|  |   |                         | SECTION D. CERTIFICATION  |
|--|---|-------------------------|---|
| Report and<br>obtaining th<br>knowledge. | all attached docun<br>le information, I ve<br>I understand that f | nents<br>erify<br>the s | have personally examined and am familiar with the information submitted in this Annual<br>s and that based upon my inquiry of those individuals immediately responsible for<br>that the submitted information is true, accurate and complete to the best of my<br>submission of false Information herein is made subject to the penalties of 18 Pa. C.S.<br>on to authorities, which include fine and imprisonment. |
| Check the fo                             | llowing, if applicabl   | e:                      |   |
| l certi                                  | fy the information<br>_and has not chang                          |                         | ired in Section B-1, General Properties was supplied to the Department for the year   |
| Form                                     | Submitted:  |                         | Form 26R  |
|  |   |                         | Other (specify)   |
| Date                                     | Submitted:  |                         |   |
| □ l certi<br>                            | fy the information<br>and has not chang                           |                         | ired in Section B-2, Chemical Analysis was supplied to the Department for the year  |
| Form                                     | Submitted:  |                         | Form 26R  |
|  |   |                         | Other (specify)   |
| Date                                     | Submitted:  |                         |   |
|  | y the information re<br>year and ha                               |                         | ed in Section B-3, Process Description and Schematic, was supplied to the Department t changed.   |
| Form                                     | Submitted:  |                         | Form 26R  |
|  |   |                         | Other (specify)   |
| Date                                     | Submitted:  |                         |   |
| Name of Res                              | ponsible Official   |                         | Title Environmental Specialist  |
| Dina Brown<br>Signature                  | <u>A</u>  | <                       | Date 2/2.5/11   |

| Lab ID: 08-0<br>Lab ID: 39-0 |  | Eas<br>2566<br>S<br>Phor | ark Analytics, In<br>stern Division<br>Pennsylvania Ave.<br>ayre, PA 18840<br>ne: (570) 888-0169<br>ax: (570) 888-0717 | C.             | Work                             | Order: 101           | 125 <b>2</b> 5 |
|------------------------------|--|--------------------------|--|----------------|----------------------------------|----------------------|----------------|
| SEND DATA                    | TO:  |                          |  |                |                                  |                      |                |
| NAME:                        | Steve Gridley                                |                          |  | W              | /O#: 1011                        | 2525                 |                |
| COMPANY:                     |  | nc.                      | · · · · ·  | P              | AGE: 1 of 2                      | 2                    |                |
| ADDRESS:                     | 337 Daniel Zenker Dr<br>Horseheads, NY 14845 |                          |  |                |                                  | _                    |                |
|                              | 1010010203, 111 14040                        |                          |  | P              | O#: AF78                         | 3425                 |                |
| PHONE:<br>FAX:               | (607) 731-0145<br>(607) 562-4001             | Т                        | EST REPORT   | P              | WS ID#                           |                      | -              |
| 01-                          | -023   |                          |  |                |                                  |                      |                |
|                              | OR LAB BY: SCP                               | DA                       | TE: 11/16/2010 16:40   |                |                                  | Pa                   | age 1 of 2     |
| SAMPLE: AI                   | r Cuttings                                   |                          | Lab ID: 10112525-001A  | Grab           |                                  |                      |                |
| SAMPLE                       | D BY: SG                                     | Si                       | ample Time: 11/16/2010 14:56   | SLOQ           |                                  |                      |                |
| Test                         |  | Result                   | Method   | SLUG           | Analysis Start                   | Analysis End         | Analyst *      |
|                              | oleum Hydrocarbons                           | < 172 mg/Kg              | EPA 9071   | 172            | 11/18/10 14:40                   | 11/18/10             |                |
| Sample                       | Note: Analysis performed by I                | Microbac Laborato        | ries, Inc-Erie Division.   |                |                                  |                      |                |
| SAMPLE: Air                  | -  |                          | Lab ID: 10112525-001B  | Grab           |                                  |                      |                |
| SAMPLE                       | D BY: SG                                     | Sa                       | ample Time: 11/16/2010 14:56   | SLOQ           |                                  |                      |                |
| Test                         |  | <u>Result</u>            | Method   | VLVX           | Analysis Start                   | Analysis End         | Analyst *      |
| Moisture                     |  | 25.2 %                   | Moisture Calc.   | 0.01           | 11/17/10 9:00                    | 11/18/10             | IC-SA          |
| Free Liqui                   | d  | < 0.1 %                  | EPA 9095A  | 0.1            | 11/17/10 9:00                    | 11/17/10             | K-SA           |
| pH                           |  | 10.20@24.1°C             | EPA 9045C  |                | 11/17/10 16:52                   | 11/17/10             | SG-SA          |
| SAMPLE: Air                  |  |                          | Lab ID: 10112525-001C  | Grab           |                                  |                      |                |
| SAMPLE                       | D BY: SG                                     | Sa                       | ample Time: 11/16/2010 14:56   | <u>SLOQ</u>    |                                  |                      |                |
| Test                         |  | Result                   | Method   |                | Analysis Start                   | Analvsis 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 M                    | oisture                                      | 25.2 %                   | SM2540G  |                | 11/17/10 9:00                    | 11/18/10             | IC-SA          |
|                              | LP Leachate of Air Cutting                   | •                        | Lab ID: 10112525-001E  | Grab           |                                  |                      |                |
| SAMPLE                       | D BY: SG                                     | Sa                       | ample Time: 11/17/2010 8:00  | SLOQ           |                                  |                      |                |
| Test                         |  | Result                   | Method   | <u></u>        | Analysis Start                   | Analysis End         | Analyst *      |
| -                            | TCLP extracted                               | < 0.0008 mg/L            | EPA 7470A  | 8000.0         | 11/17/10 9:00                    | 11/18/10             | KW-CV          |
|                              | CLP extracted                                | < 0.500 mg/L             | EPA 6010B  | 0.500          | 11/18/10 13:15                   | 11/18/10             | GSR-CV         |
|                              | CLP extracted                                | < 10.00 mg/L             | EPA 6010B  | 10.00          | 11/18/10 13:15                   | 11/18/10             | GSR-CV         |
|                              | - TCLP extracted                             | < 0.100 mg/L             | EPA 6010B  | 0.100          | 11/18/10 13:15                   | 11/18/10             | GSR-CV         |
|                              | - TCLP extracted                             | < 0.500 mg/L             | EPA 6010B  | 0.500<br>0.100 | 11/18/10 13:15<br>11/18/10 13:15 | 11/18/10<br>11/18/10 | GSR-CV         |
| Copper - I                   | CLP extracted                                | < 0.100 mg/L             | EPA 6010B  | 0.100          | 11/10/10 10:10                   | 11/10/10             | GSR-CV         |

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

Value above calibration range but within annually verified linear range L

MANAGER

anie M. Davis DATE: 11/19/2010

| Lab ID: 08-(<br>Lab ID: 39-( |                                  | <b>East</b><br>2566 P | ern l<br>ennsy | n <b>alytics, In<br/>Division</b><br>/Ivania Ave.<br>A 18840 | C.    |          | Work   | Order: 101 | 112525     |
|------------------------------|----------------------------------|-----------------------|----------------|--|-------|----------|--------|------------|------------|
|                              |                                  |                       | • •            | 888-0169<br>888-0717   |       |          |        |            |            |
| SEND DATA                    | A TO:                            |                       |                |  |       |          |        |            |            |
| NAME:                        | Steve Gridley                    |                       |                |  | w     | 'O#:     | 10112  | 2525       |            |
| COMPANY:                     |                                  | nc.                   |                |  | p     | AGE:     | 2 of 2 |            |            |
| ADDRESS:                     | 337 Daniel Zenker Dr             |                       |                |  | .,    |          | 2012   |            |            |
|                              | Horseheads, NY 14845             |                       |                |  | P     | O#:      | AF784  | 425        |            |
| PHONE:<br>FAX:               | (607) 731-0145<br>(607) 562-4001 | TES                   | ST RI          | EPORT  | P     | WS ID#   |        |            |            |
| 01                           | -023                             |                       |                |  |       |          |        |            |            |
| RECEIVED I                   | FOR LAB BY: SCP                  | DATE                  | : 11/1         | 6/2010 16:40   |       |          |        | P          | age 2 of 2 |
| Lead - T(                    | CLP extracted                    | < 0.500 mg/L          |                | EPA 6010B  | 0.500 | 11/18/10 | 13:15  | 11/18/10   | GSR-CV     |
| Nickel - T                   | TCLP extracted                   | < 0.100 mg/L          |                | EPA 6010B  | 0.100 | 11/18/10 | 13:15  | 11/18/10   | GSR-CV     |
| Selenium                     | n - TCLP extracted               | < 0.500 mg/L          |                | EPA 6010B  | 0.500 | 11/18/10 | 13:15  | 11/18/10   | GSR-CV     |
| Silver - T                   | CLP extracted                    | < 0.100 mg/L          |                | EPA 6010B  | 0.100 | 11/18/10 | 13:15  | 11/18/10   | GSR-CV     |
| Zinc - TC                    | CLP extracted                    | 40.1 mg/L             | L              | EPA 6010B  | 0.200 | 11/18/10 | 13:15  | 11/18/10   | GSR-CV     |

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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:

11/19/2010

| CHAIN OF CUSTODY   |       |                  |                 |                |        |                        |  | PAGE 1OF1                          |
|--|-------|------------------|-----------------|----------------|--------|------------------------|--|------------------------------------|
| Talisman / UEG   | ]     |                  |                 |                |        |                        |  |                                    |
| geowetlands@aol.com  | 1     |                  |                 |                |        |                        | W/O#: 10112525   | ARE SPECIAL DETECTION LIMITS       |
| 300000000  |       |                  |                 |                | 50     |                        |  | NEEDED: YES / NO                   |
|  | 1     | riger/<br>Er col |                 |                | :0     | 6                      |  | ISED FOR: IF YES, PLEASE ATTACH    |
|  | - ·   |                  |                 |                |        | DV GV                  |  |                                    |
| CONTACT Steve Gridley  |       | TRANS            | PORT            |                |        | / sv<br>wi             |  | YES 🗹 NO                           |
| PH# 607-731-0145   | 1.    | π                | -               |                |        |                        | DEIONIZED WATER DI DISTILLED WATER PERSONAL OTHER  | IF YES, PLEASE ATTACH REQUIREMENTS |
| FAX#   |       | ABOR/<br>IN COO  |                 |                |        | 15                     | / H HYDROCHLORIC ACID OH SODIUM HYDROXIDE<br>S SULFURIC ACID AS ASCORBIC ACID  |                                    |
| BILL TO: Talisman  | _     | WITH             |                 |                | / /    |                        | N NITRICACID AC ACETICACID<br>SO3 SODIUM SULFITE NH, AMMONIUM CHLORIDE   |                                    |
| 20# 10-104/25  | _     | -7               | 7               | $\neg$         |        |                        | Thio SODIUM THIOSULFATE ZN ZINC ACETATE<br>– NONE Hg MERCURIC CHLORIDE   |                                    |
|  | -     |                  |                 | '/*            | / 8    |                        | An incomplete chain of custody may delay the   | Please fill out all                |
| SAMPLER SIGNATURE / AFFILIATION  | 4,    | THE SAMPLED      | Ser.            | SALLENATRIX    |        |                        | An incomplete chain of custody may delay the<br>processing of your sample(s).<br>ANALYSIS TO BE PERFORMED<br>(PER CONTAINER) | applicable areas                   |
| Slow use   |       |                  | 5/              | <u><u></u></u> | 47 / . |                        | ξ/   |                                    |
| CONTAINER SAMPLING POINT   | / శ్  |                  | SALLE SALLELING | / ऊँ           | / 3    | PRESS MITHLS COMPOSITE | ANALYSIS TO BE PERFORMED (PER CONTAINER)   | LAB USE ONLY                       |
| 1 Air Cuttings   | 11/16 | 1456             | 50              | I              | 95-    |                        | ТРН  |                                    |
| 2  |       |                  |                 |                |        |                        | pH, Chlorides, Sodium  |                                    |
| 3  |       |                  |                 |                |        |                        | TCLP 8 RCRA Metals + Cu, Ni, Zn  |                                    |
| 4 A - TPH  |       |                  |                 |                |        |                        | Free Liquids / % Moisture  |                                    |
| 5 B-pH, free Liquid, 1. mois   | ture  |                  |                 |                |        |                        |  |                                    |
| 6 C- Anions, metals  |       |                  |                 |                |        |                        | Perform BTEX ONLY IF the TPH   |                                    |
| 7 D- Total Sanple  |       |                  |                 |                |        |                        | exceeds 100,000 mg/Kg  |                                    |
| 8 E- TCLP metals   |       |                  |                 |                |        |                        |  |                                    |
| 9  |       |                  |                 |                |        |                        | フン HOUR TURNAROUND   |                                    |
| 10   |       |                  |                 |                |        |                        | DAY TURNAROUND   |                                    |
| 11   |       |                  |                 |                |        |                        |  |                                    |
| LAB USE ONLY THE REPORT OF |       |                  |                 |                |        |                        |  |                                    |
|  |       |                  |                 |                |        |                        |  | A REAL OF ARKIVAL UNIGE MAN        |
| RELINQUISHEEPBY  |       |                  | ATE:            | 11 5           | 0      | TIME:                  | YO RECEIVED BY:  | DATE: TIME:                        |
| RELINQUISHED BY:   |       |                  | ATE:            | 61             |        | TIME:                  | RECEIVED BY:   | DATE: TIME:                        |
|  |       |                  | 1               | /              |        |                        |  | 1 1                                |
| RELINQUISHED BY:   |       | 10               | ATE:            |                |        | TIME:                  | RECEIVED BY:   | DATE:<br>(1/16/16 TIME:<br>1/0:40  |

| LAB ID: 08-00380<br>LAB ID: 39-00401                 | Easter<br>2566 Pen<br>Sayre, | Analytics, Ir<br>n Division<br>nsylvania Ave.<br>PA 18840 | ıc.         | Work  | Order: 101               | 20839           |
|--|------------------------------|---|-------------|---|--------------------------|-----------------|
|  | •                            | 70) 888-0169  |             |   |                          |                 |
|  | Fax: (5                      | 70) 888-0717  |             |   |                          |                 |
| SEND DATA TO:  |                              |   |             |   |                          |                 |
| NAME: Steve Gridley                                  |                              |   | W           | O#: 1012                                    | 0839                     |                 |
| COMPANY: Talisman Energy USA                         |                              |   | P           | AGE: 1 of                                   | 1                        |                 |
| ADDRESS: 337 Daniel Zenker Dr<br>Horseheads, NY 148  | 1                            |   |             |   | -                        |                 |
| 11013616a03, 141 140                                 | + <b>J</b>                   |   | P           | O#: AF78                                    | 3425                     |                 |
| PHONE: (607) 731-0145<br>FAX: (607) 562-4001         | TEST                         | REPORT  | P\          | NS ID#                                      |                          |                 |
| FAX: (607) 562-4001                                  |                              |   |             | میں اور |                          |                 |
| 01-023   | :                            |   |             |   |                          |                 |
| RECEIVED FOR LAB BY: CMS                             | DATE: 1                      | 2/06/2010 15:40   |             |   | Pa                       | age 1 of 1      |
| SAMPLE: Inv. Cuttings                                | 1.4                          | ab ID: 10120839-001A                                      | Compo       | site  |                          |                 |
| SAMPLED BY: SG                                       |                              | Fime: 12/06/2010 10:30                                    |             |   |                          |                 |
| Tret   | Beault                       | <b>1 d</b> - 44   | <u>SLOQ</u> | Analusia Otari                              | Analusia Mad             | ð er mla er fað |
| <u>Test</u><br>Total Petroleum Hydrocarbons          | <u>Result</u><br>42500 mg/Kg | Method<br>EPA 9071  |             | Analvsis Start<br>12/08/10 14:20            | Analysis End<br>12/08/10 | Analyst         |
| Sample Note: Analysis performed                      |                              |   |             | 12,00,10 14.20                              | 12,00,10                 |                 |
|  |                              | ab ID: 10120839-001B                                      | Compo       | eite  |                          |                 |
| SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG              | •                            | Time: 12/06/2010 10:30                                    | Compo       | 310   |                          |                 |
|  | •                            |   | <u>SLOQ</u> |   |                          |                 |
| <u>Test</u><br>Moisture                              | <u>Result</u><br>37.7 %      | <u>Method</u><br>Moisture Calc.                           | 0.01        | Analysis Start<br>12/06/10 17:30            | Analysis End<br>12/07/10 |                 |
| Free Liquid  | <:0.1 %                      | EPA 9095A   | 0.01        | 12/06/10 17:20                              | 12/06/10                 | IC-SA<br>IC-SA  |
| pH   | 8.23@21.7°C                  | EPA 9045C   | 0.1         | 12/07/10 14:20                              | 12/07/10                 | MED-SA          |
|  |                              |   |             |   | 12/01/10                 |                 |
| SAMPLE: TCLP Leachate of Inv. Cut<br>SAMPLED BY: SG  | lingo                        | ib ID: 10120839-001E                                      | Compo       | site  |                          |                 |
| SAMFLED BT. 30                                       | Sample                       | Fime: 12/07/2010 8:00                                     | <u>SLOQ</u> |   |                          |                 |
| Test   | Result                       | Method  |             | 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-C\          |
| Barium - TCLP extracted                              | < 10.00 mg/L                 | EPA 6010B   | 10.00       | 12/08/10 12:15                              | 12/08/10                 | GSR-C\          |
| Cadmium - TCLP extracted                             | < 0.100 mg/L                 | EPA 6010B   | 0.100       | 12/08/10 12:15                              | 12/08/10                 | GSR-C\          |
| Chromium - TCLP extracted                            | < 0.500 mg/L                 | EPA 6010B   | 0.500       | 12/08/10 12:15                              | 12/08/10                 | GSR-C\          |
| Copper - TCLP extracted                              | < 0.100 mg/L                 | EPA 6010B   | 0.100       | 12/08/10 12:15                              | 12/08/10                 | GSR-C\          |
| Lead - TCLP extracted                                | < 0.500 mg/L                 | EPA 6010B   | 0.500       | 12/08/10 12:15                              | 12/08/10                 | GSR-C\          |
| Nickel - TCLP extracted                              | < 0.100 mg/L                 | EPA 6010B   | 0.100       | 12/08/10 12:15                              | 12/08/10                 | GSR-C\          |
|  | < 0.500 mg/L                 | EPA 6010B   | 0.500       | 12/08/10 12:15                              | 12/08/10                 | GSR-CV          |
| Selenium - TCLP extracted                            | , –                          |   |             |   |                          |                 |
| Selenium - TCLP extracted<br>Silver - TCLP extracted | < 0.100 mg/L<br>39.5 mg/L    | EPA 6010B   | 0.100       | 12/08/10 12:15<br>12/08/10 12:15            | 12/08/10<br>12/08/10     | GSR-CV          |

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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                   | -         |               |                   |            |                | ١                | N/O#: 10120839   |   |
|                                       | REFRI     | GERA          | TE SA             | MPI F      | s              |                  |  |   |
|                                       | AFTER     |               |                   |            | .0             |                  | DRINKING WATER SL SLUDGE NYDOH NYDEC PADEP   | IF YES, PLEASE ATTACH   |
| · · · · · · · · · · · · · · · · · · · |           |               |                   |            |                | /DW<br>GV        | V DRINKING WATER SL SLUDGE NYDOH NYDEC PADEP<br>V GROUND WATER SO SOIL   | IS A QC PACKAGE NEEDED?   |
| CONTACT Steve Gridley                 | TH        | ANSP          | ORT               |            |                | / 5M<br>W        |  | YES 🔽 NO  |
| PH# 607-731-0145                      |           | TO            |                   |            |                | DE               | DEIGNIZED WATED DI DICTULED WATED DEDCOMA OTHED  | IF YES, PLEASE ATTACH REQUIREMENTS                                    |
| FAX#                                  | 1         | BORA<br>I COO |                   |            |                | 15               | H HYDROCHLORIC ACID OH SODIUM HYDROXIDE<br>S SULFURIC ACID AS ASCORBIC ACID  | 105   |
| BILL TO: Talisman                     |           | WITH          | CE                | ,          | / · ,          |                  | N NITRIC ACID AC ACETIC ACID   | JE CO   |
|                                       |           |               | -7-               | $\neg$     |                | ર્શ/             | SO3 SODIUM SULFITE NH, AMMONIUM CHLORIDE<br>Thio SODIUM THIOSULFATE ZN ZINC ACETATE  | La Contraction  |
| PO# AF 78425                          | 4         |               | 2                 | 1.         | / §            | ة / <sup>ي</sup> | - NONE Hg MERCURIC CHLORIDE  | Please fill out all   |
| 01-023                                |           | 27            |                   | The second | ا نیچ          |                  | イム An incomplete chain of custody may delay the ろ<br>デ processing of your sample(s).   | applicable areas  |
| SAMPLER SIGNATURE / AFFILIATION       |           | 1/8           | $\frac{3}{2}$     | ¥ /        | 4.             | 3                |  | S completely  |
| CONTAINER SAMPLING POINT              | DAITE SAL | THE           | SAMPLING SAMPLING | SAM.       | 241            | PRESS MITTALS    | SO, SODIUM SULFITE       NH, AMMONIUM CHLORIDE         Thio       SODIUM SULFITE         NONE       Hg         MERCURIC CHLORIDE         An incomplete chain of custody may delay the processing of your sample(s).         ANALYSIS TO BE PERFORMED (PER CONTAINER) | Please fill out all<br>applicable areas<br>completely<br>LAB USE ONLY |
| 1 Inv Cuttings                        | 12/1      | 030           |                   |            | 50             | N                | трн  |   |
| 2                                     |           |               |                   |            |                |                  | рН   |   |
| 3                                     |           |               |                   |            |                |                  | TCLP 8 RCRA Metals + Cu, Ni, Zn  |   |
| 4                                     |           |               |                   |            |                |                  | Free Liquids / % Moisture  |   |
| 5 001A - TPH                          |           |               |                   |            |                |                  |  |   |
| 6 B. pH, Free liquid                  | • j. V    | nois          | tur               | e,         |                |                  | Perform BTEX ONLY IF the TPH   |   |
| 7 C- Amons, metals                    |           |               |                   |            |                |                  | exceeds 100,000 mg/Kg  |   |
| 8 D- TUTAL Sample                     |           |               |                   |            |                |                  |  |   |
| 9 ETCLP metals.                       |           |               |                   |            |                |                  | 72 HOUR TURNAROUND   |   |
| 10                                    |           |               |                   |            |                |                  | DAY TURNAROUND   |   |
| 11                                    |           |               |                   |            |                |                  |  |   |
| LAB USE CNLY<br>DELLIVERED BY         |           |               |                   |            |                |                  |  |   |
|                                       |           | Lac           |                   |            |                |                  |  |   |
| RELINGHISHED                          |           | DA            |                   | 11         | υT             | IME:             | FYU RECEIVED BY:   | DATE: TIME:   |
| RELINQUISHED BY:                      |           | DAT           |                   | 1          |                | ME:              | RECEIVED BY:   | DATE: TIME:   |
| RELINQUISHED BY:                      | <u></u>   | DAT           | ΓΕ:<br>/          | 1          | <del> </del> † | IME:             | RECEIVED BY A LA LA LA LA  | DATE (410 TIME 1540   |
|                                       |           |               |                   |            |                |                  |  | Ad Graphics Printing 570-888-0685                                     |

| NY ID # 11216   | 80   | <b>Ea</b><br>2560   | istern D                                     | vania Ave.  | NC.<br>Work Order: 10121752   |  |  |  | 21752   |
|---|--|---|--|---|---|--|--|--|---|
|   |  |   | ne: (570) 8<br>ax: (570) 8                   |   |   |  |  |  |   |
| SEND DATA TO  | ):   |   |  |   |   |  |  |  |   |
|   | na Brown   |   |  |   | W   | O#:  | 10121  | 752  |   |
|   | lisman Energy USA, In  | c.  |  |   |   |  |  |  |   |
|   | 7 Daniel Zenker Dr   |   |  |   | PA  | AGE:   | 1 of 3   |  |   |
| Ho  | orseheads, NY 14845  |   |  |   | PC  | D#: /  | AF784  | 425  |   |
|   |  | ÷.,   |  |   | P۱  | NS ID#   |  |  |   |
|   | 07) 562-4000<br>07) 562-4001   |   | TEST REI                                     | PORT  |   |  |  |  |   |
| 01-023  | 3  |   |  |   |   |  |  |  |   |
| RECEIVED FOR  | LAB BY: RML  | D   | ATE: 12/09                                   | /2010 15:45   |   |  |  | Pa   | ige 1 of 3  |
| SAMPLE: Inv. C  | uttings  | t   | Lab ID:                                      | 10121752-001A   | Grab  |  |  |  | ور مسلم مساقیه  |
| SAMPLED B   | Y: SG  |   | Sample Time:                                 | 12/09/2010 12:04  |   |  |  |  |   |
| <u>Test</u>   |  | Result  |  | Method  | <u>SLOQ</u>   | Analysis S   | Start  | Analysis End   | Analyst *   |
|   |  |   |  |   |   |  |  |  |   |
| Ignitability  |  | Neg ASIS °F   |  | SW846 1030  |   | 12/15/10 1   | 3:30   | 12/15/10   |   |
| • •   | te: Analysis performed by Q  | -   |  | SW846 1030  |   | 12/15/10 1   | 3:30   | 12/15/10   |   |
| Sample Not  |  | -   | Lab ID:                                      | SW846 1030  | Grab  | 12/15/10 1   | 3:30   | 12/15/10   |   |
| • •   | uttings  | C Laboratories  |  |   |   | 12/15/10 1   | 3:30   | 12/15/10   |   |
| Sample Not<br>SAMPLE: Inv. Co<br>SAMPLED B  | uttings  | C Laboratories  |  | 10121752-001C<br>12/09/2010 12:04   | Grab<br>SLOQ  |  |  |  | Applyet*  |
| Sample Not<br>SAMPLE: Inv. Co<br>SAMPLED B<br><u>Test</u>   | uttings<br>Y: SG   | C Laboratories  |  | 10121752-001C<br>12/09/2010 12:04<br><u>Method</u>  | <u>SLOQ</u>   | Analysis S   | Start  | Analysis End   |   |
| Sample Not<br>SAMPLE: Inv. C<br>SAMPLED B   | uttings<br>Y: SG<br>ctive  | C Laboratories<br>Result<br>< 0.2 mg/Kg   |  | 10121752-001C<br>12/09/2010 12:04   |   |  | <u>Start</u><br>3:56   |  | HDP-CV  |
| Sample Not<br>SAMPLE: Inv. C<br>SAMPLED B<br><u>Test</u><br>Cyanide, Read<br>Reactive Sulfit  | uttings<br>Y:SG<br>ctive<br>de   | C Laboratories  | Sample Time:<br>Q                            | 10121752-001C<br>12/09/2010 12:04<br><u>Method</u><br>SW 7.3.3.2<br>SW846 7.3   | <u>SLOQ</u><br>0.2<br>32  | <u>Analysis S</u><br>12/13/10 8  | <u>Start</u><br>3:56   | Analysis End<br>12/14/10   | HDP-CV  |
| Sample Not<br>SAMPLE: Inv. C<br>SAMPLED B<br><u>Test</u><br>Cyanide, Read<br>Reactive Sulfid<br>SAMPLE: Inv. C  | uttings<br>Y: SG<br>ctive<br>de<br>uttings   | C Laboratories<br><u>Result</u><br>< 0.2 mg/Kg<br>1100 mg/Kg  | Sample Time:<br>Q<br>Lab I <b>D</b> :        | 10121752-001C<br>12/09/2010 12:04<br><u>Method</u><br>SW 7.3.3.2<br>SW846 7.3<br>10121752-001D  | <u>SLOQ</u><br>0.2  | <u>Analysis S</u><br>12/13/10 8  | <u>Start</u><br>3:56   | Analysis End<br>12/14/10   | HDP-CV  |
| Sample Not<br>SAMPLE: Inv. C<br>SAMPLED B<br><u>Test</u><br>Cyanide, Read<br>Reactive Sulfit  | uttings<br>Y: SG<br>ctive<br>de<br>uttings   | C Laboratories<br><u>Result</u><br>< 0.2 mg/Kg<br>1100 mg/Kg  | Sample Time:<br>Q<br>Lab ID:                 | 10121752-001C<br>12/09/2010 12:04<br><u>Method</u><br>SW 7.3.3.2<br>SW846 7.3<br>10121752-001D<br>12/09/2010 12:04  | <u>SLOQ</u><br>0.2<br>32  | <u>Analysis S</u><br>12/13/10 8<br>12/14/10 13   | <u>Start</u><br>3:56<br>2:30   | Analysis End<br>12/14/10   | HDP-CV<br>LTW-CV  |
| Sample Not<br>SAMPLE: Inv. Ca<br>SAMPLED B<br>Test<br>Cyanide, Read<br>Reactive Sulfid<br>SAMPLE: Inv. Ca<br>SAMPLE B<br>Test   | uttings<br>Y: SG<br>ctive<br>de<br>uttings<br>Y: SG  | C Laboratories<br><u>Result</u><br>< 0.2 mg/Kg<br>1100 mg/Kg<br><u>Result</u>   | Sample Time:<br>Q<br>Lab ID:<br>Sample Time: | 10121752-001C<br>12/09/2010 12:04<br><u>Method</u><br>SW 7.3.3.2<br>SW846 7.3<br>10121752-001D<br>12/09/2010 12:04<br><u>Method</u>   | SLOQ<br>0.2<br>32<br>Grab<br>SLOQ   | <u>Analysis S</u><br>12/13/10 8<br>12/14/10 13<br><u>Analysis S</u>  | <u>Start</u><br>3:56<br>2:30<br><u>Start</u>   | Analysis End<br>12/14/10<br>12/14/10<br>Analysis End   | HDP-CV<br>LTW-CV<br>Analyst *   |
| Sample Not<br>SAMPLE: Inv. Ca<br>SAMPLED B<br>Test<br>Cyanide, Read<br>Reactive Sulfin<br>SAMPLE: Inv. Ca<br>SAMPLED B<br>Test<br>% Solids  | uttings<br>Y: SG<br>ctive<br>de<br>uttings<br>Y: SG  | C Laboratories<br><u>Result</u><br>< 0.2 mg/Kg<br>1100 mg/Kg<br><u>Result</u><br>37.70 % Wght   | Q<br>Lab ID:<br>Sample Time:                 | 10121752-001C<br>12/09/2010 12:04<br><u>Method</u><br>SW 7.3.3.2<br>SW846 7.3<br>10121752-001D<br>12/09/2010 12:04<br><u>Method</u><br>SM2540B  | <u>SLOQ</u><br>0.2<br>32<br>Grab<br><u>SLOQ</u><br>0.10   | <u>Analysis S</u><br>12/13/10 8<br>12/14/10 12<br><u>Analysis S</u><br>12/10/10 1  | <u>Start</u><br>3:56<br>2:30<br><u>Start</u><br>7:00   | <u>Analysis End</u><br>12/14/10<br>12/14/10<br><u>Analysis End</u><br>12/13/10   | HDP-CV<br>LTW-CV<br><u>Analyst*</u><br>IC-SA                                    |
| Sample Not<br>SAMPLE: Inv. Ca<br>SAMPLED B<br>Test<br>Cyanide, Read<br>Reactive Sulfid<br>SAMPLE: Inv. Ca<br>SAMPLE B<br>Test   | uttings<br>Y: SG<br>ctive<br>de<br>uttings<br>Y: SG  | C Laboratories<br><u>Result</u><br>< 0.2 mg/Kg<br>1100 mg/Kg<br><u>Result</u>   | Q<br>Lab ID:<br>Sample Time:                 | 10121752-001C<br>12/09/2010 12:04<br><u>Method</u><br>SW 7.3.3.2<br>SW846 7.3<br>10121752-001D<br>12/09/2010 12:04<br><u>Method</u>   | SLOQ<br>0.2<br>32<br>Grab<br>SLOQ   | <u>Analysis S</u><br>12/13/10 8<br>12/14/10 13<br><u>Analysis S</u>  | <u>Start</u><br>3:56<br>2:30<br><u>Start</u><br>7:00   | Analysis End<br>12/14/10<br>12/14/10<br>Analysis End   | HDP-CV<br>LTW-CV<br>Analyst*  |
| Sample Not<br>SAMPLE: Inv. Ca<br>SAMPLED B<br>Test<br>Cyanide, Read<br>Reactive Sulfin<br>SAMPLE: Inv. Ca<br>SAMPLE: Inv. Ca<br>SAMPLE B<br>Test<br>% Solids<br>Total Volatile S<br>SAMPLE: TCLP  | uttings<br>Y: SG<br>ctive<br>de<br>uttings<br>Y: SG<br>Solids<br>Leachate of Inv. Cutting                            | C Laboratories<br><u>Result</u><br>< 0.2 mg/Kg<br>1100 mg/Kg<br><u>Result</u><br>37.70 % Wght<br>71.88 % Wght   | Q<br>Lab ID:<br>Sample Time:<br>Lab ID:      | 10121752-001C<br>12/09/2010 12:04<br><u>Method</u><br>SW 7.3.3.2<br>SW846 7.3<br>10121752-001D<br>12/09/2010 12:04<br><u>Method</u><br>SM2540B<br>EPA 160.4<br>10121752-001F  | <u>SLOQ</u><br>0.2<br>32<br>Grab<br><u>SLOQ</u><br>0.10   | <u>Analysis S</u><br>12/13/10 8<br>12/14/10 12<br><u>Analysis S</u><br>12/10/10 1  | <u>Start</u><br>3:56<br>2:30<br><u>Start</u><br>7:00   | <u>Analysis End</u><br>12/14/10<br>12/14/10<br><u>Analysis End</u><br>12/13/10   | HDP-CV<br>LTW-CV<br><u>Analyst*</u><br>IC-SA                                    |
| Sample Not<br>SAMPLE: Inv. Co<br>SAMPLED B<br>Test<br>Cyanide, Reac<br>Reactive Sulfor<br>SAMPLE: Inv. Co<br>SAMPLE: Inv. Co<br>SAMPLED B<br>Test<br>% Solids<br>Total Volatile S   | uttings<br>Y: SG<br>ctive<br>de<br>uttings<br>Y: SG<br>Solids<br>Leachate of Inv. Cutting                            | C Laboratories<br><u>Result</u><br>< 0.2 mg/Kg<br>1100 mg/Kg<br><u>Result</u><br>37.70 % Wght<br>71.88 % Wght   | Q<br>Lab ID:<br>Sample Time:<br>Lab ID:      | 10121752-001C<br>12/09/2010 12:04<br><u>Method</u><br>SW 7.3.3.2<br>SW846 7.3<br>10121752-001D<br>12/09/2010 12:04<br><u>Method</u><br>SM2540B<br>EPA 160.4   | SLOQ           0.2           32           Grab           SLOQ           0.10           0.01           Grab  | <u>Analysis S</u><br>12/13/10 8<br>12/14/10 12<br><u>Analysis S</u><br>12/10/10 1  | <u>Start</u><br>3:56<br>2:30<br><u>Start</u><br>7:00   | <u>Analysis End</u><br>12/14/10<br>12/14/10<br><u>Analysis End</u><br>12/13/10   | HDP-CV<br>LTW-CV<br><u>Analyst*</u><br>IC-SA                                    |
| Sample Not<br>SAMPLE: Inv. Ca<br>SAMPLED B<br>Test<br>Cyanide, Read<br>Reactive Sulfin<br>SAMPLE: Inv. Ca<br>SAMPLE: Inv. Ca<br>SAMPLE B<br>Test<br>% Solids<br>Total Volatile S<br>SAMPLE: TCLP  | uttings<br>Y: SG<br>ctive<br>de<br>uttings<br>Y: SG<br>Solids<br>Leachate of Inv. Cutting                            | C Laboratories<br><u>Result</u><br>< 0.2 mg/Kg<br>1100 mg/Kg<br><u>Result</u><br>37.70 % Wght<br>71.88 % Wght   | Q<br>Lab ID:<br>Sample Time:<br>Lab ID:      | 10121752-001C<br>12/09/2010 12:04<br><u>Method</u><br>SW 7.3.3.2<br>SW846 7.3<br>10121752-001D<br>12/09/2010 12:04<br><u>Method</u><br>SM2540B<br>EPA 160.4<br>10121752-001F  | <u>SLOQ</u><br>0.2<br>32<br>Grab<br><u>SLOQ</u><br>0.10<br>0.01   | <u>Analysis S</u><br>12/13/10 8<br>12/14/10 12<br><u>Analysis S</u><br>12/10/10 1  | <u>Start</u><br>8:56<br>2:30<br><u>Start</u><br>7:00<br>3:00   | <u>Analysis End</u><br>12/14/10<br>12/14/10<br><u>Analysis End</u><br>12/13/10   | HDP-CV<br>LTW-CV<br><u>Analyst*</u><br>IC-SA<br>NFM-SA                          |
| Sample Not<br>SAMPLE: Inv. Ci<br>SAMPLED B<br>Test<br>Cyanide, Reac<br>Reactive Sulfit<br>SAMPLE: Inv. Ci<br>SAMPLE: Inv. Ci<br>SAMPLED B<br>Test<br>% Solids<br>Total Volatile S<br>SAMPLE: TCLP<br>SAMPLED B  | uttings<br>Y: SG<br>ctive<br>de<br>uttings<br>Y: SG<br>Solids<br>Leachate of Inv. Cutting                            | C Laboratories<br><u>Result</u><br>< 0.2 mg/Kg<br>1100 mg/Kg<br><u>Result</u><br>37.70 % Wght<br>71.88 % Wght<br><b>js</b>  | Q<br>Lab ID:<br>Sample Time:<br>Lab ID:      | 10121752-001C<br>12/09/2010 12:04<br><u>Method</u><br>SW 7.3.3.2<br>SW846 7.3<br>10121752-001D<br>12/09/2010 12:04<br><u>Method</u><br>SM2540B<br>EPA 160.4<br>10121752-001F<br>12/11/2010 12:45                                    | SLOQ           0.2           32           Grab           SLOQ           0.10           0.01           Grab  | <u>Analysis S</u><br>12/13/10 8<br>12/14/10 1<br><u>Analysis S</u><br>12/10/10 1<br>12/10/10 8   | <u>Start</u><br>3:56<br>2:30<br><u>Start</u><br>7:00<br>3:00   | <u>Analysis End</u><br>12/14/10<br>12/14/10<br><u>Analysis End</u><br>12/13/10<br>12/14/10   | HDP-CV<br>LTW-CV<br><u>Analyst*</u><br>IC-SA<br>NFM-SA<br><u>Analyst*</u>       |
| Sample Not<br>SAMPLE: Inv. Ci<br>SAMPLED B<br>Test<br>Cyanide, Reac<br>Reactive Sulfic<br>SAMPLE: Inv. Ci<br>SAMPLE: Inv. Ci<br>SAMPLE: Inv. Ci<br>SAMPLE: CLP<br>SAMPLE: TCLP<br>SAMPLED B   | uttings<br>Y: SG<br>ctive<br>de<br>uttings<br>Y: SG<br>Solids<br>Leachate of Inv. Cutting<br>Y: SG                   | C Laboratories<br><u>Result</u><br>< 0.2 mg/Kg<br>1100 mg/Kg<br><u>Result</u><br>37.70 % Wght<br>71.88 % Wght<br><b>js</b><br><u>Result</u>   | Q<br>Lab ID:<br>Sample Time:<br>Lab ID:      | 10121752-001C<br>12/09/2010 12:04<br><u>Method</u><br>SW 7.3.3.2<br>SW846 7.3<br>10121752-001D<br>12/09/2010 12:04<br><u>Method</u><br>SM2540B<br>EPA 160.4<br>10121752-001F<br>12/11/2010 12:45<br><u>Method</u>                   | SLOQ           0.2           32           Grab           SLOQ           0.10           0.01           Grab           SLOQ   | <u>Analysis S</u><br>12/13/10 8<br>12/14/10 1<br><u>Analysis S</u><br>12/10/10 1<br>12/10/10 8<br><u>Analysis S</u>                                      | <u>Start</u><br>3:56<br>2:30<br><u>Start</u><br>7:00<br>3:00<br>Start<br>7:48  | Analysis End<br>12/14/10<br>12/14/10<br>Analysis End<br>12/13/10<br>12/14/10<br>Analysis End   | HDP-CV<br>LTW-CV<br>Analyst *<br>IC-SA<br>NFM-SA<br>Analyst *<br>RHH-SA         |
| Sample Not<br>SAMPLE: Inv. Cd<br>SAMPLED B<br>Test<br>Cyanide, Read<br>Reactive Sulfid<br>SAMPLE: Inv. Cd<br>SAMPLE Inv. Cd<br>SAMPLED B<br>Test<br>% Solids<br>Total Volatile S<br>SAMPLE: TCLP<br>SAMPLED B   | uttings<br>Y: SG<br>ctive<br>de<br>uttings<br>Y: SG<br>Solids<br>Leachate of Inv. Cutting<br>Y: SG                   | C Laboratories<br><u>Result</u><br>< 0.2 mg/Kg<br>1100 mg/Kg<br>37.70 % Wght<br>71.88 % Wght<br>71.88 % Wght<br><b>Result</b><br>< 0.10 mg/L  | Q<br>Lab ID:<br>Sample Time:<br>Lab ID:      | 10121752-001C<br>12/09/2010 12:04<br>Method<br>SW 7.3.3.2<br>SW846 7.3<br>10121752-001D<br>12/09/2010 12:04<br>Method<br>SM2540B<br>EPA 160.4<br>10121752-001F<br>12/11/2010 12:45<br>Method<br>EPA 8270C                           | SLOQ           0.2           32           Grab           SLOQ           0.10           0.01           Grab           SLOQ           0.10           0.01   | <u>Analysis S</u><br>12/13/10 t<br>12/14/10 1<br><u>Analysis S</u><br>12/10/10 t<br>12/10/10 t<br><u>Analysis S</u><br>12/15/10 7                        | Start<br>3:56<br>2:30<br>Start<br>7:00<br>3:00<br>Start<br>7:48<br>7:48  | <u>Analysis End</u><br>12/14/10<br>12/14/10<br><u>Analysis End</u><br>12/13/10<br>12/14/10<br><u>Analysis End</u><br>12/15/10                | Analyst *<br>IC-SA<br>NFM-SA<br>Analyst *<br>RHH-SA<br>RHH-SA                   |
| Sample Not<br>SAMPLE: Inv. Ci<br>SAMPLED B<br>Test<br>Cyanide, Read<br>Reactive Sulfid<br>SAMPLE: Inv. Ci<br>SAMPLE: Inv. Ci<br>SAMPLE B<br>Test<br>% Solids<br>Total Volatile S<br>SAMPLE: TCLP<br>SAMPLED B<br>Test<br>Pyridine<br>1,4-Dichlorobe             | uttings<br>Y: SG<br>ctive<br>de<br>uttings<br>Y: SG<br>Solids<br>Leachate of Inv. Cutting<br>Y: SG                   | C Laboratories<br><u>Result</u><br>< 0.2 mg/Kg<br>1100 mg/Kg<br>37.70 % Wght<br>71.88 % Wght<br>71.88 % Wght<br><b>Result</b><br>< 0.10 mg/L<br>< 0.10 mg/L   | Q<br>Lab ID:<br>Sample Time:<br>Lab ID:      | 10121752-001C<br>12/09/2010 12:04<br>Method<br>SW 7.3.3.2<br>SW846 7.3<br>10121752-001D<br>12/09/2010 12:04<br>Method<br>SM2540B<br>EPA 160.4<br>10121752-001F<br>12/11/2010 12:45<br>Method<br>EPA 8270C<br>EPA 8270C              | SLOQ           0.2           32           Grab           SLOQ           0.10           0.01           Grab           SLOQ           0.10           0.10           0.10           0.10   | <u>Analysis S</u><br>12/13/10 8<br>12/14/10 12<br><u>Analysis S</u><br>12/10/10 1<br>12/10/10 8<br><u>Analysis S</u><br>12/15/10 7<br>12/15/10 7         | Start<br>3:56<br>2:30<br>Start<br>7:00<br>3:00<br>Start<br>7:48<br>7:48<br>7:48                                      | Analysis End<br>12/14/10<br>12/14/10<br>Analysis End<br>12/13/10<br>12/14/10<br>Analysis End<br>12/15/10<br>12/15/10                         | Analyst *<br>IC-SA<br>NFM-SA<br>Analyst *<br>RHH-SA<br>RHH-SA                   |
| Sample Not<br>SAMPLE: Inv. Ci<br>SAMPLED B<br>Test<br>Cyanide, Read<br>Reactive Sulfid<br>SAMPLE: Inv. Ci<br>SAMPLE: Inv. Ci<br>SAMPLE B<br>Test<br>% Solids<br>Total Volatile S<br>SAMPLE: TCLP<br>SAMPLE B<br>Test<br>Pyridine<br>1,4-Dichlorobe<br>o-Cresol  | uttings<br>Y: SG<br>ctive<br>de<br>uttings<br>Y: SG<br>Solids<br>Leachate of Inv. Cutting<br>Y: SG<br>enzene<br>esol | C Laboratories<br><u>Result</u><br>< 0.2 mg/Kg<br>1100 mg/Kg<br><u>Result</u><br>37.70 % Wght<br>71.88 % Wght<br><b>1.88</b> % Wght<br><b>1.88</b> % Wght<br><b>2.1</b><br><b>1.88</b> % Wght<br><b>3.1</b><br><b>1.88</b> % Wght<br><b>3.1</b><br><b>1.00</b> mg/L<br>< 0.10 mg/L<br>< 0.10 mg/L   | Q<br>Lab ID:<br>Sample Time:<br>Lab ID:      | 10121752-001C<br>12/09/2010 12:04<br>Method<br>SW 7.3.3.2<br>SW846 7.3<br>10121752-001D<br>12/09/2010 12:04<br>Method<br>SM2540B<br>EPA 160.4<br>10121752-001F<br>12/11/2010 12:45<br>Method<br>EPA 8270C<br>EPA 8270C<br>EPA 8270C | SLOQ           0.2           32           Grab           SLOQ           0.10           0.01           Grab           SLOQ           0.10           0.11           O.10           0.10           0.10           0.10           0.10           0.10   | <u>Analysis S</u><br>12/13/10 8<br>12/14/10 12<br>12/14/10 12<br>12/10/10 1<br>12/10/10 8<br>Analysis S<br>12/15/10 7<br>12/15/10 7<br>12/15/10 7        | <u>Start</u><br>3:56<br>2:30<br><u>Start</u><br>7:00<br>3:00<br><u>Start</u><br>7:48<br>7:48<br>7:48<br>7:48         | Analysis End<br>12/14/10<br>12/14/10<br>Analysis End<br>12/13/10<br>12/14/10<br>Analysis End<br>12/15/10<br>12/15/10<br>12/15/10             | Analyst*<br>IC-SA<br>NFM-SA<br>Analyst*<br>RHH-SA<br>RHH-SA<br>RHH-SA<br>RHH-SA |
| Sample Not<br>SAMPLE: Inv. Ci<br>SAMPLED B<br>Test<br>Cyanide, Read<br>Reactive Sulfid<br>SAMPLE: Inv. Ci<br>SAMPLE: Inv. Ci<br>SAMPLE: Inv. Ci<br>SAMPLE: TCLP<br>SAMPLE: TCLP<br>SAMPLED B<br>Test<br>Pyridine<br>1,4-Dichlorobe<br>o-Cresol<br>p-Cresol/m-Cr | uttings<br>Y: SG<br>ctive<br>de<br>uttings<br>Y: SG<br>Solids<br>Leachate of Inv. Cutting<br>Y: SG<br>enzene<br>esol | C Laboratories<br><u>Result</u><br>< 0.2 mg/Kg<br>1100 mg/Kg<br>1100 mg/Kg<br>37.70 % Wght<br>37.70 % Wght<br>37.70 % Wght<br>37.70 % Wght<br>37.70 % Wght<br>37.70 % Ught<br>37.70 % U | Q<br>Lab ID:<br>Sample Time:<br>Lab ID:      | 10121752-001C<br>12/09/2010 12:04<br>Method<br>SW 7.3.3.2<br>SW846 7.3<br>10121752-001D<br>12/09/2010 12:04<br>Method<br>SM2540B<br>EPA 160.4<br>10121752-001F<br>12/11/2010 12:45<br>Method<br>EPA 8270C<br>EPA 8270C<br>EPA 8270C | SLOQ           0.2           32           Grab           SLOQ           0.10           0.01           Grab           SLOQ           0.10           0.10           0.10           0.10           0.10           0.10           0.10           0.10           0.10           0.10           0.10           0.10 | Analysis S<br>12/13/10 8<br>12/14/10 12<br>12/14/10 12<br>12/10/10 1<br>12/10/10 8<br>Analysis S<br>12/15/10 7<br>12/15/10 7<br>12/15/10 7<br>12/15/10 7 | <u>Start</u><br>3:56<br>2:30<br><u>Start</u><br>7:00<br>3:00<br><u>Start</u><br>7:48<br>7:48<br>7:48<br>7:48<br>7:48 | Analysis End<br>12/14/10<br>12/14/10<br>Analysis End<br>12/13/10<br>12/14/10<br>Analysis End<br>12/15/10<br>12/15/10<br>12/15/10<br>12/15/10 | HDP-CV<br>LTW-CV<br><u>Analyst*</u><br>IC-SA<br>NFM-SA                          |

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

Analyte detected in the associated Method Blank в

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

MANAGER

Carrie M. Davis

12/16/2010 DATE:

SEND DATA TO:

NAME:

# Benchmark Analytics, Inc.

**Eastern Division** 

2566 Pennsylvania Ave. Sayre, PA 18840

Phone: (570) 888-0169

Work Order: 10121752

10121752

2 of 3

Fax: (570) 888-0717 WO#:

PO#: AF78425

PAGE:

PWS ID#

## TEST REPORT

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

Dina Brown

ADDRESS: 337 Daniel Zenker Dr

COMPANY: Talisman Energy USA, Inc.

Horseheads, NY 14845

| 01-023                           |                          |                              |             |                |                     |                  |
|----------------------------------|--------------------------|------------------------------|-------------|----------------|---------------------|------------------|
| RECEIVED FOR LAB BY: RML         | DAT                      | E: 12/09/2010 15:45          |             |                | Р                   | age 2 of 3       |
| 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. Cu | ttings                   | Lab ID: 10121752-001G        | Grab        |                |                     |                  |
| SAMPLED BY: SG                   | Sam                      | ple Time: 11/17/2010 8:00    |             |                |                     |                  |
|                                  |                          | <b>.</b>                     | <u>SLOQ</u> |                |                     |                  |
| Test                             | <u>Result</u>            | Method                       |             | Analysis Start | <u>Analysis End</u> | <u>Analyst *</u> |
| 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 ex  | tracted Strontium was re | eceived on 11/16/10 at 16:40 | by SCP.     |                |                     |                  |

| SAMPLE: TCLP Leachate of Inv. Cuttin | ngs                          | Lab ID: 10121752-001H       | Grab        |                                 |                                 |                           |
|--------------------------------------|------------------------------|-----------------------------|-------------|---------------------------------|---------------------------------|---------------------------|
| SAMPLED BY: SG                       | Sam                          | nple Time: 12/11/2010 12:45 |             |                                 |                                 |                           |
| <u>Test</u><br>pH                    | <u>Result</u><br>5.10@16.9°C | Method<br>SM4500H+B         | <u>SLOQ</u> | Analysis Start<br>12/14/10 8:00 | <u>Analysis End</u><br>12/14/10 | <u>Analyst *</u><br>SG-SA |
| SAMPLE: ZHE Extract of Inv. Cuttings |                              | Lab ID: 10121752-0011       | Grab        |                                 |                                 |                           |
| SAMPLED BY: SG                       | San                          | ple Time: 12/13/2010 8:45   | SLOQ        |                                 |                                 |                           |
| <u>Test</u>                          | Result                       | Method                      |             | 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                    |
| Isopropyibenzene                     | < 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
- Oue to matrix effects, not all quality sontrel parameters met acceptance criteria

MANAGER

ani M. Davis

DATE: 12/16/2010

| NY ID # 112  | 00380<br>116   | <b>Ea</b><br>2566  | stern [   | nalytics, In<br>Division<br>Ivania Ave.<br>18840  | IC.  | N  | Work  | Order: 1012  | 21752   |
|--|--|--|---|---|--|--|---|--|---|
|  |  |  | . ,   | 888-0169<br>888-0717  |  |  |   |  |   |
| SEND DATA  | TO:  |  |   |   |  |  |   |  |   |
| NAME:  | Dina Brown   |  |   |   | W  | O#:  | 1012  | 1752   |   |
| COMPANY:<br>ADDRESS:   | Talisman Energy USA, In<br>337 Daniel Zenker Dr  | IC.  |   |   | PA   | GE:  | 3 of 3  | 3  |   |
| ADDRE33.   | Horseheads, NY 14845   |  |   |   |  | S.H.   |   | -  |   |
|  | ·····  |  |   |   | PC   | )#:  | AF78  | 9425   |   |
|  | (007) 500 4000   | -  | <b>FEST RE</b>  | PORT  | P۷   | VS ID#   |   |  |   |
| PHONE:<br>FAX:   | (607) 562-4000<br>(607) 562-4001   |  |   |   |  |  |   |  |   |
| 04   |  |  |   |   |  |  |   |  |   |
|  | -023<br>FOR LAB BY: RML  |  | TE: 12/0  | 9/2010 15:45  |  |  |   | Da   | 2 - 5'  |
|  |  |  | ATE. 12/0:  |   |  |  |   |  | ge 3 of 3   |
| Tetrachio  | roethene   | < 0.0250 mg/L  |   | EPA 8260B   | 0.0250   | 12/13/10   |   | 12/13/10   | CTM-S/  |
| Toluene<br>Trichloroe  | athene   | < 0.0250 mg/L<br>< 0.0250 mg/L   |   | EPA 8260B<br>EPA 8260B  | 0.0250<br>0.0250   | 12/13/10<br>12/13/10   |   | 12/13/10<br>12/13/10   | CTM-S/  |
|  | nethylbenzene  | < 0.0250 mg/L  |   | EPA 8260B   | 0.0250   | 12/13/10   |   | 12/13/10   | CTM-S/  |
|  |  | -  |   |   |  |  |   | 12/13/10   | CTM-S/  |
| 1.3.5-Trin   | nethylbenzene  | < 0.0250 ma/L  |   | EPA 8260B   | 0.0250   | 12/13/10   | 0.11  |  | U 11VI-3/   |
|  | nethylbenzene<br>vride   | < 0.0250 mg/L<br>< 0.0250 mg/L   |   | EPA 8260B<br>EPA 8260B  | 0.0250<br>0.0250   | 12/13/10<br>12/13/10   |   | 12/13/10   |   |
| Vinyl chlo   | ride   | < 0.0250 mg/L<br>< 0.0250 mg/L<br>< 0.0250 mg/L  |   |   |  |  | 8:11  |  | CTM-SA  |
| Vinyl chlo   | ride<br>rt-butyl ether   | < 0.0250 mg/L  |   | EPA 8260B   | 0.0250   | 12/13/10   | 8:11<br>8:11  | 12/13/10   | CTM-SA<br>CTM-SA<br>CTM-SA  |
| Vinyl chlo<br>Methyl ter<br>2-Butanor  | ride<br>rt-butyl ether<br>ne   | < 0.0250 mg/L<br>< 0.0250 mg/L<br>< 0.0500 mg/L  | Lab ID:   | EPA 8260B<br>EPA 8260B  | 0.0250<br>0.0250   | 12/13/10<br>12/13/10   | 8:11<br>8:11  | 12/13/10<br>12/13/10   | CTM-SA  |
| Vinyl chlo<br>Methyl ter<br>2-Butanor<br>SAMPLE: AS  | ride<br>rt-butyl ether   | < 0.0250 mg/L<br>< 0.0250 mg/L<br>< 0.0500 mg/L  |   | EPA 8260B<br>EPA 8260B<br>EPA 8260B   | 0.0250<br>0.0250<br>0.0500<br>Grab   | 12/13/10<br>12/13/10   | 8:11<br>8:11  | 12/13/10<br>12/13/10   | CTM-SA  |
| Vinyl chlo<br>Methyl ter<br>2-Butanor<br>SAMPLE: AS<br>SAMPLE  | ride<br>rt-butyl ether<br>ne<br>STM Extract of Inv. Cuttings   | < 0.0250 mg/L<br>< 0.0250 mg/L<br>< 0.0500 mg/L<br>S   |   | EPA 8260B<br>EPA 8260B<br>EPA 8260B<br>10121752-001J<br>12/10/2010 11:15  | 0.0250<br>0.0250<br>0.0500   | 12/13/10<br>12/13/10<br>12/13/10   | 8:11<br>8:11<br>8:11  | 12/13/10<br>12/13/10<br>12/13/10   | CTM-SA<br>CTM-SA<br>CTM-SA  |
| Vinyl chlo<br>Methyl ter<br>2-Butanor<br>SAMPLE: AS<br>SAMPLE<br><u>Test</u>   | ride<br>rt-butyl ether<br>ne<br>STM Extract of Inv. Cuttings<br>ED BY: SG  | < 0.0250 mg/L<br>< 0.0250 mg/L<br>< 0.0500 mg/L<br>S<br><u>Result</u>  |   | EPA 8260B<br>EPA 8260B<br>EPA 8260B<br>: 10121752-001J<br>12/10/2010 11:15<br><u>Method</u>   | 0.0250<br>0.0250<br>0.0500<br>Grab   | 12/13/10<br>12/13/10   | 8:11<br>8:11<br>8:11<br><u>Start</u>  | 12/13/10<br>12/13/10<br>12/13/10<br><u>Analvsis End</u>                                  | CTM-SA<br>CTM-SA<br>CTM-SA  |
| Vinyl chlo<br>Methyl ter<br>2-Butanor<br>SAMPLE: AS<br>SAMPLE<br><u>Test</u><br>Chemical   | ride<br>rt-butyl ether<br>ne<br>STM Extract of Inv. Cuttings<br>ED BY: SG<br>Oxygen Demand   | < 0.0250 mg/L<br>< 0.0250 mg/L<br>< 0.0500 mg/L<br>S<br><u>Result</u><br>548 mg/L  | Sample Time:<br>B                                       | EPA 8260B<br>EPA 8260B<br>EPA 8260B<br>10121752-001J<br>12/10/2010 11:15<br><u>Method</u><br>HACH 8000  | 0.0250<br>0.0250<br>0.0500<br>Grab<br><u>SLOQ</u><br>10                                | 12/13/10<br>12/13/10<br>12/13/10<br><u>Analysis</u>  | 8:11<br>8:11<br>8:11<br><u>Start</u>  | 12/13/10<br>12/13/10<br>12/13/10   | CTM-SA<br>CTM-SA<br>CTM-SA  |
| Vinyl chlo<br>Methyl ter<br>2-Butanor<br>SAMPLE: AS<br>SAMPLE: <u>Test</u><br>Chemical   | ride<br>rt-butyl ether<br>ne<br>STM Extract of Inv. Cuttings<br>ED BY: SG<br>Oxygen Demand<br>STM Extract of Inv. Cuttings                               | < 0.0250 mg/L<br>< 0.0250 mg/L<br>< 0.0500 mg/L<br>S<br><u>Result</u><br>548 mg/L  | Sample Time:<br>B<br>Lab ID:                            | EPA 8260B<br>EPA 8260B<br>EPA 8260B<br>10121752-001J<br>12/10/2010 11:15<br><u>Method</u><br>HACH 8000  | 0.0250<br>0.0250<br>0.0500<br>Grab<br><u>SLOQ</u>                                      | 12/13/10<br>12/13/10<br>12/13/10<br><u>Analysis</u>  | 8:11<br>8:11<br>8:11<br><u>Start</u>  | 12/13/10<br>12/13/10<br>12/13/10<br><u>Analvsis End</u>                                  | CTM-SA<br>CTM-SA<br>CTM-SA  |
| Vinyi chlo<br>Methyi ter<br>2-Butanor<br>SAMPLE: AS<br>SAMPLE: AS<br>Chemical<br>SAMPLE: AS  | ride<br>rt-butyl ether<br>ne<br>STM Extract of Inv. Cuttings<br>ED BY: SG<br>Oxygen Demand   | < 0.0250 mg/L<br>< 0.0250 mg/L<br>< 0.0500 mg/L<br>S<br><u>Result</u><br>548 mg/L  | Sample Time:<br>B<br>Lab ID:                            | EPA 8260B<br>EPA 8260B<br>EPA 8260B<br>10121752-001J<br>12/10/2010 11:15<br><u>Method</u><br>HACH 8000  | 0.0250<br>0.0250<br>0.0500<br>Grab<br><u>SLOQ</u><br>10                                | 12/13/10<br>12/13/10<br>12/13/10<br><u>Analysis</u><br>12/11/10                                | 8:11<br>8:11<br>8:11<br><u>Start</u><br>8:00                                  | 12/13/10<br>12/13/10<br>12/13/10<br><u>Analvsis End</u>                                  | CTM-SA<br>CTM-SA<br>CTM-SA  |
| Vinyi chlo<br>Methyi ter<br>2-Butanor<br>SAMPLE: AS<br>SAMPLE: AS<br>SAMPLE: AS<br>SAMPLE: AS  | ride<br>rt-butyl ether<br>ne<br>STM Extract of Inv. Cuttings<br>ED BY: SG<br>Oxygen Demand<br>STM Extract of Inv. Cuttings                               | < 0.0250 mg/L<br>< 0.0250 mg/L<br>< 0.0500 mg/L<br>S<br>Result<br>548 mg/L<br>S<br><u>Result</u><br>S                              | Sample Time:<br>B<br>Lab ID:                            | EPA 8260B<br>EPA 8260B<br>EPA 8260B<br>: 10121752-001J<br>12/10/2010 11:15<br><u>Method</u><br>HACH 8000<br>: 10121752-001L<br>12/10/2010 11:15<br><u>Method</u>  | 0.0250<br>0.0250<br>0.0500<br>Grab<br><u>SLOQ</u><br>10<br>Grab                        | 12/13/10<br>12/13/10<br>12/13/10<br><u>Analysis</u><br>12/11/10<br><u>Analysis</u>             | 8:11<br>8:11<br>8:11<br><u>Start</u><br>8:00                                  | 12/13/10<br>12/13/10<br>12/13/10<br>Analysis End<br>12/13/10                             | CTM-SA<br>CTM-SA<br>CTM-SA<br>Analyst                               |
| Vinyl chlo<br>Methyl ter<br>2-Butanor<br>SAMPLE: AS<br>SAMPLE: AS<br>SAMPLE: AS<br>SAMPLE: AS<br>SAMPLE: Test<br>pH                          | ride<br>rt-butyl ether<br>ne<br>STM Extract of Inv. Cuttings<br>D BY: SG<br>Oxygen Demand<br>STM Extract of Inv. Cuttings<br>ED BY: SG                   | < 0.0250 mg/L<br>< 0.0250 mg/L<br>< 0.0500 mg/L<br>S<br><u>Result</u><br>548 mg/L<br>S<br><u>Result</u><br>6.80@17.9°C             | Sample Time:<br>B<br>Lab ID:                            | EPA 8260B<br>EPA 8260B<br>EPA 8260B<br>10121752-001J<br>12/10/2010 11:15<br><u>Method</u><br>HACH 8000<br>10121752-001L<br>12/10/2010 11:15<br><u>Method</u><br>SM4500H+B                                   | 0.0250<br>0.0250<br>0.0500<br>Grab<br><u>SLOQ</u><br>10<br>Grab<br><u>SLOQ</u>         | 12/13/10<br>12/13/10<br>12/13/10<br><u>Analysis</u><br>12/11/10<br><u>Analysis</u><br>12/14/10 | 8:11<br>8:11<br>8:11<br><u>Start</u><br>8:00<br><u>Start</u><br>8:00          | 12/13/10<br>12/13/10<br>12/13/10<br>Analysis End<br>12/13/10<br>Analysis End<br>12/14/10 | CTM-SA<br>CTM-SA<br>CTM-SA<br>Analyst<br>KMF-SA<br>Analyst<br>SG-SA |
| Vinyl chlo<br>Methyl ter<br>2-Butanor<br>SAMPLE: AS<br>SAMPLE: AS<br>SAMPLE: AS<br>SAMPLE: AS  | ride<br>rt-butyl ether<br>ne<br>STM Extract of Inv. Cuttings<br>D BY: SG<br>Oxygen Demand<br>STM Extract of Inv. Cuttings<br>ED BY: SG                   | < 0.0250 mg/L<br>< 0.0250 mg/L<br>< 0.0500 mg/L<br>S<br>Result<br>548 mg/L<br>S<br><u>Result</u><br>S                              | Sample Time:<br>B<br>Lab ID:                            | EPA 8260B<br>EPA 8260B<br>EPA 8260B<br>: 10121752-001J<br>12/10/2010 11:15<br><u>Method</u><br>HACH 8000<br>: 10121752-001L<br>12/10/2010 11:15<br><u>Method</u>  | 0.0250<br>0.0250<br>0.0500<br>Grab<br><u>SLOQ</u><br>10<br>Grab                        | 12/13/10<br>12/13/10<br>12/13/10<br><u>Analysis</u><br>12/11/10<br><u>Analysis</u>             | 8:11<br>8:11<br>8:11<br><u>Start</u><br>8:00<br><u>Start</u><br>8:00          | 12/13/10<br>12/13/10<br>12/13/10<br>Analysis End<br>12/13/10                             | CTM-SA<br>CTM-SA<br>CTM-SA<br>Analyst                               |
| Vinyi chlo<br>Methyi ter<br>2-Butanor<br>SAMPLE: AS<br>SAMPLE: AS<br>Chemical<br>SAMPLE: AS<br>SAMPLE: AS<br>DH<br>Test<br>pH<br>Total Solie | ride<br>rt-butyl ether<br>ne<br>STM Extract of Inv. Cuttings<br>D BY: SG<br>Oxygen Demand<br>STM Extract of Inv. Cuttings<br>ED BY: SG                   | < 0.0250 mg/L<br>< 0.0250 mg/L<br>< 0.0500 mg/L<br>S<br><u>Result</u><br>548 mg/L<br>S<br><u>Result</u><br>6.80@17.9°C             | B<br>B<br>Lab ID:<br>Sample Time:                       | EPA 8260B<br>EPA 8260B<br>EPA 8260B<br>10121752-001J<br>12/10/2010 11:15<br><u>Method</u><br>HACH 8000<br>10121752-001L<br>12/10/2010 11:15<br><u>Method</u><br>SM4500H+B                                   | 0.0250<br>0.0250<br>0.0500<br>Grab<br><u>SLOQ</u><br>10<br>Grab<br><u>SLOQ</u>         | 12/13/10<br>12/13/10<br>12/13/10<br><u>Analysis</u><br>12/11/10<br><u>Analysis</u><br>12/14/10 | 8:11<br>8:11<br>8:11<br><u>Start</u><br>8:00<br><u>Start</u><br>8:00          | 12/13/10<br>12/13/10<br>12/13/10<br>Analysis End<br>12/13/10<br>Analysis End<br>12/14/10 | CTM-SA<br>CTM-SA<br>CTM-SA<br>Analyst<br>KMF-SA<br>Analyst<br>SG-SA |
| Vinyi chlo<br>Methyi ter<br>2-Butanor<br>SAMPLE: AS<br>SAMPLE: AS<br>SAMPLE: AS<br>SAMPLE: AS<br>DH<br>Total Solid<br>SAMPLE: Inv            | ride<br>rt-butyl ether<br>ne<br>STM Extract of Inv. Cuttings<br>ED BY: SG<br>Oxygen Demand<br>STM Extract of Inv. Cuttings<br>ED BY: SG<br>ds            | < 0.0250 mg/L<br>< 0.0250 mg/L<br>< 0.0500 mg/L<br>S<br><u>Result</u><br>548 mg/L<br>S<br><u>Result</u><br>6.80@17.9°C<br>720 mg/L | Sample Time:<br>B<br>Lab ID:<br>Sample Time:<br>Lab ID: | EPA 8260B<br>EPA 8260B<br>EPA 8260B<br>10121752-001J<br>12/10/2010 11:15<br><u>Method</u><br>HACH 8000<br>10121752-001L<br>12/10/2010 11:15<br><u>Method</u><br>SM4500H+B<br>SM2540B                        | 0.0250<br>0.0250<br>0.0500<br>Grab<br><u>SLOQ</u><br>0.10<br>Grab                      | 12/13/10<br>12/13/10<br>12/13/10<br><u>Analysis</u><br>12/11/10<br><u>Analysis</u><br>12/14/10 | 8:11<br>8:11<br>8:11<br><u>Start</u><br>8:00<br><u>Start</u><br>8:00          | 12/13/10<br>12/13/10<br>12/13/10<br>Analysis End<br>12/13/10<br>Analysis End<br>12/14/10 | CTM-SA<br>CTM-SA<br>CTM-SA<br>Analyst<br>KMF-SA<br>Analyst<br>SG-SA |
| Vinyi chlo<br>Methyi ter<br>2-Butanor<br>SAMPLE: AS<br>SAMPLE: AS<br>SAMPLE: AS<br>SAMPLE: AS<br>DH<br>Total Solid<br>SAMPLE: Inv            | ride<br>rt-butyl ether<br>ne<br>STM Extract of Inv. Cuttings<br>DBY: SG<br>Oxygen Demand<br>STM Extract of Inv. Cuttings<br>DBY: SG<br>ds<br>v. Cuttings | < 0.0250 mg/L<br>< 0.0250 mg/L<br>< 0.0500 mg/L<br>S<br><u>Result</u><br>548 mg/L<br>S<br><u>Result</u><br>6.80@17.9°C<br>720 mg/L | Sample Time:<br>B<br>Lab ID:<br>Sample Time:<br>Lab ID: | EPA 8260B<br>EPA 8260B<br>EPA 8260B<br>i 10121752-001J<br>12/10/2010 11:15<br><u>Method</u><br>HACH 8000<br>i 10121752-001L<br>12/10/2010 11:15<br><u>Method</u><br>SM4500H+B<br>SM2540B<br>i 10121752-001M | 0.0250<br>0.0250<br>0.0500<br>Grab<br><u>SLOQ</u><br>10<br>Grab<br><u>SLOQ</u><br>0.10 | 12/13/10<br>12/13/10<br>12/13/10<br><u>Analysis</u><br>12/11/10<br><u>Analysis</u><br>12/14/10 | 8:11<br>8:11<br>8:11<br><u>Start</u><br>8:00<br><u>Start</u><br>8:00<br>17:00 | 12/13/10<br>12/13/10<br>12/13/10<br>Analysis End<br>12/13/10<br>Analysis End<br>12/14/10 | CTM-SA<br>CTM-SA<br>CTM-SA<br>Analyst '<br>SG-SA<br>IC-SA           |

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

•

Analyte detected in the associated Method Blank в

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

MANAGER

Carrie M. Darkis

DATE: 12/16/2010

|     | CHAIN OF CUSTODY             |                  |                |              |                |               |               | Benchmar  | 0F  |
|-----|------------------------------|------------------|----------------|--------------|----------------|---------------|---------------|---|---|
| RE  | Talisman / UEG               | ]                |                |              |                | 2             | 566 [         | Easl<br>Pennsylvania W/OH· 10121752   |   |
| ae  | eowetlands@aol.com           |                  |                |              |                | ~             | JUU 1         | Pennsylvania W/O#: 10121752<br>Phone:   | ECIAL DETECTION LIMITS  |
| 95  |                              |                  |                |              |                |               |               | Fax: (5/0) 000-0/1/   | TES / NO  |
|     |                              |                  | rigef<br>Er CC |              |                | ES            | ~             |   | FYES, PLEASE ATTACH   |
|     |                              |                  |                |              | non            |               |               | W DRINKING WATER SL SLUDGE NYDOH NYDEC PADEP  | IS A QC PACKAGE NEEDED  |
| co  | NTACT Steve Gridley          | -                | <b>FRAN</b>    | SPOR         | т              |               | / s           | W SURFACE WATER HZ HAZARDOUS LANDFILL Mostoller   | YES NO  |
| PH# |                              | 1                | Т              | 0            |                | /             | ́г.           | E DEIONIZED WATER DI DISTILLED WATER DERSONAL OTHER   | FYES, PLEASE ATTACH REQUIRE   |
| FAX | #                            |                  | ABOF           |              | łΥ<br>'        |               | / 5           | /H     HYDROCHLORIC ACID     OH     SODIUM HYDROXIDE       /S     SULFURIC ACID     AS     ASCORBIC ACID  |   |
| BIL | L TO: Talisman               |                  | IN CO<br>WITH  |              | 1              | /             |               | N NITRIC ACID AC ACETIC ACID  | 1 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4                               |
|     |                              | <u> </u>         |                |              | —/             | ' /           | <u>`</u> 8/   | SO3 SODIUM SULFITE NH4 AMMONIUM CHLORIDE  | 8   |
| PO# | $\pi$ $10(\alpha)$           |                  |                |              | ¥ / .          | /ġ            | <u></u>       | - NONE Hg MERCURIC CHLORIDE   | Please fill out all   |
| PR  | PERT DESCRIPTION 84 01-023   |                  | [E]            |              | []\$           | ا بنا         |               | $4$ An incomplete chain of custody may delay the $\delta$ $\delta$  | applicable areas  |
| SAN | APPERSIGNATURE / AFFILIATION | /                | 125            | ર્સ /        |                | 12            | E             |   | completely  |
|     | NTAINER SAMPLING POINT       | /\$              | The Sampled    | Con SAMPLING | South I MATRIX | Sui ETTPE.Go. | Por Ex MITIAL | SO <sub>3</sub> SODIUM SULFITE NH, AMMONIUM CHLORIDE<br>Thio SODIUM THIOSULFATE ZN ZINC ACETATE<br>- NONE Hg MERCURIC CHLORIDE<br>An incomplete chain of custody may delay the<br>processing of your sample(s). | Please fill out all<br>applicable areas<br>completely<br>LAB USE ONLY |
| 1   | Inv Cuttings                 | 12/9             | 1204           | Se           |                | EB            | Ņ             | Ignitability, Reactive Sulfide & Cyanide  |   |
| 2   |                              | $\left[ \right]$ | 1              | 1            | C              |               |               | PCBs, Total Solids  |   |
| 3   | A-flords, Igr.               |                  |                |              | G              |               |               | Total Volatile Solids   |   |
| 4   | C- Rectivity                 | $\prod$          |                | $\prod$      | С              |               | Π             | Ammonia-Nitrogen  |   |
| 5   | D-TS, TVS                    |                  |                | Π.           | C              |               | $\square$     | Water Leaching Procedure: COD,  |   |
| 6   | E-T. Scaple                  | V                | 11             | 11           | C              | 17            | Y             | Total Solids, Oil & Grease,   |   |
| 7   | F-TCLP BNA, Rots.            |                  |                |              |                |               | 1             |   |   |
| 8   | G-TCLP States. Sr            |                  | ¥-             | 4.5          | m              | 4-            | *             |   |   |
| 9   | H-TCLP pH                    |                  | 1              |              | m              |               | 1 .           | 36 HOUR TURNAROUND  |   |
| 10  | I-TCCP Vels.                 |                  |                | 170          |                |               | 1             | DAY TURNAROUND  |   |
| 11  | J-AST CODING                 |                  |                |              | <u> </u>       | 1.            | 1             |   |   |
| LA  | B USE CALY                   |                  |                |              |                |               |               |   |   |
|     |                              |                  |                |              |                |               |               |   | ICE ARRIVALIONICE   |
| REL | INQUISTED BY. Jee            | angular 14, 2003 | [              |              | ۵,             | 10            | IME;          |   | DATE: TIME:   |
| REL | INQUISHED BY:                |                  |                | ATE:         | <u>7,1</u>     |               | IME:          |   | DATE: , TIME:   |
| REL | INQUISHED BY:                |                  |                | HATE: ,      |                |               | IME:          | RECEIVEDAY: DOX DO  | 7519 10 TBK   |
|     |                              |                  |                | /            | - 1            |               |               |   | INM IU DI   |



COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WASTE MANAGEMENT

FORM 26R

CHEMICAL ANALYSIS OF RESIDUAL WASTE

ANNUAL REPORT BY THE GENERATOR

| typed or legi<br>each attache   | bly printed in the spaces<br>ed sheet as Form 26R,  | itely completed. All requi<br>s provided. If additional sp<br>reference the item numb   | ace is necessary, identi<br>er and identify the da  | ify Date Receive   | USE:ONLY  |
|---|---|---|---|--|---|
| prepared. Th  | e date on attached shee   | ts needs to match the date  | noted below.  |  |   |
|   | rence 287.54  |   |   |  |   |
| Date Prepare  |   | oruary 11, 2011   | and a subscription of the second strategy of |  |   |
| <u> </u>  |   | CEIENT (GENERATOR   | R OF THE WASTE) IN  | FORMATION  | •   |
| Company Na<br>Talisman En   | <b>me</b><br>ergy USA Inc.  |   |   |  |   |
| If a Subsidiar  | ry, Name of Parent Comp   | bany  | <u>, , , , , , , , , , , , , , , , , , , </u>   | EPA  | Generator ID#   |
| Talisman En   |   |   | <u> </u>  | N/A  |   |
|   | iling Address Line 1  | C   | ompany Mailing Addres   | s Line 2   |   |
| 50 Pennwoo  | dress Last Line – City  | State   | Zip+4   | Phone  | Ext   |
| Warrendale  | -   | PA  | 15086   | (724) 814-530  |   |
|   | ntact Last Name   | First Name  | MI  | Suffix   | <   |
| Brown<br>Municipality   |   | Dina  | County  |  |   |
| Warrendale  |   |   | Allegheny   |  |   |
| Contact Phor  | ne Ext  | Contact Email Address   |   |  | pa.u  |
| (724) 814-53  |   | dybrown@talismanusa.c   |   |  |   |
|   |   | y Mailing Address (noted a  |   |  | Yes 🖾 No  |
|   |   | eration and storage. <u>Drill c</u><br>ed at 504 Ballard Hill Road, 0   |   |  |   |
| containers on   |   |   | olumbia romanp, prad  |  |   |
| Municipality  | Columbia  | County Bradfo   |   | State  | PA  |
|   |   | SECTION B. WAST   | E DESCRIPTION   |  | · · · · · · · · · · · · · · · · · · ·   |
| Residual  | Kesid   |   |   | Unit of  |   |
| Waste Code  |   | ual Waste<br>Description  | Amount  |  | Time<br>Frame   |
| Waste Code  | Code D  | escription  | Amount  | Measure  | Frame   |
| Waste Code<br>810   |   | pescription<br>gas)   | 1,034   | Measure  |   |
| 810   | Code D<br>Drill cuttings (oil and g   | pescription<br>gas)<br>1. General P   |   | Measure  | Frame   |
| 810<br>a. pH Ra   | Code D<br>Drill cuttings (oil and g   | pescription<br>gas)<br>1. GENERAL P<br>17 to 7.96   | 1,034   | Measure  | Frame   |
| 810<br>a. pH Ra   | Code D<br>Drill cuttings (oil and g<br>ange 6.0   | pescription<br>gas)<br>1. General P   | 1,034   | Measure  | Frame   |
| 810<br>a. pH Ra<br>b. Physi   | Code D<br>Drill cuttings (oil and g<br>ange 6.0<br>cal State  | pescription<br>gas)<br>1. GENERAL P<br>7 to 7.96<br>☐ Liquid Waste (EPA Me<br>Solid (EPA Method 909<br>☐ Gas (ambient temperation)  | 1,034     []       ROPERTIES       (based on analyses or kr       thod 9095)       95)       ture & pressure)   | Measure<br>cu yd gal<br>lb ⊠ ton<br>nowledge)  | Frame   |
| 810<br>a. pH Ra<br>b. Physi   | Code D<br>Drill cuttings (oil and g<br>ange 6.0   | as)<br><b>1. GENERAL P</b><br>To 7.96<br>Liquid Waste (EPA Me<br>Solid (EPA Method 909<br>Gas (ambient temperal<br><b>Color</b> Greyish Black   | 1,034<br>ROPERTIES<br>(based on analyses or kr<br>thod 9095)<br>95)<br>ture & pressure)<br>Odor   | Measure<br>cu yd gal<br>b ⊠ ton<br>howledge)<br>Earthy/Slight I  | Frame   |
| 810<br>a. pH Ra<br>b. Physi   | Code D<br>Drill cuttings (oil and g<br>ange 6.0<br>cal State  | Description<br>gas)<br>1. GENERAL P<br>07 to 7.96<br>□ Liquid Waste (EPA Me<br>○ Solid (EPA Method 909<br>□ Gas (ambient temperal<br>Color Greyish Black<br>Number of Solid or Liquid   | 1,034     Image: Constraint of the second seco                          | Measure         cu yd       gal         lb       ∑ ton         nowledge)   | Frame   |
| 810<br>a. pH Ra<br>b. Physi   | Code D<br>Drill cuttings (oil and g<br>ange 6.0<br>cal State  | as)<br><b>1. GENERAL P</b><br>To 7.96<br>Liquid Waste (EPA Me<br>Solid (EPA Method 909<br>Gas (ambient temperal<br><b>Color</b> Greyish Black   | 1,034     Image: Constraint of the second seco                          | Measure         cu yd       gal         lb       ∑ ton         nowledge)   | Frame   |
| 810<br>a. pH Ra<br>b. Physi<br>c. Physi   | Code D<br>Drill cuttings (oil and g<br>ange 6.0<br>cal State<br>cal Appearance  | as)<br>1. GENERAL P<br>7 to 7.96<br>↓ Liquid Waste (EPA Me<br>Solid (EPA Method 909<br>Gas (ambient temperation<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of s<br>2. CHEMICAL ANALYS   | 1,034  ROPERTIES (based on analyses or kr thod 9095) 95) ture & pressure) Odor I Phases of Separation eparation. Soil and Roc SIS ATTACHMENTS   | Measure<br>cu yd gal<br>b ⊠ ton<br>nowledge)<br>Earthy/Slight F<br>One<br>ck Fragments   | Frame   |
| <ul> <li>810</li> <li>a. pH Ra</li> <li>b. Physi</li> <li>c. Physi</li> <li>a. The reinstru</li> </ul>  | Code D<br>Drill cuttings (oil and g<br>ange 6.0<br>cal State<br>cal Appearance  | Description         gas)         1. GENERAL P         07 to 7.96         1. Liquid Waste (EPA Method 90%         2. Solid (EPA Method 90%         3. Gas (ambient temperation of Solid or Liquid Color Greyish Black         Number of Solid or Liquid Describe each phase of s         2. CHEMICAL ANALYS         Analysical characterization of the                           | 1,034  ROPERTIES (based on analyses or kr thod 9095) 95) ture & pressure)  Odor I Phases of Separation eparation. Soil and Roc SIS ATTACHMENTS waste, as described in   | Measure<br>cu yd gal<br>b ⊠ ton<br>nowledge)<br>Earthy/Slight F<br>One<br>ck Fragments   | Frame   |
| 810<br>a. pH Ra<br>b. Physi<br>c. Physi<br>c. Physi<br>a. The re<br>instru<br>b. A deta                 | Code D<br>Drill cuttings (oil and g<br>ange 6.0<br>cal State<br>cal Appearance<br>esults of a detailed chem<br>ictions, is attached.<br>ailed description of the v  | Description         gas)         1. GENERAL P         07 to 7.96         1. Liquid Waste (EPA Method 90%         2. Gas (ambient temperation of Solid or Liquid Vaste)         Color       Greyish Black         Number of Solid or Liquid         Describe each phase of s         2. CHEMICAL ANALYS         Lical characterization of the         Vaste sampling method is a | 1,034       I         ROPERTIES         (based on analyses or kr         thod 9095)         25)       Odor         Odor         I Phases of Separation         eparation. Soil and Root         SIS ATTACHMENTS         waste, as described in         ttached.   | Measure         cu yd       gal         lb       X ton         nowledge)       Ib         Earthy/Slight F       One         One       One         ck Fragments       X         the       X | Frame       One Time       One Time       Petroleum       Yes     No       Yes     No |
| 810<br>a. pH Ra<br>b. Physi<br>c. Physi<br>c. Physi<br>a. The re<br>instru<br>b. A deta                 | Code D<br>Drill cuttings (oil and g<br>ange 6.0<br>cal State<br>cal Appearance<br>esults of a detailed chem<br>ictions, is attached.<br>ailed description of the v<br>uality assurance/quality                                      | Description         gas)         1. GENERAL P         07 to 7.96         1. Liquid Waste (EPA Method 90%         2. Solid (EPA Method 90%         3. Gas (ambient temperation of Solid or Liquid Color Greyish Black         Number of Solid or Liquid Describe each phase of s         2. CHEMICAL ANALYS         Analysical characterization of the                           | 1,034       I         ROPERTIES         (based on analyses or kr         thod 9095)         25)       Odor         Odor         I Phases of Separation         eparation. Soil and Root         SIS ATTACHMENTS         waste, as described in         ttached.   | Measure         cu yd       gal         lb       X ton         nowledge)       Ib         Earthy/Slight F       One         One       One         ck Fragments       X         the       X | Frame       One Time       One Time       Petroleum       Yes     No                  |
| a. pH Ra<br>b. Physi<br>c. Physi<br>a. The re<br>instru<br>b. A deta<br>c. The q<br>attach<br>d. The re | Code D<br>Drill cuttings (oil and g<br>ange 6.0<br>cal State<br>cal Appearance<br>esults of a detailed chem<br>actions, is attached.<br>ailed description of the v<br>uality assurance/quality<br>red.<br>esults of the hazardous v | Description         gas)         1. GENERAL P         07 to 7.96         1. Liquid Waste (EPA Method 90%         2. Gas (ambient temperation of Solid or Liquid Vaste)         Color       Greyish Black         Number of Solid or Liquid         Describe each phase of s         2. CHEMICAL ANALYS         Lical characterization of the         Vaste sampling method is a | 1,034       I         ROPERTIES         (based on analyses or kr         thod 9095)         05)       Odor         Odor         I Phases of Separation         eparation. Soil and Roc         SIS ATTACHMENTS         waste, as described in         ttached.         yet by the laboratory(ie         ched.   | Measure         cu yd       gal         lb       ton         nowledge)   | Frame       One Time       One Time       Petroleum       Yes     No       Yes     No |

|         | 2   | PROCESS DESCRIPTION        | 8 SOUTHATIC ATTA         | NUMENTO           |              |       |  |  |  |  |  |
|---------|---|----------------------------|--------------------------|-------------------|--------------|-------|--|--|--|--|--|
|         | A detailed description of the                                     |                            |                          |                   | <u> </u>     |       |  |  |  |  |  |
| a.      | the waste, as specified in the                                    | instructions, is attache   | d.                       |                   | 🛛 Yes        | 🗌 No  |  |  |  |  |  |
| b.      | A schematic of the manufact<br>as specified in the instruction    |                            | ontrol processes pro     | lucing the waste, | 🛛 Yes        | 🗌 No  |  |  |  |  |  |
| C.      | If portions of the information<br>a confidentiality claim, as des |                            |                          | n for 📋 Yes       | 🗌 No         | 🛛 N/A |  |  |  |  |  |
|         | SECTION C. MANAGEMENT OF RESIDUAL WASTE                           |                            |                          |                   |              |       |  |  |  |  |  |
|         |   |                            | DISPOSAL FACILITY (IE    |                   |              |       |  |  |  |  |  |
| The a   | rea below (ad.) will accommod                                     | late the identification of | two facilities. Attach   | additional sheets | if necessary | •     |  |  |  |  |  |
| a.      | Solid waste permit number(s)<br>100361                            | for processing or disp     | osal facility being util | ized.             | ,            |       |  |  |  |  |  |
| b.      | Facility Name   | McKean County Lan          | dfill                    |                   |              |       |  |  |  |  |  |
|         | Address Line 1  | 19 Ness Lane               |                          |                   |              |       |  |  |  |  |  |
|         | Address Line 1  |                            |                          |                   |              |       |  |  |  |  |  |
|         | Address City State ZIP  | Kane                       | PA                       | 16735             |              |       |  |  |  |  |  |
|         | Municipality  | Sergeant Twp               | County                   | McKean            |              |       |  |  |  |  |  |
| с.      | Facility Contact Name   | Mike Manderfeld            |                          |                   |              |       |  |  |  |  |  |
|         | Title   |                            |                          | ********          |              |       |  |  |  |  |  |
|         | Phone   | (814) 778-9931             | Email Address            | manderfeld@gm     | ail.com      |       |  |  |  |  |  |
| d.      | Volume of waste shipped to p                                      | rocessing or disposal f    | acility in the previous  | •                 | )            | ~     |  |  |  |  |  |
| a.      | Solid waste permit number(s)<br>9-0232-00003                      | for processing or disp     | osal facility being utíl | ized.             |              |       |  |  |  |  |  |
| 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@ca | sella.com    |       |  |  |  |  |  |
| d.      | Volume of waste shipped to p                                      | , ,                        | acility in the previous  |                   |              |       |  |  |  |  |  |
| u.      | 293   | cu yd 📋 gal                |                          |                   |              |       |  |  |  |  |  |
| 3.2.1.1 | an and a star and a star and a                                    |                            | FICIAL USE               |                   |              |       |  |  |  |  |  |
| a.      | Has the waste been approved                                       | for beneficial use?        |                          |                   | Yes          | 🛛 No  |  |  |  |  |  |
|         | If "Yes", list the general perm                                   |                            |                          |                   |              |       |  |  |  |  |  |
| b.      | Volume of waste beneficially                                      | used in the previous yea   | ar.                      |                   |              |       |  |  |  |  |  |
|         | 0   | cu yd 🗌 gal                | 🗌 lb 🗌 ton               | (check one)       |              |       |  |  |  |  |  |

| 3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS  |  |                           |                         |  |              |       |  |  |  |  |
|---|--|---------------------------|-------------------------|--|--------------|-------|--|--|--|--|
| a.  | A detailed description of the                |                           |                         | esses producing  | 🛛 Yes        | 🗌 No  |  |  |  |  |
| )   | the waste, as specified in the               | instructions, is attached | i.                      |  |              |       |  |  |  |  |
| b.  | A schematic of the manufact                  |                           | ntrol processes pro     | ducing the waste,  | Yes          | No No |  |  |  |  |
|   | as specified in the instruction              |                           |                         |  |              |       |  |  |  |  |
| C.  | If portions of the information               |                           |                         | n for 🗌 Yes  | 🗌 No         | 🖾 N/A |  |  |  |  |
| a confidentiality claim, as described in the instructions, is attached.   |  |                           |                         |  |              |       |  |  |  |  |
| SECTION C. MANAGEMENT OF RESIDUAL WASTE   |  |                           |                         |  |              |       |  |  |  |  |
| 1. PROCESSING OR DISPOSAL FACILITY(IES)<br>The area below (ad.) will accommodate the identification of two facilities. Attach additional sheets if necessary. |  |                           |                         |  |              |       |  |  |  |  |
| The ai  |  |                           |                         |  | if necessary | •     |  |  |  |  |
| a.  | Solid waste permit number(s)<br>8-4630-00010 | for processing or dispo   | sal facility being util | ized.  |              |       |  |  |  |  |
| b.  | Facility Name                                | Hakes C&D Landfill        |                         |  |              |       |  |  |  |  |
|   | Address Line 1                               | 4376 Manning Ridge        | Road                    |  |              |       |  |  |  |  |
|   | Address Line 1                               |                           |                         |  |              |       |  |  |  |  |
|   | Address City State ZIP                       | Painted Post              | NY                      | 14870  |              |       |  |  |  |  |
|   | Municipality                                 | Erwin Twp                 | County                  | Steuben  |              |       |  |  |  |  |
| C.  | Facility Contact Name                        | Joseph Boyles             |                         |  |              |       |  |  |  |  |
|   | Title  |                           |                         |  |              |       |  |  |  |  |
|   | Phone  | (607) 937-6044            | Email Address           | joe.boyles@case  | ella.com     |       |  |  |  |  |
|   |  | (585) 466-7271            |                         |  |              |       |  |  |  |  |
| d.  | Volume of waste shipped to p                 |                           |                         |  |              |       |  |  |  |  |
|   | 151  | cu yd 📃 gal               | 🗌 lb 🛛 tor              | ,  |              |       |  |  |  |  |
| a.  | Solid waste permit number(s)                 | for processing or dispo   | sal facility being util | ized.  |              |       |  |  |  |  |
|   | 100945                                       |                           |                         |  |              |       |  |  |  |  |
| b.  | Facility Name                                | Cumberland County L       | andfill                 |  |              |       |  |  |  |  |
|   | Address Line 1                               | 135 Vaughn Road           |                         |  |              |       |  |  |  |  |
|   | Address Line 1                               |                           |                         |  |              |       |  |  |  |  |
|   | Address City State ZIP                       | Newburg                   | PA                      | 17240  |              |       |  |  |  |  |
| 1   | Municipality                                 | Newbug Boro               | County                  | Cumberland   |              |       |  |  |  |  |
| с.  | Facility Contact Name                        | Dusty Hilbert             |                         |  |              |       |  |  |  |  |
|   | Title  | Compliance Manager        |                         |  |              |       |  |  |  |  |
|   | Phone  | (717) 729-5261            | Email Address           | dhilbert@iswaste   | e.com        |       |  |  |  |  |
| d.  | Volume of waste shipped to p                 | rocessing or disposal fa  | cility in the previous  | year.  |              |       |  |  |  |  |
|   | 72   | cuyd 🔲 gal                | ☐ lb 🛛 ton              |  |              |       |  |  |  |  |
|   |  |                           | FICIAL USE              | and the second |              |       |  |  |  |  |
| a.  | Has the waste been approved                  | for beneficial use?       |                         |  | Yes          | 🛛 No  |  |  |  |  |
|   | If "Yes", list the general perm              | it number or approval nu  | mber.                   |  |              |       |  |  |  |  |
| b.  | Volume of waste beneficially                 |                           |                         |  |              |       |  |  |  |  |
|   | 0  | cuyd 🗌 gal                | b ton                   | (check one)  |              |       |  |  |  |  |

| 1992  | · · · · · · · · · · · · · · · · · · ·                             | <b>PROCESS DESCRIPTIO</b> | NO CONTRACT       |                  | ITO           |              |          |  |  |  |  |
|-------|---|---------------------------|-------------------|------------------|---------------|--------------|----------|--|--|--|--|
| -     |   |                           |                   |                  |               |              | <u> </u> |  |  |  |  |
| a.    | A detailed description of the the waste, as specified in the      | <b>.</b> .                |                   | oi processes     | producing     | 🛛 Yes        | 🗌 No     |  |  |  |  |
| b.    | A schematic of the manufact<br>as specified in the instruction    |                           | control proces    | ses producin     | ; the waste,  | 🛛 Yes        | No No    |  |  |  |  |
| C.    | If portions of the information<br>a confidentiality claim, as des |                           |                   |                  | 📋 Yes         | 🗌 No         | N/A      |  |  |  |  |
|       | SECTI   | ON C. MANAGEN             | IENT OF R         | ESIDUAL          | WASTE         |              |          |  |  |  |  |
|       |   | 1. PROCESSING OF          | R DISPOSAL FA     | CILITY(IES)      |               | 2, 2         |          |  |  |  |  |
| The a | rea below (ad.) will accommod                                     | late the identification o | of two facilities | . Attach addi    | tional sheets | if necessary | •        |  |  |  |  |
| a.    | Solid waste permit number(s)<br>101243                            | for processing or disp    | oosal facility b  | eing utilized.   |               |              |          |  |  |  |  |
| b.    | Facility Name   | Chemung County La         | andfill           |                  |               |              |          |  |  |  |  |
|       | Address Line 1  | 1690 Lake Street          |                   |                  |               |              |          |  |  |  |  |
|       | Address Line 1  |                           |                   |                  |               |              |          |  |  |  |  |
|       | Address City State ZIP  | Elmira                    | NY                |                  | 14903         |              |          |  |  |  |  |
|       | Municipality  | Elmira                    | Cou               | i <b>nty</b> Che | mung          |              |          |  |  |  |  |
| с.    | Facility Contact Name   |                           |                   |                  |               |              |          |  |  |  |  |
|       | Title   | Environmental Mana        | aner              |                  |               |              |          |  |  |  |  |
|       | Phone   | (585) 797-5941            | Email Add         | iress carl       | a.canjar@ca   | sella.com    |          |  |  |  |  |
| d.    | Volume of waste shipped to p                                      | . ,                       | facility in the . |                  |               |              |          |  |  |  |  |
| u.    | 15  | cu yd gal                 |                   | ton              | (check one)   |              |          |  |  |  |  |
| а.    | Solid waste permit number(s)                                      | for processing or disp    | osal facility be  | eing utilized.   |               |              |          |  |  |  |  |
| b.    | Facility Name   |                           |                   |                  |               |              |          |  |  |  |  |
|       | Address Line 1  |                           |                   |                  |               |              |          |  |  |  |  |
|       | Address Line 1  |                           |                   |                  |               |              |          |  |  |  |  |
|       | Address City State ZIP  |                           |                   |                  |               |              |          |  |  |  |  |
|       | Municipality  |                           | Cou               | nty              |               |              |          |  |  |  |  |
| c.    | Facility Contact Name   |                           |                   |                  |               |              |          |  |  |  |  |
|       | Title   |                           |                   |                  |               |              |          |  |  |  |  |
|       | Phone   |                           | Email Add         | iress            |               |              |          |  |  |  |  |
| d.    | Volume of waste shipped to p                                      | rocossing or disposal     | facility in the r |                  |               |              |          |  |  |  |  |
| u.    |   | cu yd gal                 |                   | ton              | (check one)   |              |          |  |  |  |  |
|       |   |                           | EFICIAL USE       |                  |               |              |          |  |  |  |  |
| a.    | Has the waste been approved                                       | for beneficial use?       |                   |                  |               | Yes          | 🛛 No     |  |  |  |  |
|       | lf "Yes", list the general perm                                   | it number or approval i   | number.           |                  |               |              |          |  |  |  |  |
| b.    | Volume of waste beneficially                                      |                           |                   |                  |               |              |          |  |  |  |  |
|       | 0   | cuyd 📋 gal                | 🗌 lb              | ton              | (check one)   |              |          |  |  |  |  |

•

| SECTION D. CERTIFICATION  |  |  |  |  |  |  |  |  |
|---|--|--|--|--|--|--|--|--|
| Report and all attached doct<br>obtaining the information, I<br>knowledge. I understand tha | that I have personally examined and am familiar with the information submitted in this Annual<br>uments and that based upon my inquiry of those individuals immediately responsible for<br>verify that the submitted information is true, accurate and complete to the best of my<br>t the submission of false information herein is made subject to the penalties of 18 Pa. C.S.<br>sification to authorities, which include fine and imprisonment. |  |  |  |  |  |  |  |
| Check the following, if applica   | ble:   |  |  |  |  |  |  |  |
| I certify the information   | n required in Section B-1, General Properties was supplied to the Department for the year nged.  |  |  |  |  |  |  |  |
| Form Submitted:   | Form 26R   |  |  |  |  |  |  |  |
|   | Other (specify)  |  |  |  |  |  |  |  |
| Date Submitted:   |  |  |  |  |  |  |  |  |
| I certify the information   | n required in Section B-2, Chemical Analysis was supplied to the Department for the year nged.   |  |  |  |  |  |  |  |
| Form Submitted:   | Form 26R   |  |  |  |  |  |  |  |
|   | Other (specify)  |  |  |  |  |  |  |  |
| Date Submitted:   |  |  |  |  |  |  |  |  |
| I certify the information for the year and I  | required in Section B-3, Process Description and Schematic, was supplied to the Department has not changed.  |  |  |  |  |  |  |  |
| Form Submitted:   | Form 26R   |  |  |  |  |  |  |  |
|   | Other (specify)  |  |  |  |  |  |  |  |
| Date Submitted:   |  |  |  |  |  |  |  |  |
| Name of Responsible Official  | Title Environmental Specialist   |  |  |  |  |  |  |  |
| Dina Brown Signature  | 9/8n/ Date 2/2.5/11  |  |  |  |  |  |  |  |

| LAB ID: 08-00380<br>LAB ID: 39-00401   |   | Easter<br>2566 Pen  | Analytics, In<br>n Division<br>nsylvania Ave.<br>PA 18840   | C.<br>Work Order: 10112530  |   |   |   |  |  |
|--|---|---|---|---|---|---|---|--|--|
|  |   | •   | 70) 888-0169<br>70) 888-0717  |   |   |   | 1.  |  |  |
| SEND DATA  | TO:   |   |   |   |   |   |   |  |  |
| NAME:  | Steve Gridley   |   |   | w   | O#: 101   | 12530   |   |  |  |
| COMPANY:   | Talisman Energy USA, Ir   | nc.   |   | n,  |   |   |   |  |  |
|  | 337 Daniel Zenker Dr  |   |   | P/  | AGE: 1 of   | 2   |   |  |  |
|  | Horseheads, NY 14845  |   |   | P   | O#: AF7   | 6723  |   |  |  |
|  | (607) 731-0145<br>(607) 562-4001  | TEST  | REPORT  | P۱  | NS ID#  |   |   |  |  |
| 03-04  | 15  | and a second  |   |   |   |   |   |  |  |
|  | OR LAB BY: SCP  | DATE: 1   | 1/16/2010 16:40   |   |   | Pa  | age 1 of 2  |  |  |
| SAMPLE: Air  | Cuttings  | 1 a   | ь ID: 10112530-001A   | Grab  |   |   |   |  |  |
| SAMPLED  |   |   | "ime: 11/15/2010 18:39  | 0.00  |   |   |   |  |  |
| · · · · · · · · · · · · · · · · · · ·  |   | Denvik  | Mathad  | <u>sloq</u>   | Analysis Start  | Analysis End  | Amaluat 1   |  |  |
| Test   | · · · ·   | Result  | Method  |   | Analysis Start  | Analysis End  | Analyst   |  |  |
|  | leum Hydrocarbons   | 39400 ma/Ka   | EPA 9071  | 170   | 11/18/10 14.40  | 11/18/10  |   |  |  |
| Total Petrol   | leum Hydrocarbons<br>Note: Analysis performed by N  | 39400 mg/Kg<br>/licrobac Laboratories, Ind  | EPA 9071<br>c-Erie Division.  | 170   | 11/18/10 14:40  | 11/18/10  |   |  |  |
| Total Petrol<br>Sample N   | Note: Analysis performed by N   | licrobac Laboratories, Inc  | c-Erie Division.  |   | 11/18/10 14:40  | 11/18/10  |   |  |  |
| Total Petrol   | Note: Analysis performed by M<br>Cuttings   | /licrobac Laboratories, ind   | c-Erie Division.<br>b ID: 10112530-001B   | 170<br>Grab   | 11/18/10 14:40  | 11/18/10  |   |  |  |
| Total Petrol<br>Sample N<br>SAMPLE: Air<br>SAMPLED   | Note: Analysis performed by M<br>Cuttings   | licrobac Laboratories, Ind<br>La<br>Sample T  | c-Erie Division.<br>b ID: 10112530-001B<br>ïme: 11/15/2010 18:39  |   |   |   | trobust *   |  |  |
| Total Petrol<br>Sample N<br>SAMPLE: Air (<br>SAMPLED<br><u>Test</u>  | Note: Analysis performed by M<br>Cuttings   | /licrobac Laboratories, Ind<br>La<br>Sample T<br><u>Result</u>  | c-Erie Division.<br>b ID: 10112530-001B<br>ïme: 11/15/2010 18:39<br><u>Method</u>   | Grab<br><u>SLOQ</u>   | Analysis Start  | Analysis End  |   |  |  |
| Total Petrol<br>Sample N<br>SAMPLE: Air (<br>SAMPLED<br><u>Test</u><br>Moisture  | Note: Analysis performed by N<br>Cuttings<br>DBY: SG  | /licrobac Laboratories, Ind<br>La<br>Sample T<br><u>Result</u><br>34.8 %  | c-Erie Division.<br>b ID: 10112530-001B<br>ïme: 11/15/2010 18:39<br><u>Method</u><br>Moisture Calc.   | Grab  | <u>Analysis Start</u><br>11/17/10 9:00  | <u>Analvsis End</u><br>11/18/10   | IC-SA   |  |  |
| Total Petrol<br>Sample N<br>SAMPLE: Air (<br>SAMPLED<br><u>Test</u>  | Note: Analysis performed by N<br>Cuttings<br>DBY: SG  | /licrobac Laboratories, Ind<br>La<br>Sample T<br><u>Result</u>  | c-Erie Division.<br>b ID: 10112530-001B<br>ïme: 11/15/2010 18:39<br><u>Method</u>   | Grab<br><u>SLOQ</u><br>0.01   | Analysis Start  | Analysis End  |   |  |  |
| Total Petrol<br>Sample N<br>SAMPLE: Air (<br>SAMPLED<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH   | Note: Analysis performed by N<br>Cuttings<br>DBY: SG  | /licrobac Laboratories, Ind<br>La<br>Sample T<br><u>Result</u><br>34.8 %<br>< 0.1 %<br>7.96@24.3°C  | c-Erie Division.<br>b ID: 10112530-001B<br>ïme: 11/15/2010 18:39<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C   | Grab<br><u>SLOQ</u><br>0.01<br>0.1  | Analysis Start<br>11/17/10 9:00<br>11/17/10 9:05  | <u>Analvsis End</u><br>11/18/10<br>11/17/10   | IC-SA<br>IC-SA  |  |  |
| Total Petrol<br>Sample N<br>SAMPLE: Air (<br>SAMPLED<br><u>Test</u><br>Moisture<br>Free Liquid   | Note: Analysis performed by N<br>Cuttings<br>D BY: SG<br>Cuttings   | flicrobac Laboratories, Ind<br>La<br>Sample T<br><u>Result</u><br>34.8 %<br>< 0.1 %<br>7.96@24.3°C<br>La  | c-Erie Division.<br>b ID: 10112530-001B<br>ime: 11/15/2010 18:39<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>b ID: 10112530-001C  | Grab<br><u>SLOQ</u><br>0.01   | Analysis Start<br>11/17/10 9:00<br>11/17/10 9:05  | <u>Analvsis End</u><br>11/18/10<br>11/17/10   | IC-SA<br>IC-SA  |  |  |
| Total Petrol<br>Sample N<br>SAMPLE: Air (<br>SAMPLED<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: Air (<br>SAMPLED   | Note: Analysis performed by N<br>Cuttings<br>D BY: SG<br>Cuttings   | flicrobac Laboratories, Ind<br>La<br>Sample T<br><u>Result</u><br>34.8 %<br>< 0.1 %<br>7.96@24.3°C<br>La<br>Sample T  | c-Erie Division.<br>b ID: 10112530-001B<br>iime: 11/15/2010 18:39<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>b ID: 10112530-001C<br>iime: 11/15/2010 18:39   | Grab<br><u>SLOQ</u><br>0.01<br>0.1  | Analvsis Start<br>11/17/10 9:00<br>11/17/10 9:05<br>11/17/10 16:52  | <u>Analvsis End</u><br>11/18/10<br>11/17/10<br>11/17/10   | ic-sa<br>ic-sa<br>sg-sa   |  |  |
| Total Petrol<br>Sample N<br>SAMPLE: Air (<br>SAMPLED<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: Air (<br>SAMPLED<br><u>Test</u>  | Note: Analysis performed by N<br>Cuttings<br>D BY: SG<br>Cuttings   | flicrobac Laboratories, Ind<br>La<br>Sample T<br><u>Result</u><br>34.8 %<br>< 0.1 %<br>7.96@24.3°C<br>La<br>Sample T<br><u>Result</u>   | c-Erie Division.<br>b ID: 10112530-001B<br>ime: 11/15/2010 18:39<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>b ID: 10112530-001C<br>ime: 11/15/2010 18:39<br><u>Method</u>  | Grab<br><u>SLOQ</u><br>0.01<br>0.1<br>Grab<br><u>SLOQ</u>   | Analysis Start<br>11/17/10 9:00<br>11/17/10 9:05<br>11/17/10 16:52<br>Analysis Start  | Analvsis End<br>11/18/10<br>11/17/10<br>11/17/10<br>Analvsis End  | IC-SA<br>IC-SA<br>SG-SA   |  |  |
| Total Petrol<br>Sample N<br>SAMPLE: Air (<br>SAMPLED<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: Air (<br>SAMPLE)<br><u>Test</u><br>Sodium  | Note: Analysis performed by N<br>Cuttings<br>D BY: SG<br>Cuttings   | flicrobac Laboratories, Ind<br>La<br>Sample T<br><u>Result</u><br>34.8 %<br>< 0.1 %<br>7.96@24.3°C<br>La<br>Sample T<br><u>Result</u><br>294 mg/Kg-dry  | C-Erie Division.<br>b ID: 10112530-001B<br>Time: 11/15/2010 18:39<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>b ID: 10112530-001C<br>Time: 11/15/2010 18:39<br><u>Method</u><br>EPA 6010B   | Grab<br><u>SLOQ</u><br>0.01<br>0.1<br>Grab<br><u>SLOQ</u><br>132  | <u>Analvsis Start</u><br>11/17/10 9:00<br>11/17/10 9:05<br>11/17/10 16:52<br><u>Analvsis Start</u><br>11/18/10 9:00   | <u>Analvsis End</u><br>11/18/10<br>11/17/10<br>11/17/10<br><u>Analvsis End</u><br>11/18/10  | IC-SA<br>IC-SA<br>SG-SA<br><u>Analyst*</u><br>GSR-CV                                    |  |  |
| Total Petrol<br>Sample N<br>SAMPLE: Air (<br>SAMPLED<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: Air (<br>SAMPLED<br><u>Test</u>  | Note: Analysis performed by N<br>Cuttings<br>BY: SG<br>Cuttings<br>BY: SG   | flicrobac Laboratories, Ind<br>La<br>Sample T<br><u>Result</u><br>34.8 %<br>< 0.1 %<br>7.96@24.3°C<br>La<br>Sample T<br><u>Result</u>   | c-Erie Division.<br>b ID: 10112530-001B<br>ime: 11/15/2010 18:39<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>b ID: 10112530-001C<br>ime: 11/15/2010 18:39<br><u>Method</u>  | Grab<br><u>SLOQ</u><br>0.01<br>0.1<br>Grab<br><u>SLOQ</u>   | Analysis Start<br>11/17/10 9:00<br>11/17/10 9:05<br>11/17/10 16:52<br>Analysis Start  | Analvsis End<br>11/18/10<br>11/17/10<br>11/17/10<br>Analvsis End  | IC-SA<br>IC-SA<br>SG-SA<br><u>Analvst *</u><br>GSR-CV<br>HDP-CV                         |  |  |
| Total Petrol<br>Sample N<br>SAMPLE: Air (<br>SAMPLED<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: Air (<br>SAMPLE: Air (<br>SAMPLED<br><u>Test</u><br>Sodium<br>Chloride<br>Percent Mo   | Note: Analysis performed by N<br>Cuttings<br>D BY: SG<br>Cuttings<br>D BY: SG   | Alicrobac Laboratories, Ind<br>La<br>Sample T<br><u>Result</u><br>34.8 %<br>< 0.1 %<br>7.96@24.3°C<br>La<br>Sample T<br><u>Result</u><br>294 mg/Kg-dry<br>1030 mg/Kg-dry<br>34.8 %  | C-Erie Division.<br>b ID: 10112530-001B<br>Time: 11/15/2010 18:39<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>b ID: 10112530-001C<br>Time: 11/15/2010 18:39<br><u>Method</u><br>EPA 6010B<br>EPA 300.0<br>SM2540G   | Grab<br><u>SLOQ</u><br>0.01<br>0.1<br>Grab<br><u>SLOQ</u><br>132<br>74.8  | <u>Analysis Start</u><br>11/17/10 9:00<br>11/17/10 9:05<br>11/17/10 16:52<br><u>Analysis Start</u><br>11/18/10 9:00<br>11/18/10 15:13   | Analvsis End<br>11/18/10<br>11/17/10<br>11/17/10<br><u>Analvsis End</u><br>11/18/10<br>11/19/10   | IC-SA<br>IC-SA<br>SG-SA<br><u>Analyst*</u><br>GSR-CV                                    |  |  |
| Total Petrol<br>Sample N<br>SAMPLE: Air (<br>SAMPLED<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: Air (<br>SAMPLE: Air (<br>SAMPLED<br><u>Test</u><br>Sodium<br>Chloride<br>Percent Mo   | Note: Analysis performed by N<br>Cuttings<br>BY: SG<br>Cuttings<br>BY: SG<br>isture<br>P Leachate of Air Cutting  | Alicrobac Laboratories, Ind<br>La<br>Sample T<br><u>Result</u><br>34.8 %<br>< 0.1 %<br>7.96@24.3°C<br>La<br>Sample T<br><u>Result</u><br>294 mg/Kg-dry<br>1030 mg/Kg-dry<br>34.8 %<br><b>s</b> La   | C-Erie Division.<br>b ID: 10112530-001B<br>Time: 11/15/2010 18:39<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>b ID: 10112530-001C<br>Time: 11/15/2010 18:39<br><u>Method</u><br>EPA 6010B<br>EPA 300.0  | Grab<br><u>SLOQ</u><br>0.01<br>0.1<br>Grab<br><u>SLOQ</u><br>132  | <u>Analysis Start</u><br>11/17/10 9:00<br>11/17/10 9:05<br>11/17/10 16:52<br><u>Analysis Start</u><br>11/18/10 9:00<br>11/18/10 15:13   | Analvsis End<br>11/18/10<br>11/17/10<br>11/17/10<br><u>Analvsis End</u><br>11/18/10<br>11/19/10   | IC-SA<br>IC-SA<br>SG-SA<br>Analvst *<br>GSR-CV<br>HDP-CV                                |  |  |
| Total Petrol<br>Sample N<br>SAMPLE: Air (<br>SAMPLED<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: Air (<br>SAMPLE: Air (<br>SAMPLED<br><u>Test</u><br>Sodium<br>Chloride<br>Percent Mo<br>SAMPLE: TCL<br>SAMPLED   | Note: Analysis performed by N<br>Cuttings<br>BY: SG<br>Cuttings<br>BY: SG<br>isture<br>P Leachate of Air Cutting  | Alicrobac Laboratories, Ind<br>La<br>Sample T<br><u>Result</u><br>34.8 %<br>< 0.1 %<br>7.96@24.3°C<br>La<br>Sample T<br><u>Result</u><br>294 mg/Kg-dry<br>1030 mg/Kg-dry<br>34.8 %<br><b>s</b> La<br>Sample T   | C-Erie Division.<br>b ID: 10112530-001B<br>Time: 11/15/2010 18:39<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>b ID: 10112530-001C<br>Time: 11/15/2010 18:39<br><u>Method</u><br>EPA 6010B<br>EPA 300.0<br>SM2540G<br>b ID: 10112530-001E<br>Time: 11/17/2010 8:00   | Grab<br><u>SLOQ</u><br>0.01<br>0.1<br>Grab<br><u>SLOQ</u><br>132<br>74.8  | <u>Analysis Start</u><br>11/17/10 9:00<br>11/17/10 9:05<br>11/17/10 16:52<br><u>Analysis Start</u><br>11/18/10 9:00<br>11/18/10 15:13<br>11/17/10 9:00  | Analvsis End<br>11/18/10<br>11/17/10<br>11/17/10<br><u>Analvsis End</u><br>11/18/10<br>11/19/10<br>11/18/10                               | IC-SA<br>IC-SA<br>SG-SA<br>Analvst*<br>GSR-CV<br>HDP-CV<br>IC-SA                        |  |  |
| Total Petrol<br>Sample N<br>SAMPLE: Air (<br>SAMPLE)<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: Air (<br>SAMPLE)<br><u>Test</u><br>Sodium<br>Chloride<br>Percent Mo<br>SAMPLE: TCL<br>SAMPLE]<br><u>Test</u>   | Note: Analysis performed by N<br>Cuttings<br>D BY: SG<br>Cuttings<br>D BY: SG<br>isture<br>P Leachate of Air Cutting<br>BY: SG                                    | Alicrobac Laboratories, Ind<br>La<br>Sample T<br><u>Result</u><br>34.8 %<br>< 0.1 %<br>7.96@24.3°C<br>La<br>Sample T<br><u>Result</u><br>294 mg/Kg-dry<br>1030 mg/Kg-dry<br>34.8 %<br>s La<br>Sample T<br><u>Result</u>   | C-Erie Division.<br>b ID: 10112530-001B<br>ime: 11/15/2010 18:39<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>b ID: 10112530-001C<br>ime: 11/15/2010 18:39<br><u>Method</u><br>EPA 6010B<br>EPA 300.0<br>SM2540G<br>b ID: 10112530-001E<br>ime: 11/17/2010 8:00<br><u>Method</u>   | Grab<br><u>SLOQ</u><br>0.01<br>0.1<br>Grab<br><u>SLOQ</u><br>132<br>74.8<br>Grab<br><u>SLOQ</u>                             | <u>Analysis Start</u><br>11/17/10 9:00<br>11/17/10 9:05<br>11/17/10 16:52<br><u>Analysis Start</u><br>11/18/10 9:00<br>11/18/10 15:13<br>11/17/10 9:00<br><u>Analysis Start</u>               | <u>Analvsis End</u><br>11/18/10<br>11/17/10<br>11/17/10<br><u>Analvsis End</u><br>11/18/10<br>11/19/10<br>11/18/10<br><u>Analysis End</u> | IC-SA<br>IC-SA<br>SG-SA<br>Analyst *<br>IC-SA<br>Analyst *                              |  |  |
| Total Petrol<br>Sample N<br>SAMPLE: Air (<br>SAMPLED<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: Air (<br>SAMPLE: Air (<br>SAMPLED<br><u>Test</u><br>Sodium<br>Chloride<br>Percent Mo<br>SAMPLE: TCL<br>SAMPLED<br><u>Test</u><br>Mercury - Test  | Note: Analysis performed by N<br>Cuttings<br>BY: SG<br>Cuttings<br>BY: SG<br>isture<br>P Leachate of Air Cutting<br>BY: SG<br>CLP extracted                       | Alicrobac Laboratories, Ind<br>La<br>Sample T<br><u>Result</u><br>34.8 %<br>< 0.1 %<br>7.96@24.3°C<br>La<br>Sample T<br><u>Result</u><br>294 mg/Kg-dry<br>1030 mg/Kg-dry<br>34.8 %<br><b>s</b> La<br>Sample T<br><u>Result</u><br>< 0.0008 mg/L   | C-Erie Division.<br>b ID: 10112530-001B<br>Time: 11/15/2010 18:39<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>b ID: 10112530-001C<br>Time: 11/15/2010 18:39<br><u>Method</u><br>EPA 6010B<br>EPA 300.0<br>SM2540G<br>b ID: 10112530-001E<br>Time: 11/17/2010 8:00<br><u>Method</u><br>EPA 7470A   | Grab<br><u>SLOQ</u><br>0.01<br>0.1<br>Grab<br><u>SLOQ</u><br>74.8<br>Grab<br><u>SLOQ</u><br>0.0008                          | Analysis Start<br>11/17/10 9:00<br>11/17/10 9:05<br>11/17/10 16:52<br>Analysis Start<br>11/18/10 9:00<br>11/18/10 9:00<br>11/18/10 9:00<br>Analysis Start<br>11/17/10 9:00                    | Analvsis End<br>11/18/10<br>11/17/10<br>11/17/10<br>11/17/10<br>Analvsis End<br>11/18/10<br>11/18/10<br>Analysis End<br>11/18/10          | IC-SA<br>IC-SA<br>SG-SA<br>Analyst *<br>GSR-CV<br>HDP-CV<br>IC-SA<br>Analyst *<br>KW-CV |  |  |
| Total Petrol<br>Sample N<br>SAMPLE: Air (<br>SAMPLED<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: Air (<br>SAMPLE: Air (<br>SAMPLE)<br><u>Test</u><br>Sodium<br>Chloride<br>Percent Mo<br>SAMPLE: TCL<br>SAMPLED<br><u>Test</u><br>Mercury - Te<br>Arsenic - TC                                | Note: Analysis performed by N<br>Cuttings<br>DBY: SG<br>Cuttings<br>BY: SG<br>BY: SG<br>P Leachate of Air Cutting<br>BY: SG<br>CLP extracted<br>CLP extracted     | Alicrobac Laboratories, Ind<br>La<br>Sample T<br><u>Result</u><br>34.8 %<br>< 0.1 %<br>7.96@24.3°C<br>La<br>Sample T<br><u>Result</u><br>294 mg/Kg-dry<br>1030 mg/Kg-dry<br>34.8 %<br><b>s</b> La<br>Sample T<br><u>Result</u><br>< 0.0008 mg/L<br>< 0.500 mg/L                                   | C-Erie Division.<br>b ID: 10112530-001B<br>Time: 11/15/2010 18:39<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>b ID: 10112530-001C<br>Time: 11/15/2010 18:39<br><u>Method</u><br>EPA 6010B<br>EPA 300.0<br>SM2540G<br>b ID: 10112530-001E<br>Time: 11/17/2010 8:00<br><u>Method</u><br>EPA 7470A<br>EPA 6010B  | Grab<br><u>SLOQ</u><br>0.01<br>0.1<br>Grab<br><u>SLOQ</u><br>Grab<br><u>SLOQ</u><br>0.0008<br>0.500                         | Analysis Start<br>11/17/10 9:00<br>11/17/10 9:05<br>11/17/10 16:52<br>Analysis Start<br>11/18/10 9:00<br>11/18/10 15:13<br>11/17/10 9:00<br>Analysis Start<br>11/17/10 9:00<br>11/18/10 13:15 | Analvsis End<br>11/18/10<br>11/17/10<br>11/17/10<br>11/17/10<br>Analvsis End<br>11/18/10<br>11/18/10<br>11/18/10<br>11/18/10<br>11/18/10  | Analvst*<br>GSR-CV<br>HDP-CV<br>IC-SA   |  |  |
| Total Petrol<br>Sample N<br>SAMPLE: Air (<br>SAMPLED<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: Air (<br>SAMPLE: Air (<br>SAMPLE)<br><u>Test</u><br>Sodium<br>Chloride<br>Percent Mo<br>SAMPLE: TCL<br>SAMPLE: TCL<br>SAMPLED<br><u>Test</u><br>Mercury - T(<br>Arsenic - TC)<br>Barium - TC | Note: Analysis performed by N<br>Cuttings<br>BY: SG<br>Cuttings<br>BY: SG<br>BY: SG<br>BY: SG<br>CLP extracted<br>CLP extracted<br>CLP extracted<br>CLP extracted | Alicrobac Laboratories, Ind<br>La<br>Sample T<br><u>Result</u><br>34.8 %<br>< 0.1 %<br>7.96@24.3°C<br>La<br>Sample T<br><u>Result</u><br>294 mg/Kg-dry<br>1030 mg/Kg-dry<br>1030 mg/Kg-dry<br>34.8 %<br><b>s</b> La<br>Sample T<br><u>Result</u><br>< 0.0008 mg/L<br>< 0.500 mg/L<br>< 10.00 mg/L | C-Erie Division.<br>b ID: 10112530-001B<br>Time: 11/15/2010 18:39<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9095A<br>EPA 9045C<br>b ID: 10112530-001C<br>Time: 11/15/2010 18:39<br><u>Method</u><br>EPA 6010B<br>EPA 300.0<br>SM2540G<br>b ID: 10112530-001E<br>Time: 11/17/2010 8:00<br><u>Method</u><br>EPA 7470A<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B | Grab<br><u>SLOQ</u><br>0.01<br>0.1<br>Grab<br><u>SLOQ</u><br>74.8<br>Grab<br><u>SLOQ</u><br>0.0008                          | Analysis Start<br>11/17/10 9:00<br>11/17/10 9:05<br>11/17/10 16:52<br>Analysis Start<br>11/18/10 9:00<br>11/18/10 9:00<br>11/18/10 9:00<br>Analysis Start<br>11/17/10 9:00                    | Analvsis End<br>11/18/10<br>11/17/10<br>11/17/10<br>11/17/10<br>Analvsis End<br>11/18/10<br>11/18/10<br>Analysis End<br>11/18/10          | Analyst*<br>GSR-CV<br>HDP-CV<br>IC-SA<br>Analyst*<br>KW-CV<br>GSR-CV<br>GSR-CV          |  |  |
| Total Petrol<br>Sample N<br>SAMPLE: Air (<br>SAMPLED<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: Air (<br>SAMPLE: Air (<br>SAMPLE)<br><u>Test</u><br>Sodium<br>Chloride<br>Percent Mo<br>SAMPLE: TCL<br>SAMPLED<br><u>Test</u><br>Mercury - TC<br>Arsenic - TC<br>Barium - TC<br>Cadmium - TC | Note: Analysis performed by N<br>Cuttings<br>DBY: SG<br>Cuttings<br>BY: SG<br>BY: SG<br>P Leachate of Air Cutting<br>BY: SG<br>CLP extracted<br>CLP extracted     | Alicrobac Laboratories, Ind<br>La<br>Sample T<br><u>Result</u><br>34.8 %<br>< 0.1 %<br>7.96@24.3°C<br>La<br>Sample T<br><u>Result</u><br>294 mg/Kg-dry<br>1030 mg/Kg-dry<br>34.8 %<br><b>s</b> La<br>Sample T<br><u>Result</u><br>< 0.0008 mg/L<br>< 0.500 mg/L                                   | C-Erie Division.<br>b ID: 10112530-001B<br>Time: 11/15/2010 18:39<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>b ID: 10112530-001C<br>Time: 11/15/2010 18:39<br><u>Method</u><br>EPA 6010B<br>EPA 300.0<br>SM2540G<br>b ID: 10112530-001E<br>Time: 11/17/2010 8:00<br><u>Method</u><br>EPA 7470A<br>EPA 6010B  | Grab<br><u>SLOQ</u><br>0.01<br>0.1<br>Grab<br><u>SLOQ</u><br>132<br>74.8<br>Grab<br><u>SLOQ</u><br>0.0008<br>0.500<br>10.00 | Analysis Start<br>11/17/10 9:00<br>11/17/10 9:05<br>11/17/10 16:52<br>Analysis Start<br>11/18/10 9:00<br>11/18/10 15:13<br>11/17/10 9:00<br>Analysis Start<br>11/17/10 9:00<br>11/18/10 13:15 | Analvsis End<br>11/18/10<br>11/17/10<br>11/17/10<br>Analvsis End<br>11/18/10<br>11/18/10<br>11/18/10<br>11/18/10<br>11/18/10<br>11/18/10  | Analvst*<br>GSR-CV<br>HDP-CV<br>IC-SA   |  |  |

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 \_\_\_\_\_ Davis \_\_\_\_\_ DATE: \_\_\_\_\_\_DATE: \_\_\_\_\_\_

| LAB ID: 08-00380<br>LAB ID: 39-00401                           |                                  | 2566 Penr    | Analytics, Ir<br>Division<br>Isylvania Ave.<br>PA 18840 | IC.       | Work Order: 10112530 |          |            |  |  |
|--|----------------------------------|--------------|---|-----------|----------------------|----------|------------|--|--|
|  |                                  |              | 0) 888-0169<br>0) 888-0717                              |           |                      |          |            |  |  |
| SEND DAT   | A TO:                            |              |   |           |                      |          |            |  |  |
| NAME:  | Steve Gridley                    |              |   | WO#:      | 10112                | 530      |            |  |  |
| COMPANY: Talisman Energy USA,<br>ADDRESS: 337 Daniel Zenker Dr |                                  | nc.          | э.  |           |                      |          |            |  |  |
| ADDRESS:   | Horseheads, NY 14845             |              |   | PO#:      | AF767                | -<br>    |            |  |  |
|  | · .                              |              |   |           |                      | 25       |            |  |  |
| PHONE:<br>FAX:   | (607) 731-0145<br>(607) 562-4001 | TEST         | REPORT  | PWS       | ID#                  |          |            |  |  |
| 03-  | 045                              |              |   |           |                      |          |            |  |  |
| RECEIVED   | FOR LAB BY: SCP                  | DATE: 1      | 1/16/2010 16:40   |           |                      | Р        | age 2 of 2 |  |  |
| Lead - T   | CLP 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/ | 1 <b>8/10</b> 13:15  | 11/18/10 | GSR-CV     |  |  |
| Seleniun   | n - TCLP extracted               | < 0.500 mg/L | EPA 6010B   | 0.500 11/ | 18/10 13:15          | 11/18/10 | GSR-CV     |  |  |
| Silver - T   | CLP extracted                    | < 0.100 mg/L | EPA 6010B   | 0.100 11/ | 18/10 13:15          | 11/18/10 | GSR-CV     |  |  |
| Zinc - TC  | CLP extracted                    | 2.15 mg/L    | EPA 6010B   | 0.200 11/ | 18/10 13:15          | 11/18/10 | GSR-CV     |  |  |

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

| UTAIN OF CUSTODI | <b>CHAIN</b> | OF | CUSTODY |  |
|------------------|--------------|----|---------|--|
|------------------|--------------|----|---------|--|

| REPORT TO: Talisman / UEG       | ]    |             |                    |                  |       |              |   |                        |                              |
|---------------------------------|------|-------------|--------------------|------------------|-------|--------------|---|------------------------|------------------------------|
| geowetlands@aol.com             | 1    |             |                    |                  |       |              | W/O#: 10112530  | ARE SPECIAL DETECT     |                              |
|                                 | REF  | RIGER       | ATE S              | AMPLE            | Es    |              | RESULTS ARE BEING USED FOR:   | NEEDED: YES /          | _                            |
|                                 |      | ER CO       |                    |                  |       |              |   |                        |                              |
| 0.01/74.07                      | -    |             |                    |                  |       | / GV         | V GROUND WATER SO SOIL  |                        |                              |
| CONTACT Steve Gridley           | · ·  | TRANS       | SPORT              |                  |       | / sv<br>w    | WASTE WATER OTHER   |                        | NO                           |
| PH# 607-731-0145                | ].   | T           | -                  |                  |       |              | DEIONIZED WATER DI DISTILLED WATER PERSONAL OTHER                                       | _ IF YES, PLEASE ATTAC | H REQUIREMENTS               |
| FAX#                            |      | ABOR        |                    | r                |       | 10           | H HYDROCHLORIC ACID OH SODIUM HYDROXIDE<br>S SULFURIC ACID AS ASCORBIC ACID             |                        |                              |
| BILL TO: Talisman               | _    | WITH        |                    | ,                | / ,   | / 🛓          | N NITRIC ACID AC ACETIC ACID<br>SO3 SODIUM SULFITE NH, AMMONIUM CHLORIDE                |                        |                              |
|                                 |      |             | -7                 | /                |       | ~~/<br>~~/   | This SODIUM THIOSULFATE ZN ZINC ACETATE   |                        |                              |
| PO# AF 78489                    | _    |             | /                  | بر ا             | /8    | § / 3        | - NONE Hg MERCURIC CHLORIDE   | F Pleas                | e fill out all               |
| PROJECT DESCRIPTION             |      |             |                    |                  | jui j |              | イム An incomplete chain of custody may delay the ろう<br>を processing of your sample(s). 名 | applic                 | able areas                   |
| SAMPLER SIGNATURE / AFFILIATION | ] /  | 13          | \$                 | 4                | 14    | 3            |   |                        | mpletely                     |
| CONTAINER SAMPLING POINT        |      | The Sampled | SALLE OF SALLELING | SALEMATRIX       | 10    | PRESS MITALS | An incomplete chain of custody may delay the<br>processing of your sample(s).           | LAB USE                | ONLY                         |
| 1 Air Cuttings                  | 1/15 | 1839        | 50                 | C                | S     | N            | ТРН   |                        |                              |
| 2                               |      |             |                    |                  |       |              | pH, Chlorides, Sodium   |                        |                              |
| 3                               |      |             |                    |                  |       |              | TCLP 8 RCRA Metals + Cu, Ni, Zn   |                        |                              |
| 4 A - TPH                       |      | 1           |                    |                  |       |              | Free Liquids / % Moisture   |                        |                              |
| 5 B- pH free liguid, 1. miost   | ire  | 1           |                    |                  |       |              |   |                        |                              |
| 6 c- Anions, metals             |      |             |                    |                  |       |              | Perform BTEX ONLY IF the TPH  |                        |                              |
| 7 D- TUTAL Sample               |      |             |                    |                  |       |              | exceeds 100,000 mg/Kg   |                        |                              |
| 8 E- TCLP metals.               |      |             |                    |                  |       |              |   |                        |                              |
| 9                               |      |             |                    |                  |       |              | <u>72</u> HOUR TURNAROUND   |                        |                              |
| 10                              |      | T           |                    |                  |       |              | DAY TURNAROUND  |                        |                              |
| 11                              |      |             |                    |                  |       |              |   |                        |                              |
|                                 |      |             |                    | 3/2001<br>3/2001 |       |              |   |                        |                              |
|                                 |      |             |                    |                  |       |              |   |                        |                              |
| RELITION SHED BY:               |      | [           | DATE:              | GI               | 0     | TIME:        | SYO RECEIVED BY:  | DATE:                  | TIME:                        |
| RELINQUISHED BY:                |      |             | DATE:              | <u> </u>         |       | TIME:        | RECEIVED BY:  | DATE:                  | TIME:                        |
| RELINQUISHED BY:                |      | [           | DATE:              |                  |       | TIME:        | RECEIVED BY: SOLA LEWY  | DATE: 116/10           | TIME:                        |
|                                 |      |             |                    |                  |       |              | OMGAU   | Ad Gr                  | raphics Printing 570-888-068 |

| LAB ID: 08-00380<br>LAB ID: 39-00401  |   | Benchmark Analytics, Inc.<br>Eastern Division<br>2566 Pennsylvania Ave.<br>Sayre, PA 18840 |                                     |                         | C.<br>Work Order: 10120827                         |  |                            |  |
|---|---|--|-------------------------------------|-------------------------|--|--|----------------------------|--|
|   |   |  | (570) 888-0169<br>(570) 888-0717    |                         |  |  |                            |  |
| SEND DATA   | TO:   |  |                                     |                         |  |  |                            |  |
| NAME:   | Steve Gridley   |  |                                     | W                       | O#: 1012   | 0827   |                            |  |
| COMPANY:  |   | С.   |                                     |                         | 05. 1.4  |  |                            |  |
| ADDRESS:  | 337 Daniel Zenker Dr  |  |                                     | PA                      | GE: 1 of '   | 1  |                            |  |
|   | Horseheads, NY 14845  |  |                                     | PC                      | )#: AF78   | 3489   |                            |  |
| PHONE:  | (607) 731-0145  | TE   | ST REPORT                           | P٧                      | VS ID#   |  |                            |  |
| FAX:  | (607) 562-4001  |  |                                     |                         |  |  |                            |  |
| 03-0  | 045   | 1  | · ·                                 |                         |  |  |                            |  |
| RECEIVED F  | FOR LAB BY: CMS   | DATE   | E: 12/06/2010 15:40                 |                         |  | Pa   | age 1 of 1                 |  |
| SAMPLE: In  | v Cuttings + Omni   |  | Lab ID: 10120827-001A               | Compo                   | site   |  |                            |  |
|   | ED BY: SG   | Sam  | ple Time: 12/06/2010 11:22          | •                       |  |  |                            |  |
| Test  |   | <u>Result</u>  | Method                              | <u>sloq</u>             | Analysis Start                                     | Analysis End                                 | Analyst *                  |  |
|   | roleum Hydrocarbons   | 22800 mg/Kg  | EPA 9071                            |                         | 12/08/10 14:20                                     | 12/08/10                                     | Analyst                    |  |
|   | e Note: Analysis performed by N   |  |                                     |                         |  |  |                            |  |
| SAMPLE: In  | v Cuttings + Omni   | · · · · · · · · · · · · · · · · · · ·  | Lab ID: 10120827-001B               | Compo                   | site   |  |                            |  |
|   | ED BY: SG   | Sam  | ple Time: 12/06/2010 11:22          | •                       |  |  |                            |  |
| <b>T</b> 4  |   | Decult   | Billethead                          | <u>SLOQ</u>             | Analysia Clark                                     | Archiola Ead                                 | A                          |  |
| <u>Test</u><br>Moisture   | ·   | <u>Result</u><br>33.1 %  | <u>Method</u><br>Moisture Calc.     | 0.01                    | Analysis Start<br>12/06/10 17:30                   | Analysis End<br>12/07/10                     | IC-SA                      |  |
| Free Liqui  | id  | < 0.1 %  | EPA 9095A                           | 0.1                     | 12/06/10 17:00                                     | 12/06/10                                     | IC-SA                      |  |
| pH  |   | 6.07@21.7°C  | EPA 9045C                           | 0.1                     | 12/07/10 14:20                                     | 12/07/10                                     | MED-SA                     |  |
|   |   |  | Lab ID: 10120827-001E               | Compo                   |  |  |                            |  |
|   | CLP Leachate of Inv Cutting<br>ED BY: SG  |  | ple Time: 12/07/2010 8:00           | Compos                  | ыс   |  |                            |  |
|   |   |  |                                     | SLOQ                    |  |  |                            |  |
| Test  | ·   | Result   | Method                              |                         | 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                      |  |
| •   | TCLP extracted  | < 0.500 mg/L   | EPA 6010B                           | 0.500                   | 12/08/10 12:15                                     | 12/08/10                                     | GSR-CV                     |  |
| Arsenic -   | TCLP extracted  | < 10.00 mg/L   | EPA 6010B                           | 10.00                   | 12/08/10 12:15                                     | 12/08/10                                     | GSR-CV                     |  |
| Arsenic -<br>Barium - 1   |   |  | EPA 6010B                           | 0.100                   | 12/08/10 12:15                                     | 12/08/10                                     | GSR-CV                     |  |
| Arsenic -<br>Barium -<br>Cadmium  | - TCLP extracted  | < 0.100 mg/L   |                                     | 0 500                   | 4000000 40-40                                      |  | 000 01                     |  |
| Arsenic -<br>Barium -<br>Cadmium<br>Chromium  | n - TCLP extracted<br>n - TCLP extracted  | < 0.500 mg/L   | EPA 6010B                           | 0.500                   | 12/08/10 12:15                                     | <b>12/08/</b> 10                             | GSR-CV                     |  |
| Arsenic -<br>Barium -<br>Cadmium<br>Chromium<br>Copper -  | n - TCLP extracted<br>n - TCLP extracted<br>TCLP extracted                                    | < 0.500 mg/L<br>< 0.100 mg/L   | EPA 6010B                           | 0.100                   | 12/08/10 12:15                                     | 12/08/10<br>12/08/10                         | GSR-CV                     |  |
| Arsenic -<br>Barium -<br>Cadmium<br>Chromium<br>Copper -<br>Lead - TC                             | n - TCLP extracted<br>n - TCLP extracted<br>TCLP extracted<br>CLP extracted                   | < 0.500 mg/L<br>< 0.100 mg/L<br>< 0.500 mg/L   | EPA 6010B<br>EPA 6010B              | 0.100<br>0.500          | 12/08/10 12:15<br>12/08/10 12:15                   | 12/08/10<br>12/08/10<br>12/08/10             | GSR-CV<br>GSR-CV           |  |
| Arsenic -<br>Barium -<br>Cadmium<br>Chromium<br>Copper -<br>Lead - TC<br>Nickel - T               | n - TCLP extracted<br>n - TCLP extracted<br>TCLP extracted<br>CLP extracted<br>TCLP extracted | < 0.500 mg/L<br>< 0.100 mg/L<br>< 0.500 mg/L<br>< 0.100 mg/L                               | EPA 6010B<br>EPA 6010B<br>EPA 6010B | 0.100<br>0.500<br>0.100 | 12/08/10 12:15<br>12/08/10 12:15<br>12/08/10 12:15 | 12/08/10<br>12/08/10<br>12/08/10<br>12/08/10 | GSR-CV<br>GSR-CV<br>GSR-CV |  |
| Arsenic -<br>Barium - 1<br>Cadmium<br>Chromium<br>Copper -<br>Lead - TC<br>Nickel - T<br>Selenium | n - TCLP extracted<br>n - TCLP extracted<br>TCLP extracted<br>CLP extracted                   | < 0.500 mg/L<br>< 0.100 mg/L<br>< 0.500 mg/L   | EPA 6010B<br>EPA 6010B              | 0.100<br>0.500          | 12/08/10 12:15<br>12/08/10 12:15                   | 12/08/10<br>12/08/10<br>12/08/10             | GSR-CV<br>GSR-CV           |  |

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

Carrie M. Davis MANAGER

DATE: <u>12/10/2010</u>

PAGE 1 OF 1 CHAIN OF CUSTODY **REPORT TO:** Talisman / UEG W/O#: 10120827 ARE SPECIAL DETECTION LIMITS geowetlands@aol.com NEEDED: YES / 7 NO REFRIGERATE SAMPLES RESULTS ARE BEING USED FOR: IF YES, PLEASE ATTACH NYDEC AFTER COLLECTION IZ PADEP NYDOH ึกพ DRINKING WATER SL SLUDGE IS A QC PACKAGE NEEDED? GROUND WATER SO SOL G₩ CONTACT SURFACE WATER HZ HAZARDOUS SW LANDFILL Steve Gridley YES ZINO TRANSPORT ww WASTE WATER OTHER PERSONAL OTHER DISTILLED WATER DEIONIZED WATER DI 607-731-0145 то DE IF YES, PLEASE ATTACH REQUIREMENTS PH# SAMPLE TYPE - GRAB/COMPOSITE PRESERVATIVE ADDED ON RECEIPT F LABORATORY HYDROCHLORIC ACID SODIUM HYDROXIDE ′н OH FAX# SULFURIC ACID S AS ASCORBIC ACID IN COOLER BILL TO: Talisman Ν NITRIC ACID AC ACETIC ACID WITH ICE COMPOSITED ON RECEIPT SO<sub>1</sub> SODIUM SULFITE NH, AMMONIUM CHLORIDE SODIUM THIOSULFATE Thio ΖN ZINC ACETATE The of Suntung NONE MERCURIC CHLORIDE Ha F78489 SAMPLE MUTRIX Please fill out all PRESERVATIVE Date Sampled 03-045 An incomplete chain of custody may delay the applicable areas processing of your sample(s). SAMPLER SIGNATURE / AFFILIATION completely SAMPLING POINT CONTAINER ANALYSIS TO BE PERFORMED LAB USE ONLY (PER CONTAINER) 12/6 1122 50 56 N Inv Cuttings + Own i 6 TPH pН 2 TCLP 8 RCRA Metals + Cu, Ni, Zn 3 Free Liquids / % Moisture 4 A. TPH 5 Perform BTEX ONLY IF the TPH B- pH, Free liquid, 1. moisture C- Anions, metals 6 exceeds 100,000 mg/Kg 7 D- Total Sample 8 HOUR TURNAROUND AW F-TCLP metals. 9 DAY TURNAROUND 10 11 LAB USE ONLY TEMPERATURE UPONIRECEIPT VERED RELINOVISHED BY: DATE: TIME: RECEIVED BY: DATE: TIME: 540 1216110 1 P 1 RECEIVED BY: RELINQUISHED BY DATE: TIME: DATE: TIME: 1 1 1 TIME: RECEIVED BY ME: (e10 **RELINQUISHED BY:** DATE: Ad Graphics Printing 578-

| PA ID #: 08-00380<br>NY ID # 11216  | 2566 Penr  | Analytics, In<br>n Division<br>nsylvania Ave.<br>PA 18840  | IC.   | C.<br>Work Order: 10121740  |   |   |  |  |
|---|--|--|---|---|---|---|--|--|
|   |  | 70) 888-0169<br>70) 888-0717   |   |   |   |   |  |  |
| SEND DATA TO:   |  |  |   |   |   |   |  |  |
| NAME: Dina Brown  |  |  | w   | O#: 1012  | 21740   |   |  |  |
| COMPANY: Talisman Energy USA  | , Inc.   |  |   |   | 0   |   |  |  |
| ADDRESS: 337 Daniel Zenker Dr   | 47   |  | P7  | AGE: 1 of   | 3   |   |  |  |
| Horseheads, NY 148  | ł0   |  | P   | D#: AF78  | 3489  |   |  |  |
| PHONE: (607) 562-4000<br>FAX: (607) 562-4001  | TEST   | REPORT   | P۱  | WS ID#  |   |   |  |  |
| FAX: (607) 562-4001   |  |  |   |   |   |   |  |  |
| 03-045  |  |  |   |   |   |   |  |  |
| RECEIVED FOR LAB BY: RML  | DATE: 1  | 2/09/2010 15:45  |   |   | Pa  | ige 1 of 3  |  |  |
| SAMPLE: Inv. Cuttings   | la   | b ID: 10121740-001A  | Grab  |   |   |   |  |  |
| SAMPLED BY: SG  | Sample T   | 0.05   |   |   |   |   |  |  |
| Test  |  |  | <u>SLOQ</u>   |   | A subjects Frank  |   |  |  |
|   |  |  |   |   |   |   |  |  |
| Test  | Result<br>Neg ASIS °F  | Method   |   | Analysis Start  | Analysis End  | Analyst *   |  |  |
| Ignitability  | Neg ASIS °F  | <u>Method</u><br>SW846 1030  |   | Analysis Start<br>12/15/10 13:30  | <u>Analysis End</u><br>12/15/10   | <u>Analyst *</u>  |  |  |
| Ignitability<br>Sample Note: Analysis performed t   | Neg ASIS °F<br>oy QC Laboratories  | SW846 1030   |   |   |   | <u>Analyst *</u>  |  |  |
| Ignitability<br>Sample Note: Analysis performed t<br>SAMPLE: Inv. Cuttings  | Neg ASIS °F<br>by QC Laboratories<br>Lai   | SW846 1030   | Grab  |   |   | <u>Analyst *</u>  |  |  |
| Ignitability<br>Sample Note: Analysis performed t   | Neg ASIS °F<br>by QC Laboratories<br>Lai   | SW846 1030   | Grab  |   |   | <u>Analyst *</u>  |  |  |
| Ignitability<br>Sample Note: Analysis performed to<br>SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u>  | Neg ASIS °F<br>by QC Laboratories<br>Lai   | SW846 1030   |   |   |   |   |  |  |
| Ignitability<br>Sample Note: Analysis performed to<br>SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Cyanide, Reactive   | Neg ASIS °F<br>by QC Laboratories<br>Lat<br>Sample T<br><u>Result</u><br>0.2 mg/Kg   | SW846 1030<br>b ID: 10121740-001C<br>ime: 12/08/2010 20:00   |   | 12/15/10 13:30  | 12/15/10  |   |  |  |
| Ignitability<br>Sample Note: Analysis performed to<br>SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u>  | Neg ASIS °F<br>by QC Laboratories<br>Lal<br>Sample T<br><u>Result</u>  | SW846 1030<br>b ID: 10121740-001C<br>ime: 12/08/2010 20:00<br><u>Method</u>  | <u>SLOQ</u>   | 12/15/10 13:30  | 12/15/10  | Analyst *   |  |  |
| Ignitability<br>Sample Note: Analysis performed to<br>SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Cyanide, Reactive   | Neg ASIS °F<br>by QC Laboratories<br>Lat<br>Sample T<br><u>Result</u><br>0.2 mg/Kg<br>1300 mg/Kg   | SW846 1030<br>b ID: 10121740-001C<br>ime: 12/08/2010 20:00<br><u>Method</u><br>SW 7.3.3.2  | <u>SLOQ</u><br>0.2  | 12/15/10 13:30<br>Analysis Start<br>12/13/10 8:56   | 12/15/10<br>Analysis End<br>12/14/10  | Analvst *<br>HDP-CV   |  |  |
| Ignitability<br>Sample Note: Analysis performed to<br>SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Cyanide, Reactive<br>Reactive Sulfide   | Neg ASIS °F<br>by QC Laboratories<br>Lat<br>Sample T<br>0.2 mg/Kg<br>1300 mg/Kg<br>Lat   | SW846 1030<br>b ID: 10121740-001C<br>ime: 12/08/2010 20:00<br><u>Method</u><br>SW 7.3.3.2<br>SW846 7.3   | SLOQ<br>0.2<br>16<br>Grab   | 12/15/10 13:30<br>Analysis Start<br>12/13/10 8:56   | 12/15/10<br>Analysis End<br>12/14/10  | Analvst *<br>HDP-CV   |  |  |
| Ignitability<br>Sample Note: Analysis performed to<br>SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Cyanide, Reactive<br>Reactive Sulfide<br>SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG  | Neg ASIS °F<br>by QC Laboratories<br>Lat<br>Sample T<br>0.2 mg/Kg<br>1300 mg/Kg<br>Lat<br>Sample T   | SW846 1030<br>b ID: 10121740-001C<br>ime: 12/08/2010 20:00<br><u>Method</u><br>SW 7.3.3.2<br>SW846 7.3<br>b ID: 10121740-001D<br>ime: 12/08/2010 20:00   | <u>SLOQ</u><br>0.2<br>16  | 12/15/10 13:30<br>Analysis Start<br>12/13/10 8:56<br>12/14/10 12:30   | 12/15/10<br>Analysis End<br>12/14/10<br>12/14/10  | <u>Analvst *</u><br>HDP-CV<br>LTW-CV  |  |  |
| Ignitability<br>Sample Note: Analysis performed to<br>SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Cyanide, Reactive<br>Reactive Sulfide<br>SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u>   | Neg ASIS °F<br>by QC Laboratories<br>Lai<br>Sample T<br><u>Result</u><br>0.2 mg/Kg<br>1300 mg/Kg<br>Lai<br>Sample Tr<br><u>Result</u>  | SW846 1030<br>b ID: 10121740-001C<br>ime: 12/08/2010 20:00<br><u>Method</u><br>SW 7.3.3.2<br>SW846 7.3<br>b ID: 10121740-001D<br>ime: 12/08/2010 20:00<br><u>Method</u>  | SLOQ<br>0.2<br>16<br>Grab<br>SLOQ   | 12/15/10 13:30<br><u>Analysis Start</u><br>12/13/10 8:56<br>12/14/10 12:30<br><u>Analysis Start</u>   | 12/15/10<br>Analysis End<br>12/14/10<br>12/14/10<br>Analysis End  | Analvst *<br>HDP-CV<br>LTW-CV<br>Analvst *  |  |  |
| Ignitability<br>Sample Note: Analysis performed to<br>SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Cyanide, Reactive<br>Reactive Sulfide<br>SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG  | Neg ASIS °F<br>by QC Laboratories<br>Lat<br>Sample T<br>0.2 mg/Kg<br>1300 mg/Kg<br>Lat<br>Sample T   | SW846 1030<br>b ID: 10121740-001C<br>ime: 12/08/2010 20:00<br><u>Method</u><br>SW 7.3.3.2<br>SW846 7.3<br>b ID: 10121740-001D<br>ime: 12/08/2010 20:00   | SLOQ<br>0.2<br>16<br>Grab   | 12/15/10 13:30<br>Analysis Start<br>12/13/10 8:56<br>12/14/10 12:30   | 12/15/10<br>Analysis End<br>12/14/10<br>12/14/10  | <u>Analvst *</u><br>HDP-CV<br>LTW-CV<br><u>Analvst *</u><br>IC-SA   |  |  |
| Ignitability<br>Sample Note: Analysis performed to<br>SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Cyanide, Reactive<br>Reactive Sulfide<br>SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>% Solids<br>Total Volatile Solids  | Neg ASIS °F<br>ay QC Laboratories<br>Lai<br>Sample T<br><u>Result</u><br>0.2 mg/Kg<br>1300 mg/Kg<br>Lai<br>Sample Tr<br><u>Result</u><br>59.58 % Wght.<br>30.21 % Wght.  | SW846 1030<br>b ID: 10121740-001C<br>ime: 12/08/2010 20:00<br><u>Method</u><br>SW 7.3.3.2<br>SW846 7.3<br>b ID: 10121740-001D<br>ime: 12/08/2010 20:00<br><u>Method</u><br>SM2540B<br>EPA 160.4  | <u>SLOQ</u><br>0.2<br>16<br>Grab<br><u>SLOQ</u><br>0.10<br>0.01   | Analysis Start<br>12/13/10 13:30<br>Analysis Start<br>12/13/10 8:56<br>12/14/10 12:30<br>Analysis Start<br>12/10/10 17:00   | 12/15/10<br><u>Analysis End</u><br>12/14/10<br>12/14/10<br><u>Analysis End</u><br>12/13/10  | <u>Analyst *</u><br>HDP-CV<br>LTW-CV<br><u>Analyst *</u>  |  |  |
| Ignitability<br>Sample Note: Analysis performed to<br>SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Cyanide, Reactive<br>Reactive Sulfide<br>SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>% Solids<br>Total Volatile Solids<br>SAMPLE: TCLP Leachate of Inv. Cut   | Neg ASIS °F<br>by QC Laboratories<br>Lai<br>Sample T<br><u>Result</u><br>0.2 mg/Kg<br>1300 mg/Kg<br>Lai<br>Sample T<br><u>Result</u><br>59.58 % Wght.<br>30.21 % Wght.<br>Lai  | SW846 1030<br>b ID: 10121740-001C<br>ime: 12/08/2010 20:00<br><u>Method</u><br>SW 7.3.3.2<br>SW846 7.3<br>b ID: 10121740-001D<br>ime: 12/08/2010 20:00<br><u>Method</u><br>SM2540B<br>EPA 160.4<br>b ID: 10121740-001F   | <u>SLOQ</u><br>0.2<br>16<br>Grab<br><u>SLOQ</u><br>0.10<br>0.01<br>Grab   | Analysis Start<br>12/13/10 13:30<br>Analysis Start<br>12/13/10 8:56<br>12/14/10 12:30<br>Analysis Start<br>12/10/10 17:00   | 12/15/10<br><u>Analysis End</u><br>12/14/10<br>12/14/10<br><u>Analysis End</u><br>12/13/10  | <u>Analvst *</u><br>HDP-CV<br>LTW-CV<br><u>Analvst *</u><br>IC-SA   |  |  |
| Ignitability<br>Sample Note: Analysis performed to<br>SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Cyanide, Reactive<br>Reactive Sulfide<br>SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>% Solids<br>Total Volatile Solids<br>SAMPLE: TCLP Leachate of Inv. Cutt<br>SAMPLED BY: SG  | Neg ASIS °F<br>by QC Laboratories<br>Lai<br>Sample T<br><u>Result</u><br>0.2 mg/Kg<br>1300 mg/Kg<br>Lai<br>Sample T<br><u>Result</u><br>59.58 % Wght.<br>30.21 % Wght.<br>Lai<br>Sample T<br>Sample T  | SW846 1030<br>b ID: 10121740-001C<br>ime: 12/08/2010 20:00<br><u>Method</u><br>SW 7.3.3.2<br>SW846 7.3<br>b ID: 10121740-001D<br>ime: 12/08/2010 20:00<br><u>Method</u><br>SM2540B<br>EPA 160.4<br>b ID: 10121740-001F<br>ime: 12/11/2010 12:45  | <u>SLOQ</u><br>0.2<br>16<br>Grab<br><u>SLOQ</u><br>0.10<br>0.01<br>Grab   | Analysis Start<br>12/13/10 13:30<br>Analysis Start<br>12/13/10 8:56<br>12/14/10 12:30<br>Analysis Start<br>12/10/10 17:00   | 12/15/10<br>Analysis End<br>12/14/10<br>12/14/10<br>Analysis End<br>12/13/10<br>12/14/10  | Analvst *<br>HDP-CV<br>LTW-CV<br><u>Analvst *</u><br>IC-SA<br>NFM-SA  |  |  |
| Ignitability<br>Sample Note: Analysis performed to<br>SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Cyanide, Reactive<br>Reactive Sulfide<br>SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>% Solids<br>Total Volatile Solids<br>SAMPLE: TCLP Leachate of Inv. Cutt<br>SAMPLED BY: SG<br><u>Test</u>   | Neg ASIS °F<br>by QC Laboratories<br>Lai<br>Sample T<br><u>Result</u><br>0.2 mg/Kg<br>1300 mg/Kg<br>Lai<br>Sample T<br><u>Result</u><br>59.58 % Wght.<br>30.21 % Wght.<br>Lai<br>Sample T<br>Result  | SW846 1030<br>b ID: 10121740-001C<br>ime: 12/08/2010 20:00<br><u>Method</u><br>SW 7.3.3.2<br>SW846 7.3<br>b ID: 10121740-001D<br>ime: 12/08/2010 20:00<br><u>Method</u><br>SM2540B<br>EPA 160.4<br>b ID: 10121740-001F<br>ime: 12/11/2010 12:45<br><u>Method</u>   | SLOQ           0.2           16           Grab           SLOQ           0.10           0.01           Grab           SLOQ   | 12/15/10 13:30           Analysis Start           12/13/10 8:56           12/13/10 8:56           12/14/10 12:30           Analysis Start           12/10/10 17:00           12/10/10 8:00           Analysis Start           12/10/10 8:00   | 12/15/10<br><u>Analysis End</u><br>12/14/10<br>12/14/10<br><u>Analysis End</u><br>12/13/10<br>12/14/10<br><u>Analysis End</u>                         | Analvst *<br>HDP-CV<br>LTW-CV<br><u>Analvst *</u><br>IC-SA<br>NFM-SA<br><u>Analvst *</u>                        |  |  |
| Ignitability<br>Sample Note: Analysis performed I<br>SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Cyanide, Reactive<br>Reactive Sulfide<br>SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>% Solids<br>Total Volatile Solids<br>SAMPLE: TCLP Leachate of Inv. Cut<br>SAMPLED BY: SG<br><u>Test</u><br>Pyridine   | Neg ASIS °F<br>by QC Laboratories<br>Lai<br>Sample T<br><u>Result</u><br>0.2 mg/Kg<br>1300 mg/Kg<br>Lai<br>Sample T<br><u>Result</u><br>59.58 % Wght.<br>30.21 % Wght.<br>tings Lai<br>Sample T<br><u>Result</u><br>Sample T   | SW846 1030<br>b ID: 10121740-001C<br>ime: 12/08/2010 20:00<br><u>Method</u><br>SW 7.3.3.2<br>SW846 7.3<br>b ID: 10121740-001D<br>ime: 12/08/2010 20:00<br><u>Method</u><br>SM2540B<br>EPA 160.4<br>b ID: 10121740-001F<br>ime: 12/11/2010 12:45<br><u>Method</u><br>EPA 8270C  | SLOQ           0.2           16           Grab           SLOQ           0.10           0.01           Grab           SLOQ           0.10           0.10           0.11           Grab   | 12/15/10 13:30<br><u>Analysis Start</u><br>12/13/10 8:56<br>12/14/10 12:30<br><u>Analysis Start</u><br>12/10/10 17:00<br>12/10/10 8:00<br><u>Analysis Start</u><br>12/15/10 7:48  | 12/15/10<br><u>Analysis End</u><br>12/14/10<br>12/14/10<br><u>Analysis End</u><br>12/13/10<br>12/14/10<br><u>Analysis End</u><br>12/15/10             | Analvst *<br>HDP-CV<br>LTW-CV<br>Analvst *<br>IC-SA<br>NFM-SA<br>Analvst *<br>RHH-SA                            |  |  |
| Ignitability<br>Sample Note: Analysis performed to<br>SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Cyanide, Reactive<br>Reactive Sulfide<br>SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>% Solids<br>Total Volatile Solids<br>SAMPLE: TCLP Leachate of Inv. Cut<br>SAMPLED BY: SG<br><u>Test</u><br>Pyridine<br>1,4-Dichlorobenzene   | Neg ASIS °F<br>by QC Laboratories<br>Lai<br>Sample T<br>Result<br>0.2 mg/Kg<br>1300 mg/Kg<br>Lai<br>Sample T<br>Result<br>59.58 % Wght.<br>30.21 % Wght.<br>tings Lai<br>Sample T<br>Result<br>< 0.10 mg/L<br>< 0.10 mg/L  | SW846 1030<br>b ID: 10121740-001C<br>ime: 12/08/2010 20:00<br><u>Method</u><br>SW 7.3.3.2<br>SW846 7.3<br>b ID: 10121740-001D<br>ime: 12/08/2010 20:00<br><u>Method</u><br>SM2540B<br>EPA 160.4<br>b ID: 10121740-001F<br>ime: 12/11/2010 12:45<br><u>Method</u><br>EPA 8270C<br>EPA 8270C                           | SLOQ           0.2           16           Grab           SLOQ           0.10           0.01           Grab           SLOQ           0.10           0.110           O.10           0.10           0.10   | 12/15/10 13:30<br><u>Analysis Start</u><br>12/13/10 8:56<br>12/14/10 12:30<br><u>Analysis Start</u><br>12/10/10 17:00<br>12/10/10 8:00<br><u>Analysis Start</u><br>12/15/10 7:48<br>12/15/10 7:48   | 12/15/10<br><u>Analysis End</u><br>12/14/10<br>12/14/10<br><u>Analysis End</u><br>12/13/10<br>12/14/10<br><u>Analysis End</u><br>12/15/10<br>12/15/10 | Analvst *<br>HDP-CV<br>LTW-CV<br>Analvst *<br>IC-SA<br>NFM-SA<br>Analvst *<br>RHH-SA<br>RHH-SA                  |  |  |
| Ignitability<br>Sample Note: Analysis performed to<br>SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Cyanide, Reactive<br>Reactive Sulfide<br>SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>% Solids<br>Total Volatile Solids<br>SAMPLE: TCLP Leachate of Inv. Cutt<br>SAMPLED BY: SG<br><u>Test</u><br>Pyridine<br>1,4-Dichlorobenzene<br>o-Cresol  | Neg ASIS °F<br>ay QC Laboratories<br>Lai<br>Sample T<br><u>Result</u><br>0.2 mg/Kg<br>1300 mg/Kg<br>Lai<br>Sample T<br><u>Result</u><br>59.58 % Wght.<br>30.21 % Wght.<br>tings Lai<br>Sample T<br><u>Result</u><br>< 0.10 mg/L<br>< 0.10 mg/L   | SW846 1030<br>b ID: 10121740-001C<br>ime: 12/08/2010 20:00<br><u>Method</u><br>SW 7.3.3.2<br>SW846 7.3<br>b ID: 10121740-001D<br>ime: 12/08/2010 20:00<br><u>Method</u><br>EPA 160.4<br>b ID: 10121740-001F<br>ime: 12/11/2010 12:45<br><u>Method</u><br>EPA 8270C<br>EPA 8270C<br>EPA 8270C                         | SLOQ           0.2           16           Grab           SLOQ           0.10           0.01           Grab           SLOQ           0.10           0.110           0.10           0.10           0.10           0.10           0.10           0.10           0.10   | 12/15/10 13:30<br><u>Analysis Start</u><br>12/13/10 8:56<br>12/14/10 12:30<br><u>Analysis Start</u><br>12/10/10 17:00<br>12/10/10 8:00<br><u>Analysis Start</u><br>12/15/10 7:48<br>12/15/10 7:48   | 12/15/10 Analysis End 12/14/10 12/14/10 12/14/10 Analysis End 12/13/10 12/14/10 Analysis End 12/15/10 12/15/10 12/15/10 12/15/10                      | Analvst *<br>HDP-CV<br>LTW-CV<br>Analvst *<br>IC-SA<br>NFM-SA<br>RHH-SA<br>RHH-SA<br>RHH-SA                     |  |  |
| Ignitability<br>Sample Note: Analysis performed to<br>SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Cyanide, Reactive<br>Reactive Sulfide<br>SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>% Solids<br>Total Volatile Solids<br>SAMPLE: TCLP Leachate of Inv. Cut<br>SAMPLED BY: SG<br><u>Test</u><br>Pyridine<br>1,4-Dichlorobenzene<br>o-Cresol<br>p-Cresol/m-Cresol                      | Neg ASIS °F<br>ay QC Laboratories<br>Lai<br>Sample T<br><u>Result</u><br>0.2 mg/Kg<br>1300 mg/Kg<br>Lai<br>Sample T<br><u>Result</u><br>59.58 % Wght.<br>30.21 % Wght.<br>tings Lai<br>Sample T<br><u>Result</u><br>< 0.10 mg/L<br>< 0.10 mg/L<br>< 0.10 mg/L  | SW846 1030<br>b ID: 10121740-001C<br>ime: 12/08/2010 20:00<br><u>Method</u><br>SW 7.3.3.2<br>SW846 7.3<br>b ID: 10121740-001D<br>ime: 12/08/2010 20:00<br><u>Method</u><br>SM2540B<br>EPA 160.4<br>b ID: 10121740-001F<br>ime: 12/11/2010 12:45<br><u>Method</u><br>EPA 8270C<br>EPA 8270C<br>EPA 8270C<br>EPA 8270C | SLOQ           0.2           16           Grab           SLOQ           0.10           0.01           Grab           SLOQ           0.10           0.10           0.10           0.10           0.10           0.10           0.10           0.10   | 12/15/10 13:30<br>Analysis Start<br>12/13/10 8:56<br>12/14/10 12:30<br>Analysis Start<br>12/10/10 17:00<br>12/10/10 8:00<br>Analysis Start<br>12/15/10 7:48<br>12/15/10 7:48<br>12/15/10 7:48   | 12/15/10 Analysis End 12/14/10 12/14/10 12/14/10 Analysis End 12/13/10 12/14/10 Analysis End 12/15/10 12/15/10 12/15/10 12/15/10 12/15/10             | Analvst *<br>HDP-CV<br>LTW-CV<br>IC-SA<br>NFM-SA<br>RHH-SA<br>RHH-SA<br>RHH-SA<br>RHH-SA                        |  |  |
| Ignitability<br>Sample Note: Analysis performed to<br>SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Cyanide, Reactive<br>Reactive Sulfide<br>SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>% Solids<br>Total Volatile Solids<br>SAMPLE: TCLP Leachate of Inv. Cutt<br>SAMPLED BY: SG<br><u>Test</u><br>Pyridine<br>1,4-Dichlorobenzene<br>o-Cresol<br>p-Cresol/m-Cresol<br>Hexachloroethane | Neg ASIS °F<br>by QC Laboratories<br>Lai<br>Sample T<br>Result<br>0.2 mg/Kg<br>1300 mg/Kg<br>Lai<br>Sample T<br>Result<br>59.58 % Wght.<br>30.21 % Wght.<br>Lai<br>Sample T<br>Result<br>59.58 % Wght.<br>Lai<br>Sample T<br>Result<br>< 0.10 mg/L<br>< 0.10 mg/L<br>< 0.10 mg/L<br>< 0.10 mg/L<br>< 0.10 mg/L | SW846 1030<br>b ID: 10121740-001C<br>ime: 12/08/2010 20:00<br><u>Method</u><br>SW 7.3.3.2<br>SW846 7.3<br>b ID: 10121740-001D<br>ime: 12/08/2010 20:00<br><u>Method</u><br>SM2540B<br>EPA 160.4<br>b ID: 10121740-001F<br>ime: 12/11/2010 12:45<br><u>Method</u><br>EPA 8270C<br>EPA 8270C<br>EPA 8270C<br>EPA 8270C | SLOQ           0.2           16           Grab           SLOQ           0.10           0.01           Grab           SLOQ           0.10           0.10           0.10           0.10           0.10           0.10           0.10           0.10           0.10           0.10           0.10           0.10 | 12/15/10 13:30         Analysis Start         12/13/10 8:56         12/13/10 8:56         12/14/10 12:30         Analysis Start         12/10/10 12:30         Analysis Start         12/10/10 8:00         Analysis Start         12/10/10 8:00         Analysis Start         12/15/10 7:48         12/15/10 7:48         12/15/10 7:48         12/15/10 7:48         12/15/10 7:48         12/15/10 7:48         12/15/10 7:48 | 12/15/10 Analysis End 12/14/10 12/14/10 Analysis End 12/13/10 12/14/10 Analysis End 12/15/10 12/15/10 12/15/10 12/15/10 12/15/10 12/15/10             | Analvst *<br>HDP-CV<br>LTW-CV<br>Analvst *<br>IC-SA<br>NFM-SA<br>RHH-SA<br>RHH-SA<br>RHH-SA<br>RHH-SA<br>RHH-SA |  |  |
| Ignitability<br>Sample Note: Analysis performed to<br>SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Cyanide, Reactive<br>Reactive Sulfide<br>SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>% Solids<br>Total Volatile Solids<br>SAMPLE: TCLP Leachate of Inv. Cut<br>SAMPLED BY: SG<br><u>Test</u><br>Pyridine<br>1,4-Dichlorobenzene<br>o-Cresol<br>p-Cresol/m-Cresol                      | Neg ASIS °F<br>ay QC Laboratories<br>Lai<br>Sample T<br><u>Result</u><br>0.2 mg/Kg<br>1300 mg/Kg<br>Lai<br>Sample T<br><u>Result</u><br>59.58 % Wght.<br>30.21 % Wght.<br>tings Lai<br>Sample T<br><u>Result</u><br>< 0.10 mg/L<br>< 0.10 mg/L<br>< 0.10 mg/L  | SW846 1030<br>b ID: 10121740-001C<br>ime: 12/08/2010 20:00<br><u>Method</u><br>SW 7.3.3.2<br>SW846 7.3<br>b ID: 10121740-001D<br>ime: 12/08/2010 20:00<br><u>Method</u><br>SM2540B<br>EPA 160.4<br>b ID: 10121740-001F<br>ime: 12/11/2010 12:45<br><u>Method</u><br>EPA 8270C<br>EPA 8270C<br>EPA 8270C<br>EPA 8270C | SLOQ           0.2           16           Grab           SLOQ           0.10           0.01           Grab           SLOQ           0.10           0.10           0.10           0.10           0.10           0.10           0.10           0.10   | 12/15/10 13:30<br>Analysis Start<br>12/13/10 8:56<br>12/14/10 12:30<br>Analysis Start<br>12/10/10 17:00<br>12/10/10 8:00<br>Analysis Start<br>12/15/10 7:48<br>12/15/10 7:48<br>12/15/10 7:48   | 12/15/10 Analysis End 12/14/10 12/14/10 12/14/10 Analysis End 12/13/10 12/14/10 Analysis End 12/15/10 12/15/10 12/15/10 12/15/10 12/15/10             | Analvst *<br>HDP-CV<br>LTW-CV<br>Analvst *<br>IC-SA<br>NFM-SA<br>RHH-SA<br>RHH-SA<br>RHH-SA<br>RHH-SA           |  |  |

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

Camie M. Davis

DATE: 12/16/2010

SEND DATA TO:

.

# **Benchmark Analytics, Inc.**

**Eastern Division** 

2566 Pennsylvania Ave.

Sayre, PA 18840

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

| Vork Order: | 10121740 |
|-------------|----------|
| vork Order: | 10121740 |

| PHONE:         (607) 562-4000         TEST REPORT         PWS ID#           03-045         03-045         Page 2 of 3           RECEIVED FOR LAB BY: RML         DATE:         12/09/2010 15:45         Page 2 of 3           2,4,6-Trichlorophenol         < 0.10 mg/L         EPA 8270C         0.10         12/15/10 7:48         12/15/10 RHI-SA           2,4,6-Trichlorophenol         < 0.10 mg/L         EPA 8270C         0.10         12/15/10 7:48         12/15/10 RHI-SA           2,4,6-Trichlorophenol         < 0.00 mg/L         EPA 8270C         0.10         12/15/10 7:48         12/15/10 RHI-SA           2,4,0-Initrotoluene         < 0.10 mg/L         EPA 8270C         0.10         12/15/10 7:48         12/15/10 RHI-SA           2,4-Dinitrotoluene         < 0.10 mg/L         EPA 8270C         0.10         12/15/10 7:48         12/15/10 RHI-SA           Age/Dinitrotoluene         < 0.10 mg/L         EPA 8270C         0.10         12/15/10 7:48         12/15/10 RHI-SA           SAMPLE:         TCLP Leachate of Inv. Cuttings         Lab ID: 10121740-0016         Grab         SLOQ           Sample Note:         Sample Time: 12/11/2010 12:45         SLOQ         Analysis Start         Analysis Start         Analysis End         Analysis Start           JH         6.120/16.7°C   | NAME:<br>COMPANY:<br>ADDRESS: | Dina Brown<br>Talisman Energy USA, In<br>337 Daniel Zenker Dr<br>Horseheads, NY 14845 | <b>C</b> .    |                      |                                       |             |                 | 1012<br>2 of 3<br>AF78 | 3            |            |
|--|-------------------------------|---|---------------|----------------------|---------------------------------------|-------------|-----------------|------------------------|--------------|------------|
| RECEIVED FOR LAB BY: RML         DATE: 12/09/2010 15:45         Page 2 of 3           2.4.6-Trichlorophenol         < 0.10 mg/L  |                               |   | Т             | EST REF              | PORT                                  | PV          | NS 1D#          |                        |              |            |
| 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   | 03-0                          | 045   |               |                      | · · · · · · · · · · · · · · · · · · · |             |                 | • • • • •              |              |            |
| 2.4,5-Trichlorophenol         < 0.10 mg/L  | RECEIVED F                    | FOR LAB BY: RML   | DA            | TE: 12/09/           | /2010 15:45                           |             |                 |                        | Pa           | age 2 of 3 |
| 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  | 2,4,6-Tric                    | chlorophenol  | < 0.10 mg/L   |                      | EPA 8270C                             | 0.10        | 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  | 2,4,5-Tric                    | chlorophenol  | < 0.10 mg/L   |                      | EPA 8270C                             | 0.10        | 12/15/10        | 7:48                   | 12/15/10     | RHH-\$A    |
| Hexachlorobenzene<br>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         12/15/10         RHH-SA           SAMPLED BY: SG         Sample Time: 11/17/2010 8:00         Grab         SLOQ         Analysis Start         Analysis End         A   | Pentachic                     | orophenol   | < 0.50 mg/L   |                      | EPA 8270C                             | 0.50        | 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         Sample Time: 11/17/2010 8:00         Analysis Start         Analysis End         Analysis Time: 11/17/2010 8:00         Sample Time: 12/11/2010 12:45         Sample Time: 12/13/2010 8:45         Analysis Start         Analysis End         Analysis Start   | 2,4-Dinitro                   | otoluene  | < 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     SLOQ       Test     Result     Method     0.050       SAMPLED BY: SG     Sample for TCLP extracted     7.33 mg/L     E       Strontium - TCLP extracted     7.33 mg/L     E     EPA 6010B     0.050       Sample Note:     Sample for TCLP extracted Strontium was received on 11/16/10 at 16:40 by SCP.     11/18/10 13:15     11/18/10       SAMPLED BY: SG     Sample Time: 12/11/2010 12:45     SLOQ     Analysis Start     Analysis End       MPH     6.12@16.7°C     SM4500H+B     SLOQ     Analysis Start     Analysis End       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: 10121740-0011     Grab       SAMPLED BY: SG     Sample Time: 12/13/2010 8:45     SLOQ       Test     Result     Method     Analysis Start     Analysis End       Benzene     < 0.0250 mg/L  | Hexachio                      | robenzene   | < 0.10 mg/L   |                      | EPA 8270C                             | 0.10        | 12/15/10        | 7:48                   | 12/15/10     | RHH-SA     |
| SAMPLED BY: SGSample Time: 11/17/2010 8:00IestResultMethodAnalysis StartAnalysis EndAnalysisStrontlum - TCLP extracted7.33 mg/LEEPA 6010B0.05011/18/10 13:1511/18/10GSR-CVSample Note: Sample for TCLP extracted Strontlum was received on 11/16/10 at 16:40 by SCP.Grab11/18/10GSR-CVSAMPLE: TCLP Leachate of Inv. CuttingsLab ID: 10121740-001HGrabSLOQAnalysis StartAnalysis EndAnalysisImage: Sample Der SGSample Time: 12/11/2010 12:45SLOQAnalysis StartAnalysis EndAnalysispH6.12@16.7°CSM4500H+B12/14/10 8:0012/14/10SG-SASAMPLE: ZHE Extract of Inv. CuttingsLab ID: 10121740-0011GrabSLOQAnalysis StartAnalysis EndAnalysis'SAMPLED BY: SGSample Time: 12/13/2010 8:45Sample Time: 12/13/2010 8:45SLOQAnalysis StartAnalysis EndAnalysis'SAMPLED BY: SGSample Time: 12/13/2010 8:45SLOQAnalysis StartAnalysis EndAnalysis'Benzene< 0.0250 mg/L   | Naphthal                      | ene   | < 0.10 mg/L   |                      | EPA 8270C                             | 0.10        | 12/15/10        | 7:48                   | 12/15/10     | RHH-SA     |
| SAMPLED BY: SG         Sample Time: 11/17/2010 8:00         SLOQ         Analysis Start         Analysis End         A   | SAMPLE: TO                    | CLP Leachate of Inv. Cutting  | 18            | Lab ID:              | 10121740-001G                         | Grab        |                 |                        |              |            |
| IestResultMethodAnalysis StartAnalysis EndAnalysisStrontlum - TCLP extracted7.33 mg/LEEPA 6010B0.05011/18/10 13:1511/18/10GSR-CVSample Note:Sample for TCLP extracted Strontlum was received on 11/16/10 at 16:40 by SCP.Grab5511/18/10GSR-CVSAMPLE:TCLP Leachate of Inv. CuttingsLab ID: 10121740-001HGrabGrab555SAMPLED BY: SGSample Time: 12/11/2010 12:45SLOQAnalysis StartAnalysis EndAnalysispH6.12@16.7°CSM4500H+B12/14/10 8:0012/14/10SG-SASAMPLE:ZHE Extract of Inv. CuttingsLab ID: 10121740-0011Grab12/14/10SG-SASAMPLED BY: SGSample Time: 12/13/2010 8:45SI_OQ12/14/1012/14/10SG-SASAMPLED BY: SGSample Time: 12/13/2010 8:45SI_OQ12/14/1012/14/10SG-SASAMPLED BY: SGSample Time: 12/13/2010 8:45SI_OQ12/14/1012/14/10CTM-SAGarbon tetrachloride< 0.0250 mg/L   |                               |   |               | ample Time: 1        | 1/17/2010 8:00                        |             |                 |                        |              |            |
| Strontlum - TCLP extracted         7.33 mg/L         E         EPA 6010B         0.050         11/18/10         11/18/10         GSR-CV           Sample Note:         Sample for TCLP extracted Strontlum was received on 11/16/10 at 16:40 by SCP.         Grab         11/18/10         11/18/10         GSR-CV           SAMPLE:         TCLP Leachate of Inv. Cuttings         Lab ID: 10121740-001H         Grab         Grab         11/18/10         SAMPLED BY: SG         Analysis Start         Analysis End         Analysis E   |                               |   |               | ·                    |                                       | <u>SLOQ</u> |                 | <b>.</b>               |              |            |
| Sample Note: Sample for TCLP extracted Strontium was received on 11/16/10 at 16:40 by SCP.SAMPLE: TCLP Leachate of Inv. CuttingsLab ID: 10121740-001HGrabSAMPLED BY: SGSample Time: 12/11/2010 12:45TestResultMethodAnalysis StartAnalysis EndAnalyst *pH6.12@16.7°CSM4500H+B12/14/10 8:0012/14/10SG-SASAMPLED BY: SGLab ID: 10121740-001IGrabSAMPLED BY: SGSample Time: 12/13/2010 8:45SAMPLED BY: SGSample Time: 12/13/2010 8:45TestResultMethodAnalysis StartAnalysis EndAnalyst *Benzene< 0.0250 mg/LEPA 8260B0.025012/13/10 8:1112/13/10CTM-SACarbon tetrachloride< 0.0250 mg/LEPA 8260B0.025012/13/10 8:1112/13/10CTM-SAChlorobenzene< 0.0250 mg/LEPA 8260B0.025012/13/10 8:1112/13/10CTM-SALab ID: 10,200 mg/LEPA 8260B0.025012/13/10 8:1112/13/10CTM-SAColspan="4">Colspan=4Colspan=16Colspan=16Colspan=12MethodAnalysis StartAnalysis EndAnalysisSAMPLED BY: SGEPA 8260B0.025012/13/10 8:1112/13/10CTM-SACarbon tetrachloride< 0.0250 mg/LEPA 8260B0.025012/13/10 8:1112/13/10CTM-SAChlorobenzene< 0.0250 mg/LEPA 8260B0.0250   |                               |   |               | -                    |                                       |             |                 |                        |              |            |
| SAMPLE:         TCLP Leachate of Inv. Cuttings         Lab ID: 10121740-001H         Grab           SAMPLED BY: SG         Sample Time: 12/11/2010 12:45         SLOQ           Test         Result         Method         Analysis Start         Analysis End         Analysis End           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         Analysis End         An   |                               |   | -             |                      |                                       |             | 11/18/10        | 13:15                  | 11/18/10     | GSR-UV     |
| SAMPLED BY: SG         Sample Time: 12/11/2010 12:45         SLOQ           Test         Result         Method         Analysis Start         Analysis End         Analysis           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: 10121740-0011         Grab         12/14/10         SG-SA           SAMPLED BY: SG         Sample Time: 12/13/2010 8:45         SLOQ         SLOQ         12/14/10         SG-SA           Test         Result         Method         Analysis Start         Analysis End         Analysis           Benzene         < 0.0250 mg/L  | ·                             |   |               |                      |                                       |             |                 |                        |              |            |
| Test<br>pH         Result<br>6.12@16.7°C         Method<br>SM4500H+B         Analysis Start<br>12/14/10 8:00         Analysis End<br>12/14/10         Analysis End<br>SG-SA           SAMPLE:         ZHE Extract of Inv. Cuttings<br>SAMPLED BY: SG         Lab ID: 10121740-0011<br>Sample Time: 12/13/2010 8:45         Grab         France         Analysis Start         Analysis End<br>12/14/10         Analysis Mark           Test         Result         Method         SLOQ         Analysis Start         Analysis End<br>12/13/10         Analysis End<br>SG-SA           Test         Result         Method         Analysis Start         Analysis End<br>12/13/10         Analysis End<br>CTM-SA           Carbon tetrachloride         <0.0250 mg/L   |                               | -   | -             |                      |                                       | Grab        |                 |                        |              |            |
| Test<br>pH         Result<br>6.12@16.7°C         Method<br>SM4500H+B         Analysis Start<br>12/14/10 8:00         Analysis End<br>12/14/10         Analysis End<br>SG-SA           SAMPLE:         ZHE Extract of Inv. Cuttings<br>SAMPLED BY: SG         Lab ID: 10121740-0011         Grab         Grab         Image: Start star | SAMPLE                        | ED BY: SG   | Sa            | ample Time: 1        | 12/11/2010 12:45                      | SI 00       |                 |                        |              |            |
| pH         6.12@16.7°C         SM4500H+B         12/14/10 8:00         12/14/10         SG-SA           SAMPLE:         ZHE Extract of Inv. Cuttings<br>SAMPLED BY: SG         Lab ID: 10121740-0011<br>Sample Time: 12/13/2010 8:45         Grab         SILOQ  | Test                          |   | Result        |                      | Method                                | OLOG        | Analysis        | Start                  | Analysis End | Analyst *  |
| SAMPLED BY: SG         Sample Time: 12/13/2010 8:45         SLOQ         Analysis Start         Analysis End         Analysis End         Analysis End         Analysis End         Analysis *           Benzene         < 0.0250 mg/L   |                               |   | 6.12@16.7°C   |                      |                                       |             |                 |                        |              |            |
| SAMPLED BY: SG         Sample Time: 12/13/2010 8:45         SLOQ         Analysis Start         Analysis End         Analysis End         Analysis End         Analysis End         Analysis *           Benzene         < 0.0250 mg/L   | SAMPLE: 71                    | JE Extract of Inv. Cuttinge   |               | l ah ID <sup>.</sup> | 10121740-001                          | Grah        |                 |                        |              |            |
| Test         Result         Method         Analysis Start         Analysis End         A  |                               | -   |               |                      |                                       | 0100        |                 |                        |              |            |
| 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  |                               |   | 01            | ampio timo.          | 12/10/2010 0.40                       | SLOQ        |                 |                        |              |            |
| Carbon tetrachloride         < 0.0250 mg/L         EPA 8260B         0.0250         12/13/10         12/13/10         CTM-SA           Chlorobenzene         < 0.0250 mg/L   | <u>⊤est</u>                   |   | <u>Result</u> |                      | <u>Method</u>                         |             | <u>Analysis</u> | Start                  | Analysis End | Analyst *  |
| Chlorobenzene         < 0.0250 mg/L         EPA 8260B         0.0250         12/13/10         12/13/10         CTM-SA           Chloroform         < 0.0250 mg/L   | Benzene                       |   | < 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   | Carbon te                     | etrachloride  | < 0.0250 mg/L |                      | EPA 8260B                             | 0.0250      | 12/13/10        | 8:11                   | 12/13/10     |            |
| 1,2-Dichloroethane < 0.0250 mg/L EPA 8260B 0.0250 12/13/10 8:11 12/13/10 CTM-SA  | Chlorobe                      | nzene   | < 0.0250 mg/L |                      | EPA 8260B                             |             | 12/13/10        | 8:11                   | 12/13/10     |            |
| -  | Chlorofor                     | m   | < 0.0250 mg/L |                      | EPA 8260B                             | 0.0250      | 12/13/10        | 8:11                   | 12/13/10     |            |
| 1,1-Dichloroethene < 0.0250 mg/L EPA 8260B 0.0250 12/13/10 8:11 12/13/10 CTM-SA  | 1,2-Dichle                    | oroethane   | < 0.0250 mg/L |                      | EPA 8260B                             | 0.0250      | 12/13/10        | 8:11                   | 12/13/10     | CTM-SA     |
|  | 1,1-Dichle                    | oroethene   | < 0.0250 mg/L |                      | EPA 8260B                             | 0.0250      | 12/13/10        | 8:11                   | 12/13/10     | CTM-SA     |

### **REMARKS:**

Ethylbenzene

Isopropylbenzene

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.

EPA 8260B

EPA 8260B

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

< 0.0250 mg/L

< 0.0250 mg/L

Analyte detected in the associated Method Blank В

Value above quantitation range Ε

MANAGER

anie M. Davis

12/16/2010 DATE:

12/13/10

12/13/10

CTM-SA

CTM-SA

0.0250 12/13/10 8:11

0.0250 12/13/10 8:11

.

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

2566 Pennsylvania Ave. Sayre, PA 18840

Work Order: 10121740

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

| SEND DATA      | TO:  |                                       |            |                  |             |            |                  |               |
|----------------|--|---------------------------------------|------------|------------------|-------------|------------|------------------|---------------|
| NAME:          | Dina Brown                                   | ·                                     |            |                  | W           | 'O#:       | 10121740         |               |
| COMPANY:       | Talisman Energy USA, In                      | IC.                                   |            |                  | D           | AGE: 3     | 3 of 3           |               |
| ADDRESS:       | 337 Daniel Zenker Dr<br>Horseheads, NY 14845 | ;                                     |            |                  | F7          | -0L. (     | 5015             |               |
|                | nuiseneaus, nit 14040                        |                                       |            |                  | P           | O#: /      | AF78489          |               |
|                |  | TE                                    | ST RE      | DODT             | P١          | WS ID#     |                  |               |
| PHONE:<br>FAX: | (607) 562-4000<br>(607) 562-4001             | 1 5                                   | .31 KE     |                  |             |            |                  |               |
| 03-0           | )45  |                                       |            |                  |             |            |                  |               |
| RECEIVED F     | OR LAB BY: RML                               | DAT                                   | E: 12/0    | 9/2010 15:45     |             |            |                  | Page 3 of 3   |
| Tetrachlo      | roethene                                     | < 0.0250 mg/L                         |            | EPA 8260B        | 0.0250      | 12/13/10 8 | 3:11 12/13/10    | CTM-SA        |
| Toluene        |  | < 0.0250 mg/L                         |            | EPA 8260B        | 0.0250      | 12/13/10 8 | B:11 12/13/10    | CTM-SA        |
| Trichloroe     | thene  | < 0.0250 mg/L                         |            | EPA 8260B        | 0.0250      | 12/13/10 8 | 3:11 12/13/10    | CTM-SA        |
| 1,2,4-Trim     | nethylbenzene                                | < 0.0250 mg/L                         |            | EPA 8260B        | 0.0250      | 12/13/10 8 | 3:11 12/13/10    | CTM-SA        |
| 1,3,5-Trim     | nethylbenzene                                | < 0.0250 mg/L                         |            | EPA 8260B        | 0.0250      | 12/13/10 8 | 3:11 12/13/10    | CTM-SA        |
| Vinyl chio     | ride   | < 0.0250 mg/L                         |            | EPA 8260B        | 0.0250      | 12/13/10 8 | 3:11 12/13/10    | CTM-SA        |
| Methyl ter     | t-butyl ether                                | < 0.0250 mg/L                         |            | EPA 8260B        | 0.0250      | 12/13/10 8 | 8:11 12/13/10    | CTM-SA        |
| 2-Butanor      | 10   | < 0.0500 mg/L                         |            | EPA 8260B        | 0.0500      | 12/13/10 8 | 3:11 12/13/10    | CTM-SA        |
| SAMPLE: AS     | TM Extract of Inv. Cuttings                  | i                                     | Lab ID     | : 10121740-001J  | Grab        |            |                  |               |
| SAMPLE         | D BY: SG                                     | Sar                                   | nple Time: | 12/12/2010 13:10 | SLOQ        |            |                  |               |
| Test           |  | Result                                |            | Method           | <u>5100</u> | Analysis S | itart Analysis E | ind Analyst * |
|                | Oxygen Démand                                | 222 mg/L                              | 8          | HACH 8000        | 10          | 12/11/10 8 |                  |               |
| SAMPLE: AS     | TM Extract of Inv. Cuttings                  | · · · · · · · · · · · · · · · · · · · | Lab ID     | : 10121740-001L  | Grab        |            |                  |               |
| SAMPLE         | D BY: SG                                     | Sar                                   | nple Time: | 12/12/2010 13:10 |             |            |                  |               |
| Test           |  | Result                                |            | Method           | <u>SLOQ</u> | Analysis S | tart Analysis E  | nd Analyst*   |
| pH             |  | 7.46@16.7°C                           |            | SM4500H+B        |             | 12/14/10 8 |                  |               |
| Total Solid    | ds .   | 1210 mg/L                             |            | SM2540B          | 0.10        | 12/10/10 1 |                  |               |
| SAMPLE: Inv    | /. Cuttings                                  | •                                     | Lab ID     | 10121740-001M    | Grab        |            |                  |               |
|                | DBY: SG                                      | San                                   | nple Time: | 12/12/2010 13:10 | SLOQ        |            |                  |               |
| Test           |  | Result                                |            | Method           | SLUG        | Analysis S | tart Analysis E  | nd Analyst *  |
|                | anic Halides                                 | < 5.00 mg/kg                          |            | SW846/9023       | 5.00        | 12/15/10 1 |                  |               |
| Sample         | Note: Analysis performed by A                | nalytical 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

Analyte detected in the associated Method Blank в

Value above quantitation range E

MANAGER

Cami M. Davis

DATE: 12/16/2010

| CHAIN OF CUSTODY                | Benchm   | E <u>1</u> OF_                         |
|---------------------------------|--|--|
| REPORT TO: Talisman / UEG       | Eε<br>2566 Pennsylvan W/O#: 10121740   | ······································ |
| geowetlands@aol.com             | Phone  | SPECIAL DETECTION L                    |
| )                               | REFRIGERATE SAMPLES  | THE DED; YES / 7NO                     |
|                                 |  | IF YES, PLEASE ATTACH                  |
|                                 | I GW GROUNDWALER SO SOIL I   | 1                                      |
| CONTACT Steve Gridley           | TRANSPORT SW SURFACE WATER HZ HAZARDOUS LANDFILL Mostolle  | YES NO                                 |
| PH# 607-731-0145                | TO DE DEIONIZED WATER DI DISTILLED WATER PERSONAL OTHER  | _ IF YES, PLEASE ATTACH REQ            |
| FAX#                            | LABORATORY     /4/     /H     HYDROCHLORIC ACID     OH     SODIUM HYDROXIDE       IN COOLER     /5/     /S     SULFURIC ACID     AS     ASCORBIC ACID  | Laiz                                   |
| BILL TO: Talisman               | WITH ICE / S / N NITRIC ACID AC ACETIC ACID<br>SO3 SODIUM SULFITE NH, AMMONIUM CHLORIDE  | L L L L L L L L L L L L L L L L L L L  |
| PO# AE70409                     | Thio SODIUM THIOSULFATE ZN ZINC ACETATE  |  |
|                                 | An incomplete chain of custody may delay the   | Please fill ou                         |
|                                 | An incomplete chain of custody may delay the<br>processing of your sample(s).  | applicable and completel               |
| SAMPLER SIGNATURE / AFFILIATION |  | E.                                     |
| CONTAINER SAMPLING POINT        | LABORATORY<br>IN COOLER<br>WITH ICE<br>WITH ICE<br>USING CACID OF SODIUM HYDROXIDE<br>S SULFURC ACID AS ASCORBIC ACID<br>N NITRIC ACID AC ACETIC ACID<br>N NITRIC ACID AC ACETIC ACID<br>SO, SODIUM SULFITE<br>This SODIUM SULFITE<br>NH, AMMONIUM CHLORIDE<br>SO, SODIUM SULFITE<br>NH, AMMONIUM CHLORIDE<br>SO, SODIUM SULFITE<br>NH, AMMONIUM CHLORIDE<br>NH, AMMONIUM CHLORIDE<br>SO, SODIUM THIOSULFATE<br>NONE<br>Hg MERCURIC CHLORIDE<br>SO<br>SOLIUM SULFITE<br>NH, AMMONIUM CHLORIDE<br>NH, AMMONIUM CHLORIDE<br>NH, AMMONIUM CHLORIDE<br>NH, AMMONIUM CHLORIDE<br>SOLIUM SULFITE<br>NH, AMMONIUM SULFITE<br>NH, AMMONIUM CHLORIDE<br>SOLIUM SULFITE<br>NH, AMMONIUM SULFITE<br>NH, AMMONIUM SULFITE<br>NH, AMMONIUM SULFITE<br>NH, AMMONIUM SULFITE<br>NH, AMMONIUM SULFITE<br>NH, AMMONIUM SULFI | Lab USE ONLY                           |
| 1 Inv Cuttings                  |  |  |
| 2                               | C PCBs, Total Solids   |  |
| 3 A- Plants, Ign.               | G Total Volatile Solids  |  |
| 4 E - Reachivity                | C Ammonia-Nitrogen   |  |
| 5 5-TS, TUS                     | C Water Leaching Procedure: COD,   |  |
| 6 E-T. Sa-ple                   | V V C V V Total Solids, Oil & Grease,  |  |
| 7 F-TELP BNA, Posts.            |  |  |
| 8 G-TCLP Autor Sr               |  |  |
| 9 H-TCLP ,H                     | F-137-046 36 HOUR TURNAROUND   |  |
| 10 I-TELP Yols.                 | L-ASTM-TS, OH DAY TURNAROUND   |  |
| 11 J- ASTM COD, with            | m-Tax  |  |
| LAB USE ONLY                    |  |  |
| DAAVAKADBY                      | ŢĿĔĬŴĬŦĔŔŴŨŔĿĿŬŔŎŊĿĿĔſĸĔĬ <u>ŖŬĊŢĿĿ</u>  | C CARRIVALIONIC                        |
| RELINQUISHEE BX                 | TATE: 91 10 TIME: 1530 RECEIVED BY:  | DATE: TIME                             |
| RELINQUISHED BY:                | DATE: TIME: RECEIVED BY  |  |
|                                 |  | DATE: TIME:                            |
| RELINQUISHED BY:                | DATE: , TIME: RECEIPTOY: DO TOT  | PARA IN THE                            |
|                                 |  | Ad Graphics Pric                       |

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.   |   |   |   |  | ify Da   | DEP USE ONLY<br>Date Received & General Notes   |   |  |
|--|---|---|---|--|--|---|---|--|
| General  | Refere  | ence 287.54   |   |  |  |   |   |  |
| Date Pre   | epared  | / <b>Revised</b> Feb  | oruary 11, 2011   |  |  |   |   |  |
|  |   | SECTION A.  | <b>CLIENT</b> (GENERATOR  | R OF THE WASTE) IN   | IFORMA   | TION  |   |  |
| Compar   |   |   |   |  |  |   |   |  |
|  |   | rgy USA Inc.<br>, Name of Parent Comp   |   |  |  | EDA   | Generator ID#   |  |
| Talisma  |   |   | ally  |  |  | N/A   | Generator ID#   |  |
|  |   | ing Address Line 1  | C   | ompany Mailing Addres  | ss Line 2  |   |   |  |
| 50 Penr  |   |   |   |  |  |   |   |  |
|  |   | ress Last Line – City   | State   | Zip+4  | Phone  | -   | Ext   |  |
| Warren   |   | tact Last Name  | PA<br>First Name  | 15086<br>MI  | (724)  | 814-530<br>Suffix                               |   |  |
| Brown  |   | lact Last Manie   | Dina  | Wit  |  | Julia   | <b>X</b>  |  |
| Municip  | ality   |   | (   | County   |  |   |   |  |
| Warren   |   |   |   | Allegheny  |  |   |   |  |
| Contact  |   |   | Contact Email Address   |  |  |   |   |  |
| (724) 81   |   |   | dybrown@talismanusa.c<br>y Mailing Address (noted a   |  |  |   | Yes 🛛 No  |  |
|  |   |   | eration and storage. Drill o  |  | iring natura   |   |   |  |
| the  |   |   | at 1349 Buckwheat Road, G   |  |  |   |   |  |
| containe   | re on si  | ito   |   |  |  |   | · · · · · · · · · · · · · · · · · · ·   |  |
|  |   |   | Oriente D. K  |  |  |   | <b>D</b> 4  |  |
| Municip  |   | Granville   | County Bradfo   |  | S1   | ate   | PA  |  |
| Municip  | ality   | Granville   | SECTION B. WAST   |  |  |   |   |  |
| Municip<br>Residu  | ality<br>Jal  | Granville<br>Residu   | SECTION B. WAST   | E DESCRIPTION  | Unit   | of  | Time  |  |
| Municip<br>Residu<br>Waste C   | ality<br>Jal  | Granville<br>Residu<br>Code D   | SECTION B. WAST<br>ual Waste<br>escription  | E DESCRIPTION<br>Amount  | Unit<br>Measu  | of<br>ure                                       | Time<br>Frame   |  |
| Municip<br>Residu  | ality<br>Jal  | Granville<br>Residu   | SECTION B. WAST<br>Jal Waste<br>escription<br>Jas)  | EDESCRIPTION<br>Amount<br>1,949  | Unit<br>Measi  | of<br>ure                                       | Time  |  |
| Municip<br>Residu<br>Waste C<br>810  | ality<br>Jal<br>Code  | Granville<br>Residu<br>Code D<br>Drill cuttings (oil and g  | SECTION B. WAST<br>Jal Waste<br>escription<br>jas)<br>1. General P  | EDESCRIPTION<br>Amount<br>1,949<br>ROPERTIES   | Unit<br>Measu<br>cu yd<br>lb   | of<br>ure                                       | Time<br>Frame   |  |
| Municip<br>Residu<br>Waste C<br>810  | ality<br>Jal<br>Code  | Granville<br>Residu<br>Code D<br>Drill cuttings (oil and g<br>nge 8.8   | SECTION B. WAST<br>Jal Waste<br>escription<br>jas)<br>1. GENERAL P<br>9 to 9.01   | Amount         1,949         ROPERTIES         (based on analyses or kit)  | Unit<br>Measu<br>cu yd<br>lb   | of<br>ure                                       | Time<br>Frame   |  |
| Municip<br>Residu<br>Waste C<br>810  | ality<br>Jal<br>Code  | Granville<br>Residu<br>Code D<br>Drill cuttings (oil and g  | SECTION B. WAST<br>Jal Waste<br>escription<br>jas)<br>1. General P  | EDESCRIPTION<br>Amount<br>1,949<br>ROPERTIES<br>(based on analyses or ki<br>thod 9095)   | Unit<br>Measu<br>cu yd<br>lb   | of<br>ure                                       | Time<br>Frame   |  |
| Municip<br>Residu<br>Waste C<br>810  | ality<br>Jal<br>Code  | Granville<br>Residu<br>Code D<br>Drill cuttings (oil and g<br>nge 8.8   | SECTION B. WAST<br>Jal Waste<br>escription<br>jas)<br>1. GENERAL P<br>9 to 9.01<br>Uiquid Waste (EPA Me   | EDESCRIPTION<br>Amount<br>1,949<br>ROPERTIES<br>(based on analyses or ki<br>thod 9095)<br>95)  | Unit<br>Measu<br>cu yd<br>lb   | of<br>ure                                       | Time<br>Frame   |  |
| Municip<br>Residu<br>Waste C<br>810<br>a. p<br>b. F  | ality<br>Jal<br>Code<br>DH Ran<br>Physica   | Granville<br>Residu<br>Code D<br>Drill cuttings (oil and g<br>nge 8.8   | SECTION B. WAST<br>al Waste<br>escription<br>jas)<br>1. GENERAL P<br>9 to 9.01<br>Liquid Waste (EPA Me<br>Solid (EPA Method 90)<br>Gas (ambient tempera<br>Color Greyish Black  | Amount         1,949         ROPERTIES         (based on analyses or kithod 9095)         95)         ture & pressure)         Odo   | Unit<br>Measu<br>cuyd<br>lb<br>nowledge)                                 | of<br>⊔re<br>⊡ gal<br>⊠ ton                     | Time<br>Frame   |  |
| Municip<br>Residu<br>Waste C<br>810<br>a. p<br>b. F  | ality<br>Jal<br>Code<br>DH Ran<br>Physica   | Granville<br>Residu<br>Code D<br>Drill cuttings (oil and g<br>age 8.8<br>al State   | SECTION B. WAST<br>Jal Waste<br>escription<br>jas)<br>1. GENERAL P<br>9 to 9.01<br>Liquid Waste (EPA Me<br>Solid (EPA Method 90)<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquid  | EDESCRIPTION Amount 1,949 ROPERTIES (based on analyses or ki thod 9095) 95) ture & pressure) Odo Phases of Separation  | Unit<br>Measu<br>lb<br>nowledge)<br>r Earthy<br>One                      | of<br>□ gal<br>⊠ ton                            | Time<br>Frame   |  |
| Municip<br>Residu<br>Waste C<br>810<br>a. p<br>b. F  | ality<br>Jal<br>Code<br>DH Ran<br>Physica   | Granville<br>Residu<br>Code D<br>Drill cuttings (oil and g<br>age 8.8<br>al State   | SECTION B. WAST<br>al Waste<br>escription<br>jas)<br>1. GENERAL P<br>9 to 9.01<br>Liquid Waste (EPA Me<br>Solid (EPA Method 90)<br>Gas (ambient tempera<br>Color Greyish Black  | EDESCRIPTION Amount 1,949 ROPERTIES (based on analyses or ki thod 9095) 95) ture & pressure) Odo Phases of Separation  | Unit<br>Measu<br>lb<br>nowledge)<br>r Earthy<br>One                      | of<br>□ gal<br>⊠ ton                            | Time<br>Frame   |  |
| Municip<br>Residu<br>Waste C<br>810<br>a. p<br>b. F<br>c. F  | ality<br>Jal<br>Gode<br>DH Ran<br>Physica   | Granville<br>Residu<br>Code D<br>Drill cuttings (oil and g<br>nge 8.8<br>al State<br>al Appearance  | SECTION B. WAST<br>al Waste<br>escription<br>jas)<br>1. GENERAL P<br>9 to 9.01<br>Liquid Waste (EPA Me<br>Solid (EPA Method 90)<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of s   | EDESCRIPTION Amount 1,949 ROPERTIES (based on analyses or kitched 9095) 95) ture & pressure) Odo Phases of Separation eparation. Soil and Ro   | Unit<br>Measu<br>lb<br>nowledge)<br>r Earthy<br>One                      | of<br>□ gal<br>⊠ ton                            | Time<br>Frame   |  |
| Municip<br>Residu<br>Waste C<br>810<br>a. p<br>b. F<br>c. F  | ality<br>Jal<br>Code<br>DH Ran<br>Physica   | Granville<br>Residu<br>Code D<br>Drill cuttings (oil and g<br>nge 8.8<br>al State<br>al Appearance  | SECTION B. WAST<br>Jal Waste<br>escription<br>jas)<br>1. GENERAL P<br>9 to 9.01<br>Liquid Waste (EPA Me<br>Solid (EPA Method 90)<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquid  | E DESCRIPTION Amount 1,949 ROPERTIES (based on analyses or kithod 9095) 95) ture & pressure) Odo Phases of Separation eparation. Soil and Ro SIS ATTACHMENTS   | Unit<br>Measu<br>cuyd<br>lb<br>nowledge)<br>r Earthy<br>One<br>ck Fragme | of<br>⊔re<br>⊇ gal<br>⊠ ton                     | Time<br>Frame         One Time         One Time   |  |
| Municip<br>Residu<br>Waste C<br>810<br>a. p<br>b. F<br>c. F  | ality<br>Jal<br>Jode<br>OH Ran<br>Physica<br>Physica<br>The res   | Granville<br>Residu<br>Code D<br>Drill cuttings (oil and g<br>ige 8.8<br>al State<br>al Appearance<br>sults of a detailed chem<br>tions, is attached.   | SECTION B. WAST<br>al Waste<br>escription<br>jas)<br>1. GENERAL P<br>9 to 9.01<br>Liquid Waste (EPA Met<br>Solid (EPA Method 900<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of s<br>2. CHEMICAL ANALYS<br>Ical characterization of the  | Amount     Amount     1,949      ROPERTIES     (based on analyses or kethod 9095) 95) ture & pressure)     Odo     Phases of Separation     eparation. Soil and Ro     SIS ATTACHMENTS     waste, as described in  | Unit<br>Measu<br>cuyd<br>lb<br>nowledge)<br>r Earthy<br>One<br>ck Fragme | of<br>ure<br>gal<br>X ton<br>y/Slight F<br>ents | Time<br>Frame         One Time         Detroleum         Yes         No   |  |
| Municip<br>Residu<br>Waste C<br>810<br>a. p<br>b. F<br>c. F<br>a. 1<br>ib. A   | ality<br>Jal<br>Joh Ran<br>Physica<br>Physica<br>The res<br>nstruc<br>A detail  | Granville<br>Residu<br>Code D<br>Drill cuttings (oil and g<br>ige 8.8<br>al State<br>al Appearance<br>sults of a detailed chem<br>tions, is attached.<br>led description of the w                                   | SECTION B. WAST<br>al Waste<br>escription<br>jas)<br>1. GENERAL P<br>9 to 9.01<br>Liquid Waste (EPA Met<br>Solid (EPA Method 900<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of s<br>2. CHEMICAL ANALYS<br>Ical characterization of the<br>waste sampling method is a                              | Amount     Amount     1,949      ROPERTIES     (based on analyses or kn thod 9095) 95) ture & pressure)     Odo     Phases of Separation     eparation. Soil and Ro     Sis ATTACHMENTS     waste, as described in attached.                             | Unit<br>Measu<br>cuyd<br>lb<br>nowledge)<br>r Earthy<br>One<br>ck Fragme | of<br>ure<br>gal<br>X ton<br>y/Slight F<br>ents | Time<br>Frame         One Time         One Time         Petroleum         Yes         No         Yes         No                                       |  |
| Municip<br>Residu<br>Waste C<br>810<br>a. p<br>b. F<br>c. F<br>c. F  | ality<br>Jal<br>Code<br>DH Ran<br>Physica<br>Physica<br>Che res<br>nstruc<br>A detail   | Granville<br>Residu<br>Code D<br>Drill cuttings (oil and g<br>age 8.8<br>al State<br>al Appearance<br>sults of a detailed chem<br>tions, is attached.<br>led description of the w<br>ality assurance/quality        | SECTION B. WAST<br>al Waste<br>escription<br>jas)<br>1. GENERAL P<br>9 to 9.01<br>Liquid Waste (EPA Met<br>Solid (EPA Method 900<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of s<br>2. CHEMICAL ANALYS<br>Ical characterization of the  | Amount     Amount     1,949      ROPERTIES     (based on analyses or kn thod 9095) 95) ture & pressure)     Odo     Phases of Separation     eparation. Soil and Ro     Sis ATTACHMENTS     waste, as described in attached.                             | Unit<br>Measu<br>cuyd<br>lb<br>nowledge)<br>r Earthy<br>One<br>ck Fragme | of<br>ure<br>gal<br>X ton<br>y/Slight F<br>ents | Time<br>Frame         One Time         Detroleum         Yes         No   |  |
| Municip.<br>Residu<br>Waste C<br>810<br>a. p<br>b. F<br>c. F<br>a. 1<br>b. A<br>c. 1<br>a. 2<br>a. 2<br>b. 4<br>c. 1<br>a. 2<br>b. 4<br>c. 1<br>a. 2<br>b. 4<br>c. 1<br>a. 2<br>c. 2<br>c. 1<br>a. 2<br>c. 1<br>c. 2<br>c. 1<br>c. 2<br>c. 1<br>c. 2<br>c. 1<br>c. 2<br>c. 1<br>c. 2<br>c. 2 | ality<br>Jal<br>Jal<br>OH Ran<br>Physica<br>Physica<br>Physica<br>Che res<br>nstruc<br>A detail<br>The qua                    | Granville<br>Residu<br>Code D<br>Drill cuttings (oil and g<br>age 8.8<br>al State<br>al Appearance<br>sults of a detailed chem<br>tions, is attached.<br>led description of the w<br>ality assurance/quality        | SECTION B. WAST<br>al Waste<br>escription<br>jas)<br>1. GENERAL P<br>9 to 9.01<br>Liquid Waste (EPA Met<br>Solid (EPA Method 900<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of s<br>2. CHEMICAL ANALYS<br>Ical characterization of the<br>waste sampling method is a                              | Amount     Amount     1,949     ROPERTIES     (based on analyses or kn thod 9095)     95) ture & pressure)     Odo     Phases of Separation     eparation. Soil and Ro     Sis ATTACHMENTS     waste, as described in attached. yed by the laboratory(ie | Unit<br>Measu<br>cuyd<br>lb<br>nowledge)<br>r Earthy<br>One<br>ck Fragme | of<br>ure<br>gal<br>X ton<br>y/Slight F<br>ents | Time<br>Frame         One Time         One Time         Petroleum         Yes       No         Yes       No         Yes       No         Yes       No |  |
| Municip.<br>Residu<br>Waste C<br>810<br>a. p<br>b. F<br>c. F<br>a. 1<br>b. A<br>c. 1<br>a. 1<br>b. A<br>c. 1<br>a. 1<br>b. A   | ality<br>Jal<br>Johenson<br>Physica<br>Physica<br>Physica<br>Che res<br>Sustruct<br>A detail<br>The qua<br>attache<br>The res | Granville<br>Residu<br>Code D<br>Drill cuttings (oil and g<br>age 8.8<br>al State<br>al Appearance<br>sults of a detailed chem<br>tions, is attached.<br>led description of the w<br>ality assurance/quality<br>ed. | SECTION B. WAST<br>al Waste<br>escription<br>jas)<br>1. GENERAL P<br>9 to 9.01<br>Liquid Waste (EPA Me<br>Solid (EPA Method 900<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of s<br>2. CHEMICAL ANAL YS<br>Ical characterization of the<br>vaste sampling method is a<br>control procedures employ | Amount Amount 1,949 ROPERTIES (based on analyses or kethod 9095) 95) ture & pressure) Odo Phases of Separation eparation. Soil and Ro SIS ATTACHMENTS waste, as described in attached. yed by the laboratory(ie ched.                                    | Unit<br>Measu<br>cuyd<br>lb<br>nowledge)<br>r Earthy<br>One<br>ck Fragme | of<br>ure<br>gal<br>X ton<br>y/Slight F<br>ents | Time<br>Frame         One Time         One Time         Petroleum         Yes       No         Yes       No         Yes       No                      |  |

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| <ul> <li>a. A detailed description of the manufacturing and/or pollution control processes producing Yes the waste, as specified in the instructions, is attached.</li> <li>b. A schematic of the manufacturing and/or pollution control processes producing the waste, Yes as specified in the instructions, is attached.</li> <li>c. If portions of the information submitted are confidential, the substantiation for Yes No a confidentiality claim, as described in the instructions, is attached.</li> <li>SECTION C. MANAGEMENT OF RESIDUAL WASTE         <ul> <li>PROCESSING OR DISPOSAL FACILITY(IES)</li> <li>The detailed of the unit of the o</li></ul></li></ul> | <ul> <li>No</li> <li>No</li> <li>N/A</li> </ul> |
|--|---|
| as specified in the instructions, is attached.         c.       If portions of the information submitted are confidential, the substantiation for Yes No a confidentiality claim, as described in the instructions, is attached.         SECTION C.       MANAGEMENT OF RESIDUAL WASTE         1.       PROCESSING OR DISPOSAL FACILITY(IES)   |   |
| a confidentiality claim, as described in the instructions, is attached.  SECTION C. MANAGEMENT OF RESIDUAL WASTE  1. PROCESSING OR DISPOSAL FACILITY (IES)   | ⊠ N/A   |
| 1. PROCESSING OR DISPOSAL FACILITY(IES)  |   |
|  | States and the second second second             |
|  |   |
| The area below (ad.) 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.<br>8-4630-00010  |   |
| b. Facility Name Hakes C&D Landfill  |   |
| Address Line 1 4376 Manning Ridge Road   |   |
| Address Line 1   |   |
| Address City State ZIP Painted Post NY 14870   |   |
| Municipality Erwin Twp County Steuben  |   |
| c. Facility Contact Name Joseph Boyles   |   |
| Title  |   |
| Phone (607) 937-6044 Email Address joe.boyles@casella.com (585) 466-7271   |   |
| d. Volume of waste shipped to processing or disposal facility in the previous year.  |   |
| 1,087  |   |
| a. Solid waste permit number(s) for processing or disposal facility being utilized.<br>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       Ib       ∑ ton (check one)   |   |
| 2. BENEFICIAL USE  |   |
| a. Has the waste been approved for beneficial use?   | No No   |
| If "Yes", list the general permit number or approval number.   |   |
| b.       Volume of waste beneficially used in the previous year.         0   |   |

| encounter de la company |   |                              | ally setting to the set of an angle of the set |                     |               |  |
|-------------------------|---|------------------------------|---|---------------------|---------------|--|
|                         |   | <b>PROCESS DESCRIPTION 8</b> |   |                     |               | an a |
| a.                      | A detailed description of the<br>the waste, as specified in the | instructions, is attached.   | -   |                     | 🛛 Yes         | No No                                    |
| b.                      | A schematic of the manufactu<br>as specified in the instruction |                              | trol processes pro  | ducing the waste,   | 🛛 Yes         | No No                                    |
| C.                      | If portions of the information a confidentiality claim, as des  |                              |   | on for 🗌 Yes        | No No         | N/A                                      |
|                         | SECTIO  | ON C. M'AN'AGEME             |   |                     |               |  |
|                         |   | 1. PROCESSING OR DI          | SPOSAL FACILITY(I   | ES)                 |               |  |
| The a                   | rea below (ad.) will accommod                                   | ate the identification of tw | vo facilities. Attac  | h additional sheets | if necessary. |  |
| a.                      | Solid waste permit number(s)<br>8-0728-00004                    | for processing or dispos     | al facility being uti   | lized.              |               |  |
| b.                      | Facility Name   | Chemung County Land          | Ifill   |                     |               |  |
|                         | 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 Manage         | <u>۲</u>  |                     |               |  |
|                         | Phone   | (585) 797-5941               | Email Address   | carla.canjar@cas    | sella.com     |  |
| d.                      | Volume of waste shipped to p                                    | rocessing or disposal fac    | ility in the previou  | s vear              |               |  |
|                         | 242   | cuyd 🛄 gal [                 | ib 🖂 to   | n (check one)       |               |  |
| а.                      | Solid waste permit number(s)                                    | for processing or dispos     | al facility being uti   | lized.              |               |  |
| b.                      | Facility Name   |                              |   |                     |               |  |
|                         | Address Line 1  |                              |   |                     |               |  |
|                         | Address Line 1  |                              |   |                     |               |  |
|                         | Address City State ZIP  |                              |   |                     |               |  |
|                         | Municipality  |                              | County  |                     |               |  |
| с.                      | Facility Contact Name   |                              |   |                     |               |  |
|                         | Title   |                              |   | · · · · ·           |               |  |
|                         | Phone   |                              | Email Address   |                     |               |  |
| d.                      | Volume of waste shipped to p                                    | ocessing or disposal fac     | ility in the previous   | s vear.             |               |  |
|                         |   | cuyd 🗌 gal [                 | b tor   |                     |               |  |
|                         |   | 2. Benefi                    | CIAL USE  | -                   |               |  |
| a.                      | Has the waste been approved                                     | for beneficial use?          |   |                     | Yes [         | 🛛 No                                     |
|                         | If "Yes", list the general permi                                | t number or approval nur     | nber.   |                     |               |  |
| b.                      | Volume of waste beneficially u                                  |                              |   |                     |               |  |
|                         | 0   | cuyd 🗌 gal [                 | lbtor   | n (check one)       |               |  |

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|  |      | 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 applical   | ole: |   |  |  |  |  |  |  |
| I certify the information and has not chan   |      | ired in Section B-1, General Properties was supplied to the Department for the year             |  |  |  |  |  |  |
| Form Submitted:  |      | Form 26R  |  |  |  |  |  |  |
|  |      | Other (specify)   |  |  |  |  |  |  |
| Date Submitted:  |      | ·   |  |  |  |  |  |  |
| I certify the information  | -    | ired in Section B-2, Chemical Analysis was supplied to the Department for the year              |  |  |  |  |  |  |
| Form Submitted:  |      | Form 26R  |  |  |  |  |  |  |
|  |      | Other (specify)   |  |  |  |  |  |  |
| Date Submitted:  |      |   |  |  |  |  |  |  |
| I certify the information for the year and h   |      | ed in Section B-3, Process Description and Schematic, was supplied to the Department t changed. |  |  |  |  |  |  |
| Form Submitted:  |      | Form 26R  |  |  |  |  |  |  |
|  |      | Other (specify)   |  |  |  |  |  |  |
| Date Submitted:  |      |   |  |  |  |  |  |  |
| Name of Responsible Official   |      | Title Environmental Specialist  |  |  |  |  |  |  |
| Dina Brown   | -5   | 1502 Date 2/25/11   |  |  |  |  |  |  |
|  | -)   |   |  |  |  |  |  |  |

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| _AB ID: 08-00380<br>_AB ID: 39-00401  | <b>Easte</b><br>2566 Pe   | Benchmark Analytics, In<br>Eastern Division<br>2566 Pennsylvania Ave.<br>Sayre, PA 18840  |  |  | <b>IC.</b><br>Work Order: 10074058   |   |  |  |
|---|---|---|--|--|--|---|--|--|
|   |   | (570) 888-0169<br>(570) 888-0717  |  |  |  |   |  |  |
| SEND DATA TO:   |   |   | •  |  |  |   |  |  |
| NAME: Steve Gridley   |   |   | W  | O#: 1007   | 4058   |   |  |  |
| COMPANY: Talisman Energy US<br>ADDRESS: 337 Daniel Zenker D   |   |   | PA   | AGE: 1 of  | 1  |   |  |  |
| Horseheads, NY 14   |   |   |  | <u>.</u>   | 7400   |   |  |  |
|   |   |   | PU   | D#: AF77   | /406   |   |  |  |
| PHONE: (607) 562-4000<br>FAX: (607) 562-4001  | TES   | ST REPORT   | P۷   | VS ID#   |  |   |  |  |
|   |   |   |  |  |  |   |  |  |
| RECEIVED FOR LAB BY: DLM2   | DATE  | : 07/26/2010 15:15  |  |  | Pa   | age 1 of 1  |  |  |
| SAMPLE: Inv. Cuttings   |   | Lab ID: 10074058-001A   | Compo  | site   |  |   |  |  |
| SAMPLED BY: SG  | Samr  | ble Time: 07/26/2010 11:45  |  |  |  |   |  |  |
| SAMFLED DT. 3G  |   |   |  |  |  |   |  |  |
|   | •   |   | <u>SLOQ</u>  | Analvsis Start   | Analysis End   | Analyst *   |  |  |
| <u>Test</u><br>Total Petroleum Hydrocarbons   | <u>Result</u><br>72400 mg/Kg  | <u>Method</u><br>EPA 9071   | <u>SLOQ</u>  | <u>Analysis Start</u><br>07/27/10 12:00  | <u>Analysis End</u><br>07/27/10  | <u>Analyst *</u>  |  |  |
| Test  | <u>Result</u><br>72400 mg/Kg  | Method  | <u>SLOQ</u>  |  |  | <u>Analyst *</u>  |  |  |
| <u>Test</u><br>Total Petroleum Hydrocarbons   | <u>Result</u><br>72400 mg/Kg  | Method  | <u>SLOQ</u><br>Compos  | 07/27/10 12:00   |  | <u>Analyst *</u>  |  |  |
| <u>Test</u><br>Total Petroleum Hydrocarbons<br>Sample Note: Analysis performed  | <u>Result</u><br>72400 mg/Kg<br>d by Microbac-Erie  | <u>Method</u><br>EPA 9071   | Compos   | 07/27/10 12:00   |  | <u>Analyst *</u>  |  |  |
| Test<br>Total Petroleum Hydrocarbons<br>Sample Note: Analysis performed<br>MPLE: Inv. Cuttings<br>SAMPLED BY: SG  | <u>Result</u><br>72400 mg/Kg<br>d by Microbac-Erie<br>Samp  | Method<br>EPA 9071<br>Lab ID: 10074058-001B<br>de Time: 07/26/2010 11:45  |  | 07/27/10 12:00   | 07/27/10   |   |  |  |
| Test<br>Total Petroleum Hydrocarbons<br>Sample Note: Analysis performed<br>GAMPLE: Inv. Cuttings  | <u>Result</u><br>72400 mg/Kg<br>d by Microbac-Erie  | Method<br>EPA 9071<br>Lab ID: 10074058-001B   | Compos   | 07/27/10 12:00   |  |   |  |  |
| Test<br>Total Petroleum Hydrocarbons<br>Sample Note: Analysis performed<br>GAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br>Test  | <u>Result</u><br>72400 mg/Kg<br>d by Microbac-Erie<br>Samp<br><u>Result</u>   | Method<br>EPA 9071<br>Lab ID: 10074058-001B<br>ole Time: 07/26/2010 11:45<br><u>Method</u>  | Compos<br>SLOQ   | 07/27/10 12:00<br>site<br><u>Analysis Start</u>  | 07/27/10   | Analyst *   |  |  |
| Test<br>Total Petroleum Hydrocarbons<br>Sample Note: Analysis performed<br>SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br>Test<br>Moisture  | <u>Result</u><br>72400 mg/Kg<br>d by Microbac-Erie<br>Samp<br><u>Result</u><br>21.7 %   | Method<br>EPA 9071<br>Lab ID: 10074058-001B<br>ble Time: 07/26/2010 11:45<br><u>Method</u><br>Moisture Calc.  | Compos<br>SLOQ<br>0.01   | 07/27/10 12:00<br>site<br><u>Analysis Start</u><br>07/26/10 10:30  | 07/27/10<br>Analysis End<br>07/27/10   | <u>Analyst *</u><br>NFM-SA  |  |  |
| Test<br>Total Petroleum Hydrocarbons<br>Sample Note: Analysis performed<br>SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH  | <u>Result</u><br>72400 mg/Kg<br>d by Microbac-Erie<br>Samp<br><u>Result</u><br>21.7 %<br>< 0.1 %<br>9.01@21.0°C   | Method<br>EPA 9071<br>Lab ID: 10074058-001B<br>ole Time: 07/26/2010 11:45<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A   | Compos<br>SLOQ<br>0.01   | 07/27/10 12:00<br>site<br><u>Analysis Start</u><br>07/26/10 10:30<br>07/26/10 16:15  | 07/27/10<br>Analysis End<br>07/27/10<br>07/26/10   | Analyst *<br>NFM-SA<br>IC-SA  |  |  |
| Test<br>Total Petroleum Hydrocarbons<br>Sample Note: Analysis performed<br>GAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br>Test<br>Moisture<br>Free Liquid   | <u>Result</u><br>72400 mg/Kg<br>d by Microbac-Erie<br>Samp<br><u>Result</u><br>21.7 %<br>< 0.1 %<br>9.01@21.0°C   | Method<br>EPA 9071<br>Lab ID: 10074058-001B<br>ole Time: 07/26/2010 11:45<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C  | Compos<br>SLOQ<br>0.01<br>0.1  | 07/27/10 12:00<br>site<br><u>Analysis Start</u><br>07/26/10 10:30<br>07/26/10 16:15  | 07/27/10<br>Analysis End<br>07/27/10<br>07/26/10   | Analyst *<br>NFM-SA<br>IC-SA  |  |  |
| Test<br>Total Petroleum Hydrocarbons<br>Sample Note: Analysis performed<br>SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: TCLP Leachate of Inv. Cu  | Result<br>72400 mg/Kg<br>d by Microbac-Erie<br>Samp<br><u>Result</u><br>21.7 %<br>< 0.1 %<br>9.01@21.0°C<br>uttings<br>Samp                                   | Method<br>EPA 9071           Lab ID: 10074058-001B           ole Time: 07/26/2010 11:45           Method<br>Moisture Calc.           EPA 9095A           EPA 9045C           Lab ID: 10074058-001D           Je Time: 07/26/2010 11:45  | Compos<br>SLOQ<br>0.01<br>0.1  | 07/27/10 12:00<br>site<br><u>Analysis Start</u><br>07/26/10 10:30<br>07/26/10 16:15<br>07/27/10 12:20  | 07/27/10<br>Analysis End<br>07/27/10<br>07/26/10<br>07/27/10   | <u>Analyst *</u><br>NFM-SA<br>IC-SA<br>NFM-SA   |  |  |
| Test<br>Total Petroleum Hydrocarbons<br>Sample Note: Analysis performed<br>SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: TCLP Leachate of Inv. Cu<br>SAMPLED BY: SG<br><u>Test</u>   | Result<br>72400 mg/Kg<br>d by Microbac-Erie<br>Samp<br><u>Result</u><br>21.7 %<br>< 0.1 %<br>9.01@21.0°C<br>uttings<br>Samp<br><u>Result</u>                  | Method<br>EPA 9071           Lab ID: 10074058-001B           ole Time: 07/26/2010 11:45           Method<br>Moisture Calc.           EPA 9095A           EPA 9045C           Lab ID: 10074058-001D           Ide Time: 07/26/2010 11:45           Method  | Compos<br>SLOQ<br>0.01<br>0.1<br>Grab<br>SLOQ  | 07/27/10 12:00<br>site<br><u>Analysis Start</u><br>07/26/10 10:30<br>07/26/10 16:15<br>07/27/10 12:20<br><u>Analysis Start</u>   | 07/27/10<br><u>Analysis End</u><br>07/27/10<br>07/26/10<br>07/27/10<br><u>Analysis End</u>   | <u>Analyst *</u><br>NFM-SA<br>IC-SA<br>NFM-SA<br><u>Analyst *</u>   |  |  |
| Test<br>Total Petroleum Hydrocarbons<br>Sample Note: Analysis performed<br>SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br>Test<br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: TCLP Leachate of Inv. Cu<br>SAMPLED BY: SG<br>Test<br>Mercury - TCLP extracted   | Result<br>72400 mg/Kg<br>d by Microbac-Erie<br>Samp<br><u>Result</u><br>21.7 %<br>< 0.1 %<br>9.01@21.0°C<br>uttings<br>Samp<br><u>Result</u><br>< 0.0010 mg/L | Method<br>EPA 9071           Lab ID: 10074058-001B           ole Time: 07/26/2010 11:45           Method<br>Moisture Calc.           EPA 9095A           EPA 9045C           Lab ID: 10074058-001D           Ide Time: 07/26/2010 11:45           Method<br>EPA 7470A   | Compos<br><u>SLOQ</u><br>0.01<br>0.1<br>Grab<br><u>SLOQ</u><br>0.0010  | 07/27/10 12:00<br>site<br><u>Analysis Start</u><br>07/26/10 10:30<br>07/26/10 16:15<br>07/27/10 12:20<br><u>Analysis Start</u><br>07/29/10 9:00  | 07/27/10<br><u>Analysis End</u><br>07/27/10<br>07/26/10<br>07/27/10<br><u>Analysis End</u><br>07/29/10   | <u>Analyst *</u><br>NFM-SA<br>IC-SA<br>NFM-SA<br><u>Analyst *</u><br>RMD-CV   |  |  |
| Test<br>Total Petroleum Hydrocarbons<br>Sample Note: Analysis performed<br>GAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br>Test<br>Moisture<br>Free Liquid<br>pH<br>GAMPLE: TCLP Leachate of Inv. Cu<br>SAMPLED BY: SG<br>Test<br>Mercury - TCLP extracted<br>Arsenic - TCLP extracted   | Result           72400 mg/Kg           d by Microbac-Erie           Samp           Result           21.7 %           < 0.1 %                                  | Method<br>EPA 9071           Lab ID: 10074058-001B           ole Time: 07/26/2010 11:45           Method<br>Moisture Calc.           EPA 9095A           EPA 9045C           Lab ID: 10074058-001D           Ide Time: 07/26/2010 11:45           Method<br>EPA 7470A           EPA 6010B   | Compos<br><u>SLOQ</u><br>0.01<br>0.1<br>Grab<br><u>SLOQ</u><br>0.0010<br>0.500   | 07/27/10 12:00<br>site<br><u>Analysis Start</u><br>07/26/10 10:30<br>07/26/10 16:15<br>07/27/10 12:20<br><u>Analysis Start</u><br>07/29/10 9:00<br>07/29/10 9:50   | 07/27/10<br><u>Analysis End</u><br>07/27/10<br>07/26/10<br>07/27/10<br><u>Analysis End</u><br>07/29/10<br>07/29/10   | Analyst *<br>NFM-SA<br>IC-SA<br>NFM-SA<br>MFM-SA  |  |  |
| Test<br>Total Petroleum Hydrocarbons<br>Sample Note: Analysis performed<br>SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br>Test<br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: TCLP Leachate of Inv. Cu<br>SAMPLED BY: SG<br>Test<br>Mercury - TCLP extracted<br>Arsenic - TCLP extracted<br>Barium - TCLP extracted  | Result           72400 mg/Kg           d by Microbac-Erie           Samp           Result           21.7 %           < 0.1 %                                  | Method<br>EPA 9071           Lab ID: 10074058-001B           ole Time: 07/26/2010 11:45           Method<br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C           Lab ID: 10074058-001D           ole Time: 07/26/2010 11:45           Method<br>EPA 7470A<br>EPA 6010B           EPA 6010B  | Compos<br>SLOQ<br>0.01<br>0.1<br>Grab<br>SLOQ<br>0.0010<br>0.500<br>10.00  | 07/27/10 12:00 site <u>Analysis Start</u> 07/26/10 10:30 07/26/10 16:15 07/27/10 12:20 <u>Analysis Start</u> 07/29/10 9:00 07/29/10 9:50 07/29/10 9:50   | 07/27/10<br>Analysis End<br>07/27/10<br>07/26/10<br>07/27/10<br>07/27/10<br>07/29/10<br>07/29/10<br>07/29/10   | Analyst *<br>NFM-SA<br>IC-SA<br>NFM-SA<br>MFM-SA  |  |  |
| Test<br>Total Petroleum Hydrocarbons<br>Sample Note: Analysis performed<br>SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br>Test<br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: TCLP Leachate of Inv. Cu<br>SAMPLED BY: SG<br>Test<br>Mercury - TCLP extracted<br>Arsenic - TCLP extracted<br>Barium - TCLP extracted<br>Cadmium - TCLP extracted  | Result           72400 mg/Kg           d by Microbac-Erie           Samp           Result           21.7 %           < 0.1 %                                  | Method<br>EPA 9071           Lab ID: 10074058-001B           ole Time: 07/26/2010 11:45           Method<br>Moisture Calc.           EPA 9095A           EPA 9045C           Lab ID: 10074058-001D           Ide Time: 07/26/2010 11:45           Method<br>EPA 9045C           Lab ID: 10074058-001D           Ide Time: 07/26/2010 11:45           Method<br>EPA 7470A           EPA 6010B           EPA 6010B           EPA 6010B  | Compos<br>SLOQ<br>0.01<br>0.1<br>Grab<br>SLOQ<br>0.0010<br>0.500<br>10.00<br>0.100                                     | 07/27/10 12:00 site <u>Analysis Start</u> 07/26/10 10:30 07/26/10 16:15 07/27/10 12:20 <u>Analysis Start</u> 07/29/10 9:50 07/29/10 9:50 07/29/10 9:50 07/29/10 9:50   | 07/27/10<br>Analysis End<br>07/27/10<br>07/26/10<br>07/27/10<br>07/27/10<br>07/29/10<br>07/29/10<br>07/29/10<br>07/29/10   | Analyst *<br>NFM-SA<br>IC-SA<br>NFM-SA<br>MD-SA<br>Analyst *<br>RMD-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV                            |  |  |
| Test<br>Total Petroleum Hydrocarbons<br>Sample Note: Analysis performed<br>SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br>Test<br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: TCLP Leachate of Inv. Cu<br>SAMPLED BY: SG<br>Test<br>Mercury - TCLP extracted<br>Arsenic - TCLP extracted<br>Barium - TCLP extracted  | Result           72400 mg/Kg           d by Microbac-Erie           Samp <u>Result</u> 21.7 %           < 0.1 %   | Method<br>EPA 9071           Lab ID: 10074058-001B           ole Time: 07/26/2010 11:45           Method<br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C           Lab ID: 10074058-001D           ole Time: 07/26/2010 11:45           Method<br>EPA 7470A<br>EPA 6010B           EPA 6010B  | Compos<br>SLOQ<br>0.01<br>0.1<br>Grab<br>SLOQ<br>0.0010<br>0.500<br>10.00<br>0.100<br>0.500                            | 07/27/10 12:00 site <u>Analysis Start</u> 07/26/10 10:30 07/26/10 16:15 07/27/10 12:20 <u>Analysis Start</u> 07/29/10 9:50 07/29/10 9:50 07/29/10 9:50 07/29/10 9:50 07/29/10 9:50   | 07/27/10<br>Analysis End<br>07/27/10<br>07/26/10<br>07/26/10<br>07/27/10<br>07/29/10<br>07/29/10<br>07/29/10<br>07/29/10<br>07/29/10                                     | Analyst *<br>NFM-SA<br>IC-SA<br>NFM-SA<br>MFM-SA<br>MD-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV                               |  |  |
| Test<br>Total Petroleum Hydrocarbons<br>Sample Note: Analysis performed<br>SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: TCLP Leachate of Inv. Cu<br>SAMPLED BY: SG<br><u>Test</u><br>Mercury - TCLP extracted<br>Arsenic - TCLP extracted<br>Barium - TCLP extracted<br>Cadmium - TCLP extracted<br>Chromium - TCLP extracted<br>Copper - TCLP extracted  | Result           72400 mg/Kg           d by Microbac-Erie           Samp <u>Result</u> 21.7 %           < 0.1 %   | Method<br>EPA 9071           Lab ID: 10074058-001B           ole Time: 07/26/2010 11:45           Method<br>Moisture Calc.           EPA 9095A           EPA 9045C           Lab ID: 10074058-001D           ole Time: 07/26/2010 11:45           Method<br>EPA 7470A           EPA 6010B           EPA 6010B           EPA 6010B           EPA 6010B           EPA 6010B           EPA 6010B   | Compos<br>SLOQ<br>0.01<br>0.1<br>Grab<br>SLOQ<br>0.0010<br>0.500<br>10.00<br>0.100<br>0.500<br>0.100                   | 07/27/10 12:00 site Analysis Start 07/26/10 10:30 07/26/10 16:15 07/27/10 12:20 Analysis Start 07/29/10 9:50 07/29/10 9:50 07/29/10 9:50 07/29/10 9:50 07/29/10 9:50 07/29/10 9:50   | 07/27/10<br>Analysis End<br>07/27/10<br>07/26/10<br>07/27/10<br>07/27/10<br>07/29/10<br>07/29/10<br>07/29/10<br>07/29/10   | Analyst *<br>NFM-SA<br>IC-SA<br>NFM-SA<br>MFM-SA<br>MD-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV                     |  |  |
| Test<br>Total Petroleum Hydrocarbons<br>Sample Note: Analysis performed<br>SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br>Test<br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: TCLP Leachate of Inv. Cu<br>SAMPLED BY: SG<br><u>Test</u><br>Mercury - TCLP extracted<br>Arsenic - TCLP extracted<br>Barium - TCLP extracted<br>Cadmium - TCLP extracted   | Result           72400 mg/Kg           d by Microbac-Erie           Samp <u>Result</u> 21.7 %           < 0.1 %   | Method<br>EPA 9071           Lab ID: 10074058-001B           ole Time: 07/26/2010 11:45           Method<br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C           Lab ID: 10074058-001D           Ide Time: 07/26/2010 11:45           Method<br>EPA 7470A<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B   | Compos<br>SLOQ<br>0.01<br>0.1<br>Grab<br>SLOQ<br>0.0010<br>0.500<br>10.00<br>0.100<br>0.500                            | 07/27/10 12:00 site <u>Analysis Start</u> 07/26/10 10:30 07/26/10 16:15 07/27/10 12:20 <u>Analysis Start</u> 07/29/10 9:00 07/29/10 9:50 07/29/10 9:50 07/29/10 9:50 07/29/10 9:50 07/29/10 9:50 07/29/10 9:50                             | 07/27/10<br>Analysis End<br>07/27/10<br>07/26/10<br>07/26/10<br>07/29/10<br>07/29/10<br>07/29/10<br>07/29/10<br>07/29/10<br>07/29/10<br>07/29/10<br>07/29/10             | Analyst *<br>NFM-SA<br>IC-SA<br>NFM-SA<br>MD-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV           |  |  |
| Test<br>Total Petroleum Hydrocarbons<br>Sample Note: Analysis performed<br>SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br>Test<br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: TCLP Leachate of Inv. Cu<br>SAMPLED BY: SG<br><u>Test</u><br>Mercury - TCLP extracted<br>Arsenic - TCLP extracted<br>Barium - TCLP extracted<br>Cadmium - TCLP extracted<br>Chromium - TCLP extracted<br>Copper - TCLP extracted<br>Lead - TCLP extracted                            | Result           72400 mg/Kg           d by Microbac-Erie           Samp           Result           21.7 %           < 0.1 %                                  | Method<br>EPA 9071           Lab ID: 10074058-001B           ole Time: 07/26/2010 11:45           Method<br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C           Lab ID: 10074058-001D           ole Time: 07/26/2010 11:45           Method<br>EPA 7470A<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B  | Compos<br>SLOQ<br>0.01<br>0.1<br>Grab<br>SLOQ<br>0.0010<br>0.500<br>10.00<br>0.100<br>0.500<br>0.100<br>0.500          | 07/27/10 12:00 site Analysis Start 07/26/10 10:30 07/26/10 16:15 07/27/10 12:20 Analysis Start 07/29/10 9:50 07/29/10 9:50 07/29/10 9:50 07/29/10 9:50 07/29/10 9:50 07/29/10 9:50   | 07/27/10<br>Analysis End<br>07/27/10<br>07/26/10<br>07/26/10<br>07/29/10<br>07/29/10<br>07/29/10<br>07/29/10<br>07/29/10<br>07/29/10<br>07/29/10<br>07/29/10<br>07/29/10 | Analyst *<br>NFM-SA<br>IC-SA<br>NFM-SA<br>MD-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV |  |  |
| Test<br>Total Petroleum Hydrocarbons<br>Sample Note: Analysis performed<br>SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br>Test<br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: TCLP Leachate of Inv. Cu<br>SAMPLED BY: SG<br><u>Test</u><br>Mercury - TCLP extracted<br>Arsenic - TCLP extracted<br>Barium - TCLP extracted<br>Cadmium - TCLP extracted<br>Chromium - TCLP extracted<br>Copper - TCLP extracted<br>Lead - TCLP extracted<br>Nickel - TCLP extracted | Result           72400 mg/Kg           d by Microbac-Erie           Samp           Result           21.7 %           < 0.1 %                                  | Method<br>EPA 9071           Lab ID: 10074058-001B           ole Time: 07/26/2010 11:45           Method<br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C           Lab ID: 10074058-001D           ole Time: 07/26/2010 11:45           Method<br>EPA 7470A           EPA 6010B           EPA 6010B | Compos<br>SLOQ<br>0.01<br>0.1<br>Grab<br>SLOQ<br>0.0010<br>0.500<br>10.00<br>0.100<br>0.500<br>0.100<br>0.500<br>0.100 | 07/27/10 12:00 site <u>Analysis Start</u> 07/26/10 10:30 07/26/10 16:15 07/27/10 12:20 <u>Analysis Start</u> 07/29/10 9:50 07/29/10 9:50 07/29/10 9:50 07/29/10 9:50 07/29/10 9:50 07/29/10 9:50 07/29/10 9:50 07/29/10 9:50 07/29/10 9:50 | 07/27/10<br>Analysis End<br>07/27/10<br>07/26/10<br>07/26/10<br>07/29/10<br>07/29/10<br>07/29/10<br>07/29/10<br>07/29/10<br>07/29/10<br>07/29/10<br>07/29/10             | Analyst *<br>NFM-SA<br>IC-SA<br>NFM-SA<br>MD-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV           |  |  |

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

| Canij | M. | Davis |
|-------|----|-------|
|       |    |       |

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DATE: 7/30/2010

| LAB ID: 08-00380<br>LAB ID: 39-00401  | Benchmark Analytics, In<br>Eastern Division<br>2566 Pennsylvania Ave.<br>Sayre, PA 18840   |   |  | <b>1C.</b><br>Work Order: 10081723  |   |   |  |
|---|--|---|--|---|---|---|--|
|   |  | 570) 888-0169<br>570) 888-0717  |  |   |   |   |  |
| SEND DATA TO:   |  |   |  |   |   |   |  |
| NAME: Steve Gridley   |  |   | W  | O#: 1008  | 31723   |   |  |
| COMPANY: Talisman Energy USA, I   | nc.  |   | PA   | AGE: 1 of 1   | 2   |   |  |
| ADDRESS: 337 Daniel Zenker Dr<br>Horseheads, NY 14845   |  |   | D  |   |   |   |  |
| ·····, ····,  |  |   | PU   | D#: AF7   | 406   |   |  |
| PHONE: (607) 562-4000<br>FAX: (607) 562-4001  | TEST   | REPORT  | P١   | NS ID#  |   |   |  |
|   |  |   |  |   |   |   |  |
|   |  |   |  |   | _   |   |  |
| RECEIVED FOR LAB BY: DLM2   | DATE:  | 08/10/2010 15:33  | _  |   | P   | age 1 of 2  |  |
| SAMPLE: Air Cuttings  |  | ab ID: 10081723-001A  | Grab   |   |   |   |  |
| SAMPLED BY: SG  | Sample   | Time: 08/09/2010 15:50  | SLOQ   |   |   |   |  |
| Test  | Result   | <u>Method</u>   |  | 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 N  | Aicrobac-Erie  |   |  | armanana Madata   |   |   |  |
| SAMPLE: Air Cuttings  |  | ab ID: 10081723-001B  | Grab   |   |   |   |  |
| SAMPLED BY: SG  | Sample   | Time: 08/09/2010 15:50  | SLOQ   |   |   |   |  |
| Test  | Result   | Method  |  | Analysis Start  | Analysis End  | <u>Analyst *</u>  |  |
| Moisture  | 18.2 %   | Moisture Calc.  | 0.01   | 08/12/10 8:45   | 08/13/10  | MED-SA  |  |
| Free Liquid   | < 0.1 %  | EPA 9095A   | 0.1  | 08/12/10 15:15  | 08/12/10  | RHN-SA  |  |
| рН  | 8.89@21.8°C  | EPA 9045C   |  | 08/12/10 15:42  | 08/12/10  | MED-SA  |  |
| SAMPLE: Air Cuttings  |  | ab ID: 10081723-001C  | Grab   |   |   |   |  |
| SAMPLED BY: SG  | Sample   | Time: 08/09/2010 15:50  | SLOQ   |   |   |   |  |
| Test  | <u>Result</u>  | Method  |  | Analysis Start  | Analysis End  | <u>Analyst *</u>  |  |
|   |  |   |  |   | 00110110  | RMD-CV  |  |
| Sodium  | 941 mg/Kg-dry  | EPA 6010B   | 108  | 08/13/10 9:40   | 08/13/10  |   |  |
| Chloride  | 370 mg/Kg-dry  | EPA 300.0   | 108<br>61.1  | 08/11/10 14:31  | 08/12/10  | HDP-CV  |  |
|   |  |   |  |   |   |   |  |
| Chloride  | 370 mg/Kg-dry<br>18.2 %  | EPA 300.0   |  | 08/11/10 14:31  | 08/12/10  | HDP-CV  |  |
| Chloride<br>Percent Moisture  | 370 mg/Kg-dry<br>18.2 %  | EPA 300.0<br>SM2540G  | 61.1<br>Grab   | 08/11/10 14:31  | 08/12/10  | HDP-CV  |  |
| Chloride<br>Percent Moisture<br>SAMPLE: TCLP Leachate of Air Cutting  | 370 mg/Kg-dry<br>18.2 %  | EPA 300.0<br>SM2540G<br>ab ID: 10081723-001E  | 61.1   | 08/11/10 14:31  | 08/12/10  | HDP-CV<br>MED-SA  |  |
| Chloride<br>Percent Moisture<br>SAMPLE: <b>TCLP Leachate of Air Cutting</b><br>SAMPLED BY: SG   | 370 mg/Kg-dry<br>18.2 %<br>Is L<br>Sample  | EPA 300.0<br>SM2540G<br>ab ID: 10081723-001E<br>Time: 08/09/2010 15:50  | 61.1<br>Grab   | 08/11/10 14:31<br>08/12/10 8:45   | 08/12/10<br>08/13/10  | HDP-CV<br>MED-SA  |  |
| Chloride<br>Percent Moisture<br>SAMPLE: <b>TCLP Leachate of Air Cutting</b><br>SAMPLED BY: SG<br><u>Test</u>  | 370 mg/Kg-dry<br>18.2 %<br><b>js</b> L<br>Sample<br><u>Result</u>  | EPA 300.0<br>SM2540G<br>ab ID: 10081723-001E<br>Time: 08/09/2010 15:50<br><u>Method</u>   | 61.1<br>Grab<br><u>SLOQ</u>                                      | 08/11/10 14:31<br>08/12/10 8:45<br><u>Analysis Start</u>  | 08/12/10<br>08/13/10<br><u>Analysis End</u>                                     | HDP-CV<br>MED-SA<br><u>Analyst *</u><br>KW-CV                               |  |
| Chloride<br>Percent Moisture<br>SAMPLE: <b>TCLP Leachate of Air Cutting</b><br>SAMPLED BY: SG<br><u>Test</u><br>Mercury - TCLP extracted  | 370 mg/Kg-dry<br>18.2 %<br><b>js</b> L<br>Sample<br><u>Result</u><br>< 0.0008 mg/L   | EPA 300.0<br>SM2540G<br>ab ID: 10081723-001E<br>Time: 08/09/2010 15:50<br><u>Method</u><br>EPA 7470A  | 61.1<br>Grab<br><u>SLOQ</u><br>0.0008                            | 08/11/10 14:31<br>08/12/10 8:45<br><u>Analysis Start</u><br>08/12/10 8:30   | 08/12/10<br>08/13/10<br><u>Analysis End</u><br>08/13/10                         | HDP-CV<br>MED-SA<br><u>Analyst *</u><br>KW-CV<br>RMD-CV                     |  |
| Chloride<br>Percent Moisture<br>SAMPLE: <b>TCLP Leachate of Air Cutting</b><br>SAMPLED BY: SG<br><u>Test</u><br>Mercury - TCLP extracted<br>Arsenic - TCLP extracted  | 370 mg/Kg-dry<br>18.2 %<br><b>js</b> L<br>Sample<br><u>Result</u><br>< 0.0008 mg/L<br>< 0.500 mg/L                                 | EPA 300.0<br>SM2540G<br>ab ID: 10081723-001E<br>Time: 08/09/2010 15:50<br><u>Method</u><br>EPA 7470A<br>EPA 6010B                           | 61.1<br>Grab<br><u>SLOQ</u><br>0.0008<br>0.500                   | 08/11/10 14:31<br>08/12/10 8:45<br><u>Analysis Start</u><br>08/12/10 8:30<br>08/13/10 7:20                            | 08/12/10<br>08/13/10<br><u>Analysis End</u><br>08/13/10<br>08/13/10             | HDP-CV<br>MED-SA<br><u>Analyst *</u><br>KW-CV<br>RMD-CV<br>RMD-CV           |  |
| Chloride<br>Percent Moisture<br>SAMPLE: <b>TCLP Leachate of Air Cutting</b><br>SAMPLED BY: SG<br><u>Test</u><br>Mercury - TCLP extracted<br>Arsenic - TCLP extracted<br>Barium - TCLP extracted                             | 370 mg/Kg-dry<br>18.2 %<br><b>js</b> L<br>Sample<br><u>Result</u><br>< 0.0008 mg/L<br>< 0.500 mg/L<br>< 10.00 mg/L                 | EPA 300.0<br>SM2540G<br>ab ID: 10081723-001E<br>Time: 08/09/2010 15:50<br><u>Method</u><br>EPA 7470A<br>EPA 6010B<br>EPA 6010B              | 61.1<br>Grab<br><u>SLOQ</u><br>0.0008<br>0.500<br>10.00          | 08/11/10 14:31<br>08/12/10 8:45<br><u>Analysis Start</u><br>08/12/10 8:30<br>08/13/10 7:20<br>08/13/10 7:20           | 08/12/10<br>08/13/10<br><u>Analysis End</u><br>08/13/10<br>08/13/10<br>08/13/10 | HDP-CV<br>MED-SA<br><u>Analyst *</u><br>KW-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV |  |
| Chloride<br>Percent Moisture<br>SAMPLE: <b>TCLP Leachate of Air Cutting</b><br>SAMPLED BY: SG<br><u>Test</u><br>Mercury - TCLP extracted<br>Arsenic - TCLP extracted<br>Barium - TCLP extracted<br>Cadmium - TCLP extracted | 370 mg/Kg-dry<br>18.2 %<br><b>js</b> L<br>Sample<br><u>Result</u><br>< 0.0008 mg/L<br>< 0.500 mg/L<br>< 10.00 mg/L<br>< 0.100 mg/L | EPA 300.0<br>SM2540G<br>ab ID: 10081723-001E<br>Time: 08/09/2010 15:50<br><u>Method</u><br>EPA 7470A<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B | 61.1<br>Grab<br><u>SLOQ</u><br>0.0008<br>0.500<br>10.00<br>0.100 | 08/11/10 14:31<br>08/12/10 8:45<br>Analysis Start<br>08/12/10 8:30<br>08/13/10 7:20<br>08/13/10 7:20<br>08/13/10 7:20 | 08/12/10<br>08/13/10<br><u>Analysis End</u><br>08/13/10<br>08/13/10<br>08/13/10 | HDP-CV<br>MED-SA  |  |

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report. \* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER

Carrie M. Davis

DATE: 8/13/2010

| LAB ID: 08-00380<br>LAB ID: 39-00401 |                                    | Benchmark Analytics, Inc.<br>Eastern Division<br>2566 Pennsylvania Ave.<br>Sayre, PA 18840<br>Phone: (570) 888-0169<br>Fax: (570) 888-0717 |                | C.    | C.<br>Work Order: 1008 |          |         | 081723     |
|--------------------------------------|------------------------------------|--|----------------|-------|------------------------|----------|---------|------------|
| SEND DATA                            |                                    | Fax. 15/1  | 11000-0717     |       |                        |          |         |            |
| NAME:                                | Steve Gridley                      |  |                | \\/(  | D#:                    | 10081723 | Ł       |            |
| COMPANY:                             | -                                  | IC.  |                |       |                        |          | ,       |            |
| ADDRESS:                             | 337 Daniel Zenker Dr               |  |                | PA    | GE:                    | 2 of 2   |         |            |
|                                      | Horseheads, NY 14845               |  |                | PC    | D#:                    | AF77406  |         |            |
| PHONE:<br>FAX:                       | (607) 562-4000<br>(607) 562-4001   | TEST R   | REPORT         | PV    | VS ID#                 |          |         |            |
|                                      |                                    |  |                |       | • • • • •              |          |         |            |
| RECEIVED                             | FOR LAB BY: DLM2                   | DATE: 08   | /10/2010 15:33 |       |                        |          | P       | age 2 of 2 |
| Nickel - 1                           | CLP extracted                      | 0.230 mg/L   | EPA 6010B      | 0.100 | 08/13/10               | 7:20 08  | 3/13/10 | RMD-CV     |
| Selenium                             | <ul> <li>TCLP extracted</li> </ul> | < 0.500 mg/L   | EPA 6010B      | 0.500 | 08/13/10               | 7:20 08  | 3/13/10 | RMD-CV     |
| Silver - T                           | CLP extracted                      | < 0.100 mg/L   | EPA 6010B      | 0.100 | 08/13/10               | 7:20 08  | 3/13/10 | RMD-CV     |
| Zinc - TC                            | LP extracted                       | 0.735 mg/L   | EPA 6010B      | 0.200 | 08/13/10               | 7:20 08  | 3/13/10 | RMD-CV     |

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

Camie M. Davis

DATE: 8/13/2010



### COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WASTE MANAGEMENT

FORM 26R

CHEMICAL ANALYSIS OF RESIDUAL WASTE ANNUAL REPORT BY THE GENERATOR

| This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form 26R, reference the item number and identify the date prepared. The date on attached sheets needs to match the date noted below. |   |   |                               | tify Date Receive   | DEP USE ONLY<br>Date Received & General Notes |  |  |
|--|---|---|-------------------------------|---------------------|---|--|--|
| General Refe   |   |   |                               |                     |   |  |  |
| Date Prepare   |   | ry 11, 2011   |                               |                     |   |  |  |
|  | SECTION A. CI   | IENT (GENERATOR   | R OF THE WASTE)               | IFORMATION          |   |  |  |
| Company Na   |   |   |                               |                     |   |  |  |
|  | ergy USA Inc.<br>ry, Name of Parent Company                     |   |                               | EPA                 | Generator ID#                                 |  |  |
| Talisman En  |   |   |                               | N/A                 | Selicitator 10#                               |  |  |
| Company Ma   | iling Address Line 1  | C   | ompany Mailing Addre          | ss Line 2           |   |  |  |
| 50 Pennwoo   | d Place<br>dress Last Line – City                               | State   | Zip+4                         | Phone               | Ext   |  |  |
| Warrendale   | uress Last Line – City  | PA  | 15086                         | (724) 814-530       |   |  |  |
|  | ntact Last Name   | First Name  | MI                            | Suffi               |   |  |  |
| Brown  |   | Dina  | <u></u>                       |                     |   |  |  |
| Municipality<br>Warrendale   |   |   | County<br>Allegheny           |                     |   |  |  |
| Contact Phor   | ne Ext Co   | ontact Email Address  | lioghony                      |                     |   |  |  |
| (724) 814-53   |   | brown@talismanusa.c   |                               |                     |   |  |  |
|  | generated at the Company M<br>be location of waste genera       |   |                               |                     | Yes 🛛 No                                      |  |  |
| the (01-   | 003) well pad site located at 1                                 | 349 Buckwheat Road, G   | ranville Township, Bradf      | ord County, PA. Was | ste is stored in                              |  |  |
| containers on<br>Municipality  | site.   |   |                               | State               |   |  |  |
| wunicipality   | Granville   | County Bradfo   |                               | State               | <u>PA</u>                                     |  |  |
| Residual   | Residual  |   |                               | Unit of             | Time  |  |  |
| Waste Code   | Code Desc   | ription   | Amount                        | Measure             | Frame   |  |  |
| 810  | Drill cuttings (oil and gas)                                    | i   | 1,949                         | cuydgal<br>lb ⊠ton  | One Time                                      |  |  |
| 14 - Tiel  |   | 1. GENERAL P  | ROPERTIES                     |                     |   |  |  |
| a. pHRa  |   |   | (based on analyses or k       | nowledge)           |   |  |  |
| b. Physi   | cal State   | Liquid Waste (EPA Me<br>Solid (EPA Method 909<br>Gas (ambient tempera | 95)                           |                     |   |  |  |
| c. Physi   |   | olor Greyish Black  |                               |                     | Petroleum                                     |  |  |
|  |   | mber of Solid or Liquic   |                               |                     |   |  |  |
|  | De  | scribe each phase of s  | eparation. <u>Soil and Ro</u> | ck Fragments        |   |  |  |
|  |   | 2. CHEMICAL ANALYS  |                               |                     |   |  |  |
| instru   | esults of a detailed chemical<br>ctions, is attached.           |   |                               | the                 | Yes 🗌 No                                      |  |  |
|  | ailed description of the wast                                   |   |                               |                     | Yes 🗌 No                                      |  |  |
| c. The q   | uality assurance/quality con<br>ned.                            | trol procedures employ  | yed by the laboratory(ie      | es) is 🖂            | Yes 🔄 No                                      |  |  |
|  | esults of the hazardous was                                     | e determination is atta   | ched.                         |                     | Yes 🗌 No                                      |  |  |
| e. If app  | licable, a detailed explanatic<br>f actual chemical analysis is | on supporting use of ge   |                               | Yes                 | No 🛛 N/A                                      |  |  |

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|           | and the second | 3. PROCESS DESCRIPTIO      | SOUTHATIC ATTA           | CUMENTO  |              | and the second second |
|-----------|--|----------------------------|--------------------------|--|--------------|-----------------------|
| 520352724 |  |                            |                          |  |              | - <u></u>             |
| a.        | A detailed description of the the waste, as specified in the   |                            |                          | esses producing  | 🛛 Yes        | 🗌 No                  |
| b.        | A schematic of the manufac<br>as specified in the instruction  |                            | control processes pro    | ducing the waste,  | Yes Yes      | No No                 |
| C.        | If portions of the informatio<br>a confidentiality claim, as d   |                            |                          | on for 🗌 Yes   | No No        | 🛛 N/A                 |
|           | SECT   | ION C. MANAGEN             |                          | Character and a character and a start water and a second water and |              |                       |
|           |  |                            | DISPOSAL FACILITY        |  |              |                       |
| The a     | rea below (ad.) will accommo   | odate the identification o | f two facilities. Attac  | h additional sheets  | if necessary | <b>.</b>              |
| а.        | Solid waste permit number(<br>8-4630-00010   | s) for processing or disp  | osal facility being uti  | lized.   |              |                       |
| b.        | Facility Name  | Hakes C&D Landfill         | ·····                    |  | ······       |                       |
|           | Address Line 1   | 4376 Manning Ridge         | Road                     |  |              |                       |
|           | Address Line 1   | <u>UU_</u>                 |                          | · · · · · · · · · · · · · · · · · · ·                              |              |                       |
| 1         | Address City State ZIP   | Painted Post               | NY                       | 14870  |              |                       |
| -         | Municipality   | Erwin Twp                  | County                   | Steuben  |              |                       |
| C.        | Facility Contact Name  | Joseph Boyles              |                          |  |              |                       |
|           | Title  | JUSEPH Doyles              |                          |  |              |                       |
|           | Phone  | (607) 937-6044             | Email Address            | joe.boyles@case  | alla com     |                       |
|           | T none   | (585) 466-7271             |                          | Joe.boyles@cast  | sha.com      |                       |
| d.        | Volume of waste shipped to   |                            | facility in the previou  | s vear.  |              |                       |
|           | 1,087 [  | cuyd gal                   | ☐ lb ⊠ to                |  | 1            |                       |
| a.        | Solid waste permit number(<br>9-0232-00003   | s) for processing or disp  | osal facility being uti  | lized.   |              |                       |
| b.        | Facility Name  | Hyland Landfill            |                          |  |              |                       |
|           | Address Line 1   | 6653 Herdman Road          | d                        |  |              |                       |
|           | 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@ca  | sella.com    |                       |
| d.        | Volume of waste shipped to<br>620  | processing or disposal     | facility in the previous |  |              |                       |
|           |  | 2. BEN                     |                          | •  |              |                       |
| а.        | Has the waste been approve   |                            |                          |  | Yes          | No No                 |
|           | If "Yes", list the general per   | mit number or approval i   | number.                  |  |              |                       |
| b.        | Volume of waste beneficially   |                            |                          |  |              |                       |
|           | 0  | ] cuyd [] gal              | b to                     | n (check one)  |              |                       |

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|             | 3.  | PROCESS DESCRIPTION          | & SCHEMATIC ATTACH        | IMENTS                                | sa Si        |         |
|-------------|---|------------------------------|---------------------------|---------------------------------------|--------------|---------|
| a.          | A detailed description of the manufacturing and/or pollution control processes producing Xes No the waste, as specified in the instructions, is attached.         |                              |                           |                                       |              |         |
| b.          | A schematic of the manufacturing and/or pollution control processes producing the waste, X Yes No as specified in the instructions, is attached.                  |                              |                           |                                       |              |         |
| C.          | If portions of the information submitted are confidential, the substantiation forYesNoN/A a confidentiality claim, as described in the instructions, is attached. |                              |                           |                                       |              |         |
|             | SECTI   | ON C. MANAGEME               | NT OF RESIDUA             | L WASTE                               |              |         |
|             |   | 1. PROCESSING OR D           | ISPOSAL FACILITY (IES     | )                                     |              |         |
| The a       | rea below (ad.) will accommo  | late the identification of t | wo facilities. Attach a   | dditional sheets                      | if necessary | •       |
| a.          | Solid waste permit number(s<br>8-0728-00004   | for processing or dispo      | sal facility being utiliz | ed.                                   |              |         |
| b.          | Facility Name   | Chemung County Lan           | dfill                     |                                       |              |         |
|             | 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 Manag          | er                        |                                       |              | · · · · |
|             | Phone   | (585) 797-5941               |                           | carla.canjar@ca                       | sella.com    | · · · · |
| d.          | Volume of waste shipped to p  | processing or disposal fa    |                           |                                       | ·····        |         |
| u.          | 242   | cuyd 🗍 gal                   | ☐ lb ⊠ ton                | (check one)                           |              |         |
| a.          | Solid waste permit number(s)  | for processing or dispos     |                           | , , , , , , , , , , , , , , , , , , , |              |         |
| a.          | • • • •   | for processing of dispos     | sai lacinty being utilize | cu.                                   |              |         |
| b.          | Facility Name   |                              |                           |                                       |              |         |
|             | Address Line 1  |                              |                           |                                       |              |         |
|             | Address Line 1  |                              |                           |                                       |              |         |
|             | Address City State ZIP  |                              |                           |                                       |              |         |
|             | Municipality  |                              | County                    |                                       |              |         |
| C.          | Facility Contact Name   |                              |                           |                                       |              |         |
|             | Title   |                              | ×                         |                                       | <u> </u>     |         |
|             | Phone   |                              | Email Address             | ······                                |              |         |
| d.          | Volume of waste shipped to processing or disposal facility in the previous year.  |                              |                           |                                       |              |         |
| <b>u</b> .  |   | cu yd 🗌 gal                  |                           | (check one)                           |              |         |
| 1. sel je s |   | 2. Benef                     | FICIAL USE                |                                       |              |         |
| a.          | Has the waste been approved for beneficial use?   |                              |                           |                                       |              |         |
|             | If "Yes", list the general permit number or approval number.  |                              |                           |                                       |              |         |
| b.          | Volume of waste beneficially used in the previous year  |                              |                           |                                       |              |         |
|             | 0   | cuyd 🗌 gal                   | ☐ lb ☐ ton                | (check one)                           |              |         |

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| SECTION D. CERTIFICATION   |  |                                |  |  |  |  |  |  |
|--|--|--------------------------------|--|--|--|--|--|--|
| I certify, under penalty of law, that I have personally examined and am familiar with the information submitted in this Annual<br>Report and all attached documents and that based upon my inquiry of those individuals immediately responsible for<br>obtaining the information, I verify that the submitted information is true, accurate and complete to the best of my<br>knowledge. I understand that the submission of false information herein is made subject to the penalties of 18 Pa. C.S.<br>§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<br>and has not changed.   |  |                                |  |  |  |  |  |  |
| Form Submitted:  |  | Form 26R                       |  |  |  |  |  |  |
|  |  | Other (specify)                |  |  |  |  |  |  |
| Date Submitted:  |  |                                |  |  |  |  |  |  |
| I certify the information required in Section B-3, Process Description and Schematic, was supplied to the Department for the year and has not changed.   |  |                                |  |  |  |  |  |  |
| Form Submitted:  |  | Form 26R                       |  |  |  |  |  |  |
|  |  | Other (specify)                |  |  |  |  |  |  |
| Date Submitted:  |  |                                |  |  |  |  |  |  |
| Name of Responsible Official   |  | Title Environmental Specialist |  |  |  |  |  |  |
| Dina Brown<br>Signature 212S/(L  |  |                                |  |  |  |  |  |  |

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LAB ID: 08-00380 Benchmark Analytics, Inc. LAB ID: 39-00401 Eastern Division 2566 Pennsylvania Ave. Work Order: 10074058 Sayre, PA 18840 Phone: (570) 888-0169 Fax: (570) 888-0717 SEND DATA TO: NAME: Steve Gridley WO#: 10074058 COMPANY: Talisman Energy USA, Inc. PAGE: 1 of 1 337 Daniel Zenker Dr ADDRESS: Horseheads, NY 14845 PO#: AF77406 PWS ID# TEST REPORT PHONE: (607) 562-4000 FAX: (607) 562-4001 RECEIVED FOR LAB BY: DLM2 DATE: 07/26/2010 15:15 Page 1 of 1 Lab ID: 10074058-001A SAMPLE: Inv. Cuttings Composite SAMPLED BY: SG Sample Time: 07/26/2010 11:45 <u>SLOQ</u> Test Result **Method** Analysis End Analyst \* Analysis Start **Total Petroleum Hydrocarbons** 72400 mg/Kg EPA 9071 07/27/10 12:00 07/27/10 Sample Note: Analysis performed by Microbac-Erie Lab ID: 10074058-001B SAMPLE: Inv. Cuttings Composite SAMPLED BY: SG Sample Time: 07/26/2010 11:45 SLOQ Test Result Method Analysis Start Analysis End Analyst \* 21.7 % Moisture Calc. 0.01 07/26/10 10:30 Moisture 07/27/10 NFM-SA EPA 9095A Free Liquid < 0.1 % 07/26/10 16:15 07/26/10 0.1 IC-SA 9.01@21.0°C EPA 9045C 07/27/10 12:20 07/27/10 pН NFM-SA SAMPLE: TCLP Leachate of Inv. Cuttings Lab ID: 10074058-001D Grab SAMPLED BY: SG Sample Time: 07/26/2010 11:45 SLOQ Test Result Method Analysis Start Analysis End Analyst \* Mercury - TCLP extracted < 0.0010 ma/LEPA 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

uni M. Davis

DATE: 7/30/2010

| LAB ID: 08-1<br>LAB ID: 39-1          |   | <b>Eas</b><br>2566<br>Sá    | ark Analytics, In<br>stern Division<br>Pennsylvania Ave.<br>ayre, PA 18840<br>e: (570) 888-0169 | C.<br>Work Order: 10081723 |                             |          |                          |                  |
|---------------------------------------|---|-----------------------------|---|----------------------------|-----------------------------|----------|--------------------------|------------------|
|                                       |   | Fa                          | x: (570) 888-0717   |                            |                             |          |                          |                  |
| SEND DATA                             |   |                             |   |                            |                             |          |                          |                  |
| NAME:                                 | Steve Gridley                                   |                             |   | W                          | O#:                         | 1008     | 1723                     |                  |
| ADDRESS:                              | Talisman Energy USA, Ir<br>337 Daniel Zenker Dr | IC.                         | PA  | GE:                        | 1 of 2                      | 2        |                          |                  |
| ADDIALOO.                             | Horseheads, NY 14845                            |                             |   | P                          | D#:                         | AF77     | 406                      |                  |
|                                       |   |                             |   |                            |                             |          | 400                      |                  |
| PHONE:<br>FAX:                        | (607) 562-4000<br>(607) 562-4001                | Т                           | EST REPORT  | P۷                         | VS ID#                      |          |                          |                  |
|                                       |   |                             |   |                            |                             |          |                          |                  |
| RECEIVED                              | FOR LAB BY: DLM2                                | DA                          | TE: 08/10/2010 15:33  |                            |                             |          | Ра                       | age 1 of 2       |
| SAMPLE: A                             | ir Cuttings                                     |                             | Lab ID: 10081723-001A   | Grab                       |                             |          |                          |                  |
|                                       | ED BY: SG                                       | Sa                          | ample Time: 08/09/2010 15:50  |                            |                             |          |                          |                  |
| Test                                  |   | Pecult                      | Method  | <u>SLOQ</u>                | Analysis                    | Start    | Analysis End             | Analyst *        |
| <u>Test</u><br>Total Pei              | troleum Hydrocarbons                            | <u>Result</u><br>1230 mg/Kg | EPA 9071  |                            | 08/12/10                    |          | Analysis End<br>08/12/10 | Analyst          |
|                                       | le Note: Analysis performed by M                |                             |   |                            |                             |          |                          |                  |
| SAMPLE: A                             | ir Cuttings                                     |                             | Lab ID: 10081723-001B   | Grab                       |                             |          |                          |                  |
|                                       | ED BY: SG                                       | Sa                          | ample Time: 08/09/2010 15:50  |                            |                             |          |                          |                  |
|                                       |   |                             |   | <u>SLOQ</u>                | <b>.</b>                    | <u>.</u> |                          |                  |
| <u>Test</u><br>Moisture               |   | <u>Result</u><br>18.2 %     | <u>Method</u><br>Moisture Calc.   | 0.01                       | <u>Analysis</u><br>08/12/10 |          | Analysis End<br>08/13/10 |                  |
| Free Liqu                             |   | < 0.1 %                     | EPA 9095A   | 0.01                       | 08/12/10                    |          | 08/13/10                 | MED-SA<br>RHN-SA |
| pH                                    |   | 8.89@21.8°C                 | EPA 9045C   | 0.1                        | 08/12/10                    |          | 08/12/10                 | MED-SA           |
| · · · · · · · · · · · · · · · · · · · | • • •••   |                             |   | Croh                       |                             |          |                          |                  |
| SAMPLE: A                             | I <b>r Cuttings</b><br>ED BY: SG                | 84                          | Lab ID: 10081723-001C<br>ample Time: 08/09/2010 15:50   | Grab                       |                             |          |                          |                  |
| SAMP L                                | LD D1. 30                                       | 02                          | ample filme. 00/03/2010 13:50   | <u>SLOQ</u>                |                             |          |                          |                  |
| Test                                  |   | <u>Result</u>               | <u>Method</u>   |                            | <u>Analysis</u>             | Start    | Analysis End             | <u>Analyst *</u> |
| Sodium                                |   | 941 mg/Kg-dry               | EPA 6010B   | 108                        | 08/13/10                    |          | 08/13/10                 | RMD-CV           |
| Chloride                              |   | 370 mg/Kg-dry               | EPA 300.0   | 61.1                       | 08/11/10                    |          | 08/12/10                 | HDP-CV           |
| Percent                               | Moisture  | 18.2 %                      | SM2540G   |                            | 08/12/10                    | 8:45     | 08/13/10                 | MED-SA           |
|                                       | CLP Leachate of Air Cutting                     |                             | Lab ID: 10081723-001E   | Grab                       |                             |          |                          |                  |
| SAMPLI                                | ED BY: SG                                       | Sa                          | mple Time: 08/09/2010 15:50   | SLOQ                       |                             |          |                          |                  |
| Test                                  |   | <u>Result</u>               | Method  | <u></u>                    | <u>Analysis</u>             | Start    | Analysis End             | <u>Analyst *</u> |
| Mercury                               | - TCLP extracted                                | < 0.0008 mg/L               | EPA 7470A   | 0.0008                     | 08/12/10                    | 8:30     | 08/13/10                 | KW-CV            |
| Arsenic -                             | TCLP extracted                                  | < 0.500 mg/L                | EPA 6010B   | 0.500                      | 08/13/10                    | 7:20     | 08/13/10                 | RMD-CV           |
| Barium -                              | TCLP extracted                                  | < 10.00 mg/L                | EPA 6010B   | 10.00                      | 08/13/10                    | 7:20     | 08/13/10                 | RMD-CV           |
| Cadmium                               | n - TCLP extracted                              | < 0.100 mg/L                | EPA 6010B   | 0.100                      | 08/13/10                    | 7:20     | 08/13/10                 | RMD-CV           |
| Chromiu                               | m - 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 - T(                             | CLP extracted                                   | < 0.500 mg/L                | EPA 6010B   | 0.500                      | 08/13/10                    | 7:20     | 08/13/10                 | RMD-CV           |
| REMARKS:                              |   |                             |   |                            |                             |          |                          |                  |

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report. \* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER \_\_\_\_\_ Davis \_\_\_\_\_ DATE: 8/13/2010

| LAB ID: 08-(<br>LAB ID: 39-( |  | Easte<br>2566 Per | <b>Analytics, Ind<br/>rn Division</b><br>Insylvania Ave.<br>9, PA 18840 | с.    | V          | Vork Order: 10 | 081723      |
|------------------------------|--|-------------------|---|-------|------------|----------------|-------------|
|                              |  |                   | 570) 888-0169<br>570) 888-0717  |       |            |                |             |
| SEND DATA                    | A TO:  |                   |   |       |            |                |             |
| NAME:                        | Steve Gridley                                |                   |   | W     | O#:        | 10081723       |             |
| COMPANY:                     | <b>U</b> 7 ·                                 | IC.               |   | PA    | AGE: 2     | 2 of 2         |             |
| ADDRESS:                     | 337 Daniel Zenker Dr<br>Horseheads, NY 14845 |                   |   |       |            |                |             |
|                              |  |                   |   |       | D#: /      | AF77406        |             |
| PHONE:<br>FAX:               | (607) 562-4000<br>(607) 562-4001             | TEST              | REPORT  | P۷    | VS ID#     |                |             |
|                              |  |                   |   |       |            |                |             |
| RECEIVED                     | FOR LAB BY: DLM2                             | DATE:             | 08/10/2010 15:33  |       |            |                | Page 2 of 2 |
| Nickel - 1                   | TCLP extracted                               | 0.230 mg/L        | EPA 6010B   | 0.100 | 08/13/10 7 | 7:20 08/13/10  | RMD-CV      |
| Selenium                     | - TCLP extracted                             | < 0.500 mg/L      | EPA 6010B   | 0.500 | 08/13/10 7 | 7:20 08/13/10  | RMD-CV      |
|                              | CLP extracted                                | < 0.100 mg/L      | EPA 6010B   | 0.100 | 08/13/107  |                | RMD-CV      |
| Zinc - TC                    | CLP extracted                                | 0.735 mg/L        | EPA 6010B   | 0.200 | 08/13/10 7 | 7:20 08/13/10  | RMD-CV      |

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

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

MANAGER

Carrie M. Davis

DATE: 8/13/2010



### COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WASTE MANAGEMENT

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

| typed or legil<br>each attache                                       | ust be fully and accurate<br>bly printed in the spaces p<br>ed sheet as Form 26R, re<br>ne date on attached sheets | fy Date Receiv  | USE ONLY<br>ed & General Notes   |   |                               |
|--|--|---|--|---|-------------------------------|
| General Refe   | rence 287.54   |   |  |   |                               |
| Date Prepare   | d/Revised Febru  | uary 11, 2011   |  |   |                               |
|  |  | LIENT (GENERATOR  | R OF THE WASTE) IN   | FORMATION   |                               |
| Company Na   |  |   |  |   |                               |
|  | ergy USA Inc.<br>y, Name of Parent Compar  | nv  |  | EPA   | Generator  D#                 |
| Talisman En  | ergy Inc.  | -   | <u> </u>   | N/A   |                               |
|  | iling Address Line 1   | C   | ompany Mailing Addres  | s Line 2  |                               |
| 50 Pennwoo<br>Company Ad   | d Place<br>dress Last Line – City  | State   | Zip+4  | Phone   | Ext                           |
| Warrendale   | ,  | PA  | 15086  | (724) 814-53                                      |                               |
|  | ntact Last Name  | First Name  | MI   | Suffi   | x                             |
| Brown<br>Municipality  |  | Dina  | County   |   |                               |
| Warrendale   |  |   | Allegheny  |   |                               |
| Contact Phor   |  | Contact Email Address   |  |   |                               |
| (724) 814-53   | generated at the Company   | dybrown@talismanusa.c<br>Mailing Address (noted a   |  | <b>—</b> —  | Yes 🕅 No                      |
| If 'No', descri  | be location of waste gener   | ration and storage. Drill c   | uttings are generated du   | ليا<br>ring natural gas drill                     |                               |
| the (  | 01-071) well pad site located  | 1 at 5290 Fallbrook Road,   | Troy Township, Bradford  | County, PA. Waste                                 | is stored in                  |
| Containers on Municipality   | site.<br>Troy  | County Bradfo   | ord  | State   | PA                            |
|  |  | SECTION B. WAST   |  |   |                               |
| Residual   | Residua  |   |  | Unit of   | Time                          |
| Waste Code   | Code Des   |   | Amount   | Measure   | Frame                         |
| 810  | Drill cuttings (oil and ga   | s)  | 3,377  |   |                               |
|  |  |   |  |   | 🗌 🗌 One Time                  |
| a. pHRa  |  | 1. GENERAL P  | a we are the second construction for a weak a water of the second second second second second second second second   |   |                               |
| h Dhuai  |  | to 9.67   | (based on analyses or kr   |   |                               |
| b. Physi   | cal State  |   | (based on analyses or kr<br>thod 9095)<br>95)  |   |                               |
|  | cal State  | to 9.67<br>Liquid Waste (EPA Me<br>Solid (EPA Method 909<br>Gas (ambient temperat<br>Color Greyish Black  | (based on analyses or kr<br>thod 9095)<br>95)<br>ture & pressure)<br>Odor  | owledge)  |                               |
|  | cal State  | to 9.67 Liquid Waste (EPA Me Solid (EPA Method 909 Gas (ambient temperal Color Greyish Black Number of Solid or Liquid  | (based on analyses or kr<br>thod 9095)<br>95)<br>ture & pressure)<br>Odor<br>I Phases of Separation  | owledge)<br>Earthy/Slight<br>One                  |                               |
|  | cal State  | to 9.67<br>Liquid Waste (EPA Me<br>Solid (EPA Method 909<br>Gas (ambient temperat<br>Color Greyish Black  | (based on analyses or kr<br>thod 9095)<br>95)<br>ture & pressure)<br>Odor<br>I Phases of Separation  | owledge)<br>Earthy/Slight<br>One                  |                               |
|  | cal State  | to 9.67 Liquid Waste (EPA Me Solid (EPA Method 909 Gas (ambient temperal Color Greyish Black Number of Solid or Liquid  | (based on analyses or kr<br>thod 9095)<br>95)<br>ture & pressure)<br>Odor<br>I Phases of Separation<br>eparation. <u>Soil and Roc</u>  | owledge)<br>Earthy/Slight<br>One                  |                               |
| c. Physic<br>a. The re-<br>instru                                    | cal State  | to 9.67 Liquid Waste (EPA Me Solid (EPA Method 903 Gas (ambient temperat Color <u>Greyish Black</u> Number of Solid or Liquid Describe each phase of so 2. CHEMICAL ANALYS al characterization of the   | (based on analyses or kr<br>thod 9095)<br>95)<br>ture & pressure)<br>Odor<br>I Phases of Separation<br>eparation. <u>Soil and Roc</u><br>SIS ATTACHMENTS<br>waste, as described in   | owledge)<br>Earthy/Slight<br>_One<br>_k Fragments |                               |
| c. Physic<br>a. The re-<br>instru<br>b. A deta                       | cal State  | to 9.67 Liquid Waste (EPA Me Solid (EPA Method 903 Gas (ambient temperat Color Greyish Black Number of Solid or Liquid Describe each phase of so 2. CHEMICAL ANALYS al characterization of the ste sampling method is a                           | (based on analyses or kr<br>thod 9095)<br>95)<br>ture & pressure)<br>Odor<br>I Phases of Separation<br>eparation. <u>Soil and Roc</u><br>SIS ATTACHMENTS<br>waste, as described in<br>ttached.                             | owledge) <u>Earthy/Slight</u> One K Fragments the | Petroleum<br>Yes No<br>Yes No |
| c. Physic<br>a. The re-<br>instru<br>b. A deta<br>c. The q           | cal State  | to 9.67 Liquid Waste (EPA Me Solid (EPA Method 903 Gas (ambient temperat Color Greyish Black Number of Solid or Liquid Describe each phase of so 2. CHEMICAL ANALYS al characterization of the ste sampling method is a                           | (based on analyses or kr<br>thod 9095)<br>95)<br>ture & pressure)<br>Odor<br>I Phases of Separation<br>eparation. <u>Soil and Roc</u><br>SIS ATTACHMENTS<br>waste, as described in<br>ttached.                             | owledge) <u>Earthy/Slight</u> One K Fragments the | Petroleum<br>Yes 🗌 No         |
| c. Physic<br>a. The re-<br>instru<br>b. A deta<br>c. The q<br>attach | cal State  | to 9.67 Liquid Waste (EPA Me Solid (EPA Method 903 Gas (ambient temperat Color Greyish Black Number of Solid or Liquid Describe each phase of so 2. CHEMICAL ANALYS al characterization of the ste sampling method is a pontrol procedures employ | (based on analyses or kr<br>thod 9095)<br>95)<br>ture & pressure)<br>Odor<br>I Phases of Separation<br>eparation. <u>Soil and Roc</u><br>SIS ATTACHMENTS<br>waste, as described in<br>ttached.<br>yed by the laboratory(le | owledge) <u>Earthy/Slight</u> One K Fragments the | Petroleum<br>Yes No<br>Yes No |

| SALAR SALAR                             |   |                                  | 0.0                       |                     | The second s |   |  |  |  |  |
|---|---|----------------------------------|---------------------------|---------------------|--|---|--|--|--|--|
|   |   | PROCESS DESCRIPTIC               |                           |                     |  |   |  |  |  |  |
| a.                                      | A detailed description of the the waste, as specified in the  |                                  |                           | esses producing     | 🛛 Yes  | No No   |  |  |  |  |
| b.                                      | A schematic of the manufac<br>as specified in the instruction |                                  | control processes pro     | ducing the waste,   | 🛛 Yes  | No No   |  |  |  |  |
| C.                                      | If portions of the information a confidentiality claim, as de |                                  |                           | on for 🗌 Yes        | No No  | 🛛 N/A   |  |  |  |  |
| SECTION C. MANAGEMENT OF RESIDUAL WASTE |   |                                  |                           |                     |  |   |  |  |  |  |
|   |   |                                  | R DISPOSAL FACILITY (II   |                     |  | Contrastic state of the second state of the contra- |  |  |  |  |
| The a                                   | rea below (ad.) will accommo                                  | date the identification of       | of two facilities. Attacl | h additional sheets | if necessary   | <b>'</b> .  |  |  |  |  |
| a.                                      | Solid waste permit number(s<br>9-0232-00003                   | s) for processing or dis         | posal facility being uti  | lized.              |  |   |  |  |  |  |
| b.                                      | Facility Name   | Hyland Landfill                  |                           |                     |  |   |  |  |  |  |
|   | Address Line 1  | 6653 Herdman Roa                 | d                         |                     |  |   |  |  |  |  |
|   | Address Line 1  |                                  |                           |                     |  |   |  |  |  |  |
|   | Address City State ZIP  | Angelica                         | NY                        | 14709               |  | ······  |  |  |  |  |
|   | Municipality  | Angelica                         | County                    | Allegany            |  |   |  |  |  |  |
| C.                                      | Facility Contact Name   | Larry Shilling                   |                           | , mogariy           |  |   |  |  |  |  |
| υ.                                      | Title   | Larry Shining                    |                           |                     |  |   |  |  |  |  |
|   |   | (505) 400 7074                   | Cus all Aslalas a         |                     | 11   |   |  |  |  |  |
|   | Phone   | (585) 466-7271                   | Email Address             | larry.shilling@ca   | isella.com   |   |  |  |  |  |
| d.                                      | Volume of waste shipped to 2,218                              | processing or disposal           | facility in the previous  |                     | )  |   |  |  |  |  |
| a.                                      | Solid waste permit number(s<br>8-4630-00010                   | s) for processing or dis         | oosal facility being util | ized.               |  |   |  |  |  |  |
| b.                                      | Facility Name   | Hakes C&D Landfill               |                           |                     |  |   |  |  |  |  |
|   | Address Line 1  | 4376 Manning Ridg                |                           |                     |  |   |  |  |  |  |
|   | Address Line 1  |                                  |                           |                     |  |   |  |  |  |  |
|   | Address City State ZIP  | Painted Post                     | NY                        | 14870               |  |   |  |  |  |  |
|   | Municipality  | Erwin Twp                        | County                    | Steuben             | 1  | ·   |  |  |  |  |
| c.                                      | Facility Contact Name   | Joseph Boyles                    |                           |                     |  |   |  |  |  |  |
| 0.                                      | Title   | Jusepin Doyles                   |                           |                     |  |   |  |  |  |  |
|   | Phone   | (607) 937-6044<br>(585) 466-7271 | Email Address             | joe.boyles@case     | ella.com   |   |  |  |  |  |
| d.                                      | Volume of waste shipped to                                    |                                  | facility in the previous  | s year.             |  |   |  |  |  |  |
|   | 907   | ]cuyd 🔲 gal                      | 🗌 lb 🛛 tor                |                     | 1  |   |  |  |  |  |
|   |   | 2. Ben                           | NEFICIAL USE              |                     | an a   | 7   |  |  |  |  |
| а.                                      | Has the waste been approve                                    | d for beneficial use?            |                           |                     | Yes  | No No   |  |  |  |  |
|   | If "Yes", list the general perm                               | nit number or approval           | number.                   |                     |  | _   |  |  |  |  |
| b.                                      | Volume of waste beneficially                                  |                                  |                           |                     |  |   |  |  |  |  |
| <i></i>                                 | 0   | ] cu yd 🛛 🗌 gal                  | □ lb □ tor                | (check one)         |  |   |  |  |  |  |
|   | J L   |                                  |                           |                     |  |   |  |  |  |  |

.

|            | 3.  | PROCESS DESCRIPTION & S                        | CHEMATIC ATTACHME                        | NTS                                     |                                       |       |  |  |  |  |  |
|------------|---|--|--|---|---------------------------------------|-------|--|--|--|--|--|
| a.         | A detailed description of the r<br>the waste, as specified in the       |  | on control processes                     | producing                               | 🛛 Yes                                 | 🗌 No  |  |  |  |  |  |
| b.         | A schematic of the manufactu<br>as specified in the Instruction         | s, is attached.                                |  | g the waste,                            | Yes Yes                               | 🗌 No  |  |  |  |  |  |
| C.         | a confidentiality claim, as described in the instructions, is attached. |  |  |   |                                       |       |  |  |  |  |  |
|            | SECTION C. MANAGEMENT OF RESIDUAL WASTE                                 |  |  |   |                                       |       |  |  |  |  |  |
| 55 (11) (1 |   | 1. PROCESSING OR DISPO                         |  |   |                                       |       |  |  |  |  |  |
| The ar     | ea below (ad.) will accommod  | ate the identification of two                  | facilities. Attach addi                  | tional sheets                           | if necessary.                         |       |  |  |  |  |  |
| а.         | Solid waste permit number(s)<br>100361                                  | for processing or disposal f                   | acility being utilized.                  |   | · · · · · · · · · · · · · · · · · · · |       |  |  |  |  |  |
| 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 Mc                                | Kean                                    |                                       |       |  |  |  |  |  |
| C.         | Facility Contact Name   | Mike Manderfeld                                |  |   |                                       |       |  |  |  |  |  |
|            | Title   |  |  |   |                                       |       |  |  |  |  |  |
|            | Phone   | (814) 778-9931 E                               | mail Address mai                         | nderfeld@gm                             | ail.com                               |       |  |  |  |  |  |
| d.         | Volume of waste shipped to p  | cu yd gal gal                                  | y in the previous year<br>lb 🛛 ton       | (check one)                             |                                       |       |  |  |  |  |  |
| a.         | Solid waste permit number(s)  | for processing or disposal f                   | acility being utilized.                  |   |                                       |       |  |  |  |  |  |
| b.         | Facility Name   |  |  |   |                                       |       |  |  |  |  |  |
|            | Address Line 1  |  |  |   |                                       |       |  |  |  |  |  |
|            | Address Line 1  |  |  |   |                                       |       |  |  |  |  |  |
|            | Address City State ZIP  | - 1- 00 - 12                                   |  |   |                                       |       |  |  |  |  |  |
|            | Municipality  |  | County                                   |   |                                       |       |  |  |  |  |  |
| с.         | Facility Contact Name   |  |  | -                                       |                                       |       |  |  |  |  |  |
|            | Title   |  | ·····                                    |   |                                       |       |  |  |  |  |  |
|            | Phone   | E  | mail Address                             |   |                                       |       |  |  |  |  |  |
| d.         | Volume of waste shipped to p  | ocessing or disposal facility<br>cu yd 🔲 gal 🗌 | / in the previous year<br>lb [] ton      | (check one)                             |                                       |       |  |  |  |  |  |
|            |   | 2. BENEFICIA                                   | LUSE                                     |   |                                       |       |  |  |  |  |  |
| а.         | Has the waste been approved   |  | ang ng ang ang ang ang ang ang ang ang a | nen en | ☐ Yes                                 | No No |  |  |  |  |  |
|            | If "Yes", list the general permi  | number or approval numbe                       | er.                                      |   | _                                     |       |  |  |  |  |  |
| b.         | Volume of waste beneficially u  |  |  |   |                                       |       |  |  |  |  |  |
|            | 0 Ú   | cuyd 🗌 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<br>Report and all attached documents and that based upon my inquiry of those individuals immediately responsible for<br>obtaining the Information, I verify that the submitted information is true, accurate and complete to the best of my<br>knowledge. I understand that the submission of false information herein is made subject to the penalties of 18 Pa. C.S.<br>§4904, relating to unsworn falsification to authorities, which include fine and imprisonment. |  |  |  |  |  |  |  |  |  |
| Check the following, if applicable   | e:   |  |  |  |  |  |  |  |  |
| I certify the information r  | equired in Section B-1, General Properties was supplied to the Department for the year                     |  |  |  |  |  |  |  |  |
| Form Submitted:  | Form 26R   |  |  |  |  |  |  |  |  |
|  | Other (specify)  |  |  |  |  |  |  |  |  |
| Date Submitted:  | · · · · · · · · · · · · · · · · · · ·  |  |  |  |  |  |  |  |  |
| I certify the information r<br>and has not change  | equired in Section B-2, Chemical Analysis was supplied to the Department for the year                      |  |  |  |  |  |  |  |  |
| Form Submitted:  | Form 26R   |  |  |  |  |  |  |  |  |
|  | Other (specify)  |  |  |  |  |  |  |  |  |
| Date Submitted:  |  |  |  |  |  |  |  |  |  |
| I certify the information re-<br>for the year and has  | quired in Section B-3, Process Description and Schematic, was supplied to the Department<br>s not changed. |  |  |  |  |  |  |  |  |
| Form Submitted:  | Form 26R   |  |  |  |  |  |  |  |  |
|  | Other (specify)  |  |  |  |  |  |  |  |  |
| Date Submitted:  |  |  |  |  |  |  |  |  |  |
| Name of Responsible Official   | Title Environmental Specialist   |  |  |  |  |  |  |  |  |
| Dina Brown<br>Signature  | Jan Date 2/25/11   |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |

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| LAB ID: 08-0<br>LAB ID: 39-0 |  | <b>Eas</b><br>2566                  | nalytics, In<br>Division<br>/Ivania Ave.<br>A 18840 | NC.<br>Work Order: 10092016             |             |                      |        |                      |                  |
|------------------------------|--|-------------------------------------|---|---|-------------|----------------------|--------|----------------------|------------------|
|                              |  |                                     | • •   | 888-0169<br>888-0717                    |             |                      |        |                      |                  |
| SEND DATA                    | TO:  |                                     |   |   |             |                      |        |                      |                  |
| NAME:                        | Steve Gridley  |                                     |   |   | W           | O#:                  | 1009   | 2016                 |                  |
| COMPANY:<br>ADDRESS:         | Talisman Energy USA, I<br>337 Daniel Zenker Dr         | nc.                                 |   |   | PA          | AGE:                 | 1 of 2 | 2                    |                  |
| ADDRESS.                     | Horseheads, NY 14845                                   |                                     |   |   |             | <b>~</b> #.          | A E 77 | 700                  |                  |
|                              |  |                                     |   |   | P           | O#:                  | AF77   | 728                  |                  |
| PHONE:<br>FAX:               | (607) 562-4000<br>(607) 562-4001                       | TE                                  | EST RE  | EPORT                                   | P١          | NS ID#               |        |                      |                  |
| 01-                          | 071  |                                     |   |   |             |                      |        |                      |                  |
|                              | FOR LAB BY: TJC  | DAT                                 | E: 09/1   | 3/2010 17:12                            |             |                      |        | P                    | age 1 of 2       |
|                              |  |                                     |   |   | Oreh        |                      |        |                      |                  |
| SAMPLE: AI                   | r Cuttings<br>ED BY: SG                                | Sa                                  |   | ): 10092016-001A<br>): 09/13/2010 12:20 | Grab        |                      |        |                      |                  |
| SAMI EL                      | D D1. 30   | 04                                  | mpie rime   | . 03/13/2010 12.20                      | <u>SLOQ</u> |                      |        |                      |                  |
| <u>Test</u>                  | I II becoderes   | Result                              |   | Method                                  | 000         | Analysis             |        | Analysis End         | <u>Analyst *</u> |
|                              | roleum Hydrocarbons<br>e Note: Analysis performed by I | < 209 mg/Kg<br>/licrobac Laboratori | es inc-Fr   | EPA 9071<br>ie Division                 | 209         | 09/19/10             | 10.20  | 09/19/10             |                  |
| ·                            |  |                                     |   |   | 0           |                      |        |                      |                  |
| SAMPLE: AII                  | r Cuttings<br>ED BY: SG                                | Sa                                  |   | ): 10092016-001B<br>): 09/13/2010 12:20 | Grab        |                      |        |                      |                  |
| SAIVIF LE                    | 0 01. 30   | 04                                  | inple fille   | . 03/13/2010 12.20                      | <u>SLOQ</u> |                      |        |                      |                  |
| Test                         |  | Result                              |   | Method                                  | 0.04        | Analysis             |        | Analysis End         |                  |
| Moisture                     |  | 25.3 %                              |   | Moisture Calc.                          | 0.01        | 09/14/10             |        | 09/15/10             | MED-SA           |
| Free Liqui<br>pH             | iù   | < 0.1 %<br>7.90@20.3°C              |   | EPA 9095A<br>EPA 9045C                  | 0.1         | 09/14/10<br>09/14/10 |        | 09/14/10<br>09/14/10 | IC-SA<br>MED-SA  |
| ·                            |  | 7.00@20.0 0                         |   |   |             |                      | 14.20  |                      |                  |
| SAMPLE: AII                  | <b>r Cuttings</b><br>ED BY: SG                         | Sa                                  |   | : 10092016-001C<br>: 09/13/2010 12:20   | Grab        |                      |        |                      |                  |
| SAMPLE                       | UDT. 30  | 34                                  | inhie Time  | . 09/13/2010 12.20                      | SLOQ        |                      |        |                      |                  |
| Test                         |  | <u>Result</u>                       |   | Method                                  |             | <u>Analysis</u>      |        | Analysis End         |                  |
| Sodium                       |  | < 180 mg/Kg-dry                     | 140   | EPA 6010B                               | 180         | 09/16/10             |        | 09/16/10             | RMD-CV           |
| Chloride                     | 6 - i - t  | < 66.9 mg/Kg-dry                    | MS  | EPA 300.0                               | 66.9        | 09/15/10             |        | 09/16/10             | HDP-CV           |
| Percent M                    |  | 25.3 %                              |   | SM2540G                                 |             | 09/14/10             | 10.00  | 09/15/10             | MED-SA           |
|                              | CLP Leachate of Air Cutting                            |                                     |   | : 10092016-001E                         | Grab        |                      |        |                      |                  |
| SAMPLE                       | D BY: SG   | Sa                                  | mple Time   | : 09/15/2010 9:00                       | <u>SLOQ</u> |                      |        |                      |                  |
| Test                         |  | <u>Result</u>                       |   | Method                                  |             | <u>Analysis</u>      | 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            |
|                              | TCLP extracted   | < 0.500 mg/L                        |   | EPA 6010B                               | 0.500       | 09/16/10             | 8:00   | 09/16/10             | RMD-CV           |
|                              | TCLP extracted   | < 10.00 mg/L                        |   | EPA 6010B                               | 10.00       | 09/16/10             |        | 09/16/10             | RMD-CV           |
|                              | - TCLP extracted                                       | < 0.100 mg/L                        |   | EPA 6010B                               | 0.100       | 09/16/10             |        | 09/16/10             | RMD-CV           |
|                              | n - TCLP extracted                                     | < 0.500 mg/L                        |   | EPA 6010B                               | 0.500       | 09/16/10             |        | 09/16/10             | RMD-CV           |
| • •                          | TCLP extracted   | < 0.100 mg/L                        |   | EPA 6010B                               | 0.100       | 09/16/10             |        | 09/16/10             | RMD-CV           |
|                              | LP extracted   | < 0.500 mg/L                        |   | EPA 6010B                               | 0.500       | 09/16/10             | 0:00   | 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: 08-0<br>Lab ID: 39-0 |  | <b>Easte</b><br>2566 Pe | k Analytics, Ind<br>rn Division<br>nnsylvania Ave.<br>e, PA 18840 | <b>C</b> . | Work Order: 10092016 |        |          |            |
|------------------------------|--|-------------------------|---|------------|----------------------|--------|----------|------------|
|                              |  | •                       | 570) 888-0169<br>570) 888-0717                                    |            |                      |        |          |            |
| SEND DATA                    | A TO:  |                         |   |            |                      |        |          |            |
| NAME:                        | Steve Gridley                                |                         |   | W          | O#:                  | 10092  | 2016     |            |
| COMPANY:                     |  | IC.                     |   | PA         | AGE:                 | 2 of 2 |          |            |
| ADDRESS:                     | 337 Daniel Zenker Dr<br>Horseheads, NY 14845 |                         |   |            |                      |        |          |            |
|                              | 1101Selleaus, 111 14045                      |                         |   | P          | O#:                  | AF77   | 728      |            |
| PHONE:<br>FAX:               | (607) 562-4000<br>(607) 562-4001             | TES                     | T REPORT  | P١         | WS ID#               |        |          |            |
| 01-                          | -071   |                         |   |            |                      |        |          |            |
| RECEIVED I                   | FOR LAB BY: TJC                              | DATE:                   | 09/13/2010 17:12  |            |                      |        | Р        | age 2 of 2 |
| Nickel - T                   | CLP extracted                                | < 0.100 mg/L            | EPA 6010B   | 0.100      | 09/16/10             | 0 8:00 | 09/16/10 | RMD-CV     |
| Selenium                     | a - TCLP extracted                           | < 0.500 mg/L            | EPA 6010B   | 0.500      | 09/16/10             | 0 8:00 | 09/16/10 | RMD-CV     |
| Silver - T                   | CLP extracted                                | < 0.100 mg/L            | EPA 6010B   | 0.100      | 09/16/10             | 00:8 0 | 09/16/10 | RMD-CV     |
| Zinc - TC                    | LP extracted                                 | < 0.200 mg/L            | EPA 6010B   | 0.200      | 09/16/10             | 0 8:00 | 09/16/10 | RMD-CV     |

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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\* 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

|  | 00380<br>00401   | Easter<br>2566 Per<br>Sayre<br>Phone: (5   | x <b>Analytics, In</b><br>r <b>n Division</b><br>nnsylvania Ave.<br>9, PA 18840<br>570) 888-0169   | IC.<br>Work Order: 10103216   |   |  |   |  |
|--|--|--|--|---|---|--|---|--|
|  |  | Fax: (8  | 570) 888-071 <b>7</b>  |   |   |  |   |  |
| SEND DATA<br>NAME:   |  |  |  |   | <b>~</b> // / / / /   |  |   |  |
| COMPANY:   | Steve Gridley<br>Talisman Energy USA, Ir   |  |  | Υ¥(   | O#: 1010  | )3216  |   |  |
| ADDRESS:   | 337 Daniel Zenker Dr   |  |  | PA  | GE: 1 of  | 2  |   |  |
|  | Horseheads, NY 14845   |  |  | PC  | )#: AF7   | 7729   |   |  |
|  |  |  |  | -   |   |  |   |  |
| PHONE:<br>FAX:   | (607) 731-0145<br>(607) 562-4001   | TESI   | REPORT   | <b>۲</b> ۹  | VS ID#  |  |   |  |
| 01-  | 071  |  |  |   |   |  |   |  |
|  | FOR LAB BY: TJC  | DATE:  | 10/21/2010 11:37   |   |   | Pa   | age 1 of 2  |  |
| SAMPLE: In   | v Cuttings   |  | ab ID: 10103216-001A   | Compos  | site  |  |   |  |
|  | ED BY: SG  |  | Time: 10/19/2010 10:39   | Compo.  | 510   |  |   |  |
|  |  |  |  | <u>sloq</u>   |   |  |   |  |
| <u>Test</u><br>Total Date  | an la sua la subana di ana   | <u>Result</u><br>115000 mg/Kg  | <u>Method</u><br>EPA 9071  | 170   | Analysis Start<br>10/23/10 9:00   | Analysis End<br>10/23/10   | Analyst *   |  |
|  | roleum Hydrocarbons<br>e Note: Analysis performed by N   | • •  |  | 170   | 10/23/10 9.00   | 10/23/10   |   |  |
| SAMPLE: In   |  |  | ab ID: 10103216-001B   | Compos  | site  |  |   |  |
|  | ED BY: SG  |  | Time: 10/19/2010 10:39   |   |   |  |   |  |
|  |  |  |  |   |   |  |   |  |
| _  |  | •  |  | <u>SLOQ</u>   | An altra a Otant  | Amelia Cod   | A   |  |
| Test   |  | <u>Result</u>  | Method   |   | Analysis Start  | Analysis End   |   |  |
| <u>Test</u><br>Moisture  | :4   | <u>Result</u><br>11.1 %  | <u>Method</u><br>Moisture Calc.  | 0.01  | 10/25/10 15:00  | 10/26/10   | NFM-SA  |  |
| <u>Test</u><br>Moisture<br>Free Liqu   | id   | <u>Result</u><br>11.1 %<br>< 0.1 %   | <u>Method</u><br>Moisture Calc.<br>EPA 9095A   |   | 10/25/10 15:00<br>10/22/10 15:10  | 10/26/10<br>10/22/10   | NFM-SA<br>IC-SA   |  |
| <u>Test</u><br>Moisture  | id   | <u>Result</u><br>11.1 %<br>< 0.1 %<br>9.67@23.0°C  | <u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C  | 0.01<br>0.1   | 10/25/10 15:00<br>10/22/10 15:10<br>10/26/10 8:50   | 10/26/10   | NFM-SA  |  |
| Test<br>Moisture<br>Free Liqu<br>pH<br>SAMPLE: In  | v. Cuttings  | <u>Result</u><br>11.1 %<br>< 0.1 %<br>9.67@23.0℃   | Method<br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>.ab ID: 10103216-001C  | 0.01  | 10/25/10 15:00<br>10/22/10 15:10<br>10/26/10 8:50   | 10/26/10<br>10/22/10   | NFM-SA<br>IC-SA   |  |
| Test<br>Moisture<br>Free Liqu<br>pH<br>SAMPLE: In  |  | <u>Result</u><br>11.1 %<br>< 0.1 %<br>9.67@23.0℃   | <u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C  | 0.01<br>0.1<br>Compos   | 10/25/10 15:00<br>10/22/10 15:10<br>10/26/10 8:50   | 10/26/10<br>10/22/10   | NFM-SA<br>IC-SA   |  |
| Test<br>Moisture<br>Free Liqu<br>pH<br>SAMPLE: In<br>SAMPLE  | v. Cuttings  | <u>Result</u><br>11.1 %<br>< 0.1 %<br>9.67@23.0°C<br>⊾<br>Sample                                   | Method<br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>.ab ID: 10103216-001C  | 0.01<br>0.1   | 10/25/10 15:00<br>10/22/10 15:10<br>10/26/10 8:50<br>site   | 10/26/10<br>10/22/10   | NFM-SA<br>IC-SA   |  |
| Test<br>Moisture<br>Free Liqu<br>pH<br>SAMPLE: In  | v. Cuttings  | <u>Result</u><br>11.1 %<br>< 0.1 %<br>9.67@23.0℃   | Method<br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>.ab ID: 10103216-001C<br>Time: 10/19/2010 10:39  | 0.01<br>0.1<br>Compos   | 10/25/10 15:00<br>10/22/10 15:10<br>10/26/10 8:50   | 10/28/10<br>10/22/10<br>10/26/10   | NFM-SA<br>IC-SA<br>NFM-SA   |  |
| Test<br>Moisture<br>Free Liqu<br>pH<br>SAMPLE: In<br>SAMPLE: In<br>SAMPLE  | v. Cuttings  | <u>Result</u><br>11.1 %<br>< 0.1 %<br>9.67@23.0°C<br>t<br>Sample<br><u>Result</u>                  | <u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>.ab ID: 10103216-001C<br>Time: 10/19/2010 10:39<br><u>Method</u>  | 0.01<br>0.1<br>Compos   | 10/25/10 15:00<br>10/22/10 15:10<br>10/26/10 8:50<br>site<br><u>Analysis Start</u>  | 10/26/10<br>10/22/10<br>10/26/10<br><u>Analysis End</u>  | NFM-SA<br>IC-SA<br>NFM-SA   |  |
| Test<br>Moisture<br>Free Liqu<br>pH<br>SAMPLE: In<br>SAMPLE: In<br>SAMPLE<br>SAMPLE<br>Test<br>Sodium  | <b>v. Cuttings</b><br>ED BY: SG  | <u>Result</u><br>11.1 %<br>< 0.1 %<br>9.67@23.0°C<br>t<br>Sample<br><u>Result</u><br>704 mg/Kg-dry | Method<br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>ab ID: 10103216-001C<br>Time: 10/19/2010 10:39<br>Method<br>EPA 6010B  | 0.01<br>0.1<br>Compos<br><u>SLOQ</u><br>92.5  | 10/25/10 15:00<br>10/22/10 15:10<br>10/26/10 8:50<br>site<br><u>Analysis Start</u><br>10/22/10 10:40  | 10/26/10<br>10/22/10<br>10/26/10<br><u>Analysis End</u><br>10/22/10  | NFM-SA<br>IC-SA<br>NFM-SA<br>Analvst*<br>RMD-CV   |  |
| Test<br>Moisture<br>Free Liqu<br>pH<br>SAMPLE: In<br>SAMPLE: In<br>SAMPLE<br>SAMPLE<br>Test<br>Sodium<br>Chloride<br>Percent M   | <b>v. Cuttings</b><br>ED BY: SG<br>Moisture  | Result           11.1 %           < 0.1 %  | Method<br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>ab ID: 10103216-001C<br>Time: 10/19/2010 10:39<br>Method<br>EPA 6010B<br>EPA 300.0   | 0.01<br>0.1<br>Compos<br><u>SLOQ</u><br>92.5  | 10/25/10 15:00<br>10/22/10 15:10<br>10/26/10 8:50<br>site<br><u>Analysis Start</u><br>10/22/10 10:40<br>10/22/10 15:07<br>10/25/10 15:00  | 10/26/10<br>10/22/10<br>10/26/10<br><u>Analysis End</u><br>10/22/10<br>10/23/10  | NFM-SA<br>IC-SA<br>NFM-SA<br>Analvst*<br>RMD-CV<br>HDP-CV   |  |
| Test<br>Moisture<br>Free Liqu<br>pH<br>SAMPLE: In<br>SAMPLE: In<br>SAMPLE: Test<br>Sodium<br>Chloride<br>Percent M   | <b>v. Cuttings</b><br>ED BY: SG  | Result         11.1 %         < 0.1 %  | Method<br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>ab ID: 10103216-001C<br>Time: 10/19/2010 10:39<br>Method<br>EPA 6010B<br>EPA 300.0<br>SM2540G  | 0.01<br>0.1<br>Compos<br><u>SLOQ</u><br>92.5<br>55.1  | 10/25/10 15:00<br>10/22/10 15:10<br>10/26/10 8:50<br>site<br><u>Analysis Start</u><br>10/22/10 10:40<br>10/22/10 15:07<br>10/25/10 15:00  | 10/26/10<br>10/22/10<br>10/26/10<br><u>Analysis End</u><br>10/22/10<br>10/23/10  | NFM-SA<br>IC-SA<br>NFM-SA<br>Analvst*<br>RMD-CV<br>HDP-CV   |  |
| Test<br>Moisture<br>Free Liqu<br>pH<br>SAMPLE: In<br>SAMPLE: In<br>SAMPLE: Test<br>Sodium<br>Chloride<br>Percent M   | v. Cuttings<br>ED BY: SG<br>Moisture<br>CLP Leachate of Inv. Cuttin  | Result         11.1 %         < 0.1 %  | Method           Moisture Calc.           EPA 9095A           EPA 9045C           .ab ID: 10103216-001C           Time: 10/19/2010 10:39           Method           EPA 300.0           SM2540G           .ab ID: 10103216-001E  | 0.01<br>0.1<br>Compos<br><u>SLOQ</u><br>92.5<br>55.1<br>Compos  | 10/25/10 15:00<br>10/22/10 15:10<br>10/26/10 8:50<br>site<br><u>Analysis Start</u><br>10/22/10 10:40<br>10/22/10 15:07<br>10/25/10 15:00  | 10/26/10<br>10/22/10<br>10/26/10<br><u>Analysis End</u><br>10/22/10<br>10/23/10  | NFM-SA<br>iC-SA<br>NFM-SA<br>Analvst*<br>RMD-CV<br>HDP-CV<br>NFM-SA                                 |  |
| Test<br>Moisture<br>Free Liqu<br>pH<br>SAMPLE: In<br>SAMPLE: In<br>SAMPLE: In<br>SAMPLE: IC<br>SAMPLE: IC<br>SAMPLE: IC  | v. Cuttings<br>ED BY: SG<br>Moisture<br>CLP Leachate of Inv. Cuttin  | Result           11.1 %           < 0.1 %  | Method           Moisture Calc.           EPA 9095A           EPA 9045C           .ab ID: 10103216-001C           Time: 10/19/2010 10:39           Method           EPA 6010B           EPA 300.0           SM2540G           .ab ID: 10103216-001E           Time: 10/22/2010 7:30  | 0.01<br>0.1<br>Compos<br><u>SLOQ</u><br>92.5<br>55.1<br>Compos  | 10/25/10 15:00<br>10/22/10 15:10<br>10/26/10 8:50<br>site<br><u>Analvsis Start</u><br>10/22/10 10:40<br>10/22/10 15:07<br>10/25/10 15:00<br>site  | 10/26/10<br>10/22/10<br>10/26/10<br><u>Analysis End</u><br>10/22/10<br>10/23/10<br>10/26/10  | NFM-SA<br>iC-SA<br>NFM-SA<br>Analvst*<br>RMD-CV<br>HDP-CV<br>NFM-SA                                 |  |
| Test<br>Moisture<br>Free Liqu<br>pH<br>SAMPLE: In<br>SAMPLE: In<br>SAMPLE: In<br>SAMPLE: In<br>SAMPLE: TO<br>SAMPLE: TO<br>SAMPLE: TO<br>SAMPLE: TO<br>SAMPLE: TO<br>SAMPLE: TO<br>SAMPLE: TO  | v. Cuttings<br>ED BY: SG<br>Moisture<br>CLP Leachate of Inv. Cuttin<br>ED BY: SG   | Result           11.1 %           < 0.1 %  | Method           Moisture Calc.           EPA 9095A           EPA 9045C           .ab ID: 10103216-001C           Time: 10/19/2010 10:39           Method           EPA 300.0           SM2540G           .ab ID: 10103216-001E           Time: 10/22/2010 7:30  | 0.01<br>0.1<br>Compos<br><u>SLOQ</u><br>92.5<br>55.1<br>Compos<br><u>SLOQ</u>                             | 10/25/10 15:00<br>10/22/10 15:10<br>10/26/10 8:50<br>site<br><u>Analysis Start</u><br>10/22/10 10:40<br>10/22/10 15:07<br>10/25/10 15:00<br>site<br><u>Analysis Start</u><br>10/23/10 10:20<br>10/23/10 11:10     | 10/26/10<br>10/22/10<br>10/26/10<br><u>Analysis End</u><br>10/22/10<br>10/23/10<br>10/26/10<br><u>Analysis End</u>   | NFM-SA<br>IC-SA<br>NFM-SA<br>Analvst*<br>RMD-CV<br>NFM-SA<br>Analvst*<br>RMD-CV<br>RMD-CV           |  |
| Test<br>Moisture<br>Free Liqu<br>pH<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: To<br>Sodium<br>Chloride<br>Percent M<br>SAMPLE: To<br>SAMPLE: T  | v. Cuttings<br>ED BY: SG<br>Moisture<br>CLP Leachate of Inv. Cuttin<br>ED BY: SG<br>• TCLP extracted                                   | Result           11.1 %           < 0.1 %  | Method<br>Moisture Calc.           EPA 9095A           EPA 9045C           .ab ID: 10103216-001C           Time: 10/19/2010 10:39           Method           EPA 300.0           SM2540G           .ab ID: 10103216-001E           Time: 10/22/2010 7:30           Method           EPA 300.0           SM2540G           .ab ID: 10103216-001E           Time: 10/22/2010 7:30           Method           EPA 7470A | 0.01<br>0.1<br>Compos<br><u>SLOQ</u><br>92.5<br>55.1<br>Compos<br><u>SLOQ</u><br>0.0008                   | 10/25/10 15:00<br>10/22/10 15:10<br>10/26/10 8:50<br>site<br><u>Analysis Start</u><br>10/22/10 10:40<br>10/22/10 15:07<br>10/25/10 15:00<br>site<br><u>Analysis Start</u><br>10/23/10 10:20                       | 10/26/10<br>10/22/10<br>10/26/10<br><u>Analysis End</u><br>10/22/10<br>10/26/10<br><u>Analysis End</u><br>10/24/10   | NFM-SA<br>IC-SA<br>NFM-SA<br>Analvst*<br>RMD-CV<br>NFM-SA<br>Analyst*<br>RMD-CV<br>RMD-CV           |  |
| Test<br>Moisture<br>Free Liqu<br>pH<br>SAMPLE: In<br>SAMPLE: In<br>SAMPLE: In<br>SAMPLE: In<br>SAMPLE: In<br>SAMPLE: In<br>SAMPLE: In<br>SAMPLE: In<br>SAMPLE: In<br>Sample<br>Percent M<br>SAMPLE: In<br>SAMPLE: In<br>Sample<br>Percent A<br>SAMPLE: In<br>SAMPLE: In<br>Sample<br>Percent A<br>SAMPLE: In<br>SAMPLE: In<br>Sample<br>Percent A<br>SAMPLE: In<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Sample<br>Samp | v. Cuttings<br>ED BY: SG<br>Moisture<br>CLP Leachate of Inv. Cuttin<br>ED BY: SG<br>TCLP extracted<br>TCLP extracted                   | Result           11.1 %           < 0.1 %  | Method<br>Moisture Calc.           EPA 9095A           EPA 9045C           ab ID: 10103216-001C           Time: 10/19/2010 10:39           Method           EPA 300.0           SM2540G           ab ID: 10103216-001E           Time: 10/22/2010 7:30           Method           EPA 7470A           EPA 6010B  | 0.01<br>0.1<br>Compos<br><u>SLOQ</u><br>92.5<br>55.1<br>Compos<br><u>SLOQ</u><br>0.0008<br>0.500          | 10/25/10 15:00<br>10/22/10 15:10<br>10/26/10 8:50<br>site<br>Analysis Start<br>10/22/10 10:40<br>10/22/10 15:00<br>site<br>Analysis Start<br>10/23/10 15:00<br>10/23/10 10:20<br>10/23/10 11:10<br>10/23/10 11:10 | 10/26/10<br>10/22/10<br>10/26/10<br><u>Analysis End</u><br>10/22/10<br>10/23/10<br>10/26/10<br><u>Analysis End</u><br>10/24/10<br>10/23/10<br>10/23/10<br>10/23/10 | NFM-SA<br>iC-SA<br>NFM-SA<br>Analvst*<br>RMD-CV<br>NFM-SA<br>Analvst*<br>RMD-CV<br>RMD-CV<br>RMD-CV |  |
| Test<br>Moisture<br>Free Liqu<br>pH<br>SAMPLE: In<br>SAMPLE: In<br>SAMPLE: In<br>Sodium<br>Chloride<br>Percent M<br>SAMPLE: TC<br>SAMPLE: TC   | v. Cuttings<br>ED BY: SG<br>Moisture<br>CLP Leachate of Inv. Cuttin<br>ED BY: SG<br>TCLP extracted<br>TCLP extracted<br>TCLP extracted | Result           11.1 %           < 0.1 %  | Method<br>Moisture Calc.           EPA 9095A           EPA 9045C           ab ID: 10103216-001C           Time: 10/19/2010 10:39           Method           EPA 6010B           EPA 300.0           SM2540G           ab ID: 10103216-001E           Time: 10/22/2010 7:30           Method           EPA 7470A           EPA 6010B           EPA 6010B  | 0.01<br>0.1<br>Compos<br><u>SLOQ</u><br>92.5<br>55.1<br>Compos<br><u>SLOQ</u><br>0.0008<br>0.500<br>10.00 | 10/25/10 15:00<br>10/22/10 15:10<br>10/26/10 8:50<br>site<br>Analysis Start<br>10/22/10 10:40<br>10/22/10 15:07<br>10/25/10 15:00<br>site<br>Analysis Start<br>10/23/10 10:20<br>10/23/10 11:10                   | 10/26/10<br>10/22/10<br>10/26/10<br>Analysis End<br>10/22/10<br>10/23/10<br>10/26/10<br>Analysis End<br>10/24/10<br>10/23/10<br>10/23/10                           | NFM-SA<br>IC-SA<br>NFM-SA<br>Analyst*<br>RMD-CV<br>NFM-SA<br>Analyst*<br>RMD-CV                     |  |

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 \_\_\_\_\_ Davis \_\_\_\_\_ DATE: 10/26/2010

| LAB ID: 08-00380<br>LAB ID: 39-00401 |                                  | 2566 Penr              | Analytics, Ir<br>n Division<br>nsylvania Ave.<br>PA 18840 | nC.   | Work Order: 10103216 |         |          |            |  |
|--------------------------------------|----------------------------------|------------------------|---|-------|----------------------|---------|----------|------------|--|
|                                      |                                  | Phone: (57<br>Fax: (57 |   |       |                      |         |          |            |  |
| SEND DATA                            | A TO:                            | :                      |   |       |                      |         |          |            |  |
| NAME:                                | Steve Gridley                    | e e                    |   | wo    | <b>)#</b> :          | 10103   | 216      |            |  |
|                                      | COMPANY: Talisman Energy USA,    | ic.                    |   | DA    | GE:                  | 2 of 2  |          |            |  |
| ADDRESS: 337 Daniel Zenker Dr        |                                  |                        | FA  | GL.   |                      |         |          |            |  |
|                                      | Horseheads, NY 14845             | ·                      |   | PC    | PO#: AF77729         |         |          |            |  |
| PHONE:<br>FAX:                       | (607) 731-0145<br>(607) 562-4001 | TEST                   | TEST REPORT   |       |                      | PWS ID# |          |            |  |
| 01                                   | -071                             |                        |   |       |                      |         |          |            |  |
|                                      | FOR LAB BY: TJC                  | DATE: 1                | 0/21/2010 11:37   |       | •                    |         | P        | age 2 of 2 |  |
| Lead - T                             | CLP extracted                    | < 0.500 mg/L           | EPA 6010B   | 0.500 | 10/23/10             | 11:10   | 10/23/10 | RMD-CV     |  |
| Nickel - 1                           | TCLP extracted                   | 0.138 mg/L             | EPA 6010B   | 0.100 | 10/23/10             | 11:10   | 10/23/10 | RMD-CV     |  |
| Selenium                             | n - TCLP extracted               | < 0.500 mg/L           | EPA 6010B   | 0.500 | 10/23/10             | 11:10   | 10/23/10 | RMD-CV     |  |
| Silver - T                           | CLP extracted                    | < 0.100 mg/L           | EPA 6010B   | 0.100 | 10/23/10             | 11:10   | 10/23/10 | RMD-CV     |  |
| Zinc - TC                            | CLP extracted                    | 0.217 mg/L             | EPA 6010B   | 0.200 | 10/23/10             | 11:10   | 10/23/10 | RMD-CV     |  |

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

DATE: 10/26/2010 avis Carrie M MANAGER

| EPORT TO: Talisman / UEG        | ]           |              |                | 14/         |            | <u></u>                | 10102010 3840  |           |
|---------------------------------|-------------|--------------|----------------|-------------|------------|------------------------|--|-----------|
| geowetlands@aol.com             | 1           |              |                | VV.         | 10         | #:                     | IUIUJZID ARE SPECIAL DETECTION L   | IMITS     |
| wollin@rallysolutions.ca        |             | IGER         | ATE SA         | MPI F       | 8          |                        |  |           |
|                                 |             |              | LECT           |             | Ĩ          | 6                      | W DRINKING WATER SL SLUDGE WOOH NYDEC PADEP IS A QC PACKAGE NE   |           |
| CONTACT Otavia Oriallari        | -           |              |                |             |            |                        | W GROUND WATER SO SOIL   | EVENT     |
| CONTACT Steve Gridley           | <u> </u> т  | RANS<br>T(   | PORT           |             | 1          | / w                    |  |           |
| AX#                             | - LA        |              | )<br>Atory     | ,           |            | - Tk                   |  | URCEMENTO |
| BILL TO: Tallsman               |             | N CO<br>WITH |                | _/          | /          | PRESENTITIAL COMPOSITE | H       HYDROCHLORIC ACID       OH       SODIUM HYDROXIDE         S       SULFURIC ACID       AS       ASCORBIC ACID         N       NITRIC ACID       AC       ACETIC ACID         SO, SODIUM SULFITE       NH, AMMONIUM CHLORIDE       Hg       Hercuric CHLORIDE         Thio       SODIUM THIOSULFATE       ZINC ACETATE       Hg       MERCURIC CHLORIDE         -       NONE       Hg       MERCURIC CHLORIDE       Hg       Pease fill c         An incomplete chain of custody may delay the       Processing of your sample(s).       Pease fill c       SO       SO         ANALYSIS TO BE PERFORMED       CONTAINER)       CAB       USE ONLY       CAB       CAB |           |
| 0#/F77729                       | -           |              | 6              | 7           |            |                        | - NONE Hg MERCURIC CHLORIDE  | . 11      |
| CAMPLER SIGNATURE / AFFILIATION |             |              | SAMPLIN        | MATRY       | in all     | R MITLA                | An incomplete chain of custody may delay the<br>processing of your sample(s).<br>ANALYSIS TO BE PERFORMED<br>(REP CONTAINED)   | areas     |
| SCONTAINER SAMPLING POINT       | Dares       | TIME         | Super Same ING | SAME MATRIX |            | Tommer of the second   | SO <sub>3</sub> SODIUM SULFITE NH, AMMONIUM CHLORIDE<br>Thio SODIUM THIOSULFATE ZN ZINC ACETATE<br>- NONE Hg MERCURIC CHLORIDE<br>An incomplete chain of custody may delay the<br>processing of your sample(s).<br>ANALYSIS TO BE PERFORMED<br>(PER CONTAINER)   | Ý         |
| 1 Inv Cuttings                  | 10/19       | 1039         | 50             |             | 8          | N                      |  | DOI K     |
| 2                               |             |              |                |             |            |                        | pH   |           |
| 3                               |             |              |                |             |            |                        | TCLP 8 RCRA Metals + Cu, Ni, Zn  |           |
| 4 A. TPH                        |             |              |                |             | μ          |                        | Free Liquids / % Moisture  |           |
| 5 B-pH, Free Lige               | fill        | 0            | lon            | poi         | tu         | pe                     | BTEX   |           |
| 6 CLINA                         |             |              |                |             | <u> </u>   |                        | TCLE CLOS + SETO ONLY IF the TPH   |           |
| 7 D.T.Sanples                   |             | • 1          |                |             | .<br>      |                        | exceeds 120,000 mg/Kg  |           |
| 8 TCLP Metals 4                 | -0          | (N)          | 1,4            | p           |            |                        | 7之 HOUR TURNAROUND   |           |
| 9                               |             |              |                |             | <u> </u>   |                        | DAY TURNAROUND   |           |
| 10                              | +           |              |                | <b> </b>    |            |                        |  | 20/10     |
| LAS USE GAD: 1. A State         | <u> </u>    | :            | L              | L_,,        |            |                        |  | 901       |
|                                 | йн<br>1977- | •            | <i>.</i>       |             | <u>ې</u> ک |                        |  |           |
| RELINGUISTED BY: / / Les        |             |              | ATE:           | 211/        | 0          | TIME:                  | 37 RECEIVED BY: DATE:  | E:        |
| RELINQUISHED BY:                |             | Ē            | ATE:           |             |            | TIME:                  | RECEIVED BY: DATE: / TIM   | E:        |
|                                 |             |              |                |             |            |                        |  |           |

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| 2540-PM       | BWM0347       | Rev. 1/2011              |   |
|---------------|---------------|--------------------------|---|
|               |               | sylvania                 |   |
| $\mathcal{P}$ | DEPARTMENT OF | ENVIRONMENTAL PROTECTION | ł |

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WASTE MANAGEMENT

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

| typed or legil<br>each attache   | his form must be fully and accurately completed. All required information must be<br>yped or legibly printed in the spaces provided. If additional space is necessary, identify<br>ach attached sheet as Form 26R, reference the item number and identify the date<br>repared. The date on attached sheets needs to match the date noted below. |  |   |  | DEP USE ONLY<br>Received & General      |  |
|--|---|--|---|--|---|--|
| General Refe   | General Reference 287.54  |  |   |  |   |  |
| Date Prepare   | d/Revised Febru   | iary 11, 2011  |   |  |   |  |
| 1.1.1  |   | LIENT (GENERATOR   | OF THE WASTE) IN  | FORMATI  | ON                                      |  |
| Company Na<br>Talisman En  | <b>me</b><br>ergy USA Inc.  |  |   |  |   |  |
|  | y, Name of Parent Compan  | ıy   |   |  | EPA Generator                           | ID#  |
| Talisman En  |   |  |   |  | N/A                                     |  |
| 50 Pennwoo   | iling Address Line 1<br>d Place   | C  | ompany Mailing Addres   | s Line 2   |   |  |
|  | dress Last Line – City  | State  | Zip+4   | Phone  |   | xt   |
| Warrendale   |   | PA   | 15086   | (724) 81   |   |  |
| Brown  | ntact Last Name   | <b>First Name</b><br>Dina  | MI  |  | Suffix                                  |  |
| Municipality   |   | (  | County  | (i.e.,   |   |  |
| Warrendale<br>Contact Phor   | ne Ext C  | A<br>Contact Email Address   | Allegheny   |  |   |  |
| (724) 814-53   |   | lybrown@talismanusa.c  | om  |  |   |  |
| Is the waste g   | generated at the Company  | Mailing Address (noted a   | above)?   |  | 🗌 Yes 🛛                                 |  |
| If 'No'. descri  | be location of waste gener<br>1-032) well pad site located a  | ation and storage. <u>Drill c</u>  | uttings are generated du  | ring natural ga  | as drilling operatio                    | ns at  |
| containers on  |   | at 554 Alba Wountain Roa   | u, Canton Township, Bra   | alora County,  | PA. Waste is sto                        |  |
| Municipality   | Canton  | County Bradfo  |   | State  | PA                                      |  |
|  |   |  |   |  |   | and months includes  |
|  |   | ECTION B. WAST   | EDESCRIPTION  | 11-14-6  |   |  |
| Residual<br>Waste Code   | Residual  | l Waste  | Amount  | Unit of<br>Measure   | Tin<br>Frai                             |  |
| Waste Code   | Residual<br>Code Des  | l Waste<br>cription  | Amount  | Measure<br>cuyd  | gal                                     | me   |
|  | Residual  | I Waste<br>scription<br>s)   | Amount<br>4,091   | Measure<br>cuyd  | gal                                     |  |
| Waste Code   | Residual<br>Code Des<br>Drill cuttings (oil and gas   | I Waste<br>cription<br>S)<br>1. GENERAL P  | Amount<br>4,091   | Measure<br>☐ cu yd _<br>☐ lb   | gal                                     | me   |
| Waste Code<br>810<br>a. pH Ra  | Residual<br>Code Des<br>Drill cuttings (oil and gas<br>inge 9.18<br>cal State   | I Waste<br>cription<br>S)<br>1. GENERAL P  | Amount<br>4,091<br>ROPERTIES<br>(based on analyses or ki<br>thod 9095)<br>95)   | Measure<br>☐ cu yd _<br>☐ lb   | gal                                     | me   |
| Waste Code<br>810<br>a. pH Ra<br>b. Physi  | Residual         Code Des         Drill cuttings (oil and gas         inge       9.18         cal State       []         cal Appearance       C   | I Waste<br>cription<br>5)<br>1. GENERAL P<br>to 10.33<br>☐ Liquid Waste (EPA Me<br>Solid (EPA Method 909<br>☐ Gas (ambient temperation<br>Color Greyish Black  | Amount<br>4,091<br>ROPERTIES<br>(based on analyses or ki<br>thod 9095)<br>95)<br>ture & pressure)<br>Odo  | Measure  | gal                                     | me   |
| Waste Code<br>810<br>a. pH Ra<br>b. Physi  | Residual<br>Code Des<br>Drill cuttings (oil and gas<br>inge 9.18<br>cal State [<br>Cal Appearance C<br>N  | I Waste<br>acription<br>S)<br>1. GENERAL P<br>to 10.33<br>Liquid Waste (EPA Me<br>Solid (EPA Method 909<br>Gas (ambient temperal<br>Color Greyish Black<br>lumber of Solid or Liquic   | Amount<br>4,091<br>ROPERTIES<br>(based on analyses or kit<br>thod 9095)<br>95)<br>ture & pressure)<br>Odo<br>I Phases of Separation   | Measure<br>cu ydlb<br>nowledge)<br>rEarthy/S<br>One                                | gal<br>] gal<br>] ton                   | me   |
| Waste Code<br>810<br>a. pH Ra<br>b. Physi  | Residual<br>Code Des<br>Drill cuttings (oil and gas<br>inge 9.18<br>cal State [<br>Cal Appearance C<br>N  | I Waste<br>cription<br>5)<br>1. GENERAL P<br>to 10.33<br>☐ Liquid Waste (EPA Me<br>Solid (EPA Method 909<br>☐ Gas (ambient temperation<br>Color Greyish Black  | Amount<br>4,091<br>ROPERTIES<br>(based on analyses or kit<br>thod 9095)<br>95)<br>ture & pressure)<br>Odo<br>I Phases of Separation   | Measure<br>cu ydlb<br>nowledge)<br>rEarthy/S<br>One                                | gal<br>] gal<br>] ton                   | me   |
| Waste Code<br>810<br>a. pH Ra<br>b. Physi<br>c. Physi  | Residual<br>Code Des<br>Drill cuttings (oil and gas<br>ange 9.18<br>cal State [<br>Cal Appearance C<br>N<br>D   | I Waste Cription  I. GENERAL P to 10.33 I. Liquid Waste (EPA Me Solid (EPA Method 909 Gas (ambient temperat Color Greyish Black Iumber of Solid or Liquic Describe each phase of s 2. CHEMICAL ANALYS  | Amount<br>4,091<br>ROPERTIES<br>(based on analyses or kit<br>thod 9095)<br>35)<br>ture & pressure)<br>Odo<br>I Phases of Separation<br>eparation. Soil and Ro   | Measure  | gal<br>]gal<br>]ton □ One<br>]ton □ One | me<br><u>a</u> Time  |
| Waste Code<br>810<br>a. pH Ra<br>b. Physi<br>c. Physi<br>c. Physi<br>a. The re<br>instru   | Residual<br>Code Des<br>Drill cuttings (oil and gas<br>ange 9.18<br>cal State [<br>cal Appearance C<br>N<br>besults of a detailed chemica<br>ctions, is attached.   | I Waste         ccription         s)         1. GENERAL P         to       10.33         Liquid Waste (EPA Me         Solid (EPA Method 909         Gas (ambient temperal         color       Greyish Black         lumber of Solid or Liquic         bescribe each phase of s         2. CHEMICAL ANALYS         al characterization of the | Amount<br>4,091<br>ROPERTIES<br>(based on analyses or kit<br>thod 9095)<br>35)<br>ture & pressure)<br>Odo<br>I Phases of Separation<br>eparation. Soil and Ro<br>SIS ATTACHMENTS<br>waste, as described in  | Measure  | Silight Petroleum                       | me<br>Time<br>No   |
| Waste Code<br>810<br>a. pH Ra<br>b. Physi<br>c. Physi<br>c. Physi<br>a. The re<br>instru<br>b. A deta                                    | Residual<br>Code Des         Drill cuttings (oil and gas         ange       9.18         cal State       []         cal Appearance       C         sults of a detailed chemica       D         ctions, is attached.       ailed description of the was  | I Waste Coription  I. GENERAL P  to 10.33  Liquid Waste (EPA Me  Solid (EPA Method 909 Gas (ambient temperat Color Greyish Black Iumber of Solid or Liquic Describe each phase of s  C. CHEMICAL ANALYS al characterization of the ste sampling method is a  | Amount<br>4,091<br>ROPERTIES<br>(based on analyses or ki<br>thod 9095)<br>55)<br>ture & pressure)<br>Odo<br>I Phases of Separation<br>eparation. <u>Soil and Ro</u><br>SIS ATTACHMENTS<br>waste, as described in<br>ttached.                                | Measure<br>cu yd<br>lb<br>nowledge)<br>rEarthy/S<br><br>One<br>ck Fragments<br>the | S Yes                                   | me<br>2 Time<br>2 Time<br>3 No<br>3 No                         |
| Waste Code<br>810<br>a. pH Ra<br>b. Physi<br>c. Physi<br>c. Physi<br>a. The re<br>instru<br>b. A deta                                    | Residual<br>Code Des         Drill cuttings (oil and gas         ange       9.18         cal State       []         cal Appearance       C         cal Appearance       C         cal Appearance       C         ailed description of the was       ailed description of the was  | I Waste Coription  I. GENERAL P  to 10.33  Liquid Waste (EPA Me  Solid (EPA Method 909 Gas (ambient temperat Color Greyish Black Iumber of Solid or Liquic Describe each phase of s  C. CHEMICAL ANALYS al characterization of the ste sampling method is a  | Amount<br>4,091<br>ROPERTIES<br>(based on analyses or ki<br>thod 9095)<br>55)<br>ture & pressure)<br>Odo<br>I Phases of Separation<br>eparation. <u>Soil and Ro</u><br>SIS ATTACHMENTS<br>waste, as described in<br>ttached.                                | Measure<br>cu yd<br>lb<br>nowledge)<br>rEarthy/S<br><br>One<br>ck Fragments<br>the | Silight Petroleum                       | me<br>Time<br>No   |
| Waste Code<br>810<br>a. pH Ra<br>b. Physi<br>c. Physi<br>c. Physi<br>a. The re<br>instru<br>b. A deta<br>c. The q<br>attach<br>d. The re | Residual<br>Code Des         Drill cuttings (oil and gas         ange       9.18         cal State       []         cal Appearance       C         cal Appearance       C         cal Appearance       C         ailed description of the was       ailed description of the was  |  | Amount<br>4,091<br>ROPERTIES<br>(based on analyses or kit<br>thod 9095)<br>35)<br>ture & pressure)<br>Odo<br>I Phases of Separation<br>eparation. Soil and Ro<br>SIS ATTACHMENTS<br>waste, as described in<br>ttached.<br>yed by the laboratory(ie<br>ched. | Measure<br>cu yd<br>lb<br>nowledge)<br>rEarthy/S<br><br>One<br>ck Fragments<br>the | S Yes                                   | me<br>2 Time<br>2 Time<br>3 No<br>3 No<br>3 No<br>3 No<br>3 No |

|        | 3.   | PROCESS DESCRIPTI                | ON & SCHEMATIC ATTA        | CHMENTS             | 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -<br>1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - |       |  |
|--------|--|----------------------------------|----------------------------|---------------------|--|-------|--|
| a.     | A detailed description of the  |                                  |                            |                     | Yes  | □ No  |  |
|        | the waste, as specified in the   |                                  |                            |                     |  |       |  |
| b.     | A schematic of the manufacturing and/or pollution control processes producing the waste, Xes No as specified in the instructions, is attached. |                                  |                            |                     |  |       |  |
| C.     | If portions of the information a confidentiality claim, as des   |                                  |                            | n for 📋 Yes         | No No  | 🛛 N/A |  |
|        | SECTIO   |                                  | MENT OF RESIDU             |                     |  |       |  |
|        |  |                                  | R DISPOSAL FACILITY(II     |                     |  |       |  |
| The ar | rea below (ad.) will accommod  | ate the identification           | of two facilities. Attack  | h additional sheets | if necessary   |       |  |
| а.     | Solid waste permit number(s)<br>9-0232-00003   | for processing or dis            | posal facility being util  | lized.              |  |       |  |
| b.     | Facility Name  | Hyland Landfill                  |                            |                     |  |       |  |
|        | Address Line 1   | 6653 Herdman Roa                 | ad                         |                     |  |       |  |
|        | Address Line 1   |                                  |                            |                     |  |       |  |
|        | Address City State ZIP   | Angelica                         | NY                         | 14709               | ······································   |       |  |
|        | Municipality   | Angelica                         | County                     | Allegany            |  |       |  |
| c.     | Facility Contact Name  | Larry Shilling                   |                            |                     |  |       |  |
|        | Title  |                                  | est sa                     |                     |  |       |  |
|        | Phone  | (585) 466-7271                   | Email Address              | larry.shilling@ca   | sella.com  |       |  |
| d.     | Volume of waste shipped to p<br>2,494  | cu yd 🗌 gal                      | ☐ lb 🛛 tor                 | n (check one)       |  |       |  |
| а.     | Solid waste permit number(s)<br>8-4630-00010   | for processing or dis            | posal facility being util  | ized.               |  |       |  |
| b.     | Facility Name  | Hakes C&D Landfil                | 1                          |                     |  |       |  |
|        | Address Line 1   | 4376 Manning Ridg                | ge 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<br>(585) 466-7271 | Email Address              | joe.boyles@case     | ella.com   |       |  |
| d.     | Volume of waste shipped to p   | rocessing or disposa             | I facility in the previous | s year.             |  |       |  |
| 1      | 1,377  | cuyd 🗌 gal                       | 🗌 lb 🛛 tor                 | n (check one)       |  |       |  |
|        | 14   | 2. BE                            | NEFICIAL USE               |                     |  |       |  |
| a.     | Has the waste been approved  | for beneficial use?              |                            |                     | Yes  | 🛛 No  |  |
|        | If "Yes", list the general permi   | t number or approval             | number.                    |                     |  |       |  |
| b.     | Volume of waste beneficially   |                                  |                            |                     |  |       |  |
|        | 0  | cuyd 🗌 gal                       | 🗌 lb 🗌 tor                 | n (check one)       |  |       |  |

|                   | 3.   | <b>PROCESS DESCRIPTION &amp;</b>       | SCHEMATIC ATTAC         | HMENTS  | · · · · · · · · · · · · · · · · · · · |
|-------------------|--|--|-------------------------|---|---------------------------------------|
| a.                | A detailed description of the the waste, as specified in the   |  | lution control proce    | sses producing  | 🛛 Yes 🗌 No                            |
| b.                | A schematic of the manufacture as specified in the instruction |  | trol processes prod     | ucing the waste,  | Yes 🗌 No                              |
| C.                | If portions of the information a confidentiality claim, as des |  |                         | n for Yes   | 🗌 No 🛛 N/A                            |
|                   | SECTIO   | ON C. MANAGEME                         | NT OF RESIDU            | AL WASTE  |                                       |
|                   |  | 1. PROCESSING OR D                     |                         |   |                                       |
| The ar            | ea below (ad.) will accommod                                   | ate the identification of the          | vo facilities. Attach   | additional sheets   | if necessary.                         |
| a.                | Solid waste permit number(s)<br>8-0728-00004                   | for processing or dispos               | al facility being utili | zed.  |                                       |
| b.                | Facility Name  | Chemung County Land                    | Ifill                   |   |                                       |
|                   | 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 Manage                   |                         |   |                                       |
|                   | Phone  | (585) 797-5941                         | Email Address           | carla.canjar@cas  | sella.com                             |
| d.                | Volume of waste shipped to p                                   | rocessing or disposal fac<br>cu yd gal | ility in the previous   | year.<br>(check one)  |                                       |
| a.                | Solid waste permit number(s)<br>100361                         | for processing or dispos               | al facility being utili | zed.  |                                       |
| b.                | Facility Name  | McKean County Landfi                   |                         |   |                                       |
|                   | 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@gma  | ail.com                               |
| d.                | Volume of waste shipped to p                                   | rocessing or disposal fac<br>cu yd gal | ility in the previous   | year.<br>(check one)  |                                       |
| 184 <b>1</b> -000 |  | 2. BENEF                               |                         | An in the second sec |                                       |
| a.                | Has the waste been approved                                    | for beneficial use?                    |                         |   | 🗌 Yes 🛛 No                            |
|                   | If "Yes", list the general perm                                | t number or approval nur               | nber.                   |   |                                       |
| b.                | Volume of waste beneficially                                   | ised in the previous year              |                         |   |                                       |
|                   | 0  | cuyd 🗌 gal [                           | b 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<br>Report and all attached documents and that based upon my inquiry of those individuals immediately responsible for<br>obtaining the information, I verify that the submitted information is true, accurate and complete to the best of my<br>knowledge. I understand that the submission of false information herein is made subject to the penalties of 18 Pa. C.S.<br>§4904, relating to unsworn falsification to authorities, which include fine and imprisonment. |           |   |  |  |  |
| Check the following, if applica  | e:        |   |  |  |  |
| I certify the information and has not char   | •         | ction B-1, General Properties was supplied to the Department for the year |  |  |  |
| Form Submitted:  | Form 26F  | R   |  |  |  |
|  | Other (sp | ecify)  |  |  |  |
| Date Submitted:  |           |   |  |  |  |
| I certify the information  |           | ction B-2, Chemical Analysis was supplied to the Department for the year  |  |  |  |
| Form Submitted:  | Form 26F  | R   |  |  |  |
|  | Other (sp | ecify)  |  |  |  |
| Date Submitted:  |           |   |  |  |  |
| I certify the information for the year and I   | -         | on B-3, Process Description and Schematic, was supplied to the Department |  |  |  |
| Form Submitted:  | Form 26R  |   |  |  |  |
|  | Other (sp | ecify)  |  |  |  |
| Date Submitted:  |           | · · · · ·   |  |  |  |
| Name of Responsible Official   |           | Title Environmental Specialist  |  |  |  |
| Dina Brown Signature   | 3/6       | Date 2/25/11  |  |  |  |

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| LAB ID: 39-00401  | <b>Easter</b><br>2566 Pen<br>Sayre<br>Phone: (5   | Analytics, Ir<br>n Division<br>nsylvania Ave.<br>, PA 18840<br>70) 888-0169<br>70) 888-0717   | IC.  | Work  | c Order: 100   | 74528  |
|---|---|---|--|---|--|--|
| SEND DATA TO:   | 1 47. 10  |   |  |   |  |  |
| NAME: Steve Gridley   |   |   | W  | O#: 1007  | 74528  |  |
| COMPANY: Talisman Energy  |   |   | PA   | AGE: 1 of   | 2  |  |
| ADDRESS: 337 Daniel Zen<br>Horseheads, N  |   |   | D  | ∩#• ∧ ⊑7/   | 6317   |  |
| ,,.   |   |   |  |   | 0317   |  |
| PHONE: (607) 562-400<br>FAX: (607) 562-400  | 10  | REPORT  | P\   | NS ID#  |  |  |
| Well  |   |   |  |   |  |  |
| RECEIVED FOR LAB BY: DL   | _M2 DATE:   | 07/29/2010 9:32   |  |   | Pa   | age 1 of 2   |
| SAMPLE: Air Cuttings<br>SAMPLED BY: SG  |   | ab ID: 10074528-001A<br>Time: 07/28/2010 15:00  | Grab   |   |  |  |
| Test  | Result  | Method  | <u>SLOQ</u>  | Analysis Start  | Analysis End   | Analyst *  |
| Total Petroleum Hydrocarbons<br>Sample Note: Analysis per   | s 890 mg/Kg   | EPA 9071  |  |   | 08/02/10   |  |
|   |   |   |  |   |  |  |
| SAMPLE: Air Cuttings  | Li  | ab ID: 10074528-001B  | Grab   |   |  |  |
| SAMPLE: Air Cuttings<br>SAMPLED BY: SG  |   | ab ID: 10074528-001B<br>Time: 07/28/2010 15:00  |  |   |  |  |
|   |   |   | Grab<br><u>SLOQ</u>  | <u>Analysis Start</u>   | <u>Analysis End</u>  | <u>Analyst *</u>   |
| SAMPLED BY: SG  | Sample  | Time: 07/28/2010 15:00  |  | <u>Analysis Start</u><br>07/29/10 14:30   | <u>Analysis End</u><br>07/30/10  | <u>Analyst *</u><br>NFM-SA   |
| SAMPLED BY: SG<br><u>Test</u>   | Sample<br><u>Result</u>   | Time: 07/28/2010 15:00<br><u>Method</u>   | <u>sloq</u>  |   |  |  |
| SAMPLED BY: SG<br><u>Test</u><br>Moisture   | Sample<br><u>Result</u><br>16.1 %   | Time: 07/28/2010 15:00<br><u>Method</u><br>Moisture Calc.   | <u>SLOQ</u><br>0.01  | 07/29/10 14:30  | 07/30/10   | NFM-SA   |
| SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Liquid  | Sample<br><u>Result</u><br>16.1 %<br>< 0.1 %<br>10.33@21.0°C  | Time: 07/28/2010 15:00<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A  | <u>SLOQ</u><br>0.01  | 07/29/10 14:30<br>07/30/10 17:10  | 07/30/10<br>07/30/10   | NFM-SA<br>IC-SA  |
| SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH  | Sample<br><u>Result</u><br>16.1 %<br>< 0.1 %<br>10.33@21.0°C<br>Li  | Time: 07/28/2010 15:00<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C   | <u>SLOQ</u><br>0.01<br>0.1<br>Grab   | 07/29/10 14:30<br>07/30/10 17:10  | 07/30/10<br>07/30/10   | NFM-SA<br>IC-SA  |
| SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: Air Cuttings<br>SAMPLED BY: SG  | Sample<br><u>Result</u><br>16.1 %<br>< 0.1 %<br>10.33@21.0°C<br>L:<br>Sample  | Time: 07/28/2010 15:00<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>ab ID: 10074528-001C<br>Time: 07/28/2010 15:00   | <u>SLOQ</u><br>0.01<br>0.1   | 07/29/10 14:30<br>07/30/10 17:10<br>07/29/10 8:00   | 07/30/10<br>07/30/10<br>07/30/10   | NFM-SA<br>IC-SA<br>NFM-SA  |
| SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: Air Cuttings  | Sample<br><u>Result</u><br>16.1 %<br>< 0.1 %<br>10.33@21.0°C<br>Li<br>Sample<br><u>Result</u>   | Time: 07/28/2010 15:00<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>ab ID: 10074528-001C   | <u>SLOQ</u><br>0.01<br>0.1<br>Grab   | 07/29/10 14:30<br>07/30/10 17:10  | 07/30/10<br>07/30/10   | NFM-SA<br>IC-SA<br>NFM-SA  |
| SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: Air Cuttings<br>SAMPLED BY: SG<br><u>Test</u>   | Sample<br><u>Result</u><br>16.1 %<br>< 0.1 %<br>10.33@21.0°C<br>L:<br>Sample  | Time: 07/28/2010 15:00<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>ab ID: 10074528-001C<br>Time: 07/28/2010 15:00<br><u>Method</u>  | SLOQ<br>0.01<br>0.1<br>Grab<br>SLOQ  | 07/29/10 14:30<br>07/30/10 17:10<br>07/29/10 8:00<br><u>Analysis Start</u>  | 07/30/10<br>07/30/10<br>07/30/10<br><u>Analysis End</u>  | NFM-SA<br>IC-SA<br>NFM-SA  |
| SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: Air Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Sodium   | Sample<br><u>Result</u><br>16.1 %<br>< 0.1 %<br>10.33@21.0°C<br>Li<br>Sample<br><u>Result</u><br>1280 mg/Kg-dry   | Time: 07/28/2010 15:00<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>ab ID: 10074528-001C<br>Time: 07/28/2010 15:00<br><u>Method</u><br>EPA 6010B   | <u>SLOQ</u><br>0.01<br>0.1<br>Grab<br><u>SLOQ</u><br>71.8  | 07/29/10 14:30<br>07/30/10 17:10<br>07/29/10 8:00<br><u>Analysis Start</u><br>07/30/10 8:30   | 07/30/10<br>07/30/10<br>07/30/10<br><u>Analysis End</u><br>07/31/10  | NFM-SA<br>IC-SA<br>NFM-SA<br><u>Analyst *</u><br>RMD-CV  |
| SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: Air Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Sodium<br>Chloride<br>Percent Moisture   | Sample<br><u>Result</u><br>16.1 %<br>< 0.1 %<br>10.33@21.0°C<br>L:<br>Sample<br><u>Result</u><br>1280 mg/Kg-dry<br>173 mg/Kg-dry<br>16.1 %  | Time: 07/28/2010 15:00<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>ab ID: 10074528-001C<br>Time: 07/28/2010 15:00<br><u>Method</u><br>EPA 6010B<br>EPA 300.0  | <u>SLOQ</u><br>0.01<br>0.1<br>Grab<br><u>SLOQ</u><br>71.8  | 07/29/10 14:30<br>07/30/10 17:10<br>07/29/10 8:00<br><u>Analysis Start</u><br>07/30/10 8:30<br>07/30/10 15:42   | 07/30/10<br>07/30/10<br>07/30/10<br><u>Analysis End</u><br>07/31/10<br>07/31/10  | NFM-SA<br>IC-SA<br>NFM-SA<br><u>Analyst *</u><br>RMD-CV<br>HDP-CV  |
| SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: <b>Air Cuttings</b><br>SAMPLED BY: SG<br><u>Test</u><br>Sodium<br>Chloride  | Sample<br><u>Result</u><br>16.1 %<br>< 0.1 %<br>10.33@21.0°C<br>La<br>Sample<br><u>Result</u><br>1280 mg/Kg-dry<br>173 mg/Kg-dry<br>16.1 %<br>La<br>Air Cuttings  | Time: 07/28/2010 15:00<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>ab ID: 10074528-001C<br>Time: 07/28/2010 15:00<br><u>Method</u><br>EPA 6010B<br>EPA 300.0<br>SM2540G   | <u>SLOQ</u><br>0.01<br>0.1<br>Grab<br><u>SLOQ</u><br>71.8<br>59.6<br>Grab  | 07/29/10 14:30<br>07/30/10 17:10<br>07/29/10 8:00<br><u>Analysis Start</u><br>07/30/10 8:30<br>07/30/10 15:42   | 07/30/10<br>07/30/10<br>07/30/10<br><u>Analysis End</u><br>07/31/10<br>07/31/10  | NFM-SA<br>IC-SA<br>NFM-SA<br><u>Analyst *</u><br>RMD-CV<br>HDP-CV  |
| SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: Air Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Sodium<br>Chloride<br>Percent Moisture<br>SAMPLE: TCLP Leachate of A<br>SAMPLED BY: SG   | Sample<br><u>Result</u><br>16.1 %<br>< 0.1 %<br>10.33@21.0°C<br>La<br>Sample<br><u>Result</u><br>1280 mg/Kg-dry<br>173 mg/Kg-dry<br>16.1 %<br>La<br>Sample  | Time: 07/28/2010 15:00<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>ab ID: 10074528-001C<br>Time: 07/28/2010 15:00<br><u>Method</u><br>EPA 6010B<br>EPA 300.0<br>SM2540G<br>ab ID: 10074528-001E<br>Time: 07/30/2010 7:50  | <u>SLOQ</u><br>0.01<br>0.1<br>Grab<br><u>SLOQ</u><br>71.8<br>59.6  | 07/29/10 14:30<br>07/30/10 17:10<br>07/29/10 8:00<br><u>Analysis Start</u><br>07/30/10 8:30<br>07/30/10 15:42<br>07/29/10 14:30   | 07/30/10<br>07/30/10<br>07/30/10<br><u>Analysis End</u><br>07/31/10<br>07/31/10<br>07/30/10  | NFM-SA<br>IC-SA<br>NFM-SA<br><u>Analyst *</u><br>RMD-CV<br>HDP-CV<br>NFM-SA  |
| SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: Air Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Sodium<br>Chloride<br>Percent Moisture<br>SAMPLE: TCLP Leachate of A<br>SAMPLED BY: SG<br><u>Test</u>  | Sample          Result         16.1 %         < 0.1 %   | Time: 07/28/2010 15:00<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>ab ID: 10074528-001C<br>Time: 07/28/2010 15:00<br><u>Method</u><br>EPA 6010B<br>EPA 300.0<br>SM2540G<br>ab ID: 10074528-001E<br>Time: 07/30/2010 7:50<br><u>Method</u>   | <u>SLOQ</u><br>0.01<br>0.1<br>Grab<br><u>SLOQ</u><br>71.8<br>59.6<br>Grab<br><u>SLOQ</u>   | 07/29/10 14:30<br>07/30/10 17:10<br>07/29/10 8:00<br><u>Analysis Start</u><br>07/30/10 8:30<br>07/30/10 15:42<br>07/29/10 14:30<br><u>Analysis Start</u>                                    | 07/30/10<br>07/30/10<br>07/30/10<br><u>Analysis End</u><br>07/31/10<br>07/30/10<br><u>Analysis End</u>   | NFM-SA<br>IC-SA<br>NFM-SA<br><u>Analyst *</u><br>RMD-CV<br>HDP-CV<br>NFM-SA<br><u>Analyst *</u>                              |
| SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: Air Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Sodium<br>Chloride<br>Percent Moisture<br>SAMPLE: TCLP Leachate of A<br>SAMPLED BY: SG<br><u>Test</u><br>Mercury - TCLP extracted  | Sample<br><u>Result</u><br>16.1 %<br>< 0.1 %<br>10.33@21.0°C<br>La<br>Sample<br><u>Result</u><br>1280 mg/Kg-dry<br>173 mg/Kg-dry<br>16.1 %<br>La<br>Sample<br><u>Result</u><br>Sample<br>La<br>Sample   | Time: 07/28/2010 15:00<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>ab ID: 10074528-001C<br>Time: 07/28/2010 15:00<br><u>Method</u><br>EPA 6010B<br>EPA 300.0<br>SM2540G<br>ab ID: 10074528-001E<br>Time: 07/30/2010 7:50<br><u>Method</u><br>EPA 7470A  | SLOQ           0.01           0.1           Grab           SLOQ           71.8           59.6           Grab           SLOQ           0.0008   | 07/29/10 14:30<br>07/30/10 17:10<br>07/29/10 8:00<br><u>Analysis Start</u><br>07/30/10 8:30<br>07/30/10 15:42<br>07/29/10 14:30<br><u>Analysis Start</u><br>07/30/10 12:50                  | 07/30/10<br>07/30/10<br>07/30/10<br><u>Analysis End</u><br>07/31/10<br>07/31/10<br>07/30/10<br><u>Analysis End</u><br>08/03/10                                     | NFM-SA<br>IC-SA<br>NFM-SA<br><u>Analyst *</u><br>RMD-CV<br>HDP-CV<br>NFM-SA<br><u>Analyst *</u><br>KW-CV                     |
| SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: Air Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Sodium<br>Chloride<br>Percent Moisture<br>SAMPLE: TCLP Leachate of A<br>SAMPLED BY: SG<br><u>Test</u><br>Mercury - TCLP extracted<br>Arsenic - TCLP extracted                            | Sample<br><u>Result</u><br>16.1 %<br>< 0.1 %<br>10.33@21.0°C<br>L:<br>Sample<br><u>Result</u><br>1280 mg/Kg-dry<br>173 mg/Kg-dry<br>16.1 %<br>Air Cuttings<br>L:<br>Sample<br><u>Result</u><br>< 0.0008 mg/L<br>< 0.500 mg/L                                    | Time: 07/28/2010 15:00<br><u>Method</u><br>EPA 9095A<br>EPA 9045C<br>ab ID: 10074528-001C<br>Time: 07/28/2010 15:00<br><u>Method</u><br>EPA 6010B<br>EPA 300.0<br>SM2540G<br>ab ID: 10074528-001E<br>Time: 07/30/2010 7:50<br><u>Method</u><br>EPA 7470A<br>EPA 6010B   | SLOQ           0.01           0.1           Grab           SLOQ           71.8           59.6           Grab           SLOQ           0.0008           0.500                                 | 07/29/10 14:30<br>07/30/10 17:10<br>07/29/10 8:00<br><u>Analysis Start</u><br>07/30/10 8:30<br>07/30/10 15:42<br>07/29/10 14:30<br><u>Analysis Start</u><br>07/30/10 12:50<br>08/02/10 8:30 | 07/30/10<br>07/30/10<br>07/30/10<br><u>Analysis End</u><br>07/31/10<br>07/30/10<br><u>Analysis End</u>   | NFM-SA<br>IC-SA<br>NFM-SA<br><u>Analyst *</u><br>RMD-CV<br>HDP-CV<br>NFM-SA<br><u>Analyst *</u><br>KW-CV<br>RMD-CV           |
| SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: Air Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Sodium<br>Chloride<br>Percent Moisture<br>SAMPLE: TCLP Leachate of A<br>SAMPLED BY: SG<br><u>Test</u><br>Mercury - TCLP extracted  | Sample<br><u>Result</u><br>16.1 %<br>< 0.1 %<br>10.33@21.0°C<br>L:<br>Sample<br><u>Result</u><br>1280 mg/Kg-dry<br>173 mg/Kg-dry<br>16.1 %<br>L:<br>Sample<br><u>Result</u><br>< 0.0008 mg/L<br>< 0.500 mg/L<br>< 10.00 mg/L                                    | Time: 07/28/2010 15:00<br><u>Method</u><br>EPA 9095A<br>EPA 9045C<br>ab ID: 10074528-001C<br>Time: 07/28/2010 15:00<br><u>Method</u><br>EPA 6010B<br>EPA 300.0<br>SM2540G<br>ab ID: 10074528-001E<br>Time: 07/30/2010 7:50<br><u>Method</u><br>EPA 7470A<br>EPA 6010B<br>EPA 6010B                                | SLOQ           0.01           0.1           Grab           SLOQ           71.8           59.6           Grab           SLOQ           0.0008   | 07/29/10 14:30<br>07/30/10 17:10<br>07/29/10 8:00<br><u>Analysis Start</u><br>07/30/10 8:30<br>07/30/10 15:42<br>07/29/10 14:30<br><u>Analysis Start</u><br>07/30/10 12:50<br>08/02/10 8:30 | 07/30/10<br>07/30/10<br>07/30/10<br><u>Analysis End</u><br>07/31/10<br>07/31/10<br>07/30/10<br><u>Analysis End</u><br>08/03/10<br>08/02/10                         | NFM-SA<br>IC-SA<br>NFM-SA<br>MFM-SA<br>RMD-CV<br>HDP-CV<br>NFM-SA<br><u>Analyst *</u><br>KW-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV |
| SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: Air Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Sodium<br>Chloride<br>Percent Moisture<br>SAMPLE: TCLP Leachate of A<br>SAMPLED BY: SG<br><u>Test</u><br>Mercury - TCLP extracted<br>Barium - TCLP extracted                             | Sample<br><u>Result</u><br>16.1 %<br>< 0.1 %<br>10.33@21.0°C<br>L:<br>Sample<br><u>Result</u><br>1280 mg/Kg-dry<br>173 mg/Kg-dry<br>16.1 %<br>Air Cuttings<br>L:<br>Sample<br><u>Result</u><br>< 0.0008 mg/L<br>< 0.500 mg/L                                    | Time: 07/28/2010 15:00<br><u>Method</u><br>EPA 9095A<br>EPA 9045C<br>ab ID: 10074528-001C<br>Time: 07/28/2010 15:00<br><u>Method</u><br>EPA 6010B<br>EPA 300.0<br>SM2540G<br>ab ID: 10074528-001E<br>Time: 07/30/2010 7:50<br><u>Method</u><br>EPA 7470A<br>EPA 6010B   | SLOQ           0.01           0.1           Grab           SLOQ           71.8           59.6           Grab           SLOQ           0.0008           0.500           10.00                 | 07/29/10 14:30<br>07/30/10 17:10<br>07/29/10 8:00<br><u>Analysis Start</u><br>07/30/10 8:30<br>07/30/10 15:42<br>07/29/10 14:30<br><u>Analysis Start</u><br>07/30/10 12:50<br>08/02/10 8:30 | 07/30/10<br>07/30/10<br>07/30/10<br><u>Analysis End</u><br>07/31/10<br>07/31/10<br>07/30/10<br><u>Analysis End</u><br>08/03/10<br>08/02/10<br>08/02/10             | NFM-SA<br>IC-SA<br>NFM-SA<br>MD-CV<br>HDP-CV<br>NFM-SA<br><u>Analyst *</u><br>KW-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV            |
| SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: Air Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Sodium<br>Chloride<br>Percent Moisture<br>SAMPLE: TCLP Leachate of A<br>SAMPLED BY: SG<br><u>Test</u><br>Mercury - TCLP extracted<br>Arsenic - TCLP extracted<br>Barium - TCLP extracted | Sample<br><u>Result</u> 16.1 % < 0.1 % 10.33@21.0°C<br>L: Sample<br><u>Result</u> 1280 mg/Kg-dry 173 mg/Kg-dry 173 mg/Kg-dry 16.1 %<br>Air Cuttings L: Sample<br><u>Result</u> < 0.0008 mg/L < 0.500 mg/L < 0.500 mg/L < 0.100 mg/L < 0.100 mg/L < 0.100 mg/L < | Time: 07/28/2010 15:00<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>ab ID: 10074528-001C<br>Time: 07/28/2010 15:00<br><u>Method</u><br>EPA 6010B<br>EPA 300.0<br>SM2540G<br>ab ID: 10074528-001E<br>Time: 07/30/2010 7:50<br><u>Method</u><br>EPA 7470A<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B | SLOQ           0.01           0.1           Grab           SLOQ           71.8           59.6           Grab           SLOQ           0.0008           0.500           10.00           0.100 | 07/29/10 14:30<br>07/30/10 17:10<br>07/29/10 8:00<br><u>Analysis Start</u><br>07/30/10 15:42<br>07/29/10 14:30<br><u>Analysis Start</u><br>07/30/10 12:50<br>08/02/10 8:30<br>08/02/10 8:30 | 07/30/10<br>07/30/10<br>07/30/10<br><u>Analysis End</u><br>07/31/10<br>07/31/10<br>07/30/10<br><u>Analysis End</u><br>08/03/10<br>08/02/10<br>08/02/10<br>08/02/10 | NFM-SA<br>IC-SA<br>NFM-SA<br>MFM-SA<br>MD-CV<br>HDP-CV<br>NFM-SA<br><u>Analyst *</u><br>KW-CV<br>RMD-CV<br>RMD-CV            |

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.

Carrie M. Davis DATE: 8/4/2010

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

MANAGER

| LAB ID: 08<br>LAB ID: 39 |                                     | 2566 Penns<br>Sayre, I       | <b>Division</b><br>sylvania Ave.<br>PA 18840 | C.             |                      | Work ( | Order: 100           | )74528           |
|--------------------------|-------------------------------------|------------------------------|--|----------------|----------------------|--------|----------------------|------------------|
|                          |                                     | Phone: (570<br>Fax: (570     | )) 888-0169<br>)) 888-0717                   |                |                      |        |                      |                  |
| SEND DATA                | A TO:                               |                              |  |                |                      |        |                      |                  |
| NAME:                    | Steve Gridley                       |                              |  | W              | O#:                  | 10074  | 528                  |                  |
| COMPANY:<br>ADDRESS:     | <b>.</b> ,                          | ъ.                           |  | PA             | GE:                  | 2 of 2 |                      |                  |
|                          | Horseheads, NY 14845                |                              |  | PC             | D#:                  | AF763  | 17                   |                  |
| PHONE:<br>FAX:           | (607) 562-4000<br>(607) 562-4001    | TEST F                       | REPORT                                       | P٧             | VS ID#               |        |                      |                  |
| We                       |                                     |                              |  |                |                      |        |                      |                  |
| RECEIVED                 | FOR LAB BY: DLM2                    | DATE: 07                     | /29/2010 9:32                                |                |                      |        | Р                    | age 2 of 2       |
|                          | TCLP extracted                      | < 0.100 mg/L                 | EPA 6010B                                    | 0.100          | 08/02/10             |        | 08/02/10             | RMD-CV           |
|                          | n - TCLP extracted<br>CLP extracted | < 0.500 mg/L<br>< 0.100 mg/L | EPA 6010B<br>EPA 6010B                       | 0.500<br>0.100 | 08/02/10             |        | 08/02/10             | RMD-CV           |
|                          | CLP extracted                       | < 0.100 mg/L<br>60.4 mg/L    | EPA 6010B                                    | 1.80           | 08/02/10<br>08/02/10 |        | 08/02/10<br>08/02/10 | RMD-CV<br>RMD-CV |

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

|   | 00380<br>00401  | Easte<br>2566 Per<br>Sayre<br>Phone: (S  | <b>x Analytics, In<br/>rn Division</b><br>nnsylvania Ave.<br>e, PA 18840<br>570) 888-0169  | IC.  | Work  | Order: 100  | 81716   |
|---|---|--|--|--|---|---|---|
|   |   | Fax: (   | 570) 888-0717  |  |   |   |   |
| SEND DATA   | TO:   |  |  |  |   |   |   |
| NAME:   | Steve Gridley   |  |  | W  | O#: 1008  | 31716   |   |
| COMPANY:  | -   | Inc.   |  |  |   | 4   |   |
| ADDRESS:  | 337 Daniel Zenker Dr  |  |  | PA   | AGE: 1 of   |   |   |
|   | Horseheads, NY 14845  | 5  |  | P  | D#: AF77  | 7446  |   |
|   |   |  |  | P\   | NS ID#  |   |   |
| PHONE:  | (607) 562-4000  | TES  | <b>F REPORT</b>  |  |   |   |   |
| FAX:  | (607) 562-4001  |  |  |  |   |   |   |
|   |   |  |  |  |   |   |   |
|   | FOR LAB BY: DLM2  |  | 08/10/2010 15:33   |  |   | D   | age 1 of 1  |
|   |   |  | 00/10/2010 13:33   |  |   | 1   |   |
| SAMPLE: In  | v. Cuttings   |  | Lab ID: 10081716-001A  | Grab   |   |   |   |
| ~   |   | Sample   |  |  |   |   |   |
| SAMPLE  | ED BY: SG   | Sample   | e Time: 08/10/2010 12:10   | 8100   |   |   |   |
| SAMPLI<br><u>Test</u>   | -D BY: SG   | <u>Result</u>  | Method   | <u>SLOQ</u>  | Analysis Start  | Analysis End  | <u>Analyst *</u>  |
| Test  | ED BY: SG<br>roleum Hydrocarbons  |  |  | <u>SLOQ</u>  | <u>Analysis Start</u><br>08/12/10 11:10   | <u>Analysis End</u><br>08/12/10   | <u>Analyst *</u>  |
| <u>Test</u><br>Total Pet  |   | <u>Result</u><br>149000 mg/Kg  | Method   | <u>SLOQ</u>  |   |   | <u>Analyst *</u>  |
| <u>Test</u><br>Total Pet<br>Sample  | roleum Hydrocarbons<br>e Note: Analysis performed by  | <u>Result</u><br>149000 mg/Kg<br>Microbac-Erie   | Method   | <u>SLOQ</u><br>Grab  |   |   | <u>Analyst *</u>  |
| <u>Test</u><br>Total Pet<br>Sample<br>SAMPLE: In  | roleum Hydrocarbons<br>e Note: Analysis performed by  | <u>Result</u><br>149000 mg/Kg<br>Microbac-Erie   | <u>Method</u><br>EPA 9071  | Grab   |   |   | <u>Analyst *</u>  |
| <u>Test</u><br>Total Pet<br>Sample<br>SAMPLE: In<br>SAMPLE  | roleum Hydrocarbons<br>e Note: Analysis performed by<br><b>v. Cuttings</b>  | <u>Result</u><br>149000 mg/Kg<br>Microbac-Erie<br>Sample   | Method<br>EPA 9071<br>Lab ID: 10081716-001B<br>Time: 08/10/2010 12:10  |  | 08/12/10 11:10  | 08/12/10  |   |
| <u>Test</u><br>Total Pet<br>Sample<br>SAMPLE: In<br>SAMPLE<br><u>Test</u>   | roleum Hydrocarbons<br>e Note: Analysis performed by<br><b>v. Cuttings</b>  | <u>Result</u><br>149000 mg/Kg<br>Microbac-Erie<br>Sample<br><u>Result</u>  | <u>Method</u><br>EPA 9071<br>Lab ID: 10081716-001B<br>Time: 08/10/2010 12:10<br><u>Method</u>  | Grab<br><u>SLOQ</u>  | 08/12/10 11:10  | 08/12/10  | Analyst *   |
| <u>Test</u><br>Total Pet<br>Sample<br>SAMPLE: In<br>SAMPLE<br><u>Test</u><br>Moisture   | roleum Hydrocarbons<br>e Note: Analysis performed by<br><b>v. Cuttings</b><br>ED BY: SG   | <u>Result</u><br>149000 mg/Kg<br>Microbac-Erie<br>Sample<br><u>Result</u><br>29.5 %  | <u>Method</u><br>EPA 9071<br>Lab ID: 10081716-001B<br>Time: 08/10/2010 12:10<br><u>Method</u><br>Moisture Calc.  | Grab   | 08/12/10 11:10<br>Analysis Start<br>08/12/10 8:45   | 08/12/10<br>Analysis End<br>08/13/10  | <u>Analyst *</u><br>MED-SA  |
| <u>Test</u><br>Total Pet<br>Sample<br>SAMPLE: In<br>SAMPLE<br><u>Test</u>   | roleum Hydrocarbons<br>e Note: Analysis performed by<br><b>v. Cuttings</b><br>ED BY: SG   | <u>Result</u><br>149000 mg/Kg<br>Microbac-Erie<br>Sample<br><u>Result</u>  | <u>Method</u><br>EPA 9071<br>Lab ID: 10081716-001B<br>Time: 08/10/2010 12:10<br><u>Method</u>  | Grab<br><u>SLOQ</u><br>0.01  | 08/12/10 11:10  | 08/12/10  | Analyst *   |
| Test<br>Total Pet<br>Sample<br>SAMPLE: In<br>SAMPLE<br><u>Test</u><br>Moisture<br>Free Liqu<br>pH   | roleum Hydrocarbons<br>e Note: Analysis performed by<br><b>v. Cuttings</b><br>ED BY: SG<br>id   | <u>Result</u><br>149000 mg/Kg<br>Microbac-Erie<br>Sample<br><u>Result</u><br>29.5 %<br>< 0.1 %<br>9.45@21.5°C              | <u>Method</u><br>EPA 9071<br>Lab ID: 10081716-001B<br>Time: 08/10/2010 12:10<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C  | Grab<br><u>SLOQ</u><br>0.01<br>0.1   | 08/12/10 11:10<br>Analysis Start<br>08/12/10 8:45<br>08/12/10 15:00   | 08/12/10<br>Analysis End<br>08/13/10<br>08/12/10  | Analyst *<br>MED-SA<br>RHN-SA   |
| Test<br>Total Pet<br>Sample<br>SAMPLE: In<br>SAMPLE: In<br>SAMPLE: In<br>Free Liqu<br>pH  | roleum Hydrocarbons<br>e Note: Analysis performed by<br><b>v. Cuttings</b><br>ED BY: SG<br>id<br><b>CLP Leachate of Inv. Cuttin</b>   | <u>Result</u><br>149000 mg/Kg<br>Microbac-Erie<br>Sample<br><u>Result</u><br>29.5 %<br>< 0.1 %<br>9.45@21.5°C              | Method<br>EPA 9071<br>Lab ID: 10081716-001B<br>Time: 08/10/2010 12:10<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>Lab ID: 10081716-001D  | Grab<br><u>SLOQ</u><br>0.01  | 08/12/10 11:10<br>Analysis Start<br>08/12/10 8:45<br>08/12/10 15:00   | 08/12/10<br>Analysis End<br>08/13/10<br>08/12/10  | Analyst *<br>MED-SA<br>RHN-SA   |
| Test<br>Total Pet<br>Sample<br>SAMPLE: In<br>SAMPLE: In<br>SAMPLE: In<br>Free Liqu<br>pH  | roleum Hydrocarbons<br>e Note: Analysis performed by<br><b>v. Cuttings</b><br>ED BY: SG<br>id   | <u>Result</u><br>149000 mg/Kg<br>Microbac-Erie<br>Sample<br><u>Result</u><br>29.5 %<br>< 0.1 %<br>9.45@21.5°C              | Method<br>EPA 9071           Lab ID: 10081716-001B           Time: 08/10/2010 12:10           Method<br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C           Lab ID: 10081716-001D           Time: 08/10/2010 12:10  | Grab<br><u>SLOQ</u><br>0.01<br>0.1   | 08/12/10 11:10 Analysis Start 08/12/10 8:45 08/12/10 15:00 08/12/10 15:42   | 08/12/10<br>Analysis End<br>08/13/10<br>08/12/10<br>08/12/10  | Analyst *<br>MED-SA<br>RHN-SA<br>MED-SA   |
| Test<br>Total Pet<br>Sample<br>SAMPLE: In<br>SAMPLE: In<br>Moisture<br>Free Liqu<br>pH<br>SAMPLE: TO<br>SAMPLE: TO  | roleum Hydrocarbons<br>e Note: Analysis performed by<br><b>v. Cuttings</b><br>ED BY: SG<br>id<br><b>CLP Leachate of Inv. Cuttin</b><br>ED BY: SG  | Result<br>149000 mg/Kg<br>Microbac-Erie<br>Sample<br>Result<br>29.5 %<br>< 0.1 %<br>9.45@21.5°C<br>ngs<br>Sample<br>Result | Method<br>EPA 9071           Lab ID: 10081716-001B           Time: 08/10/2010 12:10           Method<br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C           Lab ID: 10081716-001D           Time: 08/10/2010 12:10           Method   | Grab<br><u>SLOQ</u><br>0.01<br>0.1<br>Grab<br><u>SLOQ</u>  | 08/12/10 11:10 Analysis Start 08/12/10 8:45 08/12/10 15:00 08/12/10 15:42 Analysis Start  | 08/12/10<br><u>Analysis End</u><br>08/13/10<br>08/12/10<br>08/12/10<br><u>Analysis End</u>  | <u>Analyst *</u><br>MED-SA<br>RHN-SA<br>MED-SA<br><u>Analyst *</u>  |
| Test<br>Total Pet<br>Sample<br>SAMPLE: In<br>SAMPLE: In<br>SAMPLE: TO<br>SAMPLE: TO<br>SAMPLE: TO<br>SAMPLE: TO   | roleum Hydrocarbons<br>e Note: Analysis performed by<br><b>v. Cuttings</b><br>ED BY: SG<br>id<br><b>CLP Leachate of Inv. Cuttin</b><br>ED BY: SG<br>TCLP extracted  | Result           149000 mg/Kg           Microbac-Erie           Sample           Result           29.5 %           < 0.1 % | Method<br>EPA 9071           Lab ID: 10081716-001B           Time: 08/10/2010 12:10           Method<br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C           Lab ID: 10081716-001D           Time: 08/10/2010 12:10           Method<br>EPA 7470A  | Grab<br><u>SLOQ</u><br>0.01<br>0.1<br>Grab<br><u>SLOQ</u><br>0.0008  | Analysis Start           08/12/10 11:10           Analysis Start           08/12/10 8:45           08/12/10 15:00           08/12/10 15:42           Analysis Start           08/12/10 8:30   | 08/12/10<br><u>Analysis End</u><br>08/13/10<br>08/12/10<br>08/12/10<br><u>Analysis End</u><br>08/13/10  | Analyst *<br>MED-SA<br>RHN-SA<br>MED-SA<br><u>Analyst *</u><br>KW-CV  |
| Test<br>Total Pet<br>Sample<br>SAMPLE: In<br>SAMPLE: In<br>SAMPLE<br>Free Liqu<br>pH<br>SAMPLE: TO<br>SAMPLE: TO<br>SAMPLE: TO<br>SAMPLE: TO<br>SAMPLE: TO<br>SAMPLE: TO  | roleum Hydrocarbons<br>e Note: Analysis performed by<br>v. Cuttings<br>ED BY: SG<br>id<br>CLP Leachate of Inv. Cuttin<br>ED BY: SG<br>TCLP extracted<br>TCLP extracted  | Result           149000 mg/Kg           Microbac-Erie           Sample           Result           29.5 %           < 0.1 % | Method<br>EPA 9071           Lab ID: 10081716-001B           Time: 08/10/2010 12:10           Method<br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C           Lab ID: 10081716-001D           Time: 08/10/2010 12:10           Method<br>EPA 7470A<br>EPA 6010B   | Grab<br><u>SLOQ</u><br>0.01<br>0.1<br>Grab<br><u>SLOQ</u><br>0.0008<br>0.500   | Analysis Start           08/12/10 11:10           Analysis Start           08/12/10 8:45           08/12/10 15:00           08/12/10 15:42           Analysis Start           08/12/10 8:30           08/12/10 7:20   | 08/12/10<br><u>Analysis End</u><br>08/13/10<br>08/12/10<br><u>Analysis End</u><br>08/13/10<br>08/13/10  | Analyst *<br>MED-SA<br>RHN-SA<br>MED-SA<br><u>Analyst *</u><br>KW-CV<br>RMD-CV  |
| Test<br>Total Pet<br>Sample<br>SAMPLE: In<br>SAMPLE: In<br>SAMPLE<br>Test<br>Moisture<br>Free Liqu<br>pH<br>SAMPLE: TC<br>SAMPLE: TC<br>SAMPLE<br>Test<br>Mercury -<br>Arsenic -<br>Barium -  | roleum Hydrocarbons<br>e Note: Analysis performed by<br>v. Cuttings<br>ED BY: SG<br>id<br>CLP Leachate of Inv. Cuttin<br>ED BY: SG<br>TCLP extracted<br>TCLP extracted<br>TCLP extracted  | Result           149000 mg/Kg           Microbac-Erie           Sample           Result           29.5 %           < 0.1 % | Method<br>EPA 9071           Lab ID: 10081716-001B           Time: 08/10/2010 12:10           Method<br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C           Lab ID: 10081716-001D           Time: 08/10/2010 12:10           Method<br>EPA 7470A<br>EPA 6010B           EPA 6010B   | Grab<br><u>SLOQ</u><br>0.01<br>0.1<br>Grab<br><u>SLOQ</u><br>0.0008<br>0.500<br>10.00  | 08/12/10 11:10<br><u>Analysis Start</u> 08/12/10 8:45 08/12/10 15:00 08/12/10 15:42<br><u>Analysis Start</u> 08/12/10 8:30 08/13/10 7:20 08/13/10 7:20  | 08/12/10<br><u>Analysis End</u><br>08/13/10<br>08/12/10<br>08/12/10<br><u>Analysis End</u><br>08/13/10<br>08/13/10<br>08/13/10                          | Analyst *<br>MED-SA<br>RHN-SA<br>MED-SA<br>MED-SA<br>MED-CV<br>RMD-CV<br>RMD-CV   |
| Test<br>Total Pet<br>Sample<br>SAMPLE: In<br>SAMPLE: In<br>SAMPLE: In<br>Free Liqu<br>pH<br>SAMPLE: TO<br>SAMPLE: T   | roleum Hydrocarbons<br>e Note: Analysis performed by<br>v. Cuttings<br>ED BY: SG<br>id<br>CLP Leachate of Inv. Cuttin<br>ED BY: SG<br>TCLP extracted<br>TCLP extracted<br>TCLP extracted<br>ICLP extracted<br>ICLP extracted  | Result           149000 mg/Kg           Microbac-Erie           Sample           Result           29.5 %           < 0.1 % | Method<br>EPA 9071           Lab ID: 10081716-001B           Time: 08/10/2010 12:10           Method<br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C           Lab ID: 10081716-001D           Time: 08/10/2010 12:10           Method<br>EPA 7470A<br>EPA 6010B           EPA 6010B           EPA 6010B   | Grab<br><u>SLOQ</u><br>0.01<br>0.1<br>Grab<br><u>SLOQ</u><br>0.0008<br>0.500<br>10.00<br>0.100                                     | Analysis Start           08/12/10 11:10           Analysis Start           08/12/10 8:45           08/12/10 15:00           08/12/10 15:42           Analysis Start           08/12/10 8:30           08/12/10 8:30           08/13/10 7:20           08/13/10 7:20   | 08/12/10<br><u>Analysis End</u><br>08/13/10<br>08/12/10<br>08/12/10<br>08/13/10<br>08/13/10<br>08/13/10<br>08/13/10                                     | Analyst *<br>MED-SA<br>RHN-SA<br>MED-SA<br>MED-SA<br>MED-SA<br>KW-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV                                |
| Test<br>Total Pet<br>Sample<br>SAMPLE: In<br>SAMPLE: In<br>SAMPLE: I<br>Free Liqu<br>pH<br>SAMPLE: T<br>SAMPLE: T | roleum Hydrocarbons<br>e Note: Analysis performed by<br>v. Cuttings<br>ED BY: SG<br>id<br>CLP Leachate of Inv. Cuttin<br>ED BY: SG<br>TCLP extracted<br>TCLP extracted<br>TCLP extracted<br>ICLP extracted<br>n - TCLP extracted<br>n - TCLP extracted  | Result           149000 mg/Kg           Microbac-Erie           Sample           Result           29.5 %           < 0.1 % | Method<br>EPA 9071           Lab ID: 10081716-001B           Time: 08/10/2010 12:10           Method<br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C           Lab ID: 10081716-001D           Time: 08/10/2010 12:10           Method<br>EPA 7470A<br>EPA 6010B           EPA 6010B           EPA 6010B           EPA 6010B           EPA 6010B   | Grab<br><u>SLOQ</u><br>0.01<br>0.1<br>Grab<br><u>SLOQ</u><br>0.0008<br>0.500<br>10.00<br>0.100<br>0.500                            | Analysis Start           08/12/10 11:10           Analysis Start           08/12/10 8:45           08/12/10 15:00           08/12/10 15:42           Analysis Start           08/12/10 8:30           08/12/10 8:30           08/13/10 7:20           08/13/10 7:20           08/13/10 7:20           08/13/10 7:20   | 08/12/10<br><u>Analysis End</u><br>08/13/10<br>08/12/10<br>08/12/10<br>08/13/10<br>08/13/10<br>08/13/10<br>08/13/10                                     | Analyst *<br>MED-SA<br>RHN-SA<br>MED-SA<br>MED-SA<br>KW-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV                                |
| Test<br>Total Pet<br>Sample<br>SAMPLE: In<br>SAMPLE: In<br>SAMPLE: TO<br>Free Liqu<br>pH<br>SAMPLE: TO<br>SAMPLE: TO<br>SAMPLE: TO<br>SAMPLE: TO<br>SAMPLE: TO<br>Cadmium<br>Chromium<br>Copper -   | roleum Hydrocarbons<br>a Note: Analysis performed by<br>v. Cuttings<br>ED BY: SG<br>id<br>CLP Leachate of Inv. Cuttin<br>ED BY: SG<br>TCLP extracted<br>TCLP extracted<br>TCLP extracted<br>i - TCLP extracted<br>i - TCLP extracted<br>i - TCLP extracted<br>TCLP extracted<br>i - TCLP extracted<br>TCLP extracted  | Result           149000 mg/Kg           Microbac-Erie           Sample           Result           29.5 %           < 0.1 % | Method<br>EPA 9071           Lab ID: 10081716-001B           Time: 08/10/2010 12:10           Method<br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C           Lab ID: 10081716-001D           Time: 08/10/2010 12:10           Method<br>EPA 7470A<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B   | Grab<br><u>SLOQ</u><br>0.01<br>0.1<br>Grab<br><u>SLOQ</u><br>0.0008<br>0.500<br>10.00<br>0.100<br>0.500<br>0.100                   | Analysis Start           08/12/10 11:10           Analysis Start           08/12/10 8:45           08/12/10 15:00           08/12/10 15:42           Analysis Start           08/12/10 8:30           08/13/10 7:20           08/13/10 7:20           08/13/10 7:20           08/13/10 7:20           08/13/10 7:20           08/13/10 7:20   | 08/12/10<br><u>Analysis End</u><br>08/13/10<br>08/12/10<br>08/12/10<br><u>Analysis End</u><br>08/13/10<br>08/13/10<br>08/13/10<br>08/13/10<br>08/13/10  | Analyst *<br>MED-SA<br>RHN-SA<br>MED-SA<br>MED-SA<br>MED-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV                     |
| Test<br>Total Pet<br>Sample<br>SAMPLE: In<br>SAMPLE: In<br>SAMPLE<br>Free Liqu<br>pH<br>SAMPLE: TC<br>SAMPLE: TC<br>SAMPLE: TC<br>SAMPLE: Construct<br>Mercury -<br>Arsenic -<br>Barium -<br>Cadmium<br>Chromiun<br>Copper -<br>Lead - TC   | roleum Hydrocarbons<br>e Note: Analysis performed by<br>v. Cuttings<br>ED BY: SG<br>id<br>CLP Leachate of Inv. Cuttin<br>ED BY: SG<br>TCLP extracted<br>TCLP extracted<br>TCLP extracted<br>ICLP extracted<br>n - TCLP extracted<br>n - TCLP extracted  | Result           149000 mg/Kg           Microbac-Erie           Sample           Result           29.5 %           < 0.1 % | Method<br>EPA 9071           Lab ID: 10081716-001B           Time: 08/10/2010 12:10           Method<br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C           Lab ID: 10081716-001D           Time: 08/10/2010 12:10           Method<br>EPA 7470A<br>EPA 6010B           EPA 6010B           EPA 6010B           EPA 6010B           EPA 6010B   | Grab<br><u>SLOQ</u><br>0.01<br>0.1<br>Grab<br><u>SLOQ</u><br>0.0008<br>0.500<br>10.00<br>0.100<br>0.500                            | Analysis Start           08/12/10 11:10           Analysis Start           08/12/10 8:45           08/12/10 15:00           08/12/10 15:42           Analysis Start           08/12/10 8:30           08/12/10 8:30           08/13/10 7:20           08/13/10 7:20           08/13/10 7:20           08/13/10 7:20   | 08/12/10<br><u>Analysis End</u><br>08/13/10<br>08/12/10<br>08/12/10<br>08/13/10<br>08/13/10<br>08/13/10<br>08/13/10                                     | Analyst *<br>MED-SA<br>RHN-SA<br>MED-SA<br>MED-SA<br>MED-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV           |
| Test<br>Total Pet<br>Sample<br>SAMPLE: In<br>SAMPLE: In<br>SAMPLE<br>Free Liqu<br>pH<br>SAMPLE: TC<br>SAMPLE: TC<br>SAMPLE: TC<br>SAMPLE: TC<br>SAMPLE: TC<br>Cadmium<br>Chromium<br>Copper -<br>Lead - TC<br>Nickel - T  | roleum Hydrocarbons<br>e Note: Analysis performed by<br>v. Cuttings<br>ED BY: SG<br>id<br>CLP Leachate of Inv. Cuttin<br>ED BY: SG<br>TCLP extracted<br>TCLP extracted<br>TCLP extracted<br>i - TCLP extracted<br>i - TCLP extracted<br>i - TCLP extracted<br>i - TCLP extracted<br>CLP extracted<br>CLP extracted<br>CLP extracted<br>CLP extracted<br>CLP extracted<br>CLP extracted<br>CLP extracted<br>CLP extracted<br>CLP extracted | Result           149000 mg/Kg           Microbac-Erie           Sample           Result           29.5 %           < 0.1 % | Method<br>EPA 9071           Lab ID: 10081716-001B           Time: 08/10/2010 12:10           Method<br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C           Lab ID: 10081716-001D           Time: 08/10/2010 12:10           Method<br>EPA 7470A<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B   | Grab<br><u>SLOQ</u><br>0.01<br>0.1<br>Grab<br><u>SLOQ</u><br>0.0008<br>0.500<br>10.00<br>0.100<br>0.500<br>0.100<br>0.500          | Analysis Start           08/12/10 11:10           Analysis Start           08/12/10 8:45           08/12/10 15:00           08/12/10 15:42           Analysis Start           08/12/10 15:42           Analysis Start           08/12/10 8:30           08/13/10 7:20           08/13/10 7:20           08/13/10 7:20           08/13/10 7:20           08/13/10 7:20           08/13/10 7:20           08/13/10 7:20                         | 08/12/10<br><u>Analysis End</u><br>08/13/10<br>08/12/10<br>08/12/10<br><u>Analysis End</u><br>08/13/10<br>08/13/10<br>08/13/10<br>08/13/10<br>08/13/10  | Analyst *<br>MED-SA<br>RHN-SA<br>MED-SA<br>MED-SA<br>MED-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV |
| Test<br>Total Pet<br>Sample<br>SAMPLE: In<br>SAMPLE: In<br>SAMPLE: TO<br>Free Liqu<br>pH<br>SAMPLE: TO<br>SAMPLE: TO<br>SAMPLE: TO<br>SAMPLE: TO<br>Cadmium<br>Chromium<br>Copper -<br>Lead - TO<br>Nickel - T<br>Selenium  | roleum Hydrocarbons<br>e Note: Analysis performed by<br>v. Cuttings<br>ED BY: SG<br>id<br>CLP Leachate of Inv. Cuttin<br>ED BY: SG<br>TCLP extracted<br>TCLP extracted<br>TCLP extracted<br>- TCLP extracted<br>n - TCLP extracted<br>n - TCLP extracted<br>CLP extracted<br>CLP extracted<br>CLP extracted   | Result           149000 mg/Kg           Microbac-Erie           Sample           Result           29.5 %           < 0.1 % | Method<br>EPA 9071           Lab ID: 10081716-001B           Time: 08/10/2010 12:10           Method<br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C           Lab ID: 10081716-001D           Time: 08/10/2010 12:10           Method<br>EPA 7470A<br>EPA 6010B           EPA 6010B | Grab<br><u>SLOQ</u><br>0.01<br>0.1<br>Grab<br><u>SLOQ</u><br>0.0008<br>0.500<br>10.00<br>0.100<br>0.500<br>0.100<br>0.500<br>0.100 | Analysis Start           08/12/10 11:10           Analysis Start           08/12/10 8:45           08/12/10 15:00           08/12/10 15:42           Analysis Start           08/12/10 15:42           Analysis Start           08/12/10 8:30           08/13/10 7:20           08/13/10 7:20           08/13/10 7:20           08/13/10 7:20           08/13/10 7:20           08/13/10 7:20           08/13/10 7:20           08/13/10 7:20 | 08/12/10<br><u>Analysis End</u><br>08/13/10<br>08/12/10<br>08/12/10<br>08/13/10<br>08/13/10<br>08/13/10<br>08/13/10<br>08/13/10<br>08/13/10<br>08/13/10 | Analyst *<br>MED-SA<br>RHN-SA<br>MED-SA<br>MED-SA<br>MED-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV           |

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

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

| LAB ID: 08-0<br>LAB ID: 39-0         |                                   | Easte<br>2566 Pe<br>Sayr<br>Phone: ( | k Analytics, In<br>ern Division<br>ennsylvania Ave.<br>e, PA 18840<br>(570) 888-0169<br>(570) 888-0717 | IC.          | Work                   | Order: 100           | 81719            |
|--------------------------------------|-----------------------------------|--------------------------------------|--|--------------|------------------------|----------------------|------------------|
| SEND DATA                            | TO                                |                                      |  |              |                        |                      |                  |
| NAME:                                | Steve Gridley                     |                                      |  | \ <b>\</b> / | O#: 1008               | 1719                 |                  |
| COMPANY:                             | Talisman Energy USA, Ir           | IC.                                  |  |              |                        |                      |                  |
| ADDRESS:                             | 337 Daniel Zenker Dr              |                                      |  | PA           | AGE: 1 of <sup>r</sup> | 1                    |                  |
|                                      | Horseheads, NY 14845              |                                      |  | P            | D#: AF77               | 446                  |                  |
|                                      |                                   |                                      |  |              |                        |                      |                  |
| PHONE:<br>FAX:                       | (607) 562-4000<br>(607) 562-4001  | TES                                  | T REPORT   | PV           | NS ID#                 |                      |                  |
|                                      |                                   |                                      |  |              |                        |                      |                  |
|                                      | FOR LAB BY: DLM2                  |                                      | 08/10/2010 15:33   |              |                        | D                    | age 1 of 1       |
| RECEIVED F                           |                                   |                                      | 08/10/2010 15:55   | _            |                        | r                    | age 1 01 1       |
|                                      | v. Cuttings & Biomatrix           | Lab ID: 10081719-001A                |  | Grab         |                        |                      |                  |
| SAMPLE                               | ED BY: SG                         | Samp                                 | le Time: 08/10/2010 12:15  | SLOQ         |                        |                      |                  |
| Test                                 |                                   | Result                               | Method   | OLOQ         | Analysis Start         | Analysis End         | Analyst *        |
| Total Petr                           | oleum Hydrocarbons                | 169000 mg/Kg EPA 9071                |  |              | 08/12/10 11:10         | 08/12/10             |                  |
| Sample                               | Note: Analysis performed by M     | licrobac-Erie                        |  |              |                        |                      |                  |
| SAMPLE: Inv                          | v. Cuttings & Biomatrix           |                                      | Lab ID: 10081719-001B  | Grab         |                        |                      |                  |
| SAMPLE                               | D BY: SG                          | Samp                                 | le Time: 08/10/2010 12:15  |              |                        |                      |                  |
| Test                                 |                                   | Result                               | Method   | <u>sloq</u>  | Analysis Start         | Analysis End         | Analvst *        |
| Moisture                             |                                   | 23.4 %                               | Moisture Calc.   | 0.01         | 08/12/10 8:45          | 08/13/10             | MED-SA           |
| Free Liqui                           | id                                | < 0.1 %                              | EPA 9095A  | 0.1          | 08/12/10 15:05         | 08/12/10             | RHN-SA           |
| pН                                   |                                   | 9.18@21.9°C                          | EPA 9045C  |              | 08/12/10 15:42         | 08/12/10             | MED-SA           |
| SAMPLE: TC                           | LP Leachate of Inv. Cutting       | us & Biomatrix                       | Lab ID: 10081719-001D  | Grab         |                        |                      |                  |
|                                      | DBY: SG                           | -                                    | le Time: 08/10/2010 12:15  |              |                        |                      |                  |
| Test                                 |                                   | Result                               | Method   | <u>SLOQ</u>  | Analysis Start         | Analysis End         | Analyst *        |
| <u>Test</u><br>Mercury -             | TCLP extracted                    | < 0.0008 mg/L                        | EPA 7470A  | 0.0008       | 08/12/10 8:30          | 08/13/10             | KW-CV            |
|                                      | TCLP extracted                    | < 0.500 mg/L                         | EPA 6010B  | 0.500        | 08/13/10 7:20          | 08/13/10             | RMD-CV           |
|                                      | CLP extracted                     | < 10.00 mg/L                         | EPA 6010B  | 10.00        | 08/13/10 7:20          | 08/13/10             | RMD-CV           |
|                                      | - TCLP extracted                  | < 0.100 mg/L                         | EPA 6010B  | 0.100        | 08/13/10 7:20          | 08/13/10             | RMD-CV           |
|                                      | - TCLP extracted                  | < 0.500 mg/L                         | EPA 6010B  | 0.500        | 08/13/10 7:20          | 08/13/10             | RMD-CV           |
|                                      | TCLP extracted                    | < 0.100 mg/L                         | EPA 6010B  | 0.100        | 08/13/10 7:20          | 08/13/10             | RMD-CV           |
| 000000                               | LP extracted                      | < 0.500 mg/L                         | EPA 6010B  | 0.500        | 08/13/10 7:20          | 08/13/10             | RMD-CV           |
|                                      |                                   |                                      | EPA 6010B  | 0.100        | 08/13/10 7:20          | 08/13/10             | RMD-CV           |
| Lead - TC                            | CLP extracted                     | < 0.100 mg/L                         |  |              |                        |                      |                  |
| Lead - TC<br>Nickel - TC             | CLP extracted<br>- TCLP extracted | < 0.100 mg/L<br>< 0.500 mg/L         | EPA 6010B  | 0.500        | 08/13/10 7:20          | 08/13/10             | RMD-CV           |
| Lead - TC<br>Nickel - TC<br>Selenium |                                   | -                                    |  |              |                        | 08/13/10<br>08/13/10 | RMD-CV<br>RMD-CV |

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.

DATE: 8/13/2010

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

Carrie M. Davis

MANAGER

| PA ID #: 08-<br>NY ID # 11 |                            | Easter<br>2566 Pen | Analytics, In<br>n Division<br>nsylvania Ave.<br>, PA 18840 | nc.         | Work           | Order: 100   | 82687            |
|----------------------------|----------------------------|--------------------|---|-------------|----------------|--------------|------------------|
|                            |                            | -                  | Phone: (570) 888-0169<br>Fax: (570) 888-0717                |             |                |              |                  |
| SEND DAT                   | A TO:                      |                    |   |             |                |              |                  |
| NAME:                      | Steve Gridley              |                    |   | W           | 'O#: 1008      | 32687        |                  |
| COMPANY:                   | 0,                         | , Inc.             |   | P           | AGE: 1 of      | <b>2</b>     |                  |
| ADDRESS:                   |                            |                    |   |             |                | 2            |                  |
|                            | Horseheads, NY 1484        | 10                 |   | P           | O#:            |              |                  |
| PHONE:                     | (607) 562-4000             | TEST               | REPORT  | P           | WS ID#         |              |                  |
| FAX:                       | (607) 562-4001             |                    |   |             |                |              |                  |
| Relog of 10                | 081719-001                 |                    |   |             |                |              |                  |
|                            | FOR LAB BY: DLM2           | DATE:              | 08/10/2010 15:33  |             |                | Р            | age 1 of 2       |
|                            |                            |                    |   |             |                |              | 8                |
|                            | CLP Leachate of Inv. Cut   | +                  | ab ID: 10082687-001B  | Grab        |                |              |                  |
| SAMPL                      | ED BY: SG                  | Sample             | Time: 08/17/2010 8:18                                       | SLOQ        |                |              |                  |
| Test                       |                            | Result             | Method  | 0200        | 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-Dich                   | lorobenzene                | < 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           |
| Hexachle                   | oroethane                  | < 0.10 mg/L        | EPA 8270C   | 0.10        | 08/18/10 15:52 | 08/18/10     | RHH-SA           |
| Nitroben                   | zene                       | < 0.10 mg/L        | EPA 8270C   | 0.10        | 08/18/10 15:52 | 08/18/10     | RHH-SA           |
| Hexachle                   | orobutadiene               | < 0.10 mg/L        | EPA 8270C   | 0.10        | 08/18/10 15:52 | 08/18/10     | RHH-SA           |
| 2,4,6-Tri                  | chlorophenol               | < 0.10 mg/L        | EPA 8270C   | 0.10        | 08/18/10 15:52 | 08/18/10     | RHH-SA           |
| 2,4,5-Tri                  | chlorophenol               | < 0.10 mg/L        | EPA 8270C   | 0.10        | 08/18/10 15:52 | 08/18/10     | RHH-SA           |
| Pentachl                   | lorophenol                 | < 0.50 mg/L        | EPA 8270C   | 0.50        | 08/18/10 15:52 | 08/18/10     | RHH-SA           |
| 2,4-Dinit                  | rotoluene                  | < 0.10 mg/L        | EPA 8270C   | 0.10        | 08/18/10 15:52 | 08/18/10     | RHH-SA           |
| Hexachle                   | orobenzene                 | < 0.10 mg/L        | EPA 8270C   | 0.10        | 08/18/10 15:52 | 08/18/10     | RHH-SA           |
| SAMPLE Z                   | HE Extract of Inv. Cutting | s & Biomatrix      | ab ID: 10082687-001C  | Grab        |                |              |                  |
|                            | ED BY: SG                  |                    | Time: 08/17/2010 8:15                                       | <u>SLOQ</u> |                |              |                  |
| Test                       |                            | <u>Result</u>      | Method  | _           | Analysis Start | Analysis End | <u>Analyst *</u> |
| Benzene                    | •                          | < 0.02 mg/L        | EPA 8260B   | 0.02        | 08/17/10 20:26 | 08/18/10     | RHH-SA           |
| 2-Butanc                   | one                        | < 0.20 mg/L        | EPA 8260B   | 0.20        | 08/17/10 20:26 | 08/18/10     | RHH-SA           |
| Carbon t                   | etrachloride               | < 0.02 mg/L        | EPA 8260B   | 0.02        | 08/17/10 20:26 | 08/18/10     | RHH-SA           |
| Chlorobe                   | enzene                     | < 0.02 mg/L        | EPA 8260B   | 0.02        | 08/17/10 20:26 | 08/18/10     | RHH-SA           |
| Chlorofo                   |                            | < 0.02 mg/L        | EPA 8260B   | 0.02        | 08/17/10 20:26 | 08/18/10     | RHH-SA           |
|                            | lorobenzene                | < 0.02 mg/L        | EPA 8260B   | 0.02        | 08/17/10 20:26 | 08/18/10     | RHH-SA           |
| 1,2-Dichl                  | loroethane                 | < 0.02 mg/L        | EPA 8260B   | 0.02        | 08/17/10 20:26 | 08/18/10     | RHH-SA           |
| 1,1-Dichl                  | loroethene                 | < 0.02 mg/L        | EPA 8260B   | 0.02        | 08/17/10 20:26 | 08/18/10     | RHH-SA           |
| Trichloro                  | ethene                     | < 0.02 mg/L        | EPA 8260B   | 0.02        | 08/17/10 20:26 | 08/18/10     | RHH-SA           |
|                            |                            |                    |   | 0.02        |                |              |                  |

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

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

MANAGER

Cami M. Davis

DATE:

8/19/2010

| PA ID #: 08-<br>NY ID # 112 |   | <b>Easterr</b><br>2566 Penn<br>Sayre,<br>Phone: (57 | Analytics, Inc<br>Division<br>sylvania Ave.<br>PA 18840<br>0) 888-0169<br>0) 888-0717 | <b>C.</b><br>Work Order: 10 |             |        | )82687     |
|-----------------------------|---|---|---|-----------------------------|-------------|--------|------------|
| SEND DATA                   | A TO:   |   |   |                             |             |        |            |
| NAME:                       | Steve Gridley                                   |   |   | WO#:                        | 10082687    |        |            |
| COMPANY:<br>ADDRESS:        | Talisman Energy USA, In<br>337 Daniel Zenker Dr | С.  |   | PAGE:                       | 2 of 2      |        |            |
| ABBRECO.                    | Horseheads, NY 14845                            |   |   | PO#:                        |             |        |            |
| PHONE:<br>FAX:              | (607) 562-4000<br>(607) 562-4001                | TEST  | REPORT  | PWS ID≉                     | 4           |        |            |
| Relog of 100                | ······································          |   |   |                             |             |        |            |
| -                           | FOR LAB BY: DLM2                                | DATE: 08  | 8/10/2010 15:33   |                             |             | Р      | age 2 of 2 |
| Vinyl chlo                  | pride   | < 0.02 mg/L   | EPA 8260B   | 0.02 08/17/                 | 10 20:26 08 | /18/10 | RHH-SA     |

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

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

MANAGER \_\_\_\_\_ DATE: \_\_\_\_\_ DATE: \_\_\_\_\_ DATE: \_\_\_\_\_

8/19/2010

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

2566 Pennsylvania Ave. Sayre, PA 18840

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

# 

| SEND DATA TO:<br>NAME: Steve Gridley<br>COMPANY: Talisman Energy USA, Ir<br>ADDRESS: 337 Daniel Zenker Dr<br>Horseheads, NY 14845 | ю.   |  | PA                   | O#: 1008<br>AGE: 1 of 2<br>D#:                     | 2689<br>2                        |                            |
|---|--|--|----------------------|--|----------------------------------|----------------------------|
| PHONE: (607) 562-4000<br>FAX: (607) 562-4001  | TEST RE  | EPORT                                  | ₽\<br>               | NS ID#   |                                  |                            |
| Relog of 10081716-001<br>RECEIVED FOR LAB BY: DLM2  | DATE: 08/1   | 10/2010 15:33                          |                      |  | Pa                               | age 1 of 2                 |
| SAMPLE: TCLP Leachate of Inv. Cutting<br>SAMPLED BY: SG   | 30   | D: 10082689-001B<br>e: 08/17/2010 8:15 | Grab<br>SLOQ         |  |                                  |                            |
| <u>Test</u><br>Pyridine   | <u>Result</u><br>< 0.10 mg/L                           | <u>Method</u><br>EPA 8270C             | 0.10                 | <u>Analysis Start</u><br>08/18/10 15:52            | <u>Analysis End</u><br>08/18/10  | RHH-SA                     |
| 1,4-Dichlorobenzene<br>o-Cresol   | < 0.10 mg/L<br>< 0.10 mg/L<br>< 0.10 mg/L <sup>S</sup> | EPA 8270C<br>EPA 8270C<br>EPA 8270C    | 0.10<br>0.10<br>0.10 | 08/18/10 15:52<br>08/18/10 15:52<br>08/18/10 15:52 | 08/18/10<br>08/18/10<br>08/18/10 | RHH-SA<br>RHH-SA           |
| p-Cresol/m-Cresol<br>Hexachloroethane<br>Nitrobenzene   | < 0.10 mg/L<br>< 0.10 mg/L<br>< 0.10 mg/L              | EPA 8270C<br>EPA 8270C<br>EPA 8270C    | 0.10<br>0.10<br>0.10 | 08/18/10 15:52<br>08/18/10 15:52                   | 08/18/10<br>08/18/10<br>08/18/10 | RHH-SA<br>RHH-SA<br>RHH-SA |
| Hexachlorobutadiene<br>2,4,6-Trichlorophenol  | < 0.10 mg/L<br>< 0.10 mg/L                             | EPA 8270C<br>EPA 8270C                 | 0.10<br>0.10         | 08/18/10 15:52<br>08/18/10 15:52                   | 08/18/10<br>08/18/10             | RHH-SA<br>RHH-SA           |
| 2,4,5-Trichlorophenol<br>Pentachlorophenol  | < 0.10 mg/L<br>< 0.50 mg/L                             | EPA 8270C<br>EPA 8270C                 | 0.10<br>0.50         | 08/18/10 15:52<br>08/18/10 15:52                   | 08/18/10<br>08/18/10             | RHH-SA<br>RHH-SA           |
| 2,4-Dinitrotoluene<br>Hexachlorobenzene   | < 0.10 mg/L<br>< 0.10 mg/L                             | EPA 8270C<br>EPA 8270C                 | 0.10<br>0.10         | 08/18/10 15:52<br>08/18/10 15:52                   | 08/18/10<br>08/18/10             | RHH-SA<br>RHH-SA           |
| SAMPLE: <b>ZHE Extract of Inv. Cuttings</b><br>SAMPLED BY: SG   |  | ): 10082689-001C<br>e: 08/17/2010 8:15 | Grab<br><u>SLOQ</u>  |  |                                  |                            |
| <u>Test</u><br>Benzene  | <u>Result</u><br>< 0.02 mg/L                           | <u>Method</u><br>EPA 8260B             | 0.02                 | <u>Analysis Start</u><br>08/17/10 20:26            | <u>Analysis End</u><br>08/18/10  | <u>Analyst *</u><br>RHH-SA |
| 2-Butanone<br>Carbon tetrachloride  | < 0.20 mg/L<br>< 0.02 mg/L                             | EPA 8260B<br>EPA 8260B                 | 0.20<br>0.02         | 08/17/10 20:26<br>08/17/10 20:26                   | 08/18/10<br>08/18/10             | RHH-SA<br>RHH-SA           |
| Chlorobenzene<br>Chloroform   | < 0.02 mg/L<br>< 0.02 mg/L                             | EPA 8260B<br>EPA 8260B                 | 0.02                 | 08/17/10 20:26<br>08/17/10 20:26                   | 08/18/10<br>08/18/10             | RHH-SA<br>RHH-SA           |
| 1,4-Dichlorobenzene<br>1,2-Dichloroethane   | < 0.02 mg/L<br>< 0.02 mg/L<br>< 0.02 mg/l              | EPA 8260B<br>EPA 8260B<br>EPA 8260B    | 0.02<br>0.02<br>0.02 | 08/17/10 20:26<br>08/17/10 20:26<br>08/17/10 20:26 | 08/18/10<br>08/18/10<br>08/18/10 | RHH-SA<br>RHH-SA           |
| 1,1-Dichloroethene<br>Trichloroethene<br>Tetrachloroethene  | < 0.02 mg/L<br>< 0.02 mg/L<br>< 0.02 mg/L              | EPA 8260B<br>EPA 8260B<br>EPA 8260B    | 0.02<br>0.02<br>0.02 | 08/17/10 20:26<br>08/17/10 20:26<br>08/17/10 20:26 | 08/18/10<br>08/18/10<br>08/18/10 | RHH-SA<br>RHH-SA<br>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

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MANAGER

| ani | M. | Davis |
|-----|----|-------|
| C   |    |       |

DATE:

8/19/2010

Work Order: 10082689

| PA ID #: 08-<br>NY ID # 112 |   | Easter<br>2566 Pen | Analytics, In<br>n Division<br>nsylvania Ave.<br>PA 18840 | IC.    | Work           | Order: 10 | 082689     |
|-----------------------------|---|--------------------|---|--------|----------------|-----------|------------|
|                             |   | •                  | 70) 888-0169<br>70) 888-0717                              |        |                |           |            |
| SEND DATA                   | A TO:   |                    |   |        |                |           |            |
| NAME:                       | Steve Gridley                                   |                    |   | WO     | #: 10082       | 2689      |            |
| COMPANY:<br>ADDRESS:        | Talisman Energy USA, In<br>337 Daniel Zenker Dr | с.                 |   | PAG    | GE: 2 of 2     |           |            |
|                             | Horseheads, NY 14845                            |                    |   | PO#    | <b>#</b> :     |           |            |
| PHONE:<br>FAX:              | (607) 562-4000<br>(607) 562-4001                | TEST               | REPORT  | PW     | S ID#          |           |            |
| Relog of 100                | 081716-001                                      |                    |   |        |                |           |            |
| RECEIVED                    | FOR LAB BY: DLM2                                | DATE: (            | 08/10/2010 15:33  |        |                | F         | age 2 of 2 |
| Vinyl chlo                  | oride   | < 0.02 mg/L        | EPA 8260B   | 0.02 0 | 08/17/10 20:26 | 08/18/10  | RHH-SA     |

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

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S Spike Recovery outside accepted recovery limits

MANAGER \_\_\_\_\_

| $\Lambda$ | <b>~</b> . |  |
|-----------|------------|--|
| ani       | M. Davis   |  |
|           |            |  |

DATE: 8/19/2010



COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WASTE MANAGEMENT

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

| typed or legi<br>each attache   | bly printed in the space<br>ed sheet as Form 26R  | rately completed. All requi<br>es provided. If additional sp<br>R, reference the item numb<br>eets needs to match the date   | ace is necessary, iden<br>per and identify the d   | tify Date Receive   | USE:ONLY<br>ed & General Notes   |
|---|---|--|--|---|--|
| General Refe  | rence 287.54  |  |  |   |  |
| Date Prepare  | d/Revised F   | ebruary 11, 2011   |  |   |  |
|   | SECTION A   | . CLIENT (GENERATOR  | R OF THE WASTE) I  | NFORMATION  |  |
| Company Na  |   |  |  |   |  |
|   | ergy USA Inc.<br>y, Name of Parent Con  |  |  | <b>EDA</b> (  | Generator ID#  |
| Talisman En   |   | прапу  |  | N/A   | Generator ID#  |
| Company Ma  | iling Address Line 1  | C  | ompany Mailing Addre   |   |  |
| 50 Pennwoo  |   |  |  |   | ·····  |
|   | dress Last Line – City  | State  | Zip+4  | Phone   | Ext  |
| Warrendale<br>Company Co  | ntact Last Name   | PA<br>First Name   | 15086  | (724) 814-530<br>Suffix   |  |
| Brown   | ntavi Last Manic  | Dina   | 1411   | Sum   | N Contraction of the second se |
| Municipality  |   |  | County   | ······································  |  |
| Warrendale  |   |  | Allegheny  |   |  |
| Contact Phor  |   | Contact Email Address  |  |   |  |
| (724) 814-53  |   | dybrown@talismanusa.c<br>any Mailing Address (noted a  |  |   | Yes 🛛 No   |
|   |   | eneration and storage. Drill of  |  |   |  |
|   |   | d site located at 909 Newell Ro  |  |   |  |
| containers on   |   | • • • • • • • •  |  | - · ·   |  |
| Municipality  | Canton  | County Bradfo  | ord  | State   | PA   |
|   |   |  |  |   | <u>FA</u>  |
|   | · · · · · · · · · · · · · · · · · · ·   | SECTION B. WAST  | E DESCRIPTION  |   |  |
| Residual<br>Waste Code  |   | dual Waste   |  | Unit of<br>Measure  | Time   |
| Waste Code  | Code  | dual Waste<br>Description  | Amount   | Measure   |  |
|   |   | dual Waste<br>Description<br>I gas)  | Amount<br>6,211 -  |   | Time   |
| Waste Code<br>810   | Code<br>Drill cuttings (oil and   | dual Waste<br>Description<br>I gas)<br>1. General P  | Amount<br>6,211<br>ROPERTIES   | Measure<br>☐ cu yd  | Time<br>Frame  |
| Waste Code       810       a.     pH Ra   | Code<br>Drill cuttings (oil and<br>inge 7   | dual Waste<br>Description<br>I gas)<br>1. GENERAL P<br>.91 to 9.58   | Amount<br>6,211<br>ROPERTIES<br>(based on analyses or k  | Measure<br>☐ cu yd  | Time<br>Frame  |
| Waste Code       810       a.     pH Ra   | Code<br>Drill cuttings (oil and   | dual Waste<br>Description<br>I gas)<br>.91 to 9.58<br>   | Amount<br>6,211<br>ROPERTIES<br>(based on analyses or k<br>thod 9095)  | Measure<br>☐ cu yd  | Time<br>Frame  |
| Waste Code       810       a.     pH Ra   | Code<br>Drill cuttings (oil and<br>inge 7   | dual Waste<br>Description<br>I gas)<br>1. GENERAL.P<br>.91 to 9.58<br>☐ Liquid Waste (EPA Method 909)<br>Solid (EPA Method 909)  | Amount<br>6,211<br>ROPERTIES<br>(based on analyses or k<br>thod 9095)<br>95)   | Measure<br>☐ cu yd  | Time<br>Frame  |
| Waste Code810a.pH Rab.Physi   | Code<br>Drill cuttings (oil and<br>inge 7<br>cal State  | dual Waste<br>Description<br>I gas)<br>1. GENERAL P<br>.91 to 9.58<br>□ Liquid Waste (EPA Metod 900<br>□ Gas (ambient tempera  | Amount<br>6,211<br>ROPERTIES<br>(based on analyses or k<br>thod 9095)<br>95)<br>ture & pressure)   | Measure   | Time     Frame       One Time  |
| Waste Code810a.pH Rab.Physi   | Code<br>Drill cuttings (oil and<br>inge 7   | dual Waste<br>Description<br>I gas)<br>1. GENERAL P<br>.91 to 9.58<br>1. Liquid Waste (EPA Mee Solid (EPA Method 90) Gas (ambient tempera<br>Color Greyish Black   | Amount<br>6,211<br>ROPERTIES<br>(based on analyses or k<br>thod 9095)<br>95)<br>ture & pressure)<br>Odd  | Measure   | Time     Frame       One Time  |
| Waste Code810a.pH Rab.Physi   | Code<br>Drill cuttings (oil and<br>inge 7<br>cal State  | dual Waste<br>Description<br>I gas)<br>1. GENERAL P<br>.91 to 9.58<br>□ Liquid Waste (EPA Metod 900<br>□ Gas (ambient tempera  | Amount<br>6,211<br>ROPERTIES<br>(based on analyses or k<br>thod 9095)<br>95)<br>ture & pressure)<br>Odd<br>I Phases of Separation  | Measure           □ cu yd         gal           □ lb         ⊠ ton           nowledge)           r         Earthy/Slight F<br>One | Time     Frame       One Time  |
| Waste Code810a.pH Rab.Physic.Physi  | Code<br>Drill cuttings (oil and<br>inge 7<br>cal State  | dual Waste<br>Description I gas)<br>.91 to 9.58<br>Liquid Waste (EPA Metod 900)<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of s  | Amount<br>6,211<br>ROPERTIES<br>(based on analyses or k<br>thod 9095)<br>95)<br>ture & pressure)<br>Odd<br>t Phases of Separation<br>eparation. Soil and Ro  | Measure           □ cu yd         gal           □ lb         ⊠ ton           nowledge)           r         Earthy/Slight F<br>One | Time     Frame       One Time  |
| Waste Code<br>810<br>a. pH Ra<br>b. Physi<br>c. Physi   | Code<br>Drill cuttings (oil and<br>inge 7<br>cal State<br>cal Appearance  | dual Waste<br>Description<br>I gas)<br>1. GENERAL P<br>.91 to 9.58<br>2. Liquid Waste (EPA Met<br>Solid (EPA Method 90)<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of s<br>2. CHEMICAL ANALYS  | Amount<br>6,211<br>ROPERTIES<br>(based on analyses or k<br>thod 9095)<br>95)<br>ture & pressure)<br>Odd<br>Phases of Separation<br>eparation. Soil and Ro<br>Sis ATTACHMENTS   | Measure<br>□ cu yd □ gal<br>□ lb ⊠ ton<br>nowledge)<br>r Earthy/Slight F<br>One<br>ock Fragments                                  | Time<br>Frame         One Time         One Time  |
| Waste Code810a.pH Rab.Physic.Physia.The re  | Code<br>Drill cuttings (oil and<br>inge 7<br>cal State<br>cal Appearance  | dual Waste<br>Description I gas)<br>.91 to 9.58<br>Liquid Waste (EPA Metod 900)<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of s  | Amount<br>6,211<br>ROPERTIES<br>(based on analyses or k<br>thod 9095)<br>95)<br>ture & pressure)<br>Odd<br>Phases of Separation<br>eparation. Soil and Ro<br>Sis ATTACHMENTS   | Measure<br>□ cu yd □ gal<br>□ lb ⊠ ton<br>nowledge)<br>r Earthy/Slight F<br>One<br>ock Fragments                                  | Time     Frame       One Time  |
| Waste Code810a.pH Rab.Physic.Physia.The regiment of the regiment of | Code Drill cuttings (oil and inge 7 cal State cal Appearance esults of a detailed che ctions, is attached.  | dual Waste<br>Description<br>I gas)<br>1. GENERAL P<br>.91 to 9.58<br>2. Liquid Waste (EPA Met<br>Solid (EPA Method 90)<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of s<br>2. CHEMICAL ANALYS  | Amount<br>6,211<br>ROPERTIES<br>(based on analyses or k<br>thod 9095)<br>95)<br>ture & pressure)<br>Odd<br>Phases of Separation<br>eparation. <u>Soil and Ro</u><br>Sis ATTACHMENTS<br>waste, as described in                                  | Measure<br>□ cu yd □ gal<br>□ lb ⊠ ton<br>nowledge)<br>or Earthy/Slight F<br>One<br>ock Fragments<br>n the ⊠                      | Time<br>Frame         One Time         One Time  |
| Waste Code810a.pH Rab.Physic.Physia.Physia.The rainstrub.b.A deta   | Code<br>Drill cuttings (oil and<br>ange 7<br>cal State<br>cal Appearance<br>esults of a detailed che<br>ctions, is attached.<br>ailed description of the<br>uality assurance/qualit | dual Waste<br>Description I gas) I GENERAL P .91 to 9.58 Liquid Waste (EPA Mee Solid (EPA Method 90) Gas (ambient tempera Color Greyish Black Number of Solid or Liquid Describe each phase of s 2. CHEMICAL ANALYS mical characterization of the  | Amount<br>6,211<br>ROPERTIES<br>(based on analyses or k<br>thod 9095)<br>95)<br>ture & pressure)<br>Odd<br>Phases of Separation<br>eparation. <u>Soil and Ro</u><br>Sis ATTACHMENTS<br>waste, as described in<br>attached.                     | Measure<br>□ cu yd □ gal<br>□ lb ⊠ ton<br>nowledge)<br>or Earthy/Slight F<br>One<br>ock Fragments<br>n the ⊠                      | Time<br>Frame         One Time         Petroleum         Yes       No  |
| Waste Code810a.pH Rab.Physic.Physia.The registrationb.A detac.The q<br>attach   | Code Drill cuttings (oil and inge 7 cal State cal Appearance esults of a detailed che ctions, is attached. ailed description of the uality assurance/qualit ed.                     | dual Waste<br>Description<br>I gas)<br>1. GENERAL P<br>.91 to 9.58<br>2. Liquid Waste (EPA Met<br>Solid (EPA Method 900<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of s<br>2. CHEMICAL ANALYS<br>mical characterization of the<br>waste sampling method is a | Amount<br>6,211<br>ROPERTIES<br>(based on analyses or k<br>thod 9095)<br>95)<br>ture & pressure)<br>Odd<br>Phases of Separation<br>eparation. Soil and Ro<br>Sis ATTACHMENTS<br>waste, as described in<br>attached.<br>yed by the laboratory(i | Measure         □ cu yd       gal         □ lb       ⊥ ton         nowledge)  | Time<br>Frame         One Time         One Time         Petroleum         Yes       No         Yes       No  |

| risego-weat-ormation |  |  |                                       |                     | in production and the second           |   |
|----------------------|--|--|---------------------------------------|---------------------|--|---|
|                      |  |  | ION & SCHEMATIC ATTA                  |                     |  | <u> de la secola de la</u> |
| a.                   | A detailed description of the the waste, as specified in the     |  |                                       | esses producing     | 🛛 Yes                                  | 🗌 No  |
| b.                   | A schematic of the manufact<br>as specified in the instructio    |  | n control processes pro               | ducing the waste,   | Yes Yes                                | No No   |
| C.                   | If portions of the information<br>a confidentiality claim, as de |  |                                       | on for 🔲 Yes        | No No                                  | 🛛 N/A   |
|                      | SECTI  | and the second of the second o | MENT OF RESIDU                        |                     |  |   |
|                      |  |  | OR DISPOSAL FACILITY(II               |                     |  | 2000 - C.   |
| The a                | rea below (ad.) will accommo                                     | date the identification  | of two facilities. Attac              | h additional sheets | if necessary                           | •   |
| а.                   | Solid waste permit number(s<br>9-0232-00003                      | ) for processing or di   | sposal facility being uti             | lized.              |  |   |
| b.                   | Facility Name  | Hyland Landfill  |                                       |                     |  |   |
|                      | Address Line 1   | 6653 Herdman Ro  | ad                                    |                     |  |   |
|                      | Address Line 1   |  | · · · · · · · · · · · · · · · · · · · |                     |  |   |
|                      | Address City State ZIP   | Angelica   | NY                                    | 14709               |  |   |
|                      | Municipality   | Angelica   | County                                | Allegany            | · · · · · · · · · · · · · · · · · · ·  |   |
| C.                   | Facility Contact Name  | Larry Shilling   |                                       |                     |  |   |
| 0.                   | Title  | Larry Shining  |                                       |                     |  |   |
|                      | Phone  | (585) 466-7271   | Email Address                         | larry.shilling@ca   |  |   |
|                      |  | ( )  |                                       |                     | sella.com                              |   |
| d.                   | Volume of waste shipped to 2,875                                 | processing or dispos<br>] cu yd  | al facility in the previous           |                     |  |   |
| a.                   | Solid waste permit number(s<br>8-4630-00010                      | ) for processing or di   | sposal facility being util            | lized.              |  |   |
| b.                   | Facility Name  | Hakes C&D Landf  | ili                                   |                     |  |   |
|                      | Address Line 1   | 4376 Manning Rid   |                                       |                     |  |   |
|                      | Address Line 1   | X  | ×                                     |                     |  |   |
|                      | Address City State ZIP   | Painted Post   |                                       | 14870               |  |   |
|                      | Municipality   | Erwin Twp  | County                                | Steuben             | ······································ |   |
| C.                   | Facility Contact Name  | Joseph Boyles  |                                       |                     |  |   |
| ••                   | Title  |  |                                       |                     |  |   |
|                      | Phone  | (607) 937-6044<br>(585) 466-7271   | Email Address                         | joe.boyles@case     | ella.com                               |   |
| d.                   | Volume of waste shipped to                                       |  | al facility in the previous           | s year.             |  |   |
|                      | 2,176  | ]cuyd 🗌 gal  | ☐ lb 🛛 tor                            |                     | ·                                      |   |
|                      |  | 2. Bi  | ENEFICIAL USE                         |                     |  |   |
| a.                   | Has the waste been approved                                      | d for beneficial use?  |                                       |                     | Yes                                    | 🛛 No  |
|                      | If "Yes", list the general pern                                  | nit number or approva  | al number.                            |                     |  |   |
| b.                   | Volume of waste beneficially                                     |  |                                       |                     |  |   |
|                      | 0  | ] cu yd 📋 gal  | b tor                                 | n (check one)       |  | i   |

|            |  | PROCESS DESCRIPTIC                 | N & SCHEMATIC ATTA        | NUMENTO           |  |  |
|------------|--|------------------------------------|---------------------------|-------------------|--|--|
| a.         | A detailed description of the                                    |                                    |                           |                   | Yes [                                  |  |
| а.         | the waste, as specified in the                                   |                                    |                           | sses producing    |  |  |
| b.         | A schematic of the manufact<br>as specified in the instruction   |                                    | control processes pro     | ducing the waste, | Yes [                                  | No   |
| C.         | If portions of the information<br>a confidentiality claim, as de |                                    |                           | n for 📋 Yes       | No [                                   | N/A  |
|            | SECTI  | ON C. MANAGEN                      |                           |                   |  |  |
|            |  | 1. PROCESSING OF                   | R DISPOSAL FACILITY (I    | ES)               |  | and and a second se |
| The a      | rea below (ad.) will accommo                                     | late the identification of         | of two facilities. Attach | additional sheets | if necessary.                          |  |
| a.         | Solid waste permit number(s)<br>8-0728-00004                     | for processing or dis              | posal facility being util | ized.             |  |  |
| b.         | Facility Name  | Chemung County L                   | andfill                   |                   |  |  |
|            | 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                       |                           |                   |  |  |
| <b>v</b> . | Title  | Environmental Man                  |                           |                   |  | *  |
|            | Phone  | (585) 797-5941                     | Email Address             | carla.canjar@ca   |  |  |
|            |  | ( )                                |                           | , 0               | sella.com                              |  |
| d.         | Volume of waste shipped to p                                     | rocessing or disposal<br>cu yd gal | facility in the previous  |                   | I                                      |  |
| а.         | Solid waste permit number(s)<br>100361                           | for processing or disp             | oosal facility being util | ized.             |  |  |
| b.         | Facility Name  | McKean County Lar                  | ndfill                    |                   |  |  |
|            | 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  | Mille Mandonola                    |                           |                   |  |  |
|            | Phone  | (814) 778-9931                     | Email Address             | manderfeld@gm     | ail.com                                |  |
| d.         | Volume of waste shipped to p                                     | . ,                                | facility in the provinue  | 00                |  |  |
| u.         | 550  | cuyd 🗌 gal                         | ☐ lb 🖾 ton                |                   |  |  |
|            |  |                                    | IEFICIAL USE              |                   |  |  |
| a.         | Has the waste been approved                                      | for beneficial use?                |                           |                   | Yes 2                                  | 🛛 No   |
|            | If "Yes", list the general perm                                  | it number or approval              | number.                   |                   |  |  |
| b.         | Volume of waste beneficially                                     |                                    |                           |                   |  |  |
|            | 0 Ĺ  | cuyd 🗌 gal                         | 🗌 lb 📋 ton                | (check one)       |  |  |
|            |  |                                    |                           |                   |  |  |

|  | SECTION D. CERTIFICATION   |
|--|--|
| Report and all attached docum<br>obtaining the information, I ve<br>knowledge. I understand that t | at I have personally examined and am familiar with the information submitted in this Annual<br>nents and that based upon my inquiry of those individuals immediately responsible for<br>wrify that the submitted information is true, accurate and complete to the best of my<br>he submission of false information herein is made subject to the penalties of 18 Pa. C.S.<br>ication to authorities, which include fine and imprisonment. |
| Check the following, if applicable   | ə:   |
| I certify the information in a local sector is and has not change                                  | required in Section B-1, General Properties was supplied to the Department for the year ed.  |
| Form Submitted:  | Form 26R   |
|  | Other (specify)  |
| Date Submitted:  |  |
| I certify the information a and has not change   | required in Section B-2, Chemical Analysis was supplied to the Department for the year ed.   |
| Form Submitted:  | Form 26R   |
|  | Other (specify)  |
| Date Submitted:  |  |
| I certify the information re<br>for the year and has   | quired in Section B-3, Process Description and Schematic, was supplied to the Department s not changed.  |
| Form Submitted:  | Form 26R   |
|  | Other (specify)  |
| Date Submitted:  | · · · · · · · · · · · · · · · · · · ·  |
| Name of Responsible Official   | Title Environmental Specialist   |
| Dina Brown   |  |
| Signature  | 2/202 Date 2/25/11   |

| Lab ID: 08-(<br>Lab ID: 39-(  |   | Easte<br>2566 Pe<br>Say<br>Phone:   | <b>k Analytics, In</b><br><b>Ern Division</b><br>Ennsylvania Ave.<br>re, PA 18840<br>(570) 888-0169<br>(570) 888-0717 | IC.  | Ņ  | Work   | Order: 100   | 81720  |
|---|---|---|---|--|--|--|--|--|
| SEND DATA<br>NAME:<br>COMPANY:<br>ADDRESS:<br>PHONE:                      | Steve Gridley   |   | ST REPORT   | PA<br>PC   | 0#:<br>\GE:<br>)#:<br>VS ID#   | 1008<br>1 of 2<br>AF76                               | 2  |  |
| FAX:<br>Harvest Hold  | (607) 562-4001<br>dings   |   |   |  | 0.00<br>0 0.0000000<br>0 0.0000000   |  |  |  |
| RECEIVED  | FOR LAB BY: DLM2  | DATE  | : 08/10/2010 15:33  |  |  |  | Pa   | age 1 of 2   |
| SAMPLE: Ai<br>SAMPLI  | <b>ir Cuttings</b><br>ED BY: SG   | Samp  | Lab ID: 10081720-001Á<br>ble Time: 08/09/2010 16:00   | Grab<br><u>SLOQ</u>  |  |  |  |  |
|   | roleum Hydrocarbons<br>e Note: Analysis performed by l  | <u>Result</u><br>272 mg/Kg<br>⁄licrobac-Erie  | <u>Method</u><br>EPA 9071   | <u></u>  | <u>Analysis</u><br>08/12/10  |  | <u>Analysis End</u><br>08/12/10  | <u>Analyst *</u>   |
| SAMPLE: <b>Ai</b><br>SAMPLE<br><u>Test</u><br>Moisture<br>Free Liqu<br>pH | ED BY: SG   | Samp<br><u>Result</u><br>17.0 %<br>2.6 %<br>8.63@21.7°C   | Lab ID: 10081720-001B<br>ole Time: 08/09/2010 16:00<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C      | Grab<br><u>SLOQ</u><br>0.01<br>0.1                           | Analysis<br>08/12/10<br>08/12/10<br>08/12/10                                       | 8:45<br>15:10  | Analysis End<br>08/13/10<br>08/12/10<br>08/12/10                                     | <u>Analyst *</u><br>MED-SA<br>RHN-SA<br>MED-SA                                 |
| SAMPLE: <b>Ai</b><br>SAMPLE<br><u>Test</u><br>Sodium                      | <b>ir Cuttings</b><br>ED BY: SG   | Samp<br><u>Result</u><br>< 556 mg/Kg-dry  | Lab ID: 10081720-001C<br>le Time: 08/09/2010 16:00<br><u>Method</u><br>EPA 6010B                                      | Grab<br><u>SLOQ</u><br>556                                   | <u>Analysis :</u><br>08/13/10  |  | Analysis End<br>08/13/10   | <u>Analyst *</u><br>RMD-CV   |
| Chloride<br>Percent N   | Moisture  | 402 mg/Kg-dry<br>17.0 %   | EPA 300.0<br>SM2540G  | 60.2   | 08/11/10<br>08/12/10   |  | 08/12/10<br>08/13/10   | HDP-CV<br>MED-SA   |
|   | CLP Leachate of Air Cutting<br>ED BY: SG  |   | Lab ID: 10081720-001E<br>le Time: 08/09/2010 16:00  | Grab<br><u>SLOQ</u>  |  |  |  |  |
| Arsenic -<br>Barium -<br>Cadmium<br>Chromiun<br>Copper -                  | - TCLP extracted<br>TCLP extracted<br>TCLP extracted<br>n - TCLP extracted<br>m - TCLP extracted<br>TCLP extracted<br>CLP extracted | Result<br>< 0.0008 mg/L<br>< 0.500 mg/L<br>< 10.00 mg/L<br>< 0.100 mg/L<br>< 0.500 mg/L<br>< 0.500 mg/L<br>< 0.500 mg/L | <u>Method</u><br>EPA 7470A<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B                           | 0.0008<br>0.500<br>10.00<br>0.100<br>0.500<br>0.100<br>0.500 | Analysis 3<br>08/12/10<br>08/13/10<br>08/13/10<br>08/13/10<br>08/13/10<br>08/13/10 | 8:30<br>7:20<br>7:20<br>7:20<br>7:20<br>7:20<br>7:20 | Analysis End<br>08/13/10<br>08/13/10<br>08/13/10<br>08/13/10<br>08/13/10<br>08/13/10 | Analyst *<br>KW-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>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

DATE: 8/13/2010

Carrie M. Davis

Value above calibration range but within annually verified linear range L

MANAGER

| LAB ID: 08-1<br>LAB ID: 39-1 |  | <b>East</b><br>2566 P | ern<br>Pennsy | <b>nalytics, Ir<br/>Division</b><br>ylvania Ave.<br>A 18840 | IC.   | ,        | Work C | )rder: 10( | 081720     |
|------------------------------|--|-----------------------|---------------|---|-------|----------|--------|------------|------------|
|                              |  |                       | • •           | 888-0169<br>888-0717  |       |          |        |            |            |
| SEND DATA                    | A TO:  |                       |               |   |       |          |        |            |            |
| NAME:                        | Steve Gridley                                |                       |               |   | W     | D#:      | 100817 | 720        |            |
| COMPANY:                     |  | IC.                   |               |   | PA    | GE:      | 2 of 2 |            |            |
| ADDRESS:                     | 337 Daniel Zenker Dr<br>Horseheads, NY 14845 |                       |               |   |       |          |        | 00         |            |
|                              |  |                       |               |   | PC    | )#:      | AF767: | 23         |            |
| PHONE:<br>FAX:               | (607) 562-4000<br>(607) 562-4001             | TE                    | ST RI         | EPORT   | PV    | VS ID#   |        |            |            |
| Harvest Hol                  | dings  |                       |               |   |       |          |        |            |            |
|                              | FOR LAB BY: DLM2                             | DATE                  | E: 08/        | 10/2010 15:33   |       |          |        | P          | age 2 of 2 |
| Nickel -                     | TCLP extracted                               | < 0.100 mg/L          |               | EPA 6010B   | 0.100 | 08/13/10 | 7:20   | 08/13/10   | RMD-CV     |
| Seleniun                     | n - TCLP extracted                           | < 0.500 mg/L          |               | EPA 6010B   | 0.500 | 08/13/10 | 7:20   | 08/13/10   | RMD-CV     |
| Silver - T                   | CLP extracted                                | < 0.100 mg/L          |               | EPA 6010B   | 0.100 | 08/13/10 | 7:20   | 08/13/10   | RMD-CV     |
| Zinc - TC                    | CLP extracted                                | 28.6 mg/L             | L             | EPA 6010B   | 0.200 | 08/13/10 | 7:20   | 08/13/10   | RMD-CV     |

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<br>LAB ID: 39-00401 | Benchmark Analytics, Ir<br>Eastern Division<br>2566 Pennsylvania Ave.<br>Sayre, PA 18840                        | <b>1C.</b><br>Work Order: 10110477            |
|--------------------------------------|---|---|
|                                      | Phone: (570) 888-0169<br>Fax: (570) 888-0717  |   |
| SEND DATA TO:                        | ·   |   |
| NAME: Steve Gridley                  | 2 Contraction of the second | WO#: 10110477                                 |
| COMPANY: Talisman Energy US          | A, Inc.   |   |
| ADDRESS: 337 Daniel Zenker D         |   | PAGE: 1 of 1                                  |
| Horseheads, NY 148                   | 345   | PO#: AF 76719                                 |
|                                      | TEST DEBORT   | PWS ID#                                       |
| PHONE: (607) 731-0145                | TEST REPORT   |   |
| FAX: (607) 562-4001                  |   |   |
| Harvest Holdings                     |   |   |
| RECEIVED FOR LAB BY: RML             | DATE: 11/03/2010 12:36  | Page 1 of 1                                   |
|                                      |   |   |
| SAMPLE: Pad Soil<br>SAMPLED BY: SG   | Lab ID: 10110477-001A<br>Sample Time: 11/03/2010 10:45  | Composite                                     |
| SAMPLED BT. 30                       | Sample time. 1703/2010 10.43  | SLOQ  |
| Test                                 | Result Method   | 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             |
| pН                                   | 7.87@23.4°C EPA 9045C   | 11/04/10 15:32 11/04/10 SG-SA                 |
| Total Dissolved Solids               | 14300 mg/kg × 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   | SLQQ<br>Analysis Start Analysis End Analyst * |
| Sodium                               | <pre>&lt; 273 mg/Kg MS EPA 6010B</pre>  | 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   | SLOQ  |
| Test                                 | Result Method   | 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.  |   |

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

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

х Value exceeds Maximum Contaminant Level

MANAGER

| Carrie | M. | Davis |
|--------|----|-------|
| Ç      |    |       |

DATE: 11/5/2010

| CHAIN OF CUSTODY                |   | E                        |  |                            | PAGE1  | _OF                   |
|---------------------------------|---|--------------------------|--|----------------------------|--|-----------------------|
| REPORT TO: 'Talisman / UEG      | 1   | 2566 P                   |  |                            |  |                       |
| geowetlands@aol.com             |   | 2000 11                  | W/O#: 10110477   |                            | ARE SPECIAL DETEC  |                       |
| twollin@rallysolutions.ca       |   |                          |  |                            | NEEDED: YES /  |                       |
| twoining ranysolutions.ca       | AFTER COLLECTION  |                          | RESULTS ARE BE   | ING USED FOR:<br>DEC PADEP | IF YES, PLEASE ATTAC   |                       |
| CONTRACT                        | · ·   | / GV                     | GROUND WALER SO SUIL   |                            | 1  |                       |
| CONTACT Steve Gridley           | TRANSPORT   | SW<br>WA                 | WASTE WATER OTHER  | IDFILL                     | YES  |                       |
| PH# 607-731-0145<br>FAX#        | LABORATORY  |                          | DEIONIZED WATER DI DISTILLED WATER PERSONAL OTH  | IER                        | IF YES, PLEASE ATTAC   | CH REC                |
| BILL TO: Talisman               | - IN COOLER   |                          | S SULFURIC ACID AS ASCORBIC ACID<br>N NITRIC ACID AC ACETIC ACID   |                            |  |                       |
|                                 | WITH ICE  |                          | N NITRIC ACID AC ACETIC ACID<br>SO3 SODIUM SULFITE NH4 AMMONIUM CHLORIE  | DE /                       | 5 3  |                       |
| PO# AF 76719                    | - 7/07  | 1                        | Thio SODIUM THIOSULFATE ZN ZINC ACETATE  | E Š                        |  |                       |
| PROJECT DESCRIPTION/            | DATE SUMPLED<br>TIME OF SUMPLED<br>SUMPLE MATRY<br>SUMPLE MATRY | SAMPLER WITHLE COMPOSITE | An incomplete chain of custody may delay the   | PE E                       | LAB USE  | se fill o<br>icable a |
| SAMPTER SIGNATURE / AFFILIATION |   |                          | processing of your sample(s).  | El H                       |  | omplete               |
| CONTAINED SAMPLING POINT        | DATE SAMPLED<br>TIME OF SAMPLIN<br>SAMPLE MATRIX                | V \$                     | An incomplete chain of custody may delay the<br>processing of your sample(s).<br>ANALYSIS TO BE PERFORMED<br>(PER CONTAINER) |                            | y<br>y   |                       |
| /                               |   |                          | (PER CONTAINER)  |                            |  |                       |
| 1 Winter Spill Goil Pad Soil    | 1/3 1045 50 C   | B-N                      | TDS, Conductivity, PH  |                            | -0011  | <u> </u>              |
| 2                               |   |                          | pH, Chlorides, Sodium, Pro; st   |                            |  | ß                     |
| 3                               |   |                          | Salinity   |                            |  |                       |
| 4                               |   |                          | ТРН  |                            | and the second | <u>C</u>              |
| 5                               |   |                          | . *  |                            |  | -                     |
| 6                               |   | ·                        | · · · · · · · · · · · · · · · · · · ·  |                            |  | 6                     |
| 7                               |   | ļ                        | ·  |                            |  |                       |
| 8                               |   |                          |  |                            |  |                       |
| 9                               |   |                          | 24 HOUR TURNAROUND   |                            |  |                       |
| 10                              |   |                          | DAY TURNAROUND   |                            |  |                       |
| 11                              |   |                          |  |                            |  |                       |
| LAE USE ONLY DEL VERED BY       | clic I  |                          | TEMPERATURE UPON RECE  | ipt 👘                      | <u> </u>   | ON                    |
|                                 |   | 1                        |  |                            |  | 2                     |
| RELINQUISHED                    | DATE;<br>11 13 10   | TIME                     | 36 RECEIVED BY   |                            | DATE:  | TIM                   |
| RELINQUISHED BY:                | DATE:   | TIME:                    |  |                            | DATE:  | Тім                   |
| RELINQUISHED BY:                | DATE:   | TIME:                    | RECRIVED BY DO TO  | •                          | DATE: 0 10   | ) TIM                 |
|                                 | 1 1   |                          | CHULT 199  |                            | DIF: 310   | Graphica              |

| LAB ID: 08-00<br>LAB ID: 39-00                         |                                | <b>Eas</b><br>2566<br>Sa  | <b>stern [</b><br>Pennsy<br>ayre, PA | nalytics, Ir<br>Division<br>Ivania Ave.<br>\ 18840<br>888-0169 | IC.            | Wor                              | k Order: 100 | 071880     |
|--|--------------------------------|---------------------------|--------------------------------------|--|----------------|----------------------------------|--------------|------------|
|  |                                |                           | · ·                                  | 888-0717   |                |                                  |              |            |
| SEND DATA 1  | ГО:                            |                           |                                      |  |                |                                  |              |            |
|  | Steve Gridley                  |                           |                                      |  | W              | O#: 100                          | 71880        |            |
|  | Talisman Energy USA, Ind       | o.                        |                                      |  |                |                                  |              |            |
|  | 337 Daniel Zenker Dr           |                           |                                      |  | PA             | AGE: 1 of                        | 1            |            |
| ł  | Horseheads, NY 14845           |                           |                                      |  | P              | O#: AF7                          | 76719        |            |
|  |                                | _                         |                                      |  | P۱             | NS ID#                           |              |            |
|  | (607) 562-4000                 | Т                         | EST RE                               | PORT   |                |                                  |              |            |
| FAX: (   | (607) 562-4001                 |                           |                                      | 10810-1180-11  |                |                                  |              |            |
| Harvest Hldgs  | Well                           |                           |                                      |  |                |                                  |              |            |
| •  | OR LAB BY: WCB                 | DA                        | TE: 07/1                             | 3/2010 13:15   |                |                                  | P            | age 1 of 1 |
|  |                                |                           |                                      |  | Ourth          |                                  |              |            |
| SAMPLE: Inv.<br>SAMPLED                                | -                              | 0                         |                                      | : 10071880-001A<br>: 07/12/2010 12:45                          | Grab           |                                  |              |            |
| SAMPLED  | 01.00                          | 30                        | ample rime.                          | . 0771272010 12.45   | <u>SLOQ</u>    |                                  |              |            |
| Test   |                                | <u>Result</u>             |                                      | Method   |                | Analysis Start                   | Analysis End | Analyst *  |
|  | eum Hydrocarbons               | 16300 mg/Kg               |                                      | EPA 9071   |                | 07/15/10 0:00                    | 07/15/10     |            |
| Sample r   | Note: Analysis performed by Mi | crobac-Erie               |                                      |  |                |                                  |              |            |
| SAMPLE: Inv.   | -                              |                           | Lab ID                               | : 10071880-00 <b>1</b> B                                       | Grab           |                                  |              |            |
| SAMPLED  | BY: SG                         | Sa                        | ample Time:                          | : 07/12/2010 12:45   | SLOQ           |                                  |              |            |
| Test   |                                | Result                    |                                      | Method   | <u>3200</u>    | 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      |
| рН   |                                | 9.58@22.2°C               |                                      | EPA 9045C  |                | 07/14/10 12:23                   | 07/14/10     | DLM-SA     |
| SAMPLE: TCL  | P Leachate of Inv. Cutting     | S                         | Lab ID:                              | : 10071880-001D  | Grab           |                                  |              |            |
| SAMPLED  | -                              |                           | ample Time:                          | 07/12/2010 12:45   |                |                                  |              |            |
| Test   |                                | Result                    |                                      | Method   | <u>SLOQ</u>    | Analysis Start                   | Analysis End | Analyst *  |
|  | CLP extracted                  | < 0.0008 mg/L             |                                      | EPA 7470A  | 8000.0         | 07/16/10 9:00                    | 07/18/10     | RMD-CV     |
|  | CLP extracted                  | < 0.500 mg/L              |                                      | EPA 6010B  | 0.500          | 07/16/10 15:00                   |              | RMD-CV     |
|  | CLP extracted                  | < 10.00 mg/L              |                                      | EPA 6010B  | 10.00          | 07/16/10 15:00                   |              | RMD-CV     |
|  | 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 - TC  | CLP extracted                  | < 0.100 mg/L              |                                      | EPA 6010B  | 0.100          | 07/16/10 15:00                   | 07/17/10     | RMD-CV     |
| Lead - TCL   | P extracted                    | < 0.500 mg/L              |                                      | EPA 6010B  | 0.500          | 07/16/10 15:00                   | 07/17/10     | RMD-CV     |
|  | _P extracted                   | < 0.100 mg/L              |                                      | EPA 6010B  | 0.100          | 07/16/10 15:00                   | 07/17/10     | RMD-CV     |
|  | TCLP extracted                 | < 0.500 mg/L              |                                      | EPA 6010B  | 0.500          | 07/16/10 15:00                   | 07/17/10     | RMD-CV     |
|  |                                |                           |                                      |  |                |                                  |              |            |
| Selenium - <sup>-</sup><br>Silver - TCL<br>Zinc - TCLP | P extracted                    | < 0.100 mg/L<br>29.4 mg/L | L                                    | EPA 6010B<br>EPA 6010B   | 0.100<br>0.200 | 07/16/10 15:00<br>07/16/10 15:00 |              | RMD-CV     |

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

Value above calibration range but within annually verified linear range L

MANAGER

| / '       | <b>`</b> |
|-----------|----------|
| Carrie M. | Davis    |

DATE: \_\_\_\_\_7/20/2010

| LAB ID: 08-00380<br>LAB ID: 39-00401 |  | Benchmark Analytics, Inc<br>Eastern Division<br>2566 Pennsylvania Ave.<br>Sayre, PA 18840<br>Phone: (570) 888-0169<br>Fax: (570) 888-0717 |                        |              | <b>C.</b><br>Work Order: 10110480 |                          |  |  |  |
|--------------------------------------|--|---|------------------------|--------------|-----------------------------------|--------------------------|--|--|--|
| SEND DATA 1                          | ГО:  |   |                        |              |                                   |                          |  |  |  |
|                                      | Steve Gridley                                      |   |                        |              | WO#: 10110480                     |                          |  |  |  |
|                                      | Talisman Energy USA, Ir<br>337 Daniel Zenker Dr    | IC.   |                        | PAGE: 1 of 1 |                                   |                          |  |  |  |
|                                      | Horseheads, NY 14845                               |   |                        |              |                                   |                          |  |  |  |
|                                      |  | ,   |                        | P            | O#: AF7€                          | 5719                     |  |  |  |
|                                      | (607) 731-0145 <b>TEST REPORT</b> PWS ID#          |   |                        |              |                                   |                          |  |  |  |
| Harvest Holdin                       | nas-cu   | a and a second                          |                        |              |                                   |                          | al tothing to one for an an and the second |  |  |
|                                      | OR LAB BY: RML                                     | DATE:   | 11/03/2010 12:36       |              |                                   | Pa                       | age 1 of 1                                 |  |  |
| SAMPLE: Inve                         | <ul> <li>→</li> </ul>                              |   | ab ID: 10110480-001A   | Grab         |                                   |                          |  |  |  |
| SAMPLE. INVE                         |  |   | Time: 11/03/2010 10:45 | Grab         |                                   |                          |  |  |  |
|                                      |  |   |                        | <u>SLOQ</u>  |                                   |                          |  |  |  |
| <u>Test</u>                          | launa Lludassanhann                                | Result Method<br>230 ma/Ka EPA 907  |                        |              | Analysis Start<br>11/04/10 14:30  | Analvsis End<br>11/04/10 | Analyst *                                  |  |  |
|                                      | leum Hydrocarbons<br>Note: Analysis performed by N | 230 mg/Kg<br>/licrobac Laboratories, l  |                        |              | 11/04/10 14.30                    | 11/04/10                 |  |  |  |
| SAMPLE: Inve                         | ert  |   | _ab ID: 10110480-001B  | Grab         | ·······                           |                          |  |  |  |
| SAMPLED                              | BY: SG   | Sample Time: 11/03/2010 10:45   |                        |              |                                   |                          |  |  |  |
| Test                                 |  | Result  | Method                 | <u>SLOO</u>  | 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                                      |  |  |
|                                      | P Leachate of Invert                               |   | ab ID: 10110480-001D   | Grab         |                                   |                          |  |  |  |
| SAMPLE. ICL<br>SAMPLED               |  | -   | Time: 11/04/2010 7:30  | Grau         |                                   |                          |  |  |  |
| 0,411 220                            |  | •   |                        | <u>SLOQ</u>  |                                   |                          |  |  |  |
| Test                                 |  | Result  | Method                 |              | Analysis Start                    | Analysis End             |  |  |  |
| -                                    | CLP extracted                                      | < 0.0008 mg/L   | EPA 7470A              | 0.0008       | 11/04/10 13:15                    | 11/04/10                 | RMD-C                                      |  |  |
|                                      | CLP extracted                                      | < 0.500 mg/L  | EPA 6010B              | 0.500        | 11/04/10 14:05                    | 11/04/10                 | RMD-C                                      |  |  |
|                                      | CLP extracted                                      | < 10.00 mg/L  | EPA 6010B              | 10.00        | 11/04/10 14:05                    | 11/04/10                 | RMD-C                                      |  |  |
|                                      | TCLP extracted                                     | < 0.100 mg/L  | EPA 6010B              | 0.100        | 11/04/10 14:05                    | 11/04/10                 | RMD-C                                      |  |  |
|                                      | - TCLP extracted                                   | < 0.500 mg/L  | EPA 6010B              | 0.500        | 11/04/10 14:05                    | 11/04/10                 | RMD-C                                      |  |  |
| ••                                   | CLP extracted                                      | < 0.100 mg/L  | EPA 6010B              | 0.100        | 11/04/10 14:05                    | 11/04/10                 | RMD-C                                      |  |  |
| Lead - TCL                           |  | < 0.500 mg/L  | EPA 6010B              | 0.500        | 11/04/10 14:05                    | 11/04/10                 | RMD-C                                      |  |  |
|                                      | LP extracted                                       | < 0.100 mg/L  | EPA 6010B              | 0.100        | 11/04/10 14:05                    | 11/04/10                 | RMD-C                                      |  |  |
|                                      | TCLP extracted                                     | < 0.500 mg/L  | EPA 6010B              | 0.500        | 11/04/10 14:05                    | 11/04/10<br>11/04/10     | RMD-C                                      |  |  |
|                                      | P extracted  | < 0.100 mg/L  | EPA 6010B              | 0.100        | 11/04/10 14:05                    | 11/04/10                 | RMD-C                                      |  |  |
| Zinc - TCLF                          | extracted  | < 0.200 mg/L  | EPA 6010B              | 0.200        | 11/04/10 14:05                    | 11/04/10                 | RMD-C                                      |  |  |

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Camie M. Davis DATE: 11/5/2010 MANAGER

| CHAIN OF CUSTODY                           | Т   | 1                        |   |   |   |                                       | PAGE <u>1</u>           | <u> </u> _0                 |
|--|---|--------------------------|---|---|---|---------------------------------------|-------------------------|-----------------------------|
| Talisman / UEG                             |   | 2566 F                   | M//O#·  | 101104  | 20  |                                       | ARE SPECIAL D           | ETECTIC                     |
| geowetlands@aol.com                        |   |                          | <b>Ψ</b> /Oπ.                                   | 1011040   | 50  |                                       | NEEDED:                 |                             |
| twollin@rallysolutions.ca                  | REFRIGERATE SAMPLE                                      | S                        | ·   | RESULTS   | ARE BEING USE   | ) FOR:                                | IF YES, PLEASE          | <b>II</b>                   |
|  | AFTER COLLECTION  |                          | DRINKING WATER SL. SLUD                         |   | NYDEC   | <b>IZ</b><br>PADEP                    | IS A QC 1               |                             |
| CONTACT Change Cartellary                  | ~ *   | GV<br>SV                 |   | ARDOUS  | LANDFILL  | 1100                                  |                         |                             |
| CONTACT Steve Gridley<br>PH# 607-731-0145  | TRANSPORT   | WI<br>DE                 |   | ILLED WATER PERSONA                             |   |                                       | IFYES, PLEASE           |                             |
| FAX#                                       | TO<br>LABORATORY  |                          | / /H HYDROCHLORIC ACI                           |   |   |                                       | T /S/                   | A IAON                      |
| BILL TO: Talisman                          | IN COOLER   |                          | S SULFURIC ACID                                 | AS ASCORBIC AC<br>AC ACETIC ACID                |   | ,                                     |                         |                             |
|  | ,WITH ICE   | / डैं /                  | SO 3 SODIUM SULFITE<br>Thio SODIUM THIOSULFAT   | NH, AMMONIUM C                                  | HLORIDE   |                                       | 5 3                     |                             |
| PO# AF 76719                               |   | 3                        | - NONE  | Hg MERCURIC C                                   | HLORIDE   |                                       | 3/2/                    |                             |
| PROJECT DESCRIPTION<br>Hanvest Holdings CU |   | ii ii                    | An incomplete ch                                | ain of custody may del<br>ig of your sample(s). | ay the  |                                       | The second second       | Please  <br>applicat        |
| SAMPLES SIGNATURE / AFFILIATION            |   | <u>,</u><br>5            | S processin                                     | ig oi your aampia(s).                           |   |                                       | S.                      | i comp                      |
| CONTAINER (SAMPLING POINT                  | GATE SAMPLED<br>TIME OF SAMPLED<br>SAMPLE MATRY<br>SAME | SAMPLEA MITLES COMPOSITE | An incomplete cha<br>processin<br>ANALYSISTO BE | PERFORMED                                       |   | PRESE ON REC.                         | COMMUNE ADED ON RECEIPT | USE O                       |
|  |   |                          |   | TAINER)   |   |                                       |                         | lł I                        |
| 1 Bentlings Envert                         | #/3 1045 50 C   | DE-N                     | TPH .   |   | () 전다.<br>(************************************   |                                       | - 07                    | 1 Place - 1 - 1 - 1 - 1 - 1 |
| 2  | ┝──┝──┝──┥  | <b></b>                  | pH  |   |   |                                       |                         | B                           |
| 3  |   | <br>                     | TCLP 8 RCRA Metals                              |   |   |                                       |                         | <u>   C</u>                 |
| 4  | ·   |                          | Free Liquids / % Moistu                         | JLG   |   |                                       | <u> </u>                | B                           |
| 5  |   |                          | TCLP 8260 / 8270 ONI                            |   | 23.83<br>23.85<br>23.85<br>23.85<br>23.85<br>23.85<br>23.85<br>23.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85<br>24.85 |                                       |                         |                             |
| 6  |   | ┠                        | ······································          |   |   | ····································· |                         |                             |
| 7.   |   |                          | exceeds 120,000 m                               | y/ry  | 28.34<br>- 28.4<br>- 28.4<br>- 19.4   |                                       |                         |                             |
| 8  |   |                          | 29 HOUR TL                                      | JRNAROUND                                       | <u>, 31,11</u>  |                                       |                         |                             |
| 9  |   |                          |   | NAROUND   |   |                                       |                         |                             |
| 10   |   |                          |   |   |   |                                       |                         |                             |
| 11   |   |                          |   |   |   |                                       |                         | <u>周辺。</u><br>[[23] - [12]  |
| DEVIVERED BY                               |   |                          | TEMP  | ERATURE UPON F                                  | RÊOÊIPT   |                                       |                         | VALO                        |
| RELINGUIST                                 | DATE:   | TINAC:                   | RECEIVED BY:                                    |   |   |                                       | DATE:                   | 1288-)<br>                  |
| La Ren                                     | 11 13 110   |                          | 36  |   |   |                                       | / /                     |                             |
| RELINQUISHED BY:                           | DATE:   | TIME:                    | BECEIVED BY:                                    |   |   |                                       | DATE:                   |                             |
| RELINQUISHED BY:                           | DATE:   | TIME:                    | RECEIVED BY:                                    | Sth   |   |                                       | MF3                     | 10                          |



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 |   |  | tify Date Receive  | Date Received & General Notes   |  |  |  |
|---|---|--|--|---|--|--|--|
| prepared. The date on attached sheets needs to match the date noted below.  |   |  |  |   |  |  |  |
| General Refe  | erence 287.54   |  |  |   |  |  |  |
| Date Prepare  | ed/Revised Fe   | ebruary 11, 2011   |  |   |  |  |  |
|   |   | <b>CLIENT</b> (GENERATOR   | ROF THE WASTE) IN  | IFORMATION  |  |  |  |
| Company Na  | i <b>me</b><br>iergy USA Inc.   |  |  |   |  |  |  |
|   | ry, Name of Parent Com  | pany   |  | EPA   | Generator ID#  |  |  |
| Talisman Er   | ergy Inc.   |  |  | N/A   |  |  |  |
| Company Ma<br>50 Pennwoo  | iling Address Line 1  | C  | ompany Mailing Addres  | ss Line 2   |  |  |  |
|   | dress Last Line – City  | State  | Zip+4  | Phone   | Ext  |  |  |
| Warrendale  |   | PA   | 15086  | (724) 814-530   |  |  |  |
| Company Co<br>Brown   | ntact Last Name   | <b>First Name</b><br>Dina  | MI   | Suffix  | C C C C C C C C C C C C C C C C C C C  |  |  |
| Municipality  |   |  | County   |   |  |  |  |
| Warrendale  |   |  | Allegheny  |   |  |  |  |
| Contact Phot<br>(724) 814-53  |   | Contact Email Address<br>dybrown@talismanusa.c   | om   |   |  |  |  |
|   |   | ny Mailing Address (noted a  |  | ,,, | Yes 🛛 No   |  |  |
|   |   | neration and storage. Drill o  |  |   |  |  |  |
| the (0<br>on site.  | 1-017) well pad site locate   | ed at 13766 Route 14, Cantor   | Township, Bradford Co  | unty, PA. Waste is st   | tored in containers  |  |  |
| Municipality  | Canton  | Country Durill   | rd   | State   |  |  |  |
| mannenpanny   | Canton  | County Bradfo  |  | Otate   | PA   |  |  |
|   |   | SECTION B. WAST  | E DESCRIPTION  |   | -  |  |  |
| Residual  | Resid   | SECTION B. WAST  | E DESCRIPTION  | Unit of   | Time   |  |  |
| Residual<br>Waste Code  | Resid<br>Code   | SECTION B. WAST<br>Jual Waste<br>Description   | E DESCRIPTION<br>Amount  |   | -  |  |  |
| Residual  | Resid   | SECTION B. WAST<br>Jual Waste<br>Description<br>gas)   | E DESCRIPTION<br>Amount<br>3,382   | Unit of<br>Measure  | Time   |  |  |
| Residual<br>Waste Code<br>810   | Resid<br>Code<br>Drill cuttings (oil and  | SECTION B. WAST<br>Jual Waste<br>Description<br>gas)<br>1. GENERAL P   | E DESCRIPTION<br>Amount<br>3,382<br>ROPERTIES  | Unit of<br>Measure<br>□ cu yd  □ gal<br>□ lb  ⊠ ton   | Time<br>Frame  |  |  |
| Residual<br>Waste Code<br>810<br>a. pH Ra   | Resid<br>Code<br>Drill cuttings (oil and<br>ange 8.   | SECTION B. WAST<br>Jual Waste<br>Description<br>gas)<br>1. GENERAL P   | E DESCRIPTION<br>Amount<br>3,382<br>ROPERTIES<br>(based on analyses or ki  | Unit of<br>Measure<br>□ cu yd  □ gal<br>□ lb  ⊠ ton   | Time<br>Frame  |  |  |
| Residual<br>Waste Code<br>810<br>a. pH Ra   | Resid<br>Code<br>Drill cuttings (oil and  | SECTION B. WAST<br>Jual Waste<br>Description<br>gas)<br>1. GENERAL P<br>9 to 11.3<br>Liquid Waste (EPA Met<br>Solid (EPA Method 90)  | E DESCRIPTION<br>Amount<br>3,382<br>ROPERTIES<br>(based on analyses or ki<br>thod 9095)<br>95)   | Unit of<br>Measure<br>□ cu yd  □ gal<br>□ lb  ⊠ ton   | Time<br>Frame  |  |  |
| Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi   | Resid<br>Code<br>Drill cuttings (oil and<br>ange 8.<br>cal State  | SECTION B. WAST<br>Jual Waste<br>Description<br>gas)<br>1. GENERAL P<br>9 to 11.3<br>1. Liquid Waste (EPA Me<br>Solid (EPA Method 90)<br>Gas (ambient tempera  | E DESCRIPTION<br>Amount<br>3,382<br>ROPERTIES<br>(based on analyses or kithod 9095)<br>95)<br>ture & pressure)   | Unit of<br>Measure<br>cu yd gal<br>lb X ton   | Time<br>Frame  |  |  |
| Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi   | Resid<br>Code<br>Drill cuttings (oil and<br>ange 8.   | SECTION B. WAST<br>Jual Waste<br>Description<br>gas)<br>1. GENERAL P<br>9 to 11.3<br>1 Liquid Waste (EPA Me<br>Solid (EPA Method 90)<br>1 Gas (ambient tempera<br>Color Greyish Black  | E DESCRIPTION<br>Amount<br>3,382<br>ROPERTIES<br>(based on analyses or k<br>thod 9095)<br>95)<br>ture & pressure)<br>Odo   | Unit of<br>Measure<br>cu yd gal<br>lb X ton<br>nowledge)  | Time<br>Frame  |  |  |
| Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi   | Resid<br>Code<br>Drill cuttings (oil and<br>ange 8.<br>cal State  | SECTION B. WAST<br>Jual Waste<br>Description<br>gas)<br>1. GENERAL P<br>9 to 11.3<br>1. Liquid Waste (EPA Me<br>Solid (EPA Method 90)<br>Gas (ambient tempera  | E DESCRIPTION<br>Amount<br>3,382<br>ROPERTIES<br>(based on analyses or kit<br>thod 9095)<br>95)<br>ture & pressure)<br>Odo<br>I Phases of Separation   | Unit of<br>Measure<br>cu yd gal<br>lb X ton<br>nowledge)<br>r Earthy/slight pe<br>One   | Time<br>Frame  |  |  |
| Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi   | Resid<br>Code<br>Drill cuttings (oil and<br>ange 8.<br>cal State  | SECTION B. WAST<br>Jual Waste<br>Description<br>gas)<br>1. GENERAL P<br>9 to 11.3<br>1 Liquid Waste (EPA Me<br>Solid (EPA Method 90)<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of s   | E DESCRIPTION<br>Amount<br>3,382<br>ROPERTIES<br>(based on analyses or kit<br>thod 9095)<br>95)<br>ture & pressure)<br>Odo<br>I Phases of Separation<br>eparation. Soil and Ro   | Unit of<br>Measure<br>cu yd gal<br>lb X ton<br>nowledge)<br>r Earthy/slight pe<br>One   | Time<br>Frame  |  |  |
| Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi<br>c. Physi   | Resid<br>Code<br>Drill cuttings (oil and<br>ange 8.<br>cal State<br>cal Appearance  | SECTION B. WAST<br>Jual Waste<br>Description<br>gas)<br>1. GENERAL P<br>9 to 11.3<br>1 Liquid Waste (EPA Me<br>2 Solid (EPA Method 90)<br>3 Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquid   | E DESCRIPTION Amount 3,382 ROPERTIES (based on analyses or ki thod 9095) 95) ture & pressure) Odo I Phases of Separation eparation. Soil and Ro SIS ATTACHMENTS  | Unit of<br>Measure<br>□ cu yd □ gal<br>□ lb ⊠ ton<br>nowledge)<br>r Earthy/slight pr<br>One<br>ck Fragments   | Time<br>Frame  |  |  |
| Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi<br>c. Physi<br>c. Physi   | Resid<br>Code<br>Drill cuttings (oil and<br>ange 8.<br>cal State<br>cal Appearance<br>esults of a detailed cher<br>actions, is attached.  | SECTION B. WAST<br>Jual Waste<br>Description<br>gas)<br>1. GENERAL P<br>9 to 11.3<br>1. Liquid Waste (EPA Met<br>Solid (EPA Method 90)<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of s<br>2. CHEMICAL ANALYS<br>nical characterization of the  | E DESCRIPTION Amount 3,382 ROPERTIES (based on analyses or ki thod 9095) 95) ture & pressure) Odo I Phases of Separation eparation. Soil and Ro SIS ATTACHMENTS waste, as described in   | Unit of<br>Measure<br>□ cu yd □ gal<br>□ lb ⊠ ton<br>nowledge)<br>r Earthy/slight pr<br>One<br>ck Fragments<br>the ⊠ `  | Time<br>Frame<br>One Time<br>etroleum  |  |  |
| Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi<br>c. Physi<br>c. Physi<br>a. The ra<br>instru<br>b. A det  | Resid         Code         Drill cuttings (oil and         ange       8.         cal State         cal Appearance         esults of a detailed cher         esults of a detailed cher         ange (constructions, is attached.)         ailed description of the                               | SECTION B. WAST<br>Jual Waste<br>Description<br>gas)<br>1. GENERAL P<br>9 to 11.3<br>1. Liquid Waste (EPA Met<br>Solid (EPA Method 90)<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquic<br>Describe each phase of s<br>2. CHEMICAL ANALYS<br>nical characterization of the<br>waste sampling method is a                                | E DESCRIPTION<br>Amount<br>3,382<br>ROPERTIES<br>(based on analyses or k<br>thod 9095)<br>95)<br>ture & pressure)<br>Odo<br>I Phases of Separation<br>eparation. Soil and Ro<br>SIS ATTACHMENTS<br>waste, as described in<br>ttached.                                      | Unit of<br>Measure<br>cu yd gal<br>lb X ton<br>nowledge)<br>r Earthy/slight pr<br>One<br>ck Fragments<br>the X X  | Time         Frame         One Time         etroleum         Yes       No         Yes       No |  |  |
| Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi<br>c. Physi<br>c. Physi<br>a. The ra<br>instru<br>b. A det<br>c. The q<br>attack  | Resid<br>Code<br>Drill cuttings (oil and<br>ange 8.<br>cal State<br>cal Appearance<br>esults of a detailed cher<br>actions, is attached.<br>ailed description of the<br>uality assurance/quality<br>ned.  | SECTION B. WAST<br>Jual Waste<br>Description<br>gas)<br>1. GENERAL P<br>9 to 11.3<br>1. Liquid Waste (EPA Met<br>Solid (EPA Method 90)<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of s<br>2. CHEMICAL ANALYS<br>nical characterization of the<br>waste sampling method is a<br>r control procedures employ | E DESCRIPTION<br>Amount<br>3,382<br>ROPERTIES<br>(based on analyses or k<br>thod 9095)<br>95)<br>ture & pressure)<br>Odo<br>I Phases of Separation<br>eparation. Soil and Ro<br>SIS ATTACHMENTS<br>waste, as described in<br>ttached.<br>yed by the laboratory(ie          | Unit of<br>Measure<br>cu yd gal<br>lb X ton<br>nowledge)<br>r Earthy/slight pr<br>One<br>ck Fragments<br>the X X  | Time<br>Frame<br>One Time<br>etroleum  |  |  |
| Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi<br>c. Physi<br>c. Physi<br>a. The ra<br>instru<br>b. A det<br>c. The q<br>attact<br>d. The ra   | Resid         Code         Drill cuttings (oil and         ange       8.         cal State         cal Appearance         esults of a detailed cher         ctions, is attached.         ailed description of the         uality assurance/quality         ned.         esults of the hazardous | SECTION B. WAST<br>Jual Waste<br>Description<br>gas)<br>1. GENERAL P<br>9 to 11.3<br>1. Liquid Waste (EPA Met<br>Solid (EPA Method 90)<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquic<br>Describe each phase of s<br>2. CHEMICAL ANALYS<br>nical characterization of the<br>waste sampling method is a                                | E DESCRIPTION<br>Amount<br>3,382<br>ROPERTIES<br>(based on analyses or k<br>thod 9095)<br>95)<br>ture & pressure)<br>Odo<br>I Phases of Separation<br>eparation. Soil and Ro<br>SIS ATTACHMENTS<br>waste, as described in<br>ttached.<br>yed by the laboratory(ie<br>ched. | Unit of<br>Measure<br>□ cu yd □ gal<br>□ lb ⊠ ton<br>nowledge)<br>r Earthy/slight pr<br>One<br>ck Fragments<br>o the ⊠ ``<br>es) is ⊠ ``  | Time         Frame         One Time         etroleum         Yes       No         Yes       No |  |  |

| ter and the second s | <b>•</b>  | Design Description                    |  |   | a a constanta da fara | de la contra de la c |  |  |  |
|---|---|---------------------------------------|--|---|-----------------------|---|--|--|--|
| 11. A.  |   | PROCESS DESCRIPTIO                    |  |   |                       |   |  |  |  |
| а.  | A detailed description of the manufacturing and/or pollution control processes producing Xes No the waste, as specified in the instructions, is attached. |                                       |  |   |                       |   |  |  |  |
| b.  | A schematic of the manufacturing and/or pollution control processes producing the waste, X Yes No as specified in the instructions, is attached.          |                                       |  |   |                       |   |  |  |  |
| C.  | If portions of the information a confidentiality claim, as de   |                                       |  | n for 📋 Yes   | No No                 | N/A   |  |  |  |
| Magarian 30 vights  |   |                                       |  |   |                       |   |  |  |  |
|   | SECTI   | ON C. MANAGEN                         | and the second | an na historia and an |                       |   |  |  |  |
| <u></u>   |   |                                       | DISPOSAL FACILITY  |   |                       |   |  |  |  |
| The a   | area below (ad.) will accommo   | date the identification of            | of two facilities. Attach  | additional sheets   | if necessary          | <b>'.</b>   |  |  |  |
| a.  | Solid waste permit number(s<br>101243   | ) for processing or dis               | oosal facility being util  | ized.   |                       |   |  |  |  |
| b.  | Facility Name   | Northern Tier Solid                   | Waste Authority - Bra  | dford County  |                       |   |  |  |  |
|   | Address Line 1  | 108 Steam Hollow F                    | Road   |   |                       |   |  |  |  |
|   | Address Line 1  |                                       |  |   |                       |   |  |  |  |
|   | Address City State ZIP  | Troy                                  | PA   | 16947   |                       |   |  |  |  |
|   | Municipality  | West Burlington Tw                    | p <b>County</b>  | Bradford  |                       |   |  |  |  |
| c.  | Facility Contact Name   | Charles Woodward                      |  |   |                       |   |  |  |  |
|   | Title   | Recycling Coordinat                   | tor  |   |                       |   |  |  |  |
|   | Phone   | (570) 297-4177                        | Email Address  | chuckwoodward(  | @epix.net             |   |  |  |  |
| d.  | Volume of waste shipped to 1,227  | processing or disposal<br>] cu yd gal | facility in the previous   |   |                       |   |  |  |  |
| a.  | Solid waste permit number(s<br>9-0232-00003   | ) for processing or disp              | oosal facility being util  | ized.   |                       |   |  |  |  |
| b.  | Facility Name   | Hyland Landfill                       |  |   |                       |   |  |  |  |
|   | Address Line 1  | 6653 Herdman Roa                      | d  | ·····   |                       |   |  |  |  |
|   | Address Line 1  |                                       |  |   |                       |   |  |  |  |
|   | Address City State ZIP  | Angelica                              | NY   | 14709   |                       |   |  |  |  |
|   | Municipality  | Angelica                              | County   | Allegany  |                       |   |  |  |  |
| c.  | Facility Contact Name   | Larry Shilling                        |  |   |                       | ·   |  |  |  |
|   | Title<br>Phone  | (585) 466-7271                        | Email Address  | larry.shilling@ca   | sella.com             |   |  |  |  |
| d.  | Volume of waste shipped to 1,158  |                                       | facility in the previous   |   |                       |   |  |  |  |
|   |   | 2. Ben                                | IEFICIAL USE   |   |                       |   |  |  |  |
| a.  | Has the waste been approved   | l for beneficial use?                 | and a second   | <u>an an a</u>           | Yes                   | No No   |  |  |  |
|   | If "Yes", list the general pern   | nit number or approval                | number.  |   |                       |   |  |  |  |
| b.  | Volume of waste beneficially  |                                       |  |   |                       |   |  |  |  |
|   | 0 Ĺ   | ]cuyd 🛄 gal                           | 🗌 lb 📋 ton   | (check one)   |                       |   |  |  |  |
|   |   |                                       |  |   |                       |   |  |  |  |

| 1200200000000 | •  |                               |                   |                   | New York of the second second second |          |
|---------------|--|-------------------------------|-------------------|-------------------|--------------------------------------|----------|
|               |  | PROCESS DESCRIPTION & SC      |                   |                   |                                      | <u> </u> |
| а.            | A detailed description of the the waste, as specified in the   | instructions, is attached.    |                   |                   | Yes                                  | No No    |
| b.            | A schematic of the manufacture as specified in the instruction |                               | processes proc    | ducing the waste, | Yes Yes                              | No No    |
| C.            | If portions of the information a confidentiality claim, as des |                               |                   | n for 🔲 Yes       | No No                                | N/A      |
|               | SECTIO   | ON C. MANAGEMENT              | <b>OF RESIDU</b>  | JAL WASTE         |                                      |          |
| 1943          |  | 1. PROCESSING OR DISPO        | SAL FACILITY      | ES)               |                                      |          |
| The a         | rea below (ad.) will accommod                                  |                               |                   |                   | if necessary.                        |          |
| a.            | Solid waste permit number(s)<br>8-0728-00004                   | for processing or disposal fa | cility being util | ized.             |                                      |          |
| 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                  |                   |                   |                                      |          |
| 1             | Title  | Environmental Manager         |                   |                   |                                      |          |
|               | Phone  |                               | nail Address      | carla.canjar@cas  | sella.com                            |          |
| d.            | Volume of waste shipped to p                                   | cu yd 🗌 gal 🗌                 | lb 🛛 ton          | n (check one)     |                                      |          |
| а.            | Solid waste permit number(s)<br>8-4630-00010                   | for processing or disposal fa | cility being util | ized.             |                                      |          |
| b.            | Facility Name  | Hakes C&D Landfill            |                   |                   |                                      |          |
|               | Address Line 1   | 4376 Manning Ridge Road       |                   |                   |                                      |          |
|               | Address Line 1   | <b>T</b>                      |                   |                   |                                      |          |
|               | Address City State ZIP   | Painted Post                  | NY                | 14870             |                                      |          |
|               | Municipality   | Erwin Twp                     | County            | Steuben           |                                      |          |
| C.            | Facility Contact Name  | Joseph Boyles                 |                   | ·····             |                                      |          |
|               | Title  |                               |                   |                   |                                      |          |
|               | Phone  | (585) 466-7271                | nail Address      | joe.boyles@case   | lla.com                              |          |
| d.            | Volume of waste shipped to p                                   |                               |                   |                   |                                      |          |
|               | 108  | cuyd 🔄 gal 📋                  | lb 🛛 ton          | n (check one)     |                                      |          |
|               |  | 2. BENEFICIA                  | USE               |                   |                                      |          |
| a.            | Has the waste been approved                                    | for beneficial use?           |                   |                   | Yes                                  | 🛛 No     |
|               | If "Yes", list the general perm                                |                               | r.                |                   |                                      |          |
| b.            | Volume of waste beneficially                                   |                               |                   |                   |                                      |          |
|               | 0  | cuyd 🗌 gal 🗌                  | lb 🗌 ton          | n (check one)     |                                      |          |

|                       |  |                          | SECTION D. CERTIFICATION  |
|-----------------------|--|--------------------------|---|
| Repo<br>obtai<br>know | ort and all attached docu<br>ining the information, I<br>vledge. I understand that | ments<br>verify<br>the s | have personally examined and am familiar with the information submitted in this Annual<br>s and that based upon my inquiry of those individuals immediately responsible for<br>that the submitted information is true, accurate and complete to the best of my<br>submission of false information herein is made subject to the penalties of 18 Pa. C.S.<br>on to authorities, which include fine and imprisonment. |
| Chec                  | k the following, if applical   | ole:                     |   |
|                       | I certify the information and has not chan   |                          | ired in Section B-1, General Properties was supplied to the Department for the year   |
|                       | Form Submitted:  |                          | Form 26R  |
|                       |  |                          | Other (specify)   |
|                       | Date Submitted:  |                          |   |
|                       | I certify the information and has not chan   |                          | ired in Section B-2, Chemical Analysis was supplied to the Department for the year  |
|                       | Form Submitted:  |                          | Form 26R  |
| 1                     |  |                          | Other (specify)   |
|                       | Date Submitted:  |                          |   |
|                       | l certify the information for the year and h                                       |                          | ed in Section B-3, Process Description and Schematic, was supplied to the Department t changed.   |
|                       | Form Submitted:  |                          | Form 26R  |
|                       |  |                          | Other (specify)   |
|                       | Date Submitted:  | . <u></u>                |   |
| Name                  | e of Responsible Official  |                          | Title Environmental Specialist  |
| Dina<br>Signa         | Brown  | 5                        | Date 2/25/11  |

2540-PM-BWM0347 Rev. 1/2011
Perspective
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

| typed or legi<br>each attache   | bly printed in the speed sheet as Form  | ccurately completed. All requ<br>paces provided. If additional sp<br>26R, reference the item num<br>sheets needs to match the date   | pace is necessary, ident<br>ber and identify the da  | tify Date Receive   | JSE ONEY   |
|---|---|--|--|---|--|
| General Refe  | erence 287.54   | ·  |  |   |  |
| Date Prepare  | d/Revised   | February 11, 2011  |  |   |  |
|   |   | A. CLIENT (GENERATO  | R OF THE WASTE) IN   | IFORMATION  |  |
| Company Na  | i <b>me</b><br>iergy USA Inc.   |  |  |   |  |
|   | ry, Name of Parent (  | Company  |  | EPA   | Generator ID#  |
| Talisman En   | ergy Inc.   |  |  | N/A   |  |
|   | iling Address Line  | 1 (  | Company Mailing Addres   | ss Line 2   |  |
| 50 Pennwoo  | id Place<br>Idress Last Line – C  | City State   | Zip+4  | Phone   | Ext  |
| Warrendale  |   | PA   | 15086  | (724) 814-530   |  |
|   | ntact Last Name   | First Name   | MI   | Suffi   | (  |
| Brown<br>Municipality   |   | Dina   | County   |   |  |
| Warrendale  |   |  | Allegheny  |   |  |
| Contact Pho   | ne Ext  | Contact Email Address  | <u> </u>   |   |  |
| (724) 814-53  |   | dybrown@talismanusa.   |  |   |  |
|   |   | mpany Mailing Address (noted<br>e generation and storage. Drill  |  |   | Yes 🔯 No   |
| the (0  | 1-024) well pad site l  | located at 720 Knights Drive, Troy   | y Township, Bradford Cou   | inty, PA. Waste is st   | ored in containers   |
| on site.  |   |  |  |   |  |
| Municipality  | Trov  | County Bradf   | ford   | State   | PA   |
| Municipality  | Troy  |  |  | State   | PA   |
| Residual  | F   | SECTION B. WAS   | TE DESCRIPTION   | Unit of   | Time   |
|   | F   | SECTION B. WAS   |  | Unit of<br>Measure  |  |
| Residual  | F   | SECTION B. WAS<br>Residual Waste<br>ode Description  | TE DESCRIPTION   | Unit of   | Time<br>Frame  |
| Residual<br>Waste Code  | F<br>Ci   | SECTION B. WAS<br>Residual Waste<br>ode Description  | TE DESCRIPTION<br>Amount<br>673<br>PROPERTIES  | Unit of<br>Measure<br>□ cu yd □ gal<br>□ lb ⊠ ton   | Time   |
| Residual<br>Waste Code<br>810<br>a. pH Ra   | Drill cuttings (oil   | SECTION B. WAS<br>Residual Waste<br>ode Description<br>and gas)<br>1. GENERAL<br>9.74 to 10.61   | TE DESCRIPTION Amount 673 PROPERTIES (based on analyses or kit   | Unit of<br>Measure<br>□ cu yd □ gal<br>□ lb ⊠ ton   | Time<br>Frame  |
| Residual<br>Waste Code<br>810<br>a. pH Ra   | F<br>Cu<br>Drill cuttings (oil  | SECTION B. WAS<br>Residual Waste<br>ode Description<br>and gas)<br>1. GENERAL I<br>9.74 to 10.61<br>Liquid Waste (EPA M  | TE DESCRIPTION<br>Amount<br>673<br>PROPERTIES<br>(based on analyses or ki<br>ethod 9095)   | Unit of<br>Measure<br>□ cu yd □ gal<br>□ lb ⊠ ton   | Time<br>Frame  |
| Residual<br>Waste Code<br>810<br>a. pH Ra   | Drill cuttings (oil   | SECTION B. WAS<br>Residual Waste<br>ode Description<br>and gas)<br>1. GENERAL I<br>9.74 to 10.61<br>Liquid Waste (EPA M<br>Solid (EPA Method 90  | Amount         673         PROPERTIES         (based on analyses or kiethod 9095)         095)   | Unit of<br>Measure<br>□ cu yd □ gal<br>□ lb ⊠ ton   | Time<br>Frame  |
| Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi   | Drill cuttings (oil   | SECTION B. WAS<br>Residual Waste<br>ode Description<br>and gas)<br>1. GENERAL I<br>9.74 to 10.61<br>Liquid Waste (EPA M  | Amount         673         PROPERTIES         (based on analyses or kill         ethod 9095)         095)         ature & pressure)  | Unit of<br>Measure<br>Cu yd gal<br>Ib X ton   | Time     Frame       Image: Description of the second sec |
| Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi   | Drill cuttings (oil   | SECTION B. WAS<br>Residual Waste<br>ode Description<br>and gas)<br>1. GENERAL I<br>9.74 to 10.61<br>Liquid Waste (EPA M<br>Solid (EPA Method 90<br>Gas (ambient temperation)   | Amount         673         PROPERTIES         (based on analyses or k)         ethod 9095)         095)         ature & pressure)          Odo   | Unit of<br>Measure<br>Cu yd gal<br>Ib X ton<br>nowledge)  | Time     Frame       Image: Description of the second sec |
| Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi   | Drill cuttings (oil   | SECTION B. WAS<br>Residual Waste<br>ode Description<br>and gas)<br>1. GENERAL I<br>9.74 to 10.61<br>Uiquid Waste (EPA M<br>Solid (EPA Method 90<br>Gas (ambient tempera<br>Color Greyish Black   | Amount         673         PROPERTIES         (based on analyses or kill         ethod 9095)         095)         ature & pressure)         <  | Unit of<br>Measure<br>cu yd gal<br>lb X ton<br>nowledge)<br>r Earthy/slight p<br>One  | Time     Frame       Image: Description of the second sec |
| Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi   | Drill cuttings (oil   | SECTION B. WAS<br>Residual Waste<br>ode Description<br>and gas)<br>1. GENERAL I<br>9.74 to 10.61<br>J. Liquid Waste (EPA M<br>Solid (EPA Method 90<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liqui<br>Describe each phase of a  | Amount         673         PROPERTIES         (based on analyses or kill         ethod 9095)         095)         ature & pressure)         Code         Odo         id Phases of Separation         separation.         Soil and Ro   | Unit of<br>Measure<br>cu yd gal<br>lb X ton<br>nowledge)<br>r Earthy/slight p<br>One  | Time     Frame       Image: Description of the second sec |
| Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi<br>c. Physi<br>c. Physi   | F<br>Ca<br>Drill cuttings (oil<br>ange<br>ical State<br>ical Appearance   | SECTIONIB. WAS<br>Residual Waste<br>ode Description<br>and gas)<br>1. GENERAL I<br>9.74 to 10.61<br>1. Liquid Waste (EPA M<br>Solid (EPA Method 90<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liqui<br>Describe each phase of a<br>2. CHEMICAL ANALY<br>chemical characterization of th                                  | TE DESCRIPTION Amount 673 PROPERTIES (based on analyses or k ethod 9095) 095) ature & pressure) C Odo Id Phases of Separation separation. Soil and Ro Sis ATTACHMENTS  | Unit of<br>Measure<br>Cu yd gal<br>Ib X ton<br>nowledge)<br>r _Earthy/slight p<br>One<br>ck Fragments                                   | Time     Frame       Image: Description of the second sec |
| Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi<br>c. Physi<br>c. Physi   | F<br>Cr<br>Drill cuttings (oil<br>ange<br>ical State<br>ical Appearance<br>esults of a detailed<br>actions, is attached.  | SECTION B. WAS<br>Residual Waste<br>ode Description<br>and gas)<br>1. GENERAL I<br>9.74 to 10.61<br>☐ Liquid Waste (EPA M<br>Solid (EPA Method 90<br>☐ Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liqui<br>Describe each phase of 9<br>2. CHEMICAL ANALY<br>chemical characterization of th                                 | Amount         673         PROPERTIES         (based on analyses or k         ethod 9095)         095)         ature & pressure)         Odo         Id Phases of Separation         separation.         Soil and Ro         'SIS ATTACHMENTS         e waste, as described in   | Unit of<br>Measure<br>Cu yd gal<br>Ib X ton<br>nowledge)<br>r Earthy/slight p<br>One<br>ck Fragments                                    | Time<br>Frame  |
| Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi<br>c. Physi<br>c. Physi<br>a. The ra<br>instru<br>b. A det                                    | F<br>Cr<br>Drill cuttings (oil<br>ange<br>ical State<br>cal Appearance<br>esults of a detailed<br>actions, is attached.<br>ailed description of<br>uality assurance/qu          | SECTIONIB. WAS<br>Residual Waste<br>ode Description<br>and gas)<br>1. GENERAL I<br>9.74 to 10.61<br>1. Liquid Waste (EPA M<br>Solid (EPA Method 90<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liqui<br>Describe each phase of a<br>2. CHEMICAL ANALY<br>chemical characterization of th                                  | Amount         673         PROPERTIES         (based on analyses or k         ethod 9095)         095)         ature & pressure)         <   | Unit of<br>Measure<br>Cu yd gal<br>Ib X ton<br>nowledge)<br>r Earthy/slight p<br>One<br>ck Fragments<br>the X                           | Time<br>Frame         One Time         One Time         vetroleum         Yes  |
| Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi<br>c. Physi<br>c. Physi<br>a. The ra<br>instru<br>b. A det<br>c. The q<br>attacl<br>d. The ra | F<br>Cr<br>Drill cuttings (oil<br>ange<br>ical State<br>ical Appearance<br>esults of a detailed<br>actions, is attached.<br>ailed description of<br>uality assurance/qu<br>hed. | SECTION B. WAS<br>Residual Waste<br>ode Description<br>and gas)<br>1. GENERAL I<br>9.74 to 10.61<br>☐ Liquid Waste (EPA M<br>Solid (EPA Method 90<br>☐ Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liqui<br>Describe each phase of a<br>2. CHEMICAL ANALY<br>chemical characterization of th<br>the waste sampling method is | Amount         673         PROPERTIES         (based on analyses or k         ethod 9095)         095)         ature & pressure)         Odo         Id Phases of Separation         separation.         Soil and Ro         'SIS ATTACHMENTS         e waste, as described in         attached.         oyed by the laboratory(id | Unit of<br>Measure<br>□ cu yd □ gal<br>□ lb   ⊠ ton<br>nowledge)<br>r Earthy/slight p<br>One<br>ck Fragments<br>n the   ⊠<br>es) is   ⊠ | Time<br>Frame         One Time         One Time         vetroleum         Yes         No         Yes         No  |

ł

| 1.1.1.1 | 3.  | PROCESS DESCRIPTION & S                   | CHEMATIC ATTAC                         | HMENTS               |               |       |
|---------|---|---|--|----------------------|---------------|-------|
| a.      | A detailed description of the r<br>the waste, as specified in the |   | ion control proces                     | sses producing       | Yes           | 🗌 No  |
| b.      | A schematic of the manufacture as specified in the instruction    |   | l processes prod                       | ucing the waste,     | Yes Yes       | No No |
| C.      | If portions of the information a confidentiality claim, as des    |   |  | n for Yes            | No No         | 🛛 N/A |
|         | SECTIO  | N C. MANAGEMEN                            | T OF RESIDU                            | AL WASTE             |               |       |
|         |   | 1. PROCESSING OR DISP                     | OSAL FACILITY (IE                      | s)                   |               |       |
| The ar  | ea below (ad.) will accommod                                      | ate the identification of two             | facilities. Attach                     | additional sheets    | if necessary. |       |
| a.      | Solid waste permit number(s)<br>101243                            | for processing or disposal                | facility being utili                   | zed.                 |               |       |
| b.      | Facility Name   | Northern Tier Solid Wast                  | e Authority                            |                      |               |       |
|         | Address Line 1  | 108 Steam Hollow Road                     |  |                      |               |       |
|         | Address Line 1  |   |  |                      |               |       |
|         | Address City State ZIP  | Troy                                      | PA                                     | 16947                |               |       |
|         | Municipality  | West Burlington Twp                       | County                                 | Bradford             |               |       |
| с.      | Facility Contact Name   | Charles Woodward                          |  |                      |               |       |
|         | Title   |   |  |                      |               |       |
|         | Phone   | (570) 29 <b>7</b> -4177                   | Email Address                          | chuckwoodward(       | @epix.net     |       |
| d.      | Volume of waste shipped to p<br>603                               | rocessing or disposal facili<br>cu yd gal | t <b>y in the previous</b><br>lb ⊠ ton | year.<br>(check one) |               |       |
| а.      | Solid waste permit number(s)<br>8-0728-00004                      | for processing or disposal                | facility being utiliz                  | zed.                 |               |       |
| b.      | Facility Name   | Chemung County Landfil                    |  |                      |               |       |
|         | Address Line 1  | 1690 Lake Street                          |  |                      |               |       |
|         | Address Line 1  |   |  |                      |               |       |
|         | Address City State ZIP  | Elmira                                    | NY                                     | 14903                |               |       |
|         | Municipality  | Elmira                                    | County                                 | Chemung              |               |       |
| с.      | Facility Contact Name   | Carla Canjar                              |  |                      |               |       |
|         | Title   | Environmental Manager                     |  |                      |               |       |
|         | Phone   | (000) / 00 00 00                          | mail Address                           | carla.canjar@cas     | sella.com     |       |
| d.      | Volume of waste shipped to p                                      | ocessing or disposal facilit<br>cu yd gal | b in the previous Ib ⊠ ton             | year.<br>(check one) |               |       |
|         |   | 2. BENEFICI                               | ai Usf                                 |                      |               |       |
| a.      | Has the waste been approved                                       |   |  |                      | ☐ Yes         | No No |
|         | If "Yes", list the general permi                                  |   | er.                                    |                      |               |       |
| b.      | Volume of waste beneficially u                                    |   | · · · · · · · · · · · · · · · · · · ·  |                      |               |       |
|         | 0   | cuyd 🗌 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<br>Report and all attached documents and that based upon my inquiry of those individuals immediately re<br>obtaining the information, I verify that the submitted information is true, accurate and complete to the<br>knowledge. I understand that the submission of false information herein is made subject to the penalties<br>§4904, relating to unsworn falsification to authorities, which include fine and imprisonment. | esponsible for<br>e best of my |
| Check the following, if applicable:  |                                |
| I certify the information required in Section B-1, General Properties was supplied to the Departmer and has not changed.   | t for the year                 |
| Form Submitted: Gran Form 26R  |                                |
| Other (specify)  |                                |
| Date Submitted:  |                                |
| I certify the information required in Section B-2, Chemical Analysis was supplied to the Departmen and has not changed.  | t for the year                 |
| Form Submitted: Gran 26R   |                                |
| Other (specify)  |                                |
| Date Submitted:  |                                |
| I certify the information required in Section B-3, Process Description and Schematic, was supplied to the for the year and has not changed.  | ne Department                  |
| Form Submitted:  Form 26R  |                                |
| Other (specify)  |                                |
| Date Submitted:  |                                |
| Name of Responsible Official Title Environmental Specialist  |                                |
| Dina Brown   |                                |
| Signature <u>Am Ston</u> Date <u>2/2S/11</u>   |                                |



# **Certificate of Analysis**

| Project Name:   | Marcellus Shale | Workorder:    | 9814714               |  |
|-----------------|-----------------|---------------|-----------------------|--|
| Purchase Order: |                 | Workorder ID: | 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

hui.

Anna G Milliken Laboratory Manager

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

Report ID: 9814714



### SAMPLE SUMMARY

| Workorder 98 | L2H Well Pad://NV+Cut. |        |                |                | Discard Date: 11/06/2009 |
|--------------|------------------------|--------|----------------|----------------|--------------------------|
| Lab ID       | Sample ID              | Matrix | Date Collected | Date Received  | Collected By             |
| 9814714001   | L2H - Inv Cuttings Bin | Solid  | 10/20/09 13:20 | 10/21/09 09:15 | Steve Gridley            |

Workorder Comments:

Notes

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

#### Standard Acronyms/Flags

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



### ANALYTICAL RESULTS

| Lab ID: 9814714001                    |             |       |          | Date Col | lected: 10/20/2009 1 | 3:20     |     | Matrix: Solid  |     |      |
|---------------------------------------|-------------|-------|----------|----------|----------------------|----------|-----|----------------|-----|------|
| Sample ID: L2H -                      | Inv Cutting | s Bin |          | Date Rec | ceived: 10/21/2009 0 |          |     |                |     |      |
| Parameters                            | Results     | Flag  | Units    | RDL      | Method               | Prepared | By  | Analyzed       | Ву  | Cntr |
| PETROLEUM HC's                        | 1           |       |          |          |                      |          |     |                |     |      |
| Total Petroleum<br>Hydrocarbons (TPH) | 202000      |       | mg/kg    | 16300    | SW846 8015D          | 10/21/09 | RSS | 10/23/09 14:16 | ΊĴΉ | A1   |
| WET CHEMISTRY                         |             |       |          |          |                      |          |     |                |     |      |
| Free Liquids                          | Negative    |       |          |          | SW846 9095           |          |     | 10/22/09 12:15 | SDL | А    |
| Moisture                              | 18.8        |       | %        | 0.1      | SM20-2540 G          |          |     | 10/21/09 22:45 | MBR | А    |
| pН                                    | 10.61       | 1,2   | pH_Units |          | SW846 9045D          |          |     | 10/22/09 07 44 | SAD | А    |
| Total Solids                          | 81.2        |       | %        | 0.1      | SM20-2540 G          |          |     | 10/21/09 22:45 | MBR | А    |
| 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     | 013      | 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 | ΕL  | А    |
| Final pH                              | 5.28        |       | pH_Units |          | SW846 1311           |          |     | 10/22/09 07:00 | EL  | А    |
| Preliminary pH after DI water         | 8.01        |       | pH_Units |          | SW846 1311           |          |     | 10/22/09 07:00 | EL  | А    |
| Preliminary pH after HCl              | 5.01        |       | pH Units |          | SW846 1311           |          |     | 10/22/09 07:00 | EL  | А    |

#### 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.

ann mille

Anna G Milliken Laboratory Manager

Page 3 of 5



# ANALYTICAL RESULTS QUALIFIERS\FLAGS

Workorder: 9814714 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.

| Analytical<br>Laboratory Service<br>Environmental w Kndustilel Hyperne w<br>34 Dogwood Lama w Middletown, PA 17057 w 717.94 | Field Services | 17,944.1430 |                               |         | QU         | EST<br>D'AREA | FOR       |                      | LYS      | IS<br>D RY TH<br>NL BAC |          | Generation<br>NT | ni try AL | *                   | P9.  |
|---|----------------|-------------|-------------------------------|---------|------------|---------------|-----------|----------------------|----------|-------------------------|----------|------------------|-----------|---------------------|--|
| llent Name: Fortuna Energy Inc. (FEI)   |                | 1           | Containe                      | r Type  | Glass      | Glasa         | Glass     | Glass                |          |                         |          |                  |           | Ĩ                   | Receipt Information (completed by Receiving Lab) |
| dress: 337 Daniel Zenker Drive  |                | PA<br>S     | Contain                       | er Sise | 4-0Z       | 4-02          | 4-02      | 4-02                 |          |                         |          |                  |           |                     | Cooler Temp: 6 Therm 10: 5/023                   |
| Horseheads, New York 14845  |                |             | Preser                        | valins  | N          | N             | N         | N                    |          |                         |          |                  |           |                     | Ho. of Coolern:Y H In                            |
| ntact: Sleve Gridley  | <u>*</u>       |             |                               |         |            | A             | NALYS     | ESIMET               | HODR     | EQUES                   | TED      |                  |           |                     | Custedy Seets Present?                           |
| mell: 607-731-0145  |                |             |                               | ٢.      | برق        | 1             |           |                      |          |                         |          |                  | [· -      |                     | (If present) Solds Intact?                       |
| ject Namel#:   2H Well Pad: W   | V + Cuttings   |             |                               |         | ດ<br>ວັ•   |               |           |                      |          |                         |          |                  |           |                     | Roceivad en Ica?                                 |
| To: FEI: AF #73289  |                |             |                               |         | 3.         |               |           | Ê                    |          |                         |          |                  |           |                     | COC/Labels ComptetelAccurate?                    |
| TAT Normal-Standard TAT is 10-  |                |             |                               |         | 315        | ,             | 1         | Liquids (% Moisture) |          |                         |          | 1                |           |                     | Cont. in Good Cand.?                             |
| X Rush-Subject to ALSI appro  |                | -           |                               | ;       | Z          |               |           | N N                  |          |                         |          |                  |           |                     | Correct Containers?                              |
|   | pproved By:    |             |                               |         |            | ].            |           | 8                    |          |                         |          | 1                |           |                     | Correct Sample Volarges?                         |
| sall? X Y geowetlands@aol.com   | & 500 COMIT    | rents       |                               |         | N N        | 1             | l         | Į.                   | l        |                         |          | l I              | l         |                     | Correct Preservation7                            |
| 1x7 Y No:   |                |             | U                             | ĕ       | 5.0        | ほし            |           | 8                    |          |                         |          |                  |           |                     | Headspace/Volatiles?                             |
| Sample Description/Location<br>(as it will appear on the lab report)  | Sample         | -           | 80                            | "Watch  | <u>P4Ť</u> | 18            |           |                      | <u> </u> | <u> </u>                |          | <u> </u>         |           | L                   | CounterTracking # 2597 4333 6954                 |
|   | Date           | Time        |                               |         | ·          | _             |           | <del>Y</del>         | ners Pe  | r Sample                | or Fig   | d Resul          | ts Below  | ",<br>T <sup></sup> | Sample/COC Companys                              |
| Knights L2H-Inv Cuttings-Bin  | 102009         | 1120        | $\left\{ \downarrow \right\}$ | SO      | X          | X             | <u> </u>  | <u>⊢×</u>            | 5        | 402                     |          | <u> </u>         | <u> </u>  | +                   | Drill Cuttings w residual oil-based drilling flu |
|   |                |             | ┢╂                            |         | <u> </u>   | ┼             |           |                      | 2        | hu                      |          | are              | <u>b</u>  |                     | IF TPH IS > 120,000 mg/Kg - RUN EPA 8260 &82     |
|   | -              |             | ╊╋                            |         | ┼──        | +             | +         | <u>-</u>             | t        | KUM                     | 10       |                  | 4!        |                     | WITH RUSH  |
|   | t              |             | +                             | _       | <u>├</u>   |               | +         | 1                    | <u> </u> | <u> </u>                |          | ┼╼──             | +         | ┼──                 |  |
|   |                |             |                               |         | 1          | 1-            | 1         | <u> </u>             | <u>†</u> | <u> </u>                | <u> </u> |                  | <u> </u>  |                     |  |
| ·   |                |             | 1. 1                          |         | 1-         | 1—            | 1         | 1                    |          | 1                       |          | 1                |           |                     |  |
| ······································  |                |             |                               |         |            |               |           |                      |          | 1-                      |          |                  |           |                     |  |
|   |                |             |                               |         |            |               |           |                      |          |                         |          |                  |           |                     | Sampling oRental Equipment                       |
| 0   |                |             |                               |         |            |               |           | 4                    |          |                         |          |                  |           |                     | Sampling oRental Equipment                       |
| OMMENTS: Also Email Results to:<br>rollingrzäyschutions.ca &  | <b>.</b>       | LOOGED B    | r(signat                      | N10):   |            | 7             | h         | w                    | Ŗ        | \$ 16                   | 2/09     | 1124             |           |                     | Standard Special Processing Sta                  |
| hyilis@waynelwplandfill.com & kathymstron   | ARabit ust     | REVIEWED    | 81 ( <b>sig</b> a             | uture)  |            | 5             | 30        |                      | <u> </u> | 50                      | 2210     | E,               | Data      | $\square$           | LP-ike USACE                                     |
|   |                | 1           | [                             |         | 1          |               | ~ ~       |                      | -        | • •                     |          | 7                | ă j       |                     | JSACE Navy N                                     |
| Beinquished By / Company Na   |                | Date        |                               | Ime     | -          |               | · · · ·   | Comp                 | ny Na    | 18                      | Date     | _                | _         |                     |  |
| Man Mall U  | UBG-           | 102009      | 160                           | 0       | 2 Fe       | dex #8        | 97833     | 6956                 |          |                         | 1020     |                  |           |                     | X P/   |
|   |                | <u> </u>    |                               |         | 14         | ×             | <u>-W</u> | <u> </u>             | AU       | <u>51</u>               | ig/x/b   | 0915             |           | _                   | to PADEP? Sample Disposal Ni                     |
|   |                | ļ           |                               |         | 6          |               |           | ۰ <b>ـــــ</b>       |          |                         | <u> </u> | <u> </u>         | -         |                     | . #237861 Lab <sup>2</sup> X                     |
| ,<br>   |                |             | 1                             |         | 8          |               |           |                      |          |                         | L        | 1                | PWS       |                     | 101243 Special                                   |
| · · · · · · · · · · · · · · · · · · ·   |                |             |                               |         | 10         |               |           |                      |          |                         |          |                  | EDDS      | : Forma             | Tripe  |
|   | Composite      |             |                               | -       | -De-La     | - 18 -        | - CIMA    | 2000                 |          | -01.01                  | -04-04   | ا -اطر سنة 1     | e         |                     | =Soll; WPaWipe; WW=Westewater                    |



www.analyticaliab.com



# **Certificate of Analysis**

| Project Name:   | Marcelius Shale | Workorder:    | 9815605 |  |
|-----------------|-----------------|---------------|---------|--|
| Purchase Order: |                 | Workorder ID: | L2H     |  |

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

October 29, 2009

Dear Mr. Gridley,

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

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

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

Please visit us at www.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.

112

Anna G Milliken Laboratory Manager

Report ID: 9815605



#### SAMPLE SUMMARY

| Workorder: 98 | 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



# ANALYTICAL RESULTS

| Lab ID: 9815605001                    |         |      |          |          | lected: 10/26/2009 1 |          |     | Matrix: Solid  |     |      |
|---------------------------------------|---------|------|----------|----------|----------------------|----------|-----|----------------|-----|------|
| Sample ID: Inv-Cuttings               |         |      |          | Date Red | ceived: 10/27/2009 0 | 9:30     |     |                |     |      |
| Parameters                            | Results | Flag | Units    | RDL      | Method               | Prepared | Ву  | Analyzed       | By  | Cntr |
| PETROLEUM HC's                        |         |      |          |          |                      |          |     |                |     |      |
| Total Petroleum<br>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 | А    |
| pН                                    | 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    |
| CLP 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   |
| CLP LEACHATE                          |         |      |          |          |                      |          |     |                |     |      |
| Extraction Fluid Used                 | 1       |      |          |          | SW846 1311           |          |     | 10/28/09 07:20 | ΕL  | А    |
| Final pH                              | 5.94    |      | pH_Units |          | SW846 1311           |          |     | 10/28/09 07:20 | EL  | А    |
| Preliminary pH after DI water         | 7.23    |      | pH_Units |          | SW846 1311           |          |     | 10/28/09 07:20 | ΕL  | A    |
| Preliminary pH after HCI              | 1.84    |      | pH Units |          | SW846 1311           |          |     | 10/28/09 07:20 | EL  | А    |

#### 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.

ann millie

Anna G Milliken Laboratory Manager



# ANALYTICAL RESULTS QUALIFIERS\FLAGS

Workorder: 9815605

# 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.

L2H

| Analytical<br>Laboratory Service<br>Environmental - Environmental - Environmental - Environmental - Environmental - Middebown, PA 17057 - 717.544  | Pano Services Al<br>5641 + Pax: 717.044.1430 C | CHA<br>REQUI<br>L SHADED AR<br>IENT / SAMPL         | EAS MUS<br>ER. INST                        | DR AN<br>IT BE CO<br>RUCTIO | ALYSIS<br>MPLETED  | E BACK.              | 8            | Courier:<br>Iracking #: | <sup>2</sup> age 4 <sup>01</sup><br>- 4 4 -<br>1 <u>3 83 9 7</u> 0 |   |                                      | ; 6                       | 0 5   |                             |                              | 1   |                            |   |
|--|--|---|--|-----------------------------|--------------------|----------------------|--------------|-------------------------|--|---|--------------------------------------|---------------------------|---|-----------------------------|------------------------------|---|----------------------------|---|
| Co. Narre: Fortung Bu<br>Contact Marine: Steve Cord<br>Address:  | hey Phone: 6                                   | 07<br>31-0145                                       | Trype<br>Type<br>Trype<br>State<br>Present | harr y<br>ruho N            | G- 4<br>4 U<br>2 - | G-C<br>4-G<br>ANALYS |              | THOD R                  | EQUESTED   |   | - <u>- 1</u> -                       | ooler Te                  | ne<br>ne<br>ne<br>ne<br>ne<br>ne<br>ne<br>ne<br>ne<br>ne<br>ne<br>ne<br>ne<br>n | Ne<br>110                   | <b>万</b><br>く                |   | 34 Dog                     |   |
| Bill to platinics than Report by:<br>Project Name/#:<br>TAT:<br>Standard TAT in 10-12 by sin<br>TAT:<br>Standard TAT in 10-12 by sin<br>Standard TAT in 10-12 by s | L2H ALSI QUOI<br>Neto days. Data Required      | yghr.<br>Sot  |  | TELP & RENA MERES           | TPH                | 2 mortune            | PH           |                         | 2) 407.<br>Da  | Sej) 5445<br>Wj 27  | correct containers? (* ) * 2 - 3 - 3 | ,106                      | alo<br>alo  | HandspaceVolationan         | ŝ                            | 19<br>19<br>19<br>19<br>19<br>19<br>19<br>19<br>19<br>19<br>19<br>19<br>19<br>1 | Dogwood Lane - Middletown, | VALYTICAL<br>ABORATORY<br>ERVICES, ÎNC.                   |
| Sample Description/Location  | COC Comments<br>Drill Cuttings                 | Sample Mill<br>Date Th<br>10/26 /0/                 | <b>74</b>                                  | 50 /                        |                    | Enter N              | iumber       | of Con                  | tainers Per Ar   | nalysis   |                                      | 2                         | 0   | *<br>-<br>-                 | *<br>9                       |   | PA 17057                   | www.analyticallab.<br>NELAP Accredited<br>PA 22-293 NJ PA |
| 4<br>5<br>6<br>7   | •  |   |  |                             |                    |                      |              |                         |  |   | Custody seats Present?               | (if present) Seels intert | Received on ide?  | COCKabels complete/accurate | Container in good condition? |   | Phone: 717-944-5541        | icallab.com<br>credited<br>NJ PA010                       |
| sampleD BY (Please Print): Skell Grad<br>Sheve Grad & Y<br>Relingvished By / Company Na<br>1 Grad & Grad & Grad<br>3<br>5  | REVIEWED BY (standard):                        | 12 F2d EX<br>6                                      | ier By TC                                  |                             | ame<br>37.707      | Date                 | Time<br>1500 | EDBs Data Defiverables  | Standard<br>CLP-ike<br>NJ-Reduced<br>NJ-Fuli                       | STMA         State Sample           Farma 700         Callectual In7           rra         40           rra         HJ           rra         HJ           rra         HJ           rra         HJ           rra         HJ           rra         HJ           STMA         State Sample |                                      |                           | Pickup<br> Labor<br> Cemp   | SERVI<br>osta 31<br>(Eq./pr | nçting                       |   | Fax:                       | ACCREOTIN ACCO  |
| 9<br>Copies: WINTE-ORIGINAL CANARY-CUSTOM  |  | 10<br>10<br>Nir: OW=Drinking W<br>Type: AQ-Amber GI |  |                             |                    |                      | ցլ.=⊊երվ     | ge; 60%84               |  |   |                                      |                           |   | Pav 6                       | 507                          |   | 717-944-1430               | OHO JOHO  |



# **Certificate of Analysis**

| Project Name:  | Marcellus Shale | Workorder:    | 9816272 |  |
|----------------|-----------------|---------------|---------|--|
| Purchase Order |                 | Workorder ID: | L2H     |  |

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

November 3, 2009

Dear Mr. Gridley,

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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.

hill.

Anna G Milliken Laboratory Manager

Report ID: 9816272



### SAMPLE SUMMARY

| Workorder: 98 | 816272 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).
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- -- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141
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- PQL Practical Quantitation Limit
- RDL Reporting Detection Limit
- ND Not Detected indicates that the analyte was Not Detected at the RDL
- Cntr Analysis was performed using this container
- RegLmt Regulatory Limit
- LCS Laboratory Control Sample
- MS Matrix Spike
- MSD Matrix Spike Duplicate
- DUP Sample Duplicate
- %Rec Percent Recovery
- RPD Relative Percent Difference



ANALYTICAL RESULTS

| Lab ID: 9816272001              |          |      |              | Date Col         | lected: 10/26/2009 1 | 0:15     |     | Matrix: Solid  |     |          |
|---------------------------------|----------|------|--------------|------------------|----------------------|----------|-----|----------------|-----|----------|
| Sample ID: Inv - Cuttings       |          |      |              | Date Re          | ceived: 10/27/2009 0 | 9:30     |     |                |     |          |
| Parameters                      | Results  | Flag | Units        | RDL              | Method               | Prepared | By  | Analyzed       | By  | Cntr     |
| CLP VOLATILE ORGANICS           |          |      |              |                  |                      |          |     |                |     |          |
| Benzene                         | ND       |      | ug/L         | 20.0             | SW846 8260B          |          |     | 11/3/09 10:29  | MES | А        |
| 2-Butanone                      | ND       |      | ug/L         | 200              | SW846 8260B          |          |     | 11/3/09 10:29  | MES | А        |
| Carbon Tetrachloride            | ND       |      | ug/L         | 20.0             | SW846 8260B          |          |     | 11/3/09 10:29  | MES | А        |
| Chlorobenzene                   | ND       |      | ug/L         | 20.0             | SW846 8260B          |          |     | 11/3/09 10:29  | MES | А        |
| Chloroform                      | ND       |      | ug/L         | 20.0             | SW846 8260B          |          |     | 11/3/09 10:29  | MES | А        |
| 1.2-Dichloroethane              | ND       |      | ug/L         | 20.0             | SW846 8260B          |          |     | 11/3/09 10:29  | MES | А        |
| 1,1-Dichloroethene              | ND       |      | ug/L         | 20.0             | SW846 8260B          |          |     | 11/3/09 10:29  | MES | А        |
| Tetrachloroethene               | ND       |      | ug/L         | 20.0             | SW846 8260B          |          |     | 11/3/09 10.29  | MES | А        |
| Trichloroethene                 | ND       |      | ug/L         | 20.0             | SW846 8260B          |          |     | 11/3/09 10:29  | MES | А        |
| √inyl Chloride                  | ND       |      | ug/L         | 20.0             | SW846 8260B          |          |     | 11/3/09 10:29  | MES | А        |
| 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 | А        |
| Dibromofluoromethane (S)        | 4.4      |      | %            | 78-116           | SW846 8260B          |          |     | 11/3/09 10:29  | MES | A        |
| oluene-d8 (S)                   | 4.9      |      | %            | 76-127           | SW846 8260B          |          |     | 11/3/09 10:29  | MES | A        |
| CLP SEMI-VOLATILES              |          |      |              |                  |                      |          |     |                |     |          |
| np-Cresol                       | ND       |      | ug/L         | 160              | SW846 8270D          | 11/2/09  | TNC | 11/2/09 22:08  | CGS | A1       |
| p-Cresol                        | ND       |      | ug/L         | 160              | SW846 8270D          | 11/2/09  | TNC | 11/2/09 22:08  | CGS | A1       |
| .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       |
| lexachlorobenzene               | 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       |
| Vitrobenzene                    | 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<br>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     |
| 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       |
| erphenyl-d14 (S)                | 80       |      | %            | 50-122           | SW846 8270D          | 11/2/09  | TNC | 11/2/09 22:08  | CGS | A1       |
| litrobenzene-d5 (S)             | 80<br>82 |      | %            | 40-110           | SW846 8270D          | 11/2/09  | TNC | 11/2/09 22:08  | CGS | A1       |
| <b>C</b> 1 1 1 1 1 ( <b>C</b> 1 | 69.9     |      | %            | 40-110<br>50-110 | SW846 8270D          | 11/2/09  | TNC |                |     |          |
| -Fluorobiphenyl (S)             |          |      | %            | 20-75            | SW846 8270D          |          |     | 11/2/09 22:08  | CGS |          |
| -Fluorophenol (S)               | 48.7     |      | 70           | 20-73            | 377040 021 UL        | 11/2/09  | TNC | 11/2/09 22:08  | CGS | <u> </u> |
| CLP LEACHATE                    |          |      |              |                  |                      |          |     |                |     |          |
| xtraction Fluid Used            | 1        |      |              |                  | SW846 1311           |          |     | 10/30/09 06:45 | EL  | А        |
| inal pH                         | 6.14     |      | pH_Units     |                  | SW846 1311           |          |     | 10/30/09 06:45 | EL  | А        |
| Preliminary pH after DI water   | 7.23     |      | pH_Units     |                  | SW846 1311           |          |     | 10/30/09 06:45 | EL  | А        |
| reliminary pH after HCI         | 1.84     |      | pH_Units     |                  | SW846 1311           |          |     | 10/30/09 06:45 | EL  | А        |



# ANALYTICAL RESULTS

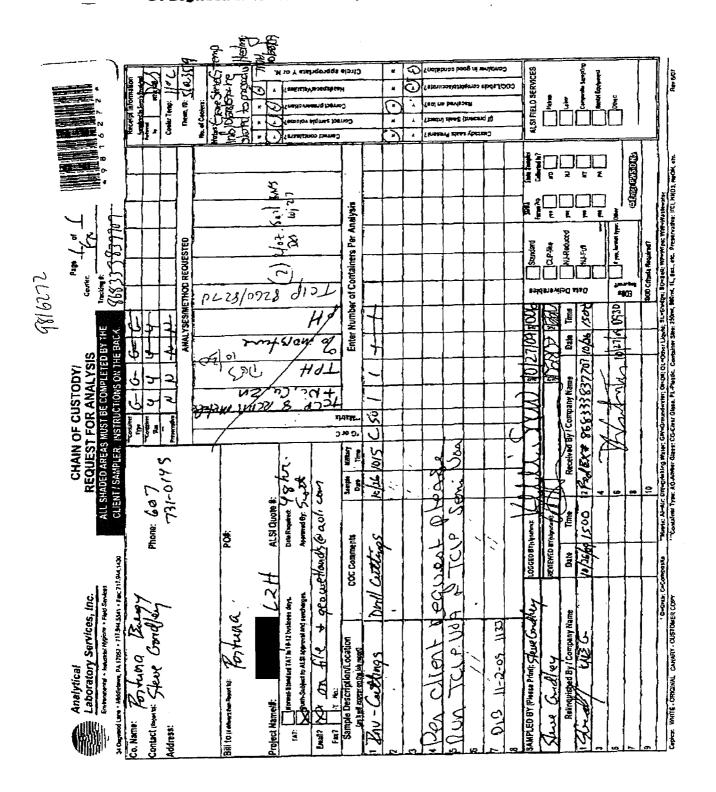
| Workorder: 9 | 816272                                | .2H     |      |       |                 | ···· =     |          |    |         |       |    |      |  |
|--------------|---------------------------------------|---------|------|-------|-----------------|------------|----------|----|---------|-------|----|------|--|
| Lab ID:      | 9816272001                            |         |      |       | Date Collected: | 10/26/2009 | 10:15    | N  | latrix. | Solid |    |      |  |
| Sample ID:   | Inv - Cuttings                        |         |      |       | Date Received   | 10/27/2009 | 09:30    |    |         |       |    |      |  |
| Parameters   | · · · · · · · · · · · · · · · · · · · | Results | Flag | Units | RDL             | Method     | Prepared | By | Anal    | zed   | Ву | Cntr |  |

Sample Comments:

ann millie Anna G Milliken

Laboratory Manager





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

| typed or legil<br>each attache  | bly printed in the spaces<br>ed sheet as Form 26R,   | tely completed. All requi<br>provided. If additional sp<br>reference the item numb<br>ts needs to match the date   | ace is necessary, iden<br>er and identify the d   | tify Date Rece  | PUSE ONLY<br>Dived & General Notes |
|---|--|--|---|---|------------------------------------|
| General Refe  | rence 287.54   |  |   |   |                                    |
| Date Prepare  | d/Revised Fet  | oruary 11, 2011  |   |   |                                    |
|   |  | <b>CLIENT</b> (GENERATOR   | OF THE WASTE) IN  | <b>IFORMATION</b>   | V                                  |
| Company Na  |  |  |   |   |                                    |
|   | ergy USA Inc.<br>ry, Name of Parent Comp   | anv  |   | EP  | A Generator ID#                    |
| Talisman En   | ergy Inc.  |  |   | <br>N//   |                                    |
|   | iling Address Line 1   | Co   | ompany Mailing Addre  | ss Line 2   |                                    |
| 50 Pennwoo  | d Place<br>dress Last Line – City  | State  | Zip+4   | Phone   | Ext                                |
| Warrendale  | uless Last Line - Oity   | PA   | 15086   | (724) 814-5   |                                    |
|   | ntact Last Name  | First Name   | MI  |   | ffix                               |
| Brown   |  | Dina   |   |   |                                    |
| Municipality<br>Warrendale  |  |  | <b>County</b><br>Allegheny  |   |                                    |
| Contact Phor  | ne Ext   | Contact Email Address  |   |   |                                    |
| (724) 814-53  |  | dybrown@talismanusa.c  |   |   |                                    |
|   |  | ny Mailing Address (noted a<br>neration and storage. <u>Drill c</u>  |   | uting notural good  | Yes No                             |
| the   | (03-008) well pad site I   | located at 2202 Wolfe Hollow   | Road. Columbia Towns  | hip. Bradford Cou   | ntv. PA. Waste is                  |
| stored in conta   | ainers on site.  |  |   |   |                                    |
| Municipality  | Columbia   | County Drodfe  | ord   | State   | PA                                 |
|   |  | County Bradfo  |   |   |                                    |
|   |  | SECTION B. WAST  |   |   |                                    |
| Residual<br>Waste Code  | Residu   |  |   | Unit of<br>Measure  | Time<br>Frame                      |
| Residual  | Residu   | SECTION B. WAST<br>ual Waste<br>lescription  | E DESCRIPTION   | Unit of<br>Measure  | Time<br>Frame                      |
| Residual<br>Waste Code  | Residu<br>Code D   | SECTION B. WAST<br>ual Waste<br>bescription<br>gas)  | Amount<br>8,491   | Unit of<br>Measure  | Time<br>Frame                      |
| Residual<br>Waste Code  | Residu<br>Code D<br>Drill cuttings (oil and g  | SECTION B. WAST<br>ual Waste<br>lescription<br>gas)<br>1. GENERAL P  | Amount<br>8,491   | Unit of<br>Measure<br>Cuyd ga<br>Ub X tor   | Time<br>Frame                      |
| Residual<br>Waste Code<br>810<br>a. pH Ra   | Residu<br>Code D<br>Drill cuttings (oil and g  | SECTION B. WAST<br>ual Waste<br>description<br>gas)<br>1. GENERAL P<br>79 to 11.10<br>Liquid Waste (EPA Me<br>Solid (EPA Method 905<br>Gas (ambient temperat   | Amount<br>8,491<br>ROPERTIES<br>(based on analyses or k<br>thod 9095)<br>95)<br>ture & pressure)  | Unit of<br>Measure<br>Cuyd ga<br>Ub X tor<br>nowledge)  | Time<br>Frame                      |
| Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi   | Residu<br>Code D<br>Drill cuttings (oil and g<br>ange 9.7  | SECTION B. WAST<br>val Waste<br>vescription<br>gas)<br>1. GENERAL P<br>79 to 11.10<br>Liquid Waste (EPA Me<br>Solid (EPA Method 905<br>Gas (ambient temperat<br>Color Greyish Black  | Amount     Amount     A,491     ROPERTIES     (based on analyses or k thod 9095)     95) ture & pressure)    Odo  | Unit of<br>Measure<br>Cu yd ga<br>Ib X tor<br>nowledge)   | Time<br>Frame                      |
| Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi   | Residu<br>Code D<br>Drill cuttings (oil and g<br>ange 9.7<br>cal State   | SECTION B. WAST<br>ual Waste<br>lescription<br>gas)<br>1. GENERAL P<br>'9 to 11.10<br>Liquid Waste (EPA Me<br>Solid (EPA Method 905<br>Gas (ambient temperat<br>Color Greyish Black<br>Number of Solid or Liquid   | EDESCRIPTION Amount 8,491 ROPERTIES (based on analyses or k thod 9095) 95) ture & pressure) Odo Phases of Separation  | Unit of<br>Measure<br>Cu yd ga<br>Ib S tor<br>nowledge)<br>r Earthy/Sligh<br>One  | Time<br>Frame                      |
| Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi   | Residu<br>Code D<br>Drill cuttings (oil and g<br>ange 9.7<br>cal State   | SECTION B. WAST<br>val Waste<br>vescription<br>gas)<br>1. GENERAL P<br>79 to 11.10<br>Liquid Waste (EPA Me<br>Solid (EPA Method 905<br>Gas (ambient temperat<br>Color Greyish Black  | EDESCRIPTION Amount 8,491 ROPERTIES (based on analyses or k thod 9095) 95) ture & pressure) Odo Phases of Separation  | Unit of<br>Measure<br>Cu yd ga<br>Ib S tor<br>nowledge)<br>r Earthy/Sligh<br>One  | Time<br>Frame                      |
| Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi<br>c. Physi   | Residu<br>Code D<br>Drill cuttings (oil and g<br>ange 9.7<br>cal State<br>cal Appearance   | SECTION B. WAST<br>ual Waste<br>lescription<br>gas)<br>1. GENERAL P<br>'9 to 11.10<br>Liquid Waste (EPA Met<br>Solid (EPA Method 909<br>Gas (ambient temperat<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of so<br>2. CHEMICAL ANALYS   | EDESCRIPTION Amount 8,491 ROPERTIES (based on analyses or k thod 9095) 95) ture & pressure) Odo Phases of Separation eparation. Soil and Ro SIS ATTACHMENTS   | Unit of<br>Measure<br>cu yd ga<br>lb dtor<br>nowledge)<br>r Earthy/Sligh<br>One<br>ck Fragments                                       | Time<br>Frame                      |
| Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi<br>c. Physi<br>c. Physi   | Residu<br>Code D<br>Drill cuttings (oil and g<br>ange 9.7<br>cal State<br>cal Appearance   | SECTION B. WAST<br>ual Waste<br>description<br>gas)<br>1. GENERAL P<br>'9 to 11.10<br>1. Liquid Waste (EPA Me<br>Solid (EPA Method 905<br>Gas (ambient temperat<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of so   | EDESCRIPTION Amount 8,491 ROPERTIES (based on analyses or k thod 9095) 95) ture & pressure) Odo Phases of Separation eparation. Soil and Ro SIS ATTACHMENTS   | Unit of<br>Measure<br>cu yd ga<br>lb dtor<br>nowledge)<br>r Earthy/Sligh<br>One<br>ck Fragments                                       | Time<br>Frame                      |
| Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi<br>c. Physi<br>c. Physi<br>a. The re<br>instru                                    | Reside<br>Code D<br>Drill cuttings (oil and g<br>ange 9.7<br>cal State<br>cal Appearance   | SECTION B. WAST<br>wal Waste<br>lescription<br>gas)<br>1. GENERAL P<br>9 to 11.10<br>Liquid Waste (EPA Me<br>Solid (EPA Method 905<br>Gas (ambient temperat<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of so<br>2. CHEMICAL ANALYS<br>lical characterization of the                              | E DESCRIPTION Amount 8,491 ROPERTIES (based on analyses or k thod 9095) 95) ture & pressure) Odo Phases of Separation eparation. Soil and Ro SIS ATTACHMENTS waste, as described in   | Unit of<br>Measure<br>cu yd ga<br>lb dtor<br>nowledge)<br>r Earthy/Sligh<br>One<br>ck Fragments                                       | Time<br>Frame                      |
| Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi<br>c. Physi<br>c. Physi<br>a. The re<br>instru<br>b. A deta                       | Reside<br>Code D<br>Drill cuttings (oil and g<br>ange 9.7<br>cal State<br>cal Appearance<br>esults of a detailed chem<br>actions, is attached.<br>ailed description of the w<br>uality assurance/quality         | SECTION B. WAST<br>ual Waste<br>lescription<br>gas)<br>1. GENERAL P<br>'9 to 11.10<br>Liquid Waste (EPA Met<br>Solid (EPA Method 909<br>Gas (ambient temperat<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of so<br>2. CHEMICAL ANALYS   | Amount     Amount     Amount     A,491     ROPERTIES     (based on analyses or k thod 9095)     95) ture & pressure)     Odo     Phases of Separation     eparation. Soil and Ro     SIS ATTACHMENTS     waste, as described in tttached. | Unit of<br>Measure<br>Unit of<br>Measure<br>ga<br>ga<br>lb ga<br>to<br>nowledge)<br>r<br>Earthy/Sligh<br>One<br>ok Fragments<br>n the | Time<br>Frame                      |
| Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi<br>c. Physi<br>c. Physi<br>a. The re<br>instru<br>b. A deta<br>c. The q<br>attach | Reside<br>Code D<br>Drill cuttings (oil and g<br>ange 9.7<br>cal State<br>cal Appearance<br>esults of a detailed chem<br>ictions, is attached.<br>ailed description of the w<br>uality assurance/quality<br>ned. | SECTION B. WAST<br>wal Waste<br>vescription<br>gas)<br>1. GENERAL P<br>9 to 11.10<br>Liquid Waste (EPA Me<br>Solid (EPA Method 905<br>Gas (ambient temperat<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of so<br>2. CHEMICAL ANALYS<br>ical characterization of the<br>waste sampling method is a | E DESCRIPTION Amount 8,491 ROPERTIES (based on analyses or k thod 9095) 95) ture & pressure) Odo Phases of Separation eparation. Soil and Ro SIS ATTACHMENTS waste, as described in tttached. yed by the laboratory(in                    | Unit of<br>Measure<br>Unit of<br>Measure<br>ga<br>ga<br>lb ga<br>to<br>nowledge)<br>r<br>Earthy/Sligh<br>One<br>ok Fragments<br>n the | Time<br>Frame                      |

| -         | 0  |  |  |   |               |       |
|-----------|--|--|--|---|---------------|-------|
| S. Halles |  |  | ON & SCHEMATIC ATTA                    |   |               |       |
| a.        | A detailed description of the the waste, as specified in the   |  |  | esses producing   | 🛛 Yes         | 🗌 No  |
| b.        | A schematic of the manufacture as specified in the instruction   |  | control processes pro                  | ducing the waste,   | Yes           | 🗌 No  |
| C.        | If portions of the information<br>a confidentiality claim, as des  |  |  | n for 📋 Yes   | No No         | 🛛 N/A |
|           | SECTIO   | er Sex Charles Shere and the State of the State of States of States of the States of the States of the second stat | MENT OF RESIDU                         | Control and action appropriate general product and the second s |               |       |
|           |  |  | R DISPOSAL FACILITY (I                 |   |               |       |
| The a     | rea below (ad.) will accommod  | ate the identification of  | of two facilities. Attach              | n additional sheets   | if necessary. |       |
| a.        | Solid waste permit number(s)<br>9-0232-00003   | for processing or dis  | posal facility being util              | ized.   |               |       |
| b.        | Facility Name  | Hyland Landfill  | ······································ |   |               |       |
|           | Address Line 1   | 6653 Herdman Roa   | Id                                     |   |               |       |
|           | Address Line 1   |  |  |   |               |       |
|           | Address City State ZIP   | Angelica   | NY                                     | 14709   |               |       |
|           | Municipality   | Angelica   | County                                 | Allegany  |               |       |
| с.        | Facility Contact Name  | Larry Shilling   |  |   |               |       |
| 0.        | Title  | Larry Onlining   |  | ·······   |               |       |
|           | Phone  | (585) 466-7271   | Email Address                          | larry.shilling@ca   |               |       |
|           |  | <b>、</b> ,   |  |   |               |       |
| d.        | Volume of waste shipped to p<br>3,773  | cuyd 🗌 gal   | 🗌 lb 🖂 ton                             | (check one)   |               |       |
| a.        | Solid waste permit number(s)<br>8-4630-00010   | for processing or dis  | posal facility being util              | ized.   |               |       |
| b.        | Facility Name  | Hakes C&D Landfill   |  |   |               |       |
|           | Address Line 1   | 4376 Manning Ridg  |  | LE Aphiliphic broad and   |               |       |
|           | Address Line 1   |  |  |   |               |       |
|           | Address City State ZIP   | Painted Post   |  | 14870   | <u> </u>      |       |
|           | Municipality   | Erwin Twp  | County                                 | Steuben   |               |       |
| с.        | Facility Contact Name  | Joseph Boyles  |  |   |               |       |
|           | Title  |  |  | 1174-75-  |               |       |
|           | Phone  | (607) 937-6044<br>(585) 466-7271   | Email Address                          | joe.boyles@case   | ella.com      |       |
| d.        | Volume of waste shipped to p   |  | facility in the previous               | уеаг.   |               |       |
| -         | 3,387  | cuyd 🗌 gal   | 🗍 lb 🖂 ton                             |   |               |       |
|           | and the second | ar heavy and have been been a start of the second start of the second start of the second start of the second s  | NEFICIAL USE                           |   | <u> </u>      | 2.    |
| a.        | Has the waste been approved  | for beneficial use?  |  |   | Yes           | 🛛 No  |
|           | If "Yes", list the general permi   |  |  |   |               |       |
| b.        | Volume of waste beneficially u   | ised in the previous y   | ear.                                   | · · · · · · · · · · · · · · · · · · ·   |               |       |
|           | 0  | cuyd 🗌 gal   | 🔲 lb 🗌 ton                             | (check one)   |               |       |

| 03.3 <b>5</b> 5 | 3   | <b>PROCESS DESCRIPTIO</b>               | N& SCHEMA       |                 | NTS            | 2.4.1.1                     | ····  |  |  |  |
|-----------------|---|---|-----------------|-----------------|----------------|-----------------------------|-------|--|--|--|
| a.              | A detailed description of the                                     |   |                 |                 |                | X Yes                       |       |  |  |  |
| u.              | the waste, as specified in the                                    | instructions, is attach                 | ed.             |                 |                |                             |       |  |  |  |
| b.              | A schematic of the manufactu<br>as specified in the instruction   |   | control proc    | esses producin  | g the waste,   | X Yes                       | 🗌 No  |  |  |  |
| C.              | If portions of the information<br>a confidentiality claim, as des |   |                 |                 | Yes            | 🗌 No                        | N/A   |  |  |  |
|                 |   | DN.C. MANAGEN                           |                 |                 | WASTE          |                             |       |  |  |  |
|                 |   | 1. PROCESSING OF                        |                 |                 |                |                             |       |  |  |  |
| The a           | rea below (ad.) will accommod                                     | ate the identification of               | of two faciliti | es. Attach add  | itional sheets | if necessary                |       |  |  |  |
| a.              | Solid waste permit number(s)<br>8-0728-00004                      | for processing or dis                   | posal facility  | being utilized. | - ··           |                             |       |  |  |  |
| b.              | Facility Name   | Chemung County L                        | andfill         |                 |                |                             |       |  |  |  |
|                 | Address Line 1  | 1690 Lake Street                        |                 |                 |                |                             |       |  |  |  |
|                 | Address Line 1  |   |                 |                 |                |                             |       |  |  |  |
|                 | Address City State ZIP  | Elmira                                  | N               | Y               | 14903          |                             | ····· |  |  |  |
|                 | Municipality  | Elmira                                  | С               | ounty Che       | emung          |                             | ==    |  |  |  |
| с.              | Facility Contact Name Carla Canjar                                |   |                 |                 |                |                             |       |  |  |  |
| 0.              | Title   | Environmental Mana                      | ager            |                 |                |                             |       |  |  |  |
|                 | Phone (585) 797-5941 Email Address carla.canjar@casella.com       |   |                 |                 |                |                             |       |  |  |  |
|                 |   | ( )                                     |                 |                 |                |                             |       |  |  |  |
| d.              | Volume of waste shipped to p                                      | rocessing or disposal<br>cu yd gal      | facility in the | e previous year | (check one)    |                             |       |  |  |  |
| a.              | Solid waste permit number(s)                                      | for processing or disp                  | osal facility   | being utilized. |                |                             |       |  |  |  |
| b.              | Facility Name   |   |                 |                 |                |                             |       |  |  |  |
|                 | Address Line 1  |   |                 |                 |                |                             |       |  |  |  |
|                 | Address Line 1  | · · · · · · · · · · · · · · · · · · ·   |                 |                 |                |                             |       |  |  |  |
| -               | Address City State ZIP  | *************************************** |                 |                 |                |                             |       |  |  |  |
|                 | Municipality  |   | C               | ounty           |                |                             |       |  |  |  |
| с.              | Facility Contact Name   |   | _               |                 |                |                             |       |  |  |  |
| С.              | Title   |   |                 |                 |                |                             |       |  |  |  |
|                 | Phone   |   | Email A         | ddroce          |                |                             |       |  |  |  |
|                 |   |   |                 |                 |                |                             |       |  |  |  |
| d.              | Volume of waste shipped to p                                      |   |                 |                 |                |                             |       |  |  |  |
|                 | L   | cuyd 🔄 gal                              | ∐ lb            | ∐ ton           | (check one)    |                             |       |  |  |  |
| Server a        |   | 2. BEN                                  | IEFICIAL USE    |                 |                | 2022-2004 <mark>-</mark> 30 |       |  |  |  |
| a.              | Has the waste been approved                                       | for beneficial use?                     |                 |                 |                | Yes                         | 🛛 No  |  |  |  |
|                 | If "Yes", list the general permi                                  | t number or approval                    | number.         |                 |                |                             |       |  |  |  |
| b.              | Volume of waste beneficially u                                    |   |                 |                 |                |                             |       |  |  |  |
|                 | 0 Ĺ   | cuyd 🗌 gal                              | 🗌 lb            | 🔲 ton           | (check one)    |                             |       |  |  |  |

|  |  | SECTION D. CERTIFICATION  |  |  |  |  |  |  |  |  |
|--|--|---|--|--|--|--|--|--|--|--|
| Report and all attached docu<br>obtaining the information, I<br>knowledge. I understand that | 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 applica  | ble:   |   |  |  |  |  |  |  |  |  |
| I certify the information  |  | ired in Section B-1, General Properties was supplied to the Department for the year             |  |  |  |  |  |  |  |  |
| Form Submitted:  |  | Form 26R  |  |  |  |  |  |  |  |  |
|  |  | Other (specify)   |  |  |  |  |  |  |  |  |
| Date Submitted:  |  |   |  |  |  |  |  |  |  |  |
| I certify the information  |  | ired in Section B-2, Chemical Analysis was supplied to the Department for the year              |  |  |  |  |  |  |  |  |
| Form Submitted:  |  | Form 26R  |  |  |  |  |  |  |  |  |
|  |  | Other (specify)   |  |  |  |  |  |  |  |  |
| Date Submitted:  |  |   |  |  |  |  |  |  |  |  |
| I certify the information for the year and h   |  | ed in Section B-3, Process Description and Schematic, was supplied to the Department t changed. |  |  |  |  |  |  |  |  |
| Form Submitted:  |  | Form 26R  |  |  |  |  |  |  |  |  |
|  |  | Other (specify)   |  |  |  |  |  |  |  |  |
| Date Submitted:  |  |   |  |  |  |  |  |  |  |  |
| Name of Responsible Official   |  | Title Environmental Specialist  |  |  |  |  |  |  |  |  |
| Dina Brown   |  | - /1  |  |  |  |  |  |  |  |  |
| Signature  | 2  | Date 2/2.5/(1   |  |  |  |  |  |  |  |  |

SEND DATA TO:

NAME:

# **Benchmark Analytics, Inc.**

**Eastern Division** 

2566 Pennsylvania Ave. Sayre, PA 18840

Phone: (570) 888-0169 Fax: (570) 888-0717 Work Order: 10071897

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

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

Steve Gridley

COMPANY: Talisman Energy USA, Inc.

Horseheads, NY 14845

ADDRESS: 337 Daniel Zenker Dr

**TEST REPORT** 

| Well                             |                  |                          |             |                |              |                |
|----------------------------------|------------------|--------------------------|-------------|----------------|--------------|----------------|
| RECEIVED FOR LAB BY: WCB         | DATE:            | 07/13/2010 13:15         |             |                | Pa           | age 1 of       |
| SAMPLE: Inv. Cuttings            |                  | Lab ID: 10071897-001A    | Grab        |                |              |                |
| SAMPLED BY: SG                   | Sampl            | e Time: 07/12/2010 15:00 | SLOQ        |                |              |                |
| Test                             | <u>Result</u>    | Method                   | OLOQ        | Analysis Start | Analysis End | <u>Analyst</u> |
| 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                   | Sampl            | e Time: 07/12/2010 15:00 |             |                |              |                |
| Test                             | Result           | Method                   | <u>SLOQ</u> | Analysis Start | Analysis End | Analyst        |
| Moisture                         | 13.8 %           | Moisture Calc.           | 0.01        | 07/14/10 14:30 | 07/15/10     | NFM-S          |
| 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-S          |
| SAMPLE: TCLP Leachate of Inv. Cu | ıttings          | Lab ID: 10071897-001D    | Grab        |                |              |                |
| SAMPLED BY: SG                   | Sampl            | e Time: 07/12/2010 15:00 | SLOQ        |                |              |                |
| Test                             | Result           | Method                   | <u>5200</u> | 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-C          |
| Arsenic - TCLP extracted         | < 0.500 mg/L     | EPA 6010B                | 0.500       | 07/16/10 15:00 | 07/17/10     | RMD-C          |
| Barium - TCLP extracted          | < 10.00 mg/L     | EPA 6010B                | 10.00       | 07/16/10 15:00 | 07/17/10     | RMD-C          |
| Cadmium - TCLP extracted         | < 0.100 mg/L     | EPA 6010B                | 0.100       | 07/16/10 15:00 | 07/17/10     | RMD-C          |
| Chromium - TCLP extracted        | < 0.500 mg/L     | EPA 6010B                | 0.500       | 07/16/10 15:00 | 07/17/10     | RMD-C          |
| Copper - TCLP extracted          | < 0.100 mg/L     | EPA 6010B                | 0.100       | 07/16/10 15:00 | 07/17/10     | RMD-C          |
| Lead - TCLP extracted            | < 0.500 mg/L     | EPA 6010B                | 0.500       | 07/16/10 15:00 | 07/17/10     | RMD-C          |
| Nickel - TCLP extracted          | 0.166 mg/L       | EPA 6010B                | 0.100       | 07/16/10 15:00 | 07/17/10     | RMD-C          |
| Selenium - TCLP extracted        | < 0.500 mg/L     | EPA 6010B                | 0.500       | 07/16/10 15:00 | 07/17/10     | RMD-C          |
| Silver - TCLP extracted          | < 0.100 mg/L     | EPA 6010B                | 0.100       | 07/16/10 15:00 | 07/17/10     | RMD-C          |
| Zinc - TCLP extracted            | < 0.200 mg/L     | EPA 6010B                | 0.200       | 07/16/10 15:00 | 07/17/10     | RMD-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: 7/20/2010

SEND DATA TO:

NAME:

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave.

Sayre, PA 18840

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

**TEST REPORT** 

Work Order: 10074055

WO#: 10074055PAGE: 1 of 2PO#: AF77442PWS ID#

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

Steve Gridley

COMPANY: Talisman Energy USA, Inc.

Horseheads, NY 14845

ADDRESS: 337 Daniel Zenker Dr

| RECEIVED FOR LAB BY: DLM2                   | DATE:                      | 07/26/2010 15:15          |             |   | Ра                       | age 1 of 2       |
|---|----------------------------|---------------------------|-------------|---|--------------------------|------------------|
| SAMPLE: Air Cuttings & Gypsum               | -                          | ab ID: 10074055-001A      | Compo       | site                                    |                          |                  |
| SAMPLED BY: SG                              | Sample                     | Time: 07/26/2010 12:38    | SLOQ        |   |                          |                  |
| Test  | <u>Result</u>              | Method                    | OLOQ        | Analysis Start                          | Analysis End             | <u>Analyst *</u> |
| 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               | Li                         | ab ID: 10074055-001B      | Compo       | site                                    |                          |                  |
| SAMPLED BY: SG                              | Sample                     | Time: 07/26/2010 12:38    | 81.00       |   |                          |                  |
| Test  | Result                     | Method                    | <u>SLOQ</u> | 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            |
| рН  | 11.10@20.8°C               | EPA 9045C                 |             | 07/27/10 12:20                          | 07/27/10                 | NFM-SA           |
| SAMPLE: Air Cuttings & Gypsum               | Li                         | ab ID: 10074055-001C      | Compo       | site                                    |                          |                  |
| SAMPLED BY: SG                              | Sample                     | Time: 07/26/2010 12:38    |             |   |                          |                  |
| T   | Decult                     | Mathed                    | <u>SLOQ</u> | Analysia Start                          | Analysia End             | Analust *        |
| <u>Test</u><br>Total Petroleum Hydrocarbons | <u>Result</u><br>154 mg/Kg | <u>Method</u><br>EPA 9071 |             | <u>Analysis Start</u><br>07/27/10 12:00 | Analysis End<br>07/27/10 | <u>Analyst *</u> |
| Sample Note: Analysis performed             | 0 0                        |                           |             | 01/21/10 12:00                          | 01/21/10                 |                  |
| SAMPLE: TLCP of Air Cuttings & G            | /nsum                      | ab ID: 10074055-001E      | Grab        |   | ·····                    | ·······          |
| SAMPLED BY: SG                              | pount                      | Time: 07/26/2010 12:38    |             |   |                          |                  |
|   |                            |                           | <u>SLOQ</u> |   |                          |                  |
| Test  | <u>Result</u>              | Method                    |             | Analysis Start                          | Analysis End             |                  |
| 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:**

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

S Spike Recovery outside accepted recovery limits

MANAGER

Carrie M. Davis

DATE: 7/30/2010

| Lab ID: 08-(<br>Lab ID: 39-( |                                  | 2566 Pe      | rn D<br>nnsyl | <b>alytics, In</b><br><b>Division</b><br>Ivania Ave.<br>18840 | C.    | ١        | Work C | )rder: 100 | )74055     |
|------------------------------|----------------------------------|--------------|---------------|---|-------|----------|--------|------------|------------|
|                              |                                  | •            |               | 888-0169<br>888-0717  |       |          |        |            |            |
| SEND DATA                    | A TO:                            |              |               |   |       |          |        |            |            |
| NAME:                        | Steve Gridley                    |              |               |   | W     | O#:      | 100740 | 055        |            |
| COMPANY:<br>ADDRESS:         |                                  | IC.          |               |   | PA    | GE:      | 2 of 2 |            |            |
| ADDRESS.                     | Horseheads, NY 14845             |              |               |   | P     | D#:      | AF774  | 42         |            |
|                              |                                  |              |               |   |       |          |        | 72         |            |
| PHONE:<br>FAX:               | (607) 562-4000<br>(607) 562-4001 | TES          | T RE          | PORT  | P۱    | VS ID#   |        |            |            |
|                              |                                  |              |               |   |       |          |        |            |            |
| RECEIVED                     | FOR LAB BY: DLM2                 | DATE:        | 07/26         | 6/2010 15:15  |       |          |        | Р          | age 2 of 2 |
| Nickel - 1                   | 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 - T                   | CLP extracted                    | < 0.100 mg/L |               | EPA 6010B   | 0.100 | 07/29/10 | 9:50   | 07/29/10   | GSR-CV     |
| Zinc - TC                    | CLP 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.

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

S Spike Recovery outside accepted recovery limits

MANAGER \_\_\_\_\_

| Carrie | M. | Davis |
|--------|----|-------|
| C      |    |       |

DATE: 7/30/2010

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#### COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WASTE MANAGEMENT

FORM 26R

CHEMICAL ANALYSIS OF RESIDUAL WASTE ANNUAL REPORT BY THE GENERATOR

| typed or legi<br>each attach  | bly printed in the space<br>ed sheet as Form 26R,   | ately completed. All requi<br>s provided. If additional sp<br>reference the item numb<br>ets needs to match the date   | ace is necessary, ident<br>er and identify the da   | ify Dat   |   | JSE ONLY<br>d & General Notes                  |
|---|---|--|---|---|---|--|
| General Refe  | erence 287.54   |  |   |   |   |  |
| Date Prepare  | d/Revised Fe  | bruary 11, 2011  |   |   |   |  |
|   |   | CLIENT (GENERATOR  | R OF THE WASTE) IN  | <u>FORMA</u>  | TION  |  |
| Company Na  |   |  |   |   |   |  |
|   | ergy USA Inc.<br>ry, Name of Parent Com   | pany   |   |   | EPA   | Generator ID#                                  |
| Talisman Er   | ergy Inc.   |  |   |   | N/A   |  |
|   | iling Address Line 1  | C  | ompany Mailing Addres   | s Line 2  |   |  |
| 50 Pennwoo  | d Place<br>dress Last Line – City   | State  | Zip+4   | Phone   |   | Ext  |
| Warrendale  | uless Last Line - City  | PA   | 15086   |   | ,<br>814-530  |  |
|   | ntact Last Name   | First Name   | MI  |   | Suffix  |  |
| Brown   |   | Dina   |   |   | ······  |  |
| Municipality<br>Warrendale  |   |  | County<br>Allegheny   |   |   |  |
| Contact Pho   | ne Ext  | Contact Email Address  | silegheny   |   |   |  |
| (724) 814-53  | 321   | dybrown@talismanusa.c  |   |   |   |  |
| Is the waste  | generated at the Compa  | ny Mailing Address (noted a  | above)?   |   |   | Yes 🛛 No                                       |
| the (01-0   | ibe location of waste gen<br>(15) well pad site located a   | neration and storage. <u>Drill c</u><br>at 225 Buckwheat Road, Troy  | uttings are generated du  | ring natural  | <u>gas drilli</u><br>asto is st                       | ng operations at                               |
| 1 110 (01-0   |   |  |   |   |   |  |
| on site.  | <u></u>   | at 220 Buokunioat rioda, moy   | Township, Diadiora Cou  |   |   |  |
| on site.<br>Municipality  | Troy  | County Bradfo  | brd   |   | ate   | PA   |
| Municipality  | Troy  | County Bradfo  | brd   | St  | ate   | PA   |
| Municipality<br>Residual  | Troy  | County Bradfo<br>SECTION B. WAST<br>lual Waste   | TE DESCRIPTION  | St  | ate<br>of   | PA<br>Time                                     |
| Municipality<br>Residual<br>Waste Code  | Troy<br>Resid<br>Code I   | County Bradfo<br>SECTION B. WAST<br>lual Waste<br>Description  | E DESCRIPTION<br>Amount   | St  | ate<br>of   | PA   |
| Municipality<br>Residual  | Troy  | County Bradfo<br>SECTION B. WAST<br>lual Waste<br>Description<br>gas)  | ord E DESCRIPTION Amount 3,161  | St<br>Unit<br>Measu   | ate<br>of<br>ure                                      | PA<br>Time                                     |
| Municipality<br>Residual<br>Waste Code<br>810   | Troy<br>Resid<br>Code I<br>Drill cuttings (oil and  | County Bradfo<br>SECTION B. WAST<br>lual Waste<br>Description<br>gas)<br>1. GENERAL P  | ord E DESCRIPTION Amount 3,161 ROPERTIES  | St<br>Unit o<br>Measu<br>cu yd<br>lb  | ate<br>of<br>ure<br>gal                               | PA<br>Time<br>Frame                            |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra   | Troy<br>Resid<br>Code I<br>Drill cuttings (oil and  | County Bradfo<br>SECTION B. WAST<br>lual Waste<br>Description<br>gas)<br>1. GENERAL P<br>0.65 to   | E DESCRIPTION         Amount         3,161         ROPERTIES         (based on analyses or kr   | St<br>Unit o<br>Measu<br>cu yd<br>lb  | ate<br>of<br>ure<br>gal                               | PA<br>Time<br>Frame                            |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra   | Troy<br>Resid<br>Code I<br>Drill cuttings (oil and  | County Bradfo<br>SECTION B. WAST<br>lual Waste<br>Description<br>gas)<br>1. GENERAL P<br>0.65 to<br>Liquid Waste (EPA Me   | Amount 3,161 ROPERTIES (based on analyses or kr thod 9095)  | St<br>Unit o<br>Measu<br>cu yd<br>lb  | ate<br>of<br>ure<br>gal                               | PA<br>Time<br>Frame                            |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra   | Troy<br>Resid<br>Code I<br>Drill cuttings (oil and  | County Bradfo<br>SECTION B. WAST<br>lual Waste<br>Description<br>gas)<br>1. GENERAL P<br>0.65 to   | E DESCRIPTION         Amount         3,161         ROPERTIES         (based on analyses or kr         thod 9095)         95)  | St<br>Unit o<br>Measu<br>cu yd<br>lb  | ate<br>of<br>ure<br>gal                               | PA<br>Time<br>Frame                            |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi   | Troy<br>Resid<br>Code I<br>Drill cuttings (oil and  | County Bradfo<br>SECTION B. WAST<br>Jual Waste<br>Description<br>gas)<br>1. GENERAL P<br>0.65 to<br>Liquid Waste (EPA Me<br>Solid (EPA Method 900<br>Gas (ambient tempera<br>Color Greyish Black   | E DESCRIPTION         Amount         3,161         ROPERTIES         (based on analyses or kr         thod 9095)         95)         ture & pressure)         Odout   | St<br>Unit (<br>Measu<br>] cu yd<br>] lb<br>nowledge)                               | ate<br>of<br>ire<br>gal<br>X ton                      | PA<br>Time<br>Frame                            |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi   | Troy<br>Resid<br>Code I<br>Drill cuttings (oil and<br>ange 10<br>ical State   | County Bradfo<br>SECTION B. WAST<br>Jual Waste<br>Description<br>gas)<br>1. GENERAL P<br>0.65 to<br>Liquid Waste (EPA Me<br>Solid (EPA Method 900<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquid  | E DESCRIPTION         Amount         3,161         ROPERTIES         (based on analyses or kr         thod 9095)         95)         ture & pressure)         Odout         1         Phases of Separation  | St<br>Unit (<br>Measu<br>] cu yd<br>] lb<br>nowledge)<br>Earthy<br>One              | ate<br>of<br>Ire<br>gal<br>X ton                      | PA<br>Time<br>Frame                            |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi   | Troy<br>Resid<br>Code I<br>Drill cuttings (oil and<br>ange 10<br>ical State   | County Bradfo<br>SECTION B. WAST<br>Jual Waste<br>Description<br>gas)<br>1. GENERAL P<br>0.65 to<br>Liquid Waste (EPA Me<br>Solid (EPA Method 900<br>Gas (ambient tempera<br>Color Greyish Black   | E DESCRIPTION         Amount         3,161         ROPERTIES         (based on analyses or kr         thod 9095)         95)         ture & pressure)         Odout         1         Phases of Separation  | St<br>Unit (<br>Measu<br>] cu yd<br>] lb<br>nowledge)<br>Earthy<br>One              | ate<br>of<br>Ire<br>gal<br>X ton                      | PA<br>Time<br>Frame                            |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi   | Troy<br>Resid<br>Code I<br>Drill cuttings (oil and<br>ange 10<br>ical State   | County Bradfo<br>SECTION B. WAST<br>Jual Waste<br>Description<br>gas)<br>1. GENERAL P<br>0.65 to<br>Liquid Waste (EPA Me<br>Solid (EPA Method 900<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquid  | E DESCRIPTION         Amount         3,161         'ROPERTIES         (based on analyses or kr         thod 9095)         95)         ture & pressure)         Odor         Homes of Separation         eparation. Soil and Root                            | St<br>Unit (<br>Measu<br>] cu yd<br>] lb<br>nowledge)<br>Earthy<br>One              | ate<br>of<br>Ire<br>gal<br>X ton                      | PA<br>Time<br>Frame                            |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi<br>c. Physi   | Troy<br>Resid<br>Code I<br>Drill cuttings (oil and<br>ange 10<br>cal State<br>cal Appearance  | County Bradfo<br>SECTION B. WAST<br>Jual Waste<br>Description<br>gas)<br>1. GENERAL P<br>0.65 to<br>Liquid Waste (EPA Met<br>Solid (EPA Method 909<br>Gas (ambient temperat<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of s  | E DESCRIPTION         Amount         3,161         'ROPERTIES         (based on analyses or kr         thod 9095)         95)         ture & pressure)         Odor         1 Phases of Separation         eparation. Soil and Root         SIS ATTACHMENTS | St<br>Unit (<br>Measu<br>] cu yd<br>] lb<br>nowledge)<br>Earthy<br>One<br>ck Fragme | ate<br>of<br>ire<br>gal<br>X ton<br>//Slight F        | PA<br>Time<br>Frame                            |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi<br>c. Physi<br>c. Physi   | Troy<br>Resid<br>Code I<br>Drill cuttings (oil and<br>ange 10<br>cal State<br>cal Appearance<br>esults of a detailed chen<br>ictions, is attached.  | County Bradfo<br>SECTION B. WAST<br>Iual Waste<br>Description<br>gas)<br>1. GENERAL P<br>0.65 to<br>Liquid Waste (EPA Met<br>Solid (EPA Method 909<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of s<br>2. CHEMICAL ANALYS<br>nical characterization of the                              | Amount Amount 3,161 COPERTIES (based on analyses or kr thod 9095) 95) ture & pressure) Odor d Phases of Separation eparation. Soil and Rod Sis ATTACHMENTS e waste, as described in   | St<br>Unit (<br>Measu<br>] cu yd<br>] lb<br>nowledge)<br>Earthy<br>One<br>ck Fragme | ate   | PA Time Frame One Time Petroleum Yes No        |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi<br>c. Physi<br>c. Physi<br>a. The r<br>instru<br>b. A det                                   | Troy<br>Resid<br>Code I<br>Drill cuttings (oil and<br>ange 10<br>cal State<br>cal Appearance<br>esults of a detailed chen<br>ictions, is attached.<br>ailed description of the  | County Bradfo<br>SECTION B. WAST<br>Jual Waste<br>Description<br>gas)<br>1. GENERAL P<br>0.65 to<br>Liquid Waste (EPA Me<br>Solid (EPA Method 909<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquic<br>Describe each phase of s<br>2. CHEMICAL ANALYS<br>nical characterization of the<br>waste sampling method is a | Amount Amount 3,161 COPERTIES (based on analyses or kr thod 9095) 95) ture & pressure) Odor d Phases of Separation eparation. Soil and Rod Sis ATTACHMENTS waste, as described in attached.   | St<br>Unit (<br>Measu<br>] cu yd<br>] lb<br>nowledge)<br>Earthy<br>One<br>ck Fragme | ate<br>of<br>ire<br>gal<br>X ton<br>//Slight F<br>nts | PA Time Frame One Time Petroleum Yes No Yes No |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi<br>c. Physi<br>c. Physi<br>a. The r<br>instru<br>b. A det                                   | Troy<br>Resid<br>Code I<br>Drill cuttings (oil and<br>ange 10<br>cal State<br>cal Appearance<br>esults of a detailed chem<br>ictions, is attached.<br>ailed description of the v<br>uality assurance/quality  | County Bradfo<br>SECTION B. WAST<br>Iual Waste<br>Description<br>gas)<br>1. GENERAL P<br>0.65 to<br>Liquid Waste (EPA Met<br>Solid (EPA Method 909<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of s<br>2. CHEMICAL ANALYS<br>nical characterization of the                              | Amount Amount 3,161 COPERTIES (based on analyses or kr thod 9095) 95) ture & pressure) Odor d Phases of Separation eparation. Soil and Rod Sis ATTACHMENTS waste, as described in attached.   | St<br>Unit (<br>Measu<br>] cu yd<br>] lb<br>nowledge)<br>Earthy<br>One<br>ck Fragme | ate<br>of<br>ire<br>gal<br>X ton<br>//Slight F<br>nts | PA Time Frame One Time Petroleum Yes No        |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi<br>c. Physi<br>c. Physi<br>a. The r<br>instru<br>b. A det<br>c. The q<br>attact<br>d. The r | Troy<br>Resid<br>Code I<br>Drill cuttings (oil and<br>ange 10<br>cal State<br>cal Appearance<br>cal Appearance<br>esults of a detailed chen<br>ictions, is attached.<br>ailed description of the<br>uality assurance/quality<br>red.<br>esults of the hazardous | County Bradfo<br>SECTION B. WAST<br>Jual Waste<br>Description<br>gas)<br>1. GENERAL P<br>0.65 to<br>Liquid Waste (EPA Me<br>Solid (EPA Method 909<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquic<br>Describe each phase of s<br>2. CHEMICAL ANALYS<br>nical characterization of the<br>waste sampling method is a | Amount Amount 3,161 COPERTIES (based on analyses or kr thod 9095) 95) ture & pressure) Odor d Phases of Separation eparation. Soil and Rod Sis ATTACHMENTS waste, as described in attached. yed by the laboratory(le ched.                                  | St<br>Unit (<br>Measu<br>] cu yd<br>] lb<br>nowledge)<br>Earthy<br>One<br>ck Fragme | ate   | PA Time Frame One Time Petroleum Yes No Yes No |

|        |  | PROCESS DESCRIPTION &         | COURNATIO ATTAC                        |                   | <u></u>       |       |
|--------|--|-------------------------------|--|-------------------|---------------|-------|
|        |  |                               |  |                   |               |       |
| a.     | A detailed description of the<br>the waste, as specified in the  |                               | ition control proce                    | sses producing    | 🛛 Yes         | 🗌 No  |
| b.     | A schematic of the manufacturing and/or pollution control processes producing the waste, X Yes No as specified in the Instructions, is attached. |                               |  |                   |               |       |
| C.     | If portions of the Information a confidentiality claim, as des   |                               |  | n for 🗌 Yes       | No No         | 🛛 N/A |
|        | SECTIO   | ON C. MANAGEMEN               |  |                   |               |       |
|        |  | 1. PROCESSING OR DIS          |  |                   |               |       |
| The ar | ea below (ad.) will accommod   | ate the identification of two | o facilities. Attach                   | additional sheets | if necessary. |       |
| a.     | Solid waste permit number(s)<br>8-4630-00010   | for processing or disposa     | I facility being utili                 | ized.             |               |       |
| b.     | Facility Name  | Hakes C&D Landfill            |  |                   |               |       |
|        | Address Line 1   | 4376 Manning Ridge Ro         | ad                                     |                   |               |       |
|        | Address Line 1   | <b>_</b>                      |  |                   |               |       |
|        | Address City State ZIP   | Painted Post                  | NY                                     | 14870             |               |       |
|        | Municipality   | Erwin Twp                     | County                                 | Steuben           | ·······       |       |
| c.     | Facility Contact Name  | Joseph Boyles                 |  |                   |               |       |
|        | Title  |                               | ·····                                  |                   | ·             |       |
|        | Phone  | (607) 937-6044                | Email Address                          | joe.boyles@case   | ella com      |       |
|        |  | (585) 466-7271                |  | ,,                |               |       |
| d.     | Volume of waste shipped to p   |                               | ity in the previous                    | year.             |               |       |
|        | 1,566  | cuyd 门 gal 🗌                  | ]İb 🛛 🔀 ton                            |                   |               |       |
| a.     | Solid waste permit number(s)<br>9-0232-00003   | for processing or disposa     | l facility being utili                 | zed.              |               |       |
| 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                | <del></del>                            |                   |               |       |
|        | Title  |                               |  |                   |               |       |
|        | Phone  | (585) 466-7271                | Email Address                          | larry.shilling@ca | sella.com     |       |
| d.     | Volume of waste shipped to p   | . ,                           | ity in the provinue                    |                   |               |       |
| u.     | 855  | cuyd 门 gal 🗌                  | ] lb 🔀 ton                             |                   |               |       |
|        | 1  | 2. BENEFIC                    |  |                   |               |       |
| a.     | Has the waste been approved  | for beneficial use?           |  |                   | 🗌 Yes         | No No |
|        | If "Yes", list the general permi   |                               | ber.                                   |                   |               |       |
| b.     | Volume of waste beneficially u   |                               | <b>.</b>                               |                   |               |       |
|        | 0  | cu yd 🔄 gal 🗌                 | ] lb 🔤 ton                             | (check one)       |               |       |

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|        | 3.   | PROCESS DESCRIPTION       | & SCHEMATIC ATTAC                    | HMENTS  |               |       |
|--------|--|---------------------------|--------------------------------------|---|---------------|-------|
| a.     | A detailed description of the<br>the waste, as specified in the  | nanufacturing and/or po   | Ilution control proce                | the an elaborary territy that Ages has been get that the true to be that the that the | Yes           | No No |
| b.     | A schematic of the manufacturing and/or pollution control processes producing the waste, Xes No as specified in the instructions, is attached.                       |                           |                                      |   |               |       |
| c.     | If portions of the information submitted are confidential, the substantiation for Yes No N/A a confidentiality claim, as described in the instructions, is attached. |                           |                                      |   |               |       |
|        | SECTIO   | ON C. MANAGEMI            | ENT OF RESIDU                        | AL WASTE  |               |       |
|        |  |                           | DISPOSAL FACILITY (IE                |   |               |       |
| The ar | ea below (ad.) will accommod   | ate the identification of | two facilities. Attach               | additional sheets   | if necessary. |       |
| а.     | Solid waste permit number(s)<br>8-0728-00004   | for processing or dispo   | sal facility being utili             | zed.  |               |       |
| b.     | Facility Name  | Chemung County Lar        | ndfill                               |   |               |       |
|        | 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 Manac       | ler                                  |   |               |       |
|        | Phone  | (585) 797-5941            | Email Address                        | carla.canjar@cas  | sella.com     |       |
| d.     | Volume of waste shipped to p<br>573  | rocessing or disposal fa  | cility in the previous               | year.<br>(check one)  |               |       |
| а.     | Solid waste permit number(s)<br>100361   | for processing or dispo   | sal facility being utili             | zed.  |               |       |
| b.     | Facility Name  | McKean County Land        | fill                                 | ····  |               |       |
|        | Address Line 1   | 19 Ness Lane              |                                      | ····  |               |       |
|        | Address Line 1   |                           |                                      |   |               |       |
|        | Address City State ZIP   | Kane                      | PA                                   | 16735   |               |       |
|        | Municipality   | Sergeant Twp              | County                               | McKean  |               |       |
| с.     | Facility Contact Name  | Mike Manderfeld           |                                      |   |               |       |
|        | Title  |                           |                                      |   |               |       |
|        | Phone  | (814) 778-9931            | Email Address                        | manderfeld@gm   | ail.com       |       |
| d.     | Volume of waste shipped to p<br>167  | rocessing or disposal fa  | cility in the previous<br>☐ lb ⊠ ton |   |               |       |
|        |  | 2. Bene                   | FICIAL ÜSE                           |   |               |       |
| a.     | Has the waste been approved  |                           |                                      | n an  | Yes           | No No |
|        | If "Yes", list the general permi   | t number or approval nu   | ımber.                               |   |               |       |
| b.     | Volume of waste beneficially u   |                           |                                      |   |               |       |
|        | 0  | cuyd 🗌 gal                | b ton                                | (check one)   |               |       |

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|  |                             | SECTION D. CERTIFICATION  |
|--|-----------------------------|---|
| Report and all attached doc<br>obtaining the information, I<br>knowledge. I understand tha | uments<br>verify<br>t the s | have personally examined and am familiar with the information submitted in this Annual<br>s and that based upon my inquiry of those individuals immediately responsible for<br>that the submitted information is true, accurate and complete to the best of my<br>submission of false information herein is made subject to the penalties of 18 Pa. C.S.<br>on to authorities, which include fine and imprisonment. |
| Check the following, if applica  | ble:                        |   |
| I certify the information  |                             | ired in Section B-1, General Properties was supplied to the Department for the year   |
| Form Submitted:  |                             | Form 26R  |
|  |                             | Other (specify)   |
| Date Submitted:  |                             |   |
| I certify the information and has not char   |                             | ired in Section B-2, Chemical Analysis was supplied to the Department for the year  |
| Form Submitted:  |                             | Form 26R  |
|  |                             | Other (specify)   |
| Date Submitted:  |                             |   |
| I certify the information for the year and   | -                           | ed in Section B-3, Process Description and Schematic, was supplied to the Department<br>t changed.  |
| Form Submitted:  |                             | Form 26R  |
|  |                             | Other (specify)   |
| Date Submitted:  |                             |   |
| Name of Responsible Official   |                             | Title Environmental Specialist  |
| Dina Brown Signature   | 5                           | 1500 Date 2/25/11   |

LAB ID # 11216 **Benchmark Analytics, Inc.** LAB ID # 11827 **Eastern Division** 2566 Pennsylvania Ave. Work Order: 10041878 Sayre, PA 18840 Phone: (570) 888-0169 Fax: (570) 888-0717 SEND DATA TO: WO#: 10041878 NAME: Steve Gridley COMPANY: Talisman Energy USA, Inc. PAGE: 1 of 1 ADDRESS: 337 Daniel Zenker Dr Horseheads, NY 14845 PO#: AF76509 PWS ID# **TEST REPORT** PHONE: (607) 562-4000 FAX: (607) 562-4001 -5H RECEIVED FOR LAB BY: DLM2 DATE: 04/14/2010 10:50 Page 1 of 1 Lab ID: 10041878-001A SAMPLE: Inv. Cuttings Composite SAMPLED BY: SG Sample Time: 04/12/2010 17:00 SLOQ Test Result Method 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 < 10.00 mg/L EPA 6010B 04/15/10 11:45 04/15/10 Barium - TCLP extracted 10.00 RMD-CV < 0.100 mg/L 0.100 04/15/10 Cadmium - TCLP extracted EPA 6010B 04/15/10 11:45 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 0.500 Lead - TCLP extracted < 0.500 mg/L EPA 6010B 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 0.200 Zinc - TCLP extracted 2.20 mg/L EPA 6010B 04/15/10 11:45 04/15/10 RMD-CV 10.65 @ 21.5°C EPA 9045D 04/15/10 10:45 04/15/10 SMH-CV pН Percent Moisture 30.4 % SM2540G 04/15/10 8:00 04/15/10 DTG-CV EPA 1664A 1400 04/15/10 8:25 04/15/10 Total Petroleum Hydrocarbons 59000 mg/Kg-dry 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

| Can | ; M. | Davis |
|-----|------|-------|
|     |      |       |

DATE: 4

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

| Inis form m  | ust be fully and accura  | ately completed. All requi  | red information must   | be 🗱 🔊   | 🔆 🖉 DEP l  | JSE ONLY  |
|--|--|---|--|--|--|---|
|  | yped or legibly printed in the spaces provided. If additional space is necessary, identify   |   |  |  | Date Received & General Notes                            |   |
|  | ch attached sheet as Form 26R, reference the item number and identify the date pared. The date on attached sheets needs to match the date noted below.   |   |  |  |  |   |
| 1  |  | ets needs to match the date   | noted below.   |  |  |   |
|  | rence 287.54   | haven 44, 2014  |  |  |  |   |
| Date Prepare   |  | bruary 11, 2011   |  |  | TION   |   |
|  |  | CLIENT (GENERATOR   | COFFICE WASIE) IN  | IFURMA   | ATION  |   |
| Company Na<br>Talisman En  | iergy USA Inc.   |   |  |  |  |   |
|  | ry, Name of Parent Com   | pany  |  |  | EPA (  | Generator ID#   |
| Talisman En  |  |   |  |  | N/A  |   |
|  | iling Address Line 1   | C   | ompany Mailing Addre   | ss Line 2  |  |   |
| 50 Pennwoo   | d Place<br>dress Last Line – City  | State   | Zip+4  | Phon   |  | Ext   |
| Warrendale   | uress Last Line – City   | PA  | 15086  |  | 814-530  |   |
|  | ntact Last Name  | First Name  | MI   |  | Suffix   |   |
| Brown  |  | Dina  |  |  |  |   |
| Municipality   |  |   | County   |  |  |   |
| Warrendale<br>Contact Pho  | ne Ext   | Contact Email Address   | Allegheny  |  |  |   |
| (724) 814-53   |  | dybrown@talismanusa.c   | om   |  |  |   |
| Is the waste   | generated at the Compar  | ny Mailing Address (noted a   | above)?  |  |  | Yes 🛛 No  |
| if 'No', descr   | ibe location of waste ger  | neration and storage. <u>Drill c</u>  | uttings are generated du   | uring natura   | <u>l gas drilli</u>                                      | ng operations at  |
|  |  | d at 1185 Garrison Road, We   | ells Township, Bradford C  | <u>Jounty, PA.</u>   | Waste is   | stored in   |
| containers on  | site   |   |  |  |  |   |
| containers on<br>Municipality  | site.<br>Wells   | County Bradfo   |  | S  | tate   | PA  |
| 1  |  | County Bradfo   |  | S  | tate   | PA  |
| Municipality<br>Residual   | Wells  | SECTION B. WAST   | E DESCRIPTION  | Unit   | of   | Time  |
| Municipality   | Wells<br>Resid<br>Code D   | SECTION B. WAST<br>ual Waste<br>Description   | E DESCRIPTION<br>Amount  | Unit<br>Meas   | of<br>ure  |   |
| Municipality<br>Residual   | Wells  | SECTION B. WAST<br>ual Waste<br>Description   | E DESCRIPTION  | Unit   | of   | Time  |
| Municipality<br>Residual<br>Waste Code   | Wells<br>Resid<br>Code D   | SECTION B. WAST<br>ual Waste<br>Description<br>gas)<br>1. GENERAL P   | E DESCRIPTION<br>Amount<br>721<br>ROPERTIES  | Unit<br>Meas<br>Cuyd   | of<br>ure  | Time<br>Frame   |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra  | Wells Resid Code I Drill cuttings (oil and g   | SECTION B. WAST<br>ual Waste<br>Description<br>gas)<br>1. GENERAL P<br>78 to 8.20   | E DESCRIPTION Amount 721 ROPERTIES (based on analyses or k   | Unit<br>Meas<br>Cuyd   | of<br>ure  | Time<br>Frame   |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra  | Wells<br>Resid<br>Code I<br>Drill cuttings (oil and g  | SECTION B. WAST<br>ual Waste<br>Description<br>gas)<br>1. GENERAL P<br>78 to 8.20<br>Liquid Waste (EPA Me   | E DESCRIPTION<br>Amount<br>721<br>ROPERTIES<br>(based on analyses or k<br>thod 9095)   | Unit<br>Meas<br>cu yd<br>lb  | of<br>ure  | Time<br>Frame   |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra  | Wells Resid Code I Drill cuttings (oil and g   | SECTION B. WAST<br>ual Waste<br>Description<br>gas)<br>1. GENERAL P<br>78 to 8.20<br>Liquid Waste (EPA Me<br>Solid (EPA Method 909  | E DESCRIPTION<br>Amount<br>721<br>ROPERTIES<br>(based on analyses or k<br>thod 9095)<br>95)  | Unit<br>Meas<br>cu yd<br>lb  | of<br>ure  | Time<br>Frame   |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi  | Wells Resid Code I Drill cuttings (oil and g ange 7.7 cal State -  | SECTION B. WAST<br>ual Waste<br>Description<br>gas)<br>1. GENERAL P<br>78 to 8.20<br>Liquid Waste (EPA Me<br>Solid (EPA Method 909<br>Gas (ambient temperation)   | E DESCRIPTION<br>Amount<br>721<br>ROPERTIES<br>(based on analyses or k<br>thod 9095)<br>95)<br>ture & pressure)  | Unit<br>Meas<br>Cuyd<br>Ib<br>nowledge)  | of<br>ure<br>☐ gal<br>⊠ ton                              | Time<br>Frame   |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi  | Wells Resid Code I Drill cuttings (oil and g   | SECTION B. WAST<br>ual Waste<br>Description<br>gas)<br>1. GENERAL P<br>78 to 8.20<br>Liquid Waste (EPA Me<br>Solid (EPA Method 909<br>Gas (ambient temperation)   | E DESCRIPTION Amount 721 ROPERTIES (based on analyses or k thod 9095) 95) ture & pressure) Odo   | Unit<br>Meas<br>Cuyd<br>Ib<br>nowledge)  | of<br>ure<br>☐ gal<br>⊠ ton                              | Time<br>Frame   |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi  | Wells Resid Code I Drill cuttings (oil and g ange 7.7 cal State -  | SECTION B. WAST<br>ual Waste<br>Description<br>gas)<br>1. GENERAL P<br>78 to 8.20<br>Liquid Waste (EPA Me<br>Solid (EPA Method 909<br>Gas (ambient temperat<br>Color Greyish Black  | E DESCRIPTION Amount 721 ROPERTIES (based on analyses or k thod 9095) 95) ture & pressure) Odo Phases of Separation  | Unit<br>Meas<br>cu yd<br>lb<br>nowledge)<br>r Earth<br>One                     | of<br>ure<br>☐ gal<br>⊠ ton                              | Time<br>Frame   |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi  | Wells Resid Code I Drill cuttings (oil and g ange 7.7 cal State -  | SECTION B. WAST<br>ual Waste<br>Description<br>gas)<br>1. GENERAL P<br>78 to 8.20<br>1 Liquid Waste (EPA Me<br>Solid (EPA Method 909<br>Gas (ambient temperat<br>Color Greyish Black<br>Number of Solid or Liquic<br>Describe each phase of s   | E DESCRIPTION Amount 721 ROPERTIES (based on analyses or k thod 9095) 95) ture & pressure) Odo Phases of Separation eparation. Soil and Ro   | Unit<br>Meas<br>cu yd<br>lb<br>nowledge)<br>r Earth<br>One                     | of<br>ure<br>☐ gal<br>⊠ ton                              | Time<br>Frame   |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi<br>c. Physi  | Wells Resid Code D Drill cuttings (oil and g ange 7.7 cal State cal Appearance   | SEC.TION.B. WAST<br>ual Waste<br>Description<br>gas)<br>1. GENERAL P<br>78 to 8.20<br>Liquid Waste (EPA Met<br>Solid (EPA Method 900<br>Gas (ambient temperal<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of s<br>2. CHEMICAL ANALYS   | E DESCRIPTION Amount 721 ROPERTIES (based on analyses or k thod 9095) 95) ture & pressure) Odo Phases of Separation eparation. Soil and Ro SIS ATTACHMENTS   | Unit<br>Meas<br>cuyd<br>lb<br>nowledge)<br>r <u>Earth</u><br>One<br>ock Fragme | of<br>ure<br>gal<br>X ton<br>y/Slight F                  | Time<br>Frame         Image: One Time         One Time         Petroleum  |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi<br>c. Physi<br>c. Physi  | Wells Resid Code I Drill cuttings (oil and g ange 7.7 cal State . cal Appearance esults of a detailed chem ictions, is attached.   | SECTION B. WAST<br>ual Waste<br>Description<br>gas)<br>1. GENERAL P<br>78 to 8.20<br>Liquid Waste (EPA Met<br>Solid (EPA Method 900<br>Gas (ambient temperal<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of s<br>2. CHEMICAL ANALYS<br>hical characterization of the   | E DESCRIPTION Amount 721 ROPERTIES (based on analyses or k thod 9095) 95) ture & pressure) Odd Phases of Separation eparation. Soil and Ro SIS ATTACHMENTS e waste, as described in  | Unit<br>Meas<br>cuyd<br>lb<br>nowledge)<br>r <u>Earth</u><br>One<br>ock Fragme | of<br>ure<br>gal<br>X ton<br>y/Slight F                  | Time<br>Frame   |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi<br>c. Physi<br>c. Physi<br>a. The ru<br>instru<br>b. A det   | Wells Resid Code I Drill cuttings (oil and g ange 7.7 cal State cal Appearance esults of a detailed chem attached. ailed description of the w  | SECTION B. WAST<br>ual Waste<br>Description<br>gas)<br>1. GENERAL P<br>78 to 8.20<br>Liquid Waste (EPA Met<br>Solid (EPA Method 900<br>Gas (ambient temperal<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of s<br>2. CHEMICAL ANALYS<br>hical characterization of the<br>waste sampling method is a   | E DESCRIPTION Amount 721 ROPERTIES (based on analyses or k thod 9095) 95) ture & pressure) Odo Phases of Separation eparation. Soil and Ro SIS ATTACHMENTS waste, as described in attached.                                | Unit<br>Meas<br>cu yd<br>lb<br>nowledge)<br>r Earth<br>One<br>ck Fragme        | of<br>ure<br>□ gal<br>⊠ ton<br>y/Slight F<br>ants<br>□ □ | Time         Frame         One Time         Petroleum         Yes       No         Yes       No   |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi<br>c. Physi<br>c. Physi<br>a. The ru<br>instru<br>b. A det<br>c. The q                                     | Wells Resid Code I Drill cuttings (oil and g ange 7.7 cal State cal Appearance esults of a detailed chem attached. ailed description of the w uality assurance/quality   | SECTION B. WAST<br>ual Waste<br>Description<br>gas)<br>1. GENERAL P<br>78 to 8.20<br>Liquid Waste (EPA Met<br>Solid (EPA Method 900<br>Gas (ambient temperal<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of s<br>2. CHEMICAL ANALYS<br>hical characterization of the   | E DESCRIPTION Amount 721 ROPERTIES (based on analyses or k thod 9095) 95) ture & pressure) Odo Phases of Separation eparation. Soil and Ro SIS ATTACHMENTS waste, as described in attached.                                | Unit<br>Meas<br>cu yd<br>lb<br>nowledge)<br>r Earth<br>One<br>ck Fragme        | of<br>ure<br>□ gal<br>⊠ ton<br>y/Slight F<br>ants<br>□ □ | Time         Frame         One Time         Petroleum         Yes       No  |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi<br>c. Physi<br>c. Physi<br>a. The ru<br>instru<br>b. A det<br>c. The q<br>attacl                           | Wells Resid Code I Drill cuttings (oil and g ange 7.7 cal State cal Appearance esults of a detailed chem attached. ailed description of the v uality assurance/quality ned.  | SECTION B. WAST<br>ual Waste<br>Description<br>gas)<br>1. GENERAL P<br>78 to 8.20<br>Liquid Waste (EPA Met<br>Solid (EPA Method 900<br>Gas (ambient temperal<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of s<br>2. CHEMICAL ANALYS<br>hical characterization of the<br>waste sampling method is a   | E DESCRIPTION Amount 721 ROPERTIES (based on analyses or k thod 9095) 95) ture & pressure) Odo Phases of Separation eparation. Soil and RC SIS ATTACHMENTS waste, as described in attached. yed by the laboratory(in       | Unit<br>Meas<br>cu yd<br>lb<br>nowledge)<br>r Earth<br>One<br>ck Fragme        | of<br>ure<br>gal<br>X ton<br>y/Slight F<br>ents          | Time         Frame         One Time         Petroleum         Yes       No         Yes       No   |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi<br>c. Physi<br>c. Physi<br>a. The ru<br>instru<br>b. A det<br>c. The q<br>attacl<br>d. The ro<br>e. If app | Wells Resid Code I Drill cuttings (oil and g ange 7.7 cal State cal Appearance esults of a detailed chem attached. ailed description of the v uality assurance/quality ned. esults of the hazardous of the secure of | SECTION B. WAST<br>ual Waste<br>Description<br>gas)<br>1. GENERAL P<br>78 to 8.20<br>Liquid Waste (EPA Me<br>Solid (EPA Method 900<br>Gas (ambient temperal<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of s<br>2. CHEMICAL ANALYS<br>hical characterization of the<br>waste sampling method is a<br>control procedures employ<br>waste determination is attach<br>hation supporting use of ge | E DESCRIPTION Amount 721 ROPERTIES (based on analyses or k thod 9095) 95) ture & pressure) Odo Phases of Separation eparation. Soil and Ro SIS ATTACHMENTS waste, as described in attached. yed by the laboratory(in ched. | Unit<br>Meas<br>cu yd<br>lb<br>nowledge)<br>r Earth<br>One<br>ck Fragme        | of<br>ure<br>gal<br>X ton<br>y/Slight F<br>ents          | Time         Frame         One Time         Petroleum         Yes       No         Yes       No         Yes       No         Yes       No |

|        | .3.  | PROCESS DESCRIPTION                    | SCHEMATIC ATTAC                        | HMENTS               |               |       |
|--------|--|--|--|----------------------|---------------|-------|
| a.     | A detailed description of the<br>the waste, as specified in the  |  |  | sses producing       | Yes           | No No |
| b.     | A schematic of the manufacturing and/or pollution control processes producing the waste, Xes No as specified in the Instructions, is attached.                       |  |  |                      |               |       |
| c.     | If portions of the information submitted are confidential, the substantiation for Yes No N/A a confidentiality claim, as described in the instructions, is attached. |  |  |                      |               |       |
|        | SECTIO   | ON C. MANAGEME                         | NT OF RESIDU                           | AL WASTE             | -             |       |
|        |  | 1. PROCESSING OR D                     |  |                      |               |       |
| The ar | ea below (ad.) will accommod   | ate the identification of the          | wo facilities. Attach                  | additional sheets    | if necessary. |       |
| a.     | Solid waste permit number(s)<br>9-0232-00003   | for processing or dispos               | al facility being utili                | zed.                 |               |       |
| 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             |               |       |
| с.     | Facility Contact Name  | Larry Shilling                         |  |                      |               |       |
|        | Title  |  |  |                      |               |       |
|        | Phone  | (585) 466-7271                         | Email Address                          | larry.shilling@ca    | sella.com     |       |
| d.     | Volume of waste shipped to p<br>423  | rocessing or disposal fac              | cility in the previous<br>☐ lb ⊠ ton   |                      |               |       |
| a.     | Solid waste permit number(s)<br>100361   | for processing or dispos               | al facility being utili                | zed.                 |               |       |
| b.     | Facility Name  | McKean County Landf                    |  |                      |               |       |
|        | 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@gm        | ail.com       |       |
| d.     | Volume of waste shipped to p   | rocessing or disposal fac<br>cu yd gal | cility in the previous<br>☐ lb   ⊠ ton | year.<br>(check one) |               |       |
|        |  | 2. Benef                               | ICIAL USE                              |                      |               |       |
| a.     | Has the waste been approved  | for beneficial use?                    |  |                      | Yes           | 🛛 No  |
|        | If "Yes", list the general permi   | t number or approval nu                | mber.                                  |                      |               |       |
| b.     | Volume of waste beneficially   |  | •                                      |                      |               |       |
|        | 0  | cuyd 🗌 gal                             | b 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 applicat   | ble:   |  |  |  |
| I certify the information<br>and has not chan  | n required in Section B-1, General Properties was supplied to the Department for the year<br>nged.             |  |  |  |
| Form Submitted:  | Form 26R   |  |  |  |
|  | Other (specify)  |  |  |  |
| Date Submitted:  |  |  |  |  |
| I certify the information  | n required in Section B-2, Chemical Analysis was supplied to the Department for the year<br>nged.              |  |  |  |
| Form Submitted:  | Form 26R   |  |  |  |
|  | Other (specify)  |  |  |  |
| Date Submitted:  |  |  |  |  |
| I certify the information i for the year and h   | required in Section B-3, Process Description and Schematic, was supplied to the Department<br>has not changed. |  |  |  |
| Form Submitted:  | Form 26R   |  |  |  |
|  | Other (specify)  |  |  |  |
| Date Submitted:  |  |  |  |  |
| Name of Responsible Official   | Title Environmental Specialist   |  |  |  |
| Dina Brown   |  |  |  |  |
| Signature  | _ Slow Date 2/2/11   |  |  |  |

| LAB ID: 08-1<br>LAB ID: 39-1  |   | East<br>2566 P<br>Say   | rk Analytics, Ir<br>ern Division<br>ennsylvania Ave.<br>/re, PA 18840                                  | IC.  | Work   | Order: 101   | 13523  |
|---|---|---|--|--|--|--|--|
|   |   |   | : (570) 888-0169<br>: (570) 888-0717   |  |  |  |  |
| SEND DATA   | A TO:   |   |  |  |  |  |  |
| NAME:   | Steve Gridley   |   |  | W  | O#: 1011   | 3523   |  |
| COMPANY:  |   | nc.   |  | DA   | GE: 1 of   | 1  |  |
| ADDRESS:  | 337 Daniel Zenker Dr  |   |  |  | AGE. TUI   | 1  |  |
|   | Horseheads, NY 14845  |   |  | PC   | D#: AF76   | 888  |  |
|   |   |   |  | ₽V   | VS ID#   |  |  |
| PHONE:  | (607) 731-0145  | , TE  | ST REPORT  | ••   |  |  |  |
| FAX:  | (607) 562-4001  |   |  |  | i  |  |  |
|   |   |   |  |  |  |  |  |
|   | FOR LAB BY: SCP   |   | E: 11/22/2010 12:33  |  |  | D.   |  |
| RECEIVED  |   | DATI  |  |  |  | ra   | ige 1 of 1   |
| SAMPLE: In  | v. Cuttings   |   | Lab ID: 10113523-001A  | Grab   |  |  |  |
| SAMPL   | ED BY: \$G  | Sam   | ple Time: 11/21/2010 9:00  | 0.00   |  |  |  |
| Test  |   | <u>Result</u>   | Method   | <u>SLOQ</u>  | Analysis Start   | Analysis End   | Analyst '  |
|   | troleum Hydrocarbons  | 54000 mg/Kg   | EPA 9071   | 170  | 11/23/10 0:00  | 11/23/10   |  |
| Sampl   | le Note: Analysis performed by I  | Microbac Laboratorie  | s, IncErie Division  |  |  |  |  |
| SAMPLE: In  | v Cuttinge  |   | Lab ID: 10113523-001B  | Grab   |  |  |  |
|   | ED BY: SG   | Sam   | ple Time: 11/21/2010 9:00  | 0.00   |  |  |  |
|   |   |   | -  | SLOQ   |  |  |  |
| Test  |   | Result  | Method   | 0.04   | Analysis Start   | Analysis End   |  |
| Moisture<br>Erce Lice   |   | 36.9 %<br>< 0.1 %   | Moisture Calc.<br>EPA 9095A  | 0.01<br>0.1  | 11/24/10 10:30<br>11/23/10 17:10   | 11/29/10<br>11/23/10   | IC-SA<br>IC-SA   |
| Free Liqu   | Шa  |   | EPA 9095A<br>EPA 9045C   | 0.1  | 11/23/10 17:10   | 11/23/10   | SG-SA  |
| pH  |   | 7.78@24.2°C   | EFA 30400  |  | 11/23/10 14:00   | 11/23/10   | 3G-3A  |
|   | CLP Leachate of Inv. Cuttin   |   | Lab ID: 10113523-001D  | Grab   |  |  |  |
| C A A A DI  | ED BY: SG   | : Sam   | ple Time: 11/24/2010 8:00  | SLOQ   |  |  |  |
| SAMPL   |   |   |  | <u>orod</u>  | A  | Analysis End   | Analyst '  |
|   |   | Result  | Method   |  | <u>Analysis Start</u>  |  |  |
| Test  | - TCLP extracted  | <u>Result</u><br>< 0.0008 mg/L  | <u>Method</u><br>EPA 7470A   | 0.0008   | Analysis Start<br>11/27/10 12:35   | 11/28/10   | RMD-C  |
| <u>Test</u><br>Mercury  | - TCLP extracted<br>TCLP extracted  |   |  | 0.0008<br>0.500  |  |  |  |
| <u>Test</u><br>Mercury<br>Arsenic -   |   | < 0.0008 mg/L   | EPA 7470A  |  | 11/27/10 12:35   | 11/28/10   | JRA-CV   |
| <u>Test</u><br>Mercury<br>Arsenic -<br>Barium -   | TCLP extracted  | < 0.0008 mg/L<br>< 0.500 mg/L   | EPA 7470A<br>EPA 6010B   | 0.500  | 11/27/10 12:35<br>11/27/10 8:15  | 11/28/10<br>11/27/10   | JRA-CV<br>JRA-CV   |
| <u>Test</u><br>Mercury<br>Arsenic -<br>Barium -<br>Cadmiun  | TCLP extracted<br>TCLP extracted  | < 0.0008 mg/L<br>< 0.500 mg/L<br>< 10.00 mg/L   | EPA 7470A<br>EPA 6010B<br>EPA 6010B  | 0.500<br>10.00   | 11/27/10 12:35<br>11/27/10 8:15<br>11/27/10 8:15   | 11/28/10<br>11/27/10<br>11/27/10   | JRA-CV<br>JRA-CV<br>JRA-CV   |
| <u>Test</u><br>Mercury<br>Arsenic -<br>Barium -<br>Cadmiun<br>Chromiu   | TCLP extracted<br>TCLP extracted<br>n - TCLP extracted  | < 0.0008 mg/L<br>< 0.500 mg/L<br>< 10.00 mg/L<br>< 0.100 mg/L   | EPA 7470A<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B   | 0.500<br>10.00<br>0.100  | 11/27/10 12:35<br>11/27/10 8:15<br>11/27/10 8:15<br>11/27/10 8:15  | 11/28/10<br>11/27/10<br>11/27/10<br>11/27/10                                     | JRA-C\<br>JRA-C\<br>JRA-C\<br>JRA-C\   |
| <u>Test</u><br>Mercury<br>Arsenic -<br>Barium -<br>Cadmiun<br>Chromiu<br>Copper -                               | TCLP extracted<br>TCLP extracted<br>n - TCLP extracted<br>m - TCLP extracted  | < 0.0008 mg/L<br>< 0.500 mg/L<br>< 10.00 mg/L<br>< 0.100 mg/L<br>< 0.500 mg/L   | EPA 7470A<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B  | 0.500<br>10.00<br>0.100<br>0.500                                     | 11/27/10 12:35<br>11/27/10 8:15<br>11/27/10 8:15<br>11/27/10 8:15<br>11/27/10 8:15   | 11/28/10<br>11/27/10<br>11/27/10<br>11/27/10<br>11/27/10                         | JRA-CV<br>JRA-CV<br>JRA-CV<br>JRA-CV<br>JRA-CV   |
| Test<br>Mercury<br>Arsenic -<br>Barium -<br>Cadmiun<br>Chromiu<br>Copper -<br>Lead - To                         | TCLP extracted<br>TCLP extracted<br>n - TCLP extracted<br>m - TCLP extracted<br>TCLP extracted                                    | < 0.0008 mg/L<br>< 0.500 mg/L<br>< 10.00 mg/L<br>< 0.100 mg/L<br>< 0.500 mg/L<br>< 0.100 mg/L   | EPA 7470A<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B                             | 0.500<br>10.00<br>0.100<br>0.500<br>0.100                            | 11/27/10 12:35<br>11/27/10 8:15<br>11/27/10 8:15<br>11/27/10 8:15<br>11/27/10 8:15<br>11/27/10 8:15  | 11/28/10<br>11/27/10<br>11/27/10<br>11/27/10<br>11/27/10<br>11/27/10             | JRA-CV<br>JRA-CV<br>JRA-CV<br>JRA-CV<br>JRA-CV<br>JRA-CV   |
| Test<br>Mercury<br>Arsenic -<br>Barium -<br>Cadmiun<br>Chromiu<br>Copper -<br>Lead - To<br>Nickel -             | TCLP extracted<br>TCLP extracted<br>n - TCLP extracted<br>m - TCLP extracted<br>TCLP extracted<br>CLP extracted                   | < 0.0008 mg/L<br>< 0.500 mg/L<br>< 10.00 mg/L<br>< 0.100 mg/L<br>< 0.500 mg/L<br>< 0.100 mg/L<br>< 0.500 mg/L<br>< 0.100 mg/L<br>< 0.500 mg/L | EPA 7470A<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B                | 0.500<br>10.00<br>0.100<br>0.500<br>0.100<br>0.500<br>0.100<br>0.500 | 11/27/10 12:35<br>11/27/10 8:15<br>11/27/10 8:15<br>11/27/10 8:15<br>11/27/10 8:15<br>11/27/10 8:15<br>11/27/10 8:15<br>11/27/10 8:15<br>11/27/10 8:15 | 11/28/10<br>11/27/10<br>11/27/10<br>11/27/10<br>11/27/10<br>11/27/10<br>11/27/10 | JRA-CV<br>JRA-CV<br>JRA-CV<br>JRA-CV<br>JRA-CV<br>JRA-CV<br>JRA-CV   |
| Test<br>Mercury<br>Arsenic -<br>Barium -<br>Cadmiun<br>Chromiu<br>Copper -<br>Lead - To<br>Nickel -<br>Selenium | TCLP extracted<br>TCLP extracted<br>n - TCLP extracted<br>m - TCLP extracted<br>TCLP extracted<br>CLP extracted<br>TCLP extracted | < 0.0008 mg/L<br>< 0.500 mg/L<br>< 10.00 mg/L<br>< 0.100 mg/L<br>< 0.500 mg/L<br>< 0.100 mg/L<br>< 0.500 mg/L<br>< 0.100 mg/L                 | EPA 7470A<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>Z EPA 6010B | 0.500<br>10.00<br>0.100<br>0.500<br>0.100<br>0.500<br>0.100          | 11/27/10 12:35<br>11/27/10 8:15<br>11/27/10 8:15<br>11/27/10 8:15<br>11/27/10 8:15<br>11/27/10 8:15<br>11/27/10 8:15                                   | 11/28/10<br>11/27/10<br>11/27/10<br>11/27/10<br>11/27/10<br>11/27/10<br>11/27/10 | RMD-CV<br>JRA-CV<br>JRA-CV<br>JRA-CV<br>JRA-CV<br>JRA-CV<br>JRA-CV<br>JRA-CV<br>JRA-CV<br>JRA-CV<br>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

- Value above calibration range but within annually verified linear range L
- z Due to matrix blas, spike recovery was outside acceptance limits

MANAGER \_\_\_\_\_

| $\Lambda$ |    | _     |
|-----------|----|-------|
| ani       | M. | Davis |

DATE: \_\_\_\_1/30/2010

PAGE 1 OF 1 CHAIN OF CUSTODY REPORT TO: Talisman / UEG 40 ARE SPECIAL DETECTION LIMITS W/O#: 10113523 geowetlands@aol.com NEEDED: YES / NO REFRIGE. RESULTS ARE BEING USED FOR: IF YES, PLEASE ATTACH AFTER COLLECTION ✓ PADEP DRINKING WATER SL SLUDGE wg/ IS A QC PACKAGE NEEDED? GW GROUND WATER SO SOIL CONTACT Steve Gridley SURFACE WATER ΗZ HAZARDOUS SW LANDFILL YES NO TRANSPORT ww WASTE WATER OTHER DEIONIZED WATER DISTILLED WATER PERSONAL OTHER DE DI IF YES, PLEASE ATTACH REQUIREMENTS TO PH# 607-731-0145 Sumple Trpe- Scue Composite PRESERVATIVE ADDED ON RECEIPT F LABORATORY HYDROCHLORIC ACID OH SODIUM HYDROXIDE ′н FAX# SULFURIC ACID AS ASCORBIC ACID 5 **IN COOLER** BILL TO: Talisman N NITRIC ACID AC ACETIC ACID WITH ICE COMPOSITED ON RECEIPT SO3 SODIUM SULFITE NH, AMMONIUM CHLORIDE SODIUM THIOSULFATE ZN Thio ZINC ACETATE TIME OF SAMPLING NONE Hg MERCURIC CHLORIDE AF 76888 PO# SAMPLE MATRIX Please fill out all DATE SAMPLED PRESERVATIVE PROJECT DESCRIPTION An incomplete chain of custody may delay the applicable areas processing of your sample(s). completely SAMPLER SIGNATURE / AFFILIATION UBC CONTAINER SAMPLING POINT ANALYSIS TO BE PERFORMED LAB USE ONLY (PER CONTAINER) 10/21 1000 50 8 TPH Inv Cuttings pН 2 TCLP 8 RCRA Metals + Cu, Ni, Zn 3 Free Liquids / % Moisture 4 N-TPH 5 Perform BTEX ONLY IF the TPH Wetchein 6 Total Scomple TCLP Metals exceeds 100,000 mg/Kg 8 72 HOUR TURNAROUND 9 DAY TURNAROUND 10 112910 11 LAB USE ONLY TEMPERATUREULION RECEIPT TO THE SCI ARRIVALION INC. RELINQUISHED BY DATE: TIME: 1231 RECEIVED BY: DATE: TIME: 11 122110 1 RELINQUISHED BY: DATE: TIME: RECEIVED BY: DATE: TIME: 1 1 RECEIVED BY: DATE: **RELINQUISHED BY:** DATE: TIME: TIME "ïD: 1221 Ad Graphics Printing 570-688-0685

|   | Easter<br>2566 Pen<br>Sayre<br>Phone: (5                     | Analytics, Ir<br>n Division<br>nsylvania Ave.<br>, PA 18840<br>70) 888-0169<br>70) 888-0717 | )C.                              | Work   | Order: 101                                   | 10482                                |
|---|--|---|----------------------------------|--|--|--------------------------------------|
| Steve Gridley<br>JMPANY: Talisman Energy USA, Ir<br>ADDRESS: 337 Daniel Zenker Dr<br>Horseheads, NY 14845   | <b>c</b> .   |   | PA                               | AGE: 1 of  | 0482<br>1<br>6888                            |                                      |
| PHONE: (607) 731-0145<br>FAX: (607) 562-4001  | TEST   | REPORT  | P\                               | WS ID#   |  |                                      |
| J2H<br>RECEIVED FOR LAB BY: RML   |  | 11/03/2010 12:36  |                                  |  | P  | age 1 of 1                           |
| SAMPLE: Air Cuttings<br>SAMPLED BY: SG  |  | ab ID: 10110482-001A<br>Time: 11/03/2010 19:40  | Grab                             |  |  |                                      |
| <u>Test</u><br>Total Petroleum Hydrocarbons<br>Sample Note: Analysis performed by N                         | <u>Result</u><br>1110 mg/Kg<br>licrobac Laboratories, Ir     | <u>Method</u><br>EPA 9071<br>Ic-Erie Division.  | <u>sloq</u>                      | Analvsis Start<br>11/04/10 14:30                                     | Analysis End<br>11/04/10                     | <u>Analyst*</u>                      |
| SAMPLE: Air CuttIngs<br>SAMPLED BY: SG<br><u>Test</u><br>Moisture   | L<br>Sample<br><u>Result</u><br>33.7 %                       | ab ID: 10110482-001B<br>Time: 11/03/2010 19:40<br><u>Method</u><br>Moisture Calc,           | Grab<br><u>SLQQ</u><br>0.01      | <u>Analysis Start</u><br>11/03/10 14:45                              | Analysis End<br>11/04/10                     | IC-SA                                |
| Free Liquid<br>pH   | < 0.1 %<br>8.20@23.6°C                                       | EPA 9095A<br>EPA 9045C  | 0.1                              | 11/03/10 14:40<br>11/04/10 15:32                                     | 11/03/10<br>11/04/10                         | IC-SA<br>SG-SA                       |
| SAMPLE: TCLP Leachate of Air Cutting<br>SAMPLED BY: SG  |  | ab ID: 10110482-001D<br>Time: 11/04/2010 7:30   | Grab                             | <u></u>  |  |                                      |
| Test<br>Mercury - TCLP extracted<br>Arsenic - TCLP extracted  | <u>Result</u><br>< 0.0008 mg/L<br>< 0.500 mg/L               | <u>Method</u><br>EPA 7470A<br>EPA 6010B   | <u>SLOQ</u><br>0.0008<br>0.500   | <u>Analysis Start</u><br>11/04/10 13:15<br>11/04/10 14:05            | <u>Analysis End</u><br>11/04/10<br>11/04/10  | RMD-CV<br>RMD-CV                     |
| Barium - TCLP extracted<br>Cadmium - TCLP extracted<br>Chromium - TCLP extracted<br>Copper - TCLP extracted | < 10.00 mg/L<br>< 0.100 mg/L<br>< 0.500 mg/L<br>< 0.100 mg/L | EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B  | 10.00<br>0.100<br>0.500<br>0.100 | 11/04/10 14:05<br>11/04/10 14:05<br>11/04/10 14:05<br>11/04/10 14:05 | 11/04/10<br>11/04/10<br>11/04/10<br>11/04/10 | RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV |
| Lead - TCLP extracted   | < 0.500 mg/L   | EPA 6010B   | 0.500<br>0.100                   | 11/04/10 14:05<br>11/04/10 14:05                                     | 11/04/10<br>11/04/10                         | RMD-CV<br>RMD-CV                     |

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 Valléy, PA; SA = Benchmark Analytics, Inc. Sayre, PA

| MANAGER  | Carrie | m. Davis | <br>DATE: | 11/5/2010 |
|----------|--------|----------|-----------|-----------|
| WIANAGER | any    | M. Oavis | <br>DATE: | 11/3/2010 |

| CHAIN OF CUSTODY                |          |                     |              | •  <br>• .  |             | Be   | nct                           |   |                      |                                       |                | (                  | GE <u>1</u>                |                | OF_             |
|---------------------------------|----------|---------------------|--------------|-------------|-------------|--|-------------------------------|---|----------------------|---------------------------------------|----------------|--------------------|----------------------------|----------------|-----------------|
| REPORT TO: Talisman / UEG       | 7        |                     | :            | •<br>22     | 256         | 6 Pen  | nsvt                          | W/O#:                                     | 1011                 | 0483                                  | >              | _                  |                            |                |                 |
| geowetlands@aol.com             |          |                     |              | •           | 200         | 0101   | Ph.                           |   |                      | 0402                                  | -              |                    | E SPECIAL D                | 1              |                 |
| twollin@rallysolutions.ca       | REFR     | IGERATE             | SAMP         | PLES        |             |  | Fax: (570)                    | 888-0717                                  | RESULTS              | ARE BEING U                           |                | -                  | EDED: 🌅 YES<br>'ES, PLEASE |                |                 |
|                                 | - AFTE   | R COLLE             | CTION        | 1           |             | /DW  | DRINKING WATER                | SL SLUDGE                                 | Пероги               | NYDEC                                 |                |                    | IS A QC I                  | 1              |                 |
| CONTACT Steve Gridley           |          |                     |              |             | /           | / GW<br>SW                                   | GROUND WATER<br>BURFACE WATER |   |                      | LANDFILL                              | 17.00          |                    |                            | EB E           |                 |
| Oleve Ghuley                    | T        | RANSPOI<br>TO       | ,            |             |             | WW<br>De                                     | WASTE WATER<br>DEIONIZED WATE | OTHER<br>R DI DISTILLED W                 |                      |                                       |                |                    |                            |                |                 |
| FAX#                            |          | BORATO              | RY           |             | / ,         | 1  | /н нуо                        | ROCHLORIC ACID OH                         | SODIUM HYD           | ROXIDE                                |                | 7                  | 15/                        |                |                 |
| BILL TO: Talisman               |          | N COOLE<br>WITH ICE | R            | A           | 1.          | 8  | / N NITE                      | FURIC ACID AS<br>RIC ACID AC              | ACETIC ACID          |                                       |                | /                  |                            |                |                 |
|                                 |          |                     | -<br>/       | /           | 18          | 3/   | / Thio SOD                    | IUM THIOSULFATE ZN                        |                      | HLORIDE                               | /              | E                  | Š                          |                |                 |
| PO# AF'76888                    |          |                     | 2/           | ~ /         | \$ /        | PRESERVATION S                               | - <u>NON</u>                  | č.  | MERCURIC C           | HLORIDE                               |                |                    | \$ /                       | Please         | 3 fill          |
| PROJECT DESCRIPTION             |          | TIME OF SAME        |              |             | i /         | PRESERVATION                                 |                               | incomplete chain of c<br>processing of yo |                      | lay the                               |                | AND A              |                            | applica<br>com |                 |
| SAMPLER SIGNATURE / AFFILIATION |          | \$ 5                | J.           | 14          |             | 5   \$                                       |                               |   |                      | ,                                     |                |                    |                            |                | ihia            |
| CONTAINER SAMPLING POINT        | _//ð     | TIME OF SAME        | SAMPLE MATCH | \$/         | र्जे        | PRESERVITING CONTE                           | /                             | ANALYSIS TO BE PERFO<br>(PER CONTAINER)   |                      |                                       | COMPOSITE ON C | ž /                | LAB                        | ise c          | JNI             |
| 1 Air Cuttings                  | 1/3      | 1940 50             |              | _           |             |  | ЪН                            |   |                      | 2 A.                                  |                | 2010)<br>1.241 (-) |                            | 771            | (A              |
| 2                               |          |                     |              |             |             | 7  | H, Chloride                   | s, Sodium                                 |                      | 1.<br>1.                              |                |                    |                            |                | Ē               |
| 3                               |          |                     |              |             |             | 1  | CLP 8 RCF                     | RA Metals + Cu                            | , NI, Zn             |                                       |                |                    |                            |                | <b>C</b>        |
| 4                               |          |                     |              |             |             | F  | ree Liquids                   | / % Moisture                              |                      |                                       |                | 1                  |                            |                | 6               |
| 5                               |          |                     |              |             |             |  | BTEX                          |   |                      | r.                                    |                |                    |                            |                | · · ·           |
| 6                               |          | •                   |              | [[          |             | <u>-</u>                                     |                               | 8270 ONLY IL                              |                      |                                       |                | 10                 |                            | 1. <u>1</u>    |                 |
| 7                               |          |                     |              | _           |             |  | exceeds                       | 1 <b>2</b> 0,000 mg/Kg                    |                      | 1<br>1<br>1<br>1                      |                |                    |                            |                |                 |
| 8                               | _        |                     |              |             |             |  |                               |   |                      |                                       |                |                    |                            |                | :<br>ند ب.<br>ح |
| 9                               |          |                     |              |             |             |  | -72                           | HOUR TURN                                 |                      |                                       |                |                    |                            |                | ).              |
| 10                              |          |                     |              | _#          |             |  |                               | DAY TURNAR                                |                      | · · · · · · · · · · · · · · · · · · · |                |                    |                            |                |                 |
| 11                              |          |                     | Ļ            |             | <u>.</u>  _ | <u> </u>                                     |                               |   | ।<br>जनसंस्थानिक संय |                                       | * <u> </u>     | 1                  |                            |                |                 |
| LABUSE OF Y                     |          | أع                  | ; e          | Y           | <u></u>     |  |                               | TEMPERAT                                  | URE UPON I           | Receipt_                              |                | o                  | CiARR                      | VAL (          | ON              |
| RELINQUISHED                    | <u> </u> | DATE                |              | <u>   -</u> | TIM         | ΛE:  | RE                            | CENCED BY:                                | <u></u>              |                                       | <u></u>        | D                  | ATE:                       |                | TIN             |
| RELINQUISHED BY:                |          | 11                  | 131          | 110         | 711.4       | <u>/                                    </u> | 36.                           | CEIVED BY                                 |                      |                                       |                |                    | <u> </u>                   |                | TIN             |
|                                 |          | DATE                | 1            | 1           | TIM         |  |                               | :/ .                                      | $() \cap$            |                                       |                |                    | ATE:<br>/ /                |                |                 |
| RELINQUISHED BY:                |          | DATE                |              |             | TIM         | 1E.  |                               | P DY O OX                                 |                      |                                       |                | - In               | 17:3                       | L              | IJ              |

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

| typed or legi<br>each attach  | bust be fully and accur<br>bly printed in the space<br>ed sheet as Form 26R,  | tify Date Receive  | JSE ONLY<br>d & General Notes  |   |                               |  |  |  |
|---|---|--|--|---|-------------------------------|--|--|--|
| 1   | erence 287.54   | ets needs to match the date  | noted below.   |   |                               |  |  |  |
| Date Prepare  |   | bruary 11, 2011  |  |   |                               |  |  |  |
| SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION  |   |  |  |   |                               |  |  |  |
| Company Na  | ime   |  | - <u> </u>   |   |                               |  |  |  |
|   | ergy USA Inc.   |  |  | <b>EDA</b> (  | 0                             |  |  |  |
|   | If a Subsidiary, Name of Parent Company EPA Generator ID#<br>Talisman Energy Inc. N/A   |  |  |   |                               |  |  |  |
|   | Company Mailing Address Line 1 Company Mailing Address Line 2   |  |  |   |                               |  |  |  |
|   | dress Last Line – City  | State  | Zip+4  | Phone   | Ext                           |  |  |  |
| Warrendale  |   | PA   | 15086  | (724) 841-530   |                               |  |  |  |
|   | ntact Last Name   | First Name   | MI   | Suffix  | (                             |  |  |  |
| Brown<br>Municipality   |   | Dina   | County   |   | ····                          |  |  |  |
| Warrendale  |   |  | Allegheny  |   |                               |  |  |  |
| Contact Pho   |   | Contact Email Address  |  |   |                               |  |  |  |
| (724) 814-5321 dybrown@talismanusa.com  |   |  |  |   |                               |  |  |  |
| Is the waste generated at the Company Mailing Address (noted above)?                            |   |  |  |   |                               |  |  |  |
| the (0  | 1-074) well pad site locat  | ed at 2018 Mountain Avenue,  | Armenia Township, Bra  | adford County, PA. W  | aste is stored in             |  |  |  |
| containers on   | site.   |  |  |   |                               |  |  |  |
| Municipality  | Armenia   | County Bradfo  |  | State   | PA                            |  |  |  |
| Residual  | Deale   | SECTION B. WAST  | E DESCRIPTION  | 11-14 -4  | <b>T</b> ime -                |  |  |  |
| Waste Code  |   | Description  | Amount   | Unit of<br>Measure  | Time<br>Frame                 |  |  |  |
| 810   | Drill cuttings (oil and   | •  |  | Cu vd al  |                               |  |  |  |
| 0.0   | Dim outingo (on and   | nas)   | 5.619  |   |                               |  |  |  |
| 1. GENERAL PROPERTIES   |   |  |  |   |                               |  |  |  |
| a nH R  |   | 1. GENERAL P   |  | 🗌 lb 🛛 ton  | One Time                      |  |  |  |
| a. pH Ra<br>b. Physi  | ange 8.   | <b>1. GENERAL P</b><br>26 to 8.89  | ROPERTIES<br>(based on analyses or k   | 🗌 lb 🛛 ton  |                               |  |  |  |
| •   |   | 1. GENERAL P   | ROPERTIES<br>(based on analyses or k<br>thod 9095)   | 🗌 lb 🛛 ton  | One Time                      |  |  |  |
| b. Physi  | ange 8<br>cal State   | 1. GENERAL P         26       to       8.89         ☐ Liquid Waste (EPA Me         ⊠ Solid (EPA Method 900         ☐ Gas (ambient tempera)   | ROPERTIES<br>(based on analyses or k<br>thod 9095)<br>95)<br>ture & pressure)  | Ib Ston   |                               |  |  |  |
| b. Physi  | ange 8.   | 1. GENERAL P         26       to       8.89         Liquid Waste (EPA Me         Solid (EPA Method 900         Gas (ambient tempera         Color       Greyish Black  | ROPERTIES<br>(based on analyses or k<br>thod 9095)<br>95)<br>ture & pressure)<br>Odd   | ☐ Ib ⊠ ton<br>mowledge)<br>pr Earthy/Slight F                                     |                               |  |  |  |
| b. Physi  | ange 8<br>cal State   | 1. GENERAL P         26       to       8.89         Liquid Waste (EPA Me         Solid (EPA Method 90)         Gas (ambient tempera         Color       Greyish Black         Number of Solid or Liquid  | ROPERTIES<br>(based on analyses or lefthod 9095)<br>95)<br>ture & pressure)<br>Odd<br>I Phases of Separation   | ☐ lb ⊠ ton<br>mowledge)<br>Pr _Earthy/Slight F                                    |                               |  |  |  |
| b. Physi  | ange 8<br>cal State   | 1. GENERAL P         26       to       8.89         Liquid Waste (EPA Me         Solid (EPA Method 900         Gas (ambient tempera         Color       Greyish Black  | ROPERTIES<br>(based on analyses or lefthod 9095)<br>95)<br>ture & pressure)<br>Odd<br>I Phases of Separation   | ☐ lb ⊠ ton<br>mowledge)<br>Pr _Earthy/Slight F                                    |                               |  |  |  |
| b. Physi<br>c. Physi  | ange 8.<br>ical State<br>cal Appearance   | 1. GENERAL P     26 to 8.89     ☐ Liquid Waste (EPA Me         Solid (EPA Method 90)     ☐ Gas (ambient tempera         Color Greyish Black         Number of Solid or Liquid         Describe each phase of s         2. CHEMICAL ANALYS  | ROPERTIES<br>(based on analyses or leased<br>thod 9095)<br>95)<br>ture & pressure)<br>Odd<br>Phases of Separation<br>eparation. Soil and Ro  | ☐ Ib ⊠ ton<br>knowledge)<br>pr Earthy/Slight F<br>One<br>ock Fragments            |                               |  |  |  |
| b. Physi<br>c. Physi<br>a. The re   | ange 8.<br>ical State<br>cal Appearance   | 1. GENERAL P         26       to       8.89         ☐       Liquid Waste (EPA Me         ⊠       Solid (EPA Method 90)         ☐       Gas (ambient tempera         Color       Greyish Black         Number of Solid or Liquid         Describe each phase of s                                   | ROPERTIES<br>(based on analyses or leased<br>thod 9095)<br>95)<br>ture & pressure)<br>Odd<br>Phases of Separation<br>eparation. Soil and Ro  | ☐ Ib ⊠ ton<br>knowledge)<br>pr Earthy/Slight F<br>One<br>ock Fragments            |                               |  |  |  |
| b. Physi<br>c. Physi<br>a. The ro<br>instru<br>b. A det   | ange 8.<br>cal State<br>cal Appearance<br>esults of a detailed chen<br>actions, is attached.<br>ailed description of the v  | 1. GENERAL P     26 to 8.89     ☐ Liquid Waste (EPA Me         Solid (EPA Method 90)     ☐ Gas (ambient tempera         Color Greyish Black         Number of Solid or Liquid         Describe each phase of s         2. CHEMICAL ANALYS nical characterization of the waste sampling method is a | ROPERTIES<br>(based on analyses or leased on analyses of Separation of the second of | ☐ Ib ⊠ ton<br>knowledge)<br>pr Earthy/Slight F<br>One<br>pck Fragments<br>n the ⊠ | Petroleum                     |  |  |  |
| b. Physi<br>c. Physi<br>a. The ro<br>instru<br>b. A det   | ange 8.<br>cal State<br>cal Appearance<br>esults of a detailed chen<br>actions, is attached.<br>ailed description of the v<br>uality assurance/quality                                  | 1. GENERAL P     26 to 8.89     ☐ Liquid Waste (EPA Me         Solid (EPA Method 90)     ☐ Gas (ambient tempera         Color Greyish Black         Number of Solid or Liquid         Describe each phase of s         2. CHEMICAL ANALYS nical characterization of the                            | ROPERTIES<br>(based on analyses or leased on analyses of Separation of the second of | ☐ Ib ⊠ ton<br>knowledge)<br>pr Earthy/Slight F<br>One<br>pck Fragments<br>n the ⊠ | Petroleum<br>Yes No           |  |  |  |
| b. Physic<br>c. Physic<br>a. The re-<br>instru-<br>b. A det<br>c. The q<br>attack<br>d. The re- | ange 8.<br>cal State<br>cal Appearance<br>esults of a detailed chen<br>ictions, is attached.<br>ailed description of the<br>uality assurance/quality<br>ned.<br>esults of the hazardous | 1. GENERAL P     26 to 8.89     ☐ Liquid Waste (EPA Me         Solid (EPA Method 90)     ☐ Gas (ambient tempera         Color Greyish Black         Number of Solid or Liquid         Describe each phase of s         2. CHEMICAL ANALYS nical characterization of the waste sampling method is a | ROPERTIES<br>(based on analyses or lefthod 9095)<br>95)<br>ture & pressure)<br>Odd<br>Phases of Separation<br>eparation. <u>Soil and Ro</u><br>SIS ATTACHMENTS<br>waste, as described in<br>attached.<br>yed by the laboratory(in<br>ched.   |   | Petroleum<br>Yes No<br>Yes No |  |  |  |

|            | 3   | PROCESS DESCRIPTION &         | SCHEMATIC ATTAC  | HMENTS            |               |                   |  |  |
|------------|---|-------------------------------|--|-------------------|---------------|-------------------|--|--|
| a.         | A detailed description of the the waste, as specified in the  | manufacturing and/or poll     |  |                   | Yes           | No No             |  |  |
|            | · · · · · · · · · · · · · · · · · · ·   | ·····                         |  |                   |               |                   |  |  |
| b.         | A schematic of the manufactor<br>as specified in the instruction                                    |                               | rol processes proc   | ducing the waste, | 🛛 Yes         | 🗌 No              |  |  |
| C.         | If portions of the information a confidentiality claim, as des                                      |                               |  | n for 🔲 Yes       | No No         | N/A               |  |  |
|            | SECTIO  | ON C. MANAGEMEI               | encode a construction of the construction of t |                   |               |                   |  |  |
|            |   | 1. PROCESSING OR DIS          |  |                   |               |                   |  |  |
| The a      | rea below (ad.) will accommod   | late the identification of tw | o facilities. Attach   | additional sheets | if necessary. |                   |  |  |
| a.         | a. Solid waste permit number(s) for processing or disposal facility being utilized.<br>8-4630-00010 |                               |  |                   |               |                   |  |  |
| b.         | Facility Name   | Hakes C&D Landfill            |  |                   |               |                   |  |  |
|            | Address Line 1  | 4376 Manning Ridge Ro         | oad  |                   |               |                   |  |  |
|            | Address Line 1  |                               |  |                   |               |                   |  |  |
|            | Address City State ZIP  | Painted Post                  | NY   | 14870             |               |                   |  |  |
|            | Municipality  | Erwin Twp                     | County   | Steuben           |               |                   |  |  |
| c.         | Facility Contact Name   | Joseph Boyles                 |  |                   |               |                   |  |  |
|            | Title   |                               |  |                   |               |                   |  |  |
|            | Phone   | (607) 937-6044                | Email Address  | joe.boyles@case   | lla.com       |                   |  |  |
|            |   | (585) 466-7271                |  |                   |               |                   |  |  |
| d.         | d. Volume of waste shipped to processing or disposal facility in the previous year.                 |                               |  |                   |               |                   |  |  |
|            | 2,512   | cuyd 🔤 gal 🔤                  | b 🛛 ton  | (check one)       |               |                   |  |  |
| a.         | Solid waste permit number(s)<br>9-0232-00003  | for processing or dispose     | al facility being util   | ized.             |               |                   |  |  |
| b.         | Facility Name   | Hyland Landfill               |  |                   |               |                   |  |  |
| Б.         | Address Line 1  | 6653 Herdman Road             |  |                   |               |                   |  |  |
|            | Address Line 1  | 0055 Heruman Road             |  |                   |               |                   |  |  |
|            | Address City State ZIP  | Angelica                      | NY   | 14709             |               |                   |  |  |
|            | Municipality  | Angelica                      | County   | Allegany          |               |                   |  |  |
| C.         | Facility Contact Name   | Larry Shilling                |  | , moguriy         |               |                   |  |  |
| <b>U</b> . | Title   | Larry Shining                 |  |                   |               | ~                 |  |  |
|            | Phone   | (585) 466-7271                | Email Address  | larry.shilling@ca | sella com     |                   |  |  |
|            |   |                               |  |                   |               |                   |  |  |
| d.         | Volume of waste shipped to p 2,139  | cu yd gal                     | ty in the previous<br>   b   X  ton  |                   |               |                   |  |  |
|            |   | 2. BENEFI                     | CIAL USE   |                   |               | and in the second |  |  |
| a.         | Has the waste been approved   | for beneficial use?           |  |                   | Yes           | No No             |  |  |
|            | If "Yes", list the general perm   | it number or approval num     | nber.  |                   |               |                   |  |  |
| b.         | Volume of waste beneficially  | used in the previous year.    |  |                   |               |                   |  |  |
|            | 0   | cuyd 📋 gal 📋                  | b ton  | (check one)       |               |                   |  |  |

|        | 3.   | PROCESS DESCRIPTION  | & SCHEMATIC ATTA         | CHMENTS           | generative and see the                     |       |  |  |  |  |
|--------|--|--|--------------------------|-------------------|--|-------|--|--|--|--|
| a.     | A detailed description of the  |  |                          |                   | Yes  |       |  |  |  |  |
|        | the waste, as specified in the   |  |                          | p                 |  |       |  |  |  |  |
| b.     | A schematic of the manufactu<br>as specified in the instruction  |  | ontrol processes proc    | ducing the waste, | 🛛 Yes                                      | 🗌 No  |  |  |  |  |
| C.     | If portions of the information a confidentiality claim, as des   |  |                          | n for 📋 Yes       | 🗌 No                                       | 🛛 N/A |  |  |  |  |
|        | SEGTI  | DN C. MANAGEM  |                          |                   |  |       |  |  |  |  |
|        | 1. PROCESSING OR DISPOSAL FACILITY (IES)   |  |                          |                   |  |       |  |  |  |  |
| The ar | The area below (ad.) will accommodate the identification of two facilities. Attach additional sheets if necessary. |  |                          |                   |  |       |  |  |  |  |
| a.     | a. Solid waste permit number(s) for processing or disposal facility being utilized.<br>100361                      |  |                          |                   |  |       |  |  |  |  |
| b.     | Facility Name  | McKean County Lan  | dfill                    |                   |  |       |  |  |  |  |
|        | Address Line 1   | 19 Ness Lane   |                          |                   |  |       |  |  |  |  |
|        | Address Line 1   |  |                          |                   |  |       |  |  |  |  |
|        | Address City State ZIP   | Kane   | PA                       | 16735             | 17. 19. 19. 19. 19. 19. 19. 19. 19. 19. 19 |       |  |  |  |  |
|        | Municipality   | Sergeant Twp   | County                   | McKean            |  |       |  |  |  |  |
| c.     | Facility Contact Name  | Mike Manderfeld  |                          |                   |  |       |  |  |  |  |
|        | Title  |  |                          |                   |  |       |  |  |  |  |
|        | Phone  | (814) 778-9931   | Email Address            | manderfeld@gm     | ail.com                                    |       |  |  |  |  |
| d.     | d. Volume of waste shipped to processing or disposal facility in the previous year.                                |  |                          |                   |  |       |  |  |  |  |
|        | 938  | cuyd 🗌 gal   | 🗌 lb 🛛 ton               | (check one)       | )  |       |  |  |  |  |
| a.     | Solid waste permit number(s)<br>100945   | for processing or disp   | osal facility being util | ized.             |  |       |  |  |  |  |
| b.     | Facility Name  | Cumberland County  | l andfill                |                   |  |       |  |  |  |  |
|        | Address Line 1   | 135 Vaughn Road  | Euriann                  |                   |  |       |  |  |  |  |
|        | Address Line 1   | - roo vaagiin rooaa  |                          |                   |  |       |  |  |  |  |
|        | Address City State ZIP   | Newburg  | PA                       | 17240             |  |       |  |  |  |  |
|        | Municipality   | Newburg Boro   | County                   | Cumberland        |  |       |  |  |  |  |
| c.     | Facility Contact Name  | Dusty Hilbert  |                          |                   |  |       |  |  |  |  |
| 0.     | Title  | Compliance Manage  | r                        |                   |  |       |  |  |  |  |
|        | Phone  | (717) 729-5261   | Email Address            | dhilbert@iswaste  |  |       |  |  |  |  |
|        |  | · · ·  |                          | -                 | <del></del>                                |       |  |  |  |  |
| d.     | Volume of waste shipped to p   |  |                          |                   |  |       |  |  |  |  |
|        | 30   | cuyd 🗌 gal   | 🔄 lb 🖂 ton               | (check one)       |  |       |  |  |  |  |
|        | 4  | The Provide Provid | FICIALUSE                |                   |  | 14    |  |  |  |  |
| a.     | Has the waste been approved  | for beneficial use?  |                          |                   | Yes  | 🛛 No  |  |  |  |  |
|        | If "Yes", list the general permi   | t number or approval n   | umber.                   |                   |  |       |  |  |  |  |
| b.     | Volume of waste beneficially u   |  | ar.                      |                   |  |       |  |  |  |  |
|        | 0  | cuyd 🗌 gal   | 🗌 lb 🗌 ton               | (check one)       |  |       |  |  |  |  |

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| 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: Def 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: Derm 26R   |  |  |  |  |  |  |  |  |
| Other (specify)  |  |  |  |  |  |  |  |  |
| Date Submitted:  |  |  |  |  |  |  |  |  |
| I certify the information required in Section B-3, Process Description and Schematic, was supplied to the Department for the year and has not changed.   |  |  |  |  |  |  |  |  |
| Form Submitted: Form 26R   |  |  |  |  |  |  |  |  |
| Other (specify)  |  |  |  |  |  |  |  |  |
| Date Submitted:  |  |  |  |  |  |  |  |  |
| Name of Responsible Official Title Environmental Specialist  |  |  |  |  |  |  |  |  |
| Dina Brown   |  |  |  |  |  |  |  |  |
| Signature <u>Are</u> Sum Date <u>2728/11</u>   |  |  |  |  |  |  |  |  |

| LAB ID: 08-0<br>LAB ID: 39-0 |                                  | <b>Ea</b><br>256                      | <b>mark Analytic<br/>astern Divisic</b><br>6 Pennsylvania <i>A</i><br>Sayre, PA 18840 | on<br>Ave. | C.              | N                      | Work (       | Order: 100               | 83653            |
|------------------------------|----------------------------------|---------------------------------------|---|------------|-----------------|------------------------|--------------|--------------------------|------------------|
|                              |                                  |                                       | one: (570) 888-016<br>Fax: (570) 888-071  |            |                 |                        |              |                          |                  |
| SEND DATA                    | TO:                              |                                       |   |            |                 |                        |              |                          |                  |
| NAME:                        | Steve Gridley                    |                                       |   |            | W               | O#:                    | 10083        | 653                      |                  |
| COMPANY:                     |                                  | IC.                                   |   |            | PA              | AGE:                   | 1 of 2       |                          |                  |
| ADDRESS:                     | 337 Daniel Zenker Dr             |                                       |   |            |                 |                        | 1012         |                          |                  |
|                              | Horseheads, NY 14845             |                                       |   |            | PC              | D#:                    | AF777        | '17                      |                  |
| PHONE:                       | (607) 562-4000                   |                                       | TEST REPORT   |            | P٧              | NS ID#                 |              |                          |                  |
| FAX:                         | (607) 562-4000                   |                                       |   |            |                 |                        |              |                          |                  |
| 01-0                         | )74-01                           |                                       |   |            |                 |                        |              |                          |                  |
|                              | FOR LAB BY: DLM2                 | Ľ                                     | ATE: 08/20/2010 1   | 1:51       |                 |                        |              | Pa                       | ige 1 of 2       |
|                              |                                  |                                       |   |            | Compo           | oito                   |              |                          |                  |
| SAMPLE: AI                   | i <b>r Cuttings</b><br>ED BY: SG |                                       | Lab ID: 10083653<br>Sample Time: 08/19/201  |            | Compo           | site                   |              |                          |                  |
| SAMP LL                      | _D D1. 3G                        |                                       | Sample Time. 00/19/201  | 15.00      | <u>SLOQ</u>     |                        |              |                          |                  |
| Test                         |                                  | <u>Result</u>                         | Method  | -          |                 | Analysis               |              | Analysis End             |                  |
| Sodium                       |                                  | 1830 mg/Kg                            |   |            | 60.0            | 08/24/10               |              | 08/24/10                 | RMD-CV           |
| pH                           |                                  | 8.30 @ 17.8°C                         |   |            | 50.0            | 08/25/10               |              | 08/25/10                 | TLB-CV           |
| Chloride                     |                                  | 223 mg/Kg                             | EPA 30  | 0.0        | 50.0            | 08/23/10 <sup>-</sup>  | 14:05        | 08/23/10                 | HDP-CV           |
| SAMPLE: AI                   | -                                |                                       | Lab ID: 10083653  |            | Compo           | site                   |              |                          |                  |
| SAMPLE                       | ED BY: SG                        |                                       | Sample Time: 08/19/201  | 0 15:06    | SLOQ            |                        |              |                          |                  |
| Test                         |                                  | Result                                | Method  | <u>1</u>   | <u>0200</u>     | Analysis :             | <u>Start</u> | Analysis End             | <u>Analyst *</u> |
| Moisture                     |                                  | 35.0 %                                | Moisture  | Calc.      | 0.01            | 08/23/10 <sup>-</sup>  | 13:30        | 08/24/10                 | MED-SA           |
| Free Liqu                    | id                               | < 0.1 %                               | EPA 90  | 95A        | 0.1             | 08/23/10 <sup>-</sup>  | 15:25        | 08/23/10                 | IC-SA            |
| SAMPLE: AI                   | r Cuttings                       |                                       | Lab ID: 10083653  | 3-001C     | Compos          | site                   |              |                          |                  |
|                              | ED BY: SG                        |                                       | Sample Time: 08/19/201  | 0 15:06    |                 |                        |              |                          |                  |
| Teet                         |                                  | Result                                | Method  | r          | <u>sloq</u>     | Analysis               | Stort        | Analysis End             | Ánalvat *        |
| <u>Test</u><br>Total Petr    | roleum Hydrocarbons              | 5400 mg/Kg                            | EPA 9   | -          |                 | 08/23/10               |              | Analysis End<br>08/23/10 | Analyst          |
|                              | e Note: Analysis performed by N  |                                       |   | 071        |                 | 00/20/10               | 11.10        | 00/20/10                 |                  |
| SAMPLE TO                    | CLP Leachate of Air Cutting      | e                                     | Lab ID: 10083653  | 3-001F     | Compos          | site                   |              |                          |                  |
|                              | ED BY: SG                        | 3                                     | Sample Time: 08/21/201  |            | compo           |                        |              |                          |                  |
|                              |                                  | <b>m</b> ()                           |   |            | <u>SLOQ</u>     |                        | <b>.</b>     |                          |                  |
| <u>Test</u>                  | TOLD suffranted                  | Result                                | Method  | •          | 0.0000          | Analysis S             |              | Analysis End             | Analyst *        |
| -                            | TCLP extracted                   | < 0.0008 mg/l                         |   |            | 0.0008<br>0.500 | 08/24/10<br>08/24/10 1 |              | 08/24/10                 | KW-CV            |
|                              | TCLP extracted<br>TCLP extracted | < 0.500 mg/L<br>< 10.00 mg/L          |   |            | 10.00           | 08/24/101              |              |                          | RMD-CV           |
|                              | - TCLP extracted                 | < 10.00 mg/L<br>0.101 mg/L            | EPA 60  |            | 0.100           | 08/24/10 1             |              |                          | RMD-CV           |
|                              | n - TCLP extracted               | < 0.500 mg/L                          |   |            | 0.500           | 08/24/10 1             |              |                          | RMD-CV<br>RMD-CV |
|                              | TCLP extracted                   | < 0.100 mg/L                          |   |            | 0.100           | 08/24/10 1             |              |                          | RMD-CV<br>RMD-CV |
| •••                          | CLP extracted                    | < 0.500 mg/L                          |   |            | 0.500           | 08/24/10 1             |              |                          | RMD-CV<br>RMD-CV |
|                              | CLP extracted                    | < 0.100 mg/L                          |   |            | 0.100           | 08/24/10 1             |              |                          | RMD-CV           |
|                              |                                  | · · · · · · · · · · · · · · · · · · · |   |            | 0.100           | 50/27/10               | 0.00         | 00/21/10                 |                  |

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

Value above calibration range but within annually verified linear range L

MANAGER

Carrie M. Davis

DATE: 8/25/2010

| LAB ID: 08-(<br>LAB ID: 39-( |   | East<br>2566 P<br>Say<br>Phone: | ern l<br>ennsy<br>/re, P/<br>(570) | nalytics, In<br>Division<br>/Ivania Ave.<br>A 18840<br>888-0169<br>888-0717 | IC.   |          | Work ( | Order: 100 | 083653     |
|------------------------------|---|---------------------------------|------------------------------------|---|-------|----------|--------|------------|------------|
| SEND DATA                    | A TO:   |                                 |                                    |   |       |          |        |            |            |
| NAME:                        | Steve Gridley                                   | _                               |                                    |   | W     | 'O#:     | 10083  | 653        |            |
| COMPANY:<br>ADDRESS:         | Talisman Energy USA, In<br>337 Daniel Zenker Dr | С.                              |                                    |   | P/    | AGE:     | 2 of 2 |            |            |
|                              | Horseheads, NY 14845                            |                                 |                                    |   | P     | O#:      | AF777  | 717        |            |
| PHONE:<br>FAX:               | (607) 562-4000<br>(607) 562-4001                | TE                              | ST RE                              | EPORT   | P١    | WS ID#   |        |            |            |
| 01-0                         | )74-01  |                                 |                                    |   |       |          |        |            |            |
| RECEIVED                     | FOR LAB BY: DLM2                                | DATE                            | E: 08/2                            | 20/2010 11:51   |       |          |        | Р          | age 2 of 2 |
| Selenium                     | n - TCLP extracted                              | < 0.500 mg/L                    |                                    | EPA 6010B   | 0.500 | 08/24/10 | 10:50  | 08/24/10   | RMD-CV     |
| Silver - T                   | CLP extracted                                   | < 0.100 mg/L                    |                                    | EPA 6010B   | 0.100 | 08/24/10 | 10:50  | 08/24/10   | RMD-CV     |
| Zinc - TC                    | CLP extracted                                   | 115 mg/L                        | L                                  | EPA 6010B   | 0.200 | 08/24/10 | 10:50  | 08/24/10   | RMD-CV     |

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 \_\_\_\_\_

Camie M. Davis

DATE: 8/25/2010

| LAB ID: 08-<br>LAB ID: 39-   |   | <b>Eas</b><br>2566<br>Si<br>Phon  | <b>stern E</b><br>Pennsyl<br>ayre, PA<br>ne: (570) ( | <b>alytics, In</b><br><b>Division</b><br>Ivania Ave.<br>18840<br>888-0169<br>888-0717 | IC.                                       | Worl  | k Order: 100                                 | 92004                                |
|--|---|---|--|---|---|---|--|--------------------------------------|
| SEND DAT   | A TO:   |   |  |   |   |   |  |                                      |
| NAME:  | Steve Gridley   |   |  |   | W   | O#: 100   | 92004  |                                      |
| COMPANY:   |   | IC.   |  |   | PA  | AGE: 1 of   | 1  |                                      |
| ADDRESS:   | 337 Daniel Zenker Dr<br>Horseheads, NY 14845  |   |  |   |   |   |  |                                      |
|  | 11015elleaus, 101 14045   |   |  |   | PC  | D#: AF7   | 7717   |                                      |
| PHONE:<br>FAX:   | (607) 562-4000<br>(607) 562-4001  | TEST REPORT   |  |   | P٧  | NS ID#  |  |                                      |
|  |   |   |  |   |   |   |  |                                      |
| RECEIVED   | FOR LAB BY: TJC   | DA  | TE: 09/13  | 3/2010 17:12  |   |   | Pa   | age 1 of 1                           |
| SAMPLE: Ir   | ו <b>יע. Cuttings</b><br>ED BY: SG  | S   |  | 10092004-001A<br>09/13/2010 12:05   | Grab                                      |   |  |                                      |
|  |   |   | ampie mine.  |   | <u>SLOQ</u>                               |   |  |                                      |
|  | troleum Hydrocarbons<br>le Note: Analysis performed by M                                      | Result Method<br>77900 mg/Kg EPA 9071<br>d by Microbac Laboratories, IncErie Division |  |   | <u>Analysis Start</u><br>09/19/10 10:20   | <u>Analysis End</u> <u>Analyst *</u><br>09/19/10                                  |  |                                      |
| SAMPLE: In   | ny. Cuttings  |   | Lab ID:  | 10092004-001B   | Grab                                      |   |  |                                      |
|  | ED BY: SG   | S   | ample Time:  | 09/13/2010 12:05  |   |   |  |                                      |
| Test   |   | Result  |  | Method  | <u>SLOQ</u>                               | Analysis Start  | Analysis End                                 | Analyst *                            |
| Moisture   | 9   | 22.9 %  |  | Moisture Calc.  | 0.01                                      | 09/14/10 10:00  |  | MED-SA                               |
| Free Liqu  |   | < 0.1 %   |  | EPA 9095A   | 0.1                                       | 09/14/10 15:00  |  | IC-SA                                |
| рН   |   | 8.89@20.3°C   |  | EPA 9045C   |   | 09/14/10 14:26  | 09/14/10                                     | MED-SA                               |
| SAMPLE: T  | CLP Leachate of Inv. Cutting  | IS  | Lab ID:  | 10092004-001D   | Grab                                      |   |  |                                      |
|  | ED BY: SG   | -   | ample Time:  | 09/15/2010 9:00   |   |   |  |                                      |
| Test   |   | Result  |  | Method  | <u>SLOQ</u>                               | <u>Analysis Start</u>   | Analysis End                                 | Analyst *                            |
|  | - TCLP extracted  | < 0.0008 mg/L   |  | EPA 7470A   | 0.0008                                    | 09/15/10 9:00   | 09/16/10                                     | KW-CV                                |
| •  | - TCLP extracted  | < 0.500 mg/L  |  | EPA 6010B   | 0.500                                     | 09/16/10 8:00   | 09/16/10                                     | RMD-CV                               |
| Arsenic -  |   | •   |  | EPA 6010B   | 10.00                                     | 09/16/10 8:00   | 09/16/10                                     | RMD-CV                               |
|  | TCLP extracted  | < 10.00 mg/L  |  | EINCOLOD  |   |   |  |                                      |
| Barium -   | n - TCLP extracted  | < 10.00 mg/L<br>< 0.100 mg/L  |  | EPA 6010B   | 0.100                                     | 09/16/10 8:00   | 09/16/10                                     | RMD-CV                               |
| Barium -<br>Cadmiun  |   | •   |  |   |   |   | 09/16/10<br>09/16/10                         | RMD-CV<br>RMD-CV                     |
| Barium -<br>Cadmiun<br>Chromiu   | n - TCLP extracted  | < 0.100 mg/L  |  | EPA 6010B   | 0.100                                     | 09/16/10 8:00   |  |                                      |
| Barium -<br>Cadmiun<br>Chromiui<br>Copper -  | n - TCLP extracted<br>m - TCLP extracted  | < 0.100 mg/L<br>< 0.500 mg/L  |  | EPA 6010B<br>EPA 6010B  | 0.100<br>0.500                            | 09/16/10 8:00<br>09/16/10 8:00  | 09/16/10                                     | RMD-CV                               |
| Barium -<br>Cadmiun<br>Chromiun<br>Copper -<br>Lead - T(                           | n - TCLP extracted<br>m - TCLP extracted<br>TCLP extracted                                    | < 0.100 mg/L<br>< 0.500 mg/L<br>< 0.100 mg/L  |  | EPA 6010B<br>EPA 6010B<br>EPA 6010B   | 0.100<br>0.500<br>0.100                   | 09/16/10 8:00<br>09/16/10 8:00<br>09/16/10 8:00                                   | 09/16/10<br>09/16/10                         | RMD-CV<br>RMD-CV                     |
| Barium -<br>Cadmiun<br>Chromiun<br>Copper -<br>Lead - T(<br>Nickel - 1             | n - TCLP extracted<br>m - TCLP extracted<br>TCLP extracted<br>CLP extracted                   | < 0.100 mg/L<br>< 0.500 mg/L<br>< 0.100 mg/L<br>< 0.500 mg/L                          |  | EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B                                      | 0.100<br>0.500<br>0.100<br>0.500          | 09/16/10 8:00<br>09/16/10 8:00<br>09/16/10 8:00<br>09/16/10 8:00                  | 09/16/10<br>09/16/10<br>09/16/10             | RMD-CV<br>RMD-CV<br>RMD-CV           |
| Barium -<br>Cadmiun<br>Chromiun<br>Copper -<br>Lead - T(<br>Nickel - 1<br>Selenium | n - TCLP extracted<br>m - TCLP extracted<br>TCLP extracted<br>CLP extracted<br>TCLP extracted | < 0.100 mg/L<br>< 0.500 mg/L<br>< 0.100 mg/L<br>< 0.500 mg/L<br>0.114 mg/L            |  | EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B                         | 0.100<br>0.500<br>0.100<br>0.500<br>0.100 | 09/16/10 8:00<br>09/16/10 8:00<br>09/16/10 8:00<br>09/16/10 8:00<br>09/16/10 8:00 | 09/16/10<br>09/16/10<br>09/16/10<br>09/16/10 | RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV |

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

Camie 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

### SEND DATA TO:

| NAME: Steve Gridley<br>COMPANY: Talisman Energy USA,<br>ADDRESS: 337 Daniel Zenker Dr<br>Horseheads, NY 14845 |               |   | P                | AGE: 1 of      | 94268<br><sup>:</sup> 1<br>77718 |            |
|---|---------------|---|------------------|----------------|----------------------------------|------------|
| PHONE: (607) 562-4000<br>FAX: (607) 562-4001  | TE            | ST REPORT   | P                | WS ID#         |                                  |            |
| 01-074  |               |   | <u> </u>         |                |                                  |            |
| RECEIVED FOR LAB BY: BMM  | DAT           | E: 09/27/2010 14:48                                 |                  |                | Pa                               | age 1 of 1 |
| SAMPLE: Gel Cuttings<br>SAMPLED BY: SG  | Sar           | Lab ID: 10094268-001B<br>nple Time: 09/25/2010 17:1 |                  | osite          |                                  |            |
| Test  | Result        | Method  | <u></u>          | 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 Cutti  | ıgs           | Lab ID: 10094268-001C                               | Compo            | osite          |                                  |            |
| SAMPLED BY: SG  | Sar           | mple Time: 09/28/2010 7:30                          | 21.00            |                |                                  |            |
| Test  | Result        | Method  | <u>SLOQ</u>      | 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                               | Compo            | osite          |                                  |            |
| SAMPLED BY: SG  | Sar           | nple Time: 09/25/2010 17:19                         | )<br><u>SLOQ</u> |                |                                  |            |
| Test  | <u>Result</u> | Method  | 3200             | Analysis Start | Analysis End                     | Analyst *  |
| Total Petroleum Hydrocarbons  | 5220 mg/Kg    | EPA 9071  |                  | 09/28/10 12:58 |                                  |            |
| Sample Note: Analysis performed by  | 0 0           |   |                  |                |                                  |            |

### **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

Value above calibration range but within annually verified linear range L  $\sim$ 

MANAGER

| ani | M. | Davis |
|-----|----|-------|
|     |    |       |

DATE: 9/30/2010

Work Order: 10094268

| LAB ID # 11216<br>LAB ID # 11827  | <b>Eas</b><br>2566          | <b>nalytics, Ir<br/>Division</b><br>vlvania Ave.<br>A 18840 | NC.<br>Work Order: 1010180      |             |  |                                  |                            |
|---|-----------------------------|---|---------------------------------|-------------|--|----------------------------------|----------------------------|
|   |                             | • •   | 888-0169<br>888-0717            |             |  |                                  |                            |
| SEND DATA TO:   |                             |   |                                 |             |  |                                  |                            |
| NAME: Steve Gridley   |                             |   |                                 | W           | O#: 101  | 01808                            |                            |
| COMPANY: Talisman Energy USA, I   | nc.                         |   |                                 | D           | AGE: 1 of  | 1                                |                            |
| ADDRESS: 337 Daniel Zenker Dr   |                             |   |                                 | Г <i>1</i>  | AGE. 101   | 1                                |                            |
| Horseheads, NY 14845  |                             |   |                                 | P           | O#: AF7  | 7717                             |                            |
| PHONE: (607) 731-0145<br>FAX: (607) 562-4001                                  | TE                          | EST RI  | EPORT                           | P١          | NS ID#   |                                  |                            |
| Pad Inv. Spill  |                             |   |                                 |             | **************************************             | ·                                |                            |
| RECEIVED FOR LAB BY: BMM  | DAT                         | E: 10/1   | 2/2010 16:22                    |             |  | P                                | age 1 of 1                 |
| SAMPLE: Clean Soil  |                             | Lab II  | D: 10101808-001A                | Compo       | site   |                                  |                            |
| SAMPLED BY: SG  | Sai                         | mple Time   | : 09/28/2010 19:55              | •           |  |                                  |                            |
| Tost  | Popult                      |   | Method                          | SLOQ        | Analysis Start                                     | Analysis End                     | Analyst *                  |
| <u>Test</u><br>Total Petroleum Hydrocarbons                                   | <u>Result</u><br><118 mg/Kg |   | EPA 9071                        | 118         | 10/14/10 10:25                                     | 10/14/10                         | Analyse                    |
| Sample Note: This sample was analy  |                             | ooratories  |                                 |             |  |                                  |                            |
| SAMPLE: Clean Soil  |                             | Lab IC  | ): 10101808-001B                | Compo       | site   |                                  |                            |
| SAMPLED BY: SG  | Sar                         |   | : 09/28/2010 19:55              |             |  |                                  |                            |
| Trat  |                             | -   |                                 | <u>SLOQ</u> | Applying Clark                                     | Analusia End                     | A                          |
| <u>Test</u><br>Moisture   | <u>Result</u><br>9.12 %     | к   | <u>Method</u><br>Moisture Calc. | 0.01        | Analysis Start<br>10/13/10 17:00                   | <u>Analysis End</u><br>10/15/10  | Analyst *<br>IC-SA         |
| Free Liquid   | < 0.1 %                     |   | EPA 9095A                       | 0.01        | 10/13/10 15:10                                     | 10/13/10                         | IC-SA                      |
| . pH  | 8.35@22.8°C                 | к   | EPA 9045C                       | 0.1         | 10/15/10 17:00                                     | 10/15/10                         | IC-SA                      |
| •<br>   |                             |   |                                 |             |  |                                  |                            |
| SAMPLE: TCLP Leachate of Clean Soil   |                             |   | ): 10101808-001D                | Compo       | site   |                                  |                            |
| SAMPLED BY: SG  | Sal                         | npie rime   | : 10/14/2010 7:30               | SLOQ        |  |                                  |                            |
| Test  | Result                      |   | Method                          |             | 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                     |
|   | < 0.500 mg/L                |   | EPA 6010B                       | 0.500       | 10/16/10 10:15                                     | 10/16/10                         | RMD-CV                     |
| Lead - TCLP extracted   |                             |   |                                 | 0.100       | 10/16/10 10:15                                     | 10/16/10                         | RMD-CV                     |
| Lead - TCLP extracted Nickel - TCLP extracted                                 | < 0.100 mg/L                |   | EPA 6010B                       |             | 10/10/10 10 10                                     | 10110110                         |                            |
| Lead - TCLP extracted<br>Nickel - TCLP extracted<br>Selenium - TCLP extracted | < 0.500 mg/L                |   | EPA 6010B                       | 0.500       | 10/16/10 10:15                                     | 10/16/10                         | RMD-CV                     |
| Lead - TCLP extracted<br>Nickel - TCLP extracted                              | -                           |   |                                 |             | 10/16/10 10:15<br>10/16/10 10:15<br>10/16/10 10:15 | 10/16/10<br>10/16/10<br>10/16/10 | RMD-CV<br>RMD-CV<br>RMD-CV |

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

κ Sample was received past holding time.

MANAGER

Carrie M. Davis

DATE: 10/18/2010

| CHAIN OF CUSTODY<br>Talisman / UEG   |                |                          |              |              |           | B                      | enchmark Analytics, Inc.   |  | PAGE1                 | OF1   | L        |
|--|----------------|--------------------------|--------------|--------------|-----------|------------------------|--|--|-----------------------|---|----------|
| geowetlands@aol.com  |                |                          |              |              |           |                        |  |  | ARE SPECIAL DE        |   |          |
| twollin@rallysolutions.ca  | REFRI<br>AFTEF |                          |              |              |           | ١                      | N/O#: 10101808   | ig USED For;<br>//<br>EC PADEP         | IF YES, PLEASE        |   | ,.<br>17 |
| CONTACT Steve Gridley  | те             | RANSP                    | пот          |              |           | / sw<br>ww             |  | FILL                                   | . 🗖 🖌                 | Б []] NO  |          |
| PH# 607-731-0145   |                | TO                       |              |              |           | DE                     | DEIONIZED WATER DI DISTILLED WATER PERSONAL OTHE   | R                                      | IF YES, PLEASE        | TACH REQUIRE  | MENTS    |
| AX#<br>BILL TO: Talisman PO# AZ7777  | IN             | BORA<br>I COOI<br>WITH I | LER<br>CE    | '<br>/       |           | e/composite            | H         HYDROCHLORIC ACID         OH         SODIUM HYDROXIDE           S         SULFURIC ACID         AS         ASCORBIC ACID           N         NITRIC ACID         AS         ASCORBIC ACID           SO         SODIUM SULFITE         NH,         AMMONIUM CHLORIDE           Thio         SODIUM THIOSULFATE         N         ZINC ACETATE           -         NONE         Hq         MERCURIC CHLORIDE |  | CEPT<br>ED ON RECEIPT |   |          |
| COMPLET DESCRIPTION<br>PROJECT DESCRIPTION<br>PACE ZAV Spill<br>SAMPLING SIGNATURE / AFFILIATION<br>UISC<br>CONTAINER SAMPLING POINT | CATE SAL       | THE OF O                 | ALC SAMPLING | SAMOLEMATRIX | LETTRE GR | PRESS MITHLS COMPOSITE | An incomplete chain of custody may delay the<br>processing of your sample(s).  | COMPOSITED ON REC.                     | LAB L                 | Pease fill out all<br>oplicable areas<br>completely |          |
|  | <u> </u>       |                          | _            |              |           | L                      |  | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ |                       |   |          |
| 1 Las Cuttinge Clean Sor   | 9-28/          | 1955                     | SC           | C            | \$C_      | $\mathcal{N}$          | ТРН  |  | COLF-                 | $\downarrow$  |          |
| 2  | <b> </b>       |                          |              |              | <br>      |                        | pH   |  | <u> Yonğ</u>          |   |          |
| 3,   |                |                          |              |              | <br>      |                        | TCLP 8 RCRA Metals + Cu, Ni, Zn<br>Free Liquids / % Moisture   |  |                       |   |          |
| 4  |                |                          |              |              |           |                        |  |  | CUID                  |   |          |
| 5 6  |                |                          |              |              |           |                        | TCLP 8260 / 8270 ONLY IF the TPH   |  |                       |   |          |
| 7  |                |                          |              |              |           |                        | exceeds 120,000 mg/Kg  |  |                       |   |          |
| 8  |                |                          |              |              | Í         |                        |  |  |                       |   |          |
| 9  |                |                          |              |              |           |                        | フン HOUR TURNAROUND   |  |                       |   |          |
| 10   |                |                          |              |              |           |                        | DAY TURNAROUND   |  |                       |   |          |
| 11   |                |                          | <del></del>  | <u> </u>     |           | <u> </u>               |  |  |                       |   |          |
|  | lie            | H                        | ٢            |              |           | -                      | TEMPERATURE UPON RECEI   | ?T <u> </u>                            | <u> </u>              | VAL ON ICE  |          |
| RELINGUISHED BY  | <u>1 </u>      | ĐA                       | TE:          | 1211         |           | TIME:                  | ら 之 之 RECEIVED BY:   |  | DATE:                 | TIME:   | 18       |
| RELINQUISHED BY:   | ,              |                          | TE:          | · <u> </u>   |           | IME:                   | RECEIVED BY:   |  | DATE:                 | TIME:   |          |
| RELINQUISHED BY:   |                | -+                       | NTE:,        | '            | ÷         | IME:                   | RECEIVED BY.<br>Deple Mc Carte   |  | DATE:<br>1012         | Ad Graphics Piloling                                |          |

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| PA ID #: 08-00380<br>NY ID # 11216               | 2566 Penns<br>Sayre, F<br>Phone: (570 | <b>Division</b><br>sylvania Ave.<br>PA 18840 | IC.         | Work           | Order: 1012  | 21720      |
|--|---------------------------------------|--|-------------|----------------|--------------|------------|
| SEND DATA TO:                                    |                                       |  |             |                |              |            |
| NAME: Dina Brown<br>COMPANY: Talisman Energy USA | Inc                                   |  | W           | O#: 1012       | 1720         |            |
| ADDRESS: 337 Daniel Zenker Dr                    | , 11 I.C.                             |  | PA          | AGE: 1 of 3    | 3            |            |
| Horseheads, NY 1484                              | 5                                     |  | PC          | D#: AF77       | 720          |            |
| PHONE: (607) 562-4000<br>FAX: (607) 562-4001     | TESTR                                 | EPORT  | P١          | WS ID#         |              |            |
| D1-074   |                                       |  |             |                |              |            |
| RECEIVED FOR LAB BY: RML                         | DATE: 12                              | /09/2010 15:45                               |             |                | Pa           | ige 1 of 3 |
| SAMPLE: Air or Gel Cuttings                      | Lab                                   | D: 10121720-001A                             | Grab        |                |              |            |
| SAMPLED BY: SG                                   | Sample Tin                            | ne: 12/08/2010 19:23                         |             |                |              |            |
| Test   | Result                                | Method                                       | <u>sloq</u> | Analysis Start | Analysis End | Analyst *  |
| Ignitability                                     | Neg ASIS °F                           | SW846 1030                                   |             | 12/15/10 13:30 | 12/15/10     |            |
| Sample Note: Analysis performed b                | y QC Laboratories                     |  |             |                |              |            |
| SAMPLE: Air or Gel Cuttings                      | Lab                                   | ID: 10121720-001C                            | Grab        |                |              |            |
| SAMPLED BY: SG                                   | Sample Tin                            | ne: 12/08/2010 19:23                         | <u>SLOQ</u> |                |              |            |
| Test   | <u>Result</u>                         | Method                                       | <u>SLUU</u> | 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 Tin                            | ne: 12/08/2010 19:23                         | 01.00       |                |              |            |
| 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 G                | el Cuttinos Lab                       | ID: 10121720-001F                            | Grab        |                |              |            |
| SAMPLED BY: SG                                   |                                       | ne: 12/11/2010 12:45                         |             |                |              |            |
| Tort   | Result                                | Method                                       | <u>sloq</u> | Analysis Start | Analysis End | Analyst *  |
| <u>Test</u><br>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     |

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

Analyte detected in the associated Method Blank в

MANAGER

Camie M. Davis

DATE: 12/16/2010

# **Benchmark Analytics, Inc.**

**Eastern Division** 

2566 Pennsylvania Ave. Sayre, PA 18840

Work Order: 10121720

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

# SEND DATA TO:

PHONE:

| NAME: | Dina Brown  | WO#:    | 10121720 |
|-------|---|---------|----------|
|       | Talisman Energy USA, Inc.<br>337 Daniel Zenker Dr | PAGE:   | 2 of 3   |
|       | Horseheads, NY 14845                              | PO#:    | AF77720  |
|       |   | PWS ID# |          |

# TEST REPORT

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

| 01-074                          |                              |                            |             |                 |                          |            |
|---------------------------------|------------------------------|----------------------------|-------------|-----------------|--------------------------|------------|
| RECEIVED FOR LAB BY: RML        | DATE:                        | 12/09/2010 15:45           |             |                 | Pa                       | age 2 of 3 |
| 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 o  | r Gel Cuttings               | ab ID: 10121720-001G       | Grab        |                 |                          |            |
| SAMPLED BY: SG                  | Sample                       | Time: 08/21/2010 9:00      |             |                 |                          |            |
|                                 | <b>D</b>                     | <b>N.N.</b> (1)            | <u>SLQQ</u> |                 |                          |            |
| Test                            | <u>Result</u>                | Method                     |             | Analysis Start  | Analysis End             |            |
| 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 TCLF    | extracted Strontium was rece | ived on 8/20/10 at 11:51 t | DLM2.       |                 |                          |            |
| SAMPLE: TCLP Leachate of Air o  | r Gel Cuttings L             | ab ID: 10121720-001H       | Grab        |                 |                          |            |
| SAMPLED BY: SG                  | Sample                       | Time: 12/11/2010 12:45     |             |                 |                          |            |
| <b>T</b>                        | Denvik                       | 5 8 - 41 J                 | <u>sloq</u> | An aluaia Otaat | Analysis Fad             | A          |
| Test                            | Result                       | Method                     |             | Analysis Start  | Analysis End<br>12/14/10 |            |
| pH                              | 5.72@16.8°C                  | SM4500H+B                  |             | 12/14/10 8:00   | 12/14/10                 | SG-SA      |
| SAMPLE: ZHE Extract of Air or G | el Cuttings                  | ab ID: 10121720-0011       | Grab        |                 |                          |            |
| SAMPLED BY: SG                  | Sample                       | Time: 12/11/2010 12:45     |             |                 |                          |            |
| <b></b>                         |                              |                            | <u>SLOQ</u> |                 | A                        |            |
| Test                            | <u>Result</u>                | Method                     |             | 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     |
|                                 | -                            |                            |             |                 |                          |            |

### **REMARKS:**

Toluene

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.

EPA 8260B

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

< 0.0250 mg/L

B Analyte detected in the associated Method Blank

MANAGER

anie M. Davis

DATE:

0.0250 12/13/10 8:11

12/16/2010

12/13/10 CTM-SA

| NY ID # 11:  | -00380<br>216  | Ē   | Eastern I  | /Ivania Ave.  | IC.  |   | Work  | Order: 101   | 21720   |
|--|--|---|--|---|--|---|---|--|---|
|  |  | PI  | hone: (570)<br>Fax: (570)  |   |  |   |   |  |   |
| SEND DAT   | A TO:  | ·   |  |   |  |   |   |  |   |
| NAME:  | Dina Brown   |   |  |   | W  | O#:   | 1012  | 1720   |   |
| COMPANY:<br>ADDRESS:   | Talisman Energy USA, I<br>337 Daniel Zenker Dr   | nc.   |  |   | PA   | GE:   | 3 of :  | 3  |   |
| Horseheads, NY 14845   |  |   |  |   | PC   |   | AF77  |  |   |
|  |  |   |  |   |  |   |   | 120  |   |
| PHONE:<br>FAX:   | (607) 562-4000<br>(607) 562-4001   | .*  | TEST RE  | EPORT   | PV   | VS ID#  |   |  |   |
| D1-0   |  | -   |  |   |  |   |   |  |   |
| RECEIVED   | FOR LAB BY: RML  |   | DATE: 12/0   | 9/2010 15:45  |  |   |   | Pa   | ige 3 of 3  |
| Trichloro  | ethene   | < 0.0250 m  | g/L  | EPA 8260B   | 0.0250   | 12/13/1   | 0 8:11  | 12/13/10   | CTM-SA  |
| 1,2,4-Tri  | methylbenzene  | < 0.0250 m  | g/L  | EPA 8260B   | 0.0250   | 12/13/1   | 0 8:11  | 12/13/10   | CTM-SA  |
| 1,3,5-Tri  | methylbenzene  | < 0.0250 m  | g/L  | EPA 8260B   | 0.0250   | 12/13/1   | 0 8:11  | 12/13/10   | CTM-SA  |
| Vinyl chi  | oride  | < 0.0250 m  | g/L  | EPA 8260B   | 0.0250   | 12/13/1   | 0 8:11  | 12/13/10   | CTM-SA  |
| Mathud to  | ert-butyl ether  | < 0.0250 m  | a/L  | EPA 8260B   | 0.0050   |   | 0.8.11  | 12/13/10   | CTM-SA  |
| wieuryr te   | at buly outon  |   | <b>.</b> –   |   | 0.0250   | 12/13/1   | 0.0.11  |  |   |
| 2-Butanc   | •  | < 0.0500 mg   | •  | EPA 8260B   | 0.0250   | 12/13/1<br>12/13/1  |   | 12/13/10   | CTM-SA  |
| 2-Butanc   | one<br>STM Extract of Air or Gel C   | < 0.0500 mg   | g/L<br>Lab ID  | EPA 8260B   |  |   |   | 12/13/10   | CTM-SA  |
| 2-Butanc   | pne  | < 0.0500 mg   | g/L<br>Lab ID  | EPA 8260B   | 0.0500<br>Grab   |   |   | 12/13/10   | CTM-SA  |
| 2-Butanc   | one<br>STM Extract of Air or Gel C   | < 0.0500 mg   | g/L<br>Lab ID  | EPA 8260B   | 0.0500   | 12/13/1   | 0 8:11  | 12/13/10<br>Analysis End                             | CTM-SA  |
| 2-Butanc<br>SAMPLE: A<br>SAMPL<br><u>Test</u>  | one<br>STM Extract of Air or Gel C   | < 0.0500 mg   | g/L<br>Lab ID  | EPA 8260B<br>1: 10121720-001J<br>1: 12/10/2010 11:15  | 0.0500<br>Grab   |   | 0 8:11  |  |   |
| 2-Butance<br>SAMPLE: A<br>SAMPL<br>Test<br>Chemica   | one<br>STM Extract of Air or Gel C<br>ED BY: SG  | < 0.0500 m<br>uttings<br><u>Result</u><br>91 mg/L   | g/L<br>Lab ID<br>Sample Time<br>B  | EPA 8260B<br>: 10121720-001J<br>: 12/10/2010 11:15<br><u>Method</u>   | 0.0500<br>Grab<br><u>SLOQ</u>                                      | 12/13/1<br>Analysis   | 0 8:11  | Analysis End   | Analyst *   |
| 2-Butance<br>SAMPLE: A<br>SAMPL<br><u>Test</u><br>Chemica<br>SAMPLE: A   | one<br>STM Extract of Air or Gel C<br>ED BY: SG<br>Il Oxygen Demand  | < 0.0500 m<br>uttings<br><u>Result</u><br>91 mg/L   | g/L<br>Lab ID<br>Sample Time<br>B<br>Lab ID  | EPA 8260B<br>10121720-001J<br>12/10/2010 11:15<br><u>Method</u><br>HACH 8000  | 0.0500<br>Grab<br><u>SLOQ</u><br>10<br>Grab                        | 12/13/1<br>Analysis   | 0 8:11  | Analysis End   | Analyst *   |
| 2-Butance<br>SAMPLE: A<br>SAMPLI<br><u>Test</u><br>Chemica<br>SAMPLE: A<br>SAMPL   | one<br>STM Extract of Air or Gel C<br>ED BY: SG<br>Il Oxygen Demand<br>STM Extract of Air or Gel C               | < 0.0500 m<br>uttings<br><u>Result</u><br>91 mg/L<br>uttings  | g/L<br>Lab ID<br>Sample Time<br>B<br>Lab ID  | EPA 8260B<br>10121720-001J<br>12/10/2010 11:15<br><u>Method</u><br>HACH 8000<br>10121720-001L<br>12/10/2010 11:15   | 0.0500<br>Grab<br><u>SLOQ</u><br>10                                | 12/13/1<br><u>Analysis</u><br>12/11/1                                 | 0 8:11  | <u>Analysis End</u><br>12/13/10                      | <u>Analyst *</u><br>KMF-SA                              |
| 2-Butance<br>SAMPLE: A<br>SAMPLI<br><u>Test</u><br>Chemica<br>SAMPLE: A<br>SAMPLE: A   | one<br>STM Extract of Air or Gel C<br>ED BY: SG<br>Il Oxygen Demand<br>STM Extract of Air or Gel C               | < 0.0500 m<br>uttings<br><u>Result</u><br>91 mg/L<br>uttings<br><u>Result</u>   | g/L<br>Lab ID<br>Sample Time<br>B<br>Lab ID<br>Sample Time                               | EPA 8260B<br>10121720-001J<br>12/10/2010 11:15<br><u>Method</u><br>HACH 8000<br>10121720-001L<br>12/10/2010 11:15<br><u>Method</u>  | 0.0500<br>Grab<br><u>SLOQ</u><br>10<br>Grab                        | 12/13/1 <u>Analysis</u> 12/11/1                                       | 0 8:11  | Analysis End<br>12/13/10<br>Analysis End             | <u>Analyst *</u><br>KMF-SA<br><u>Analyst *</u>          |
| 2-Butance<br>SAMPLE: A<br>SAMPLI<br><u>Test</u><br>Chemica<br>SAMPLE: A<br>SAMPLE: A<br>SAMPLE: <u>A</u><br>SAMPLE: <u>A</u> | STM Extract of Air or Gel C<br>ED BY: SG<br>Il Oxygen Demand<br>STM Extract of Air or Gel C<br>ED BY: SG         | < 0.0500 m<br>uttings<br><u>Result</u><br>91 mg/L<br>uttings<br><u>Result</u><br>7.10@16.5 <sup>6</sup>               | g/L<br>Lab ID<br>Sample Time<br>B<br>Lab ID<br>Sample Time                               | EPA 8260B<br>1: 10121720-001J<br>1: 12/10/2010 11:15<br><u>Method</u><br>HACH 8000<br>1: 10121720-001L<br>1: 12/10/2010 11:15<br><u>Method</u><br>SM4500H+B                             | 0.0500<br>Grab<br>SLOQ<br>10<br>Grab<br>SLOQ                       | 12/13/1<br><u>Analysis</u><br>12/11/11<br><u>Analysis</u><br>12/14/11 | 0 8:11  | Analysis End<br>12/13/10<br>Analysis End<br>12/14/10 | <u>Analyst *</u><br>KMF-SA<br><u>Analyst *</u><br>SG-SA |
| 2-Butance<br>SAMPLE: A<br>SAMPLE<br>Chemica<br>SAMPLE: A<br>SAMPLE: A<br>SAMPLE<br>DEST<br>PH<br>Total Sol                   | one<br>STM Extract of Air or Gel C<br>ED BY: SG<br>Il Oxygen Demand<br>STM Extract of Air or Gel C<br>ED BY: SG  | < 0.0500 m<br><b>uttings</b><br><u>Result</u><br>91 mg/L<br><b>uttings</b><br><u>Result</u><br>7.10@16.5°<br>196 mg/L | g/L<br>Lab ID<br>Sample Time<br>B<br>Lab ID<br>Sample Time                               | EPA 8260B<br>1: 10121720-001J<br>1: 12/10/2010 11:15<br><u>Method</u><br>HACH 8000<br>1: 10121720-001L<br>1: 12/10/2010 11:15<br><u>Method</u><br>SM4500H+B<br>SM2540B                  | 0.0500<br>Grab<br><u>SLOQ</u><br>10<br>Grab<br><u>SLOQ</u><br>0.10 | 12/13/1 <u>Analysis</u> 12/11/1                                       | 0 8:11  | Analysis End<br>12/13/10<br>Analysis End             | Analyst *<br>KMF-SA<br>Analyst *                        |
| 2-Butance<br>SAMPLE: A<br>SAMPLE: A<br>Chemica<br>SAMPLE: A<br>SAMPLE: A<br>Total Sol  | STM Extract of Air or Gel C<br>ED BY: SG<br>Il Oxygen Demand<br>STM Extract of Air or Gel C<br>ED BY: SG<br>Iids | < 0.0500 m<br>uttings<br><u>Result</u><br>91 mg/L<br>uttings<br><u>Result</u><br>7.10@16.5 <sup>6</sup>               | g/L<br>Lab ID<br>Sample Time<br>B<br>Lab ID<br>Sample Time<br>C<br>Lab ID                | EPA 8260B<br>1: 10121720-001J<br>1: 12/10/2010 11:15<br><u>Method</u><br>HACH 8000<br>1: 10121720-001L<br>12/10/2010 11:15<br><u>Method</u><br>SM4500H+B<br>SM2540B<br>1: 10121720-001M | 0.0500<br>Grab<br>SLOQ<br>10<br>Grab<br>SLOQ                       | 12/13/1<br><u>Analysis</u><br>12/11/11<br><u>Analysis</u><br>12/14/11 | 0 8:11  | Analysis End<br>12/13/10<br>Analysis End<br>12/14/10 | <u>Analyst *</u><br>KMF-SA<br><u>Analyst *</u><br>SG-SA |
| 2-Butance<br>SAMPLE: A<br>SAMPLE: A<br>Chemica<br>SAMPLE: A<br>SAMPLE: A<br>Total Sol<br>SAMPLE: A                           | one<br>STM Extract of Air or Gel C<br>ED BY: SG<br>Il Oxygen Demand<br>STM Extract of Air or Gel C<br>ED BY: SG  | < 0.0500 m<br><b>uttings</b><br><u>Result</u><br>91 mg/L<br><b>uttings</b><br><u>Result</u><br>7.10@16.5°<br>196 mg/L | g/L<br>Lab ID<br>Sample Time<br>B<br>Lab ID<br>Sample Time<br>C<br>Lab ID                | EPA 8260B<br>1: 10121720-001J<br>1: 12/10/2010 11:15<br><u>Method</u><br>HACH 8000<br>1: 10121720-001L<br>1: 12/10/2010 11:15<br><u>Method</u><br>SM4500H+B<br>SM2540B                  | 0.0500<br>Grab<br><u>SLOQ</u><br>10<br>Grab<br><u>SLOQ</u><br>0.10 | 12/13/1<br><u>Analysis</u><br>12/11/11<br><u>Analysis</u><br>12/14/11 | 0 8:11  | Analysis End<br>12/13/10<br>Analysis End<br>12/14/10 | <u>Analyst *</u><br>KMF-SA<br><u>Analyst *</u><br>SG-SA |
| 2-Butance<br>SAMPLE: A<br>SAMPLE: A<br>Chemica<br>SAMPLE: A<br>SAMPLE: A<br>Total Sol<br>SAMPLE: A                           | STM Extract of Air or Gel C<br>ED BY: SG<br>Il Oxygen Demand<br>STM Extract of Air or Gel C<br>ED BY: SG<br>Iids | < 0.0500 m<br><b>uttings</b><br><u>Result</u><br>91 mg/L<br><b>uttings</b><br><u>Result</u><br>7.10@16.5°<br>196 mg/L | g/L<br>Lab ID<br>Sample Time<br>B<br>Lab ID<br>Sample Time<br>C<br>Lab ID<br>Sample Time | EPA 8260B<br>1: 10121720-001J<br>1: 12/10/2010 11:15<br><u>Method</u><br>HACH 8000<br>1: 10121720-001L<br>12/10/2010 11:15<br><u>Method</u><br>SM4500H+B<br>SM2540B<br>1: 10121720-001M | 0.0500<br>Grab<br>SLOQ<br>10<br>Grab<br>SLOQ<br>0.10<br>Grab       | 12/13/1<br><u>Analysis</u><br>12/11/11<br><u>Analysis</u><br>12/14/11 | 0 8:11<br>5 Start<br>0 8:00<br>5 Start<br>0 8:00<br>0 17:00 | Analysis End<br>12/13/10<br>Analysis End<br>12/14/10 | Analyst *<br>KMF-SA<br>Analyst *<br>SG-SA<br>IC-SA      |

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.

DATE: 12/16/2010

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

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Camie M. Davis

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B Analyte detected in the associated Method Blank

MANAGER

| CONTACT       Steve Gridley       TRANSPORT       GW GROUND WATER       SO SOL       LANDFILL       Mostoller       I vest         PH#       607-731-0145       TO       DE       DEIONIZED WATER       DI DISTILLED WATER       PERSONAL OTHER       IF YES, PLEASE AT         FAX#       LABORATORY       IN COOLER       WITH ICE       SULFURICACID       AS ASCORBIC ACID       ACETIC ACID       AS ASCORBIC ACID       AS ASCORBIC ACID         P0#       AT P77720       NITRICE       SO, SOLUM SULFITE       NH, AMMONIUM CHLORIDE       SO, SODIUM THIOSULFATE       NITRICE CHLORIDE       SO, SODIUM SULFITE       NH, AMMONIUM CHLORIDE         P0#       AT P77720       SO, SODIUM THIOSULFATE       NITRIC CHLORIDE       SO, SODIUM SULFITE       NH, AMMONIUM CHLORIDE         P0#       AT P77720       SO, SODIUM THIOSULFATE       NITRIC CHLORIDE       SO, SODIUM THIOSULFATE       NITRIC CHLORIDE         PBOJECT DESCRIPTION       GO       SO, SODIUM THIOSULFATE       NITRIC CHLORIDE       SO       SOLUM THIOSULFATE       NITRIC CHLORIDE         SAMPLIATYSIGNATURE / AFFILIATION       SOLUM THIOSULFATE       NITRIC CHLORIDE       SOLUM THIOSULFATE       NITRIC CHLORIDE       SOLUM THIOSULFATE       NITRIC CHLORIDE       SOLUM THIOSULFATE       NITRIC CHLORIDE       SOLUM THIOSULFATE       NITRIC ACETATE       NITRIC AC  |                              |
|---|------------------------------|
| 2566 Pennsylvanik       Phone:       W/O#: 10121720       PECIAL DET         geowetlands@aol.com       Fax: (       W/O#: 10121720       Picolat.Det         REFRIGERATE SAMPLES       AFTER COLLECTION       Fax: (       Republic factor       Picolat.Det         CONTACT       Steve Gridley       TRANSPORT       OW       DRINKING WATER       St. SLUDGE       Picolat.Det         PH#       607-731-0145       TRANSPORT       OW       DEIONIZED WATER       DI       DISTILLED WATER       PERSONAL OTHER       IF YES, PLEASE AT         JABORATORY       IN COOLER       WITH ICE       SUBLICATIC ACID       ASCORBIO ACID       ASCORBIO ACID       ASCORBIO ACID       ASCORBIO ACID         PO#       AP777200       PBOJECT DESCRIPTION       PG       PICAL DET       PICAL DET       PICAL DET         PBOJECT DESCRIPTION       79       SAMPULARSIGNATURE / AFFILIATION       AMAUNUM CHLORIDE       ASCORBIO ACID       ASCORBIO ACID         SAMPULARSIGNATURE / AFFILIATION       PERCENTE       PICAL DET       PICAL DET       PICAL DET         This SODIUM THOSULFATE       SAMPULARSITO BE PERFORMED       PICALICACID       ASCORBIO ACID       ASCORBIO ACID         SAMPULARSIGNATURE / AFFILIATION       PICAL DET       PICAL DET       PICAL DET       PICAL DET       PI  | OF1                          |
| geowetlands@aol.com       Phone:<br>Fax: (       W/O#: 10121720       Precur use         REFRIGERATE SAMPLES<br>AFTER COLLECTION       REFRIGERATE SAMPLES<br>AFTER COLLECTION       Fax: (       RESULTS ARE BEING USED FOR:<br>Fax: (       IF YES, PLEASE AT<br>IS A OC PAC<br>WW DERINKING WATER<br>SUBJECT DESCRIPTION         CONTACT Steve Gridley       TRANSPORT<br>TO<br>LABORATORY       TRANSPORT<br>TO<br>LABORATORY       DW DRINKING WATER<br>WW DECIDED WATER WATER<br>DECIDED WATER WATER<br>WW DECIDED WATER WATER<br>DI DISTILLED WATER PERSONAL OTHER       IF YES, PLEASE AT<br>IS A OC PAC<br>WW WASTE WATER<br>WW DECIDED WATER WATER<br>DECIDED WATER WATER<br>WW DECIDED WATER WATER<br>DECIDED WATER DECIDED WATER DECIDED WATER WATER<br>DECIDED WATER WATER<br>DECIDED WATER DECIDED WATER DECIDED WATER DECIDE<br>DECIDED WATER DECIDED WATER DECIDE<br>DECIDE |                              |
| AFTER COLLECTION       DW       DRINKING WATER       SL       SLUDGE       DW       DRINKING WATER       SL       SLUDGE       WDOH       NYDOH       NY  |                              |
| CONTACT       Steve Gridley       TRANSPORT       JW       Diskniking water       SL       SLUDGE       NYDOH       NYDOH       NYDEC       PADEP       Is A OC PAC         CONTACT       Steve Gridley       TRANSPORT       TRANSPORT       SW       SURFACE WATER       HZ       HAZARDOUS       LANDFILL       Mostoller       IP YES, PLEASE AT         PH#       607-731-0145       TO       DE       DE       DE       DISTULED WATER       DI       DISTULED WATER       IP YES, PLEASE AT         FAX#       LABORATORY       IN COOLER       WITH ICE       S       SULFURIC ACID       As       ASCORBIC ACID       AS       ASCORBIC ACID       ACETIC ACID       A       ACETIC ACID       A       ACETIC ACID   | TACH                         |
| CONTACT       Steve Gridley       TRANSPORT       SW       SURFACE WATER       HZ       HAZARDOUS       LANDFILL       Mostoller       I ves         PH#       607-731-0145       TO       DE       DEIONIZED WATER       DI DISTILLED WATER       PERSONAL OTHER       IF YES, PLEASE AT         FAX#       LABORATORY       IN COOLER       WITH ICE       SULFACE CAID       AS ASCORBIC ACID       ASCORBIC ACID       AS ASCORBIC ACID       AS ASCORBIC ACID  | KAGE NEEDED?                 |
| PH#       607-731-0145       TO       DE       DEIONIZED WATER       DI       DISTILLED WATER       PERSONAL       OTHER       IF YES, PLEASE AT         FAX#       IN COOLER       IN COOLER       IN COOLER       IN COOLER       IN NITRICACID       AS ASCORBIC ACID       AS ASCORDICACID       AC ACETICACID       AC ACE   | S 🔽 NO                       |
| 1 Air or Gel Cuttings     12/8/1923 50 C     50 C     50 PCBs, Total Solids       2     1 C     PCBs, Total Solids  | TACH REQUIREMENTS            |
| 1 Air or Gel Cuttings     12/8/1923 50 C     50 C     50 PCBs, Total Solids       2     1 C     PCBs, Total Solids  |                              |
| 1 Air or Gel Cuttings     12/8/1923 50 C     50 C     50 PCBs, Total Solids       2     1 C     PCBs, Total Solids  |                              |
| 1 Air or Gel Cuttings     12/8/1923 50 C     50 C     50 PCBs, Total Solids       2     1 C     PCBs, Total Solids  |                              |
| 1 Air or Gel Cuttings     12/8/1923 50 C     50 C     50 PCBs, Total Solids       2     1 C     PCBs, Total Solids  | ease fill out all            |
| 1 Air or Gel Cuttings     12/8/1923 50 C     50 C     50 PCBs, Total Solids       2     1 C     PCBs, Total Solids  | plicable areas<br>completely |
| 1 Air or Gel Cuttings     12/8/1923 50 C     50 C     50 PCBs, Total Solids       2     1 C     PCBs, Total Solids  |                              |
| 1 Air or Gel Cuttings     12/8/1923 50 C     50 C     50 PCBs, Total Solids       2     1 C     PCBs, Total Solids  | SE ONLY                      |
|   |                              |
|   |                              |
| 3 A Thereof, Jon.   |                              |
| 4 C - Leastinity C Ammonia-Nitrogen   |                              |
| 5 D - 70 TS, TVS // C Water Leaching Procedure: COD,  |                              |
| 6 E - T. Scrple VVCVV Total Solids, Oil & Grease,   |                              |
| 7 F. Tect 8270, Asts.   |                              |
| 8 5-TELP Hertes Sr K-ASTA DAS   |                              |
| 9 H-TELP PH L-ASTM T.S. pH 36 HOUR TURNAROUND   |                              |
| 10 I-TELP Vals. M-TOX DAY TURNAROUND  |                              |
| 11 J-ASTM COD, 1013   |                              |
| LAB USE ONLY LIT WE NIT   |                              |
|   |                              |
| RELINQUISHED BY: DATE: 1/2/9/0 TIME:/530 RECEIVED BY: DATE: 1/  | TIME:                        |
| RELINQUISHED BY: DATE: TIME: RECEIVED BY: DATE:   | TIME:                        |
|   |                              |
| RELINQUISHED BY: DATE: , TIME: RECEIVED BY: DATE: , TIME: RECEIVED BY: DATE: , , TIME:  | > THE US                     |

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave. Sayre, PA 18840

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

December 17, 2010

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

Dear Dina Brown:

The enclosed corrected test report for work order 10121754 is a replacement for a test report sent earlier. We did not report the COD analysis (ASTM) with a B qualifier, indicating that the analyte was detected in the associated ASTM blank. I apologize for any inconvenience that this may have caused. Thank you.

Sincerely Yours,

Carrie Davis Quality Assurance Officer

| PA ID #: 08-00380<br>NY ID # 11216  |   | Benchmark Analytics, Inc<br>Eastern Division<br>2566 Pennsylvania Ave.<br>Sayre, PA 18840<br>Phone: (570) 888-0169   |  |  | I <b>C.</b><br>Work Order: 10121754  |  |   |  |
|---|---|--|--|--|--|--|---|--|
|   |   | Fax: (5  | 70) 888-0717   |  |  |  |   |  |
| SEND DATA   | TO:   |  |  |  |  |  |   |  |
| NAME:   | Dina Brown  |  |  | W  | O#: 1012   | 21754  |   |  |
| COMPANY:  | Talisman Energy USA, I  | nc.  |  | PAGE: 1 of 3   |  |  |   |  |
| ADDRESS:  | 337 Daniel Zenker Dr  |  |  | P7   | AGE: IO  | 3  |   |  |
|   | Horseheads, NY 14845  |  |  | P  | 0#: AF7  | 7720   |   |  |
| PHONE:<br>FAX:  | (607) 562-4000<br>(607) 562-4001  | TEST   | REPORT   | P\   | WS ID#   |  |   |  |
| 01-07   | 74  |  |  |  |  |  |   |  |
|   | FOR LAB BY: RML   |  | 12/09/2010 15:45   |  |  | P  | age 1 of 3  |  |
|   |   |  |  |  |  |  | 1go 1 01 5  |  |
| SAMPLE: Inv   | _   |  | ab ID: 10121754-001A   | Grab   |  |  |   |  |
| SAMPLE  | D BY: SG  | Sample   | Time: 12/08/2010 19:15   | SLOQ   |  |  |   |  |
| Tee   |   | Result   | Method   | 0000   | Analysis Start   | Analysis End   | Analyst *   |  |
| Test  |   |  |  |  |  |  |   |  |
| lgnitability  | 1   | Neg ASIS °F  | SW846 1030   |  | 12/15/10 13:30   | 12/15/10   |   |  |
| Ignitability  | v<br>Note: Analysis performed by  |  |  |  | 12/15/10 13:30   | 12/15/10   |   |  |
| lgnitability<br>Sample  | Note: Analysis performed by   | QC Laboratories  |  | Grab   | 12/15/10 13:30   | 12/15/10   |   |  |
| lgnitability<br>Sample<br>SAMPLE: Inv   | Note: Analysis performed by   | QC Laboratories  | SW846 1030   |  | 12/15/10 13:30   | 12/15/10   |   |  |
| Ignitability<br>Sample<br>SAMPLE: Inv<br>SAMPLE   | Note: Analysis performed by   | QC Laboratories<br>La<br>Sample  | SW846 1030<br>ab ID: 10121754-001C<br>Time: 12/08/2010 19:15   | Grab<br><u>SLOQ</u>  |  |  | Analyst *   |  |
| Ignitability<br>Sample<br>SAMPLE: Inv<br>SAMPLEI<br><u>Test</u>   | Note: Analysis performed by<br><b>7. Cuttings</b><br>ED BY: SG  | QC Laboratories<br>La<br>Sample <sup>-</sup><br><u>Result</u>  | SW846 1030<br>ab ID: 10121754-001C<br>Fime: 12/08/2010 19:15<br><u>Method</u>  | <u>sloq</u>  | Analysis Start   | Analysis End   |   |  |
| Ignitability<br>Sample<br>SAMPLE: Inv<br>SAMPLEI<br><u>Test</u><br>Cyanide, F   | Note: Analysis performed by<br><b>J. Cuttings</b><br>ED BY: SG<br>Reactive  | QC Laboratories<br>La<br>Sample <sup>-</sup><br><u>Result</u><br>0.2 mg/Kg   | SW846 1030<br>ab ID: 10121754-001C<br>Time: 12/08/2010 19:15   |  |  |  | Analyst *<br>HDP-CV<br>LTW-CV   |  |
| Ignitability<br>Sample<br>SAMPLE: Inv<br>SAMPLE<br>SAMPLE<br>Test<br>Cyanide, F<br>Reactive S   | Note: Analysis performed by<br><b> Cuttings</b><br>D BY: SG<br>Reactive<br>Sulfide  | QC Laboratories<br>La<br>Sample <sup>-</sup><br><u>Result</u><br>0.2 mg/Kg<br>80 mg/Kg   | SW846 1030<br>ab ID: 10121754-001C<br>Fime: 12/08/2010 19:15<br><u>Method</u><br>SW 7.3.3.2<br>SW846 7.3   | <u>SLOQ</u><br>0.2<br>16   | <u>Analysis Start</u><br>12/13/10 8:56   | <u>Analysis End</u><br>12/14/10  | HDP-CV  |  |
| Ignitability<br>Sample<br>SAMPLE: Inv<br>SAMPLE:<br><u>Test</u><br>Cyanide, F<br>Reactive S<br>SAMPLE: Inv  | Note: Analysis performed by<br><b>J. Cuttings</b><br>ED BY: SG<br>Reactive<br>Sulfide<br><b>J. Cuttings</b>   | QC Laboratories<br>La<br>Sample <sup>-</sup><br><u>Result</u><br>0.2 mg/Kg<br>80 mg/Kg<br>La   | SW846 1030<br>ab ID: 10121754-001C<br>Time: 12/08/2010 19:15<br><u>Method</u><br>SW 7.3.3.2<br>SW846 7.3<br>ab ID: 10121754-001D   | <u>SLOQ</u><br>0.2   | <u>Analysis Start</u><br>12/13/10 8:56   | <u>Analysis End</u><br>12/14/10  | HDP-CV  |  |
| Ignitability<br>Sample<br>SAMPLE: Inv<br>SAMPLE<br>Cyanide, F<br>Reactive S<br>SAMPLE: Inv  | Note: Analysis performed by<br><b> Cuttings</b><br>D BY: SG<br>Reactive<br>Sulfide  | QC Laboratories<br>La<br>Sample <sup>-</sup><br><u>Result</u><br>0.2 mg/Kg<br>80 mg/Kg<br>La   | SW846 1030<br>ab ID: 10121754-001C<br>Fime: 12/08/2010 19:15<br><u>Method</u><br>SW 7.3.3.2<br>SW846 7.3   | <u>SLOQ</u><br>0.2<br>16   | <u>Analysis Start</u><br>12/13/10 8:56   | <u>Analysis End</u><br>12/14/10  | HDP-CV  |  |
| Ignitability<br>Sample<br>SAMPLE: Inv<br>SAMPLE<br>Cyanide, F<br>Reactive S<br>SAMPLE: Inv  | Note: Analysis performed by<br><b>J. Cuttings</b><br>ED BY: SG<br>Reactive<br>Sulfide<br><b>J. Cuttings</b>   | QC Laboratories<br>La<br>Sample <sup>-</sup><br><u>Result</u><br>0.2 mg/Kg<br>80 mg/Kg<br>La<br>Sample <sup>-</sup><br><u>Result</u>   | SW846 1030<br>ab ID: 10121754-001C<br>Time: 12/08/2010 19:15<br><u>Method</u><br>SW 7.3.3.2<br>SW846 7.3<br>ab ID: 10121754-001D   | <u>SLOQ</u><br>0.2<br>16<br>Grab   | <u>Analysis Start</u><br>12/13/10 8:56   | <u>Analysis End</u><br>12/14/10  | HDP-CV<br>LTW-CV  |  |
| Ignitability<br>Sample<br>SAMPLE: Inv<br>SAMPLE: Inv<br>Cyanide, F<br>Reactive S<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: <u>Inv</u><br>SAMPLE: <u>X</u> Solids   | A Note: Analysis performed by<br>Cuttings<br>D BY: SG<br>Reactive<br>Sulfide<br>Cuttings<br>D BY: SG  | QC Laboratories<br>La<br>Sample <sup>-</sup><br><u>Result</u><br>0.2 mg/Kg<br>80 mg/Kg<br>La<br>Sample <sup>-</sup><br><u>Result</u><br>77.07 % Wght.  | SW846 1030<br>ab ID: 10121754-001C<br>Time: 12/08/2010 19:15<br><u>Method</u><br>SW 7.3.3.2<br>SW846 7.3<br>ab ID: 10121754-001D<br>Time: 12/08/2010 19:15<br><u>Method</u><br>SM2540B   | <u>SLOQ</u><br>0.2<br>16<br>Grab<br><u>SLOQ</u><br>0.10  | <u>Analysis Start</u><br>12/13/10 8:56<br>12/14/10 12:30<br><u>Analysis Start</u><br>12/10/10 17:00  | <u>Analysis End</u><br>12/14/10<br>12/14/10<br><u>Analysis End</u><br>12/13/10   | HDP-CV<br>LTW-CV<br><u>Analyst*</u><br>IC-SA  |  |
| Ignitability<br>Sample<br>SAMPLE: Inv<br>SAMPLE: Inv<br>Cyanide, F<br>Reactive S<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE:   | A Note: Analysis performed by<br>Cuttings<br>D BY: SG<br>Reactive<br>Sulfide<br>Cuttings<br>D BY: SG  | QC Laboratories<br>La<br>Sample <sup>-</sup><br><u>Result</u><br>0.2 mg/Kg<br>80 mg/Kg<br>La<br>Sample <sup>-</sup><br><u>Result</u>   | SW846 1030<br>ab ID: 10121754-001C<br>Fime: 12/08/2010 19:15<br><u>Method</u><br>SW 7.3.3.2<br>SW846 7.3<br>ab ID: 10121754-001D<br>Fime: 12/08/2010 19:15<br><u>Method</u>  | SLOQ<br>0.2<br>16<br>Grab<br>SLOQ  | <u>Analysis Start</u><br>12/13/10 8:56<br>12/14/10 12:30<br><u>Analysis Start</u>  | <u>Analysis End</u><br>12/14/10<br>12/14/10<br><u>Analysis End</u>   | HDP-CV<br>LTW-CV  |  |
| Ignitability<br>Sample<br>SAMPLE: Inv<br>SAMPLE:<br>Cyanide, F<br>Reactive S<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: Model<br>Test<br>% Solids<br>Total Volat  | Note: Analysis performed by<br>. Cuttings<br>D BY: SG<br>Reactive<br>Sulfide<br>. Cuttings<br>D BY: SG<br>tile Solids   | QC Laboratories<br>La<br>Sample <sup>-</sup><br><u>Result</u><br>0.2 mg/Kg<br>80 mg/Kg<br>La<br>Sample <sup>-</sup><br><u>Result</u><br>77.07 % Wght.<br>8.78 % Wght.  | SW846 1030<br>ab ID: 10121754-001C<br>Time: 12/08/2010 19:15<br><u>Method</u><br>SW 7.3.3.2<br>SW846 7.3<br>ab ID: 10121754-001D<br>Time: 12/08/2010 19:15<br><u>Method</u><br>SM2540B   | <u>SLOQ</u><br>0.2<br>16<br>Grab<br><u>SLOQ</u><br>0.10  | <u>Analysis Start</u><br>12/13/10 8:56<br>12/14/10 12:30<br><u>Analysis Start</u><br>12/10/10 17:00  | <u>Analysis End</u><br>12/14/10<br>12/14/10<br><u>Analysis End</u><br>12/13/10   | HDP-CV<br>LTW-CV<br><u>Analyst*</u><br>IC-SA  |  |
| Ignitability<br>Sample<br>SAMPLE: Inv<br>SAMPLE: Inv<br>Cyanide, F<br>Reactive S<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: Test<br>% Solids<br>Total Volat<br>SAMPLE: TC  | A Note: Analysis performed by<br>Cuttings<br>D BY: SG<br>Reactive<br>Sulfide<br>Cuttings<br>D BY: SG  | QC Laboratories<br>La<br>Sample <sup>-</sup><br><u>Result</u><br>0.2 mg/Kg<br>80 mg/Kg<br>80 mg/Kg<br>La<br>Sample <sup>-</sup><br><u>Result</u><br>77.07 % Wght.<br>8.78 % Wght.  | SW846 1030<br>ab ID: 10121754-001C<br>Time: 12/08/2010 19:15<br><u>Method</u><br>SW 7.3.3.2<br>SW846 7.3<br>ab ID: 10121754-001D<br>Time: 12/08/2010 19:15<br><u>Method</u><br>SM2540B<br>EPA 160.4  | SLOQ           0.2           16           Grab           SLOQ           0.10           0.01           Grab   | <u>Analysis Start</u><br>12/13/10 8:56<br>12/14/10 12:30<br><u>Analysis Start</u><br>12/10/10 17:00  | <u>Analysis End</u><br>12/14/10<br>12/14/10<br><u>Analysis End</u><br>12/13/10   | HDP-CV<br>LTW-CV<br><u>Analyst*</u><br>IC-SA  |  |
| Ignitability<br>Sample<br>SAMPLE: Inv<br>SAMPLE:<br>Cyanide, F<br>Reactive S<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: Test<br>% Solids<br>Total Volat<br>SAMPLE: TC  | A Note: Analysis performed by<br>Cuttings<br>D BY: SG<br>Reactive<br>Sulfide<br>Cuttings<br>D BY: SG<br>Atile Solids<br>CLP Leachate of Inv. Cuttin   | QC Laboratories  | SW846 1030<br>ab ID: 10121754-001C<br>Fime: 12/08/2010 19:15<br><u>Method</u><br>SW 7.3.3.2<br>SW846 7.3<br>ab ID: 10121754-001D<br>Fime: 12/08/2010 19:15<br><u>Method</u><br>SM2540B<br>EPA 160.4<br>ab ID: 10121754-001F<br>Fime: 12/11/2010 12:45  | <u>SLOQ</u><br>0.2<br>16<br>Grab<br><u>SLOQ</u><br>0.10<br>0.01  | Analysis Start<br>12/13/10 8:56<br>12/14/10 12:30<br>Analysis Start<br>12/10/10 17:00<br>12/10/10 8:00   | <u>Analysis End</u><br>12/14/10<br>12/14/10<br><u>Analysis End</u><br>12/13/10<br>12/14/10   | HDP-CV<br>LTW-CV<br><u>Analyst*</u><br>iC-SA<br>NFM-SA                                    |  |
| Ignitability<br>Sample<br>SAMPLE: Inv<br>SAMPLE:<br>Cyanide, F<br>Reactive S<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: Test<br>SAMPLE: TC<br>SAMPLE: TC   | A Note: Analysis performed by<br>Cuttings<br>D BY: SG<br>Reactive<br>Sulfide<br>Cuttings<br>D BY: SG<br>Atile Solids<br>CLP Leachate of Inv. Cuttin   | QC Laboratories<br>La<br>Sample <sup>-</sup><br><u>Result</u><br>0.2 mg/Kg<br>80 mg/Kg<br>80 mg/Kg<br>La<br>Sample <sup>-</sup><br><u>Result</u><br>77.07 % Wght.<br>8.78 % Wght.  | SW846 1030<br>ab ID: 10121754-001C<br>Fime: 12/08/2010 19:15<br><u>Method</u><br>SW 7.3.3.2<br>SW846 7.3<br>ab ID: 10121754-001D<br>Fime: 12/08/2010 19:15<br><u>Method</u><br>SM2540B<br>EPA 160.4<br>ab ID: 10121754-001F  | SLOQ           0.2           16           Grab           SLOQ           0.10           0.01           Grab   | <u>Analysis Start</u><br>12/13/10 8:56<br>12/14/10 12:30<br><u>Analysis Start</u><br>12/10/10 17:00  | <u>Analysis End</u><br>12/14/10<br>12/14/10<br><u>Analysis End</u><br>12/13/10   | HDP-CV<br>LTW-CV<br>Analyst*<br>IC-SA<br>NFM-SA   |  |
| Ignitability<br>Sample<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: TC<br>SAMPLE: TC<br>SAMPLE: TC<br>SAMPLE: TC   | A Note: Analysis performed by<br>Cuttings<br>D BY: SG<br>Reactive<br>Sulfide<br>Cuttings<br>D BY: SG<br>Atile Solids<br>CLP Leachate of Inv. Cuttin   | QC Laboratories  | SW846 1030<br>ab ID: 10121754-001C<br>Time: 12/08/2010 19:15<br><u>Method</u><br>SW 7.3.3.2<br>SW846 7.3<br>ab ID: 10121754-001D<br>Time: 12/08/2010 19:15<br><u>Method</u><br>SM2540B<br>EPA 160.4<br>ab ID: 10121754-001F<br>Time: 12/11/2010 12:45<br><u>Method</u>   | SLOQ           0.2           16           Grab           SLOQ           0.10           0.01           Grab           SLOQ  | Analysis Start<br>12/13/10 8:56<br>12/14/10 12:30<br>Analysis Start<br>12/10/10 17:00<br>12/10/10 8:00<br>Analysis Start   | <u>Analysis End</u><br>12/14/10<br>12/14/10<br><u>Analysis End</u><br>12/13/10<br>12/14/10<br><u>Analysis End</u>  | HDP-CV<br>LTW-CV<br><u>Analyst*</u><br>iC-SA<br>NFM-SA                                    |  |
| Ignitability<br>Sample<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: TC<br>SAMPLE: TC<br>SAMPLE: TC<br>SAMPLE: TC   | A Note: Analysis performed by<br>A. Cuttings<br>ED BY: SG<br>Reactive<br>Sulfide<br>A. Cuttings<br>ED BY: SG<br>Atile Solids<br>ELP Leachate of Inv. Cutting<br>ED BY: SG   | QC Laboratories  | SW846 1030<br>ab ID: 10121754-001C<br>Fime: 12/08/2010 19:15<br><u>Method</u><br>SW 7.3.3.2<br>SW846 7.3<br>ab ID: 10121754-001D<br>Fime: 12/08/2010 19:15<br><u>Method</u><br>SM2540B<br>EPA 160.4<br>ab ID: 10121754-001F<br>Fime: 12/11/2010 12:45<br><u>Method</u><br>EPA 8270C  | SLOQ           0.2           16           Grab           SLOQ           0.10           0.01           Grab           SLOQ           0.10           0.01  | <u>Analysis Start</u><br>12/13/10 8:56<br>12/14/10 12:30<br><u>Analysis Start</u><br>12/10/10 17:00<br>12/10/10 8:00<br><u>Analysis Start</u><br>12/15/10 7:48                               | <u>Analysis End</u><br>12/14/10<br>12/14/10<br><u>Analysis End</u><br>12/13/10<br>12/14/10<br><u>Analysis End</u><br>12/15/10                            | HDP-CV<br>LTW-CV<br>Analyst *<br>IC-SA<br>NFM-SA<br>Analyst *<br>RHH-SA                   |  |
| Ignitability<br>Sample<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: Cyanide, F<br>Reactive S<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: TC<br>SAMPLE: TC<br>SAMPLE: TC<br>SAMPLE: TC<br>SAMPLE: TC<br>SAMPLE: TC   | A Note: Analysis performed by<br>A. Cuttings<br>D BY: SG<br>Reactive<br>Sulfide<br>A. Cuttings<br>D BY: SG<br>Atile Solids<br>CLP Leachate of Inv. Cuttin<br>D BY: SG<br>Arobenzene   | QC Laboratories  | SW846 1030<br>ab ID: 10121754-001C<br>Fime: 12/08/2010 19:15<br><u>Method</u><br>SW 7.3.3.2<br>SW846 7.3<br>ab ID: 10121754-001D<br>Fime: 12/08/2010 19:15<br><u>Method</u><br>SM2540B<br>EPA 160.4<br>ab ID: 10121754-001F<br>Fime: 12/11/2010 12:45<br><u>Method</u><br>EPA 8270C<br>EPA 8270C                           | SLOQ           0.2           16           Grab           SLOQ           0.10           0.01           Grab           SLOQ           0.10           0.01           Grab   | <u>Analysis Start</u><br>12/13/10 8:56<br>12/14/10 12:30<br><u>Analysis Start</u><br>12/10/10 17:00<br>12/10/10 8:00<br><u>Analysis Start</u><br>12/15/10 7:48<br>12/15/10 7:48              | Analysis End<br>12/14/10<br>12/14/10<br>12/14/10<br>12/13/10<br>12/13/10<br>12/14/10<br>Analysis End<br>12/15/10<br>12/15/10                             | HDP-CV<br>LTW-CV<br>IC-SA<br>NFM-SA<br>Analyst*<br>RHH-SA<br>RHH-SA                       |  |
| Ignitability<br>Sample<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: Cyanide, F<br>Reactive S<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: TCI<br>SAMPLE: TCI<br>SAMPLE: TCI<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMP  | A Note: Analysis performed by<br>A Cuttings<br>D BY: SG<br>Reactive<br>Sulfide<br>A Cuttings<br>D BY: SG<br>Atile Solids<br>CLP Leachate of Inv. Cutting<br>D BY: SG<br>Probenzene<br>n-Cresol  | QC Laboratories         La           Result         Sample           0.2 mg/Kg         La           0.2 mg/Kg         La           80 mg/Kg         La           Sample         Sample           Result         77.07 % Wght.           8.78 % Wght.         Sample           Result         Sample           77.07 % Ught.         Sample           0.10 mg/L         0.10 mg/L           < 0.10 mg/L | SW846 1030<br>ab ID: 10121754-001C<br>Time: 12/08/2010 19:15<br><u>Method</u><br>SW 7.3.3.2<br>SW846 7.3<br>ab ID: 10121754-001D<br>Time: 12/08/2010 19:15<br><u>Method</u><br>SM2540B<br>EPA 160.4<br>ab ID: 10121754-001F<br>Time: 12/11/2010 12:45<br><u>Method</u><br>EPA 8270C<br>EPA 8270C<br>EPA 8270C              | SLOQ           0.2           16           Grab           SLOQ           0.10           0.01           Grab           SLOQ           0.10           0.10           0.10           0.10           0.10           0.10           0.10           0.10  | Analysis Start<br>12/13/10 8:56<br>12/14/10 12:30<br>Analysis Start<br>12/10/10 17:00<br>12/10/10 8:00<br>Analysis Start<br>12/15/10 7:48<br>12/15/10 7:48                                   | Analysis End<br>12/14/10<br>12/14/10<br>12/14/10<br>Analysis End<br>12/13/10<br>12/14/10<br>Analysis End<br>12/15/10<br>12/15/10<br>12/15/10             | HDP-CV<br>LTW-CV<br>iC-SA<br>NFM-SA<br>Analyst*<br>RHH-SA<br>RHH-SA<br>RHH-SA             |  |
| Ignitability<br>Sample<br>SAMPLE: Inv<br>SAMPLE:<br>Cyanide, F<br>Reactive S<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: To:<br>SAMPLE: TC:<br>SAMPLE: SAMPLE: SAMPLE: TC:<br>SAMPLE: SAMPLE: SAMP   | A Note: Analysis performed by<br>A Cuttings<br>D BY: SG<br>Reactive<br>Sulfide<br>A Cuttings<br>D BY: SG<br>Atile Solids<br>CLP Leachate of Inv. Cutting<br>D BY: SG<br>A Cutting<br>Cuttings<br>D BY: SG<br>A Cuttings<br>Cuttings<br>D BY: SG<br>A Cuttings<br>Cuttings<br>D BY: SG<br>A Cuttings<br>Cuttings<br>D BY: SG<br>A Cuttings<br>Cuttings<br>D BY: SG<br>A Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttin | QC Laboratories         La           Result         Sample           0.2 mg/Kg         La           80 mg/Kg         La           Sample         Sample           Result         Sample           77.07 % Wght.         Sample           8.78 % Wght.         Sample           Result         Sample           70.10 mg/L         0.10 mg/L           < 0.10 mg/L                                      | SW846 1030<br>ab ID: 10121754-001C<br>Time: 12/08/2010 19:15<br><u>Method</u><br>SW 7.3.3.2<br>SW846 7.3<br>ab ID: 10121754-001D<br>Time: 12/08/2010 19:15<br><u>Method</u><br>EPA 160.4<br>ab ID: 10121754-001F<br>Time: 12/11/2010 12:45<br><u>Method</u><br>EPA 8270C<br>EPA 8270C<br>EPA 8270C<br>EPA 8270C            | SLOQ           0.2           16           Grab           SLOQ           0.10           0.01           Grab           SLOQ           0.10           0.01           Grab   | Analysis Start<br>12/13/10 8:56<br>12/14/10 12:30<br>Analysis Start<br>12/10/10 17:00<br>12/10/10 8:00<br>Analysis Start<br>12/15/10 7:48<br>12/15/10 7:48<br>12/15/10 7:48                  | Analysis End<br>12/14/10<br>12/14/10<br>12/14/10<br>12/13/10<br>12/13/10<br>12/14/10<br>Analysis End<br>12/15/10<br>12/15/10<br>12/15/10<br>12/15/10     | HDP-CV<br>LTW-CV<br>iC-SA<br>NFM-SA<br>Analyst*<br>RHH-SA<br>RHH-SA<br>RHH-SA<br>RHH-SA   |  |
| Ignitability<br>Sample<br>SAMPLE: Inv<br>SAMPLE:<br>Cyanide, F<br>Reactive S<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: Total Volat<br>SAMPLE: TC<br>SAMPLE: TC<br>SAM | A Note: Analysis performed by<br>A Cuttings<br>D BY: SG<br>Reactive<br>Sulfide<br>A Cuttings<br>D BY: SG<br>Atile Solids<br>CLP Leachate of Inv. Cutting<br>D BY: SG<br>A Cutting<br>Cuttings<br>D BY: SG<br>A Cuttings<br>Cuttings<br>D BY: SG<br>A Cuttings<br>Cuttings<br>D BY: SG<br>A Cuttings<br>Cuttings<br>D BY: SG<br>A Cuttings<br>Cuttings<br>D BY: SG<br>A Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttings<br>Cuttin | QC Laboratories  | SW846 1030<br>ab ID: 10121754-001C<br>Time: 12/08/2010 19:15<br><u>Method</u><br>SW 7.3.3.2<br>SW846 7.3<br>ab ID: 10121754-001D<br>Time: 12/08/2010 19:15<br><u>Method</u><br>SM2540B<br>EPA 160.4<br>ab ID: 10121754-001F<br>Time: 12/11/2010 12:45<br><u>Method</u><br>EPA 8270C<br>EPA 8270C<br>EPA 8270C<br>EPA 8270C | SLOQ           0.2           16           Grab           SLOQ           0.10           0.01           Grab           SLOQ           0.10           0.01           Grab           10           0.10           0.10           0.10           0.10           0.10           0.10           0.10           0.10           0.10 | Analysis Start<br>12/13/10 8:56<br>12/14/10 12:30<br>Analysis Start<br>12/10/10 17:00<br>12/10/10 8:00<br>Analysis Start<br>12/15/10 7:48<br>12/15/10 7:48<br>12/15/10 7:48<br>12/15/10 7:48 | Analysis End<br>12/14/10<br>12/14/10<br>Analysis End<br>12/13/10<br>12/14/10<br>Analysis End<br>12/15/10<br>12/15/10<br>12/15/10<br>12/15/10<br>12/15/10 | Anaivst*<br>IC-SA<br>NFM-SA<br>Anaivst*<br>RHH-SA<br>RHH-SA<br>RHH-SA<br>RHH-SA<br>RHH-SA |  |

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 | M. Davis | DATE: | 12/16/2010 |
|---------|----------|-------|------------|
|---------|----------|-------|------------|

# **Benchmark Analytics, Inc.**

**Eastern Division** 

2566 Pennsylvania Ave. Sayre, PA 18840

Work Order: 10121754

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

# .....

|  | 0:                             |   | *                                   |                            |   |   |                  |
|--|--------------------------------|---|-------------------------------------|----------------------------|---|---|------------------|
| NAME: D  | lina Brown                     |   |                                     | W                          | O#: 1                                     | 0121754                                   |                  |
|  | alisman Energy USA, In         | C. ,  |                                     | DA                         | AGE: 2                                    | of 3                                      |                  |
|  | 37 Daniel Zenker Dr            |   |                                     | PP                         |   | OF 3                                      |                  |
| п  | orseheads, NY 14845            |   |                                     | PC                         | )#: A                                     | F77720                                    |                  |
|  |                                | TES   | T REPORT                            | P۷                         | VS ID#                                    |   |                  |
|  | 607) 562-4000<br>607) 562-4001 |   |                                     |                            |   |   |                  |
| 01-074   |                                | ······································          |                                     |                            |   |   |                  |
| RECEIVED FOI                                   | R LAB BY: RML                  | DATE:   | 12/09/2010 15:45                    | _                          |   | Pa  | age 2 of 3       |
| 2,4,5-Trichlor                                 | rophenol                       | < 0.10 mg/L                                     | EPA 8270C                           | 0.10                       | 12/15/10 7:                               | 48 12/15/10                               | RHH-SA           |
| Pentachlorop                                   | phenol                         | < 0.50 mg/L                                     | EPA 8270C                           | 0.50                       | 12/15/10 7:                               | 48 12/15/10                               | RHH-SA           |
| 2,4-Dinitrotoi                                 | uene                           | < 0.10 mg/L                                     | EPA 8270C                           | 0.10                       | 12/15/10 7:                               | 48 12/15/10                               | RHH-\$A          |
| Hexachlorob                                    | enzene                         | < 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: TOLE                                   | Leachate of Inv. Cutting       | · · · · · · · · · · · · · · · · · · ·           | Lab ID: 10121754-001G               | Grab                       |   |   | <u></u>          |
| SAMPLED E                                      | -                              |   | e Time: 09/15/2010 9:00             |                            |   |   |                  |
|  |                                | •   |                                     | <u>SLOQ</u>                |   |   |                  |
| Test   |                                | <u>Result</u>                                   | Method                              |                            | Analysis St                               |   |                  |
|  | CLP extracted                  | 0.212 mg/L                                      | EPA 6010B                           | 0.050                      | 09/16/10 8:                               | 00 09/16/10                               | RMD-CV           |
| Sample No                                      | ote: Sample for TCLP extract   | ed Strontium was rec                            | eived on 9/13/10 at 17:12 b         | y TJC.                     |   |   |                  |
| SAMPLE: TCLP                                   | Leachate of Inv. Cutting       | 8   | Lab ID: 10121754-001H               | Grab                       |   |   |                  |
| SAMPLED E                                      | -                              |   | e Time: 12/11/2010 12:45            |                            |   |   |                  |
| <b>T</b> 4                                     |                                | Denville  | <b>B</b> Badhaad                    | <u>SLOQ</u>                | Ameliaia Cá                               | and Amplyin's Find                        | A                |
| Test   |                                | Result<br>6.03@16.9°C                           | <u>Method</u><br>SM4500H+B          |                            | Analysis Sta<br>12/14/10 8:               |   |                  |
| ρH   |                                | 0.03@10.9 C                                     | 3M4300077B                          |                            | 12/14/10 6.                               | 00 12/14/10                               | SG-SA            |
| SAMPLE: ZHE                                    | Extract of Inv. Cuttings       |   | Lab ID: 10121754-0011               | Grab                       |   |   |                  |
| SAMPLED E                                      | BY: SG                         | Sample  | e Time: 12/13/2010 8:45             |                            |   |   |                  |
| Test   |                                | Result  | Method                              | SLOQ                       | Analysis Sta                              | art Analysis End                          | Analyst *        |
| Benzene  |                                | < 0.0250 mg/L                                   | EPA 8260B                           | 0.0250                     | 12/13/10 8:                               |   | CTM-SA           |
| Carbon tetrac                                  | chloride                       | < 0.0250 mg/L                                   | EPA 8260B                           | 0.0250                     | 12/13/10 8:                               |   | CTM-SA           |
| Chlorobenzer                                   |                                | < 0.0250 mg/L                                   | EPA 8260B                           | 0.0250                     | 12/13/10 8:                               |   | CTM-SA           |
|  | <del>-</del>                   | < 0.0250 mg/L                                   | EPA 8260B                           | 0.0250                     | 12/13/10 8:                               |   | CTM-SA           |
| Chloroform                                     |                                |   |                                     |                            |   |   |                  |
| Chioroform<br>1.2-Dichloroe                    | thane                          |   |                                     | 0.0250                     | 12/13/10 8:                               | 11 12/13/10                               | CTM-SA           |
| 1,2-Dichloroe                                  |                                | < 0.0250 mg/L                                   | EPA 8260B                           |                            | 12/13/10 8:<br>12/13/10 8:                |   | CTM-SA<br>CTM-SA |
| 1,2-Dichloroe<br>1,1-Dichloroe                 | ethene                         | < 0.0250 mg/L<br>< 0.0250 mg/L                  | EPA 8260B<br>EPA 8260B              | 0.0250<br>0.0250<br>0.0250 | 12/13/10 8:<br>12/13/10 8:<br>12/13/10 8: | 11 12/13/10                               | CTM-SA           |
| 1,2-Dichloroe<br>1,1-Dichloroe<br>Ethylbenzene | ethene<br>e                    | < 0.0250 mg/L<br>< 0.0250 mg/L<br>< 0.0250 mg/L | EPA 8260B                           | 0.0250                     | 12/13/10 8:                               | 11 12/13/10<br>11 12/13/10                | CTM-SA<br>CTM-SA |
| 1,2-Dichloroe<br>1,1-Dichloroe                 | ethene<br>e<br>zene            | < 0.0250 mg/L<br>< 0.0250 mg/L                  | EPA 8260B<br>EPA 8260B<br>EPA 8260B | 0.0250<br>0.0250           | 12/13/10 8:<br>12/13/10 8:                | 11 12/13/10<br>11 12/13/10<br>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

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

| PA ID #: 08-/<br>NY ID # 112   |  | Eas<br>2566<br>Sa                              | ark Analytics, In<br>stern Division<br>Pennsylvania Ave.<br>ayre, PA 18840                    | с.   | Work   | Order: 101:                                 | 21754          |
|--|--|--|---|--|--|---|----------------|
|  |  |  | e: (570) 888-0169<br>x: (570) 888-0717  |  |  |   |                |
| SEND DATA  |  | 1.4  | x. (373) 888-07 17  |  |  |   |                |
|  |  | î  |   |  |  |   |                |
| NAME:<br>COMPANY:  | Dina Brown<br>Talisman Energy USA, Ir                          | ic. H  |   | VVG  | O#: 1012   | 1754  |                |
| ADDRESS:   | 337 Daniel Zenker Dr   |  |   | PA   | GE: 3 of 3   | 3   |                |
|  | Horseheads, NY 14845   |  |   | PC   | )#: AF77   | 720   |                |
|  |  |  |   |  |  |   |                |
| PHONE:<br>FAX:   | (607) 562-4000<br>(607) 562-4001                               | <b>T</b> I                                     | EST REPORT  | PV   | VS ID#   |   |                |
| 01-0   | 74   |  |   | , and the second se |  |   |                |
|  | FOR LAB BY: RML  |  | TE: 12/09/2010 15:45  |  |  | Pa  | ige 3 of 3     |
| Trichloro  | ethene   | < 0.0250 mg/L                                  | EPA 8260B   | 0.0250   | 12/13/10 8:11  | 12/13/10                                    | CTM-S/         |
| 1,2,4-Trin   | nethylbenzene  | < 0.0250 mg/L                                  | EPA 8260B   | 0.0250   | 12/13/10 8:11  | 12/13/10                                    | CTM-S/         |
| 1,3,5-Trin   | nethylbenzene  | < 0.0250 mg/L                                  | EPA 8260B   | 0.0250   | 12/13/10 8:11  | 12/13/10                                    | CTM-S/         |
| Vinyl chic   | oride  | < 0.0250 mg/L                                  | EPA 8260B   | 0.0250   | 12/13/10 8:11  | 12/13/10                                    | CTM-S/         |
| Methyl te  | rt-butyl ether   | < 0.0250 mg/L                                  | EPA 8260B   | 0.0250   | 12/13/10 8:11  | 12/13/10                                    | CTM-S/         |
| 2-Butano   | ne   | < 0.0500 mg/L                                  | EPA 8260B   | 0.0500   | 12/13/10 8:11  | 12/13/10                                    | CTM-S/         |
|  | STM Extract of Inv. Cuttings                                   |  | Lab ID: 10121754-001J   | Grab   |  |   |                |
| SAMPLE   | ED BY: SG  | Sa<br>G  | mple Time: 12/10/2010 11:15   | SLOQ   |  |   |                |
| Test   |  | Result   | Method  | <u></u>  | Analysis Start   | Analysis End                                | <u>Analyst</u> |
|  | Owene Demand   | 276 mg/L                                       | HACH 8000   | 1  | 12/15/10 10:00   | 12/15/10                                    | KAL-SA         |
| Chemical   | Oxygen Demand  | . 🗸  |   |  |  |   |                |
|  | STM Extract of Inv. Cuttings                                   |  | Lab ID: 10121754-001L   | Grab   |  |   |                |
| SAMPLE: A  | · · · · · · · · · · · · · · · · · · ·                          |  | Lab ID: 10121754-001L<br>mple Time: 12/10/2010 11:15  |  |  |   |                |
| SAMPLE: AS<br>SAMPLE   | STM Extract of Inv. Cuttings                                   | s Sa   | mple Time: 12/10/2010 11:15   | Grab<br><u>SLOQ</u>  | Analysis Start   | Analysis End                                | Analvet        |
| SAMPLE: AS<br>SAMPLE<br><u>Test</u>  | STM Extract of Inv. Cuttings                                   | s<br>Sa<br><u>Result</u>                       | mple Time: 12/10/2010 11:15<br><u>Method</u>  |  | Analysis Start<br>12/14/10 8:00                          | Analysis End                                |                |
| SAMPLE: <b>At</b><br>SAMPLE<br><u>Test</u><br>pH                               | STM Extract of Inv. Cuttings<br>ED BY: SG                      | Sa<br><u>Result</u><br>8.19@17.2°C             | mple Time: 12/10/2010 11:15   |  | <u>Analysis Start</u><br>12/14/10 8:00<br>12/10/10 17:00 | <u>Analysis End</u><br>12/14/10<br>12/13/10 | SG-SA          |
| SAMPLE: At<br>SAMPLE<br><u>Test</u><br>pH<br>Total Soli                        | STM Extract of Inv. Cuttings<br>ED BY: SG<br>ds                | s<br>Sa<br><u>Result</u>                       | mple Time: 12/10/2010 11:15<br><u>Method</u><br>SM4500H+B<br>SM2540B                          | <u>SLOQ</u><br>0.10  | 12/14/10 8:00  | 12/14/10                                    |                |
| SAMPLE: AS<br>SAMPLE<br><u>Test</u><br>pH<br>Total Soli<br>SAMPLE: Inv         | STM Extract of Inv. Cuttings<br>ED BY: SG<br>ds<br>v. Cuttings | Sa<br><u>Result</u><br>8.19@17.2°C<br>442 mg/L | mple Time: 12/10/2010 11:15<br><u>Method</u><br>SM4500H+B<br>SM2540B<br>Lab ID: 10121754-001M | <u>SLOQ</u>  | 12/14/10 8:00  | 12/14/10                                    | SG-SA          |
| SAMPLE: AS<br>SAMPLE<br><u>Test</u><br>pH<br>Total Soli<br>SAMPLE: Inv         | STM Extract of Inv. Cuttings<br>ED BY: SG<br>ds                | Sa<br><u>Result</u><br>8.19@17.2°C<br>442 mg/L | mple Time: 12/10/2010 11:15<br><u>Method</u><br>SM4500H+B<br>SM2540B                          | <u>SLOQ</u><br>0.10  | 12/14/10 8:00  | 12/14/10                                    | SG-SA          |
| SAMPLE: At<br>SAMPLE<br>pH<br>Total Soli<br>SAMPLE: In<br>SAMPLE: In<br>SAMPLE | STM Extract of Inv. Cuttings<br>ED BY: SG<br>ds<br>v. Cuttings | Sa<br><u>Result</u><br>8.19@17.2°C<br>442 mg/L | mple Time: 12/10/2010 11:15<br><u>Method</u><br>SM4500H+B<br>SM2540B<br>Lab ID: 10121754-001M | SLOQ<br>0.10<br>Grab   | 12/14/10 8:00  | 12/14/10                                    | SG-SA<br>IC-SA |

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

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| MANAGER | Cami M. Davis | DATE: | 12/16/2010 |  |
|---------|---------------|-------|------------|--|
|---------|---------------|-------|------------|--|

| CHAIN OF CUSTODY               | Benc   | PAGEOF1   |
|--------------------------------|--|---|
| EPORT TO: Talisman / UEG       | <sup>2566 Pennsy</sup> W/O#: 10121754  | ARE SPECIAL DETECTION LIMITS  |
| geowetlands@aol.com            | F -  |   |
|                                | REFRIGERATE SAMPLES RESULTS ARE BEING USED FO  |   |
|                                |  | ADEP IS A QC PACKAGE NEEDED?  |
| CONTACT                        | GW GROUND WATER SO SOIL<br>SW SURFACE WATER HZ HAZARDOUS LANDFILL MOST   |   |
| CONTACT Steve Gridley          | TRANSPORT / WW WASTE WATER OTHER   |   |
| PH# 607-731-0145               | TO DE DEIONIZED WATER DI DISTILLED WATER DERSONAL OTHER  | IF YES, PLEASE ATTACH REQUIREMENTS                                    |
| AX#                            | IN COOLER S SULFURIC ACID AS ASCORBIC ACID   |   |
| BILL TO: Talisman              | WITH ICE / N NITRIC ACID AC ACETIC ACID<br>SO 3 SODIUM SULFITE NH, AMMONIUM CHLORIDE   | L H   |
| 0# AF 7772 B                   | Thio SODIUM THIOSULFATE ZN ZINC ACETATE  | / ÿ/ ġ/   |
| PROJECT DESCRIPTION            | $\beta$  | Please fill out all   |
|                                | An incomplete chain of custody may delay the<br>processing of your sample(s).  | applicable areas  |
| AMPLER SIGNATURE / AFFILIATION |  |   |
| CONTAINER SAMPLING POINT       | LABORATORY<br>IN COOLER<br>WITH ICE<br>UNIT ICE<br>UNI | Please fill out all<br>applicable areas<br>completely<br>LAB USE ONLY |
| 1 Inv Cuttings                 | 19/8 19/5 So C SB- N Ignitability, Reactive Sulfide & Cyanide  |   |
| 2                              | C   PCBs, Total Solids   |   |
| 3 A -finale, Ign               | G Total Volatile Solids  |   |
| 4 C- Reactivity                | C Ammonia-Nitrogen   |   |
| 5 D-TS, TVS                    | C Water Leaching Procedure: COD,   |   |
| 6 E-T. Somple                  | CVV Total Solids, Oil & Grease,  |   |
| 7 F-TOLP BNA Posts.            |  |   |
| 8 G-TCLP Hots. St              | K-Astment  |   |
| 9 H-TCDP pH                    | L-ASTM TS of 36 HOUR TURNAROUND  |   |
| 10 I-TECP Vols                 | M-TOX DAY TURNAROUND   |   |
| 11 J-ASTM COD, Noting          |  |   |
| LAB USE ONLY                   |  |   |
|                                | The second s   | E CARRIVALIONICE V//NI  |
| RELINQUISHEDBY                 | DATE: TIME: RECEIVED BY:   | DATE: TIME:   |
| RELINQUISHED BY:               | DATE: TIME: RECEIVED BY:   | DATE: TIME:   |
|                                |  | -1 1  |
| RELINQUISHED BY:               | DATE: TIME: RECEIVED BI: OD KAR  | 19919 M 119515  |



#### COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WASTE MANAGEMENT

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

| typed or legi<br>each attach  | ust be fully and accurately completed. All request printed in the spaces provided. If additional spaces provided if additional spaces sheet as Form 26R, reference the item number date on attached sheets needs to match the date | tify Date Receive              | JSE{ONLY               |                  |  |
|-------------------------------|--|--------------------------------|------------------------|------------------|--|
| General Refe                  | rence 287.54   |                                |                        |                  |  |
| Date Prepare                  |  |                                |                        |                  |  |
|                               | SECTION A. CLIENT (GENERATO  | R OF THE WASTE) II             | NEORMATION             |                  |  |
| Company Na                    | me<br>ergy USA Inc.  |                                |                        |                  |  |
| If a Subsidia                 | y, Name of Parent Company  |                                | EPA                    | Generator ID#    |  |
| Talisman En                   | ergy Inc.  |                                | N/A                    |                  |  |
| 50 Pennwoo                    | •  | Company Mailing Addre          | ss Line 2              |                  |  |
|                               | dress Last Line – City State   | Zip+4                          | Phone                  | Ext              |  |
| Warrendale                    | PA   | 15086                          | (724) 814-530          | 0                |  |
|                               | ntact Last Name First Name   | MI                             | Suffix                 | (                |  |
| Brown<br>Municipality         | Dina   | County                         |                        |                  |  |
| Warrendale                    |  | Allegheny                      |                        |                  |  |
| Contact Pho                   |  |                                |                        |                  |  |
| (724) 814-53                  | 21 dybrown@talismanusa.<br>generated at the Company Mailing Address (noted   |                                |                        | Yes 🕅 No         |  |
|                               | be location of waste generation and storage. Drill   |                                |                        |                  |  |
| the (C                        | 1-076) well pad site located at 3637 Fallbrook Road, A   | Armenia Township, Brad         | ord County, PA. Was    | ste is stored in |  |
| containers on<br>Municipality | site.<br>Armenia <b>County</b> Bradfi  | ord                            | State                  | PA               |  |
|                               | SECTION B. WAST  |                                |                        |                  |  |
| Residual                      | Residual Waste   |                                | Unit of                | Time             |  |
| Waste Code                    | Code Description   | Amount                         | Measure                | Frame            |  |
| 810                           | Drill cuttings (oil and gas)   | 7,364                          | ☐ lb ⊠ ton             | One Time         |  |
|                               | 1. General F   |                                |                        |                  |  |
| a. pHRa<br>b. Phvsi           | nge 8.81 to 11.27<br>cal State   | (based on analyses or l        | (nowledge)             |                  |  |
| D. Physi                      | Solid (EPA Method 90   |                                |                        |                  |  |
|                               | Gas (ambient tempera   | •                              |                        |                  |  |
| c. Physi                      | cal Appearance Color Greyish Black   |                                | <u>Larry / Origine</u> | Petroleum        |  |
|                               | Number of Solid or Liqui<br>Describe asstances of s  |                                |                        |                  |  |
|                               | Describe each phase of s   | separation. <u>Soli and Ro</u> |                        |                  |  |
|                               | 2. CHEMICAL ANALY  |                                | <u></u>                |                  |  |
|                               | a. The results of a detailed chemical characterization of the waste, as described in the X Yes No instructions, is attached.   |                                |                        |                  |  |
|                               | iled description of the waste sampling method is a   | attached.                      |                        | Yes 🗌 No         |  |
|                               | uality assurance/quality control procedures emplo  |                                | es) is 🛛 🕅             | Yes 🗌 No         |  |
|                               | sults of the hazardous waste determination is atta   |                                |                        | Yes 🗌 No         |  |
|                               | icable, a detailed explanation supporting use of ge<br>actual chemical analysis is attached.   | enerator knowledge in          | Yes                    | No 🛛 N/A         |  |

|       |  |  | ION & SCHEMATIC ATTA        |                                 |              |            |
|-------|--|--|-----------------------------|---------------------------------|--------------|------------|
| a.    | A detailed description of the                                  |  |                             | esses producing                 | 🛛 Yes        | 🗌 No       |
|       | the waste, as specified in the                                 |  |                             |                                 |              |            |
| b.    | A schematic of the manufact<br>as specified in the instruction |  | o control processes pro     | ducing the waste,               | 🛛 Yes        | 🗋 No       |
| c.    | If portions of the information                                 |  |                             | on for 📋 Yes                    | No No        | 🖾 N/A      |
|       | a confidentiality claim, as de                                 | scribed in the instruc                   | tions, is attached.         |                                 |              |            |
|       | SECTI  | ON C. MANAGE                             | MENT OF RESIDU              | JAL WASTE                       |              |            |
|       |  |  | OR DISPOSAL FACILITY        |                                 |              |            |
| The a | rea below (ad.) will accommo                                   | date the identification                  | of two facilities. Attac    | h additional sheets             | if necessary | <i>i</i> . |
| a.    | Solid waste permit number(s<br>9-0232-00003                    | ) for processing or di                   | sposal facility being uti   | lized.                          |              |            |
| b.    | Facility Name  | Hyland Landfill                          |                             |                                 |              |            |
|       | Address Line 1   | 6653 Herdman Ro                          | ad                          |                                 |              |            |
|       | 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@ca               | sella.com    |            |
| d.    | Volume of waste shipped to 4,157                               | p <b>rocessing or dispos</b> a           | al facility in the previous | <b>s year.</b><br>n (check one) | )            |            |
| а.    | Solid waste permit number(s<br>8-4630-00010                    | ) for processing or di                   | sposal facility being uti   | lized.                          |              |            |
| b.    | Facility Name  | Hakes C&D Landfi                         | II                          |                                 |              |            |
|       | Address Line 1   | 4376 Manning Rid                         | ge 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<br>(585) 4 <u>66-7271</u> | Email Address               | joe.boyles@case                 | ella.com     |            |
| d.    | Volume of waste shipped to                                     |  |                             |                                 |              |            |
|       | 2,796  | ]cuyd 🗌 gal                              | 🗌 lb 🖾 tor                  | n (check one)                   | )            |            |
|       |  |  | ENEFICIAL USE               |                                 |              |            |
| a.    | Has the waste been approved                                    | l for beneficial use?                    |                             | ,                               | Yes          | 🛛 No       |
|       | If "Yes", list the general pern                                | nit number or approva                    | l number.                   |                                 |              |            |
| b.    | Volume of waste beneficially                                   |  |                             |                                 |              |            |
|       | 0  | ]cuyd 🗌 gal                              | b tor                       | n (check one)                   | 1            |            |

|       | 3.   | PROCESS DESCRIPTION       | & SCHEMATIC ATTAC         | HMENTS                                |               |       |
|-------|--|---------------------------|---------------------------|---------------------------------------|---------------|-------|
| a.    | A detailed description of the                                  |                           |                           | sses producing                        | X Yes         | No No |
|       | the waste, as specified in the                                 | instructions, is attache  | <b>.</b>                  |                                       |               |       |
| b.    | A schematic of the manufacture as specified in the instruction |                           | ontrol processes proc     | lucing the waste,                     | Yes           | 🗌 No  |
| с.    | If portions of the information                                 | submitted are confident   | ial, the substantiation   | n for Yes                             | No            | N/A   |
|       | a confidentiality claim, as des                                | cribed in the instruction | ns, is attached.          |                                       |               |       |
|       | SECTIO   | ON C. MANAGEM             | ENT OF RESIDU             | AL WASTE                              |               |       |
|       |  |                           | DISPOSAL FACILITY(IE      |                                       |               |       |
| The a | rea below (ad.) will accommod                                  | ate the identification of | two facilities. Attach    | additional sheets                     | if necessary. |       |
| a.    | Solid waste permit number(s)<br>8-0728-00004                   | for processing or dispo   | osal facility being util  | ized.                                 |               |       |
| b.    | Facility Name  | Chemung County La         | ndfill                    |                                       |               |       |
|       | Address Line 1   | 1690 Lake Street          | _                         |                                       |               |       |
|       | Address Line 1   |                           |                           |                                       |               |       |
| Ì     | Address City State ZIP   | Elmira                    | NY                        | 14903                                 |               |       |
|       | Municipality   | Elmira                    | County                    | Chemung                               |               |       |
| C.    | Facility Contact Name  | Carla Canjar              |                           |                                       |               |       |
|       | Title  | Environmental Mana        | ger                       |                                       |               |       |
|       | Phone  | (585) 797-5941            | Email Address             | carla.canjar@ca                       | sella.com     |       |
| d.    | Volume of waste shipped to p                                   | rocessing or disposal f   | acility in the previous   | year.                                 |               |       |
|       | 1,172  | cuyd 🔲 gal                | 🗌 Ib 🛛 ton                | (check one)                           | )             |       |
| a.    | Solid waste permit number(s)<br>100361                         | for processing or dispo   | osal facility being utili | zed.                                  |               |       |
| b.    | Facility Name  | McKean County Land        | fill                      |                                       |               |       |
|       | Address Line 1   | 19 Ness Lane              |                           |                                       |               |       |
|       | Address Line 1   |                           |                           |                                       | ····          |       |
|       | Address City State ZIP   | Kane                      | PA                        | 16735                                 |               |       |
|       | Municipality   | Sergeant Twp              | County                    | McKean                                |               |       |
| с.    | Facility Contact Name  | Mike Manderfeld           |                           |                                       |               |       |
| 1     | Title  |                           |                           |                                       |               |       |
|       | Phone  | (814) 778-9931            | Email Address             | manderfeld@gm                         | ail.com       |       |
| d.    | Volume of waste shipped to p                                   | rocessing or disposal f   | acility in the previous   | year.                                 |               |       |
|       | 21   | cu yd 🗌 🗍 gal             | 🗌 lb 🛛 ton                | (check one)                           | I             |       |
|       |  | 2. Bene                   | FICIAL USE                |                                       |               |       |
| a.    | Has the waste been approved                                    | for beneficial use?       |                           |                                       | Yes           | 🛛 No  |
|       | If "Yes", list the general perm                                | it number or approval n   | umber.                    |                                       |               |       |
| b.    | Volume of waste beneficially                                   |                           |                           | · · · · · · · · · · · · · · · · · · · |               |       |
|       | 0  | cu yd 🛛 🗌 gal             | b 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 applica  | ole:   |  |  |  |
| I certify the information and has not char   | required in Section B-1, General Properties was supplied to the Department for the year ged.               |  |  |  |
| Form Submitted:  | Form 26R   |  |  |  |
|  | Other (specify)  |  |  |  |
| Date Submitted:  |  |  |  |  |
| I certify the information and has not char   | required in Section B-2, Chemical Analysis was supplied to the Department for the year ged.                |  |  |  |
| Form Submitted:  | Form 26R   |  |  |  |
|  | Other (specify)  |  |  |  |
| Date Submitted:  |  |  |  |  |
| I certify the information for the year and h   | required in Section B-3, Process Description and Schematic, was supplied to the Department as not changed. |  |  |  |
| Form Submitted:  | Form 26R   |  |  |  |
|  | Other (specify)  |  |  |  |
| Date Submitted:  |  |  |  |  |
| Name of Responsible Official   | Title _Environmental Specialist  |  |  |  |
| Dina Brown   | $\gamma P_{i}$   |  |  |  |
| Signature  | Stow Date _ 2/28/11  |  |  |  |

SEND DATA TO:

76

NAME:

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave. Sayre, PA 18840

Phone: (570) 888-0169 Fax: (570) 888-0717 Work Order: 10041885

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

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

RECEIVED FOR LAB BY: DLM2

Steve Gridley

COMPANY: Talisman Energy USA, Inc.

Horseheads, NY 14845

ADDRESS: 337 Daniel Zenker Dr

DATE: 04/14/2010 10:47

**TEST REPORT** 

Page 1 of 1

| 1PLE: Air Cuttings              | La                             | ab ID: 10041885-001A    | Compo       | site           |              |         |
|---------------------------------|--------------------------------|-------------------------|-------------|----------------|--------------|---------|
| SAMPLED BY: SG                  | Sample                         | Time: 04/12/2010 17:30  |             |                |              |         |
| Test                            | Result                         | Method                  | <u>SLOQ</u> | Analvsis Start | Analysis End | Analyst |
| Mercury - TCLP extracted        | < 0.0008 mg/L                  | EPA 7470A               | 0.0008      | 04/15/10 11:30 | 04/15/10     | RMD-C   |
| Sodium                          | 658 mg/Kg                      | EPA 6010B               | 103         | 04/16/10 15:25 | 04/19/10     | RMD-C   |
| Arsenic - TCLP extracted        | < 0.500 mg/L                   | EPA 6010B               | 0.500       | 04/15/10 11:45 | 04/15/10     | RMD-C   |
| Barium - TCLP extracted         | < 10.00 mg/L                   | EPA 6010B               | 10.00       | 04/15/10 11:45 | 04/15/10     | RMD-C   |
| Cadmium - TCLP extracted        | < 0.100 mg/L                   | EPA 6010B               | 0.100       | 04/15/10 11:45 | 04/15/10     | RMD-C   |
| Chromium - TCLP extracted       | < 0.500 mg/L                   | EPA 6010B               | 0.500       | 04/15/10 11:45 | 04/15/10     | RMD-C   |
| Copper - TCLP extracted         | < 0.100 mg/L                   | EPA 6010B               | 0.100       | 04/15/10 11:45 | 04/15/10     | RMD-C   |
| Lead - TCLP extracted           | < 0.500 mg/L                   | EPA 6010B               | 0.500       | 04/15/10 11:45 | 04/15/10     | RMD-C   |
| Nickel - TCLP extracted         | < 0.100 mg/L                   | EPA 6010B               | 0.100       | 04/15/10 11:45 | 04/15/10     | RMD-C   |
| Selenium - TCLP extracted       | < 0.500 mg/L                   | EPA 6010B               | 0.500       | 04/15/10 11:45 | 04/15/10     | RMD-C   |
| Silver - TCLP extracted         | < 0.100 mg/L                   | EPA 6010B               | 0.100       | 04/15/10 11:45 | 04/15/10     | RMD-C   |
| Zinc - TCLP extracted           | 0.297 mg/L                     | EPA 6010B               | 0.200       | 04/15/10 11:45 | 04/15/10     | RMD-C   |
| pН                              | 8.81 @ 25.2 °C                 | EPA 9045D               |             | 04/20/10 13:25 | 04/20/10     | SMH-C\  |
| 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-C\  |
| Sample Note: TPH analysis perfo | rmed by Microbac Lab - Erie [  | Div.                    |             |                |              |         |
| Sample Note: The temperature of | f the extraction room exceeded | d the range of 23 ± 2°C |             |                |              |         |

### **REMARKS**:

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

MANAGER

Carrie M. Davis

DATE: 4/22/2010

NAME:

FAX:

76

# **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: WO#: 10074059 Steve Gridley Talisman Energy USA, Inc. COMPANY: PAGE: 1 of 1 337 Daniel Zenker Dr ADDRESS: Horseheads, NY 14845 PO#: AF76709 PWS ID# TEST REPORT PHONE: (607) 562-4000 (607) 562-4001

RECEIVED FOR LAB BY: DLM2 DATE: 07/26/2010 15:15 Page 1 of 1 SAMPLE: Inv. Cuttings & Gypsum Lab ID: 10074059-001A Composite SAMPLED BY: SG Sample Time: 07/26/2010 10:45 <u>SLOQ</u> Test Result Method 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 SLOQ Method Analysis Start Analysis End Analyst \* Test <u>Result</u> 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 11.27@20.8°C EPA 9045C 07/27/10 12:20 07/27/10 NFM-SA pН Lab ID: 10074059-001D Grab SAMPLE: TCLP Leachate of Inv. Cuttings & Gypsum SAMPLED BY: SG Sample Time: 07/26/2010 10:45 SLOQ Analysis End Analyst \* Test **Result** Method Analysis Start Mercury - TCLP extracted < 0.0010 mg/L EPA 7470A 0.0010 07/29/10 9:00 07/29/10 RMD-CV 0.500 07/29/10 9:50 07/29/10 Arsenic - TCLP extracted < 0.500 mg/L EPA 6010B GSR-CV 10.00 07/29/10 9:50 07/29/10 Barium - TCLP extracted < 10.00 mg/L EPA 6010B 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 EPA 6010B 0.500 07/29/10 9:50 07/29/10 < 0.500 mg/L GSR-CV Nickel - TCLP extracted 0.201 mg/L EPA 6010B 0.100 07/29/10 9:50 07/29/10 GSR-CV s 0.500 Selenium - TCLP extracted < 0.500 mg/L EPA 6010B 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:**

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

Spike Recovery outside accepted recovery limits S

MANAGER

Carrie M. Davis

7/30/2010 DATE:

SEND DATA TO:

NAME:

ADDRESS:

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave. Sayre, PA 18840

Phone: (570) 888-0169 Fax: (570) 888-0717 Work Order: 10074060

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

Steve Gridley

COMPANY: Talisman Energy USA, Inc.

337 Daniel Zenker Dr Horseheads, NY 14845

TEST REPORT

| 76                               |                  |                          |             |                |              |                  |
|----------------------------------|------------------|--------------------------|-------------|----------------|--------------|------------------|
| RECEIVED FOR LAB BY: DLM2        | DATE:            | 07/26/2010 15:15         |             |                | Pa           | age 1 of 1       |
| SAMPLE: Inv. Cuttings            |                  | Lab ID: 10074060-001A    | Compo       | site           |              |                  |
| SAMPLED BY: SG                   | Sampl            | e Time: 07/26/2010 10:45 | SLOQ        |                |              |                  |
| Test                             | <u>Result</u>    | Method                   | 0100        | Analysis Start | Analysis End | <u>Analyst *</u> |
| 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    | Compo       | site           |              |                  |
| SAMPLED BY: SG                   | Sampl            | e Time: 07/26/2010 10:45 |             |                |              |                  |
| Test                             | Result           | Method                   | <u>SLOQ</u> | 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. Cu | ttings           | Lab ID: 10074060-001D    | Compo       | site           |              |                  |
| SAMPLED BY: SG                   | -                | e Time: 07/26/2010 10:45 |             |                |              |                  |
| Test                             | Result           | Method                   | <u>SLOQ</u> | 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:**

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

S Spike Recovery outside accepted recovery limits

MANAGER

Curie M. Davis

DATE: 7/30/

| LAB ID: 39-00   | 0380<br>0401  | Easter<br>2566 Pen   | <b>Analytics, In</b><br><b>In Division</b><br>Insylvania Ave.<br>In PA 18840  | IC.   | Work   | Order: 100   | 74062   |
|---|---|--|---|---|--|--|---|
|   |   | •  | 570) 888-0169<br>570) 888-0717  |   |  |  |   |
| SEND DATA   | το <sup>,</sup>   |  |   |   |  |  |   |
|   | Steve Gridley   |  |   |   | O#: 1007   | 4062   |   |
|   | Talisman Energy USA, Ir   | าс.  |   |   |  |  |   |
|   | 337 Daniel Zenker Dr  |  |   | PA  | AGE: 1 of  | 1  |   |
|   | Horseheads, NY 14845  |  |   | P   | O#: AF76   | 6709   |   |
|   |   |  | _   | D١  | NS ID#   |  |   |
|   | (607) 562-4000<br>(607) 562-4001  | TEST   | REPORT  | FX  | NS 1D#   |  |   |
| 76  |   |  |   |   |  |  |   |
| RECEIVED FO   | OR LAB BY: DLM2   | DATE:  | 07/26/2010 15:15  | ,   |  | Pa   | age 1 of 1  |
| SAMPLE: Inv.  | . Cuttings-Raw  | L  | ab ID: 10074062-001A.   | Compo   | site   |  |   |
|   |   | Sample   | Time: 07/26/2010 10:45  |   |  |  |   |
| SAMPLED   | J D1. 3G  | Campio   | Time. 0//20/2010 10.40  |   |  |  |   |
|   | 561.36  |  |   | <u>SLOQ</u>   | Analysis Start   | Analysis End   | Analyst *   |
| Test  |   | <u>Result</u>  | <u>Method</u><br>EPA 9071   | <u>SLOQ</u>   | <u>Analysis Start</u><br>07/27/10 12:00  | <u>Analysis End</u><br>07/27/10  | <u>Analyst *</u>  |
| <u>Test</u><br>Total Petro  | oleum Hydrocarbons<br>Note: Analysis performed by M   | <u>Result</u><br>118000 mg/Kg  | Method  | <u>SLOQ</u>   |  |  | <u>Analyst *</u>  |
| <u>Test</u><br>Total Petro<br>Sample I  | oleum Hydrocarbons<br>Note: Analysis performed by M   | <u>Result</u><br>118000 mg/Kg<br>/licrobac-Erie  | <u>Method</u><br>EPA 9071   |   | 07/27/10 12:00   |  | Analyst *   |
| <u>Test</u><br>Total Petro  | oleum Hydrocarbons<br>Note: Analysis performed by M<br>. Cuttings-Raw   | <u>Result</u><br>118000 mg/Kg<br>/licrobac-Erie<br>L   | Method  | <u>SLOQ</u><br>Compo  | 07/27/10 12:00   |  | <u>Analyst *</u>  |
| Test<br>Total Petro<br>Sample<br>SAMPLE: Inv.<br>SAMPLE   | oleum Hydrocarbons<br>Note: Analysis performed by M<br>. Cuttings-Raw   | <u>Result</u><br>118000 mg/Kg<br>/licrobac-Erie<br>L<br>Sample   | Method<br>EPA 9071<br>ab ID: 10074062-001B<br>Time: 07/26/2010 10:45  |   | 07/27/10 12:00   | 07/27/10   |   |
| <u>Test</u><br>Total Petro<br>Sample I<br>SAMPLE: Inv.<br>SAMPLEI<br><u>Test</u>  | oleum Hydrocarbons<br>Note: Analysis performed by M<br>. Cuttings-Raw   | <u>Result</u><br>118000 mg/Kg<br>/icrobac-Erie<br>L<br>Sample<br><u>Result</u>   | Method<br>EPA 9071<br>ab ID: 10074062-001B<br>Time: 07/26/2010 10:45<br><u>Method</u>   | Compo<br><u>SLOQ</u>  | 07/27/10 12:00<br>site<br><u>Analysis Start</u>  | 07/27/10<br>Analysis End   | Analyst *   |
| Test<br>Total Petro<br>Sample I<br>SAMPLE: Inv.<br>SAMPLE<br><u>Test</u><br>Moisture  | oleum Hydrocarbons<br>Note: Analysis performed by M<br><b>. Cuttings-Raw</b><br>D BY: SG  | <u>Result</u><br>118000 mg/Kg<br>/licrobac-Erie<br>L<br>Sample<br><u>Result</u><br>11.5 %  | <u>Method</u><br>EPA 9071<br>ab ID: 10074062-001B<br>Time: 07/26/2010 10:45<br><u>Method</u><br>Moisture Calc.  | Compo<br><u>SLOQ</u><br>0.01  | 07/27/10 12:00<br>site<br><u>Analysis Start</u><br>07/26/10 10:30  | 07/27/10<br>Analysis End<br>07/27/10   | <u>Analyst *</u><br>NFM-SA  |
| Test<br>Total Petro<br>Sample I<br>SAMPLE: Inv.<br>SAMPLE<br><u>Test</u><br>Moisture<br>Free Liquid   | oleum Hydrocarbons<br>Note: Analysis performed by M<br><b>. Cuttings-Raw</b><br>D BY: SG  | Result<br>118000 mg/Kg<br>/icrobac-Erie<br>L<br>Sample<br><u>Result</u><br>11.5 %<br>< 0.1 %   | Method<br>EPA 9071<br>ab ID: 10074062-001B<br>Time: 07/26/2010 10:45<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A  | Compo<br><u>SLOQ</u>  | 07/27/10 12:00<br>site<br><u>Analysis Start</u><br>07/26/10 10:30<br>07/26/10 16:30  | 07/27/10<br>Analysis End<br>07/27/10<br>07/26/10   | Analyst *<br>NFM-SA<br>IC-SA  |
| Test<br>Total Petro<br>Sample I<br>SAMPLE: Inv.<br>SAMPLE<br>SAMPLE<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH   | oleum Hydrocarbons<br>Note: Analysis performed by M<br><b>. Cuttings-Raw</b><br>D BY: SG  | <u>Result</u><br>118000 mg/Kg<br>/icrobac-Erie<br>L<br>Sample<br><u>Result</u><br>11.5 %<br>< 0.1 %<br>11.0@20.8°C   | <u>Method</u><br>EPA 9071<br>ab ID: 10074062-001B<br>Time: 07/26/2010 10:45<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C  | Compo<br><u>SLOQ</u><br>0.01<br>0.1   | 07/27/10 12:00<br>site<br><u>Analysis Start</u><br>07/26/10 10:30  | 07/27/10<br>Analysis End<br>07/27/10   | Analyst *<br>NFM-SA<br>IC-SA  |
| Test<br>Total Petro<br>Sample I<br>SAMPLE: Inv.<br>SAMPLE:<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: TCL   | oleum Hydrocarbons<br>Note: Analysis performed by M<br><b>. Cuttings-Raw</b><br>D BY: SG<br>I<br>LP Leachate of Inv. Cuttin   | Result           118000 mg/Kg           /licrobac-Erie           /licrobac-Erie           L           Sample           Result           11.5 %           < 0.1 % | Method<br>EPA 9071           ab ID: 10074062-001B           Time: 07/26/2010 10:45           Method<br>Moisture Calc.           EPA 9095A           EPA 9045C           ab ID: 10074062-001D  | Compo<br><u>SLOQ</u><br>0.01  | 07/27/10 12:00<br>site<br><u>Analysis Start</u><br>07/26/10 10:30<br>07/26/10 16:30  | 07/27/10<br>Analysis End<br>07/27/10<br>07/26/10   | Analyst *<br>NFM-SA<br>IC-SA  |
| Test<br>Total Petro<br>Sample I<br>SAMPLE: Inv.<br>SAMPLE<br>SAMPLE<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH   | oleum Hydrocarbons<br>Note: Analysis performed by M<br><b>. Cuttings-Raw</b><br>D BY: SG<br>I<br>LP Leachate of Inv. Cuttin   | Result           118000 mg/Kg           /licrobac-Erie           /licrobac-Erie           L           Sample           Result           11.5 %           < 0.1 % | <u>Method</u><br>EPA 9071<br>ab ID: 10074062-001B<br>Time: 07/26/2010 10:45<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C  | Compo<br><u>SLOQ</u><br>0.01<br>0.1   | 07/27/10 12:00<br>site<br><u>Analysis Start</u><br>07/26/10 10:30<br>07/26/10 16:30  | 07/27/10<br>Analysis End<br>07/27/10<br>07/26/10   | Analyst *<br>NFM-SA<br>IC-SA  |
| Test<br>Total Petro<br>Sample I<br>SAMPLE: Inv.<br>SAMPLE:<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: TCL   | oleum Hydrocarbons<br>Note: Analysis performed by M<br><b>. Cuttings-Raw</b><br>D BY: SG<br>I<br>LP Leachate of Inv. Cuttin   | Result           118000 mg/Kg           /licrobac-Erie           /licrobac-Erie           L           Sample           Result           11.5 %           < 0.1 % | Method<br>EPA 9071           ab ID: 10074062-001B           Time: 07/26/2010 10:45           Method<br>Moisture Calc.           EPA 9095A           EPA 9045C           ab ID: 10074062-001D  | Compo<br><u>SLOQ</u><br>0.01<br>0.1<br>Grab   | 07/27/10 12:00<br>site<br><u>Analysis Start</u><br>07/26/10 10:30<br>07/26/10 16:30  | 07/27/10<br>Analysis End<br>07/27/10<br>07/26/10   | Analyst *<br>NFM-SA<br>IC-SA<br>NFM-SA  |
| Test<br>Total Petro<br>Sample I<br>SAMPLE: Inv.<br>SAMPLE:<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: TCL<br>SAMPLE:  | oleum Hydrocarbons<br>Note: Analysis performed by M<br><b>. Cuttings-Raw</b><br>D BY: SG<br>I<br>LP Leachate of Inv. Cuttin   | Result           118000 mg/Kg           /licrobac-Erie           L           Sample           Result           11.5 %           < 0.1 %                          | Method<br>EPA 9071           ab ID: 10074062-001B           Time: 07/26/2010 10:45           Method<br>Moisture Calc.           EPA 9095A           EPA 9045C           ab ID: 10074062-001D           Time: 07/26/2010 10:45   | Compo<br><u>SLOQ</u><br>0.01<br>0.1<br>Grab   | 07/27/10 12:00<br>site<br><u>Analysis Start</u><br>07/26/10 10:30<br>07/26/10 16:30<br>07/27/10 12:20  | 07/27/10<br>Analysis End<br>07/27/10<br>07/26/10<br>07/27/10   | Analyst *<br>NFM-SA<br>IC-SA<br>NFM-SA  |
| Test<br>Total Petro<br>Sample I<br>SAMPLE: Inv.<br>SAMPLE: Inv.<br>SAMPLE: Test<br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: TCL<br>SAMPLE: TCL<br>SAMPLE: TCL   | oleum Hydrocarbons<br>Note: Analysis performed by M<br><b>. Cuttings-Raw</b><br>D BY: SG<br>LP Leachate of Inv. Cutting<br>D BY: SG   | Result           118000 mg/Kg           /icrobac-Erie           /icrobac-Erie           L           Sample           Result           11.5 %           < 0.1 %   | Method<br>EPA 9071           ab ID: 10074062-001B           Time: 07/26/2010 10:45           Method           Moisture Calc.           EPA 9095A           EPA 9045C           ab ID: 10074062-001D           Time: 07/26/2010 10:45           Method           EPA 9045C           ab ID: 10074062-001D           Time: 07/26/2010 10:45           Method           EPA 7470A           EPA 6010B  | Compo<br><u>SLOQ</u><br>0.01<br>0.1<br>Grab<br><u>SLOQ</u><br>0.0010<br>0.500   | 07/27/10 12:00 site <u>Analysis Start</u> 07/26/10 10:30 07/26/10 16:30 07/27/10 12:20 <u>Analysis Start</u> 07/29/10 9:00 07/29/10 9:50   | 07/27/10<br><u>Analysis End</u><br>07/27/10<br>07/26/10<br>07/27/10<br><u>Analysis End</u><br>07/29/10<br>07/29/10   | Analyst *<br>NFM-SA<br>IC-SA<br>NFM-SA<br>Analyst *<br>RMD-CV   |
| Test<br>Total Petro<br>Sample I<br>SAMPLE: Inv.<br>SAMPLE: Inv.<br>SAMPLE: Test<br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: TCL<br>SAMPLE: TCL<br>SAMPLE: TCL<br>SAMPLE: TCL<br>SAMPLE: TCL   | oleum Hydrocarbons<br>Note: Analysis performed by M<br><b>. Cuttings-Raw</b><br>D BY: SG<br>LP Leachate of Inv. Cutting<br>D BY: SG   | Result           118000 mg/Kg           /licrobac-Erie           L           Sample           Result           11.5 %           < 0.1 %                          | Method<br>EPA 9071           ab ID: 10074062-001B           Time: 07/26/2010 10:45           Method           Moisture Calc.           EPA 9095A           EPA 9045C           ab ID: 10074062-001D           Time: 07/26/2010 10:45           Method           EPA 9045C   | Compo<br><u>SLOQ</u><br>0.01<br>0.1<br>Grab<br><u>SLOQ</u><br>0.0010  | 07/27/10 12:00 site <u>Analysis Start</u> 07/26/10 10:30 07/26/10 16:30 07/27/10 12:20 <u>Analysis Start</u> 07/29/10 9:00   | 07/27/10<br><u>Analysis End</u><br>07/27/10<br>07/26/10<br>07/27/10<br><u>Analysis End</u><br>07/29/10   | Analyst *<br>NFM-SA<br>IC-SA<br>NFM-SA<br>MFM-SA<br>MFM-SA<br>MD-CV<br>GSR-CV   |
| Test<br>Total Petro<br>Sample I<br>SAMPLE: Inv.<br>SAMPLE: Inv.<br>SAMPLE: Test<br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: TCL<br>SAMPLE: TCL<br>SAMPLE: TCL<br>SAMPLE: TCL<br>Barium - TC   | oleum Hydrocarbons<br>Note: Analysis performed by M<br><b>. Cuttings-Raw</b><br>D BY: SG<br><b>LP Leachate of Inv. Cuttin</b><br>D BY: SG<br>FCLP extracted<br>FCLP extracted   | Result           118000 mg/Kg           /licrobac-Erie           /licrobac-Erie           L           Sample           Result           11.5 %           < 0.1 % | Method<br>EPA 9071           ab ID: 10074062-001B           Time: 07/26/2010 10:45           Method           Moisture Calc.           EPA 9095A           EPA 9045C           ab ID: 10074062-001D           Time: 07/26/2010 10:45           Method           EPA 9045C           ab ID: 10074062-001D           Time: 07/26/2010 10:45           Method           EPA 7470A           EPA 6010B           EPA 6010B           EPA 6010B  | Compo<br>SLOQ<br>0.01<br>0.1<br>Grab<br>SLOQ<br>0.0010<br>0.500<br>10.00<br>0.100                                     | 07/27/10 12:00 site <u>Analysis Start</u> 07/26/10 10:30 07/26/10 16:30 07/27/10 12:20 <u>Analysis Start</u> 07/29/10 9:00 07/29/10 9:50   | 07/27/10<br><u>Analysis End</u><br>07/27/10<br>07/26/10<br>07/26/10<br>07/29/10<br>07/29/10<br>07/29/10<br>07/29/10<br>07/29/10                                      | Analyst *<br>NFM-SA<br>IC-SA<br>NFM-SA<br>MFM-SA<br>Analyst *<br>RMD-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV                 |
| Test<br>Total Petro<br>Sample I<br>SAMPLE: Inv.<br>SAMPLE: Test<br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: TCL<br>SAMPLE: TCL<br>SAMPLE: TCL<br>Barium - TC<br>Cadmium - TC  | oleum Hydrocarbons<br>Note: Analysis performed by M<br>. Cuttings-Raw<br>D BY: SG<br>LP Leachate of Inv. Cuttin<br>D BY: SG<br>FCLP extracted<br>CLP extracted<br>CLP extracted   | Result           118000 mg/Kg           /licrobac-Erie           /licrobac-Erie           L           Sample           Result           11.5 %           < 0.1 % | Method<br>EPA 9071           ab ID: 10074062-001B           Time: 07/26/2010 10:45           Method           Moisture Calc.           EPA 9095A           EPA 9045C           ab ID: 10074062-001D           Time: 07/26/2010 10:45           Method           EPA 9045C           ab ID: 10074062-001D           Time: 07/26/2010 10:45           Method           EPA 7470A           EPA 6010B           EPA 6010B  | Compo<br><u>SLOQ</u><br>0.01<br>0.1<br>Grab<br><u>SLOQ</u><br>0.0010<br>0.500<br>10.00                                | 07/27/10 12:00 site <u>Analysis Start</u> 07/26/10 10:30 07/26/10 16:30 07/27/10 12:20 <u>Analysis Start</u> 07/29/10 9:00 07/29/10 9:50 07/29/10 9:50   | 07/27/10<br><u>Analysis End</u><br>07/27/10<br>07/26/10<br>07/26/10<br>07/27/10<br><u>Analysis End</u><br>07/29/10<br>07/29/10<br>07/29/10                           | Analyst *<br>NFM-SA<br>IC-SA<br>NFM-SA<br>MFM-SA<br>Analyst *<br>RMD-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV                 |
| Test<br>Total Petro<br>Sample I<br>SAMPLE: Inv.<br>SAMPLE: Inv.<br>SAMPLE: Test<br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: TCI<br>SAMPLE: TCI | Deum Hydrocarbons<br>Note: Analysis performed by M<br>. Cuttings-Raw<br>D BY: SG<br>LP Leachate of Inv. Cutting<br>D BY: SG<br>TCLP extracted<br>CLP extracted<br>CLP extracted<br>- TCLP extracted   | Result           118000 mg/Kg           /licrobac-Erie           /licrobac-Erie           L           Sample           Result           11.5 %           < 0.1 % | Method<br>EPA 9071           ab ID: 10074062-001B           Time: 07/26/2010 10:45           Method           Moisture Calc.           EPA 9095A           EPA 9045C           ab ID: 10074062-001D           Time: 07/26/2010 10:45           Method           EPA 9045C           ab ID: 10074062-001D           Time: 07/26/2010 10:45           Method           EPA 7470A           EPA 6010B           EPA 6010B           EPA 6010B  | Compo<br>SLOQ<br>0.01<br>0.1<br>Grab<br>SLOQ<br>0.0010<br>0.500<br>10.00<br>0.100                                     | Analysis Start           07/27/10 12:00           site           Analysis Start           07/26/10 10:30           07/26/10 16:30           07/27/10 12:20           Analysis Start           07/29/10 9:00           07/29/10 9:50           07/29/10 9:50           07/29/10 9:50  | 07/27/10<br><u>Analysis End</u><br>07/27/10<br>07/26/10<br>07/26/10<br>07/29/10<br>07/29/10<br>07/29/10<br>07/29/10<br>07/29/10                                      | Analyst *<br>NFM-SA<br>IC-SA<br>NFM-SA<br>MFM-SA<br>MD-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV                     |
| Test<br>Total Petro<br>Sample I<br>SAMPLE: Inv.<br>SAMPLE: Inv.<br>SAMPLE: Test<br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: TCL<br>SAMPLE: TCL<br>SAMPLE: TCL<br>Cadmium - TC<br>Cadmium - TC<br>Cadmium - TC   | Deum Hydrocarbons<br>Note: Analysis performed by M<br>. Cuttings-Raw<br>D BY: SG<br>LP Leachate of Inv. Cutting<br>D BY: SG<br>TCLP extracted<br>CLP extracted<br>CLP extracted<br>- TCLP extracted<br>- TCLP extracted   | Result           118000 mg/Kg           /licrobac-Erie           L           Sample           Result           11.5 %           < 0.1 %                          | Method<br>EPA 9071           ab ID: 10074062-001B           Time: 07/26/2010 10:45           Method           Moisture Calc.           EPA 9095A           EPA 9045C           ab ID: 10074062-001D           Time: 07/26/2010 10:45           Method           EPA 9045C           ab ID: 10074062-001D           Time: 07/26/2010 10:45           Method           EPA 7470A           EPA 6010B           EPA 6010B           EPA 6010B           EPA 6010B  | Compo<br>SLOQ<br>0.01<br>0.1<br>Grab<br>SLOQ<br>0.0010<br>0.500<br>10.00<br>0.100<br>0.500                            | Analysis Start           07/27/10 12:00           site           Analysis Start           07/26/10 10:30           07/26/10 16:30           07/26/10 16:30           07/27/10 12:20           Analysis Start           07/29/10 9:00           07/29/10 9:50           07/29/10 9:50           07/29/10 9:50           07/29/10 9:50           07/29/10 9:50           07/29/10 9:50   | 07/27/10<br><u>Analysis End</u><br>07/27/10<br>07/26/10<br>07/26/10<br>07/29/10<br>07/29/10<br>07/29/10<br>07/29/10<br>07/29/10                                      | Analyst *<br>NFM-SA<br>IC-SA<br>NFM-SA<br>MFM-SA<br>CSR-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV          |
| Test<br>Total Petro<br>Sample I<br>SAMPLE: Inv.<br>SAMPLE: Inv.<br>SAMPLE: Test<br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: TCL<br>SAMPLE: TCL<br>SAMPLE: TCL<br>Casmium - TC<br>Cadmium -<br>Chromium  | Deum Hydrocarbons<br>Note: Analysis performed by M<br>. Cuttings-Raw<br>D BY: SG<br>LP Leachate of Inv. Cutting<br>D BY: SG<br>TCLP extracted<br>CLP extracted<br>CLP extracted<br>- TCLP extracted<br>- TCLP extracted<br>CLP extracted<br>- TCLP extracted<br>CLP extracted   | Result           118000 mg/Kg           /licrobac-Erie           L           Sample           Result           11.5 %           < 0.1 %                          | Method<br>EPA 9071           ab ID: 10074062-001B           Time: 07/26/2010 10:45           Method           Moisture Calc.           EPA 9095A           EPA 9045C           ab ID: 10074062-001D           Time: 07/26/2010 10:45           Method           EPA 9045C           ab ID: 10074062-001D           Time: 07/26/2010 10:45           Method           EPA 7470A           EPA 6010B           EPA 6010B           EPA 6010B           EPA 6010B           EPA 6010B  | Compo<br>SLOQ<br>0.01<br>0.1<br>Grab<br>SLOQ<br>0.0010<br>0.500<br>10.00<br>0.100<br>0.500<br>0.100                   | Analysis Start           07/27/10 12:00           site           Analysis Start           07/26/10 10:30           07/26/10 16:30           07/26/10 16:30           07/27/10 12:20           Analysis Start           07/27/10 12:20           Analysis Start           07/29/10 9:50           07/29/10 9:50           07/29/10 9:50           07/29/10 9:50           07/29/10 9:50           07/29/10 9:50           07/29/10 9:50   | 07/27/10<br><u>Analysis End</u><br>07/27/10<br>07/26/10<br>07/27/10<br>07/29/10<br>07/29/10<br>07/29/10<br>07/29/10<br>07/29/10<br>07/29/10                          | Analyst *<br>NFM-SA<br>IC-SA<br>NFM-SA<br>MD-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV           |
| Test<br>Total Petro<br>Sample I<br>SAMPLE: Inv.<br>SAMPLE: Inv.<br>SAMPLE: Test<br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: TCL<br>SAMPLE: TCL<br>SAMPLE: TCL<br>Cadmium - TC<br>Cadmium - TC<br>Copper - TC<br>Lead - TCL<br>Nickel - TC   | Deum Hydrocarbons<br>Note: Analysis performed by M<br>. Cuttings-Raw<br>D BY: SG<br>LP Leachate of Inv. Cutting<br>D BY: SG<br>TCLP extracted<br>CLP extracted<br>CLP extracted<br>- TCLP extracted                               | Result           118000 mg/Kg           /licrobac-Erie           L           Sample           Result           11.5 %           < 0.1 %                          | Method<br>EPA 90711           ab ID: 10074062-001B           Time: 07/26/2010 10:45           Method<br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C           ab ID: 10074062-001D           Time: 07/26/2010 10:45           Method<br>EPA 7470A           EPA 6010B  | Compo<br>SLOQ<br>0.01<br>0.1<br>Grab<br>SLOQ<br>0.0010<br>0.500<br>10.00<br>0.100<br>0.500<br>0.100<br>0.500          | Analysis Start           07/27/10 12:00           site           Analysis Start           07/26/10 10:30           07/26/10 16:30           07/26/10 16:30           07/26/10 12:20           Analysis Start           07/27/10 12:20           Analysis Start           07/29/10 9:50           07/29/10 9:50           07/29/10 9:50           07/29/10 9:50           07/29/10 9:50           07/29/10 9:50           07/29/10 9:50           07/29/10 9:50           07/29/10 9:50           07/29/10 9:50           07/29/10 9:50                         | 07/27/10<br>Analysis End<br>07/27/10<br>07/26/10<br>07/26/10<br>07/29/10<br>07/29/10<br>07/29/10<br>07/29/10<br>07/29/10<br>07/29/10<br>07/29/10                     | Analyst *<br>NFM-SA<br>IC-SA<br>NFM-SA<br>MD-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV |
| Test<br>Total Petro<br>Sample I<br>SAMPLE: Inv.<br>SAMPLE: Inv.<br>SAMPLE: Test<br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: TCL<br>SAMPLE: TCL<br>SAMPLE: TCL<br>Cadmium -<br>Chromium<br>Copper - TC<br>Lead - TCL<br>Nickel - TC<br>Selenium -  | Deum Hydrocarbons<br>Note: Analysis performed by M<br>. Cuttings-Raw<br>D BY: SG<br>LP Leachate of Inv. Cutting<br>D BY: SG<br>TCLP extracted<br>CLP extracted<br>CLP extracted<br>- TCLP extracted<br>- TCLP extracted<br>- TCLP extracted<br>CLP extracted<br>- TCLP extracted<br>CLP extracted<br>- P extracted<br>CLP extracted<br>CLP extracted<br>CLP extracted<br>CLP extracted<br>CLP extracted<br>CLP extracted<br>CLP extracted | Result           118000 mg/Kg           /licrobac-Erie           L           Sample           Result           11.5 %           < 0.1 %                          | Method<br>EPA 90711           ab ID: 10074062-001B           Time: 07/26/2010 10:45           Method<br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C           ab ID: 10074062-001D           Time: 07/26/2010 10:45           Method<br>EPA 7470A<br>EPA 6010B           EPA 6010B | Compo<br>SLOQ<br>0.01<br>0.1<br>Grab<br>SLOQ<br>0.0010<br>0.500<br>10.00<br>0.100<br>0.500<br>0.100<br>0.500<br>0.100 | Analysis Start           07/27/10 12:00           site           Analysis Start           07/26/10 10:30           07/26/10 16:30           07/26/10 16:30           07/26/10 12:20             Analysis Start           07/29/10 9:50           07/29/10 9:50           07/29/10 9:50           07/29/10 9:50           07/29/10 9:50           07/29/10 9:50           07/29/10 9:50           07/29/10 9:50           07/29/10 9:50           07/29/10 9:50           07/29/10 9:50           07/29/10 9:50           07/29/10 9:50           07/29/10 9:50 | 07/27/10<br>07/27/10<br>07/27/10<br>07/26/10<br>07/26/10<br>07/29/10<br>07/29/10<br>07/29/10<br>07/29/10<br>07/29/10<br>07/29/10<br>07/29/10<br>07/29/10<br>07/29/10 | Analyst *<br>NFM-SA<br>IC-SA<br>NFM-SA  |

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report. \* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

S Spike Recovery outside accepted recovery limits

MANAGER

Carrie M. Davis

DATE: 7/30/2010



#### COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WASTE MANAGEMENT

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

| This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form 26R, reference the item number and identify the date prepared. The date on attached sheets needs to match the date noted below.   |   |   |                               | tify Date Receive            | USE ONLY<br>ed & General Notes |
|--|---|---|-------------------------------|------------------------------|--------------------------------|
| General Refe   | rence 287.54  |   |                               |                              |                                |
| Date Prepare   |   |   |                               |                              |                                |
|  | SECTION A. CLIEN  | T (GENERATOR  | OF THE WASTE)                 | NFORMATION                   |                                |
| Company Nat  | ne<br>ergy USA Inc.   |   |                               |                              |                                |
|  | y, Name of Parent Company   |   |                               | EPA                          | Generator ID#                  |
| Talisman En  |   |   |                               | N/A                          |                                |
| Company Ma<br>50 Pennwoo   | ling Address Line 1   | C   | ompany Mailing Addre          | ess Line 2                   |                                |
|  | Iress Last Line – City  | State   | Zip+4                         | Phone                        | Ext                            |
| Warrendale   | -   | PA  | 15086                         | (724) 814-530                |                                |
|  |   | F <b>irst Name</b><br>Dina                                    | MI                            | Suffi                        | x                              |
| Brown<br>Municipality  | <u>L</u>  |   | County                        |                              |                                |
| Warrendale   |   | <i>A</i>  | Allegheny                     |                              |                                |
| Contact Phon   |   | Email Address   |                               |                              |                                |
| (724) 814-53   | enerated at the Company Mailing   | n@talismanusa.c   |                               |                              | Yes 🛛 No                       |
|  | be location of waste generation a                                       |   |                               | س<br>uring natural gas drill |                                |
| the (0   | 1-077) well pad site located at 2871                                    |   |                               |                              |                                |
| containers on<br>Municipality  |   | County Bradfo   | ord                           | State                        | PA                             |
| manopany   |   |   | E DESCRIPTION                 |                              |                                |
| Residual   | Residual Waste  |   |                               | Unit of                      | Time                           |
| Waste Code   | Code Descriptio   | n   | Amount                        | Measure                      | Frame                          |
| 810  | Drill cuttings (oil and gas)  |   | 8,477                         | <u> </u>                     | One Time                       |
| -2).   |   | 1. GENERAL P  | ROPERTIES                     |                              |                                |
| a. pH Ra   |   |   | (based on analyses or l       | (nowledge)                   |                                |
| b. Physic  | Soli  | iid Waste (EPA Me<br>d (EPA Method 909<br>a (ambient temperat | 95)                           |                              |                                |
| c. Physic  | al Appearance Color   | Greyish Black   | Ode                           | ungin                        | Petroleum                      |
|  |   | •   | Phases of Separation          |                              |                                |
|  | Describe  | e each phase of s   | eparation. <u>Soil and Re</u> | ock Fragments                |                                |
|  |   | CHEMICAL ANALYS   |                               | in the second                |                                |
| instru   | sults of a detailed chemical chara<br>ctions, is attached.              |   |                               | n the 🛛 🕅                    | Yes 🗌 No                       |
|  | iled description of the waste sam                                       |   |                               |                              | Yes No                         |
| c. The quart of the contract o | ality assurance/quality control p<br>ed.                                | rocedures employ  | /ed by the laboratory(        | es) is 🛛 🖂                   | Yes 🗌 No                       |
|  | sults of the hazardous waste det  | ermination is attac   | ched.                         | $\boxtimes$                  | Yes No                         |
|  | icable, a detailed explanation sup<br>actual chemical analysis is attac |   | nerator knowledge in          | Yes                          | No 🛛 N/A                       |

| 1.1.1.2.2      |   | 3. PROCESS DESCRIPTIO       | N & SCHEMATIC ATTA         | CHMENTS             |              | i i i i i i i i i i i i i i i i i i i  |
|----------------|---|-----------------------------|----------------------------|---------------------|--------------|--|
| a.             | A detailed description of th                                    |                             |                            | esses producing     | 🛛 Yes        | No No  |
|                | the waste, as specified in the                                  | ne instructions, is attach  | ed.                        |                     |              |  |
| b.             | A schematic of the manufact                                     | cturing and/or pollution    | control processes pro      | ducing the waste.   | X Yes        | □ No   |
| <sup>~</sup> . | as specified in the instructi                                   |                             |                            | ,                   |              |  |
| L              | -   |                             | tial the substantiatio     | on for Yes          | [] N         | 57 N/A   |
| c.             | If portions of the information<br>a confidentiality claim, as d |                             |                            | on for res          | 🗌 No         | 🖾 N/A  |
|                |   |                             |                            |                     |              |  |
|                | SECT  | ION C. MANAGEN              | MENT OF RESIDU             | JAL WASTE           |              |  |
|                |   |                             | DISPOSAL FACILITY          |                     |              | 1944 - 19 |
| The a          | rea below (ad.) will accomm                                     | odate the identification of | of two facilities. Attac   | h additional sheets | if necessary |  |
| a.             | Solid waste permit number                                       | s) for processing or dis    | osal facility being uti    | lized.              |              |  |
|                | 8-4630-00010  |                             | , ,                        |                     |              |  |
| b.             | Facility Name   | Hakes C&D Landfill          |                            |                     |              |  |
| D.             | Address Line 1  | 4376 Manning Ridg           | - Pood                     | ······              |              |  |
|                | Address Line 1  | 4576 Manning Rug            |                            |                     |              |  |
|                | Address City State ZIP  | Painted Post                | NY                         | 14870               |              |  |
| 1              | Municipality  | Erwin Twp                   | County                     | Steuben             |              |  |
|                |   |                             | County                     | Steuben             |              |  |
| с.             | Facility Contact Name   | Joseph Boyles               |                            |                     |              |  |
|                | Title   |                             |                            |                     |              |  |
|                | Phone   | (607) 937-6044              | Email Address              | joe.boyles@case     | ella.com     |  |
|                |   | (585) 797-5941              |                            |                     |              |  |
| d.             | Volume of waste shipped to                                      |                             | b k                        |                     |              |  |
|                | 3,701 [   | cuydgal                     |                            |                     |              |  |
| a.             | Solid waste permit number(                                      | s) for processing or disp   | oosal facility being uti   | lized.              |              |  |
|                | 9-0232-00003  |                             |                            |                     |              |  |
| b.             | Facility Name   | Hyland Landfill             |                            |                     |              |  |
|                | Address Line 1  | 6653 Herdman Roa            | d                          |                     |              |  |
|                | Address Line 1  |                             |                            |                     |              |  |
|                | Address City State ZIP  | Angelica                    | NY                         | 14709               |              |  |
|                | Municipality  | Angelica                    | County                     | Allegany            |              |  |
| c.             | Facility Contact Name   | Larry Shilling              |                            |                     |              | 1464   |
|                | Title   | <u></u>                     | ·····                      | ·····               | ·            |  |
|                | Phone   | (585) 466-7271              | Email Address              | larry.shilling@ca   | sella.com    |  |
| -              |   | ( )                         |                            |                     |              |  |
| d.             | Volume of waste shipped to                                      | <u> </u>                    | b Tacility in the previous |                     |              |  |
|                | 3,583   |                             |                            |                     |              |  |
|                |   |                             | IEFICIAL USE               |                     |              |  |
| a.             | Has the waste been approve                                      | ed for beneficial use?      |                            |                     | Yes          | 🛛 No   |
|                | If "Yes", list the general per                                  | mit number or approval      | number.                    |                     |              |  |
| b.             | Volume of waste beneficial                                      | y used in the previous ye   | ear.                       |                     |              |  |
|                | 0 [   | cuydgal                     | 🗌 lb 🗌 tor                 | n (check one)       |              |  |

|        | 3  | 3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS  |     |
|--------|--|---|-----|
| a.     | the waste, as specified in th                                    |   | No  |
| b.     | as specified in the instruction                                  |   | No  |
| C.     | If portions of the information<br>a confidentiality claim, as de | n submitted are confidential, the substantiation for Yes No X<br>escribed in the instructions, is attached. | N/A |
|        | SECT   | ION C. MANAGEMENT OF RESIDUAL WASTE   |     |
|        |  |   |     |
| The ar | ea below (ad.) will accommo                                      | odate the identification of two facilities. Attach additional sheets if necessary.                          |     |
| a.     | Solid waste permit number(<br>8-0728-00004                       | s) for processing or disposal facility being utilized.  |     |
| 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.     | 1,172  | processing or disposal facility in the previous year.   |     |
| a.     | Solid waste permit number(<br>100361                             | s) for processing or disposal facility being utilized.  |     |
| 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  |     |
| с.     | Facility Contact Name  | Mike Manderfeld   |     |
|        | Title  |   |     |
|        | Phone  | (814) 778-9931 Email Address manderfeld@gmail.com   |     |
| d.     | Volume of waste shipped to 21                                    | processing or disposal facility in the previous year.<br>cu yd gal lb ton (check one)                       |     |
|        |  | 2. BENEFICIAL USE   |     |
| a.     | Has the waste been approve                                       | ed for beneficial use?  | No  |
|        |  | mit number or approval number.  |     |
| b.     | Volume of waste beneficially                                     |   |     |
|        | 0  | cuyd 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 applica  | le:   |  |  |  |
| I certify the information and has not char   | required in Section B-1, General Properties was supplied to the Department for the year ged.              |  |  |  |
| Form Submitted:  | Form 26R  |  |  |  |
|  | Other (specify)   |  |  |  |
| Date Submitted:  |   |  |  |  |
| I certify the information and has not char   | required in Section B-2, Chemical Analysis was supplied to the Department for the year ged.               |  |  |  |
| Form Submitted:  | Form 26R  |  |  |  |
|  | Other (specify)   |  |  |  |
| Date Submitted:  |   |  |  |  |
| I certify the information for the year and I   | equired in Section B-3, Process Description and Schematic, was supplied to the Department as not changed. |  |  |  |
| Form Submitted:  | Form 26R  |  |  |  |
|  | Other (specify)   |  |  |  |
| Date Submitted:  |   |  |  |  |
| Name of Responsible Official   | Title Environmental Specialist  |  |  |  |
| Dina Brown Signature   | Stown Date 2/25/11  |  |  |  |
|  |   |  |  |  |

10

LAB ID # 11216 **Benchmark Analytics, Inc.** LAB ID # 11827 **Eastern Division** 2566 Pennsylvania Ave. Work Order: 10030703 Sayre, PA 18840 Phone: (570) 888-0169 Fax: (570) 888-0717 SEND DATA TO: WO#: 10030703 NAME: Steve Gridley COMPANY: Talisman Energy USA, Inc. PAGE: 1 of 1 ADDRESS: 337 Daniel Zenker Dr Horseheads, NY 14845 PO#: PWS ID# TEST REPORT PHONE: (607) 731-0145 FAX: (607) 562-4001 NTSW TCLP Metals/TPH/pH/%Moisture RECEIVED FOR LAB BY: WCB DATE: 03/03/2010 9:38 Page 1 of 1 SAMPLE: Air Cuttings P-1 Lab ID: 10030703-001A Composite SAMPLED BY: SG Sample Time: 03/01/2010 11:45 SLOQ Test Result Method Analysis Start Analysis End Analyst \* рH 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 < 170 mg/Kg **Total Petroleum Hydrocarbons** 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 SLOQ Result Test Method 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 03/10/10 13:40 0.100 03/11/10 RMD-CV Lead - TCLP extracted < 0.500 mg/L EPA 6010B 0.500 03/11/10 03/10/10 13:40 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

ani m. Davis

DATE:

3/17/2010

| CHAIN OF CUSTODY<br>EPORT TO: Talisman | 7   | Eas                       | <b>rk Analytics, Inc.</b><br>stern Division  | PAGEOF  |
|--|---|---------------------------|--|---|
| Tatismay                               | 2566 Pennsylvania Avenue • Sayre, PA 18840<br>Phone: (570) 888-0169 |                           |  | ARE SPECIAL DETECTION LIMITS                          |
|  | 4   |                           | 570) 888-0717                                | NEEDED: YES / NO                                      |
|  | REFRIGERATE SAMPLES   |                           | RESULTS ARE BEING USE                        | D FOR: IF YES, PLEASE ATTACH                          |
|  | AFTER COLLECTION  | DW DRINKING               |  | (PNDEP) IS A QC PACKAGE NEEDED?                       |
| CONTACT STORE ( )                      | -   | GW GROUNDW<br>SW SURFACEV | WATER HZ HAZARDOUS                           | YES NO  |
| H# 607-731-0145                        | TRANSPORT<br>TO   | / WW WASTEWA              | ICD ATTICA                                   | IF YES, PLEASE ATTACH REQUIREME                       |
| AX#                                    | LABORATORY  |                           | DROXIDE PWS                                  | S ID#   |
| SILL TO: Talisman                      | WITH ICE  |                           |  |   |
|  |   | W/O#:                     | 40030703 CHLORIDE                            | ple Point   |
| °O#                                    | 7 / / &/  |                           |  |   |
| TION                                   | Sume Le Unitation   | Supplements               | An incomplete chain of custody may delay the | To the please out |
| AMPLER SIGNATURE / AFFILIATION         |   |                           | D processing of your sample(s).              |   |
| GOL UEG                                |   |                           | ANALYSIS TO BE PERFORMED                     | A Comp  |
| Container Sample Point No./Type        |   |                           | (PER CONTAINER)                              |   |
| 1 Air Cuttings P-1                     | 3/1 1145 So C   | & W                       | TPH PH                                       | OGI A   |
| 2                                      |   |                           | TCLP JA 8 RCRA Metals +                      | -   |
| 3                                      |   |                           | Cy, Ni, Zn.                                  |   |
| 4                                      |   |                           |  |   |
| 5                                      |   |                           | A - TPH, pH, CI                              |   |
| 6                                      |   |                           | 13 - Total Sample                            |   |
| 7                                      |   |                           | C TCLP Metals                                |   |
| 8                                      |   |                           |  |   |
| 9                                      |   |                           |  |   |
| 10                                     |   |                           |  |   |
| 11                                     |   |                           | Duc: 3/18/10                                 |   |
| LAB USE THE                            | C.  |                           |  |   |
| DELIVERED BY                           |   |                           |  | C ARRIVAL ON ICE O                                    |
| RELINQUISHED                           | 131/  | U TIME:938                | RECEIVED BY:                                 | DATE: TIME:   |
| RELINQUISHED BY:                       | DATE:   | TIME:                     | RECEIVED BY:                                 | DATE: , TIME:   |
| RELINQUISHED BY:                       | DATE:   | TIME:                     | RECEIVED BY: Debbie McCart                   |   |

NAME:

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave. Sayre, PA 18840

Phone: (570) 888-0169 Fax: (570) 888-0717 Work Order: 10064652

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

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

Steve Gridley

COMPANY: Talisman Energy USA, Inc.

Horseheads, NY 14845

ADDRESS: 337 Daniel Zenker Dr

TEST REPORT

| Truck Accident 030810            |                      |                             |             |                       | _                   |                  |
|----------------------------------|----------------------|-----------------------------|-------------|-----------------------|---------------------|------------------|
| RECEIVED FOR LAB BY: DLM2        | DAT                  | E: 06/29/2010 14:40         |             |                       | P                   | age 1 of 1       |
| SAMPLE: Inv. Cuttings Rig 56 Bin | S                    | Lab ID: 10064652-001A       | Compo       | osite                 | · · ·               |                  |
| SAMPLED BY: LS                   | San                  | nple Time: 06/28/2010 10:00 | SLOQ        |                       |                     |                  |
| <u>Test</u>                      | <u>Result</u>        | Method                      |             | 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       | Compo       | site                  |                     |                  |
| SAMPLED BY: LS                   | San                  | nple Time: 06/28/2010 10:00 |             |                       |                     |                  |
|                                  |                      |                             | <u>SLOQ</u> |                       |                     |                  |
| Test                             | <u>Result</u>        | Method                      |             | <u>Analysis Start</u> | <u>Analysis End</u> | <u>Analyst *</u> |
| Total Petroleum Hydrocarbons     | 10200 mg/Kg          | EPA 9071                    |             | 07/01/10 0:00         | 07/01/10            |                  |
| Sample Note: Analysis performed  | l by Microbac-Erie   |                             |             |                       |                     |                  |
| SAMPLE: TCLP Leachate of Inv. Cu | uttings Rig 56 Bin's | Lab ID: 10064652-001D       | Compo       | site                  |                     |                  |
| SAMPLED BY: LS                   |                      | nple Time: 06/28/2010 10:00 |             |                       |                     |                  |

|                                 |                                  |                     | SLOQ   |                |              |                  |
|---------------------------------|----------------------------------|---------------------|--------|----------------|--------------|------------------|
| Test                            | <u>Result</u>                    | Method              |        | Analysis Start | Analysis End | <u>Analyst *</u> |
| 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 | e 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

anie M. Davis

DATE:

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| LAB ID: 08-00380<br>LAB ID: 39-00401  | Easter<br>2566 Per  | a <b>Analytics, In</b><br><b>In Division</b><br>Insylvania Ave.<br>, PA 18840           | IC.                            | Work  | Order: 100   | 71871  |
|---|---|---|--------------------------------|---|--|--|
|   | •   | 70) 888-0169<br>70) 888-0717  |                                |   |  |  |
| SEND DATA TO:   |   |   |                                |   |  |  |
| NAME: Steve Gridley   |   |   | W                              | 'O#: 1007   | 1871   |  |
| COMPANY: Talisman Energy US   |   |   | D                              | AGE: 1 of   | 1  |  |
| ADDRESS: 337 Daniel Zenker  |   |   | F/                             | AGE. TO   | I  |  |
| Horseheads, NY 14   | -845  |   | P                              | O#: AF76  | 6317   |  |
| PHONE: (607) 562-4000   | TEST  | REPORT  | P                              | WS ID#  |  |  |
| FAX: (607) 562-4000   |   |   |                                |   |  |  |
| 77 Well   |   |   | _                              |   |  |  |
| RECEIVED FOR LAB BY: WCB  | DATE  | 07/13/2010 13:15  |                                |   | D  | age 1 of 1   |
|   |   | 07/13/2010 13:13  |                                |   |  |  |
| SAMPLE: Inv. Cuttings   |   | ab ID: 10071871-001A  | Grab                           |   |  |  |
| SAMPLED BY: SG  | Sample  | Time: 07/12/2010 12:05  | Reg                            |   |  |  |
| Test  | <u>Result</u>   | Method  | Limit                          | Analysis Start  | Analysis End   | <u>Analyst *</u>   |
| Total Petroleum Hydrocarbons  | 73700 mg/Kg   | EPA 9071  |                                | 07/15/10 0:00   | 07/15/10   |  |
| Sample Note: Analysis performed   | d by Microbac-Erie  |   |                                |   | · · · · · · · · · · · · · · · · · · ·  |  |
| SAMPLE: Inv. Cuttings   | L   | ab ID: 10071871-001B  | Grab                           |   |  |  |
| SAMPLED BY: SG  | Sample  | Time: 07/12/2010 12:05  | Bog                            |   |  |  |
| Test  | Result  | Method  | <u>Reg</u><br>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  |
| рH  | 9.27@22.4°C   | EPA 9045C   |                                | 07/14/10 12:23  | 07/14/10   | DLM-SA   |
| SAMPLE: TCLP Leachate of Inv. C   | uttings   | ab ID: 10071871-001D  | Grab                           |   |  |  |
| SAMPLED BY: SG  | -   | Time: 07/12/2010 12:05  | _                              |   |  |  |
|   |   | Mathad  | <u>Reg</u>                     | Analysis Start  | Analysis End   | Analyst *  |
| Test  | Result  |   | 1.11/111                       |   |  |  |
| <u>Test</u><br>Mercury - TCLP extracted   | <u>Result</u><br>< 0.0008 ma/L  | <u>Method</u><br>EPA 7470A  | <u>Limit</u><br>0.2            |   | 07/18/10   | RMD-CV   |
| Test<br>Mercury - TCLP extracted<br>Arsenic - TCLP extracted  | <u>Result</u><br>< 0.0008 mg/L<br>< 0.500 mg/L  | EPA 7470A<br>EPA 6010B  | 0.2<br>5                       | 07/16/10 9:00<br>07/16/10 15:00   | 07/18/10<br>07/17/10   | RMD-CV<br>RMD-CV   |
| Mercury - TCLP extracted  | < 0.0008 mg/L   | EPA 7470A   | 0.2                            | 07/16/10 9:00   |  | RMD-CV   |
| Mercury - TCLP extracted<br>Arsenic - TCLP extracted  | < 0.0008 mg/L<br>< 0.500 mg/L   | EPA 7470A<br>EPA 6010B  | 0.2<br>5                       | 07/16/10 9:00<br>07/16/10 15:00   | 07/17/10   |  |
| Mercury - TCLP extracted<br>Arsenic - TCLP extracted<br>Barium - TCLP extracted   | < 0.0008 mg/L<br>< 0.500 mg/L<br>< 10.00 mg/L   | EPA 7470A<br>EPA 6010B<br>EPA 6010B   | 0.2<br>5<br>100                | 07/16/10 9:00<br>07/16/10 15:00<br>07/16/10 15:00   | 07/17/10<br>07/17/10   | RMD-CV<br>RMD-CV   |
| Mercury - TCLP extracted<br>Arsenic - TCLP extracted<br>Barium - TCLP extracted<br>Cadmium - TCLP extracted   | < 0.0008 mg/L<br>< 0.500 mg/L<br>< 10.00 mg/L<br>< 0.100 mg/L   | EPA 7470A<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B  | 0.2<br>5<br>100<br>1           | 07/16/10 9:00<br>07/16/10 15:00<br>07/16/10 15:00<br>07/16/10 15:00   | 07/17/10<br>07/17/10<br>07/17/10   | RMD-CV<br>RMD-CV<br>RMD-CV                               |
| Mercury - TCLP extracted<br>Arsenic - TCLP extracted<br>Barium - TCLP extracted<br>Cadmium - TCLP extracted<br>Chromium - TCLP extracted  | < 0.0008 mg/L<br>< 0.500 mg/L<br>< 10.00 mg/L<br>< 0.100 mg/L<br>< 0.500 mg/L   | EPA 7470A<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B                           | 0.2<br>5<br>100<br>1           | 07/16/10 9:00<br>07/16/10 15:00<br>07/16/10 15:00<br>07/16/10 15:00<br>07/16/10 15:00                                     | 07/17/10<br>07/17/10<br>07/17/10<br>07/17/10                                     | RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV                     |
| Mercury - TCLP extracted<br>Arsenic - TCLP extracted<br>Barium - TCLP extracted<br>Cadmium - TCLP extracted<br>Chromium - TCLP extracted<br>Copper - TCLP extracted   | < 0.0008 mg/L<br>< 0.500 mg/L<br>< 10.00 mg/L<br>< 0.100 mg/L<br>< 0.500 mg/L<br>< 0.100 mg/L   | EPA 7470A<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B              | 0.2<br>5<br>100<br>1<br>5      | 07/16/10 9:00<br>07/16/10 15:00<br>07/16/10 15:00<br>07/16/10 15:00<br>07/16/10 15:00<br>07/16/10 15:00                   | 07/17/10<br>07/17/10<br>07/17/10<br>07/17/10<br>07/17/10                         | RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV           |
| Mercury - TCLP extracted<br>Arsenic - TCLP extracted<br>Barium - TCLP extracted<br>Cadmium - TCLP extracted<br>Chromium - TCLP extracted<br>Copper - TCLP extracted<br>Lead - TCLP extracted                            | < 0.0008 mg/L<br>< 0.500 mg/L<br>< 10.00 mg/L<br>< 0.100 mg/L<br>< 0.500 mg/L<br>< 0.100 mg/L<br>< 0.500 mg/L                                 | EPA 7470A<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B | 0.2<br>5<br>100<br>1<br>5      | 07/16/10 9:00<br>07/16/10 15:00<br>07/16/10 15:00<br>07/16/10 15:00<br>07/16/10 15:00<br>07/16/10 15:00<br>07/16/10 15:00 | 07/17/10<br>07/17/10<br>07/17/10<br>07/17/10<br>07/17/10<br>07/17/10             | RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV |
| Mercury - TCLP extracted<br>Arsenic - TCLP extracted<br>Barium - TCLP extracted<br>Cadmium - TCLP extracted<br>Chromium - TCLP extracted<br>Copper - TCLP extracted<br>Lead - TCLP extracted<br>Nickel - TCLP extracted | < 0.0008 mg/L<br>< 0.500 mg/L<br>< 10.00 mg/L<br>< 0.100 mg/L<br>< 0.500 mg/L<br>< 0.100 mg/L<br>< 0.500 mg/L<br>< 0.100 mg/L<br>< 0.100 mg/L | EPA 7470A<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B | 0.2<br>5<br>100<br>1<br>5<br>5 | 07/16/10 9:00<br>07/16/10 15:00<br>07/16/10 15:00<br>07/16/10 15:00<br>07/16/10 15:00<br>07/16/10 15:00<br>07/16/10 15:00 | 07/17/10<br>07/17/10<br>07/17/10<br>07/17/10<br>07/17/10<br>07/17/10<br>07/17/10 | RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV |

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 n

MANAGER

| Cani | M. Davis | 4. T | DATE: | 7/20/2010 |
|------|----------|------|-------|-----------|
| C C  |          |      |       |           |

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave. Sayre, PA 18840

Work Order: 10073110

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

| SEND DATA                          | TO:  |                                   |           |  |                       |  |              |                           |
|------------------------------------|--|-----------------------------------|-----------|--|-----------------------|--|--------------|---------------------------|
| NAME:                              | Steve Gridley                                  |                                   |           |  | W                     | O#: 100                                | 073110       |                           |
| COMPANY:<br>ADDRESS:               | Talisman Energy USA, I<br>337 Daniel Zenker Dr | Inc.                              |           |  | PA                    | AGE: 1 o                               | f 2          |                           |
| ADDINE00.                          | Horseheads, NY 14845                           | 5                                 |           |  | P                     | D#: AF                                 | 76323        |                           |
|                                    |  |                                   |           |  |                       |  |              |                           |
| PHONE:<br>FAX:                     | (607) 562-4000<br>(607) 562-4001               | TE                                | EST RE    | EPORT  | P\                    | NS ID#                                 |              |                           |
| 7<br>RECEIVED F                    | OR LAB BY: WCB                                 | DAT                               | Έ· 07/2   | 20/2010 13:25                                    |                       |  | P            | age 1 of 2                |
| -                                  |  |                                   |           |  |                       | •-                                     |              |                           |
| SAMPLE: Inv                        | <b>/. Clean Soil</b><br>D BY: SG               | 80                                |           | ): 10073110-001A<br>e: 07/13/2010 18:40          | Compo                 | site                                   |              |                           |
|                                    | D B1. 3G                                       |                                   | пре ппе   |  | <u>SLOQ</u>           |  |              |                           |
| <u>Test</u><br>Sodium              |  | <u>Result</u><br>< 123 mg/Kg-dry  |           | <u>Method</u><br>EPA 6010B                       | 123                   | Analysis Start<br>07/22/10 7:00        |              | Analyst *<br>GSR-CV       |
| Chloride                           |  | < 123 mg/Kg-dry<br>66.2 mg/Kg-dry |           | EPA 300.0  | 51.8                  | 07/21/10 12:3                          |              | HDP-CV                    |
|                                    | lculated as LAS, mol                           | 15 mg/Kg                          | ΖN        | SM5540C  | 13                    | 07/20/10 8:25                          |              | BJW-CV                    |
| Percent M                          |  | 3.4 %                             |           | SM2540G  |                       | 07/21/10 16:0                          | 0 07/22/10   | BJW-CV                    |
| SAMPLE: Inv                        | /. Clean Soil                                  |                                   | Lab ID    | ): 10073110-001B                                 | Compo                 | site                                   |              | ·                         |
| SAMPLE                             | D BY: SG                                       | Sa                                | mple Time | : 07/13/2010 18:40                               | SLOQ                  |  |              |                           |
| Test                               |  | Result                            |           | Method   | <u> 3200</u>          | Analysis Start                         | Analysis End | <u>Analyst *</u>          |
| Moisture                           |  | 3.26 %                            |           | Moisture Calc.                                   | 0.01                  | 07/21/10 9:40                          | 07/22/10     | NFM-SA                    |
| Free Liqui                         | d  | < 0.1 %                           |           | EPA 9095A  | 0.1                   | 07/22/10 10:0                          | 5 07/22/10   | IC-SA                     |
| pН                                 |  | 8.57@21.6°C                       |           | EPA 9045C  |                       | 07/21/10 12:1                          | 5 07/21/10   | NFM-SA                    |
| Phosphoru                          | us   | 246 mg/kg-dry                     |           | EPA 365.3  | 5                     | 07/22/10 11:00                         | 0 07/23/10   | MED-SA                    |
| SAMPLE: Inv                        | /. Clean Soil                                  |                                   | Lab ID    | ): 10073110-001C                                 | Compo                 | site                                   |              |                           |
| SAMPLE                             | D BY: SG                                       | Sa                                | mple Time | : 07/13/2010 18:40                               | SLOQ                  |  |              |                           |
| Test                               |  | Result                            |           | Method   | <u>3L0Q</u>           | Analysis Start                         | Analysis End | <u>Analyst *</u>          |
| Total Petro                        | oleum Hydrocarbons                             | 299 mg/Kg                         |           | EPA 9071   |                       | 07/22/10 11:10                         | 0 07/22/10   |                           |
| Sample                             | Note: Analysis performed by I                  | Microbac-Erie                     |           |  |                       |  |              |                           |
|                                    |  | Soil                              | Lab ID    | : 10073110-001E                                  | Compo                 | site                                   |              |                           |
| SAMPLE: IC                         | LP Leachate of Inv. Clean                      | 0011                              |           |  |                       |  |              |                           |
|                                    | LP Leachate of Inv. Clean<br>D BY: SG          |                                   | mple Time | : 07/13/2010 18:40                               | 01.00                 |  |              |                           |
| SAMPLE                             |  | Sa                                | mple Time |  | <u>SLOQ</u>           | Analysis Start                         | Analysis End | Analvst *                 |
| SAMPLE<br><u>Test</u>              |  |                                   | mple Time | : 07/13/2010 18:40<br><u>Method</u><br>EPA 7470A | <u>SLOQ</u><br>0.0008 | <u>Analysis Start</u><br>07/22/10 9:00 |              | <u>Analyst *</u><br>KW-CV |
| SAMPLE<br><u>Test</u><br>Mercury - | D BY: SG                                       | Sai<br><u>Result</u>              | mple Time | Method   |                       |  | 07/23/10     |                           |

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\* 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

| In. ha had |    |
|------------|----|
| any M. Oak | ha |

DATE: \_\_\_\_7/27/2010

OFNID DATA TO

Lead - TCLP extracted

Nickel - TCLP extracted

Silver - TCLP extracted

Zinc - TCLP extracted

Selenium - TCLP extracted

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

2566 Pennsylvania Ave. Sayre, PA 18840

Phone: (570) 888-0169 Fax: (570) 888-0717 Work Order: 10073110

07/22/10

07/22/10

07/22/10

07/22/10

07/22/10

GSR-CV

GSR-CV

GSR-CV

GSR-CV

GSR-CV

| SEND DATA            | . 10:   |              |                  |       |            |         |          |            |
|----------------------|---|--------------|------------------|-------|------------|---------|----------|------------|
| NAME:                | Steve Gridley                                   |              |                  | W     | O#:        | 1007311 | 0        |            |
| COMPANY:<br>ADDRESS: | Talisman Energy USA, In<br>337 Daniel Zenker Dr | C.           |                  | PA    | AGE:       | 2 of 2  |          |            |
|                      | Horseheads, NY 14845                            |              |                  | P     | D#:        | AF76323 | ;        |            |
| PHONE:<br>FAX:       | (607) 562-4000<br>(607) 562-4001                | TEST         | REPORT           | P\    | WS ID#     |         |          |            |
| 77                   |   |              |                  |       |            |         |          |            |
| RECEIVED F           | FOR LAB BY: WCB                                 | DATE: (      | 07/20/2010 13:25 |       |            |         | Р        | age 2 of 2 |
| Cadmium              | - TCLP extracted                                | < 0.100 mg/L | EPA 6010B        | 0.100 | 07/22/10 1 | 12:30 0 | )7/22/10 | GSR-CV     |
| Chromiun             | n - TCLP extracted                              | < 0.500 mg/L | EPA 6010B        | 0.500 | 07/22/10 1 | 12:30 0 | )7/22/10 | GSR-CV     |
| Copper -             | TCLP extracted                                  | < 0.100 mg/L | EPA 6010B        | 0.100 | 07/22/10 1 | 12:30 0 | )7/22/10 | GSR-CV     |

EPA 6010B

EPA 6010B

EPA 6010B

EPA 6010B

EPA 6010B

0.500 07/22/10 12:30

0.100 07/22/10 12:30

0.200 07/22/10 12:30

07/22/10 12:30

07/22/10 12:30

0.100

0.500

< 0.500 mg/L

< 0.100 mg/L

< 0.500 mg/L

< 0.100 mg/L

< 0.200 mg/L

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Parameter is not NELAC certified Ν

Due to matrix bias, spike recovery was outside acceptance limits Ζ

MANAGER

Carrie M. Davis

DATE:

7/27/2010

Steve Gridley COMPANY: Talisman Energy USA, Inc.

(607) 562-4000

(607) 562-4001

Horseheads, NY 14845

ADDRESS: 337 Daniel Zenker Dr

NAME:

PHONE:

FAX:

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

2566 Pennsylvania Ave. Sayre, PA 18840

Phone: (570) 888-0169 Fax: (570) 888-0717 Work Order: 10080733

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

**TEST REPORT** 

| 77                                 |                         |                                 |             |   |  |                 |
|------------------------------------|-------------------------|---------------------------------|-------------|---|--|-----------------|
| RECEIVED FOR LAB BY: DLM2          | DAT                     | E: 08/05/2010 9:50              |             |   | Pa                                       | ige 1 of 1      |
| SAMPLE: Inv. Cuttings & Gypsum     |                         | Lab ID: 10080733-001A           | Grab        |   | 11 11 11 11 10 10 10 10 10 10 10 10 10 1 |                 |
| SAMPLED BY: SG                     | Sai                     | mple Time: 08/04/2010 11:00     | SLOQ        |   |  |                 |
| Test                               | Result                  | Method                          |             | 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        |   | <u></u>                                  |                 |
| SAMPLED BY: SG                     | Sar                     | mple Time: 08/04/2010 11:00     |             |   |  |                 |
| <b>T</b>                           | Decell                  | Mastha al                       | <u>SLOQ</u> | Analysis Ofert                          | Analysis End                             | A               |
| <u>Test</u><br>Moisture            | <u>Result</u><br>14.1 % | <u>Method</u><br>Moisture Calc. | 0.01        | <u>Analysis Start</u><br>08/09/10 14:45 | Analysis End<br>08/10/10                 | Analyst *       |
|                                    | 14.1 %<br>< 0.1 %       | EPA 9095A                       | 0.01        | 08/05/10 14:15                          | 08/05/10                                 | NFM-SA<br>IC-SA |
| Free Liquid                        |                         | EPA 9095A<br>EPA 9045C          | 0.1         | 08/06/10 14:13                          | 08/06/10                                 | SG-SA           |
| рН                                 | 9.13@22.3°C             | EPA 90450                       |             | 08/08/10 14.21                          |  | SG-SA           |
| SAMPLE: TCLP Leachate of Inv. Cutt | ings & Gypsum           | Lab ID: 10080733-001D           | Grab        |   |  |                 |
| SAMPLED BY: SG                     | Sar                     | mple Time: 08/06/2010 7:45      | SLOQ        |   |  |                 |
| Test                               | Result                  | Method                          | OLOQ        | 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          |

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MANAGER

Carrie M. Davis

DATE:

8/10/2010

NAME:

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave. Sayre, PA 18840

Phone: (570) 888-0169 Fax: (570) 888-0717 Work Order: 10080746

WO#: 10080746PAGE: 1 of 1PO#: AF76709PWS ID#

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

Steve Gridley

COMPANY: Talisman Energy USA, Inc.

Horseheads, NY 14845

ADDRESS: 337 Daniel Zenker Dr

TEST REPORT

| 7                                    |                         |                            |             |   | ··                       |                  |
|--------------------------------------|-------------------------|----------------------------|-------------|---|--------------------------|------------------|
| RECEIVED FOR LAB BY: DLM2            | DATE                    | : 08/05/2010 9:50          |             |   | Pa                       | age 1 of 1       |
| SAMPLE: Inv. Cuttings & Cool Ash 1   |                         | Lab ID: 10080746-001A      | Grab        |   |                          |                  |
| SAMPLED BY: SG                       | Sam                     | ple Time: 08/04/2010 11:00 | SLOQ        |   |                          |                  |
| <u>Test</u>                          | Result                  | Method                     | <u></u>     | Analysis Start                          | Analysis End             | <u>Analyst *</u> |
| 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                       | Sam                     | ple Time: 08/04/2010 11:00 |             |   |                          |                  |
| Test                                 | Popult                  | Method                     | <u>SLOQ</u> | Apolygia Start                          | Analysia End             | A polyof *       |
| Moisture                             | <u>Result</u><br>15.7 % | Metriou<br>Moisture Calc.  | 0.01        | <u>Analysis Start</u><br>08/09/10 14:45 | Analysis End<br>08/10/10 | <u>Analyst *</u> |
| Free Liguid                          | < 0.1 %                 | EPA 9095A                  | 0.01        | 08/05/10 14:45                          | 08/05/10                 | NFM-SA           |
| •                                    |                         | EPA 9095A<br>EPA 9045C     | 0.1         |   |                          | IC-SA            |
| рН                                   | 9.64@22.3°C             | EPA 90450                  |             | 08/06/10 14:21                          | 08/06/10                 | SG-SA            |
| SAMPLE: TCLP Leachate of Inv. Cuttin | igs & Cool Ash 1        | Lab ID: 10080746-001D      | Grab        |   |                          |                  |
| SAMPLED BY: SG                       | Sam                     | ple Time: 08/06/2010 7:45  |             |   |                          |                  |
| Test                                 | Result                  | Method                     | <u>SLOQ</u> | 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                 |                  |
| Chromium - TCLP extracted            | < 0.500 mg/L            | EPA 6010B                  | 0.500       | 08/09/10 10:30                          | 08/09/10                 | RMD-CV           |
|                                      | •                       |                            | 0.100       |   |                          | RMD-CV           |
| Copper - TCLP extracted              | < 0.100 mg/L            | EPA 6010B                  |             | 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           |

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MANAGER

Carrie M. Davis

DATE: 8/10/2010

NAME:

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave. Sayre, PA 18840

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

WO#: 10080752PAGE: 1 of 1PO#: AF76709PWS ID#

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

Steve Gridley

COMPANY: Talisman Energy USA, Inc.

Horseheads, NY 14845

ADDRESS: 337 Daniel Zenker Dr

TEST REPORT

| 77   |                  |   |              |                       |              |                  |
|--|------------------|---|--------------|-----------------------|--------------|------------------|
| RECEIVED FOR LAB BY: DM3                             | DATE             | : 08/05/2010 9:50                                   |              |                       | Pa           | age 1 of 1       |
| SAMPLE: Inv. Cuttings & Cool Ash 2<br>SAMPLED BY: SG | Sam              | Lab ID: 10080752-001A<br>ple Time: 08/04/2010 11:00 | Grab<br>SLOQ |                       |              |                  |
| Test   | <u>Result</u>    | Method  |              | <u>Analysis Start</u> | 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                                       | Sam              | ple Time: 08/04/2010 11:00                          | SLOQ         |                       |              |                  |
| Test   | Result           | Method  | <u>3LUQ</u>  | 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            |
| рН   | 9.33@22.4°C      | EPA 9045C   |              | 08/06/10 14:21        | 08/06/10     | SG-SA            |
| SAMPLE: TCLP Leachate of Inv. Cuttin                 | igs & Cool Ash 2 | Lab ID: 10080752-001D                               | Grab         |                       |              |                  |
| SAMPLED BY: SG                                       | -                | ple Time: 08/06/2010 7:45                           | SLOQ         |                       |              |                  |
| Test   | <u>Result</u>    | Method  | OLOQ         | Analysis Start        | Analysis End | <u>Analyst *</u> |
| Mercury - TCLP extracted                             | < 0.0008 mg/L    | EPA 7470A   | 0.0008       | 08/09/10 9:00         | 08/10/10     | KW-CV            |
| Arsenic - TCLP extracted                             | < 0.500 mg/L     | EPA 6010B   | 0.500        | 08/09/10 10:30        | 08/09/10     | RMD-CV           |
| Barium - TCLP extracted                              | < 10.00 mg/L     | EPA 6010B   | 10.00        | 08/09/10 10:30        | 08/09/10     | RMD-CV           |
| Cadmium - TCLP extracted                             | < 0.100 mg/L     | EPA 6010B   | 0.100        | 08/09/10 10:30        | 08/09/10     | RMD-CV           |
| Chromium - TCLP extracted                            | < 0.500 mg/L     | EPA 6010B   | 0.500        | 08/09/10 10:30        | 08/09/10     | RMD-CV           |
| Copper - TCLP extracted                              | < 0.100 mg/L     | EPA 6010B   | 0.100        | 08/09/10 10:30        | 08/09/10     | RMD-CV           |
| Lead - TCLP extracted                                | < 0.500 mg/L     | EPA 6010B   | 0.500        | 08/09/10 10:30        | 08/09/10     | RMD-CV           |
| Nickel - TCLP extracted                              | < 0.100 mg/L     | EPA 6010B   | 0.100        | 08/09/10 10:30        | 08/09/10     | RMD-CV           |
| Selenium - TCLP extracted                            | < 0.500 mg/L     | EPA 6010B   | 0.500        | 08/09/10 10:30        | 08/09/10     | RMD-CV           |
| Silver - TCLP extracted                              | < 0.100 mg/L     | EPA 6010B   | 0.100        | 08/09/10 10:30        | 08/09/10     | RMD-CV           |
| Zinc - TCLP extracted                                | < 0.200 mg/L     | EPA 6010B   | 0.200        | 08/09/10 10:30        | 08/09/10     | RMD-CV           |

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MANAGER

anie M. Davis

DATE: 8

8/10/2010



#### COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WASTE MANAGEMENT

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

| This form must be fully and accur<br>typed or legibly printed in the space<br>each attached sheet as Form 26<br>prepared. The date on attached sh | tify Date Receiv   | USE ONLY<br>ed & General Notes  |   |                    |
|---|--|---|---|--------------------|
| General Reference 287.54  |  |   |   |                    |
| Date Prepared/Revised   | February 11, 2011  |   |   |                    |
|   | A. CLIENT (GENERATOR   | R OF THE WASTE) IN  | <b>IFORMATION</b>                         |                    |
| Company Name  |  |   |   |                    |
| Talisman Energy USA Inc.<br>If a Subsidiary, Name of Parent Co  | mpany  |   | FPA                                       | Generator ID#      |
| Talisman Energy Inc.  | mpany  |   | N/A                                       | Cenerator ibir     |
| Company Mailing Address Line 1  | C  | ompany Mailing Addres   | ss Line 2                                 |                    |
| 50 Pennwood Place   | 04-4-  | 71  | Dharra                                    | <b>P</b> 4         |
| Company Address Last Line – City<br>Warrendale  | State  | <b>Zip+4</b><br>15086   | Phone<br>(724) 814-53                     | Ext                |
| Company Contact Last Name   | First Name   | MI  | (124)014-000<br>Suffi                     |                    |
| Brown   | Dina   |   |   |                    |
| Municipality  |  | County  |   |                    |
| Warrendale<br>Contact Phone Ext   | Contact Email Address  | Allegheny   |   |                    |
| (724) 814-5321  | dybrown@talismanusa.c  | com   |   |                    |
| Is the waste generated at the Comp  |  |   |   | Yes 🛛 No           |
| If 'No', describe location of waste g   | generation and storage. Drill o                                | cuttings are generated du   | iring natural gas drill                   | ling operations at |
| the (03-006) well pad site lo<br>containers on site.  | ocated at 431 Bradford Street, T                               | roy Borough, Bradford C   | ounty, PA. Waste is                       | s stored in        |
| Municipality Troy   | County Bradfo  | ord   | State                                     | PA                 |
|   | SECTION B. WAST  | E DESCRIPTION   |   |                    |
|   | idual Waste  |   | Unit of                                   | Time               |
|   | e Description  | Amount  | Measure                                   | Frame              |
| 810 Drill cuttings (oil an  | d gas)   | 570   | ☐ lb ⊠ ton                                | One Time           |
|   | 1. GENERAL P   | na hara ta'an ang kang sa ang kang sa   | + 11 - 12 - 14 - 14 - 14 - 14 - 14 - 14 - |                    |
| • •   |  | (based on analyses or ki  | nowledge)                                 | ·····              |
| b. Physical State   | Liquid Waste (EPA Me   |   |   |                    |
|   | Gas (ambient temperat  |   |   |                    |
| c. Physical Appearance  | Color Greyish Black  | ///   | r Earthy / Sligh                          | t Petroleum        |
|   | Number of Solid or Liquic                                      | Phases of Separation  | One                                       |                    |
|   | Describe each phase of s                                       | eparation. <u>Soil and Ro</u>   | ck Fragments                              |                    |
|   |  |   |   |                    |
|   | 2. CHEMICAL ANALYS   | SIS ATTACHMENTS   |   |                    |
| a. The results of a detailed ch   | 2. CHEMICAL ANALYS<br>emical characterization of the           | a server and the server of the server and the server of the | the 🕅                                     | Yes No             |
| instructions, is attached.  | emical characterization of the                                 | waste, as described in  |   |                    |
| instructions, is attached.<br>b. A detailed description of the  | emical characterization of the<br>e waste sampling method is a | waste, as described in<br>httached.   |   | Yes No             |
| instructions, is attached.b.A detailed description of thec.The quality assurance/quality  | emical characterization of the                                 | waste, as described in<br>httached.   |   |                    |
| instructions, is attached.<br>b. A detailed description of the<br>c. The quality assurance/quali<br>attached.                                     | emical characterization of the<br>e waste sampling method is a | waste, as described in<br>httached.<br>yed by the laboratory(ie   |   | Yes No             |

|       | 3.   | PROCESS DESCRIPT                 | TION & SCHEMATIC ATTA      | CHMENTS            |              | 1     |  |  |  |
|-------|--|----------------------------------|----------------------------|--------------------|--------------|-------|--|--|--|
| a.    | A detailed description of the the waste, as specified in the   |                                  |                            | esses producing    | 🛛 Yes        | No No |  |  |  |
| b.    | A schematic of the manufact<br>as specified in the instruction   |                                  | n control processes pro    | oducing the waste, | X Yes        | 🗌 No  |  |  |  |
| C.    | If portions of the information submitted are confidential, the substantiation for Yes No X N/A a confidentiality claim, as described in the instructions, is attached. |                                  |                            |                    |              |       |  |  |  |
|       | SECTI  |                                  | EMENT OF RESID             |                    |              |       |  |  |  |
|       |  |                                  | OR DISPOSAL FACILITY       |                    |              |       |  |  |  |
| The a | rea below (ad.) will accommo   |                                  |                            |                    | if necessary | ·     |  |  |  |
| a.    | Solid waste permit number(s<br>8-4630-00010  | ) for processing or d            | isposal facility being ut  | ilized.            |              |       |  |  |  |
| b.    | Facility Name  | Hakes C&D Land                   | fill                       |                    |              |       |  |  |  |
|       | Address Line 1   | 4376 Manning Rid                 | dge 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<br>(585) 466-7271 | Email Address              | joe.boyles@cas     | ella.com     |       |  |  |  |
| d.    | Volume of waste shipped to p   |                                  | al facility in the previou | is year.           |              |       |  |  |  |
|       | 204  | cuyd 🗌 gal                       | 🗍 lb 🛛 to                  |                    | )            |       |  |  |  |
| а.    | Solid waste permit number(s)<br>9-0232-00003   | for processing or d              | isposal facility being ut  | ilized.            |              |       |  |  |  |
| b.    | Facility Name  | Hyland Landfill                  |                            |                    |              |       |  |  |  |
|       | Address Line 1   | 6653 Herdman Ro                  | oad                        |                    |              |       |  |  |  |
|       | 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@ca  | sella.com    |       |  |  |  |
| d.    | Volume of waste shipped to p   | rocessing or dispos              | al facility in the previou | -                  | )            |       |  |  |  |
|       |  | 2. B                             | ENEFICIAL USE              |                    |              |       |  |  |  |
| a.    | Has the waste been approved  | for beneficial use?              |                            |                    | Yes          | No No |  |  |  |
|       | If "Yes", list the general perm  | it number or approv              | al number.                 |                    |              |       |  |  |  |
| b.    | Volume of waste beneficially   |                                  |                            |                    |              |       |  |  |  |
|       | 0  | cu yd 🗌 gal                      | 🗌 lb 🗌 to                  | n (check one)      | )            |       |  |  |  |

|        | 2  | <b>PROCESS DESCRIPTION</b>            | & SCHEMATIC ATTAC         | HMENTS.           |              | 200 C |  |  |
|--------|--|---------------------------------------|---------------------------|-------------------|--------------|-------|--|--|
| a.     | A detailed description of the  |                                       |                           |                   | X Yes        |       |  |  |
| а.     | the waste, as specified in the   |                                       |                           | sses producing    |              |       |  |  |
| b.     | A schematic of the manufacturing and/or pollution control processes producing the waste, X Yes No as specified in the instructions, is attached. |                                       |                           |                   |              |       |  |  |
| C.     | If portions of the information a confidentiality claim, as des   |                                       |                           | n for 🔲 Yes       | No No        | N/A   |  |  |
|        | SECTIÓ   | ON C. MANAGEM                         | <b>ENT OF RESIDU</b>      | AL WASTE          |              |       |  |  |
|        |  | 1. PROCESSING OR                      | DISPOSAL FACILITY (IE     | (S)               |              |       |  |  |
| The ar | ea below (ad.) will accommod   | ate the identification o              | f two facilities. Attach  | additional sheets | if necessary | •     |  |  |
| a.     | Solid waste permit number(s)<br>8-0728-00004   | for processing or disp                | osal facility being util  | ized.             |              |       |  |  |
| b.     | Facility Name  | Chemung County La                     | ndfill                    |                   |              |       |  |  |
|        | 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 Mana                    | aer                       |                   |              |       |  |  |
| :      | Phone  | (585) 797-5941                        | Email Address             | carla.canjar@ca   | sella.com    |       |  |  |
| d.     | Volume of waste shipped to p   | rocessing or disposal                 | facility in the previous  | year.             |              |       |  |  |
|        | 127 🗌  | cu yd 🗌 gal                           | 🗌 İb 🛛 🖾 ton              |                   |              |       |  |  |
| а.     | Solid waste permit number(s)<br>100361   | for processing or disp                | osal facility being utili | zed.              |              |       |  |  |
| b.     | Facility Name  | McKean County Lan                     | dfill                     |                   |              |       |  |  |
|        | Address Line 1   | 19 Ness Lane                          |                           |                   |              |       |  |  |
|        | Address Line 1   |                                       |                           |                   |              |       |  |  |
|        | Address City State ZIP   | Kane                                  | PA                        | 16735             |              |       |  |  |
|        | Municipality   | Sergeant Twp                          | County                    | McKean            |              |       |  |  |
| с.     | Facility Contact Name  | Mike Manderfeld                       |                           |                   |              |       |  |  |
| 0.     | Title  | Milke Manachela                       |                           |                   |              |       |  |  |
|        | Phone  | (814) 778-9931                        | Email Address             | manderfeld@gm     | ail.com      |       |  |  |
|        |  |                                       |                           |                   |              |       |  |  |
| d.     | Volume of waste shipped to p   | cu yd gal                             | b K ton                   |                   |              |       |  |  |
|        |  | 2: BEN                                | EFICIAL USE               |                   |              |       |  |  |
| a.     | Has the waste been approved  | for beneficial use?                   |                           |                   | Yes          | 🛛 No  |  |  |
|        | If "Yes", list the general perm  | it numbe <mark>r or approval</mark> r | umber.                    |                   |              |       |  |  |
| b.     | Volume of waste beneficially   |                                       |                           |                   |              |       |  |  |
|        | 0 📋  | cuyd 🗌 gal                            | 🗌 lb 🗌 ton                | (check one)       |              |       |  |  |

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|  |   | 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  | • | ired in Section B-2, Chemical Analysis was supplied to the Department for the year              |  |  |  |  |  |  |
| Form Submitted:  |   | Form 26R  |  |  |  |  |  |  |
|  |   | Other (specify)   |  |  |  |  |  |  |
| Date Submitted:  |   |   |  |  |  |  |  |  |
| I certify the information for the year and I   |   | ed in Section B-3, Process Description and Schematic, was supplied to the Department t changed. |  |  |  |  |  |  |
| Form Submitted:  |   | Form 26R  |  |  |  |  |  |  |
|  |   | Other (specify)   |  |  |  |  |  |  |
| Date Submitted:  |   |   |  |  |  |  |  |  |
| Name of Responsible Official   |   | Title Environmental Specialist  |  |  |  |  |  |  |
| Dina Brown   |   |   |  |  |  |  |  |  |
| Signature  | 5 | Date 2/25/11  |  |  |  |  |  |  |

NAME:

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave. Sayre, PA 18840

Phone: (570) 888-0169 Fax: (570) 888-0717 Work Order: 10123993

 WO#:
 10123993

 PAGE:
 1 of 3

 PO#:
 AF 78732

 PWS ID#

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

Dina Brown

ADDRESS: 337 Daniel Zenker Dr

COMPANY: Talisman Energy USA, Inc.

Horseheads, NY 14845

TEST REPORT

| A4H Well Pad<br>RECEIVED FOR LAB BY: CMS | DATE:                         | 12/28/2010 13:50       |             |                | Pa           | ige 1 of 3       |
|--|-------------------------------|------------------------|-------------|----------------|--------------|------------------|
| SAMPLE: Air Cuttings                     |                               | ab ID: 10123993-001A   | Grab        |                |              |                  |
| SAMPLED BY: DJD                          | Sample                        | Time: 12/28/2010 10:50 |             |                |              |                  |
| Test                                     | Result                        | Method                 | <u>SLOQ</u> | Analysis Start | Analysis End | Analyst *        |
| Total Petroleum Hydrocarbons             | 560 mg/Kg                     | EPA 9071               | 170         | 12/29/10 15:10 | 12/29/10     | <u>r indiyot</u> |
| Sample Note: Analysis performe           | 8 8                           | c-Erie Division.       |             |                |              |                  |
| SAMPLE: Air Cuttings                     | Ļ                             | ab ID: 10123993-001B   | Grab        |                |              |                  |
| SAMPLED BY: DJD                          | Sample                        | Time: 12/28/2010 10:50 |             |                |              |                  |
| <b>-</b> ,                               | <b>D</b> "                    |                        | <u>SLOQ</u> |                |              | • • • • •        |
| Test                                     | Result                        | Method                 |             | 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                     | L                             | ab ID: 10123993-001C   | Grab        |                |              |                  |
| SAMPLED BY: DJD                          | Sample                        | Time: 12/28/2010 10:50 | ~ ~ ~ ~     |                |              |                  |
| Test                                     | Result                        | Method                 | <u>SLOQ</u> | 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     |                  |
| ASTM D Chloride                          | < 25.0 mg/L                   | EPA 300.0              | 25.0        | 01/07/11 15:12 | 01/03/11     | HDP-CV<br>HDP-CV |
| ASTM D Ph                                | < 23.0 mg/∟<br>10.34 @ 19.2°C | SM4500H+B              | 25.0        | 01/07/11 14:22 | 01/07/11     |                  |
|  | 0                             | SW 7.3.3.2             | 0.0         |                |              | LTW-CV           |
| Cyanide, Reactive<br>Reactive Sulfide    | < 0.2 mg/Kg                   |                        | 0.2<br>64   | 01/06/11 9:28  | 01/07/11     | HDP-CV           |
|  | < 64 mg/Kg                    | SW846 7.3              | 64          | 01/10/11 8:55  | 01/10/11     | LTW-CV           |
| SAMPLE: TCLP Leachate of Air C           | uttings La                    | ab ID: 10123993-001E   | Grab        |                |              |                  |
| SAMPLED BY: DJD                          | Sample                        | Time: 12/29/2010 8:00  | 81.00       |                |              |                  |
| Test                                     | Result                        | Method                 | <u>SLOQ</u> | 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           |
| Caumum - TOLF Extracted                  | < 0.100 mg/L                  |                        | 0.100       | 12/00/10 0.00  | 01/03/11     | 03K-0V           |

## **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

Cani M. Davis

DATE: 1/12/2011

NAME:

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave. Sayre, PA 18840

Phone: (570) 888-0169 Fax: (570) 888-0717 Work Order: 10123993

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

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

Dina Brown

ADDRESS: 337 Daniel Zenker Dr

COMPANY: Talisman Energy USA, Inc.

Horseheads, NY 14845

# TEST REPORT

| A4H Well Pad                      | <u></u>       |             |                   |             |                |              |                  |
|-----------------------------------|---------------|-------------|-------------------|-------------|----------------|--------------|------------------|
| RECEIVED FOR LAB BY: CMS          | DAT           | E: 12/2     | 8/2010 13:50      |             |                | Pa           | age 2 of 3       |
| 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 Cutt | tings         | Lab ID      | : 10123993-001F   | Grab        |                |              |                  |
| SAMPLED BY: DJD                   | Sar           | nple Time   | : 01/06/2011 8:00 |             |                |              |                  |
| Test                              | Result        |             | Method            | <u>SLOQ</u> | 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 Cutt | inas          | Lab ID      | : 10123993-001G   | Grab        |                |              |                  |
| SAMPLED BY:                       |               |             | : 01/06/2011 8:00 |             |                |              |                  |
|                                   |               |             |                   | <u>SLOQ</u> |                |              |                  |
| Test                              | Result        |             | Method            |             | Analysis Start | Analysis End | <u>Analyst *</u> |
| Benzene                           | < 0.0250 mg/L |             | EPA 8260B         | 0.0250      | 01/07/11 9:22  | 01/07/11     | CTM-SA           |

#### **REMARKS:**

Carbon tetrachloride

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.

EPA 8260B

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

< 0.0250 mg/L

L Value above calibration range but within annually verified linear range

MANAGER

Carrie M. Davis

DATE: 1/12/2011

01/07/11

CTM-SA

0.0250 01/07/11 9:22

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave. Sayre, PA 18840

Phone: (570) 888-0169

Work Order: 10123993

Fax: (570) 888-0717 SEND DATA TO: NAME: WO#: 10123993 Dina Brown COMPANY: Talisman Energy USA, Inc. PAGE: 3 of 3 ADDRESS: 337 Daniel Zenker Dr Horseheads, NY 14845 AF 78732 PO#: PWS ID# **TEST REPORT** PHONE: (607) 562-4000 FAX: (607) 562-4001 A4H Well Pad RECEIVED FOR LAB BY: CMS DATE: 12/28/2010 13:50 Page 3 of 3 < 0.0250 mg/L EPA 8260B 0.0250 01/07/11 9:22 01/07/11 Chlorobenzene CTM-SA Chloroform < 0.0250 mg/L EPA 8260B 0.0250 01/07/11 9:22 01/07/11 CTM-SA < 0.0250 mg/L 01/07/11 9:22 1,2-Dichloroethane EPA 8260B 0.0250 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 01/07/11 9:22 Isopropylbenzene < 0.0250 mg/L EPA 8260B 0.0250 01/07/11 CTM-SA < 0.0250 mg/L 0.0250 01/07/11 9:22 Tetrachloroethene EPA 8260B 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 < 0.0250 mg/L 0.0250 01/07/11 9:22 01/07/11 1,3,5-Trimethylbenzene EPA 8260B CTM-SA Vinyl chloride < 0.0250 mg/L EPA 8260B 0.0250 01/07/11 9:22 01/07/11 CTM-SA < 0.0250 mg/L 01/07/11 9:22 Methyl tert-butyl ether EPA 8260B 0.0250 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 Lab ID: 10123993-001H SAMPLE: Air Cuttings Grab SAMPLED BY: DJD Sample Time: 12/29/2010 8:00 SLOQ Test Result Method 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. Lab ID: 10123993-0011 SAMPLE: Air Cuttings Grah SAMPLED BY: DJD Sample Time: 12/29/2010 8:00 <u>SLOQ</u> Test Result Method 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



#### COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WASTE MANAGEMENT

FORM 26R

# CHEMICAL ANALYSIS OF RESIDUAL WASTE ANNUAL REPORT BY THE GENERATOR

| each attache  | ust be fully and accura<br>bly printed in the spaces<br>ad sheet as Form 26R,<br>ne date on attached shee   | ify Date R  | DEPIUSE(C<br>Received & Ge  |   |  |   |
|---|---|---|---|---|--|---|
| General Refe  | rence 287.54  |   |   |   |  |   |
| Date Prepare  | d/Revised Fe  | bruary 11, 2011   |   |   | _  |   |
|   |   | CLIENT (GENERATOR   | R OF THE WASTE) IN  | IFORMATI  | ON   |   |
| Company Na  |   |   |   |   |  |   |
|   | ergy USA Inc.<br>v, Name of Parent Com  | pany  |   |   | EPA Gener  | ator ID#                                |
| Talisman En   |   |   |   |   | N/A  |   |
| Company Ma  | iling Address Line 1  | C   | ompany Mailing Addres   | ss Line 2   |  |   |
|   | dress Last Line – City  | State   | Zip+4   | Phone   |  | Ext                                     |
| Warrendale  | -   | PA  | 15086   | (724) 81-   |  |   |
| Company Co<br>Brown   | ntact Last Name   | First Name<br>Dina  | MI  |   | Suffix   |   |
| Municipality  |   |   | County  |   | -  |   |
| Warrendale  |   | /   | Allegheny   |   |  |   |
| Contact Phot  |   | Contact Email Address   |   |   |  |   |
| (724) 814-53  |   | dybrown@talismanusa.c<br>ny Mailing Address (noted a  |   |   | Yes  | No No                                   |
| If 'No'. descr  | be location of waste gei  | neration and storage. Drill o   | uttings are generated du  |   | is drilling op   | erations at                             |
|   |   | ted at 311 Stump Road, Grar   | ville Township, Bradford  | County, PA.   | Waste is sto   | ored in                                 |
| containers on<br>Municipality   | Granville   | County Bradfo   | ord   | State   | PA   |   |
|   |   |   | E DESCRIPTION   |   |  |   |
| Residual  | Resid   |   |   | Unit of   |  |   |
|   |   | ual Waste   |   |   |  | Time                                    |
| Waste Code  | · · · ·   | Description   | Amount  | Measure   |  | Time<br>Frame                           |
| Waste Code<br>810   | Code I<br>Drilling Cuttings (Oil a  | Description   | Amount<br>1,109   | 🗌 cu yd 📃   | gal<br>ton   |   |
| 810   | Drilling Cuttings (Oil a  | Description<br>and Gas)<br>1. GENERAL P   | 1,109   | □ cu yd  □<br>□ lb   ⊠  |  | Frame                                   |
| 810<br>a. pH Ra   | Drilling Cuttings (Oil a  | Description<br>and Gas)<br>1. General P<br>53 to 8.24   | 1,109<br>ROPERTIES<br>(based on analyses or k   | □ cu yd  □<br>□ lb   ⊠  |  | Frame                                   |
| 810<br>a. pH Ra   | Drilling Cuttings (Oil a  | Description<br>and Gas)<br>53 to 8.24<br>Liquid Waste (EPA Me   | 1,109<br>ROPERTIES<br>(based on analyses or k<br>thod 9095)   | □ cu yd  □<br>□ lb   ⊠  |  | Frame                                   |
| 810<br>a. pH Ra   | Drilling Cuttings (Oil a  | Description<br>and Gas)<br>1. General P<br>53 to 8.24   | 1,109<br>ROPERTIES<br>(based on analyses or k<br>thod 9095)<br>95)  | □ cu yd  □<br>□ lb   ⊠  |  | Frame                                   |
| 810<br>a. pH Ra<br>b. Physi   | Drilling Cuttings (Oil a  | And Gas)           1. GENERAL P           53         to         8.24           Liquid Waste (EPA Metod 909)         Solid (EPA Method 909)           Gas (ambient temperal Color         Greyish Black  | 1,109<br>ROPERTIES<br>(based on analyses or k<br>thod 9095)<br>95)<br>ture & pressure)<br>Odo   | □ cu yd □<br>□ lb   ⊠<br>nowledge)<br>r   Earthy / \$                                 |  | Frame<br>One Time                       |
| 810<br>a. pH Ra<br>b. Physi   | Drilling Cuttings (Oil a<br>ange 6.5<br>cal State   | Description<br>and Gas)<br>1. GENERAL P<br>53 to 8.24<br>☐ Liquid Waste (EPA Me<br>Solid (EPA Method 909<br>☐ Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquid  | 1,109<br>ROPERTIES<br>(based on analyses or k<br>thod 9095)<br>95)<br>ture & pressure)<br>Odo<br>I Phases of Separation   | □ cu yd □<br>□ lb   ⊠<br>nowledge)<br>r _ Earthy / S<br>_ One                         | Slight Petro   | Frame<br>One Time                       |
| 810<br>a. pH Ra<br>b. Physi   | Drilling Cuttings (Oil a<br>ange 6.5<br>cal State   | And Gas)           1. GENERAL P           53         to         8.24           Liquid Waste (EPA Metod 909)         Solid (EPA Method 909)           Gas (ambient temperal Color         Greyish Black  | 1,109<br>ROPERTIES<br>(based on analyses or k<br>thod 9095)<br>95)<br>ture & pressure)<br>Odo<br>I Phases of Separation   | □ cu yd □<br>□ lb   ⊠<br>nowledge)<br>r _ Earthy / S<br>_ One                         | Slight Petro   | Frame<br>One Time                       |
| 810<br>a. pH Ra<br>b. Physi<br>c. Physi   | Drilling Cuttings (Oil a<br>ange 6.t<br>cal State<br>cal Appearance   | Description<br>and Gas)<br>1. GENERAL P<br>3 to 8.24<br>Liquid Waste (EPA Met<br>Solid (EPA Method 909<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquic<br>Describe each phase of s<br>2. CHEMICAL ANALYS  | 1,109 ROPERTIES (based on analyses or k thod 9095) b5) ture & pressure) Odo I Phases of Separation eparation. Soil and Ro SIS ATTACHMENTS   | □ cu yd □<br>□ lb   ⊠<br>nowledge)<br>rEarthy / S<br>One<br>ck Fragments              | ton  | Frame<br>One Time<br>Dleum              |
| 810<br>a. pH Ra<br>b. Physi<br>c. Physi<br>a. The ra<br>instru  | Drilling Cuttings (Oil a<br>ange 6.t<br>cal State<br>cal Appearance<br>esults of a detailed chen<br>actions, is attached.   | Description and Gas)  | 1,109 ROPERTIES (based on analyses or k thod 9095) 95) ture & pressure) Odo I Phases of Separation eparation. Soil and Ro SIS ATTACHMENTS waste, as described Ir  | □ cu yd □<br>□ lb   ⊠<br>nowledge)<br>rEarthy / S<br>One<br>ck Fragments              | Slight Petro   | Frame<br>One Time                       |
| 810<br>a. pH Ra<br>b. Physi<br>c. Physi<br>a. The ra<br>instru<br>b. A det                                    | Drilling Cuttings (Oil a<br>ange 6.t<br>cal State<br>cal Appearance<br>esults of a detailed chen<br>actions, is attached.   | Description<br>and Gas)<br>1. GENERAL P<br>33 to 8.24<br>↓ Liquid Waste (EPA Me<br>Solid (EPA Method 909<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquic<br>Describe each phase of s<br>2. CHEMICAL ANALYS<br>hical characterization of the<br>waste sampling method is a | 1,109 ROPERTIES (based on analyses or k thod 9095) b5) ture & pressure) Odo I Phases of Separation eparation. Soil and Ro SIS ATTACHMENTS waste, as described Ir ttached.                                 | □ cu yd □<br>□ lb   ⊠<br>nowledge)<br>r _Earthy / S<br><br>Che<br>ck Fragments<br>the | ton       Slight Petro       S       X       Yes       X | Frame One Time One Time Deleum No No No |
| 810<br>a. pH Ra<br>b. Physi<br>c. Physi<br>a. The ra<br>instru<br>b. A det                                    | Drilling Cuttings (Oil a<br>ange 6.t<br>cal State<br>cal Appearance<br>esults of a detailed chen<br>actions, is attached.<br>alled description of the v<br>uality assurance/quality         | Description and Gas)  | 1,109 ROPERTIES (based on analyses or k thod 9095) b5) ture & pressure) Odo I Phases of Separation eparation. Soil and Ro SIS ATTACHMENTS waste, as described Ir ttached.                                 | □ cu yd □<br>□ lb   ⊠<br>nowledge)<br>r _Earthy / S<br><br>Che<br>ck Fragments<br>the | Slight Petro   | Frame One Time Deleum No                |
| 810<br>a. pH Ra<br>b. Physi<br>c. Physi<br>a. The ra<br>instru<br>b. A det<br>c. The q<br>attack<br>d. The ra | Drilling Cuttings (Oil a<br>ange 6.t<br>cal State<br>cal Appearance<br>esults of a detailed chen<br>actions, is attached.<br>alled description of the v<br>uality assurance/quality<br>red. | Description<br>and Gas)<br>1. GENERAL P<br>33 to 8.24<br>↓ Liquid Waste (EPA Me<br>Solid (EPA Method 909<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquic<br>Describe each phase of s<br>2. CHEMICAL ANALYS<br>hical characterization of the<br>waste sampling method is a | 1,109 ROPERTIES (based on analyses or k thod 9095) b5) ture & pressure) Odo I Phases of Separation eparation. Soil and Ro SIS ATTACHMENTS waste, as described Ir ttached. //ed by the laboratory(id ched. | □ cu yd □<br>□ lb   ⊠<br>nowledge)<br>r _Earthy / S<br><br>Che<br>ck Fragments<br>the | ton       Slight Petro       S       X       Yes       X | Frame One Time One Time Deleum No No No |

|           | 3.:  | PROCESS DESCRIPTION &                          | SCHEMATIC ATTAC         | CHMENTS                                |               |       |  |  |
|-----------|--|--|-------------------------|--|---------------|-------|--|--|
| a.        | A detailed description of the i<br>the waste, as specified in the  | nanufacturing and/or pol                       | lution control proce    |  | Yes Yes       | 🗌 No  |  |  |
| b.        | A schematic of the manufacturing and/or pollution control processes producing the waste, X Yes INO as specified in the instructions, is attached.                          |  |                         |  |               |       |  |  |
| C.        | If portions of the information submitted are confidential, the substantiation for 🚺 Yes 🔲 No 🖾 N/A a confidentiality claim, as described in the instructions, is attached. |  |                         |  |               |       |  |  |
|           | SECTIO   | ON C. MANAGEME                                 |                         | 2xx000xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx |               |       |  |  |
| 947)<br>1 |  | 1. PROCESSING OR D                             |                         |  |               |       |  |  |
| The ar    | rea below (ad.) will accommod  | ate the identification of the                  | vo facilities. Attach   | additional sheets                      | if necessary. |       |  |  |
| a.        | Solid waste permit number(s)<br>100361   | for processing or dispos                       | al facility being util  | ized.                                  |               |       |  |  |
| b.        | Facility Name  | McKean County Landfi                           |                         |  |               |       |  |  |
|           | 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<br>Title   | Mike Manderfeld                                |                         |  |               |       |  |  |
|           | Phone  | (814) 778-9931                                 | Email Address           | manderfeld@gm                          | ail.com       |       |  |  |
| d.        | Volume of waste shipped to p<br>518  | cu yd 🗌 gal                                    | b 🛛 ton                 | (check one)                            |               |       |  |  |
| a.        | Solid waste permit number(s)<br>8-4630-00010   | for processing or dispos                       | al facility being utili | zed.                                   |               |       |  |  |
| b.        | Facility Name  | Hakes C&D Landfill                             |                         |  |               |       |  |  |
|           | Address Line 1   | 4376 Manning Ridge R                           | oad                     |  |               |       |  |  |
|           | 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<br>(585) 466-7271               | Email Address           | joe.boyles@case                        | lla.com       |       |  |  |
| d.        | Volume of waste shipped to p   | r <b>ocessing or disposal fac</b><br>cu yd gal | ility in the previous   |  |               |       |  |  |
| ÷ Tris    |  | 2. BENEF                                       |                         |  |               |       |  |  |
| a.        | Has the waste been approved  |  |                         |  | Ves           | No No |  |  |
|           | If "Yes", list the general permi   | t number or approval nur                       | nber.                   |  |               | _     |  |  |
| b.        | Volume of waste beneficially u   |  |                         |  | ·             |       |  |  |
|           | 0 Ď  | cuyd 🗌 gal [                                   | lbton                   | (check one)                            |               |       |  |  |

|            | 3.   | PROCESS DESCRIPTION       | & SCHEMATIC ATTAC                     | HMENTS            |               |         |  |
|------------|--|---------------------------|---------------------------------------|-------------------|---------------|---------|--|
| a.         | A detailed description of the  |                           |                                       | sses producing    | Yes [         | ] No    |  |
| 1          | the waste, as specified in the   | instructions, is attached | d.                                    |                   |               | -       |  |
| b.         | A schematic of the manufacture as specified in the instruction   |                           | ntrol processes proc                  | lucing the waste, | Yes [         | ] No    |  |
|            | •  |                           |                                       |                   |               | 7       |  |
| C.         | If portions of the information submitted are confidential, the substantiation for Yes No X N/A a confidentiality claim, as described in the instructions, is attached. |                           |                                       |                   |               |         |  |
|            | SECTIC   | ON C. MANAGEM             | ENT OF RESIDU                         | AL WASTE          |               |         |  |
|            |  |                           | DISPOSAL FACILITY (IE                 |                   |               |         |  |
| The ar     | ea below (ad.) will accommod   | ate the identification of | two facilities. Attach                | additional sheets | if necessary. |         |  |
| a.         | Solid waste permit number(s)<br>9-0232-00003   | for processing or dispo   | sal facility being util               | zed.              |               |         |  |
| 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          |               |         |  |
| с.         | Facility Contact Name  | Larry Shilling            |                                       |                   |               |         |  |
|            | Title  | ¥                         |                                       |                   |               |         |  |
|            | Phone  | (585) 466-7271            | Email Address                         | larry.shilling@ca | sella.com     |         |  |
| d.         | Volume of waste shipped to p   | rocessing or disposal fa  | cility in the previous                | year.             |               |         |  |
|            | 181  | cu yd 🗌 🔲 gal             | 🗍 lb 🛛 ton                            |                   | ,             |         |  |
| a.         | Solid waste permit number(s)   | for processing or dispo   | sal facility being utili              | zed.              |               |         |  |
|            | 8-0728-00004   | J                         | · · · · · · · · · · · · · · · · · · · |                   |               |         |  |
| b.         | Facility Name  | Chemung County Lar        | dfill                                 |                   |               |         |  |
|            | 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              |                                       | <del>_</del>      |               |         |  |
|            | Title  | Environmental Manag       | er                                    |                   |               |         |  |
|            | Phone  | (585)797-5941             | Email Address                         | carla.canjar@cas  | sella.com     |         |  |
| d.         | Volume of waste shipped to p   | rocessing or disposal fa  | cility in the previous                | • -               |               |         |  |
| u.         | 142  | cu yd 🗌 gal               | ☐ lb ⊠ ton                            |                   |               |         |  |
| <i>i</i> . |  |                           | FICIAL USE                            |                   |               | No. 199 |  |
| a.         | Has the waste been approved  | for beneficial use?       |                                       |                   | Yes 🛛         | No      |  |
|            | If "Yes", list the general permi   | t number or approval ni   | umber.                                |                   |               |         |  |
| b.         | Volume of waste beneficially u   |                           | г.                                    |                   |               |         |  |
|            | 0  | cu yd 🗌 gal               | lb ton                                | (check one)       |               |         |  |

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|  | SECTION D. CERTIFICATION   |
|--|--|
| Report and all attached doc<br>obtaining the information, I<br>knowledge. I understand tha | that I have personally examined and am familiar with the information submitted in this Annual<br>uments and that based upon my inquiry of those individuals immediately responsible for<br>verify that the submitted information is true, accurate and complete to the best of my<br>t the submission of false information herein is made subject to the penalties of 18 Pa. C.S.<br>sification to authoritles, which include fine and imprisonment. |
| Check the following, if applica  | ble:   |
| I certify the information  | n required in Section B-1, General Properties was supplied to the Department for the year<br>nged.   |
| Form Submitted:  | Form 26R   |
|  | Other (specify)  |
| Date Submitted:  |  |
| I certify the information  | n required in Section B-2, Chemical Analysis was supplied to the Department for the year nged.   |
| Form Submitted:  | Form 26R   |
|  | Other (specify)  |
| Date Submitted:  |  |
| I certify the information<br>for the year and  | required in Section B-3, Process Description and Schematic, was supplied to the Department has not changed.  |
| Form Submitted:  | Form 26R   |
|  | Other (specify)  |
| Date Submitted:  |  |
| Name of Responsible Official   | Title Environmental Specialist   |
| Dina Brown Signature   | Stow Date 2/2.5/11   |

| LAB ID: 39-0  | 0401  | East<br>2566 Pe<br>Say<br>Phone:  | r <b>k Analytics, In</b><br>ern Division<br>ennsylvania Ave.<br>re, PA 18840<br>(570) 888-0169<br>(570) 888-0717  | ь.   | W   | ork Order: 101   | 20835  |
|---|---|---|---|--|---|--|--|
| SEND DATA   | TO:   |   |   |  |   |  |  |
| NAME:   | Steve Gridley   |   |   | W  | O#: 10  | 0120835  |  |
| COMPANY:  |   | Inc.  |   | PA   | AGE: 1  | of 1   |  |
| ADDRESS:  | 337 Daniel Zenker Dr<br>Horseheads, NY 14845  |   |   |  |   |  |  |
|   |   |   |   | PC   | D#: A   | F77715   |  |
| PHONE:<br>FAX:  | (607) 731-0145<br>(607) 562-4001  | TES   | ST REPORT   | P٧   | WS ID#  |  |  |
| 01-   | -075  | 1   | · ·   |  |   |  |  |
| RECEIVED F  | FOR LAB BY: CMS   | DATE  | : 12/06/2010 15:40  |  |   | Ра   | ige 1 of 1   |
| SAMPLE: In  | v Cuttings  |   | Lab ID: 10120835-001A   | Compo  | site  |  |  |
| SAMPLE  | D BY: SG  | Sam   | ole Time: 12/06/2010 10:05  |  |   |  |  |
|   |   | eany  | ble filme. 12/00/2010 10:00   | SI OO  |   |  |  |
| <u>⊺est</u><br>Total Peti   | roleum Hydrocarbons   | <u>Result</u><br>96400 mg/Kg  | <u>Method</u><br>EPA 9071   | <u>SLOQ</u>  | <u>Analysis Sta</u><br>12/08/10 14:   |  | <u>Analyst *</u>   |
| <u>⊺est</u><br>Total Peti<br>Sample   | roleum Hydrocarbons<br>e Note: Analysis performed by  | <u>Result</u><br>96400 mg/Kg  | <u>Method</u><br>EPA 9071<br>s, Inc-Erie Division   |  | 12/08/10 14   |  | Analyst *  |
| Test<br>Total Petr<br>Sample<br>SAMPLE: In  | roleum Hydrocarbons<br>e Note: Analysis performed by  | <u>Result</u><br>96400 mg/Kg<br>Microbac Laboratories   | <u>Method</u><br>EPA 9071<br>s, Inc-Erie Division<br>Lab ID: 10120835-001B  | <u>SLOQ</u><br>Compo   | 12/08/10 14   |  | <u>Analyst *</u>   |
| Test<br>Total Petr<br>Sample<br>SAMPLE: In<br>SAMPLE  | roleum Hydrocarbons<br>e Note: Analysis performed by<br>v Cuttings  | <u>Result</u><br>96400 mg/Kg<br>Microbac Laboratories<br>Samp   | Method<br>EPA 9071<br>s, Inc-Erie Division<br>Lab ID: 10120835-001B<br>ble Time: 12/06/2010 10:05   |  | 12/08/10 14:<br>site  | 20 12/08/10  |  |
| <u>Test</u><br>Total Petr<br>Sample<br>SAMPLE: In<br>SAMPLE<br><u>Test</u>  | roleum Hydrocarbons<br>e Note: Analysis performed by<br>v Cuttings  | <u>Result</u><br>96400 mg/Kg<br>Microbac Laboratories<br>Samp<br><u>Result</u>  | <u>Method</u><br>EPA 9071<br>s, Inc-Erie Division<br>Lab ID: 10120835-001B<br>ole Time: 12/06/2010 10:05<br><u>Method</u>   | Compo<br>SLOQ  | 12/08/10 14:<br>site<br><u>Analysis Sta</u>   | 20 12/08/10  | Analyst *  |
| <u>Test</u><br>Total Petr<br>Sample<br>SAMPLE: In<br>SAMPLE<br><u>Test</u><br>Moisture  | roleum Hydrocarbons<br>e Note: Analysis performed by<br><b>v Cuttings</b><br>ED BY: SG  | <u>Result</u><br>96400 mg/Kg<br>Microbac Laboratories<br>Samp<br><u>Result</u><br>13.8 %  | Method<br>EPA 9071<br>s, Inc-Erie Division<br>Lab ID: 10120835-001B<br>ole Time: 12/06/2010 10:05<br><u>Method</u><br>Moisture Calc.  | Composi<br>SLOQ<br>0.01  | 12/08/10 14:<br>site<br><u>Analvsis Sta</u><br>12/06/10 17:   | 20 12/08/10<br>art <u>Analysis End</u><br>30 12/07/10  | <u>Analyst *</u><br>IC-SA  |
| <u>Test</u><br>Total Petr<br>Sample<br>SAMPLE: In<br>SAMPLE<br><u>Test</u>  | roleum Hydrocarbons<br>e Note: Analysis performed by<br><b>v Cuttings</b><br>ED BY: SG  | <u>Result</u><br>96400 mg/Kg<br>Microbac Laboratories<br>Samp<br><u>Result</u>  | <u>Method</u><br>EPA 9071<br>s, Inc-Erie Division<br>Lab ID: 10120835-001B<br>ole Time: 12/06/2010 10:05<br><u>Method</u>   | Compo<br>SLOQ  | 12/08/10 14:<br>site<br><u>Analysis Sta</u>   | 20 12/08/10<br>art <u>Analysis End</u><br>:30 12/07/10<br>:15 12/06/10   | Analyst *  |
| Test<br>Total Petr<br>Sample<br>SAMPLE: In<br>SAMPLE<br>Test<br>Moisture<br>Free Liqu<br>pH   | roleum Hydrocarbons<br>e Note: Analysis performed by<br><b>v Cuttings</b><br>ED BY: SG<br>id  | <u>Result</u><br>96400 mg/Kg<br>Microbac Laboratories<br>Samp<br><u>Result</u><br>13.8 %<br>< 0.1 %<br>8.24@22.3°C  | Method<br>EPA 9071<br>s, Inc-Erie Division<br>Lab ID: 10120835-001B<br>ole Time: 12/06/2010 10:05<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A   | Compo<br><u>SLOQ</u><br>0.01<br>0.1  | 12/08/10 14:<br>site<br><u>Analysis Sta</u><br>12/06/10 17:<br>12/06/10 17:<br>12/07/10 14:   | 20 12/08/10<br>art <u>Analysis End</u><br>:30 12/07/10<br>:15 12/06/10   | Analyst *<br>IC-SA<br>IC-SA  |
| Test<br>Total Petr<br>Sample<br>SAMPLE: In<br>SAMPLE: In<br>SAMPLE: In<br>Free Liqu<br>pH<br>SAMPLE: TO   | roleum Hydrocarbons<br>e Note: Analysis performed by<br><b>v Cuttings</b><br>ED BY: SG  | <u>Result</u><br>96400 mg/Kg<br>Microbac Laboratories<br>Samp<br><u>Result</u><br>13.8 %<br>< 0.1 %<br>8.24@22.3°C<br><b>gs</b>                             | Method<br>EPA 9071<br>s, Inc-Erie Division<br>Lab ID: 10120835-001B<br>ole Time: 12/06/2010 10:05<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C  | Compo<br>SLOQ<br>0.01<br>0.1<br>Compo:   | 12/08/10 14:<br>site<br><u>Analysis Sta</u><br>12/06/10 17:<br>12/06/10 17:<br>12/07/10 14:   | 20 12/08/10<br>art <u>Analysis End</u><br>:30 12/07/10<br>:15 12/06/10   | Analyst *<br>IC-SA<br>IC-SA  |
| Test<br>Total Petr<br>Sample<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: TC<br>SAMPLE: TC   | roleum Hydrocarbons<br>e Note: Analysis performed by<br><b>v Cuttings</b><br>ED BY: SG<br>id<br><b>CLP Leachate of Inv Cuttin</b>   | Result<br>96400 mg/Kg<br>Microbac Laboratories<br>Samp<br><u>Result</u><br>13.8 %<br>< 0.1 %<br>8.24@22.3°C<br><b>gs</b><br>Samp                            | Method<br>EPA 9071<br>s, Inc-Erie Division<br>Lab ID: 10120835-001B<br>ole Time: 12/06/2010 10:05<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>Lab ID: 10120835-001E<br>ole Time: 12/07/2010 8:00  | Compo<br><u>SLOQ</u><br>0.01<br>0.1  | 12/08/10 14:<br>site<br><u>Analvsis Sta</u><br>12/06/10 17:<br>12/06/10 17:<br>12/07/10 14:<br>site   | 20 12/08/10<br>art <u>Analysis End</u><br>30 12/07/10<br>15 12/06/10<br>20 12/07/10  | <u>Analyst *</u><br>IC-SA<br>IC-SA<br>MED-SA   |
| Test<br>Total Petr<br>Sample<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: TC<br>SAMPLE: TC<br>SAMPLE: Test   | roleum Hydrocarbons<br>e Note: Analysis performed by<br><b>v Cuttings</b><br>ED BY: SG<br>id<br><b>CLP Leachate of Inv Cuttin</b><br>ED BY: SG  | Result<br>96400 mg/Kg<br>Microbac Laboratories<br>Samp<br><u>Result</u><br>13.8 %<br>< 0.1 %<br>8.24@22.3°C<br>gs<br>Samp<br><u>Result</u>                  | Method<br>EPA 9071<br>s, Inc-Erie Division<br>Lab ID: 10120835-001B<br>ole Time: 12/06/2010 10:05<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>Lab ID: 10120835-001E<br>ole Time: 12/07/2010 8:00<br><u>Method</u>   | Compo<br>SLOQ<br>0.01<br>0.1<br>Compos<br>SLOQ   | 12/08/10 14:<br>site<br><u>Analysis Sta</u><br>12/06/10 17:<br>12/06/10 17:<br>12/07/10 14:<br>site<br><u>Analysis Sta</u>  | 20 12/08/10<br>art <u>Analysis End</u><br>30 12/07/10<br>15 12/06/10<br>20 12/07/10<br>art <u>Analysis End</u>   | <u>Analvst *</u><br>IC-SA<br>IC-SA<br>MED-SA<br><u>Analyst *</u>   |
| Test<br>Total Petr<br>Sample<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: TC<br>SAMPLE: TC<br>SAMPLE: TC<br>SAMPLE: TC<br>SAMPLE: TC   | roleum Hydrocarbons<br>e Note: Analysis performed by<br><b>v Cuttings</b><br>ED BY: SG<br>id<br><b>CLP Leachate of Inv Cuttin</b><br>ED BY: SG<br>TCLP extracted  | Result<br>96400 mg/Kg<br>Microbac Laboratories<br>Samp<br><u>Result</u><br>13.8 %<br>< 0.1 %<br>8.24@22.3°C<br>gs<br>Samp<br><u>Result</u><br>< 0.0008 mg/L | Method<br>EPA 9071<br>s, Inc-Erie Division<br>Lab ID: 10120835-001B<br>ole Time: 12/06/2010 10:05<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9095A<br>EPA 9045C<br>Lab ID: 10120835-001E<br>ole Time: 12/07/2010 8:00<br><u>Method</u><br>EPA 7470A   | Compo<br><u>SLOQ</u><br>0.01<br>0.1<br>Compos<br><u>SLOQ</u><br>0.0008   | 12/08/10 14:<br>site<br><u>Analysis Sta</u><br>12/06/10 17:<br>12/06/10 17:<br>12/07/10 14:<br>site<br><u>Analysis Sta</u><br>12/07/10 10:  | art         Analysis End           :30         12/08/10           :15         12/07/10           :20         12/07/10           :20         12/07/10           :20         12/07/10           :21         12/07/10           :20         12/07/10  | <u>Analvst *</u><br>IC-SA<br>IC-SA<br>MED-SA<br><u>Analvst *</u><br>KW-CV  |
| Test<br>Total Petr<br>Sample<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: TO<br>Free Liqu<br>pH<br>SAMPLE: TO<br>SAMPLE: TO<br>SAMPLE: TO<br>SAMPLE: TO<br>SAMPLE: TO<br>SAMPLE: TO<br>SAMPLE: TO   | roleum Hydrocarbons<br>e Note: Analysis performed by<br><b>v Cuttings</b><br>ED BY: SG<br>id<br><b>CLP Leachate of Inv Cuttin</b><br>ED BY: SG<br>TCLP extracted<br>TCLP extracted  | Result           96400 mg/Kg           Microbac Laboratories           Samp           Result           13.8 %           < 0.1 %                             | Method<br>EPA 9071<br>s, Inc-Erie Division<br>Lab ID: 10120835-001B<br>ble Time: 12/06/2010 10:05<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9095A<br>EPA 9045C<br>Lab ID: 10120835-001E<br>ble Time: 12/07/2010 8:00<br><u>Method</u><br>EPA 7470A<br>EPA 6010B  | Compo<br><u>SLOQ</u><br>0.01<br>0.1<br>Compos<br><u>SLOQ</u><br>0.0008<br>0.500                                | Analysis Sta           Analysis Sta           12/06/10 17:           12/06/10 17:           12/06/10 17:           12/06/10 17:           12/07/10 14:           site           Analysis Sta           12/07/10 10:           12/07/10 10:           12/08/10 12:   | Analysis End           30         12/08/10           12/07/10         12/07/10           15         12/07/10           20         12/07/10           15         12/07/10           15         12/07/10           15         12/07/10   | Analvst *<br>IC-SA<br>IC-SA<br>MED-SA<br><u>Analvst *</u><br>KW-CV<br>GSR-CV   |
| Test<br>Total Petr<br>Sample<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: TO<br>Free Liqu<br>pH<br>SAMPLE: TO<br>SAMPLE:  | roleum Hydrocarbons<br>e Note: Analysis performed by<br><b>v Cuttings</b><br>ED BY: SG<br>id<br><b>CLP Leachate of Inv Cuttin</b><br>ED BY: SG<br>TCLP extracted<br>TCLP extracted<br>TCLP extracted  | Result           96400 mg/Kg           Microbac Laboratories           Samp           Result           13.8 %           < 0.1 %                             | Method<br>EPA 9071<br>s, Inc-Erle Division<br>Lab ID: 10120835-001B<br>ole Time: 12/06/2010 10:05<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9095A<br>EPA 9045C<br>Lab ID: 10120835-001E<br>ole Time: 12/07/2010 8:00<br><u>Method</u><br>EPA 7470A<br>EPA 6010B<br>EPA 6010B   | Compo<br>SLOQ<br>0.01<br>0.1<br>Compos<br>SLOQ<br>0.0008<br>0.500<br>10.00                                     | Analysis State           Analysis State           12/06/10 17:           12/06/10 17:           12/06/10 17:           12/06/10 17:           12/07/10 14:           site           Analysis State           12/07/10 10:           12/08/10 12:           12/08/10 12:   | Analysis End           30         12/08/10           12/07/10         12/07/10           15         12/06/10           120         12/07/10           15         12/07/10           15         12/07/10           15         12/07/10           15         12/08/10           15         12/08/10           15         12/08/10  | Analvst *<br>IC-SA<br>IC-SA<br>MED-SA<br>MED-SA<br>MED-SA<br>MED-SA  |
| Test<br>Total Petr<br>Sample<br>SAMPLE: In<br>SAMPLE: In<br>SAMPLE: In<br>Free Liqu<br>pH<br>SAMPLE: TO<br>SAMPLE:    | roleum Hydrocarbons<br>e Note: Analysis performed by<br><b>v Cuttings</b><br>ED BY: SG<br>id<br><b>CLP Leachate of Inv Cuttin</b><br>ED BY: SG<br>TCLP extracted<br>TCLP extracted<br>TCLP extracted<br>TCLP extracted<br>TCLP extracted  | Result           96400 mg/Kg           Microbac Laboratories           Samp           Result           13.8 %           < 0.1 %                             | Method<br>EPA 9071<br>s, Inc-Erie Division<br>Lab ID: 10120835-001B<br>ole Time: 12/06/2010 10:05<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9095A<br>EPA 9045C<br>Lab ID: 10120835-001E<br>ole Time: 12/07/2010 8:00<br><u>Method</u><br>EPA 7470A<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B  | Compo<br><u>SLOQ</u><br>0.01<br>0.1<br>Compos<br><u>SLOQ</u><br>0.0008<br>0.500                                | Analysis Sta           Analysis Sta           12/06/10 17:           12/06/10 17:           12/06/10 17:           12/06/10 17:           12/07/10 14:           site           Analysis Sta           12/07/10 10:           12/07/10 10:           12/08/10 12:   | art         Analysis End           :30         12/08/10           :15         12/07/10           :20         12/07/10           :20         12/07/10           :20         12/07/10           :15         12/07/10           :15         12/08/10           :15         12/08/10           :15         12/08/10           :15         12/08/10   | Analvst *<br>IC-SA<br>IC-SA<br>MED-SA<br>MED-SA<br>MED-SA<br>MED-SA<br>MED-SA<br>MED-SA  |
| Test<br>Total Petr<br>Sample<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: TC<br>SAMPLE: TC<br>SAMPLE: TC<br>SAMPLE: TC<br>SAMPLE: TC<br>SAMPLE: Co<br>SAMPLE: TC<br>SAMPLE: TC   | roleum Hydrocarbons<br>e Note: Analysis performed by<br>v Cuttings<br>ED BY: SG<br>id<br>CLP Leachate of Inv Cuttin<br>ED BY: SG<br>TCLP extracted<br>TCLP extracted<br>TCLP extracted<br>TCLP extracted<br>n - TCLP extracted<br>n - TCLP extracted  | Result           96400 mg/Kg           Microbac Laboratories           Samp           Result           13.8 %           < 0.1 %                             | Method<br>EPA 9071<br>s, Inc-Erie Division<br>Lab ID: 10120835-001B<br>ole Time: 12/06/2010 10:05<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9095A<br>EPA 9045C<br>Lab ID: 10120835-001E<br>ole Time: 12/07/2010 8:00<br><u>Method</u><br>EPA 7470A<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B  | Compo<br>SLOQ<br>0.01<br>0.1<br>Compos<br>SLOQ<br>0.0008<br>0.500<br>10.00<br>0.100<br>0.500                   | 12/08/10 14:<br>site<br><u>Analysis Sta</u><br>12/06/10 17:<br>12/06/10 17:<br>12/07/10 14:<br>site<br><u>Analysis Sta</u><br>12/07/10 10:<br>12/08/10 12:<br>12/08/10 12:<br>12/08/10 12:<br>12/08/10 12:  | Analysis End           30         12/08/10           12/07/10         12/07/10           15         12/06/10           120         12/07/10           15         12/07/10           15         12/07/10           15         12/08/10           15         12/08/10           15         12/08/10           15         12/08/10           15         12/08/10  | Analvst *<br>IC-SA<br>IC-SA<br>MED-SA<br>MED-SA<br>MED-SA<br>MED-SA<br>MED-SA<br>GSR-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV                          |
| Test<br>Total Petr<br>Sample<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: TO<br>SAMPLE: TO<br>SAMPLE: TO<br>SAMPLE: TO<br>SAMPLE: TO<br>SAMPLE: TO<br>SAMPLE: Constant<br>Mercury -<br>Arsenic -<br>Barium -<br>Cadmium<br>Chromiun<br>Copper -  | roleum Hydrocarbons<br>e Note: Analysis performed by<br>v Cuttings<br>ED BY: SG<br>id<br>CLP Leachate of Inv Cuttin<br>ED BY: SG<br>TCLP extracted<br>TCLP extracted<br>TCLP extracted<br>ICLP extracted<br>n - TCLP extracted<br>TCLP extracted<br>ICLP extracted  | Result           96400 mg/Kg           Microbac Laboratories           Samp           Result           13.8 %           < 0.1 %                             | Method<br>EPA 9071<br>s, Inc-Erie Division<br>Lab ID: 10120835-001B<br>ole Time: 12/06/2010 10:05<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9095A<br>EPA 9045C<br>Lab ID: 10120835-001E<br>ole Time: 12/07/2010 8:00<br><u>Method</u><br>EPA 7470A<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B   | Compo<br>SLOQ<br>0.01<br>0.1<br>Compos<br>SLOQ<br>0.0008<br>0.500<br>10.00<br>0.100<br>0.500<br>0.100          | 12/08/10 14:<br>site<br><u>Analysis Sta</u><br>12/06/10 17:<br>12/06/10 17:<br>12/07/10 14:<br>site<br><u>Analysis Sta</u><br>12/07/10 10:<br>12/08/10 12:<br>12/08/10 12:<br>12/08/10 12:  | Analysis End           30         12/08/10           12/07/10         12/07/10           15         12/06/10           20         12/07/10           15         12/07/10           15         12/07/10           15         12/08/10           15         12/08/10           15         12/08/10           15         12/08/10           15         12/08/10           15         12/08/10   | Anaivst *<br>IC-SA<br>IC-SA<br>MED-SA<br>MED-SA<br>MED-SA<br>MED-SA<br>GSR-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV                          |
| Test<br>Total Petr<br>Sample<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: TO<br>SAMPLE:      | roleum Hydrocarbons<br>e Note: Analysis performed by<br><b>v Cuttings</b><br>ED BY: SG<br>id<br><b>CLP Leachate of Inv Cuttin</b><br>ED BY: SG<br>TCLP extracted<br>TCLP extracted<br>TCLP extracted<br>ITCLP extracted<br>In - TCLP extracted<br>In - TCLP extracted<br>ICLP extracted<br>ICLP extracted<br>ICLP extracted<br>ICLP extracted<br>ICLP extracted<br>ICLP extracted | Result           96400 mg/Kg           Microbac Laboratories           Samp           Result           13.8 %           < 0.1 %                             | Method<br>EPA 9071           s, Inc-Erie Division           Lab ID: 10120835-001B           ole Time: 12/06/2010 10:05           Method           Moisture Calc.           EPA 9095A           EPA 9045C           Lab ID: 10120835-001E           ole Time: 12/07/2010 8:00           Method           EPA 7470A           EPA 6010B   | Compo<br>SLOQ<br>0.01<br>0.1<br>Compos<br>SLOQ<br>0.0008<br>0.500<br>10.00<br>0.100<br>0.500                   | 12/08/10 14:         site         Analysis Sta         12/06/10 17:         12/06/10 17:         12/06/10 17:         12/06/10 17:         12/07/10 14:         site         Analysis Sta         12/07/10 10:         12/08/10 12:         12/08/10 12:         12/08/10 12:         12/08/10 12:         12/08/10 12:         12/08/10 12:  | Analysis End           30         12/08/10           12/07/10         12/07/10           15         12/07/10           15         12/07/10           15         12/07/10           15         12/07/10           15         12/08/10           15         12/08/10           15         12/08/10           15         12/08/10           15         12/08/10           15         12/08/10           15         12/08/10           15         12/08/10   | Analvst*<br>IC-SA<br>IC-SA<br>MED-SA<br>MED-SA<br>MED-SA<br>MED-SA<br>MED-SA<br>CSR-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV       |
| Test<br>Total Petr<br>Sample<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE<br>Test<br>Moisture<br>Free Liqu<br>pH<br>SAMPLE: TC<br>SAMPLE: TC<br>SAMPLE: TC<br>SAMPLE: C<br>SAMPLE: TC<br>SAMPLE: | roleum Hydrocarbons<br>e Note: Analysis performed by<br>v Cuttings<br>ED BY: SG<br>id<br>CLP Leachate of Inv Cuttin<br>ED BY: SG<br>TCLP extracted<br>TCLP extracted<br>TCLP extracted<br>n - TCLP extracted<br>n - TCLP extracted<br>n - TCLP extracted<br>CLP extracted<br>CLP extracted<br>CLP extracted   | Result           96400 mg/Kg           Microbac Laboratories           Samp           Result           13.8 %           < 0.1 %                             | Method<br>EPA 9071           s, Inc-Erie Division           Lab ID: 10120835-001B           ole Time: 12/06/2010 10:05           Method<br>Moisture Calc.           EPA 9095A           EPA 9095A           EPA 9045C           Lab ID: 10120835-001E           ole Time: 12/07/2010 8:00           Method<br>EPA 7470A           EPA 6010B           EPA 6010B | Compo<br>SLOQ<br>0.01<br>0.1<br>Compos<br>SLOQ<br>0.0008<br>0.500<br>0.100<br>0.500<br>0.100<br>0.500          | Analysis Sta           site           12/08/10 17:           12/06/10 17:           12/06/10 17:           12/06/10 17:           12/06/10 17:           12/07/10 14:           site           Analysis Sta           12/07/10 10:           12/08/10 12:           12/08/10 12:           12/08/10 12:           12/08/10 12:           12/08/10 12:           12/08/10 12:           12/08/10 12:           12/08/10 12:           12/08/10 12: | Analysis End           art         Analysis End           30         12/07/10           15         12/06/10           20         12/07/10           15         12/07/10           15         12/07/10           15         12/08/10           15         12/08/10           15         12/08/10           15         12/08/10           15         12/08/10           15         12/08/10           15         12/08/10           15         12/08/10  | Analvst*<br>IC-SA<br>IC-SA<br>MED-SA<br>MED-SA<br>MED-SA<br>MED-SA<br>MED-SA<br>CV<br>GSR-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV |
| Test<br>Total Petr<br>Sample<br>SAMPLE: Inv<br>SAMPLE: Inv<br>SAMPLE: TO<br>SAMPLE: TO<br>SAMPLE: TO<br>SAMPLE: TO<br>SAMPLE: TO<br>SAMPLE: TO<br>SAMPLE: TO<br>SAMPLE: TO<br>SAMPLE: TO<br>Cadmium<br>Chromium<br>Copper -<br>Lead - TO<br>Nickel - T<br>Selenium  | roleum Hydrocarbons<br>e Note: Analysis performed by<br><b>v Cuttings</b><br>ED BY: SG<br>id<br><b>CLP Leachate of Inv Cuttin</b><br>ED BY: SG<br>TCLP extracted<br>TCLP extracted<br>TCLP extracted<br>ITCLP extracted<br>ITCLP extracted<br>In - TCLP extracted<br>In - TCLP extracted<br>ICLP extracted<br>ICLP extracted<br>ICLP extracted<br>ICLP extracted                  | Result           96400 mg/Kg           Microbac Laboratories           Samp           Result           13.8 %           < 0.1 %                             | Method<br>EPA 9071           s, Inc-Erie Division           Lab ID: 10120835-001B           ole Time: 12/06/2010 10:05           Method           Moisture Calc.           EPA 9095A           EPA 9045C           Lab ID: 10120835-001E           ole Time: 12/07/2010 8:00           Method           EPA 7470A           EPA 6010B   | Compo<br>SLOQ<br>0.01<br>0.1<br>Compos<br>SLOQ<br>0.0008<br>0.500<br>0.100<br>0.500<br>0.100<br>0.500<br>0.100 | Analysis Sta           site           12/06/10 17:           12/06/10 17:           12/06/10 17:           12/06/10 17:           12/06/10 17:           12/07/10 14:           site           Analysis Sta           12/07/10 10:           12/08/10 12:           12/08/10 12:           12/08/10 12:           12/08/10 12:           12/08/10 12:           12/08/10 12:           12/08/10 12:           12/08/10 12:           12/08/10 12: | Analysis End           30         12/08/10           30         12/07/10           315         12/06/10           320         12/07/10           315         12/07/10           315         12/09/10           315         12/08/10           315         12/08/10           315         12/08/10           315         12/08/10           315         12/08/10           315         12/08/10           315         12/08/10           315         12/08/10           315         12/08/10           315         12/08/10 | Analvst*<br>IC-SA<br>IC-SA<br>MED-SA<br>MED-SA<br>MED-SA<br>MED-SA<br>MED-SA<br>CSR-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV<br>GSR-CV       |

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

DATE: <u>12/10/2010</u>

| CHAIN OF CUSTODY                      | 1  |   |   |                                       | PAGE0F                     |
|---------------------------------------|--|---|---|---------------------------------------|----------------------------|
| REPORT TO: Talisman / UEG             |  |   |   |                                       |                            |
| geowetlands@aol.com                   |  | V   | //O#: 10120835  |                                       | ARE SPECIAL DETECTION LIN  |
|                                       | REFRIGERATE SAMPI  |   |   |                                       | NEEDED: YES / NO           |
|                                       | AFTER COLLECTION   |   | RINKING WATER SL SLUDGE NYDOH NYD   | NG USED FOR:                          | IF YES, PLEASE ATTACH      |
| · · · · · · · · · · · · · · · · · · · | -  |   | RINKING WATER SL SLUDGE NYDOH NYI<br>ROUND WATER SO SOIL                    | DEC PADEP                             | IS A QC PACKAGE NEE        |
| CONTACT Steve Gridley                 | TRANSPORT  | f f   | URFACE WATER HZ HAZARDOUS LANI<br>VASTE WATER OTHER                         | DFILL                                 | YES 🔽 NO                   |
| PH# 607-731-0145                      | 1 70   |   | EIONIZED WATER DI DISTILLED WATER PERSONAL OTH                              | ER                                    | IF YES, PLEASE ATTACH REQU |
| FAX#                                  | LABORATORY<br>IN COOLER  |   | H HYDROCHLORIC ACID OH SODIUM HYDROXIDE<br>S SULFURIC ACID AS ASCORBIC ACID |                                       | 101                        |
| BILL TO: Talisman                     | WITHICE  | SAMPLETPE. GRAB/COMPOSITE                   | / N NITRIC ACID AC ACETIC ACID  | _ /                                   | LAB USE ONLY               |
|                                       | ·····  | $\left  \left  \frac{3}{2} \right  \right $ | Thio SODIUM THIOSULFATE ZN ZINC ACETATE                                     |                                       |                            |
| PO# AF 78557                          | DATE SAMPLED<br>TIME OF SAMPLED<br>SAMPLE MATRY  | 18 3  | - NONE Hg MERCURIC CHLORIDE   | COMPOSITED ON REC.                    | Please fill out            |
| PROJECT DESCRIPTION                   | LATE SAMPLED<br>TIME OF SAMPLED<br>SAMPLE MATRY  | PRESERVATURE                                | An incomplete chain of custody may delay the processing of your sample(s).  |                                       | applicable are             |
| SAMPLER SIGNATURE / AFFILIATION       | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1  |   |   |                                       | S completely               |
| CONTAINER SAMPLING POINT              |  |   | ANALYSIS TO BE PERFORMED  | 55 St.                                | LAB USE ONLY               |
|                                       | and the second s |   |   | Terrer Pressere                       |                            |
| 1 Inv Cuttings                        | 12/6 1005 50 C   | 56 N TP                                     |   |                                       |                            |
| 2                                     |  | рН  |   |                                       |                            |
| 3                                     | <b></b>  |   | CLP 8 RCRA Metals + Cu, Ni, Zn  |                                       |                            |
| 4                                     |  | Fre   | ee Liquids / % Moisture   |                                       |                            |
| 5 A- TPH                              | ,  |   | 1   |                                       |                            |
| 6 B- pH, Free Liquid,                 | 1. noisture  | Pe  | rform BTEX ONLY IF the TPH  |                                       |                            |
| 7 C- Anions, metals                   |  |   | exceeds 100,000 mg/Kg   |                                       |                            |
| 8 D- Total Sample                     |  |   | · · · · · · · · · · · · · · · · · · ·                                       |                                       |                            |
| PE- TCLP Metals                       |  |   | 72 HOUR TURNAROUND  |                                       |                            |
| 10                                    |  |   | DAY TURNAROUND  |                                       |                            |
| 11                                    |  |   |   |                                       |                            |
|                                       |  |   |   |                                       |                            |
| CERTIFICATION DELIVERED BY            |  |   |   | 1                                     | C. ARRIVALONIQ             |
| RELINQUISHED BY                       | DATE:  | TIME:                                       | RECEIVED BY:  |                                       | DATE: TIME:                |
| 9.001                                 | 12161  | 10 154                                      | 0   |                                       | 11                         |
| RELINQUISHED BY:                      | DATE:  | TIME:                                       | RECEIVED BY:  |                                       | DATE: TIME:                |
| RELINQUISHED BY:                      | DATE:  | TIME:                                       | RECEIVED BY the los M   | · · · · · · · · · · · · · · · · · · · | DATE I LOIN TIME           |
| 1                                     |  |   | I = I = I = I = I = I = I = I = I = I =                                     | 7                                     | 1210111                    |

•

NAME:

ADDRESS:

# Benchmark Analytics, Inc. Eastern Division

Eastern Division

2566 Pennsylvania Ave. Sayre, PA 18840

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

## Work Order: 10121734

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

# **TEST REPORT**

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

Dina Brown

COMPANY: Talisman Energy USA, Inc.

337 Daniel Zenker Dr Horseheads, NY 14845

01-075

RECEIVED FOR LAB BY: RML DATE: 12/09/2010 15:45 Page 1 of 3 SAMPLE: Inv. Cuttings Lab ID: 10121734-001A Grab SAMPLED BY: SG Sample Time: 12/09/2010 11:42 SLOQ Result Method Analysis Start Analysis End Analyst \* Test SW846 1030 Ignitability Neg ASIS °F 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 SLOQ Analysis End Analyst\* Analysis Start Result Method Test SW 7.3.3.2 0.2 12/13/10 8:56 12/14/10 HDP-CV Cyanide, Reactive 0.2 mg/Kg LTW-CV **Reactive Sulfide** 1200 mg/Kg SW846 7.3 16 12/14/10 12:30 12/14/10 Lab ID: 10121734-001D Grab SAMPLE: Inv. Cuttings SAMPLED BY: SG Sample Time: 12/09/2010 11:42 SLOQ Analysis End Analyst \* Method Analysis Start Test Result SM2540B 12/13/10 % Solids 76.55 % Wght. 0.10 12/10/10 17:00 IC-SA 15.07 % Wght. EPA 160.4 12/10/10 8:00 12/14/10 **Total Volatile Solids** 0.01 NFM-SA Lab ID: 10121734-001F Grab SAMPLE: TCLP Leachate of Inv. Cuttings SAMPLED BY: SG Sample Time: 12/11/2010 12:45 SLOQ Analysis Start Analysis End Analyst \* Test Result Method 0.10 12/15/10 7:48 12/15/10 Pyridine < 0.10 mg/L EPA 8270C RHH-SA 1,4-Dichlorobenzene < 0.10 mg/L EPA 8270C 0.10 12/15/10 7:48 12/15/10 RHH-SA 12/15/10 7:48 12/15/10 o-Cresol < 0.10 mg/L EPA 8270C 0.10 RHH-SA EPA 8270C 0.10 12/15/10 7:48 12/15/10 RHH-SA p-Cresol/m-Cresol < 0.10 mg/L < 0.10 mg/L EPA 8270C 0.10 12/15/10 7:48 12/15/10 RHH-SA Hexachioroethane 0.10 12/15/10 7:48 12/15/10 Nitrobenzene < 0.10 mg/L EPA 8270C **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

L Value above calibration range but within annually verified linear range

MANAGER

ani M. Davis

DATE: 12/16/2010

<sup>.</sup> 

# **Benchmark Analytics, Inc.**

**Eastern Division** 

2566 Pennsylvania Ave. Sayre, PA 18840

Work Order: 10121734

| Phone: | (570) 888-0 | 169 |
|--------|-------------|-----|
| Fax:   | (570) 888-0 | 717 |

# SEND DATA TO:

| SEND DATA              | A TO:                            |                                |                             |                  |                   |                    |                  |
|------------------------|----------------------------------|--------------------------------|-----------------------------|------------------|-------------------|--------------------|------------------|
| NAME:                  | Dina Brown                       |                                |                             | W                | O#:               | 10121734           |                  |
| COMPANY:               | Talisman Energy USA, Inc         | <b>5.</b> :                    |                             |                  | CE.               | 0.410              |                  |
| ADDRESS:               | 337 Daniel Zenker Dr             |                                |                             | PA               | GE:               | 2 of 3             |                  |
|                        | Horseheads, NY 14845             |                                |                             | PC               | )#:               | AF78557            |                  |
| PHONE:<br>FAX:         | (607) 562-4000<br>(607) 562-4001 | TI                             | EST REPORT                  | PV               | VS ID#            |                    |                  |
| 01-                    | -075                             |                                |                             |                  |                   |                    |                  |
| RECEIVED F             | FOR LAB BY: RML                  | DAT                            | TE: 12/09/2010 15:45        |                  |                   | F                  | age 2 of 3       |
| 2,4,6-Tric             | chlorophenol                     | < 0.10 mg/L                    | EPA 8270C                   | 0.10             | 12/15/10          | 7:48 12/15/10      | RHH-SA           |
| 2,4,5-Tric             | chlorophenol                     | < 0.10 mg/L                    | EPA 8270C                   | 0.10             | 12/15/10          | 7:48 12/15/10      | RHH-SA           |
| Pentachic              | orophenol                        | < 0.50 mg/L                    | EPA 8270C                   | 0.50             | 1 <b>2/1</b> 5/10 | 7:48 12/15/10      | RHH-SA           |
| 2,4-Dinitr             | otoluene                         | < 0.10 mg/L                    | EPA 8270C                   | 0.10             | 12/15/10          | 7:48 12/15/10      | RHH-SA           |
| Hexachlo               | robenzene                        | < 0.10 mg/L                    | EPA 8270C                   | 0.10             | 12/15/10          | 7:48 12/15/10      | RHH-SA           |
| Naphthal               | ene                              | < 0.10 mg/L                    | EPA 8270C                   | 0.10             | 12/15/10          | 7:48 12/15/10      | RHH-SA           |
| SAMPLE: TO             | CLP Leachate of Inv. Cutting     | S                              | Lab ID: 10121734-001G       | Grab             |                   |                    |                  |
| SAMPLE                 | ED BY: SG                        | Sa                             | mple Time: 12/07/2010 8:00  |                  |                   |                    |                  |
| Test                   |                                  | Result                         | Method                      | <u>SLOO</u>      | Analysis S        | Start Analysis End | Applyet*         |
|                        | - TCLP extracted                 | 17.8 mg/L                      | L EPA 6010B                 | 0.050            | 12/08/10 1        |                    | GSR-CV           |
|                        | e Note: Sample for TCLP extracte | Ŷ                              |                             |                  | 12/00/10          | 12:00:00           | 0011-07          |
| SAMPLE TO              | CLP Leachate of Inv. Cutting     | e                              | Lab ID: 10121734-001H       | Grab             |                   |                    |                  |
|                        | ED BY: SG                        |                                | mple Time: 12/11/2010 12:45 | 0.00             |                   |                    |                  |
|                        |                                  |                                |                             | SLOQ             |                   |                    |                  |
| <u>Test</u>            |                                  | Result                         | Method                      |                  | Analysis S        |                    |                  |
| pH                     |                                  | 6.53@16.6°C                    | SM4500H+B                   |                  | 12/14/10          | 8:00 12/14/10      | SG-SA            |
| SAMPLE: ZH             | IE Extract of Inv. Cuttings      |                                | Lab ID: 10121734-0011       | Grab             |                   |                    |                  |
| SAMPLE                 | ED BY: SG                        | Şa                             | mple Time: 12/12/2010 13:10 |                  |                   |                    |                  |
|                        |                                  |                                | <b>14</b> .05.1             | <u>SLOQ</u>      | A 1               |                    |                  |
| <u>Test</u>            |                                  | Result                         | Method                      | 0.0250           | Analysis S        |                    |                  |
| Benzene<br>Carbon to   |                                  | < 0.0250 mg/L                  | EPA 8260B                   |                  | 12/13/10          |                    | CTM-SA           |
| Carbon te<br>Chlorober |                                  | < 0.0250 mg/L<br>< 0.0250 mg/L | EPA 8260B                   | 0.0250<br>0.0250 | 12/13/10          |                    | CTM-SA           |
| Chlorofor              |                                  | < 0.0250 mg/L<br>< 0.0250 mg/L | EPA 8260B<br>EPA 8260B      | 0.0250           | 12/13/10 0        |                    | CTM-SA<br>CTM-SA |
|                        |                                  | < 0.0250 mg/L<br>< 0.0250 mg/L | EPA 8260B                   | 0.0250           | 12/13/10          |                    | CTM-SA<br>CTM-SA |
| -                      |                                  | < 0.0250 mg/L<br>< 0.0250 mg/L | EPA 8260B                   | 0.0250           | 12/13/10          |                    | CTM-SA<br>CTM-SA |
|                        |                                  | < 0.0250 mg/L<br>< 0.0250 mg/L | EPA 8260B                   | 0.0250           | 12/13/10          |                    | CTM-SA<br>CTM-SA |
| Ethylbenz              |                                  | -                              | EPA 8260B                   | 0.0250           | 12/13/10          |                    | CTM-SA           |
| Isopropyll             | penzene                          | < 0.0250 mg/L                  |                             | 0.0200           | 12/13/10/         | 0.11 (2/13/10      | CTM-3A           |

### 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

L Value above calibration range but within annually verified linear range

anie M. Davis MANAGER

DATE: 12/16/2010

| PA ID #: 08-00380<br>NY ID # 11216  | <b>Eas</b><br>2566  | <b>ark Analytics, Ir<br/>tern Division</b><br>Pennsylvania Ave.<br>Iyre, PA 18840   | າc.  | Work   | <b>Order:</b> 101:                   | 21734                                   |
|---|---|---|--|--|--------------------------------------|---|
|   |   | e: (570) 888-0169<br>c: (570) 888-0717  |  |  |                                      |   |
| SEND DATA TO:   |   |   |  | -  | •                                    |   |
| NAME: Dina Brown  | í   |   | 1.07                                       | O#: 1012   | 21734                                |   |
| COMPANY: Talisman Energy USA,   | nc.   |   | •••  | 0#. 1012   | . 17 34                              |   |
| ADDRESS: 337 Daniel Zenker Dr   |   |   | PA   | AGE: 3 of  | 3                                    |   |
| Horseheads, NY 14845  | i   |   | PC   | )#: AF78   | 3557                                 |   |
|   |   |   |  |  |                                      |   |
| PHONE: (607) 562-4000<br>FAX: (607) 562-4001  | . TE  | EST REPORT  | PV   | VS ID#   |                                      |   |
| FAX: (607) 562-4001<br>01-075   | 1   |   |  |  |                                      |   |
| RECEIVED FOR LAB BY: RML  | DAT   | E: 12/09/2010 15:45   |  |  | Pa                                   | ige 3 of 3                              |
| 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-S/                                  |
| Vinyl chloride  | < 0.0250 mg/L   | EPA 8260B   | 0.0250                                     | 12/13/10 8:11                                    | 12/13/10                             | CTM-S/                                  |
| Methyl tert-butyl ether<br>2-Butanone   | < 0.0250 mg/L   | EPA 8260B   | 0.0250                                     | 12/13/10 8:11                                    | 12/13/10                             | CTM-S/                                  |
|   | < 0.0500 mg/L   | EPA 8260B   | 0.0500                                     | 12/13/10 8:11                                    | 12/13/10                             | CTM-S/                                  |
|   | <u>_</u>  |   |  |  |                                      |   |
| AMPLE: ASTM Extract of Inv. Cutting   | <b>S</b>  | Lab ID: 10121734-001J   | Grab                                       |  |                                      |   |
|   | <b>S</b>  | Lab ID: 10121734-001J<br>mple Time: 12/10/2010 11:15  |  |  |                                      |   |
| AMPLE: ASTM Extract of Inv. Cutting   | <b>S</b>  |   | Grab<br><u>SLOQ</u>                        | Analysis Start                                   | Analysis End                         | Analyst                                 |
| AMPLE: ASTM Extract of Inv. Cutting<br>SAMPLED BY: SG   | <b>IS</b> Sar   | mple Time: 12/10/2010 11:15   |  | Analysis Start<br>12/11/10 8:00                  | <u>Analysis End</u><br>12/13/10      |   |
| AMPLE: ASTM Extract of Inv. Cutting<br>SAMPLED BY: SG<br><u>Test</u><br>Chemical Oxygen Demand  | <b>js</b><br><u>Result</u><br>227 mg/L  | mple Time: 12/10/2010 11:15<br><u>Method</u>  | <u>SLOQ</u>                                |  |                                      |   |
| SAMPLE: ASTM Extract of Inv. Cutting<br>SAMPLED BY: SG<br><u>Test</u><br>Chemical Oxygen Demand   | IS Sar<br><u>Result</u><br>227 mg/L   | mple Time: 12/10/2010 11:15<br><u>Method</u><br>B HACH 8000   | <u>SLOQ</u><br>10                          |  |                                      |   |
| SAMPLE: ASTM Extract of Inv. Cutting<br>SAMPLED BY: SG<br><u>Test</u><br>Chemical Oxygen Demand<br>SAMPLE: ASTM Extract of Inv. Cutting<br>SAMPLED BY: SG   | IS Sar<br><u>Result</u><br>227 mg/L<br>IS Sar   | Method           B         HACH 8000           Lab ID: 10121734-001L           mple Time: 12/10/2010 11:15  | <u>SLOQ</u><br>10                          | 12/11/10 8:00                                    | 12/13/10                             | KMF-SA                                  |
| SAMPLE: ASTM Extract of Inv. Cutting<br>SAMPLED BY: SG<br><u>Test</u><br>Chemical Oxygen Demand<br>SAMPLE: ASTM Extract of Inv. Cutting<br>SAMPLED BY: SG<br><u>Test</u>  | IS Sar<br><u>Result</u><br>227 mg/L<br>IS Sar<br><u>Result</u>                            | mple Time: 12/10/2010 11:15<br><u>Method</u><br>B HACH 8000<br>Lab ID: 10121734-001L<br>mple Time: 12/10/2010 11:15<br><u>Method</u>  | <u>SLOQ</u><br>10<br>Grab                  | 12/11/10 8:00<br>Analysis Start                  | 12/13/10 Analysis End                | KMF-SA                                  |
| SAMPLE: ASTM Extract of Inv. Cutting<br>SAMPLED BY: SG<br><u>Test</u><br>Chemical Oxygen Demand<br>SAMPLE: ASTM Extract of Inv. Cutting<br>SAMPLED BY: SG<br><u>Test</u><br>pH  | IS<br><u>Result</u><br>227 mg/L<br>IS<br><u>Result</u><br>8.00@16.7°C                     | Method           B         Method           HACH 8000         HACH 8000           Lab ID:         10121734-001L           mple Time:         12/10/2010 11:15           Method         SM4500H+B                                | SLOQ<br>10<br>Grab<br>SLOQ                 | 12/11/10 8:00<br>Analysis Start<br>12/14/10 8:00 | 12/13/10<br>Analysis End<br>12/14/10 | KMF-SA<br>Analyst<br>SG-SA              |
| SAMPLE: ASTM Extract of Inv. Cutting<br>SAMPLED BY: SG<br><u>Test</u><br>Chemical Oxygen Demand<br>SAMPLE: ASTM Extract of Inv. Cutting<br>SAMPLED BY: SG<br><u>Test</u><br>pH<br>Total Solids                          | IS Sar<br><u>Result</u><br>227 mg/L<br>IS Sar<br><u>Result</u>                            | mple Time: 12/10/2010 11:15<br><u>Method</u><br>B HACH 8000<br>Lab ID: 10121734-001L<br>mple Time: 12/10/2010 11:15<br><u>Method</u><br>SM4500H+B<br>SM2540B  | SLOQ<br>10<br>Grab<br>SLOQ<br>0.10         | 12/11/10 8:00<br>Analysis Start                  | 12/13/10 Analysis End                | KMF-SA                                  |
| SAMPLE: ASTM Extract of Inv. Cutting<br>SAMPLED BY: SG<br><u>Test</u><br>Chemical Oxygen Demand<br>SAMPLE: ASTM Extract of Inv. Cutting<br>SAMPLED BY: SG<br><u>Test</u><br>pH<br>Total Solids<br>SAMPLE: Inv. Cuttings | IS<br><u>Result</u><br>227 mg/L<br>IS<br>San<br><u>Result</u><br>8.00@16.7°C<br>2080 mg/L | Method           B         Method           HACH 8000         Lab ID: 10121734-001L           mple Time: 12/10/2010 11:15         Method           SM4500H+B         SM2540B           Lab ID: 10121734-001M -         SM25400B | SLOQ<br>10<br>Grab<br>SLOQ                 | 12/11/10 8:00<br>Analysis Start<br>12/14/10 8:00 | 12/13/10<br>Analysis End<br>12/14/10 | KMF-SA<br>Analyst<br>SG-SA              |
| SAMPLE: ASTM Extract of Inv. Cutting<br>SAMPLED BY: SG<br><u>Test</u><br>Chemical Oxygen Demand<br>SAMPLE: ASTM Extract of Inv. Cutting<br>SAMPLED BY: SG<br><u>Test</u><br>pH<br>Total Solids                          | IS<br><u>Result</u><br>227 mg/L<br>IS<br>San<br><u>Result</u><br>8.00@16.7°C<br>2080 mg/L | mple Time: 12/10/2010 11:15<br><u>Method</u><br>B HACH 8000<br>Lab ID: 10121734-001L<br>mple Time: 12/10/2010 11:15<br><u>Method</u><br>SM4500H+B<br>SM2540B  | SLOQ<br>10<br>Grab<br>SLOQ<br>0.10<br>Grab | 12/11/10 8:00<br>Analysis Start<br>12/14/10 8:00 | 12/13/10<br>Analysis End<br>12/14/10 | KMF-SA<br>Analyst<br>SG-SA              |
| SAMPLE: ASTM Extract of Inv. Cutting<br>SAMPLED BY: SG<br><u>Test</u><br>Chemical Oxygen Demand<br>SAMPLE: ASTM Extract of Inv. Cutting<br>SAMPLED BY: SG<br><u>Test</u><br>pH<br>Total Solids<br>SAMPLE: Inv. Cuttings | IS<br><u>Result</u><br>227 mg/L<br>IS<br>San<br><u>Result</u><br>8.00@16.7°C<br>2080 mg/L | Method           B         Method           HACH 8000         Lab ID: 10121734-001L           mple Time: 12/10/2010 11:15         Method           SM4500H+B         SM2540B           Lab ID: 10121734-001M -         SM25400B | SLOQ<br>10<br>Grab<br>SLOQ<br>0.10         | 12/11/10 8:00<br>Analysis Start<br>12/14/10 8:00 | 12/13/10<br>Analysis End<br>12/14/10 | KMF-SA<br>Analyst <sup>4</sup><br>SG-SA |

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                |                 |               |                  | •             |                 |                | Benchn                             |   |                                       |  | ЗЕ <u>1</u>              | OF1                 |
|---------------------------------|-----------------|---------------|------------------|---------------|-----------------|----------------|------------------------------------|---|---------------------------------------|--|--------------------------|---------------------|
| REPORT TO: Talisman / UEG       | ] .             |               |                  |               | 2               | 566 F          | E<br>Pennsylva                     |   | 4040                                  |  |                          |                     |
| geowetlands@aol.com             |                 |               |                  |               | 2               | .0001          | Pho                                | W/O#:                                       | 1012                                  | 1734   |                          | ETECTION LIMITS     |
|                                 | DEE             |               |                  |               | <b>F</b> 0      |                | Fax. 👝                             | <b>, -</b> · .                              | r                                     |  | EDED: YES                |                     |
|                                 |                 | R CO          |                  | sampl<br>Tion | .ES             | 6              |                                    |   |                                       | RE BEING USED FOR:   | IF YES, PLEASE A         | ATTACH              |
|                                 | · ·             |               |                  |               |                 |                | W DRINKING WATER<br>W GROUND WATER | SO SOIL                                     | NYDOH                                 | NYDEC PADER  |                          | ACKAGE NEEDED?      |
| CONTACT Steve Gridley           | <b>ј</b> т      | RANS          | SPOR1            | r             |                 | 1 '            | W SURFACE WATER                    | HZ HAZARDOUS<br>OTHER                       |                                       | LANDFILL Mostoller   | . 🖸 YE                   | es 🔽 No             |
| PH# 607-731-0145                |                 | T             | 0                |               |                 | <u>م</u> ′     |                                    | R DI DISTILLED WA                           | TER PERSONAL                          | OTHER  | IF YES, PLEASE A         | ATTACH REQUIREMENT  |
| FAX#                            |                 | ABOR<br>IN CO |                  | Y             |                 |                | ₩ /H HYC<br>S SUL                  | ROCHLORIC ACID OH<br>FURIC ACID AS          | SODIUM HYDR                           | DXIDE  |                          |                     |
| BILL TO: Talisman               |                 | WITH          |                  |               |                 |                |                                    | RIC ACID AC                                 | ACETIC ACID<br>AMMONIUM CH            |  | BEC.                     |                     |
|                                 |                 | -7            | 7                | /             | ' /             | ్ష /           | Thio SOL                           | IUM THIOSULFATE ZN                          | ZINC ACETATE                          |  |                          |                     |
| 20# AF 7855 1                   |                 |               | 1                | 2/            | . / &           | <u>اً }</u>    | - NOM                              |   | MERCURIC CHI                          |  | / \$ F                   | Please fill out all |
| PROJECTOESCRIPTION 075          |                 | 19            | ang lang         |               | 14              |                |                                    | incomplete chain of cu<br>processing of you |                                       | the 5  | 3                        | pplicable areas     |
| SAMPLER SIGNATURE / AFFILIATION | 1 /.            | 13            | \$               | E             | 14              | 1              |                                    |   | · · · · · · · · · · · · · · · · · · · |  | \$ /                     | completely          |
| CONTAINER SAMPLING POINT        | 1               | The Sampled   | SALL OF SAMPLING | SALLE MATRIX  | Comple Type. GC | Parties MITLAL | AT AT                              | ANALYSIS TO BE PERFOR<br>(PER CONTAINER)    | MED                                   | LORIDE<br>ORIDE<br>(the OUL)<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>COULD<br>C | TAB U LE ADED ON RECEIPT | SE ONLY             |
| 1 Inv Cuttings                  | 12/9            | 1142          | 50               |               | 80-             |                |                                    | eactive Sulfide &                           | Cyanide                               |  |                          |                     |
| 2                               |                 |               | $\prod$          | С             |                 | 1              | PCBs, Total                        | Solids                                      | inner and " Plan and                  |  |                          |                     |
| 3 A-Phunde, Ign.                |                 |               |                  | G             |                 | $\square$      | Total Volatile                     | e Solids                                    |                                       |  |                          |                     |
| 4 E - Reactivity                |                 |               |                  | C             |                 |                | Ammonia-Ni                         | trogen                                      |                                       |  |                          |                     |
| 5 D-75, 7050                    |                 |               |                  | С             | 11-             |                | Water Leach                        | ing Procedure: (                            | COD,                                  |  |                          |                     |
| 6 E-T. Sample                   |                 | 1,            | 17               | С             | 11,             | 17             | Total Solid                        | is, Oil & Grease                            | ,                                     |  |                          |                     |
| 7 F-TCLP BNA, Posts.            |                 | _¥            |                  |               | 1               |                |                                    |   |                                       |  |                          |                     |
| 8 G-TCLP Hards Sr               |                 |               | <b>İ</b>         | 1             |                 | 1              | 1                                  |   | · .                                   |  |                          |                     |
| 9 H-TELP pH                     |                 | K-            | A                |               | 04              | E              | 36                                 | HOUR TURNA                                  | ROUND                                 |  |                          |                     |
| 10 I-TECP Vels.                 |                 | 6             | A                | m             | 17.             |                | 4                                  | DAY TURNARC                                 | DUND                                  |  |                          |                     |
| 11 J- ASTM COD, WHY             |                 | m-            | 7/               | X             |                 | 1              |                                    | • •••••••                                   |                                       |  |                          |                     |
|                                 |                 |               |                  |               |                 |                |                                    |   |                                       |  |                          |                     |
|                                 |                 |               |                  |               |                 |                |                                    |   | ମ୍ବ-ଆମ୍ବାର ମହ                         |  | ARRIV                    | ALONIGE AVUN        |
| RELINQUISHED BY.                | Sharper and and |               |                  | 9.11          | $\mathcal{R}$   | ΓIME:          | 530 REC                            | EIVED BY:                                   |                                       |  | DATE:                    | TIME:               |
| RELINQUISHED BY:                |                 |               |                  | <u>, .(</u>   |                 | TIME:          | REC                                | EIVED BY                                    | $\wedge$                              |  | DATE:                    | TIME:               |
| (<br>RELINQUISHED BY:           |                 |               | /<br>ATE: _      | 1             |                 | IME:           |                                    | ENEDBAL AA                                  | ALA                                   | · · · · · · · · · · · · · · · · · · ·  | DATE                     | TIME                |
|                                 |                 | 10            | ~~~ <i>t</i>     | 1             |                 | 11W C.         | INFL                               |   | 1 1 1 1 1                             |  | IUMIA A                  |                     |



COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WASTE MANAGEMENT

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

| typed or legit<br>each attache | bly printed in the spaces<br>d_sheet_as_Form 26R, i    | ely completed. All requi<br>provided. If additional sp<br>eference the item numb<br>s needs to match the date | ace is necessary, ident<br>er and identify the da | ify Date Receive   | USE: ONLY         |
|--------------------------------|--|---|---|--------------------|-------------------|
| General Refe                   | rence 287.54   |   |   |                    |                   |
| Date Prepare                   |  | ruary 11, 2011  |   |                    |                   |
|                                |  | CLIENT (GENERATOR   | OF THE WASTE) IN                                  | FORMATION          |                   |
| Company Nar<br>Talisman En     | ne<br>ergy USA Inc.                                    |   |   |                    |                   |
|                                | y, Name of Parent Compa                                | iny   |   | EPA                | Generator ID#     |
| Talisman En                    |  |   |   | <u>N/A</u>         |                   |
| 50 Pennwood                    | ling Address Line 1                                    | Co  | ompany Mailing Addres                             | ss Line 2          |                   |
|                                | Iress Last Line – City                                 | State   | Zip+4   | Phone              | Ext               |
| Warrendale                     |  | PA  | 15086   | (724) 814-530      |                   |
| Company Col<br>Brown           | ntact Last Name  | First Name<br>Dina  | MI  | Suffi              | x                 |
| Municipality                   |  |   | County  | ······             |                   |
| Warrendale                     |  |   | Allegheny   |                    |                   |
| Contact Phon<br>(724) 814-53   |  | Contact Email Address<br>dybrown@talismanusa.c  | om  |                    |                   |
|                                |  | / Mailing Address (noted a  |   |                    | Yes 🛛 No          |
| lf 'N <u>o'. de</u> scri       | be location of waste gene                              | eration and storage. Drill c  | uttings are generated du                          |                    |                   |
| the (03-                       |  | at 1314 Ameah Valley Roac   | I, Wells Township, Bradf                          | ord County, PA. Wa | iste is stored in |
| Municipality                   | Wells  | County Bradfo   |   | State              | PA                |
|                                |  | SECTION B. WAST   | <b>E DESCRIPTION</b>                              |                    |                   |
| Residual<br>Waste Code         |  | al Waste<br>scription   | Amount  | Unit of<br>Measure | Time<br>Frame     |
|                                |  |   |   |                    | Fidille           |
| 810                            | Drill cuttings (oil and g                              |   | 1,970   | 🗌 lb 🛛 🖾 ton       | One Time          |
| a. pH Ra                       | nge 8.09   | 1. GENERAL P<br>5 to 11.26  | ROPERTIES<br>(based on analyses or ki             | zowledge)          |                   |
|                                | cal State  | Liquid Waste (EPA Me  |   | iowiedge)          |                   |
|                                |  | Solid (EPA Method 909   | 95)   |                    |                   |
| c. Physic                      | cal Appearance   | Color Greyish Black   | Odo   |                    | t Petroleum       |
|                                |  | Number of Solid or Liquid   |   |                    |                   |
|                                |  | Describe each phase of s  | eparation. <u>Soil and Ro</u>                     | ck Fragments       |                   |
|                                | e state  | 2. CHEMICAL ANALYS  |   |                    | *                 |
| instru                         | ctions, is attached.                                   | cal characterization of the   |   | the 🛛              | Yes No            |
|                                |  | aste sampling method is a   |   |                    | Yes No            |
| c. The quartach                |  | ontrol procedures employ  | /ed by the laboratory(ie                          | es) is 🖂           | Yes No            |
|                                |  | aste determination is atta  | ched.   | $\square$          | Yes 🗌 No          |
|                                | icable, a detailed explana<br>actual chemical analysis | ition supporting use of ge  | nerator knowledge in                              | Yes                | No 🛛 N/A          |

|       | · 3   | <b>PROCESS DESCRIPTION 8</b> | SCHEMATIC ATTA         | CHMENTS            |               |
|-------|---|------------------------------|------------------------|--------------------|---------------|
| a.    | A detailed description of the                                   |                              |                        |                    | Yes No        |
|       | the waste, as specified in the                                  |                              |                        | producing          |               |
| b.    | A schematic of the manufactu<br>as specified in the instruction |                              | trol processes proc    | ducing the waste,  | Yes No        |
| C.    | If portions of the information a confidentiality claim, as des  |                              |                        | n for 🗌 Yes        | 🗋 No 🛛 N/A    |
|       | SECTIO  | ON C. MANAGEME               |                        |                    |               |
|       |   | 1. PROCESSING OR DI          | SPOSAL FACILITY (IE    | ES)                |               |
| The a | rea below (ad.) will accommod                                   |                              |                        |                    | if necessary. |
| а.    | Solid waste permit number(s)<br>8-4630-00010                    | for processing or dispos     | al facility being util | lized.             |               |
| b.    | Facility Name   | Hakes C&D Landfill           |                        |                    |               |
|       | Address Line 1  | 4376 Manning Ridge R         | oad                    |                    |               |
|       | Address Line 1  |                              |                        |                    |               |
|       | Address City State ZIP  | Painted Post                 | NY                     | 14870              |               |
|       | Municipality  | Erwin Twp                    | County                 | Steuben            |               |
| С.    | Facility Contact Name   | Joseph Boyles                |                        |                    |               |
|       | Title   |                              |                        |                    |               |
|       | Phone   | (607) 937-6044               | Email Address          | joe.boyles@case    | lla com       |
|       |   | (585) 466-7271               |                        | 100.001100@0000    | ald.com       |
| d.    | Volume of waste shipped to p                                    |                              | ility in the previous  | s vear.            |               |
|       | 1,034   | cuyd 🗌 gal [                 | ]lb 🛛 ton              | n (check one)      |               |
| а.    | Solid waste permit number(s)<br>9-0232-00003                    | for processing or dispos     | al facility being util | ized.              |               |
| 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@cas | sella.com     |
| d.    | Volume of waste shipped to p                                    | rocessing or disposal fac    | ility in the previous  | s year.            |               |
|       | 896   | cuyd 🗌 gal [                 | lb 🛛 ton               | (check one)        |               |
|       |   | 2. BENEFI                    | CIAL USE               |                    |               |
| a.    | Has the waste been approved                                     | for beneficial use?          |                        |                    | 🗌 Yes 🛛 No    |
|       | If "Yes", list the general permi                                |                              |                        |                    |               |
| b.    | Volume of waste beneficially u                                  | sed in the previous year.    |                        |                    |               |
|       | 0   | cuyd 🗌 gal [                 | lbton                  | (check one)        |               |

| (.)                         |   | PROCESS DESCRIPTION   | & SCHEMATIC ATT   | ACHMENTS  |               | etting and an |
|-----------------------------|---|---|---|---|---------------|---------------|
| a                           |   | a second state of the second state of the second second second state of the second state of the second second s | n de la constante de la constante de la constante de la constante de la constante de la constante de la constan<br>Notes de la constante de la constante de la constante de la constante de la constante de la constante de la cons | and the second construction of the second second second second second second second second second second second |               | No            |
| <u>.</u>                    |   |   |   |   |               |               |
| b.                          |   |   | ontrol processes pr   | oducing the waste,  | Yes 🗌         | No            |
| C.                          |   |   |   | ion for 🔲 Yes   | No 🛛          | N/A           |
|                             | SECTIO  |   | The California Construction and States Construction and an advantage of the Construction of the Construction of   | and a second second second second second second second second second second second second second second second  |               |               |
|                             |   |   |   |   |               |               |
| The a                       | rea below (ad.) will accommod   | ate the identification of   | two facilities. Atta  | ch additional sheets  | if necessary. |               |
| а.                          | Solid waste permit number(s)<br>100361  | for processing or dispo   | osal facility being u   | tilized.  |               | ···           |
| b.                          | Facility Name   | McKean County Land  | fill  |   |               |               |
| ]                           | Address Line 1  | 19 Ness Lane  |   |   |               |               |
|                             | Address Line 1  |   |   |   |               |               |
|                             | Address City State ZIP  | Kane  | PA  | 16735   |               |               |
|                             | Municipality  | Sergeant Twp  | County  | McKean  |               |               |
| c                           |   |   |   |   |               |               |
| 0.                          | -   | WIKE Manuellelu   |   |   |               |               |
|                             |   | (914) 778 0031  | Email Address   | mandorfold@am   | oil com       |               |
|                             | the waste, as specified in the instructions, is attached. b. A schematic of the manufacturing and/or pollution control processes producing the waste,  Yes  as specified in the instructions, is attached. c. If portions of the information submitted are confidential, the substantiation for  Yes  No  SECTION C. MANAGEMENT OF RESIDUAL WASTE 1: PROCESSING OR DISPOSAL FACILITY(IES) The area below (ad.) 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  Address Line 1 Address Line 1 Address Line 1 (B44) 778-9931 Email Address manderfeld@gmail.com (B44) 778-9931 Email Address manderfeld@gmail.com d. Volume of waste shipped to processing or disposal facility being utilized. b. Facility Name Address Line 1 A |   |   |   |               |               |
| d.                          | · · · ·   |   |   | -   | i i           |               |
| a.                          | Solid waste permit number(s)  | for processing or dispo   | sal facility being u  | tilized.  |               |               |
| b.                          | Facility Name   |   |   |   |               |               |
|                             | Address Line 1  |   |   |   |               |               |
|                             | Address Line 1  | ······································  |   |   |               |               |
|                             | Address City State ZIP  | ······  |   |   |               |               |
|                             | Municipality  |   | County  |   |               |               |
| C                           | Facility Contact Name   |   |   |   |               |               |
| 0.                          | -   |   | · · · · · · · · · · · · · · · · · · ·   |   |               |               |
|                             |   | ······································  | Email Address   |   |               |               |
| <u> </u>                    |   |   |   |   |               |               |
| d.                          | Volume of waste shipped to p  |   |   | •   |               |               |
| where we are started as for | ليسا  | • - •   |   |   |               |               |
|                             |   |   | FICIAL USE  |   |               | 1. e 0. j     |
| a.                          | Has the waste been approved   | for beneficial use?   |   |   | 🗌 Yes 🛛       | No            |
|                             | If "Yes", list the general perm   |   |   |   |               |               |
| b.                          | Volume of waste beneficially  |   |   |   |               |               |
|                             | 0   | cuyd 🗌 gal  | 🗍 lb 🗌 to   | on (check one)  |               |               |

|  |                             | SECTION D. CERTIFICATION  |
|--|-----------------------------|---|
| Report and all attached docu<br>obtaining the information, I<br>knowledge. I understand that | uments<br>verify<br>t the s | have personally examined and am familiar with the information submitted in this Annual<br>s and that based upon my inquiry of those individuals immediately responsible for<br>that the submitted information is true, accurate and complete to the best of my<br>submission of false information herein is made subject to the penalties of 18 Pa. C.S.<br>on to authorities, which include fine and imprisonment. |
| Check the following, if applica  | ble:                        |   |
| I certify the information  | -                           | ired in Section B-1, General Properties was supplied to the Department for the year   |
| Form Submitted:  |                             | Form 26R  |
|  |                             | Other (specify)   |
| Date Submitted:  |                             |   |
| I certify the information  | -                           | ired in Section B-2, Chemical Analysis was supplied to the Department for the year  |
| Form Submitted:  |                             | Form 26R  |
|  |                             | Other (specify)   |
| Date Submitted:  |                             |   |
| I certify the information<br>for the year and h  |                             | ed in Section B-3, Process Description and Schematic, was supplied to the Department t changed.   |
| Form Submitted:  |                             | Form 26R  |
|  |                             | Other (specify)   |
| Date Submitted:  |                             |   |
| Name of Responsible Official   |                             | Title Environmental Specialist  |
| Dina Brown Signature   | Ş,                          | Date 2/28/11  |

| LAB ID: 08-00380<br>LAB ID: 39-00401   | Easter<br>2566 Per<br>Sayre<br>Phone: (5   | <b>Analytics, Ir<br/>rn Division</b><br>nnsylvania Ave.<br>9, PA 18840<br>570) 888-0169<br>570) 888-0717   | ic.  | Work  | Order: 101   | 00746   |
|--|--|--|--|---|--|---|
| SEND DATA TO:  |  |  |  |   |  |   |
| NAME: Steve Gridley  |  |  | W  | /O#: 1010   | )0746  |   |
| COMPANY: Talisman Energy USA   | , Inc.   |  |  |   |  |   |
| ADDRESS: 337 Daniel Zenker Dr  |  |  | P/   | AGE: 1 of :   | 2  |   |
| Horseheads, NY 1484  | 15   |  | P  | O#: AF78  | 3035   |   |
| PHONE: (607) 731-0145<br>FAX: (607) 562-4001   | TES  | report   | P  | WS ID#  |  |   |
| 03-035   | 1440.44<br>1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -   | · · · · ·  |  | ···   |  |   |
| RECEIVED FOR LAB BY: DLM2  | DATE:  | 10/06/2010 9:55  |  |   | Pa   | age 1 of 2  |
| SAMPLE: Air Cuttings   |  | _ab ID: 10100746-001A  | Compo  | site  |  |   |
| SAMPLED BY: SG   | Sample   | Time: 10/05/2010 16:50   |  |   |  |   |
| Test   | Result   | Method   | <u>SLOQ</u>  | Analysis Start  | Analysis End   | Analyst *   |
| Total Petroleum Hydrocarbons   | 360 mg/Kg  | EPA 9071   |  | 10/08/10 14:00  | 10/08/10   | Analyst   |
| Sample Note: Analysis performed b  |  |  |  |   |  |   |
| SAMPLE: Air Cuttings   | ········   | 1 10 40400740 0040   | Compo  | eite  |  |   |
| A DESIGNED DE CARLES DE LE CONTRACTO DE LA CONTRACTÓ DE CONTRACTÓ DE LA CONTRA |  | -ad ID: 10100746-001B  |  |   |  |   |
| SAMPLE: Air Cuttings<br>SAMPLED BY: SG   | -  | ab ID: 10100746-001B<br>Time: 10/05/2010 16:50   | Compu  | .5165   |  |   |
| SAMPLED BY: SG   | Sample   | Time: 10/05/2010 16:50   | SLOQ   |   | Analusia End   | Amol: 104 *   |
| SAMPLED BY: SG   | Sample<br><u>Result</u>  | Time: 10/05/2010 16:50<br><u>Method</u>  | <u>SLOQ</u>  | Analysis Start  | Analysis End   |   |
| SAMPLED BY: SG<br><u>Test</u><br>Moisture  | Sample<br><u>Result</u><br>22.7 %  | Time: 10/05/2010 16:50<br><u>Method</u><br>Moisture Calc.  | <u>SLOQ</u><br>0.01  | <u>Analysis Start</u><br>10/06/10 10:30   | 10/07/10   | NFM-SA  |
| SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Liquid   | Sample<br><u>Result</u><br>22.7 %<br>< 0.1 %   | Time: 10/05/2010 16:50<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A   | <u>SLOQ</u>  | <u>Analysis Start</u><br>10/06/10 10:30<br>10/08/10 11:05   | 10/07/10<br>10/08/10   | NFM-SA<br>IC-SA   |
| SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH   | Sample<br><u>Result</u><br>22.7 %<br>< 0.1 %<br>11.26@20.4C  | Time: 10/05/2010 16:50<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C  | <u>SLOQ</u><br>0.01<br>0.1   | Analysis Start<br>10/06/10 10:30<br>10/08/10 11:05<br>10/06/10 16:30  | 10/07/10   | NFM-SA  |
| SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: Air Cuttings   | Sample<br><u>Result</u><br>22.7 %<br>< 0.1 %<br>11.26@20.4C  | Time: 10/05/2010 16:50<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>ab ID: 10100746-001C  | <u>SLOQ</u><br>0.01  | Analysis Start<br>10/06/10 10:30<br>10/08/10 11:05<br>10/06/10 16:30  | 10/07/10<br>10/08/10   | NFM-SA<br>IC-SA   |
| SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: Air Cuttings<br>SAMPLED BY: SG   | Sample<br><u>Result</u><br>22.7 %<br>< 0.1 %<br>11.26@20.4C<br>L<br>Sample   | Time: 10/05/2010 16:50<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>ab ID: 10100746-001C<br>Time: 10/05/2010 16:50  | <u>SLOQ</u><br>0.01<br>0.1   | Analysis Start<br>10/06/10 10:30<br>10/08/10 11:05<br>10/06/10 16:30<br>site  | 10/07/10<br>10/08/10   | NFM-SA<br>IC-SA   |
| SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: Air Cuttings<br>SAMPLED BY: SG<br><u>Test</u>  | Sample<br><u>Result</u><br>22.7 %<br>< 0.1 %<br>11.26@20.4C<br>L<br>Sample<br><u>Result</u>  | Time: 10/05/2010 16:50<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>ab ID: 10100746-001C<br>Time: 10/05/2010 16:50<br><u>Method</u>   | <u>SLOQ</u><br>0.01<br>0.1<br>Compo  | Analysis Start<br>10/06/10 10:30<br>10/08/10 11:05<br>10/06/10 16:30<br>site<br>Analysis Start  | 10/07/10<br>10/08/10   | NFM-SA<br>IC-SA   |
| SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: Air Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Sodium  | Sample<br><u>Result</u><br>22.7 %<br>< 0.1 %<br>11.26@20.4C<br>L<br>Sample<br><u>Result</u><br>320 mg/Kg-dry   | Time: 10/05/2010 16:50<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>ab ID: 10100746-001C<br>Time: 10/05/2010 16:50<br><u>Method</u><br>EPA 6010B  | <u>SLOQ</u><br>0.01<br>0.1<br>Compo<br><u>SLOQ</u><br>78.9   | Analysis Start<br>10/06/10 10:30<br>10/08/10 11:05<br>10/06/10 16:30<br>site<br>Analysis Start<br>10/07/10 12:30  | 10/07/10<br>10/08/10<br>10/06/10<br><u>Analysis End</u><br>10/08/10  | NFM-SA<br>IC-SA<br>NFM-SA<br><u>Analyst *</u><br>GSR-CV   |
| SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Llquid<br>pH<br>SAMPLE: Air Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Sodium<br>Chloride  | Sample<br><u>Result</u><br>22.7 %<br>< 0.1 %<br>11.26@20.4C<br>L<br>Sample<br><u>Result</u><br>320 mg/Kg-dry<br>166 mg/Kg-dry  | Time: 10/05/2010 16:50<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>ab ID: 10100746-001C<br>Time: 10/05/2010 16:50<br><u>Method</u><br>EPA 6010B<br>EPA 300.0   | <u>SLOQ</u><br>0.01<br>0.1<br>Compo<br><u>SLOQ</u>   | Analysis Start<br>10/06/10 10:30<br>10/08/10 11:05<br>10/06/10 16:30<br>site<br>Analysis Start<br>10/07/10 12:30<br>10/07/10 14:51  | 10/07/10<br>10/08/10<br>10/06/10<br><u>Analysis End</u><br>10/08/10<br>10/08/10  | NFM-SA<br>IC-SA<br>NFM-SA<br><u>Analyst *</u><br>GSR-CV<br>HDP-CV   |
| SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: Air Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Sodium  | Sample<br><u>Result</u><br>22.7 %<br>< 0.1 %<br>11.26@20.4C<br>L<br>Sample<br><u>Result</u><br>320 mg/Kg-dry   | Time: 10/05/2010 16:50<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>ab ID: 10100746-001C<br>Time: 10/05/2010 16:50<br><u>Method</u><br>EPA 6010B  | <u>SLOQ</u><br>0.01<br>0.1<br>Compo<br><u>SLOQ</u><br>78.9   | Analysis Start<br>10/06/10 10:30<br>10/08/10 11:05<br>10/06/10 16:30<br>site<br>Analysis Start<br>10/07/10 12:30  | 10/07/10<br>10/08/10<br>10/06/10<br><u>Analysis End</u><br>10/08/10  | NFM-SA<br>IC-SA<br>NFM-SA<br><u>Analyst *</u><br>GSR-CV   |
| SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Llquid<br>pH<br>SAMPLE: Air Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Sodium<br>Chloride<br>Percent Moisture<br>SAMPLE: TCLP Leachate of Air Cutti  | Sample<br><u>Result</u><br>22.7 %<br>< 0.1 %<br>11.26@20.4C<br>L<br>Sample<br><u>Result</u><br>320 mg/Kg-dry<br>166 mg/Kg-dry<br>22.7 %<br><b>ngs</b>  | Time: 10/05/2010 16:50<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>ab ID: 10100746-001C<br>Time: 10/05/2010 16:50<br><u>Method</u><br>EPA 6010B<br>EPA 300.0<br>SM2540G<br>ab ID: 10100746-001E  | <u>SLOQ</u><br>0.01<br>0.1<br>Compo<br><u>SLOQ</u><br>78.9   | Analysis Start<br>10/06/10 10:30<br>10/08/10 11:05<br>10/06/10 16:30<br>site<br>Analysis Start<br>10/07/10 12:30<br>10/07/10 14:51<br>10/06/10 10:30  | 10/07/10<br>10/08/10<br>10/06/10<br><u>Analysis End</u><br>10/08/10<br>10/08/10  | NFM-SA<br>IC-SA<br>NFM-SA<br><u>Analyst *</u><br>GSR-CV<br>HDP-CV   |
| SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Llquid<br>pH<br>SAMPLE: Air Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Sodium<br>Chloride<br>Percent Moisture  | Sample<br><u>Result</u><br>22.7 %<br>< 0.1 %<br>11.26@20.4C<br>L<br>Sample<br><u>Result</u><br>320 mg/Kg-dry<br>166 mg/Kg-dry<br>22.7 %<br><b>ngs</b>  | Time: 10/05/2010 16:50<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>ab ID: 10100746-001C<br>Time: 10/05/2010 16:50<br><u>Method</u><br>EPA 6010B<br>EPA 300.0<br>SM2540G  | SLOQ           0.01           0.1           Compo           SLOQ           78.9           60.6           Compo   | Analysis Start<br>10/06/10 10:30<br>10/08/10 11:05<br>10/06/10 16:30<br>site<br>Analysis Start<br>10/07/10 12:30<br>10/07/10 14:51<br>10/06/10 10:30  | 10/07/10<br>10/08/10<br>10/06/10<br><u>Analysis End</u><br>10/08/10<br>10/08/10  | NFM-SA<br>IC-SA<br>NFM-SA<br><u>Analyst *</u><br>GSR-CV<br>HDP-CV   |
| SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Llquid<br>pH<br>SAMPLE: Air Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Sodium<br>Chloride<br>Percent Moisture<br>SAMPLE: TCLP Leachate of Air Cutti<br>SAMPLED BY: SG  | Sample<br><u>Result</u><br>22.7 %<br>< 0.1 %<br>11.26@20.4C<br>L<br>Sample<br><u>Result</u><br>320 mg/Kg-dry<br>166 mg/Kg-dry<br>22.7 %<br><b>ngs</b><br>L<br>Sample   | Time: 10/05/2010 16:50<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>ab ID: 10100746-001C<br>Time: 10/05/2010 16:50<br><u>Method</u><br>EPA 6010B<br>EPA 300.0<br>SM2540G<br>ab ID: 10100746-001E<br>Time: 10/07/2010 9:15   | <u>SLOQ</u><br>0.01<br>0.1<br>Compo<br><u>SLOQ</u><br>78.9<br>60.6   | Analysis Start<br>10/06/10 10:30<br>10/08/10 11:05<br>10/06/10 16:30<br>site<br>Analysis Start<br>10/07/10 12:30<br>10/07/10 14:51<br>10/06/10 10:30<br>site  | 10/07/10<br>10/08/10<br>10/06/10<br><u>Analysis End</u><br>10/08/10<br>10/08/10<br>10/07/10  | NFM-SA<br>IC-SA<br>NFM-SA<br><u>Analyst *</u><br>GSR-CV<br>HDP-CV<br>NFM-SA                                 |
| SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Llquid<br>pH<br>SAMPLE: Air Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Sodium<br>Chloride<br>Percent Moisture<br>SAMPLE: TCLP Leachate of Air Cutti  | Sample<br><u>Result</u><br>22.7 %<br>< 0.1 %<br>11.26@20.4C<br>L<br>Sample<br><u>Result</u><br>320 mg/Kg-dry<br>166 mg/Kg-dry<br>22.7 %<br><b>ngs</b>  | Time: 10/05/2010 16:50<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>ab ID: 10100746-001C<br>Time: 10/05/2010 16:50<br><u>Method</u><br>EPA 6010B<br>EPA 300.0<br>SM2540G<br>ab ID: 10100746-001E  | SLOQ           0.01           0.1           Compo           SLOQ           78.9           60.6           Compo   | Analysis Start<br>10/06/10 10:30<br>10/08/10 11:05<br>10/06/10 16:30<br>site<br>Analysis Start<br>10/07/10 12:30<br>10/07/10 14:51<br>10/06/10 10:30  | 10/07/10<br>10/08/10<br>10/06/10<br><u>Analysis End</u><br>10/08/10<br>10/08/10  | NFM-SA<br>IC-SA<br>NFM-SA<br><u>Analyst *</u><br>GSR-CV<br>HDP-CV   |
| SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Llquid<br>pH<br>SAMPLE: Air Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Sodium<br>Chloride<br>Percent Moisture<br>SAMPLE: TCLP Leachate of Air Cutti<br>SAMPLED BY: SG<br><u>Test</u>   | Sample<br><u>Result</u><br>22.7 %<br>< 0.1 %<br>11.26@20.4C<br>L<br>Sample<br><u>Result</u><br>320 mg/Kg-dry<br>166 mg/Kg-dry<br>22.7 %<br><b>ngs</b><br>L<br>Sample<br><u>Result</u>  | Time: 10/05/2010 16:50<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>ab ID: 10100746-001C<br>Time: 10/05/2010 16:50<br><u>Method</u><br>EPA 6010B<br>EPA 300.0<br>SM2540G<br>ab ID: 10100746-001E<br>Time: 10/07/2010 9:15<br><u>Method</u>  | SLOQ           0.01           0.1           Compo           SLOQ           78.9           60.6           Compo           SLOQ  | Analysis Start<br>10/06/10 10:30<br>10/08/10 11:05<br>10/06/10 16:30<br>site<br>Analysis Start<br>10/07/10 12:30<br>10/07/10 14:51<br>10/06/10 10:30<br>site<br>Analysis Start  | 10/07/10<br>10/08/10<br>10/06/10<br><u>Analysis End</u><br>10/08/10<br>10/07/10<br><u>Analysis End</u>                                     | NFM-SA<br>IC-SA<br>NFM-SA<br>Analyst *<br>GSR-CV<br>HDP-CV<br>NFM-SA  |
| SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Llquid<br>pH<br>SAMPLE: Air Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Sodium<br>Chloride<br>Percent Moisture<br>SAMPLE: TCLP Leachate of Air Cutti<br>SAMPLED BY: SG<br><u>Test</u><br>Mercury - TCLP extracted   | Sample<br><u>Result</u><br>22.7 %<br>< 0.1 %<br>11.26@20.4C<br>L<br>Sample<br><u>Result</u><br>320 mg/Kg-dry<br>166 mg/Kg-dry<br>22.7 %<br><b>ngs</b><br>L<br>Sample<br><u>Result</u><br>< 0.0008 mg/L                                 | Time: 10/05/2010 16:50<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>ab ID: 10100746-001C<br>Time: 10/05/2010 16:50<br><u>Method</u><br>EPA 6010B<br>EPA 300.0<br>SM2540G<br>ab ID: 10100746-001E<br>Time: 10/07/2010 9:15<br><u>Method</u><br>EPA 7470A                           | SLOQ           0.01           0.1           Compo           SLOQ           78.9           60.6           Compo           SLOQ           0.0008                                 | Analysis Start<br>10/06/10 10:30<br>10/08/10 11:05<br>10/06/10 16:30<br>site<br>Analysis Start<br>10/07/10 12:30<br>10/07/10 14:51<br>10/06/10 10:30<br>site<br>Analysis Start<br>10/08/10 8:40   | 10/07/10<br>10/08/10<br>10/06/10<br><u>Analysis End</u><br>10/08/10<br>10/07/10<br><u>Analysis End</u><br>10/11/10                         | NFM-SA<br>IC-SA<br>NFM-SA<br><u>Analyst *</u><br>GSR-CV<br>HDP-CV<br>NFM-SA<br><u>Analyst *</u><br>KW-CV    |
| SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Llquid<br>pH<br>SAMPLE: Air Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Sodium<br>Chloride<br>Percent Moisture<br>SAMPLE: TCLP Leachate of Air Cutti<br>SAMPLED BY: SG<br><u>Test</u><br>Mercury - TCLP extracted<br>Arsenic - TCLP extracted   | Sample<br><u>Result</u><br>22.7 %<br>< 0.1 %<br>11.26@20.4C<br>L<br>Sample<br><u>Result</u><br>320 mg/Kg-dry<br>166 mg/Kg-dry<br>22.7 %<br><b>ngs</b><br>L<br>Sample<br><u>Result</u><br>< 0.0008 mg/L<br>< 0.500 mg/L                 | Time: 10/05/2010 16:50<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>ab ID: 10100746-001C<br>Time: 10/05/2010 16:50<br><u>Method</u><br>EPA 6010B<br>EPA 300.0<br>SM2540G<br>ab ID: 10100746-001E<br>Time: 10/07/2010 9:15<br><u>Method</u><br>EPA 7470A<br>EPA 6010B              | SLOQ           0.01           0.1           Compo           SLOQ           78.9           60.6           Compo           SLOQ           0.0008           0.500                 | Analysis Start<br>10/06/10 10:30<br>10/08/10 11:05<br>10/06/10 16:30<br>site<br>Analysis Start<br>10/07/10 12:30<br>10/07/10 10:30<br>site<br>Analysis Start<br>10/06/10 10:30<br>site<br>Analysis Start<br>10/08/10 8:40<br>10/08/10 12:30 | 10/07/10<br>10/08/10<br>10/06/10<br><u>Analysis End</u><br>10/08/10<br>10/07/10<br><u>Analysis End</u><br>10/11/10<br>10/08/10             | NFM-SA<br>IC-SA<br>NFM-SA<br>Analyst *<br>GSR-CV<br>HDP-CV<br>NFM-SA<br><u>Analyst *</u><br>KW-CV<br>GSR-CV |
| SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: Air Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Sodium<br>Chloride<br>Percent Moisture<br>SAMPLE: TCLP Leachate of Air Cutti<br>SAMPLED BY: SG<br><u>Test</u><br>Mercury - TCLP extracted<br>Arsenic - TCLP extracted<br>Barium - TCLP extracted  | Sample<br><u>Result</u><br>22.7 %<br>< 0.1 %<br>11.26@20.4C<br>L<br>Sample<br><u>Result</u><br>320 mg/Kg-dry<br>166 mg/Kg-dry<br>22.7 %<br><b>ngs</b><br>L<br>Sample<br><u>Result</u><br>< 0.0008 mg/L<br>< 0.500 mg/L<br>< 10.00 mg/L | Time: 10/05/2010 16:50<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>ab ID: 10100746-001C<br>Time: 10/05/2010 16:50<br><u>Method</u><br>EPA 6010B<br>EPA 300.0<br>SM2540G<br>ab ID: 10100746-001E<br>Time: 10/07/2010 9:15<br><u>Method</u><br>EPA 7470A<br>EPA 6010B<br>EPA 6010B | SLOQ           0.01           0.1           Compo           SLOQ           78.9           60.6           Compo           SLOQ           0.0008           0.500           10.00 | Analysis Start<br>10/06/10 10:30<br>10/08/10 11:05<br>10/06/10 16:30<br>site<br>Analysis Start<br>10/07/10 12:30<br>10/07/10 14:51<br>10/06/10 10:30<br>site<br>Analysis Start<br>10/08/10 8:40<br>10/08/10 12:30<br>10/08/10 12:30         | 10/07/10<br>10/08/10<br>10/06/10<br><u>Analysis End</u><br>10/08/10<br>10/07/10<br><u>Analysis End</u><br>10/11/10<br>10/08/10<br>10/08/10 | NFM-SA<br>IC-SA<br>NFM-SA<br>GSR-CV<br>HDP-CV<br>NFM-SA<br><u>Analyst *</u><br>KW-CV<br>GSR-CV<br>GSR-CV    |

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-(<br>LAB ID: 39-( |  | 2566 Penn    | Analytics, In<br>Division<br>sylvania Ave.<br>PA 18840 | C.    |          | Work (  | Order: 101 | 100746     |
|------------------------------|--|--------------|--|-------|----------|---------|------------|------------|
|                              |  | •            | 0) 888-0169<br>0) 888-0717                             |       |          |         |            |            |
| SEND DATA                    | A TO:  |              |  |       |          |         |            |            |
| NAME:                        | Steve Gridley                                |              |  | W     | O#:      | 10100   | 746        |            |
| COMPANY:<br>ADDRESS:         | Talisman Energy USA, In 337 Daniel Zenker Dr | NC.          |  | PA    | GE:      | 2 of 2  |            |            |
| ADDRESS.                     | Horseheads, NY 14845                         |              |  | DC    | N44.     | A E 700 | nr.        |            |
|                              | ·····  |              |  | PC    | J#:      | AF780   | 30         |            |
| PHONE:<br>FAX:               | (607) 731-0145<br>(607) 562-4001             | TEST         | REPORT   | , PV  | VS ID#   |         |            |            |
| 03-03                        | 35   |              |  |       |          |         |            |            |
| RECEIVED I                   | FOR LAB BY: DLM2                             | DATE: 10     | )/06/2010 9:55   |       |          |         | Р          | age 2 of 2 |
| Lead - T(                    | CLP extracted                                | < 0.500 mg/L | EPA 6010B  | 0.500 | 10/08/10 | 12:30   | 10/08/10   | GSR-CV     |
| Nickel - 7                   | CLP extracted                                | < 0.100 mg/L | EPA 6010B  | 0.100 | 10/08/10 | 12:30   | 10/08/10   | GSR-CV     |
|                              | - TCLP extracted                             | < 0.500 mg/L | EPA 6010B  | 0.500 | 10/08/10 | 12:30   | 10/08/10   | GSR-CV     |
|                              | CLP extracted                                | < 0.100 mg/L | EPA 6010B  | 0.100 | 10/08/10 |         | 10/08/10   | GSR-CV     |
| Zinc - TC                    | LP extracted                                 | 0.206 mg/L   | EPA 6010B  | 0.200 | 10/08/10 | 12:30   | 10/08/10   | GSR-CV     |

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 \_\_\_\_\_ Davis \_\_\_\_\_ DATE: 10/12/2010

| SONTACT Steve Gridley       TRANSPORT       GW SURJEWAREN BY ALARADOUS       LANDFLL       DYS ZINA         HW 607-731-0145       LANDRATORY       IN COOLER       WW SURJEWAREN DI DISTILLEOWAREN PERSONAL OTHER       IPPES PLASE TACH REQUER         BALL TO' Tellisman       IN COOLER       WTHICE       IN MITGICADID       SOLUMI/PORKADE       IPPES PLASE TACH REQUER         OF A F -78 O 3.5       IN MITGICADID       A SULFING ACID       A CAETICA CID ON SOLUMI/PORKADE       IPPES PLASE TACH REQUER         OF A F -78 O 3.5       IN MITGICADID       A SULFING ACID       A CAETICA CID ON SOLUMI/PORKADE       IPPES PLASE TACH REQUER         OF A F -78 O 3.5       IN MITGICADID       A SULFING ACID       A ALYSIS TO BE PERFORMED       IPPES PLASE TACH REQUER         ONTAINER (SAMPLING POINT       IN JR ASO SOL       IN MITGICADID       A SULFING ACID ACITY       IPPES PLASE TACH REQUER         1 AIR Cuttings       Ars Social Color       IN MITGICADID       IPPES PLASE TACH REQUER       IPPES PLASE TACH REQUER       IPPES PLASE TACH REQUER         3       IN TRICKENTING ACIDY       IPPE PLASE TACH REQUER       IPPES PLASE TACH REQUER       IPPES PLASE TACH REQUER       IPPES PLASE TACH REQUER         4       A TO'L PES PLASE TACH REPORT       IPPES PLASE TACH REPORT       IPPES PLASE TACH REPORT       IPPES PLASE TACH REPORT       IPPES PLASE TACH REPORT       I   | INTACT Steve Gridley       TRANSPORT       / @/ @ GROWNO WATER       SO SOL  | eowetlands@aol.com<br>wollin@rallysolutions.ca   |            |  | RATE S                               |            | ES           | Гш.         | W/O#: 10100746  |            | IR:<br>ZI<br>PADEP | NEEDED: [_]YES<br>IF YES, PLEASE / | TACH              |                      |
|--|--|--|------------|--|--------------------------------------|------------|--------------|-------------|---|------------|--------------------|------------------------------------|-------------------|----------------------|
| 1       Air Cuttings       ArS #50 \$20 C       \$2 AV       TPH       Image: Ars and the second   | Air Cuttings       Image: Second   | Steve Ghuley<br>H# 607-731-0145<br>X#<br>ILL TO: Talisman  | ٦<br>L     | FRANS<br>T<br>Abor<br>In Co<br>With<br>7 | SPORT<br>O<br>IATOR<br>OLER<br>1 ICE | Г          |              | / SV<br>W   | V GROUND WATER SO SOIL<br>V SURFACE WATER HZ HAZARDOUS<br>V WASTE WATER OTHER<br>DEIONIZED WATER DI DISTILLED WATER DERSONAL OTHE | FILL       |                    |                                    | 5 <b>Z</b> M      | 10                   |
| 2       pH, Chlorides, Sodium         3       TCLP 8 RCRA Metals + Cu, Ni, Zn         4       A - 7PH         5       B · PH, Free Liquid % Motorul         6       C - Cl, Na         7       D T.Sample         8       E TCLP Matalpa Cu, Ni, Zn         9  | A-TPH       TCLP 8 RCRA Metals + Cu, Ni, Zn         A-TPH       Free Liquids / % Moisture         B-pH, Free Liquid / % Moisture       Free Liquids / % Moisture         D-C-Cl, Na       TCLP 8260 / 8270 ONLY IF the TPH         D-T.Sample       exceeds 120,000 mg/Kg         E-TCLP Moralbac       Date:         D-T.Sample       DATE:         BUELIVERED:BY       DATE:         DATE:       <   | AMPLER SIGNATURE / AFFILIATION   |            | The Samples                              | Same OF SAMPLING                     | SALLEHATRY | San Fringe   | PRESEMITING | An incomplete chain of custody may delay the<br>processing of your sample(s).<br>ANALYSIS TO BE PERFORMED<br>(PER CONTAINER)      | COMPOS     | PRESE OVE          | LAB                                | opilcabi<br>compl | le areas<br>letely ; |
| A-TPH     Free Liquids / % Moisture       B. pH, Free Liquid % Moisture       Q - Cl, Na       TCLP 8260 / 8270 ONLY IF the TPH       D T.Sample       exceeds 120,000 mg/Kg       E TCLP Motals - Cu, Ni, Zn       D T.Sample       D DAY TURNAROUND       D DAY TURNAROUND  | A-TPH       Free Liquids / % Moisture         B. pH, Free Liquid % Mo of Mo         C - CI, Na         D T.Sample         E TCLP Motals = Cu, Ni, Zn         Motals         TCLP 8260 / 8270 ONLY IF the TPH         D T.Sample         exceeds 120,000 mg/Kg         E TCLP Motals = Cu, Ni, Zn         Z2-HOUR TURNAROUND         DAY TURNAROUND         DELIVERED BY         SG         TEMPERATURE UPON RECEIPT         PATE         BIS 0.1V         DATE   | Air Cuttings   | 12.5       | ISC                                      | 50                                   | C          | R.           | N           |   |            |                    |                                    |                   | NOC                  |
| A-TPH<br>B. pH, Free Liquid % Moisture<br>C - CI, Na<br>D T.Sample<br>E TCLP Motaba Cu, Ni Zn<br>- CI Notaba Cu, Ni Ni Zn<br>- CI Notaba Cu, Ni Ni Zn<br>- CI Notaba Cu, Ni Zn   | A - TPH       Free Liquids / % Moisture         B · pH, Free Liquid % Moisture       TCLP 8260 / 8270 ONLY IF the TPH         C - CI, Na       TCLP 8260 / 8270 ONLY IF the TPH         D T.Sample       exceeds 120,000 mg/Kg         E TCLP Motals a Cu, Ni Zn       Z HOUR TURNAROUND         Motor TURNAROUND       Due 100 11/10.         BUSE ONY       SG         TEMPERATURE UPON RECEIPT       ************************************   |  |            |  | <b>_</b>                             | <b></b>    |              |             |   |            |                    |                                    |                   |                      |
| B PH Free Liquid % Moisture<br>C - CI Na<br>D T.Sample<br>E TCLP Metalba Cu, Ni Zn<br>DAY TURNAROUND<br>BUSE ONLY<br>SUSE ONLY<br>B DH Free Liquid % Moisture<br>TCLP 8260 / 8270 ONLY IF the TPH<br>A D T.Sample<br>E TCLP Metalba Cu, Ni Zn<br>DAY TURNAROUND<br>DAY TURNAROUND<br>DUE 10 11/10  | B PH, Free Liquid 72 Mo of me<br>C - CI, Na<br>D T. Sarride<br>E TCLP Metales Cu, Ni Zn<br>DATE: 610 TIME 954 RECEIVED BY: CMUL DATE: 610 0 TIME 954 RECEIVED BY: CMUL DATE: 610 0 TIME 954  |  |            |  |                                      |            | ╂            |             |   |            |                    |                                    |                   |                      |
| C-CI, Na<br>D T.Sample<br>E TCLP Motale Cu, Ni Zn<br>DAY TURNAROUND<br>USE ONLY<br>C-CI, Na<br>D T.Sample<br>E TCLP Motale Cu, Ni Zn<br>DAY TURNAROUND<br>DAY TURNAROUND   | C - Ci, Na     TCLP 8260 / 8270 ONLY IF the TPH       D T.Samula     exceeds 120,000 mg/Kg       E TCLP Matalbac     Ni Zn       Z HOUR TURNAROUND     Image: Cu, Ni Zn       DAY TURNAROUND     DAY TURNAROUND       DELIVERED BY     SG       TEMPERATURE UPON RECEIPT     1°C / ARRIVAL ONICE Y       DATE:     1°D / 10 / 11   |  | 101        |  | 07,                                  | ALO        |              |             |   |            |                    |                                    |                   |                      |
| D T.Sample exceeds 120,000 mg/Kg<br>E TCLP Metalba Cu, Ni Zn<br>   | D T.SamQ2<br>E TCLP Metalba Cu, Ni Zn<br>C TCLP Metalba Cu, Ni Zn<br>DAY TURNAROUND<br>DAY TURNAROUND<br>DAY TURNAROUND<br>DELIVERED BY<br>DELIVERED BY<br>DELIVERED BY<br>DATE: 6110<br>DATE: 6110<br>DATE: 754<br>RECEIVED BY<br>DATE: 6110<br>DATE: 754<br>RECEIVED BY<br>DATE: 754<br>RECEIVED BY<br>DATE: 754<br>RECEIVED BY<br>DATE: 754<br>DATE: 754<br>D |  | - O        |  | 10                                   | 1998       |              | hor         |   |            |                    |                                    |                   |                      |
| E TCLP Metalba Cu, Ni, Zn <u>72</u> HOUR TURNAROUND<br>DAY TURNAROUND<br>USE ONLY  | E TCLP Motalba-Cu, Ni Zn<br>   |  | <i>b</i> . |  |                                      | <b></b>    |              |             | exceeds 120,000 mg/Kg   |            |                    |                                    |                   |                      |
| DAY TURNAROUND<br>DAY TURNAROUND<br>DUC 10/11/10.  | Image: Second state     Image: Second st   |  | _          | ba                                       | r.                                   | 1Ni        | 17r          |             |   |            |                    |                                    |                   | <b>夏</b> 朝日          |
| $\frac{1}{2} \log \frac{10}{11} \log \frac{10}{10} \log \frac{10}{$ | SUSE OF LY     Due     10     11/10       SUSE OF LY     DELIVERED, BY     SG     TEMPERATURE UPON RECEIPT     *C     ARR VAL ONICE Y       INDUCSHED BY     DATE:     0     TIME:     95:4     RECEIVED BY:     DATE:     0     TIME:       INDUCSHED BY:     0     TIME:     95:4     RECEIVED BY:     DATE:     0     TIME:   |  |            |  |                                      |            | 1            |             | <u>72</u> HOUR TURNAROUND   |            |                    |                                    |                   | 臺灣林                  |
|  | DELIVERED BY DELIVERED BY DATE: 6110 TIME: 954 RECEIVED BY: DATE: 014 0 TIME: 354  | ,  |            |  |                                      |            | ·  .         |             | DAY TURNAROUND  |            |                    |                                    |                   |                      |
|  | DELIVERED BY DATE DATE DATE OF 10 10 TIME 954 RECEIVED BY: DATE DATE OF 10 10 TIME 954   |  |            |  | <u> </u>                             | <u> </u>   | <u>  </u>    | <u> </u>    | and a second second second second second second second second second second second second second second second                    |            |                    |                                    |                   |                      |
|  | DATE: 6110 TIME: 954 RECEIVED BY: Multin DATE: 0 TIME: 954   |  |            | <u></u>                                  |                                      | جنہ جید    | ۔<br>وب آباد | 2           | G TEMPERATURE UPON RECEIP   | T <u>.</u> |                    | <u></u> ℃ ARR                      | AL O              | NICE Y.              |
|  | INQUISHED BY: DATE: TIME: RECEIVED BY: DATE: TIME: TIME:   | the floring and the second sec |            | <u> </u>                                 | DATE:                                |            | <u> </u>     | IME:        |   |            |                    | DATE:                              | <u> </u>          | IME /                |
| $\frac{101010}{1010}$  |  |  |            |  |                                      | 011        |              | 7           | 154 Math  | •          | <u> </u>           |                                    | <u> </u>          | _ ( _ ~              |

| LAB ID: 39-00401   | <b>Easter</b><br>2566 Pen<br>Sayre   | Analytics, Ir<br>n Division<br>nsylvania Ave.<br>, PA 18840  | nc.  | Work  | c Order: 101  | 0 <b>40</b> 59   |
|--|--|--|--|---|---|--|
|  | ,  | 70) 888-0169<br>70) 888-0717   |  |   |   |  |
| SEND DATA TO:  |  |  |  |   |   |  |
| NAME: Steve Gridley  |  |  | w  | O#: 1010  | 04059   |  |
| COMPANY: Talisman Energy US.   |  |  | D  | AGE: 1 of   | 4   |  |
| ADDRESS: 337 Daniel Zenker D   |  |  |  | AGE. TO   | I   |  |
| Horseheads, NY 148   | 545  |  | PC   | O#: AF7   | 6834  |  |
|  | TEST   | REPORT   | P\   | NS ID#  |   |  |
| PHONE: (607) 731-0145<br>FAX: (607) 562-4001   |  |  |  |   |   |  |
|  |  |  |  |   |   |  |
| 03-035   | D 4 7 7  |  |  |   | _   |  |
| RECEIVED FOR LAB BY: SCP   | DATE:  | 10/27/2010 14:15   |  |   | P   | age 1 of 1   |
| SAMPLE: Inv. Cuttings  | L  | ab ID: 10104059-001A   | Grab   |   |   |  |
| SAMPLED BY: SG   | Sample   | Time: 10/26/2010 11:40   | 01.00  |   |   |  |
| Test   | Result   | Method   | <u>sloq</u>  | 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 In  | - Esta Distatan  |  |   |   |  |
|  | by Microbac Caboratories, in   | ICERE DIVISION   |  |   |   |  |
|  |  | ab ID: 10104059-001B   | Grab   |   | 11 <del> </del>   |  |
| SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG  | Li   |  |  |   | 9 - 9 - 9 - 9 - 9 - 9 - 9 - 9 - 9 - 9 -   |  |
| SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG  | La<br>Sample   | ab ID: 10104059-001B<br>Time: 10/26/2010 11:40   | Grab<br>SLOQ   | Applycic Start  | Applycic End  | Analust *  |
| SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u>   | La<br>Sample <sup>-</sup><br><u>Result</u>   | ab ID: 10104059-001B<br>Time: 10/26/2010 11:40<br><u>Method</u>  | <u>SLOQ</u>  | Analysis Start<br>10/29/10 10:30  | Analysis End  |  |
| SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Moisture   | La<br>Sample   | ab ID: 10104059-001B<br>Time: 10/26/2010 11:40   |  | 10/29/10 10:30  | <u>Analysis End</u><br>11/01/10<br>10/28/10   | NFM-SA   |
| SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u>   | La<br>Sample <sup>•</sup><br><u>Result</u><br>19.3 %   | ab ID: 10104059-001B<br>Time: 10/26/2010 11:40<br><u>Method</u><br>Moisture Calc.  | <u>SLOQ</u><br>0.01  |   | 11/01/10  |  |
| SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH  | La<br>Sample<br><u>Result</u><br>19.3 %<br>< 0.1 %<br>10.83@22.4°C   | ab ID: 10104059-001B<br>Time: 10/26/2010 11:40<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C  | <u>SLOQ</u><br>0.01<br>0.1   | 10/29/10 10:30<br>10/28/10 11:05  | 11/01/10<br>10/28/10  | NFM-SA<br>IC-SA  |
| SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Liquid  | La<br>Sample<br><u>Result</u><br>19.3 %<br>< 0.1 %<br>10.83@22.4°C<br>It <b>tings</b> La   | ab ID: 10104059-001B<br>Time: 10/26/2010 11:40<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>ab ID: 10104059-001D  | <u>SLOQ</u><br>0.01  | 10/29/10 10:30<br>10/28/10 11:05  | 11/01/10<br>10/28/10  | NFM-SA<br>IC-SA  |
| SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: TCLP Leachate of Inv. Cu<br>SAMPLED BY: SG  | La<br>Sample<br><u>Result</u><br>19.3 %<br>< 0.1 %<br>10.83@22.4°C<br>ittings La<br>Sample   | ab ID: 10104059-001B<br>Time: 10/26/2010 11:40<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>ab ID: 10104059-001D<br>Time: 10/28/2010 8:00   | <u>SLOQ</u><br>0.01<br>0.1   | 10/29/10 10:30<br>10/28/10 11:05<br>11/01/10 14:00  | 11/01/10<br>10/28/10<br>11/01/10  | NFM-SA<br>IC-SA<br>NFM-SA  |
| SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: TCLP Leachate of Inv. Cu<br>SAMPLED BY: SG<br><u>Test</u>   | La<br>Sample<br><u>Result</u><br>19.3 %<br>< 0.1 %<br>10.83@22.4°C<br>It <b>tings</b> La<br>Sample<br><u>Result</u>  | ab ID: 10104059-001B<br>Time: 10/26/2010 11:40<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>ab ID: 10104059-001D<br>Time: 10/28/2010 8:00<br><u>Method</u>  | SLOQ<br>0.01<br>0.1<br>Grab  | 10/29/10 10:30<br>10/28/10 11:05<br>11/01/10 14:00<br><u>Analysis Start</u>   | 11/01/10<br>10/28/10<br>11/01/10<br><u>Analysis End</u>   | NFM-SA<br>IC-SA<br>NFM-SA  |
| SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: TCLP Leachate of Inv. Cu<br>SAMPLED BY: SG<br><u>Test</u><br>Mercury - TCLP extracted   | La<br>Sample 2<br><u>Result</u><br>19.3 %<br>< 0.1 %<br>10.83@22.4°C<br>It <b>tings</b> La<br>Sample 2<br><u>Result</u><br>< 0.0008 mg/L   | ab ID: 10104059-001B<br>Time: 10/26/2010 11:40<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>ab ID: 10104059-001D<br>Time: 10/28/2010 8:00<br><u>Method</u><br>EPA 7470A   | <u>SLOQ</u><br>0.01<br>0.1<br>Grab<br><u>SLOQ</u><br>-0.0008   | 10/29/10 10:30<br>10/28/10 11:05<br>11/01/10 14:00<br><u>Analysis Start</u><br>10/30/10 8:45  | 11/01/10<br>10/28/10<br>11/01/10<br><u>Analysis End</u><br>10/31/10   | NFM-SA<br>IC-SA<br>NFM-SA<br><u>Analyst *</u><br>RMD-CV  |
| SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: TCLP Leachate of Inv. Cu<br>SAMPLED BY: SG<br><u>Test</u><br>Mercury - TCLP extracted<br>Arsenic - TCLP extracted   | La<br>Sample 2<br><u>Result</u><br>19.3 %<br>< 0.1 %<br>10.83@22.4°C<br>Ittings La<br>Sample 2<br><u>Result</u><br>< 0.0008 mg/L<br>< 0.500 mg/L   | ab ID: 10104059-001B<br>Time: 10/26/2010 11:40<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>ab ID: 10104059-001D<br>Time: 10/28/2010 8:00<br><u>Method</u><br>EPA 7470A<br>EPA 6010B  | <u>SLOQ</u><br>0.01<br>0.1<br>Grab<br><u>SLOQ</u><br>0.0008<br>0.500   | 10/29/10 10:30<br>10/28/10 11:05<br>11/01/10 14:00<br><u>Analysis Start</u><br>10/30/10 8:45<br>10/30/10 13:40  | 11/01/10<br>10/28/10<br>11/01/10<br><u>Analysis End</u><br>10/31/10<br>10/31/10   | NFM-SA<br>IC-SA<br>NFM-SA<br><u>Analyst *</u><br>RMD-CV<br>RMD-CV  |
| SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: TCLP Leachate of Inv. Cu<br>SAMPLED BY: SG<br><u>Test</u><br>Mercury - TCLP extracted<br>Arsenic - TCLP extracted<br>Barium - TCLP extracted  | La<br>Sample<br><u>Result</u><br>19.3 %<br>< 0.1 %<br>10.83@22.4°C<br>Ittings La<br>Sample<br><u>Result</u><br>< 0.0008 mg/L<br>< 0.500 mg/L<br>< 10.00 mg/L   | ab ID: 10104059-001B<br>Time: 10/26/2010 11:40<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>ab ID: 10104059-001D<br>Time: 10/28/2010 8:00<br><u>Method</u><br>EPA 7470A<br>EPA 6010B<br>EPA 6010B   | <u>SLOQ</u><br>0.01<br>0.1<br>Grab<br><u>SLOQ</u><br>0.0008<br>0.500<br>10.00                                | 10/29/10 10:30<br>10/28/10 11:05<br>11/01/10 14:00<br>Analysis Start<br>10/30/10 8:45<br>10/30/10 13:40<br>10/30/10 13:40   | 11/01/10<br>10/28/10<br>11/01/10<br><u>Analysis End</u><br>10/31/10<br>10/31/10<br>10/31/10   | NFM-SA<br>IC-SA<br>NFM-SA<br>Analyst *<br>RMD-CV<br>RMD-CV<br>RMD-CV   |
| SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: TCLP Leachate of Inv. Cu<br>SAMPLED BY: SG<br><u>Test</u><br>Mercury - TCLP extracted<br>Arsenic - TCLP extracted<br>Barium - TCLP extracted<br>Cadmium - TCLP extracted  | La<br>Sample<br><u>Result</u><br>19.3 %<br>< 0.1 %<br>10.83@22.4°C<br>Ittings La<br>Sample<br><u>Result</u><br>< 0.0008 mg/L<br>< 0.500 mg/L<br>< 10.00 mg/L<br>< 0.100 mg/L   | ab ID: 10104059-001B<br>Time: 10/26/2010 11:40<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>ab ID: 10104059-001D<br>Time: 10/28/2010 8:00<br><u>Method</u><br>EPA 7470A<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B  | <u>SLOQ</u><br>0.01<br>0.1<br>Grab<br><u>SLOQ</u><br>-0.0008<br>0.500<br>10.00<br>0.100                      | 10/29/10 10:30<br>10/28/10 11:05<br>11/01/10 14:00<br>Analysis Start<br>10/30/10 8:45<br>10/30/10 13:40<br>10/30/10 13:40   | 11/01/10<br>10/28/10<br>11/01/10<br><u>Analysis End</u><br>10/31/10<br>10/31/10<br>10/31/10   | NFM-SA<br>IC-SA<br>NFM-SA<br>Analyst *<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV   |
| SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: TCLP Leachate of Inv. Cu<br>SAMPLED BY: SG<br><u>Test</u><br>Mercury - TCLP extracted<br>Arsenic - TCLP extracted<br>Barium - TCLP extracted<br>Cadmium - TCLP extracted<br>Chromium - TCLP extracted   | La<br>Sample 2<br>Result<br>19.3 %<br>< 0.1 %<br>10.83@22.4°C<br>Ittings La<br>Sample 2<br>Result<br>< 0.0008 mg/L<br>< 0.500 mg/L<br>< 0.100 mg/L<br>< 0.500 mg/L<br>< 0.500 mg/L   | ab ID: 10104059-001B<br>Time: 10/26/2010 11:40<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>ab ID: 10104059-001D<br>Time: 10/28/2010 8:00<br><u>Method</u><br>EPA 7470A<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B                           | <u>SLOQ</u><br>0.01<br>0.1<br>Grab<br><u>SLOQ</u><br>0.0008<br>0.500<br>10.00<br>0.100<br>0.500              | 10/29/10 10:30<br>10/28/10 11:05<br>11/01/10 14:00<br><u>Analysis Start</u><br>10/30/10 8:45<br>10/30/10 13:40<br>10/30/10 13:40<br>10/30/10 13:40                              | 11/01/10<br>10/28/10<br>11/01/10<br><u>Analysis End</u><br>10/31/10<br>10/31/10<br>10/31/10<br>10/31/10                                     | NFM-SA<br>IC-SA<br>NFM-SA<br>Analyst *<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV                               |
| SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: TCLP Leachate of Inv. Cu<br>SAMPLED BY: SG<br><u>Test</u><br>Mercury - TCLP extracted<br>Arsenic - TCLP extracted<br>Barium - TCLP extracted<br>Cadmium - TCLP extracted<br>Chromium - TCLP extracted<br>Copper - TCLP extracted  | La<br>Sample 2<br>Result<br>19.3 %<br>< 0.1 %<br>10.83@22.4°C<br>Ittings La<br>Sample 2<br>Result<br>< 0.0008 mg/L<br>< 0.500 mg/L<br>< 0.500 mg/L<br>< 0.500 mg/L<br>< 0.500 mg/L<br>< 0.500 mg/L<br>< 0.500 mg/L<br>< 0.100 mg/L   | ab ID: 10104059-001B<br>Time: 10/26/2010 11:40<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>ab ID: 10104059-001D<br>Time: 10/28/2010 8:00<br><u>Method</u><br>EPA 7470A<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B                           | <u>SLOQ</u><br>0.01<br>0.1<br>Grab<br><u>SLOQ</u><br>0.0008<br>0.500<br>10.00<br>0.100<br>0.100              | 10/29/10 10:30<br>10/28/10 11:05<br>11/01/10 14:00<br><u>Analysis Start</u><br>10/30/10 8:45<br>10/30/10 13:40<br>10/30/10 13:40<br>10/30/10 13:40<br>10/30/10 13:40            | 11/01/10<br>10/28/10<br>11/01/10<br><u>Analysis End</u><br>10/31/10<br>10/31/10<br>10/31/10<br>10/31/10<br>10/31/10                         | NFM-SA<br>IC-SA<br>NFM-SA<br>Analyst *<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV                     |
| SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: TCLP Leachate of Inv. Cu<br>SAMPLED BY: SG<br><u>Test</u><br>Mercury - TCLP extracted<br>Arsenic - TCLP extracted<br>Barium - TCLP extracted<br>Cadmium - TCLP extracted<br>Chromium - TCLP extracted<br>Copper - TCLP extracted<br>Lead - TCLP extracted                             | La<br>Sample 2<br>Result<br>19.3 %<br>< 0.1 %<br>10.83@22.4°C<br>attings La<br>Sample 2<br>Result<br>< 0.0008 mg/L<br>< 0.500 mg/L<br>< 0.500 mg/L<br>< 0.100 mg/L<br>< 0.100 mg/L<br>< 0.500 mg/L<br>< 0.500 mg/L<br>< 0.500 mg/L   | ab ID: 10104059-001B<br>Time: 10/26/2010 11:40<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>ab ID: 10104059-001D<br>Time: 10/28/2010 8:00<br><u>Method</u><br>EPA 7470A<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B              | SLOQ<br>0.01<br>0.1<br>Grab<br>SLOQ<br>0.0008<br>0.500<br>10.00<br>0.100<br>0.500<br>0.500                   | 10/29/10 10:30<br>10/28/10 11:05<br>11/01/10 14:00<br><u>Analysis Start</u><br>10/30/10 8:45<br>10/30/10 13:40<br>10/30/10 13:40<br>10/30/10 13:40<br>10/30/10 13:40            | 11/01/10<br>10/28/10<br>11/01/10<br><u>Analysis End</u><br>10/31/10<br>10/31/10<br>10/31/10<br>10/31/10<br>10/31/10<br>10/31/10             | NFM-SA<br>IC-SA<br>NFM-SA<br>MD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV               |
| SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: TCLP Leachate of Inv. Cut<br>SAMPLED BY: SG<br><u>Test</u><br>Mercury - TCLP extracted<br>Arsenic - TCLP extracted<br>Barium - TCLP extracted<br>Cadmium - TCLP extracted<br>Chromium - TCLP extracted<br>Copper - TCLP extracted<br>Lead - TCLP extracted<br>Nickel - TCLP extracted | La<br>Sample 2<br>Result<br>19.3 %<br>< 0.1 %<br>10.83@22.4°C<br>attings La<br>Sample 2<br>Result<br>< 0.0008 mg/L<br>< 0.500 mg/L<br>< 0.500 mg/L<br>< 0.100 mg/L<br>< 0.500 mg/L | ab ID: 10104059-001B<br>Time: 10/26/2010 11:40<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>ab ID: 10104059-001D<br>Time: 10/28/2010 8:00<br><u>Method</u><br>EPA 7470A<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B | SLOQ<br>0.01<br>0.1<br>Grab<br>SLOQ<br>0.0008<br>0.500<br>10.00<br>0.100<br>0.500<br>0.100<br>0.500<br>0.100 | 10/29/10 10:30<br>10/28/10 11:05<br>11/01/10 14:00<br>Analysis Start<br>10/30/10 8:45<br>10/30/10 13:40<br>10/30/10 13:40<br>10/30/10 13:40<br>10/30/10 13:40<br>10/30/10 13:40 | 11/01/10<br>10/28/10<br>11/01/10<br><u>Analysis End</u><br>10/31/10<br>10/31/10<br>10/31/10<br>10/31/10<br>10/31/10<br>10/31/10<br>10/31/10 | NFM-SA<br>IC-SA<br>NFM-SA<br>Analyst *<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV |
| SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Moisture<br>Free Liquid<br>pH<br>SAMPLE: TCLP Leachate of Inv. Cu<br>SAMPLED BY: SG<br><u>Test</u><br>Mercury - TCLP extracted<br>Arsenic - TCLP extracted<br>Barium - TCLP extracted<br>Cadmium - TCLP extracted<br>Chromium - TCLP extracted<br>Copper - TCLP extracted<br>Lead - TCLP extracted                             | La<br>Sample 2<br>Result<br>19.3 %<br>< 0.1 %<br>10.83@22.4°C<br>attings La<br>Sample 2<br>Result<br>< 0.0008 mg/L<br>< 0.500 mg/L<br>< 0.500 mg/L<br>< 0.100 mg/L<br>< 0.100 mg/L<br>< 0.500 mg/L<br>< 0.500 mg/L<br>< 0.500 mg/L   | ab ID: 10104059-001B<br>Time: 10/26/2010 11:40<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>ab ID: 10104059-001D<br>Time: 10/28/2010 8:00<br><u>Method</u><br>EPA 7470A<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B              | SLOQ<br>0.01<br>0.1<br>Grab<br>SLOQ<br>0.0008<br>0.500<br>10.00<br>0.100<br>0.500<br>0.500                   | 10/29/10 10:30<br>10/28/10 11:05<br>11/01/10 14:00<br><u>Analysis Start</u><br>10/30/10 8:45<br>10/30/10 13:40<br>10/30/10 13:40<br>10/30/10 13:40<br>10/30/10 13:40            | 11/01/10<br>10/28/10<br>11/01/10<br><u>Analysis End</u><br>10/31/10<br>10/31/10<br>10/31/10<br>10/31/10<br>10/31/10<br>10/31/10             | NFM-SA<br>IC-SA<br>NFM-SA<br>Analyst *<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV           |

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

| REPORT TO: Talisman / UEG       |            |                |                   |           |            | ١                      |  | TION LIM                    |
|---------------------------------|------------|----------------|-------------------|-----------|------------|------------------------|--|-----------------------------|
| geowetlands@aol.com             |            |                |                   |           |            |                        | N/O#: 10104059   | NO                          |
| twollin@rallysolutions.ca       |            | RIGER          |                   |           | ES         |                        | RESULTS ARE BEING USED FOR: IF YES, PLEASE ATTA  |                             |
|                                 | AFT        | ER CO          | LLECT             | FION      |            | 1                      | W DRINKING WATER SL SLUDGE NYDOH NYDEC PADEP IS A QC PACK  | AGE NEED                    |
| CONTACT Steve Gridley           |            |                |                   | -         |            | / 51                   |  | NO                          |
| PH# 607-731-0145                |            | TRANS<br>To    |                   |           |            |                        | W WASTE WATER OTHER E DEIONIZED WATER DI DISTILLED WATER PERSONAL OTHER IF YES, PLEASE ATTA  | CH REQU                     |
| FAX#                            |            | ABOR.          |                   | Y         | V          | $\int_{\mathcal{S}}$   | H HYDROCHLORIC ACID OH SODIUM HYDROXIDE  |                             |
| BILL TO: Tallsman               |            | IN COO<br>WITH |                   | /         |            | PRESENTITIAL COMPOSITI | H       HYDROCHLORIC ACID       OH       SODIUM HYDROXIDE         S       SULFURIC ACID       AS       ASCORBIC ACID         N       NITRIC ACID       AC       ACETIC AGID         SO, SODIUM SULFITE       NH, AMMONIUM CHLORIDE       A         Thio       SODIUM THIOSULFATE       ZINC ACETATE         -       NONE       Hg       MERCURIC CHLORIDE         44       An incomplete chain of custody may delay the processing of your sample(s).       N         ANALYSIS TO BE PERFORMED (PER CONTAINER)       C       C |                             |
| PO# AF 76834                    |            |                | /s                | 2/        |            |                        | - NONE Hg MERCURIC CHLORIDE  |                             |
| PROJECT DESCRIPTION             |            | 19             |                   | /a        | 14         | MILA .                 | ーム An incomplete chain of custody may delay the ろ ル appl<br>grocessing of your sample(s). の な ま  | ise fill out<br>licable are |
| SAMPLER SIGNATURE / AFFILIATION |            | New /          | 5<br>5<br>5<br>7  | E.W.      | E/         | E.                     |  | ompletely                   |
|                                 |            | TIME SAMOLED   | SALL OF SALIPLING | SALEMATRY |            | PRESERVITIALS          | SO , SODIUM SULFITE NH, AMMONIUM CHLORIDE<br>Thio SODIUM THIOSULFATE ZN ZINC ACETATE<br>- NONE Hg MERCURIC CHLORIDE<br>4 An incomplete chain of custody may delay the<br>processing of your sample(s).   | ONLY                        |
| 1 Inv Cuttings                  | 14/26      | 1.4            | 50                | C         | 28         | N                      | ТРН  | Ô                           |
| 2                               |            |                |                   |           |            | _                      | рН   | <u>8</u> 8.                 |
| 3                               |            |                | <br>              | Ļ         | <u>  </u>  |                        | TCLP 8 RCRA Metals + Cu, Ni, Zn  |                             |
| 4                               |            | l              |                   | <b></b>   |            | .                      | Free Liquids / % Moisture  |                             |
| 5 A- TPH                        |            |                |                   |           | 1          |                        | BTEK   |                             |
| 6 B- pH, free Liquids, 1 mo     | ist        | fre            |                   | <u> .</u> |            |                        | TCLP.8260/4270 ONLY IF the TPH   |                             |
| 7 C-T. Sample                   |            |                |                   | <b>_</b>  | <u>  .</u> |                        | exceeds 1/20,000 mg/Kg   |                             |
| B D- TCLP metals + Cuti         | , <u>Z</u> | <u>р</u>       |                   | ļ         |            |                        |  | <u>.</u>                    |
| 9                               | :          |                |                   |           | -          |                        | -12 HOUR TURNAROUND  |                             |
| 10                              |            |                |                   |           | -          |                        | DAY TURNAROUND   |                             |
| 11<br>LAB USE (GLD) 🖉 🖓 👘 🖓     | <u> </u>   | <u> </u>       | L                 | <u> </u>  | <u> </u>   | <u> </u>               |  |                             |
|                                 |            | · · ·          | :                 |           |            |                        |  | L ON IC                     |
| RELINQUISHED BY: Le dunt        |            | D              | ATE:              | 261       | 10 1       | TIME:                  | 130 PH Steal DATE: 10 126 V  | S 73                        |
| RELINGUISHED BY/2               |            | 6              | ATE:              |           | v          | TIME;                  | PIS RECEIVED BY:   | TIME:                       |
| Sarah                           |            |                | o /2<br>IATE:     | 271       | 0          | TIME:                  | PTS RECEIVED BY: DATE: 10137410  | TIME:                       |

:

| LAB ID: 08-00380<br>LAB ID: 39-00401                        |   | Benchmark Analytics, Inc.<br>Eastern Division<br>2566 Pennsylvania Ave. |  |                | Work Order: 10110485                  |                          |                                      |  |  |
|---|---|---|--|----------------|---------------------------------------|--------------------------|--------------------------------------|--|--|
|   |   | •   | Sayre, PA 18840  |                |                                       |                          |                                      |  |  |
|   |   |   | ne: (570) 888-0169<br>ax: (570) 888-0717               |                |                                       |                          |                                      |  |  |
| SEND DATA   | A TO:   |   |  |                |                                       |                          |                                      |  |  |
| NAME:   | Steve Gridley   |   |  | WO#: 10110485  |                                       |                          |                                      |  |  |
| COMPANY: Talisman Energy USA                                |   | IC.   |  | P/             | PAGE: 1 of 1                          |                          |                                      |  |  |
| ADDRESS:  | 337 Daniel Zenker Dr<br>Horseheads, NY 14845          |   |  |                |                                       |                          |                                      |  |  |
|   | 10130110003,141 14040                                 |   |  | PC             | D#: AF 7                              | 8035                     |                                      |  |  |
| PHONE:<br>FAX:  | (607) 731-0145<br>(607) 562-4001                      | · -   | TEST REPORT  | P١             | VS ID#                                |                          |                                      |  |  |
| 03-03   |   |   |  | ·····          |                                       |                          |                                      |  |  |
|   | FOR LAB BY: RML                                       | D/  | ATE: 11/03/2010 12:36                                  |                |                                       | Pa                       | nge 1 of 1                           |  |  |
|   |   |   |  | 0              |                                       |                          |                                      |  |  |
| SAMPLE: In  | i <b>v. Cuttings</b><br>ED BY: SG                     | ÷ .   | Lab ID: 10110485-001A<br>Sample Time: 11/01/2010 19:20 | Grab           |                                       |                          |                                      |  |  |
| ŞAMPLI  | ED B1: 50   | ÷ •   |  | <u>SLQQ</u>    |                                       |                          |                                      |  |  |
| Test  |   | Result  | Method   |                | Analysis Start                        | Analysis End             | <u>Analyst *</u>                     |  |  |
|   | roleum Hydrocarbons                                   | 59000 mg/Kg   | EPA 9071   |                | 11/04/10 14:30                        | 11/04/10                 |                                      |  |  |
| Sample  | e Note: Analysis performed by N                       | Aicrobac Laborat  | ories, Inc-Ene Division.                               |                |                                       |                          |                                      |  |  |
| SAMPLE: In  | v. Cuttings   |   | Lab ID: 10110485-001B                                  | Grab           |                                       |                          |                                      |  |  |
| SAMPLE  | ED BY: SG   | Ś   | Sample Time: 11/01/2010 19:20                          | SLOQ           |                                       |                          |                                      |  |  |
| Test  |   | Result  | Method   | <u>3LUQ</u>    | Analysis Start                        | Analysis End             | Analyst *                            |  |  |
| Moisture  |   | 23,9 %  | Moisture Calc.   | 0.01           | 11/03/10 14:45                        | 11/04/10                 | IC-SA                                |  |  |
| Free Liqu   | uid   | < 0.1 %   | EPA 9095A  | 0.1            | 11/03/10 14:45                        | 11/03/10                 | IC-SA                                |  |  |
| pН  |   | 8.25@23.6°C   | EPA 9045C  |                | 11/04/10 15:32                        | 11/04/10                 | SG-SA                                |  |  |
|   | CLP Leachate of Inv. Cuttin                           |   | Lab ID: 10110485-001D                                  | Grab           | · · · · · · · · · · · · · · · · · · · | ······                   |                                      |  |  |
|   | ED BY: SG   | -   | Sample Time: 11/04/2010 7:30                           |                |                                       |                          |                                      |  |  |
| Test  |   |   |  | <u>SLOQ</u>    | Ameliusia Claut                       | Ameliusia Emel           | A                                    |  |  |
| <u>Test</u>   | TOI D outracted                                       | <u>Result</u><br>< 0.0008 mg/L  | <u>Method</u><br>EPA 7470A                             | 0.0008         | Analvsis Start<br>11/04/10 13:15      | Analysis End<br>11/04/10 | Analyst *<br>RMD-CV                  |  |  |
| •   | - TCLP extracted<br>TCLP extracted                    | < 0.0008 mg/L<br>< 0.500 mg/L   | EPA 6010B  | 0.500          | 11/04/10 13:15                        | 11/04/10                 |                                      |  |  |
|   | TCLP extracted  | < 10.00 mg/L  | EPA 6010B  | 10.00          | 11/04/10 14:05                        | 11/04/10                 | RMD-CV<br>RMD-CV                     |  |  |
| UQINUII "   | - TCLP extracted                                      | < 0.100 mg/L  | EPA 6010B  | 0.100          | 11/04/10 14:05                        | 11/04/10                 | RMD-CV                               |  |  |
| Cadmium   |   | < 0.500 mg/L  | EPA 6010B  | 0.500          | 11/04/10 14:05                        | 11/04/10                 | RMD-CV                               |  |  |
|   | n - TCLP extracted                                    |   | EPA 6010B  | 0.100          | 11/04/10 14:05                        | 11/04/10                 | RMD-CV                               |  |  |
| Chromiun  | n - TCLP extracted<br>TCLP extracted                  | < 0.100 ma/L  | EFAUVIUD   |                |                                       |                          |                                      |  |  |
| Chromiun<br>Copper -  | n - TCLP extracted<br>TCLP extracted<br>CLP extracted | < 0.100 mg/L<br>< 0.500 mg/L  |  | 0.500          | 11/04/10 14:05                        | 11/04/10                 | RMD-CV                               |  |  |
| Chromiun<br>Copper -<br>Lead - TC                           | TCLP extracted<br>CLP extracted                       | < 0.100 mg/L<br>< 0.500 mg/L<br>< 0.100 mg/L                            | EPA 6010B<br>EPA 6010B<br>EPA 6010B                    |                |                                       |                          |                                      |  |  |
| Chromiun<br>Copper -<br>Lead - TC<br>Nickel - T             | TCLP extracted  | < 0.500 mg/L  | EPA 6010B  | 0.500          | 11/04/10 14:05                        | 11/04/10                 | RMD-CV                               |  |  |
| Chromiun<br>Copper -<br>Lead - TC<br>Nickel - T<br>Selenium | TCLP extracted<br>CLP extracted<br>TCLP extracted     | < 0.500 mg/L<br>< 0.100 mg/L  | EPA 6010B<br>EPA 6010B                                 | 0.500<br>0.100 | 11/04/10 14:05<br>11/04/10 14:05      | 11/04/10<br>11/04/10     | RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV |  |  |

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

\_\_\_\_\_ DATE: \_\_\_\_\_11/5/2010

Cami M. Davis

MANAGER

| CHAIN OF CUSTODY<br>REPORT TO: Talisman / UEG |  |              |                  |          | 25      | 66                      |  |               | PAGE1                   | C                          |
|---|--|--------------|------------------|----------|---------|-------------------------|--|---------------|-------------------------|----------------------------|
| geowetlands@aol.com                           | -  |              |                  | ļ        | 20      | 001                     | W/O#: 10110485   |               | ARE SPECIAL D           |                            |
| twollin@rallysolutions.ca                     | REFRI  | GERATI       | E SAM            | PLES     |         |                         | RESULTS ARE BEIN   |               | NEEDED: YES             |                            |
|   |  | COLLE        |                  |          |         |                         |  | EC PADEP      | IS A QC F               |                            |
| CONTACT Stove Oridiau                         | '  |              |                  |          |         |                         | GROUND WATER SO SOIL   |               |                         |                            |
| Sleve Glidley                                 | TR   |              | TAC              |          |         | WW<br>DE                | WASTE WATER OTHER  |               |                         | .]                         |
| PH# 607-731-0145<br>FAX#                      |  | TO<br>BORAT( | ORY              |          |         | 14                      | / / HYDROCHLORIC ACID OF SODIUM HYDROXIDE  |               | IFYES, PLEASE           |                            |
| BILL TO: Talisman                             | — IN   | I COOLI      | ER               |          |         | / శ్రీ                  | S SULFURICACID AS ASCORBICACID<br>N NITRICACID AC ACETICACID   | [             |                         |                            |
|   | , v  | NITH IC      | E                |          |         | <u>ð</u> /              | SO 3 SODIUM SULFITE NH, AMMONIUM CHLORIDE  | /             | 5 8                     |                            |
| PO# AF 78035                                  |  | 7            | 1.00             | 7        |         |                         | Thio SODIUM THIOSULFATE ZN ZINC ACETATE     - NONE Hg MERCURIC CHLORIDE  |               |                         |                            |
| PROJECT DESCRIPTION                           | - /  | The OF SAL   | SAMPLE MATT      | \$ /     | 18      | PRESS INTIMIS COMPOSITE | An incomplete chain of custody may delay the   | PRESC ON REC. | TABINE KUDED ON RECEIPT | <sup>D</sup> eas<br>applic |
| SAMELER SIGNATURE / AFFILIATION               | - /  |              |                  |          | £ /     |                         | processing of your sample(s).  |               |                         | Cot<br>Cot                 |
| CONTAINER SAMPLING POINT                      | CATE SALL                                      |              | 1                | E        | I DE    |                         | An incomplete chain of custody may delay the<br>processing of your sample(s).<br>ANALYSIS TO BE PERFORMED<br>(REE CONTAINER) |               | \$/                     |                            |
| CONTAINER 7 SAWFLING FOINT                    | 18   | 12/          | \$               | 5        | 13      | / ४                     | ANALYSIS TO BE PERFORMED<br>(PER CONTAINER)  | 8/8           | / LAB                   | ISE                        |
| 1 Inv Cuttings                                | 11/1 1   | 920 51       | e C              | - 4      | 20-     | N                       | TPH ¥  |               | -0                      | 11                         |
| 2   |  |              |                  |          |         |                         | рН   |               |                         |                            |
| 3   |  |              |                  |          |         |                         | TCLP 8 RCRA Metals + Cu, Ni, Zn  |               |                         |                            |
| 4   |  |              |                  |          |         |                         | Free Liquids / % Moisture  |               |                         |                            |
| 5   |  |              |                  |          |         |                         | RTBK   |               |                         |                            |
| 6   |  |              |                  | Ť        |         | -                       | TCLP 8260 / 8270 ONLY IF THE TOL   |               |                         |                            |
| 7   |  |              |                  | Ţ        |         |                         | exceeds 120,000 mg/Kg  |               |                         | 1 j                        |
| 8   |  |              |                  |          |         |                         |  |               |                         | 2                          |
| 9   |  |              |                  | T        |         |                         | 72_HOUR TURNAROUND   |               |                         |                            |
| 10  |  |              |                  |          |         |                         | DAY TURNAROUND   |               |                         |                            |
| 11  |  |              |                  | i        |         |                         |  |               |                         |                            |
| LAS USE UNIX                                  |  |              | ; <sub>و</sub> م |          |         |                         |  |               |                         |                            |
| DELIVERED BY                                  |  | <u></u>      | 1. e ~           | <b>X</b> | 4.<br>4 | <u></u>                 | TEMPERATURE UPON RECEIP  |               | <u> </u> ℃    ARR       | <b>AT</b>                  |
| RELINQUISHEDBY                                | <u>- a a a a a a a a a a a a a a a a a a a</u> | DATE         | Ξ:,,             |          | TI      | ME                      | RECEIVED BY:   | <u> </u>      | DATE:                   | <u></u>                    |
| RELINQUISHEE BY:                              |  | DATE         | 3                | 1/10     |         | VE:                     | 2 3 C  |               | DATE:                   | <u> </u>                   |
|   |  |              | 1                | 1        |         |                         |  |               | 1                       |                            |
| RELINQUISHED BY:                              |  | DATE         | -                | - 1      | TI      | ME:                     | RECEIVED Y DOX   |               | DATE: 3                 | , ī                        |

| LAB ID: 08-00380<br>LAB ID: 39-00401         | East<br>2566 F<br>Sa<br>Phone       | <b>Irk Analytics, In</b><br><b>tern Division</b><br>Pennsylvania Ave.<br>yre, PA 18840<br>:: (570) 888-0169<br>:: (570) 888-0717 | IC.         | Work                                   | Order: 101               | 14050                    |
|--|-------------------------------------|--|-------------|--|--------------------------|--------------------------|
| SEND DATA TO:                                |                                     |  |             |  |                          |                          |
| NAME: Steve Gridley                          |                                     |  | W           | ' <b>O#:</b> 1011                      | 4050                     |                          |
| COMPANY: Talisman Energy USA, I              | nc.                                 |  | P           | AGE: 1 of 2                            | <b>o</b>                 |                          |
| ADDRESS: 337 Daniel Zenker Dr                |                                     |  | F7          |  | 2                        |                          |
| Horseheads, NY 14845                         | •                                   |  | P           | O#: AF77                               | 7414                     |                          |
| PHONE: (607) 731-0145<br>FAX: (607) 562-4001 | TE                                  | ST REPORT  | P           | WS ID#                                 |                          |                          |
| Pad  |                                     |  | <u>,</u>    |  |                          |                          |
| RECEIVED FOR LAB BY: SCP                     | DAT                                 | E: 11/29/2010 10:06  |             |  | Pa                       | age 1 of 2               |
| SAMPLE: Pad Soil                             |                                     | Lab ID: 10114050-001A  | Compo       | site                                   |                          |                          |
| SAMPLED BY: SG                               | San                                 | nple Time: 11/24/2010 11:25  |             |  |                          |                          |
| <b>-</b>                                     |                                     |  | SLOQ        | 4                                      | Accelerate Fired         |                          |
| <u>Test</u><br>Total Petroleum Hydrocarbons  | <u>Result</u>                       | Method<br>EPA 9071   | 171         | Analysis Start<br>12/01/10 16:00       | Analysis End<br>12/01/10 | Analyst."                |
| Sample Note: Analysis performed by           | < 171 mg/Kg<br>Microbac Laboratorie |  | 17.1        | 12/01/10 10:00                         | 12/01/10                 |                          |
| SAMPLE: Pad Soil                             |                                     | Lab ID: 10114050-001B  | Compo       | site                                   |                          |                          |
| SAMPLED BY: SG                               | San                                 | nple Time: 11/24/2010 11:25  | ффициа      | iono                                   |                          |                          |
| _  |                                     |  | SLOQ        |  |                          |                          |
| Test   | Result                              | <u>Method</u>  | 0.04        | Analysis Start                         | Analysis End             |                          |
|  | 11.6 %                              | Moisture Calc.   | 0.01        | 11/30/10 9:40                          | 12/01/10<br>11/29/10     | NFM-SA                   |
| Free Liquid                                  | < 0.1 %                             | EPA 9095A  | 0.1         | 11/29/10 17:00<br>11/30/10 8:00        | 11/29/10                 | IC-SA<br>NFM-SA          |
| pH   | 8.05@22.7°C                         | EPA 9045C  |             |  | 11/30/10                 | NFM-5A                   |
| SAMPLE: Pad Soil                             | _                                   | Lab ID: 10114050-001C  | Compo       | site                                   |                          |                          |
| SAMPLED BY: SG                               | San                                 | ple Time: 11/24/2010 11:25   | SLOQ        |  |                          |                          |
| Test   | <b>Result</b>                       | Method   | <u></u>     | Analysis Start                         | Analysis End             | Analvst *                |
| 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  | Compo       | site                                   |                          |                          |
| SAMPLED BY: SG                               | San                                 | ple Time: 11/30/2010 8:00  |             |  |                          |                          |
| Test   | Pacult                              | Mathad   | <u>SLOQ</u> | Analysis Start                         | Analysis End             | Analust *                |
| Test<br>Mercury - TCLP extracted             | <u>Result</u><br>< 0.0008 mg/L      | <u>Method</u><br>EPA 7470A   | 0.0008      | <u>Analysis Start</u><br>11/29/10 9:30 | 12/01/10                 | <u>Analvst*</u><br>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:                                     |                                     |  |             |  |                          |                          |

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

MANAGER

| $\Lambda$ |    | _     |
|-----------|----|-------|
| Canie     | M. | Davis |

DATE: 12/2/2010

| Lab ID: 08-(<br>Lab ID: 39-( |   | 2566 Penn    | Analytics, Ind<br>Division<br>sylvania Ave.<br>PA 18840 | c.    |                 | Work   | Order: 10 <sup>-</sup> | 14050      |
|------------------------------|---|--------------|---|-------|-----------------|--------|------------------------|------------|
|                              | ·   | •            | 0) 888-0169<br>0) 888-0717                              |       |                 |        |                        |            |
| SEND DATA                    | A TO:   |              |   |       |                 |        |                        |            |
| NAME:                        | Steve Gridley                                   |              |   | W     | /0#:            | 10114  | 1050                   |            |
| COMPANY:<br>ADDRESS:         | Talisman Energy USA, In<br>337 Daniel Zenker Dr | с.           |   | P     | AGE:            | 2 of 2 |                        |            |
| ADDREGG.                     | Horseheads, NY 14845                            |              |   |       |                 |        |                        |            |
|                              | ,   |              |   | ٣     | O#:             | AF774  | +14                    |            |
| PHONE:<br>FAX:               | (607) 731-0145<br>(607) 562-4001                | TEST         | REPORT  | P     | WS ID#          |        |                        |            |
| Pad                          |   |              |   |       |                 |        |                        |            |
|                              | FOR LAB BY: SCP                                 | DATE: 11     | /29/2010 10:06  |       |                 |        | P                      | age 2 of 2 |
| Nickel - 1                   | CLP 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 - T                   | CLP extracted                                   | < 0.100 mg/L | EPA 6010B   | 0.100 | 11/30/10        | 13:15  | 11/30/10               | GSR-CV     |
| Zinc - TC                    | LP extracted                                    | < 0.200 mg/L | EPA 6010B   | 0.200 | <b>t1/30/10</b> | 13:15  | 11/30/10               | GSR-CV     |

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

 $\Lambda$ 

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MANAGER

| ani | M. | Davis |
|-----|----|-------|
|     |    |       |

DATE: 12/2/2010

CHAIN OF CUSTODY

| REPORT TO: Talisman / UEG  | 7      |             |                  |             |          |                        |   |                                   |
|----------------------------|--------|-------------|------------------|-------------|----------|------------------------|---|-----------------------------------|
| geowetlands@aol.com        | 1      |             |                  |             |          | V                      | //O#: 10114050  |                                   |
|                            | REFE   | RIGER       | ATE SA           | AMPLE       | -s       |                        | KESULIS ARE BEING USED F  |                                   |
|                            |        |             | LLECT            |             |          |                        |   |                                   |
|                            | _      |             |                  |             |          | GV                     | GROUND WATER SO SOIL  |                                   |
| CONTACT Steve Gridley      | l I    | RANS        | PORT             |             |          | / \$V<br>Wi            |   | YES 🗹 NO                          |
| PH# 607-731-0145           |        | T           |                  |             |          | DE                     | DEIONIZED WATER DI DISTILLED WATER PERSONAL OTHER   | IF YES, PLEASE ATTACH REQUIREMENT |
| FAX#                       |        |             | ATORY            | ,           |          | 145                    | H HYDROCHLORIC ACID OH SODIUM HYDROXIDE<br>S SULFURIC ACID AS ASCORBIC ACID   |                                   |
| BILL TO: Talisman          |        | WITH        |                  | _/          | / /      | Odino S                | N NITRIC ACID AC ACETIC ACID<br>SO <sub>3</sub> SODIUM SULFITE NH, AMMONIUM CHLORIDE<br>Thio SODIUM THIOSULFATE ZN ZINC ACETATE | CON REC.                          |
| PO# AF 77414               | 1      |             | /0               | . /         |          | 8/ .                   | - NONE Hg MERCURIC CHLORIDE   |                                   |
| PROJECT DESCRIPTION        |        | The Sampled | SALLES SALLELING | SALLENATRIX | ENDE.    | PRESS MITHLS COMPOSITE | An incomplete chain of custody may delay the<br>processing of your sample(s).<br>ANALYSIS TO BE PERFORMED<br>(PER CONTAINER)    | LAB USE ONLY                      |
| CONTAINER SAMPLING POINT   | - Jage | The S       | SAMO.            | Sales       | loun - S | Tamus                  | ANALYSIS TO BE PERFORMED (PER CONTAINER)  | LAB USE ONLY                      |
| 1 Incontinge · Pad Soil    | 1/24   | 1125        | (i)              | С           | te       | $\mathcal{N}$          | TPH, Sodium, Chlorides  |                                   |
| 2                          |        |             |                  |             |          |                        | pH  |                                   |
| 3                          |        |             |                  |             | Ī        |                        | TCLP 8 RCRA Metals + Cu, Ni, Zn   |                                   |
| 4                          |        |             | 1                |             |          |                        | Free Liquids / % Moisture   |                                   |
| 5 A - TPH                  |        |             |                  |             | T        | 1                      |   |                                   |
| 6 B. OH. Free liquids . 1. | mois   | 4           |                  |             |          |                        | Perform BTEX ONLY IF the TPH  |                                   |
| 7 c - Anions, metals, p.1  |        |             |                  |             |          |                        | exceeds 100,000 mg/Kg   |                                   |
| 8p. Total Sample           |        |             |                  |             |          |                        |   |                                   |
| 9E- TCIP Metals.           |        |             |                  |             |          |                        | <u>98</u> HOUR TURNAROUND   |                                   |
| 10                         |        |             |                  |             |          |                        | DAY TURNAROUND  |                                   |
| 11                         |        |             |                  |             |          |                        |   |                                   |
|                            |        |             |                  |             | N.E.     |                        |   |                                   |
| RELINDUISHED BY:           |        | <u></u> [   | DATE:            |             |          | TIME:                  | RECEIVED BY:  | DATE: TIME:                       |
| RELINQUISHED BY:           |        |             | // /:<br>DATE:   | 1911        |          | TIME:                  | RECEIVED BY:  | DATE: TIME:                       |
|                            |        |             | /                | 1           |          |                        |   | 1 1                               |
| RELINQUISHED BY:           |        | 1           | DATE:<br>/       | 1           |          | TIME:                  | RECEIVED BY:  | - DATE: , JP1, 10 TIME: 10:01     |
|                            |        |             |                  |             |          |                        |   | Ad Graphics Printing 570-888-0    |



COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WASTE MANAGEMENT

FORM 26R

CHEMICAL ANALYSIS OF RESIDUAL WASTE ANNUAL REPORT BY THE GENERATOR

|   | -  | tely completed. All requi  |   |   | JSE ONLY  |
|---|--|--|---|---|---|
|   | <i>*</i> • •   | provided. If additional sp   |   |   | ed & General Notes  |
|   |  | reference the item numb<br>ts needs to match the date  |   | ite   |   |
|   | rence 287.54   |  |   |   |   |
| Date Prepare  |  | oruary 11, 2011  |   |   |   |
| •   |  | CLIENT (GENERATOR  | R OF THE WASTE) IN  |   |   |
| Company Na  | me   |  |   |   |   |
|   | ergy USA Inc.  |  |   |   |   |
|   | ry, Name of Parent Comp  | any  |   |   | Generator ID#   |
| Talisman En   | illing Address Line 1  | C  | ompany Mailing Addres   | N/A   |   |
| 50 Pennwoo  | •  | •  | ompany maning Addres  |   |   |
|   | dress Last Line – City   | State  | Zip+4   | Phone   | Ext   |
| Warrendale  |  | PA   | 15086   | (724) 814-530   |   |
|   | ntact Last Name  | First Name   | MI  | Suffix  | (   |
| Brown<br>Municipality   | <u>,</u>   | Dina   | County  |   |   |
| Warrendale  |  |  | Allegheny   |   |   |
| Contact Pho   | ne Ext   | Contact Email Address  |   |   | ·····   |
| (724) 814-53  |  | dybrown@talismanusa.c  |   |   |   |
|   |  | y Mailing Address (noted a   |   |   | Yes 🛛 No  |
| the (05   | ibe location of waste gen  | eration and storage. <u>Drill o</u><br>at 733 Regan Hill Road, Wa  | uttings are generated du  | ring natural gas drilli   | ng operations at  |
| i the (ua   |  | at 755 Regari Filli Road, wa   | anen Townsnip, Braulord   | County, FA. Waste   |   |
| containers on   | site.  |  |   |   |   |
| containers on<br>Municipality   | site.<br>Warren  | County Bradfo  | ord   | State   | PA  |
|   |  | County Bradfo  |   | State   | PA  |
| Municipality<br>Residual  | Warren Residu  | SECTION B. WAST  | E DESCRIPTION   | Unit of   | Time  |
| Municipality  | Warren Residu  | SECTION B. WAST  |   | Unit of<br>Measure  |   |
| Municipality<br>Residual  | Warren Residu  | SECTION B. WAST<br>al Waste<br>escription  | E DESCRIPTION   | Unit of<br>Measure<br>cu yd gal   | Time<br>Frame   |
| Municipality<br>Residual<br>Waste Code  | Warren<br>Residu<br>Code D   | SECTION B. WAST<br>al Waste<br>escription  | E DESCRIPTION<br>Amount<br>280  | Unit of<br>Measure  | Time  |
| Municipality<br>Residual<br>Waste Code  | Warren<br>Residu<br>Code D<br>Drill cuttings (oil and g  | SECTION B. WAST<br>ral Waste<br>escription<br>as)<br>1. GENERAL P<br>to 11.3   | E DESCRIPTION<br>Amount<br>280 -<br>ROPERTIES<br>(based on analyses or ki   | Unit of<br>Measure<br>□ cu yd □ gal<br>□ lb ⊠ ton   | Time<br>Frame   |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra   | Warren<br>Residu<br>Code D<br>Drill cuttings (oil and g  | SECTION B. WAST<br>ral Waste<br>escription<br>as)<br>1. GENERAL P<br>to 11.3<br>Liquid Waste (EPA Me   | E DESCRIPTION<br>Amount<br>280<br>ROPERTIES<br>(based on analyses or ki<br>thod 9095)   | Unit of<br>Measure<br>□ cu yd □ gal<br>□ lb ⊠ ton   | Time<br>Frame   |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra   | Warren<br>Residu<br>Code D<br>Drill cuttings (oil and g<br>ange 8.9  | SECTION B. WAST<br>al Waste<br>escription<br>as)<br>1. GENERAL P<br>to 11.3<br>Liquid Waste (EPA Met<br>Solid (EPA Method 900  | E DESCRIPTION<br>Amount<br>280<br>ROPERTIES<br>(based on analyses or ki<br>thod 9095)<br>95)  | Unit of<br>Measure<br>□ cu yd □ gal<br>□ lb ⊠ ton   | Time<br>Frame   |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi   | Warren<br>Residu<br>Code D<br>Drill cuttings (oil and g<br>ange 8.9<br>cal State   | SECTION B. WAST<br>al Waste<br>escription<br>as)<br>1. GENERAL P<br>to 11.3<br>Liquid Waste (EPA Me<br>Solid (EPA Method 90)<br>Gas (ambient tempera   | E DESCRIPTION<br>Amount<br>280<br>ROPERTIES<br>(based on analyses or kit<br>(based on analyses or kit<br>(based on analyses)<br>95)<br>ture & pressure)   | Unit of<br>Measure<br>cu yd gal<br>lb X ton   | Time     Frame       One Time   |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi   | Warren<br>Residu<br>Code D<br>Drill cuttings (oil and g<br>ange 8.9  | SECTION B. WAST<br>al Waste<br>escription<br>as)<br>1. GENERAL P<br>to 11.3<br>Liquid Waste (EPA Met<br>Solid (EPA Method 900<br>Gas (ambient tempera<br>Color Greyish Black   | E DESCRIPTION<br>Amount<br>280<br>ROPERTIES<br>(based on analyses or ku<br>thod 9095)<br>95)<br>ture & pressure)<br>Odo   | Unit of<br>Measure<br>cu yd gal<br>lb X ton<br>nowledge)  | Time     Frame       One Time   |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi   | Warren<br>Residu<br>Code D<br>Drill cuttings (oil and g<br>ange 8.9<br>cal State   | SECTION B. WAST<br>al Waste<br>escription<br>as)<br>1. GENERAL P<br>to 11.3<br>Liquid Waste (EPA Me<br>Solid (EPA Method 90)<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquid   | E DESCRIPTION<br>Amount<br>280<br>ROPERTIES<br>(based on analyses or kit<br>thod 9095)<br>95)<br>ture & pressure)<br>Odo<br>d Phases of Separation  | Unit of<br>Measure<br>cu yd gal<br>lb X ton<br>nowledge)<br>r Earthy / Slight<br>One                                      | Time     Frame       One Time   |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi   | Warren<br>Residu<br>Code D<br>Drill cuttings (oil and g<br>ange 8.9<br>cal State   | SECTION B. WAST<br>al Waste<br>escription<br>as)<br>1. GENERAL P<br>to 11.3<br>Liquid Waste (EPA Met<br>Solid (EPA Method 900<br>Gas (ambient tempera<br>Color Greyish Black   | E DESCRIPTION<br>Amount<br>280<br>ROPERTIES<br>(based on analyses or kit<br>thod 9095)<br>95)<br>ture & pressure)<br>Odo<br>d Phases of Separation  | Unit of<br>Measure<br>cu yd gal<br>lb X ton<br>nowledge)<br>r Earthy / Slight<br>One                                      | Time     Frame       One Time   |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi<br>c. Physi   | Warren<br>Residu<br>Code D<br>Drill cuttings (oil and g<br>ange 8.9<br>cal State<br>cal Appearance   | SECTION B. WAST<br>al Waste<br>escription<br>as)<br>1. GENERAL P<br>to 11.3<br>Liquid Waste (EPA Met<br>Solid (EPA Method 90)<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of s<br>2. CHEMICAL ANALYS  | E DESCRIPTION<br>Amount<br>280<br>ROPERTIES<br>(based on analyses or kit<br>(based on | Unit of<br>Measure<br>cu yd gal<br>lb ton<br>nowledge)<br>r Earthy / Slight<br>One<br>ck Fragments                        | Time         Frame         One Time         Petroleum   |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi<br>c. Physi<br>c. Physi   | Warren<br>Residu<br>Code D<br>Drill cuttings (oil and g<br>ange 8.9<br>cal State<br>cal Appearance   | SECTION B. WAST<br>al Waste<br>escription<br>as)<br>1. GENERAL P<br>to 11.3<br>Liquid Waste (EPA Me<br>Solid (EPA Method 90)<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of s   | E DESCRIPTION<br>Amount<br>280<br>ROPERTIES<br>(based on analyses or kit<br>(based on | Unit of<br>Measure<br>cu yd gal<br>lb ton<br>nowledge)<br>r Earthy / Slight<br>One<br>ck Fragments                        | Time     Frame       One Time   |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi<br>c. Physi<br>c. Physi   | Warren<br>Residu<br>Code D<br>Drill cuttings (oil and g<br>ange 8.9<br>cal State<br>cal Appearance   | SECTION B. WAST<br>al Waste<br>escription<br>as)<br>1. GENERAL P<br>to 11.3<br>Liquid Waste (EPA Met<br>Solid (EPA Method 90)<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of s<br>2. CHEMICAL ANALYS  | E DESCRIPTION<br>Amount<br>280<br>ROPERTIES<br>(based on analyses or kithod 9095)<br>95)<br>ture & pressure)<br>Odo<br>1 Phases of Separation<br>eparation. Soil and Ro<br>SIS ATTACHMENTS<br>waste, as described in  | Unit of<br>Measure<br>Cu yd gal<br>Ib X ton<br>nowledge)<br>r Earthy / Slight<br>One<br>ck Fragments                      | Time         Frame         One Time         Petroleum   |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi<br>c. Physi<br>c. Physi<br>a. The ra<br>instru<br>b. A det                        | Warren         Residu         Code D         Drill cuttings (oil and g         ange       8.9         cal State         cal Appearance         essults of a detailed chem         ctions, is attached.         ailed description of the w         uality assurance/quality | SECTION B. WAST<br>al Waste<br>escription<br>as)<br>1. GENERAL P<br>to 11.3<br>Liquid Waste (EPA Met<br>Solid (EPA Method 90)<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of s<br>2. CHEMICAL ANALYS<br>ical characterization of the                              | E DESCRIPTION<br>Amount<br>280<br>ROPERTIES<br>(based on analyses or kit<br>(based on | Unit of<br>Measure<br>cu yd gal<br>lb X ton<br>nowledge)<br>r Earthy / Slight<br>One<br>ck Fragments                      | Time<br>Frame         One Time         Petroleum         Yes  |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi<br>c. Physi<br>c. Physi<br>a. The ra<br>instru<br>b. A deta<br>c. The q<br>attack | Warren         Residu         Code D         Drill cuttings (oil and g         ange       8.9         cal State         cal Appearance         esults of a detailed chem         alled description of the w         uality assurance/quality                               | SECTION B. WAST<br>al Waste<br>escription<br>as)<br>1. GENERAL P<br>to 11.3<br>Liquid Waste (EPA Met<br>Solid (EPA Method 90)<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of s<br>2. CHEMICAL ANALYS<br>ical characterization of the<br>aste sampling method is a | E DESCRIPTION<br>Amount<br>280<br>ROPERTIES<br>(based on analyses or kithod 9095)<br>95)<br>ture & pressure)<br>Odo<br>1 Phases of Separation<br>eparation. Soil and Ro<br>SIS ATTACHMENTS<br>waste, as described in<br>attached.<br>yed by the laboratory(ie   | Unit of<br>Measure<br>Cu yd gal<br>Ib X ton<br>nowledge)<br>r Earthy / Slight<br>One<br>ck Fragments<br>the X<br>rs) is X | Time<br>Frame         One Time         One Time         Petroleum         Yes       No         Yes       No |

| -      | A  | D   |                       |                                       |            |   |
|--------|--|---|-----------------------|---------------------------------------|------------|---|
| A. 425 |  | PROCESS DESCRIPTION & SCHI  |                       |                                       |            | <del>~~</del>   |
| а.     | A detailed description of the the waste, as specified in the   | nanufacturing and/or pollution instructions, is attached.         | control processes     | producing                             | 🛛 Yes      | No No   |
| b.     | A schematic of the manufacture as specified in the instruction | ring and/or pollution control p<br>s, is attached.                | rocesses producing    | the waste,                            | Yes        | 🗌 No  |
| C.     |  | submitted are confidential, the cribed in the instructions, is at |                       | Yes [                                 | _ No       | 🛛 N/A   |
|        | SECTIO   | DN C. MANAGEMENT C  | FRESIDUAL V           | NASTE                                 |            |   |
|        |  | 1. PROCESSING OR DISPOS   | AL FACILITY(IES)      |                                       | 1,         | 1 - Andreas - Andreas - Andreas - Andreas - Andreas - Andreas - Andreas - Andreas - Andreas - Andreas - Andreas |
| The ar | ea below (ad.) will accommod                                   | ate the identification of two fac                                 | ilitles. Attach addit | tional sheets if r                    | ecessary.  |   |
| а.     | Solid waste permit number(s)<br>8-0728-00004                   | for processing or disposal fac                                    | lity being utilized.  |                                       |            |   |
| 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 Che            | mung                                  |            |   |
| c.     | Facility Contact Name  | Carla Canjar  |                       | -                                     |            |   |
|        | Title  | Environmental Manager   |                       |                                       |            |   |
|        | Phone  |   | il Address carla      | a.canjar@casel                        | la com     | ·   |
| d.     |  | rocessing or disposal facility in                                 |                       |                                       |            |   |
| u.     | 123  | cuyd 🗍 gal 🗌 Ib   | 🛛 ton                 | (check one)                           |            |   |
| а.     | Solid waste permit number(s)<br>8-4630-00010                   | for processing or disposal faci                                   | lity being utilized.  |                                       |            |   |
| b.     | Facility Name  | Hakes C&D Landfill  |                       |                                       |            |   |
|        | Address Line 1   | 4376 Manning Ridge Road   |                       |                                       |            |   |
|        | Address Line 1   | <b>x</b>  |                       |                                       | · · · ···· |   |
|        | Address City State ZIP   | Painted Post  | NY                    | 14870                                 |            |   |
|        | Municipality   | Erwin Twp   | County Steu           | iben                                  |            |   |
| c.     | Facility Contact Name  | Joseph Boyles   |                       | · · · · · · · · · · · · · · · · · · · |            |   |
|        | Title  |   |                       |                                       |            |   |
|        | Phone  | (607) 937-6044 Ema<br>(585) 466-7271                              | il Address joe.b      | ooyles@casella                        | .com       |   |
| d.     | Volume of waste shipped to p                                   | rocessing or disposal facility in                                 | the previous year.    |                                       |            |   |
|        | 103  | cuyd 🗌 gal 🗌 İb   | 🛛 ton                 | (check one)                           |            |   |
|        |  | 2. BENEFICIAL L   | JSE                   |                                       |            |   |
| a.     | Has the waste been approved                                    | for beneficial use?   |                       |                                       | Yes        | 🛛 No  |
|        | If "Yes", list the general perm                                | t number or approval number.                                      |                       | _                                     |            |   |
| b.     | Volume of waste beneficially                                   |   |                       |                                       |            |   |
|        | 0  | cuyd 🗌 gal 🔲 Ib   | 🔲 ton                 | (check one)                           |            |   |

|   |                             | SECTION D. CERTIFICATION   |
|---|-----------------------------|--|
| Report and all attached docu<br>obtaining the information, I<br>knowledge. I understand tha | uments<br>verify<br>t the s | have personally examined and am familiar with the information submitted in this Annual<br>is and that based upon my inquiry of those individuals immediately responsible for<br>that the submitted information is true, accurate and complete to the best of my<br>submission of false information herein is made subject to the penalties of 18 Pa. C.S.<br>on to authorities, which include fine and imprisonment. |
| Check the following, if applica   | ble:                        |  |
| I certify the information   | •                           | ired in Section B-1, General Properties was supplied to the Department for the year  |
| Form Submitted:   |                             | Form 26R   |
|   |                             | Other (specify)  |
| Date Submitted:   | _                           |  |
| I certify the information   |                             | ired in Section B-2, Chemical Analysis was supplied to the Department for the year   |
| Form Submitted:   |                             | Form 26R   |
|   |                             | Other (specify)  |
| Date Submitted:   |                             |  |
| I certify the information for the year and I  |                             | ed in Section B-3, Process Description and Schematic, was supplied to the Department t changed.  |
| Form Submitted:   |                             | Form 26R   |
|   |                             | Other (specify)  |
| Date Submitted:   |                             |  |
| Name of Responsible Official  |                             | Title Environmental Specialist   |
| Dina Brown Signature  |                             | Mon Date 2/25/11   |

| LAB ID: 08-00380<br>LAB ID: 39-00401 | <b>Easter</b> i<br>2566 Peni<br>Sayre,<br>Phone: (57 | Analytics, In<br>n Division<br>nsylvania Ave.<br>PA 18840<br>70) 888-0169<br>70) 888-0717 | IC.            | Work                             | Order: 101               | 20831            |
|--------------------------------------|--|---|----------------|----------------------------------|--------------------------|------------------|
| SEND DATA TO:                        |  |   |                |                                  |                          |                  |
| NAME: Steve Gridley                  |  |   | W              | O#: 1012                         | 0831                     |                  |
| COMPANY: Talisman Energy USA,        | nc.  |   |                |                                  |                          |                  |
| ADDRESS: 337 Daniel Zenker Dr        |  |   | PA             | AGE: 1 of <sup>r</sup>           | 1                        |                  |
| Horseheads, NY 14845                 |  |   | PC             | )#: AF78                         | 3267                     |                  |
|                                      |  |   |                |                                  |                          |                  |
| PHONE: (607) 731-0145                | TEST   | REPORT  | PV             | VS ID#                           |                          |                  |
| FAX: (607) 562-4001                  |  |   |                |                                  |                          |                  |
| 05-005                               |  |   |                |                                  |                          |                  |
|                                      | DATE   | 0/00/0040 45 40   |                |                                  | _                        |                  |
| RECEIVED FOR LAB BY: CMS             | DATE: 1  | 2/06/2010 15:40   |                |                                  | Pa                       | age 1 of 1       |
| SAMPLE: inv. Cuttings                | La   | b ID: 10120831-001A   | Compo          | site                             |                          |                  |
| SAMPLED BY: SG                       | Sample 1   | Time: 12/06/2010 13:47  |                |                                  |                          |                  |
| Test                                 | Result   | Method  | <u>SLOQ</u>    | Analysis Start                   | Analysis End             | Analyst *        |
| Total Petroleum Hydrocarbons         | 94900 mg/Kg  | EPA 9071  |                | 12/08/10 14:20                   | 12/08/10                 | CULULINI.        |
| Sample Note: Analysis performed by   |  | c-Erie Division   |                |                                  |                          |                  |
| SAMPLE: Inv. Cuttings                |  | ib ID: 10120831-001B  | Compo          | eita                             |                          |                  |
| SAMPLED BY: SG                       |  | Time: 12/06/2010 13:47  | Compo          | 310                              |                          |                  |
|                                      |  |   | <u>SLOQ</u>    |                                  |                          |                  |
| <u>Test</u><br>Molsture              | <u>Result</u><br>16.4 %                              | <u>Method</u>   | 0.01           | Analysis Start<br>12/06/10 17:30 | Analysis End<br>12/07/10 |                  |
| Free Liquid                          | < 0.1 %  | Moisture Calc.<br>EPA 9095A   | 0.01<br>0.1    | 12/06/10 17:30                   | 12/06/10                 | IC-SA<br>IC-SA   |
| pH                                   | 7.97@21.7°C  | EPA 9045C   | 0.1            | 12/07/10 14:20                   | 12/00/10                 | MED-SA           |
|                                      |  |   |                |                                  |                          | WED-5A           |
| SAMPLE: TCLP Leachate of Inv.Cuttin  | -  | b ID: 10120831-001E   | Compo          | site                             |                          |                  |
| SAMPLED BY: SG                       | Sample I   | ime: 12/07/2010 8:00  | <u>SLOQ</u>    |                                  |                          |                  |
| Test                                 | Result   | Method  |                | 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<br>12/08/10     | GSR-CV           |
| Selenium - TCLP extracted            | < 0.500 mg/L   | EPA 6010B   | 0.500<br>0.100 | 12/08/10 12:15<br>12/08/10 12:15 | 12/08/10                 | GSR-CV           |
| Silver - TCLP extracted              | < 0.100 mg/L<br>< 0.200 mg/L                         | EPA 6010B<br>EPA 6010B  | 0.200          | 12/08/10 12:15                   | 12/08/10                 | GSR-CV<br>GSR-CV |
| Zinc - TCLP extracted                | - 0.200 mg/L   |   | 0.200          |                                  |                          | 00100            |

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

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

| CHAIN OF CUSTODY                      |   | PAGE1OF1  |
|---------------------------------------|---|---|
| REPORT TO: Talisman / UEG             |   |   |
| geowetlands@aol.com                   | W/O#: 10120831  | ARE SPECIAL DETECTION LIMITS  |
| geomoticando (gaon.com                |   | NEEDED: YES / NO  |
|                                       | REFRIGERATE SAMPLES   |   |
| · · · · · · · · · · · · · · · · · · · | AFTER COLLECTION DW DRINKING WATER SL SLUDGE NYDOH NYDEC PA   | DEP IS A QC PACKAGE NEEDED?   |
| CONTACT Steve Gridley                 | TRANSPORT SW SURFACE WATER HZ HAZARDOUS LANDFILL  |   |
| PH# 607-731-0145                      |   | IF YES, PLEASE ATTACH REQUIREMENTS                                    |
| FAX#                                  | LABORATORY / / // H HYDROCHLORIC ACID OH SODIUM HYDROXIDE<br>IN COOLER / S SULFURIC ACID AS ASCORBIC ACID   |   |
| BILL TO: Talisman                     | LABORATORY<br>IN COOLER<br>WITH ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE<br>UNIT ICE | Please fill out all<br>applicable areas<br>completely<br>LAB USE ONLY |
|                                       | SO SOJUM SULFITE NH, AMMONIUM CHLORIDE  | Please fill out all<br>applicable areas<br>completely<br>LAB USE ONLY |
| PO# AF78267                           | An incomplete chain of custody may delay the<br>processing of your sample(s).   | Please fill out all   |
| DECT DESCRIPTION                      | 日 「 「 「 」 「 「 」 「 」 「 」 「 」 「 」 「 」 「 」   | applicable areas  |
| SAMPLER SIGNATURE / AFFILIATION       |   | completely  |
| SCONTAINER SAMPLING POINT             | An incomplete chain of custody may delay the<br>processing of your sample(s).   | Le la la la la la la la la la la la la la                             |
|                                       | (PER CONTAINER)   | A LAB USE ONLY  |
| 1 Inv Cuttings                        | 12/6/1347 50 C SCI N TPH  |   |
| 2                                     | рН  |   |
| 3                                     | TCLP 8 RCRA Metals + Cu, Ni, Zn   |   |
| 4                                     | Free Liquids / % Moisture   |   |
| 5 A-TPH                               |   |   |
| 6 B- pH, Free liquia, "               | Perform BTEX ONLY IF the TPH  |   |
| 7 C- Amons, metals                    | exceeds 100,000 mg/Kg   |   |
| 8 D- Total Sciple                     |   |   |
| 9 E- TCLP metals                      | TZ HOUR TURNAROUND  |   |
| 10                                    | DAY TURNAROUND  |   |
| 11                                    |   |   |
| LAB USE ONLY                          | Real and the second second second second second second second second second second second second second second  |   |
|                                       |   | C ARRIVAL ON IGE YAN  |
| RELINQUISHED BY:                      | DATE:<br>1216110 TIME:<br>1540<br>RECEIVED BY:  | DATE: TIME:   |
| RELINQUISHED BY:                      | DATE: TIME: RECEIVED BY:  | DATE: TIME:   |
|                                       |   |   |
| RELINQUISHED BY:                      | DATE: TIME: RECEIVED BY: 10. 1010   | _ DATE 16 110 TIME: 1540  |

| $\sim$ |          | · • •  | ~   | <i>.</i> | ~     |    |
|--------|----------|--------|-----|----------|-------|----|
| Ad Gra | phics Pr | inting | 570 | -88      | 1-066 | 15 |

| PA ID #: 08-00380<br>NY ID #. 11216   | 2566 Penn<br>Sayre, I<br>Phone: (57        | Analytics, In<br>I Division<br>sylvania Ave.<br>PA 18840<br>0) 888-0169<br>0) 888-0717   | IC.   | Work  | Order: 101   | 21729   |
|---|--|--|---|---|--|---|
| SEND DATA TO:<br>NAME: Dina Brown<br>COMPANY: Talisman Energy USA,<br>ADDRESS: 337 Daniel Zenker Dr<br>Horseheads, NY 14845<br>PHONE: (607) 562-4000  | i  | REPORT   | P/<br>P(  | O#: 1012<br>AGE: 1 of 3<br>O#: AF78<br>WS ID#   |  | ·   |
| FAX: (607) 562-4001<br>05-005<br>RECEIVED FOR LAB BY: RML   | DATE: 12                                   | 2/09/2010 15:45  | -   |   | Pi   | age 1 of 3  |
| SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Ignitability<br>Sample Note: Analysis performed by  | Sample Tii<br><u>Result</u><br>Neg ASIS °F | ID: 10121729-001A<br>me: 12/09/2010 13:28<br><u>Method</u><br>SW846 1030   | Grab<br><u>SLOQ</u>   | <u>Analysis Start</u><br>12/15/10 13:30   | <u>Analysis End</u><br>12/15/10  | <u>Analyst *</u>  |
| SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>Cyanide, Reactive<br>Reactive Sulfide   |  | ID: 10121729-001C<br>me: 12/09/2010 13:28<br><u>Method</u><br>SW 7.3.3.2<br>SW846 7.3  | Grab<br><u>SLOQ</u><br>0.2<br>16  | Analysis Start<br>12/13/10 8:56<br>12/14/10 12:30   | Analysis End<br>12/14/10<br>12/14/10   | <u>Analvst*</u><br>HDP-CV<br>LTW-CV   |
| SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG<br><u>Test</u><br>% Solids<br>Total Volatile Solids   | Lab  | ID: 10121729-001D<br>ne: 12/09/2010 13:28<br><u>Method</u><br>SM2540B<br>EPA 160.4   | Grab<br><u>SLOQ</u><br>0.10<br>0.01   | Analysis Start<br>12/10/10 17:00<br>12/10/10 8:00   | <u>Analysis End</u><br>12/13/10<br>12/14/10  | Analyst *<br>IC-SA<br>NFM-SA  |
| SAMPLE: TCLP Leachate of Inv. Cuttin<br>SAMPLED BY: SG<br><u>Test</u><br>Pyridine<br>1,4-Dichlorobenzene<br>o-Cresol<br>p-Cresol/m-Cresol<br>Hexachloroethane<br>Nitrobenzene<br>Hexachlorobutadiene<br>2,4,6-Trichlorophenol | •  | ID: 10121729-001F<br>ne: 12/11/2010 12:45<br><u>Method</u><br>EPA 8270C<br>EPA 8270C<br>EPA 8270C<br>EPA 8270C<br>EPA 8270C<br>EPA 8270C<br>EPA 8270C<br>EPA 8270C | Grab<br><u>SLOQ</u><br>0.10<br>0.10<br>0.10<br>0.10<br>0.10<br>0.10<br>0.10 | Analvsis Start<br>12/15/10 7:48<br>12/15/10 7:48<br>12/15/10 7:48<br>12/15/10 7:48<br>12/15/10 7:48<br>12/15/10 7:48<br>12/15/10 7:48 | Analysis End<br>12/15/10<br>12/15/10<br>12/15/10<br>12/15/10<br>12/15/10<br>12/15/10<br>12/15/10 | Analvst *<br>RHH-SA<br>RHH-SA<br>RHH-SA<br>RHH-SA<br>RHH-SA<br>RHH-SA<br>RHH-SA |

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

## Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave. Work Order: 10121729 Sayre, PA 18840 Phone: (570) 888-0169 Fax: (570) 888-0717 SEND DATA TO: NAME: Dina Brown WO#: 10121729 COMPANY: Talisman Energy USA, Inc. PAGE: 2 of 3 ADDRESS: 337 Daniel Zenker Dr Horseheads, NY 14845 PO#: AF78267 PWS ID# **TEST REPORT** PHONE: (607) 562-4000 FAX: (607) 562-4001 05-005 RECEIVED FOR LAB BY: RML DATE: 12/09/2010 15:45 Page 2 of 3 < 0.10 mg/L 12/15/10 7:48 12/15/10 2,4,5-Trichlorophenol EPA 8270C 0.10 RHH-SA Pentachlorophenol < 0.50 ma/LEPA 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 12/15/10 7:48 EPA 8270C 0.10 12/15/10 **RHH-SA** Naphthalene < 0.10 mg/L EPA 8270C 0.10 12/15/10 7:48 12/15/10 **RHH-SA** Lab ID: 10121729-001G Grab SAMPLE: TCLP Leachate of Inv. Cuttings SAMPLED BY: SG Sample Time: 12/07/2010 8:00 <u>SLOQ</u> Test **Result** Method Analysis Start Analysis End Analyst \* < 0.050 mg/L Strontium - TCLP extracted 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. Lab ID: 10121729-001H SAMPLE: TCLP Leachate of Inv. Cuttings Grab SAMPLED BY: SG Sample Time: 12/11/2010 12:45 SLOQ Method Analysis Start Analysis End Analyst\* Test Result 6.26@16.6°C 12/14/10 8:00 SM4500H+B 12/14/10 pН SG-SA Lab ID: 10121729-0011 Grab SAMPLE: ZHE Extract of Inv. Cuttings SAMPLED BY: SG Sample Time: 12/12/2010 13:10 SLOQ Test Result Method Analysis Start Analysis End Analyst\* < 0.0250 mg/L 0.0250 12/13/10 8:11 12/13/10 Benzene EPA 8260B CTM-SA < 0.0250 mg/L EPA 8260B 0.0250 12/13/10 8:11 12/13/10 CTM-SA Carbon tetrachloride EPA 8260B 0.0250 12/13/10 8:11 12/13/10 Chlorobenzene < 0.0250 mg/L CTM-SA 0.0250 12/13/10 8:11 12/13/10 < 0.0250 mg/L EPA 8260B CTM-SA Chloroform 12/13/10 8:11 12/13/10 < 0.0250 mg/L EPA 8260B 0.0250 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 EPA 8260B 0.0250 12/13/10 8:11 12/13/10 CTM-SA < 0.0250 mg/L Ethylbenzene < 0.0250 mg/L EPA 8260B 0.0250 12/13/10 8:11 12/13/10 CTM-SA Isopropylbenzene 12/13/10 8:11 0.0250 12/13/10 Trichloroethene < 0.0250 mg/L EPA 8260B CTM-SA

## 1,2,4-Trimethylbenzene

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.

EPA 8260B

0.0250

12/13/10 8:11

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

< 0.0250 mg/L

B Analyte detected in the associated Method Blank

MANAGER

REMARKS:

Carrie M. Davis

DATE: 12/16/2010

12/13/10

CTM-SA

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

2566 Pennsylvania Ave. Sayre, PA 18840

Work Order: 10121729

Phone: (570) 888-0169

Fax: (570) 888-0717

| SEND DATA TO | ): |
|--------------|----|
|--------------|----|

| NAME:  | Dina Brown   |   |  |  | W  | O#:  | 1012  | 1729   |  |
|--|--|---|--|--|--|--|---|--|--|
| COMPANY:   | Talisman Energy USA, Ir  | IC.   |  |  | PA   | AGE;   | 3 of 3  | 3  |  |
| ADDRESS:   | 337 Daniel Zenker Dr<br>Horseheads, NY 14845   |   |  | •  |  |  |   |  |  |
|  | 1013610203, 111 14040  | :   |  |  | PC   | <b>)#</b> :  | AF78  | 267  |  |
| PHONE:<br>FAX:   | (607) 562-4000<br>(607) 562-4001   | TE  | ST RE                                    | EPORT  | P۷   | NS ID#   |   |  |  |
| 05-00  | 5  |   |  |  |  |  |   |  |  |
| RECEIVED F   | FOR LAB BY: RML  | DAT   | E: 12/0                                  | 9/2010 15:45   |  |  |   | P٤   | age 3 of 3   |
| 1,3,5-Trir   | nethylbenzene  | < 0.0250 mg/L   |  | EPA 8260B  | 0.0250   | 12/13/10   | 8:11  | 12/13/10   | CTM-SA   |
| Vinyl chic   | pride  | < 0.0250 mg/L   |  | EPA 8260B  | 0.0250   | 12/13/10   | 8:11  | 12/13/10   | CTM-SA   |
| Methyl te  | rt-butyl ether   | < 0.0250 mg/L   |  | EPA 8260B  | 0.0250   | 12/13/10   | 8:11  | 12/13/10   | CTM-SA   |
| A B -  | ne   | < 0.0500 mg/L   |  | EPA 8260B  | 0.0500   | 12/13/10   | 8:11  | 12/13/10   | CTM-SA   |
| 2-Butano   |  |   |  | 217(02000  | 0.0000   |  |   |  | <b>Q</b> 1111 Q/ 1   |
| <u></u>  | STM Extract of Inv. Cutting  |   | Lab ID                                   | ): 10121729-001J   | Grab   |  |   |  |  |
| SAMPLE: A  | •  | 3   |  |  | Grab   |  |   |  |  |
| SAMPLE: AS   | STM Extract of Inv. Cuttings   | 3 Sam   |  | 0: 10121729-001J<br>9: 12/10/2010 11:15  |  |  |   |  |  |
| SAMPLE: AS<br>SAMPLE<br><u>Test</u>  | STM Extract of Inv. Cuttings<br>ED BY: SG  | 3<br>Sam<br><u>Result</u>   | nple Time                                | 2: 10121729-001J<br>2: 12/10/2010 11:15<br><u>Method</u>   | Grab<br><u>SLOQ</u>                                | Analysis   | <u>Start</u>  | Analysis End   | Analyst *  |
| SAMPLE: AS<br>SAMPLE<br><u>Test</u><br>Chemical  | STM Extract of Inv. Cuttings<br>ED BY: SG<br>I Oxygen Demand   | 3<br><u>Result</u><br>178 mg/L  | nple Time<br>в                           | 2: 10121729-001J<br>2: 12/10/2010 11:15<br><u>Method</u><br>HACH 8000  | Grab<br><u>SLOQ</u><br>10                          |  | <u>Start</u>  |  |  |
| SAMPLE: AS<br>SAMPLE<br><u>Test</u><br>Chemical<br>SAMPLE: AS  | STM Extract of Inv. Cuttings<br>ED BY: SG<br>I Oxygen Demand<br>STM Extract of Inv. Cuttings                     | 3 Sam<br><u>Result</u><br>178 mg/L  | в<br>Lab IE                              | 2: 10121729-001J<br>2: 12/10/2010 11:15<br><u>Method</u><br>HACH 8000<br>2: 10121729-001L  | Grab<br><u>SLOQ</u>                                | Analysis   | <u>Start</u>  | Analysis End   | Analyst *  |
| SAMPLE: AS<br>SAMPLE<br><u>Test</u><br>Chemical<br>SAMPLE: AS  | STM Extract of Inv. Cuttings<br>ED BY: SG<br>I Oxygen Demand   | 3 Sam<br><u>Result</u><br>178 mg/L  | в<br>Lab IE                              | 2: 10121729-001J<br>2: 12/10/2010 11:15<br><u>Method</u><br>HACH 8000  | Grab<br><u>SLOQ</u><br>10<br>Grab                  | Analysis   | <u>Start</u>  | Analysis End   | Analyst *  |
| SAMPLE: AS<br>SAMPLE<br><u>Test</u><br>Chemical<br>SAMPLE: AS  | STM Extract of Inv. Cuttings<br>ED BY: SG<br>I Oxygen Demand<br>STM Extract of Inv. Cuttings                     | 3 Sam<br><u>Result</u><br>178 mg/L  | в<br>Lab IE                              | 2: 10121729-001J<br>2: 12/10/2010 11:15<br><u>Method</u><br>HACH 8000<br>2: 10121729-001L  | Grab<br><u>SLOQ</u><br>10                          | Analysis   | <u>Start</u><br>8:00  | Analysis End   | Analyst *  |
| SAMPLE: AS<br>SAMPLE<br><u>Test</u><br>Chemical<br>SAMPLE: AS<br>SAMPLE: AS  | STM Extract of Inv. Cuttings<br>ED BY: SG<br>I Oxygen Demand<br>STM Extract of Inv. Cuttings                     | s Sam<br><u>Result</u><br>178 mg/L<br>s Sam   | в<br>Lab IE                              | 2: 10121729-001J<br>2: 12/10/2010 11:15<br><u>Method</u><br>HACH 8000<br>2: 10121729-001L<br>4: 12/10/2010 11:15   | Grab<br><u>SLOQ</u><br>10<br>Grab                  | <u>Analvsis :</u><br>12/11/10  | Start<br>8:00   | Analysis End<br>12/13/10   | Analyst *<br>KMF-SA  |
| SAMPLE: AS<br>SAMPLE<br><u>Test</u><br>Chemical<br>SAMPLE: AS<br>SAMPLE: <u>Test</u>   | STM Extract of Inv. Cuttings<br>ED BY: SG<br>I Oxygen Demand<br>STM Extract of Inv. Cuttings<br>ED BY: SG        | 3 Sam<br><u>Result</u><br>178 mg/L<br>3 Sam<br><u>Result</u>                                    | в<br>Lab IE                              | 2: 10121729-001J<br>2: 12/10/2010 11:15<br><u>Method</u><br>HACH 8000<br>2: 10121729-001L<br>4: 12/10/2010 11:15<br><u>Method</u>  | Grab<br><u>SLOQ</u><br>10<br>Grab                  | Analvsis<br>12/11/10<br>Analysis                                       | <u>Start</u><br>8:00<br><u>Start</u><br>8:00                          | Analysis End<br>12/13/10<br>Analysis End                         | <u>Analyst *</u><br>KMF-SA<br><u>Analyst *</u>                   |
| SAMPLE: AS<br>SAMPLE<br>Chemical<br>SAMPLE: AS<br>SAMPLE: AS<br>SAMPLE<br>Total Soli   | STM Extract of Inv. Cuttings<br>ED BY: SG<br>I Oxygen Demand<br>STM Extract of Inv. Cuttings<br>ED BY: SG        | 3 Sam<br><u>Result</u><br>178 mg/L<br>3 Sam<br><u>Result</u><br>7.34@16.7°C                     | B<br>B<br>Lab IC<br>Iple Time            | 2: 10121729-001J<br>2: 12/10/2010 11:15<br><u>Method</u><br>HACH 8000<br>2: 10121729-001L<br>4: 12/10/2010 11:15<br><u>Method</u><br>SM4500H+B   | Grab<br>SLOQ<br>10<br>Grab<br>SLOQ                 | <u>Analysis :</u><br>12/11/10<br><u>Analysis :</u><br>12/14/10         | <u>Start</u><br>8:00<br><u>Start</u><br>8:00                          | Analysis End<br>12/13/10<br>Analysis End<br>12/14/10             | <u>Analyst *</u><br>KMF-SA<br><u>Analyst *</u><br>SG-SA          |
| SAMPLE: AS<br>SAMPLE: AS<br>Chemical<br>SAMPLE: AS<br>SAMPLE: AS<br>SAMPLE: Test<br>pH<br>Total Soli<br>SAMPLE: In                             | STM Extract of Inv. Cuttings<br>ED BY: SG<br>I Oxygen Demand<br>STM Extract of Inv. Cuttings<br>ED BY: SG        | Sam<br><u>Result</u><br>178 mg/L<br>S<br>Sam<br><u>Result</u><br>7.34@16.7°C<br>1890 mg/L       | B<br>B<br>Lab IC<br>Ipple Time<br>Lab IC | 2: 10121729-001J<br>2: 12/10/2010 11:15<br><u>Method</u><br>HACH 8000<br>2: 10121729-001L<br>4: 12/10/2010 11:15<br><u>Method</u><br>SM4500H+B<br>SM2540B  | Grab<br>SLOQ<br>10<br>Grab<br>SLOQ<br>0.10<br>Grab | <u>Analysis :</u><br>12/11/10<br><u>Analysis :</u><br>12/14/10         | <u>Start</u><br>8:00<br><u>Start</u><br>8:00                          | Analysis End<br>12/13/10<br>Analysis End<br>12/14/10             | <u>Analyst *</u><br>KMF-SA<br><u>Analyst *</u><br>SG-SA          |
| SAMPLE: AS<br>SAMPLE: AS<br>Chemical<br>SAMPLE: AS<br>SAMPLE: AS<br>DH<br>Total Soli<br>SAMPLE: In<br>SAMPLE: In                               | STM Extract of Inv. Cuttings<br>ED BY: SG<br>I Oxygen Demand<br>STM Extract of Inv. Cuttings<br>ED BY: SG<br>ids | 3 Sam<br><u>Result</u><br>178 mg/L<br>3 Sam<br><u>Result</u><br>7.34@16.7°C<br>1890 mg/L<br>Sam | B<br>B<br>Lab IC<br>Ipple Time<br>Lab IC | 2: 10121729-001J<br>2: 12/10/2010 11:15<br><u>Method</u><br>HACH 8000<br>2: 10121729-001L<br>4: 12/10/2010 11:15<br><u>Method</u><br>SM4500H+B<br>SM2540B<br>2: 10121729-001M<br>2: 12/10/2010 10:25 | Grab<br>SLOQ<br>10<br>Grab<br>SLOQ<br>0.10         | <u>Analvsis</u><br>12/11/10<br><u>Analysis</u><br>12/14/10<br>12/10/10 | <u>Start</u><br>8:00<br><u>Start</u><br>8:00<br>17:00                 | Analysis End<br>12/13/10<br>Analysis End<br>12/14/10<br>12/13/10 | <u>Analyst *</u><br>KMF-SA<br><u>Analyst *</u><br>SG-SA<br>IC-SA |
| SAMPLE: AS<br>SAMPLE: AS<br>Chemical<br>SAMPLE: AS<br>SAMPLE: AS<br>SAMPLE: Test<br>pH<br>Total Soli<br>SAMPLE: In<br>SAMPLE: In<br>SAMPLE: In | STM Extract of Inv. Cuttings<br>ED BY: SG<br>I Oxygen Demand<br>STM Extract of Inv. Cuttings<br>ED BY: SG<br>ids | Sam<br><u>Result</u><br>178 mg/L<br>S<br>Sam<br><u>Result</u><br>7.34@16.7°C<br>1890 mg/L       | B<br>B<br>Lab IC<br>Ipple Time<br>Lab IC | 2: 10121729-001J<br>2: 12/10/2010 11:15<br><u>Method</u><br>HACH 8000<br>2: 10121729-001L<br>4: 12/10/2010 11:15<br><u>Method</u><br>SM4500H+B<br>SM2540B<br>2: 10121729-001M                        | Grab<br>SLOQ<br>10<br>Grab<br>SLOQ<br>0.10<br>Grab | <u>Analysis :</u><br>12/11/10<br><u>Analysis :</u><br>12/14/10         | <u>Start</u><br>8:00<br><u>Start</u><br>8:00<br>17:00<br><u>Start</u> | Analysis End<br>12/13/10<br>Analysis End<br>12/14/10             | <u>Analyst *</u><br>KMF-SA<br><u>Analyst *</u><br>SG-SA<br>IC-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

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Analyte detected in the associated Method Blank в

MANAGER

Carrie M. Davis

12/16/2010 DATE:

| CHAIN OF CUSTODY                | Benchmi   | E <u>1</u> 0F <u>1</u>  |
|---------------------------------|---|---|
| REPORT TO: Talisman / UEG       | Ea <b>W/O#: 10121729</b>  | SPECIAL DETECTION LIMITS  |
| geowetlands@aol.com             | Phone   | 1   |
|                                 | Fax: (570) 888-0717 REFRIGERATE SAMPLES RESULTS ARE BEING USED FOR:   |   |
|                                 | REFRIGERATE SAMPLES       RESULTS ARE BEING USED FOR:         AFTER COLLECTION       Image: Construction of the second seco | IF YES, PLEASE ATTACH   |
|                                 | I GW GROUND WATER SO SOIL   |   |
| CONTACT Steve Gridley           | TRANSPORT SW SURFACE WATER HZ HAZARDOUS LANDFILL Mostoller  |   |
| PH# 607-731-0145                | TO DE DEIONIZED WATER DI DISTILLED WATER PERSONAL OTHER   | IF YES, PLEASE ATTACH REQUIREMENTS  |
| FAX#                            | LABORATORY / / H HYDROCHLORIC ACID OH SODIUM HYDROXIDE<br>IN COOLER / S SULFURIC ACID AS ASCORBIC ACID  |   |
| BILL TO: Talisman               | WITH ICE / S / N NITRIC ACID AC ACETIC ACID<br>SO3 SODIUM SULFITE NH4 AMMONIUM CHLORIDE /   | E E E   |
|                                 | Thio SODIUM THIOSULFATE ZN ZINC ACETATE   | 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  |
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| DECT DESCRIPTION                | 「日本語」を「「「「「「」」」を「「」」(「「」」) An incomplete chain of custody may delay the 「「」」<br>「「」」「「」」」を「「」」」「「」」」)<br>「」」」」)「「」」」」)「「」」」)<br>「」」」」)「」」」」)「」」」)<br>「」」」」」」)「」」」」」)」<br>「」」」」」」」」  | applicable areas  |
| SAMPLER SIGNATURE / AFFILIATION |   | S completely  |
|                                 | LABORATORY<br>IN COOLER<br>WITH ICE   | Please fill out all<br>applicable areas<br>completely<br>LAB USE ONLY   |
| 1 Inv Cuttings                  | (PER CONTAINER)   |   |
|                                 | C / PCBs, Total Solids  | 한 가슴은 알 가 상황에는 가지 않는 가에서 도망했다.<br>같은 것에 같은 것이 같은 가 있었다. 이 도망했다.   |
|                                 | G   Total Volatile Solids   | n an dein och sette det stade at 1997 – 1998.<br>Till stade at 1998 at 1998 at 1999 at 1999 at 1999 at 1999 at 1999 at 1999 at 1999 at 1999 at 1999 at 1999 at  |
| 3 A Phinots, Igr.               |   | , 전문한 1993년 2013년 1993년 - 1993년<br>1977년 - 1993년 1973년 1973년 1973년 1973년 1973년 1973년 1973년 1973년 1973년 1973년 1973년 1973년 1973년 1973년 1973년 1973년 1<br>1973년 - 1973년 1973년 1973년 1973년 1973년 1973년 1973년 1973년 1973년 1973년 1973년 1973년 1973년 1973년 1973년 1973년 1973년 1 |
| 4 C - Reactivity                | C Ammonia-Nitrogen  |   |
| 5 D- 75, TUS                    | C Water Leaching Procedure: COD,  |   |
| 6 E-Total Sample                | VVVCV Total Solids, Oil & Grease,   |   |
| 7 F-TOLS BNA, fists.            |   |   |
| 8 G-TCCP Hats Sr                |   |   |
| 9 H -TCCP pH                    | - X-ASTANE 36 HOUR TURNAROUND   |   |
| 10 I-TELP UNS.                  | 1- ASTM T.S. DAY TURNAROUND   |   |
| 11 J- Asm cod, all              | m+Tax [   |   |
| LAB USE ONLY                    | 에는 이 것은 것은 것은 것은 것은 것은 것은 것은 것은 것은 것은 것은 것은   | 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -<br>1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -                                    |
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|                                 |   | •   |



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. |  |   |   |  | JSE <b>[ONLY</b><br>d & General Notes   |
|--|--|---|---|--|---|
| General Refe   | rence 287.54   |   |   |  |   |
| Date Prepare   | d/Revised Fe   | ebruary 11, 2011  |   |  |   |
|  |  | CLIENT (GENERATOR   | R OF THE WASTE) IN  | FORMATION  |   |
| Company Na   |  |   |   |  |   |
|  | ergy USA Inc.<br>ry, Name of Parent Com  | pany  |   | EPA  | Generator ID#   |
| Talisman En  | ergy Inc.  |   |   | N/A  |   |
| Company Ma<br>50 Pennwoo   | iling Address Line 1   | C   | ompany Mailing Addre  | ss Line 2  |   |
|  | dress Last Line – City   | State   | Zip+4   | Phone  | Ext   |
| Warrendale   |  | PA  | 15086   | (724) 814-530  | 0   |
| Company Co<br>  Brown  | ntact Last Name  | First Name<br>Dina  | MI  | Suffix   | <b>C</b>  |
| Municipality   |  |   | County  |  |   |
| Warrendale   |  | /   | Allegheny   |  |   |
| Contact Pho  |  | Contact Email Address   |   |  |   |
| (724) 814-53   |  | dybrown@talismanusa.c<br>ny Mailing Address (noted a  |   |  | Yes 🕅 No  |
| lf 'N <u>o'. desc</u> ri   | ibe location of waste ge   | neration and storage. Drill o   | uttings are generated du  | uring natural gas drilli   | ng operations at  |
|  |  | ocated at 706 Thomas Lane,  | Troy Township, Bradford   | County, PA. Waste  | is stored in  |
| containers on<br>Municipality  | _  | • • • • •   |   | <b>e</b> ( )   |   |
|  | Trov   | County Bradfo   | ord   | State  | PA  |
| manopany   |  | County Bradfo   |   | State  | PA  |
| Residual   | Resid  | SECTION B. WAST   | E DESCRIPTION   | Unit of  | Time  |
|  | Resic<br>Code  | SECTION B. WAST<br>lual Waste<br>Description  | E DESCRIPTION<br>Amount   | Unit of<br>Measure   |   |
| Residual   | Resid  | SECTION B. WAST<br>lual Waste<br>Description  | E DESCRIPTION   | Unit of  | Time  |
| Residual<br>Waste Code<br>810  | Resic<br>Code<br>Drill cuttings (oil and   | SECTION B. WAST<br>Iual Waste<br>Description<br>gas)<br>1. GENERAL P  | E DESCRIPTION<br>Amount<br>2,175<br>ROPERTIES   | Unit of<br>Measure<br>cu yd gal<br>lb X ton  | Time<br>Frame   |
| Residual<br>Waste Code<br>810<br>a. pH Ra  | Resic<br>Code<br>Drill cuttings (oil and<br>ange 8.  | SECTION B. WAST<br>Iual Waste<br>Description<br>gas)<br><u>1. GENERAL P</u><br>9 to 11.3  | E DESCRIPTION<br>Amount<br>2,175<br>ROPERTIES<br>(based on analyses or k  | Unit of<br>Measure<br>cu yd gal<br>lb X ton  | Time<br>Frame   |
| Residual<br>Waste Code<br>810<br>a. pH Ra  | Resic<br>Code<br>Drill cuttings (oil and   | SECTION B. WAST<br>Iual Waste<br>Description<br>gas)<br>1. GENERAL P<br>9 to 11.3<br>Liquid Waste (EPA Me   | E DESCRIPTION<br>Amount<br>2,175<br>ROPERTIES<br>(based on analyses or k<br>thod 9095)  | Unit of<br>Measure<br>cu yd gal<br>lb X ton  | Time<br>Frame   |
| Residual<br>Waste Code<br>810<br>a. pH Ra  | Resic<br>Code<br>Drill cuttings (oil and<br>ange 8.  | SECTION B. WAST<br>Iual Waste<br>Description<br>gas)<br><u>1. GENERAL P</u><br>9 to 11.3  | E DESCRIPTION<br>Amount<br>2,175<br>ROPERTIES<br>(based on analyses or k<br>thod 9095)<br>95)   | Unit of<br>Measure<br>cu yd gal<br>lb X ton  | Time<br>Frame   |
| Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi  | Resic<br>Code<br>Drill cuttings (oil and<br>ange 8.  | SECTION B. WAST<br>Jual Waste<br>Description<br>gas)<br>1. GENERAL P<br>9 to 11.3<br>1 Liquid Waste (EPA Met<br>Solid (EPA Method 900<br>Gas (ambient tempera<br>Color Greyish Black  | E DESCRIPTION<br>Amount<br>2,175<br>ROPERTIES<br>(based on analyses or k<br>thod 9095)<br>95)<br>ture & pressure)<br>Odo  | Unit of<br>Measure<br>Cuyd gal<br>Ib X ton<br>nowledge)  | Time<br>Frame   |
| Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi  | Resic<br>Code<br>Drill cuttings (oil and<br>ange 8.<br>cal State   | SECTION B. WAST<br>Jual Waste<br>Description<br>gas)<br>1. GENERAL P<br>9 to 11.3<br>1. Liquid Waste (EPA Me<br>Solid (EPA Method 90)<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquid   | E DESCRIPTION Amount 2,175 ROPERTIES (based on analyses or k thod 9095) 95) ture & pressure) Odo I Phases of Separation   | Unit of<br>Measure<br>Cu yd gal<br>Ib X ton<br>nowledge)<br>r _Earthy / Slight<br>One  | Time<br>Frame   |
| Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi  | Resic<br>Code<br>Drill cuttings (oil and<br>ange 8.<br>cal State   | SECTION B. WAST<br>Jual Waste<br>Description<br>gas)<br>1. GENERAL P<br>9 to 11.3<br>1 Liquid Waste (EPA Met<br>Solid (EPA Method 900<br>Gas (ambient tempera<br>Color Greyish Black  | E DESCRIPTION Amount 2,175 ROPERTIES (based on analyses or k thod 9095) 95) ture & pressure) Odo I Phases of Separation   | Unit of<br>Measure<br>Cu yd gal<br>Ib X ton<br>nowledge)<br>r _Earthy / Slight<br>One  | Time<br>Frame   |
| Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi<br>c. Physi  | Resic<br>Code  <br>Drill cuttings (oil and<br>ange 8.<br>cal State<br>cal Appearance   | SECTION B. WAST<br>Jual Waste<br>Description<br>gas)<br>1. GENERAL P<br>9 to 11.3<br>1. Liquid Waste (EPA Met<br>Solid (EPA Method 900<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of s<br>2. CHEMICAL ANALYS  | E DESCRIPTION Amount 2,175 ROPERTIES (based on analyses or k thod 9095) 95) ture & pressure) Odo I Phases of Separation eparation. Soil and Ro SIS ATTACHMENTS  | Unit of<br>Measure<br>Cu yd gal<br>Ib X ton<br>nowledge)<br>r Earthy / Slight<br>One<br>ck Fragments   | Time         Frame         One Time         Petroleum   |
| Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi<br>c. Physi<br>c. Physi  | Resic<br>Code  <br>Drill cuttings (oil and<br>ange 8.<br>cal State<br>cal Appearance<br>esults of a detailed cher<br>ictions, is attached.   | SECTION B. WAST<br>Jual Waste<br>Description<br>gas)<br>1. GENERAL P<br>9 to 11.3<br>1. Liquid Waste (EPA Met<br>Solid (EPA Method 900<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of s<br>2. CHEMICAL ANALYS<br>Inical characterization of the            | E DESCRIPTION Amount 2,175 ROPERTIES (based on analyses or k thod 9095) 95) ture & pressure) Odo I Phases of Separation eparation. Soil and Ro SIS ATTACHMENTS waste, as described in   | Unit of<br>Measure<br>□ cu yd □ gal<br>□ lb  | Time         Frame         One Time         Petroleum         Yes       No                      |
| Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi<br>c. Physi<br>c. Physi<br>a. The ra<br>instru<br>b. A deta  | Resic<br>Code<br>Drill cuttings (oil and<br>ange 8.<br>cal State<br>cal Appearance<br>esults of a detailed cher<br>ictions, is attached.<br>ailed description of the                             | SECTION B. WAST<br>Jual Waste<br>Description<br>gas)<br>1. GENERAL P<br>9 to 11.3<br>1. Liquid Waste (EPA Method 900<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of s<br>2. CHEMICAL ANALYS<br>nical characterization of the<br>waste sampling method is a | E DESCRIPTION Amount 2,175 ROPERTIES (based on analyses or k thod 9095) 95) ture & pressure) Odo Phases of Separation eparation. Soil and Ro SIS ATTACHMENTS waste, as described in tttached.                                 | Unit of<br>Measure<br>Unit of<br>Measure<br>gal<br>gal<br>Ib<br>X ton<br>nowledge)<br>r<br>Earthy / Slight<br>One<br>ck Fragments<br>the<br>X  | Time         Frame         One Time         Petroleum         Yes       No         Yes       No |
| Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi<br>c. Physi<br>c. Physi<br>a. The ra<br>instru<br>b. A deta  | Resic<br>Code<br>Drill cuttings (oil and<br>ange 8.<br>cal State<br>cal Appearance<br>esults of a detailed cher<br>ictions, is attached.<br>ailed description of the<br>uality assurance/quality | SECTION B. WAST<br>Jual Waste<br>Description<br>gas)<br>1. GENERAL P<br>9 to 11.3<br>1. Liquid Waste (EPA Met<br>Solid (EPA Method 900<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of s<br>2. CHEMICAL ANALYS<br>Inical characterization of the            | E DESCRIPTION Amount 2,175 ROPERTIES (based on analyses or k thod 9095) 95) ture & pressure) Odo Phases of Separation eparation. Soil and Ro SIS ATTACHMENTS waste, as described in tttached.                                 | Unit of<br>Measure<br>Unit of<br>Measure<br>gal<br>gal<br>Ib<br>X ton<br>nowledge)<br>r<br>Earthy / Slight<br>One<br>ck Fragments<br>the<br>X  | Time         Frame         One Time         Petroleum         Yes       No                      |
| Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physi<br>c. Physi<br>c. Physi<br>a. The ra<br>instru<br>b. A deta<br>c. The q<br>attack<br>d. The ra   | Resic<br>Code<br>Drill cuttings (oil and<br>ange 8.<br>cal State<br>cal Appearance<br>cal Appearance<br>cal Appearance<br>cal Appearance<br>cal Appearance<br>cal Appearance<br>cal Appearance   | SECTION B. WAST<br>Jual Waste<br>Description<br>gas)<br>1. GENERAL P<br>9 to 11.3<br>1. Liquid Waste (EPA Method 900<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of s<br>2. CHEMICAL ANALYS<br>nical characterization of the<br>waste sampling method is a | E DESCRIPTION Amount 2,175 ROPERTIES (based on analyses or k thod 9095) 95) ture & pressure) Odo Phases of Separation eparation. Soil and Ro SIS ATTACHMENTS waste, as described in ittached. //ed by the laboratory(in ched. | Unit of<br>Measure<br>Unit of<br>Measure<br>gal<br>gal<br>Ib<br>X ton<br>nowledge)<br>r<br>Earthy / Slight<br>One<br>ck Fragments<br>the<br>Share<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>Charles<br>C | Time         Frame         One Time         Petroleum         Yes       No         Yes       No |

|        | 3   | PROCESS DESCRIPTION         | SCHEMATIC ATTAC   | HMENTS   |               | 1     |  |  |  |
|--------|---|-----------------------------|---|--|---------------|-------|--|--|--|
| a.     | A detailed description of the   |                             |   |  | Yes           |       |  |  |  |
|        | the waste, as specified in the  |                             |   |  |               |       |  |  |  |
| b.     | A schematic of the manufactu  | ring and/or pollution oor   | tral processo proc  | luging the weets   | X Yes         | □ No  |  |  |  |
| D.     | as specified in the instruction   |                             | itroi processes proc  | incling the waste,   | K fes         |       |  |  |  |
| c.     | If portions of the information  | submitted are confidentia   | al, the substantiation  | n for Yes  | No No         | 🛛 N/A |  |  |  |
|        | a confidentiality claim, as described in the instructions, is attached. |                             |   |  |               |       |  |  |  |
|        | SECTIO  | ON C. MANAGEME              | watakey (SomeElion) New Politons (BALActy Firstless (BAVACATION South | over an example and the contract of the contract of the second and the contract of the second of the |               |       |  |  |  |
|        |   | 1. PROCESSING OR D          |   |  |               |       |  |  |  |
| The ar | ea below (ad.) will accommod  | ate the identification of t | wo facilities. Attach   | additional sheets  | if necessary. |       |  |  |  |
| a.     | Solid waste permit number(s)<br>9-0232-00003                            | for processing or dispos    | al facility being utili   | zed.   |               |       |  |  |  |
| 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   | Latty Stiming               |   |  |               |       |  |  |  |
|        | Phone   | (585) 466-7271              | Email Address   | larry.shilling@ca  | sella.com     |       |  |  |  |
| d.     | Volume of waste shipped to p  | rocessing or disposal fac   | lity in the previous  | vear.  |               |       |  |  |  |
|        | 1,255   | cu yd 🗌 gal                 | ∏lb ⊠ton  |  |               |       |  |  |  |
| a.     | Solid waste permit number(s)  | for processing or dispos    | al facility being utili   | zed  |               |       |  |  |  |
| u.     | 8-0728-00004  | for processing of dispos    | an lacinty being utili  | LCU.   |               |       |  |  |  |
| b.     | Facility Name   | Observer Country Loop       | JC11  |  |               |       |  |  |  |
| D.     | Address Line 1  | Chemung County Land         |   | ·····  |               |       |  |  |  |
|        | Address Line 1<br>Address Line 1  | 1690 Lake Street            |   |  |               |       |  |  |  |
|        | Address Line 1<br>Address City State ZIP                                |                             | NIX   | 44000  |               |       |  |  |  |
|        | Municipality  | Elmira                      | NY<br>County  | 14903  |               |       |  |  |  |
|        |   | Elmira                      | County  | Chemung  |               |       |  |  |  |
| с.     | Facility Contact Name   | Carla Canjar                | <u> </u>  |  |               |       |  |  |  |
|        | Title   | Environmental Manage        |   |  |               |       |  |  |  |
|        | Phone   | (585) 797-5941              | Email Address   | carla.canjar@cas   | sella.com     |       |  |  |  |
| d.     | Volume of waste shipped to p  |                             | ility in the previous   | year.  |               |       |  |  |  |
|        | 548   | cu yd 🗌 gal 🗌               | b 🛛 ton   | (check one)  |               |       |  |  |  |
|        |   | 2. BENEF                    | ICIAL USE   |  | <u>.</u>      |       |  |  |  |
| a.     | Has the waste been approved   | for beneficial use?         |   |  | Yes           | No No |  |  |  |
|        | If "Yes", list the general permi  | t number or approval nu     | nber.   |  |               |       |  |  |  |
| b.     | Volume of waste beneficially i  |                             |   |  |               |       |  |  |  |
|        | 0 Ú   | cuyd 🗌 gal 🛛                | lbton   | (check one)  |               |       |  |  |  |

|        | 3:  | PROCESS DESCRIPTION   | & SCHEMATIC ATTA   | CHMENTS                                  | an da da da da da da da da da da da da da |       |  |  |
|--------|---|---|--|--|---|-------|--|--|
| a.     | A detailed description of the r<br>the waste, as specified in the   | instructions, is attached   |  | esses producing                          | X Yes                                     | No No |  |  |
| b.     | A schematic of the manufacturing and/or pollution control processes producing the waste, X Yes No as specified in the instructions, is attached.                        |   |  |  |   |       |  |  |
| C.     | c. If portions of the information submitted are confidential, the substantiation for Yes No N/A a confidentiality claim, as described in the instructions, is attached. |   |  |  |   |       |  |  |
|        | SECTIO  | ON C. MANAGEME  | - NO ADD WELLEY WITH Y STOLEN DE DATE OF AN AND AN AND AN AND AN AN AN AN AN AN AN AN AN AN AN AN AN | an an an an an an an an an an an an an a |   |       |  |  |
|        |   | 1. PROCESSING OR D  |  |  |   |       |  |  |
| The ar | ea below (ad.) will accommod  | ate the identification of t   | wo facilities. Attac   | h additional sheets                      | if necessary.                             |       |  |  |
| a.     | Solid waste permit number(s)<br>101243  | for processing or dispo   | sal facility being ut  | ilized.                                  | - night                                   |       |  |  |
| b.     | Facility Name   | Northern Tier Solid W   | aste Authority   |  |   |       |  |  |
|        | Address Line 1  | 108 Steam Hollow Ro   | ad   |  |   |       |  |  |
|        | Address Line 1  |   |  |  |   |       |  |  |
|        | Address City State ZIP  | Troy  | PA   | 16947                                    |   |       |  |  |
|        | Municipality  | West Burlington Twp   | County   | Bradford                                 |   |       |  |  |
| с.     | Facility Contact Name   | Charles Woodward  |  |  |   |       |  |  |
|        | Title   |   |  |  |   |       |  |  |
|        | Phone   | (570) 297-4177  | Email Address  | chuckwoodward                            | @epix.net                                 |       |  |  |
| d.     | Volume of waste shipped to p<br>372   | rocessing or disposal fa<br>cu yd gal   | cility in the previou  |  |   |       |  |  |
| a.     | Solid waste permit number(s)  | for processing or dispo   | sal facility being ut  | ilized.                                  |   |       |  |  |
| 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 p  | ocessing or disposal fa   | cility in the previou  | s year.                                  |   |       |  |  |
|        |   | cu yd 🛛 🗌 gal   | b to   | n (check one)                            |   |       |  |  |
|        |   | 2. BENER  | ICIAL USE  |  |   |       |  |  |
| а.     | Has the waste been approved   | and the date of the latter of |  |  | Yes                                       | No No |  |  |
|        | If "Yes", list the general permi  | t number or approval nu   | mber.  |  |   |       |  |  |
| b.     | Volume of waste beneficially u  |   |  |  |   |       |  |  |
|        | 0 📋   | cuyd 🗌 gal  | 🗌 lb 🗌 to  | n (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 applical   | ole: |   |  |  |  |  |
| I certify the information and has not chan   | •    | ired in Section B-1, General Properties was supplied to the Department for the year             |  |  |  |  |
| Form Submitted:  |      | Form 26R  |  |  |  |  |
|  |      | Other (specify)   |  |  |  |  |
| Date Submitted:  |      |   |  |  |  |  |
| I certify the information  | -    | ired in Section B-2, Chemical Analysis was supplied to the Department for the year              |  |  |  |  |
| Form Submitted:  |      | Form 26R  |  |  |  |  |
|  |      | Other (specify)   |  |  |  |  |
| Date Submitted:  |      |   |  |  |  |  |
| I certify the information for the year and h   |      | ed in Section B-3, Process Description and Schematic, was supplied to the Department t changed. |  |  |  |  |
| Form Submitted:  |      | Form 26R  |  |  |  |  |
|  |      | Other (specify)   |  |  |  |  |
| Date Submitted:  |      |   |  |  |  |  |
| Name of Responsible Official   |      | TitleEnvironmental Specialist   |  |  |  |  |
| Dina Brown   |      |   |  |  |  |  |
| Signature  | 5    | Date Date 2/2/11  |  |  |  |  |

| LAB ID: 08-00380<br>LAB ID: 39-00401 |  | Benchmark Analytics, Inc.<br>Eastern Division<br>2566 Pennsylvania Ave.<br>Sayre, PA 18840 |                 | •<br>Work Order: 10032816 |              |                  |  |  |
|--------------------------------------|--|--|-----------------|---------------------------|--------------|------------------|--|--|
|                                      |  | Phone: (570) 888-01<br>Fax: (570) 888-07   |                 |                           |              |                  |  |  |
| SEND DATA                            | A TO:  |  |                 |                           |              |                  |  |  |
| NAME:                                | Steve Gridley  |  | WO#             | : 1003                    | 2816         |                  |  |  |
| COMPANY:                             | <b>0</b> , ,   | <b>ЪС.</b>   | PAGI            | E: 1 of                   | 1            |                  |  |  |
| ADDRESS:                             | 50 Pennwood Place<br>Warrendale, PA 15086                            |  |                 |                           | •            |                  |  |  |
|                                      | Waltendale, 177 10000  |  | PO#:            |                           |              |                  |  |  |
| PHONE:<br>FAX:                       | (607) 562-4000<br>(607) 562-4001                                     | TEST REPORT  | PWS             | ID#                       |              |                  |  |  |
| FTS                                  | 5H   |  |                 |                           |              |                  |  |  |
|                                      | FOR LAB BY: DLM2   | DATE: 03/17/2010 1   | 4:47            |                           | Pa           | ge 1 of 1        |  |  |
| SAMPLE: In                           | v. Cuttings  | Lab ID: 1003281  | 6-001A Grab     |                           |              |                  |  |  |
| SAMPLI                               | ED BY: -   | Sample Time: 03/16/20  | 10 0:00<br>SLOQ |                           |              |                  |  |  |
| Test                                 |  | Result Metho   |                 | nalysis Start             | Analysis End | <u>Analyst *</u> |  |  |
| Unknown                              | 1  | See Attached Subcor  | itract 04       | 4/20/10 0:00              | 04/20/10     |                  |  |  |
| Sample                               | Sample Note: Analysis performed by Texas Oil Tech Laboratories, Inc. |  |                 |                           |              |                  |  |  |

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

anie M. Davis DATE: 4/21/2010

MANAGER

| CHAIN OF CUSTODY               | 1   | Benchmark Ana  | ivtics. Inc.  | PAGEOF   |
|--------------------------------|---|--|---|--|
| EPORT TOI Talismon 1/2126      | ·   | East<br>2566 Pennsylvania  | ~~~~  | FLS SPECIAL DETECTION LIMITS   |
| the A                          | 1   | Phone: (   | 0032816 03/17/10 14:47  |  |
| geowetland's                   |   | •  | sman Energy USA, Inc.   | ED: YES / NO   |
|                                | AFTER COLLECTION  | ·····  | mas FT5H  | ), PLEASE ATTACH   |
| · ·                            | ALTEROOLLEONON  | DW DRINKING WA U<br>GW GROUND WATER S  | O SOIL INYDOH NYDEC F   | ADEP IS A QC PACKAGE NEEDED?   |
| ONTACT Steve Cridley           | TRANSPORT   | SW SURFACE WATER H   | Z HAZARDOUS LANDFILL  | YES (NO )  |
| H#                             | 1 👞   |  | THER I DISTILLED WATER PERSONAL OTHER                             | IF YES, PLEASE ATTACH REQUIREMENTS   |
| AX#                            | LABORATORY  | H HYDROCH  | LORIC ACID OH SODIUM HYDROXIDE PWS ID                             | #  |
| ILL TO: To Isman               | IN COOLER   | S SULFURIC   | ACID AS ASCOMBIC ACID<br>ID AC ACETIC ACID Location               |  |
|                                |   | SO3 SODIUM S   | ULFITE NH, AMMONIUM CHLORIDE<br>HIOSULFATE ZN ZINC ACETATE Sample | · · ·  |
| 0# AF 75715                    | 1 / / 0/ 1  | Sel so - NONE  | Hg MERCURIC CHLORIDE  |  |
| BOJECT DESCRIPTION             | 1 / 3 / 2 / 2 /   |  | n incomplete chain of custody may delay the                       | ろ 与 Please fill<br>の ダン out all  |
| AMELER SIGNATURE / AFFILIATION | DATE SOUPLED<br>THE OF SOUPLED<br>SOUPLE WATTRY<br>SOUPLE FOR | BE DESCRIPTION WITCH DESCRIPTION OF THE DESCRIPTION OF THE PROPERTY OF THE PRO | processing of your sample(s).                                     | S. SS applicable   |
| Steep UEG                      | The second second   | Tat Composition  | ANALYSIS TO BE PERFORMED  | 文字 50 areas<br>この 20 年間 completely.  |
| ontainer Sample Point No./Type | 5 1 3 3   | 8 8 8 8 40   | (PER CONTAINER)   | LAB USE ONLY   |
| 1 Inv Cuttings                 | 3/16 - 50 G -   | -N Ban   | te \by X  | -Ray -001x   |
| 2                              |   | Suge   |   | when   |
| 3                              |   | C la   | minoralogy. Al  |  |
|                                |   |  | MINE 001044 1 01  | 0  |
| 4                              |   | I ID   |   |  |
| 5                              |   | Notan  | rive load - 0/6 of  | UN Start   |
| 6                              |   | Biter  | mus Coal / f  |  |
| 7                              |   | 60   | gonic Carbon  |  |
| 8                              | <u></u>   | - Cruo   | De OIL  | NMA /  |
| 9                              |   | Poli   | Imeris n  | -TP/   |
| 0                              |   | 4  | SAr landoud   |  |
| 1                              |   |  | Δ   | 8. 3130110 - OK DEF  |
|                                |   |  |   | and the second second second second second second second second second second second second second second second |
| DELIVERED BY                   | K SC  |  |   | <u>4</u> °C ARRIVAL ON CE (77N   |
|                                | DATE:   | TIME:  | n and an an an an an an an an an an an an an                      | DATE: TIME:  |
| RELINQUISHED                   | 31/716  | 1447   |   | 1 1  |
| RELINQUISHED END               |   |  |   |  |
| RELINQUISHED BY:               | DATE:   | TIME: RECEIVE  | DBY:  | DATE: TIME:  |
| Geore 1:                       |   | TIME: RECEIVE  |   | DATE: // TIME:<br>DATE: ////0 TIME: /9:47  |

## **Certificate of Analysis**



SINCE 1985

Quality Controlled Through Analysis

10630 FALLSTONE RD. HOUSTON, TEXAS 77099 P.O. BOX 741905, HOUSTON, TEXAS 77274

Talisnan

TEL: (281) 495-2400 FAX: (281) 495-2410

| CLIENT: Benchmark Analytics, Inc. |               | REQUESTED BY:      | Mr. Tracy Cole |
|-----------------------------------|---------------|--------------------|----------------|
| SAMPLE:                           | 10032816-001A | REPORT DATE:       | April 20, 2010 |
| LABORATOR                         | Y 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

| Amount Found, wt% |
|-------------------|
| 28                |
| 55                |
| ND                |
| 7                 |
| 10                |
|                   |

Respectfully submitted For Texas OilTech La poratories, L.P.

A. Phil Solurbaktsh Director of Laboratory Operations



These analyses, opinions or interpretations are based on material supplied by the client to whom, and for whose exclusive and confidential use this report is made. Texas Oiltech Laboratories, Inc. and its officers assume no responsibility and make no warranty for proper operations of any petroleum, oil, gas or any other material in connection with which this report is used or relied on.





COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WASTE MANAGEMENT

FORM 26R

CHEMICAL ANALYSIS OF RESIDUAL WASTE ANNUAL REPORT BY THE GENERATOR

|                           |   |  | rately completed. All requi   |                               |                         | USE ONLY                              |
|---------------------------|---|--|---|-------------------------------|-------------------------|---------------------------------------|
| each a                    | typed or legibly printed in the spaces provided. If additional space is necessary, identify<br>each attached sheet as Form 26R, reference the item number and identify the date<br>prepared. The date on attached sheets needs to match the date noted below. |  |   |                               |                         | ed & General Notes                    |
| Genera                    | al Refe   | ence 287.54                            |   |                               |                         |                                       |
| Date P                    | repared   | I/Revised F                            | February 11, 2011   |                               |                         |                                       |
|                           |   | SECTION A                              | . CLIENT (GENERATOR   | R OF THE WASTE) II            | NFORMATION              |                                       |
| Compa                     | ny Nar  | ne                                     |   | ······                        | -                       |                                       |
| I alism                   | an Ene  | ergy USA Inc.<br>/, Name of Parent Cor | many  |                               | EDA                     | Generator ID#                         |
| Talism                    | an Ene  | argy Inc.                              | прапу   |                               | N/A                     | Generator ID#                         |
| Compa<br>50 Per           | iny Mai   | ling Address Line 1                    | C   | ompany Mailing Addre          |                         |                                       |
| Compa                     | ny Add  | lress Last Line – City                 | State   | Zip+4                         | Phone                   | Ext                                   |
| Warrer                    |   |  | PA  | 15086                         | (724) 814-530           |                                       |
| Brown                     | -   | itact Last Name                        | <b>First Name</b><br>Dina   | MI                            | Suffi                   | ×                                     |
| Munici                    |   |  |   | County                        |                         |                                       |
| Warrer<br>Contac          |   | e Ext                                  | Contact Email Address   | Allegheny                     |                         | · · · · · · · · · · · · · · · · · · · |
| (724) 8                   |   |  | dybrown@talismanusa.c   | com                           |                         |                                       |
| Is the v                  | vaste g   | enerated at the Comp                   | any Mailing Address (noted a  | above)?                       |                         | Yes 🛛 No                              |
| lf 'No',                  | descrit   | e location of waste g                  | eneration and storage. Drill c  | cuttings are generated d      | uring natural gas drill | ing operations at                     |
| <u>the TW</u><br>in conta |   |  | site located at 1242 Swamp R  | load, Armenia Township        | , Bradford County, P.   | A. Waste is stored                    |
| Munici                    |   | Armenia                                | County Bradfo   | ord                           | State                   | PA                                    |
|                           |   |  | SECTION B. WAST   |                               |                         |                                       |
| Resid                     | lual  | Res                                    | idual Waste   |                               | Unit of                 | Time                                  |
| Waste                     | Code  | Code                                   | Description   | Amount                        | Measure                 | Frame                                 |
| 810                       |   | Drill cuttings (oil and                | d gas)  | 5,840                         | cuydgal<br>lb ⊠_ton     | One Time                              |
|                           | <u> </u>  |  | 1. GENERAL P  | ROPERTIES                     |                         |                                       |
| a.                        | pH Ra   | nge 7                                  |   | (based on analyses or l       | (nowledge)              |                                       |
| b.                        | Physic  | al State                               | Liquid Waste (EPA Me<br>Solid (EPA Method 909<br>Gas (ambient tempera | 95)                           |                         |                                       |
| с.                        | Physic  | al Appearance                          | Color Grevish Black   |                               | pr Earthy / Slight      | t Petroleum                           |
|                           |   |  | Number of Solid or Liquid   |                               | , •                     |                                       |
|                           |   |  | Describe each phase of s  | eparation. <u>Soil and Re</u> | ock Fragments           |                                       |
|                           |   | The second second                      | 2. CHEMICAL ANALYS  | SIS ATTACHMENTS               |                         |                                       |
| a.                        | The re  | sults of a detailed che                | emical characterization of the  |                               | n the 🛛                 | Yes No                                |
|                           | instrug   | tions, is attached.                    |   |                               |                         |                                       |
|                           |   |  | waste sampling method is a  |                               | <u>\</u>                | Yes No                                |
| с.                        | The qu<br>attach  |  | ty control procedures employ  | yed by the laboratory(i       | es) is 🛛 🖂              | Yes 🗌 No                              |
| d.                        |   |  | s waste determination is atta   | ched.                         | <br>                    | Yes No                                |
|                           | If appli  | cable, a detailed expl                 | anation supporting use of ge  |                               |                         | No 🛛 N/A                              |
|                           | lieu of   | actual chemical analy                  | sis is attached.  | -                             |                         | —                                     |

|       | 3   | PROCESS DESCRIPTION                          | N& SCHEMATIC ATTA   | CHMENTS             |               |  |
|-------|---|--|---|---------------------|---------------|--|
| a.    | A detailed description of the the waste, as specified in the  | manufacturing and/or                         | pollution control proc  |                     | 🛛 Yes         | 🗌 No                                   |
|       | · •   |  |   |                     |               |  |
| b.    | A schematic of the manufact<br>as specified in the instructio |  | control processes pro   | ducing the waste,   | 🛛 Yes         | No No                                  |
| C.    | If portions of the information a confidentiality claim, as de |  |   | on for 🗌 Yes        | 🗌 No          | 🛛 N/A                                  |
|       | SECTI   | <u>on C. Managei</u>                         |   |                     |               |  |
|       |   |  | R DISPOSAL FACILITY(I   |                     | 1927          |  |
| The a | rea below (ad.) will accommo                                  | date the identification of                   | of two facilities. Attac  | h additional sheets | if necessary. |  |
| a.    | Solid waste permit number(s<br>9-0232-00003                   | ) for processing or dis                      | posal facility being uti  | lized.              |               |  |
| b.    | Facility Name   | Hyland Landfill                              |   |                     |               |  |
| 1     | Address Line 1  | 6653 Herdman Roa                             | id  |                     |               |  |
|       | Address Line 1  |  |   |                     |               |  |
|       | Address City State ZIP  | Angelica                                     | NY  | 14709               |               |  |
|       | Municipality  | Angelica                                     | County  | Allegany            |               |  |
| C.    | Facility Contact Name   | Larry Shilling                               |   |                     |               |  |
| •     | Title   | Earry Onlining                               |   |                     |               |  |
|       | Phone   | (585) 466-7271                               | Email Address   | larry.shilling@ca   | sella.com     |  |
| d.    | Volume of waste shipped to 2,226                              | p <b>rocessing or disposa</b><br>] cu yd gal | I facility in the previous  |                     |               |  |
| a.    | Solid waste permit number(s<br>8-4630-00010                   | ) for processing or dis                      | posal facility being uti  | lized.              | ·····         |  |
| b.    | Facility Name   | Hakes C&D Landfill                           |   |                     |               |  |
|       | Address Line 1  | 4376 Manning Ridg                            |   |                     |               |  |
|       | Address Line 1  |  |   |                     |               |  |
|       | Address City State ZIP  | Painted Post                                 | NY  | 14870               |               |  |
|       | Municipality  | Erwin Twp                                    | County  | Steuben             |               |  |
| с.    | Facility Contact Name   | Joseph Boyles                                |   |                     |               |  |
|       | Title   |  |   |                     |               | ······································ |
|       | Phone   | (607) 937-6044                               | Email Address   | joe.boyles@case     | ella.com      |  |
| d.    | Volume of waste shipped to                                    | (585) 466-7271                               | facility in the proving   | - Voar              |               |  |
| u.    | 2,143   | ] cu yd 🛛 🗍 gal                              |   |                     |               |  |
| E     |   | 2. BEI                                       | NEFICIAL USE  |                     |               |  |
| а.    | Has the waste been approved                                   |  | neneral and a first of fragment for a second strategy of the second second second second second second second s |                     | Yes           | No No                                  |
|       | If "Yes", list the general pern                               | nit number or approval                       | number.   |                     |               | -                                      |
| b.    | Volume of waste beneficially                                  |  |   |                     | · · · ·       |  |
|       | 0 Ľ   | ]cuyd 🗍 gal                                  | 🗌 lb 🗌 tor  | n (check one)       |               |  |

|            | 3.  | PROCESS DESCRIPTION & SC              | HEMATIC ATTAC      | HMENTS                 |              |       |  |  |  |  |
|------------|---|---------------------------------------|--------------------|------------------------|--------------|-------|--|--|--|--|
| a.         | A detailed description of the r   |                                       | n control proce    | sses producing         | Yes          | No No |  |  |  |  |
|            | the waste, as specified in the  | instructions, is attached.            |                    |                        |              |       |  |  |  |  |
| b.         | A schematic of the manufactu<br>as specified in the instruction         |                                       | processes proc     | lucing the waste,      | Yes          | No No |  |  |  |  |
| C.         | If portions of the information  | submitted are confidential, th        | e substantiatio    | n for Yes              | □ No         | N/A   |  |  |  |  |
|            | a confidentiality claim, as described in the instructions, is attached. |                                       |                    |                        |              |       |  |  |  |  |
|            | SECTIO  | N C. MANAGEMENT                       | OF RESIDU          | AL WASTE               |              |       |  |  |  |  |
|            |   | 1. PROCESSING OR DISPO                |                    |                        |              |       |  |  |  |  |
| The ar     | ea below (ad.) will accommod  | ate the identification of two f       | acilities. Attach  | additional sheets      | if necessary |       |  |  |  |  |
| a.         | Solid waste permit number(s)<br>8-0728-00004                            | for processing or disposal fa         | cility being utili | ized.                  |              |       |  |  |  |  |
| 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                 |                    |                        |              |       |  |  |  |  |
| i          | Phone   | (585) 797-5941 Er                     | nail Address       | carla.canjar@ca        | sella.com    |       |  |  |  |  |
| d.         | Volume of waste shipped to p  | rocessing or disposal facility        | in the previous    | vear.                  |              |       |  |  |  |  |
|            | 661   |                                       | lb 🛛 ton           |                        |              |       |  |  |  |  |
| a.         | Solid waste permit number(s)  | for processing or disposal fa         | cility being utili | zed                    |              |       |  |  |  |  |
|            | 101243  | · · · · · · · · · · · · · · · · · · · |                    |                        |              |       |  |  |  |  |
| b.         | Facility Name   | Northern Tier Solid Waste             | Authority          |                        |              |       |  |  |  |  |
| <b>D</b> . | Address Line 1  | 108 Steam Hollow Road                 | Authonity          | ******                 |              |       |  |  |  |  |
|            | Address Line 1  |                                       |                    | ·····                  |              |       |  |  |  |  |
|            | Address City State ZIP  | Troy                                  | PA                 | 16947                  |              |       |  |  |  |  |
|            | Municipality  | West Burlington Twp                   | County             | Bradford               |              | ···   |  |  |  |  |
| с.         | Facility Contact Name   | Charles Woodward                      |                    |                        |              |       |  |  |  |  |
| 0.         | Title   | Charles Woodward                      |                    |                        |              |       |  |  |  |  |
|            | Phone   | (570) 297-4177 En                     | nail Address       | chuckwoodward          | @enix net    |       |  |  |  |  |
|            | Maluma of words ablumates a   |                                       |                    |                        |              |       |  |  |  |  |
| d.         | Volume of waste shipped to p<br>476                                     | cuyd 🗌 gal 🗌                          | lb 🛛 ton           |                        |              |       |  |  |  |  |
|            | state in the  | 2. BENEFICIA                          | USE                |                        |              |       |  |  |  |  |
| a.         | Has the waste been approved   | for beneficial use?                   |                    |                        | Yes          | 🛛 No  |  |  |  |  |
|            | If "Yes", list the general permi  |                                       | г.                 |                        |              |       |  |  |  |  |
| b.         | Volume of waste beneficially u  |                                       |                    | ** <u>********</u> *** |              |       |  |  |  |  |
|            | 0   | cuyd 🗌 gal 🗌                          | lb 🗌 ton           | (check one)            |              |       |  |  |  |  |

| OT CONTRACTOR AND DO | and an an an an an an an an an an an an an   |  | manage and the second sec | a a sub-                     |               |              | - and the set of the other set of the set |
|----------------------|--|--|--|------------------------------|---------------|--------------|---|
|                      |  | PROCESS DESCRIPTIO                     |  |                              |               | 177 · · ·    | ander la de la de                         |
| a.                   | A detailed description of the<br>the waste, as specified in the  | instructions, is attach                | ed.  |                              | -             | 🛛 Yes        | No No                                     |
| b.                   | A schematic of the manufacture as specified in the instruction   |  | control processe   | s producing (                | he waste,     | Yes Yes      | No No                                     |
| C.                   | If portions of the information a confidentiality claim, as des   |  |  |                              | Yes           | No No        | ⊠ N/A                                     |
|                      | SECTIO   | DN C. MANAGEN                          | IENT OF RE   | SIDUAL W                     | ASTE          |              |   |
|                      | A CONTRACTOR OFTA CONTRACTOR OFTA CONTRACTOR O | 1. PROCESSING OR                       | DISPOSAL FACI  | LITY(IES)                    |               |              | 22  |
| The a                | rea below (ad.) will accommod  | ate the identification o               | f two facilities.  | Attach additio               | onal sheets i | f necessary. |   |
| a.                   | Solid waste permit number(s)<br>100361   | for processing or disp                 | oosal facility bei   | ng utilized.                 |               |              |   |
| b.                   | Facility Name  | McKean County Lar                      | ldfill   |                              |               |              |   |
|                      | Address Line 1   | 19 Ness Lane                           |  |                              |               |              |   |
|                      | Address Line 1   |  |  |                              |               |              |   |
|                      | Address City State ZIP   | Kane                                   | PA   |                              | 16735         |              |   |
|                      | Municipality   | Sergeant Twp                           | Coun   | ty McKe                      | an            |              |   |
| C.                   | Facility Contact Name  | Mike Manderfeld                        |  |                              |               |              |   |
|                      | Title  |  |  |                              |               |              |   |
|                      | Phone  | (814) 778-9931                         | Email Addr   | ess mand                     | erfeld@gma    | ail.com      | <u></u>                                   |
| d.                   | Volume of waste shipped to p   | rocessing or disposal<br>cu yd     gal |  | <b>evious year.</b><br>⊴ ton | (check one)   |              |   |
| а.                   | Solid waste permit number(s)   | for processing or disp                 | osal facility beir   | ng utilized.                 |               |              |   |
| b.                   | Facility Name  |  |  | <u>.</u>                     |               |              |   |
| <b>D</b> .           | Address Line 1   |  |  |                              |               |              |   |
|                      | Address Line 1   |  |  |                              |               |              |   |
|                      | Address City State ZIP   |  |  |                              |               |              |   |
|                      | Municipality   | ······                                 | Count  | hv                           |               |              |   |
|                      |  |  |  | .y                           |               |              |   |
| с.                   | Facility Contact Name  |  |  |                              |               |              |   |
|                      | Title  |  | En all Adda  |                              |               |              |   |
|                      | Phone  |  | Email Addre  |                              |               |              |   |
| d.                   | Volume of waste shipped to p   | rocessing or disposal                  | facility in the pro  |                              | (check one)   |              |   |
|                      |  | ·                                      |  |                              |               |              |   |
|                      |  |  | EFICIAL USE  |                              |               | <u> </u>     |   |
| a.                   | Has the waste been approved  |  |  |                              |               | ∐ Yes        | 🖂 No                                      |
|                      | If "Yes", list the general perm  |  |  |                              |               |              |   |
| b.                   | Volume of waste beneficially   |  |  | <b>_</b>                     |               |              |   |
|                      | 0  | cuyd 🗌 gal                             | [] Ib [  | 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 re<br>and has not change   | equired in Section B-1, General Properties was supplied to the Department for the year<br>d.         |  |  |  |  |  |  |  |
| 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 rec  | uired in Section B-3, Process Description and Schematic, was supplied to the Department not changed. |  |  |  |  |  |  |  |
| Form Submitted:  | Form 26R   |  |  |  |  |  |  |  |
| [  | Other (specify)  |  |  |  |  |  |  |  |
| Date Submitted:  |  |  |  |  |  |  |  |  |
| Name of Responsible Official   | Title Environmental Specialist   |  |  |  |  |  |  |  |
| Dina Brown Signature   | 5/14-02- Date 2/28/11  |  |  |  |  |  |  |  |

.

| LAB ID # 11216<br>LAB ID # 11827  |   | Easter<br>2566 Per<br>Sayre<br>Phone: (5  | <b>Analytics, In</b><br><b>In Division</b><br>Insylvania Ave.<br>PA 18840<br>570) 888-0169<br>570) 888-0717   | IC.  | Work   | c Order: 10040648  |
|---|---|---|---|--|--|--|
| SEND DATA   | TO:   |   |   |  |  |  |
| NAME:   | Steve Gridley   |   |   | W  | /O#: 1004  | 10648  |
| COMPANY:<br>ADDRESS:  | Talisman Energy USA,<br>337 Daniel Zenker Dr  | Inc.  |   | P  | AGE: 1 of  | 3  |
| ADDRESS.  | Horseheads, NY 1484   | 5   |   | P  | O#: AFE  | 76067  |
|   |   |   |   |  |  | 10001  |
| PHONE:<br>FAX:  | (607) 731-0145<br>(607) 562-4001  | TEST  | REPORT  | P  | WS ID#   |  |
| TWL 01-016  | -04   |   |   |  |  |  |
| RECEIVED F  | FOR LAB BY: WCB   | DATE:   | 04/06/2010 8:45   |  |  | Page 1 of 3  |
| SAMPLE: In  | Cuttings - Bin  | L   | ab ID: 10040648-001A  | Grab   |  |  |
|   | ED BY: DB   | Sample  | Time: 04/05/2010 18:00  | <b>D</b>   |  |  |
| Test  |   | Result  | Method  | <u>Reg</u><br>Limit  | Analysis Start   | Analysis End Analyst *   |
| pН  |   | 7.99 @ 23.4°C   | EPA 9045D   |  | 04/07/10 11:55   | 04/07/10 NC-CV   |
| Total Petr  | roleum Hydrocarbons   | 57000 mg/Kg   | EPA 1664A   |  | 04/07/10 12:40   | 04/07/10 DTG-CV  |
| SAMDIE: In  | Cuttings - Bin  | L   | ab ID: 10040648-001B  | Grab   |  |  |
| SAMPLE. III   | -   | <b>.</b> .  | Time: 04/05/2010 18:00  |  |  |  |
|   | ED BY: DB   | Sample  | rime. 04/05/2010 18.00  | _  |  |  |
| SAMPLE<br><u>Test</u>   | ED BY: DB   | Result  | Method  | <u>Reg</u><br>Limit  | Analysis Start<br>04/06/10 14:30   | Analysis End Analyst *<br>04/07/10 NEM-SA  |
| SAMPLE<br><u>Test</u><br>% Solids   | )   | <u>Result</u><br>75.37 % Wght.  | Method<br>SM2540B   | Limit  | <u>Analysis Start</u><br>04/06/10 14:30  | Analysis End Analyst *<br>04/07/10 NFM-SA  |
| SAMPLE<br><u>Test</u><br>% Solids<br>SAMPLE: <b>TC</b>  | CLP Leachate of In Cuttin   | <u>Result</u><br>75.37 % Wght.<br><b>gs - Bin</b> L   | <u>Method</u><br>SM2540B<br>ab ID: 10040648-001D  |  |  |  |
| SAMPLE<br><u>Test</u><br>% Solids<br>SAMPLE: <b>TC</b>  | )   | <u>Result</u><br>75.37 % Wght.<br><b>gs - Bin</b> L   | Method<br>SM2540B   | Limit  |  |  |
| SAMPLE<br><u>Test</u><br>% Solids<br>SAMPLE: <b>TC</b><br>SAMPLE<br><u>Test</u>   | CLP Leachate of In Cuttin   | <u>Result</u><br>75.37 % Wght.<br><b>gs - Bin</b> L<br>Sample<br><u>Result</u>  | <u>Method</u><br>SM2540B<br>ab ID: 10040648-001D<br>Time: 04/07/2010 6:45<br><u>Method</u>  | Limit<br>Grab<br><u>Reg</u><br>Limit                                     | 04/06/10 14:30   | 04/07/10 NFM-SA  |
| SAMPLE<br><u>Test</u><br>% Solids<br>SAMPLE: TO<br>SAMPLE<br><u>Test</u><br>Mercury -   | CLP Leachate of In Cuttin<br>D BY: DB<br>TCLP extracted   | Result<br>75.37 % Wght.<br>gs - Bin L<br>Sample<br>Sample<br>< 0.0008 mg/L  | <u>Method</u><br>SM2540B<br>ab ID: 10040648-001D<br>Time: 04/07/2010 6:45<br><u>Method</u><br>EPA 7470A   | Limit<br>Grab<br><u>Reg</u><br>Limit<br>0.008                            | 04/06/10 14:30<br><u>Analysis Start</u><br>04/07/10 11:30  | 04/07/10 NFM-SA<br><u>Analysis End</u> <u>Analyst *</u><br>04/07/10 RMD-CV   |
| SAMPLE<br><u>Test</u><br>% Solids<br>SAMPLE: <b>TC</b><br>SAMPLE<br><u>Test</u><br>Mercury -<br>Arsenic -   | CLP Leachate of in Cuttin<br>D BY: DB<br>TCLP extracted<br>TCLP extracted   | Result           75.37 % Wght.           gs - Bin         Li           Sample           Result           < 0.0008 mg/L.   | <u>Method</u><br>SM2540B<br>ab ID: 10040648-001D<br>Time: 04/07/2010 6:45<br><u>Method</u><br>EPA 7470A<br>EPA 6010B  | Limit<br>Grab<br><u>Reg</u><br>Limit<br>0.008<br>5                       | 04/06/10 14:30<br>Analysis Start<br>04/07/10 11:30<br>04/07/10 11:45   | 04/07/10 NFM-SA<br><u>Analysis End</u> <u>Analyst *</u><br>04/07/10 RMD-CV<br>04/07/10 RMD-CV  |
| SAMPLE<br><u>Test</u><br>% Solids<br>SAMPLE: TC<br>SAMPLE<br><u>Test</u><br>Mercury -<br>Arsenic - 1<br>Barium - 1  | CLP Leachate of In Cuttin<br>D BY: DB<br>TCLP extracted<br>TCLP extracted<br>TCLP extracted   | Result           75.37 % Wght.           gs - Bin         Li           Sample           Result           < 0.0008 mg/L  | <u>Method</u><br>SM2540B<br>ab ID: 10040648-001D<br>Time: 04/07/2010 6:45<br><u>Method</u><br>EPA 7470A<br>EPA 6010B<br>EPA 6010B   | Limit<br>Grab<br><u>Reg</u><br>Limit<br>0.008<br>5<br>100                | <u>Analysis Start</u><br>04/07/10 11:30<br>04/07/10 11:45<br>04/07/10 11:45  | 04/07/10         NFM-SA           Analysis End         Analyst *           04/07/10         RMD-CV           04/07/10         RMD-CV           04/07/10         RMD-CV           04/07/10         RMD-CV   |
| SAMPLE<br><u>Test</u><br>% Solids<br>SAMPLE: TC<br>SAMPLE: TC<br>SAMPLE<br><u>Test</u><br>Mercury -<br>Arsenic -<br>Barium - T<br>Cadmium   | CLP Leachate of In Cuttin<br>D BY: DB<br>TCLP extracted<br>TCLP extracted<br>TCLP extracted<br>TCLP extracted<br>- TCLP extracted   | Result           75.37 % Wght.           gs - Bin         Li           Sample           < 0.0008 mg/L.  | <u>Method</u><br>SM2540B<br>ab ID: 10040648-001D<br>Time: 04/07/2010 6:45<br><u>Method</u><br>EPA 7470A<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B  | Limit<br>Grab<br>Reg<br>Limit<br>0.008<br>5<br>100<br>1                  | <u>Analysis Start</u><br>04/07/10 11:30<br>04/07/10 11:45<br>04/07/10 11:45<br>04/07/10 11:45  | 04/07/10         NFM-SA           Analysis End         Analyst *           04/07/10         RMD-CV           04/07/10         RMD-CV           04/07/10         RMD-CV           04/07/10         RMD-CV           04/07/10         RMD-CV   |
| SAMPLE:<br><u>Test</u><br>% Solids<br>SAMPLE: <b>TC</b><br>SAMPLE:<br><u>Test</u><br>Mercury -<br>Arsenic -<br>Barium - 1<br>Cadmium<br>Chromium  | CLP Leachate of In Cuttin<br>DBY: DB<br>TCLP extracted<br>TCLP extracted<br>TCLP extracted<br>- TCLP extracted<br>- TCLP extracted  | Result           75.37 % Wght.           gs - Bin           Sample           Result           < 0.0008 mg/L   | <u>Method</u><br>SM2540B<br>ab ID: 10040648-001D<br>Time: 04/07/2010 6:45<br><u>Method</u><br>EPA 7470A<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B   | Limit<br>Grab<br><u>Reg</u><br>Limit<br>0.008<br>5<br>100                | Analysis Start<br>04/07/10 11:30<br>04/07/10 11:45<br>04/07/10 11:45<br>04/07/10 11:45<br>04/07/10 11:45   | 04/07/10         NFM-SA           Analysis End         Analyst *           04/07/10         RMD-CV   |
| SAMPLE<br><u>Test</u><br>% Solids<br>SAMPLE: TO<br>SAMPLE<br><u>Test</u><br>Mercury -<br>Arsenic -<br>Barium - 1<br>Cadmium<br>Chromium<br>Copper - 1   | CLP Leachate of In Cuttin<br>DBY: DB<br>TCLP extracted<br>TCLP extracted<br>TCLP extracted<br>- TCLP extracted<br>- TCLP extracted<br>- TCLP extracted<br>TCLP extracted                                  | Result           75.37 % Wght.           gs - Bin           Easult           Sample           < 0.0008 mg/L.  | <u>Method</u><br>SM2540B<br>ab ID: 10040648-001D<br>Time: 04/07/2010 6:45<br><u>Method</u><br>EPA 7470A<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B  | Limit<br>Grab<br>Reg<br>Limit<br>0.008<br>5<br>100<br>1<br>5             | Analysis Start<br>04/07/10 11:30<br>04/07/10 11:30<br>04/07/10 11:45<br>04/07/10 11:45<br>04/07/10 11:45<br>04/07/10 11:45                                     | 04/07/10         NFM-SA           Analysis End         Analyst *           04/07/10         RMD-CV   |
| SAMPLE<br><u>Test</u><br>% Solids<br>SAMPLE: TC<br>SAMPLE: TC<br>SAMPLE<br><u>Test</u><br>Mercury -<br>Arsenic -<br>Barium - T<br>Cadmium<br>Chromium<br>Copper - T<br>Lead - TC                            | CLP Leachate of In Cuttin<br>D BY: DB<br>TCLP extracted<br>TCLP extracted<br>TCLP extracted<br>- TCLP extracted<br>TCLP extracted<br>TCLP extracted<br>TCLP extracted<br>CLP extracted                    | Result           75.37 % Wght.           gs - Bin         Li           Sample           Result           < 0.0008 mg/L  | Method<br>SM2540B<br>ab ID: 10040648-001D<br>Time: 04/07/2010 6:45<br>Method<br>EPA 7470A<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B   | Limit<br>Grab<br>Reg<br>Limit<br>0.008<br>5<br>100<br>1                  | Analysis Start<br>04/07/10 11:30<br>04/07/10 11:30<br>04/07/10 11:45<br>04/07/10 11:45<br>04/07/10 11:45<br>04/07/10 11:45<br>04/07/10 11:45                   | 04/07/10         NFM-SA           Analysis End         Analyst *           04/07/10         RMD-CV           04/07/10         RMD-CV |
| SAMPLE<br><u>Test</u><br>% Solids<br>SAMPLE: TC<br>SAMPLE: TC<br>SAMPLE<br><u>Test</u><br>Mercury -<br>Arsenic - 7<br>Barium - 1<br>Cadmium<br>Chromium<br>Copper - 1<br>Lead - TC<br>Nickel - TC           | CLP Leachate of In Cuttin<br>DBY: DB<br>TCLP extracted<br>TCLP extracted<br>TCLP extracted<br>- TCLP extracted<br>- TCLP extracted<br>- TCLP extracted<br>TCLP extracted                                  | Result         X           75.37 % Wght.         Sample           gs - Bin         La           Sample         Sample           Result         Sample           < 0.0008 mg/L | Method<br>SM2540B           ab ID: 10040648-001D           Time: 04/07/2010 6:45           Method           EPA 7470A           EPA 6010B           EPA 6010B | Limit<br>Grab<br>Reg<br>Limit<br>0.008<br>5<br>100<br>1<br>5             | Analysis Start<br>04/07/10 11:30<br>04/07/10 11:30<br>04/07/10 11:45<br>04/07/10 11:45<br>04/07/10 11:45<br>04/07/10 11:45                                     | 04/07/10         NFM-SA           Analysis End         Analyst *           04/07/10         RMD-CV           04/07/10         RMD-CV |
| SAMPLE<br><u>Test</u><br>% Solids<br>SAMPLE: TC<br>SAMPLE: TC<br>SAMPLE<br><u>Test</u><br>Mercury -<br>Arsenic -<br>Barium - T<br>Cadmium<br>Chromium<br>Copper - T<br>Lead - TC<br>Nickel - TC<br>Selenium | CLP Leachate of In Cuttin<br>D BY: DB<br>TCLP extracted<br>TCLP extracted<br>TCLP extracted<br>- TCLP extracted<br>- TCLP extracted<br>TCLP extracted<br>ICLP extracted<br>CLP extracted<br>CLP extracted | Result           75.37 % Wght.           gs - Bin         Li           Sample           Result           < 0.0008 mg/L  | Method<br>SM2540B<br>ab ID: 10040648-001D<br>Time: 04/07/2010 6:45<br>Method<br>EPA 7470A<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B   | Limit<br>Grab<br><u>Reg</u><br>Limit<br>0.008<br>5<br>100<br>1<br>5<br>5 | Analysis Start<br>04/07/10 11:30<br>04/07/10 11:30<br>04/07/10 11:45<br>04/07/10 11:45<br>04/07/10 11:45<br>04/07/10 11:45<br>04/07/10 11:45<br>04/07/10 11:45 | 04/07/10         NFM-SA           Analysis End         Analyst *           04/07/10         RMD-CV           04/07/10         RMD-CV |

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

4/8/2010

# Benchmark Analytics, Inc.

**Eastern Division** 

2566 Pennsylvania Ave. Sayre, PA 18840

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

SEND DATA TO:

| ADDRESS: 337 Daniel Zenker Dr<br>Horseheads, NY 14845 |  |  |
|---|--|--|
|---|--|--|

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

RECEIVED FOR LAB BY: WCB

TEST REPORT

TWL 01-016-04

DATE: 04/06/2010 8:45

Page 2 of 3

Work Order: 10040648

10040648

AFE 76067

2 of 3

WO#:

PAGE:

PO#:

PWS ID#

| SAMPLE: TCLP Leachate of In (            | Cuttings - Bin | Lab ID    | ): 10040648-001E  | Grab                |                |              |                  |
|--|----------------|-----------|-------------------|---------------------|----------------|--------------|------------------|
| SAMPLED BY: DB                           | Sar            | nple Time | : 04/07/2010 6:45 | _                   |                |              |                  |
| Test                                     | Result         |           | Method            | <u>Req</u><br>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 Cutt           | ings - Bin     | Lab ID    | : 10040648-001F   | Grab                |                |              |                  |
| SAMPLED BY: DB                           | San            | nple Time | : 04/07/2010 6:45 |                     |                |              |                  |
| Test                                     | <u>Result</u>  |           | Method            | <u>Reg</u><br>Limit | Analysis Start | Analysis End | <u>Analyst *</u> |
| Benzene - TCLP extracted                 | < 0.100 mg/L   |           | EPA 8260B         | 0.5                 | 04/07/10 14:19 | 04/08/10     | DN-CV            |
| Carbon tetrachloride - TCLP<br>extracted | < 0.100 mg/L   |           | EPA 8260B         | 0.5                 | 04/07/10 14:19 | 04/08/10     | DN-CV            |
| Chlorobenzene - TCLP<br>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            |

EPA 8260B

EPA 8260B

**REMARKS**:

extracted

extracted

The above test procedures meet all the requirements of NELAC and relate only to these samples.

< 0.100 mg/L

< 0.100 mg/L

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

S Spike Recovery outside accepted recovery limits

1,4-Dichlorobenzene - TCLP

1,2-Dichloroethane - TCLP

MANAGER

Carris M. Davis

DATE:

7.5 04/07/10 14:19

0.5 04/07/10 14:19

04/08/10

04/08/10

DN-CV

DN-CV

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

2566 Pennsylvania Ave. Sayre, PA 18840

Work Order: 10040648

04/08/10

DN-CV

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

#### SEND DATA TO:

extracted

Vinyl chloride - TCLP extracted

| NAME:<br>COMPANY:<br>ADDRESS: | COMPANY: Talisman Energy USA, Inc<br>ADDRESS: 337 Daniel Zenker Dr |              |                 |     | VO#: 100<br>AGE: 3 of | 40648<br>5 3 |             |
|-------------------------------|--|--------------|-----------------|-----|-----------------------|--------------|-------------|
| Horseheads, NY 14845          |  | 5            |                 | Р   | O#: AFI               | E 76067      |             |
| PHONE:<br>FAX:                |  |              | REPORT          | P   | WS ID#                |              |             |
| TWL 01-016                    | 5-04   |              |                 |     |                       |              |             |
| RECEIVED                      | FOR LAB BY: WCB  | DATE: (      | 04/06/2010 8:45 | _   |                       |              | Page 3 of 3 |
| 1,1-Dich<br>extracted         | loroethene - TCLP  | < 0.100 mg/L | EPA 8260B       | 0.7 | 04/07/10 14:19        | 04/08/10     | DN-CV       |
| Methyl e<br>extracted         | thyl ketone - TCLP<br>1  | < 0.500 mg/L | EPA 8260B       | 200 | 04/07/10 14:19        | 04/08/10     | DN-CV       |
| Tetrachic<br>extracted        | proethene - TCLP   | < 0.100 mg/L | EPA 8260B       | 0.7 | 04/07/10 14:19        | 04/08/10     | DN-CV       |
| Trichloro                     | ethene - TCLP  | < 0.100 mg/L | EPA 8260B       | 0.5 | 04/07/10 14:19        | 04/08/10     | DN-CV       |

EPA 8260B

0.2

04/07/10 14:19

**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

< 0.100 mg/L

Sample Note: Limit of detection increased due to sample foaming

Spike Recovery outside accepted recovery limits s

MANAGER

Carrie M. Davis

DATE: 4/8/2010

| CHAIN OF CUSTODY                      |  | Benchmark A  |  |                             | PAGEO  | F                   |
|---------------------------------------|--|--|--|-----------------------------|--|---------------------|
| Talisman Energy                       |  | Eastern<br>2566 Pennsylvania Ave<br>Phone: (570<br>Fax: (570)  | nue • Sayre, PA 18840<br>) 888-0169            |                             | ARE SPECIAL DETECTION  |                     |
|                                       | REFRIGERATE SAMPLES  |  |  | RESULTS ARE BEING USED FOR: | IF YES, PLEASE ATTACH  |                     |
| · · · · · · · · · · · · · · · · · · · | AFTER COLLECTION   | DW DRINKING WATER  | SL SLUDGE N                                    |                             | IS A QC PACKAGI  | ENEEDED?            |
|                                       |  | GW GROUND WATER<br>SW SURFACE WATER  | SO SOIL<br>HZ HAZARDOUS                        | LANDFILL                    |  | NO                  |
| H#607-731-0145                        | TRANSPORT<br>TO  | / WW WASTE WATER   | OTHER 1  | , other                     | IFYES, PLEASE ATTACH   | REQUIREMENTS        |
| AX#                                   | LABORATORY   |  |  | OXIDE PWS ID#               | ••••••••••••••••••••••••••••••••••••••   |                     |
| ILL TO: Talisman Energy               | IN COOLER<br>WITH ICE  |  |  | Location                    |  |                     |
| Jaxon 170                             |  | W/O#:  | 10040648                                       | LORIDE Sample Point         |  |                     |
| 0#AFE 76067                           |  |  | ,  | .ORIDE                      | /> /   | A Please fill       |
| HOJECT DESCRIPTION                    | DATE SAMPLED<br>The OF SAMPLED<br>SAMPLE MATTIN<br>SAMPLE MATTIN | SAMPLER MITTA  | An Incomplete chain of ci<br>processing of you |                             | Received for the second s | vo‴∕outali          |
| AMPLER SIGNATURE LAFFILIATION         | PLE N  |  |  | • • •                       | Poperation of the second  | applicable<br>areas |
| ontainer Sample Point No./Type        |  | \$ # \$#0  | ANALYSIS TO BE PE<br>(PER CONTAIN              |                             | S# #\$   | Completely.         |
|                                       | 11514 19:00 50 C   | N TC   |  | Metals a Ni                 | 10.00 Parks 10.00 Parks 10.00  | OOID                |
| 2                                     |  | IC   | A 1 (  | 2N                          |  |                     |
| 3                                     |  |  | PH   |                             |  | <i>∞</i> 1 <u>4</u> |
| 1                                     |  | ······································   | H  |                             |  | I A                 |
| 5 OULC - Total Sample                 |  | 0  |  |                             |  | σi B                |
| i                                     |  |  | CLP 8260.                                      | - 8270 * Due:               | 4/8/10 0   | ole, F              |
| 7                                     |  |  | (F)  | (E)                         |  |                     |
| 3                                     |  |  | 24 hr Rue                                      | (dc                         |  |                     |
| 3                                     |  |  | •  |                             |  |                     |
| o                                     |  |  |  |                             |  |                     |
| 1                                     |  |  | Duc: 4710                                      | >                           |  |                     |
| LAB USE ONLY<br>DELIVERED BY          | Cla  | At the second se | 的经济资料 网络新闻教育新闻教育                               | UPON RECEIPT                | <u> </u>   | DNICE YIM           |
| RELINQUISHED BY:                      | DATE:  | TIME: REC  | EIVED BY:                                      |                             | DATE:  | TIME:               |
| RELINQUISHED BY:                      | DATE:  |  | EIVED BY:                                      |                             | DATE:  | TIME:               |
| RELINQUERED BYTHEN Arey/P             | BC PATE://e/K  | ) TIME 8.450 REC   | EIVED BY:<br>Oabhie M                          | A                           | DATE: 16/10  | TIME:<br>845        |

· · · · · ·

| LAB ID # 11216<br>LAB ID # 11827  |  | <b>Eas</b><br>2566<br>Sa   | <b>ark Analytics, In<br/>stern Division</b><br>Pennsylvania Ave.<br>ayre, PA 18840<br>e: (570) 888-0169   | IC.   | Work  | c Order: 100  | 030695  |
|---|--|--|---|---|---|---|---|
|   |  |  | x: (570) 888-0717   |   |   |   |   |
| SEND DATA   |  | 14   | x. 10/0/000/07/11   |   |   |   |   |
| -   |  |  |   | 1.67  | 10 <del>11</del> 1001   | 00005   |   |
| NAME:<br>COMPANY:   | Steve Gridley<br>Talisman Energy USA, II   |  |   | vv  | 'O#: 1003   | 30695   |   |
| ADDRESS:  | 337 Daniel Zenker Dr   | iç.  |   | PA  | AGE: 1 of   | 1   |   |
|   | Horseheads, NY 14845   |  |   | Pr  | O#:   |   |   |
|   |  |  |   |   |   |   |   |
| PHONE:  | (607) 731-0145   | T  | EST REPORT  | P۱  | WS ID#  |   |   |
| FAX:  | (607) 562-4001   |  |   |   |   |   |   |
| NTSW TOU  | P Metals/TPH/pH/%Moistu  | Ire  |   |   |   |   |   |
|   | FOR LAB BY: WCB  |  | FE. 02/02/2040 0.20   |   |   | m   |   |
| RECEIVED  |  |  | TE: 03/03/2010 9:38   |   |   | P   | age 1 of 1  |
| SAMPLE: AI  | ir Cuttings TWL-1  |  | Lab ID: 10030695-001A   | Grab  |   |   |   |
| SAMPLE  | ED BY: SG  | Sa   | mple Time: 03/02/2010 11:00   |   |   |   |   |
| Test  |  | Result   | Method  | <u>SLOQ</u>   | Analysis Start  | Analysis End  | Analyst *   |
|   |  |  |   |   |   |   |   |
| pH  |  | 8.14 @ 25.3°C  | EPA 9045D   |   | 03/08/10 14:37  | 03/08/10  | NC-CV   |
|   |  |  |   | 50.0  |   |   |   |
| pH<br>Chloride  | roleum Hydrocarbons  | 8.14 @ 25.3°C  | EPA 9045D   | 50.0<br>170   | 03/08/10 14:37  | 03/08/10  | NC-CV   |
| pH<br>Chloride<br>Total Petr  | •  | 8.14 @ 25.3°C<br>466 mg/Kg<br>< 170 mg/Kg  | EPA 9045D<br>EPA 300.0  |   | 03/08/10 14:37<br>03/10/10 14:03  | 03/08/10<br>03/11/10  | NC-CV<br>HDP-CV   |
| pH<br>Chloride<br>Total Petr<br>SAMPLE: <b>TC</b>   | roleum Hydrocarbons<br>CLP Leachate of Air Cutting<br>ED BY: SG  | 8.14 @ 25.3°C<br>466 mg/Kg<br>< 170 mg/Kg<br>s TWL-1   | EPA 9045D<br>EPA 300.0<br>EPA 1664A   | 170   | 03/08/10 14:37<br>03/10/10 14:03  | 03/08/10<br>03/11/10  | NC-CV<br>HDP-CV   |
| pH<br>Chloride<br>Total Petr<br>SAMPLE: <b>TC</b><br>SAMPLE   | CLP Leachate of Air Cutting  | 8.14 @ 25.3°C<br>466 mg/Kg<br>< 170 mg/Kg<br>s TWL-1<br>Sa   | EPA 9045D<br>EPA 300.0<br>EPA 1664A<br>Lab ID: 10030695-001C<br>mple Time: 03/02/2010 11:00   | 170   | 03/08/10 14:37<br>03/10/10 14:03<br>03/16/10 13:30  | 03/08/10<br>03/11/10<br>03/16/10  | NC-CV<br>HDP-CV<br>DTG-CV   |
| pH<br>Chloride<br>Total Petr<br>SAMPLE: <b>TC</b><br>SAMPLE<br><u>Test</u>  | CLP Leachate of Air Cutting<br>ED BY: SG   | 8.14 @ 25.3°C<br>466 mg/Kg<br>< 170 mg/Kg<br>s TWL-1<br>Sa<br><u>Result</u>  | EPA 9045D<br>EPA 300.0<br>EPA 1664A<br>Lab ID: 10030695-001C<br>mple Time: 03/02/2010 11:00<br><u>Method</u>  | 170<br>Grab<br><u>SLOQ</u>  | 03/08/10 14:37<br>03/10/10 14:03<br>03/16/10 13:30<br><u>Analysis Start</u>   | 03/08/10<br>03/11/10<br>03/16/10<br>Analysis End  | NC-CV<br>HDP-CV<br>DTG-CV   |
| pH<br>Chloride<br>Total Petr<br>SAMPLE: <b>TC</b><br>SAMPLE<br><u>Test</u><br>Mercury -   | CLP Leachate of Air Cutting<br>ED BY: SG<br>TCLP extracted   | 8.14 @ 25.3°C<br>466 mg/Kg<br>< 170 mg/Kg<br>s TWL-1<br>Sa<br><u>Result</u><br>< 0.0008 mg/L   | EPA 9045D<br>EPA 300.0<br>EPA 1664A<br>Lab ID: 10030695-001C<br>mple Time: 03/02/2010 11:00<br><u>Method</u><br>EPA 7470A   | 170<br>Grab<br><u>SLOQ</u><br>0.0008  | 03/08/10 14:37<br>03/10/10 14:03<br>03/16/10 13:30<br><u>Analysis Start</u><br>03/11/10 8:30  | 03/08/10<br>03/11/10<br>03/16/10<br><u>Analysis End</u><br>03/12/10   | NC-CV<br>HDP-CV<br>DTG-CV<br><u>Analyst *</u><br>KW-CV  |
| pH<br>Chloride<br>Total Petr<br>SAMPLE: <b>TC</b><br>SAMPLE<br><u>Test</u><br>Mercury -<br>Arsenic -  | CLP Leachate of Air Cutting<br>ED BY: SG<br>TCLP extracted<br>TCLP extracted   | 8.14 @ 25.3°C<br>466 mg/Kg<br>< 170 mg/Kg<br>Is TWL-1<br>Sa<br><u>Result</u><br>< 0.0008 mg/L<br>< 0.500 mg/L  | EPA 9045D<br>EPA 300.0<br>EPA 1664A<br>Lab ID: 10030695-001C<br>mple Time: 03/02/2010 11:00<br><u>Method</u><br>EPA 7470A<br>EPA 6010B  | 170<br>Grab<br><u>SLOQ</u><br>0.0008<br>0.500   | 03/08/10 14:37<br>03/10/10 14:03<br>03/16/10 13:30<br><u>Analysis Start</u><br>03/11/10 8:30<br>03/10/10 13:40  | 03/08/10<br>03/11/10<br>03/16/10<br><u>Analysis End</u><br>03/12/10<br>03/11/10   | NC-CV<br>HDP-CV<br>DTG-CV<br><u>Analyst*</u><br>KW-CV<br>RMD-CV   |
| pH<br>Chloride<br>Total Petr<br>SAMPLE: TC<br>SAMPLE<br><u>Test</u><br>Mercury -<br>Arsenic -<br>Barium -   | CLP Leachate of Air Cutting<br>ED BY: SG<br>TCLP extracted<br>TCLP extracted<br>TCLP extracted   | 8.14 @ 25.3°C<br>466 mg/Kg<br>< 170 mg/Kg<br>s TWL-1<br>Sa<br><u>Result</u><br>< 0.0008 mg/L<br>< 0.500 mg/L<br>< 10.00 mg/L   | EPA 9045D<br>EPA 300.0<br>EPA 1664A<br>Lab ID: 10030695-001C<br>mple Time: 03/02/2010 11:00<br><u>Method</u><br>EPA 7470A<br>EPA 6010B<br>EPA 6010B   | 170<br>Grab<br><u>SLOQ</u><br>0.0008<br>0.500<br>10.00  | 03/08/10 14:37<br>03/10/10 14:03<br>03/16/10 13:30<br><u>Analysis Start</u><br>03/11/10 8:30<br>03/10/10 13:40  | 03/08/10<br>03/11/10<br>03/16/10<br><u>Analysis End</u><br>03/12/10<br>03/11/10<br>03/11/10                                     | NC-CV<br>HDP-CV<br>DTG-CV<br>Analyst *<br>KW-CV<br>RMD-CV<br>RMD-CV   |
| pH<br>Chloride<br>Total Petr<br>SAMPLE: <b>TC</b><br>SAMPLE<br><u>Test</u><br>Mercury -<br>Arsenic -<br>Barium -<br>Cadmium   | CLP Leachate of Air Cutting<br>ED BY: SG<br>TCLP extracted<br>TCLP extracted<br>TCLP extracted<br>TCLP extracted   | 8.14 @ 25.3°C<br>466 mg/Kg<br>< 170 mg/Kg<br>s TWL-1<br>Sa<br><u>Result</u><br>< 0.0008 mg/L<br>< 0.500 mg/L<br>< 10.00 mg/L<br>< 0.100 mg/L   | EPA 9045D<br>EPA 300.0<br>EPA 1664A<br>Lab ID: 10030695-001C<br>mple Time: 03/02/2010 11:00<br><u>Method</u><br>EPA 7470A<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B  | 170<br>Grab<br><u>SLOQ</u><br>0.0008<br>0.500<br>10.00<br>0.100                                       | 03/08/10 14:37<br>03/10/10 14:03<br>03/16/10 13:30<br><u>Analysis Start</u><br>03/11/10 8:30<br>03/10/10 13:40<br>03/10/10 13:40  | 03/08/10<br>03/11/10<br>03/16/10<br><u>Analysis End</u><br>03/12/10<br>03/11/10<br>03/11/10                                     | NC-CV<br>HDP-CV<br>DTG-CV<br>Analyst *<br>KW-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV                                       |
| pH<br>Chloride<br>Total Petr<br>SAMPLE: <b>TC</b><br>SAMPLE<br><u>Test</u><br>Mercury -<br>Arsenic -<br>Barium -<br>Cadmium<br>Chromium   | CLP Leachate of Air Cutting<br>ED BY: SG<br>TCLP extracted<br>TCLP extracted<br>TCLP extracted<br>TCLP extracted<br>- TCLP extracted<br>n - TCLP extracted                                   | 8.14 @ 25.3°C<br>466 mg/Kg<br>< 170 mg/Kg<br>s TWL-1<br>Sa<br><u>Result</u><br>< 0.0008 mg/L<br>< 0.500 mg/L<br>< 0.100 mg/L<br>< 0.500 mg/L.  | EPA 9045D<br>EPA 300.0<br>EPA 1664A<br>Lab ID: 10030695-001C<br>mple Time: 03/02/2010 11:00<br><u>Method</u><br>EPA 7470A<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B  | 170<br>Grab<br>SLOQ<br>0.0008<br>0.500<br>10.00<br>0.100<br>0.500                                     | 03/08/10 14:37<br>03/10/10 14:03<br>03/16/10 13:30<br><u>Analysis Start</u><br>03/11/10 8:30<br>03/10/10 13:40<br>03/10/10 13:40<br>03/10/10 13:40                              | 03/08/10<br>03/11/10<br>03/16/10<br><u>Analysis End</u><br>03/12/10<br>03/11/10<br>03/11/10<br>03/11/10                         | NC-CV<br>HDP-CV<br>DTG-CV<br>MC-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV  |
| pH<br>Chloride<br>Total Petr<br>SAMPLE: TC<br>SAMPLE<br><u>Test</u><br>Mercury -<br>Arsenic -<br>Barium -<br>Cadmium<br>Chromium<br>Copper -  | CLP Leachate of Air Cutting<br>ED BY: SG<br>TCLP extracted<br>TCLP extracted<br>TCLP extracted<br>- TCLP extracted<br>n - TCLP extracted<br>TCLP extracted<br>TCLP extracted                 | 8.14 @ 25.3°C<br>466 mg/Kg<br>< 170 mg/Kg<br>Is TWL-1<br>Sa<br><u>Result</u><br>< 0.0008 mg/L<br>< 0.500 mg/L<br>< 0.100 mg/L<br>< 0.500 mg/L<br>< 0.100 mg/L<br>< 0.100 mg/L  | EPA 9045D<br>EPA 300.0<br>EPA 1664A<br>Lab ID: 10030695-001C<br>mple Time: 03/02/2010 11:00<br><u>Method</u><br>EPA 7470A<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B                           | 170<br>Grab<br><u>SLOQ</u><br>0.0008<br>0.500<br>10.00<br>0.100<br>0.500<br>0.100                     | 03/08/10 14:37<br>03/10/10 14:03<br>03/16/10 13:30<br><u>Analysis Start</u><br>03/11/10 8:30<br>03/10/10 13:40<br>03/10/10 13:40<br>03/10/10 13:40<br>03/10/10 13:40            | 03/08/10<br>03/11/10<br>03/16/10<br><u>Analysis End</u><br>03/12/10<br>03/11/10<br>03/11/10<br>03/11/10<br>03/11/10             | NC-CV<br>HDP-CV<br>DTG-CV<br>DTG-CV<br>KW-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV                      |
| pH<br>Chloride<br>Total Petr<br>SAMPLE: TC<br>SAMPLE:<br><u>Test</u><br>Mercury -<br>Arsenic -<br>Barium -<br>Cadmium<br>Chromium<br>Copper -<br>Lead - TC                            | CLP Leachate of Air Cutting<br>ED BY: SG<br>TCLP extracted<br>TCLP extracted<br>TCLP extracted<br>TCLP extracted<br>- TCLP extracted<br>n - TCLP extracted                                   | 8.14 @ 25.3°C<br>466 mg/Kg<br>< 170 mg/Kg<br>is TWL-1<br>Sa<br><u>Result</u><br>< 0.0008 mg/L<br>< 0.500 mg/L<br>< 0.500 mg/L<br>< 0.500 mg/L<br>< 0.100 mg/L<br>< 0.500 mg/L<br>< 0.500 mg/L                                | EPA 9045D<br>EPA 300.0<br>EPA 1664A<br>Lab ID: 10030695-001C<br>mple Time: 03/02/2010 11:00<br><u>Method</u><br>EPA 7470A<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B              | 170<br>Grab<br>SLOQ<br>0.0008<br>0.500<br>10.00<br>0.100<br>0.500<br>0.100<br>0.500                   | 03/08/10 14:37<br>03/10/10 14:03<br>03/16/10 13:30<br><u>Analysis Start</u><br>03/11/10 8:30<br>03/10/10 13:40<br>03/10/10 13:40<br>03/10/10 13:40<br>03/10/10 13:40            | 03/08/10<br>03/11/10<br>03/16/10<br><u>Analysis End</u><br>03/12/10<br>03/11/10<br>03/11/10<br>03/11/10<br>03/11/10<br>03/11/10 | NC-CV<br>HDP-CV<br>DTG-CV<br>DTG-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV                     |
| pH<br>Chloride<br>Total Petr<br>SAMPLE: TC<br>SAMPLE: TC<br>SAMPLE<br><u>Test</u><br>Mercury -<br>Arsenic -<br>Barium -<br>Cadmium<br>Chromium<br>Copper -<br>Lead - TC<br>Nickel - T | CLP Leachate of Air Cutting<br>ED BY: SG<br>TCLP extracted<br>TCLP extracted<br>TCLP extracted<br>- TCLP extracted<br>n - TCLP extracted<br>TCLP extracted<br>CLP extracted                  | 8.14 @ 25.3°C<br>466 mg/Kg<br>< 170 mg/Kg<br>s TWL-1<br>Sa<br><u>Result</u><br>< 0.0008 mg/L<br>< 0.500 mg/L<br>< 0.500 mg/L<br>< 0.100 mg/L<br>< 0.500 mg/L<br>< 0.500 mg/L<br>< 0.500 mg/L<br>< 0.100 mg/L<br>< 0.100 mg/L | EPA 9045D<br>EPA 300.0<br>EPA 1664A<br>Lab ID: 10030695-001C<br>mple Time: 03/02/2010 11:00<br><u>Method</u><br>EPA 7470A<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B | 170<br>Grab<br>SLOQ<br>0.0008<br>0.500<br>10.00<br>0.100<br>0.500<br>0.100<br>0.500<br>0.100          | 03/08/10 14:37<br>03/10/10 14:03<br>03/16/10 13:30<br>Analysis Start<br>03/11/10 8:30<br>03/10/10 13:40<br>03/10/10 13:40<br>03/10/10 13:40<br>03/10/10 13:40<br>03/10/10 13:40 | 03/08/10<br>03/11/10<br>03/16/10<br>Analysis End<br>03/12/10<br>03/11/10<br>03/11/10<br>03/11/10<br>03/11/10<br>03/11/10        | NC-CV<br>HDP-CV<br>DTG-CV<br>DTG-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV |
| pH<br>Chloride<br>Total Petr<br>SAMPLE: TC<br>SAMPLE: TC<br>SAMPLE<br>Mercury -<br>Arsenic -<br>Barium -<br>Cadmium<br>Chromium<br>Copper -<br>Lead - TC<br>Nickel - To<br>Selenium   | CLP Leachate of Air Cutting<br>ED BY: SG<br>TCLP extracted<br>TCLP extracted<br>TCLP extracted<br>- TCLP extracted<br>n - TCLP extracted<br>TCLP extracted<br>CLP extracted<br>CLP extracted | 8.14 @ 25.3°C<br>466 mg/Kg<br>< 170 mg/Kg<br>is TWL-1<br>Sa<br><u>Result</u><br>< 0.0008 mg/L<br>< 0.500 mg/L<br>< 0.500 mg/L<br>< 0.500 mg/L<br>< 0.100 mg/L<br>< 0.500 mg/L<br>< 0.500 mg/L                                | EPA 9045D<br>EPA 300.0<br>EPA 1664A<br>Lab ID: 10030695-001C<br>mple Time: 03/02/2010 11:00<br><u>Method</u><br>EPA 7470A<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B              | 170<br>Grab<br>SLOQ<br>0.0008<br>0.500<br>10.00<br>0.100<br>0.500<br>0.100<br>0.500<br>0.100<br>0.500 | 03/08/10 14:37<br>03/10/10 14:03<br>03/16/10 13:30<br><u>Analysis Start</u><br>03/11/10 8:30<br>03/10/10 13:40<br>03/10/10 13:40<br>03/10/10 13:40<br>03/10/10 13:40            | 03/08/10<br>03/11/10<br>03/16/10<br><u>Analysis End</u><br>03/12/10<br>03/11/10<br>03/11/10<br>03/11/10<br>03/11/10<br>03/11/10 | NC-CV<br>HDP-CV<br>DTG-CV<br>DTG-CV<br>KW-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV            |

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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: \_\_\_\_\_\_\_

| CHAIN OF CUSTODY  |   |                             | B              | enchmark                                     | Analytics, Inc.  |  |  | F  |
|---|---|-----------------------------|----------------|--|--|--|--|--|
| REPORT TO: Talisman   |   |                             | 2566 Pe        | nnsylvania A<br>Phone: (5                    | n Division<br>/enue • Sayre, PA 188-<br>70) 888-0169<br>)) 888-0717  | 40   | ARE SPECIAL DETECTION  |  |
| 1   | REFRIGERATI<br>AFTER COLLE<br>TRANSPC<br>TO | ECTION                      | Dw<br>GW<br>SW | DRINKING WATE<br>GROUND WATE<br>SURFACE WATE | R SO SOIL  | RESULTS ARE BEING USED FOR:<br>NYDOH NYDEC FADEP<br>LANDFILL | IF YES, PLEASE ATTACH<br>IS A OC PACKAGE<br>YES<br>IF YES, PLEASE ATTACH | NO   |
| FAX#<br>BILL TO: Talisman<br>PO#  | LABORATI<br>IN COOL<br>WITH IC              |                             | N. 1 VI        |  | : 1003069  | DE PWS ID#<br>FIDE Location<br>Sample Point_                 |  |  |
| PBOJECT DESCRIPTION<br>SAMPLER SIGNATURE / AFFILIATION<br>Container Sample Point No./Type | DATE SOUPLED<br>The OF SOL                  | SAMPLE MATTIN<br>SAMPLE TOS | PRESE MITALS   | Chlonine Residual                            | An incomplete chain o<br>processing of<br>ANALYSIS TO BE<br>(PER CON |  |  | Please fill<br>out all<br>applicable<br>areas<br>completely.<br>LAB USE ONLY |
| 1 An Cuttings - Twl-1   | 3/2 11005                                   | 0 G-8                       | - N            |  | TPH, pH  | C[   | · · · · · · · · · · · · · · · · · · ·                                    | DIA-C  |
| 2   |   |                             |                | TO   | IP & RUPA M  | etils + Ni, Cy, Zu   | 1  |  |
| 3   |   |                             | _              |  | 4 - TPH, pH  | , c1   |  |  |
| 5   |   |                             |                | Ē  |  | stal Sample  |  |  |
| 6   |   |                             |                | C  | - TUP M  | letals   |  |  |
| 7   |   |                             |                |  |  |  |  |  |
| 8   |   |                             |                |  |  |  |  |  |
| 9   |   |                             |                |  |  |  |  |  |
| 10  |   |                             |                |  | Due: 31  | 8/10   |  |  |
| LAB USE CNLY<br>DENIVERED BY  |   | Cher                        | ł              |  |  | EUPONRECEIPT S   |  | ON ICE @/N   |
| RELINQUISHED BY:  | DAI   | E:<br>5/3/10                | TIME           | 38 1   | ECEIVED BY:  |  | DATE:  | TIME:  |
| RELINQUISHED BY:  | DAT   |                             | TIME:          |  | ECEIVED BY:  |  | DATE:  | TIME:  |
| RELINQUISHED BY:  | DAT   | E:                          | TIME:          | F  | ECEIVED BY:<br>Dabble Y  | nccarty  | DATE: 13 10  | TIME 938<br>aphics Printing 570-888-0688                                     |



COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WASTE MANAGEMENT

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

| typed or legit<br>each attache  | his form must be fully and accurately completed. All required information must be<br>/ped or legibly printed in the spaces provided. If additional space is necessary, identify<br>ach attached sheet as Form 26R, reference the item number and identify the date<br>repared. The date on attached sheets needs to match the date noted below. |   |  |   |   | <b>General Notes</b>  |  |  |
|---|---|---|--|---|---|---|--|--|
| General Refe  | rence 287.54  |   |  |   |   |   |  |  |
| Date Prepared   | d/Revised Febru   | uary 11, 2011   |  |   |   |   |  |  |
|   |   | LIENT (GENERATOR  | R OF THE WASTE) IN   | <b>IFORMA</b> 1   | TION  |   |  |  |
| Company Nar   | <b>ne</b><br>ergy USA Inc.  |   |  |   |   |   |  |  |
|   | y, Name of Parent Compar  | ηγ  |  |   | EPA Gen   | nerator ID#   |  |  |
| Talisman Ene  | Talisman Energy Inc. N/A  |   |  |   |   |   |  |  |
| 50 Pennwood   | iling Address Line 1  | C   | ompany Mailing Addres  | ss Line 2   |   |   |  |  |
|   | dress Last Line – City  | State   | Zip+4  | Phone   |   | Ext   |  |  |
| Warrendale  | -   | PA  | 15086  | (724) 8   | 14-5300   |   |  |  |
| Company Cor<br>Brown  | ntact Last Name   | First Name<br>Dina  | MI   |   | Suffix  |   |  |  |
| Municipality  |   |   | County   |   |   |   |  |  |
| Warrendale  |   |   | Allegheny  |   |   |   |  |  |
| Contact Phon<br>(724) 814-532   |   | Contact Email Address<br>lybrown@talismanusa.c  | YOM .  |   |   |   |  |  |
|   | enerated at the Company   |   |  |   | T Yes   | s 🛛 No  |  |  |
| If 'No', descril  | be location of waste gener  | ation and storage. Drill o  | cuttings are generated du  | uring natural g   | gas drilling o  | operations at   |  |  |
| the   | (03-004) well pad site loca   | ated at 1226 Besley Road  | Columbia Townshin Bra  | adford County   | / DA Mast   | te is stored in   |  |  |
| containers on s   |   | 100 01 1220 20010 <b>)</b> 110000;  | Columbia (Ottionip, Die  |   | , i A. Was  |   |  |  |
| containers on s<br>Municipality   |   | County Bradfo   |  | Sta   |   | A   |  |  |
|   | site.<br>Columbia   |   | ord  |   |   |   |  |  |
| Municipality<br>Residual  | site.<br>Columbia<br>S<br>Residua   | County Bradfo<br>SECTION B. WAST  | ord<br>E DESCRIPTION   | Sta<br>Unit of  | te P.   | A<br>Time   |  |  |
| Municipality<br>Residual<br>Waste Code  | site.<br>Columbia<br>S<br>Residua<br>Code Des   | County Bradfo<br>SECTION B. WAST<br>I Waste<br>scription  | E DESCRIPTION<br>Amount  | Sta<br>Unit of<br>Measur  | te P.<br>f  | <u>A</u>  |  |  |
| Municipality<br>Residual<br>Waste Code<br>810   | site.<br>Columbia<br>S<br>Residua   | County Bradfo<br>SECTION B. WAST<br>Waste<br>scription<br>s)  | ord<br>E DESCRIPTION<br>Amount<br>6,866  | Sta<br>Unit of<br>Measur<br>□ cu yd [   | te P<br>f<br>re<br>] gal<br>⊠ ton                                 | A<br>Time<br>Frame<br>] One Time  |  |  |
| Municipality<br>Residual<br>Waste Code<br>810   | site.<br>Columbia<br>Residua<br>Code Des<br>Drill cuttings (oil and ga  | County Bradfo<br>SECTION B. WAST<br>Waste<br>scription<br>s)<br>1. General P  | ord E DESCRIPTION Amount 6,866 ROPERTIES   | Sta<br>Unit o<br>Measur<br>Cu yd [<br>Ib [  | te P<br>f<br>re<br>] gal<br>⊠ ton                                 | A<br>Time<br>Frame  |  |  |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra   | site.<br>Columbia<br>Sesidua<br>Code Des<br>Drill cuttings (oil and ga<br>nge 8.9   | County Bradfo<br>SECTION B. WAST<br>Waste<br>scription<br>s)<br><u>1. General P</u><br>to 11.3  | ord E DESCRIPTION Amount 6,866 ROPERTIES (based on analyses or k   | Sta<br>Unit o<br>Measur<br>Cu yd [<br>Ib [  | te P<br>f<br>re<br>] gal<br>⊠ ton                                 | A<br>Time<br>Frame<br>] One Time  |  |  |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra   | site.<br>Columbia<br>Residua<br>Code Des<br>Drill cuttings (oil and ga  | County Bradfo<br>SECTION B. WAST<br>Waste<br>scription<br>s)<br>1. General P  | Amount<br>6,866<br>6,866<br>6,866<br>6,866<br>6,866<br>6,866<br>6,866<br>6,866<br>6,866<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,9000<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,900<br>7,9000<br>7,9000<br>7,9000<br>7,9000<br>7,9000<br>7,9000<br>7,9000<br>7,9000<br>7,9000<br>7,9000<br>7,9000<br>7,9000<br>7,9000<br>7,9000<br>7,9000<br>7,9000<br>7,9000<br>7,9000<br>7,9000<br>7,9000<br>7,9000<br>7,9000<br>7,9000<br>7,9000<br>7,9000<br>7,9000<br>7,9000<br>7,9000<br>7,9000<br>7,9000<br>7,9000<br>7,9000<br>7,9000<br>7,9000<br>7,9000<br>7,9000<br>7,9000<br>7,9000<br>7,90000<br>7,9000<br>7,9000<br>7,9000<br>7,9000<br>7,9000<br>7,9000000<br>7,9000<br>7,9000<br>7,90000000000 | Sta<br>Unit o<br>Measur<br>Cu yd [<br>Ib [  | te P<br>f<br>re<br>] gal<br>⊠ ton                                 | A<br>Time<br>Frame<br>] One Time  |  |  |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physic  | site.<br>Columbia<br>Residua<br>Code Des<br>Drill cuttings (oil and ga<br>nge 8.9<br>cal State  | County Bradfo<br>SECTION B. WAST<br>Waste<br>scription<br>s)<br>1. GENERAL P<br>to 11.3<br>Liquid Waste (EPA Me<br>Solid (EPA Method 909<br>Gas (ambient tempera  | Amount<br>6,866<br>ROPERTIES<br>(based on analyses or ki<br>thod 9095)<br>95)<br>ture & pressure)  | Sta<br>Unit o<br>Measur<br>Cu yd<br>Dib<br>Nowledge)  | te P.<br>f<br>⊡gal<br>⊠ton ⊑                                      | A<br>Time<br>Frame<br>One Time  |  |  |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physic  | site.<br>Columbia<br>Sesidua<br>Code Des<br>Drill cuttings (oil and ga<br>nge 8.9<br>cal State  | County Bradfo<br>SECTION B. WAST<br>Waste<br>scription<br>s)<br>1. GENERAL P<br>to 11.3<br>Liquid Waste (EPA Me<br>Solid (EPA Method 909<br>Gas (ambient temperal<br>Color Greyish Black  | ord EDESCRIPTION Amount 6,866 ROPERTIES (based on analyses or ki thod 9095) 95) ture & pressure) Odo   | Sta<br>Unit o<br>Measur<br>Cuyd [<br>Bb [<br>nowledge)<br>r Earthy                                | te P<br>f<br>re<br>] gal<br>⊠ ton                                 | A<br>Time<br>Frame  |  |  |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physic  | site.<br>Columbia<br>Residua<br>Code Des<br>Drill cuttings (oil and ga<br>nge 8.9<br>cal State  | County Bradfo<br>SECTION B. WAST<br>Waste<br>scription<br>s)<br>1. GENERAL P<br>to 11.3<br>Liquid Waste (EPA Me<br>Solid (EPA Method 909<br>Gas (ambient tempera<br>Color Greyish Black<br>Jumber of Solid or Liquid  | E DESCRIPTION         Amount         6,866         ROPERTIES         (based on analyses or kithod 9095)         95)         ture & pressure)         Odo         1 Phases of Separation  | Sta<br>Unit of<br>Measur<br>Cu yd<br>Ib<br>Ib<br>nowledge)<br>r<br>Earthy<br>One                  | te P<br>f<br>gal _<br>∑ ton _<br>/ Slight Pe                      | A<br>Time<br>Frame  |  |  |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physic  | site.<br>Columbia<br>Residua<br>Code Des<br>Drill cuttings (oil and ga<br>nge 8.9<br>cal State  | County Bradfo<br>SECTION B. WAST<br>Waste<br>scription<br>s)<br>1. GENERAL P<br>to 11.3<br>Liquid Waste (EPA Me<br>Solid (EPA Method 909<br>Gas (ambient tempera<br>Color Greyish Black<br>Jumber of Solid or Liquic<br>Describe each phase of s  | E DESCRIPTION         Amount         6,866         ROPERTIES         (based on analyses or kithod 9095)         95)         ture & pressure)         Odo         Phases of Separation         eparation. Soil and Ro   | Sta<br>Unit of<br>Measur<br>Cu yd<br>Ib<br>Ib<br>nowledge)<br>r<br>Earthy<br>One                  | te P<br>f<br>gal _<br>∑ ton _<br>/ Slight Pe                      | A<br>Time<br>Frame<br>One Time  |  |  |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physic<br>c. Physic   | site.<br>Columbia<br>Residua<br>Code Des<br>Drill cuttings (oil and ga<br>nge 8.9<br>cal State [<br>cal Appearance C  | County Bradfo<br>SECTION B. WAST<br>Waste<br>scription<br>s)<br>1. GENERAL P<br>to 11.3<br>Liquid Waste (EPA Me<br>Solid (EPA Method 909<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of s<br>2. CHEMICAL ANALYS  | Amount Amount 6,866 ROPERTIES (based on analyses or k thod 9095) 95) ture & pressure) Odo Phases of Separation eparation. Soil and Ro SIS ATTACHMENTS  | Sta<br>Unit of<br>Measur<br>Cu yd [<br>Book<br>Ib [<br>Nowledge]<br>r Earthy<br>One<br>ck Fragmen | te P<br>f<br>□ gal  <br>⊠ ton   _<br>/ Slight Pe<br>its           | A<br>Time<br>Frame<br>] One Time  |  |  |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physic<br>c. Physic<br>c. Physic  | site.<br>Columbia<br>Residua<br>Code Des<br>Drill cuttings (oil and ga<br>nge 8.9<br>cal State  | County Bradfo<br>SECTION B. WAST<br>Waste<br>scription<br>s)<br>1. GENERAL P<br>to 11.3<br>Liquid Waste (EPA Me<br>Solid (EPA Method 909<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of s<br>2. CHEMICAL ANALYS  | Amount Amount 6,866 ROPERTIES (based on analyses or k thod 9095) 95) ture & pressure) Odo Phases of Separation eparation. Soil and Ro SIS ATTACHMENTS  | Sta<br>Unit of<br>Measur<br>Cu yd [<br>Book<br>Ib [<br>Nowledge]<br>r Earthy<br>One<br>ck Fragmen | te P<br>f<br>gal _<br>∑ ton _<br>/ Slight Pe                      | A<br>Time<br>Frame<br>] One Time  |  |  |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physic<br>c. Physic<br>c. Physic<br>a. The re<br>instruct<br>b. A deta                        | site.<br>Columbia<br>Residua<br>Code Des<br>Drill cuttings (oil and ga<br>nge 8.9<br>cal State [<br>cal Appearance 0<br>sults of a detailed chemic<br>ctions, is attached.<br>iled description of the was   | County Bradfo<br>SECTION B. WAST<br>Waste<br>scription<br>s)<br>1. GENERAL P<br>to 11.3<br>Liquid Waste (EPA Me<br>Solid (EPA Method 909<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquic<br>Describe each phase of s<br>2. CHEMICAL ANALYS<br>al characterization of the<br>ste sampling method is a                              | Amount Amount 6,866 ROPERTIES (based on analyses or kethod 9095) 95) ture & pressure) Odo Phases of Separation eparation. Soil and Ro SIS ATTACHMENTS waste, as described in attached.   | Sta<br>Unit of<br>Measur<br>Cu yd [<br>Bub [<br>nowledge)<br>r Earthy<br>One<br>ck Fragmen        | te P<br>f<br>□ gal  <br>⊠ ton   _<br>/ Slight Pe<br>its           | ATime<br>Frame<br>] One Time<br>etroleum  |  |  |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physic<br>c. Physic<br>c. Physic<br>a. The re<br>instruct<br>b. A deta<br>c. The qu           | site.<br>Columbia<br>Residua<br>Code Des<br>Drill cuttings (oil and ga<br>nge 8.9<br>cal State [<br>cal Appearance 0<br>sults of a detailed chemic<br>ctions, is attached.<br>iled description of the was<br>uality assurance/quality co  | County Bradfo<br>SECTION B. WAST<br>Waste<br>scription<br>s)<br>1. GENERAL P<br>to 11.3<br>Liquid Waste (EPA Me<br>Solid (EPA Method 909<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquic<br>Describe each phase of s<br>2. CHEMICAL ANALYS<br>al characterization of the<br>ste sampling method is a                              | Amount Amount 6,866 ROPERTIES (based on analyses or kethod 9095) 95) ture & pressure) Odo Phases of Separation eparation. Soil and Ro SIS ATTACHMENTS waste, as described in attached.   | Sta<br>Unit of<br>Measur<br>Cu yd [<br>Bub [<br>nowledge)<br>r Earthy<br>One<br>ck Fragmen        | te P<br>f<br>gal<br>⊠ ton<br>/ Slight Pe<br>its<br>∑ Yes          | ATime Frame   |  |  |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH Ra<br>b. Physic<br>c. Physic<br>c. Physic<br>a. The re<br>instruct<br>b. A deta<br>c. The qu<br>attach | site.<br>Columbia<br>Residua<br>Code Des<br>Drill cuttings (oil and ga<br>nge 8.9<br>cal State [<br>cal Appearance 0<br>sults of a detailed chemic<br>ctions, is attached.<br>iled description of the was<br>uality assurance/quality co  | County Bradfo<br>SECTION B. WAST<br>Waste<br>scription<br>s)<br>1. GENERAL P<br>to 11.3<br>Liquid Waste (EPA Me<br>Solid (EPA Method 909<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquic<br>Describe each phase of s<br>2. CHEMICAL ANALYS<br>al characterization of the<br>ste sampling method is a<br>pontrol procedures employ | Amount<br>6,866<br>ROPERTIES<br>(based on analyses or kethod 9095)<br>95)<br>ture & pressure)<br>Odo<br>I Phases of Separation<br>eparation. <u>Soil and Ro</u><br>SIS ATTACHMENTS<br>waste, as described in<br>attached.<br>yed by the laboratory(in  | Sta<br>Unit of<br>Measur<br>Cu yd [<br>Bub [<br>nowledge)<br>r Earthy<br>One<br>ck Fragmen        | te P<br>f<br>gal<br>⊠ ton<br>/ Slight Pe<br>its<br>∑ Yes<br>∑ Yes | A<br>Time<br>Frame<br>] One Time<br>etroleum<br>atroleum<br>atroleum<br>b<br>b<br>b<br>b<br>c<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b<br>b |  |  |

| •<br>• | 3.   | PROCESS DESCRIPTION              | & SCHEMATIC ATTAC         | HMENTS            | × .           |   |  |  |  |  |
|--------|--|----------------------------------|---------------------------|-------------------|---------------|---|--|--|--|--|
| a.     | A detailed description of the r  |                                  |                           |                   | Yes           | □ No  |  |  |  |  |
|        | the waste, as specified in the   | instructions, is attache         | d.                        |                   | ·····         |   |  |  |  |  |
| b.     | A schematic of the manufactu<br>as specified in the instruction                    |                                  | ontrol processes proc     | lucing the waste, | 🛛 Yes         | 🗋 No  |  |  |  |  |
| c.     | If portions of the information a confidentiality claim, as des                     |                                  |                           | n for 🗌 Yes       | No No         | N/A N/A                                       |  |  |  |  |
|        | SECTION C. MANAGEMENT OF RESIDUAL WASTE<br>1. Processing or Disposal Facility(ies) |                                  |                           |                   |               |   |  |  |  |  |
| The ar | rea below (ad.) will accommod  |                                  |                           |                   | if necossan/  | (1,13, s, s, s, s, s, s, s, s, s, s, s, s, s, |  |  |  |  |
|        | • •  |                                  |                           |                   | in necessary. |   |  |  |  |  |
| a.     | Solid waste permit number(s)<br>9-0232-00003                                       | for processing or disp           | osal facility being utili | ized.             |               |   |  |  |  |  |
| 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          |               |   |  |  |  |  |
| с.     | Facility Contact Name  | Larry Shilling                   |                           |                   |               |   |  |  |  |  |
|        | Title  |                                  |                           |                   |               |   |  |  |  |  |
|        | Phone  | (585) 466-7271                   | Email Address             | larry.shilling@ca | sella.com     |   |  |  |  |  |
| d.     | Volume of waste shipped to p<br>2,852  | cuyd 🗌 gal                       | 🗌 İb 🛛 ton                | (check one)       |               |   |  |  |  |  |
| а.     | Solid waste permit number(s)<br>8-4630-00010                                       | for processing or disp           | osal facility being utili | zed.              |               |   |  |  |  |  |
| 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<br>(585) 466-7271 | Email Address             | joe.boyles@case   | lla.com       |   |  |  |  |  |
| d.     | Volume of waste shipped to p   |                                  | acility in the previous   | year.             |               |   |  |  |  |  |
|        | 1,799  | cuyd 🗌 gal                       | 🔲 lb 🛛 🖂 ton              | (check one)       |               |   |  |  |  |  |
|        |  | 2. Beni                          |                           |                   |               |   |  |  |  |  |
| а.     | Has the waste been approved  | for beneficial use?              |                           |                   | Yes           | 🛛 No  |  |  |  |  |
|        | If "Yes", list the general permi   | t number or approval n           | umber.                    |                   |               |   |  |  |  |  |
| b.     | Volume of waste beneficially u   |                                  |                           |                   |               |   |  |  |  |  |
|        | 0 Ö  | cuyd 🗌 gal                       | ib ton                    | (check one)       |               |   |  |  |  |  |

|        |  | <b>PROCESS DESCRIPTION</b>            | & SCHEMATIC ATTAC        | CHMENTS           |  |              |
|--------|--|---------------------------------------|--------------------------|-------------------|--|--------------|
| a.     | A detailed description of the the waste, as specified in the   | nanufacturing and/or po               | llution control proce    |                   | Yes  | No No        |
|        |  | ·                                     |                          |                   |  |              |
| b.     | A schematic of the manufact<br>as specified in the instruction |                                       | ntrol processes proc     | lucing the waste, | Yes Yes  | 🗌 No         |
| C.     | If portions of the information a confidentiality claim, as des |                                       |                          | n for 🗌 Yes       | No No  | N/A          |
|        | SECTIO   | ON C. MANAGEME                        | ENT OF RESIDU            | AL WASTE          |  |              |
|        |  | 1. PROCESSING OR D                    | ISPOSAL FACILITY (IE     | (S)               |  |              |
| The ar | rea below (ad.) will accommod                                  | ate the identification of             | wo facilities. Attach    | additional sheets | if necessary.  |              |
| а.     | Solid waste permit number(s)<br>101243                         | for processing or dispo               | sal facility being util  | ized.             |  |              |
| b.     | Facility Name  | Northern Tier Solid W                 | aste Authority           |                   |  |              |
|        | Address Line 1   | 108 Steam Hollow Ro                   |                          |                   |  |              |
|        | Address Line 1   | · · · · · · · · · · · · · · · · · · · |                          |                   |  |              |
|        | Address City State ZIP   | Trov                                  | PA                       | 16947             |  |              |
|        | Municipality   | West Burlington Twp                   | County                   | Bradford          |  |              |
| C.     | Facility Contact Name  | Charles Woodward                      |                          |                   |  |              |
| •.     | Title  | Onanes woodward                       |                          |                   |  |              |
|        | Phone  | (570) 297-4177                        | Email Address            | chuckwoodward(    | @epix.net  |              |
| d.     | Volume of waste shipped to p                                   | rocessing or disposal fa<br>cu yd gal | cility in the previous   |                   |  |              |
| а.     | Solid waste permit number(s)<br>8-0728-00004                   | for processing or dispo               | sal facility being utili | zed.              | and the second second second second second second second second second second second second second second second |              |
| b.     | Facility Name  | Chemung County Lan                    | dfill                    |                   |  | _            |
|        | Address Line 1   | 1690 Lake Street                      |                          |                   |  |              |
|        | Address Line 1   |                                       |                          |                   |  |              |
|        | Address City State ZIP   | Elmira                                | NY                       | 14903             |  |              |
|        | Municipality   | Elmira                                | County                   | Chemung           |  |              |
| с.     | Facility Contact Name  | Carla Canjar                          |                          |                   |  |              |
|        | Title  | Environmental Manag                   | er                       |                   |  |              |
|        | Phone  | (585) 797-5941                        | Email Address            | carla.canjar@cas  | ella com   |              |
|        |  | ( )                                   |                          |                   |  |              |
| d.     | Volume of waste shipped to p<br>883                            | cu yd gal                             |                          |                   |  |              |
|        | 4  | 2. BENE                               | ICIAL USE                |                   | 12014  | tin a second |
| a.     | Has the waste been approved                                    | for beneficial use?                   |                          |                   | Yes  | No No        |
|        | If "Yes", list the general perm                                | t number or approval nu               | mber.                    |                   |  |              |
| b.     | Volume of waste beneficially                                   |                                       |                          |                   |  |              |
|        | 0  | cuyd 🗌 gal                            | ☐ lb ☐ ton               | (check one)       |  | ĺ            |

|        | 3.  | PROCESS DESCRIPTION      | & SCHEMATIC ATTA        | CHMENTS       | -             |      |  |  |  |
|--------|---|--------------------------|-------------------------|---------------|---------------|------|--|--|--|
| a.     | A detailed description of the r<br>the waste, as specified in the   | nanufacturing and/or po  | Ilution control proce   |               | Yes           | 🗋 No |  |  |  |
| b.     | A schematic of the manufacturing and/or pollution control processes producing the waste, X Yes No as specified in the instructions, is attached.                  |                          |                         |               |               |      |  |  |  |
| C.     | If portions of the information submitted are confidential, the substantiation forYesNoN/A a confidentiality claim, as described in the instructions, is attached. |                          |                         |               |               |      |  |  |  |
|        | SECTIO  | N C. MANAGEM             | ENT OF RESIDU           | JAL WASTE     |               |      |  |  |  |
|        |   | 1. PROCESSING OR D       |                         |               |               |      |  |  |  |
| The ar | ea below (ad.) will accommod  |                          |                         |               | if necessary. |      |  |  |  |
| а.     | Solid waste permit number(s)<br>100361  | for processing or dispo  | sal facility being util | ized.         |               |      |  |  |  |
| b.     | Facility Name   | McKean County Land       | fill                    |               |               |      |  |  |  |
|        | Address Line 1  | 19 Ness Lane             |                         |               |               |      |  |  |  |
|        | Address Line 1  |                          |                         |               |               |      |  |  |  |
|        | Address City State ZIP  | Kane                     | PA                      | 16735         |               |      |  |  |  |
|        | Municipality  | Sergeant Twp             | County                  | McKean        |               |      |  |  |  |
| с.     | Facility Contact Name   | Mike Manderfeld          |                         |               |               |      |  |  |  |
|        | Title   |                          |                         |               |               |      |  |  |  |
|        | Phone .   | (814) 778-9931           | Email Address           | manderfeld@gm | ail.com       |      |  |  |  |
| d.     | Volume of waste shipped to p 331  | rocessing or disposal fa | icility in the previous |               |               |      |  |  |  |
| a.     | Solid waste permit number(s)  | for processing or dispo  | sal facility being util | ized.         |               |      |  |  |  |
| 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 p  |                          |                         |               |               |      |  |  |  |
| L      |   | cu yd 🔄 gal              | b ton                   | (check one)   |               |      |  |  |  |
|        |   |                          | FICIAL USE              |               |               |      |  |  |  |
| а.     | 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 L  |                          |                         |               |               |      |  |  |  |
|        | 0   | cuyd 🗌 gal               | b 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 applicat   | le:   |   |  |  |  |  |  |  |  |
| 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 and has not change   | -   | ired in Section B-2, Chemical Analysis was supplied to the Department for the year              |  |  |  |  |  |  |  |
| Form Submitted:  |   | Form 26R  |  |  |  |  |  |  |  |
|  |   | Other (specify)   |  |  |  |  |  |  |  |
| Date Submitted:  |   |   |  |  |  |  |  |  |  |
| I certify the information r<br>for the year and h  |   | ed in Section B-3, Process Description and Schematic, was supplied to the Department t changed. |  |  |  |  |  |  |  |
| Form Submitted:  |   | Form 26R  |  |  |  |  |  |  |  |
|  |   | Other (specify)   |  |  |  |  |  |  |  |
| Date Submitted:  |   |   |  |  |  |  |  |  |  |
| Name of Responsible Official   | Name of Responsible Official Title Environmental Specialist |   |  |  |  |  |  |  |  |
| Dina Brown   | Dina Brown  |   |  |  |  |  |  |  |  |
| Signature  |   | Date 2/25/11  |  |  |  |  |  |  |  |

SEND DATA TO:

NAME:

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

2566 Pennsylvania Ave. Sayre, PA 18840

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

**TEST REPORT** 

Work Order: 10090956

WO#: 10090956 PAGE: 1 of 1 PO#: AF77049 PWS ID#

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

Steve Gridley

COMPANY: Talisman Energy USA, Inc.

Horseheads, NY 14845

ADDRESS: 337 Daniel Zenker Dr

| 03-054                            |                               |          |                  |             |                       |              |                  |
|-----------------------------------|-------------------------------|----------|------------------|-------------|-----------------------|--------------|------------------|
| RECEIVED FOR LAB BY: DLM2         | DAT                           | E: 09/   | 07/2010 16:25    |             |                       | Pa           | ge 1 of 1        |
| SAMPLE: Inv. Cuttings             | Lab ID: 10090956-001A         |          |                  | Composite   |                       |              |                  |
| SAMPLED BY: LS                    | Sample Time: 08/30/2010 12:12 |          | SLOQ             |             |                       |              |                  |
| Test                              | Result                        |          | Method           |             | Analysis Start        | Analysis End | Analyst *        |
| Moisture                          | 12.5 %                        | к        | 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            |
| рН                                | 9.30@19.8°C                   |          | EPA 9045C        |             | 09/10/10 10:00        | 09/10/10     | SG-SA            |
| SAMPLE: Inv. Cuttings             |                               | Lab II   | D: 10090956-001B | Compo       | site                  |              |                  |
| SAMPLED BY: LS                    | Sample Time: 08/30/2010 12:12 |          |                  |             |                       |              |                  |
|                                   |                               |          |                  | <u>SLOQ</u> |                       |              |                  |
| Test                              | <u>Result</u>                 |          | Method           |             | <u>Analysis Start</u> | Analysis End | <u>Analyst *</u> |
| Total Petroleum Hydrocarbons      | 89000 mg/Kg                   |          | EPA 9071         |             | 09/08/10 14:30        | 09/08/10     |                  |
| Sample Note: Analysis performed b | y Microbac Laboratorie        | es, IncE | rie Division     |             |                       |              |                  |

| SAMPLE: TCLP Leachate of Inv. C | -             | Lab ID: 10090956-001D<br>Sample Time: 09/08/2010 10:00 |             | Composite      |              |           |  |  |
|---------------------------------|---------------|--|-------------|----------------|--------------|-----------|--|--|
| SAMPLED BY: LS                  | Sample        |  |             |                |              |           |  |  |
| Test                            | Result        | Method   | <u>SLOQ</u> | 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
- к Sample was received past holding time.

MANAGER

| ani | M. | Davis |
|-----|----|-------|
| C.  |    |       |

0

DATE: 9/13/2010

| PA ID #: 08-00380<br>NY ID # 11216                             | Benchmark Analytics, Inc<br>Eastern Division<br>2566 Pennsylvania Ave.<br>Sayre, PA 18840<br>Phone: (570) 888-0169<br>Fax: (570) 888-0717 |                        |              | C.<br>Work Order: 10121731     |                      |                  |  |
|--|---|------------------------|--------------|--------------------------------|----------------------|------------------|--|
| SEND DATA TO:  |   |                        |              |                                |                      |                  |  |
| NAME: Dina Brown   | ·   |                        | W            | O#: 1012                       | 1731                 |                  |  |
| COMPANY: Talisman Energy USA,<br>ADDRESS: 337 Daniel Zenker Dr | Inc.  |                        | PA           | AGE: 1 of :                    | 3                    |                  |  |
| Horseheads, NY 1484  | 5   |                        |              |                                | -                    |                  |  |
|  | 0   |                        | P            | D#: AF77                       | 7716                 |                  |  |
| PHONE: (607) 562-4000<br>FAX: (607) 562-4001                   | TEST  | REPORT                 | P\           | WS ID#                         |                      |                  |  |
| 03-054   |   |                        |              |                                |                      |                  |  |
| RECEIVED FOR LAB BY: RML                                       | DATE: 1   | 2/09/2010 15:45        |              |                                | Pa                   | age 1 of 3       |  |
| SAMPLE: Inv. Cuttings  | 1 s   | b ID: 10121731-001A    | Grab         |                                |                      |                  |  |
| SAMPLED BY: SG   |   | Time: 12/08/2010 21:27 | Club         |                                |                      |                  |  |
|  | :   |                        | <u>SLOQ</u>  |                                |                      |                  |  |
| Test   | Result  | Method                 |              | Analysis Start                 | Analysis End         | <u>Analyst *</u> |  |
| Ignitability<br>Sample Note: Analysis performed by             | Neg ASIS °F   | SW846 1030             |              | 12/15/10 13:30                 | 12/15/10             |                  |  |
| -  |   |                        |              |                                |                      |                  |  |
| SAMPLE: Inv. Cuttings  |   | b ID: 10121731-001C    | Grab         |                                |                      |                  |  |
| SAMPLED BY: SG   | Sample  | ime: 12/08/2010 21:27  | SLOQ         |                                |                      |                  |  |
| Test   | Result  | Method                 | -            | Analysis Start                 | Analysis End         | <u>Analyst *</u> |  |
| Cyanide, Reactive  | < 0.2 mg/Kg   | SW 7.3.3.2             | 0.2          | 12/13/10 8:56                  | 12/14/10             | HDP-CV           |  |
| Reactive Sulfide   | 990 mg/Kg   | SW846 7.3              | 16           | 12/14/10 12:30                 | 12/14/10             | LTW-CV           |  |
| SAMPLE: Inv. Cuttings  | La  | b ID: 10121731-001D    | Grab         |                                |                      |                  |  |
| SAMPLED BY: SG   | Sample 1  | ime: 12/08/2010 21:27  |              |                                |                      |                  |  |
| Test   | Result  | Method                 | <u>SLOQ</u>  | 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. Cutt                             |   | b ID: 10121731-001F    | Grab         |                                |                      |                  |  |
| SAMPLED BY: SG   |   | ime: 12/11/2010 12:45  | Olab         |                                |                      |                  |  |
|  |   | 1116. 12/11/2010 12.40 | SLOQ         |                                |                      |                  |  |
| Test   | Result  | Method                 | <b>.</b>     | Analysis Start                 | Analysis End         |                  |  |
| 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<br>12/15/10 | RHH-SA           |  |
|  | < 0:10 mg/L<br>< 0.10 mg/L  | EPA 8270C<br>EPA 8270C | 0.10<br>0.10 | 12/15/10 7:48<br>12/15/10 7:48 | 12/15/10<br>12/15/10 | RHH-SA<br>RHH-SA |  |
| 2,4,6-Trichlorophenol  | - o. to myre  |                        | 0.10         | 12/10/10 /.40                  |                      | NUTOA            |  |

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. Daris

DATE: 12/16/2010

| PA ID #: 08-<br>NY ID # 112 |                                 | <b>Easte</b><br>2566 Pe        | <b>k Analytics, In</b><br><b>ern Division</b><br>ennsylvania Ave.<br>re, PA 18840 | C.          | ١                      | Nork ( | Order: 101;              | 21731               |
|-----------------------------|---------------------------------|--------------------------------|---|-------------|------------------------|--------|--------------------------|---------------------|
|                             |                                 |                                | (570) 888-0169<br>(570) 888-0717  |             |                        |        |                          |                     |
| SEND DATA                   | A TO:                           |                                |   |             |                        |        |                          |                     |
| NAME:                       | Dina Brown                      | 2                              |   | w           | O#:                    | 10121  | 731                      |                     |
| COMPANY:                    |                                 | IC.                            |   |             | $\bigcirc \pi$ .       | 1012.1 | 101                      |                     |
| ADDRESS:                    | 337 Daniel Zenker Dr            |                                |   | P/          | AGE:                   | 2 of 3 |                          |                     |
|                             | Horseheads, NY 14845            |                                |   | P           | D#:                    | AF777  | 16                       |                     |
|                             |                                 |                                |   |             |                        |        | . •                      |                     |
| PHONE:                      | (607) 562-4000                  | TES                            | ST REPORT   | P١          | VS ID#                 |        |                          |                     |
| FAX:                        | (607) 562-4001                  | i                              |   |             |                        |        |                          |                     |
|                             |                                 |                                |   |             |                        |        |                          |                     |
|                             | 03-054                          |                                |   |             |                        |        |                          | _                   |
| RECEIVED                    | FOR LAB BY: RML                 | DATE                           | : 12/09/2010 15:45  |             |                        |        | Pa                       | ige 2 of 3          |
| 2,4,5-Trie                  | chlorophenol                    | < 0.10 mg/L                    | EPA 8270C   | 0.10        | 12/15/10               | 7:48   | 12/15/10                 | RHH-SA              |
| Pentachl                    | lorophenol                      | < 0.50 mg/L                    | EPA 8270C   | 0.50        | 12/15/10               | 7:48   | 12/15/10                 | RHH-SA              |
| 2,4-Diniti                  | rotoluene                       | < 0.10 mg/L                    | EPA 8270C   | 0.10        | 12/15/10               | 7:48   | 12/15/10                 | RHH-SA              |
| Hexachic                    | probenzene                      | < 0.10 mg/L                    | EPA 8270C   | 0.10        | 12/15/10               | 7:48   | 12/15/10                 | RHH-SA              |
| Naphthal                    | lene                            | < 0.10 mg/L                    | EPA 8270C   | 0.10        | 12/15/10               | 7:48   | 12/15/10                 | RHH-SA              |
| SAMPLE: T                   | CLP Leachate of Inv. Cuttin     | qs                             | Lab ID: 10121731-001G   | Grab        |                        |        |                          |                     |
|                             | ED BY: SG                       |                                | le Time: 09/08/2010 10:00   |             |                        |        |                          |                     |
| Tost                        |                                 | Popult                         | Mathad  | <u>sloq</u> | Apolunio               | Ctart  | Analumia End             | Analyst *           |
| <u>Test</u><br>Strontiun    | n - TCLP extracted              | <u>Result</u><br>0.056 mg/L    | <u>Method</u><br>EPA 6010B  | 0.050       | Analysis 3<br>09/09/10 |        | Analysis End<br>09/09/10 | Analyst *<br>RMD-CV |
|                             | e Note: Sample for TCLP extract | •                              |   |             | 00/00/10               | 14.70  | 00/00/10                 |                     |
|                             | -<br>-                          |                                |   |             |                        |        |                          |                     |
|                             | CLP Leachate of Inv. Cuttin     |                                | Lab ID: 10121731-001H   | Grab        |                        |        |                          |                     |
| SAMPLI                      | ED BY: SG                       | Samp                           | le Time: 12/11/2010 12:45   | SLOQ        |                        |        |                          |                     |
| <u>Test</u>                 |                                 | Result                         | Method  | <u>5100</u> | Analysis \$            | Start  | Analysis End             | Analyst *           |
| рН                          |                                 | 5.97@16.6°C                    | SM4500H+B   |             | 12/14/10               | 8:00   | 12/14/10                 | SG-SA               |
| SAMPLE: 7                   | HE Extract of Inv. Cuttings     |                                | Lab ID: 10121731-001  | Grab        |                        |        |                          |                     |
|                             | ED BY: SG                       | Samp                           | le Time: 12/12/2010 13:10   | 0.02        |                        |        |                          |                     |
|                             |                                 |                                |   | SLOQ        |                        |        |                          |                     |
| Test                        |                                 | <u>Result</u>                  | Method  |             | Analysis :             |        | Analysis End             |                     |
| Benzene                     |                                 | < 0.0250 mg/L                  | EPA 8260B   | 0.0250      | 12/13/10               |        | 12/13/10                 | CTM-SA              |
|                             | etrachloride                    | < 0.0250 mg/L                  | EPA 8260B   | 0.0250      | 12/13/10               |        | 12/13/10                 | CTM-SA              |
| Chlorobe                    |                                 | < 0.0250 mg/L                  | EPA 8260B   | 0.0250      | 12/13/10               |        | 12/13/10                 | CTM-SA              |
| Chlorofor                   | ÷                               | < 0.0250 mg/L                  | EPA 8260B   | 0.0250      | 12/13/10               |        | 12/13/10<br>12/13/10     | CTM-SA              |
| · • • •                     | oroethane                       | < 0.0250 mg/L<br>< 0.0250 mg/L | EPA 8260B<br>EPA 8260B  | 0.0250      | 12/13/10<br>12/13/10   |        | 12/13/10                 | CTM-SA<br>CTM-SA    |
| 1,1-Dicni<br>Ethylben:      | oroethene                       | < 0.0250 mg/L<br>< 0.0250 mg/L | EPA 8260B   | 0.0250      | 12/13/10               |        | 12/13/10                 | CTM-SA              |
| Isopropyl                   |                                 | < 0.0250 mg/L                  | EPA 8260B   | 0.0250      | 12/13/10               |        | 12/13/10                 | CTM-SA              |
|                             | proethene                       | < 0.0250 mg/L                  | EPA 8260B   | 0.0250      | 12/13/10               |        | 12/13/10                 | CTM-SA              |
| Trichloro                   |                                 | < 0.0250 mg/L                  | EPA 8260B   | 0.0250      | 12/13/10               |        | 12/13/10                 | CTM-SA              |
|                             |                                 | ing =                          |   |             |                        |        |                          |                     |
| REMARKS:                    |                                 |                                |   |             |                        |        |                          |                     |

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B Analyte detected in the associated Method Blank

MANAGER

Carrie M. Davis

DATE: 12/16/2010

| PA ID #: 08- <br>NY ID # 112        |   | <b>Eas</b><br>2566                    | stern D      | <b>alytics, Ir<br/>Division</b><br>Ivania Ave.<br>18840 | IC.                 | V                               | Vork     | Order: 101                      | 21731            |
|-------------------------------------|---|---------------------------------------|--------------|---|---------------------|---------------------------------|----------|---------------------------------|------------------|
|                                     |   |                                       | • •          | 888-0169<br>888-0717                                    |                     |                                 |          |                                 |                  |
| SEND DATA                           | A TO:                                     |                                       |              |   |                     |                                 |          |                                 |                  |
| NAME:                               | Dina Brown                                | .*                                    |              |   | W                   | O#:                             | 1012     | 1731                            |                  |
| COMPANY:                            | Talisman Energy USA, Ir                   | 1 <b>C</b> .                          |              |   |                     |                                 |          |                                 |                  |
| ADDRESS:                            | 337 Daniel Zenker Dr                      |                                       |              |   | PA                  | AGE:                            | 3 of 3   | 5                               |                  |
|                                     | Horseheads, NY 14845                      | :                                     |              |   | PC                  | D#:                             | AF77     | 716                             |                  |
| PHONE:<br>FAX:                      | (607) 562-4000<br>(607) 562-4001          | - <b>T</b>                            | EST RE       | PORT  | PV                  | VS ID#                          |          |                                 |                  |
|                                     | 03-054                                    |                                       |              |   |                     | •                               |          |                                 |                  |
| RECEIVED F                          | FOR LAB BY: RML                           | DA                                    | TE: 12/09    | 9/2010 15:45  |                     |                                 |          | Pa                              | ige 3 of 3       |
| 1,2,4-Trin                          | nethylbenzene                             | < 0.0250 mg/L                         |              | EPA 8260B   | 0.0250              | 12/13/10                        | 8:11     | 12/13/10                        | CTM-SA           |
| 1,3,5-Trin                          | nethylbenzene                             | < 0.0250 mg/L                         |              | EPA 8260B   | 0.0250              | 12/13/10                        | 8:11     | 12/13/10                        | CTM-SA           |
| Vinyl chlo                          | pride                                     | < 0.0250 mg/L                         |              | EPA 8260B   | 0.0250              | 12/13/10                        | 8:11     | 12/13/10                        | CTM-SA           |
| Methyl te                           | rt-butyl ether                            | < 0.0250 mg/L                         |              | EPA 8260B   | 0.0250              | 12/13/10                        | 8:11     | 12/13/10                        | CTM-S/           |
| 2-Butano                            | ne  | < 0.0500 mg/L                         |              | EPA 8260B   | 0.0500              | 12/13/10                        | 8:11     | 12/13/10                        | CTM-SA           |
| SAMPLE: AS                          | STM Extract of Inv. Cuttings              | · ·                                   | Lab ID:      | 10121731-001J   | Grab                |                                 |          |                                 |                  |
|                                     | ED BY: SG                                 |                                       | mple Time:   | 12/10/2010 11:15  |                     |                                 |          |                                 |                  |
| Test                                |   | Result                                |              | Method  | SLOQ                | Analysis S                      | Start    | Analysis End                    | Analyst '        |
|                                     | l Oxygen Demand                           | 234 mg/L                              | в            | HACH 8000   | 10                  | 12/11/10                        |          | 12/13/10                        | KMF-SA           |
|                                     |   | · · · · · · · · · · · · · · · · · · · | Lah ID:      | h   |                     |                                 |          |                                 |                  |
|                                     | STM Extract of Inv. Cuttings<br>ED BY: SG |                                       |              | 10121731-001L   | Grab                |                                 |          |                                 |                  |
| SAMPLE                              | ED BY: SG                                 | . 58                                  | imple (ime:  | 12/10/2010 11:15  | SLOQ                |                                 |          |                                 |                  |
| Test                                |   | Result                                |              | Method  |                     | Analysis S                      | Start    | Analysis End                    | Analyst 1        |
| pН                                  |   | 7.57@16.6°C                           |              | SM4500H+B   |                     | 12/14/10                        | 8:00     | 12/14/10                        | SG-SA            |
|                                     | ids                                       | 1840 mg/L                             |              | SM2540B   | 0.10                | 12/10/10 1                      | 7:00     | 12/13/10                        | IC-SA            |
| Total Soli                          |   |                                       | Lab ID:      | 10121731-001M   | Grab                |                                 |          |                                 |                  |
| -                                   | v. Cuttinas                               |                                       |              | 12/10/2010 10:25  |                     |                                 |          |                                 |                  |
| SAMPLE: In                          | <b>v. Cuttings</b><br>ED BY: SG           | . Sa                                  | imple l'ime: | 12/10/2010 10:20  |                     |                                 |          |                                 |                  |
| SAMPLE: In<br>SAMPLE                | -   |                                       | imple Time:  |   | <u>SLOQ</u>         | A                               | <b>-</b> | <b>A</b>                        | A                |
| SAMPLE: In<br>SAMPLE<br><u>Test</u> | -   | Sa<br><u>Result</u><br>< 5.00 mg/kg   | imple lime:  | <u>Method</u><br>SW846/9023                             | <u>SLOQ</u><br>5.00 | <u>Analysis (</u><br>12/15/10 1 |          | <u>Analysis End</u><br>12/15/10 | <u>Analyst '</u> |

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B Analyte detected in the associated Method Blank

MANAGER

Camie M. Davis

DATE: 12/16/2010

| CHAIN OF CUSTODY   | Benchn   | € <u>1</u> OF <u>1</u>  |
|--|--|---|
| Talisman / UEG   | 2566 Pennsylva   | E SPECIAL DETECTION LIMITS  |
| geowetlands@aol.com  | Phor <b>VV/U#: 10121/31</b>  |   |
| <u> </u>   | Fax  |   |
|  |  | IF YES, PLEASE ATTACH   |
|  | I Z GW GROUND WATER SO SON   | IS A QC PACKAGE NEEDED?   |
| CONTACT Steve Gridley  | TRANSPORT SW SURFACE WATER HZ HAZARDOUS LANDFILL Mostoller   | YES Z NO  |
| H# 607-731-0145  |  | IF YES, PLEASE ATTACH REQUIREMENTS                                    |
| AX#  | LABORATORY / / // H HYDROCHLORIC ACID OH SODIUM HYDROXIDE<br>IN COOLER / S SULFURIC ACID AS ASCORBIC ACID /  |   |
| HILL TO: Talisman  | WITH ICE   |   |
|  | Thio SODIUM SULFITE NH, AMMONIUM CHLORIDE  |   |
| PO# AF77716  | NONE Hg MERCURIC CHLORIDE  | Please fill out all   |
| PROJECT DESCRIPTION  | 」 / デーデーデーデー ダー An incomplete chain of custody may delay the / ヴー<br>デーデーデーデーデー デー クローク デー クローク デー クローク デー クローク デー クローク デー クローク アーク アーク アーク アーク アーク アーク アーク アーク アーク ア  | applicable areas  |
| SAMPLER SIGNATURE / AFFILIATION  | LABORATORY     H     HYDROCHLORIC ACID     OH     SOLUCIONICAL OF SODIUM HYDROXIDE       IN COOLER     IN COOLER     IN COOLER     IN COOLER     IN COOLER     IN COOLER       WITH ICE     IN COOLER     IN COOLER     IN COOLER     IN COOLER     IN COOLER       IN COOLER     IN COOLER     IN COOLER     IN COOLER     IN COOLER     IN COOLER       IN COOLER     IN COOLER     IN COOLER     IN COOLER     IN COOLER     IN COOLER       IN COOLER     IN COOLER     IN COOLER     IN COOLER     IN COOLER     IN COOLER       IN COOLER     IN COOLER     IN COOLER     IN COOLER     IN COOLER     IN COOLER       IN COOLER     IN COOLER     IN COOLER     IN COOLER     IN COOLER     IN COOLER       IN COOLER     IN COOLER     IN COOLER     IN COOLER     IN COOLER     IN COOLER       IN COOLER     IN COOLER     IN COOLER     IN COOLER     IN COOLER     IN COOLER       IN COOLER     IN COOLER     IN COOLER     IN COOLER     IN COOLER     IN COOLER       IN COOLER     IN COOLER     IN COOLER     IN COOLER     IN COOLER     IN COOLER       IN COOLER     IN COOLER     IN COOLER     IN COOLER     IN COOLER     IN COOLER       IN COOLER     IN COOLER     I  | Please fill out all<br>applicable areas<br>completely<br>LAB USE ONLY |
| CONTAINER SAMPLING POINT   | ANALYSIS TO BE PERFORMED   |   |
| ·  |  |   |
| 1 Inv Cuttings   | 12/8 2127 50 C 56 D Ignitability, Reactive Sulfide & Cyanide   |   |
| 2  | C PCBs, Total Solids   |   |
| 3 Actions, Inn.  | G Total Volatile Solids  |   |
| 4 C- Reactivity  | C Ammonia-Nitrogen   |   |
| 5 D-TS, TVS  | C Water Leaching Procedure: COD,   |   |
| 6 E-T. Sample  | V V C V V Total Solids, Oil & Grease,  |   |
| F-TRIP BNA, leats.   |  |   |
| 8 G-TECP-Harss. Sr   | K-Asma ort   |   |
| H-TELP pH  |  |   |
| 0 I-TELP Vols.   | M-TOX DAY TURNAROUND   |   |
|  |  |   |
| 1 J-ASTA COD, NOH  |  |   |
| and the second second second second second second second second second second second second second second second | ાગમંદ્રાં મુક્તરાય છે. આ ગામમાં આ ગામમાં આ ગામમાં આ ગામમાં આ ગામમાં આ ગામમાં આ ગામમાં આ ગામમાં આ ગામમાં આ ગામમાં   | SARAWAL ONICE W/IN  |
|  | 이 방법은 같이 많은 것이 있는 것이 되는 것이 같다. 말 것이 같다. 같은 것은 것은 것이 같다. 지난 것은 것은 것이 같은 것이 같다. 같은 것은 것은 것이 같은 것이 같다. 것이 같은 것이 같다.   | and an an an an an an an an an an an an an                            |
| RELINGUISHEE BY:   | DATE:<br>1219110 TIME:<br>DATE:<br>DATE:<br>TIME:<br>BECEIVED BY:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>DATE:<br>D | DATE: TIME:   |
| RELINQUISHED BY:   | DATE: TIME: RECEIVED BY:   | DATE: TIME:   |
| RELINQUISHED BY:   |  |   |
|  | DATE: TIME: RECEIVED AY OO   | BE 19 10 19545  |

| LAB ID: 08-00380<br>LAB ID: 39-00401   |  | n Division                                  | nc.                  |   |                                 |                            |
|--|--|---|----------------------|---|---------------------------------|----------------------------|
|  |  | nsylvania Ave.<br>PA 18840                  |                      | Work                                    | Order: 101                      | 03214                      |
|  | •  | 70) 888-0169<br>70) 888-0717                |                      |   |                                 |                            |
| SEND DATA TO:<br>NAME: Steve Gridley<br>COMPANY: Talisman Energy USA,<br>ADDRESS: 337 Daniel Zenker Dr | nc.  |   |                      | 'O#: 1010<br>AGE: 1 of :                | )3214<br>2                      |                            |
| Horseheads, NY 14845   | i !  |   | P                    | D#: AF77                                |                                 |                            |
| PHONE: (607) 731-0145<br>FAX: (607) 562-4001   | TEST   | REPORT                                      | P۱                   | WS ID#                                  |                                 |                            |
| 03-054<br>RECEIVED FOR LAB BY: DLM2  | DATE: 1  | 0/21/2010 11:37                             |                      |   | P                               | age 1 of 2                 |
| SAMPLE: Air Cuttings   |  | b ID: 10103214-001A                         | Compo                | site                                    |                                 |                            |
| SAMPLED BY: SG   | Sample T   | ime: 10/19/2010 9:55                        | SLOQ                 |   |                                 |                            |
| Test<br>Total Petroleum Hydrocarbons<br>Sample Note: Analysis performed by                             | <u>Result</u><br>640 mg/Kg<br>Microbac Laboratories, Ind | <u>Method</u><br>EPA 9071<br>Erie Division. | 170                  | <u>Analysis Start</u><br>10/23/10 9:00  | <u>Analysis End</u><br>10/23/10 | <u>Analyst *</u>           |
| SAMPLE: Air Cuttings   | La   | b ID: 10103214-001B                         | Compo                | site                                    | <u>`</u>                        |                            |
| SAMPLED BY: SG   | Sample T   | ime: 10/19/2010 9:55                        | SLOQ                 |   |                                 |                            |
| <u>Test</u><br>Moisture  | <u>Result</u><br>42. <del>9</del> %                      | <u>Method</u><br>Moisture Calc.             | 0.01                 | <u>Analysis Start</u><br>10/25/10 15:00 | <u>Analysis End</u><br>10/26/10 | <u>Analvst</u> *<br>NFM-SA |
| Free Liquid  | < 0.1 %  | EPA 9095A                                   | 0.1                  | 10/22/10 15:05                          | 10/22/10                        | IC-SA                      |
| рН   | 12.01@23.1°C   | EPA 9045C                                   |                      | 10/26/10 8:50                           | 10/26/10                        | NFM-SA                     |
| SAMPLE: Air Cuttings<br>SAMPLED BY: SG   |  | b ID: 10103214-001C<br>ime: 10/19/2010 9:55 | Compo                | site                                    |                                 |                            |
| <u>Test</u><br>Sodium  | <u>Result</u><br>391 mg/Kg-dry                           | <u>Method</u><br>EPA 6010B                  | <u>SLOQ</u><br>214   | Analysis Start<br>10/22/10 10:40        | <u>Analysis End</u><br>10/22/10 | <u>Analyst *</u><br>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 Cuttin<br>SAMPLED BY: SG  | 3.   | b ID: 10103214-001E<br>ime: 10/22/2010 7:30 | Compo<br><u>SLOQ</u> | site                                    |                                 |                            |
| <u>Test</u>  | <u>Result</u>  | Method                                      |                      | Analysis Start                          | Analysiş 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<br>Copper - TCLP extracted   | < 0.500 mg/L<br>< 0.100 mg/L                             | EPA 6010B<br>EPA 6010B                      | 0.500<br>0.100       | 10/23/10 11:10<br>10/23/10 11:10        | 10/23/10<br>10/23/10            | RMD-CV<br>RMD-CV           |
|  |  |   |                      |   |                                 |                            |

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anie M. Davis DATE: 10/26/2010

| LAB ID: 08-00380<br>LAB ID: 39-00401                  | Benchmark Analytics,<br>Eastern Division<br>2566 Pennsylvania Ave<br>Sayre, PA 18840 |                                      |
|---|--|--------------------------------------|
|   | Phone: (570) 888-0169<br>Fax: (570) 888-0717   |                                      |
| SEND DATA TO:   |  |                                      |
| NAME: Steve Gridley                                   |  | WO#: 10103214                        |
| COMPANY: Talisman Energy USA, I                       | nc.  | PAGE: 2 of 2                         |
| ADDRESS: 337 Daniel Zenker Dr<br>Horseheads, NY 14845 |  |                                      |
| Horseneaus, NT 14040                                  | ·  | PO#: AF77715                         |
| PHONE: (607) 731-0145<br>FAX: (607) 562-4001          | TEST REPORT  | PWS ID#                              |
| 03-054  |  |                                      |
| RECEIVED FOR LAB BY: DLM2                             | DATE: 10/21/2010 11:37   | Page 2 of 2                          |
| Lead - TCLP extracted                                 | < 0.500 mg/L EPA 6010B   | 0.500 10/23/10 11:10 10/23/10 RMD-CV |
| Nickel - TCLP extracted                               | < 0:100 mg/L EPA 6010B   | 0.100 10/23/10 11:10 10/23/10 RMD-CV |
| Selenium - TCLP extracted                             | < 0.500 mg/L EPA 6010B   | 0.500 10/23/10 11:10 10/23/10 RMD-CV |
| Silver - TCLP extracted                               | < 0.100 mg/L EPA 6010B   | 0.100 10/23/10 11:10 10/23/10 RMD-CV |
| Zinc - TCLP extracted                                 | < 0.200 mg/L EPA 6010B   | 0.200 10/23/10 11:10 10/23/10 RMD-CV |

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MANAGER

Carrie M. Davis

DATE: 10/26/2010

|                                |          |               |                  |              | ĺ        |                       |  |                                       |                  |                                   |
|--------------------------------|----------|---------------|------------------|--------------|----------|-----------------------|--|---------------------------------------|------------------|-----------------------------------|
| CHAIN OF CUSTODY               |          |               |                  |              |          | E                     | enchmark /   |                                       | _                | OF 1                              |
| REPORT TO: Talisman / UEG      | .        |               |                  |              | 0        | ree b                 |  | ) <b>1</b> 4                          |                  |                                   |
| geowetlands@aol.com            | ļ        |               |                  |              | 2        | 900 8                 | ennsylvania Ave W/O#: 10103<br>Phone: (57)   |                                       |                  | ECTION LIMITS                     |
| twollin@rallysolutions.ca      | RFE      | RIGEF         | RATE S/          |              | FS       |                       | Fax: (570) 688-0717<br>RESULTS ARE BEING USI   | · · · · · · · · · · · · · · · · · · · |                  |                                   |
|                                |          |               | ILLECT           |              | -0       | /m                    |  | ED FOR:<br>PADEP                      | IF YES, PLEASE A | TIACH<br>CKAGE NEEDED?            |
| CONTACT Steve Gridley          | · .      |               |                  |              |          |                       | GROUND WATER SO SOIL<br>SURFACE WATER HZ HAZARDOUS LANDFILL                          |                                       |                  |                                   |
| PH# 607-731-0145               |          |               | sport<br>'O      |              | 1        | / W<br>Di             |  |                                       | IF YES, PLEASE A | TACH REQUIREMENTS                 |
| FAX#                           | 1        | ABOR          | ATOR\            | t            |          |                       | H HYDROCHLORIC ACID OH SODIUM HYDROXIDE  |                                       | 7 /5/            |                                   |
| BILL TO: Talisman              |          | IN CO<br>WITH | IDLER            |              |          |                       | S SULFURIC ACID AS ASCORBIG ACID<br>N NITRIG ACID AC ACETIC ACID                     | /                                     | , FEC            | 10 a.                             |
|                                | <u> </u> |               | <del></del>      | /            |          | <u>`</u> 8/           | SO 3 SODIUM SULFITE NH, AMMONIUM CHLORIDE<br>Thio SODIUM THIOSULFATE ZN ZINC ACETATE |                                       |                  |                                   |
| PO# AF 77715                   |          |               | / 🛓              | _د / ۲       | /8       |                       | - NONE Hg MERCURIC CHLORIDE  |                                       |                  | lease fill out all                |
| PROJECTIOESCRIPTION 03-054     |          | The Sameled   | 1 Star           | E.           |          |                       | An incomplete chain of custody may delay the<br>processing of your sample(s).        | 1                                     | ALL A            | pplicable areas<br>completely     |
| SAMPLEASIGNATURE / AFFILIATION |          | J.            | 8/3              | Į.           | 10       |                       | \$`/`  |                                       | Ĩ                | ustripiotoly                      |
| CONTAINER SAMPLING POINT       | /\$      |               | SALL OF SULPLING | SALL FURTHER |          | PRES INTIME COMPOSITE | ANALYSIS TO BE PERFORMED (PER CONTAINER)   | COMPOSITED ON RECENT                  | Land Con Recent  | SE ONLY                           |
| 1 Air Cuttings                 | 10/19    | 955           | 50               | C            | \$G-     |                       | ТРН  |                                       |                  | - OO ALL                          |
| 2                              |          |               |                  |              |          |                       | pH, Chlorides, Sodium  |                                       |                  |                                   |
| 3                              |          |               |                  |              |          |                       | TCLP 8 RCRA Metals + Cu, Ni, Zn  |                                       |                  |                                   |
| A TPH                          |          |               |                  |              |          |                       | Free Liquids / % Moisture  |                                       |                  |                                   |
| 5 B. pH Free Liqui             | 4,0      | 70 H          | pist             | ire          | 1        |                       | BTEX   |                                       |                  |                                   |
| 6 <u>C-CINA, RM</u>            | bis      | <u>+</u>      |                  |              |          |                       | IT-P 2007 HOFO ONLY IF the TPH   |                                       |                  |                                   |
| 7 D. T. Sample                 |          |               |                  |              |          |                       | exceeds 1 <b>2</b> 0,000 mg/Kg   |                                       |                  |                                   |
| 8                              |          |               |                  |              |          |                       |  |                                       |                  |                                   |
| 9                              |          |               |                  |              |          |                       | 72 HOUR TURNAROUND   |                                       |                  |                                   |
| 10                             | <u> </u> | ļ             |                  |              | <u> </u> |                       | DAY TURNAROUND   |                                       |                  |                                   |
| 11                             | Ļ        |               | <u> </u>         | L            |          | <u> </u>              |  |                                       | Jue              | 10/26/10                          |
| LAB USE WILLY<br>DELIVERED BY  | <u></u>  |               | ·                |              |          |                       | SG TEMPERATURE UPON RECEIPT  |                                       | ℃ ARR            | AL ON ICE, Y N                    |
| RELINGLISHED BY                | <u> </u> |               |                  |              |          | TIME:                 | , RECEIVED BY:   |                                       | DATE:            | TIME;                             |
| yug                            |          |               |                  | 2111         | 0        | /                     | 137  |                                       | 1 1              |                                   |
| RELINQUISHED BY:               |          | [[            | DATE:<br>/       | 1            |          | TIME:                 | RECEIVED BY:   |                                       | DATE:            | TIME:                             |
| RELINQUISHED BY:               | <b></b>  | 1             | DATE:            | 1            |          | rime:                 | RECEIVED BY: June Cal  |                                       | DATE:            | 0 TIME:<br>1137                   |
|                                |          |               |                  |              |          |                       |  | ·                                     |                  | Ad Graphica 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

| General Reference 287.54         Date Prepared/Revised       February 11, 2011         SECTION A. CEIENT (GENERATOR OF THE WASTE) INFORMATION         Company Name<br>Talisman Energy USA Inc.         Talisman Energy USA Inc.         If a Subsidiary, Name of Parent Company<br>Talisman Energy Inc.         Company Mailing Address Line 1<br>S0 Pennwood Place         Company Mailing Address Line - City         State       Zip+4       Phone       Ext         Company Address Last Line - City       State       Zip+4       Phone       Ext         Company Contact Last Name       First Name       MI       Suffix         Brown       Dina       Dina       Municipality       County         Warrendale       Allegheny       County       State       No         (03-054) well pad site located at 847 Fairbanks Read, Columbia Township, Bradford County, PA. Waste is stored in containers on site.         Municipality       Columbia       County       Bradford       State       PA         Sectition Mailing Address (noted above)?         Is the waste generated at the Company Mailing Address (noted above)?         (03-054) well pad site located at 847 Fairbanks Read, Columbia Township, Bradford County, PA. Waste is s   |  |
|---|--|
| SECTION A. CLIENT (GENERATOR OF THE WASTE) INFORMATION         Company Name<br>Talisman Energy USA Inc.         If a Subsidiary, Name of Parent Company<br>Talisman Energy Inc.         IF A Generator ID#<br>Talisman Energy Inc.         Company Mailing Address Line 1<br>S0 Pennwood Place         Company Mailing Address Line 1<br>S0 Pennwood Place         Company Address Last Line - City       State       Zip+4       Phone       Ext<br>Company Contact Last Name       First Name       MI       Suffix         Company Contact Last Name       First Name       MI       Suffix         Municipality       County         Contact Email Address         (724) 814-5321       dybrown@talismanusa.com         Is the waste generated at the Company Mailing Address (noted above)?       Yes       No         If No/ if No', describe location of waste generation and storage.       Dill cuttings are generated during natural gas drilling operations at the         (03-054) well pad site located at 847 Fairbanks Road, Columbia Township, Bradford County, PA. Waste is stored in containers on site.       Municipality       Columbia       County <th cols<="" td=""></th>  |  |
| Company Name<br>Talisman Energy USA Inc.       EPA Generator ID#<br>N/A         If a Subsidiary, Name of Parent Company<br>Talisman Energy Inc.       N/A         Company Mailing Address Line 1<br>50 Pennwood Place       Company Mailing Address Line 2         Company Address Last Line - City       State       Zip+4       Phone       Ext         Company Contact Last Name       PA       15086       (724) 814-5300       Ext         Company Contact Last Name       First Name       MI       Suffix       Suffix         Brown       Dina       County       Municipality       County       County         Municipality       Contact Email Address       Allegheny       Contact Phone       Ext       No         (724) 814-5321       dybrown@talismanusa.com       I'so', describe location of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the most for state generation and storage. Drill cuttings are generated during natural gas drilling operations at the following is county       Bradford       State       PA         Residual       Residual Waste       County       Bradford       State       PA         State       Columbia       County       Bradford       State       PA         State       Columbia       County       Bradford       State       PA <td< td=""></td<>   |  |
| Tailisman Energy USA Inc.       If a Subsidiary, Name of Parent Company<br>Tailisman Energy Inc.       EPA Generator ID#<br>N/A         Company Mailing Address Line 1<br>50 Pennwood Place       N/A         Company Address Last Line - City       State       Zip+4       Phone       Ext         Warrendale       PA       15086       (724) 814-5300       Ext         Company Contact Last Name       First Name       MI       Suffix       Suffix         Brown       Dina       Suffix       Suffix       Suffix       Suffix         Municipality       County       Allegheny       County       Varrendale       Varrendale       Varrendale       No         Contact Phone       Ext       Contact Email Address       County       Varrendale       Vestown@tailsmanusa.com   |  |
| If a Subsidiary, Name of Parent Company<br>Talisman Energy Inc.       EPA Generator ID#<br>N/A         Company Mailing Address Line 1<br>50 Pennwood Place       Company Mailing Address Line 2<br>50 Pennwood Place       N/A         Company Address Last Line – City       State       Zip+4       Phone       Ext         Company Address Last Line – City       State       Zip+4       Phone       Ext         Company Contact Last Name       First Name       MI       Suffix         Brown       Dina       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)?       I Yes       No       No         If 'No', describe location of waste generation and storage.       Drill cuttings are generated during natural gas drilling operations at the       (03-054) well pad site located at 847 Fairbanks Road, Columbia Township, Bradford County, PA. Waste is stored in containers on site.       State       PA         Residual       Residual Waste       Amount       Measure       Frame         810       Drill cuttings (oil and gas)       5,256       □ tu       □ to time       □ to time         810       Drill cuttings (oil and gas)       Susid (EPA Method 9095)       □ solid (EPA Method 9095)   |  |
| Company Mailing Address Line 1       Company Mailing Address Line 2         50 Pennwood Place       Company Address Last Line - City       State       Zip+4       Phone       Ext         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       County       Municipality       County       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)?       I Yes       No       No       No         If 'No', describe location of waste generation and storage.       Drill cuttings are generated during natural gas drilling operations at the more (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         810       Drill cuttings (oil and gas)       5,256       I well       I well       Cut yd       gal         810       Drill cuttings (oil and gas)       Side (EPA Method 9095)       I b       I b       I on e   |  |
| 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       County       Allegheny       Suffix       Suffix         Municipality       County       Allegheny       County       Suffix       Suffix         Municipality       Contact Email Address       Allegheny       Yes       No       No         (724) 814-5321       dybrown@talismanusa.com       Yes       No       No       Yes       No         If 'No', describe tocation of waste generated at the Company Malling Address (noted above)?       Yes       No       No         If 'No', describe tocation of waste generation and storage. Drill cuttings are generated during natural gas drilling operations at the       County       PA         Municipality       Columbia       County       Bradford       State       PA         Musicipality       Columbia       County       Bradford       State       PA         Municipality       Columbia       County       Bradford       State       PA         Musicipality       Columbia       County       Bradf   |  |
| Company Address Last Line - City       State       Zip+4       Phone       Ext         Warrendale       PA       15086       (724) 814-5300       Ext         Company Contact Last Name       First Name       MI       Suffix       Suffix         Brown       Dina       County       Allegheny       Suffix       Suffix         Municipality       Contact Email Address       Allegheny       Contact Phone       Ext       Contact Email Address (noted above)?       Yes       No         If 'No', describe location of waste generated at the Company Mailing Address (noted above)?       If 'No', describe location of waste generation and storage.       Drill cuttings are generated during natural gas drilling operations at the         Municipality       Columbia       County       Bradford       State       PA         SECTION/B.       WASTE DESCRIPTION       Frame       Frame       Frame         810       Drill cuttings (oil and gas)       5,256       Ima       One Time         810       Drill cuttings (oil and gas)       5,256       Ima       One Time         810       Drill cuttings (oil and gas)       Ima       Solid (EPA Method 9095)       Solid (EPA Method 9095)         Solid (EPA Method 9095)       Gas (ambient temperature & pressure)       Codor       Earthy / Slight   |  |
| Company Contact Last Name       First Name       MI       Suffix         Brown       Dina       Municipality       Suffix         Municipality       County       Allegheny         Contact Phone       Ext       Contact Email Address         (724) 814-5321       dybrown@talismanusa.com       Is the waste generated at the Company Malling Address (noted above)?       Is the waste generated at the Company Malling Address (noted above)?         Is the waste generated at the Company Malling Address (noted above)?       Is the waste generated at the Company Malling Address (noted above)?       Is the waste generated at the Company Malling Address (noted above)?         Is the waste generated at the Company Malling Address (noted above)?       Is the waste generated at the Company Malling Address (noted above)?       Is the waste for the company Malling Address (noted above)?         It method       Is the waste generated at the Company Malling Address (noted above)?       Is the waste for the company Malling Address (noted above)?         It method       Is the waste generated at the Company Malling Address (noted above)?       Is the waste for the company Malling Address (noted above)?         Municipality       Columbia       County       Bradford       State         Municipality       Columbia       County       Bradford       State       PA         Residual       Residual Waste       Amount       Measure |  |
| Brown       Dina         Municipality<br>Warrendale       County<br>Allegheny         Contact Phone       Ext       Contact Email Address<br>dybrown@talismanusa.com         Is the waste generated at the Company Mailing Address (noted above)?       Yes         Is the waste generated at the Company Mailing Address (noted above)?       Yes         If 'No', describe location of waste generation and storage.       Drill cuttings are generated during natural gas drilling operations at<br>the (03-054) well pad site located at 847 Fairbanks Road, Columbia Township, Bradford County, PA. Waste is stored in<br>containers on site.         Municipality       Columbia       County       Bradford       State       PA         SECTION B.       WASTIE DESCRIPTION       State       PA         Residual<br>Waste Code       Code Description       Amount       Measure       Frame         810       Drill cuttings (oil and gas)       5,256       Cu yd gal       On one Time         810       Drill cuttings (oil and gas)       12.01       (based on analyses or knowledge)       One Time         a.       pH Range       5.97       to       12.01       (based on analyses or knowledge)       Solid (EPA Method 9095)         Solid (EPA Method 9095)       Gas (ambient temperature & pressure)       Color       Gas (ambient temperature & pressure)       Odor       Earthy / Slight Petroleum   |  |
| Municipality<br>Warrendale       County<br>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       Yes       No         (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. WASTIE DESCRIPTION         Residual       Residual Waste       Unit of       Time         Residual       Residual Waste       Gover Description       Measure       Frame         810       Drill cuttings (oil and gas)       5,256       Cu yd       gal       Image         a.       pH Range       5.97       to       12.01       (based on analyses or knowledge)       Image         b.       Physical State       Liquid Waste (EPA Method 9095)       Gas (ambient temperature & pressure)       Gas (ambient temperature & pressure)       Codor       Earthy / Slight Petroleum   |  |
| 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         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 model       [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 Maste         Code Description       Amount       Measure       Frame         810       Drill cuttings (oil and gas)       5,256       □ cu yd □ gal       □         a. pH Range       5.97       to       12.01       (based on analyses or knowledge)       0         b.       Physical State       □ Liquid Waste (EPA Method 9095)       □ Gas (ambient temperature & pressure)       Gas (ambient temperature & pressure)         c.       Physical Appearance       Color       Greyish Black       Odor       Earthy / Slight Petroleum   |  |
| (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   |  |
| 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  |  |
| Ite (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         Time Residual Waste Code Code Description       Amount       Unit of Measure       Time Frame         810       Drill cuttings (oil and gas)       5,256       I cu yd       gal       I cu  |  |
| containers on site.         Municipality       Columbia       County       Bradford       State       PA         SECTION B. WASTE DESCRIPTION         Residual Waste       Unit of       Time         Waste Code       Code Description       Amount       Measure       Frame         810       Drill cuttings (oil and gas)       5,256       Cu yd       gal         I. 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)         Color       Greyish Black       Odor       Earthy / Slight Petroleum   |  |
| Municipality       Columbia       County       Bradford       State       PA         Residual Waste Code       Residual Waste Code Description       MASTE DESCRIPTION       Unit of Measure       Time Frame         810       Drill cuttings (oil and gas)       5,256       □ cu yd □ gal  |  |
| Residual Waste Code       Residual Waste Code Description       Amount       Unit of Measure       Time Frame         810       Drill cuttings (oil and gas)       5,256       □ cu yd □ gal       □         810       Drill cuttings (oil and gas)       5,256       □ lb ☑ ton □       One Time         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)       Solid (EPA Method 9095)       Solid (EPA Method 9095)         Gas (ambient temperature & pressure)       Gareyish Black       Odor       Earthy / Slight Petroleum  |  |
| Waste Code     Code Description     Amount     Measure     Frame       810     Drill cuttings (oil and gas)     5,256     Cu yd gal     gal       I 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)       Generature & pressure)       Color     Greyish Black     Odor     Earthy / Slight Petroleum   |  |
| 810       Drill cuttings (oil and gas)       5,256       I cu yd gal       gal         a.       pH Range       5.97 to       12.01 (based on analyses or knowledge)       One Time         b.       Physical State       Liquid Waste (EPA Method 9095)<br>Solid (EPA Method 9095)       Solid (EPA Method 9095)       Solid (EPA Method 9095)         Gas (ambient temperature & pressure)       Greyish Black       Odor       Earthy / Slight Petroleum  |  |
| 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)       Odor       Earthy / Slight Petroleum   |  |
| a.       pH Range       5.97       to       12.01       (based on analyses or knowledge)         b.       Physical State       I Liquid Waste (EPA Method 9095)       Solid (EPA Method 9095)         Gas (ambient temperature & pressure)         c.       Physical Appearance       Color       Greyish Black       Odor       Earthy / Slight Petroleum  |  |
| b.       Physical State       Liquid Waste (EPA Method 9095)         Solid (EPA Method 9095)       Solid (EPA Method 9095)         Gas (ambient temperature & pressure)         c.       Physical Appearance         Color       Greyish Black       Odor         Earthy / Slight Petroleum   |  |
| Color       Greyish Black       Odor       Earthy / Slight Petroleum  |  |
| 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 Yes No   |  |
| instructions, is attached.  |  |
| b. A detailed description of the waste sampling method is attached.   |  |
| c. The quality assurance/quality control procedures employed by the laboratory(ies) is 🛛 Yes 🗌 No   |  |
| attached.   |  |
| attached.         d.       The results of the hazardous waste determination is attached.         X       Yes         No   |  |

|        | 3.  | PROCESS DESCRIPTION                     | & SCHEMATIC ATTAC        | HMENTS            |               |       |
|--------|---|---|--------------------------|-------------------|---------------|-------|
| a.     | A detailed description of the the waste, as specified in the      |   |                          | sses producing    | Yes Yes       | No No |
| b.     | A schematic of the manufacture as specified in the instruction    |   | ntrol processes proc     | lucing the waste, | X Yes         | 🗌 No  |
| C.     | If portions of the information<br>a confidentiality claim, as des |   |                          | n for 📋 Yes       | No No         | ⊠ N/A |
|        | SECTIO  | ON C. MANAGEME                          | ENT OF RESIDU            | AL WASTE          |               |       |
|        |   | 1. PROCESSING OR D                      | ISPOSAL FACILITY (IE     | (S)               |               |       |
| The ar | ea below (ad.) will accommod                                      | ate the identification of               | wo facilities. Attach    | additional sheets | if necessary. |       |
| a.     | Solid waste permit number(s)<br>9-0232-00003                      | for processing or dispo                 | sal facility being utili | zed.              |               |       |
| 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@ca | sella.com     |       |
| d.     | Volume of waste shipped to p<br>2,795                             | rocessing or disposal fa<br>cu yd 🛛 gal | cility in the previous   |                   | 1             |       |
| a.     | Solid waste permit number(s)<br>100361                            | for processing or dispo                 | sal facility being utili | zed.              |               |       |
| b.     | Facility Name   | McKean County Landi                     | fill                     |                   |               |       |
|        | Address Line 1  | 19 Ness Lane                            |                          |                   |               |       |
|        | Address Line 1  |   |                          |                   |               |       |
|        | Address City State ZIP  | Kane                                    | PA                       | 16735             |               |       |
|        | Municipality  | Sergeant Twp                            | County                   | McKean            |               |       |
| с.     | Facility Contact Name   | Mike Manderfeld                         |                          |                   |               |       |
|        | Title   |   |                          |                   |               |       |
|        | Phone   | (814) 778-9931                          | Email Address            | manderfeld@gm     | ail.com       |       |
| d.     | Volume of waste shipped to p 1,342                                | rocessing or disposal fa<br>cu yd 🛛 gal | cility in the previous   |                   |               |       |
|        |   | 2. Bener                                | FICIAL USE               |                   |               |       |
| a.     | Has the waste been approved                                       | for beneficial use?                     |                          |                   | Yes           | No No |
|        | If "Yes", list the general permi                                  | t number or approval nu                 | mber.                    |                   |               |       |
| b.     | Volume of waste beneficially u                                    | ised in the previous yea                | ٢.                       |                   |               |       |
|        | 0   | cu yd 📃 gal                             | 🗌 lb 🗌 ton               | (check one)       |               |       |

|       | 3  | PROCESS DESCRIPTION   | 1 & SCHEMATIC ATTA      | CUMENTS   |              |       |
|-------|--|---|-------------------------|---|--------------|-------|
| a.    | A detailed description of the                                    |   |                         |   | V Yes        |       |
| а.    | the waste, as specified in the                                   | <b>v</b> 1  |                         | esses producing   | M Tes        |       |
| b.    | A schematic of the manufact<br>as specified in the instructio    |   | ontrol processes pro    | ducing the waste,   | X Yes        | 🗌 No  |
| C.    | If portions of the information<br>a confidentiality claim, as de |   |                         | on for 📋 Yes  | No           | 🛛 N/A |
|       | SECTI  | ON C. MANAGEM   |                         | and the first of a second state of a second state of a second state of a second state of the second state of th |              |       |
|       |  |   | DISPOSAL FACILITY       |   |              |       |
| The a | rea below (ad.) will accommo                                     |   |                         |   | if necessary | •     |
| a.    | Solid waste permit number(s<br>8-4630-00010                      | ) for processing or disp  | osal facility being uti | lized.  |              |       |
| b.    | Facility Name  | Hakes C&D Landfill  | <u>.</u>                |   |              |       |
|       | Address Line 1   | 4376 Manning Ridge  | Road                    |   |              |       |
|       | Address Line 1   | <u></u>   |                         |   |              |       |
|       | Address City State ZIP   | Painted Post  | NY                      | 14870   |              |       |
|       | Municipality   | Erwin Twp   | County                  | Steuben   |              |       |
| c.    | Facility Contact Name  | Joe Boyles  |                         |   |              |       |
| ••    | Title  |   |                         |   |              |       |
|       | Phone  | (607) 937-6044  | Email Address           | joe.boyles@case   | lla com      |       |
|       |  | (585) 466-7271  |                         | ,000.009.000@0000   | ind.com      |       |
| d.    | Volume of waste shipped to                                       |   | acility in the previou  | s vear.   |              | ,     |
|       | 1,031  | ]cuyd 🗌 gal   | 🗌 İb 🖂 toı              |   |              |       |
| а.    | Solid waste permit number(s<br>100945                            | ) for processing or disp  | osal facility being uti | lized.  |              |       |
| 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  |              |       |
| с.    | Facility Contact Name  | Dusty Hilbert   |                         |   |              |       |
|       | Title  | Compliance Manage   | r                       |   |              |       |
|       | Phone  | (717) 729-5261  | Email Address           | dhilbert@iswaste  | e.com        |       |
| d.    | Volume of waste shipped to                                       | processing or disposal f  | acility in the previous | s vear.   |              |       |
|       | 88   | ] cuyd 🗌 gal  | ☐ lb 🛛 tor              | n (check one)   |              |       |
|       |  | Printed and the second s | EFICIAL USE             |   |              |       |
| a.    | Has the waste been approved                                      | I for beneficial use?   |                         |   | Yes          | 🛛 No  |
|       | If "Yes", list the general perm                                  |   |                         |   |              |       |
| b.    | Volume of waste beneficially                                     |   |                         |   |              |       |
|       | 0  | ] cuyd 🗌 gal  | ☐ lb ☐ tor              | n (check one)   |              |       |

.

|  |                          | SECTION D. CERTIFICATION  |
|--|--------------------------|---|
| Report and all attached docu<br>obtaining the information, I<br>knowledge. I understand that | ments<br>verify<br>the s | nave personally examined and am familiar with the information submitted in this Annual<br>s and that based upon my inquiry of those individuals immediately responsible for<br>that the submitted information is true, accurate and complete to the best of my<br>submission of false information herein is made subject to the penalties of 18 Pa. C.S.<br>on to authorities, which include fine and imprisonment. |
| Check the following, if applical   | ole:                     |   |
| I certify the information  |                          | ired in Section B-1, General Properties was supplied to the Department for the year   |
| Form Submitted:  |                          | Form 26R  |
|  |                          | Other (specify)   |
| Date Submitted:  |                          |   |
| I certify the information and has not chan   | -                        | ired in Section B-2, Chemical Analysis was supplied to the Department for the year  |
| Form Submitted:  |                          | Form 26R  |
|  |                          | Other (specify)   |
| Date Submitted:  |                          |   |
| I certify the information for the year and h   | •                        | ed in Section B-3, Process Description and Schematic, was supplied to the Department t changed.   |
| Form Submitted:  |                          | Form 26R  |
|  |                          | Other (specify)   |
| Date Submitted:  |                          |   |
| Name of Responsible Official   |                          | Title Environmental Specialist  |
| Dina Brown<br>Signature  | A                        | Date 2/25/11  |

| PA ID #: 08-00380<br>NY ID # 11216  | 2566 Penr   | Analytics, In<br>n Division<br>nsylvania Ave.<br>PA 18840   | C.  | Work   | Order: 1012  | 21731   |
|---|---|---|---|--|--|---|
|   |   | 70) 888-0169<br>70) 888-0717  |   |  |  |   |
| SEND DATA TO:   |   |   |   |  |  |   |
| NAME: Dina Brown  | •   |   | W   | O#: 1012   | 21731  |   |
| COMPANY: Talisman Energy USA,   | Inc.  |   | P/  | AGE: 1 of 3  | 3  |   |
| ADDRESS: 337 Daniel Zenker Dr<br>Horseheads, NY 1484  | 5   |   |   |  | -  |   |
| Horseneads, IVI 1404  | ,   |   | P   | D#: AF77   | 7716   |   |
| PHONE: (607) 562-4000<br>FAX: (607) 562-4001  | TEST  | REPORT  | P١  | WS ID#   | ·  |   |
| 03-054  | ·   |   |   |  | <u> </u>   |   |
| RECEIVED FOR LAB BY: RML  | DATE: 1   | 2/09/2010 15:45   |   |  | Ра   | gelof3  |
|   |   | b ID: 10121731-001A   | Grab  |  |  |   |
| SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG   |   | ime: 12/08/2010 21:27   | Giab  |  |  |   |
|   |   |   | SLOQ  |  | <del>.</del> .   |   |
| <u>Test</u><br>Ignitability   | <u>Result</u><br>Neg ASIS °F  | <u>Method</u><br>SW846 1030   |   | Analysis Start<br>12/15/10 13:30   | Analysis End<br>12/15/10   | Analyst *   |
| Sample Note: Analysis performed by  | •   | 344840 1030   |   | 12/13/10 13.30   | 12/10/10   |   |
|   |   | b ID: 10121731-001C   | Grab  |  | *  |   |
| SAMPLE: Inv. Cuttings<br>SAMPLED BY: SG   |   | ime: 12/08/2010 21:27   | Grab  |  |  |   |
| _   |   |   | <u>SLOQ</u>   |  |  |   |
| <u>Test</u>   | Result  | Method  |   | Analysis Start   | Analysis End   |   |
| Cyanide, Reactive   | < 0.2 mg/Kg   | SW 7.3.3.2  | 0.2<br>16   | 12/13/10 8:56  | 12/14/10<br>12/14/10   | HDP-CV  |
| Reactive Sulfide  | 990 mg/Kg   | SW846 7.3   |   | 12/14/10 12:30   | 12/14/10   | LTW-CV  |
| SAMPLE: Inv. Cuttings   |   | b ID: 10121731-001D   | Grab  |  |  |   |
| SAMPLED BY: SG  | Sample T  | ime: 12/08/2010 21:27   |   |  |  |   |
|   |   | ime: 12/08/2010 21:27   | SLOQ  |  |  |   |
| Test  | Result  | Method  | <u>sloq</u>   | Analysis Start   | Analysis End   |   |
| <u>Test</u><br>% Solids   | <u>Result</u><br>78.73 % Wght.  |   | 0.10  | 12/10/10 17:00   | 12/13/10   | IC-SA   |
|   |   | Method  |   |  |  |   |
| % Solids  | 78.73 % Wght.<br>22.37 % Wght.  | <u>Method</u><br>SM2540B  | 0.10  | 12/10/10 17:00   | 12/13/10   | IC-SA   |
| % Solids<br>Total Volatile Solids   | 78.73 % Wght.<br>22.37 % Wght.<br>ngs La  | <u>Method</u><br>SM2540B<br>EPA 160.4   | 0.10<br>0.01<br>Grab  | 12/10/10 17:00   | 12/13/10   | IC-SA   |
| % Solids<br>Total Volatile Solids<br>SAMPLE: TCLP Leachate of Inv. Cutti<br>SAMPLED BY: SG  | 78.73 % Wght.<br>22.37 % Wght.<br>ngs La<br>Sample T  | <u>Method</u><br>SM2540B<br>EPA 160.4<br>b ID: 10121731-001F<br>ime: 12/11/2010 12:45   | 0.10<br>0.01  | 12/10/10 17:00<br>12/10/10 8:00  | 12/13/10<br>12/14/10   | IC-SA<br>NFM-SA   |
| % Solids<br>Total Volatile Solids<br>SAMPLE: TCLP Leachate of Inv. Cutti<br>SAMPLED BY: SG<br><u>Test</u>   | 78.73 % Wght.<br>22.37 % Wght.<br>ngs La<br>Sample T<br><u>Result</u>   | <u>Method</u><br>SM2540B<br>EPA 160.4<br>b ID: 10121731-001F<br>ime: 12/11/2010 12:45<br><u>Method</u>  | 0.10<br>0.01<br>Grab  | 12/10/10 17:00<br>12/10/10 8:00<br><u>Analysis Start</u>   | 12/13/10   | IC-SA<br>NFM-SA   |
| % Solids<br>Total Volatile Solids<br>SAMPLE: TCLP Leachate of Inv. Cutti<br>SAMPLED BY: SG  | 78.73 % Wght.<br>22.37 % Wght.<br>ngs Lai<br>Sample T<br><u>Result</u><br>< 0.10 mg/L   | <u>Method</u><br>SM2540B<br>EPA 160.4<br>b ID: 10121731-001F<br>ime: 12/11/2010 12:45   | 0.10<br>0.01<br>Grab<br>SLQQ  | 12/10/10 17:00<br>12/10/10 8:00  | 12/13/10<br>12/14/10<br>Analysis End   | IC-SA<br>NFM-SA   |
| % Solids<br>Total Volatile Solids<br>SAMPLE: TCLP Leachate of Inv. Cutti<br>SAMPLED BY: SG<br><u>Test</u><br>Pyridine   | 78.73 % Wght.<br>22.37 % Wght.<br>ngs La<br>Sample T<br><u>Result</u>   | <u>Method</u><br>SM2540B<br>EPA 160.4<br>b ID: 10121731-001F<br>ime: 12/11/2010 12:45<br><u>Method</u><br>EPA 8270C                                       | 0.10<br>0.01<br>Grab<br><u>SLOQ</u><br>0.10                                 | 12/10/10 17:00<br>12/10/10 8:00<br><u>Analysis Start</u><br>12/15/10 7:48  | 12/13/10<br>12/14/10<br><u>Analysis End</u><br>12/15/10  | IC-SA<br>NFM-SA<br><u>Analyst *</u><br>RHH-SA                     |
| % Solids<br>Total Volatile Solids<br>SAMPLE: TCLP Leachate of Inv. Cutti<br>SAMPLED BY: SG<br><u>Test</u><br>Pyridine<br>1,4-Dichlorobenzene  | 78.73 % Wght.<br>22.37 % Wght.<br>ngs Lai<br>Sample T<br><u>Result</u><br>< 0.10 mg/L<br>< 0.10 mg/L  | <u>Method</u><br>SM2540B<br>EPA 160.4<br>b ID: 10121731-001F<br>ime: 12/11/2010 12:45<br><u>Method</u><br>EPA 8270C<br>EPA 8270C                          | 0.10<br>0.01<br>Grab<br><u>SLOQ</u><br>0.10<br>0.10                         | 12/10/10 17:00<br>12/10/10 8:00<br><u>Analysis Start</u><br>12/15/10 7:48<br>12/15/10 7:48   | 12/13/10<br>12/14/10<br><u>Analysis End</u><br>12/15/10<br>12/15/10<br>12/15/10                  | IC-SA<br>NFM-SA<br>Analyst *<br>RHH-SA<br>RHH-SA                  |
| % Solids<br>Total Volatile Solids<br>SAMPLE: TCLP Leachate of Inv. Cutti<br>SAMPLED BY: SG<br><u>Test</u><br>PyridIne<br>1,4-Dichlorobenzene<br>o-Cresol  | 78.73 % Wght.<br>22.37 % Wght.<br>ngs Lai<br>Sample T<br><u>Result</u><br>< 0.10 mg/L<br>< 0.10 mg/L<br>< 0.10 mg/L   | Method<br>SM2540B<br>EPA 160.4<br>b ID: 10121731-001F<br>ime: 12/11/2010 12:45<br>Method<br>EPA 8270C<br>EPA 8270C<br>EPA 8270C                           | 0.10<br>0.01<br>Grab<br><u>SLOQ</u><br>0.10<br>0.10<br>0.10                 | 12/10/10 17:00<br>12/10/10 8:00<br>Analysis Start<br>12/15/10 7:48<br>12/15/10 7:48<br>12/15/10 7:48                                   | 12/13/10<br>12/14/10<br><u>Analysis End</u><br>12/15/10<br>12/15/10<br>12/15/10<br>12/15/10      | IC-SA<br>NFM-SA<br>Analyst *<br>RHH-SA<br>RHH-SA<br>RHH-SA        |
| % Solids<br>Total Volatile Solids<br>SAMPLE: TCLP Leachate of Inv. Cutti<br>SAMPLED BY: SG<br><u>Test</u><br>Pyridine<br>1,4-Dichlorobenzene<br>o-Cresol<br>p-Cresol/m-Cresol                     | 78.73 % Wght.<br>22.37 % Wght.<br>ngs Lai<br>Sample T<br><u>Result</u><br>< 0.10 mg/L<br>< 0.10 mg/L<br>< 0.10 mg/L<br>< 0.10 mg/L<br>< 0.10 mg/L                               | Method<br>SM2540B<br>EPA 160.4<br>b ID: 10121731-001F<br>ime: 12/11/2010 12:45<br>Method<br>EPA 8270C<br>EPA 8270C<br>EPA 8270C<br>EPA 8270C              | 0.10<br>0.01<br>Grab<br><u>SLOQ</u><br>0.10<br>0.10<br>0.10<br>0.10         | 12/10/10 17:00<br>12/10/10 8:00<br>Analysis Start<br>12/15/10 7:48<br>12/15/10 7:48<br>12/15/10 7:48<br>12/15/10 7:48                  | 12/13/10<br>12/14/10<br><u>Analysis End</u><br>12/15/10<br>12/15/10<br>12/15/10<br>12/15/10      | IC-SA<br>NFM-SA<br>RHH-SA<br>RHH-SA<br>RHH-SA<br>RHH-SA           |
| % Solids<br>Total Volatile Solids<br>SAMPLE: TCLP Leachate of Inv. Cutti<br>SAMPLED BY: SG<br><u>Test</u><br>Pyridine<br>1,4-Dichlorobenzene<br>o-Cresol<br>p-Cresol/m-Cresol<br>Hexachloroethane | 78.73 % Wght.<br>22.37 % Wght.<br>ngs Lai<br>Sample T<br><u>Result</u><br>< 0.10 mg/L<br>< 0.10 mg/L<br>< 0.10 mg/L<br>< 0.10 mg/L<br>< 0.10 mg/L<br>< 0.10 mg/L<br>< 0.10 mg/L | Method<br>SM2540B<br>EPA 160.4<br>b ID: 10121731-001F<br>ime: 12/11/2010 12:45<br>Method<br>EPA 8270C<br>EPA 8270C<br>EPA 8270C<br>EPA 8270C<br>EPA 8270C | 0.10<br>0.01<br>Grab<br><u>SLOQ</u><br>0.10<br>0.10<br>0.10<br>0.10<br>0.10 | 12/10/10 17:00<br>12/10/10 8:00<br>Analysis Start<br>12/15/10 7:48<br>12/15/10 7:48<br>12/15/10 7:48<br>12/15/10 7:48<br>12/15/10 7:48 | 12/13/10<br>12/14/10<br>Analysis End<br>12/15/10<br>12/15/10<br>12/15/10<br>12/15/10<br>12/15/10 | IC-SA<br>NFM-SA<br>RHH-SA<br>RHH-SA<br>RHH-SA<br>RHH-SA<br>RHH-SA |

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<br>NY ID # 11216           | 2566 Penns               | <b>Nalytics, Ir</b><br><b>Division</b><br>Sylvania Ave.<br>PA 18840 | 1C.         | Work           | Corder: 101  | 21731      |
|--|--------------------------|---|-------------|----------------|--------------|------------|
|  | Phone: (570<br>Fax: (570 | ) 888-0169<br>) 888-0717  |             |                |              |            |
| SEND DATA TO:                                |                          |   |             |                |              |            |
| NAME: Dina Brown                             | 2                        |   | w           | O#: 1012       | 21731        |            |
| COMPANY: Talisman Energy USA,                | Inc.                     |   |             | AGE: 2 of      | <b>o</b>     |            |
| ADDRESS: 337 Daniel Zenker Dr                |                          |   | E,          | AGE: 201       | 3            |            |
| Horseheads, NY 14845                         |                          |   | P           | O#: AF7        | 7716         |            |
|  | TERT                     | EDODT   | P\          | NS ID#         |              |            |
| PHONE: (607) 562-4000<br>FAX: (607) 562-4001 | 1231 K                   | EPORT   |             |                |              |            |
| 03-054                                       |                          |   |             |                |              |            |
| RECEIVED FOR LAB BY: RML                     | DATE: 12/                | 09/2010 15:45   |             |                | Pa           | age 2 of 3 |
| 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. Cuttin         | n <b>gs</b> Lab I        | D: 10121731-001G  | Grab        |                |              |            |
| SAMPLED BY: SG                               |                          | e: 09/08/2010 10:00   |             |                |              |            |
| Test   | Result                   | Method  | <u>SLOQ</u> | 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 extra           | -                        |   |             |                |              | 1440-04    |
| SAMPLE: TCLP Leachate of Inv. Cuttin         | ngs Lab I                | D: 10121731-001H  | Grab        |                |              |            |
| SAMPLED BY: SG                               | -                        | e: 12/11/2010 12:45   |             |                |              |            |
|  | <b>e</b> 11              |   | <u>SLOQ</u> |                |              |            |
| <u>Test</u>                                  | Result                   | Method  |             | Analysis Start | Analysis End |            |
| pH   | 5.97@16.6°C              | SM4500H+B   |             | 12/14/10 8:00  | 12/14/10     | SG-SA      |
| SAMPLE: ZHE Extract of Inv. Cuttings         |                          | D: 10121731-0011  | Grab        |                |              |            |
| SAMPLED BY: SG                               | Sample Tim               | e: 12/12/2010 13:10   | SLOQ        |                |              |            |
| Test   | Result                   | Method  | OLOG        | 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     |
| DEMARKO.                                     |                          |   |             |                |              |            |

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

12/16/2010 DATE:

| PA ID #: 08-00380<br>NY ID # 11216   |   | <b>Eas</b><br>2566   | stern D                                  | vania Ave.   | IC.  |  | Work  | Order: 101                                       | 21731                                 |
|--|---|--|--|--|--|--|---|--|---------------------------------------|
|  |   |  | ie: (570) 8<br>ix: (570) 8               |  |  |  |   |  |                                       |
| SEND DATA  | A TO:   |  |  |  |  |  |   |  |                                       |
| NAME:  | Dina Brown  | .•   |  |  | W  | O#:  | 1012  | 21731  |                                       |
| COMPANY:   | Talisman Energy USA, Ir   | Inc.   |  |  |  |  |   |  |                                       |
| ADDRESS:   | 337 Daniel Zenker Dr  |  |  |  |  | PAGE: 3 of 3   |   |  |                                       |
|  | Horseheads, NY 14845  | ;  |  |  | PC   | )#:  | AF77  | 7716   |                                       |
| PHONE: (607) 562-4000<br>FAX: (607) 562-4001   |   | Ţ  | EST REF                                  | PORT   | PV   | VS ID#   |   |  |                                       |
|  | 03-054  |  |  |  |  |  |   |  |                                       |
| RECEIVED I   | FOR LAB BY: RML   | DA   | TE: 12/00                                | /2010 15:45  |  |  |   | D  | ige 3 of 3                            |
|  |   |  | 12. 12/03/                               |  |  |  |   |  | _                                     |
|  | methylbenzene   | < 0.0250 mg/L  |  | EPA 8260B  | 0.0250   | 12/13/10   |   | 12/13/10   | CTM-SA                                |
|  | methylbenzene   | < 0.0250 mg/L<br>< 0.0250 mg/L   |  | EPA 8260B<br>EPA 8260B   | 0.0250   | 12/13/10   |   | 12/13/10   | CTM-SA                                |
| Vinyl chk  |   | . 4  |  |  | 0.0250<br>0.0250                                 | 12/13/10 8:11<br>12/13/10 8:11                             |   | 12/13/10<br>12/13/10                             | CTM-SA<br>CTM-SA                      |
| Methyl tert-butyl ether  |   | < 0.0250 mg/L  |  | EPA 8260B<br>EPA 8260B   |  |  |   | 12/13/10   | CTM-SA                                |
| 2-Butano   | ne  | < 0.0500 mg/L  |  | EPA 8260B  | 0.0500   | 12/13/10   |   |  |                                       |
| 2-Butano   |   | < 0.0500 mg/L  | l ab ID:                                 |  |  | 12/13/10   |   |  |                                       |
| 2-Butano   | ne<br>STM Extract of Inv. Cuttings<br>ED BY: SG   | •  |  | EPA 8260B<br>10121731-001J<br>12/10/2010 11:15   | Grab   | 12/13/10   |   |  |                                       |
| 2-Butano<br>SAMPLE: A:<br>SAMPLE   | STM Extract of Inv. Cutting   | s<br>Sa  |  | 10121731-001J<br>12/10/2010 11:15  |  |  |   | Anchusia End                                     | Anglugi                               |
| 2-Butano<br>SAMPLE: A:<br>SAMPLE<br><u>Test</u>  | STM Extract of Inv. Cuttings<br>ED BY: SG   | s<br>Sa<br><u>Result</u>   | ample Time: 1                            | 10121731-001J<br>12/10/2010 11:15<br><u>Method</u>   | Grab<br><u>SLOQ</u>                              | Analysis   | Start   | Analysis End                                     |                                       |
| 2-Butano<br>SAMPLE: A:<br>SAMPLE<br><u>Test</u><br>Chemica   | STM Extract of Inv. Cuttings<br>ED BY: SG<br>I Oxygen Demand  | Sa<br><u>Result</u><br>234 mg/L  | ample Time: f                            | 10121731-001J<br>12/10/2010 11:15<br><u>Method</u><br>HACH 8000  | Grab<br><u>SLOQ</u><br>10                        |  | Start   | <u>Analysis End</u><br>12/13/10                  | Analyst *<br>KMF-SA                   |
| 2-Butano<br>SAMPLE: A:<br>SAMPLE<br><u>Test</u><br>Chemical<br>SAMPLE: A:  | STM Extract of Inv. Cuttings<br>ED BY: SG<br>I Oxygen Demand<br>STM Extract of Inv. Cuttings                                    | s<br><u>Result</u><br>234 mg/L   | B<br>Lab ID:                             | 10121731-001J<br>12/10/2010 11:15<br><u>Method</u><br>HACH 8000<br>10121731-001L   | Grab<br><u>SLOQ</u>                              | Analysis   | Start   |  |                                       |
| 2-Butano<br>SAMPLE: A:<br>SAMPLE<br><u>Test</u><br>Chemical<br>SAMPLE: A:  | STM Extract of Inv. Cuttings<br>ED BY: SG<br>I Oxygen Demand  | s<br><u>Result</u><br>234 mg/L   | B<br>Lab ID:                             | 10121731-001J<br>12/10/2010 11:15<br><u>Method</u><br>HACH 8000  | Grab<br><u>SLOQ</u><br>10<br>Grab                | Analysis   | Start   |  |                                       |
| 2-Butano<br>SAMPLE: A:<br>SAMPLE<br><u>Test</u><br>Chemical<br>SAMPLE: A:  | STM Extract of Inv. Cuttings<br>ED BY: SG<br>I Oxygen Demand<br>STM Extract of Inv. Cuttings                                    | s<br><u>Result</u><br>234 mg/L   | B<br>Lab ID:                             | 10121731-001J<br>12/10/2010 11:15<br><u>Method</u><br>HACH 8000<br>10121731-001L   | Grab<br><u>SLOQ</u><br>10                        | Analysis   | <u>Start</u><br>) 8:00  |  | KMF-SA                                |
| 2-Butano<br>SAMPLE: A:<br>SAMPLE<br><u>Test</u><br>Chemica<br>SAMPLE: A:<br>SAMPLE   | STM Extract of Inv. Cuttings<br>ED BY: SG<br>I Oxygen Demand<br>STM Extract of Inv. Cuttings                                    | Sa<br><u>Result</u><br>234 mg/L<br>Sa  | B<br>Lab ID:                             | 10121731-001J<br>12/10/2010 11:15<br><u>Method</u><br>HACH 8000<br>10121731-001L<br>12/10/2010 11:15   | Grab<br><u>SLOQ</u><br>10<br>Grab                | <u>Analvsis</u><br>12/11/10                                | <u>Start</u><br>8:00  | 12/13/10   | KMF-SA                                |
| 2-Butano<br>SAMPLE: A:<br>SAMPLE<br><u>Test</u><br>Chemical<br>SAMPLE: A:<br>SAMPLE: A:<br>SAMPLE  | STM Extract of Inv. Cuttings<br>ED BY: SG<br>I Oxygen Demand<br>STM Extract of Inv. Cuttings<br>ED BY: SG                       | s Sa<br><u>Result</u><br>234 mg/L<br>s<br>Result   | B<br>Lab ID:                             | 10121731-001J<br>12/10/2010 11:15<br><u>Method</u><br>HACH 8000<br>10121731-001L<br>12/10/2010 11:15<br><u>Method</u>  | Grab<br><u>SLOQ</u><br>10<br>Grab                | Analvsis<br>12/11/10<br>Analvsis                           | <u>Start</u><br>) 8:00<br><u>Start</u><br>) 8:00                          | 12/13/10<br>Analysis End                         | KMF-SA                                |
| 2-Butano<br>SAMPLE: A:<br>SAMPLE<br><u>Test</u><br>Chemical<br>SAMPLE: A:<br>SAMPLE: A:<br><u>Test</u><br>pH                               | STM Extract of Inv. Cuttings<br>ED BY: SG<br>I Oxygen Demand<br>STM Extract of Inv. Cuttings<br>ED BY: SG                       | Sa<br><u>Result</u><br>234 mg/L<br>3<br>Sa<br><u>Result</u><br>7.57@16.6°C               | B<br>B<br>Lab ID:<br>ample Time: 1       | 10121731-001J<br>12/10/2010 11:15<br>Method<br>HACH 8000<br>10121731-001L<br>12/10/2010 11:15<br>Method<br>SM4500H+B   | Grab<br><u>SLOQ</u><br>10<br>Grab<br><u>SLOQ</u> | <u>Analvsis</u><br>12/11/10<br><u>Analvsis</u><br>12/14/10 | <u>Start</u><br>) 8:00<br><u>Start</u><br>) 8:00                          | 12/13/10<br>Analysis End<br>12/14/10             | KMF-SA<br>Anaiyst *<br>SG-SA          |
| 2-Butano<br>SAMPLE: A:<br>SAMPLE: A:<br>Chemical<br>SAMPLE: A:<br>SAMPLE: A:<br>DH<br>Total Soli<br>SAMPLE: In                             | STM Extract of Inv. Cuttings<br>ED BY: SG<br>I Oxygen Demand<br>STM Extract of Inv. Cuttings<br>ED BY: SG                       | Sa<br><u>Result</u><br>234 mg/L<br>3<br>Sa<br><u>Result</u><br>7.57@16.6°C<br>1840 mg/L  | B<br>Lab ID:<br>ample Time: 1<br>Lab ID: | 10121731-001J<br>12/10/2010 11:15<br>Method<br>HACH 8000<br>10121731-001L<br>12/10/2010 11:15<br>Method<br>SM4500H+B<br>SM2540B                                      | Grab<br>SLOQ<br>Grab<br>SLOQ<br>0.10<br>Grab     | <u>Analvsis</u><br>12/11/10<br><u>Analvsis</u><br>12/14/10 | <u>Start</u><br>) 8:00<br><u>Start</u><br>) 8:00                          | 12/13/10<br>Analysis End<br>12/14/10             | KMF-SA<br>Anaiyst *<br>SG-SA          |
| 2-Butano<br>SAMPLE: A:<br>SAMPLE: A:<br>Chemical<br>SAMPLE: A:<br>SAMPLE: A:<br>DH<br>Total Soli<br>SAMPLE: In<br>SAMPLE: In               | STM Extract of Inv. Cuttings<br>ED BY: SG<br>I Oxygen Demand<br>STM Extract of Inv. Cuttings<br>ED BY: SG<br>ids<br>v. Cuttings | Sa<br><u>Result</u><br>234 mg/L<br>Sa<br><u>Result</u><br>7.57@16.6°C<br>1840 mg/L<br>Sa | B<br>Lab ID:<br>ample Time: 1<br>Lab ID: | 10121731-001J<br>12/10/2010 11:15<br>Method<br>HACH 8000<br>10121731-001L<br>12/10/2010 11:15<br>Method<br>SM4500H+B<br>SM2540B<br>10121731-001M<br>12/10/2010 10:25 | Grab<br>SLOQ<br>10<br>Grab<br>SLOQ<br>0.10       | Analysis<br>12/11/10<br>Analysis<br>12/14/10<br>12/10/10   | <u>Start</u><br>) 8:00<br><u>Start</u><br>) 8:00<br>17:00                 | 12/13/10<br>Analysis End<br>12/14/10<br>12/13/10 | KMF-SA<br>Anaivst *<br>SG-SA<br>IC-SA |
| 2-Butano<br>SAMPLE: A:<br>SAMPLE: A:<br>Chemical<br>SAMPLE: A:<br>SAMPLE: A:<br>DH<br>Total Soli<br>SAMPLE: In<br>SAMPLE: In<br>SAMPLE: In | STM Extract of Inv. Cuttings<br>ED BY: SG<br>I Oxygen Demand<br>STM Extract of Inv. Cuttings<br>ED BY: SG<br>ids<br>v. Cuttings | Sa<br><u>Result</u><br>234 mg/L<br>3<br>Sa<br><u>Result</u><br>7.57@16.6°C<br>1840 mg/L  | B<br>Lab ID:<br>ample Time: 1<br>Lab ID: | 10121731-001J<br>12/10/2010 11:15<br>Method<br>HACH 8000<br>10121731-001L<br>12/10/2010 11:15<br>Method<br>SM4500H+B<br>SM2540B<br>10121731-001M                     | Grab<br>SLOQ<br>Grab<br>SLOQ<br>0.10<br>Grab     | <u>Analvsis</u><br>12/11/10<br><u>Analvsis</u><br>12/14/10 | <u>Start</u><br>) 8:00<br><u>Start</u><br>) 8:00<br>17:00<br><u>Start</u> | 12/13/10<br>Analysis End<br>12/14/10             | Anaiyst *<br>SG-SA<br>IC-SA           |

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

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B Analyte detected in the associated Method Blank

MANAGER

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|        |    |       |

DATE:

12/16/2010

| CHAIN OF CUSTODY   | Benchn  | ₩ <u>1</u> 0F <u>1</u>  |
|--|---|---|
| EPORT TO: Talisman / UEG   | 2566 Pennsylva  | E SPECIAL DETECTION LIMITS  |
| geowetlands@aol.com  | Phor <b>VV/U#: 10121/31</b>   |   |
|  | Fax. REFRIGERATE SAMPLES RESULTS ARE BEING USED FOR   |   |
| ······································   | reductoria e pento docortoria   | IF YES, PLEASE ATTACH   |
|  | _I Z GW GROUND WATER SO SOIL I  |   |
| ONTACT Steve Gridley   | TRANSPORT SW SURFACE WATER HZ HAZARDOUS LANDFILL Mostolle   | YES NO  |
| H# 607-731-0145  |   | IF YES, PLEASE ATTACH REQUIREMENTS                                    |
| AX#  | LABORATORY / /4/ /H HYDROCHLORIC ACID OH SODIUM HYDROXIDE<br>IN COOLER / S SULFURIC ACID AS ASCORBIC ACID   |   |
| HLL TO: Tálisman   | IN COOLER     S     S     SULFURIC ACID     AS     ASCORBIC ACID       WITH ICE     NITRIC ACID     AC     ACETIC ACID     AC   |   |
|  | - S SOJ SODIUM SULFITE NH, AMMONIUM CHLORIDE<br>Thio SODIUM THIOSULFATE ZN ZINC ACETATE   |   |
| 0# AF 77716  | - NONE Hg MERCURIC CHLORIDE   | Please fill out all   |
|  | 」 / デーズ ズーズ / ビー An incomplete chain of custody may delay the / ゔ<br>ー デーズ スターズ えん こ / データー の An incomplete chain of custody may delay the / ゔ<br>ー デーズ スターズ デーズ パーズ / ジー パーズ の An incomplete chain of custody may delay the / ゔ<br>ー ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・   | applicable areas  |
| AMPLER SIGNATURE / AFFILIATION   |   | S completely  |
| CONTAINER SAMPLING POINT   | LABORATORY<br>IN COOLER<br>WITH ICE       I/4<br>ISS       H<br>SS       HYDROCHLORIC ACID<br>SULFUIC ACID<br>N       OH       SODIUM HYDROXIDE<br>AS ASCORBIC ACID<br>AS ASCORBIC ACID<br>AS ASCORBIC ACID<br>AC ACETIC ACID<br>SOJ SODIUM SULFITE         WITH ICE       IN<br>SS       N       NITRIC ACID<br>N       AC ACETIC ACID<br>N       AC ACETIC ACID<br>N         VITH ICE       IN<br>SS       SODIUM SULFITE       NH,<br>AMMONIUM CHLORIDE<br>ZINC ACETATE         IN<br>SS       SS       SODIUM THIOSULFATE<br>NONE       NH<br>HISS       NH<br>HISS         IN<br>SS       SS       SIL       An incomplete chain of custody may delay the<br>processing of your sample(s).       IN<br>SS         IN<br>SS       IN<br>SS       IN<br>SS       IN<br>SS       ANALYSIS TO BE PERFORMED<br>(PER CONTAINER)       IN<br>SS | Please fill out all<br>applicable areas<br>completely<br>LAB USE ONLY |
| · · ·  | PER CONTAINER)  | STANDARD CONTRACTOR AND AND AND AND AND AND AND AND AND AND           |
| 1 Inv Cuttings   | 12/8 2127 50 C 56 N Ignitability, Reactive Sulfide & Cyanide  |   |
| 2  | C PCBs, Total Solids  |   |
| 3 Actions, Ign.  | G Total Volatile Solids   |   |
| 4 C- Reactivity  | C Ammonia-Nitrogen  |   |
| 5 D- TS, TVS   | C Water Leaching Procedure: COD,  |   |
| 6 E-T. Sample  | V V V C V V Total Solids, Oil & Grease,   |   |
| 7 F-TELP BNA, Bests.   |   |   |
| 8 G-TCLP-Hats. Sr  | K-Asma ort  |   |
| 9 H-TELP pH  | L-ASTM TS ON 36 HOUR TURNAROUND   |   |
| 10 I-TELP Vois.  | M-TOX DAY TURNAROUND  |   |
| 11 J-ASTA COD, Not   |   |   |
|  |   |   |
| the second second second second second second second second second second second second second second second s | મનંશાવનાજગાણ વનાગારાજા, તાલુકા ગામ છે.  | ARRIVAL ONICE W/IN  |
| REINOLHSHEERY  | DATE: TIME: RECEIVED BY:  | DATE: TIME:   |
| RELINGUISHEB BY:   | 1219110 1550  |   |
| RELINQUISHED BY:   | DATE: TIME: RECEIVED BY:  | DATE: , , TIME:   |
| RELINQUISHED BY:   | DATE: , TIME: RECEIVED AY, OD   | DATE O IN THIS 700  |
|  | TO UN TRA   | BE 19 10 19545  |

| LAB ID: 08-00380<br>LAB ID: 39-00401  | 2566 Penn<br>Sayre,  | <b>Division</b><br>sylvania Ave.<br>PA 18840  | IC.   | Work   | Order: 101   | 03214   |
|---|--|---|---|--|--|---|
| X   |  | 0) 888-0169<br>0) 888-0717  |   |  |  |   |
| SEND DATA TO:<br>NAME: Steve Gridley<br>COMPANY: Talisman Energy USA,<br>ADDRESS: 337 Daniel Zenker Dr<br>Horseheads, NY 14845  |  |   | PA  | O#: 1010<br>AGE: 1 of 2<br>D#: AF77  | _  |   |
| PHONE: (607) 731-0145<br>FAX: (607) 562-4001  | TEST   | REPORT  | P١  | WS ID#   |  |   |
| 03-054<br>RECEIVED FOR LAB BY: DLM2   | DATE: 10   | 0/21/2010 11:37   |   |  | Pa   | age 1 of 2  |
| SAMPLE: Air Cuttings<br>SAMPLED BY: SG  |  | DID: 10103214-001A  | Compo   | site   |  |   |
| Test<br>Total Petroleum Hydrocarbons<br>Sample Note: Analysis performed by  | <u>Result</u><br>640 mg/Kg   | <u>Method</u><br>EPA 9071   | <u>SLOQ</u><br>170                                  | <u>Analysis Start</u><br>10/23/10 9:00   | <u>Analysis End</u><br>10/23/10  | <u>Analyst *</u>  |
| SAMPLE: Air Cuttings<br>SAMPLED BY: SG  | Lat<br>Sample Ti   | Composite   |   |  |  |   |
| <u>Test</u><br>Moisture<br>Free Liquid  | <u>Result</u><br>42.9 %<br>< 0.1 %<br>12.01@23.1℃  | Method<br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C  | <u>SLOQ</u><br>0.01<br>0.1                          | Analysis Start<br>10/25/10 15:00<br>10/22/10 15:05<br>10/26/10 8:50                                      | <u>Analysis End</u><br>10/26/10<br>10/22/10<br>10/26/10                              | <u>Analvst *</u><br>NFM-SA<br>IC-SA<br>NFM-SA                         |
| pH<br>SAMPLE: Air Cuttings<br>SAMPLED BY: SG  | Lat  | DID: 10103214-001C<br>me: 10/19/2010 9:55   | Compo   |  | 10/20/10   | NFM-3A  |
| Test<br>Sodium<br>Chloride<br>Percent Moisture  | Result<br>391 mg/Kg-dry<br>590 mg/Kg-dry<br>42.9 %   | <u>Method</u><br>EPA 6010B<br>EPA 300.0<br>SM2540G  | <u>SLOQ</u><br>214<br>86.8                          | Analysis Start<br>10/22/10 10:40<br>10/22/10 15:07<br>10/25/10 15:00                                     | <u>Analysis End</u><br>10/22/10<br>10/23/10<br>10/26/10                              | Analyst *<br>RMD-CV<br>HDP-CV<br>NFM-SA                               |
| SAMPLE: TCLP Leachate of Air Cuttin<br>SAMPLED BY: SG   | 3  | ID: 10103214-001E<br>me: 10/22/2010 7:30  | Compo:<br><u>SLOQ</u>                               | site   |  |   |
| Test<br>Mercury - TCLP extracted<br>Arsenic - TCLP extracted<br>Barium - TCLP extracted<br>Cadmium - TCLP extracted<br>Chromium - TCLP extracted<br>Copper - TCLP extracted | <u>Result</u><br>< 0.0008 mg/L<br>< 0.500 mg/L<br>< 10.00 mg/L<br>< 0.100 mg/L<br>< 0.500 mg/L<br>< 0.100 mg/L | <u>Method</u><br>EPA 7470A<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B | 0.0008<br>0.500<br>10.00<br>0.100<br>0.500<br>0.100 | Analysis Start<br>10/23/10 10:20<br>10/23/10 11:10<br>10/23/10 11:10<br>10/23/10 11:10<br>10/23/10 11:10 | Anaiysis End<br>10/24/10<br>10/23/10<br>10/23/10<br>10/23/10<br>10/23/10<br>10/23/10 | Analyst *<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV |

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MANAGER \_\_\_\_\_ Gauie M. Davis \_\_\_\_\_ DATE: \_\_\_\_\_ DATE: \_\_\_\_\_

| LAB ID: 08-00380<br>LAB ID: 39-00401 |  | 2566 Penr    | Analytics, Ir<br>n Division<br>nsylvania Ave.<br>PA 18840 | 1C.       | Work          | Order: 10 | 103214     |
|--------------------------------------|--|--------------|---|-----------|---------------|-----------|------------|
|                                      |  | •            | 70) 888-0169<br>70) 888-0717                              |           |               |           |            |
| SEND DATA                            | A TO:  | 1            |   |           |               |           |            |
| NAME:                                | Steve Gridley                                |              | r   | WO#       | t: 10103      | 3214      |            |
| COMPANY: Talisman Energy USA,        | nc   |              | PAG   | E: 2 of 2 |               |           |            |
| ADDRESS:                             | 337 Daniel Zenker Dr<br>Horseheads, NY 14845 |              |   |           |               |           |            |
|                                      |  |              |   | PO#       | AF777         | /15       |            |
| PHONE:<br>FAX:                       | (607) 731-0145<br>(607) 562-4001             | TEST         | TEST REPORT   |           | PWS ID#       |           |            |
|                                      | 03-054                                       |              |   |           |               |           |            |
| RECEIVED                             | FOR LAB BY: DLM2                             | DATE: 1      | 0/21/2010 11:37   |           |               | F         | age 2 of 2 |
| Lead - T                             | CLP 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                             | n - TCLP extracted                           | < 0.500 mg/L | EPA 6010B   | 0.500 10  | //23/10 11:10 | 10/23/10  | RMD-CV     |
| Silver - T                           | CLP extracted                                | < 0.100 mg/L | EPA 6010B   | 0.100 10  | /23/10 11:10  | 10/23/10  | RMD-CV     |
| Zinc - TC                            | CLP extracted                                | < 0.200 mg/L | EPA 6010B   | 0.200 10  | /23/10 11:10  | 10/23/10  | RMD-CV     |

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MANAGER

Carrie M. Davis

DATE: 10/26/2010

| CHAIN OF CUSTODY                      |          |             |                   |            | I            | E                     | enchmark /   |                    | _                | OF 1                                 |
|---------------------------------------|----------|-------------|-------------------|------------|--------------|-----------------------|--|--------------------|------------------|--------------------------------------|
| REPORT TO: Talisman / UEG             | ,        |             |                   |            | 1.01         | 566 P                 | Eastern<br>ennsylvania Ave W/O#: 1010  | 12211              |                  |                                      |
| geowetlands@aol.com                   |          |             |                   |            | <u> </u>     | 5001                  | Phone: (57)<br>Fax: (570) σ88-0717   | 5214               | NEEDED:          |                                      |
| twollin@rallysolutions.ca             | REFI     | RIGER       | ATE S             | AMPL       | ES           |                       | RESULTS ARE BEIN   |                    | IF YES, PLEASE A | 1                                    |
|                                       |          |             | LLECT             |            |              |                       | DRINKING WATER SL SLUDGE   |                    | ( i              | CKAGE NEEDED?                        |
| CONTACT Steve Gridley                 | ·        |             | SPORT             |            |              |                       | GROUND WATER SO SOIL<br>SURFACE WATER HZ HAZARDOUS LANDI   |                    |                  | б []] но                             |
| PH# 607-731-0145                      |          |             | 0                 |            |              | , Di                  | OFIGNIZED MATER OF DISTIFIED WATER DEPONIAL OTHER  |                    | IF YES, PLEASE   | TACH REQUIREMENTS                    |
| FAX#                                  | ,        |             | IATOR)<br>OLER    | f          | 1            | 1                     | H HYDROCHLORIC ACID OH SODIUM HYDROXIDE<br>S SULFURIC ACID AS ASCORBIC ACID  |                    |                  |                                      |
| BILL TO: Talisman                     | -        | WITH        |                   |            | A            | PRE-CMITHIC COMPOSITI | N NITRIGACID AC ACETICACID<br>SO1 SODIUM SULFITE NH, AMMONIUM CHLORIDE   |                    | LAB UN RECEIPT   | :•                                   |
| PO# AF 77715                          | <b> </b> | 7           | 7.                | /          |              |                       | Thio SODIUM THIOSULFATE ZN ZINC ACETATE<br>- NONE Hg MERCURIC CHLORIDE   |                    |                  |                                      |
| PROJECTIDESCRIPTION 03-054            |          | 19          |                   | )<br>\$    | لين          |                       | An incomplete chain of custody may delay the   | 3                  |                  | ease fill out all<br>policable areas |
| SAMPLER SIGNATURE / AFFILIATION       |          | I III       | 195               | E.E.       | 1            |                       | processing of your sample(s).  |                    |                  | completely                           |
| CONTAINER SAMPLING POINT              |          | The Sampled | Sauce OF Saupling | SALLEHATRY |              |                       | An incomplete chain of custody may delay the<br>processing of your sample(s).<br>ANALYSIS TO BE PERFORMED<br>(PER CONTAINER) | COMPOSITED ON RECT |                  |                                      |
|                                       | <u>V</u> |             |                   |            |              |                       |  |                    |                  | SE ONLY                              |
|                                       | 10/19    | 955         | po                | C          | <b>X</b> -   | $ \mu $               | TPH  |                    |                  | - OOIALL                             |
| 2                                     | ┣        |             | -                 |            |              | <b>.</b>              | pH, Chlorides, Sodium  | etimes a second a  |                  |                                      |
|                                       |          |             |                   |            | <u> </u>     |                       | TCLP 8 RCRA Metals, + Cu, Ni, Zri<br>Free Liquids / % Moisture   |                    |                  |                                      |
| 4 A.TPH<br>5 B. pH, Free Liqui        | 4 0      | 7. N        | bist              | 100        |              | <u> </u>              |  |                    |                  |                                      |
| 5 B· pH tree Cigue<br>6 C - CL Na, RM |          |             | <u>UNI</u>        | <u>uce</u> | 1            |                       | BTEX<br>ITHE BOOTH OF ONLY IF the TPH  | مرجع بيني جداد م   |                  |                                      |
| 7 D. T. Sanple                        |          | 1           |                   |            | 1            | <b> </b>              | exceeds 120,000 mg/Kg  |                    |                  |                                      |
| 8                                     |          |             | <u>†</u>          |            |              |                       |  |                    |                  |                                      |
| 9                                     |          | <b> </b>    |                   |            |              |                       | 7.2 HOUR TURNAROUND  |                    |                  |                                      |
| 10                                    | 1        |             |                   | [          |              |                       | DAY TURNAROUND   |                    |                  |                                      |
| 11                                    |          |             |                   |            |              |                       |  |                    | Que.             | 10/26/10                             |
|                                       |          |             |                   |            | - <u> </u> . |                       | SG TEMPERATURE UPON RECEIP   |                    |                  | AL ON ICE, Y N                       |
|                                       | <u></u>  |             | د.<br>د           |            | nin v        | <u></u>               |  |                    |                  |                                      |
| RELINGLASTED BY: U.C.                 |          |             | DATE:             | 2111       | 10           | TIME:                 | 137 RECEIVED BY:   |                    | DATE:            | TIME:                                |
| RELINQUISHED BY:                      |          |             | DATE:             | ,          |              | rime:                 | RECEIVED BY:   |                    | DATE:            | TIME:                                |
| RELINQUISHED BY:                      |          |             | DATE:             | ·          | ┼╂           | TIME:                 | RECEIVED BY:   |                    | DATE:            | D TIME: 137                          |
| I                                     |          | I_          | ۲<br>             | 1          | + 1          |                       | - may have   |                    |                  | Ad Graphica Printing 570-688-0685    |
|                                       |          |             |                   |            |              |                       | $\checkmark$   |                    |                  |                                      |

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave. Sayre, PA 18840

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

## SEND DATA TO:

| SEND DATA            | A TO:   |                |          |        |                     |       |          |        |              |                  |
|----------------------|---|----------------|----------|--------|---------------------|-------|----------|--------|--------------|------------------|
| NAME:                | Steve Gridley                                   |                |          |        |                     | W     | 'O#:     | 1009   | 0956         |                  |
| COMPANY:<br>ADDRESS: | Talisman Energy USA, Ir<br>337 Daniel Zenker Dr | 1C.            |          |        |                     | PA    | AGE:     | 1 of 1 |              |                  |
|                      | Horseheads, NY 14845                            |                |          |        |                     | P     | O#:      | AF77   | 049          |                  |
| PHONE:<br>FAX:       | (607) 562-4000<br>(607) 562-4001                |                | TES      | TRE    | EPORT               | P١    | WS ID#   |        |              |                  |
|                      | 03-054  |                |          |        |                     |       |          |        |              |                  |
| RECEIVED I           | FOR LAB BY: DLM2                                | E              | DATE:    | 09/0   | 07/2010 16:25       |       |          |        | Pa           | ge 1 of 1        |
| SAMPLE: In           | v. Cuttings                                     |                |          | Lab IC | ): 10090956-001A    | Compo | site     |        |              |                  |
| SAMPLE               | ED BY: LS                                       |                | Sampl    | e Time | e: 08/30/2010 12:12 | SLOQ  |          |        |              |                  |
| <u>Test</u>          |   | <u>Result</u>  |          |        | Method              |       | Analysis | Start  | Analysis End | <u>Analyst *</u> |
| Moisture             |   | 12.5 %         |          | к      | Moisture Calc.      | 0.01  | 09/09/10 | 12:30  | 09/10/10     | SG-SA            |
| Free Liqu            | bid   | < 0.1 %        |          |        | EPA 9095A           | 0.1   | 09/07/10 | 17:00  | 09/07/10     | IC-SA            |
| pН                   |   | 9.30@19.8°(    | 2        |        | EPA 9045C           |       | 09/10/10 | 10:00  | 09/10/10     | SG-SA            |
| SAMPLE: In           | v. Cuttings                                     |                |          | Lab ID | : 10090956-001B     | Compo | site     |        |              |                  |
| SAMPLE               | ED BY: LS                                       |                | Sampl    | e Time | : 08/30/2010 12:12  | SLOQ  |          |        |              |                  |
| <u>Test</u>          |   | <u>Result</u>  |          |        | Method              |       | Analysis | Start  | Analysis End | Analyst *        |
| Total Pet            | roleum Hydrocarbons                             | 89000 mg/Kg    | g        |        | EPA 9071            |       | 09/08/10 | 14:30  | 09/08/10     |                  |
| Sample               | e Note: Analysis performed by N                 | licrobac Labor | atories, | IncEr  | ie Division         |       |          |        |              |                  |
| SAMPLE: TO           | CLP Leachate of Inv. Cutting                    | gs             |          | Lab ID | : 10090956-001D     | Compo | site     |        |              |                  |
| SAMPLE               | ED BY: LS                                       |                | Sampl    | e Time | : 09/08/2010 10:00  | SLOQ  |          |        |              |                  |
| Test                 |   | Deput          |          |        | Mathad              |       | Analysia | Start  | Analysis End | Analyst *        |

|                           |               |               | <u>SLOQ</u> |                |              |                  |
|---------------------------|---------------|---------------|-------------|----------------|--------------|------------------|
| Test                      | Result        | <u>Method</u> |             | Analysis Start | Analysis End | <u>Analyst *</u> |
| Mercury - TCLP extracted  | < 0.0008 mg/L | EPA 7470A     | 0.0008      | 09/09/10 10:00 | 09/09/10     | KW-CV            |
| Arsenic - TCLP extracted  | < 0.500 mg/L  | EPA 6010B     | 0.500       | 09/09/10 12:45 | 09/09/10     | RMD-CV           |
| Barium - TCLP extracted   | < 10.00 mg/L  | EPA 6010B     | 10.00       | 09/09/10 12:45 | 09/09/10     | RMD-CV           |
| Cadmium - TCLP extracted  | < 0.100 mg/L  | EPA 6010B     | 0.100       | 09/09/10 12:45 | 09/09/10     | RMD-CV           |
| Chromium - TCLP extracted | < 0.500 mg/L  | EPA 6010B     | 0.500       | 09/09/10 12:45 | 09/09/10     | RMD-CV           |
| Copper - TCLP extracted   | < 0.100 mg/L  | EPA 6010B     | 0.100       | 09/09/10 12:45 | 09/09/10     | RMD-CV           |
| Lead - TCLP extracted     | < 0.500 mg/L  | EPA 6010B     | 0.500       | 09/09/10 12:45 | 09/09/10     | RMD-CV           |
| Nickel - TCLP extracted   | < 0.100 mg/L  | EPA 6010B     | 0.100       | 09/09/10 12:45 | 09/09/10     | RMD-CV           |
| Selenium - TCLP extracted | < 0.500 mg/L  | EPA 6010B     | 0.500       | 09/09/10 12:45 | 09/09/10     | RMD-CV           |
| Silver - TCLP extracted   | < 0.100 mg/L  | EPA 6010B     | 0.100       | 09/09/10 12:45 | 09/09/10     | RMD-CV           |
| Zinc - TCLP extracted     | < 0.200 mg/L  | EPA 6010B     | 0.200       | 09/09/10 12:45 | 09/09/10     | RMD-CV           |
|                           |               |               |             |                |              |                  |

#### **REMARKS:**

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

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

K Sample was received past holding time.

MANAGER

Carrie M. Davis

DATE: 9/13/2010

Work Order: 10090956



COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WASTE MANAGEMENT

FORM 26R

# CHEMICAL ANALYSIS OF RESIDUAL WASTE ANNUAL REPORT BY THE GENERATOR

| typed or legi<br>each attach  | ust be fully and accurate<br>bly printed in the spaces p<br>ed sheet as Form 26R, re<br>ne date on attached sheets  | ace is necessary, iden<br>er and identify the d  | tify Date Rec   | EP USE ONLY<br>reived & General Notes  |                  |
|---|---|--|---|--|------------------|
| General Refe  | erence 287.54   |  |   |  |                  |
| Date Prepare  |   | uary 11, 2011  |   |  |                  |
|   |   | LIENT (GENERATOR   | OF THE WASTE) IN  | IFORMATIO  | Ň                |
| Company Na  |   |  |   |  |                  |
|   | ergy USA Inc.<br>ry, Name of Parent Compar  | nv   |   | FI   | PA Generator ID# |
| Talisman Er   |   | .,   |   | N/   |                  |
|   | iling Address Line 1  | Co   | ompany Mailing Addre  | ss Line 2  |                  |
| 50 Pennwoo  |   |  | 7:  | Dhama  | <b></b>          |
| Warrendale  | dress Last Line – City  | State<br>PA  | <b>Zip+4</b><br>15086   | Phone<br>(724) 814-  | Ext              |
|   | ntact Last Name   | First Name   | MI  |  | uffix            |
| Brown   |   | Dina   |   | ······   |                  |
| Municipality  |   |  | County  |  |                  |
| Warrendale<br>Contact Pho   | ne Ext (  | Contact Email Address  | llegheny  |  |                  |
| (724) 814-53  |   | dybrown@talismanusa.c  | om  |  |                  |
| Is the waste  | generated at the Company  |  |   |  | Yes 🛛 No         |
|   | ibe location of waste gener   | ÷  |   |  |                  |
| the (03<br>containers on  | -025) well pad site located at<br>site  | 1042 Antier Road, Column   | bia Township, Bradford C  | County, PA. Wast   | te is stored in  |
| Municipality  | Columbia  | County Bradfo  | rd  | State  | PA               |
|   | 5   | SECTION B. WAST  | <b>E DESCRIPTION</b>  |  |                  |
| Residual  | Residua   |  |   | Unit of  | Time             |
| Waste Code  | Code Des  | scription  | Amount  | Measure  | Frame            |
| 810   | Dell Cuttings (Oll and C  |  |   |  |                  |
| the second second second  | Drill Cuttings (Oil and G   | as)  | 458   | ☐ lb ⊠ to  |                  |
|   |   | as)<br>1. General P  |   |  |                  |
| a. pHR  | ange 6.51   | 1. GENERAL P   | ROPERTIES<br>(based on analyses or k  |  |                  |
| •   | ange 6.51<br>cal State  | 1. GENERAL P         to          Liquid Waste (EPA Me         ⊠ Solid (EPA Method 905)   | ROPERTIES<br>(based on analyses or k<br>thod 9095)<br>95)   |  |                  |
| b. Phys   | ange 6.51<br>Ical State   | 1. GENERAL P<br>to<br>Liquid Waste (EPA Me   | ROPERTIES<br>(based on analyses or k<br>thod 9095)<br>95)   | □ lb   ⊠ to<br>nowledge)   |                  |
| b. Phys   | ange 6.51<br>Ical State [<br>Cal Appearance C   | I. GENERAL P         to          Liquid Waste (EPA Me         ⊠       Solid (EPA Method 900)         Gas (ambient temperation)   | ROPERTIES<br>(based on analyses or k<br>thod 9095)<br>95)<br>ure & pressure)<br>Odo   | □ lb ⊠ to<br>nowledge)<br>r Earthy / Sli   | onOne Time       |
| b. Phys   | ange 6.51<br>cal State [<br>[<br>[<br>cal Appearance C  | 1. GENERAL P         to          Liquid Waste (EPA Me         ⊠ Solid (EPA Method 900)         Gas (ambient temperation of the second s | ROPERTIES<br>(based on analyses or k<br>thod 9095)<br>95)<br>ure & pressure)<br>Odo<br>I Phases of Separation   | □ lb ⊠ to<br>nowledge)<br>r Earthy / Sli<br>One                                    | onOne Time       |
| b. Phys   | ange 6.51<br>cal State [<br>[<br>[<br>cal Appearance C  | 1. GENERAL P         to          Liquid Waste (EPA Me         Solid (EPA Method 905         Gas (ambient temperation         Color       Greyish Black         Number of Solid or Liquid         Describe each phase of solid  | ROPERTIES<br>(based on analyses or k<br>thod 9095)<br>35)<br>ure & pressure)<br>Odo<br>Phases of Separation<br>eparation. Soil and Ro   | □ lb ⊠ to<br>nowledge)<br>r Earthy / Sli<br>One                                    | onOne Time       |
| b. Physic. Physica c. Physica c. Physica c. Physica c. Physica c. The rest of the rest of | ange 6.51<br>cal State [<br>[<br>[<br>cal Appearance C  | 1. GENERAL P     to     Liquid Waste (EPA Me     Solid (EPA Method 909     Gas (ambient temperat ColorGreyish Black Number of Solid or Liquid Describe each phase of s     2. CHEMICAL ANALYS  | ROPERTIES<br>(based on analyses or k<br>thod 9095)<br>95)<br>ure & pressure)<br>Odo<br>I Phases of Separation<br>eparation. <u>Soil and Ro</u>  | □ lb   ⊠ tc<br>nowledge)<br>rEarthy / Sli<br>One<br>ck Fragments                   | onOne Time       |
| b. Phys<br>c. Phys<br>a. The r<br>instru  | ange 6.51<br>Ical State [<br>Ical Appearance C<br>N<br>Esults of a detailed chemic  | 1. GENERAL P     to     Liquid Waste (EPA Me     Solid (EPA Method 909     Gas (ambient temperat     ColorGreyish Black     Number of Solid or Liquid     Describe each phase of s     2. CHEMICAL ANALYS al characterization of the   | ROPERTIES<br>(based on analyses or k<br>thod 9095)<br>35)<br>ure & pressure)<br>Odo<br>Phases of Separation<br>eparation. <u>Soil and Ro</u><br>IS ATTACHMENTS<br>waste, as described in                                    | Ib X to<br>nowledge)<br>r Earthy / Sli<br>One<br>ck Fragments                      | ght Petroleum    |
| b. Physic. Physica c. | ange 6.51<br>cal State [<br>cal Appearance C<br>b<br>cal Appearance C<br>cal Appearance C<br>cal Appearance C<br>b<br>cal Appearance C<br>cal C<br>cal Appearance C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C | 1. GENERAL P     to     Liquid Waste (EPA Me     Solid (EPA Method 909     Gas (ambient temperat ColorGreyish Black Number of Solid or Liquid Describe each phase of s     2. CHEMICAL ANALYS al characterization of the ste sampling method is a  | ROPERTIES<br>(based on analyses or k<br>thod 9095)<br>35)<br>ure & pressure)<br>Phases of Separation<br>eparation. Soil and Ro<br>is ATTACHMENTS<br>waste, as described in<br>ttached.                                      | Ib X to<br>nowledge)<br>r Earthy / Sli<br>One<br>ck Fragments                      | ght Petroleum    |
| b. Phys<br>c. Phys<br>a. The r<br>instru<br>b. A det<br>c. The c<br>attact<br>d. The r  | ange 6.51<br>cal State [<br>cal Appearance C<br>b<br>cal Appearance C<br>cal Appearance C<br>cal Appearance C<br>b<br>cal Appearance C<br>cal C<br>cal Appearance C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C<br>cal C | 1. GENERAL P     to  | ROPERTIES<br>(based on analyses or k<br>thod 9095)<br>35)<br>ure & pressure)<br>Phases of Separation<br>eparation. Soil and Ro<br>is ATTACHMENTS<br>waste, as described in<br>ttached.<br>red by the laboratory(in<br>ched. | Ib X to<br>nowledge)<br>r Earthy / Sli<br>One<br>ck Fragments<br>the 2<br>es) is 2 | ght Petroleum    |

|       |  | 3. PROCESS DESCRIPTION                       | & SCHEMATIC ATTA  | CHMENTS                     |              |       |
|-------|--|--|---|-----------------------------|--------------|-------|
| а.    | A detailed description of the the waste, as specified in t   |  |   | esses producing             | 🛛 Yes        | No No |
| b.    | A schematic of the manufa<br>as specified in the instruct    |  | ontrol processes pro  | ducing the waste,           | 🛛 Yes        | No No |
| c.    | If portions of the information a confidentiality claim, as o |  |   | n for 🗌 Yes                 | No No        | N/A   |
|       | SECT   | ION C. MANAGEM                               | ENT OF RESIDU   | JAL WASTE                   |              |       |
|       |  |  | DISPOSAL FACILITY   |                             |              |       |
| The a | area below (ad.) will accomm                                 | odate the identification of                  | two facilities. Attack  | n additional sheets         | if necessary | •     |
| a.    | Solid waste permit number 100361                             | (s) for processing or disp                   | osal facility being util  | lized.                      |              |       |
| b.    | Facility Name  | McKean County Lan                            | dfill   |                             |              |       |
|       | Address Line 1   | 19 Ness Lane                                 |   |                             | 1            |       |
|       | 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@gm               | ail.com      |       |
| d.    | Volume of waste shipped to 264                               | <b>processing or disposal f</b><br>cu yd gal | acility in the previous   |                             |              |       |
| a.    | Solid waste permit number<br>9-0232-00003                    | (s) for processing or disp                   | osal facility being util  | ized.                       |              |       |
| 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@ca           | sella.com    |       |
| d.    | Volume of waste shipped to<br>105                            | processing or disposal f                     | acility in the previous   | <b>year.</b><br>(check one) |              |       |
|       |  |  |   |                             |              |       |
| a.    | Has the waste been approv                                    | ed for beneficial use?                       | tores and the second second second second second second second second second second second second second second |                             | Yes          | No No |
|       | If "Yes", list the general pe                                | mit number or approval n                     | umber.  |                             |              |       |
| b.    | Volume of waste beneficial                                   |  |   | (check one)                 |              |       |
|       |  |  |   | . ,                         |              |       |

ç

|         | 3.   | <b>PROCESS DESCRIPTION &amp;</b>  | SCHEMATIC ATTA  | CHMENTS   |               |       |
|---------|--|---|---|---|---------------|-------|
| а.      | A detailed description of the                                  | Second Schemes and the second s | no solo in and in an and a balance in the real of an any balance of the relation of the solution of the   | (a) A set of the constraint and the constraint of the constrain | X Yes         | □ No  |
|         | the waste, as specified in the                                 |   |   |   |               |       |
| b.      | A schematic of the manufacture as specified in the instruction |   | ntrol processes pro   | ducing the waste,   | Yes Yes       | No No |
| C.      | If portions of the information a confidentiality claim, as des |   |   | n for 📋 Yes   | □ No          | 🛛 N/A |
|         | SECTIO   | ON C. MANAGEME  | and mean development of the statistical considered when the share the state of the |   |               |       |
| 1. E. S |  | 1. PROCESSING OR D  |   |   |               |       |
| The ai  | rea below (ad.) will accommod                                  |   |   |   | if necessary. |       |
| a.      | Solid waste permit number(s)<br>8-4630-00010                   | for processing or dispos  | al facility being util  | lized.  |               |       |
| b.      | Facility Name  | Hakes C&D Landfill  |   |   |               |       |
|         | Address Line 1   | 4376 Manning Ridge F  | Road  |   |               |       |
|         | Address Line 1   |   |   |   |               |       |
|         | Address City State ZIP   | Painted Post  | NY  | 14870   |               |       |
|         | Municipality   | Erwin Twp   | County  | Steuben   |               |       |
| с.      | Facility Contact Name  | Joe Boyles  | · · · · · · · · · · · · · · · · · · ·   |   |               |       |
|         | Title  |   |   | 41°-00,444,   |               |       |
| -       | Phone  | (607) 937-6044  | Email Address   | joe.boyles@case   | ella.com      |       |
|         |  | (585) 466-7271  |   |   |               |       |
| d.      | Volume of waste shipped to p                                   |   |   |   |               |       |
|         | 66   | cu yd 🗌 gal   | 🗍 lb 🛛 tor  | n (check one)   |               |       |
| a.      | Solid waste permit number(s)<br>100945                         | for processing or dispos  | al facility being util  | lized.  |               |       |
| b.      | Facility Name  | Cumberland County La  | andfill   |   |               |       |
|         | 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   |   | 102   |               |       |
|         | Title  | Compliance Manager  |   |   |               |       |
|         | Phone  | (717) 729-5261  | Email Address   | dhilbert@iswaste  | e.com         |       |
| d.      | Volume of waste shipped to p                                   | rocessing or disposal fac   | ility in the previous   | s vear.   |               |       |
|         | 23   | cu yd 🗌 gal   | ☐ lb ⊠ tor  |   |               |       |
|         |  |   | ICIAL USE   |   |               |       |
| a.      | Has the waste been approved                                    | for beneficial use?   |   |   | Yes           | 🛛 No  |
|         | If "Yes", list the general perm                                |   |   |   |               |       |
| b.      | Volume of waste beneficially                                   |   |   |   |               |       |
|         | 0  | cuyd 🗌 gal  | b tor   | n (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 informati  |   | ired in Section B-1, General Properties was supplied to the Department for the year             |  |  |  |  |  |
| 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 informatio for the year and  | -   | ed in Section B-3, Process Description and Schematic, was supplied to the Department t changed. |  |  |  |  |  |
| Form Submitted:  |   | Form 26R  |  |  |  |  |  |
|  |   | Other (specify)   |  |  |  |  |  |
| Date Submitted:  | ···   |   |  |  |  |  |  |
| Name of Responsible Official   |   | TitleEnvironmental Specialist   |  |  |  |  |  |
| Dina Brown Signature   |   | 2/25/11 Date 2/25/11  |  |  |  |  |  |

| LAB ID: 08-0<br>LAB ID: 39-0               |  | Ea<br>256<br>9<br>Pho                         | nark Analytics, In<br>Astern Division<br>6 Pennsylvania Ave.<br>Sayre, PA 18840<br>Pine: (570) 888-0169<br>Fax: (570) 888-0717 | IC.            | Work                             | Order: 101                      | 20828            |
|--|--|---|--|----------------|----------------------------------|---------------------------------|------------------|
| SEND DATA<br>NAME:<br>COMPANY:<br>ADDRESS: | ATO:<br>Steve Gridley<br>Talisman Energy USA, Ir<br>337 Daniel Zenker Dr | IC.   |  |                | O#: 1012<br>AGE: 1 of 2          |                                 |                  |
|  | Horseheads, NY 14845   |   |  | P              | D#: AF78                         | 554                             |                  |
| PHONE:<br>FAX:                             | (607) 731-0145<br>(607) 562-4001   |   | TEST REPORT  |                | NS ID#                           |                                 |                  |
| 03-02                                      | 5  |   |  |                |                                  |                                 |                  |
| RECEIVED F                                 | FOR LAB BY: CMS  | D   | ATE: 12/06/2010 15:40  |                |                                  | Pa                              | age 1 of 2       |
| SAMPLE: AI<br>SAMPLE                       | <b>r Cuttings</b><br>ED BY: SG   |   | Lab ID: 10120828-001A<br>Sample Time: 12/06/2010 11:48   | Compo          | site                             |                                 |                  |
|  | roleum Hydrocarbons<br>e Note: Analysis performed by N                   | <u>Result</u><br>212 mg/Kg<br>licrobac Labora | <u>Method</u><br>EPA 9071<br>torles, Inc-Erie Division   | <u>sloq</u>    | Analysis Start<br>12/08/10 14:20 | <u>Analysis End</u><br>12/08/10 | <u>Analyst *</u> |
| SAMPLE: AI                                 | r Cuttings   |   | Lab ID: 10120828-001B  | Compo          | site                             |                                 |                  |
|  | ED BY: SG  |   | Sample Time: 12/06/2010 11:48  | ~ ~~           |                                  |                                 |                  |
| Test                                       |  | Result  | Method   | <u>SLOQ</u>    | Analysis Start                   | Analysis End                    | Analyst *        |
| Moisture                                   |  | 41.8 %  | Moisture Calc.   | 0.01           | 12/06/10 17:30                   | 12/07/10                        | IC-SA            |
| Free Liqu                                  | id   | < 0.1 %                                       | EPA 9095A  | 0.1            | 12/06/10 17:05                   | 12/06/10                        | IC-SA            |
| pН   |  | 6.51@22.0°C                                   | EPA 9045C  |                | 12/07/10 14:20                   | 12/07/10                        | MED-SA           |
| SAMPLE: Ai                                 | r Cuttings   |   | Lab ID: 10120828-001C  | Compo          | site                             |                                 |                  |
|  | ED BY: SG  | :   | Sample Time: 12/06/2010 11:48  | 01.00          |                                  |                                 |                  |
| <u>Test</u>                                |  | 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: TO                                 | CLP Leachate of Air Cutting  | 8   | Lab ID: 10120828-001E  | Compo          | site                             |                                 |                  |
|  | ED BY: SG  | :   | Sample Time: 12/07/2010 8:00   | <u>SLOQ</u>    |                                  |                                 |                  |
| Test                                       |  | <u>Result</u>                                 | Method   |                | Analysis Start                   | Analysis End                    |                  |
|  | TCLP extracted   | < 0.0008 mg/L                                 |  | 0.0008         | 12/07/10 10:15                   | 12/09/10                        | KW-CV            |
|  | TCLP extracted   | < 0.500 mg/L                                  |  | 0.500          | 12/08/10 12:15                   | 12/08/10                        | GSR-CV           |
|  | TCLP extracted   | < 10.00 mg/L                                  |  | 10.00          | 12/08/10 12:15                   | 12/08/10                        | GSR-CV           |
|  | - TCLP extracted   | < 0.100 mg/L                                  |  | 0.100          | 12/08/10 12:15                   | 12/08/10<br>12/08/10            | GSR-CV           |
|  | n - TCLP extracted   | < 0.500 mg/L<br>< 0.100 mg/L                  | EPA 6010B<br>EPA 6010B   | 0.500<br>0.100 | 12/08/10 12:15<br>12/08/10 12:15 | 12/08/10<br>12/08/10            | GSR-CV<br>GSR-CV |
|  | TCLP extracted<br>CLP extracted  | < 0.100 mg/L<br>< 0.500 mg/L                  |  | 0.500          | 12/08/10 12:15                   | 12/08/10                        | GSR-CV<br>GSR-CV |
|  |  |   |  |                |                                  |                                 |                  |

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 blas, spike recovery was outside acceptance limits

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

Zinc - TCLP extracted

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

2566 Pennsylvania Ave. Sayre, PA 18840

Work Order: 10120828

12/08/10

**GSR-CV** 

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

| SEND DATA      | A TO:   |  |                  |       |             |                    |             |  |
|----------------|---|--|------------------|-------|-------------|--------------------|-------------|--|
| NAME:          | Steve Gridley                                   |  |                  | W     | O#: 1       | 10120828<br>2 of 2 |             |  |
| ADDRESS:       | Talisman Energy USA, In<br>337 Daniel Zenker Dr | С.                                     |                  | P/    | AGE: 2      |                    |             |  |
|                | Horseheads, NY 14845                            |  |                  | P     | O#: A       | F78554             |             |  |
| PHONE:<br>FAX: | (607) 731-0145<br>(607) 562-4001                | TEST                                   | REPORT           | P     | NS ID#      |                    |             |  |
| 03-02          | 5   | ······································ |                  |       |             |                    |             |  |
| RECEIVED I     | FOR LAB BY: CMS                                 | DATE:                                  | 12/06/2010 15:40 |       |             | F                  | Page 2 of 2 |  |
| Nickel - 1     | TCLP extracted                                  | < 0.100 mg/L                           | EPA 6010B        | 0.100 | 12/08/10 12 | :15 12/08/10       | GSR-CV      |  |
| Selenium       | a - TCLP extracted                              | < 0.500 mg/L                           | EPA 6010B        | 0.500 | 12/08/10 12 | :15 12/08/10       | GSR-CV      |  |
| Silver - T     | CLP extracted                                   | < 0.100 mg/L                           | EPA 6010B        | 0.100 | 12/08/10 12 | :15 12/08/10       | GSR-CV      |  |

EPA 6010B

0.200 12/08/10 12:15

**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

< 0.200 mg/L

Z Due to matrix blas, splke recovery was outside acceptance limits

| MANAGER | Μ | A | NA | ٩G | E | R |
|---------|---|---|----|----|---|---|
|---------|---|---|----|----|---|---|

anic M. Davis

12/10/2010 DATE:

CHAIN OF CUSTODY PAGE 1 OF 1 REPORT TO: Talisman / UEG ARE SPECIAL DETECTION LIMITS geowetlands@aol.com W/O#: 10120828 NEEDED: YES / NO REFRIGERATE SAMPLES BEING USED FOR: IF YES, PLEASE ATTACH NYDEC ₩ PADEP AFTER COLLECTION DW DRINKING WATER SL SLUDGE IS A QC PACKAGE NEEDED? GW GROUND WATER SO SOIL CONTACT SW SURFACE WATER HZ HAZARDOUS **Steve Gridley** LANDFILL YES NO TRANSPORT WASTE WATER OTHER ww DE DEIONIZED WATER DI DISTILLED WATER PERSONAL OTHER IF YES, PLEASE ATTACH REQUIREMENTS PH# 607-731-0145 то Sample Trpe. Gener Composite PRESERVATIVE ADDED ON RECEIPT LABORATORY /н HYDROCHLORIC ACID ОН SODIUM HYDROXIDE FAX# IN COOLER S SULFURIC ACID AS ASCORBIC ACID BILL TO: Talisman Ν NITRIC ACID AC ACETIC ACID WITH ICE COMPOSITED ON RECEIPT SO 3 SODIUM SULFITE NH, AMMONIUM CHLORIDE Thio SODIUM THIOSULFATE ZN ZINC ACETATE THE OF SAMPLING NONE Ha MERCURIC CHLORIDE F78554 SAMPLE MATRIX DATE SAMPLED PRESERVATUE Please fill out all PROJECT DESCRIPTION An incomplete chain of custody may delay the applicable areas processing of your sample(s). SAMPLER SIGNATURE / AFFILIATION completely MED CONTAINER / SAMPLING POINT ANALYSIS TO BE PERFORMED LAB USE ONLY (PER CONTAINER) 12/6 1148 50 Ċ SS N TPH Air Cuttings 1 pH, Chlorides, Sodium 2 TCLP 8 RCRA Metals + Cu, Ni, Zn 3 Free Liquids / % Moisture 4 A- TPH 5 B-pH, Free liquid, 1. moisture C-Anions, metals Perform BTEX ONLY IF the TPH 6 exceeds 100,000 mg/Kg 7 D- TOTAL Sample 8 E-TCLP metals 2 HOUR TURNAROUND du 9 DAY TURNAROUND 10 11 LAB USE ONLY THEMPERATURE UPONICE OF FOR ARRIVALIONICE SAN DELIVEREDIBYS RELINQUISHED BY DATE: 1216110 TIME: RECEIVED BY: DATE: TIME: 540 1 DATE: RELINQUISHED BY: TIME: RECEIVED BY: DATE: TIME: 1 1 1 1 PATE 16 110 RELINQUISHED BY: DATE: TIME: RECEIVED BY 00

| Fax: (570) 888-0717           SEND DATA TO:<br>NAME:         Dina Brown<br>COMPANY:         Tailsman Energy USA, Inc.<br>ADDRESS:         WO#:         10121730           ADDRESS:         337 Daniel Zenker Dr<br>Horseheads, NY 14945         PAGE:         1 of 3           PHONE:         (607) 562-4000         TEST REPORT         PWS ID#           FAX:         (607) 562-4001         TEST REPORT         PWS ID#           FE1H         RECEIVED FOR LAB BY: RML         DATE:         12/09/2010 15;45         Page 1 of 3           SAMPLE:         Inv. Cuttings         Lab ID: 10121730-001A         Grab         Analysis End  | PA ID #: 08-0038<br>NY ID # 11216 | 80   | Eas<br>2566<br>Si<br>Phon | ark Analytics, In<br>stern Division<br>Pennsylvania Ave.<br>ayre, PA 18840<br>e: (570) 888-0169 | c.          | Wo            | k Order: 101 | 21730          |
|---|-----------------------------------|--|---------------------------|---|-------------|---------------|--------------|----------------|
| NAME:<br>COMPANY:         Dina Brown<br>Talisman Energy USA, Inc.<br>ADDRESS:         W0#:         10121730           ADDRESS:         337 Daniel Zenker Dr.<br>Horseheads, NY 14845         PAGE:         1 of 3           PHONE:         (607) 562-4000         TEST REPORT         PWS ID#           F1H         RECEIVED FOR LAB BY: RML         DATE:         12/09/2010 15:45         Page 1 of 3           SAMPLE:         Inv. Cuttings         Lab ID:         10121730-001A         Grab           SAMPLE:         Inv. Cuttings         Lab ID:         10121730-001C         Grab           SAMPLE:         Inv. Cuttings         Lab ID:         10121730-001C         Grab           SAMPLE:         Inv. Cuttings         Lab ID:         10121730-001C         Grab           SAMPLE:         10         10121730-001C         Grab         12/14/10         HDP-CV           SAMPLE:         Nodolids         Sample Time:         12/08/2010 21:56         12/14/10         12/14/10   |                                   |  | Fa                        | ix: (570) 888-0717  |             |               |              |                |
| COMPANY: Talisman Energy USA, Inc.<br>ADDRESS: 337 Daniel Zenker Dr<br>Horseheads, NY 14845         PAGE: 1 of 3<br>PO#: AF78554           PAGE: 1 of 3<br>PO#: AF78554           PHONE: (607) 562-4000<br>FAX: (607) 562-4001           TEST REPORT           PWS ID#           PLONE: (607) 562-4000           TEST REPORT           PAGE: 1 of 3           PO#: AF78554           PHONE: (607) 562-4000           TEST REPORT           PHONE: (607) 562-4000           TEST REPORT           Page 1 of 3           SAMPLE: Inv. Cuttings         Lab ID: 10121730-001A         Grad           Sample Note: Analysis performed by QC Laboratories         SUCO           SAMPLE: Inv. Cuttings         Lab ID: 10121730-001C         Crab           SAMPLE: Inv. Cuttings         Lab ID: 101   | SEND DATA TO                      | ):   |                           |   |             |               |              |                |
| ADDRESS:       337 Daniel Zenker Dr.<br>Horscheads, NY 14845       PAGE:       1 of 3         PHONE:       (607) 562-4000       TEST REPORT       PWS ID#         FAX:       (607) 562-4001       TEST REPORT       PWS ID#         E1 H       RECEIVED FOR LAB BY: RML       DATE:       12/09/2010 15:45       Page 1 of 3         SAMPLE:       Inv. Cuttings       Lab ID:       10121730-0014       Grab       SLOQ         SAMPLE:       Inv. Cuttings       Lab ID:       10121730-0016       SLOQ       Analvsis End       Analvsis End       Analvsis End       Analvsis End       Analvsis End       Analvsis End       Analvsis       12/16/10<   |                                   |  |                           |   | W           | O#: 10′       | 21730        |                |
| ADDRESS. 337 Daming Zeriker D1<br>Horseheads, NY 14845       PO#: AF78554         PHONE:       (607) 562-4000       TEST REPORT       PWS ID#         FAX:       (607) 562-4001       Page 1 of 3         E1 H       RECEIVED FOR LAB BY: RML       DATE: 12/09/2010 15:45       Page 1 of 3         SAMPLE:       Inv. Cuttings       Lab ID: 10121730-001A       Grab         SAMPLE:       N. Cuttings       Lab ID: 10121730-001A       Grab         SAMPLE:       Neg ASIS %       Sweed 1030       12/15/10 3:30         Sample Note:       Analysis performed by QC Laboratories       Suco       Analysis End       Analysis End         SAMPLE:       Inv. Cuttings       Lab ID: 10121730-001C       Grab       Suco       Analysis End   |                                   |  | С.                        |   | P           | AGE: 1 o      | F3           |                |
| FOR: APPOSE           PHONE: (607) 562-4000           FEST REPORT           PWS ID#           PWS ID#           PWS ID#           FEST REPORT           FAX: (607) 562-4000           E1 H           RECEIVED FOR LAB BY: RML         DATE: 12/09/2010 15:45         Page 1 of 3           SAMPLE: Inv. Cuttings         Lab ID: 10121730-001A         Grab           SAMPLE: Inv. Cuttings         Lab ID: 10121730-001C         Grab           SAMPLE: Inv. Cuttings         Lab ID: 10121730-001D         Grab           SAMPLE: Inv. Cuttings         Lab ID: 10121730-001D         Grab           SAMPLE: Inv. Cuttings         Lab ID: 10121730-001D         Grab           SAMPLE: Inv. Cuttings         Lab ID: 1012173  |                                   |  |                           |   | 17          |               |              |                |
| PHONE:       (607) 562-4000       TEST REPORT         FAX:       (607) 562-4001       Page 1 of 3         E1 H       RECEIVED FOR LAB BY: RML       DATE:       12/09/2010 15:45       Page 1 of 3         SAMPLE:       Inv. Cuttings       Lab ID:       10121730-001A       Grab         SAMPLED BY: SQ       Sample Time:       12/09/2010 15:45       Stopping       Analysis End       Analysis       12/15/10       12/15  | HU                                | orseneaus, interaction of the second se |                           |   | PC          | D#: AF        | 78554        |                |
| PHONE:       (607) 562-4000       TEST REPORT         FAX:       (607) 562-4001       Page 1 of 3         E1 H       RECEIVED FOR LAB BY: RML       DATE:       12/09/2010 15:45       Page 1 of 3         SAMPLE:       Inv. Cuttings       Lab ID:       10121730-001A       Grab         SAMPLED BY: SQ       Sample Time:       12/09/2010 15:45       Stopping       Analysis End       Analysis       12/15/10       12/15  |                                   |  |                           |   | P٧          | NS ID#        |              |                |
| E1 H         Page 1 of 3           RECEIVED FOR LAB BY: RML         DATE: 12/09/2010 15:45         Page 1 of 3           SAMPLE:         Inv. Cuttings         Lab ID: 10121730-001A         Grab           SAMPLED BY: SG         Sample Time: 12/08/2010 21:56         SLOQ         Analysis End  | PHONE: (60                        | 07) 562-4000   | . T                       | ESTREPORT   |             |               |              |                |
| RECEIVED FOR LAB BY: RML         DATE:         12/09/2010         15:45         Page 1 of 3           SAMPLE:         Inv. Cuttings         Lab ID:         10/12/1730-001A         Grab         SIOQ         Analysis Start         Analysis End         Analysis  | FAX: (60                          | 07) 562-4001   |                           | ,   |             |               |              |                |
| RECEIVED FOR LAB BY: RML         DATE:         12/09/2010         15:45         Page 1 of 3           SAMPLE:         Inv. Cuttings         Lab ID:         10/12/1730-001A         Grab         SIOQ         Analysis Start         Analysis End         Analysis  | E1 H                              |  |                           |   |             |               |              |                |
| SAMPLE:         Inv. Cuttings         Lab ID: 10121730-001A         Grab           SAMPLED BY: SG         Sample Time: 12/08/2010 21:56         SLOQ         Analysis Start         Analysis End         Analysis Start         Analysis End         Analysis         Analysis End         Analysis End <td></td> <td></td> <td></td> <td>TE- 12/00/2010 15:45</td> <td></td> <td></td> <td>р</td> <td>ara 1 af ?</td>   |                                   |  |                           | TE- 12/00/2010 15:45  |             |               | р            | ara 1 af ?     |
| SAMPLED BY: SG         Sample Time: 12/08/2010 21:56         SLOQ         Analysis Start         Analysis End   | RECEIVED FOR                      |  |                           | TE. 12/09/2010 15.45  |             |               | P            | age 1 of 3     |
| Test         Result         Method         Analvsis Start         Analvsis End         A   | SAMPLE: Inv. C.                   | uttings  | · ·                       | Lab ID: 10121730-001A   | Grab        |               |              |                |
| Test<br>Ignitability         Result<br>Neg ASIS °F         Method<br>SW846 1030         Analysis Start<br>12/15/10 13:30         Analysis End<br>12/15/10         Analysis End<br>Analysis         Analysis End<br>Analysis         Analysis End<br>Analysis         Analysis End<br>Analysis         Analysis End<br>Analysis         Analysis         Converting<br>Analysis           SAMPLED BY: SG         Result         Method         Analysis <start< td="">         Analysis<end<br>Analysis<start< td="">         Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<start< td="">         Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<end<br>Analysis<end< td=""><td>SAMPLED B</td><td>Y: SG</td><td>Sa</td><td>ample Time: 12/08/2010 21:56</td><td></td><td></td><td></td><td></td></end<></end<br></end<br></end<br></end<br></end<br></end<br></end<br></end<br></end<br></end<br></end<br></end<br></end<br></end<br></end<br></end<br></end<br></end<br></end<br></end<br></end<br></end<br></end<br></end<br></end<br></end<br></end<br></end<br></end<br></end<br></end<br></end<br></end<br></end<br></end<br></end<br></end<br></end<br></end<br></end<br></end<br></end<br></end<br></end<br></end<br></end<br></end<br></start<></end<br></end<br></end<br></start<></end<br></start<> | SAMPLED B                         | Y: SG  | Sa                        | ample Time: 12/08/2010 21:56  |             |               |              |                |
| Ignitability         Neg ASIS *F         SW846 1030         12/15/10 13:30         12/15/10           Sample Note:         Analysis performed by QC Laboratories         Grab         Stample Note:         Analysis performed by QC Laboratories           SAMPLE:         Inv. Cuttings         Lab ID: 10121730-001C         Grab         SLOQ           SAMPLED BY: SG         Sample Time: 12/08/2010 21:56         SLOQ         Analysis Start         Analysis End         Analys  | Test                              |  | Result                    | Method  | SLOQ        | Analysis Star | Analysis End | Analyst *      |
| 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           Sample Time: 12/08/2010 21:56           Sample Time: 12/08/2010 21:56           Cyanide, Reactive         Analysis End         Analy  |                                   |  |                           |   |             |               |              | <u>Analyst</u> |
| SAMPLE:         Inv. Cuttings         Lab ID:         10121730-001C         Grab           SAMPLED BY: SG         Sample Time:         12/06/2010 21:56         SLOQ           Test         Result         Method         Analysis Start         Analysis End         Analysis End         Analysis End         Analysis Tart           Cyanide, Reactive         < 0.2 mg/Kg   | • •                               | te: Analysis performed by Q  | -                         |   |             |               |              |                |
| SAMPLED BY: SG         Sample Time: 12/08/2010 21:56           Test         Result         Method         Analysis Start         Analysis End         Analysis           Cyanide, Reactive         < 0.2 mg/Kg  |                                   |  |                           |   | <u> </u>    |               |              |                |
| Test         Result         Method         Analysis Start         Analysis End         Analysis I           Cyanide, Reactive         < 0.2 mg/Kg   |                                   | _  |                           |   | Grab        |               |              |                |
| Test         Result         Method         Analysis Start         Analysis End         Analysis Maty           Cyanide, Reactive         < 0.2 mg/Kg  | SAMPLED 8                         | Y: SG  | Sa                        | ample Time: 12/08/2010 21:56  | SLOQ        |               |              |                |
| Reactive Sulfide         16 mg/Kg         SW846 7.3         16         12/14/10         LTW-CV           SAMPLE:         Inv. Cuttings         Lab ID: 10121730-001D         Grab         Grab         Sample Time: 12/08/2010 21:56         SLOQ           Test         Result         Method         Analysis Start         Analysis End  | Test                              |  | Result                    | Method  | <u>×</u>    | Analysis Star | Analysis End | Analyst *      |
| SAMPLE:         Inv. Cuttings         Lab ID:         10121730-001D         Grab           SAMPLED BY: SG         Sample Time:         12/08/2010 21:56         SLOQ         Analysis Start         Analysis End         Analysis         Start         Analysis End         Analysis         Start         Analysis End         Analysis         Start         Analysis         Analysis         Analysis         Analysis         Analysis   | Cyanide, Read                     | ctive  | < 0.2 mg/Kg               | SW 7.3.3.2  | 0.2         | 12/13/10 8:56 | 12/14/10     | HDP-CV         |
| SAMPLED BY: SG         Sample Time: 12/08/2010 21:56         SLOQ           Test         Result         Method         Analysis Start         Analysis End         Analysis Find         Analysis End         Analysis Find         Analysis End         Analysis End <td< td=""><td>Reactive Sulfic</td><td>de</td><td>16 mg/Kg</td><td>SW846 7.3</td><td>16</td><td>12/14/10 12:3</td><td>) 12/14/10</td><td>LTW-CV</td></td<>  | Reactive Sulfic                   | de   | 16 mg/Kg                  | SW846 7.3   | 16          | 12/14/10 12:3 | ) 12/14/10   | LTW-CV         |
| SAMPLED BY: SG         Sample Time: 12/08/2010 21:56         SLOQ           Test         Result         Method         Analysis Start         Analysis End         Analysis Find         Analysis End         Analysis Find         Analysis End         Analysis End <td< td=""><td>SAMPLE: Inv Cu</td><td>uttinge</td><td></td><td>Lab ID: 10121730-001D</td><td>Grab</td><td></td><td></td><td></td></td<>   | SAMPLE: Inv Cu                    | uttinge  |                           | Lab ID: 10121730-001D   | Grab        |               |              |                |
| Test         Result         Method         Analysis Start         Analysis End         A   |                                   |  | Sa                        |   |             |               |              |                |
| % 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         State  |                                   |  |                           |   | <u>SLOQ</u> |               |              |                |
| 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         Sample Time: 12/11/2010 12:45         Grab         SLOQ         NFM-SA <u>Test</u> Result         Method         Analysis Start         Analysis End         Analysis *           Pyridine         < 0.10 mg/L   |                                   |  |                           |   |             |               |              |                |
| SAMPLE:         TCLP Leachate of Inv. Cuttings         Lab ID: 10121730-001F         Grab           SAMPLED BY: SG         Sample Time: 12/11/2010 12:45         SLOQ           Test         Result         Method         Analysis Start         Analysis End         Analysis*           Pyridine         < 0.10 mg/L   | % Solids                          |  | -                         |   |             |               |              |                |
| SAMPLED BY: SG         Sample Time: 12/11/2010 12:45         SLOQ           Test         Result         Method         Analysis Start         Analysis End         Analysis*           Pyridine         < 0.10 mg/L   | Total Volatile S                  | Solids   | 12.95 % Wght.             | EPA 160.4   | 0.01        | 12/10/10 8:00 | 12/14/10     | NFM-SA         |
| SAMPLED BY: SG         Sample Time: 12/11/2010 12:45         SLOQ           Test         Result         Method         Analysis Start         Analysis End         Analysis*           Pyridine         < 0.10 mg/L   | SAMPLE: TCLP                      | Leachate of Inv. Cutting   | 5                         | Lab ID: 10121730-001F   | Grab        |               |              |                |
| Test         Result         Method         Analysis Start         Analysis End         A   |                                   | -  |                           | ample Time: 12/11/2010 12:45  |             |               |              |                |
| Pyridine         < 0.10 mg/L         EPA 8270C         0.10         12/15/10 7:48         12/15/10         RHH-SA           1,4-Dichlorobenzene         < 0.10 mg/L   | <b>T</b> +                        |  | Beault                    | Mathe   | SLOQ        | Applinic Car  | Apoluoio Erd | Analysi *      |
| 1,4-Dichlorobenzene       < 0.10 mg/L   |                                   |  |                           |   | 0.10        |               |              |                |
| 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   | •                                 | 07606  | -                         |   |             |               |              |                |
| 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   |                                   |  | -                         |   |             |               | 3            |                |
| Hexachloroethane         < 0.10 mg/L         EPA 8270C         0.10         12/15/10         7:48         12/15/10         RHH-SA           Nitrobenzene         < 0.10 mg/L  |                                   | esol   | -                         |   |             |               |              |                |
| Nitrobenzene         < 0.10 mg/L         EPA 8270C         0.10         12/15/10         7:48         12/15/10         RHH-SA   | -                                 |  |                           |   |             |               |              |                |
|   |                                   |  | -                         |   |             |               |              |                |
|   |                                   | ladiene  | -                         |   |             |               |              |                |
|   | 1 ISABOING ODDI                   |  | or romane                 | _,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,   |             |               |              |                |

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

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

2566 Pennsylvania Ave. Sayre, PA 18840

Work Order: 10121730

Phone: (570) 888-0169

|  |  | Fa  | ix: (57                         | 70) 888-0717  |   |  |  |  |   |
|--|--|---|---------------------------------|---|---|--|--|--|---|
| SEND DATA  | TO:  |   |                                 |   |   |  |  |  |   |
| NAME:  | Dina Brown   |   |                                 | •   | W   | O#:  | 1012   | 1730   |   |
| COMPANY:   | Talisman Energy USA, Inc   | <b>)</b> .  |                                 |   |   |  |  |  |   |
| ADDRESS:   | 337 Daniel Zenker Dr   |   |                                 |   | PÆ  | GE:  | 2 of 3   | 3  |   |
|  | Horseheads, NY 14845   |   |                                 |   | PC  | D#:  | AF78   | 3554   |   |
| PHONE:<br>FAX:   | (607) 562-4000<br>(607) 562-4001   | Т   | EST                             | REPORT  | P٧  | VS ID#   |  |  |   |
| E1 H   |  |   | * * * *                         |   |   |  |  |  |   |
| RECEIVED F   | OR LAB BY: RML   | DA  | TE: 1                           | 2/09/2010 15:45   |   |  |  | Pa   | ige 2 of 3  |
| 2,4,6-Tricl  | hlorophenol  | < 0.10 mg/L   |                                 | EPA 8270C   | 0.10  | 12/15/10   | 7:48   | 12/15/10   | RHH-SA  |
| 2,4,5-Tricl  | hlorophenol  | < 0.10 mg/L   |                                 | EPA 8270C   | 0.10  | 12/15/10   | ) 7:48   | 12/15/10   | RHH-SA  |
| Pentachlo  | prophenol  | < 0.50 mg/L   |                                 | EPA 8270C   | 0.50  | 12/15/10   | ) 7:48   | 12/15/10   | RHH-SA  |
| 2,4-Dinitro  | otoluene   | < 0.10 mg/L   |                                 | EPA 8270Č   | 0.10  | 12/15/10   | 7:48   | 12/15/10   | RHH-SA  |
| Hexachlor  | robenzene  | < 0.10 mg/L   |                                 | EPA 8270C   | 0. <b>10</b>  | 12/15/10   | ) 7:48   | 12/15/10   | RHH-SA  |
| Naphthale  | ene  | < 0.10 mg/L   |                                 | EPA 8270C   | 0.10  | 12/15/10   | ) 7:48   | 12/15/10   | RHH-SA  |
|  | LP Leachate of Inv. Cutting  | 5   | La                              | ь ID: 10121730-001G   | Grab  |  |  |  |   |
|  | D BY: SG   | Sa  | ample T                         | ime: 12/07/2010 8:00  |   |  |  |  |   |
| SAMPLE   | D BY: SG   |   | ample T                         |   | <u>SLOQ</u>   | Analysis   | Start  | Analysis End   | Analyst *   |
| SAMPLE<br><u>Test</u>  |  | Result  | ample T                         | Method  |   | Analysis   |  | Analvsis End   |   |
| SAMPLE<br><u>Test</u><br>Strontium   | - TCLP extracted   | <u>Result</u><br>< 0.050 mg/L   | ·                               | <u>Method</u><br>EPA 6010B  | 0.050   | <u>Analvsis</u><br>12/08/10  |  | Analysis End<br>12/08/10   | <u>Analvst *</u><br>GSR-CV  |
| SAMPLE<br><u>Test</u><br>Strontium<br>Sample   | - TCLP extracted<br>Note: Sample for TCLP extracte   | <u>Result</u><br>< 0.050 mg/L<br>ed Strontium was   | s receiv                        | Method<br>EPA 6010B<br>ed on 12/6/10 at 15:40 b   | 0.050<br>y CMS.   |  |  |  |   |
| SAMPLE<br><u>Test</u><br>Strontium<br>Sample<br>SAMPLE: <b>TC</b>  | - TCLP extracted<br>Note: Sample for TCLP extracte<br>CLP Leachate of Inv. Cutting   | <u>Result</u><br>< 0.050 mg/L<br>ed Strontium was<br><b>s</b>   | s receiv                        | Method<br>EPA 6010B<br>ed on 12/6/10 at 15:40 b<br>b ID: 10121730-001H  | 0.050   |  |  |  |   |
| SAMPLE<br><u>Test</u><br>Strontium<br>Sample<br>SAMPLE: <b>TC</b>  | - TCLP extracted<br>Note: Sample for TCLP extracte   | <u>Result</u><br>< 0.050 mg/L<br>ed Strontium was<br><b>s</b>   | s receiv                        | Method<br>EPA 6010B<br>ed on 12/6/10 at 15:40 b   | 0.050<br>y CMS.   |  |  |  |   |
| SAMPLE<br><u>Test</u><br>Strontium<br>Sample<br>SAMPLE: <b>TC</b>  | - TCLP extracted<br>Note: Sample for TCLP extracte<br>CLP Leachate of Inv. Cutting   | <u>Result</u><br>< 0.050 mg/L<br>ed Strontium was<br><b>s</b>   | s receiv                        | Method<br>EPA 6010B<br>ed on 12/6/10 at 15:40 b<br>b ID: 10121730-001H  | 0.050<br>y CMS.<br>Grab   |  | 12:15  |  |   |
| SAMPLE<br><u>Test</u><br>Strontium<br>Sample<br>SAMPLE: <b>TC</b><br>SAMPLE  | - TCLP extracted<br>Note: Sample for TCLP extracte<br>CLP Leachate of Inv. Cutting   | <u>Result</u><br>< 0.050 mg/L<br>ed Strontium was<br>s  | s receiv                        | Method<br>EPA 6010B<br>ed on 12/6/10 at 15:40 b<br>b ID: 10121730-001H<br>ime: 12/11/2010 12:45   | 0.050<br>y CMS.<br>Grab   | 12/08/10   | 12:15<br>Start   | 12/08/10   | GSR-CV  |
| SAMPLE<br><u>Test</u><br>Strontium<br>Sample<br>SAMPLE: <b>TC</b><br>SAMPLE<br><u>Test</u><br>pH   | - TCLP extracted<br>Note: Sample for TCLP extracte<br>CLP Leachate of Inv. Cutting   | <u>Result</u><br>< 0.050 mg/L<br>ed Strontium was<br>s<br><u>Result</u>   | s recelv<br>La<br>ample T       | Method<br>EPA 6010B<br>ed on 12/6/10 at 15:40 b<br>b ID: 10121730-001H<br>'ime: 12/11/2010 12:45<br>Method  | 0.050<br>y CMS.<br>Grab   | 12/08/10   | 12:15<br>Start   | 12/08/10<br>Analysis End   | GSR-CV  |
| SAMPLE<br><u>Test</u><br>Strontium<br>Sample<br>SAMPLE: <b>TC</b><br>SAMPLE:<br><u>Test</u><br>pH<br>SAMPLE: <b>ZH</b>   | - TCLP extracted<br>Note: Sample for TCLP extracte<br>CLP Leachate of Inv. Cutting<br>D BY: SG   | <u>Result</u><br>< 0.050 mg/L<br>ed Strontium was<br>s<br><u>Result</u><br>6.17@16.4°C  | s recelv<br>La<br>ample T<br>La | Method<br>EPA 6010B<br>ed on 12/6/10 at 15:40 b<br>b ID: 10121730-001H<br>Time: 12/11/2010 12:45<br>Method<br>SM4500H+B   | 0.050<br>y CMS.<br>Grab<br><u>SLOQ</u><br>Grab  | 12/08/10   | 12:15<br>Start   | 12/08/10<br>Analysis End   | GSR-CV  |
| SAMPLE<br><u>Test</u><br>Strontium<br>Sample<br>SAMPLE: <b>TC</b><br>SAMPLE: <b>T</b> est<br>pH<br>SAMPLE: <b>ZH</b><br>SAMPLE: <b>ZH</b>  | - TCLP extracted<br>Note: Sample for TCLP extracte<br>CLP Leachate of Inv. Cutting<br>D BY: SG   | Result<br>< 0.050 mg/L<br>ed Strontium was<br>s<br>Sa<br><u>Result</u><br>6.17@16.4°C   | s recelv<br>La<br>ample T<br>La | Method<br>EPA 6010B<br>ed on 12/6/10 at 15:40 b<br>b ID: 10121730-001H<br>'ime: 12/11/2010 12:45<br><u>Method</u><br>SM4500H+B<br>b ID: 10121730-001I<br>'ime: 12/12/2010 13:10   | 0.050<br>y CMS.<br>Grab<br><u>SLOQ</u>  | 12/08/10<br>Analysis<br>12/14/10   | 12:15<br>Start<br>9 8:00   | 12/08/10<br>Analysis End<br>12/14/10   | GSR-CV<br>Analyst *<br>SG-SA  |
| SAMPLE<br><u>Test</u><br>Strontium<br>Sample<br>SAMPLE: <b>TC</b><br>SAMPLE: <b>T</b><br>PH<br>SAMPLE: <b>ZH</b><br>SAMPLE: <b>ZH</b><br>SAMPLE: <b>ZH</b>   | - TCLP extracted<br>Note: Sample for TCLP extracted<br>CLP Leachate of Inv. Cutting<br>D BY: SG<br>IE Extract of Inv. Cuttings<br>D BY: SG   | Result<br>< 0.050 mg/L<br>ed Strontium was<br>s<br>Sa<br><u>Result</u><br>6.17@16.4°C<br>Sa<br><u>Result</u>  | s recelv<br>La<br>ample T<br>La | Method<br>EPA 6010B<br>ed on 12/6/10 at 15:40 b<br>b ID: 10121730-001H<br>'ime: 12/11/2010 12:45<br>Method<br>SM4500H+B<br>b ID: 10121730-001I<br>'ime: 12/12/2010 13:10<br>Method  | 0.050<br>y CMS.<br>Grab<br><u>SLOQ</u><br>Grab<br><u>SLOQ</u>   | 12/08/10<br>Analysis<br>12/14/10<br>Analysis   | 12:15<br>Start<br>8:00   | 12/08/10<br>Analysis End<br>12/14/10<br>Analysis End   | GSR-CV<br>Analyst *<br>SG-SA<br>Analyst *                                     |
| SAMPLE<br><u>Test</u><br>Strontium<br>Sample<br>SAMPLE: <b>TC</b><br>SAMPLE: <b>T</b><br>SAMPLE: <b>ZH</b><br>SAMPLE: <b>ZH</b><br>SAMPLE: <u>Test</u><br>Benzene  | - TCLP extracted<br>Note: Sample for TCLP extracte<br>CLP Leachate of Inv. Cutting<br>D BY: SG<br>E Extract of Inv. Cuttings<br>D BY: SG   | <u>Result</u><br>< 0.050 mg/L<br>ed Strontium was<br>s<br>Sa<br><u>Result</u><br>6.17@16.4°C<br>Sa<br><u>Result</u><br>< 0.0250 mg/L  | s recelv<br>La<br>ample T<br>La | Method<br>EPA 6010B<br>ed on 12/6/10 at 15:40 b<br>b ID: 10121730-001H<br>Time: 12/11/2010 12:45<br>Method<br>SM4500H+B<br>b ID: 10121730-001I<br>Time: 12/12/2010 13:10<br>Method<br>EPA 8260B   | 0.050<br>y CMS.<br>Grab<br><u>SLOQ</u><br>Grab<br><u>SLOQ</u><br>0.0250   | 12/08/10<br>Analysis<br>12/14/10<br><u>Analysis</u><br>12/13/10                              | 12:15<br><u>Start</u><br>98:00<br><u>Start</u><br>98:11                        | 12/08/10<br><u>Analvsis End</u><br>12/14/10<br><u>Analvsis End</u><br>12/13/10   | Analyst *<br>SG-SA<br>Analyst *<br>CTM-SA                                     |
| SAMPLE<br><u>Test</u><br>Strontium<br>Sample<br>SAMPLE: <b>TC</b><br>SAMPLE: <b>TC</b><br>SAMPLE<br><u>Test</u><br>Benzene<br>Carbon te  | - TCLP extracted<br>Note: Sample for TCLP extracter<br>CLP Leachate of Inv. Cutting<br>DBY: SG<br>IE Extract of Inv. Cuttings<br>DBY: SG<br>trachloride  | <u>Result</u><br>< 0.050 mg/L<br>ed Strontium was<br>s<br>Sa<br><u>Result</u><br>6.17@16.4°C<br>Sa<br><u>Result</u><br>< 0.0250 mg/L<br>< 0.0250 mg/L   | s recelv<br>La<br>ample T<br>La | Method<br>EPA 6010B<br>ed on 12/6/10 at 15:40 b<br>b ID: 10121730-001H<br>Time: 12/11/2010 12:45<br>Method<br>SM4500H+B<br>b ID: 10121730-001I<br>Time: 12/12/2010 13:10<br>Method<br>EPA 8260B<br>EPA 8260B                            | 0.050<br>y CMS.<br>Grab<br><u>SLOQ</u><br>Grab<br><u>SLOQ</u><br>0.0250<br>0.0250                               | 12/08/10<br>Analysis<br>12/14/10<br><u>Analysis</u><br>12/13/10<br>12/13/10                  | 12:15<br><u>Start</u><br>0 8:00<br><u>Start</u><br>0 8:11<br>0 8:11            | 12/08/10<br><u>Analysis End</u><br>12/14/10<br><u>Analysis End</u><br>12/13/10<br>12/13/10                                     | Analyst *<br>SG-SA<br>Analyst *<br>CTM-SA<br>CTM-SA                           |
| SAMPLE<br>Test<br>Strontium<br>Sample<br>SAMPLE: TC<br>SAMPLE: TC<br>SAMPLE: TC<br>SAMPLE: TC<br>SAMPLE: TC<br>SAMPLE: TC<br>Dest<br>Benzene<br>Carbon te<br>Chloroben   | - TCLP extracted<br>Note: Sample for TCLP extracted<br>CLP Leachate of Inv. Cutting<br>ID BY: SG<br>IE Extract of Inv. Cuttings<br>ID BY: SG<br>Itrachloride   | <u>Result</u><br>< 0.050 mg/L<br>ed Strontium was<br>s<br>Sa<br><u>Result</u><br>6.17@16.4°C<br>Sa<br><u>Result</u><br>< 0.0250 mg/L<br>< 0.0250 mg/L<br>< 0.0250 mg/L  | s recelv<br>La<br>ample T<br>La | Method<br>EPA 6010B<br>ed on 12/6/10 at 15:40 b<br>b ID: 10121730-001H<br>Time: 12/11/2010 12:45<br>Method<br>SM4500H+B<br>b ID: 10121730-001I<br>Time: 12/12/2010 13:10<br>Method<br>EPA 8260B<br>EPA 8260B<br>EPA 8260B               | 0.050<br>y CMS.<br>Grab<br><u>SLOQ</u><br>Grab<br><u>SLOQ</u><br>0.0250<br>0.0250<br>0.0250                     | Analysis<br>12/08/10<br>Analysis<br>12/14/10<br>Analysis<br>12/13/10<br>12/13/10<br>12/13/10 | Start<br>8:00<br>Start<br>8:11<br>8:11<br>8:11                                 | 12/08/10<br><u>Analysis End</u><br>12/14/10<br><u>Analysis End</u><br>12/13/10<br>12/13/10<br>12/13/10                         | Analyst<br>SG-SA<br>Analyst<br>CTM-SA<br>CTM-SA<br>CTM-SA                     |
| SAMPLE<br>Test<br>Strontium<br>Sample<br>SAMPLE: TC<br>SAMPLE: TC<br>SAMPLE: ZH<br>SAMPLE: ZH<br>SAMPLE: ZH<br>SAMPLE: Test<br>Benzene<br>Carbon te<br>Chloroben<br>Chloroben  | - TCLP extracted<br>Note: Sample for TCLP extracted<br>CLP Leachate of Inv. Cutting<br>ID BY: SG<br>IE Extract of Inv. Cuttings<br>ID BY: SG<br>trachloride<br>Izene<br>n                                | <u>Result</u><br>< 0.050 mg/L<br>ed Strontium was<br>s<br>Sa<br><u>Result</u><br>6.17@16.4°C<br>Sa<br><u>Result</u><br>< 0.0250 mg/L<br>< 0.0250 mg/L<br>< 0.0250 mg/L<br>< 0.0250 mg/L                         | s recelv<br>La<br>ample T<br>La | Method<br>EPA 6010B<br>ed on 12/6/10 at 15:40 by<br>b ID: 10121730-001H<br>Time: 12/11/2010 12:45<br>Method<br>SM4500H+B<br>b ID: 10121730-001I<br>Time: 12/12/2010 13:10<br>Method<br>EPA 8260B<br>EPA 8260B<br>EPA 8260B<br>EPA 8260B | 0.050<br>y CMS.<br>Grab<br><u>SLOQ</u><br>Grab<br><u>SLOQ</u><br>0.0250<br>0.0250<br>0.0250<br>0.0250           | Analysis<br>12/08/10<br>Analysis<br>12/14/10<br>12/13/10<br>12/13/10<br>12/13/10             | Start<br>8:00<br>Start<br>8:11<br>8:11<br>8:11<br>9:11                         | 12/08/10<br><u>Analysis End</u><br>12/14/10<br><u>Analysis End</u><br>12/13/10<br>12/13/10<br>12/13/10<br>12/13/10             | Analyst<br>SG-SA<br>Analyst<br>CTM-SA<br>CTM-SA<br>CTM-SA<br>CTM-SA           |
| SAMPLE<br>Test<br>Strontium<br>Sample<br>SAMPLE: TC<br>SAMPLE: TC<br>SAMPLE: ZH<br>SAMPLE: ZH<br>SAMPLE: ZH<br>SAMPLE: ZH<br>SAMPLE: Chloroben<br>Chloroben<br>Chloroben<br>1,2-Dichlo                                       | - TCLP extracted<br>Note: Sample for TCLP extracted<br><b>CLP Leachate of Inv. Cutting</b><br>D BY: SG<br><b>IE Extract of Inv. Cuttings</b><br>D BY: SG<br>trachloride<br>nzene<br>n<br>wroethane       | <u>Result</u><br>< 0.050 mg/L<br>ed Strontium was<br><b>s</b><br>Sa<br><u>Result</u><br>6.17@16.4°C<br>Sa<br><u>Result</u><br>< 0.0250 mg/L<br>< 0.0250 mg/L<br>< 0.0250 mg/L<br>< 0.0250 mg/L<br>< 0.0250 mg/L | s recelv<br>La<br>ample T<br>La | Method<br>EPA 6010B<br>ed on 12/6/10 at 15:40 b<br>b ID: 10121730-001H<br>'ime: 12/11/2010 12:45<br>Method<br>SM4500H+B<br>b ID: 10121730-001I<br>'ime: 12/12/2010 13:10<br>Method<br>EPA 8260B<br>EPA 8260B<br>EPA 8260B<br>EPA 8260B  | 0.050<br>y CMS.<br>Grab<br><u>SLOQ</u><br>Grab<br><u>SLOQ</u><br>0.0250<br>0.0250<br>0.0250<br>0.0250<br>0.0250 | Analysis<br>12/08/10<br>Analysis<br>12/14/10<br>12/13/10<br>12/13/10<br>12/13/10<br>12/13/10 | Start<br>8:00<br>Start<br>8:11<br>8:11<br>8:11<br>8:11<br>8:11                 | 12/08/10<br><u>Analysis End</u><br>12/14/10<br><u>Analysis End</u><br>12/13/10<br>12/13/10<br>12/13/10<br>12/13/10<br>12/13/10 | Analyst<br>SG-SA<br>Analyst<br>CTM-SA<br>CTM-SA<br>CTM-SA<br>CTM-SA<br>CTM-SA |
| SAMPLE<br><u>Test</u><br>Strontium<br>Sample<br>SAMPLE: <b>TC</b><br>SAMPLE: <b>T</b><br>PH<br>SAMPLE: <b>ZH</b><br>SAMPLE: <b>ZH</b><br>SAMPLE: <b>ZH</b><br>SAMPLE<br>Carbon ter<br>Carbon ter<br>Chlorobern<br>Chloroforn | - TCLP extracted<br>Note: Sample for TCLP extracte<br>CLP Leachate of Inv. Cutting<br>DBY: SG<br>E Extract of Inv. Cuttings<br>DBY: SG<br>DBY: SG<br>trachloride<br>nzene<br>n<br>wroethane<br>proethene | <u>Result</u><br>< 0.050 mg/L<br>ed Strontium was<br>s<br>Sa<br><u>Result</u><br>6.17@16.4°C<br>Sa<br><u>Result</u><br>< 0.0250 mg/L<br>< 0.0250 mg/L<br>< 0.0250 mg/L<br>< 0.0250 mg/L                         | s recelv<br>La<br>ample T<br>La | Method<br>EPA 6010B<br>ed on 12/6/10 at 15:40 by<br>b ID: 10121730-001H<br>Time: 12/11/2010 12:45<br>Method<br>SM4500H+B<br>b ID: 10121730-001I<br>Time: 12/12/2010 13:10<br>Method<br>EPA 8260B<br>EPA 8260B<br>EPA 8260B<br>EPA 8260B | 0.050<br>y CMS.<br>Grab<br><u>SLOQ</u><br>Grab<br><u>SLOQ</u><br>0.0250<br>0.0250<br>0.0250<br>0.0250           | Analysis<br>12/08/10<br>Analysis<br>12/14/10<br>12/13/10<br>12/13/10<br>12/13/10             | Start<br>8:00<br>Start<br>8:11<br>8:11<br>8:11<br>8:11<br>8:11<br>8:11<br>8:11 | 12/08/10<br><u>Analysis End</u><br>12/14/10<br><u>Analysis End</u><br>12/13/10<br>12/13/10<br>12/13/10<br>12/13/10             | Analyst *<br>SG-SA  |

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

RPD outside accepted recovery limits R

MANAGER

Carrie M. Davis

DATE:

12/16/2010

# **Benchmark Analytics, Inc.**

**Eastern Division** 

2566 Pennsylvania Ave. Sayre, PA 18840

Work Order: 10121730

**PWS ID#** 

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

**TEST REPORT** 

#### SEND DATA TO:

| NAME: |   | WO#:  | 10121730 |
|-------|---|-------|----------|
|       | Talisman Energy USA, Inc.<br>337 Daniel Zenker Dr | PAGE: | 3 of 3   |
|       | Horseheads, NY 14845                              | PO#:  | AF78554  |

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

| E1 H<br>RECEIVED FOR LAB BY: RML      | DAT           | E: 12/09   | 9/2010 15:45     |        |                       | P            | age 3 of 3 |
|---------------------------------------|---------------|------------|------------------|--------|-----------------------|--------------|------------|
| 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 8:1 <b>1</b> | 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                        |               | ple Time:  | 12/10/2010 11:15 | SLOQ   |                       |              |            |
| <u>Test</u>                           | <u>Result</u> |            | Method           |        | Analysis Start        | Analysis End | Analyst *  |
| Chemical Oxygen Demand                | 152 mg/L      | в          | HACH 8000        | 10     | 12/11/10 8:00         | 12/13/10     | KMF-SA     |
| SAMPLE: ASTM Extract of Inv. Cuttings | 1             | Lab ID:    | 10121730-001L    | Grab   |                       |              |            |
| SAMPLED BY: SG                        | San           | nple Time: | 12/10/2010 11:15 | SLOQ   |                       |              |            |

Method

Lab ID: 10121730-001M

Method

SW846/9023

Sample Time: 12/10/2010 10:25

SM4500H+B

SM2540B

**REMARKS:** 

Test

**Total Solids** 

Test

SAMPLE: Inv. Cuttings SAMPLED BY: SG

**Total Organic Halides** 

pН

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.

R

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

Result

7.05@16.7°C

342 mg/L

Result

< 5.00 mg/kg

Analyte detected in the associated Method Blank В

RPD outside accepted recovery limits R

MANAGER

| Cani | M. Davis |
|------|----------|
|      |          |

Sample Note: Analysis performed by Analytical Services, Inc.

12/16/2010 DATE:

Analysis Start

12/14/10 8:00

12/10/10 17:00

Analysis Start

12/15/10 15:45

0.10

Grab

**SLOQ** 

5.00

Analysis End Analyst \*

Analysis End Analyst\*

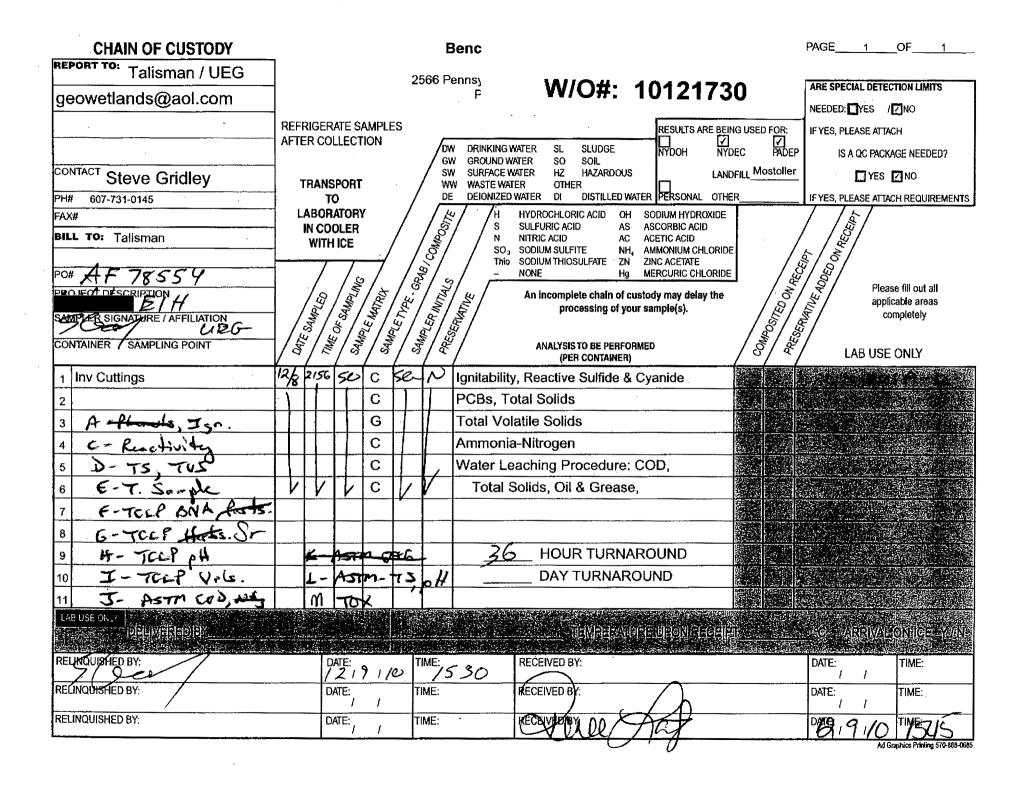
SG-SA

IC-SA

12/14/10

12/13/10

12/15/10





COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WASTE MANAGEMENT

FORM 26R

CHEMICAL ANALYSIS OF RESIDUAL WASTE ANNUAL REPORT BY THE GENERATOR

| typed or leg<br>each attach  | nust be fully and accura<br>ibly printed in the spaces<br>ed sheet as Form 26R,<br>he date on attached shee   | ace is necessary, ider<br>per and identify the c  | i <b>tify</b> Da  |   | JSE ONLY<br>d & General Notes                   |   |
|--|---|---|---|---|---|---|
| General Refe   | erence 287.54   |   |   |   |   |   |
| Date Prepare   | ed/Revised Feb  | oruary 11, 2011   |   |   |   |   |
|  | SECTION A.  | <b>CLIENT</b> (GENERATOR  | R OF THE WASTE) II  | NFORMA  | TION  |   |
| Company Na   |   |   |   |   |   |   |
|  | ergy USA Inc.<br>ry, Name of Parent Comp  |   |   |   | EDA (   | Generator ID#   |
| Talisman Er  |   | any   |   |   | N/A   | Sellerator ID#  |
| Company Ma   | ailing Address Line 1   | C   | ompany Mailing Addre  | ss Line 2   |   |   |
| 50 Pennwoo   | od Place<br>Idress Last Line – City   | State   | 7:  | Phon  |   | <b>E</b> _*4  |
| Warrendale   | iuress Last Line – City   | PA  | <b>Zip+4</b><br>15086   |   | e<br>814-530                                    | Ext   |
|  | ontact Last Name  | First Name  | MI  | (121)   | Suffix  |   |
| Brown  | _   | Dina  |   |   |   |   |
| Municipality<br>Warrendale   |   |   | County  |   |   |   |
| Contact Pho  | ne Ext  | Contact Email Address   | Allegheny   |   |   |   |
| (724) 814-53   |   | dybrown@talismanusa.c   | com   |   |   |   |
|  |   | y Mailing Address (noted a  |   |   |   | Yes 🛛 No  |
| If 'No'. descr   | ibe location of waste gen   | eration and storage. Drill concerned at 778 Cease Drive,  | cuttings are generated d  | uring natura  | l gas drilli                                    | ng operations at  |
| containers on  |   | ocated at 110 Cease Drive,  | Troy Township, Bradiord   | County, Pr  | A. Waste  | is stored in  |
| Containers on  | site.   |   |   |   |   |   |
| Municipality   | Troy  | County Bradfo   |   |   | tate  | PA  |
| Municipality   | Troy  | SECTION B. WAST   |   |   |   | PA  |
| Municipality<br>Residual   | Troy<br>Residu  | SECTION B. WAST   | E DESCRIPTION   | Unit  | of  | Time  |
| Municipality<br>Residual<br>Waste Code   | Troy<br>Residu<br>Code D  | SECTION B. WAST<br>ual Waste<br>rescription   | E DESCRIPTION<br>Amount   | Unit<br>Meas  | of<br>ure                                       |   |
| Municipality<br>Residual   | Troy<br>Residu  | SECTION B. WAST<br>ual Waste<br>rescription   | E DESCRIPTION   | Unit  | of  | Time  |
| Municipality<br>Residual<br>Waste Code<br>810  | Troy<br>Residu<br>Code D<br>Drill cuttings (oil and g   | SECTION B. WAST<br>ual Waste<br>escription<br>jas)<br>1. GENERAL P  | E DESCRIPTION<br>Amount<br>1,094<br>ROPERTIES   | Unit<br>Meas  | of<br>ure                                       | Time<br>Frame   |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH R   | Troy<br>Residu<br>Code D<br>Drill cuttings (oil and g<br>ange 8.8   | SECTION B. WAST<br>ual Waste<br>escription<br>gas)<br>1. GENERAL P<br>7 to  | E DESCRIPTION Amount 1,094 ROPERTIES (based on analyses or lease  | Unit<br>Meas  | of<br>ure                                       | Time<br>Frame   |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH R   | Troy<br>Residu<br>Code D<br>Drill cuttings (oil and g   | SECTION B. WAST<br>ual Waste<br>escription<br>gas)<br>1. GENERAL P<br>7 to<br>Liquid Waste (EPA Me  | E DESCRIPTION<br>Amount<br>1,094<br>ROPERTIES<br>(based on analyses or least<br>othod 9095)   | Unit<br>Meas  | of<br>ure                                       | Time<br>Frame   |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH R   | Troy<br>Residu<br>Code D<br>Drill cuttings (oil and g<br>ange 8.8   | SECTION B. WAST<br>ual Waste<br>escription<br>gas)<br>1. GENERAL P<br>7 to  | E DESCRIPTION<br>Amount<br>1,094<br>ROPERTIES<br>(based on analyses or least<br>othod 9095)<br>95)  | Unit<br>Meas  | of<br>ure                                       | Time<br>Frame   |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH R<br>b. Phys  | Troy<br>Residu<br>Code D<br>Drill cuttings (oil and g<br>ange 8.8   | SECTION B. WAST<br>ual Waste<br>escription<br>gas)<br>1. GENERAL P<br>7 to<br>Liquid Waste (EPA Me<br>Solid (EPA Method 90)<br>Gas (ambient tempera<br>Color Greyish Black  | E DESCRIPTION<br>Amount<br>1,094<br>ROPERTIES<br>(based on analyses or least<br>thod 9095)<br>95)<br>ture & pressure)<br>Odd  | Unit<br>Meas<br>cuyd<br>lb<br>mowledge)   | of<br>ure<br>☐ gal<br>⊠ ton                     | Time<br>Frame   |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH R<br>b. Phys  | Troy<br>Residu<br>Code D<br>Drill cuttings (oil and g<br>ange 8.8<br>ical State   | SECTION B. WAST<br>ual Waste<br>description<br>gas)<br>1. GENERAL P<br>7 to<br>Liquid Waste (EPA Me<br>Solid (EPA Method 90)<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquid  | E DESCRIPTION Amount 1,094 ROPERTIES (based on analyses or least thod 9095) 95) ture & pressure) Odd Phases of Separation   | Unit<br>Meas<br>cuyd<br>lb<br>mowledge)   | of<br>ure<br>☐ gal<br>⊠ ton                     | Time<br>Frame   |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH R<br>b. Phys  | Troy<br>Residu<br>Code D<br>Drill cuttings (oil and g<br>ange 8.8<br>ical State   | SECTION B. WAST<br>ual Waste<br>escription<br>gas)<br>1. GENERAL P<br>7 to<br>Liquid Waste (EPA Me<br>Solid (EPA Method 90)<br>Gas (ambient tempera<br>Color Greyish Black  | E DESCRIPTION Amount 1,094 ROPERTIES (based on analyses or least thod 9095) 95) ture & pressure) Odd Phases of Separation   | Unit<br>Meas<br>cuyd<br>lb<br>mowledge)   | of<br>ure<br>☐ gal<br>⊠ ton                     | Time<br>Frame   |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH R<br>b. Phys  | Troy<br>Residu<br>Code D<br>Drill cuttings (oil and g<br>ange 8.8<br>ical State   | SECTION B. WAST<br>ual Waste<br>description<br>gas)<br>1. GENERAL P<br>7 to<br>Liquid Waste (EPA Me<br>Solid (EPA Method 90)<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of s  | E DESCRIPTION Amount 1,094 ROPERTIES (based on analyses or least thod 9095) 95) ture & pressure) Odd Phases of Separation eparation. Soil and Ro  | Unit<br>Meas<br>cuyd<br>lb<br>mowledge)   | of<br>ure<br>☐ gal<br>⊠ ton                     | Time<br>Frame   |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH R<br>b. Phys<br>c. Phys<br>c. Phys  | Troy<br>Residu<br>Code D<br>Drill cuttings (oil and g<br>ange 8.8<br>ical State<br>ical Appearance  | SECTION B. WAST<br>ual Waste<br>description<br>gas)<br>1. GENERAL P<br>7 to<br>Liquid Waste (EPA Me<br>Solid (EPA Method 90)<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquid  | E DESCRIPTION Amount 1,094 ROPERTIES (based on analyses or leased | Unit<br>Meas<br>cuyd<br>ib<br>mowledge)<br>or <u>Earth</u><br>One<br>ock Fragme | of<br>ure<br>☐ gal<br>⊠ ton<br>y / Slight       | Time<br>Frame   |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH R<br>b. Phys<br>c. Phys<br>c. Phys  | Troy<br>Residu<br>Code D<br>Drill cuttings (oil and g<br>ange 8.8<br>ical State<br>ical Appearance<br>esults of a detailed chem<br>uctions, is attached.  | SECTION B. WAST<br>ual Waste<br>lescription<br>jas)<br>1. GENERAL P<br>7 to<br>Liquid Waste (EPA Met<br>Solid (EPA Method 900<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of s<br>2. CHEMICAL ANALYS<br>ical characterization of the                               | E DESCRIPTION Amount 1,094 ROPERTIES (based on analyses or leased | Unit<br>Meas<br>cuyd<br>ib<br>mowledge)<br>or <u>Earth</u><br>One<br>ock Fragme | of<br>ure<br>gal<br>X ton<br>y / Slight         | Time         Frame         One Time         Petroleum         Yes       No                      |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH R<br>b. Phys<br>c. Phys<br>c. Phys<br>a. The r<br>instru<br>b. A det  | Troy Residu Code D Drill cuttings (oil and g ange 8.8 ical State ical Appearance esults of a detailed chem attached. ailed description of the w   | SECTION B. WAST<br>ual Waste<br>lescription<br>jas)<br>1. GENERAL P<br>7 to<br>Liquid Waste (EPA Met<br>Solid (EPA Method 90)<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of s<br>2. CHEMICAL ANALYS<br>ical characterization of the<br>waste sampling method is a | E DESCRIPTION Amount 1,094 ROPERTIES (based on analyses or leased | Unit<br>Meas<br>cuyd<br>lb<br>mowledge)<br>or Earth<br>One<br>ock Fragme        | of<br>ure<br>gal<br>X ton<br>y / Slight<br>ents | Time         Frame         One Time         Petroleum         Yes       No         Yes       No |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH R<br>b. Phys<br>c. Phys<br>c. Phys<br>a. The r<br>instru<br>b. A det  | Troy<br>Residu<br>Code D<br>Drill cuttings (oil and g<br>ange 8.8<br>ical State<br>ical Appearance<br>esults of a detailed chem<br>actions, is attached.<br>ailed description of the w<br>puality assurance/quality | SECTION B. WAST<br>ual Waste<br>lescription<br>jas)<br>1. GENERAL P<br>7 to<br>Liquid Waste (EPA Met<br>Solid (EPA Method 900<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of s<br>2. CHEMICAL ANALYS<br>ical characterization of the                               | E DESCRIPTION Amount 1,094 ROPERTIES (based on analyses or leased | Unit<br>Meas<br>cuyd<br>lb<br>mowledge)<br>or Earth<br>One<br>ock Fragme        | of<br>ure<br>gal<br>X ton<br>y / Slight<br>ents | Time         Frame         One Time         Petroleum         Yes       No                      |
| Municipality<br>Residual<br>Waste Code<br>810<br>a. pH R<br>b. Phys<br>c. Phys<br>c. Phys<br>c. Phys<br>c. The r<br>instru<br>b. A det<br>c. The r<br>attact<br>d. The r | Troy Residu Code D Drill cuttings (oil and g ange 8.8 ical State ical Appearance esults of a detailed chem attached. ailed description of the w uality assurance/quality hed. esults of the hazardous w             | SECTION B. WAST<br>ual Waste<br>lescription<br>jas)<br>1. GENERAL P<br>7 to<br>Liquid Waste (EPA Met<br>Solid (EPA Method 90)<br>Gas (ambient tempera<br>Color Greyish Black<br>Number of Solid or Liquid<br>Describe each phase of s<br>2. CHEMICAL ANALYS<br>ical characterization of the<br>waste sampling method is a | E DESCRIPTION Amount 1,094 ROPERTIES (based on analyses or leased | Unit<br>Meas<br>cuyd<br>lb<br>mowledge)<br>or Earth<br>One<br>ock Fragme        | of<br>ure<br>gal<br>X ton<br>y / Slight<br>ents | Time         Frame         One Time         Petroleum         Yes       No         Yes       No |

|       | 3.  | PROCESS DESCRIPTION      | & SCHEMATIC ATTA       | CHMENTS         |               |        |  |  |  |  |
|-------|---|--------------------------|------------------------|-----------------|---------------|--------|--|--|--|--|
| а.    | A detailed description of the r<br>the waste, as specified in the |                          |                        | esses producing | 🛛 Yes         | 🗌 No   |  |  |  |  |
| b.    | A schematic of the manufactu<br>as specified in the instruction   | s, is attached.          |                        | -               | 🛛 Yes         | 🗌 No   |  |  |  |  |
| с.    | If portions of the information a confidentiality claim, as des    |                          |                        | n for 🗌 Yes     | No No         | ⊠ N/A  |  |  |  |  |
|       | SECTION C. MANAGEMENT OF RESIDUAL WASTE                           |                          |                        |                 |               |        |  |  |  |  |
|       |   | 1. PROCESSING OR D       | ISPOSAL FACILITY (IE   | ES)             |               |        |  |  |  |  |
| The a | rea below (ad.) will accommod                                     |                          |                        |                 | if necessary. |        |  |  |  |  |
| а.    | Solid waste permit number(s)<br>101243                            | for processing or dispos | al facility being util | ized.           |               |        |  |  |  |  |
| b.    | Facility Name   | Northern Tier Solid Wa   |                        |                 |               |        |  |  |  |  |
|       | Address Line 1  | 108 Steam Hollow Roa     | ad                     |                 |               |        |  |  |  |  |
|       | Address Line 1  |                          |                        |                 |               |        |  |  |  |  |
|       | Address City State ZIP  | Troy                     | PA                     | 16947           |               |        |  |  |  |  |
|       | Municipality  | West Burlington Twp      | County                 | Bradford        |               |        |  |  |  |  |
| с.    | Facility Contact Name   | Charles Woodward         |                        |                 |               |        |  |  |  |  |
|       | Title   |                          |                        |                 |               |        |  |  |  |  |
|       | Phone   | (570) 297-4177           | Email Address          | chuckwoodward   | @epix.net     |        |  |  |  |  |
| d.    | Volume of waste shipped to p 1,094                                | cu yd gal                | cility in the previous | -               |               |        |  |  |  |  |
| а.    | Solid waste permit number(s)                                      | for processing or dispos | al facility being util | ized.           |               |        |  |  |  |  |
| 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 p                                      | ocessing or disposal fac | Lility in the previous |                 |               |        |  |  |  |  |
|       |   | 2. BENEF                 | ICIAL USE              |                 |               | San Sa |  |  |  |  |
| a.    | Has the waste been approved                                       | for beneficial use?      |                        |                 | Ves           | No No  |  |  |  |  |
|       | If "Yes", list the general permi                                  | t number or approval nu  | mber.                  |                 |               | _      |  |  |  |  |
| b.    | Volume of waste beneficially u                                    |                          |                        |                 |               |        |  |  |  |  |
|       | 0   | cu yd 🗌 gal              | 🛄 lb 🔄 ton             | (check one)     |               |        |  |  |  |  |

|                            |  |      | SECTION D. CERTIFICATION  |  |  |  |  |  |  |
|----------------------------|--|------|---|--|--|--|--|--|--|
| Report<br>obtain<br>knowle | 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 applicat   | ole: |   |  |  |  |  |  |  |
|                            | I certify the information<br>and has not chan  | •    | ired in Section B-1, General Properties was supplied to the Department for the year             |  |  |  |  |  |  |
|                            | Form Submitted:  |      | Form 26R  |  |  |  |  |  |  |
|                            |  |      | Other (specify)   |  |  |  |  |  |  |
|                            | Date Submitted:  |      |   |  |  |  |  |  |  |
|                            | I certify the information<br>and has not chan  |      | ired in Section B-2, Chemical Analysis was supplied to the Department for the year              |  |  |  |  |  |  |
|                            | Form Submitted:  |      | Form 26R  |  |  |  |  |  |  |
|                            |  |      | Other (specify)   |  |  |  |  |  |  |
|                            | Date Submitted:  |      |   |  |  |  |  |  |  |
|                            | l certify the information i<br>for the year and h  | •    | ed in Section B-3, Process Description and Schematic, was supplied to the Department t changed. |  |  |  |  |  |  |
|                            | Form Submitted:  |      | Form 26R  |  |  |  |  |  |  |
|                            |  |      | Other (specify)   |  |  |  |  |  |  |
|                            | Date Submitted:  |      |   |  |  |  |  |  |  |
| Name                       | of Responsible Official  |      | Title Environmental Specialist  |  |  |  |  |  |  |
| Dina B<br>Signati          | AL.  | Č    | Date 2/2.5/4  |  |  |  |  |  |  |

SEND DATA TO:

NAME:

PHONE:

FAX:

Steve Gridley

COMPANY: Talisman Energy USA, Inc.

(607) 562-4000 (607) 562-4001

Horseheads, NY 14845

ADDRESS: 337 Daniel Zenker Dr

# Benchmark Analytics, Inc. Eastern Division

2566 Pennsylvania Ave. Sayre, PA 18840

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

#### Work Order: 10030587

WO#: 10030587PAGE: 1 of 1PO#:PWS ID#

**TEST REPORT** 

| Inv. Spill<br>RECEIVED FOR LAB BY: DLM2 | DATE:         | 03/03/2010 9:38        | ~           |                | Р            | age 1 of 1 |
|---|---------------|------------------------|-------------|----------------|--------------|------------|
| SAMPLE: Pad-Clean Soil-W1               | L             | ab ID: 10030587-001A.  | Compo       | site           | <u> </u>     |            |
| SAMPLED BY: SG                          | Sample        | Time: 03/02/2010 12:00 |             |                |              |            |
| Test                                    | Result        | Method                 | <u>SLOQ</u> | 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               | L             | ab ID: 10030587-001C   | Compo       | site           |              |            |
| SAMPLED BY: SG                          | Sample        | Time: 03/02/2010 12:00 |             |                |              |            |
| Test                                    | Result        | Method                 | <u>SLOQ</u> | 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

Curie M. Davis

.

DATE: 3/12

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. |  |  |                               |   | tify Date Receive       | DEP.USE ONLY Date Received & General Notes |  |
|--|--|--|-------------------------------|---|-------------------------|--|--|
| General  | Refe   | rence 287.54                           |                               |   |                         |  |  |
| Date Pre   | pare   |  | bruary 11, 2011               |   |                         |  |  |
|  |  |  | CLIENT (GENERATOR             | R OF THE WASTE) IN  | FORMATION               |  |  |
| Compan   |  |  |                               |   |                         |  |  |
| If a Subs  | idiar  | ergy USA Inc.<br>y, Name of Parent Com |                               |   | EPA                     | Generator ID#                              |  |
| Talisma  | n Ene  | ergy Inc.                              |                               |   | N/A                     |  |  |
| Compan   | y Mai  | ling Address Line 1                    | C                             | ompany Mailing Addre  | ss Line 2               |  |  |
| 50 Penn  |  |  | 04-4-                         | 7:  | DLana                   |  |  |
| Warrenc  |  | dress Last Line – City                 | State<br>PA                   | <b>Zip+4</b><br>15086   | Phone<br>(724) 814-530  | Ext  |  |
|  |  | ntact Last Name                        | First Name                    | MI  | Suffi                   |  |  |
| Brown  | -  |  | Dina                          |   |                         |  |  |
| Municipa   |  |  |                               | County  |                         |  |  |
| Warrenc<br>Contact   |  | e Ext                                  | Contact Email Address         | Allegheny   |                         |  |  |
| (724) 81   |  |  | dybrown@talismanusa.c         | om  |                         |  |  |
|  |  |  | ny Mailing Address (noted a   |   |                         | Yes 🛛 No                                   |  |
|  | escri  | be location of waste ger               | neration and storage. Drill o | cuttings are generated du   | uring natural gas drill | ing operations at                          |  |
| the container  |  |  | ted at 1749 Lodge Hill Road,  | Columbia Township, Bra  | adford County, PA. V    | Vaste is stored in                         |  |
| Municipa   |  | Columbia                               | County Bradfo                 | ord   | State                   | PA   |  |
|  | -  |  | SECTION B. WAST               | <b>E DESCRIPTION</b>  |                         |  |  |
| Residu   |  |  | ual Waste                     |   | Unit of                 | Time                                       |  |
| Waste C  | ode  | Code [                                 | Description                   | Amount  | Measure                 | Frame                                      |  |
| 810  |  | Drilling Cuttings (Oil a               | and Gas)                      | 240   | <u> </u>                | One Time                                   |  |
|  |  |  | 1. GENERAL P                  | an na sharan waxa ku u yu yu yu ya ya ku ku ku yu yu yu yu yu yu yu yu yu yu yu yu yu                           |                         |  |  |
|  | H Ra   |  |                               | (based on analyses or k   | nowledge)               |  |  |
| b. P   | hysio  | cal State                              | Liquid Waste (EPA Me          |   |                         |  |  |
|  |  |  | Solid (EPA Method 90)         | ,   |                         |  |  |
| c. P   | hvsid  | al Appearance                          | Color Grevish Black           | ······································  | r Earthy / Slight       | Petroleum                                  |  |
|  |  |  | Number of Solid or Liquid     |   |                         |  |  |
|  |  |  | Describe each phase of s      | eparation. Soil and Ro  | ck Fragments            |  |  |
|  | del altres   |  |                               |   |                         |  |  |
| a. T   | ho ro  | sults of a detailed chem               | 2. CHEMICAL ANALYS            | Contraction of the second of the second second second second second second second second second second second s | n the 🛛                 | Yes No                                     |  |
| a. The results of a detailed chemical characterization of the waste, as described in the X Yes No instructions, is attached.   |  |  |                               |   |                         |  |  |
|  | A detailed description of the waste sampling method is attached. |  |                               |   |                         |  |  |
| c. The quality assurance/quality control procedures employed by the laboratory(ies) is Yes No  |  |  |                               |   |                         |  |  |
| _  |  |  | control procedures employ     |   | •                       |  |  |
|  | ttach  | ed.                                    |                               |   |                         | Yes 🗆 No                                   |  |
| d. T   | ttach<br>he re   | ed.<br>sults of the hazardous          | waste determination is atta   | ched.   |                         | Yes No                                     |  |

| 230.899 | 3  | PROCESS DESCRIPTION              | SCHEMATIC ATTAC        | HMENTS            |               |  |  |
|---------|--|----------------------------------|------------------------|-------------------|---------------|--|--|
| a.      |  |                                  |                        |                   |               |  |  |
| b.      | A schematic of the manufacturing and/or pollution control processes producing the waste, X Yes No as specified in the instructions, is attached.                     |                                  |                        |                   |               |  |  |
| C.      | If portions of the information submitted are confidential, the substantiation for Yes No N/A a confidentiality claim, as described in the instructions, is attached. |                                  |                        |                   |               |  |  |
|         | SECTIO   | ON C. MANAGEME                   | NT OF RESIDU           | IAL WASTE         |               |  |  |
|         |  | 1. PROCESSING OR D               | ISPOSAL FACILITY       | ES)               |               |  |  |
| The ar  | ea below (ad.) will accommod   | ate the identification of t      | wo facilities. Attach  | additional sheets | if necessary. |  |  |
| a.      | Solid waste permit number(s) for processing or disposal facility being utilized.<br>100361   |                                  |                        |                   |               |  |  |
| b.      | Facility Name  | McKean County Land               | āll                    |                   |               |  |  |
|         | 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<br>Title   | Mike Manderfeld                  |                        |                   |               |  |  |
|         | Phone  | (814) 778-9931                   | Email Address          | manderfeld@gm     | ail.com       |  |  |
| d.      | Volume of waste shipped to p<br>114 Solid waste permit number(s)   | cu yd 🗌 gal                      | b 🛛 ton                | (check one)       |               |  |  |
| a.      | 8-4630-00010   | to processing of dispos          | sai lacinty being util | izeu.             |               |  |  |
| b.      | Facility Name  | Hakes C&D Landfill               |                        |                   |               |  |  |
|         | Address Line 1   | 4376 Manning Ridge F             | Road                   |                   | - <u></u>     |  |  |
|         | Address Line 1   |                                  |                        |                   |               |  |  |
|         | Address City State ZIP   | Painted Post                     | NY                     | 14870             |               |  |  |
|         | Municipality   | Erwin Twp                        | County                 | Steuben           |               |  |  |
| с.      | Facility Contact Name  | Joseph Boyles                    |                        |                   |               |  |  |
|         | Title  |                                  |                        |                   |               |  |  |
|         | Phone  | (607) 937-6044<br>(585) 466-7271 | Email Address          | joe.boyles@case   | illa.com      |  |  |
| d.      | Volume of waste shipped to p   |                                  | cility in the previous | year.             |               |  |  |
|         | 50   | cu yd 🗌 gal                      | 🗌 lb 🛛 ton             | (check one)       |               |  |  |
|         |  | 2. BENER                         | ICIAL USE              |                   | ÷             |  |  |
| a.      | Has the waste been approved for beneficial use?  |                                  |                        |                   |               |  |  |
|         | If "Yes", list the general permit number or approval number.   |                                  |                        |                   |               |  |  |
| b.      |  |                                  |                        |                   |               |  |  |
|         | 0 📋  | cu yd 🔲 gal                      | b ton                  | (check one)       |               |  |  |

|        | 3.  | PROCESS DESCRIPTION &                    | SCHEMATIC ATTAC                           | HMENTS            |               |       |  |  |
|--------|---|--|---|-------------------|---------------|-------|--|--|
| a.     | A detailed description of the r<br>the waste, as specified in the   |  | tion control proce                        | sses producing    | Yes Yes       | No No |  |  |
| b.     | A schematic of the manufacturing and/or pollution control processes producing the waste, Xes No as specified in the instructions, is attached.                    |  |   |                   |               |       |  |  |
| C.     | If portions of the information submitted are confidential, the substantiation forYesNoN/A a confidentiality claim, as described in the instructions, is attached. |  |   |                   |               |       |  |  |
|        | SECTIO  | ON C. MANAGEMEN                          |   |                   |               |       |  |  |
|        |   | 1. PROCESSING OR DIS                     | POSAL FACILITY(IE                         | S)                |               |       |  |  |
| The ar | ea below (ad.) will accommod  | ate the identification of two            | o facilities. Attach                      | additional sheets | if necessary. |       |  |  |
| a.     | Solid waste permit number(s)<br>9-0232-00003  | for processing or disposa                | I facility being utili                    | ized.             |               |       |  |  |
| b.     | Facility Name   | Hyland Landfill                          |   |                   |               |       |  |  |
| i      | Address Line 1  | 6653 Herdman Road                        |   |                   |               |       |  |  |
|        | Address Line 1  |  |   |                   |               |       |  |  |
| [      | Address City State ZIP  | Angelica                                 | NY  | 14709             |               |       |  |  |
|        | Municipality  | Angelica                                 | County                                    | Allegany          |               |       |  |  |
| с.     | Facility Contact Name   | Larry Shilling                           |   |                   |               |       |  |  |
|        | Title   |  |   |                   |               |       |  |  |
|        | Phone   | (585) 466-7271                           | Email Address                             | larry shilling@ca | sella.com     |       |  |  |
| d.     | Volume of waste shipped to p  | rocessing or disposal facil<br>cu yd gal | i <b>ty in the previous</b><br>] ib ⊠ ton |                   |               | ·     |  |  |
| а.     | . Solid waste permit number(s) for processing or disposal facility being utilized.<br>8-0728-00004  |  |   |                   |               |       |  |  |
| b.     | Facility Name   | Chemung County Landf                     |   |                   |               |       |  |  |
|        | 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   |  | Email Address                             | carla.canjar@ca   | sella.com     |       |  |  |
| d.     | Volume of waste shipped to p  | rocessing or disposal facil              | ity in the previous                       | vear.             |               |       |  |  |
|        | 20  | cuyd 🗌 gal 🚺                             | ] lb 🛛 ton                                |                   |               |       |  |  |
|        |   | 2. BENEFIC                               | IAL USE                                   | 21                |               |       |  |  |
| a.     | Has the waste been approved   |  |   |                   | 🗌 Yes         | 🖾 No  |  |  |
|        | If "Yes", list the general permit number or approval number.  |  |   |                   |               |       |  |  |
| b.     | Volume of waste beneficially u  |  | <u>-</u>                                  |                   |               |       |  |  |
|        | 0 🗌   | cuyd 🗌 gal 🗌                             | b ton                                     | (check one)       |               |       |  |  |

| and the second second | •   | An and the second states the second states of the second states and the second states and |                     |                    |               |          |      |  |  |  |  |
|-----------------------|---|---|---------------------|--------------------|---------------|----------|------|--|--|--|--|
| S. 1999.              |   | PROCESS DESCRIPTION   |                     |                    |               |          | 2.24 |  |  |  |  |
| a.                    | A detailed description of the the waste, as specified in the  |   |                     | processes produc   | ing 🛛         | Yes 🗌    | No   |  |  |  |  |
| b.                    | A schematic of the manufacturing and/or pollution control processes producing the waste, X Yes No as specified in the instructions, is attached.                        |   |                     |                    |               |          |      |  |  |  |  |
| C.                    | c. If portions of the information submitted are confidential, the substantiation for Yes No N/A a confidentiality clalm, as described in the instructions, is attached. |   |                     |                    |               |          |      |  |  |  |  |
|                       | SECTIO  | DN C. MANAGEM   | ENT OF RES          | IDUAL WAS          | ſE            | <u> </u> |      |  |  |  |  |
|                       |   | 1. PROCESSING OR  | DISPOSAL FACILI     | TY(IES)            | Million       |          |      |  |  |  |  |
| The a                 | rea below (ad.) will accommod   |   |                     |                    | heets if neco | essary.  |      |  |  |  |  |
| a.                    | Solid waste permit number(s)<br>100945  | for processing or dispo   | osal facility being | g utilized.        |               |          |      |  |  |  |  |
| b.                    | Facility Name   | Cumberland County   | Landfill            |                    |               |          |      |  |  |  |  |
|                       | Address Line 1  | 135 Vaughn Road   |                     |                    |               |          |      |  |  |  |  |
|                       | Address Line 1  | ¥   |                     |                    |               |          |      |  |  |  |  |
|                       | Address City State ZIP  | Newburg   | PA                  | 17                 | 240           |          |      |  |  |  |  |
|                       | Municipality  | Newburg Boro  | County              | Cumberlar          | nd            |          |      |  |  |  |  |
| с.                    | Facility Contact Name   | Dusty Hilbert   |                     |                    |               |          |      |  |  |  |  |
| <b>U</b> .            | Title   | Compliance Manager  |                     |                    |               |          |      |  |  |  |  |
|                       | Phone   | (717) 729-5261  | Email Addres        | s dhilbort@i       | swaste.com    |          |      |  |  |  |  |
|                       |   | . ,   |                     |                    | swaste.com    |          |      |  |  |  |  |
| d.                    | Volume of waste shipped to p  | rocessing or disposal f<br>cu yd gal  | acility in the prev |                    | k one)        |          |      |  |  |  |  |
| a.                    | Solid waste permit number(s)  | for processing or dispo   | osal facility being | y utilized.        |               |          |      |  |  |  |  |
| b.                    | Facility Name   |   |                     |                    |               |          |      |  |  |  |  |
|                       | Address Line 1  |   |                     |                    |               |          |      |  |  |  |  |
|                       | Address Line 1  |   |                     |                    | ***=-         |          |      |  |  |  |  |
|                       | Address City State ZIP  |   |                     |                    |               |          |      |  |  |  |  |
|                       | Municipality  |   | County              | ,                  |               |          |      |  |  |  |  |
| С.                    | Facility Contact Name   |   |                     |                    |               |          |      |  |  |  |  |
| 0.                    | Title   |   |                     |                    | "ret          |          |      |  |  |  |  |
|                       | Phone   |   | Email Addres        |                    |               |          |      |  |  |  |  |
|                       | ·   |   |                     |                    |               |          |      |  |  |  |  |
| d.                    | Volume of waste shipped to p  |   | ·                   | -                  |               |          |      |  |  |  |  |
|                       |   | cuyd 🗌 gal  |                     | ton (chec          | k one)        |          | I    |  |  |  |  |
|                       |   | 2. Bene   | FICIAL USE          | All and the second |               |          |      |  |  |  |  |
| a.                    | Has the waste been approved   | for beneficial use?   |                     |                    |               | Yes 🛛    | No   |  |  |  |  |
|                       | If "Yes", list the general permi  | t number or approval n  | umber.              |                    |               |          |      |  |  |  |  |
| b.                    | Volume of waste beneficially i  |   |                     |                    |               |          |      |  |  |  |  |
|                       | 0 Ú   | cu yd 🗌 gal   | □ lb □              | ton (cheo          | k 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 applical   | ole: |   |  |  |  |  |  |  |
| I certify the information  | •    | ired in Section B-1, General Properties was supplied to the Department for the year             |  |  |  |  |  |  |
| Form Submitted:  |      | Form 26R  |  |  |  |  |  |  |
|  |      | Other (specify)   |  |  |  |  |  |  |
| Date Submitted:  |      |   |  |  |  |  |  |  |
| I certify the information<br>and has not chan  | -    | ired in Section B-2, Chemical Analysis was supplied to the Department for the year              |  |  |  |  |  |  |
| Form Submitted:  |      | Form 26R  |  |  |  |  |  |  |
|  |      | Other (specify)   |  |  |  |  |  |  |
| Date Submitted:  |      |   |  |  |  |  |  |  |
| I certify the information<br>for the year and h  | •    | ed in Section B-3, Process Description and Schematic, was supplied to the Department t changed. |  |  |  |  |  |  |
| Form Submitted:  |      | Form 26R  |  |  |  |  |  |  |
|  |      | Other (specify)   |  |  |  |  |  |  |
| Date Submitted:  |      |   |  |  |  |  |  |  |
| Name of Responsible Official   |      | Title Environmental Specialist  |  |  |  |  |  |  |
| Dina Brown   |      |   |  |  |  |  |  |  |
| Signature  | -2   | 50000 Date 2/28/11  |  |  |  |  |  |  |

| LAB ID: 08-00380<br>LAB ID: 39-00401 |  | <b>East</b><br>2566 P | rk Analytics, Ir<br>ern Division<br>ennsylvania Ave.<br>rre, PA 18840 | <b>1C.</b><br>Work Order: 10124000 |                |              |            |  |
|--------------------------------------|--|-----------------------|---|------------------------------------|----------------|--------------|------------|--|
|                                      |  |                       | (570) 888-0169<br>(570) 888-0717                                      |                                    |                |              |            |  |
| SEND DATA                            | TO:  |                       |   |                                    |                |              |            |  |
| NAME:                                | Dina Brown                                   |                       |   | W                                  | O#: 1012       | 4000         |            |  |
| COMPANY:                             | Talisman Energy USA, II                      | nc.                   |   | P/                                 | AGE: 1 of 4    | 4            |            |  |
| ADDRESS:                             | 337 Daniel Zenker Dr<br>Horseheads, NY 14845 |                       |   |                                    |                |              |            |  |
|                                      | 10130112003, 111 14040                       | •                     |   | P                                  | O#: AF 7       | 8737         |            |  |
| PHONE:<br>FAX:                       | (607) 562-4000<br>(607) 562-4001             | TE                    | ST REPORT   | P\                                 | WS ID#         | •            |            |  |
| J4H                                  | ł Well Pad                                   |                       |   |                                    |                |              |            |  |
| RECEIVED F                           | OR LAB BY: CMS                               | DATE                  | : 12/28/2010 13:50  |                                    |                | Pa           | age 1 of 4 |  |
| SAMPLE: Air                          | r Cuttings                                   |                       | Lab ID: 10124000-001A   | Grab                               |                |              |            |  |
|                                      | D BY: DJD                                    | Sam                   | ple Time: 12/28/2010 9:45   |                                    |                |              |            |  |
| Test                                 |  | Result                | Method  | SLOQ                               | Analysis Start | Analysis End | Anaivst *  |  |
|                                      | oleum Hydrocarbons                           | <190 mg/Kg            | EPA 9071  | 190                                | 12/29/10 15:10 | 12/29/10     |            |  |
| Sample                               | Note: Analysis performed by I                | Aicrobac Laboratories | s, Inc-Erie Division.   |                                    |                |              |            |  |
| SAMPLE: Air                          | r Cuttings                                   |                       | Lab ID: 10124000-001B   | Grab                               |                |              |            |  |
| SAMPLE                               | D BY: DJD                                    | Samj                  | ple Time: 12/28/2010 9:45   | 01.00                              |                |              |            |  |
| Test                                 |  | Result                | Method  | <u>SLOQ</u>                        | Analysis Start | Analysis End | Analyst *  |  |
| Moisture                             |  | 71.4 %                | Moisture Calc.  | 0.01                               | 01/03/11 11:30 | 01/04/11     | KMF-SA     |  |
| Free Liqui                           | id   | < 0.1 %               | EPA 9095A   | 0.1                                | 12/28/10 17:05 | 12/28/10     | IC-SA      |  |
| рН                                   |  | 12.24@19.8°C          | EPA 9045C   |                                    | 12/29/10 11:41 | 12/29/10     | SG-SA      |  |
| SAMPLE: Air                          | r Cuttings                                   |                       | Lab ID: 10124000-001C   | Grab                               |                |              |            |  |
| SAMPLE                               | D BY: DJD                                    | Samj                  | ple Time: 12/28/2010 9:45   | er oo                              |                |              |            |  |
| Test                                 |  | Result                | Method  | <u>sloq</u>                        | 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 C                              | Chloride                                     | 43.7 mg/L             | EPA 300.0   | 25.0                               | 01/07/11 15:12 | 01/07/11     | HDP-CV     |  |
| ASTMD pl                             | н  | 12.25 @ 19.3°C        | SM4500H+B   |                                    | 01/07/11 14:22 | 01/07/11     | LTW-CV     |  |
| Cyanide, F                           | Reactive                                     | < 0.2 mg/Kg           | SW 7.3.3.2  | 0.2                                | 01/06/11 9:28  | 01/07/11     | HDP-CV     |  |
| Reactive S                           | Sulfide                                      | < 64 mg/Kg            | SW846 7.3   | 64                                 | 01/10/11 8:55  | 01/10/11     | LTW-CV     |  |
| SAMPLE: TC                           | LP Leachate of Air Cutting                   | IS                    | Lab ID: 10124000-001E   | Grab                               |                |              |            |  |
| SAMPLE                               | D BY: DJD                                    | Samj                  | ple Time: 12/29/2010 8:00   | 81.00                              |                |              |            |  |
| Test                                 |  | Result                | Method  | SLOQ                               | Analysis Start | Analysis End | Analyst *  |  |
|                                      | TCLP extracted                               | < 0.0008 mg/L         | EPA 7470A   | 0.0008                             | 12/30/10 11:30 | 01/03/11     | KW-CV      |  |
| •                                    | TCLP extracted                               | < 0.500 mg/L          | EPA 6010B   | 0.500                              | 12/30/10 9:30  | 01/03/11     | GSR-CV     |  |
| Barium - T                           | TCLP extracted                               | < 10.00 mg/L          | EPA 6010B   | 10.00                              | 12/30/10 9:30  | 01/03/11     | GSR-CV     |  |
|                                      |  |                       |   |                                    |                |              |            |  |

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

SEND DATA TO:

NAME:

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

2566 Pennsylvania Ave. Sayre, PA 18840

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

### Work Order: 10124000

WO#: 10124000 PAGE: 2 of 4 PO#: AF 78737 **PWS ID#** 

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

ADDRESS: 337 Daniel Zenker Dr

Dina Brown

COMPANY: Talisman Energy USA, Inc.

Horseheads, NY 14845

# **TEST REPORT**

| EIVED FOR LAB BY: CMS   | DATE   | : 12/28/2010 13:50  |  |  | Р  | age 2 of  |
|---|--|---|--|--|--|---|
| Cadmium - TCLP extracted  | < 0.100 mg/L   | EPA 6010B   | 0.100  | 12/30/10 9:30  | 01/03/11   | GSR-C   |
| Chromium - TCLP extracted   | < 0.500 mg/L   | EPA 6010B   | 0.500  | 12/30/10 9:30  | 01/03/11   | GSR-C   |
| Copper - TCLP extracted   | < 0.100 mg/L   | EPA 6010B   | 0.100  | 12/30/10 9:30  | 01/03/11   | GSR-C   |
| Lead - TCLP extracted   | < 0.500 mg/L   | EPA 6010B   | 0.500  | 12/30/10 9:30  | 01/03/11   | GSR-C   |
| Nickel - TCLP extracted   | < 0.100 mg/L   | EPA 6010B   | 0.100  | 12/30/10 9:30  | 01/03/11   | GSR-C   |
| Selenium - TCLP extracted   | < 0.500 mg/L   | EPA 6010B   | 0.500  | 12/30/10 9:30  | 01/03/11   | GSR-C   |
| Silver - TCLP extracted   | < 0.100 mg/L   | EPA 6010B   | 0.100  | 12/30/10 9:30  | 01/03/11   | GSR-C   |
| Strontium - TCLP extracted  | 3.02 mg/L  | L EPA 6010B   | 0.050  | 12/30/10 9:30  | 01/03/11   | GSR-C   |
| Zinc - TCLP extracted   | < 0.200 mg/L   | EPA 6010B   | 0.200  | 12/30/10 9:30  | 01/03/11   | GSR-C   |
| PLE: TCLP Leachate of Air Cutt  | inas   | Lab ID: 10124000-001F   | Grab   |  |  |   |
| SAMPLED BY:   | -  | ble Time: 01/06/2011 8:00   |  |  |  |   |
|   | Comp   |   | <u>SLOQ</u>  |  |  |   |
| Test  | Result   | Method  |  | Analysis Start   | Analysis End   | <u>Analys</u>   |
| Pyridine  | < 0.10 mg/L  | EPA 8270C   | 0.10   | 01/10/11 10:20   | 01/10/11   | RHH-S   |
| 1,4-Dichlorobenzene   | < 0.10 mg/L  | EPA 8270C   | 0.10   | 01/10/11 10:20   | 01/10/11   | RHH-8   |
|   |  |   |  | 04/40/44 40 00   | 01/10/11   | RHH-S   |
| o-Cresol  | < 0.10 mg/L  | EPA 8270C   | 0.10   | 01/10/11 10:20   | 01/10/11   | 12101-2   |
| •   | < 0.10 mg/L<br>< 0.10 mg/L   | EPA 8270C<br>EPA 8270C  | 0.10<br>0.10   | 01/10/11 10:20   | 01/10/11   |   |
| o-Cresol  | •  |   |  |  |  | RHH-S   |
| o-Cresol<br>p-Cresol/m-Cresol   | < 0.10 mg/L  | EPA 8270C   | 0.10   | 01/10/11 10:20   | 01/10/11   | RHH-S   |
| o-Cresol<br>p-Cresol/m-Cresol<br>Hexachloroethane   | < 0.10 mg/L<br>< 0.10 mg/L   | EPA 8270C<br>EPA 8270C  | 0.10<br>0.10   | 01/10/11 10:20<br>01/10/11 10:20   | 01/10/11<br>01/10/11   | RHH-S<br>RHH-S<br>RHH-S   |
| o-Cresol<br>p-Cresol/m-Cresol<br>Hexachloroethane<br>Nitrobenzene   | < 0.10 mg/L<br>< 0.10 mg/L<br>< 0.10 mg/L  | EPA 8270C<br>EPA 8270C<br>EPA 8270C   | 0.10<br>0.10<br>0.10                                 | 01/10/11 10:20<br>01/10/11 10:20<br>01/10/11 10:20   | 01/10/11<br>01/10/11<br>01/10/11                                     | RHH-S<br>RHH-S<br>RHH-S<br>RHH-S  |
| o-Cresol<br>p-Cresol/m-Cresol<br>Hexachloroethane<br>Nitrobenzene<br>Hexachlorobutadiene  | < 0.10 mg/L<br>< 0.10 mg/L<br>< 0.10 mg/L<br>< 0.10 mg/L   | EPA 8270C<br>EPA 8270C<br>EPA 8270C<br>EPA 8270C  | 0.10<br>0.10<br>0.10<br>0.10                         | 01/10/11 10:20<br>01/10/11 10:20<br>01/10/11 10:20<br>01/10/11 10:20   | 01/10/11<br>01/10/11<br>01/10/11<br>01/10/11                         | RHH-S<br>RHH-S<br>RHH-S<br>RHH-S<br>RHH-S                                     |
| o-Cresol<br>p-Cresol/m-Cresol<br>Hexachloroethane<br>Nitrobenzene<br>Hexachlorobutadiene<br>2,4,6-Trichlorophenol   | < 0.10 mg/L<br>< 0.10 mg/L<br>< 0.10 mg/L<br>< 0.10 mg/L<br>< 0.10 mg/L<br>< 0.10 mg/L                               | EPA 8270C<br>EPA 8270C<br>EPA 8270C<br>EPA 8270C<br>EPA 8270C                           | 0.10<br>0.10<br>0.10<br>0.10<br>0.10                 | 01/10/11 10:20<br>01/10/11 10:20<br>01/10/11 10:20<br>01/10/11 10:20<br>01/10/11 10:20                                     | 01/10/11<br>01/10/11<br>01/10/11<br>01/10/11<br>01/10/11             | RHH-S<br>RHH-S<br>RHH-S<br>RHH-S<br>RHH-S<br>RHH-S                            |
| o-Cresol<br>p-Cresol/m-Cresol<br>Hexachloroethane<br>Nitrobenzene<br>Hexachlorobutadiene<br>2,4,6-Trichlorophenol<br>2,4,5-Trichlorophenol                      | < 0.10 mg/L<br>< 0.10 mg/L<br>< 0.10 mg/L<br>< 0.10 mg/L<br>< 0.10 mg/L<br>< 0.10 mg/L                               | EPA 8270C<br>EPA 8270C<br>EPA 8270C<br>EPA 8270C<br>EPA 8270C<br>EPA 8270C              | 0.10<br>0.10<br>0.10<br>0.10<br>0.10<br>0.10         | 01/10/11 10:20<br>01/10/11 10:20<br>01/10/11 10:20<br>01/10/11 10:20<br>01/10/11 10:20<br>01/10/11 10:20                   | 01/10/11<br>01/10/11<br>01/10/11<br>01/10/11<br>01/10/11<br>01/10/11 | RHH-S<br>RHH-S<br>RHH-S<br>RHH-S<br>RHH-S<br>RHH-S                            |
| o-Cresol<br>p-Cresol/m-Cresol<br>Hexachloroethane<br>Nitrobenzene<br>Hexachlorobutadiene<br>2,4,6-Trichlorophenol<br>2,4,5-Trichlorophenol<br>Pentachlorophenol | < 0.10 mg/L<br>< 0.10 mg/L<br>< 0.10 mg/L<br>< 0.10 mg/L<br>< 0.10 mg/L<br>< 0.10 mg/L<br>< 0.10 mg/L<br>< 0.50 mg/L | EPA 8270C<br>EPA 8270C<br>EPA 8270C<br>EPA 8270C<br>EPA 8270C<br>EPA 8270C<br>EPA 8270C | 0.10<br>0.10<br>0.10<br>0.10<br>0.10<br>0.10<br>0.50 | 01/10/11 10:20<br>01/10/11 10:20<br>01/10/11 10:20<br>01/10/11 10:20<br>01/10/11 10:20<br>01/10/11 10:20<br>01/10/11 10:20 | 01/10/11<br>01/10/11<br>01/10/11<br>01/10/11<br>01/10/11<br>01/10/11 | RHH-S<br>RHH-S<br>RHH-S<br>RHH-S<br>RHH-S<br>RHH-S<br>RHH-S<br>RHH-S<br>RHH-S |

#### **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

Value above calibration range but within annually verified linear range L  $\sim$ 

MANAGER

| Carrie M. Davis | 11  |      |       |
|-----------------|-----|------|-------|
|                 | lan | ; M. | Davis |

DATE:

1/12/2011

RECEIVED FOR LAB BY: CMS

## Benchmark Analytics, Inc.

Eastern Division

2566 Pennsylvania Ave. Sayre, PA 18840

Work Order: 10124000

Page 3 of 4

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

DATE: 12/28/2010 13:50

| SEND DATA      | TO:   |              |             |         |          |
|----------------|---|--------------|-------------|---------|----------|
| NAME:          | Dina Brown  |              |             | WO#:    | 10124000 |
| ADDRESS:       | Talisman Energy USA, Inc.<br>337 Daniel Zenker Dr | ;            |             | PAGE:   | 3 of 4   |
|                | Horseheads, NY 14845                              |              |             | PO#:    | AF 78737 |
| PHONE:<br>FAX: | (607) 562-4000<br>(607) 562-4001                  |              | TEST REPORT | PWS ID# |          |
| J4ł            | H Well Pad  | الشدواي دوري |             |         |          |

SAMPLE: TCLP Leachate of Air Cuttings Lab ID: 10124000-001G Grab SAMPLED BY: Sample Time: 01/06/2011 8:00 SLOQ Test Result Method Analysis Start Analysis End Analyst\* < 0.0250 mg/L 0.0250 EPA 8260B 01/07/11 9:22 01/07/11 Benzene CTM-SA < 0.0250 mg/L 01/07/11 9:22 Carbon tetrachloride EPA 8260B 0.0250 01/07/11 CTM-SA < 0.0250 mg/L 01/07/11 9:22 01/07/11 Chlorobenzene EPA 8260B 0.0250 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 < 0.0250 mg/L EPA 8260B 0.0250 01/07/11 9:22 01/07/11 CTM-SA 1,1-Dichloroethene Ethylbenzene < 0.0250 mg/L EPA 8260B 0.0250 01/07/11 9:22 01/07/11 CTM-SA 0.0250 01/07/11 9:22 < 0.0250 mg/L EPA 8260B 01/07/11 Isopropylbenzene CTM-SA 0.0260 mg/L 01/07/11 9:22 Tetrachloroethene EPA 8260B 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 < 0.0250 mg/L 01/07/11 9:22 1,2,4-Trimethylbenzene EPA 8260B 0.0250 01/07/11 CTM-SA < 0.0250 mg/L 1,3,5-Trimethylbenzene EPA 8260B 0.0250 01/07/11 9:22 01/07/11 CTM-SA < 0.0250 mg/L Vinyl chloride 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 < 0.0500 mg/L EPA 8260B 0.0500 01/07/11 9:22 01/07/11 2-Butanone CTM-SA Lab ID: 10124000-001H SAMPLE: Air Cuttings Grab SAMPLED BY: DJD Sample Time: 12/29/2010 8:00 SLOQ Test Result Method 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

Value above calibration range but within annually verified linear range L

MANAGER

ani M. Davis

DATE:

1/12/2011

| LAB ID: 08-00380<br>LAB ID: 39-00401                             | Benchmark Analytics, Inc<br>Eastern Division<br>2566 Pennsylvania Ave.<br>Sayre, PA 18840 | 2.     | Work Order: 10124000          |                                    |  |  |
|--|---|--------|-------------------------------|------------------------------------|--|--|
|  | Phone: (570) 888-0169<br>Fax: (570) 888-0717  |        |                               |                                    |  |  |
| SEND DATA TO:  |   |        |                               |                                    |  |  |
| NAME: Dina Brown   |   | WO#:   | 1012                          | 4000                               |  |  |
| COMPANY: Talisman Energy USA<br>ADDRESS: 337 Daniel Zenker Dr    | , Inc.  | PAGE:  | 4 of                          | 4                                  |  |  |
| Horseheads, NY 1484  | 45  | PO#    | PO#: AF 78737                 |                                    |  |  |
| PHONE: (607) 562-4000<br>FAX: (607) 562-4001                     | TEST REPORT   | PWS ID | #                             |                                    |  |  |
| J4H Well Pad   |   |        |                               |                                    |  |  |
| RECEIVED FOR LAB BY: CMS   | DATE: 12/28/2010 13:50  |        |                               | Page 4 of 4                        |  |  |
| SAMPLE: Air Cuttings<br>SAMPLED BY: DJD                          | Sample Time: 12/29/2010 8:00  | Grab   |                               |                                    |  |  |
| <u>Test</u><br>Ignitability<br>Sample Note: Analysis performed t | Result Method Negative AS IS SW846 1030   |        | <u>sis Start</u><br>/11 14:00 | Analysis End Analyst *<br>01/07/11 |  |  |

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

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L Value above calibration range but within annually verified linear range

MANAGER

| Canie | М. | Davis |
|-------|----|-------|
|       |    |       |

DATE: 1/12/2011

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| CHAIN OF CUSTODY                           |          |               |               |              |          |                    |   | PAGE1               | _OF1                            |
|--|----------|---------------|---------------|--------------|----------|--------------------|---|---------------------|---------------------------------|
| EPORT TO: Talisman / UEG                   |          |               |               |              |          |                    |   |                     |                                 |
| jeowetlands@aol.com                        | 1        |               |               |              | W        | /0;                | ¢; 10124000   | ARE SPECIAL DETEC   |                                 |
| wollin@rallysolutions.ca                   | REFR     | liger.        |               |              |          |                    | KESULTS ARE BEING USED FOR:   |                     |                                 |
|  |          | R COL         |               |              |          |                    | DRINKING WATER SL SLUDGE NYDOH NYDEC FADEP  | IF YES, PLEASE ATTA |                                 |
| DING BROWN                                 | 4        |               |               |              |          | / GY               | GROUND WATER SO SOIL<br>SURFACE WATER HZ HAZARDOUS LANDFILL   | TES                 |                                 |
|  | Ţ        | RANS<br>TC    |               |              | /        | / WW               | WASTE WATER OTHER<br>DEIONIZED WATER DI DISTILLED WATER PERSONAL OTHER  | IF YES, PLEASE ATTA |                                 |
| H# 400-0015 724-814-5321                   | -  u     | ABOR/         | -             | 1            |          |                    | / /H HYDROCHLORIC ACID OH SODIUM HYDROXIDE  | T 15                | CH REQUIREMEN                   |
| ILL TO: Talisman                           | -  I     | N COC<br>WITH |               |              | /        | Come of the second | S SULFURIC ACID AS ASCORBIC ACID<br>N NITRIC ACID AC ACETIC ACID  | 📲                   |                                 |
|  | -        |               |               | _/           | ' L      | <u>§</u> [/        | SO, SODIUM SULFITE NH, AMMONIUM CHLORIDE  | <b>E B</b>          |                                 |
| O# AF # AF 78737                           | ]        | /             | 1             | , /          | Į į      | ¥ .                | - NONE Hg MERCURIC CHLORIDE   |                     | no All out -II                  |
| SCRIPTION /1 Pad                           |          | 19            |               | [È.          | /2       | 7                  | ム An incomplete chain of custody may delay the ろ  | eppli               | se fill out all<br>icable areas |
| AMPLER SIGNATURE / AFFILIATION             | =k /     | 3             | \$<br>\$      | ¥.           | 5        | \$                 | F processing of your companyer.   | β cc                | mpletely                        |
| ONTAINER SAMPLING POINT,<br>JAL Shole 6111 | 1/\$     | THE           | Sure Sune Inc | Same Marrier | ALL TREE | Pares MITULS       | SO, SODIUM SULFITE       NH, AMMONIUM CHLORIDE         Thio SODIUM THIOSULFATE       ZN ZINC ACETATE         - NONE       Hg         MERCURIC CHLORIDE       S         4       An incomplete chain of custody may delay the processing of your sample(s).         ANALYSIS TO BE PERFORMED (PER CONTAMER)       S | LAB USE             | ONLY                            |
| 1 Air Cuttings                             | P/19/    | 9:45          | SO            | G            | THE      | UNE                |   | -001A               | -8                              |
| 2  |          | 2             |               |              |          |                    | pH, Chlorides, Sodium   |                     |                                 |
| 3  |          |               |               |              |          |                    | TCLP 8 RCRA Metals + Cu, Ni, Zn   |                     |                                 |
| A-TPH                                      |          |               |               |              |          |                    | Free Liquids / % Moisture   |                     |                                 |
| 5 B-wetchem                                |          |               |               |              |          |                    |   |                     |                                 |
| · C - Anion Metals Ac                      | Smp      | 1.01          | R             | EN           |          |                    | TCLP 8260 / 8270 ONLY IF the TPH  |                     |                                 |
| 1 D-Total Sample                           |          | ĺ             |               | <u> </u>     |          |                    | exceeds 120,000 mg/Kg   |                     |                                 |
| BE-TCLPMetals                              |          |               | ļ             | ļ            |          |                    |   |                     |                                 |
| P- SANDTCUP                                |          | ļ             | ļ             | <u> </u>     | <u> </u> | <u> </u>           | HOUR TURNAROUND   |                     |                                 |
| 10 G- BLOTCLP                              | _        |               | L             | ļ            | <u> </u> | <u> </u>           | 7-19 Day TURNAROUND   |                     |                                 |
| 11/I- In                                   | <u> </u> | Ļ             | L_            | <u> </u>     | <u></u>  | 1                  | due [/5/1]  |                     |                                 |
|  | avid S   | T.D           |               | <u>ko</u>    |          |                    |   | ℃ ARRIVAI           |                                 |
| RELINQUISHED BY: Daw Allent                | ·<br>·   |               |               | 701          |          |                    | SOP RECEIVED BY:  | DATE:               | TIME:                           |
| RELINQUISHED BY:                           |          |               | ATE:          | nU'          | 14       | TIME:              | RECEIVED BY:  | DATE:               | TIME:                           |
| RELINQUISHED BY:                           |          |               |               |              |          | TIME:              | RECEIVED BY: Ma An M Day  |                     | THAT                            |
|  |          | <u>ا</u>      | ATE:          | 1            | 1        | INVIC.             | TOURING THE VOAD WILL X/MIL   | ME: BID             | TIME: 1352                      |

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

| typed or l<br>each atta  | legib<br>ache  | ust be fully and accurate<br>bly printed in the spaces p<br>d sheet as Form 26R, re<br>e date on attached sheets   | tify 🛛   |  |                   |  | NLY<br>neral Notes              |               |                              |
|--|--|--|--|--|-------------------|--|---------------------------------|---------------|------------------------------|
| General F  | Refe   | ence 287.54  |  |  |                   |  |                                 |               |                              |
| Date Prep  | bared  | d/Revised Febru  | iary 11, 2011  |  |                   |  |                                 |               |                              |
|  | _  |  | LIENT (GENERATOR   | R OF THE WASTE) IN   | IFO               | RMAT   | <b>O</b> Ň                      |               |                              |
| Company  |  | ne<br>ergy USA Inc.  |  |  |                   |  |                                 |               |                              |
|  |  | y, Name of Parent Compar   |  |  |                   |  | EPA                             | Genera        | ator ID#                     |
| Talisman   | Ene  | ergy Inc.  |  | •  |                   |  | N/A                             |               |                              |
| Company  |  | ling Address Line 1  | C  | ompany Malling Addres  | ss Liı            | ne 2   |                                 |               |                              |
|  |  | fress Last Line – City   | State  | Zip+4  |                   | Phone  |                                 |               | Ext                          |
| Warrenda   | ale  | _  | PA   | 15086  |                   | (724) 81   |                                 |               |                              |
| Company  | Cor  | itact Last Name  | First Name<br>Dina   | MI   |                   |  | Suffix                          | C             |                              |
| Municipal  | lity   |  |  | County   |                   |  |                                 |               |                              |
| Warrenda   |  |  |  | Allegheny  |                   |  |                                 |               |                              |
| Contact P<br>(724) 814   |  |  | Contact Email Address<br>lybrown@talismanusa.c   | om   |                   |  |                                 |               |                              |
|  |  | enerated at the Company  |  |  |                   |  | Π                               | Yes           | No No                        |
| lf 'No', de  | scril  | be location of waste gener   | ation and storage. Drill c   | uttings are generated du   | uring I           | natural g  | as drilli                       | ng ope        | rations at                   |
| the<br>in containe   |  | -001) well pad site located a  | t 765 Peackham Hill Road   | l, Columbia Township, Bi   | radfoi            | rd County  | /, PA.                          | The wa        | aste is stored               |
|  |  |  |  |  |                   |  |                                 |               |                              |
| Municipal  |  | Columbia   | County Bradfo  | ord  |                   | Stat   | e                               | PA            |                              |
|  |  | Columbi <u>a</u>   | County Bradfo  |  |                   |  | <u>e</u>                        | PA            |                              |
| Municipal<br>Residua   | lity<br>al   | Columbia<br>S<br>Residua   | ECTION B. WAST   | E DESCRIPTION  |                   | Unit of  |                                 | PA            | Time                         |
| Municipal<br>Residua<br>Waste Co   | lity<br>al   | Columbia<br>S<br>Residua<br>Code Des   | ECTION B. WAST   | E DESCRIPTION<br>Amount  |                   |  |                                 |               | Time<br>Frame                |
| Municipal<br>Residua   | lity<br>al   | Columbia<br>S<br>Residua   | ECTION B. WAST<br>I Waste<br>scription<br>s)   | E DESCRIPTION<br>Amount<br>4,981   |                   | Unit of<br>Measure   |                                 |               |                              |
| Municipal<br>Residua<br>Waste Co<br>810  | lity<br>al<br>ode  | Columbia<br>S<br>Residua<br>Code Des<br>Drill cuttings (oil and gas  | ECTION B. WAST<br>Waste<br>coription<br>s)<br>1. GENERAL P   | E DESCRIPTION<br>Amount<br>4,981<br>ROPERTIES  | Cu<br>D Ib        | Unit of<br>Measure   | ] gal                           |               | Frame                        |
| Municipal<br>Residua<br>Waste Co<br>810<br>a. ph   | lity<br>al<br>ode  | Columbia<br>S<br>Residua<br>Code Des<br>Drill cuttings (oil and gas<br>nge 6.29  | SECTION B. WAST<br>Waste<br>coription<br>s)<br>1. GENERAL P<br>to 12.07  | E DESCRIPTION<br>Amount<br>4,981<br>ROPERTIES<br>(based on analyses or k   | Cu<br>D Ib        | Unit of<br>Measure   | ] gal                           |               | Frame                        |
| Municipal<br>Residua<br>Waste Co<br>810<br>a. ph   | lity<br>al<br>ode  | Columbia<br>S<br>Residua<br>Code Des<br>Drill cuttings (oil and gas  | ECTION B. WAST<br>Waste<br>coription<br>s)<br>1. GENERAL P   | E DESCRIPTION<br>Amount<br>4,981<br>ROPERTIES<br>(based on analyses or k<br>thod 9095)   | Cu<br>D Ib        | Unit of<br>Measure   | ] gal                           |               | Frame                        |
| Municipal<br>Residua<br>Waste Co<br>810<br>a. ph<br>b. Ph  | lity<br>al<br>ode<br>H Ra<br>nysic   | Columbia<br>S<br>Residua<br>Code Des<br>Drill cuttings (oil and gas<br>nge 6.29<br>cal State   | Solid (EPA Method 905<br>Gas (ambient temperat   | E DESCRIPTION<br>Amount<br>4,981<br>ROPERTIES<br>(based on analyses or k<br>thod 9095)<br>95)<br>ture & pressure)  | nowle             | Unit of<br>Measure<br>yd<br>(yd)                               | ] gal<br>] ton                  |               | Frame<br>One Time            |
| Municipal<br>Residua<br>Waste Co<br>810<br>a. ph<br>b. Ph  | lity<br>al<br>ode<br>H Ra<br>nysic   | Columbia S Residua Code Des Drill cuttings (oil and gas nge 6.29 cal State Cate   | ECTION B. WAST<br>Waste<br>scription<br>s)<br>1. GENERAL P<br>to 12.07<br>↓ Liquid Waste (EPA Me<br>Solid (EPA Method 909<br>Gas (ambient temperation<br>Greyish Black   | E DESCRIPTION<br>Amount<br>4,981<br>ROPERTIES<br>(based on analyses or k<br>thod 9095)<br>95)<br>ture & pressure)<br>Odo   | nowle             | Unit of<br>Measure<br>yd<br>edge)<br>Earthy /                  | ] gal<br>] ton                  |               | Frame<br>One Time            |
| Municipal<br>Residua<br>Waste Co<br>810<br>a. ph<br>b. Ph  | lity<br>al<br>ode<br>H Ra<br>nysic   | Columbia   | ECTION B. WAST<br>Waste<br>scription<br>s)<br>1. GENERAL P<br>to 12.07<br>Liquid Waste (EPA Me<br>Solid (EPA Method 909<br>Gas (ambient temperat<br>color <u>Greyish Black</u><br>Jumber of Solld or Liquid  | E DESCRIPTION<br>Amount<br>4,981<br>ROPERTIES<br>(based on analyses or k<br>thod 9095)<br>95)<br>ture & pressure)<br>Odo<br>I Phases of Separation   | nowle             | Unit of<br>Measure<br>yd<br>edge)<br>Earthy /<br>One           | ] gal<br>] ton<br>Slight        |               | Frame<br>One Time            |
| Municipal<br>Residua<br>Waste Co<br>810<br>a. ph<br>b. Ph  | lity<br>al<br>ode<br>H Ra<br>nysic   | Columbia   | ECTION B. WAST<br>Waste<br>scription<br>s)<br>1. GENERAL P<br>to 12.07<br>Liquid Waste (EPA Me<br>Solid (EPA Method 909<br>Gas (ambient temperat<br>color <u>Greyish Black</u><br>Jumber of Solld or Liquic<br>Describe each phase of s  | E DESCRIPTION<br>Amount<br>4,981<br>ROPERTIES<br>(based on analyses or k<br>thod 9095)<br>95)<br>ture & pressure)<br>Odo<br>I Phases of Separation<br>eparation. Soil and Ro   | nowle             | Unit of<br>Measure<br>yd<br>edge)<br>Earthy /<br>One           | ] gal<br>] ton<br>Slight        |               | Frame<br>One Time            |
| Municipal<br>Residua<br>Waste Co<br>810<br>a. ph<br>b. Ph<br>c. Ph   | lity<br>al<br>ode<br>H Ra<br>nysic   | Columbia  Residual Code Des  Drill cuttings (oil and gas  nge 6.29 cal State  cal Appearance  Cal Appearance | ECTION B. WAST<br>Waste<br>cription<br>s)<br>1. GENERAL P<br>to 12.07<br>Liquid Waste (EPA Me<br>Solid (EPA Method 909<br>Gas (ambient temperal<br>Solid (EPA Method 909<br>Gas (ambient temperal<br>Color Greyish Black<br>lumber of Solid or Liquic<br>Describe each phase of s<br>2. CHEMICAL ANALYS                                      | E DESCRIPTION Amount 4,981 ROPERTIES (based on analyses or k thod 9095) 95) ture & pressure) Odo Phases of Separation eparation. Soil and Ro Sis ATTACHMENTS   | cu<br>lb<br>nowle | Unit of<br>Measure<br>yd<br>edge)<br>Earthy /<br>One           | gal<br>] gal<br>] ton<br>Slight | Petrol        | Frame<br>One Time<br>leum    |
| Municipal<br>Residua<br>Waste Co<br>810<br>a. ph<br>b. Ph<br>c. Ph<br>c. Ph                                  | lity<br>al<br>ode<br>H Ra<br>nysic   | Columbia   | ECTION B. WAST<br>Waste<br>cription<br>s)<br>1. GENERAL P<br>to 12.07<br>Liquid Waste (EPA Me<br>Solid (EPA Method 909<br>Gas (ambient temperal<br>Solid (EPA Method 909<br>Gas (ambient temperal<br>Color Greyish Black<br>lumber of Solid or Liquic<br>Describe each phase of s<br>2. CHEMICAL ANALYS                                      | E DESCRIPTION Amount 4,981 ROPERTIES (based on analyses or k thod 9095) 95) ture & pressure) Odo Phases of Separation eparation. Soil and Ro Sis ATTACHMENTS   | cu<br>lb<br>nowle | Unit of<br>Measure<br>yd<br>edge)<br>Earthy /<br>One           | gal<br>] gal<br>] ton<br>Slight |               | Frame<br>One Time            |
| Municipal<br>Residua<br>Waste Co<br>810<br>a. ph<br>b. Ph<br>c. Ph<br>c. Ph                                  | lity<br>al<br>ode<br>H Ra<br>nysic<br>nysic  | Columbia  Residual Code Des  Drill cuttings (oil and gas  nge 6.29 cal State  cal Appearance  sults of a detailed chemica ctions, is attached.  iled description of the was  | ECTION B. WAST<br>Waste<br>cription<br>s)<br>1. GENERAL P<br>to 12.07<br>Liquid Waste (EPA Me<br>Solid (EPA Method 909<br>Gas (ambient temperal<br>Color Greyish Black<br>Jumber of Solid or Liquic<br>Describe each phase of s<br>2. CHEMICAL ANALYS<br>al characterization of the<br>ste sampling method is a                              | E DESCRIPTION Amount 4,981 ROPERTIES (based on analyses or k thod 9095) 95) ture & pressure) Odo Phases of Separation eparation. Soil and Ro Sis ATTACHMENTS waste, as described in tttached.                          | nowle<br>nowle    | Unit of<br>Measure<br>yd<br>dge)<br>Earthy /<br>One<br>ragment | s<br>Slight<br>s                | Petrol<br>Yes | Frame One Time leum No No No |
| Municipal<br>Residua<br>Waste Co<br>810<br>a. ph<br>b. Ph<br>c. Ph<br>c. Ph<br>c. Th<br>ins<br>b. A          | lity<br>al<br>ode<br>H Ra<br>nysic<br>nysic<br>ne re<br>struc<br>deta<br>ne qu                 | Columbia  Residual Code Des  Drill cuttings (oil and gas  nge 6.29 cal State  cal Appearance  sults of a detailed chemic ctions, is attached.  iled description of the was cality assurance/quality co   | ECTION B. WAST<br>Waste<br>cription<br>s)<br>1. GENERAL P<br>to 12.07<br>Liquid Waste (EPA Me<br>Solid (EPA Method 909<br>Gas (ambient temperal<br>Color Greyish Black<br>Jumber of Solid or Liquic<br>Describe each phase of s<br>2. CHEMICAL ANALYS<br>al characterization of the<br>ste sampling method is a                              | E DESCRIPTION Amount 4,981 ROPERTIES (based on analyses or k thod 9095) 95) ture & pressure) Odo Phases of Separation eparation. Soil and Ro Sis ATTACHMENTS waste, as described in tttached.                          | nowle<br>nowle    | Unit of<br>Measure<br>yd<br>dge)<br>Earthy /<br>One<br>ragment | s<br>Slight<br>s                | Petrol        | Frame One Time leum No       |
| Municipal<br>Residua<br>Waste Co<br>810<br>a. ph<br>b. Ph<br>c. Ph<br>c. Ph<br>ins<br>b. A f<br>c. Th<br>att | lity<br>al<br>ode<br>H Ra<br>nysic<br>nysic<br>nysic<br>e re<br>struc<br>deta<br>ne qu<br>tach | Columbia  Residual Code Des  Drill cuttings (oil and gas  nge 6.29 cal State  cal Appearance  sults of a detailed chemic ctions, is attached.  iled description of the was cality assurance/quality co   | ECTION B. WAST<br>Waste<br>cription<br>s)<br>1. GENERAL P<br>to 12.07<br>Liquid Waste (EPA Me<br>Solid (EPA Method 900<br>Gas (ambient temperal<br>Color Greyish Black<br>Jumber of Solld or Liquid<br>Describe each phase of so<br>2. CHEMICAL ANALYS<br>al characterization of the<br>ste sampling method is a<br>antrol procedures employ | E DESCRIPTION Amount 4,981 ROPERTIES (based on analyses or k thod 9095) 95) ture & pressure) Odo Phases of Separation eparation. Soil and Ro Sis ATTACHMENTS waste, as described in ittached. yed by the laboratory(ie | nowle<br>nowle    | Unit of<br>Measure<br>yd<br>dge)<br>Earthy /<br>One<br>ragment | Slight                          | Petrol<br>Yes | Frame One Time leum No No No |

|       | 3  | PROCESS DESCRIPTION                   | & SCHEMATIC ATTA                                  | CHMENTS   |              | den statutet. |
|-------|--|---------------------------------------|---|---|--------------|---------------|
| a.    | A detailed description of the the waste, as specified in the     | e instructions, is attached           | i   |   | 🛛 Yes        | No No         |
| b.    | A schematic of the manufact<br>as specified in the instruction   | ns, is attached.                      |   | -   | X Yes        | 🗌 No          |
| C.    | If portions of the information<br>a confidentiality claim, as de |                                       |   | on for 📋 Yes  | No No        | 🛛 N/A         |
|       | SECTI  | ON C. MANAGEMI                        | 000400/080405569900000000000000000000000000000000 | esta da la companya de la companya da companya da companya da companya da companya da companya da companya da c |              |               |
|       |  | 1. PROCESSING OR [                    |   |   |              |               |
| The a | rea below (ad.) will accommo                                     | date the identification of            | two facilities. Attacl                            | h additional sheets   | if necessary | •             |
| a.    | Solid waste permit number(s<br>9-0232-00003                      | ) for processing or dispo             | osal facility being util                          | lized.  |              |               |
| b.    | Facility Name  | Hyland Landfill                       |   |   |              |               |
|       | Address Line 1   | 6653 Herdman Road                     |   | - Wit   |              |               |
|       | Address Line 1   |                                       |   |   |              |               |
|       | Address City State ZIP   | Angelica                              | NY  | 14709   |              |               |
|       | Municipality   | Angelica                              | County  | Allegany  |              |               |
| C.    | Facility Contact Name<br>Title                                   | Larry Shilling                        |   |   |              |               |
|       | Phone  | (585) 466-7271                        | Email Address                                     | larry.shilling@ca   | sella.com    |               |
| d.    | Volume of waste shipped to 3,148                                 | processing or disposal fa             | acility in the previous                           |   | 1            |               |
| a.    | Solid waste permit number(s<br>8-4630-00010                      | ) for processing or dispo             | sal facility being util                           | lized.  |              |               |
| 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<br>(585) 466-7271      | Email Address                                     | joe.boyles@case   | ella.com     | ····· .       |
| d.    | Volume of waste shipped to                                       | processing or disposal fa             | cility in the previous                            | s year.   |              |               |
|       | 1,549  | ] cuyd 🗌 gal                          | 🗌 lb 🛛 tor  | n (check one)   |              |               |
|       |  | 2. Bene                               | FICIAL USE  | •   |              |               |
| a.    | Has the waste been approve                                       | d for beneficial use?                 |   |   | Yes          | No No         |
|       | If "Yes", list the general pern                                  | nit number or approval nu             | umber.  |   |              |               |
| b.    | Volume of waste beneficially                                     |                                       |   | n (check one)   |              |               |
|       |  |                                       |   |   |              |               |

|          | 3.   | PROCESS DESCRIPTION        | & SCHEMATIC ATTA         | CHMENTS             |               | ·     |  |  |  |  |  |
|----------|--|----------------------------|--------------------------|---------------------|---------------|-------|--|--|--|--|--|
| a.       | A detailed description of the                  |                            |                          |                     | Yes           |       |  |  |  |  |  |
| }        | the waste, as specified in the                 | instructions, is attache   | d.                       |                     |               | _     |  |  |  |  |  |
| b.       | A schematic of the manufact                    |                            | ontrol processes pro     | ducing the waste,   | X Yes         | No No |  |  |  |  |  |
|          | as specified in the instructions, is attached. |                            |                          |                     |               |       |  |  |  |  |  |
| С.       |  |                            |                          |                     |               |       |  |  |  |  |  |
|          | a confidentiality claim, as de                 | scribed in the instructio  | ns, is attached.         |                     |               |       |  |  |  |  |  |
|          | SECTI  | ON C. MANAGEM              | ENT OF RESIDU            | JAL WASTE           |               |       |  |  |  |  |  |
|          |  | 1. PROCESSING OR           | DISPOSAL FACILITY(II     | ES)                 | 4.<br>        |       |  |  |  |  |  |
| The ar   | rea below (ad.) will accommo                   | late the identification of | two facilities. Attacl   | n additional sheets | if necessary. |       |  |  |  |  |  |
| a.       | Solid waste permit number(s<br>100361          | for processing or disp     | osal facility being util | ized.               |               |       |  |  |  |  |  |
| b.       | Facility Name                                  | McKean County Lan          | dfill                    |                     |               |       |  |  |  |  |  |
|          | 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@gm       | ail.com       |       |  |  |  |  |  |
| d.       | Volume of waste shipped to                     | processing or disposal f   | acility in the previous  | s year.             |               |       |  |  |  |  |  |
|          | 151  | cuyd 🛄 gal                 | 🗌 lb 🛛 tor               |                     | )             |       |  |  |  |  |  |
| a.       | Solid waste permit number(s)                   | for processing or disp     | osal facility being util | ized.               |               |       |  |  |  |  |  |
|          | 8-0728-00004                                   |                            |                          |                     |               |       |  |  |  |  |  |
| b.       | Facility Name                                  | Chemung County La          | ndfill                   |                     |               |       |  |  |  |  |  |
| <b>.</b> | Address Line 1                                 | 1690 Lake Street           |                          |                     |               |       |  |  |  |  |  |
|          | Address Line 1                                 | 1000 Lake Offeet           |                          | <u>.</u>            |               |       |  |  |  |  |  |
|          | Address City State ZIP                         | Elmira                     | NY                       | 14903               |               |       |  |  |  |  |  |
|          | Municipality                                   | Elmira                     | County                   | Chemung             |               |       |  |  |  |  |  |
| с.       | Facility Contact Name                          | Carla Canjar               |                          |                     |               |       |  |  |  |  |  |
| •••      | Title  | Environmental Mana         |                          | ·                   |               |       |  |  |  |  |  |
|          | Phone  | (585) 797-5941             | Email Address            | carla.canjar@ca     | sella com     |       |  |  |  |  |  |
| d.       | Volume of waste shipped to p                   | ( )                        | -                        | , 0                 |               |       |  |  |  |  |  |
| a.       | 133  | cu yd gal                  |                          |                     |               |       |  |  |  |  |  |
|          |  | 2. Bent                    | FICIAL USE               | 2                   |               |       |  |  |  |  |  |
| a.       | Has the waste been approved                    | for beneficial use?        |                          |                     | Yes           | 🛛 No  |  |  |  |  |  |
|          | If "Yes", list the general perm                | it number or approval n    | umber.                   |                     |               |       |  |  |  |  |  |
| b.       | Volume of waste beneficially                   |                            |                          |                     |               |       |  |  |  |  |  |
|          | 0 Ĺ  | cuyd 🗌 gal                 | 🗌 lb 📋 tor               | (check one)         |               |       |  |  |  |  |  |

ų.

|   |                                       | SECTION D. CERTIFICATION   |
|---|---------------------------------------|--|
| Report and all attached doct<br>obtaining the information, I<br>knowledge. I understand tha | nents and<br>erify that<br>the submis | versonally examined and am familiar with the information submitted in this Annual<br>that based upon my inquiry of those individuals immediately responsible for<br>the submitted information is true, accurate and complete to the best of my<br>ssion of false information herein is made subject to the penalties of 18 Pa. C.S.<br>authorities, which include fine and imprisonment. |
| Check the following, if applica   | le:                                   |  |
| I certify the information   | •                                     | n Section B-1, General Properties was supplied to the Department for the year  |
| Form Submitted:   | Form                                  | 1 26R  |
|   | Othe                                  | r (specify)  |
| Date Submitted:   |                                       |  |
| I certify the information   |                                       | n Section B-2, Chemical Analysis was supplied to the Department for the year   |
| Form Submitted:   | Form                                  | 1 26R  |
|   | Othe                                  | r (specify)  |
| Date Submitted:   |                                       | ·  |
| I certify the information for the year and I  |                                       | Section B-3, Process Description and Schematic, was supplied to the Department ged.  |
| Form Submitted:   | Form                                  | 26R  |
|   | Othe                                  | r (specify)  |
| Date Submitted:   |                                       |  |
| Name of Responsible Official  |                                       | Title Environmental Specialist   |
| Dina Brown Signature  | ŞU                                    | From Date 2/25/4   |

| LAB ID: 39-(   | 00380<br>00401  | <b>Eas</b><br>2566   | ark Analytics, In<br>stern Division<br>Pennsylvania Ave.<br>ayre, PA 18840  | C.   | Work   | Order: 100   | 84198   |
|--|---|--|---|--|--|--|---|
|  |   |  | e: (570) 888-0169<br>x: (570) 888-0717  |  |  |  |   |
| SEND DATA  | A TO:   |  |   |  |  |  |   |
| NAME:  | Steve Gridley   |  |   | W  | 'O#: 1008  | 34198  |   |
| COMPANY:   |   | Inc.   |   | P  | AGE: 1 of  | 1  |   |
| ADDRESS:   | 337 Daniel Zenker Dr  | F  |   | 17   |  | 1  |   |
|  | Horseheads, NY 1484   | 5  |   | P  | O#: AF 7   | 6907   |   |
|  |   | -  |   | P  | WS ID#   |  |   |
| PHONE:   | (607) 562-4000  | 1  | EST REPORT  |  |  |  |   |
| FAX:   | (607) 562-4001  |  |   |  |  |  |   |
| 01-0   | 03  | ······································   |   |  |  |  |   |
| RECEIVED   | FOR LAB BY: DLM2  | DA   | TE: 08/24/2010 15:10  |  |  | Pa   | ige 1 of 1  |
|  |   |  |   |  |  |  |   |
|  | v. Cuttings & Gypsum Bic<br>ED BY: SG   |  | Lab ID: 10084198-001A<br>ample Time: 08/24/2010 10:20   | Grab   |  |  |   |
| SAMPL  | ED B1. 3G   | 00   | ample filme. 00/24/2010 10.20   | Reg  |  |  |   |
|  |   |  |   |  |  |  |   |
| <u>Test</u>  |   | Result   | Method  | Limit  | Analysis Start   | <u>Analysis End</u>  | <u>Analyst</u>  |
| Total Pet  | roleum Hydrocarbons   | 4800 mg/Kg   | <u>Method</u><br>EPA 9071   |  | <u>Analysis Start</u><br>08/30/10 10:40  | <u>Analysis End</u><br>08/30/10  | <u>Analyst</u>  |
| Total Pet  | roleum Hydrocarbons<br>e Note: Analysis performed by  | 4800 mg/Kg   |   |  |  |  | <u>Analyst</u>  |
| Total Pet<br>Sample  | •   | 4800 mg/Kg<br>Microbac- Erie   |   |  |  |  | <u>Analyst</u>  |
| Total Pet<br>Sample<br>SAMPLE: In  | e Note: Analysis performed by   | 4800 mg/Kg<br>Microbac- Erie<br><b>omatrix</b>   | EPA 9071  | <u>Limit</u><br>Grab   |  |  | <u>Analyst</u>  |
| Total Pet<br>Sample<br>SAMPLE: In<br>SAMPLI  | e Note: Analysis performed by<br>v. Cuttings & Gypsum Bic   | 4800 mg/Kg<br>Microbac- Erie<br>omatrix<br>Sa  | EPA 9071<br>Lab ID: 10084198-001B<br>ample Time: 08/24/2010 10:20   | <u>Limit</u><br>Grab<br><u>Req</u>   | 08/30/10 10:40   | 08/30/10   |   |
| Total Pet<br>Sample  | e Note: Analysis performed by<br>v. Cuttings & Gypsum Bic   | 4800 mg/Kg<br>Microbac- Erie<br><b>omatrix</b>   | EPA 9071<br>Lab ID: 10084198-001B   | <u>Limit</u><br>Grab   |  |  | Analyst   |
| Total Pet<br>Sampl<br>SAMPLE: In<br>SAMPLE<br><u>Test</u>  | e Note: Analysis performed by<br><b>v. Cuttings &amp; Gypsum Bic</b><br>ED BY: SG   | 4800 mg/Kg<br>Microbac- Erie<br><b>omatrix</b><br>Sa<br><u>Result</u>  | EPA 9071<br>Lab ID: 10084198-001B<br>ample Time: 08/24/2010 10:20<br><u>Method</u>  | <u>Limit</u><br>Grab<br><u>Req</u>   | 08/30/10 10:40   | 08/30/10   | Analyst<br>IC-SA  |
| Total Pet<br>Sampl<br>GAMPLE: In<br>SAMPLI<br><u>Test</u><br>Moisture  | e Note: Analysis performed by<br><b>v. Cuttings &amp; Gypsum Bic</b><br>ED BY: SG   | 4800 mg/Kg<br>Microbac- Erie<br><b>omatrix</b><br>Sa<br><u>Result</u><br>42.6 %  | EPA 9071<br>Lab ID: 10084198-001B<br>ample Time: 08/24/2010 10:20<br><u>Method</u><br>Moisture Calc.  | <u>Limit</u><br>Grab<br><u>Req</u>   | 08/30/10 10:40<br><u>Analysis Start</u><br>08/26/10 14:30  | 08/30/10<br>Analysis End<br>08/27/10   | Analyst<br>IC-SA<br>IC-SA   |
| Total Pet<br>Sampl<br>SAMPLE: In<br>SAMPLE<br><u>Test</u><br>Moisture<br>Free Liqu<br>pH   | e Note: Analysis performed by<br><b>v. Cuttings &amp; Gypsum Bio</b><br>ED BY: SG<br>uid<br>CLP Leachate of Inv. Cutti  | 4800 mg/Kg<br>Microbac- Erie<br><b>Dematrix</b><br>Sa<br><u>Result</u><br>42.6 %<br>< 0.1 %<br>6.29@20.0°C   | EPA 9071<br>Lab ID: 10084198-001B<br>ample Time: 08/24/2010 10:20<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A   | <u>Limit</u><br>Grab<br><u>Req</u>   | <u>Analysis Start</u><br>08/26/10 14:30<br>08/25/10 14:30  | 08/30/10<br>Analysis End<br>08/27/10<br>08/25/10   | Analyst<br>IC-SA<br>IC-SA   |
| Total Pet<br>Sampl<br>SAMPLE: In<br>SAMPLE<br><u>Test</u><br>Moisture<br>Free Liqu<br>pH<br>SAMPLE: T(<br>Bi   | e Note: Analysis performed by<br><b>v. Cuttings &amp; Gypsum Bio</b><br>ED BY: SG<br>uid  | 4800 mg/Kg<br>Microbac- Erie<br>omatrix<br>Sa<br><u>Result</u><br>42.6 %<br>< 0.1 %<br>6.29@20.0°C<br>ngs & Gypsum   | EPA 9071<br>Lab ID: 10084198-001B<br>ample Time: 08/24/2010 10:20<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>Lab ID: 10084198-001D   | Limit<br>Grab<br><u>Reg</u><br>Limit   | <u>Analysis Start</u><br>08/26/10 14:30<br>08/25/10 14:30  | 08/30/10<br>Analysis End<br>08/27/10<br>08/25/10   | Analyst<br>IC-SA<br>IC-SA   |
| Total Pet<br>Sampl<br>SAMPLE: In<br>SAMPLE<br><u>Test</u><br>Moisture<br>Free Liqu<br>pH<br>SAMPLE: T(<br>Bi<br>SAMPLE   | e Note: Analysis performed by<br><b>v. Cuttings &amp; Gypsum Bio</b><br>ED BY: SG<br>uid<br>CLP Leachate of Inv. Cutti<br>iomatrix  | 4800 mg/Kg<br>Microbac- Erie<br>omatrix<br>Sa<br><u>Result</u><br>42.6 %<br>< 0.1 %<br>6.29@20.0°C<br>ngs & Gypsum<br>Sa   | EPA 9071<br>Lab ID: 10084198-001B<br>ample Time: 08/24/2010 10:20<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9095A<br>EPA 9045C<br>Lab ID: 10084198-001D<br>ample Time: 08/25/2010 8:00   | Limit<br>Grab<br>Reg<br>Limit<br>Grab  | <u>Analysis Start</u><br>08/26/10 14:30<br>08/26/10 14:30<br>08/26/10 16:50  | 08/30/10<br>Analysis End<br>08/27/10<br>08/25/10<br>08/26/10   | Analyst<br>IC-SA<br>IC-SA<br>SG-SA  |
| Total Pet<br>Sampl<br>SAMPLE: In<br>SAMPLE<br><u>Test</u><br>Moisture<br>Free Liqu<br>pH<br>SAMPLE: T(<br>Bi<br>SAMPLE   | e Note: Analysis performed by<br>v. Cuttings & Gypsum Bic<br>ED BY: SG<br>uid<br>CLP Leachate of Inv. Cutti<br>iomatrix<br>ED BY: SG  | 4800 mg/Kg<br>Microbac- Erie<br>omatrix<br>Sa<br><u>Result</u><br>42.6 %<br>< 0.1 %<br>6.29@20.0°C<br>ngs & Gypsum<br>Sa<br><u>Result</u>  | EPA 9071<br>Lab ID: 10084198-001B<br>ample Time: 08/24/2010 10:20<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9095A<br>EPA 9045C<br>Lab ID: 10084198-001D<br>ample Time: 08/25/2010 8:00<br><u>Method</u>  | Limit<br>Grab<br>Reg<br>Limit<br>Grab  | <u>Analysis Start</u><br>08/26/10 14:30<br>08/26/10 14:30<br>08/26/10 16:50<br><u>Analysis Start</u>   | 08/30/10<br><u>Analysis End</u><br>08/27/10<br>08/25/10<br>08/26/10<br><u>Analysis End</u>   | Analyst<br>IC-SA<br>IC-SA<br>SG-SA  |
| Total Pet<br>Sampl<br>SAMPLE: In<br>SAMPLE<br>Moisture<br>Free Liqu<br>pH<br>SAMPLE: TO<br>BAMPLE: TO<br>BI<br>SAMPLE<br>Test<br>Mercury   | e Note: Analysis performed by<br>v. Cuttings & Gypsum Bic<br>ED BY: SG<br>id<br>CLP Leachate of Inv. Cutti<br>iomatrix<br>ED BY: SG<br>- TCLP extracted   | 4800 mg/Kg<br>Microbac- Erie<br>Smatrix<br>Sa<br><u>Result</u><br>42.6 %<br>< 0.1 %<br>6.29@20.0°C<br>ngs & Gypsum<br>Sa<br><u>Result</u><br>< 0.0008 mg/L   | EPA 9071<br>Lab ID: 10084198-001B<br>ample Time: 08/24/2010 10:20<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9045C<br>Lab ID: 10084198-001D<br>ample Time: 08/25/2010 8:00<br><u>Method</u><br>EPA 7470A  | Limit<br>Grab<br>Reg<br>Limit<br>Grab<br>Reg<br>Limit<br>0.2                                 | <u>Analysis Start</u><br>08/26/10 14:30<br>08/26/10 14:30<br>08/26/10 16:50<br><u>Analysis Start</u><br>08/25/10 10:30   | 08/30/10<br><u>Analysis End</u><br>08/27/10<br>08/25/10<br>08/26/10<br><u>Analysis End</u><br>08/27/10   | Analyst<br>IC-SA<br>IC-SA<br>SG-SA<br>Analyst   |
| Total Pet<br>Sampl<br>SAMPLE: In<br>SAMPLE<br>Test<br>Moisture<br>Free Liqu<br>pH<br>SAMPLE: T(<br>Bi<br>SAMPLE<br>Test<br>Mercury -<br>Arsenic -  | e Note: Analysis performed by<br>v. Cuttings & Gypsum Bic<br>ED BY: SG<br>id<br>CLP Leachate of Inv. Cutti<br>iomatrix<br>ED BY: SG<br>- TCLP extracted<br>TCLP extracted   | 4800 mg/Kg<br>Microbac- Erie<br>Smatrix<br>Sa<br><u>Result</u><br>42.6 %<br>< 0.1 %<br>6.29@20.0°C<br>ngs & Gypsum<br>Sa<br><u>Result</u><br>< 0.0008 mg/L<br>< 0.500 mg/L   | EPA 9071<br>Lab ID: 10084198-001B<br>ample Time: 08/24/2010 10:20<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9095A<br>EPA 9045C<br>Lab ID: 10084198-001D<br>ample Time: 08/25/2010 8:00<br><u>Method</u><br>EPA 7470A<br>EPA 6010B  | Limit<br>Grab<br>Req<br>Limit<br>Grab<br>Reg<br>Limit<br>0.2<br>5                            | <u>Analysis Start</u><br>08/26/10 14:30<br>08/26/10 14:30<br>08/26/10 16:50<br><u>Analysis Start</u><br>08/25/10 10:30   | 08/30/10  Analysis End 08/27/10 08/25/10 08/26/10  Analysis End 08/27/10 08/26/10  | Analyst<br>IC-SA<br>IC-SA<br>SG-SA<br><u>Analyst</u><br>KW-CV<br>RMD-C  |
| Total Pet<br>Sampl<br>SAMPLE: In<br>SAMPLE: In<br>Moisture<br>Free Liqu<br>pH<br>SAMPLE: TO<br>Bi<br>SAMPLE: TO<br>SAMPLE: SAMPLE<br>SAMPLE: TO<br>SAMPLE: TO<br>SAMPLE: SAMPLE<br>SAMPLE: TO<br>SAMPLE: SAMPLE<br>SAMPLE: TO<br>SAMPLE: SAMPLE<br>SAMPLE: TO<br>SAMPLE: e Note: Analysis performed by<br>v. Cuttings & Gypsum Bic<br>ED BY: SG<br>id<br>CLP Leachate of Inv. Cutti<br>iomatrix<br>ED BY: SG<br>TCLP extracted<br>TCLP extracted<br>TCLP extracted   | 4800 mg/Kg<br>Microbac- Erie<br>matrix<br>Sa<br><u>Result</u><br>42.6 %<br>< 0.1 %<br>6.29@20.0°C<br>ngs & Gypsum<br>Sa<br><u>Result</u><br>< 0.0008 mg/L<br>< 0.500 mg/L<br>< 10.00 mg/L  | EPA 9071<br>Lab ID: 10084198-001B<br>ample Time: 08/24/2010 10:20<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9095A<br>EPA 9045C<br>Lab ID: 10084198-001D<br>ample Time: 08/25/2010 8:00<br><u>Method</u><br>EPA 7470A<br>EPA 6010B<br>EPA 6010B   | Limit<br>Grab<br>Reg<br>Limit<br>Grab<br>Reg<br>Limit<br>0.2<br>5<br>100                     | Analysis Start<br>08/30/10 10:40<br>08/26/10 14:30<br>08/25/10 14:30<br>08/26/10 16:50<br>Analysis Start<br>08/25/10 10:30<br>08/26/10 10:30   | 08/30/10  Analysis End 08/27/10 08/25/10 08/26/10  Analysis End 08/27/10 08/26/10 08/26/10 08/26/10  | Analyst<br>IC-SA<br>IC-SA<br>SG-SA<br><u>Analyst</u><br>KW-CV<br>RMD-C<br>RMD-C   |
| Total Pet<br>Sampl<br>SAMPLE: In<br>SAMPLE: In<br>SAMPLE: TO<br>Free Liqu<br>pH<br>SAMPLE: TO<br>Bi<br>SAMPLE: TO<br>Cadmium   | e Note: Analysis performed by<br>v. Cuttings & Gypsum Bic<br>ED BY: SG<br>aid<br>CLP Leachate of Inv. Cutti<br>iomatrix<br>ED BY: SG<br>- TCLP extracted<br>TCLP extracted<br>TCLP extracted<br>a - TCLP extracted<br>- TCLP extracted  | 4800 mg/Kg<br>Microbac- Erie<br>Smatrix<br>Sa<br><u>Result</u><br>42.6 %<br>< 0.1 %<br>6.29@20.0°C<br>ngs & Gypsum<br>Sa<br><u>Result</u><br>< 0.0008 mg/L<br>< 0.500 mg/L<br>< 10.00 mg/L<br>< 0.100 mg/L   | EPA 9071<br>Lab ID: 10084198-001B<br>ample Time: 08/24/2010 10:20<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9095A<br>EPA 9045C<br>Lab ID: 10084198-001D<br>ample Time: 08/25/2010 8:00<br><u>Method</u><br>EPA 7470A<br>EPA 6010B<br>EPA 6010B   | Limit<br>Grab<br>Req<br>Limit<br>Grab<br>Req<br>Limit<br>0.2<br>5<br>100<br>1                | Analysis Start<br>08/30/10 10:40<br>08/26/10 14:30<br>08/25/10 14:30<br>08/26/10 16:50<br>Analysis Start<br>08/25/10 10:30<br>08/26/10 10:30<br>08/26/10 10:30                                     | O8/30/10           Analysis End           08/27/10           08/25/10           08/26/10           08/26/10           08/26/10           08/26/10           08/26/10           08/26/10           08/26/10   | Analyst<br>IC-SA<br>IC-SA<br>SG-SA<br>Analyst<br>KW-CV<br>RMD-C'<br>RMD-C'<br>RMD-C'  |
| Total Pet<br>Sample<br>SAMPLE: In<br>SAMPLE: In<br>Test<br>Moisture<br>Free Liqu<br>pH<br>SAMPLE: T(<br>Bi<br>SAMPLE: T(<br>SAMPLE: T(<br>SAMPLE: SAMPLE:  | e Note: Analysis performed by<br>v. Cuttings & Gypsum Bic<br>ED BY: SG<br>uid<br>CLP Leachate of Inv. Cutti<br>iomatrix<br>ED BY: SG<br>- TCLP extracted<br>TCLP extracted<br>TCLP extracted<br>n - TCLP extracted<br>n - TCLP extracted<br>n - TCLP extracted  | 4800 mg/Kg<br>Microbac- Erie<br>Smatrix<br>Sa<br><u>Result</u><br>42.6 %<br>< 0.1 %<br>6.29@20.0°C<br>ngs & Gypsum<br>Sa<br><u>Result</u><br>< 0.0008 mg/L<br>< 0.500 mg/L<br>< 0.100 mg/L<br>< 0.500 mg/L   | EPA 9071<br>Lab ID: 10084198-001B<br>ample Time: 08/24/2010 10:20<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9095A<br>EPA 9045C<br>Lab ID: 10084198-001D<br>ample Time: 08/25/2010 8:00<br><u>Method</u><br>EPA 7470A<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B  | Limit<br>Grab<br>Reg<br>Limit<br>Grab<br>Reg<br>Limit<br>0.2<br>5<br>100                     | Analysis Start<br>08/30/10 10:40<br>08/26/10 14:30<br>08/26/10 14:30<br>08/26/10 16:50<br>Analysis Start<br>08/25/10 10:30<br>08/26/10 10:30<br>08/26/10 10:30<br>08/26/10 10:30                   | 08/30/10 Analysis End 08/27/10 08/25/10 08/26/10 08/26/10 08/26/10 08/26/10 08/26/10 08/26/10 08/26/10   | Analyst<br>IC-SA<br>IC-SA<br>SG-SA<br>KW-CV<br>RMD-C'<br>RMD-C'<br>RMD-C'<br>RMD-C'   |
| Total Pet<br>Sampl<br>SAMPLE: In<br>SAMPLE: In<br>Moisture<br>Free Liqu<br>pH<br>SAMPLE: TO<br>BAMPLE: TO<br>BAMPLE: TO<br>BAMPLE: TO<br>BAMPLE: TO<br>BAMPLE: TO<br>CAMPLE: TO<br>Chromiur<br>Chromiur<br>Copper -  | e Note: Analysis performed by<br>v. Cuttings & Gypsum Bic<br>ED BY: SG<br>id<br>CLP Leachate of Inv. Cutti<br>iomatrix<br>ED BY: SG<br>TCLP extracted<br>TCLP extracted<br>TCLP extracted<br>n - TCLP extracted<br>n - TCLP extracted<br>TCLP extracted<br>n - TCLP extracted<br>TCLP extracted                                   | 4800 mg/Kg<br>Microbac- Erie<br>Smatrix<br>Sa<br><u>Result</u><br>42.6 %<br>< 0.1 %<br>6.29@20.0°C<br>ngs & Gypsum<br>Sa<br><u>Result</u><br>< 0.0008 mg/L<br>< 0.500 mg/L<br>< 0.100 mg/L<br>< 0.500 mg/L<br>< 0.100 mg/L   | EPA 9071<br>Lab ID: 10084198-001B<br>ample Time: 08/24/2010 10:20<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9095A<br>EPA 9045C<br>Lab ID: 10084198-001D<br>ample Time: 08/25/2010 8:00<br><u>Method</u><br>EPA 7470A<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B                           | Limit<br>Grab<br>Reg<br>Limit<br>Grab<br>Reg<br>Limit<br>0.2<br>5<br>100<br>1<br>5           | Analysis Start<br>08/30/10 10:40<br>8/26/10 14:30<br>08/25/10 14:30<br>08/26/10 16:50<br>Analysis Start<br>08/26/10 10:30<br>08/26/10 10:30<br>08/26/10 10:30<br>08/26/10 10:30                    | 08/30/10  Analysis End 08/27/10 08/25/10 08/26/10  8/26/10 08/26/10 08/26/10 08/26/10 08/26/10 08/26/10 08/26/10 08/26/10  | Analyst<br>IC-SA<br>IC-SA<br>SG-SA<br>KW-CV<br>RMD-C'<br>RMD-C'<br>RMD-C'<br>RMD-C'   |
| Total Pet<br>Sampl<br>SAMPLE: In<br>SAMPLE: In<br>SAMPLE: T(<br>Free Liqu<br>pH<br>SAMPLE: T(<br>Bar<br>SAMPLE: T(<br>Bar<br>SAMPLE: T(<br>Barium -<br>Cadmium<br>Chromium<br>Copper -<br>Lead - T(  | e Note: Analysis performed by<br>v. Cuttings & Gypsum Bic<br>ED BY: SG<br>id<br>CLP Leachate of Inv. Cutti<br>iomatrix<br>ED BY: SG<br>- TCLP extracted<br>TCLP extracted<br>TCLP extracted<br>n - TCLP extracted<br>n - TCLP extracted<br>n - TCLP extracted<br>CLP extracted<br>CLP extracted<br>CLP extracted<br>CLP extracted | 4800 mg/Kg<br>Microbac- Erie<br>Smatrix<br>Sa<br><u>Result</u><br>42.6 %<br>< 0.1 %<br>6.29@20.0°C<br>ngs & Gypsum<br>Sa<br><u>Result</u><br>< 0.0008 mg/L<br>< 0.500 mg/L<br>< 0.100 mg/L<br>< 0.500 mg/L<br>< 0.100 mg/L<br>< 0.500 mg/L                                 | EPA 9071<br>Lab ID: 10084198-001B<br>ample Time: 08/24/2010 10:20<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9095A<br>EPA 9045C<br>Lab ID: 10084198-001D<br>ample Time: 08/25/2010 8:00<br><u>Method</u><br>EPA 7470A<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B                           | Limit<br>Grab<br>Req<br>Limit<br>Grab<br>Req<br>Limit<br>0.2<br>5<br>100<br>1                | Analysis Start<br>08/30/10 10:40<br>8/26/10 14:30<br>08/25/10 14:30<br>08/26/10 16:50<br>Analysis Start<br>08/26/10 10:30<br>08/26/10 10:30<br>08/26/10 10:30<br>08/26/10 10:30<br>08/26/10 10:30  | 08/30/10  Analysis End 08/27/10 08/25/10 08/26/10 08/26/10 08/26/10 08/26/10 08/26/10 08/26/10 08/26/10 08/26/10 08/26/10 08/26/10   | Analyst<br>IC-SA<br>IC-SA<br>SG-SA<br>KW-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV           |
| Total Pet<br>Sampl<br>SAMPLE: In<br>SAMPLE: In<br>SAMPLE: TO<br>Free Liqu<br>pH<br>SAMPLE: TO<br>Barium -<br>Cadmium<br>Chromiur<br>Copper -<br>Lead - TO<br>Nickel - T  | e Note: Analysis performed by<br>v. Cuttings & Gypsum Bic<br>ED BY: SG<br>id<br>CLP Leachate of Inv. Cutti<br>iomatrix<br>ED BY: SG<br>- TCLP extracted<br>TCLP extracted<br>n - TCLP extracted<br>n - TCLP extracted<br>m - TCLP extracted<br>CLP extracted<br>CLP extracted<br>CLP extracted<br>CLP extracted<br>CLP extracted  | 4800 mg/Kg<br>Microbac- Erie<br>Smatrix<br>Sa<br><u>Result</u><br>42.6 %<br>< 0.1 %<br>6.29@20.0°C<br>ngs & Gypsum<br>Sa<br><u>Result</u><br>< 0.0008 mg/L<br>< 0.500 mg/L<br>< 0.500 mg/L<br>< 0.100 mg/L<br>< 0.500 mg/L<br>< 0.500 mg/L<br>< 0.100 mg/L<br>< 0.100 mg/L | EPA 9071<br>Lab ID: 10084198-001B<br>ample Time: 08/24/2010 10:20<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9095A<br>EPA 9045C<br>Lab ID: 10084198-001D<br>ample Time: 08/25/2010 8:00<br><u>Method</u><br>EPA 7470A<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B | Limit<br>Grab<br>Reg<br>Limit<br>Grab<br>Reg<br>Limit<br>0.2<br>5<br>100<br>1<br>5<br>5<br>5 | Analysis Start<br>08/30/10 10:40<br>08/26/10 14:30<br>08/25/10 14:30<br>08/26/10 16:50<br>Analysis Start<br>08/26/10 10:30<br>08/26/10 10:30<br>08/26/10 10:30<br>08/26/10 10:30<br>08/26/10 10:30 | O8/30/10           Analysis End           08/27/10           08/25/10           08/25/10           08/26/10           08/26/10           08/26/10           08/26/10           08/26/10           08/26/10           08/26/10           08/26/10           08/26/10           08/26/10           08/26/10           08/26/10           08/26/10           08/26/10           08/26/10                        | Analyst<br>IC-SA<br>IC-SA<br>SG-SA<br>KW-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV<br>RMD-CV |
| Total Pet<br>Sampl<br>SAMPLE: In<br>SAMPLE: In<br>SAMPLE: TO<br>Free Liqu<br>pH<br>SAMPLE: TO<br>Barium -<br>Cadmium<br>Chromium<br>Chromium<br>Copper -<br>Lead - TO<br>Nickel - T<br>Selenium  | e Note: Analysis performed by<br>v. Cuttings & Gypsum Bic<br>ED BY: SG<br>id<br>CLP Leachate of Inv. Cutti<br>iomatrix<br>ED BY: SG<br>- TCLP extracted<br>TCLP extracted<br>TCLP extracted<br>n - TCLP extracted<br>n - TCLP extracted<br>n - TCLP extracted<br>CLP extracted<br>CLP extracted<br>CLP extracted<br>CLP extracted | 4800 mg/Kg<br>Microbac- Erie<br>Smatrix<br>Sa<br><u>Result</u><br>42.6 %<br>< 0.1 %<br>6.29@20.0°C<br>ngs & Gypsum<br>Sa<br><u>Result</u><br>< 0.0008 mg/L<br>< 0.500 mg/L<br>< 0.100 mg/L<br>< 0.500 mg/L<br>< 0.100 mg/L<br>< 0.500 mg/L                                 | EPA 9071<br>Lab ID: 10084198-001B<br>ample Time: 08/24/2010 10:20<br><u>Method</u><br>Moisture Calc.<br>EPA 9095A<br>EPA 9095A<br>EPA 9045C<br>Lab ID: 10084198-001D<br>ample Time: 08/25/2010 8:00<br><u>Method</u><br>EPA 7470A<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B<br>EPA 6010B                           | Limit<br>Grab<br>Reg<br>Limit<br>Grab<br>Reg<br>Limit<br>0.2<br>5<br>100<br>1<br>5           | Analysis Start<br>08/30/10 10:40<br>8/26/10 14:30<br>08/25/10 14:30<br>08/26/10 16:50<br>Analysis Start<br>08/26/10 10:30<br>08/26/10 10:30<br>08/26/10 10:30<br>08/26/10 10:30<br>08/26/10 10:30  | Analysis End           08/30/10           Analysis End           08/25/10           08/25/10           08/26/10           08/26/10           08/26/10           08/26/10           08/26/10           08/26/10           08/26/10           08/26/10           08/26/10           08/26/10           08/26/10           08/26/10           08/26/10           08/26/10           08/26/10           08/26/10 | <u>Analyst</u><br>IC-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

Camie M. Davis

DATE: 8/31/2010

| LAB ID: 08-00380<br>LAB ID: 39-00401  | Ber                           | Easter            | Analytics, In<br>n Division                    | C.          |                      |        |                      |                  |
|---------------------------------------|-------------------------------|-------------------|--|-------------|----------------------|--------|----------------------|------------------|
|                                       |                               |                   | nsylvania Ave.<br>, PA 18840                   |             | V                    | Work   | Order: 100           | 81725            |
|                                       |                               |                   | 70) 888-0169<br>70) 888-0717                   |             |                      |        |                      |                  |
| SEND DATA TO:<br>NAME: Steve          | Gridley                       |                   |  | \٨/         | O#:                  | 10081  | 725                  |                  |
|                                       | an Energy USA, Inc.           |                   |  |             |                      |        | 120                  |                  |
| ADDRESS: 337 Da                       | aniel Zenker Dr               |                   |  | PA          | GE:                  | 1 of 2 |                      |                  |
| Horsel                                | heads, NY 14845               |                   |  | PC          | D#:                  | AF769  | 907                  |                  |
|                                       | 562-4000<br>562-4001          | TEST              | REPORT   | P٧          | VS ID#               |        |                      |                  |
|                                       |                               |                   |  |             |                      |        |                      |                  |
| RECEIVED FOR LA                       | B BY: DLM2                    | DATE:             | 08/10/2010 15:33                               |             |                      |        | Pa                   | ige 1 of 2       |
| SAMPLE: Air Cutting                   | gs                            | L                 | ab ID: 10081725-001A                           | Grab        |                      |        |                      |                  |
| SAMPLED BY: S                         | -                             | Sample            | Time: 08/09/2010 15:00                         |             |                      |        |                      |                  |
| Test                                  | Re                            | sult              | Method   | <u>SLOQ</u> | Analysis             | Start  | Analysis End         | Analyst *        |
| Total Petroleum Hy                    |                               | mg/Kg             | EPA 9071                                       |             | 08/12/10             |        | 08/12/10             |                  |
| Sample Note: A                        | nalysis performed by Microbac | -Erie             |  |             |                      |        |                      |                  |
| SAMPLE: Air Cutting                   | gs                            | L                 | ab ID: 10081725-001B                           | Grab        |                      |        |                      |                  |
| SAMPLED BY: S                         | G                             | Sample            | Time: 08/09/2010 15:00                         | SLOQ        |                      |        |                      |                  |
| Test                                  | Re                            | sult              | Method   | <u>3100</u> | Analysis             | Start  | Analysis End         | <u>Analyst *</u> |
| Moisture                              | 40                            | .6 %              | Moisture Calc.                                 | 0.01        | 08/12/10             | 8:45   | 08/13/10             | MED-SA           |
| Free Liquid                           | < 0                           | .1 %              | EPA 9095A                                      | 0.1         | 08/12/10             | 15:20  | 08/12/10             | RHN-SA           |
| pH                                    | 12.07@                        | 021.6°C           | EPA 9045C                                      |             | 08/12/10             | 15:42  | 08/12/10             | MED-SA           |
| SAMPLE: Air Cutting<br>SAMPLED BY: SO | -                             |                   | ab ID: 10081725-001C<br>Time: 08/09/2010 15:00 | Grab        |                      |        |                      |                  |
|                                       |                               |                   |  | <u>SLOQ</u> |                      |        |                      |                  |
| <u>Test</u>                           | <u>Res</u>                    |                   | Method   | 000         | Analysis             |        | Analysis End         |                  |
| Sodium<br>Chloride                    |                               | g/Kg-dry          | EPA 6010B<br>EPA 300.0                         | 230<br>84.2 | 08/13/10             |        | 08/13/10<br>08/12/10 | RMD-CV           |
| Percent Moisture                      |                               | ıg/Kg-dry<br>.6 % | SM2540G  | 04.2        | 08/11/10<br>08/12/10 |        | 08/12/10             | HDP-CV<br>MED-SA |
|                                       |                               |                   |  |             | 00/12/10             | 0.40   |                      | WIED-SA          |
| SAMPLE: TCLP Lead<br>SAMPLED BY: SO   | •                             |                   | ab ID: 10081725-001E<br>Time: 08/09/2010 15:00 | Grab        |                      |        |                      |                  |
| Test                                  | Res                           | sult              | Method   | <u>SLOQ</u> | Analysis             | Start  | Analysis End         | <u>Analyst *</u> |
| Mercury - TCLP ex                     | tracted < 0.00                | 08 mg/L           | EPA 7470A                                      | 0.0008      | 08/12/10             | 8:30   | 08/13/10             | KW-CV            |
| Arsenic - TCLP ext                    | racted < 0.50                 | 00 mg/L           | EPA 6010B                                      | 0.500       | 08/13/10             | 7:20   | 08/13/10             | RMD-CV           |
| Barium - TCLP extr                    |                               | 0 mg/L            | EPA 6010B                                      | 10.00       | 08/13/10             | 7:20   | 08/13/10             | RMD-CV           |
| Cadmium - TCLP e                      | xtracted < 0.10               | 10 mg/L           | EPA 6010B                                      | 0.100       | 08/13/10             | 7:20   |                      | RMD-CV           |
| Chromium - TCLP                       |                               | 00 mg/L           | EPA 6010B                                      | 0.500       | 08/13/10             |        | 08/13/10             | RMD-CV           |
| Copper - TCLP extr                    |                               | 10 mg/L           | EPA 6010B                                      | 0.100       | 08/13/10             |        |                      | RMD-CV           |
| Lead - TCLP extrac                    | cted < 0.50                   | 10 mg/L           | EPA 6010B                                      | 0.500       | 08/13/10             | 7:20   | 08/13/10             | RMD-CV           |
| REMARKS:                              |                               |                   |  |             |                      |        |                      |                  |

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MANAGER

Carrie M. Daris DATE: 8/13/2010

| LAB ID: 08-<br>LAB ID: 39- |                                  | Easteri<br>2566 Penr | Analytics, In<br>n Division<br>nsylvania Ave.<br>PA 18840 | C.    | ٧        | Work Ore | der: 10  | 081725     |
|----------------------------|----------------------------------|----------------------|---|-------|----------|----------|----------|------------|
|                            |                                  | -                    | 70) 888-0169<br>70) 888-0717                              |       |          |          |          |            |
| SEND DAT                   | A TO:                            |                      |   |       |          |          |          |            |
| NAME:                      | Steve Gridley                    |                      |   | W     | O#:      | 1008172  | 5        |            |
| COMPANY:                   |                                  | IC.                  |   | PA    | AGE:     | 2 of 2   |          |            |
| ADDRESS:                   | Horseheads, NY 14845             |                      |   | P     | D#:      | AF76907  | ,        |            |
| PHONE:<br>FAX:             | (607) 562-4000<br>(607) 562-4001 | TEST                 | REPORT  | P١    | NS ID#   |          |          |            |
|                            |                                  |                      |   |       |          |          |          |            |
| RECEIVED                   | FOR LAB BY: DLM2                 | DATE: 0              | 8/10/2010 15:33   |       |          |          | F        | age 2 of 2 |
| Nickel -                   | TCLP extracted                   | < 0.100 mg/L         | EPA 6010B   | 0.100 | 08/13/10 | 7:20 (   | )8/13/10 | RMD-CV     |
| Seleniun                   | n - TCLP extracted               | < 0.500 mg/L         | EPA 6010B   | 0.500 | 08/13/10 | 7:20 0   | 08/13/10 | RMD-CV     |
|                            | CLP extracted                    | < 0.100 mg/L         | EPA 6010B   | 0.100 | 08/13/10 |          | 08/13/10 | RMD-CV     |
| Zinc - TC                  | CLP extracted                    | < 0.200 mg/L         | EPA 6010B   | 0.200 | 08/13/10 | 7:20 0   | 08/13/10 | RMD-CV     |

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MANAGER

(ani M. Davis DATE: 8/13/2010

# PRODUCED WATER APRIL 19 - MAY 12

Gallons per well total April 19 - May 12

| Pad Name  | Well Na  | ne  | Total   |
|---|--|---|---------|
| 264   | the second second second second second second second second second second second second second second second s   | ES ALLEN 264 1H   |         |
| 264 Total   |  |   | 1       |
| (03-015)  | TEUSA  | (03-015-01) J 1H  | 23,77   |
| -   | TEUSA  | (03-015-02) J 2H  | 14,764  |
| A CONTRACTOR OF | TEUSA  | (03-015-03) J 3H  | 15,52   |
|   | TEUSA  | (03-015-04) J 4H  | 20,93   |
| (03-015) Total  |  | 6mm   | 74,99   |
| (03-009)  | FEL  | T (03-009-05) L 5H  | 35,194  |
|   | FEI  | (03-009-06) L 6H  | 40.880  |
|   | FEI  | (03-009-07) L 7H  | 34,61:  |
| And the second second   | FEI  | (03-009-08) L 8H  | 51,090  |
| (03-009) Total  | - Iter State   |   | 161,584 |
| (01-025/070)  | FEI  | B 1H (01-025-01) - API 37-015-  | 1,519   |
|   | FEI  | B 2H (01-025-02) - API 37-015-  | 3,864   |
|   | FEI  | B 3H (01-070-01) - API 37-015-  | 3,52    |
| and the second second   | FEI  | B 4H (01-070-02) - API 37-015-  | 946     |
| (01-025/070) Total  |  |   | 9,853   |
| (01-047)  | FER  | (01-047-01) J 1H  | 17,902  |
|   | FEI  | (01-047-02) J 2H  | 16,59   |
|   | FEI  | (01-047-03) J 3H  | 27,694  |
|   | FEI  | (01-047-04) J 4H  | 12,03   |
|   | FEI  | (01-047-05) J 5H  | 10,53   |
|   | FEI  | (01-047-06) J 6H  | 13,032  |
| (01-047) Total  |  |   | 97,788  |
| (01-005/008)  | FEI  | (01-005-01) R1H - API 37-015-2  | 12,396  |
|   | FEI  | (01-005-02) R3H - API 37-015-2  | 15,82   |
| A second s   | FEL  | (01-008-01) R2H - API 37-015-2  | 12,594  |
| (01-005/008) Total  |  |   | 40,61   |
| DCNR 587 (02-001) PAD   | DCNR 5   | 37 (02-001-04)  | 14,235  |
|   | DONR 5   | 6,103   |         |
|   |  | 37 (02-001-06)  | 19,461  |
| DCNR 587 (02-001) PAD Tot   |  |   | 39,799  |
| DCNR 587 (02-002) PAD   |  | 37 (02-002-01)  | 3,932   |
|   |  | 37 (02-002-02)  | 2,908   |
|   |  | 37 (02-002-03)  | 2,395   |
|   |  | 37 (02-002-04)  | 3,652   |
| DCNR 587 (02-002) PAD Tot   |  |   | 12,886  |
| DCNR 587 (02-004) PAD   |  | 37 (02-004-02)  | 25,434  |
|   | the second second second second second second second second second second second second second second second se  | 37 (02-004-06)  | 37,492  |
| DCNR 587 (02-004) PAD Tot   | Contraction of the local division of the loc | an den sakan hali dan san sakan sakan sakan sakan sakan sakan sakan sakan sakan sakan sakan sakan sakan sakan s | 62,92   |
| DCNR 587 (02-008)   |  | R 587 (02-008-03) 3H  | 20,028  |
| a and the state of the  |  | R 587 (02-008-04) 4H  | 18,602  |
|   |  | R 587 (02-008-05) 5H  | 16,830  |
|   | The second second second second second second second second second second second second second second second se  | R 587 (02-008-06) 6H  | 23,416  |
| DCNR 587 (02-008) Total   |  | MELLING TH  | 78,874  |
| DCNR 587 (02-009) PAD   | FEI DON  | R 587 (02-009-01)   | 8,286   |
| a state and the second of the   | and the second se  | R 587 (02-009-02)   | 5,299   |

| DCNR 587 (02-009) PAD             | FEI DCNR 587 (02-009-03)<br>FEI DCNR 587 (02-009-04)<br>FEI DCNR 587 (02-009-05) | 5,90<br>4,17<br>5,50 |
|-----------------------------------|--|----------------------|
|                                   | FEI DCNR 587 (02-009-06)   | 9,51                 |
| DCNR 587 (02-009) PAD To          |  | 38,67                |
| DCNR 587 (02-013)                 | TEUSA DCNR 587 (02-013-01) 1H  | 31,29                |
|                                   | TEUSA DCNR 587 (02-013-02) 2H  | 31,20                |
|                                   | TEUSA DCNR 587 (02-013-03) 3H  | 30,78                |
|                                   | TEUSA DCNR 587 (02-013-04) 4H  | 30,82                |
| DCNR 587 (02-013) Total           |  | 124,11               |
| DCNR 587 (02-014)                 | TEUSA DCNR 587 (02-014-01) 1H  | 67,95                |
|                                   | TEUSA DCNR 587 (02-014-02) 2H  | 61,95                |
| DOND 587 (02 044) Tetal           | TEUSA DCNR 587 (02-014-03) 3H  | 163,25               |
| DCNR 587 (02-014) Total           | DCNR 587 (02-017-01)   | 293,18               |
| DCNR 587 (02-017) PAD             | DCNR 587 (02-017-01)   | 5,356                |
|                                   | DCNR 587 (02-017-02)   | 9,353                |
|                                   | DCNR 587 (02-017-04)   | 15,74                |
| DCNR 587 (02-017) PAD To          |  | 38,73                |
| DCNR 587 (02-018) PAD             | FEI DONR 587 (02-018-01) 1H  | 13,78                |
|                                   | FEI DCNR 587 (02-018-02) 2H  | 17,75                |
|                                   | FEI DCNR 587 (02-018-03) 3H  | 6,123                |
|                                   | FEI DCNR 587 (02-018-04) 4H  | 15,871               |
|                                   | FEI DCNR 587 (02-018-05) 5H  | 9,033                |
| the second second second second   | FEI DCNR 587 (02-018-06) 6H  | 6,140                |
| DCNR 587 (02-018) PAD To          |  | 68,712               |
| (03-013)                          | FEI 03-013-01) W 1H  | 1,944                |
|                                   | FEI 03-013-02) W 2H  | 11,575               |
|                                   | FEI (03-013-03) W 3H   | 14,443               |
|                                   | FEI (03-013-04) W 4H   | 14,81                |
|                                   | FEI (03-013-05) W 5H   | 13,780               |
|                                   | FEI (03-013-06) W 6H   | 3,187                |
|                                   | FEI (03-013-07) W 7H   | 20,380               |
| (03-013) Total                    | FEI (03-013-08) W 8H   | 23,29                |
| R (03-045)                        | TEUSA (03-045-01) J 1H   | 50.75                |
| (00-040)                          | TEUSA (03-045-02) J 2H   | 31,92                |
| R (03-045) Total                  |  | 82,680               |
| (01-003)                          | FEI 1H (01-003-01) - API 37-015-   |                      |
| (01-003) Total                    |  |                      |
| (01-071)                          | TEUSA (01-071-01) D 1H   | 31,550               |
|                                   | TEUSA (01-071-02) D 2H   | 44,207               |
|                                   | TEUSA (01-071-03) D 3H   | 44,04                |
| (01-071) Total                    |  | 119,803              |
| (01-004)                          | FEI (01-004-01) M1H - API 37-015-  | 6,659                |
|                                   | FEI (01-004-03) M 5H - API 37-015  | 4,54                 |
|                                   | FEI M 3H (01-004-02) - API 37-015  | 4,77                 |
| (01-004) Total                    |  | 15,978               |
| (01-012)                          | FEI (01-012-01) A1H - API 37-015-  | 15,90                |
| Martin Cont Of ON Tratel          | FEI (01-012-02) A2H - API 37-015-  | 12,19                |
| (01-012) Total<br>HOLDING (01-03) | 6) FEI HOLDINGS (01-036-01) 1H   | 28,10                |
| HULDING IUI-US                    | b) [FEI] HOLDINGS (01-030-01) IH   | 20,9/3               |

| HOLDING (01-036) | FEI   | HOLDINGS (01-036-02) 2H               | 38,29                  |
|------------------|---|---------------------------------------|------------------------|
|                  | PEI I   | HOLDINGS (01-036-03) 3H               | 44,18                  |
|                  | FEI   | HOLDINGS (01-036-04) 4H               | 35,45                  |
| HOLDING (01-036) |   | · · · · · · · · · · · · · · · · · · · | 144,90                 |
| (01-017)         | FEI   | (01-017-05) G 5H                      | 11,61                  |
|                  | FEI   | (01-017-06) G 6H                      | 9,47                   |
|                  | PEI   | (01-017-07) G 7H                      | 10,00                  |
|                  | FEIL  | (01-017-08) G 8H                      | 15,26                  |
| (01-017) Total   | The state in the second   |                                       | 48,38                  |
| 257              | EAST RES  | 267 1H                                | 8,13                   |
| 267 Total        | TRACT DEC   |                                       | 8,13                   |
| 261              | EAST RES  | 261 1H                                | 5.82                   |
|                  | EAST RES  | 261 2H<br>261 3H                      | 88 <sup>4</sup><br>524 |
|                  | EAST RES  | 261 4H                                | 2,96                   |
|                  | EAST RES  | 261 SH                                | 2,28                   |
|                  | EAST RES  | 261 6H                                | 1,53                   |
| 261 Total        | TENOI REAL  | THO I DA                              | 14,00                  |
| (01-014)         | FEN   | 01-014-02) R 2H                       | 23,42                  |
| (01-014)         |   | 01-014-03) R 3H                       | 21,19                  |
|                  |   | 01-014-04) R 4H                       | 17,31                  |
| (01-014) Total   | 1. 61   |                                       | 61,93                  |
| (01-014)         | FEIL  | 01-014-01) R 1H                       | 18,56                  |
| L(01-014) Total  |   |                                       | 18,58                  |
| 1 271            | EAST RES  | 971 1H                                |                        |
| 271 Total        |   |                                       | 11                     |
| (01-024)         | FEI   | (01-024-03) L 8H - API 37-01          | 18.72                  |
|                  | FEI   | (01-024-04) L 9H - API 37-01          | 15,47                  |
| (01-024) Total   |   |                                       | 34,190                 |
| (01-044)         | FEI   | (01-044-01) L 1H                      | 8,95                   |
|                  | FEI   | (01-044-02) L 2H                      | 11,14                  |
| (01-044) Total   |   |                                       | 20.093                 |
| (03-008)         | FEI   | (03-008-01) G 1H                      | 26,438                 |
|                  | FEL   | (03-008-02) G 2H                      | 36,794                 |
|                  | FEI   | (03-008-03) G 3H                      | 40,850                 |
|                  | FEI   | (03-008-04) G 4H                      | 55,56                  |
|                  | FEI   | (03-008-05) G 5H                      | 56,70                  |
|                  | PEL   | (03-008-06) G 6H<br>(03-008-07) G 7H  | 3,91                   |
|                  | FER   | (03-008-08) G 8H                      | 41,303<br>62,675       |
| R (03-008) Total |   | (U2"U0")Q 0F1                         | 324,53                 |
| (01-001)         |   | 1-001-02) TIV - API 37-015-20         | 264,03                 |
| (01-001) Total   |   |                                       |                        |
| (01-007)         | FEI 0   | 1-007-01) T2H - API 37-015-20         | 5,31                   |
| (01-007) Total   |   |                                       | 5,31                   |
| (01-015)         | FEI (0  | 1-015-01) T 3H                        | 18,17                  |
|                  | the second second second second second second second second second second second second second second second se | 1-015-02) T 4H                        | 16,73                  |
|                  |   | 1-015-03) T 5H                        | 19,67                  |
| (01-015) Total   |   |                                       | 54,57                  |
| (01-074)         | TEUSA   | (01-074-01) W 1H                      | 91.81                  |
|                  | TEUSA   | (01-074-02) W 2H                      | 89,50                  |
|                  | TEUSA   | 01-074-03) W 3H                       | 107,100                |

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| (01-074)             | TEUSA MOR   | GAN (01-074-04) W 4H   | 110,544 |
|----------------------|---|--|---------|
| (01-074) Total       | International Contraction   |  | 398,958 |
| (01-006)             | TEUSA   | (01-006-01) J 1H   | 6,398   |
|                      | TEUSA   | (01-006-02) J 2H   | 7,760   |
|                      | TEUSA   | (01-006-03) J 3H   |         |
|                      | TEUSA   | (01-006-04) J 4H   | 7,964   |
| (01-006) Total       | Intell  |  | 22,121  |
| (01-076)             | FEIC  | (01-076-01) L 7H   | 34,535  |
|                      | FEIC  | (01-076-02) L 8H   | 24,821  |
|                      | FEI   | (01-076-03) L 9H   | 26,804  |
|                      | FEI   | (01-076-04) L 10H  | 30,747  |
|                      | 图   | (01-076-05) L 11H  | 49,176  |
|                      | FEI   | (01-076-06) L 12H  | 47,082  |
|                      | FEL   | (01-076-07) L 13H  | 57,120  |
| (01=076) Total       | Teren   |  | 284,285 |
| (01-077)             | FEI   | (01-077-01) L 1H   | 33,510  |
|                      | FEI   | (01-077-02) L 2H   | 36,511  |
|                      | FEI   | (01-077-04) L 4H   | 30,171  |
|                      | FEI   | (01-077-05) L 5H   | 20,568  |
|                      | FEI   | (01-077-06) L 6H   | 22,961  |
| (01-077) Total       | IFAAT BE  |  | 143,721 |
| 1<br>Fd Fatel        | EAST RES  | >1   |         |
| T 259                | EAST RES  | 259 1H   | 5,045   |
| 1 209                | EAST RES  | 259 2H   | 59,290  |
|                      | EAST RES  | 259 3H   | 61,722  |
|                      | EAST RES  | 259 4H   | 3,182   |
|                      | EAST RES  | 259 5H   | 21,187  |
|                      | EAST RES  | 259 6H   | - 1101  |
| 259 Total            |   | 1200 011   | 150.426 |
| (01-026/027)         | IFEI)   | (01-027-01) D 3H - API 37-01   | 12,721  |
|                      | FEI   | D 1H (01-026-01) - API 37-01   | 10,991  |
|                      | FEI   | D 2H (01-026-02) - API 37-01   | 10,330  |
| (01-026/027) Tot     | and the second se |  | 34,042  |
| (01-043/013)         | FEI   | D 4H (01-043-01) - API 37-01   | 6,528   |
|                      | FEI   | D 5H (01-043-02) - API 37-01   | 5,105   |
|                      | FEI   | D 6H (01-013-01) - API 37-01   | 4,852   |
|                      | FEI   | D 7H (01-013-02) - API 37-01   | 4,485   |
|                      | FEI   | D 8H (01-013-03) - API 37-01   | 5,916   |
|                      | FEI   | D 9H (01-043-03) - API 37-01   | 4,316   |
| (01-043/013) Tot     |   |  | 31,202  |
| 269                  | EAST RES  | 269 1H   |         |
| 269 Total            |   |  |         |
| (01-001)             | FEL   | (01-001-01) FT1H - API 37-015  | 6,144   |
| (01-001) Total       |   |  | 6,144   |
| (01-002)             | FEIT  | (01-002-01) FT2H - API 37-015  | 8,269   |
| (01-002) Total       |   |  | 8,269   |
| (01-038)             | FEI   | (01-038-01) FT 3H  | 2,841   |
| Contra Astro         | FEI   | (01-038-02) FT 4H  | 3,083   |
|                      | FEI   | (01-038-03) FT 5H  | 3,800   |
|                      | FEI   | (01-038-06) FT 7H  | 3,607   |
| OMAS (01-038) Total  |   | And the state of t | 13,331  |
| Second second second |   |  | Jares.  |

| TWL ASSOCIATES (01-016)                           |                           | SOCIATES 1H (01-016-01)     | 21,890    |
|---|---------------------------|-----------------------------|-----------|
|   |                           | SOCIATES 2H (01-016-02)     | 15,346    |
|   |                           | SOCIATES 3H (01-016-03)     | 12,923    |
| and the second second second second second second | FEI TWL AS                | SOCIATES 4H (01-016-04)     | 15,152    |
| TWL ASSOCIATES (01-016) T                         |                           |                             | 65,311    |
| M (03-004)  | FEI                       | (03-004-01) R 1H            | 14,615    |
|   | FEI                       | (03-004-02) R 2H            | 13,589    |
|   | FEI                       | (03-604-03) R 3H            | 13,851    |
|   | FEI                       | (03-004-04) R 4H            | 18,652    |
|   | PEI                       | (03-004-05) R 5H            | 17,367    |
| (03-004) Total                                    |                           |                             | 78,082    |
| (03-054)  | TEUSA                     | (03-064-01) J 1H            |           |
|   | TEUSA                     | (03-054-02) J 2H            |           |
|   | TEUSA                     | (03-054-03) J 3H            |           |
|   | TEUSA                     | (03-054-04) J 4H            |           |
| 1 (03-064) Total                                  | -                         |                             |           |
| /268  | EAST RES                  | 268 1H                      | 25,300    |
| 268 Total   | - Concernant and the same |                             | 25,300    |
| 262   | EAST RES                  | 262 1 H                     |           |
| 262 Total   |                           |                             |           |
| (01-041/042)                                      | FEI                       | (01-041-01) R 1H - API 37-0 | 8,044     |
|   | FEI                       | (01-041-02) R 3H - API 37-0 | 8,169     |
|   | FEI                       | (01-041-03) R 6H - API 37-0 | 8,928     |
|   | FEI                       | (01-042-01) R 2H - API 37-0 | 8,978     |
|   | FEI                       | (01-042-02) R 4H - API 37-0 | 8,059     |
|   | FEI                       | (01-042-03) R 6H - API 37-0 | 8,538     |
| (01-041/042) Total                                | Immilia                   |                             | 50,715    |
| (03-001)  | TEUSA                     | (03-001-01) E 1H            | 33,264    |
|   | TEUSA                     | (03-001-02) E 2H            | 12,264    |
|   | TEUSA                     | (03-001-03) E 3H            | 34,188    |
|   | TEUSA                     | (03-001-04) E 4H            | 28,728    |
| MR (03-001) Total                                 | 141 15                    |                             | 108,444   |
| blank)  | (blank)                   |                             |           |
| blank) Total                                      | In the second             |                             |           |
| (03-014) J PAD                                    | TEUSA                     | (03-014-04) J 4H            | 28,980    |
| (03-014) J PAD To                                 | (8)                       |                             | 28,980    |
| Grand Total                                       |                           |                             | 3,654,595 |

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| vent date Location                                       | State | Material released   | Volume   | Environmental media          |
|--|-------|---|----------|------------------------------|
| 009 04 15 Appalachia                                     | US-PA | Oil based drilling fluids   | 0.10     | Land                         |
| 009 04 22 Appalachia                                     | US-PA | Stormwater  | 1.91     | Land                         |
| 009 06 10  | US-PA | Flowback / Completions Fluids Water                               | 0.01     | Land                         |
| 009 06 30 Appalachia                                     | US-PA | Other - Chemical Product or Mixture                               | 1.15     | Land                         |
| 009 07 30 Mountain Ridge Road                            | US-PA | Hydraulic Fluids  | 0.0190   | Land                         |
| 09 08 17 Appalachia                                      | US-PA | Oil based drilling fluids   | 0.1190   | Land                         |
| 09 08 17   | US-PA | Produced Water  | 0.0314   | Land                         |
| 09 08 23 Appalachia                                      | US-PA | Produced Water  | 3.18     | Land                         |
| 09 09 22 Appalachia                                      | US-PA | Rig wash water (surfactant and residual oil based drilling fluid) | 2.38     | Land                         |
| 09 10 16 Appalachia                                      | US-PA | Produced Water  | 0.2840   | Land                         |
| 09 10 26 (Apparating                                     | US-PA | Produced Water  | 0.0190   | Land                         |
| 00 11 12 (Annalachia                                     | US-PA | Flowback / Completions Fluids Water                               | 0.0020   |                              |
| 09 11 12 Appalachia                                      |       | Flowback / Completions Fluids water                               | 0.0020   | Land                         |
| 09 11 12 Appalachia                                      | US-PA | Flowback / Completions Fluids Water                               | 0.7950   | Land                         |
| 09 11 21 <b>4</b> H                                      | US-PA | Flowback / Completions Fluids Water                               | 0.03     | Land                         |
| 09 11 22 Appalachia                                      | US-PA | Oil based drilling fluids   | 1.19     | Land                         |
| 09 11 26 Stateland                                       | US-PA | Flowback / Completions Fluids Water                               | 4.77     | Land                         |
| 09 12 07 Appalachia                                      | US-PA | Oil based drilling fluids   | 0.06     | Land                         |
| 009 12 08  | US-PA | Produced Water  | 4.77     | Land                         |
| 09 12 29 Appalachia                                      | US-PA | Anti-freeze   | 0.01     | Land                         |
| 10 01 01 Marcellus                                       | US-PA | Oil based drilling fluids   | 0.20     | Land                         |
| 10 01 10 03-013-01 W 1H                                  | US-PA | Oil based drilling fluids   | 0.18     | Land                         |
| 10 01 11 (01-013-03) D8H                                 | US-PA | Flowback / Completions Fluids Water                               | 0.0002   | Land                         |
| 010 01 12 (01-006-03) J3H                                | US-PA | Diesel Fuel   | 0.132480 | Land                         |
| 010 01 12 (01-006-03) J3H                                | US-PA | Diesel Fuel   | 0.132480 | Land/Pooled rainwater on-sit |
| 010 01 16  DCNR 587 02-002-01                            | US-PA | Oil based drilling fluids   | 0.3028   | Land                         |
| 10 01 21 A R 4H  | US-PA | Lubricating Oil   | 0.0038   | Land                         |
| 10 01 23 01-042-01 R2H                                   | US-PA | Oil based drilling fluids   | 0.4770   | Land                         |
| 10 01 27 L6H - L9H (In L6H in Wellview)                  | US-PA | Oil based drilling fluids   | 0.0189   | Land                         |
| 10 02 04 DCNR_587 (02-017-03)                            | US-PA | Oil based drilling fluids   | 1.59     | Land                         |
| 10 02 22 ( 01-077-06) L 6H                               | US-PA | Diesel Fuel   | 0.01     | Land                         |
| 10 02 22 1 1 (01-077-06) L OH                            |       |   | 10.09    |                              |
| 10 02 22 DCNR 587 (02-002-03)                            | US-PA | Oil based drilling fluids   | 0.09     | Land                         |
| 10 02 23 ms (01-042-02) R 4H                             | US-PA | Hydraulic Fluids  | 10.04    | Land                         |
| 10 02 24 Wheeler-Jackson Township                        | US-PA | Diesel Fuel   | 0.11     | Land                         |
| 10 02 26 h (01-077-01) L 1H                              | US-PA | Hydraulic Fluids  | 0.0160   | Land                         |
| 10 03 06 Marcellus Field Area                            | US-PA | Oil based drilling fluids   | 0.05     | Land                         |
| 10 03 08 Putnam (01-077-05)L 5H                          | US-PA | Diesel Fuel   | 0.80     | Land/Wetland                 |
| 10 03 08 FEI (01-077-05) L 5H                            | US-PA | Air drill cuttings  | 17.24    | Land                         |
| 10 03 09 Marcellus Field Area                            | US-PA | Hydraulic Oil   | 0.0080   | Land                         |
| 10 03 16 FEI (03-004-05) R 5H - Pioneer 59               | US-PA | Diesel Fuel   | 0.0750   | Land                         |
| 10 03 16 FEI (03-004-05) R 5H - Pioneer 59               | US-PA | Oil based drilling fluids   | 0.06     | Land                         |
| 10 03 17 Marcellus Field Area                            | US-PA | Oil based drilling fluids   | 0.02     | Land                         |
| 10 03 20 Appalachia (EFT 1 Pad)                          | US-PA | Flowback / Completions Fluids Water                               | 1.60     | Land                         |
| 10 03 21 (DCNR 587 (02-002-04)                           | US-PA | Oil based drilling fluids   | 1.30     | Land                         |
| 10 03 25 Appalachia - Thomas (01-038-05) FT 7H (Rig 207) | US-PA | Oil based drilling fluids   | 10.02    | Land                         |
| 010 03 27 (01-024-04) R 5H                               | US-PA | Produced Water  | 0.02     | Land                         |
| 10 03 29 B Train #1                                      | US-PA | Lubricating Oil   | 0.02     | Land                         |
| 010 03 29 Appalachia - Williams (01-041-01)R 1H          | US-PA | Produced Water  | 0.30     | Land                         |
| 10 04 04 Pappalachia - Williams (01-041-01)k TH          | US-PA | Floured water   | 0.50     | Land                         |

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| 2010 04 12               | Cease #3  | US-PA          | Produced Water                                      | 0.0080        | Land  | -   |
|--------------------------|---|----------------|---|---------------|-------|-----|
| 2010 04 13               | Appalachia - TWL (01-016-04)4H  | US-PA          | Oil based drilling fluids                           | 0.0750        | Land  | _   |
| 2010 04 13               | Appalachia - Vanblarcom (03-004-01) R 1H  | US-PA          | Oil based drilling fluids                           | 0.0160        | Land  |     |
| 2010 04 14               | Appalachia - DCNR 587 (02-004-02)   | US-PA          | Produced Water                                      | 0.16          | Land  |     |
| 2010 04 18               | Appalachia - Eick (03-013-06) W 6H  | US-PA          | Hydraulic Fluids                                    | 0,0050        | Land  |     |
| 2010 05 02               | (03-015-02) J 2H (Dallas Morris 16)   | US-PA          | Hydraulic Fluids                                    | 0.0190        | Land  |     |
| 2010 05 06               | 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               | (01-041-01) R 1H  | US-PA          | Hydraulic Fluids                                    | 0.0030        | Land  |     |
|                          | 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  | 2 1 |
| 2010 06 03               | £ (03-009)  | US-PA          | Diesel Fuel   | 0.0020        | Land  | -   |
| 2010 06 03               | (03-004-04) R 4H  | US-PA          | Oil based drilling fluids                           | 0.0150        | Land  |     |
| 2010 07 04               | (01-003-01) J 1H  | US-PA          | Produced Water                                      | 0.0190        | Land  |     |
| 2010 07 13               | 01-077-01 L1H - Precision 209   | US-PA          | Oil based drilling fluids                           | 12            | Land  |     |
| 2010 08 03               | Fallbrook Road  | US-PA          | Hydraulic Fluids                                    | 0.0080        | Land  |     |
| 2010 08 06               |   | US-PA          | Natural gas   | 0.003790      | Air   |     |
| 2010 08 13               | Besley Road, Columbia Townshin  | US-PA          | Anti-freeze   | 0.0040        | Land  |     |
| 2010 08 20               | Besley Road, Columbia Township<br>Bradford County, Troy PA 3 1/2 miles East of route 14 | ILIS-PA        | Diesel Fuel   | 0.0950        | Land  |     |
| 2010 08 22               | 03-013-05 W5H   | US-PA          | Lubricating Oil                                     | 0.0080        | Land  |     |
| 2010 09 01               | (03-001-02) E 2H  | US-PA          | Oil based drilling fluids                           | 0.007570      | Land  |     |
| 2010 09 01               | M Wellsite WL 142157  | US-PA          | Produced water                                      | 0.011350      | Land  |     |
| 2010 09 02               | DCNR 587 (02-008-04)  | US-PA          | Diesel Fuel   | 0.19          | Land  |     |
| 2010 09 09               | (01-077-01) L 1H  | US-PA          | Fracwater   | 0.07          | Land  |     |
|                          | DCNR 587 (02-018)   | US-PA          | Produced water                                      | 0.01          | Land  |     |
| 2010 09 20               | DCNR 587 (02-013-02)  | US-PA          | Lubricating Oil                                     | 0.0010        | Land  |     |
| 2010 09 23               | 01-026-01) D 1  | US-PA          | Produced water                                      | 0.0114        | Land  |     |
| 2010 09 23               |   |                |   |               |       |     |
| 2010 09 27               | 01-074-02 W2H<br>01-074-02 W2H  | US-PA          | Oil based drilling fluids                           | 0.0379        | Land  | -   |
|                          |   | US-PA          | Drill cuttings and fresh water based drilling fluid |               | Land  |     |
|                          | Harvest Holdings 01-036-04 4H   | US-PA          | Diesel Fuel   | 0.0189        | Land  |     |
| 2010 10 08               | (01-076-07) L 13H - Saxon 170   | US-PA          | Spray paint   | 0.0010        | Land  | -   |
| 2010 10 12               | /(03-067-02) O 2H   | US-PA          | Oil based drilling fluids                           | 0.015140      | Land  |     |
| 2010 10 14               |   | US-PA          | Produced Water                                      | 10.0114       | Land  | -   |
| 2010 10 21               | Mountain Ridge meter station  | US-PA          | Methane gas   | 0.0010        | Air   |     |
|                          | 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 2010 11 29    | DCNB 587 Statelands Compressor Station Train #2   | US-PA          | Glycol  | 0.0757 0.0340 | Land  |     |
| 2010 11 29               | 05-005-01 K1H Saxon Rig 173   | US-PA          | Oil based drilling fluids<br>Fracwater              |               | Land  |     |
| 2010 12 08<br>2010 12 14 | h (01-076)<br>705-005-01) K 1H - Saxon 173  | US-PA          | Diesel Fuel   | 6.06          | Land  |     |
|                          | ALL - Coven 172   | US-PA          | Anti-freeze   |               | Land  |     |
| 2010 12 17               | 4H - Saxon 172  | US-PA<br>US-PA |   | 0.0010        | Land  |     |
| 2010 12 18               | ad  | US-PA          | Produced water                                      | 0.0080        | Land  |     |
| 2010 12 20 2010 12 20    | (01-075-04) L4H - PD329   |                | Diesel Fuel<br>Hydraulic Fluids                     | 0.0080        | Land  |     |
|                          | 10CND 597 (02 005 04) D-Hamma 56  | US-PA          | Hydraulic Fluids                                    |               | Land  | ~   |
| 2010 12 20               | DCNR 587 (02-005-04) - Patterson 56   | US-PA<br>US-PA | Oil based drilling fluids                           | 0.0040        | Land  | ~   |
| 2010 12 29               | DCNR 587 (02-005-05) - Patterson 56   |                | IL IL DASEO OFILIDO DUIOS                           |               | 1 ann |     |

| 2011 01 06 | (03-008)                           | US-PA | Anti-freeze   | 0.009460 | Land                          |
|------------|------------------------------------|-------|---|----------|-------------------------------|
| 2011 01 10 | (03-008)                           | US-PA | Flowback / Completions Fluids Water                       | 0.2380   | Land                          |
| 2011 01 16 | (03-008)                           | US-PA | Flowback / Completions Fluids Water                       | 9.54     | Land                          |
| 2011 01 17 | am (01-076) - 3637 Fallbrook Road  | US-PA | Flowback / Completions Fluids Water                       | 7.95     | Land                          |
| 2011 01 17 | DCNR 587-02-008-05                 | US-PA | Flowback / Completions Fluids Water                       | 0,16     | Land                          |
| 2011 01 18 | Noble Pad - Precision 228          | US-PA | Anti-freeze   | 0.0189   | Land                          |
| 2011 01 22 | Harvest Holdings (01-036)          | US-PA | Flowback / Completions Fluids Water                       | 0.4770   | Land                          |
| 2011 01 24 | FEI Longenecker (03-008)           | US-PA | Flowback / Completions Fluids Water                       | 0.7950   | Land                          |
| 2011 01 25 | #1 wellsite                        | US-PA | Produced water  | 8.33     | Land                          |
| 2011 02 02 | (03-46-08) B 8H - Saxon 171        | US-PA | Hydraulic Fluids  | 0.003790 | Land                          |
| 2011 02 06 | (03-029-01) S 1H                   | US-PA | Water based drilling fluid                                | 0.1590   | Land                          |
| 2011 02 12 | GIV                                | US-PA | Cement spacer fluid (barite, solvent and other additives) | 0.4770   | Land                          |
| 2011 02 14 | h 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 | (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 | h (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 | r to 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 | Pad                                | US-PA | Sewage  | 0.011    | Land                          |
| 2011 04 13 | Shedden Meter Station              | US-PA | Produced water  | 1.59     | Land                          |
| 2011 04 21 | to er Pipeline                     | US-PA | Pipeline boring mud (bentonite and water)                 | 0.3790   | Land                          |
| 2011 05 05 |                                    | US-PA | Produced water  | 0.0080   | Land                          |
| 2011 05 08 |                                    | US-PA | Hydraulic Fluids  | 0.0040   | Land/Pooled rainwater on-site |