

Client

Project EOG spill site sketch

Subject

Job Number

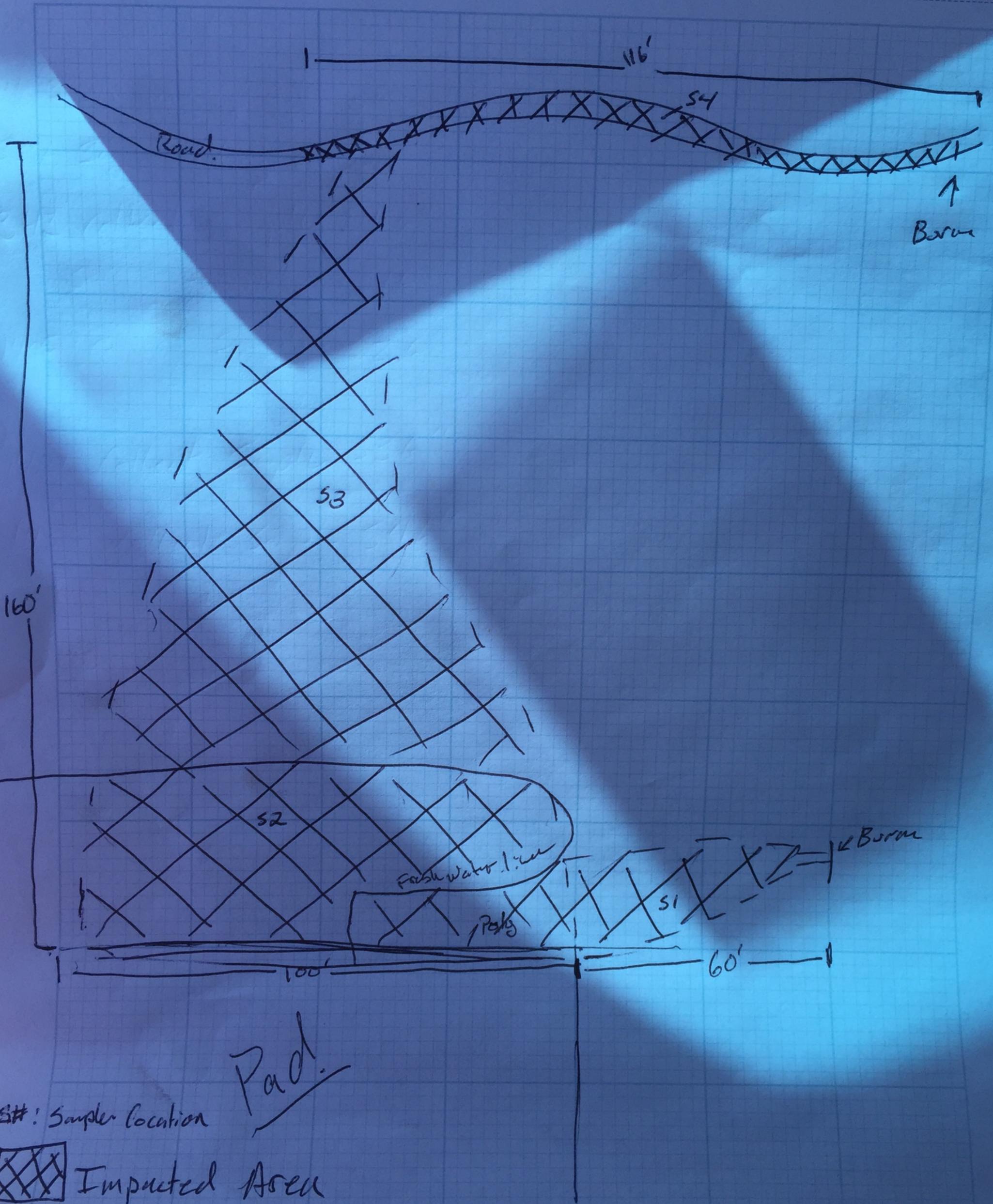
Sheets by

Checked by

Sheet ___ of ___

Date 3-17-

Date



S# : Sample Location

 Impacted Area

Pad



Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1703999

Date Reported:

CLIENT: GHD

Client Sample ID: S-031717-CN-S16"

Project: EOG Frac Rig

Collection Date: 3/17/2017 1:43:00 PM

Lab ID: 1703999-001

Matrix: SOIL

Received Date: 3/20/2017 12:04:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	30		mg/Kg	20	3/21/2017 11:02:57 AM	30827
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	3/21/2017 9:53:13 AM	30802
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	3/21/2017 9:53:13 AM	30802
Surr: DNOP	102	70-130		%Rec	1	3/21/2017 9:53:13 AM	30802
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/21/2017 9:03:00 AM	30800
Surr: BFB	75.6	54-150		%Rec	1	3/21/2017 9:03:00 AM	30800
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	3/21/2017 9:03:00 AM	30800
Toluene	ND	0.049		mg/Kg	1	3/21/2017 9:03:00 AM	30800
Ethylbenzene	ND	0.049		mg/Kg	1	3/21/2017 9:03:00 AM	30800
Xylenes, Total	ND	0.097		mg/Kg	1	3/21/2017 9:03:00 AM	30800
Surr: 4-Bromofluorobenzene	83.1	66.6-132		%Rec	1	3/21/2017 9:03:00 AM	30800

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

Analytical Report

Lab Order 1703999

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD

Client Sample ID: S-031717-CN-S26"

Project: EOG Frac Rig

Collection Date: 3/17/2017 2:05:00 PM

Lab ID: 1703999-002

Matrix: SOIL

Received Date: 3/20/2017 12:04:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	30		mg/Kg	20	3/21/2017 11:15:22 AM	30827
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	3/21/2017 10:15:16 AM	30802
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	3/21/2017 10:15:16 AM	30802
Surr: DNOP	112	70-130		%Rec	1	3/21/2017 10:15:16 AM	30802
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/21/2017 9:29:24 AM	30800
Surr: BFB	74.3	54-150		%Rec	1	3/21/2017 9:29:24 AM	30800
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	3/21/2017 9:29:24 AM	30800
Toluene	ND	0.050		mg/Kg	1	3/21/2017 9:29:24 AM	30800
Ethylbenzene	ND	0.050		mg/Kg	1	3/21/2017 9:29:24 AM	30800
Xylenes, Total	ND	0.10		mg/Kg	1	3/21/2017 9:29:24 AM	30800
Surr: 4-Bromofluorobenzene	80.6	66.6-132		%Rec	1	3/21/2017 9:29:24 AM	30800

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

Analytical ReportLab Order **1703999**

Date Reported:

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** GHD**Client Sample ID:** S-031717-CN-S36"**Project:** EOG Frac Rig**Collection Date:** 3/17/2017 2:21:00 PM**Lab ID:** 1703999-003**Matrix:** SOIL**Received Date:** 3/20/2017 12:04:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	30		mg/Kg	20	3/21/2017 11:27:46 AM	30827
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	3/21/2017 10:37:14 AM	30802
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	3/21/2017 10:37:14 AM	30802
Surr: DNOP	113	70-130		%Rec	1	3/21/2017 10:37:14 AM	30802
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/21/2017 12:59:55 PM	30800
Surr: BFB	75.2	54-150		%Rec	1	3/21/2017 12:59:55 PM	30800
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	3/21/2017 12:59:55 PM	30800
Toluene	ND	0.048		mg/Kg	1	3/21/2017 12:59:55 PM	30800
Ethylbenzene	ND	0.048		mg/Kg	1	3/21/2017 12:59:55 PM	30800
Xylenes, Total	ND	0.097		mg/Kg	1	3/21/2017 12:59:55 PM	30800
Surr: 4-Bromofluorobenzene	82.5	66.6-132		%Rec	1	3/21/2017 12:59:55 PM	30800

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.

Analytical Report

Lab Order 1703999

Date Reported:

CLIENT: GHD

Client Sample ID: S-031717-CN-S46"

Project: EOG Frac Rig

Collection Date: 3/17/2017 2:37:00 PM

Lab ID: 1703999-004

Matrix: SOIL

Received Date: 3/20/2017 12:04:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	30		mg/Kg	20	3/21/2017 11:40:11 AM	30827
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	3/21/2017 10:59:38 AM	30802
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	3/21/2017 10:59:38 AM	30802
Surr: DNOP	134	70-130	S	%Rec	1	3/21/2017 10:59:38 AM	30802
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/21/2017 1:26:14 PM	30800
Surr: BFB	69.2	54-150		%Rec	1	3/21/2017 1:26:14 PM	30800
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	3/21/2017 1:26:14 PM	30800
Toluene	ND	0.048		mg/Kg	1	3/21/2017 1:26:14 PM	30800
Ethylbenzene	ND	0.048		mg/Kg	1	3/21/2017 1:26:14 PM	30800
Xylenes, Total	ND	0.096		mg/Kg	1	3/21/2017 1:26:14 PM	30800
Surr: 4-Bromofluorobenzene	77.4	66.6-132		%Rec	1	3/21/2017 1:26:14 PM	30800

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