



2RP-3660

Investigation Summary and Work Plan

Parker Deep 5 Fed Com #3

June 23, 2016

Introduction

This summary and work plan by Matador Resources details knowledge and plans for remediation of the Parker Deep 5 Fed Com # 3 spill on April 24, 2016. The Parker Deep 5 Fed Com # 3 is located in Section 5, Township 18S, Range 31E of Eddy County, NM. This is a federal lease. The geodetic position is 32°46.32132 N, 103°53.63434W. The release occurred April 24, 2016. Approximately 10 barrels of fluid leaked into the containment from a hole in the fire tube in the heater treater. Less than 1 barrel was recovered from the ground. The release was reported to the New Mexico Oil Conservation Division Artesia office on April 24, 2016. OCD issued remediation project (RP) number 2RP-3660. Attachments include surveys, pictures, and map.

Setting

The setting is as follows:

- The surface elevation is approximately 3,698 feet above sea level.
- The topography is undulating sands with Kermit – Berino fine sands.
- Groundwater depth is unknown or not present according to records from the New Mexico Office of the State Engineer (OSE)
- No fresh water wells in the area. (See attached OSE water well reports)

Remediation Action

Collect soil samples at a minimum depth of 24 inches below surface near fire source to be analyzed by Hall Environmental Labs in Albuquerque, NM. Upon return of results, determine whether or not soil needs to be remediated deeper than 24 inches below surface.



New Mexico Office of the State Engineer
Water Column/Average Depth to Water

No records found.

PL88 Search:

Section(s): 5

Township: 18S

Range: 31E

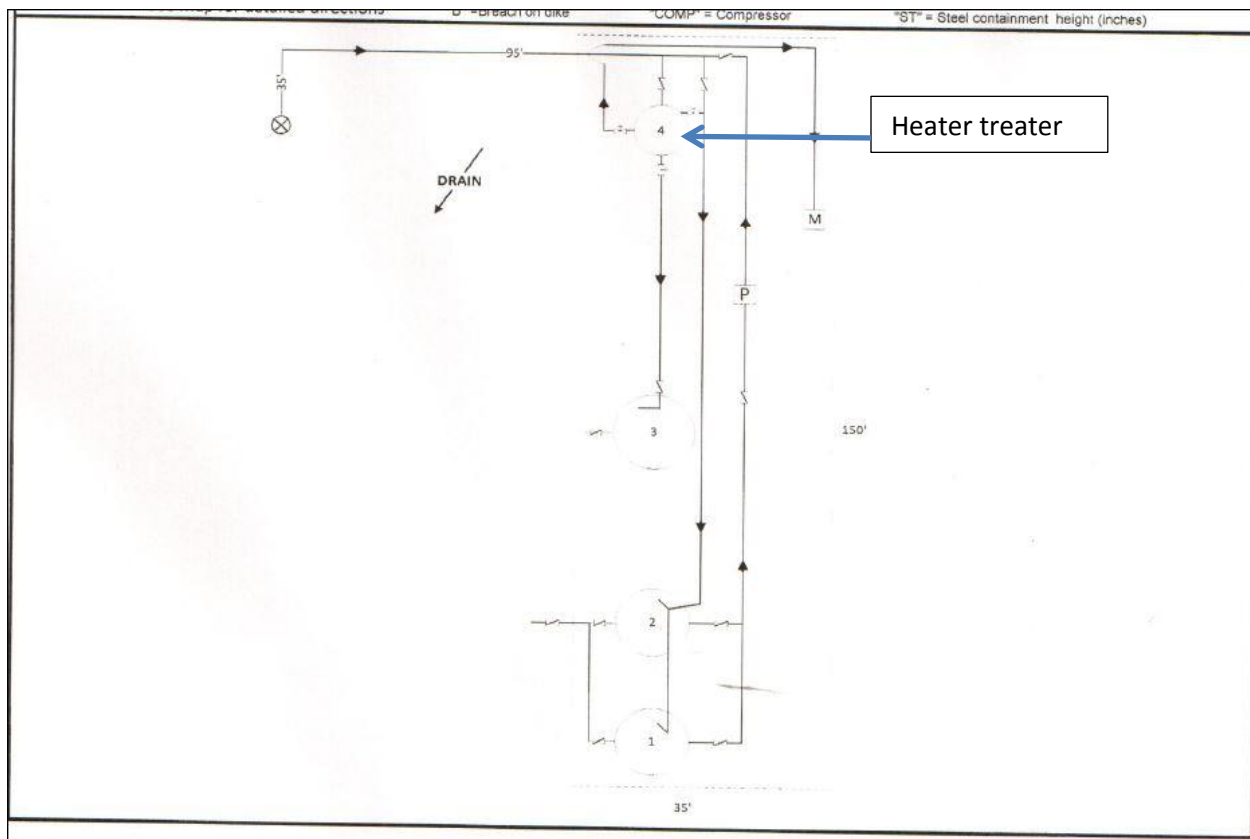
The data is furnished by the NMQSG ISC and is accepted by the recipient with the expressed understanding that the QSG ISC make no warranty, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

6/23/16 2:30 P.M.

Page 1 of 1

WATER COLUMN/ AVERAGE
DEPTH TO WATER

As can be seen above, no wells have been drilled.



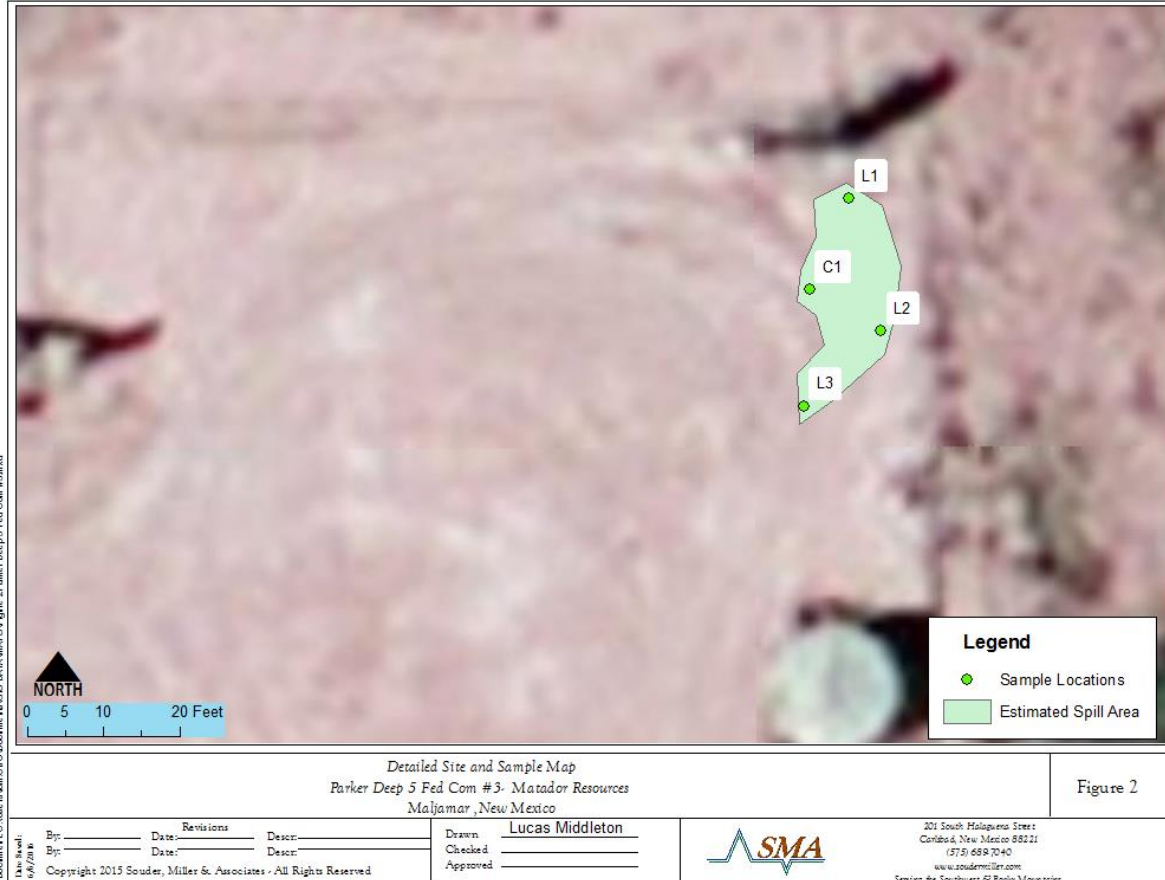






Remediation Actions

Soil samples were collected as shown on the attached plat at the surface around the spill site.



The table depicting the results BTEX, TPH, and Chlorides is shown below.

| Analytical Report- 160A71 | Sample Number on Figure 2 Map | Sample Date | Depth | BTEX ppm | Benzene mg/Kg | GRO mg/Kg | DRO mg/Kg | Cl- mg/Kg |
|---------------------------|-------------------------------|-------------|---------|----------|---------------|-----------|-----------|-----------|
| 160A71-001 | C1 | 5/20/2016 | Surface | N/A | N/A | 640 | 27,600 | 140 |
| 160A71-002 | L1-1 | 5/20/2016 | 1' | 279.21 | 0.21 | 2,000 | 6,700 | N/A |
| 160A71-003 | L1-2 | 5/20/2016 | 2' | N/A | N/A | BDL | 130 | 260 |
| 160A71-004 | L2-1 | 5/20/2016 | 1' | 1.33 | BDL | 39 | 244 | N/A |
| 160A71-005 | L2-2 | 5/20/2016 | 2' | N/A | N/A | BDL | 75 | N/A |
| 160A71-006 | L2-3 | 5/20/2016 | 3' | 306.4 | 1.4 | 3,700 | 10,100 | 49 |
| 160A71-007 | L3-1 | 5/20/2016 | 1' | N/A | N/A | N/A | N/A | BDL |
| 160A71-008 | L3-2 | 5/20/2016 | 2' | 121 | N/A | 11 | 246 | BDL |

The results of the soil analysis are attached for further investigation. Matador proposes to remove up to 4 feet of contaminated soil and replace with top soil from a local vendor.

Hall Environmental Analysis Laboratory, Inc.**Analytical Report**

Lab Order 1605A71

Date Reported: 6/7/2016

CLIENT: Souder, Miller & Associates**Client Sample ID:** C1**Project:** Parker Deep 5 Fed 3**Collection Date:** 5/20/2016 2:00:00 PM**Lab ID:** 1605A71-001**Matrix:** SOIL**Received Date:** 5/24/2016 9:40:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|--------|------|-------|-----|----------------------|---------------------|
| EPA METHOD 418.1: TPH | | | | | | | Analyst: TOM |
| Petroleum Hydrocarbons, TR | 44000 | 1900 | | mg/Kg | 100 | 5/27/2016 | 25529 |
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: LGT |
| Chloride | 140 | 30 | | mg/Kg | 20 | 5/26/2016 3:57:48 PM | 25539 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: JME |
| Diesel Range Organics (DRO) | 18000 | 960 | | mg/Kg | 100 | 6/3/2016 7:45:27 PM | 25629 |
| Motor Oil Range Organics (MRO) | 9600 | 4800 | | mg/Kg | 100 | 6/3/2016 7:45:27 PM | 25629 |
| Surr: DNOP | 0 | 70-130 | S | %Rec | 100 | 6/3/2016 7:45:27 PM | 25629 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | 640 | 50 | | mg/Kg | 10 | 6/2/2016 9:58:40 AM | 25622 |
| Surr: BFB | 363 | 80-120 | S | %Rec | 10 | 6/2/2016 9:58:40 AM | 25622 |

Hall Environmental Analysis Laboratory, Inc.**Analytical Report**

Lab Order 1605A71

Date Reported: 6/7/2016

CLIENT: Souder, Miller & Associates**Client Sample ID:** L1-1**Project:** Parker Deep 5 Fed 3**Collection Date:** 5/20/2016 2:00:00 PM**Lab ID:** 1605A71-002**Matrix:** SOIL**Received Date:** 5/24/2016 9:40:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|--------|------|-------|-----|----------------------|---------------------|
| EPA METHOD 418.1: TPH | | | | | | | Analyst: TOM |
| Petroleum Hydrocarbons, TR | 12000 | 1900 | | mg/Kg | 100 | 5/27/2016 | 25529 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: JME |
| Diesel Range Organics (DRO) | 5200 | 96 | | mg/Kg | 10 | 6/3/2016 3:05:07 PM | 25629 |
| Motor Oil Range Organics (MRO) | 1500 | 480 | | mg/Kg | 10 | 6/3/2016 3:05:07 PM | 25629 |
| Surr: DNOP | 0 | 70-130 | S | %Rec | 10 | 6/3/2016 3:05:07 PM | 25629 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | 2000 | 98 | | mg/Kg | 20 | 5/25/2016 8:32:48 PM | 25461 |
| Surr: BFB | 543 | 80-120 | S | %Rec | 20 | 5/25/2016 8:32:48 PM | 25461 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Methyl tert-butyl ether (MTBE) | ND | 0.098 | | mg/Kg | 1 | 5/25/2016 1:06:32 PM | 25461 |
| Benzene | 0.21 | 0.025 | | mg/Kg | 1 | 5/25/2016 1:06:32 PM | 25461 |
| Toluene | 26 | 0.98 | | mg/Kg | 20 | 5/25/2016 8:32:48 PM | 25461 |
| Ethylbenzene | 12 | 0.98 | | mg/Kg | 20 | 5/25/2016 8:32:48 PM | 25461 |
| Xylenes, Total | 92 | 2.0 | | mg/Kg | 20 | 5/25/2016 8:32:48 PM | 25461 |
| Surr: 4-Bromofluorobenzene | 149 | 80-120 | S | %Rec | 20 | 5/25/2016 8:32:48 PM | 25461 |

Hall Environmental Analysis Laboratory, Inc.**Analytical Report**

Lab Order 1605A71

Date Reported: 6/7/2016

CLIENT: Souder, Miller & Associates**Client Sample ID:** L1-2**Project:** Parker Deep 5 Fed 3**Collection Date:** 5/20/2016 2:00:00 PM**Lab ID:** 1605A71-003**Matrix:** SOIL**Received Date:** 5/24/2016 9:40:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|--------|------|-------|----|---------------------|---------------------|
| EPA METHOD 418.1: TPH | | | | | | | Analyst: TOM |
| Petroleum Hydrocarbons, TR | 260 | 20 | | mg/Kg | 1 | 5/27/2016 | 25529 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: JME |
| Diesel Range Organics (DRO) | 73 | 9.3 | | mg/Kg | 1 | 6/3/2016 5:53:59 PM | 25629 |
| Motor Oil Range Organics (MRO) | 57 | 47 | | mg/Kg | 1 | 6/3/2016 5:53:59 PM | 25629 |
| Surr: DNOP | 93.0 | 70-130 | | %Rec | 1 | 6/3/2016 5:53:59 PM | 25629 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 6/2/2016 1:00:26 PM | 25622 |
| Surr: BFB | 108 | 80-120 | | %Rec | 1 | 6/2/2016 1:00:26 PM | 25622 |

Hall Environmental Analysis Laboratory, Inc.**Analytical Report**

Lab Order 1605A71

Date Reported: 6/7/2016

CLIENT: Souder, Miller & Associates**Client Sample ID:** L2-1**Project:** Parker Deep 5 Fed 3**Collection Date:** 5/20/2016 2:00:00 PM**Lab ID:** 1605A71-004**Matrix:** SOIL**Received Date:** 5/24/2016 9:40:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|--------|------|-------|----|-----------------------|---------------------|
| EPA METHOD 418.1: TPH | | | | | | | Analyst: TOM |
| Petroleum Hydrocarbons, TR | 720 | 20 | | mg/Kg | 1 | 5/27/2016 | 25529 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: JME |
| Diesel Range Organics (DRO) | 160 | 9.3 | | mg/Kg | 1 | 6/3/2016 6:22:06 PM | 25629 |
| Motor Oil Range Organics (MRO) | 84 | 47 | | mg/Kg | 1 | 6/3/2016 6:22:06 PM | 25629 |
| Surr: DNOP | 92.9 | 70-130 | | %Rec | 1 | 6/3/2016 6:22:06 PM | 25629 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | 39 | 4.7 | | mg/Kg | 1 | 5/25/2016 10:07:06 PM | 25461 |
| Surr: BFB | 267 | 80-120 | S | %Rec | 1 | 5/25/2016 10:07:06 PM | 25461 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Methyl tert-butyl ether (MTBE) | ND | 0.094 | | mg/Kg | 1 | 5/25/2016 10:07:06 PM | 25461 |
| Benzene | ND | 0.023 | | mg/Kg | 1 | 5/25/2016 10:07:06 PM | 25461 |
| Toluene | 0.22 | 0.047 | | mg/Kg | 1 | 5/25/2016 10:07:06 PM | 25461 |
| Ethylbenzene | 0.16 | 0.047 | | mg/Kg | 1 | 5/25/2016 10:07:06 PM | 25461 |
| Xylenes, Total | 0.95 | 0.094 | | mg/Kg | 1 | 5/25/2016 10:07:06 PM | 25461 |
| Surr: 4-Bromofluorobenzene | 128 | 80-120 | S | %Rec | 1 | 5/25/2016 10:07:06 PM | 25461 |

Hall Environmental Analysis Laboratory, Inc.**Analytical Report**

Lab Order 1605A71

Date Reported: 6/7/2016

CLIENT: Souder, Miller & Associates**Client Sample ID:** L2-2**Project:** Parker Deep 5 Fed 3**Collection Date:** 5/20/2016 2:00:00 PM**Lab ID:** 1605A71-005**Matrix:** SOIL**Received Date:** 5/24/2016 9:40:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|--------|------|-------|----|---------------------|---------------------|
| EPA METHOD 418.1: TPH | | | | | | | Analyst: TOM |
| Petroleum Hydrocarbons, TR | 240 | 20 | | mg/Kg | 1 | 5/27/2016 | 25529 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: JME |
| Diesel Range Organics (DRO) | 76 | 9.6 | | mg/Kg | 1 | 6/3/2016 6:49:55 PM | 25629 |
| Motor Oil Range Organics (MRO) | ND | 48 | | mg/Kg | 1 | 6/3/2016 6:49:55 PM | 25629 |
| Surr: DNOP | 106 | 70-130 | | %Rec | 1 | 6/3/2016 6:49:55 PM | 25629 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.9 | | mg/Kg | 1 | 6/2/2016 1:23:58 PM | 25622 |
| Surr: BFB | 120 | 80-120 | | %Rec | 1 | 6/2/2016 1:23:58 PM | 25622 |

Hall Environmental Analysis Laboratory, Inc.**Analytical Report**

Lab Order 1605A71

Date Reported: 6/7/2016

CLIENT: Souder, Miller & Associates**Client Sample ID:** L2-3**Project:** Parker Deep 5 Fed 3**Collection Date:** 5/20/2016 2:00:00 PM**Lab ID:** 1605A71-006**Matrix:** SOIL**Received Date:** 5/24/2016 9:40:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|--------|------|-------|-----|-----------------------|---------------------|
| EPA METHOD 418.1: TPH | | | | | | | Analyst: TOM |
| Petroleum Hydrocarbons, TR | 21000 | 1900 | | mg/Kg | 100 | 5/27/2016 | 25529 |
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: LGT |
| Chloride | 49 | 30 | | mg/Kg | 20 | 5/26/2016 4:10:12 PM | 25539 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: JME |
| Diesel Range Organics (DRO) | 7900 | 95 | | mg/Kg | 10 | 6/3/2016 4:29:53 PM | 25629 |
| Motor Oil Range Organics (MRO) | 2200 | 480 | | mg/Kg | 10 | 6/3/2016 4:29:53 PM | 25629 |
| Surr: DNOP | 0 | 70-130 | S | %Rec | 10 | 6/3/2016 4:29:53 PM | 25629 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | 3700 | 230 | | mg/Kg | 50 | 5/25/2016 10:03:47 AM | 25461 |
| Surr: BFB | 371 | 80-120 | S | %Rec | 50 | 5/25/2016 10:03:47 AM | 25461 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Methyl tert-butyl ether (MTBE) | ND | 4.7 | | mg/Kg | 50 | 5/25/2016 10:03:47 AM | 25461 |
| Benzene | 1.4 | 1.2 | | mg/Kg | 50 | 5/25/2016 10:03:47 AM | 25461 |
| Toluene | 69 | 2.3 | | mg/Kg | 50 | 5/25/2016 10:03:47 AM | 25461 |
| Ethylbenzene | 28 | 2.3 | | mg/Kg | 50 | 5/25/2016 10:03:47 AM | 25461 |
| Xylenes, Total | 210 | 4.7 | | mg/Kg | 50 | 5/25/2016 10:03:47 AM | 25461 |
| Surr: 4-Bromofluorobenzene | 137 | 80-120 | S | %Rec | 50 | 5/25/2016 10:03:47 AM | 25461 |

Hall Environmental Analysis Laboratory, Inc.**Analytical Report**

Lab Order 1605A71

Date Reported: 6/7/2016

CLIENT: Souder, Miller & Associates**Client Sample ID:** L3-1**Project:** Parker Deep 5 Fed 3**Collection Date:** 5/20/2016 2:00:00 PM**Lab ID:** 1605A71-007**Matrix:** SOIL**Received Date:** 5/24/2016 9:40:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|--------------------------|--------|-----|------|-------|----|----------------------|--------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: LGT |
| Chloride | ND | 30 | | mg/Kg | 20 | 5/26/2016 4:22:37 PM | 25539 |

Hall Environmental Analysis Laboratory, Inc.**Analytical Report**

Lab Order 1605A71

Date Reported: 6/7/2016

CLIENT: Souder, Miller & Associates**Client Sample ID:** L3-2**Project:** Parker Deep 5 Fed 3**Collection Date:** 5/20/2016 2:00:00 PM**Lab ID:** 1605A71-008**Matrix:** SOIL**Received Date:** 5/24/2016 9:40:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|--------|--------|------|-------|----|----------------------|--------------|
| EPA METHOD 418.1: TPH | | | | | | | Analyst: TOM |
| Petroleum Hydrocarbons, TR | 370 | 20 | | mg/Kg | 1 | 5/27/2016 | 25529 |
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: LGT |
| Chloride | ND | 30 | | mg/Kg | 20 | 5/26/2016 4:35:01 PM | 25539 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: JME |
| Diesel Range Organics (DRO) | 160 | 9.8 | | mg/Kg | 1 | 6/3/2016 7:17:39 PM | 25629 |
| Motor Oil Range Organics (MRO) | 86 | 49 | | mg/Kg | 1 | 6/3/2016 7:17:39 PM | 25629 |
| Surr: DNOP | 95.4 | 70-130 | | %Rec | 1 | 6/3/2016 7:17:39 PM | 25629 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | 11 | 5.0 | | mg/Kg | 1 | 5/25/2016 1:53:29 PM | 25461 |
| Surr: BFB | 172 | 80-120 | S | %Rec | 1 | 5/25/2016 1:53:29 PM | 25461 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Methyl tert-butyl ether (MTBE) | ND | 0.10 | | mg/Kg | 1 | 5/25/2016 1:53:29 PM | 25461 |
| Benzene | ND | 0.025 | | mg/Kg | 1 | 5/25/2016 1:53:29 PM | 25461 |
| Toluene | ND | 0.050 | | mg/Kg | 1 | 5/25/2016 1:53:29 PM | 25461 |
| Ethylbenzene | ND | 0.050 | | mg/Kg | 1 | 5/25/2016 1:53:29 PM | 25461 |
| Xylenes, Total | ND | 0.10 | | mg/Kg | 1 | 5/25/2016 1:53:29 PM | 25461 |
| Surr: 4-Bromofluorobenzene | 121 | 80-120 | S | %Rec | 1 | 5/25/2016 1:53:29 PM | 25461 |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO# 1605A71

07-Jun-16

Client: Souder, Miller & Associates

Project: Parker Deep 5 Fed 3

| | | | | | | | | | | |
|------------|-----------|----------------|-----------|-------------|--------------------------|----------|-----------|------|----------|------|
| Sample ID | MB-25539 | SampType: | mbk | TestCode: | EPA Method 300.0: Anions | | | | | |
| Client ID: | PBS | Batch ID: | 25539 | RunNo: | 34533 | | | | | |
| Prep Date: | 5/26/2016 | Analysis Date: | 5/26/2016 | SeqNo: | 1065112 | Units: | mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | ND | 1.5 | | | | | | | | |

| | | | | | | | | | | |
|------------|-----------|----------------|-----------|-------------|--------------------------|----------|-----------|------|----------|------|
| Sample ID | LCS-25539 | SampType: | lcs | TestCode: | EPA Method 300.0: Anions | | | | | |
| Client ID: | LCSS | Batch ID: | 25539 | RunNo: | 34533 | | | | | |
| Prep Date: | 5/26/2016 | Analysis Date: | 5/26/2016 | SeqNo: | 1065113 | Units: | mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | 14 | 1.5 | 15.00 | 0 | 93.0 | 90 | 110 | | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO# 1605A71

07-Jun-16

Client: Souder, Miller & Associates

Project: Parker Deep 5 Fed 3

| | | | | | | | | | | |
|--------------------------------|----------|----------------|-----------|-------------|---|----------|-----------|------|----------|------|
| Sample ID | MB-25629 | SampType: | MBLK | TestCode: | EPA Method 8015M/D: Diesel Range Organics | | | | | |
| Client ID: | PBS | Batch ID: | 25629 | RunNo: | 34675 | | | | | |
| Prep Date: | 6/2/2016 | Analysis Date: | 6/3/2016 | SeqNo: | 1069818 | Units: | mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | ND | 10 | | | | | | | | |
| Motor Oil Range Organics (MRO) | ND | 50 | | | | | | | | |
| Surr: DNOP | 8.9 | | 10.00 | | 89.3 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------|-----------|----------------|-----------|-------------|---|----------|-----------|------|----------|------|
| Sample ID | LCS-25629 | SampType: | LCS | TestCode: | EPA Method 8015M/D: Diesel Range Organics | | | | | |
| Client ID: | LCSS | Batch ID: | 25629 | RunNo: | 34675 | | | | | |
| Prep Date: | 6/2/2016 | Analysis Date: | 6/3/2016 | SeqNo: | 1069819 | Units: | mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 52 | 10 | 50.00 | 0 | 104 | 62.6 | 124 | | | |
| Surr: DNOP | 4.3 | | 5.000 | | 85.2 | 70 | 130 | | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO# 1605A71

07-Jun-16

Client: Souder, Miller & Associates

Project: Parker Deep 5 Fed 3

| | | | | | | | | | | |
|-------------------------------|--------------------------|--|-----------|-------------|--------------|----------|-----------|------|----------|------|
| Sample ID: MB-25461 | SampType: MBLK | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | | |
| Client ID: PBS | Batch ID: 25461 | RunNo: 34464 | | | | | | | | |
| Prep Date: 5/24/2016 | Analysis Date: 5/25/2016 | SeqNo: 1063427 | | | Units: mg/Kg | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 5.0 | | | | | | | | |
| Surr: BFB | 1100 | | 1000 | | 110 | 80 | 120 | | | |

| | | | | | | | | | | |
|-------------------------------|--------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-25461 | SampType: LCS | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | | |
| Client ID: LCSS | Batch ID: 25461 | RunNo: 34464 | | | | | | | | |
| Prep Date: 5/24/2016 | Analysis Date: 5/25/2016 | SeqNo: 1064053 Units: mg/kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 23 | 5.0 | 25.00 | 0 | 93.9 | 80 | 120 | | | |
| Surr. BFB | 1200 | | 1000 | | 121 | 80 | 120 | | | S |

| | | | | | | | | | | |
|-------------------------------|-------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-25622 | SampType: MBLK | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | | |
| Client ID: PBS | Batch ID: 25622 | RunNo: 34635 | | | | | | | | |
| Prep Date: 6/1/2016 | Analysis Date: 6/2/2016 | SeqNo: 1068922 Units: mg/kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 5.0 | | | | | | | | |
| Surr: BFB | 1100 | | 1000 | | 106 | 80 | 120 | | | |

| | | | | | | | | | | |
|-------------------------------|-------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-25622 | SampType: LCS | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | | |
| Client ID: LCSS | Batch ID: 25622 | RunNo: 34635 | | | | | | | | |
| Prep Date: 6/1/2016 | Analysis Date: 6/2/2016 | SeqNo: 1068923 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 26 | 5.0 | 25.00 | 0 | 103 | 80 | 120 | | | |
| Surr. BFB | 1600 | | 1000 | | 161 | 80 | 120 | | | S |

Qualifiers:

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

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO# 1605A71

07-Jun-16

Client: Souder, Miller & Associates

Project: Parker Deep 5 Fed 3

| Sample ID: MB-25461 | SampType: MBLK | | TestCode: EPA Method 8021B: Volatiles | | | | | | | |
|--------------------------------|--------------------------|-------|---------------------------------------|-------------|--------------|----------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: 25461 | | RunNo: 34464 | | | | | | | |
| Prep Date: 5/24/2016 | Analysis Date: 5/25/2016 | | SeqNo: 1063448 | | Units: mg/kg | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Methyl tert-butyl ether (MTBE) | ND | 0.10 | | | | | | | | |
| Benzene | ND | 0.025 | | | | | | | | |
| Toluene | ND | 0.050 | | | | | | | | |
| Ethylbenzene | ND | 0.050 | | | | | | | | |
| Xylenes, Total | ND | 0.10 | | | | | | | | |
| Surr: 4-6 nonfluorobenzene | 1.1 | | 1.000 | | 114 | 80 | 120 | | | |

| | | | | | | | | | | |
|--------------------------------|--------------------------|---------------------------------------|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-25461 | SampType: LCS | TestCode: EPA Method 8021B: Volatiles | | | | | | | | |
| Client ID: LCSS | Batch ID: 25461 | RunNo: 34464 | | | | | | | | |
| Prep Date: 5/24/2016 | Analysis Date: 5/25/2016 | SeqNo: 1063449 Units: mg/kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Methyl tert-butyl ether (MTBE) | 1.1 | 0.10 | 1.000 | 0 | 111 | 61 | 143 | | | |
| Benzene | 1.1 | 0.025 | 1.000 | 0 | 106 | 75.3 | 123 | | | |
| Toluene | 1.1 | 0.050 | 1.000 | 0 | 106 | 80 | 124 | | | |
| Ethylbenzene | 1.0 | 0.050 | 1.000 | 0 | 103 | 82.8 | 121 | | | |
| Xylenes, Total | 3.1 | 0.10 | 3.000 | 0 | 103 | 83.9 | 122 | | | |
| Surr: 4-6 nonfluorobenzene | 1.2 | | 1.000 | | 118 | 80 | 120 | | | |

| | | | | | | | | | | |
|----------------------------|-------------------------|---------------------------------------|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-25622 | SampType: MBLK | TestCode: EPA Method 8021B: Volatiles | | | | | | | | |
| Client ID: PBS | Batch ID: 25622 | RunNo: 34635 | | | | | | | | |
| Prep Date: 6/1/2016 | Analysis Date: 6/2/2016 | SeqNo: 1068955 Units: %Rec | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 4-6 nonfluorobenzene | 1.0 | | 1.000 | | 105 | 80 | 120 | | | |

| | | | | | | | | | | |
|----------------------------|-------------------------|---------------------------------------|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-25622 | SampType: LCS | TestCode: EPA Method 8021B: Volatiles | | | | | | | | |
| Client ID: LCSS | Batch ID: 25622 | RunNo: 34635 | | | | | | | | |
| Prep Date: 6/1/2016 | Analysis Date: 6/2/2016 | SeqNo: 1068984 Units: %Rec | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 4-6 nonfluorobenzene | 1.1 | | 1.000 | | 109 | 80 | 120 | | | |

Qualifiers:

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

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

Sample Log-In Check List

Client Name: SMA-CARLSBAD Work Order Number: 1605A71 RptNo: 1

Received by/date:

Logged By: Ashley Gallegos

5/24/2016 9:40:00 AM

Completed By: Ashley Gallegos

5/24/2016 11:07:16 AM

Reviewed By:

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. 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 $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) 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 received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐
- # of preserved bottles checked for pH:
(<2 or >12 unless noted)
Adjusted?
Checked by:

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒
- Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

17. Additional remarks:

18. Cooler Information

| Cooler No | Temp $^{\circ}\text{C}$ | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|-------------------------|-----------|-------------|---------|-----------|-----------|
| 1 | 2.6 | Good | Yes | | | |

