March 24, 2016 Reference No. 11121222

Mr. Jamie Keyes
Environmental Specialist, District 1
Oil Conservation Division, EMNRD
1625 N. French Dr
Hobbs, New Mexico 88240

Ms. Amber Groves
Remediation Specialist
New Mexico State Land Office
2827 N. Dal Paso, Suite 117
Hobbs, New Mexico 88240

Dear Mr. Keyes and Ms. Groves:

Re: Work Plan
Lomas Rojas 26 #703 Release
RP# 1RP-4190
Unit B, Section 26, Township 25-S, Range 33-E
Latitude: N 32.10666, Longitude: W 103.5405
Lea County, New Mexico

1. Project Information

The Lomas Rojas 26 #703 site (hereafter referred to as the "Site"), is a wellsite located approximately 20 miles west of Jal in Lea County, New Mexico (see Figure 1). It is located in Unit B, Section 26, Township 25 South, Range 33 East. Both the land and minerals at the Site are owned by the State of New Mexico.

The line and well are owned by EOG Resources, Inc. (EOG). According to EOG personnel, a contractor moving flow lines across the pasture encountered a 6-inch riser and caused damage to it. The damage to the riser resulted in a release of approximately 300 barrels (bbls) of produced water. A vacuum truck was mobilized to the Site and approximately 120 bbls of fluids were recovered. A backhoe was present and was used to contain the spread of the release.

The contractor, Dubose Drilling, Inc. is currently performing assessment and remediation of the site. The approximate release boundary is depicted on Figure 2. A Form C-141 was submitted to the New Mexico Oil Conservation Division (NMOCD) and remediation permit number 1RP-4190 was assigned.

According to the NMOCD Oil and Gas Map, the depth to groundwater in the vicinity of the Site is estimated to be approximately 110 feet below ground surface (bgs). This is based on the closed well

GHD Services Inc.
6121 Indian School Road NE Suite 200 Albuquerque New Mexico 87110 USA
T 505 884 0672 **F** 505 884 4932 **W** www.ghd.com

that is located approximately 0.82 miles southwest of the Site. There are no surface water bodies within 200 to 1,000 feet of the Site. There are no well head protection areas in the vicinity of the Site. Therefore, the preliminary ranking score , in accordance with ranking criteria outlined in the NMOCD Guidelines for Remediation of Leaks, Spills and Releases (NMOCD, 1993), is 0.

Based on this score, the Site-specific Recommended Remediation Action Limits (RRALs) to be applied by the NMOCD are 10 milligrams per kilogram (mg/kg) for benzene, 50 mg/kg for total benzene, toluene, ethylbenzene, and xylene (BTEX), 5,000 mg/kg for total petroleum hydrocarbons (TPH), and 500 mg/kg for chloride.

An initial assessment of the site has determined that there are at least two buried lines at the site. A gas line is located on the south side of the site and a produced water line is located on the north side of the site (Figure 2). Both of the lines are buried approximately 2.5 to 4 ft bgs and are located approximately 15 feet apart. Both lines have been potholed with a hydrovac and the depth and location has been assessed.

Soil samples were collected during the initial assessment. The soil samples were analyzed by Hall Environmental Analysis Laboratory (HEAL) for BTEX by EPA Method 8021, TPH, diesel range organics (DRO) and gasoline range organics (GRO) by EPA Method 8015, and chlorides by EPA Method 300.0. See the attached laboratory analytical report.

Chloride concentrations ranged from not detected to 8600 mg/kg. Diesel range TPH was observed in one sample at a concentration of 2700 mg/kg. Gasoline range TPH and BTEX concentrations were not detected above the laboratory reporting limit.

2. Scope of Work

The scope of work for this project will consist of the excavation of impacted soil accompanied by soil sampling and analysis. The presence of the buried lines presents the possibility for additional impacts to these lines. In order to minimize the potential to impact buried lines, GHD proposes to excavate the impacted area to within 1 foot of depth of the lines. The horizontal extent of the impacts will be assessed during the excavation of impacted soil. In addition, a hand auger or backhoe will be used to assess the vertical extent of the release between the two pipelines.

Field screening of soils will be performed in order to guide excavation activities. When the horizontal and vertical extent of impacts has been assessed, a liner will be placed in the bottom of the excavation. Subsequently, the excavation will be backfilled with clean soil, fertilized, and reseeded. The following outlines the proposed scope of work:

Field Program

The field program will consist of the following:

- Impacted soil in the affected area will be excavated. The soil disposal facility identified for this project is Sundance/Parabo, in Eunice, New Mexico;

- Soils will be field screened for chloride during excavation using Hach chloride test kit. Soils will also be field screened for organic vapors using a calibrated photoionization detector. If field screening indicates that soils are below regulatory levels, excavation would halt to minimize excavating clean soil;
- Confirmation laboratory samples will be collected at intervals to be determined during excavation. Samples will be sent to Hall Environmental Analysis Laboratory of Albuquerque, New Mexico. Soil samples will be analyzed for TPH, and chloride;
- Once the impacted soil has been excavated to a depth within 1 foot of the existing pipelines, a 20 mil polyethylene liner will be placed in the bottom of the excavation. Liner seams will be overlapped a minimum of 24 inches. Each liner will be placed without rips or tears; and
- The excavation will be backfilled to grade using clean fill material. The disturbed area will be fertilized and reseeded with a Bureau of Land Management-approved seed mix.

Health and Safety Considerations

Personal protective equipment, including fire-retardant clothing, steel-toed work boots, gloves, safety glasses, and hard hats will be required during all field tasks. The project health and safety plan will be maintained on Site and will be reviewed and signed by on Site personnel, subcontractors, and authorized visitors.

Quality Assurance/ Quality Control

Confirmation soil sampling will be completed in accordance with GHD's standard Quality Assurance/ Quality Control procedures designed to minimize cross-contamination between samples and to provide reliable laboratory results.

Reporting

A short letter report summarizing remediation activities will be submitted. The letter report will include a Site description, project history, description of field events, a discussion of results, and recommendations (if any).

The report will include:

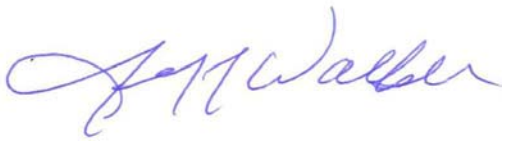
- A scaled Site plan showing the locations of the excavation and other Site features;
- Tabulation of field screening and laboratory analytical results;
- Copies of landfill manifests; and
- Geotagged photographic documentation of field activities.

3. Work Plan Approval Request

GHD is prepared to initiate the scope of work immediately. If you have any questions or comments with regards to this work plan, please do not hesitate to contact our Albuquerque office at (505) 884-0672. Your timely response to this correspondence is appreciated.

Sincerely,

GHD



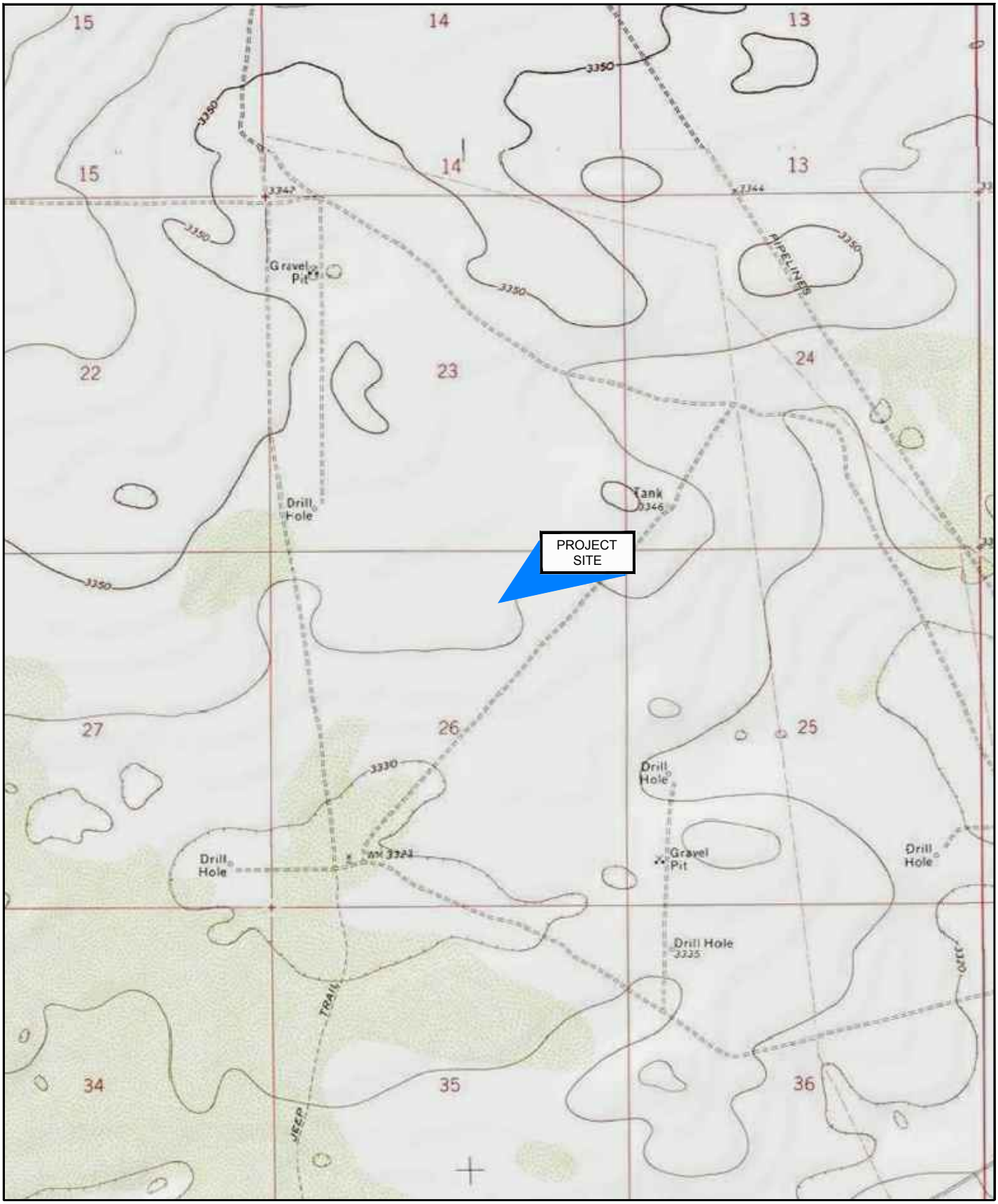
Bernard Bockisch, PMP
Senior Project Manager

Jeff Walker,
Senior Project Manager

BB/mc/1

Encl. (1)

Figures



Source: USGS 7.5 Minute Quad "Paduca Breaks East, and Andrews Place, New Mexico"

Lat/Long: 32.10666° North, 103.54050° West

0 1000 2000ft

Coordinate System:
NAD 1983 (2011) StatePlane-
New Mexico East (US Feet)

DUBOSE DRILLING INC.
LEA COUNTY, NEW MEXICO
LOMAS ROJAS 26 #703 RELEASE

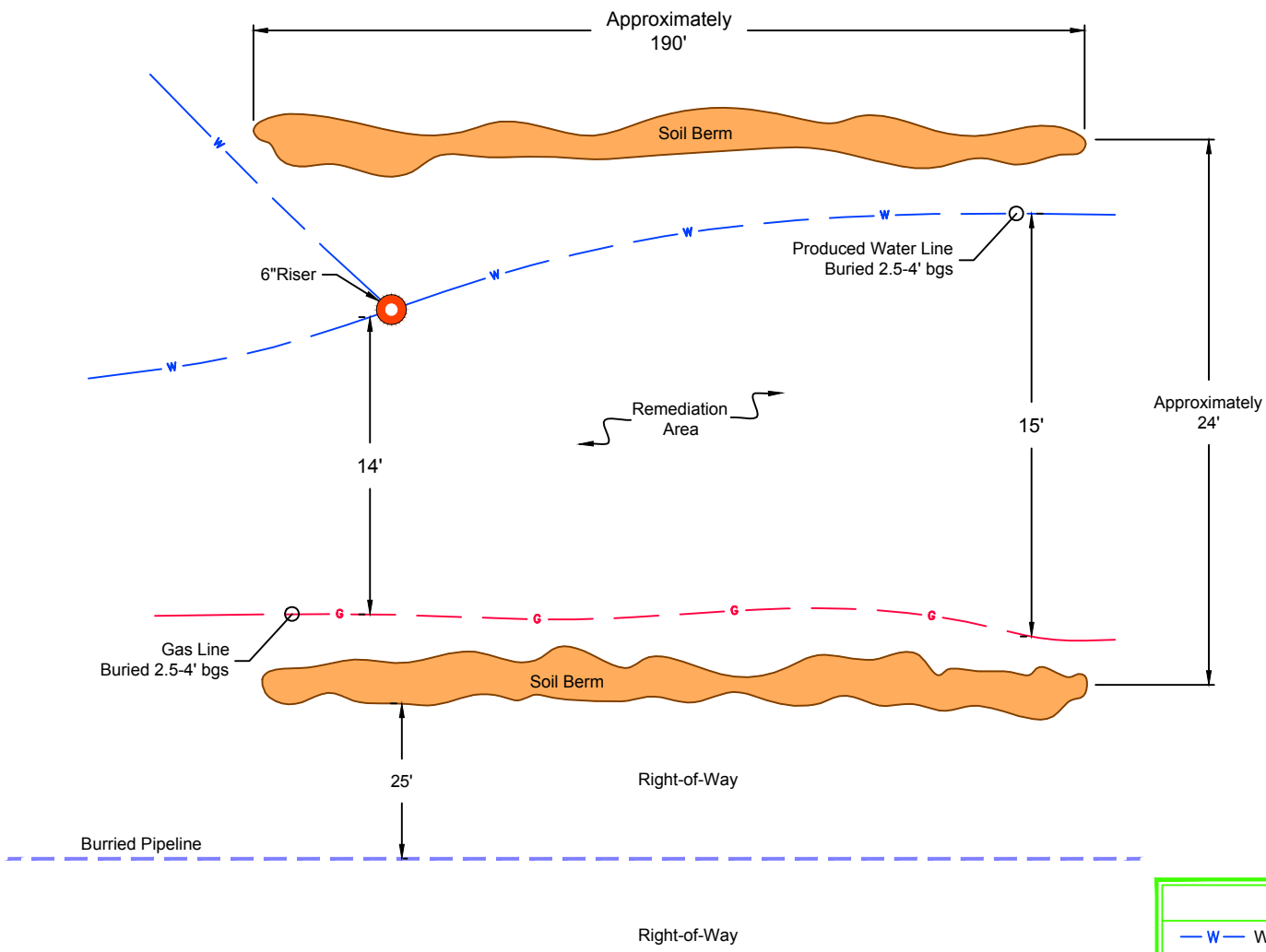
11121222-00

Mar 23, 2016

SITE LOCATION MAP

FIGURE 1

CAD File: I:\CAD\Files\Eight Digit Job Numbers\1112----\11121222-Dubose-Lomas Rojas 26 #703\11121222-00(000)GN-DL001.dwg



Not to Scale

DUBOSE DRILLING INC.
LEA COUNTY, NEW MEXICO
LOMAS ROJAS 26 #703 RELEASE

11121222-00

Mar 24, 2016

SITE MAP

FIGURE 2

CAD File: I:\CAD\Files\Eight Digit Job Numbers\1112----\11121222-Dubose-Lomas Rojas 26 #703\11121222-00(000)GN-DL001.dwg

Attachment A
Laboratory Analytical Report

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

March 22, 2016

Bernie Bockish
GHD
6121 Indian School Road, NE #200
Albuquerque, NM 87110
TEL: (505) 884-0672
FAX

RE: Lomas Rojas 26 #701 OrderNo.: 1603884

Dear Bernie Bockish:

Hall Environmental Analysis Laboratory received 4 sample(s) on 3/17/2016 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 www.hallenvironmental.com 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 qualifers 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Client Sample ID: S-11121222-031516-SP-01
Project: Lomas Rojas 26 #701
Collection Date: 3/15/2016 4:43:00 PM
Lab ID: 1603884-001
Matrix: SOIL
Received Date: 3/17/2016 9:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	7600	300		mg/Kg	200	3/22/2016 1:52:37 PM	24365
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **KJH**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	3/18/2016 12:26:05 PM	24325
Surr: DNOP	91.3	70-130		%Rec	1	3/18/2016 12:26:05 PM	24325
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/18/2016 4:57:02 PM	24321
Surr: BFB	105	66.2-112		%Rec	1	3/18/2016 4:57:02 PM	24321
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	3/18/2016 4:57:02 PM	24321
Toluene	ND	0.048		mg/Kg	1	3/18/2016 4:57:02 PM	24321
Ethylbenzene	ND	0.048		mg/Kg	1	3/18/2016 4:57:02 PM	24321
Xylenes, Total	ND	0.096		mg/Kg	1	3/18/2016 4:57:02 PM	24321
Surr: 4-Bromofluorobenzene	110	80-120		%Rec	1	3/18/2016 4:57:02 PM	24321

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Client Sample ID: S-11121222-031516-SP-02
Project: Lomas Rojas 26 #701
Collection Date: 3/15/2016 5:15:00 PM
Lab ID: 1603884-002
Matrix: SOIL
Received Date: 3/17/2016 9:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	8300	300		mg/Kg	200	3/22/2016 2:05:01 PM	24365
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **KJH**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	3/18/2016 1:31:16 PM	24325
Surr: DNOP	85.8	70-130		%Rec	1	3/18/2016 1:31:16 PM	24325
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/18/2016 5:20:36 PM	24321
Surr: BFB	106	66.2-112		%Rec	1	3/18/2016 5:20:36 PM	24321
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	3/18/2016 5:20:36 PM	24321
Toluene	ND	0.049		mg/Kg	1	3/18/2016 5:20:36 PM	24321
Ethylbenzene	ND	0.049		mg/Kg	1	3/18/2016 5:20:36 PM	24321
Xylenes, Total	ND	0.099		mg/Kg	1	3/18/2016 5:20:36 PM	24321
Surr: 4-Bromofluorobenzene	109	80-120		%Rec	1	3/18/2016 5:20:36 PM	24321

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Client Sample ID: S-11121222-031516-SP-03
Project: Lomas Rojas 26 #701
Collection Date: 3/15/2016 5:20:00 PM
Lab ID: 1603884-003
Matrix: SOIL
Received Date: 3/17/2016 9:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	4800	300		mg/Kg	200	3/22/2016 2:17:26 PM	24365
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **KJH**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	3/19/2016 10:22:28 AM	24325
Surr: DNOP	92.3	70-130		%Rec	1	3/19/2016 10:22:28 AM	24325
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/18/2016 5:44:19 PM	24321
Surr: BFB	104	66.2-112		%Rec	1	3/18/2016 5:44:19 PM	24321
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	3/18/2016 5:44:19 PM	24321
Toluene	ND	0.047		mg/Kg	1	3/18/2016 5:44:19 PM	24321
Ethylbenzene	ND	0.047		mg/Kg	1	3/18/2016 5:44:19 PM	24321
Xylenes, Total	ND	0.093		mg/Kg	1	3/18/2016 5:44:19 PM	24321
Surr: 4-Bromofluorobenzene	107	80-120		%Rec	1	3/18/2016 5:44:19 PM	24321

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Client Sample ID: S-11121222-031516-SP-04
Project: Lomas Rojas 26 #701
Collection Date: 3/15/2016 5:30:00 PM
Lab ID: 1603884-004
Matrix: SOIL
Received Date: 3/17/2016 9:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	30		mg/Kg	20	3/22/2016 4:16:25 AM	24365
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **KJH**	
Diesel Range Organics (DRO)	2700	93		mg/Kg	10	3/19/2016 10:43:33 AM	24325
Surr: DNOP	0	70-130	S	%Rec	10	3/19/2016 10:43:33 AM	24325
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/18/2016 6:07:57 PM	24321
Surr: BFB	104	66.2-112		%Rec	1	3/18/2016 6:07:57 PM	24321
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	3/18/2016 6:07:57 PM	24321
Toluene	ND	0.048		mg/Kg	1	3/18/2016 6:07:57 PM	24321
Ethylbenzene	ND	0.048		mg/Kg	1	3/18/2016 6:07:57 PM	24321
Xylenes, Total	ND	0.096		mg/Kg	1	3/18/2016 6:07:57 PM	24321
Surr: 4-Bromofluorobenzene	107	80-120		%Rec	1	3/18/2016 6:07:57 PM	24321

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603884**

23-Mar-16

Client: GHD

Project: Lomas Rojas 26 #701

Sample ID	**MB-24365**	SampType:	**MBLK**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**24365**	RunNo:	**32963**					
Prep Date:	**3/21/2016**	Analysis Date:	**3/21/2016**	SeqNo:	**1011048**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	**LCS-24365**	SampType:	**LCS**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**24365**	RunNo:	**32963**					
Prep Date:	**3/21/2016**	Analysis Date:	**3/21/2016**	SeqNo:	**1011049**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.5	90	110			

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603884**

23-Mar-16

Client: GHD

Project: Lomas Rojas 26 #701

Sample ID **LCS-24325**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **24325**	RunNo: **32886**
Prep Date: **3/18/2016**	Analysis Date: **3/18/2016**	SeqNo: **1008166** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	37	10	50.00	0	74.0	65.8	136			
Surr: DNOP	4.3		5.000		85.1	70	130			

Sample ID **MB-24325**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **24325**	RunNo: **32886**
Prep Date: **3/18/2016**	Analysis Date: **3/18/2016**	SeqNo: **1008167** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	8.3		10.00		83.0	70	130			

Sample ID **1603884-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **S-11121222-031516-**	Batch ID: **24325**	RunNo: **32886**
Prep Date: **3/18/2016**	Analysis Date: **3/19/2016**	SeqNo: **1009659** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	37	9.1	45.66	0	82.0	31.2	162			
Surr: DNOP	4.3		4.566		93.2	70	130			

Sample ID **1603884-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **S-11121222-031516-**	Batch ID: **24325**	RunNo: **32886**
Prep Date: **3/18/2016**	Analysis Date: **3/19/2016**	SeqNo: **1009661** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	40	9.6	48.08	0	83.5	31.2	162	6.99	31.7	
Surr: DNOP	4.4		4.808		91.5	70	130	0	0	

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603884**

23-Mar-16

Client: GHD

Project: Lomas Rojas 26 #701

Sample ID **MB-24321**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **24321**	RunNo: **32893**
Prep Date: **3/17/2016**	Analysis Date: **3/18/2016**	SeqNo: **1008613** 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		108	66.2	112			

Sample ID **LCS-24321**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **24321**	RunNo: **32893**
Prep Date: **3/17/2016**	Analysis Date: **3/18/2016**	SeqNo: **1008614** 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	1200		1000		117	66.2	112			S

Sample ID **1603884-002AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **S-11121222-031516-**	Batch ID: **24321**	RunNo: **32893**
Prep Date: **3/17/2016**	Analysis Date: **3/18/2016**	SeqNo: **1008617** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	4.8	23.76	0	122	59.3	143			
Surr: BFB	1100		950.6		112	66.2	112			S

Sample ID **1603884-002AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **S-11121222-031516-**	Batch ID: **24321**	RunNo: **32893**
Prep Date: **3/17/2016**	Analysis Date: **3/18/2016**	SeqNo: **1008618** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	4.6	23.02	0	120	59.3	143	5.06	20	
Surr: BFB	1100		920.8		116	66.2	112	0	0	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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603884**

23-Mar-16

Client: GHD

Project: Lomas Rojas 26 #701

Sample ID **MB-24321**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **24321**	RunNo: **32893**
Prep Date: **3/17/2016**	Analysis Date: **3/18/2016**	SeqNo: **1008645** Units: **mg/Kg**

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-Bromofluorobenzene	1.1		1.000		113	80	120			

Sample ID **LCS-24321**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **24321**	RunNo: **32893**
Prep Date: **3/17/2016**	Analysis Date: **3/18/2016**	SeqNo: **1008646** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	114	80	120			
Toluene	1.0	0.050	1.000	0	103	80	120			
Ethylbenzene	1.0	0.050	1.000	0	101	80	120			
Xylenes, Total	3.0	0.10	3.000	0	100	80	120			
Surr: 4-Bromofluorobenzene	1.2		1.000		121	80	120			S

Sample ID **1603884-001AMS**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **S-11121222-031516-**	Batch ID: **24321**	RunNo: **32893**
Prep Date: **3/17/2016**	Analysis Date: **3/18/2016**	SeqNo: **1008648** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.3	0.024	0.9756	0	134	71.5	122			S
Toluene	1.2	0.049	0.9756	0	125	71.2	123			S
Ethylbenzene	1.2	0.049	0.9756	0	122	75.2	130			
Xylenes, Total	3.6	0.098	2.927	0	121	72.4	131			
Surr: 4-Bromofluorobenzene	1.2		0.9756		124	80	120			S

Sample ID **1603884-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **S-11121222-031516-**	Batch ID: **24321**	RunNo: **32893**
Prep Date: **3/17/2016**	Analysis Date: **3/18/2016**	SeqNo: **1008649** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.3	0.024	0.9407	0	134	71.5	122	3.85	20	S
Toluene	1.2	0.047	0.9407	0	122	71.2	123	5.63	20	
Ethylbenzene	1.1	0.047	0.9407	0	121	75.2	130	4.61	20	
Xylenes, Total	3.3	0.094	2.822	0	119	72.4	131	6.07	20	
Surr: 4-Bromofluorobenzene	1.1		0.9407		118	80	120	0	0	

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: GHD | Work Order Number: 1603884 | RcptNo: 1

Received by/date: 03/17/16

Logged By: **Lindsay Mangin** 3/17/2016 9:50:00 AM

Completed By: **Lindsay Mangin** 3/17/2016 9:55:05 AM

Reviewed By: 03/17/16

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° 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 ☐	# of preserved bottles checked for pH: (<2 or >12 unless noted)
13. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted?
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 ☐	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 °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.4	Good	Yes			

Chain-of-Custody Record

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

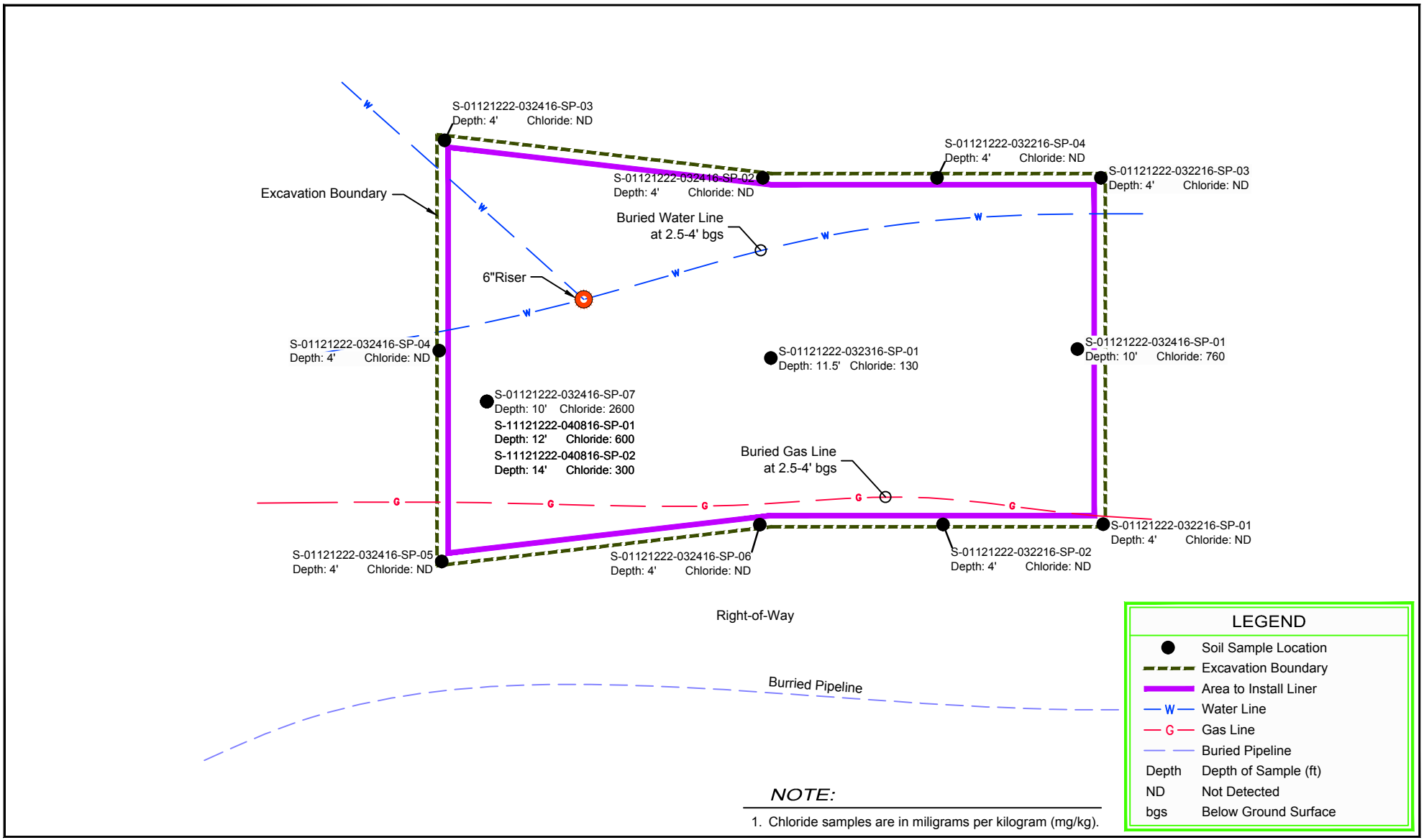
Client: GHD-Albuquerque	Turn-Around Time: ☐ Standard ☑ Rush 3day
	Project Name: Lamas Rojas 26 #701
Mailing Address: 6121 Indian School Rd NE	
Suite 200, Albuquerque, NM, 87110	Project #: 11121222
Phone #: 505-884-0672	
email or Fax#: Bernard.Bockisch@ghd.com	Project Manager: Bernard Bockisch 505-280-0572
QA/QC Package: ☐ Standard ☐ Level 4 (Full Validation)	Sampler: Steve Perez
Accreditation ☐ NELAP ☐ Other	On Ice: ☑ Yes ☐ No
☐ EDD (Type)	Sample Temperature: 5.4

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	300.0 Chloride	8021 BTEX	TPH 8015 GRO/DRO		Air Bubbles (Y or N)
3-15-16	1643	Soil	S-11121222-031516-SP-01	4oz glass-1	ICE	-001												X	X	X		
	1715		S-11121222-031516-SP-02			-002																
	1720		S-11121222-031516-SP-03			-003																
↓	1730	↓	S-11121222-031516-SP-04	↓	↓	-004												↓	↓	↓		

Date:	Time:	Relinquished by:	Received by:	Date	Time	Remarks:
3/16/16	0700	Steve Perez		3/16/16	0700	
3/16/16	1900			03/17/16	0950	

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.



Not to Scale

DUBOSE DRILLING INC.
LEA COUNTY, NEW MEXICO
LOMAS ROJAS 26 #701 RELEASE

11121222-00

Apr 20, 2016

SITE DETAILS MAP

FIGURE 2

CAD File: I:\CAD\Files\Eight Digit Job Numbers\1112----\11121222-Dubose-Lomas Rojas 26 #703\11121222-00(000)GN-DL002.dwg