE: 2 of 4
PO#: AF 78737
PWS ID#

TEST REPORT

[redacted]J4H Well Pad

RECEIVED FOR LAB BY: CMS DATE: 12/28/2010 13:50

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	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** Lab ID: 10124000-001F Grab
SAMPLED BY: Sample Time: 01/06/2011 8:00

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:

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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: 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

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

WO#: 10124000
PAGE: 3 of 4
PO#: AF 78737
PWS ID#

TEST REPORT

[redacted] J4H Well Pad

RECEIVED FOR LAB BY: CMS DATE: 12/28/2010 13:50

SAMPLE: **TCLP Leachate of Air Cuttings** Lab ID: 10124000-001G Grab
SAMPLED BY: Sample Time: 01/06/2011 8:00

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
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

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.

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

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

WO#: 10124000
PAGE: 4 of 4
PO#: AF 78737
PWS ID#

TEST REPORT

[redacted]J4H Well Pad

RECEIVED FOR LAB BY: CMS DATE: 12/28/2010 13:50

SAMPLE: **Air Cuttings** Lab ID: 10124000-001I Grab
SAMPLED BY: DJD Sample Time: 12/29/2010 8:00

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:

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L Value above calibration range but within annually verified linear range

MANAGER Carrie M. Davis DATE: 1/12/2011

CHAIN OF CUSTODY

PAGE 1 OF 1

W/O#: 10124000

REPORT TO:	Talisman / UEG
	geowetlands@aol.com
	twollin@rallysolutions.ca
CONTACT	Dina Brown
PH#	[redacted] 724-814-5321
FAX#	
BILL TO:	Talisman
PO#	AF # AF78737
DESCRIPTION	[redacted] Well Pad
SAMPLER SIGNATURE / AFFILIATION	[redacted] / GES
CONTAINER / SAMPLING POINT	Jar / Shale bin

REFRIGERATE 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

H HYDROCHLORIC ACID; S SULFURIC ACID; N NITRIC ACID; SO_3 SODIUM SULFITE; Thio SODIUM THIOSULFATE; - NONE; OH SODIUM HYDROXIDE; AS ASCORBIC ACID; AC ACETIC ACID; NH_4 AMMONIUM CHLORIDE; ZN ZINC ACETATE; Hg MERCURIC CHLORIDE

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

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

Please fill out all applicable areas completely

	Air 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		12/28/10	9:45 A	SO	G	TMD	non	TPH			-0014-E
2								pH, Chlorides, Sodium			
3								TCLP 8 RCRA Metals + Cu, Ni, Zn			
4	A- TPH							Free Liquids / % Moisture			
5	B- wet chem										
6	C- Anion, Metals, Asbmp, pH, Cl, RSCN							TCLP 8260 / 8270 ONLY IF the TPH			
7	D- Total Sample							exceeds 120,000 mg/Kg			
8	E- TCLP Metals										
9	F- 8260 TCLP							____ HOUR TURNAROUND			
10	G- 8270 TCLP							7-14 Day DAY TURNAROUND			
11	H- TOL I- tph							due 1/5/11			

[redacted] DELIVERED BY: David J. Denko TEMPERATURE UPON RECEIPT 14 °C ARRIVAL ON ICE Y N

RELINQUISHED BY: David J. Denko	DATE: 12/28/10	TIME: 1:50p	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: / /	TIME:
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY: Marlene McLean	DATE: 12/28/10	TIME: 1350

2540-PM-BWM0347 Rev. 1/2011

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.	DEP USE ONLY
General Reference 287.54	Date Received & General Notes
Date Prepared/Revised February 11, 2011	

SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION

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)? ☐ Yes ☒ No

If 'No', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the [redacted](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

SECTION B. WASTE DESCRIPTION

Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure	Time Frame
810	Drill cuttings (oil and gas)	4,981	☐ cu yd ☐ gal ☐ lb ☒ ton	☐ One Time

1. GENERAL PROPERTIES

a.	**pH Range**	6.29 to 12.07	(based on analyses or knowledge)
b.	**Physical State**	☐ Liquid Waste (EPA Method 9095) ☒ Solid (EPA Method 9095) ☐ 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	

2. CHEMICAL ANALYSIS ATTACHMENTS

a.	**The results of a detailed chemical characterization of the waste, as described in the instructions, is attached.**	☒ Yes	☐ No	
b.	**A detailed description of the waste sampling method is attached.**	☒ Yes	☐ No	
c.	**The quality assurance/quality control procedures employed by the laboratory(ies) is attached.**	☒ Yes	☐ No	
d.	**The results of the hazardous waste determination is attached.**	☒ Yes	☐ No	
e.	**If applicable, a detailed explanation supporting use of generator knowledge in lieu of actual chemical analysis is attached.**	☐ Yes	☐ No	☒ 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.	☒ Yes	☐ No	
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No	
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes	☐ No	☒ 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 ☐ cu yd ☐ gal ☐ lb ☒ 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 (585) 466-7271	Email Address	joe.boyles@casella.com

d. Volume of waste shipped to processing or disposal facility in the previous year.
1,549 ☐ cu yd ☐ gal ☐ lb ☒ ton (check one)

2. Beneficial Use

a. Has the waste been approved for beneficial use? ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. Volume of waste beneficially used in the previous year.
0 ☐ cu yd ☐ gal ☐ lb ☐ 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.	☒ Yes	☐ No	
b.	A schematic of the manufacturing and/or pollution control processes producing the waste, as specified in the instructions, is attached.	☒ Yes	☐ No	
c.	If portions of the information submitted are confidential, the substantiation for a confidentiality claim, as described in the instructions, is attached.	☐ Yes	☐ No	☒ 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.
151 ☐ cu yd ☐ gal ☐ lb ☒ 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.
133 ☐ cu yd ☐ gal ☐ lb ☒ ton (check one)

2. Beneficial Use

a. Has the waste been approved for beneficial use? ☐ Yes ☒ No
If "Yes", list the general permit number or approval number.

b. Volume of waste beneficially used in the previous year.
0 ☐ cu yd ☐ gal ☐ lb ☐ 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 Dina Brown **Title** Environmental Specialist

Signature _____ **Date** 2/25/14

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: 10084198

SEND DATA TO:

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

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

WO#: 10084198
PAGE: 1 of 1
PO#: AF 76907
PWS ID#

TEST REPORT

[redacted]01-003

RECEIVED FOR LAB BY: DLM2 DATE: 08/24/2010 15:10

SAMPLE: **Inv. Cuttings & Gypsum Biomatrix** Lab ID: 10084198-001A Grab
SAMPLED BY: SG Sample Time: 08/24/2010 10:20

Test	Result	Method	Reg 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	Reg 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	Reg 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:

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* 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

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

Work Order: 10081725

SEND DATA TO:

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

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

WO#: 10081725
PAGE: 1 of 2
PO#: AF76907
PWS ID#

TEST REPORT

[redacted]

RECEIVED FOR LAB BY: DLM2 DATE: 08/10/2010 15:33

SAMPLE: **Air Cuttings** Lab ID: 10081725-001A Grab
SAMPLED BY: SG Sample Time: 08/09/2010 15:00

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
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** Lab ID: 10081725-001B Grab
SAMPLED BY: SG Sample Time: 08/09/2010 15:00

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
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** Lab ID: 10081725-001C Grab
SAMPLED BY: SG Sample Time: 08/09/2010 15:00

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst *
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** Lab ID: 10081725-001E Grab
SAMPLED BY: SG Sample Time: 08/09/2010 15:00

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

REMARKS:

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PWS ID#

TEST REPORT

[redacted]

RECEIVED FOR LAB BY: DLM2 DATE: 08/10/2010 15:33

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

Talisman 3(a)

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
[redacted]264	EAST RES ALLEN 264 1H	
[redacted]264 Total		
[redacted](03-015)	TEUSA [redacted](03-015-01) J 1H	23,773
	TEUSA [redacted](03-015-02) J 2H	14,764
	TEUSA [redacted](03-015-03) J 3H	15,521
	TEUSA [redacted](03-015-04) J 4H	20,933
[redacted](03-015) Total		74,991
[redacted](03-009)	FEI [redacted](03-009-05) L 5H	35,194
	FEI [redacted](03-009-06) L 6H	40,660
	FEI [redacted](03-009-07) L 7H	34,613
	FEI [redacted](03-009-08) L 8H	51,096
[redacted](03-009) Total		161,564
[redacted](01-025/070)	FEI [redacted]B 1H (01-025-01) - API 37-015-	1,519
	FEI [redacted]B 2H (01-025-02) - API 37-015-	3,864
	FEI [redacted]B 3H (01-070-01) - API 37-015-	3,525
	FEI [redacted]B 4H (01-070-02) - API 37-015-	946
[redacted](01-025/070) Total		9,853
[redacted](01-047)	FEI [redacted](01-047-01) J 1H	17,902
	FEI [redacted](01-047-02) J 2H	16,593
	FEI [redacted](01-047-03) J 3H	27,694
	FEI [redacted](01-047-04) J 4H	12,035
	FEI [redacted](01-047-05) J 5H	10,532
	FEI [redacted](01-047-06) J 6H	13,032
[redacted](01-047) Total		97,788
[redacted](01-005/008)	FEI [redacted](01-005-01) R1H - API 37-015-2	12,396
	FEI [redacted](01-005-02) R3H - API 37-015-2	15,621
	FEI [redacted](01-008-01) R2H - API 37-015-2	12,594
[redacted](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	61,950
	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
[redacted] (03-013)	FEI [redacted] (03-013-01) W 1H	1,944
	FEI [redacted] (03-013-02) W 2H	11,575
	FEI [redacted] (03-013-03) W 3H	14,443
	FEI [redacted] (03-013-04) W 4H	14,811
	FEI [redacted] (03-013-05) W 5H	13,780
	FEI [redacted] (03-013-06) W 6H	3,187
	FEI [redacted] (03-013-07) W 7H	20,380
	FEI [redacted] (03-013-08) W 8H	23,291
[redacted] (03-013) Total		103,410
[redacted] R (03-045)	TEUSA [redacted] (03-045-01) J 1H	50,755
	TEUSA [redacted] (03-045-02) J 2H	31,925
[redacted] R (03-045) Total		82,680
[redacted] (01-003)	FEI [redacted] J 1H (01-003-01) - API 37-015-	-
[redacted] (01-003) Total		-
[redacted] (01-071)	TEUSA [redacted] R (01-071-01) D 1H	31,550
	TEUSA [redacted] (01-071-02) D 2H	44,207
	TEUSA [redacted] (01-071-03) D 3H	44,047
[redacted] (01-071) Total		119,803
[redacted] (01-004)	FEI [redacted] (01-004-01) M1H - API 37-015-	6,659
	FEI [redacted] (01-004-03) M 5H - API 37-015	4,545
	FEI [redacted] M 3H (01-004-02) - API 37-015	4,774
[redacted] (01-004) Total		15,978
[redacted] (01-012)	FEI [redacted] (01-012-01) A1H - API 37-015-	15,905
	FEI [redacted] (01-012-02) A2H - API 37-015-	12,196
[redacted] (01-012) Total		28,101
[redacted] HOLDING (01-036)	FEI [redacted] 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	11,618
	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	2,966
	EAST RES [redacted] 261 5H	2,285
	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	15,476
[redacted] (01-024) Total		34,196
[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	40,856
	FEI [redacted] (03-008-04) G 4H	55,562
	FEI [redacted] (03-008-05) G 5H	56,707
	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	62,873
[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	19,670
[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

[redacted] (01-074)	TEUSA MORGAN (01-074-04) W 4H	110,544
[redacted] (01-074) Total		398,958
[redacted] (01-006)	TEUSA [redacted] (01-006-01) J 1H	6,398
	TEUSA [redacted] (01-006-02) J 2H	7,760
	TEUSA [redacted] (01-006-03) J 3H	-
	TEUSA [redacted] (01-006-04) J 4H	7,964
[redacted] (01-006) Total		22,121
[redacted] (01-076)	FEI [redacted] (01-076-01) L 7H	34,535
	FEI [redacted] (01-076-02) L 8H	24,821
	FEI [redacted] (01-076-03) L 9H	26,804
	FEI [redacted] (01-076-04) L 10H	36,747
	FEI [redacted] (01-076-05) L 11H	43,176
	FEI [redacted] (01-076-06) L 12H	47,082
	FEI [redacted] (01-076-07) L 13H	57,126
[redacted] (01-076) Total		264,285
[redacted] (01-077)	FEI [redacted] (01-077-01) L 1H	33,510
	FEI [redacted] (01-077-02) L 2H	36,511
	FEI [redacted] (01-077-04) L 4H	30,171
	FEI [redacted] (01-077-05) L 5H	20,568
	FEI [redacted] (01-077-06) L 6H	22,961
[redacted] (01-077) Total		143,721
[redacted] 1	EAST RES [redacted] 1	-
[redacted] 1 Total		-
[redacted] T 259	EAST RES [redacted] 259 1H	5,045
	EAST RES [redacted] 259 2H	59,290
	EAST RES [redacted] 259 3H	61,722
	EAST RES [redacted] 259 4H	3,182
	EAST RES [redacted] 259 5H	21,187
	EAST RES [redacted] 259 6H	-
[redacted] 259 Total		150,426
[redacted] (01-026/027)	FEI [redacted] (01-027-01) D 3H - API 37-01	12,721
	FEI [redacted] D 1H (01-026-01) - API 37-01	10,991
	FEI [redacted] D 2H (01-026-02) - API 37-01	10,330
[redacted] (01-026/027) Total		34,042
[redacted] (01-043/013)	FEI [redacted] D 4H (01-043-01) - API 37-01	6,528
	FEI [redacted] D 5H (01-043-02) - API 37-01	5,105
	FEI [redacted] D 6H (01-013-01) - API 37-01	4,852
	FEI [redacted] D 7H (01-013-02) - API 37-01	4,485
	FEI [redacted] D 8H (01-013-03) - API 37-01	5,916
	FEI [redacted] D 9H (01-043-03) - API 37-01	4,316
[redacted] (01-043/013) Total		31,202
[redacted] 269	EAST RES [redacted] 269 1H	-
[redacted] 269 Total		-
[redacted] (01-001)	FEI [redacted] (01-001-01) FT1H - API 37-015	6,144
[redacted] (01-001) Total		6,144
[redacted] (01-002)	FEI [redacted] (01-002-01) FT2H - API 37-015	8,269
[redacted] (01-002) Total		8,269
[redacted] (01-038)	FEI [redacted] (01-038-01) FT 3H	2,841
	FEI [redacted] (01-038-02) FT 4H	3,083
	FEI [redacted] (01-038-03) FT 5H	3,800
	FEI [redacted] (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)	15,346
	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
[redacted] (03-004)	FEI [redacted] (03-004-01) R 1H	14,615
	FEI [redacted] (03-004-02) R 2H	13,589
	FEI [redacted] (03-004-03) R 3H	13,851
	FEI [redacted] (03-004-04) R 4H	18,652
	FEI [redacted] (03-004-05) R 5H	17,367
[redacted] (03-004) Total		78,062
[redacted] (03-054)	TEUSA [redacted] (03-054-01) J 1H	-
	TEUSA [redacted] (03-054-02) J 2H	-
	TEUSA [redacted] (03-054-03) J 3H	-
	TEUSA [redacted] (03-054-04) J 4H	-
[redacted] (03-054) Total		-
[redacted] 268	EAST RES [redacted] 268 1H	25,300
[redacted] 268 Total		25,300
[redacted] 262	EAST RES [redacted] 262 1 H	-
[redacted] 262 Total		-
[redacted] (01-041/042)	FEI [redacted] (01-041-01) R 1H - API 37-0	8,044
	FEI [redacted] (01-041-02) R 3H - API 37-0	8,169
	FEI [redacted] (01-041-03) R 5H - API 37-0	8,928
	FEI [redacted] (01-042-01) R 2H - API 37-0	8,976
	FEI [redacted] (01-042-02) R 4H - API 37-0	8,059
	FEI [redacted] (01-042-03) R 6H - API 37-0	8,538
[redacted] (01-041/042) Total		50,715
[redacted] (03-001)	TEUSA [redacted] (03-001-01) E 1H	33,264
	TEUSA [redacted] (03-001-02) E 2H	12,264
	TEUSA [redacted] (03-001-03) E 3H	34,188
	TEUSA [redacted] (03-001-04) E 4H	28,728
[redacted] R (03-001) Total		108,444
(blank)	(blank)	
(blank) Total		
[redacted] (03-014) J PAD	TEUSA [redacted] (03-014-04) J 4H	28,980
[redacted] (03-014) J PAD Total		28,980
Grand Total		3,654,595

Talisman 6

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	[redacted]	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	[redacted]	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	[redacted]	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	[redacted]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	[redacted]	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	[redacted]03-013-01 W 1H	US-PA	Oil based drilling fluids	0.18	Land
2010 01 11	[redacted] (01-013-03) D8H	US-PA	Flowback / Completions Fluids Water	0.0002	Land
2010 01 12	[redacted]y (01-006-03) J3H	US-PA	Diesel Fuel	0.132480	Land
2010 01 12	[redacted] (01-006-03) J3H	US-PA	Diesel Fuel	0.132480	Land/Pooled rainwater on-site
2010 01 16	DCNR 587 02-002-01	US-PA	Oil based drilling fluids	0.3028	Land
2010 01 21	[redacted]h R 4H	US-PA	Lubricating Oil	0.0038	Land
2010 01 23	[redacted] 01-042-01 R2H	US-PA	Oil based drilling fluids	0.4770	Land
2010 01 27	[redacted] 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	[redacted]n (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	[redacted]ms (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	[redacted]n (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 [redacted] (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 [redacted]n (03-004-05) R 5H - Pioneer 59	US-PA	Diesel Fuel	0.0750	Land
2010 03 16	FEI [redacted]n (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 ([redacted]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	[redacted] (01-024-04) R 5H	US-PA	Produced Water	0.02	Land
2010 03 29	[redacted] 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	[redacted] (03-015-02) J 2H (Dallas Morris 16)	US-PA	Hydraulic Fluids	0.0190	Land
2010 05 06	[redacted]er (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	[redacted] (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	[redacted] (03-009)	US-PA	Diesel Fuel	0.0020	Land
2010 06 03	[redacted] (03-004-04) R 4H	US-PA	Oil based drilling fluids	0.0150	Land
2010 07 04	[redacted] (01-003-01) J 1H	US-PA	Produced Water	0.0190	Land
2010 07 13	[redacted] 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	[redacted]	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	[redacted]03-013-05 W5H	US-PA	Lubricating Oil	0.0080	Land
2010 09 01	[redacted] (03-001-02) E 2H	US-PA	Oil based drilling fluids	0.007570	Land
2010 09 02	[redacted]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	[redacted] (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	[redacted]01-026-01) D 1	US-PA	Produced water	0.0114	Land
2010 09 27	[redacted]01-074-02 W2H	US-PA	Oil based drilling fluids	0.0379	Land
2010 10 05	[redacted] 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	[redacted] (01-076-07) L 13H - Saxon 170	US-PA	Spray paint	0.0010	Land
2010 10 12	[redacted] (03-067-02) O 2H	US-PA	Oil based drilling fluids	0.015140	Land
2010 10 14	[redacted]	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	[redacted]05-005-01 K1H Saxon Rig 173	US-PA	Oil based drilling fluids	0.0340	Land
2010 12 08	[redacted]n (01-076)	US-PA	Fracwater	6.06	Land
2010 12 14	[redacted] (05-005-01) K 1H - Saxon 173	US-PA	Diesel Fuel	0.0080	Land
2010 12 17	[redacted] 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	[redacted]ad	US-PA	Diesel Fuel	0.0080	Land
2010 12 20	[redacted] (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]m (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]n 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]n (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]t 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