



Linn Energy JL Keel B #90

REMEDIATION PLAN

API No. 30-015-28248

Release Date: Unknown

Unit Letter F, Section 08, Township 17 South, Range 31 East

RP# 2RP-702

BLM Event# 11NU048TG

August 17, 2014

Prepared by:

Environmental Department
Diversified Field Service, Inc.
206 W. Snyder
Hobbs, NM 88240
Phone: (575)964-8394
Fax: (575)393-8396

Mike Bratcher
Environmental Specialist
NM Oil Conservation District – Division 2
811 S. First St.
Artesia, NM 88210

RE: Linn Energy JL Keel B #90 – Remediation Work Plan
UL/F, Section 08, T17S, R31E
API No. 30-015-28248

Mr. Bratcher,

Linn Energy (Linn) has retained Diversified Field Service, Inc. (DFSI) to address environmental issues for the site detailed herein.

The site is located south west of Maljamar NM, in Eddy County. The leak site resulted from a hydrocarbon and produced water leak. The source of the leak was due to a leak on the stuffing box. A C-141 was submitted to the NMOCD on March 30, 2011 (2RP-708). The BLM Event Number for this release is 11NU048TG.

Site Assessment and Delineation

On February 13, 2014 DFSI personnel obtained surface sample of the leak area, which included SP1-SP16. Surface sampling indicated that further delineation was needed to properly sample this site. On April 22, 2014, DFSI personnel obtained full delineation on each sample point.

Field samples were taken on sixteen sample points, each sample was tested for chlorides levels as well as TPH. The TPH samples were performed using a Mini Rae Photoionization Detector (PID). All clean field samples found under the BLM/NMOCD standards, were taken to Cardinal Lab of Hobbs to obtain confirmation samples. And the results confirmed that bottom samples of each sample point were as follows:

SP1: 5' – 144 mg/kg chlorides, <0.300 mg/kg BTEX and <10 mg/kg DRO/GRO
SP2: 2' – 288 mg/kg chlorides, <0.300 mg/kg BTEX and <10 mg/kg DRO/GRO
SP3: 2' – 288 mg/kg chlorides, <0.300 mg/kg BTEX and <10 mg/kg DRO/GRO
SP4: 2' – 48 mg/kg chlorides, <.0300 mg/kg BTEX and <10 mg/kg DRO/GRO

SP5: 2' – 128 mg/kg chlorides, <0.300 mg/kg BTEX and <10 mg/kg DRO/GRO
SP6: 1' – 96 mg/kg chlorides, <0.300 mg/kg BTEX and 215 mg/kg DRO/GRO
SP7: 2' – 112 mg/kg chlorides, <0.300 mg/kg BTEX and <10 mg/kg DRO/GRO
SP8: 2' – 432 mg/kg chlorides, <0.300 mg/kg BTEX and 1090 mg/kg DRO/GRO
SP9: 2' - <16 mg/kg chlorides, <0.300 mg/kg BTEX and <10 mg/kg DRO/GRO
SP10: 2' - 80 mg/kg chlorides, <0.300 mg/kg BTEX and <17.4 mg/kg DRO/GRO
SP11: 1' - <16 mg/kg chlorides, <0.300 mg/kg BTEX and <10 mg/kg DRO/GRO
SP12: 1' – 96 mg/kg chlorides, <0.300 mg/kg BTEX and 2320 mg/kg DRO/GRO
SP13: 1' – 128 mg/kg chlorides, <0.300 mg/kg BTEX and <10 mg/kg DRO/GRO
SP14: 1' – 16 mg/kg chlorides, <0.300 mg/kg BTEX and <100 mg/kg DRO/GRO
SP15: 1' – 224 mg/kg chlorides, <0.300 mg/kg BTEX and <10 mg/kg DRO/GRO
SP16: 1' – 32 mg/kg chlorides, <0.300 mg/kg BTEX and <10 mg/kg DRO/GRO

DFSI has conducted a groundwater study of the area and has determined that according to the New Mexico Office of the State Engineer the average depth to groundwater for this area is 236 foot below ground surface. Therefore, no eminent danger of groundwater impact or threat to life is anticipated.

Conclusion

After careful review DFSI on behalf of Linn Energy would like to propose the following:

Option 1

Excavate 9042 sq. ft. of the 19504 sq. ft. area, 3' on SP1 and 1' on SP2, SP3, SP4 and SP10. SP6, SP8 and SP12 will be excavated to 1.5' and sampled for TPH until the approved levels are obtained. The contaminated soil will be hauled to an approved NMOCDBLM Disposal Facility. The excavation will be backfill on the pad with caliche and topsoil in the pasture area. Then the entire pasture area will be reseeded with a native vegetation mixture as per the BLM's guidelines for returning the site to its natural state.

Option 2

Excavate 9042 sq. ft. of the 19504 sq. ft. area, 3' on SP1 and 1' on SP2, SP3, SP4 and SP10. SP6, SP8 and SP12 will be excavated to 1.5' and sampled for TPH until the approved levels are obtained. The contaminated soil will be hauled to the JL Keel B# 17 and deep buried, with a 20' mil liner and capped with a 20 mil liner. Backfilling procedures will be utilized with native sand for surface reseeded procedures to return this site to its natural state. The excavated area will be lined at 4' and backfill with native soil. Some imported topsoil maybe needed to finalize this procedure to ensure

proper growth. This option illuminates having to haul the contaminated soil to an approved facility and the disposal costs.

Side wall samples will be taking during the excavation procedure to ensure that all contaminates have been remediated. These samples will also be taken to an approved lab for confirmation before backfilling will take place.

Following the approval of one of the above plans, either Option 1 or Option 2 above and after the remediation has taken place, DFSI will submit all proper closure documentation to the NMOCD and BLM in accordance to the State and Federal Guidelines set forth.

Please feel free to contact me with any questions concerning this remediation plan request.

Sincerely,



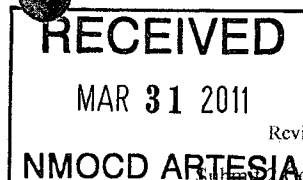
Natalie Gladden
Environmental Consultant
Diversified Field Service, Inc.
315 S. Leech
Hobbs, NM 88240
Office: (575)964-8394
Mobile: (575)602-1786
Fax: (575)964-8396
Email: ngladden@diversifiedfsi.com

cc Jeff Robertson
NM Bureau of Land Management

Attachments: Initial Form C-141
Site/Sample Map
Sample Data
Lab Analytical Data

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505



Form C-141
Revised October 10, 2003

Submit copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

Release Notification and Corrective Action

nkmw 1109552874 **OPERATOR** ☒ Initial Report ☐ Final Report

| | |
|---|----------------------------|
| Name of Company Linn Energy <i>269324</i> | Contact Dennis Potter |
| Address PO Box 69, Loco Hills, NM 88255 | Telephone No. 575 677 2327 |
| Facility Name J L Keel B #90 | Facility Type Oil Well |

| | | |
|-------------------|-------------------|---|
| Surface Owner BLM | Mineral Owner BLM | Lease No. NMLC029435B API 30-015-28248 |
|-------------------|-------------------|---|

LOCATION OF RELEASE

| Unit Letter | Section | Township | Range | Feet from the | North/South Line | Feet from the | East/West Line | County |
|-------------|---------|----------|-------|---------------|------------------|---------------|----------------|--------|
| F | 8 | 17S | 31E | | | | | Eddy |

Latitude N32.84915 Longitude W103.89658 (Release Site)

NATURE OF RELEASE

| | | |
|--|---|----------------------------------|
| Type of Release Produced Water/Hydrocarbons | Volume of Release Unknown | Volume Recovered Unknown |
| Source of Release Flow Line | Date and Hour of Occurrence Unknown | Date and Hour of Discovery Feb11 |
| Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required | If YES, To Whom? N/A | |
| By Whom? N/A | Date and Hour N/A | |
| Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | If YES, Volume Impacting the Watercourse. N/A | |
| If a Watercourse was Impacted, Describe Fully.* N/A | | |
| Describe Cause of Problem and Remedial Action Taken.* The release appears to be from the well head/sluffing box or possibly a flow line failure. The fluid exited the location on the south side and entered the pasture running southwest between two sand dunes before pooling approximately 400' from the location. The affected area is approximately 4' x 400'. The natural contour of the land contained the release into a narrow area. The affected area will be delineated and a work plan submitted to NM OCD and BLM for review and approval. | | |
| Describe Area Affected and Cleanup Action Taken.* | | |
| I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. | | |
| Signature: <i>Dennis Potter</i> | OIL CONSERVATION DIVISION | |
| Printed Name: Dennis Potter | Approved by District Supervisor <i>Mike Brannan</i> | |
| Title: Assistant Production Foreman | Approval Date: <i>4/5/11</i> | Expiration Date: |
| E-mail Address: dpotter@linenergy.com | Conditions of Approval: Attached <input type="checkbox"/> | |
| Date: 30Mar11 Phone: 505 206 7673 | REMEDATION per OCD Rules and Guidelines. <u>SUBMIT REMEDIATION PROPOSAL BY:</u> <i>5/5/11</i> | |

* Attach Additional Sheets If Necessary

2 RP-708

(E)

Company Name: Linn Energy
Location Name: JL Keel B #90

SP Date: 2/13/2014
4/22/2014

Release Date: 3/31/2011

[illegible]

Delineate further

[illegible]

Delineate further



Lab Confirmation Sample
Field Sampling
Needs Delineation and confirmation samples

Site Diagram

Legend

- ▲ Sample Points
- ★ Source
- Above Ground Line
- Buried Line
- Spill

Lance Crenshaw
GIS Technician

Soil Remediation and Ground Water Remediation
Environmental Assessments
Regulatory Compliance



Environmental

DFS

Services

Office: 575-964-8394
Fax: 575-964-8396

Cell: 575-441-2359
Email: lcrenshaw@diversifiedfsi.com

Linn, JL Keel B 90

UL/F, Sec. 8 T17S R31E

Eddy, NM

Drafted By: Lance Crenshaw, 3-3-14

0 37.5 75 150 Ft

**Spill Area:
19,504 sq. ft.**

Pumpjack

Landowner: BLM

Depth to Groundwater: 236 ft.



Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

April 28, 2014

BRIAN WALL

LINN OPERATING-HOBBS

2130 W. BENDER

HOBBS, NM 88240

RE: J. L. KEEL B #90

Enclosed are the results of analyses for samples received by the laboratory on 04/22/14 15:55.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

| | |
|------------------|------------------------------|
| Method EPA 552.2 | Haloacetic Acids (HAA-5) |
| Method EPA 524.2 | Total Trihalomethanes (TTHM) |
| Method EPA 524.4 | Regulated VOCs (V1, V2, V3) |

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

LINN OPERATING-HOBBS
 BRIAN WALL
 2130 W. BENDER
 HOBBS NM, 88240
 Fax To: (575) 738-1740

| | | | |
|-------------------|------------------|---------------------|---------------|
| Received: | 04/22/2014 | Sampling Date: | 04/22/2014 |
| Reported: | 04/28/2014 | Sampling Type: | Soil |
| Project Name: | J. L. KEEL B #90 | Sampling Condition: | Cool & Intact |
| Project Number: | NONE GIVEN | Sample Received By: | Jodi Henson |
| Project Location: | NOT GIVEN | | |

Sample ID: SP 1 @ 5' (H401209-01)

| BTX 8021B | | mg/kg | | Analyzed By: CK | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 04/24/2014 | ND | 1.89 | 94.5 | 2.00 | 8.49 | |
| Toluene* | <0.050 | 0.050 | 04/24/2014 | ND | 1.88 | 94.2 | 2.00 | 8.41 | |
| Ethylbenzene* | <0.050 | 0.050 | 04/24/2014 | ND | 1.88 | 94.0 | 2.00 | 8.50 | |
| Total Xylenes* | <0.150 | 0.150 | 04/24/2014 | ND | 5.61 | 93.4 | 6.00 | 8.54 | |
| Total BTX | <0.300 | 0.300 | 04/24/2014 | ND | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 101 % 89.4-126

| Chloride, SM4500Cl-B | | mg/kg | | Analyzed By: AP | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 144 | 16.0 | 04/24/2014 | ND | 400 | 100 | 400 | 4.08 | |

| TPH 8015M | | mg/kg | | Analyzed By: CK | | | | | |
|--------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10 | <10.0 | 10.0 | 04/23/2014 | ND | 191 | 95.5 | 200 | 7.88 | |
| DRO >C10-C28 | <10.0 | 10.0 | 04/23/2014 | ND | 210 | 105 | 200 | 9.28 | |

Surrogate: 1-Chlorooctane 101 % 65.2-140

Surrogate: 1-Chlorooctadecane 98.3 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

LINN OPERATING-HOBBS
 BRIAN WALL
 2130 W. BENDER
 HOBBS NM, 88240
 Fax To: (575) 738-1740

Received: 04/22/2014
 Reported: 04/28/2014
 Project Name: J. L. KEEL B #90
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 04/22/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SP 2 @ 2' (H401209-02)

| BTX 8021B | | mg/kg | | Analyzed By: CK | | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Benzene* | <0.050 | 0.050 | 04/24/2014 | ND | 1.89 | 94.5 | 2.00 | 8.49 | | |
| Toluene* | <0.050 | 0.050 | 04/24/2014 | ND | 1.88 | 94.2 | 2.00 | 8.41 | | |
| Ethylbenzene* | <0.050 | 0.050 | 04/24/2014 | ND | 1.88 | 94.0 | 2.00 | 8.50 | | |
| Total Xylenes* | <0.150 | 0.150 | 04/24/2014 | ND | 5.61 | 93.4 | 6.00 | 8.54 | | |
| Total BTX | <0.300 | 0.300 | 04/24/2014 | ND | | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 101 % 89.4-126

| Chloride, SM4500CI-B | | mg/kg | | Analyzed By: AP | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 288 | 16.0 | 04/24/2014 | ND | 400 | 100 | 400 | 4.08 | |

| TPH 8015M | | mg/kg | | Analyzed By: CK | | | | | |
|--------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10 | <10.0 | 10.0 | 04/23/2014 | ND | 191 | 95.5 | 200 | 7.88 | |
| DRO >C10-C28 | <10.0 | 10.0 | 04/23/2014 | ND | 210 | 105 | 200 | 9.28 | |

Surrogate: 1-Chlorooctane 108 % 65.2-140

Surrogate: 1-Chlorooctadecane 97.5 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

LINN OPERATING-HOBBS
 BRIAN WALL
 2130 W. BENDER
 HOBBS NM, 88240
 Fax To: (575) 738-1740

Received: 04/22/2014
 Reported: 04/28/2014
 Project Name: J. L. KEEL B #90
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 04/22/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SP 3 @ 2' (H401209-03)

| BTX 8021B | | mg/kg | | Analyzed By: CK | | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Benzene* | <0.050 | 0.050 | 04/24/2014 | ND | 1.89 | 94.5 | 2.00 | 8.49 | | |
| Toluene* | <0.050 | 0.050 | 04/24/2014 | ND | 1.88 | 94.2 | 2.00 | 8.41 | | |
| Ethylbenzene* | <0.050 | 0.050 | 04/24/2014 | ND | 1.88 | 94.0 | 2.00 | 8.50 | | |
| Total Xylenes* | <0.150 | 0.150 | 04/24/2014 | ND | 5.61 | 93.4 | 6.00 | 8.54 | | |
| Total BTX | <0.300 | 0.300 | 04/24/2014 | ND | | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 102 % 89.4-126

| Chloride, SM4500Cl-B | | mg/kg | | Analyzed By: AP | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 288 | 16.0 | 04/24/2014 | ND | 400 | 100 | 400 | 4.08 | |

| TPH 8015M | | mg/kg | | Analyzed By: CK | | | | | |
|--------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10 | <10.0 | 10.0 | 04/23/2014 | ND | 191 | 95.5 | 200 | 7.88 | |
| DRO >C10-C28 | <10.0 | 10.0 | 04/23/2014 | ND | 210 | 105 | 200 | 9.28 | |

Surrogate: 1-Chlorooctane 107 % 65.2-140

Surrogate: 1-Chlorooctadecane 107 % 63.6-154

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 LINN OPERATING-HOBBS
 BRIAN WALL
 2130 W. BENDER
 HOBBS NM, 88240
 Fax To: (575) 738-1740

 Received: 04/22/2014
 Reported: 04/28/2014
 Project Name: J. L. KEEL B #90
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 04/22/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SP 4 @ 2' (H401209-04)

| BTX 8021B | | mg/kg | | Analyzed By: CK | | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Benzene* | <0.050 | 0.050 | 04/24/2014 | ND | 1.89 | 94.5 | 2.00 | 8.49 | | |
| Toluene* | <0.050 | 0.050 | 04/24/2014 | ND | 1.88 | 94.2 | 2.00 | 8.41 | | |
| Ethylbenzene* | <0.050 | 0.050 | 04/24/2014 | ND | 1.88 | 94.0 | 2.00 | 8.50 | | |
| Total Xylenes* | <0.150 | 0.150 | 04/24/2014 | ND | 5.61 | 93.4 | 6.00 | 8.54 | | |
| Total BTX | <0.300 | 0.300 | 04/24/2014 | ND | | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 101 % 89.4-126

| Chloride, SM4500CI-B | | mg/kg | | Analyzed By: AP | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 48.0 | 16.0 | 04/24/2014 | ND | 400 | 100 | 400 | 4.08 | |

| TPH 8015M | | mg/kg | | Analyzed By: CK | | | | | |
|--------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10 | <10.0 | 10.0 | 04/23/2014 | ND | 191 | 95.5 | 200 | 7.88 | |
| DRO >C10-C28 | <10.0 | 10.0 | 04/23/2014 | ND | 210 | 105 | 200 | 9.28 | |

Surrogate: 1-Chlorooctane 102 % 65.2-140

Surrogate: 1-Chlorooctadecane 99.4 % 63.6-154

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

LINN OPERATING-HOBBS
 BRIAN WALL
 2130 W. BENDER
 HOBBS NM, 88240
 Fax To: (575) 738-1740

Received: 04/22/2014
 Reported: 04/28/2014
 Project Name: J. L. KEEL B #90
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 04/22/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SP 5 @ 2' (H401209-05)

| BTX 8021B | | mg/kg | | Analyzed By: CK | | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Benzene* | <0.050 | 0.050 | 04/24/2014 | ND | 1.89 | 94.5 | 2.00 | 8.49 | | |
| Toluene* | <0.050 | 0.050 | 04/24/2014 | ND | 1.88 | 94.2 | 2.00 | 8.41 | | |
| Ethylbenzene* | <0.050 | 0.050 | 04/24/2014 | ND | 1.88 | 94.0 | 2.00 | 8.50 | | |
| Total Xylenes* | <0.150 | 0.150 | 04/24/2014 | ND | 5.61 | 93.4 | 6.00 | 8.54 | | |
| Total BTX | <0.300 | 0.300 | 04/24/2014 | ND | | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 101 % 89.4-126

| Chloride, SM4500Cl-B | | mg/kg | | Analyzed By: AP | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 128 | 16.0 | 04/24/2014 | ND | 400 | 100 | 400 | 4.08 | |

| TPH 8015M | | mg/kg | | Analyzed By: CK | | | | | |
|--------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10 | <10.0 | 10.0 | 04/23/2014 | ND | 191 | 95.5 | 200 | 7.88 | |
| DRO >C10-C28 | <10.0 | 10.0 | 04/23/2014 | ND | 210 | 105 | 200 | 9.28 | |

Surrogate: 1-Chlorooctane 99.3 % 65.2-140

Surrogate: 1-Chlorooctadecane 94.9 % 63.6-154

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

LINN OPERATING-HOBBS
 BRIAN WALL
 2130 W. BENDER
 HOBBS NM, 88240
 Fax To: (575) 738-1740

| | | | |
|-------------------|------------------|---------------------|---------------|
| Received: | 04/22/2014 | Sampling Date: | 04/22/2014 |
| Reported: | 04/28/2014 | Sampling Type: | Soil |
| Project Name: | J. L. KEEL B #90 | Sampling Condition: | Cool & Intact |
| Project Number: | NONE GIVEN | Sample Received By: | Jodi Henson |
| Project Location: | NOT GIVEN | | |

Sample ID: SP 6 @ 1' (H401209-06)

| BTX 8021B | | mg/kg | | Analyzed By: CK | | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Benzene* | <0.050 | 0.050 | 04/24/2014 | ND | 1.89 | 94.5 | 2.00 | 8.49 | | |
| Toluene* | <0.050 | 0.050 | 04/24/2014 | ND | 1.88 | 94.2 | 2.00 | 8.41 | | |
| Ethylbenzene* | <0.050 | 0.050 | 04/24/2014 | ND | 1.88 | 94.0 | 2.00 | 8.50 | | |
| Total Xylenes* | <0.150 | 0.150 | 04/24/2014 | ND | 5.61 | 93.4 | 6.00 | 8.54 | | |
| Total BTX | <0.300 | 0.300 | 04/24/2014 | ND | | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 101 % 89.4-126

| Chloride, SM4500CI-B | | mg/kg | | Analyzed By: AP | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 96.0 | 16.0 | 04/24/2014 | ND | 400 | 100 | 400 | 4.08 | |

| TPH 8015M | | mg/kg | | Analyzed By: CK | | | | | |
|--------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10 | <10.0 | 10.0 | 04/24/2014 | ND | 193 | 96.7 | 200 | 6.41 | |
| DRO >C10-C28 | 215 | 10.0 | 04/24/2014 | ND | 215 | 107 | 200 | 1.79 | |

Surrogate: 1-Chlorooctane 97.4 % 65.2-140

Surrogate: 1-Chlorooctadecane 106 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 LINN OPERATING-HOBBS
 BRIAN WALL
 2130 W. BENDER
 HOBBS NM, 88240
 Fax To: (575) 738-1740

 Received: 04/22/2014
 Reported: 04/28/2014
 Project Name: J. L. KEEL B #90
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 04/22/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SP 7 @ 2' (H401209-07)

| BTX 8021B | | mg/kg | | Analyzed By: CK | | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Benzene* | <0.050 | 0.050 | 04/24/2014 | ND | 1.89 | 94.5 | 2.00 | 8.49 | | |
| Toluene* | <0.050 | 0.050 | 04/24/2014 | ND | 1.88 | 94.2 | 2.00 | 8.41 | | |
| Ethylbenzene* | <0.050 | 0.050 | 04/24/2014 | ND | 1.88 | 94.0 | 2.00 | 8.50 | | |
| Total Xylenes* | <0.150 | 0.150 | 04/24/2014 | ND | 5.61 | 93.4 | 6.00 | 8.54 | | |
| Total BTX | <0.300 | 0.300 | 04/24/2014 | ND | | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 102 % 89.4-126

| Chloride, SM4500Cl-B | | mg/kg | | Analyzed By: AP | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 112 | 16.0 | 04/24/2014 | ND | 400 | 100 | 400 | 4.08 | |

| TPH 8015M | | mg/kg | | Analyzed By: CK | | | | | |
|--------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10 | <10.0 | 10.0 | 04/24/2014 | ND | 193 | 96.7 | 200 | 6.41 | |
| DRO >C10-C28 | <10.0 | 10.0 | 04/24/2014 | ND | 215 | 107 | 200 | 1.79 | |

Surrogate: 1-Chlorooctane 96.3 % 65.2-140

Surrogate: 1-Chlorooctadecane 103 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 LINN OPERATING-HOBBS
 BRIAN WALL
 2130 W. BENDER
 HOBBS NM, 88240
 Fax To: (575) 738-1740

 Received: 04/22/2014
 Reported: 04/28/2014
 Project Name: J. L. KEEL B #90
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 04/22/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SP 8 @ 2' (H401209-08)

| BTX 8021B | | mg/kg | | Analyzed By: CK | | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Benzene* | <0.050 | 0.050 | 04/24/2014 | ND | 1.89 | 94.5 | 2.00 | 8.49 | | |
| Toluene* | <0.050 | 0.050 | 04/24/2014 | ND | 1.88 | 94.2 | 2.00 | 8.41 | | |
| Ethylbenzene* | <0.050 | 0.050 | 04/24/2014 | ND | 1.88 | 94.0 | 2.00 | 8.50 | | |
| Total Xylenes* | <0.150 | 0.150 | 04/24/2014 | ND | 5.61 | 93.4 | 6.00 | 8.54 | | |
| Total BTX | <0.300 | 0.300 | 04/24/2014 | ND | | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 101 % 89.4-126

| Chloride, SM4500CI-B | | mg/kg | | Analyzed By: AP | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 432 | 16.0 | 04/24/2014 | ND | 400 | 100 | 400 | 4.08 | |

| TPH 8015M | | mg/kg | | Analyzed By: CK | | | | | |
|--------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10 | <10.0 | 10.0 | 04/24/2014 | ND | 193 | 96.7 | 200 | 6.41 | |
| DRO >C10-C28 | 1090 | 10.0 | 04/24/2014 | ND | 215 | 107 | 200 | 1.79 | |

Surrogate: 1-Chlorooctane 120 % 65.2-140

Surrogate: 1-Chlorooctadecane 133 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

LINN OPERATING-HOBBS
 BRIAN WALL
 2130 W. BENDER
 HOBBS NM, 88240
 Fax To: (575) 738-1740

| | | | |
|-------------------|------------------|---------------------|---------------|
| Received: | 04/22/2014 | Sampling Date: | 04/22/2014 |
| Reported: | 04/28/2014 | Sampling Type: | Soil |
| Project Name: | J. L. KEEL B #90 | Sampling Condition: | Cool & Intact |
| Project Number: | NONE GIVEN | Sample Received By: | Jodi Henson |
| Project Location: | NOT GIVEN | | |

Sample ID: SP 9 @ 2' (H401209-09)

| BTX 8021B | | mg/kg | | Analyzed By: CK | | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Benzene* | <0.050 | 0.050 | 04/24/2014 | ND | 1.89 | 94.5 | 2.00 | 8.49 | | |
| Toluene* | <0.050 | 0.050 | 04/24/2014 | ND | 1.88 | 94.2 | 2.00 | 8.41 | | |
| Ethylbenzene* | <0.050 | 0.050 | 04/24/2014 | ND | 1.88 | 94.0 | 2.00 | 8.50 | | |
| Total Xylenes* | <0.150 | 0.150 | 04/24/2014 | ND | 5.61 | 93.4 | 6.00 | 8.54 | | |
| Total BTX | <0.300 | 0.300 | 04/24/2014 | ND | | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 101 % 89.4-126

| Chloride, SM4500CI-B | | mg/kg | | Analyzed By: AP | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | <16.0 | 16.0 | 04/24/2014 | ND | 400 | 100 | 400 | 4.08 | |

| TPH 8015M | | mg/kg | | Analyzed By: CK | | | | | |
|--------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10 | <10.0 | 10.0 | 04/24/2014 | ND | 193 | 96.7 | 200 | 6.41 | |
| DRO >C10-C28 | <10.0 | 10.0 | 04/24/2014 | ND | 215 | 107 | 200 | 1.79 | |

Surrogate: 1-Chlorooctane 97.6 % 65.2-140

Surrogate: 1-Chlorooctadecane 98.9 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

LINN OPERATING-HOBBS
 BRIAN WALL
 2130 W. BENDER
 HOBBS NM, 88240
 Fax To: (575) 738-1740

| | | | |
|-------------------|------------------|---------------------|---------------|
| Received: | 04/22/2014 | Sampling Date: | 04/22/2014 |
| Reported: | 04/28/2014 | Sampling Type: | Soil |
| Project Name: | J. L. KEEL B #90 | Sampling Condition: | Cool & Intact |
| Project Number: | NONE GIVEN | Sample Received By: | Jodi Henson |
| Project Location: | NOT GIVEN | | |

Sample ID: SP 10 @ 2' (H401209-10)

| BTX 8021B | | mg/kg | | Analyzed By: CK | | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Benzene* | <0.050 | 0.050 | 04/25/2014 | ND | 1.89 | 94.5 | 2.00 | 8.49 | | |
| Toluene* | <0.050 | 0.050 | 04/25/2014 | ND | 1.88 | 94.2 | 2.00 | 8.41 | | |
| Ethylbenzene* | <0.050 | 0.050 | 04/25/2014 | ND | 1.88 | 94.0 | 2.00 | 8.50 | | |
| Total Xylenes* | <0.150 | 0.150 | 04/25/2014 | ND | 5.61 | 93.4 | 6.00 | 8.54 | | |
| Total BTX | <0.300 | 0.300 | 04/25/2014 | ND | | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 101 % 89.4-126

| Chloride, SM4500Cl-B | | mg/kg | | Analyzed By: AP | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 80.0 | 16.0 | 04/24/2014 | ND | 400 | 100 | 400 | 4.08 | |

| TPH 8015M | | mg/kg | | Analyzed By: CK | | | | | |
|--------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10 | <10.0 | 10.0 | 04/24/2014 | ND | 193 | 96.7 | 200 | 6.41 | |
| DRO >C10-C28 | 17.4 | 10.0 | 04/24/2014 | ND | 215 | 107 | 200 | 1.79 | |

Surrogate: 1-Chlorooctane 111 % 65.2-140

Surrogate: 1-Chlorooctadecane 108 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

LINN OPERATING-HOBBS
 BRIAN WALL
 2130 W. BENDER
 HOBBS NM, 88240
 Fax To: (575) 738-1740

| | | | |
|-------------------|------------------|---------------------|---------------|
| Received: | 04/22/2014 | Sampling Date: | 04/22/2014 |
| Reported: | 04/28/2014 | Sampling Type: | Soil |
| Project Name: | J. L. KEEL B #90 | Sampling Condition: | Cool & Intact |
| Project Number: | NONE GIVEN | Sample Received By: | Jodi Henson |
| Project Location: | NOT GIVEN | | |

Sample ID: SP 11 @ 1' (H401209-11)

| BTX 8021B | | mg/kg | | Analyzed By: CK | | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Benzene* | <0.050 | 0.050 | 04/25/2014 | ND | 1.89 | 94.5 | 2.00 | 8.49 | | |
| Toluene* | <0.050 | 0.050 | 04/25/2014 | ND | 1.88 | 94.2 | 2.00 | 8.41 | | |
| Ethylbenzene* | <0.050 | 0.050 | 04/25/2014 | ND | 1.88 | 94.0 | 2.00 | 8.50 | | |
| Total Xylenes* | <0.150 | 0.150 | 04/25/2014 | ND | 5.61 | 93.4 | 6.00 | 8.54 | | |
| Total BTX | <0.300 | 0.300 | 04/25/2014 | ND | | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 101 % 89.4-126

| Chloride, SM4500Cl-B | | mg/kg | | Analyzed By: AP | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | <16.0 | 16.0 | 04/24/2014 | ND | 400 | 100 | 400 | 4.08 | |

| TPH 8015M | | mg/kg | | Analyzed By: CK | | | | | |
|--------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10 | <10.0 | 10.0 | 04/24/2014 | ND | 193 | 96.7 | 200 | 6.41 | |
| DRO >C10-C28 | <10.0 | 10.0 | 04/24/2014 | ND | 215 | 107 | 200 | 1.79 | |

Surrogate: 1-Chlorooctane 100 % 65.2-140

Surrogate: 1-Chlorooctadecane 101 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

LINN OPERATING-HOBBS
 BRIAN WALL
 2130 W. BENDER
 HOBBS NM, 88240
 Fax To: (575) 738-1740

Received: 04/22/2014
 Reported: 04/28/2014
 Project Name: J. L. KEEL B #90
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 04/22/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SP 12 @ 1' (H401209-12)

| BTX 8021B | | mg/kg | | Analyzed By: CK | | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Benzene* | <0.050 | 0.050 | 04/25/2014 | ND | 1.89 | 94.5 | 2.00 | 8.49 | | |
| Toluene* | <0.050 | 0.050 | 04/25/2014 | ND | 1.88 | 94.2 | 2.00 | 8.41 | | |
| Ethylbenzene* | <0.050 | 0.050 | 04/25/2014 | ND | 1.88 | 94.0 | 2.00 | 8.50 | | |
| Total Xylenes* | <0.150 | 0.150 | 04/25/2014 | ND | 5.61 | 93.4 | 6.00 | 8.54 | | |
| Total BTX | <0.300 | 0.300 | 04/25/2014 | ND | | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 102 % 89.4-126

| Chloride, SM4500Cl-B | | mg/kg | | Analyzed By: AP | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 96.0 | 16.0 | 04/24/2014 | ND | 400 | 100 | 400 | 4.08 | |

| TPH 8015M | | mg/kg | | Analyzed By: CK | | | | S-06 | |
|--------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10 | <100 | 100 | 04/24/2014 | ND | 193 | 96.7 | 200 | 6.41 | |
| DRO >C10-C28 | 2320 | 100 | 04/24/2014 | ND | 215 | 107 | 200 | 1.79 | |

Surrogate: 1-Chlorooctane 83.7 % 65.2-140

Surrogate: 1-Chlorooctadecane 155 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

LINN OPERATING-HOBBS
 BRIAN WALL
 2130 W. BENDER
 HOBBS NM, 88240
 Fax To: (575) 738-1740

| | | | |
|-------------------|------------------|---------------------|---------------|
| Received: | 04/22/2014 | Sampling Date: | 04/22/2014 |
| Reported: | 04/28/2014 | Sampling Type: | Soil |
| Project Name: | J. L. KEEL B #90 | Sampling Condition: | Cool & Intact |
| Project Number: | NONE GIVEN | Sample Received By: | Jodi Henson |
| Project Location: | NOT GIVEN | | |

Sample ID: SP 13 @ 1' (H401209-13)

| BTX 8021B | | mg/kg | | Analyzed By: CK | | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Benzene* | <0.050 | 0.050 | 04/25/2014 | ND | 1.89 | 94.5 | 2.00 | 8.49 | | |
| Toluene* | <0.050 | 0.050 | 04/25/2014 | ND | 1.88 | 94.2 | 2.00 | 8.41 | | |
| Ethylbenzene* | <0.050 | 0.050 | 04/25/2014 | ND | 1.88 | 94.0 | 2.00 | 8.50 | | |
| Total Xylenes* | <0.150 | 0.150 | 04/25/2014 | ND | 5.61 | 93.4 | 6.00 | 8.54 | | |
| Total BTX | <0.300 | 0.300 | 04/25/2014 | ND | | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 100 % 89.4-126

| Chloride, SM4500Cl-B | | mg/kg | | Analyzed By: AP | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 128 | 16.0 | 04/24/2014 | ND | 400 | 100 | 400 | 0.00 | |

| TPH 8015M | | mg/kg | | Analyzed By: CK | | | | | |
|--------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10 | <10.0 | 10.0 | 04/24/2014 | ND | 193 | 96.7 | 200 | 6.41 | |
| DRO >C10-C28 | <10.0 | 10.0 | 04/24/2014 | ND | 215 | 107 | 200 | 1.79 | |

Surrogate: 1-Chlorooctane 107 % 65.2-140

Surrogate: 1-Chlorooctadecane 106 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

LINN OPERATING-HOBBS
 BRIAN WALL
 2130 W. BENDER
 HOBBS NM, 88240
 Fax To: (575) 738-1740

| | | | |
|-------------------|------------------|---------------------|---------------|
| Received: | 04/22/2014 | Sampling Date: | 04/22/2014 |
| Reported: | 04/28/2014 | Sampling Type: | Soil |
| Project Name: | J. L. KEEL B #90 | Sampling Condition: | Cool & Intact |
| Project Number: | NONE GIVEN | Sample Received By: | Jodi Henson |
| Project Location: | NOT GIVEN | | |

Sample ID: SP 14 @ 1' (H401209-14)

| BTX 8021B | | mg/kg | | Analyzed By: CK | | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Benzene* | <0.050 | 0.050 | 04/25/2014 | ND | 1.89 | 94.5 | 2.00 | 8.49 | | |
| Toluene* | <0.050 | 0.050 | 04/25/2014 | ND | 1.88 | 94.2 | 2.00 | 8.41 | | |
| Ethylbenzene* | <0.050 | 0.050 | 04/25/2014 | ND | 1.88 | 94.0 | 2.00 | 8.50 | | |
| Total Xylenes* | <0.150 | 0.150 | 04/25/2014 | ND | 5.61 | 93.4 | 6.00 | 8.54 | | |
| Total BTX | <0.300 | 0.300 | 04/25/2014 | ND | | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 101 % 89.4-126

| Chloride, SM4500Cl-B | | mg/kg | | Analyzed By: AP | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 16.0 | 16.0 | 04/24/2014 | ND | 400 | 100 | 400 | 0.00 | |

| TPH 8015M | | mg/kg | | Analyzed By: CK | | | | | |
|--------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10 | <100 | 100 | 04/24/2014 | ND | 193 | 96.7 | 200 | 6.41 | |
| DRO >C10-C28 | <100 | 100 | 04/24/2014 | ND | 215 | 107 | 200 | 1.79 | |

Surrogate: 1-Chlorooctane 98.5 % 65.2-140

Surrogate: 1-Chlorooctadecane 130 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

LINN OPERATING-HOBBS
 BRIAN WALL
 2130 W. BENDER
 HOBBS NM, 88240
 Fax To: (575) 738-1740

Received: 04/22/2014
 Reported: 04/28/2014
 Project Name: J. L. KEEL B #90
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 04/22/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SP 15 @ 1' (H401209-15)

| BTX 8021B | | mg/kg | | Analyzed By: CK | | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Benzene* | <0.050 | 0.050 | 04/25/2014 | ND | 1.89 | 94.5 | 2.00 | 8.49 | | |
| Toluene* | <0.050 | 0.050 | 04/25/2014 | ND | 1.88 | 94.2 | 2.00 | 8.41 | | |
| Ethylbenzene* | <0.050 | 0.050 | 04/25/2014 | ND | 1.88 | 94.0 | 2.00 | 8.50 | | |
| Total Xylenes* | <0.150 | 0.150 | 04/25/2014 | ND | 5.61 | 93.4 | 6.00 | 8.54 | | |
| Total BTX | <0.300 | 0.300 | 04/25/2014 | ND | | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 100 % 89.4-126

| Chloride, SM4500CI-B | | mg/kg | | Analyzed By: AP | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 224 | 16.0 | 04/24/2014 | ND | 400 | 100 | 400 | 0.00 | |

| TPH 8015M | | mg/kg | | Analyzed By: CK | | | | | |
|--------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10 | <10.0 | 10.0 | 04/24/2014 | ND | 193 | 96.7 | 200 | 6.41 | |
| DRO >C10-C28 | <10.0 | 10.0 | 04/24/2014 | ND | 215 | 107 | 200 | 1.79 | |

Surrogate: 1-Chlorooctane 85.4 % 65.2-140

Surrogate: 1-Chlorooctadecane 82.3 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

LINN OPERATING-HOBBS
 BRIAN WALL
 2130 W. BENDER
 HOBBS NM, 88240
 Fax To: (575) 738-1740

| | | | |
|-------------------|------------------|---------------------|---------------|
| Received: | 04/22/2014 | Sampling Date: | 04/22/2014 |
| Reported: | 04/28/2014 | Sampling Type: | Soil |
| Project Name: | J. L. KEEL B #90 | Sampling Condition: | Cool & Intact |
| Project Number: | NONE GIVEN | Sample Received By: | Jodi Henson |
| Project Location: | NOT GIVEN | | |

Sample ID: SP 16 @ 1' (H401209-16)

| BTX 8021B | | mg/kg | | Analyzed By: CK | | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Benzene* | <0.050 | 0.050 | 04/25/2014 | ND | 1.89 | 94.5 | 2.00 | 8.49 | | |
| Toluene* | <0.050 | 0.050 | 04/25/2014 | ND | 1.88 | 94.2 | 2.00 | 8.41 | | |
| Ethylbenzene* | <0.050 | 0.050 | 04/25/2014 | ND | 1.88 | 94.0 | 2.00 | 8.50 | | |
| Total Xylenes* | <0.150 | 0.150 | 04/25/2014 | ND | 5.61 | 93.4 | 6.00 | 8.54 | | |
| Total BTX | <0.300 | 0.300 | 04/25/2014 | ND | | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 102 % 89.4-126

| Chloride, SM4500Cl-B | | mg/kg | | Analyzed By: AP | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 32.0 | 16.0 | 04/24/2014 | ND | 400 | 100 | 400 | 0.00 | |

| TPH 8015M | | mg/kg | | Analyzed By: CK | | | | | |
|--------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10 | <10.0 | 10.0 | 04/24/2014 | ND | 193 | 96.7 | 200 | 6.41 | |
| DRO >C10-C28 | <10.0 | 10.0 | 04/24/2014 | ND | 215 | 107 | 200 | 1.79 | |

Surrogate: 1-Chlorooctane 95.9 % 65.2-140

Surrogate: 1-Chlorooctadecane 95.6 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

| | |
|------|--|
| S-06 | The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's. |
| ND | Analyte NOT DETECTED at or above the reporting limit |
| RPD | Relative Percent Difference |
| ** | Samples not received at proper temperature of 6°C or below. |
| *** | Insufficient time to reach temperature. |
| - | Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report |

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Celey D. Keene, Lab Director/Quality Manager



—

(575) 393-2326 FAX (575) 393-2476

#54



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

1

Company Name: Linn Energy

Project Manager: Brian Weill

Address:

City:

State:

Zip:

Phone #:

Fax #:

Project #:

Project Name:

Project Location: IL coal & tco

Sample Name: Michael Hill

FOR LAB USE ONLY

Lab I.D. H4D1209

Sample I.D.

(G)RAB OR (C)OMP.

CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER :

ACID/BASE:

ICE / COOL

OTHER :

DATE

TIME

MATRIX

PRESERV

SAMPLING

Company: Linn Energy

Attn: Brian Weill

Address:

City:

State:

Zip:

Phone #:

Fax #:

Relinquished By:

Relinquished By:

Delivered By: (Circle One)

Sampler - UPS - Bus - Other:

Date: 4/22/14

Time: 3:55

Date:

Time:

Sample Condition

Cool ☒ Intact ☒

Yes ☒ No ☐

Yes ☒ No ☐

Checked By: (Initials)

[Signature]

Phone Result: ☐ Yes ☐ No

Fax Result: ☐ Yes ☐ No

REMARKS:

E-mail Results To:

Add'l Phone #:

Add'l Fax #:

Rpons@diversifiedsi.com

Tjennings@diversifiedsi.com

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Received By:

Received By:

3-80

3-80

BILL TO

ANALYSIS REQUEST