

AE Order Number Banner

Report Description

This report shows an AE Order Number in Barcode format for purposes of scanning. The Barcode format is Code 39.



App Number: pVF1802642055

3RP - 1060

WPX ENERGY, INC.

1/26/2018

3R-1060

WPX Energy Production

Temp Surface Water Line Begay ROW

01/26/2018

5

State of New Mexico Energy Minerals and Natural Resources

> Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505



Release Notification and Corrective Action

| | | OPERATOR | Initial Report | \boxtimes | Final Report |
|---|---------------------------------|--------------|----------------|-------------|--------------|
| Name of Company WPX Energy Production, L | Contact Deborah Watson | | | | |
| Address 721 S Main Ave, Aztec, NM | Telephone No. 505-333-1880 | | | | |
| Facility Name Temporary Surface Water Line/ | Facility Type Temporary Surface | Water Line | | | |
| | | | | | |
| Surface Owner Indian | Lease Informat | tion: 791-25 | API No. | | |

LOCATION OF RELEASE

| Unit Letter | Section | Township | Range | Feet from the | North/South Line | Feet from the | East/West Line | County |
|-------------|---------|----------|-------|---------------|------------------|---------------|----------------|----------|
| A | 13 | 23N | 09W | 907 | North | 990 | East | San Juan |

Latitude: N36.231726 Longitude: W107.734785 NAD83

NATURE OF RELEASE

| Type of Release Produced Water | Volume of Release Estimated 2 BBL | Volume Recovered Estimated 0 BBL | | | | | |
|---|---|---|--|--|--|--|--|
| Source of Release Failed Air Elimination/purge valve | Date and Hour of Occurrence unknown | Date and Hour of Discovery 12/14/17 12:45 | | | | | |
| Was Immediate Notice Given? | If YES, To Whom? | | | | | | |
| Yes 🗌 No 🗌 Not Required | Vanessa Fields (NMOCD) | | | | | | |
| | Whitney Thomas (BLM-FFO), Maureen | Joe (BIA-FIMO) | | | | | |
| By Whom? Deborah Watson/Andrea Felix | Date and Hour 12/14/17 followed by ema | ail 12/14 at 20:59 | | | | | |
| Was a Watercourse Reached? | If YES, Volume Impacting the Watercou | rse. | | | | | |
| 🗌 Yes 🖾 No | N/A | | | | | | |
| IC - Weterstein Describe Delle * M/A | | | | | | | |
| If a watercourse was impacted, Describe Fully.* N/A | Ta watercourse was impacted, Describe Fully." N/A | | | | | | |
| from a failed air alimination (nurse value A van truck was called to | the location to remove imported metaric | vnen tney discovered a produced water release | | | | | |
| Describe Area Affected and Cleanup Action Taken * | the location to remove impacted materia | Ц, | | | | | |
| Describe Area Affected and Cleanup Action Taken.* | | | | | | | |
| Hedress (markers land) at the level in free level in 12 | 114 Class - 12/15 | | | | | | |
| • Hydrovac/spec trucks called to location for cleanup on 12 | /14. Clean up continued on $12/15$. | | | | | | |
| • Impacted material was removed and disposed of at an app | broved landfarm facility. | | | | | | |
| • Surface impact was approximately 4/4 ft length x 1-22 in | width x 4-12 in depth. | | | | | | |
| • WPX requested confirmation sampling on 12/15 from va | nessa Fields, NMOCD. Cassandra Gould | 1, FIMO, was on location during field | | | | | |
| E-librarian algorithm on 12/15/17 A confirmation complexes | approval from Cassandra Gould, Flivio, | to proceed with backfill on 12/15/17. | | | | | |
| • Following cleanup on 12/15/17, 4 confirmation samples v (MBO/CBO/DBO) and ablaridae. Three complex were a | allocted from within the drainage (SC 1) | trea and analyzed for BIEX, IPH | | | | | |
| from within the POW/nineline location (SC 4). Sondeton | a is located at 4 inches below surface alo | ng the temporary surface POW (see attached | | | | | |
| mon) | le is located at 4 lifelies below surface alo | ing the temporary surface KOw. (see attached | | | | | |
| Concentrations of PTEV and TPH were reported below N | MOCD action levels Chloride concent | rations ranged from non-datast to 1,000 mg/kg | | | | | |
| • Concentrations of BTEA and TFH were reported below is (SC-4) (see attached laboratory reports #1712087 and #1) | 712000) | ations ranged from non-detect to 1,000 mg/kg | | | | | |
| WPV applied and raked in gungum in the area of SC 4 (a | a attached amaila) | | | | | | |
| • WFA applied and taked in gypsuin in the area of SC-4. (S | | | | | | | |
| The location was recontoured and seeded the week of 12/ No further action recommended | 18/17. | | | | | | |
| • No further action recommended. | | | | | | | |
| I hereby certify that the information given above is true and comple | te to the best of my knowledge and under | rstand that nursuant to NMOCD rules and | | | | | |
| regulations all operators are required to report and/or file certain rel | ease 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 | t" does not relieve the operator of liability | | | | | |
| should their operations have failed to adequately investigate and ren | nediate contamination that pose a threat t | o ground water surface water human health | | | | | |
| or the environment. In addition, NMOCD acceptance of a C-141 re | port does not relieve the operator of resp | onsibility for compliance with any other | | | | | |
| federal, state, or local laws and/or regulations. | port does not reneve the operator of resp | | | | | | |
| | OIL CONSE | A TION DIVISION | | | | | |
| Numah Walk | <u>OIL CONSE</u> | INVATION DIVISION | | | | | |
| Signature: | | | | | | | |
| | Annound her Environmental Space | | | | | | |
| Printed Name: Deborah Watson | Approved by Environmental Speci | anst: | | | | | |
| | | | | | | | |
| Title: Environmental Specialist | Approval Date: Approval Date: | Expiration Date: | | | | | |
| | 100110 | | | | | | |
| E-mail Address: Deborah.watson@wpxenergy.com | Conditions of Approval: | | | | | | |
| | | Attached | | | | | |
| Date: January 22, 2018 Phone: 505-333-1880 | | | | | | | |
| | NAT 100 Mar | 12247 | | | | | |
| | IN V FIDUQU | | | | | | |

| From: | Watson, Debbie |
|--------------|---|
| To: | "Joe, Maureen"; Cassandra Gould; annette.ahill@bia.gov; "Fields, Vanessa, EMNRD"; "Smith, Cory, EMNRD"; |
| | "Thomas, Leigh" |
| Cc: | Felix, Andrea |
| Subject: | Grace Begay ROW release |
| Date: | Thursday, December 14, 2017 8:59:00 PM |
| Attachments: | Grace Begay ROW.JPG |
| | |

Update on release along Grace Begay ROW:

Release Point: N36.231726, W107.734785 Surface Location: A-S13-T23N-R9W (* 55 ft located in U/L B) Discovered: 12/14/17, during removal of temporary surface produced water line Fluids Released: Produced Water Volume Released: unknown, line was not in operation at the time of release-crews were preparing the line for removal Surface Impact: approximately 474 ft x 6-22 in (see attached figure) Allotment Information: Grace M. Begay (single allottee owner) Lease #: 791-25 Cause: Failed air elimination/purge valve

Grace Begay was notified this afternoon.

Cleanup began this afternoon-hydrovac worked on impacted area within the ROW. Cleanup efforts will continue tomorrow.

Please contact me with any questions.

Thank you,

Debbie

Deborah Watson Environmental Specialist PO Box 640 | Aztec, NM 87410 office 505.333.1880 | cell 505.386.9693 | fax 505.333.1805 deborah.watson@wpxenergy.com



If you have received this message in error, please reply to advise the sender of the error and then immediately delete this message. Thank you.

| From: | Watson, Debbie |
|--------------|--|
| То: | "Fields, Vanessa, EMNRD"; "Smith, Cory, EMNRD"; Cassandra Gould; "Thomas, Leigh"; "Joe, Maureen"; annette.ahill@bia.gov |
| Cc: | Comer, Chad; Felix, Andrea |
| Subject: | Grace Begay ROW Confirmation Sampling |
| Date: | Monday, December 18, 2017 3:33:00 PM |
| Attachments: | Grace Begay ROW Drainage.pdf |
| | <u>Grace Begay ROW - ROW.PDF</u> |

Please see attached laboratory results for the cleanup along the Grace Begay ROW. Three samples were collected along the drainage and one sample collected in the ROW (late Friday afternoon) following remediation activities on Friday, December 15. Most of the cleanup within the ROW was no deeper than 4 inches due to sandstone near the surface. TPH and BTEX concentrations were reported below NMOCD action levels. Chloride concentrations in the drainage ranged from ND to 570 mg/kg, while the chloride concentration at the ROW was reported at 1,000 mg/kg. WPX will apply gypsum to the impacted area within the ROW. Please contact me with any questions.

Thank you,

Debbie Deborah Watson Environmental Specialist PO Box 640 | Aztec, NM 87410 office 505.333.1880 | cell 505.386.9693 | fax 505.333.1805 deborah.watson@wpxenergy.com



If you have received this message in error, please reply to advise the sender of the error and then immediately delete this message. Thank you.



Temporary Surface Water Line/G Begay ROW

Sample Location Section 13, Township 23N, Range 09W N36.231726, W107.734785 San Juan County, NM



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: <u>www.hallenvironmental.com</u>

December 20, 2017 Debbie Watson WPX Energy 721 S Main Ave Aztec, NM 87410 TEL: (505) 333-1880

FAX

RE: Grace Begay ROW Drainage

OrderNo.: 1712987

Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 3 sample(s) on 12/17/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to <u>www.hallenvironmental.com</u> or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

andis

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

| Analytical R | eport |
|--------------|-------|
|--------------|-------|

Date Reported: 12/20/2017

Hall Environmental Analysis Laboratory, Inc.

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| CLIENT: WPX Energy Client Sample | | | | | e ID: SC | -1 | | | |
|----------------------------------|---------------------------|--|---------|----------|---------------------------------------|-----------------------|-----------|--|--|
| Project: | Grace Begay ROW Drainage | Collection Date: 12/15/2017 2:35:00 PM | | | | | | | |
| Lab ID: | 1712987-001 | Matrix: | SOIL | Received | Received Date: 12/17/2017 12:00:00 PM | | | | |
| Analyses | | Result | PQL Qua | l Units | DF | Date Analyzed | Batch | | |
| EPA MET | HOD 300.0: ANIONS | | | | | Analys | st: MRA | | |
| Chloride | | ND | 30 | mg/Kg | 20 | 12/18/2017 12:38:22 I | PM 35566 | | |
| EPA MET | HOD 8015M/D: DIESEL RANGE | | 5 | | | Analys | st: TOM | | |
| Diesel Ra | ange Organics (DRO) | ND | 9.3 | mg/Kg | 1 | 12/18/2017 11:57:17 | AM 35560 | | |
| Motor Oil | Range Organics (MRO) | ND | 47 | mg/Kg | 1 | 12/18/2017 11:57:17 / | AM 35560 | | |
| Surr: D | DNOP | 80.8 | 70-130 | %Rec | 1 | 12/18/2017 11:57:17 / | AM 35560 | | |
| EPA MET | HOD 8015D: GASOLINE RANG | E | | | | Analys | st: NSB | | |
| Gasoline | Range Organics (GRO) | ND | 3.7 | mg/Kg | 1 | 12/18/2017 10:21:26 | AM G47852 | | |
| Surr: E | 3FB | 85.8 | 15-316 | %Rec | 1 | 12/18/2017 10:21:26 | AM G47852 | | |
| EPA MET | HOD 8021B: VOLATILES | | | | | Analys | st: NSB | | |
| Benzene | | ND | 0.018 | mg/Kg | 1 | 12/18/2017 10:21:26 | AM B47852 | | |
| Toluene | | ND | 0.037 | mg/Kg | 1 | 12/18/2017 10:21:26 | AM B47852 | | |
| Ethylben | zene | ND | 0.037 | mg/Kg | 1 | 12/18/2017 10:21:26 | AM B47852 | | |
| Xylenes, | Total | ND | 0.074 | mg/Kg | 1 | 12/18/2017 10:21:26 / | AM B47852 | | |
| Surr: 4 | -Bromofluorobenzene | 101 | 80-120 | %Rec | 1 | 12/18/2017 10:21:26 / | AM B47852 | | |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method | Blank | |
|-------------|--|---|----|--|-----------------|--|
| | D | Sample Diluted Due to Matrix E Value above quantitation range | | Value above quantitation range | | |
| | Н | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits | Page 1 of 8 | |
| | ND Not Detected at the Reporting Limit | | Р | Sample pH Not In Range | 1 age 1 01 8 | |
| | PQL | Practical Quanitative Limit | RL | Reporting Detection Limit | | |
| | S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of lim | it as specified | |
| | | | | | | |

| Analytical | Report |
|------------|--------|
|------------|--------|

Date Reported: 12/20/2017

12/18/2017 10:45:11 AM B47852

CLIENT: WPX Energy Client Sample ID: SC-2 Project: Grace Begay ROW Drainage Collection Date: 12/15/2017 2:50:00 PM Lab ID: 1712987-002 Received Date: 12/17/2017 12:00:00 PM Matrix: SOIL **POL Qual Units** Analyses Result **DF** Date Analyzed Batch EPA METHOD 300.0: ANIONS Analyst: MRA Chloride 12/18/2017 12:50:47 PM 35566 570 30 mg/Kg 20 EPA METHOD 8015M/D: DIESEL RANGE ORGANICS Analyst: TOM Diesel Range Organics (DRO) ND 9.1 12/18/2017 12:25:01 PM 35560 mg/Kg 1 Motor Oil Range Organics (MRO) ND 46 mg/Kg 1 12/18/2017 12:25:01 PM 35560 Surr: DNOP 83.1 70-130 %Rec 12/18/2017 12:25:01 PM 35560 1 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) ND 12/18/2017 10:45:11 AM G47852 3.5 mg/Kg 1 Surr: BFB 87.1 15-316 %Rec 12/18/2017 10:45:11 AM G47852 1 EPA METHOD 8021B: VOLATILES Analyst: NSB Benzene ND 0.018 12/18/2017 10:45:11 AM B47852 mg/Kg 1 Toluene ND 0.035 mg/Kg 1 12/18/2017 10:45:11 AM B47852 Ethylbenzene ND 0.035 mg/Kg 1 12/18/2017 10:45:11 AM B47852 Xylenes, Total ND 0.071 mg/Kg 12/18/2017 10:45:11 AM B47852 1

80-120

%Rec

1

105

Hall Environmental Analysis Laboratory, Inc.

Surr: 4-Bromofluorobenzene

1

| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method E | Blank | |
|-------------|--|---|--------------------------|--|----------------|--|
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range | | |
| | Н | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits | Page 2 of 8 | |
| | ND Not Detected at the Reporting Limit | | P Sample pH Not In Range | | 1 age 2 01 8 | |
| | PQL | Practical Quanitative Limit | RL | Reporting Detection Limit | | |
| | S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit | t as specified | |
| | | | | | | |

| Analytical l | Report |
|--------------|--------|
|--------------|--------|

Date Reported: 12/20/2017

Hall Environmental Analysis Laboratory, Inc.

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| CLIENT: | WPX Energy | Client Sample ID: SC-3 | | | | | | | |
|-----------------|---------------------------|--|-----------------------|----------|----|-----------------------|----------|--|--|
| Project: | Grace Begay ROW Drainage | Collection Date: 12/15/2017 2:55:00 PM | | | | | | | |
| Lab ID: | 1712987-003 | Matrix: | SOIL | Received | 1 | | | | |
| Analyses | | Result | PQL Qual | Units | DF | Date Analyzed | Batch | | |
| EPA MET | HOD 300.0: ANIONS | | | | | Analys | st: MRA | | |
| Chloride | | 310 | 30 | mg/Kg | 20 | 12/18/2017 1:03:11 PI | M 35566 | | |
| EPA MET | HOD 8015M/D: DIESEL RANGI | | 6 | | | Analys | st: TOM | | |
| Diesel Ra | ange Organics (DRO) | 10 | 9.3 | mg/Kg | 1 | 12/18/2017 12:52:35 F | PM 35560 | | |
| Motor Oil | Range Organics (MRO) | ND | 46 | mg/Kg | 1 | 12/18/2017 12:52:35 F | PM 35560 | | |
| Surr: D | NOP | 84.6 | 7 <mark>0</mark> -130 | %Rec | 1 | 12/18/2017 12:52:35 F | PM 35560 | | |
| EPA MET | HOD 8015D: GASOLINE RANG | E | | | | Analys | t: NSB | | |
| Gasoline | Range Organics (GRO) | ND | 17 | mg/Kg | 5 | 12/18/2017 11:08:30 A | M G47852 | | |
| Surr: E | 3FB | 87.3 | 15-316 | %Rec | 5 | 12/18/2017 11:08:30 A | M G47852 | | |
| EPA MET | HOD 8021B: VOLATILES | | | | | Analys | t: NSB | | |
| Benzene | | ND | 0.086 | mg/Kg | 5 | 12/18/2017 11:08:30 A | M B47852 | | |
| Toluene | | ND | 0.17 | mg/Kg | 5 | 12/18/2017 11:08:30 A | M B47852 | | |
| Ethylbenz | zene | ND | 0.17 | mg/Kg | 5 | 12/18/2017 11:08:30 A | M B47852 | | |
| Xylenes, | Total | ND | 0.35 | mg/Kg | 5 | 12/18/2017 11:08:30 A | M B47852 | | |
| Surr: 4 | -Bromofluorobenzene | 101 | 80-120 | %Rec | 5 | 12/18/2017 11:08:30 A | M B47852 | | |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method Blank |
|-------------|-----|---|----|---|
| | D | Sample Diluted Due to Matrix | Е | Value above quantitation range |
| | Н | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits Page 3 of 8 |
| | ND | Not Detected at the Reporting Limit | Р | Sample pH Not In Range |
| | PQL | Practical Quanitative Limit | RL | Reporting Detection Limit |
| | S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |
| | | | | |

Hall Environmental Analysis Laboratory, Inc.

Client: WPX Energy

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Project: Grace Begay ROW Drainage

| Sample ID MB-35566 | SampType: n | ıblk | Tes | tCode: EP | A Method | 300.0: Anion | s | 2 | |
|--|---|--|------------------------------|---|--------------------------------------|--|-----------------|----------|------|
| Client ID: PBS | Batch ID: 3 | 5566 | F | RunNo: 47 | 855 | | | | |
| Prep Date: 12/18/2017 | Analysis Date: | 12/18/2017 | S | SeqNo: 15 | 32772 | Units: mg/M | g | | |
| Analyte | Result PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | ND 1.5 | 5 | | | | | | | |
| | | | | | | | | | |
| Sample ID LCS-35566 | SampType: Ic | s | Tes | tCode: EP | A Method | 300.0: Anion | s | | |
| Sample ID LCS-35566 Client ID: LCSS | SampType: Ic Batch ID: 3 | :s 5566 | Tes F | tCode: EP RunNo: 47 | A Method 855 | 300.0: Anion | S | | |
| Sample ID LCS-35566 Client ID: LCSS Prep Date: 12/18/2017 | SampType: Io Batch ID: 3 Analysis Date: 1 | s 5566 2/18/2017 | Tes F S | tCode: EP RunNo: 47 SeqNo: 15 | A Method 855 32773 | 300.0: Anion Units: mg/K | s | | |
| Sample ID LCS-35566 Client ID: LCSS Prep Date: 12/18/2017 Analyte | SampType: Ic Batch ID: 3 Analysis Date: 1 Result PQL | :s 5566 12/18/2017 SPK value | Tes F S SPK Ref Val | tCode: EP RunNo: 47 SeqNo: 15 %REC | A Method 855 32773 LowLimit | 300.0: Anion Units: mg/K HighLimit | s ág %RPD | RPDLimit | Qual |

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix D
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits J
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Page 4 of 8

WO#: 1712987

20-Dec-17

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Hall Environmental Analysis Laboratory, Inc.

WO#: 1712987

20-Dec-17

| Client: WPX Project: Grac | Energy e Begay ROW Di | aina | ge | | | | | | | |
|--------------------------------|--------------------------|-------|-----------|-------------|-----------|-----------|-------------|-----------|------------|------|
| Sample ID LCS-35560 | SampType | e: LC | s | Tes | tCode: E | PA Method | 8015M/D: Di | esel Rang | e Organics | |
| Client ID: LCSS | Batch ID | : 35 | 560 | F | RunNo: 4 | 7845 | | | | |
| Prep Date: 12/18/2017 | Analysis Date | : 1: | 2/18/2017 | S | SeqNo: 1 | 530855 | Units: mg/l | ۲g | | |
| Analyte | Result F | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 47 | 10 | 50.00 | 0 | 93.3 | 73.2 | 114 | | | |
| Surr: DNOP | 4.5 | | 5.000 | | 89.9 | 70 | 130 | | | |
| Sample ID MB-35560 | SampType | e: MB | BLK | Tes | tCode: El | PA Method | 8015M/D: Di | esel Rang | e Organics | |
| Client ID: PBS | Batch ID | : 35 | 560 | R | RunNo: 4 | 7845 | | | | |
| Prep Date: 12/18/2017 | Analysis Date | : 1: | 2/18/2017 | S | SeqNo: 1 | 530856 | Units: mg/k | (g | | |
| Analyte | Result F | QL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | ND | 10 | | | | | | | h. | |
| Motor Oil Range Organics (MRO) | ND | 50 | | | | | | | | |
| Surr: DNOP | 8.9 | | 10.00 | | 89.4 | 70 | 130 | | | |

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix D
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- W Sample container temperature is out of limit as specified

Page 5 of 8

Reporting Detection Limit RL

Hall Environmental Analysis Laboratory, Inc.

WO#: 1712987

Page 6 of 8

20-Dec-17

Client: WPX Energy
Project: Grace Begay ROW Drainage

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| Project: | Grace Be | egay ROW | Draina | age | | | | | | | |
|---------------|-------------------|------------|---------|-----------|-------------|-----------|-----------|-------------|-----------|----------|------|
| Sample ID | RB | SampT | уре: М | BLK | Tes | tCode: E | PA Method | 8015D: Gaso | line Rang | e | |
| Client ID: | PBS | Batch | D: G | 47852 | F | RunNo: 4 | 7852 | | | | |
| Prep Date: | | Analysis D | ate: 1 | 2/18/2017 | S | SeqNo: 1 | 531574 | Units: mg/k | g | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Rang | ge Organics (GRO) | ND | 5.0 | | | | | | | | |
| Surr: BFB | | 860 | | 1000 | | 86.1 | 15 | 316 | | | |
| Sample ID | 2.5UG GRO LCS | SampT | ype: LO | cs | Tes | tCode: El | PA Method | 8015D: Gasc | line Rang | e | |
| Client ID: | LCSS | Batch | ID: G | 47852 | F | RunNo: 4 | 7852 | | | | |
| Prep Date: | | Analysis D | ate: 1 | 2/18/2017 | S | SeqNo: 1 | 531575 | Units: mg/K | g | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Rang | e Organics (GRO) | 25 | 5.0 | 25.00 | 0 | 99.8 | 75.9 | 131 | | | |
| Surr: BFB | | 1000 | | 1000 | | 101 | 15 | 316 | | | |
| Sample ID | MB-35539 | SampT | ype: M | BLK | Tes | tCode: El | PA Method | 8015D: Gaso | line Rang | e | |
| Client ID: | PBS | Batch | ID: 35 | 539 | F | RunNo: 4 | 7852 | | | | |
| Prep Date: | 12/15/2017 | Analysis D | ate: 1 | 2/18/2017 | S | SeqNo: 1 | 531578 | Units: %Red | | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: BFB | | 880 | | 1000 | | 87.7 | 15 | 316 | | | |
| Sample ID | LCS-35539 | SampT | ype: LC | cs | Tes | tCode: EF | PA Method | 8015D: Gaso | line Rang | e | |
| Client ID: | LCSS | Batch | ID: 35 | 539 | R | unNo: 4 | 7852 | | | | |
| Prep Date: | 12/15/2017 | Analysis D | ate: 1 | 2/18/2017 | S | eqNo: 1 | 531579 | Units: %Red | ; | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: BFB | | 970 | | 1000 | | 97.0 | 15 | 316 | | | |
| | | | | | | | | | | | |

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Client: WPX Energy

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* *

Project: Grace Begay ROW Drainage

| - | | | | | | | | | | | |
|----------------|-----------------|------------|-----------------|-----------|-------------|----------|-----------|-------------|--------|----------|------|
| Sample ID | RB | Samp | Туре: МІ | BLK | Tes | tCode: E | PA Method | 8021B: Vola | tiles | | |
| Client ID: | PBS | Bato | ch ID: B4 | 7852 | F | RunNo: 4 | 17852 | | | | |
| Prep Date: | | Analysis I | Date: 1 | 2/18/2017 | 5 | SeqNo: 1 | 1531606 | Units: mg/ł | ۲g | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | | ND | 0.025 | | | | | | | | |
| Toluene | | ND | 0.050 | | | | | | | | |
| Ethylbenzene | | ND | 0.050 | | | | | | | | |
| Xylenes, Total | | ND | 0.10 | | | | | | | | |
| Surr: 4-Bron | nofluorobenzene | 1.0 | | 1.000 | | 103 | 80 | 120 | | | |
| Sample ID | 100NG BTEX LCS | Samp | Type: LC | s | Tes | tCode: E | PA Method | 8021B: Vola | tiles | | |
| Client ID: | LCSS | Batc | h ID: B4 | 7852 | F | RunNo: 4 | 7852 | | | | |
| Prep Date: | | Analysis I | Date: 12 | 2/18/2017 | 5 | SeqNo: 1 | 531607 | Units: mg/k | ٢g | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | | 0.94 | 0.025 | 1.000 | 0 | 94.1 | 77.3 | 128 | | | |
| Toluene | | 0.95 | 0.050 | 1.000 | 0 | 95.1 | 79.2 | 125 | | | |
| Ethylbenzene | | 0.96 | 0.050 | 1.000 | 0 | 95.9 | 80.7 | 127 | | | |
| Xylenes, Total | | 2.9 | 0.10 | 3.000 | 0 | 97.0 | 81.6 | 129 | | | |
| Surr: 4-Brom | nofluorobenzene | 1.1 | | 1.000 | | 108 | 80 | 120 | | | |
| Sample ID | 1712987-001AMS | Samp | Туре: МЗ | 6 | Tes | tCode: E | PA Method | 8021B: Vola | tiles | | |
| Client ID: | SC-1 | Batc | h ID: B4 | 7852 | F | RunNo: 4 | 7852 | | | | |
| Prep Date: | | Analysis [| Date: 12 | 2/18/2017 | S | SeqNo: 1 | 531608 | Units: mg/k | ۲g | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | | 0.68 | 0.018 | 0.7369 | 0 | 91.8 | 80.9 | 132 | | | |
| Toluene | | 0.69 | 0.037 | 0.7369 | 0.007811 | 92.9 | 79.8 | 136 | | | |
| Ethylbenzene | | 0.70 | 0.037 | 0.7369 | 0 | 94.3 | 79.4 | 140 | | | |
| Xylenes, Total | | 2.1 | 0.074 | 2.211 | 0 | 95.2 | 78.5 | 142 | | | |
| Surr: 4-Brom | ofluorobenzene | 0.78 | | 0.7369 | | 106 | 80 | 120 | | | |
| Sample ID | 1712987-001AMSE | Samp | Туре: МЗ | SD. | Tes | tCode: E | PA Method | 8021B: Vola | tiles | | |
| Client ID: | SC-1 | Batc | h ID: B4 | 7852 | F | RunNo: 4 | 7852 | | | | |
| Prep Date: | | Analysis [| Date: 12 | 2/18/2017 | S | SeqNo: 1 | 531609 | Units: mg/M | ٢g | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | | 0.68 | 0.018 | 0.7369 | 0 | 91.8 | 80.9 | 132 | 0.0653 | 20 | |
| Toluene | | 0.69 | 0.037 | 0.7369 | 0.007811 | 92.5 | 79.8 | 136 | 0.384 | 20 | |
| Ethylbenzene | | 0.69 | 0.037 | 0.7369 | 0 | 93.5 | 79.4 | 140 | 0.852 | 20 | |
| Xylenes, Total | | 2.1 | 0.074 | 2,211 | 0 | 95.3 | 78.5 | 142 | 0 0490 | 20 | |

Qualifiers:

- Value exceeds Maximum Contaminant Level. *
- Sample Diluted Due to Matrix D

Surr: 4-Bromofluorobenzene

Η Holding times for preparation or analysis exceeded

0.74

0.7369

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- Analyte detected in the associated Method Blank В E
 - Value above quantitation range

101

- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- Reporting Detection Limit RL
- W Sample container temperature is out of limit as specified

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0

0

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WO#: 1712987

20-Dec-17

WO#: 1712987

20-Dec-17

Hall Environmental Analysis Laboratory, Inc.

Client: WPX Energy

*

Project: Grace Begay ROW Drainage

| Sample ID MB-35539 | SampType: MBL | .K Te | estCode: EPA Method | 8021B: Volatile | S | | |
|--|--|---|--|---|-----------|----------|------|
| Client ID: PBS | Batch ID: 3553 | 39 | RunNo: 47852 | | | | |
| Prep Date: 12/15/2017 | Analysis Date: 12/ | 18/2017 | SeqNo: 1531610 | Units: %Rec | | | |
| Analyte | Result PQL | SPK value SPK Ref Va | al %REC LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 4-Bromofluorobenzene | 1.0 | 1.000 | 104 80 | 120 | | | 1.0 |
| | | | | | | | |
| Sample ID LCS-35539 | SampType: LCS | Te | estCode: EPA Method | 8021B: Volatile | s | | |
| Sample ID LCS-35539 Client ID: LCSS | SampType: LCS Batch ID: 3553 | Te | estCode: EPA Method RunNo: 47852 | 8021B: Volatile | S | | |
| Sample ID LCS-35539 Client ID: LCSS Prep Date: 12/15/2017 | SampType: LCS Batch ID: 3553 Analysis Date: 12/1 | Te 99 18/2017 | estCode: EPA Method RunNo: 47852 SeqNo: 1531611 | 8021B: Volatile Units: %Rec | S | | |
| Sample ID LCS-35539 Client ID: LCSS Prep Date: 12/15/2017 Analyte | SampType: LCS Batch ID: 3553 Analysis Date: 12/1 Result PQL S | Te 89 18/2017 SPK value SPK Ref Va | estCode: EPA Method RunNo: 47852 SeqNo: 1531611 al %REC LowLimit | 8021B: Volatile Units: %Rec HighLimit | s %RPD | RPDLimit | Qual |

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Page 8 of 8

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| HALL ENVIRONMENTAL ANALYSIS LABORATORY | Albu TEL: 505-345-3975 J Website: www.hal | 4901 Hawkins querque, NM 87 FAX: 505-345-4 lenvironmental.c | NE 109 Sam 107 com | ple Log-In C | heck List | 9 |
|--|---|--|------------------------------------|---|-----------|-----------|
| Client Name: WPX ENERGY | Work Order Number: | 1712987 | | RcptNo | : 1 | |
| Received By: Andy Freeman | 12/17/2017 12:00:00 PI | M | andy | | | |
| Completed By: Anne Thome Reviewed By: DD5 | 12/18/2017 8:16:29 AM (こ)18/17 | | anne Am | - | | |
| Chain of Custody | | | | | | |
| Custody seals intact on sample bottles? Is Chain of Custody complete? | | Yes | No 🗆 | Not Present 🗹 | | |
| 3. How was the sample delivered? | | Courier | | | | |
| Log In | | _ | _ | _ | | |
| 4. Was an attempt made to cool the samples? | | Yes 🗹 | No | NA | | |
| 5. Were all samples received at a temperature of | f >0° C to 6.0°C | Yes 🗹 | No 🗌 | NA 🗌 | •• | |
| 6. Sample(s) in proper container(s)? | | Yes 🗹 | No | • | м • | |
| 7. Sufficient sample volume for indicated test(s) | 2 | Yes 🗹 | No - | | | , |
| 8. Are samples (except VOA and ONG) properly | preserved? | Yes 🗹 | No 🗌 | | · · · · | · . |
| 9. Was preservative added to bottles? | | Yes | No 🗹 | NA. L | | • •* |
| 10. VOA vials have zero headspace? | | Yes | No 🗌 | No VOA Vials 🗹 | | • • |
| 11. Were any sample containers received broken | ? | Yes | No 🗹 - | · · · · · · · · · · · · · · · · · · · | | - |
| | | | | # of preserved bottles checked | | · · · · · |
| 12. Does paperwork match bottle labels? | | Yes 🗹 | No 🗌 | for pH: | | • |
| (Note discrepancies on chain of custody) | iretody? | Vec V | No 🗌 | Adjusted? | | |
| 14 Is it clear what analyses were requested? | ustody | Yes V | No 🗌 | - | | |
| 15. Were all holding times able to be met? | · · · | Yes 🗹 | No 🗌 | Checked by: | · · · · · | : |
| (If no, notify customer for authorization.) | · · · | | | <u> </u> | | - |
| Special Handling (if analizable) | | | | | | |
| | | ¥ | | | | |
| 16. was client notified of all discrepancies with th | | Yes | | NA 🗹 | -1 | |
| Person Notified: | Date | | _ | | | |
| By Whom: | Via: | eMail P | hone 🔄 Fax | In Person | | |
| Client Instructions: | | | | and a state of the provide state of the providence of the providence of the | | |
| 17 Additional remarke: | | | | | | |
| 18. <u>Cooler Information</u> Cooler No Temp °C Condition Sea | I Intact Seal No S | eal Date | Signed By | | · , | |
| 1 3.1 Good Yes | | | | | | |

· . •

| C | hain | -of-Cu | stody Record | Turn-Around | Time: | ····· | | | | ۰. | | | _ | | | | | | | |
|----------|--------------|-------------|---------------------------|--|----------------------|--|---------------|-------------|-----------|-------------|--------------|---------------|-------------|-----------------|----------------|-------------|--------------|----------|---|----------------|
| Client: | WPX | - Enero | jy Production | Standard Standard | Rush | Same day | | | | A | | | YS | NV SIS | IF 5 L | AE | NI BO | 1E RA | | Y |
| 3.4 - 11 | A 1.1 | | | | ROM | diallores | | | | | www | v.hal | lenv | ironr | nent | al.co | om | | | |
| Mailing | Address | 721 5 | Main | Grace Beg | my non | avalrage | | 49 | 01 H | awki | ns N | IE - | Alb | uque | ərqu | e, NI | M 87 | 109 | | |
| | | Azto | NM | Project #: | | | | Te | el. 50 | 5-34 | 5-39 | 975 | F | ax | 505- | 345- | 410 | 7 | | |
| Phone a | #: 505 | 5 BODE | 00000 333-1880 | | | | | | | | | A | naly | sis | Req | uest | Ê I I | | | |
| email or | r Fax#:0 | eborah. | watson@woxenergy.com | Project Mana | ger: | | - | (ylu | Q | | | | | 04) | | | | | | |
| QA/QC F | Package: | | | S | | • | 302 | as o | E. | | | ŝ | | 4'S(| CB's | | | | | |
| Stan | dard | | Level 4 (Full Validation) | D Watsi | 04 | | Ĩ | (G | 2 | | | SIM | | PO | 2 PC | | | | | |
| Accredi | tation | | | Sampler: D | Watson | and the second state of the se | | TPH | Q | ÷. | , | 012 | | Ň | 808 | | | | | Î |
| | AP (Tume) | Li Otne | r | On Ice | A Yes | ⊡ No | t | + | (R) | 418 | 504 | or 82 | s | 10 ³ | / Se | | (Yo | | | or |
| Date | Time | Matrix | Sample Request ID | IZ 18/17 AT Container Type and # | Preservative Type | HEAD NO. 1712987 | BTEX + Martin | BTEX + MTBI | TPH 8015B | TPH (Method | EDB (Method | PAH's (8310 o | RCRA 8 Meta | Anions (FCI) | 8081 Pesticide | 8260B (VOA) | 8270 (Semi-V | | | Air Bubbles (Y |
| 12.15.17 | 1435 | Soul | Sc-1 | 1-407.cless | cold | -201 | X | | x | | | | | X | | | | | | |
| 12.15.17 | 1450 | Soil | Sc-2 | 1-402 9455 | Cold | 202 | X | | X | | | | | X | | | | | | |
| 1215.17 | 1455 | Soil | SC-3 | 1-402 den | Cold | 203 | X | | Х | | | | | X | | | | | | |
| | | | | 0 | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | |
| Date: | Time: | Relinquishe | ed by: | Received by: | New | Date Time | Rer | nark | s: | | | | | | | | | | , | |
| 19/16/17 | 1330 | Nebry | h. Watsh | 1:m L | 100 | 19/10/17 330 | | | | | | | | | | | | | | |
| Date: | i ime: | | | Received by: | 1 | Date Time | | | | | | | | | | | | | | |
| luin | 1410 | 1 | Nut | Ungly | | 1/1/17/200 | | | | | | | | | | | | | | |

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If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: <u>www.hallenvironmental.com</u>

December 20, 2017 Debbie Watson WPX Energy 721 S Main Ave Aztec, NM 87410

TEL: (505) 333-1880

FAX

RE: Grace Begay ROW - ROW

OrderNo.: 1712990

Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 12/17/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to <u>www.hallenvironmental.com</u> or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

andig

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

| Analytical | Report |
|------------|--------|
|------------|--------|

Date Reported: 12/20/2017

Hall Environmental Analysis Laboratory, Inc.

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| CLIENT: WPX Energy | | | Client Sampl | e ID: SC | -4 | |
|--------------------------------|-------------|----------|--------------|-----------|-----------------------|----------|
| Project: Grace Begay ROW - ROW | | | Collection | Date: 12/ | '15/2017 4:55:00 PM | |
| Lab ID: 1712990-001 | Matrix: | SOIL | Received | Date: 12/ | '17/2017 12:00:00 PN | 1 |
| Analyses | Result | PQL Qual | Units | DF | Date Analyzed | Batch |
| EPA METHOD 300.0: ANIONS | | | | | Analys | st: MRA |
| Chloride | 1000 | 30 | mg/Kg | 20 | 12/18/2017 1:27:59 PM | M 35566 |
| EPA METHOD 8015M/D: DIESEL RAN | GE ORGANICS | ; | | | Analys | st: TOM |
| Diesel Range Organics (DRO) | ND | 10 | mg/Kg | 1 | 12/18/2017 11:02:02 A | M 35560 |
| Motor Oil Range Organics (MRO) | ND | 50 | mg/Kg | 1 | 12/18/2017 11:02:02 A | M 35560 |
| Surr: DNOP | 83.3 | 70-130 | %Rec | 1 | 12/18/2017 11:02:02 A | M 35560 |
| EPA METHOD 8015D: GASOLINE RAM | IGE | | | | Analys | t: NSB |
| Gasoline Range Organics (GRO) | ND | 3.7 | mg/Kg | 1 | 12/18/2017 11:55:29 A | M G47852 |
| Surr: BFB | 88.1 | 15-316 | %Rec | 1 | 12/18/2017 11:55:29 A | M G47852 |
| EPA METHOD 8021B: VOLATILES | | | | | Analys | t: NSB |
| Benzene | ND | 0.018 | mg/Kg | 1 | 12/18/2017 11:55:29 A | M B47852 |
| Toluene | ND | 0.037 | mg/Kg | 1 | 12/18/2017 11:55:29 A | M B47852 |
| Ethylbenzene | ND | 0.037 | mg/Kg | 1 | 12/18/2017 11:55:29 A | M B47852 |
| Xylenes, Total | ND | 0.073 | mg/Kg | 1 | 12/18/2017 11:55:29 A | M B47852 |
| Surr: 4-Bromofluorobenzene | 105 | 80-120 | %Rec | 1 | 12/18/2017 11:55:29 A | M B47852 |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method Blank |
|-------------|-----|---|----|---|
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | Н | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits Page 1 of 5 |
| | ND | Not Detected at the Reporting Limit | Р | Sample pH Not In Range |
| | PQL | Practical Quanitative Limit | RL | Reporting Detection Limit |
| | S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |
| | | | | |

Hall Environmental Analysis Laboratory, Inc.

Client: WPX Energy

Project: Grace Begay ROW - ROW

| Sample ID MB-35566 | SampType: mb | lk | Tes | tCode: EPA | Method | 300.0: Anion | s | | |
|--|--|-----------------------------|--------------------------|---|------------------------------------|--|----------------|----------|------|
| Client ID: PBS | Batch ID: 355 | 666 | F | RunNo: 4785 | 55 | | | | |
| Prep Date: 12/18/2017 | Analysis Date: 12 | /18/2017 | S | SeqNo: 1532 | 2772 | Units: mg/K | g | | |
| Analyte | Result PQL | SPK value | SPK Ref Val | %REC L | owLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | ND 1.5 | | | | | | | | |
| | | | | | | | | | |
| Sample ID LCS-35566 | SampType: Ics | | Test | tCode: EPA | Method | 300.0: Anion | s | | |
| Sample ID LCS-35566 Client ID: LCSS | SampType: Ics Batch ID: 355 | 66 | Tesi | tCode: EPA RunNo: 4785 | Method | 300.0: Anion | S | | |
| Sample ID LCS-35566 Client ID: LCSS Prep Date: 12/18/2017 | SampType: Ics Batch ID: 355 Analysis Date: 12/ | 66 /18/2017 | Tesi R S | tCode: EPA RunNo: 4785 SeqNo: 1532 | Method 3 55 2773 | 300.0: Anion Units: mg/K | s g | | |
| Sample ID LCS-35566 Client ID: LCSS Prep Date: 12/18/2017 Analyte | SampType: Ics Batch ID: 355 Analysis Date: 12/ Result PQL | 66 /18/2017 SPK value | Tesi R SPK Ref Val | tCode: EPA RunNo: 4785 SeqNo: 1532 %REC Lu | Method 3 55 2773 .owLimit | 300.0: Anion Units: mg/K HighLimit | s g %RPD | RPDLimit | Qual |

Qualifiers:

- Value exceeds Maximum Contaminant Level. *
- Sample Diluted Due to Matrix D
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits J
- Р Sample pH Not In Range
- **Reporting Detection Limit** RL
- W Sample container temperature is out of limit as specified

Page 2 of 5

WO#: 1712990

20-Dec-17

Hall Environmental Analysis Laboratory, Inc.

WO#: 1712990

20-Dec-17

| nt: | WPX | Eı |
|-----|-----|----|
| | | |

Clien nergy **Project:** Grace Begay ROW - ROW

| Sample ID LCS-35560 | SampT | ype: LC | s | Tes | tCode: E | PA Method | 8015M/D: Di | esel Rang | e Organics | |
|---|--|---|--------------------------------------|------------------------------|---|---|--|--------------------------|------------------------|------|
| Client ID: LCSS | Batcl | h ID: 35 | 560 | F | RunNo: 4 | 7845 | | | | |
| Prep Date: 12/18/2017 | Analysis D | Date: 12 | 2/18/2017 | S | SeqNo: 1 | 530855 | Units: mg/k | ٢g | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 47 | 10 | 50.00 | 0 | 93.3 | 73.2 | 114 | | | |
| Surr: DNOP | 4.5 | | 5.000 | | 89.9 | 70 | 130 | | | |
| | | | | | | | | | | |
| Sample ID MB-35560 | SamnT | vne MF | RI K | Tes | Code: El | PA Method | 8015M/D. Di | osol Rang | Organics | |
| Sample ID MB-35560 | SampT | ype: ME | BLK | Tes | tCode: El | PA Method | 8015M/D: Di | esel Range | e Organics | |
| Sample ID MB-35560 Client ID: PBS | SampT Batch | ype: ME | 3LK 560 | Tes F | tCode: El RunNo: 4 | PA Method 7845 | 8015M/D: Di | esel Range | e Organics | |
| Sample ID MB-35560 Client ID: PBS Prep Date: 12/18/2017 | SampT Batch Analysis D | ype: ME 1D: 35 ate: 12 | 3LK 560 2/18/2017 | Tes R S | tCode: El RunNo: 4 SeqNo: 1 | PA Method 7845 530856 | 8015M/D: Die Units: mg/k | esel Rango (g | e Organics | |
| Sample ID MB-35560 Client ID: PBS Prep Date: 12/18/2017 Analyte | SampT Batch Analysis D Result | Type: ME n ID: 35 Date: 12 PQL | 3LK 560 2/18/2017 SPK value | Tes R SPK Ref Val | tCode: El RunNo: 4 SeqNo: 1 %REC | PA Method 7845 530856 LowLimit | 8015M/D: Die Units: mg/M HighLimit | esel Rango (g %RPD | e Organics RPDLimit | Qual |
| Sample ID MB-35560 Client ID: PBS Prep Date: 12/18/2017 Analyte Diesel Range Organics (DRO) | SampT Batch Analysis D Result ND | ype: ME n ID: 35 Date: 12 PQL 10 | 3LK 560 2/18/2017 SPK value | Tes R S SPK Ref Val | tCode: El RunNo: 4 SeqNo: 1 %REC | PA Method 7845 530856 LowLimit | 8015M/D: Di Units: mg/k HighLimit | esel Rango (g %RPD | e Organics RPDLimit | Qual |
| Sample ID MB-35560 Client ID: PBS Prep Date: 12/18/2017 Analyte Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) | SampT Batch Analysis D Result ND ND | Type: ME n ID: 35 Date: 12 PQL 10 50 | 3LK 560 2/18/2017 SPK value | Tes R SPK Ref Val | tCode: El RunNo: 4 GeqNo: 1 %REC | PA Method 7845 530856 LowLimit | 8015M/D: Di Units: mg/k HighLimit | esel Rango (g %RPD | e Organics | Qual |

Qualifiers:

- Value exceeds Maximum Contaminant Level. *
- D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded Η
- Not Detected at the Reporting Limit ND
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- Reporting Detection Limit RL
- W Sample container temperature is out of limit as specified

Page 3 of 5

| Hall | Envir | onmental | Ana | lysis | Lal | bora | tory, | Inc. |
|------|-------|----------|-----|-------|-----|------|-------|------|
|------|-------|----------|-----|-------|-----|------|-------|------|

WO#: 1712990

20-Dec-17

| Client: | WPX En | ergy | | | | | | | | | |
|---------------|------------------|-------------|---------|-----------|-------------|-----------|-----------|--------------|-----------|----------|------|
| Project: | Grace Be | egay ROW | - ROW | / | | | | | | | |
| Sample ID | RB | SampT | ype: MI | BLK | Tes | tCode: El | PA Method | 8015D: Gaso | line Rang | e | |
| Client ID: | PBS | Batch | ID: G4 | 47852 | F | RunNo: 4 | 7852 | | | | |
| Prep Date: | | Analysis Da | ate: 1 | 2/18/2017 | 5 | SeqNo: 1 | 531574 | Units: mg/K | g | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Rang | e Organics (GRO) | ND | 5.0 | | | | | | | | |
| Surr: BFB | | 860 | | 1000 | | 86.1 | 15 | 316 | | | |
| Sample ID | 2.5UG GRO LCS | SampTy | ype: LC | s | Tes | tCode: El | PA Method | 8015D: Gaso | line Rang | е | |
| Client ID: | LCSS | Batch | ID: G4 | 17852 | F | RunNo: 4 | 7852 | | | | |
| Prep Date: | | Analysis Da | ate: 1 | 2/18/2017 | 5 | SeqNo: 1 | 531575 | Units: mg/Kg | g | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Rang | e Organics (GRO) | 25 | 5.0 | 25.00 | 0 | 99.8 | 75.9 | 131 | | | |
| Surr: BFB | | 1000 | | 1000 | | 101 | 15 | 316 | | | |
| Sample ID | MB-35539 | SampTy | pe: ME | BLK | Tes | tCode: El | PA Method | 8015D: Gasol | ine Rang | e | |
| Client ID: | PBS | Batch | ID: 35 | 539 | F | RunNo: 4 | 7852 | | | | |
| Prep Date: | 12/15/2017 | Analysis Da | ate: 12 | 2/18/2017 | 5 | SeqNo: 1 | 531578 | Units: %Rec | | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: BFB | | 880 | | 1000 | | 87.7 | 15 | 316 | | | |
| Sample ID | LCS-35539 | SampTy | /pe: LC | s | Tes | tCode: EF | PA Method | 8015D: Gasol | ine Rang | e | |
| Client ID: | LCSS | Batch | ID: 35 | 539 | F | RunNo: 4 | 7852 | | | | |
| Prep Date: | 12/15/2017 | Analysis Da | ate: 12 | 2/18/2017 | S | eqNo: 1 | 531579 | Units: %Rec | | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: BFB | | 970 | | 1000 | | 97.0 | 15 | 316 | | | |

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

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Hall Environmental Analysis Laboratory, Inc.

Client: WPX Energy

Project: Grace Begay ROW - ROW

| Sample ID | RB | Samp | Туре: М | BLK | Tes | tCode: E | PA Method | 8021B: Volat | iles | | |
|----------------|-----------------|------------|----------|-----------|-------------|-----------|-----------|--------------|------|----------|------|
| Client ID: | PBS | Batc | h ID: B4 | 7852 | F | RunNo: 4 | 7852 | | | | |
| Prep Date: | | Analysis I | Date: 1 | 2/18/2017 | 5 | SeqNo: 1 | 531606 | Units: mg/K | g | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | | ND | 0.025 | | | | | | | | |
| Toluene | | ND | 0.050 | | | | | | | | |
| Ethylbenzene | | ND | 0.050 | | | | | | | | |
| Xylenes, Total | | ND | 0.10 | | | | | | | | |
| Surr: 4-Bron | nofluorobenzene | 1.0 | | 1.000 | | 103 | 80 | 120 | | | |
| Sample ID | 100NG BTEX LCS | Samp | Type: LC | s | Tes | tCode: El | PA Method | 8021B: Volat | iles | | |
| Client ID: | LCSS | Batc | h ID: B4 | 7852 | F | RunNo: 4 | 7852 | | | | |
| Prep Date: | | Analysis [| Date: 1 | 2/18/2017 | S | SeqNo: 1 | 531607 | Units: mg/K | g | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | | 0.94 | 0.025 | 1.000 | 0 | 94.1 | 77.3 | 128 | | | |
| Toluene | | 0.95 | 0.050 | 1.000 | 0 | 95.1 | 79.2 | 125 | | | |
| Ethylbenzene | | 0.96 | 0.050 | 1.000 | 0 | 95.9 | 80.7 | 127 | | | |
| Xylenes, Total | | 2.9 | 0.10 | 3.000 | 0 | 97.0 | 81.6 | 129 | | | |
| Surr: 4-Bron | nofluorobenzene | 1.1 | | 1.000 | | 108 | 80 | 120 | | | |
| Sample ID | MB-35539 | Samp | Гуре: МВ | BLK | Test | Code: El | PA Method | 8021B: Volat | iles | | |
| Client ID: | PBS | Batc | h ID: 35 | 539 | R | unNo: 4 | 7852 | | | | |
| Prep Date: | 12/15/2017 | Analysis [| Date: 12 | 2/18/2017 | S | eqNo: 1 | 531610 | Units: %Red | ; | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 4-Brom | nofluorobenzene | 1.0 | | 1.000 | | 104 | 80 | 120 | | | |
| Sample ID | LCS-35539 | Samp | Type: LC | S | Test | Code: E | PA Method | 8021B: Volat | iles | | |
| Client ID: | LCSS | Batc | h ID: 35 | 539 | R | unNo: 4 | 7852 | | | | |
| Prep Date: | 12/15/2017 | Analysis [| Date: 12 | 2/18/2017 | S | eqNo: 1 | 531611 | Units: %Red | ; | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 4-Brom | ofluorobenzene | 1.0 | | 1.000 | | 103 | 80 | 120 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
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- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

1712990 20-Dec-17

WO#:

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| ENVIRONMENTAL ANALYSIS LABORATORY | AI TEL: 505-345-397 Website: www.h | al Analysis Labord 4901 Hawkin. buquerque, NM 8 5 FAX: 505-345-4 hallenvironmental. | s NE 7109 Sam 1107 com | ple Log-In C | heck List |
|---|---|---|--|--|---------------------|
| Client Name: WPX ENERGY | Work Order Numbe | er: 1712990 | | RcptNo: | 1 |
| Received By: Andy Freeman | 12/17/2017 12:00:00 | PM | andy | | |
| Completed By: Anne Thorne | 12/18/2017 8:33:56 A | M | n N | | |
| Reviewed By: DDS | 12/18/17 | | and from | | |
| Chain of Custody | | | | | |
| 1. Custody seals intact on sample bol | tles? | Yes | No 🗌 | Not Present | |
| 2. Is Chain of Custody complete? | | Yes 🗹 | No 🗌 | Not Present | |
| 3. How was the sample delivered? | | Courier | | | |
| Log In | | | | | a |
| Was an attempt made to cool the s | amples? | Yes 🗹 | No 🗀 | NA L | |
| 5. Were all samples received at a tem | perature of >0° C to 6.0°C | Yes 🗹 | No | NA 🗆 | |
| 6. Sample(s) in proper container(s)? | · · · · · | Yes 🗹 | No | | |
| 7. Sufficient sample volume for indica | ted test(s)? | Yes 🗹 | No 🗌 | | · · · |
| 8. Are samples (except VOA and ONC | G) properly preserved? | Yes 🗹 | No 🗋 | | · · · · |
| 9. Was preservative added to bottles? | | Yes 🗌 | No 🗹 | NA 🗀 | |
| 10. VOA vials have zero headspace? | | Yes | No 🗌 | No VOA Vials 🗹 | |
| 11. Were any sample containers receiv | ved broken? | Yes | No 🗹 | # of preserved | The start of the |
| 12 Does paperwork match bottle label | 2 | Yes 🔽 | No 🗌 | bottles checked for pH: | |
| (Note discrepancies on chain of cus | stody) | | | (<2 0 | r >12 unless_noted) |
| 13. Are matrices correctly identified on | Chain of Custody? | Yes 🗹 | No | Adjusted? | |
| - 14. Is it clear what analyses were reque | ested? | Yes 🗹 | No 🗌 | • | |
| 15. Were all holding times able to be m | et? | Yes 🗹 | No 🗌 | Checked by: | |
| (If no, notify customer for authorizat | lion.) | | | | |
| Special Handling (if applicable |) les with this order? | Yes | No 🗌 | | |
| Demon blatter t | | | | | 1 |
| | Date | | lhana 🗔 Eau | | |
| Begerding | | | | | |
| Client Instructions: | CARROL FOR TABLE AND AN AND AND AND AND AND AND AND AND | an a | | atta Tan Tan Kanada K | |
| 17. Additional remarks: | | | | |] |
| 18 Cooler Information | | | | | |
| Cooler No Temp % Coodi | ion Seal Intact Seal No | Seal Date | Signed By | | |
| | | | | | |

. . .

| Client: WPX Energy Production Mailing Address: 721 S Main Aziec, NM 8741D Phone #: 505 0000 10000333 1880 | Turn-Around Time: Standard X Rush Samulay Project Name: Grace Begay RDW - RDW Project #: | HALL ENVIRONMENTAL ANALYSIS LABORATORY www.hallenvironmental.com 4901 Hawkins NE - Albuquerque, NM 87109 Tel. 505-345-3975 Fax 505-345-4107 Analysis Request | | | | | |
|--|--|---|--|--|--|--|--|
| email or Fax#debovah.waBon@wpXonergy 'Covn QA/QC Package: A:Standard □ Level 4 (Full Validation) Accreditation □ NELAP □ Other □ EDD (Type) Date Time Matrix Sample Request ID | Project Manager: D Watson Sampler: D Watson On Ice: & Yes En No Sample Temperature 3, /* C Arr 12/18/17 Container Type and # Mode K to the Sample Temperature Type The Servative Type The Servative The Serva | TEX + MTME + TOPH (8021) TEX + MTME + TPH (Gas only) PH 8015B (GRO (DRO (MRO) PH (Method 418.1) DB (Method 504.1) AH's (8310 or 8270 SIMS) CRA 8 Metals nions (F(CI)NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) 081 Pesticides / 8082 PCB's 260B (VOA) 270 (Semi-VOA) ir Bubbles (Y or N) | | | | | |
| 12.15,17 16:55 Sol SC-4 | 1-402 gluss cold ZOI | | | | | | |
| Date: Time: Relinquished by: 12/14/n 1330 Debuh Watu Date! Time: Relinquished by: 12/14/17 14/10 Norther | Received by: Date Time Amust Walst 12/11/17 1330 Received by: Date Time 12/17/17 1200 | Remarks: | | | | | |

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If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.
