

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

State of New Mexico  
Energy Minerals and Natural Resources

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

Form C-141  
Revised April 3, 2017

Submit 1 Copy to appropriate District Office in  
accordance with 19.15.29 NMAC.

**Release Notification and Corrective Action**

**OPERATOR**

☐ Initial Report ☒ Final Report

Name of Company	BP America Production Company	Contact	Erin Garifalos
Address	200 Energy Court, Farmington, NM 87401	Telephone No.	(832) 609-7048
Facility Name	SANDOVAL GC A 001A	Facility Type	Natural Gas Well

Surface Owner	Federal	Mineral Owner	Federal	API No.	3004522294
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**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
C	35	30N	09W	1,150	North	1,590	West	San Juan

Latitude 36.77222 Longitude -107.75408 NAD83

**NATURE OF RELEASE**

Type of Release: none	Volume of Release: unknown	Volume Recovered: N/A
Source of Release: below grade tank - 95 bbl	Date and Hour of Occurrence: n/a	Date and Hour of Discovery: n/a
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

OIL CONS. DIV DIST. 3

DEC 22 2017

Describe Cause of Problem and Remedial Action Taken.\* Impacted soils were discovered during BGT removal confirmation sampling. Soil analysis resulted for TPH, BTEX and chlorides with all but TPH below BGT closure standards. Following the spill and release guidelines, the site is ranked with a closure standard of 1,000 ppm TPH requiring no further action. Further, sampling at 7'-10' and 12' indicated BGT closure. Field reports and laboratory results are attached.

Describe Area Affected and Cleanup Action Taken.\* Roughly 12 cubic yards of minor impacted soil was excavated using a backhoe and sampling was completed. Final laboratory analysis determined no remedial action is required.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: <i>erin garifalos</i>	OIL CONSERVATION DIVISION	
Printed Name: Erin Garifalos	Approved by Environmental Specialist: <i>[Signature]</i>	
Title: Field Environmental Coordinator	Approval Date: 12/22/17	Expiration Date: <i>[Signature]</i>
E-mail Address: erin.garifalos@bp.com	Conditions of Approval: <i>[Signature]</i>	Attached <input type="checkbox"/>
Date: December 6, 2017	Phone: (832) 609-7048	

\* Attach Additional Sheets If Necessary

#NCS 17 356 33477

25



CLIENT: <b>BP</b>	<b>BLAGG ENGINEERING, INC.</b> <b>P.O. BOX 87, BLOOMFIELD, NM 87413</b> <b>(505) 632-1199</b>	API #: <b>3004522294</b> TANK ID (if applicable): <b>A</b>
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<b>FIELD REPORT:</b> (circle one): BGT CONFIRMATION / <u>RELEASE INVESTIGATION</u> / OTHER:	PAGE #: <b>1</b> of <b>2</b>
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<b>SITE INFORMATION:</b>	SITE NAME: <b>SANDOVAL GC A #1A</b>	DATE STARTED: <b>10/05/17</b>
QUAD/UNIT: <b>C</b> SEC: <b>35</b> TWP: <b>30N</b> RNG: <b>9W</b> PM: <b>NM</b> CNTY: <b>SJ</b> ST: <b>NM</b>	DATE FINISHED:	ENVIRONMENTAL SPECIALIST(S): <b>NJV / JCB</b>
1/4 - 1/4 FOOTAGE: <b>1,150'N / 1,590'W NE/NW</b> LEASE TYPE: <u>FEDERAL</u> / STATE / FEE / INDIAN	LEASE #: <b>SF078139</b> PROD. FORMATION: <b>MV</b> CONTRACTOR: <b>STRIKE MBF - R. POWELL</b>	

<b>REFERENCE POINT:</b>	WELL HEAD (W.H.) GPS COORD.: <b>36.77199 X 107.75352</b> GL ELEV.: <b>5,712'</b>	
1) <b>95 BGT (SW/DB)</b>	GPS COORD.: <b>36.77222 X 107.75408</b>	DISTANCE/BEARING FROM W.H.: <b>186', N63.5W</b>
2)	GPS COORD.:	DISTANCE/BEARING FROM W.H.:
3)	GPS COORD.:	DISTANCE/BEARING FROM W.H.:
4)	GPS COORD.:	DISTANCE/BEARING FROM W.H.:

<b>SAMPLING DATA:</b>	CHAIN OF CUSTODY RECORD(S) # OR LAB USED: <b>HALL</b>	OVM READING (ppm)
1) SAMPLE ID: <b>1 @ 4.5' (95)</b>	SAMPLE DATE: <b>10/05/17</b> SAMPLE TIME: <b>1115</b> LAB ANALYSIS: <b>8015B/8021B/300.0 (CI)</b>	<b>1,445</b>
2) SAMPLE ID: <b>Minor Impact 3-pt. @ 12'</b>	SAMPLE DATE: <b>10/05/17</b> SAMPLE TIME: <b>1505</b> LAB ANALYSIS: <b>8015B/8021B/300.0 (CI)</b>	<b>1.4</b>
3) SAMPLE ID: <b>Minor Impact 4-pt. 7'-10'</b>	SAMPLE DATE: <b>10/05/17</b> SAMPLE TIME: <b>1515</b> LAB ANALYSIS: <b>8015B/8021B/300.0 (CI)</b>	<b>1.2</b>
4) SAMPLE ID: <b>Minor Impact Pipeline Grab @ 5'</b>	SAMPLE DATE: <b>10/05/17</b> SAMPLE TIME: <b>1545</b> LAB ANALYSIS: <b>8015B/8021B/300.0 (CI)</b>	<b>1.0</b>
5) SAMPLE ID:	SAMPLE DATE: SAMPLE TIME: LAB ANALYSIS:	

<b>SOIL DESCRIPTION:</b>	SOIL TYPE: SAND <u>SILTY SAND</u> SILT <u>SILTY CLAY</u> CLAY / GRAVEL / OTHER
SOIL COLOR: <b>DARK YELLOWISH ORANGE</b>	PLASTICITY (CLAYS): NON PLASTIC <u>SLIGHTLY PLASTIC</u> <u>COHESIVE</u> MEDIUM PLASTIC / HIGHLY PLASTIC
COHESION (ALL OTHERS): NON COHESIVE <u>SLIGHTLY COHESIVE</u> COHESIVE / HIGHLY COHESIVE	DENSITY (COHESIVE CLAYS & SILTS): SOFT <u>FIRM</u> <u>STIFF</u> VERY STIFF / HARD
CONSISTENCY (NON COHESIVE SOILS): LOOSE <u>FIRM</u> DENSE / VERY DENSE	HC ODOR DETECTED: <u>YES</u> NO EXPLANATION - <b>PHYSICALLY FROM DISCOLORED SOILS ONLY.</b>
MOISTURE: DRY <u>SLIGHTLY MOIST</u> <u>MOIST</u> WET / SATURATED / SUPER SATURATED	ANY AREAS DISPLAYING WETNESS: YES <u>NO</u> EXPLANATION -
SAMPLE TYPE: <u>GRAB</u> <u>COMPOSITE</u> # OF PTS. <b>5</b>	DISCOLORATION/STAINING OBSERVED: <u>YES</u> NO EXPLANATION - <b>MOSTLY BLACK WITHIN ESE QUADRANT OF BGT PERIMETER.</b>

<b>SITE OBSERVATIONS:</b>	LOST INTEGRITY OF EQUIPMENT: YES <u>NO</u> EXPLANATION -
APPARENT EVIDENCE OF A RELEASE OBSERVED AND/OR OCCURRED: <u>YES</u> NO EXPLANATION: <b>PHYSICALLY FROM DISCOLORED SOILS &amp; HYDROCARBON ODOR.</b>	EQUIPMENT SET OVER RECLAIMED AREA: <u>YES</u> NO EXPLANATION - <b>105 BBL SHALLOW LOW PROFILE ABOVE-GRADE TANK TO BE SET ATOP BGT LOCATION.</b>
OTHER: <b>NMOCD OR BLM NOT PRESENT TO WITNESS CONFIRMATION SAMPLING. ABANDONED FIBERGLASS LINE DISCOVERED WITHIN AREA OF IMPACTED SOILS.</b>	
EXCAVATION DIMENSION ESTIMATION: _____ ft. X _____ ft. X _____ ft. EXCAVATION ESTIMATION (Cubic Yards): _____	DEPTH TO GROUNDWATER: <b>&lt;100'</b> NEAREST WATER SOURCE: <b>&gt;1,000'</b> NEAREST SURFACE WATER: <b>&gt;1,000'</b> NMOCD TPH CLOSURE STD: <b>1,000</b> ppm

<b>SITE SKETCH</b>	BGT Located : off <u>on</u> site	PLOT PLAN circle: <u>attached</u>
<b>① - S.P.D.</b>		

NOTES: BGT = BELOW-GRADE TANK; E.D. = EXCAVATION DEPRESSION; B.G. = BELOW GRADE; B = BELOW; T.H. = TEST HOLE; ~ = APPROX.; W.H. = WELL HEAD; T.B. = TANK BOTTOM; PBGTL = PREVIOUS BELOW-GRADE TANK LOCATION; SPD = SAMPLE POINT DESIGNATION; R.W. = RETAINING WALL; NA = NOT APPLICABLE OR NOT AVAILABLE; SW - SINGLE WALL; DW - DOUBLE WALL; SB - SINGLE BOTTOM; DB - DOUBLE BOTTOM.	<b>MISCELL. NOTES</b> WO: REF #: <b>P-802</b> VID: <b>VHIXONEVRM</b> PJ #: Permit date(s): <b>06/14/10</b> OCD Appr. date(s): <b>02/07/17</b> Tank ID: <b>A</b> OVM = Organic Vapor Meter ppm = parts per million BGT Sidewalls Visible: Y / <u>N</u> BGT Sidewalls Visible: Y / <u>N</u> BGT Sidewalls Visible: Y / <u>N</u> Magnetic declination: <b>10° E</b>
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NOTES: <b>GOOGLE EARTH IMAGERY DATE: 10/5/2016.</b>	ONSITE: <b>10/05/17</b>
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CLIENT: <b>BP</b>	<b>BLAGG ENGINEERING, INC.</b> <b>P.O. BOX 87, BLOOMFIELD, NM 87413</b> <b>(505) 632-1199</b>	API #: <b>3004522294</b> TANK ID (if applicable): <b>A</b>
<b>FIELD REPORT:</b> (circle one): BGT CONFIRMATION / <u>RELEASE INVESTIGATION</u> / OTHER:		PAGE #: <b>2</b> of <b>2</b>
<b>SITE INFORMATION:</b> SITE NAME: <b>SANDOVAL GC A # 1A</b> QUAD/UNIT: <b>C</b> SEC: <b>35</b> TWP: <b>30N</b> RNG: <b>9W</b> PM: <b>NM</b> CNTY: <b>SJ</b> ST: <b>NM</b> 1/4 - 1/4 FOOTAGE: <b>1,150'N / 1,590'W</b> <b>NE/NW</b> LEASE TYPE: <u>FEDERAL</u> / STATE / FEE / INDIAN LEASE #: <b>SF078139</b> PROD. FORMATION: <b>MV</b> CONTRACTOR: <b>STRIKE MBF - R. POWELL</b>		DATE STARTED: <b>10/05/17</b> DATE FINISHED: <b>10/06/17</b> ENVIRONMENTAL SPECIALIST(S): <b>JCB</b>
<b>REFERENCE POINT:</b> WELL HEAD (W.H.) GPS COORD.: <b>36.77199 X 107.75352</b> GL ELEV.: <b>5,712'</b> 1) <b>95 BGT (SW/DB)</b> GPS COORD.: <b>36.77222 X 107.75408</b> DISTANCE/BEARING FROM W.H.: <b>186', N63.5W</b> 2) GPS COORD.: DISTANCE/BEARING FROM W.H.: 3) GPS COORD.: DISTANCE/BEARING FROM W.H.: 4) GPS COORD.: DISTANCE/BEARING FROM W.H.:		
<b>SAMPLING DATA:</b> CHAIN OF CUSTODY RECORD(S) # OR LAB USED: <b>HALL</b>		OVM READING (ppm)
1) SAMPLE ID: <b>Minor Impact South Walls 4-pt. (2'-5')</b> SAMPLE DATE: <b>10/06/17</b> SAMPLE TIME: <b>1136</b> LAB ANALYSIS: <b>8015B/8021B/300.0 (CI)</b>		<b>11.8</b>
2) SAMPLE ID: <b>Minor Impact North Walls 4-pt. (2'-5')</b> SAMPLE DATE: <b>10/06/17</b> SAMPLE TIME: <b>1142</b> LAB ANALYSIS: <b>8015B/8021B/300.0 (CI)</b>		<b>2.8</b>
3) SAMPLE ID: <b>Minor Impact South Base 8' (5-pt.)</b> SAMPLE DATE: <b>10/06/17</b> SAMPLE TIME: <b>1132</b> LAB ANALYSIS: <b>8015B/8021B/300.0 (CI)</b>		<b>7.2</b>
4) SAMPLE ID: SAMPLE DATE: SAMPLE TIME: LAB ANALYSIS:		
5) SAMPLE ID: SAMPLE DATE: SAMPLE TIME: LAB ANALYSIS:		
<b>SOIL DESCRIPTION:</b> SOIL TYPE: SAND <u>SILTY SAND</u> SILT <u>SILTY CLAY</u> CLAY / GRAVEL / OTHER SOIL COLOR: <b>DARK YELLOWISH ORANGE</b> PLASTICITY (CLAYS): NON PLASTIC <u>SLIGHTLY PLASTIC</u> <u>COHESIVE</u> MEDIUM PLASTIC / HIGHLY PLASTIC COHESION (ALL OTHERS): NON COHESIVE <u>SLIGHTLY COHESIVE</u> COHESIVE / HIGHLY COHESIVE DENSITY (COHESIVE CLAYS & SILTS): SOFT <u>FIRM</u> <u>STIFF</u> VERY STIFF / HARD CONSISTENCY (NON COHESIVE SOILS): LOOSE <u>FIRM</u> DENSE / VERY DENSE HC ODOR DETECTED: <u>YES</u> NO EXPLANATION - <b>PHYSICALLY FROM DISCOLORED SOILS ONLY.</b> MOISTURE: DRY <u>SLIGHTLY MOIST</u> <u>MOIST</u> WET / SATURATED / SUPER SATURATED ANY AREAS DISPLAYING WETNESS: YES <u>NO</u> EXPLANATION - SAMPLE TYPE: <u>GRAB</u> <u>COMPOSITE</u> # OF PTS. <b>5</b> DISCOLORATION/STAINING OBSERVED: <u>YES</u> NO EXPLANATION - <b>MOSTLY BLACK WITHIN ESE QUADRANT OF BGT PERIMETER.</b>		
<b>SITE OBSERVATIONS:</b> LOST INTEGRITY OF EQUIPMENT: YES <u>NO</u> EXPLANATION - APPARENT EVIDENCE OF A RELEASE OBSERVED AND/OR OCCURRED: <u>YES</u> NO EXPLANATION: <b>PHYSICALLY FROM DISCOLORED SOILS &amp; HYDROCARBON ODOR.</b> EQUIPMENT SET OVER RECLAIMED AREA: <u>YES</u> NO EXPLANATION - <b>105 BBL SHALLOW LOW PROFILE ABOVE-GRADE TANK TO BE SET ATOP BGT LOCATION.</b> OTHER: <b>NMOC D OR BLM NOT PRESENT TO WITNESS SAMPLING. ABANDONED FIBERGLASS LINE DISCOVERED WITHIN AREA OF IMPACTED SOILS.</b>		
EXCAVATION DIMENSION ESTIMATION: <b>8</b> ft. X <b>6</b> ft. X <b>12</b> ft. IMPACTED SOILS ESTIMATION (Cubic Yards): <b>10-15 ±</b> DEPTH TO GROUNDWATER: <b>&lt;100'</b> NEAREST WATER SOURCE: <b>&gt;1,000'</b> NEAREST SURFACE WATER: <b>&gt;1,000'</b> NMOC D TPH CLOSURE STD: <b>1,000</b> ppm		
<b>SITE SKETCH</b> BGT Located: off <u>on</u> site PLOT PLAN circle: <u>attached</u> <p>SEPARATOR → ← COMPRESSOR PBGTL T.B. ~ 5' B.G. BERM FENCE PROD. TANK 10/05/17 excavation 10/06/17 excavation South &amp; North Walls &amp; South Base samples PIPELINE GRAB 10/05/17 ABANDONED FIBERGLASS FLOWLINE ~ 3.5' B.G. TO W.H. ● - S.P.D.</p>		
NOTES: BGT = BELOW-GRADE TANK; E.D. = EXCAVATION DEPRESSION; B.G. = BELOW GRADE; B = BELOW; T.H. = TEST HOLE; ~ = APPROX.; W.H. = WELL HEAD; T.B. = TANK BOTTOM; PBGTL = PREVIOUS BELOW-GRADE TANK LOCATION; SPD = SAMPLE POINT DESIGNATION; R.W. = RETAINING WALL; NA = NOT APPLICABLE OR NOT AVAILABLE; SW - SINGLE WALL; DW - DOUBLE WALL; SB - SINGLE BOTTOM; DB - DOUBLE BOTTOM.		
NOTES: <b>GOOGLE EARTH IMAGERY DATE: 10/5/2016.</b> ONSITE: <b>10/05/17, 10/06/17</b>		

**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**Lab Order **1710370**Date Reported: **10/11/2017****CLIENT:** Blagg Engineering**Client Sample ID:** 1 @ 4.5' (95)**Project:** SANDOVAL GC A #1A**Collection Date:** 10/5/2017 11:15:00 AM**Lab ID:** 1710370-001**Matrix:** SOIL**Received Date:** 10/6/2017 7:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JRR</b>
Chloride	ND	30		mg/Kg	20	10/6/2017 11:02:20 AM	34279
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	670	9.2		mg/Kg	1	10/6/2017 10:13:02 AM	34275
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/6/2017 10:13:02 AM	34275
Surr: DNOP	101	70-130		%Rec	1	10/6/2017 10:13:02 AM	34275
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	2600	160		mg/Kg	50	10/6/2017 10:53:54 AM	34265
Surr: BFB	533	54-150	S	%Rec	50	10/6/2017 10:53:54 AM	34265
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.81		mg/Kg	50	10/6/2017 10:53:54 AM	34265
Toluene	ND	1.6		mg/Kg	50	10/6/2017 10:53:54 AM	34265
Ethylbenzene	ND	1.6		mg/Kg	50	10/6/2017 10:53:54 AM	34265
Xylenes, Total	47	3.3		mg/Kg	50	10/6/2017 10:53:54 AM	34265
Surr: 4-Bromofluorobenzene	107	66.6-132		%Rec	50	10/6/2017 10:53:54 AM	34265

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

<b>Qualifiers:</b>	*	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
	PQL	Practical Quantitative 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



## Analytical Report

Lab Order 1710369

Date Reported: 10/11/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: Minor Impact 3-pt @ 12'

Project: SANDOVAL GC A #1A

Collection Date: 10/5/2017 3:05:00 PM

Lab ID: 1710369-001

Matrix: SOIL

Received Date: 10/6/2017 7:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JRR
Chloride	ND	30		mg/Kg	20	10/6/2017 10:25:06 AM	34279
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	10/6/2017 10:35:07 AM	34275
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/6/2017 10:35:07 AM	34275
Surr: DNOP	98.5	70-130		%Rec	1	10/6/2017 10:35:07 AM	34275
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	10/6/2017 9:43:19 AM	34258
Surr: BFB	92.6	54-150		%Rec	1	10/6/2017 9:43:19 AM	34258
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.017		mg/Kg	1	10/6/2017 9:43:19 AM	34258
Toluene	ND	0.034		mg/Kg	1	10/6/2017 9:43:19 AM	34258
Ethylbenzene	ND	0.034		mg/Kg	1	10/6/2017 9:43:19 AM	34258
Xylenes, Total	ND	0.068		mg/Kg	1	10/6/2017 9:43:19 AM	34258
Surr: 4-Bromofluorobenzene	96.6	66.6-132		%Rec	1	10/6/2017 9:43:19 AM	34258

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

<b>Qualifiers:</b>	* 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
	PQL Practical Quantitative 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

## Analytical Report

Lab Order 1710369

Date Reported: 10/11/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: Minor Impact 4-pt @ 7'-10'

Project: SANDOVAL GC A #1A

Collection Date: 10/5/2017 3:15:00 PM

Lab ID: 1710369-002

Matrix: SOIL

Received Date: 10/6/2017 7:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JRR
Chloride	ND	30		mg/Kg	20	10/6/2017 10:37:31 AM	34279
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	10/6/2017 10:57:18 AM	34275
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/6/2017 10:57:18 AM	34275
Surr: DNOP	99.2	70-130		%Rec	1	10/6/2017 10:57:18 AM	34275
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	10/6/2017 10:06:47 AM	34258
Surr: BFB	96.6	54-150		%Rec	1	10/6/2017 10:06:47 AM	34258
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.022		mg/Kg	1	10/6/2017 10:06:47 AM	34258
Toluene	ND	0.044		mg/Kg	1	10/6/2017 10:06:47 AM	34258
Ethylbenzene	ND	0.044		mg/Kg	1	10/6/2017 10:06:47 AM	34258
Xylenes, Total	ND	0.087		mg/Kg	1	10/6/2017 10:06:47 AM	34258
Surr: 4-Bromofluorobenzene	96.9	66.6-132		%Rec	1	10/6/2017 10:06:47 AM	34258

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
	PQL	Practical Quantitative 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



## Analytical Report

Lab Order 1710369

Date Reported: 10/11/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: Minor Impact Pipeline Grab @

Project: SANDOVAL GC A #1A

Collection Date: 10/5/2017 3:45:00 PM

Lab ID: 1710369-003

Matrix: SOIL

Received Date: 10/6/2017 7:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JRR
Chloride	ND	30		mg/Kg	20	10/6/2017 10:49:55 AM	34279
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	10/6/2017 11:19:21 AM	34275
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/6/2017 11:19:21 AM	34275
Surr: DNOP	100	70-130		%Rec	1	10/6/2017 11:19:21 AM	34275
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	10/6/2017 10:30:22 AM	34258
Surr: BFB	91.7	54-150		%Rec	1	10/6/2017 10:30:22 AM	34258
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.018		mg/Kg	1	10/6/2017 10:30:22 AM	34258
Toluene	ND	0.036		mg/Kg	1	10/6/2017 10:30:22 AM	34258
Ethylbenzene	ND	0.036		mg/Kg	1	10/6/2017 10:30:22 AM	34258
Xylenes, Total	ND	0.073		mg/Kg	1	10/6/2017 10:30:22 AM	34258
Surr: 4-Bromofluorobenzene	96.7	66.6-132		%Rec	1	10/6/2017 10:30:22 AM	34258

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
	PQL	Practical Quantitative 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

**Analytical Report**

Lab Order 1710438

Date Reported: 10/11/2017

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Blagg Engineering**Project:** SANDOVAL GC A 1A**Lab ID:** 1710438-001**Matrix:** SOIL**Client Sample ID:** Minor Impact South Base @ 8' (5**Collection Date:** 10/6/2017 11:32:00 AM**Received Date:** 10/7/2017 10:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	10/9/2017 1:59:25 PM	34306
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	10/9/2017 11:38:35 AM	34298
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/9/2017 11:38:35 AM	34298
Surr: DNOP	97.4	70-130		%Rec	1	10/9/2017 11:38:35 AM	34298
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	10/9/2017 9:38:12 AM	G46204
Surr: BFB	92.3	54-150		%Rec	1	10/9/2017 9:38:12 AM	G46204
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.021		mg/Kg	1	10/9/2017 9:38:12 AM	B46204
Toluene	ND	0.042		mg/Kg	1	10/9/2017 9:38:12 AM	B46204
Ethylbenzene	ND	0.042		mg/Kg	1	10/9/2017 9:38:12 AM	B46204
Xylenes, Total	ND	0.084		mg/Kg	1	10/9/2017 9:38:12 AM	B46204
Surr: 4-Bromofluorobenzene	97.5	66.6-132		%Rec	1	10/9/2017 9:38:12 AM	B46204

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

<b>Qualifiers:</b>	*	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
	PQL	Practical Quantitative 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



**Analytical Report**

Lab Order 1710438

Date Reported: 10/11/2017

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Blagg Engineering**Project:** SANDOVAL GC A 1A**Lab ID:** 1710438-002**Matrix:** SOIL**Client Sample ID:** Minor Impact South Walls 4-pt (**Collection Date:** 10/6/2017 11:36:00 AM**Received Date:** 10/7/2017 10:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	10/9/2017 2:11:50 PM	34306
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	10/9/2017 12:00:26 PM	34298
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/9/2017 12:00:26 PM	34298
Surr: DNOP	101	70-130		%Rec	1	10/9/2017 12:00:26 PM	34298
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	10/9/2017 10:01:43 AM	G46204
Surr: BFB	90.6	54-150		%Rec	1	10/9/2017 10:01:43 AM	G46204
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.019		mg/Kg	1	10/9/2017 10:01:43 AM	B46204
Toluene	ND	0.038		mg/Kg	1	10/9/2017 10:01:43 AM	B46204
Ethylbenzene	ND	0.038		mg/Kg	1	10/9/2017 10:01:43 AM	B46204
Xylenes, Total	ND	0.076		mg/Kg	1	10/9/2017 10:01:43 AM	B46204
Surr: 4-Bromofluorobenzene	95.4	66.6-132		%Rec	1	10/9/2017 10:01:43 AM	B46204

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

<b>Qualifiers:</b>	*	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
	PQL	Practical Quantitative 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

## Analytical Report

Lab Order 1710438

Date Reported: 10/11/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: Minor Impact North Walls 4-pt (

Project: SANDOVAL GC A 1A

Collection Date: 10/6/2017 11:42:00 AM

Lab ID: 1710438-003

Matrix: SOIL

Received Date: 10/7/2017 10:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	10/9/2017 2:24:15 PM	34306
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	10/9/2017 12:22:27 PM	34298
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/9/2017 12:22:27 PM	34298
Surr: DNOP	96.7	70-130		%Rec	1	10/9/2017 12:22:27 PM	34298
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	10/9/2017 10:25:08 AM	G46204
Surr: BFB	88.6	54-150		%Rec	1	10/9/2017 10:25:08 AM	G46204
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.017		mg/Kg	1	10/9/2017 10:25:08 AM	B46204
Toluene	ND	0.034		mg/Kg	1	10/9/2017 10:25:08 AM	B46204
Ethylbenzene	ND	0.034		mg/Kg	1	10/9/2017 10:25:08 AM	B46204
Xylenes, Total	ND	0.069		mg/Kg	1	10/9/2017 10:25:08 AM	B46204
Surr: 4-Bromofluorobenzene	95.1	66.6-132		%Rec	1	10/9/2017 10:25:08 AM	B46204

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

<b>Qualifiers:</b>	*	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
	PQL	Practical Quantitative 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



[illegible]

Client: BP AMERICA  
BLAGG ENGINEERING Inc.  
Mailing Address:  
Phone #: 505-320-1193  
email or Fax#:  
QA/QC Package:  
☒ Standard ☐ Level 4 (Full Validation)  
Accreditation  
☐ NELAP ☐ Other \_\_\_\_\_  
☐ EDD (Type)

☐ Standard ☒ Rush

Project #:

Project Manager:

Sampler: J. Bagg

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.8

As 1010617 Container Type and # Meat #	Preservative Type	HEAL No. 710319
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Container Type and #	Preservative Type
-------------------------	----------------------

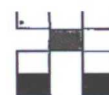
HEAL No

[illegible]

Date: 12/1/2017	Time: 1902	Relinquished by: Jill Blaggy
Date: 01/07/2018	Time:	Relinquished by: [Signature]

Received by:	Date	Time
--------------	------	------

10/5/2017 1902  
Received by: *Chris Warr* Date Time  
*Chris Warr* 190207 0720



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

[www.hallenvironmental.com](http://www.hallenvironmental.com)

4901 Hawkins NE - Albuquerque, NM 87109

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

## Analysis Request

	X	X	X	BTEX + <del>MTBE</del> + PAH's (8021)
				BTEX + MTBE + TPH (Gas only)
	X	X	X	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 <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )
				8081 Pesticides / 8082 PCB's
				8260B (VOA)
				8270 (Semi-VOA)
	X	X	X	CHLORIDE
				Air Bubbles (N or N <sub>2</sub> )

Air Bubbles (V or N)

Remarks: Bill BP      CONTACT: ERIN GARIFALOS  
VID: VHIXONEVRM  
REF: P-802

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.



# Chain-of-Custody Record

Client: **BP AMERICA**

**BLAG ENGINEERING INC.**

Mailing Address:

Phone #: **505-320-1183**

email or Fax#:

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time: **SAME DAY**

☐ Standard ☒ Rush

Project Name:

**SANDOVAL GC A 1A**

Project #:

Project Manager:

**J. BLAGG**

Sampler: **J. BLAGG**

On Ice: ☒ Yes ☐ No

Sample Temperature: **2.7°C**



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

### Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMBEs (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 <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	CHLORIDE	Air Bubbles (Y or N)
10/6/2017	1132	SOIL	MINOR IMPACT SOUTH BASE @ 8' (5-PT)	4oz x 1	COOL	1710-938	X	X										X	
"	1136	"	MINOR IMPACT SOUTH WALLS 4-PT (2'-5')	"	"		X	X										X	
"	1142	"	MINOR IMPACT NORTH WALLS 4-PT (2'-5')	"	"		X	X										X	

Date: 10/6/2017	Time: 1255	Relinquished by: <i>[Signature]</i>	Received by: <i>[Signature]</i>	Date: 10/6/2017	Time: 1255
Date: 10/6/17	Time: 1844	Relinquished by: <i>[Signature]</i>	Received by: <i>[Signature]</i>	Date: 10/7/17	Time: 1035

Remarks: **Blue BP** **Contract: ERW GARIFALOS**  
**Vid: VHIXONEVRM**  
**REF: P-802**

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.

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1710370

11-Oct-17

**Client:** Blagg Engineering  
**Project:** SANDOVAL GC A #1A

Sample ID	MB-34279		SampType: mblk		TestCode: EPA Method 300.0: Anions					
Client ID:	PBS		Batch ID: 34279		RunNo: 46172					
Prep Date:	10/6/2017		Analysis Date: 10/6/2017		SeqNo: 1471142		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-34279		SampType: lcs		TestCode: EPA Method 300.0: Anions					
Client ID:	LCSS		Batch ID: 34279		RunNo: 46172					
Prep Date:	10/6/2017		Analysis Date: 10/6/2017		SeqNo: 1471143		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.9	90	110			

### 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 Quantitative 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



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1710370

11-Oct-17

Client: Blagg Engineering

Project: SANDOVAL GC A #1A

Sample ID	LCS-34275		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 34275		RunNo: 46160					
Prep Date:	10/6/2017		Analysis Date: 10/6/2017		SeqNo: 1469181		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	92.9	73.2	114			
Surr: DNOP	4.8		5.000		95.4	70	130			

Sample ID	MB-34275	SampType: MBLK			TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID: 34275			RunNo: 46160					
Prep Date:	10/6/2017	Analysis Date: 10/6/2017			SeqNo: 1469182		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	9.9		10.00		99.1	70	130			

### 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 Quantitative 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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1710370

11-Oct-17

**Client:** Blagg Engineering  
**Project:** SANDOVAL GC A #1A

Sample ID	MB-34265	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	34265	RunNo:	46173					
Prep Date:	10/5/2017	Analysis Date:	10/6/2017	SeqNo:	1470392	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	870		1000		87.0	54	150			

Sample ID	LCS-34265	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	34265	RunNo:	46173					
Prep Date:	10/5/2017	Analysis Date:	10/6/2017	SeqNo:	1470393	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	25.00	0	114	76.4	125			
Surr: BFB	990		1000		99.0	54	150			

### 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 Quantitative 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



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1710370

11-Oct-17

Client: Blagg Engineering

Project: SANDOVAL GC A #1A

Sample ID	<b>MB-34265</b>		SampType:	<b>MBLK</b>		TestCode:	<b>EPA Method 8021B: Volatiles</b>			
Client ID:	<b>PBS</b>		Batch ID:	<b>34265</b>		RunNo:	<b>46173</b>			
Prep Date:	<b>10/5/2017</b>		Analysis Date:	<b>10/6/2017</b>		SeqNo:	<b>1470424</b>		Units: <b>mg/Kg</b>	
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	0.94		1.000		93.8	66.6	132			

Sample ID	<b>LCS-34265</b>		SampType:	<b>LCS</b>		TestCode:	<b>EPA Method 8021B: Volatiles</b>			
Client ID:	<b>LCSS</b>		Batch ID:	<b>34265</b>		RunNo:	<b>46173</b>			
Prep Date:	<b>10/5/2017</b>		Analysis Date:	<b>10/6/2017</b>		SeqNo:	<b>1470425</b>		Units: <b>mg/Kg</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.025	1.000	0	97.1	80	120			
Toluene	0.98	0.050	1.000	0	97.6	80	120			
Ethylbenzene	1.0	0.050	1.000	0	100	80	120			
Xylenes, Total	3.0	0.10	3.000	0	101	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		100	66.6	132			

### 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 Quantitative 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  
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: BLAGG

Work Order Number: 1710370

RcptNo: 1

Received By: Anne Thorne 10/6/2017 7:20:00 AM

*Anne Thorne*

Completed By: Anne Thorne 10/6/2017 7:47:27 AM

*Anne Thorne*

Reviewed By: *JD 10-6-17 @ 8810*

### 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  $6.0^{\circ}\text{C}$ ? 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:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> 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	1.8	Good	Yes			



# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1710369

11-Oct-17

Client: Blagg Engineering  
Project: SANDOVAL GC A #1A

Sample ID	MB-34279		SampType:	mbk		TestCode:	EPA Method 300.0: Anions				
Client ID:	PBS		Batch ID:	34279		RunNo:	46172				
Prep Date:	10/6/2017		Analysis Date:	10/6/2017		SeqNo:	1471142		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride	ND	1.5									

Sample ID	LCS-34279		SampType:	lcs		TestCode:	EPA Method 300.0: Anions				
Client ID:	LCSS		Batch ID:	34279		RunNo:	46172				
Prep Date:	10/6/2017		Analysis Date:	10/6/2017		SeqNo:	1471143		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride	14	1.5	15.00	0	92.9	90	110				

## 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 Quantitative 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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1710369

11-Oct-17

Client: Blagg Engineering

Project: SANDOVAL GC A #1A

Sample ID	LCS-34275		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 34275		RunNo: 46160					
Prep Date:	10/6/2017		Analysis Date: 10/6/2017		SeqNo: 1469181		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	92.9	73.2	114			
Surr: DNOP	4.8		5.000		95.4	70	130			

Sample ID	MB-34275	SampType: MBLK			TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID: 34275			RunNo: 46160					
Prep Date:	10/6/2017	Analysis Date: 10/6/2017			SeqNo: 1469182		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	9.9		10.00		99.1	70	130			

### 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 Quantitative 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



# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1710369

11-Oct-17

Client: Blagg Engineering  
Project: SANDOVAL GC A #1A

Sample ID	MB-34258	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	34258	RunNo:	46173					
Prep Date:	10/5/2017	Analysis Date:	10/6/2017	SeqNo:	1470376	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	900		1000		89.8	54	150			

Sample ID	LCS-34258	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	34258	RunNo:	46173					
Prep Date:	10/5/2017	Analysis Date:	10/6/2017	SeqNo:	1470377	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	5.0	25.00	0	117	76.4	125			
Surr: BFB	1100		1000		106	54	150			

## 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
PQL Practical Quantitative 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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1710369

11-Oct-17

Client: Blagg Engineering

Project: SANDOVAL GC A #1A

Sample ID	MB-34258	SampType: MBLK			TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID: 34258			RunNo: 46173					
Prep Date:	10/5/2017	Analysis Date: 10/6/2017			SeqNo: 1470411		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	0.97		1.000		97.0	66.6	132			

Sample ID	LCS-34258		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 34258		RunNo: 46173					
Prep Date:	10/5/2017		Analysis Date: 10/6/2017		SeqNo: 1470412		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.025	1.000	0	98.3	80	120			
Toluene	0.99	0.050	1.000	0	99.0	80	120			
Ethylbenzene	1.0	0.050	1.000	0	101	80	120			
Xylenes, Total	3.1	0.10	3.000	0	102	80	120			
Surr: 4-Bromofluorobenzene	0.99		1.000		99.1	66.6	132			

### 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 Quantitative 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  
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: BLAGG

Work Order Number: 1710369

RcptNo: 1

Received By: Anne Thorne 10/6/2017 7:20:00 AM

Completed By: Anne Thorne 10/6/2017 7:38:37 AM

Reviewed By: JU 10/6/17 @ 0810

*Anne Thorne*

*Anne Thorne*

### 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  $6.0^{\circ}\text{C}$ ? 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:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> 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	1.8	Good	Yes			



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1710438

11-Oct-17

**Client:** Blagg Engineering  
**Project:** SANDOVAL GC A 1A

Sample ID	MB-34306		SampType: mblk		TestCode: EPA Method 300.0: Anions					
Client ID:	PBS		Batch ID: 34306		RunNo: 46208					
Prep Date:	10/9/2017		Analysis Date: 10/9/2017		SeqNo: 1472041		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-34306		SampType: Ics		TestCode: EPA Method 300.0: Anions					
Client ID:	LCSS		Batch ID: 34306		RunNo: 46208					
Prep Date:	10/9/2017		Analysis Date: 10/9/2017		SeqNo: 1472042		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	90.2	90	110			

### 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 Quantitative 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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1710438

11-Oct-17

Client: Blagg Engineering  
Project: SANDOVAL GC A 1A

Sample ID	LCS-34298		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 34298		RunNo: 46197					
Prep Date:	10/9/2017		Analysis Date: 10/9/2017		SeqNo: 1470767		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	91.3	73.2	114			
Surr: DNOP	4.2		5.000		83.3	70	130			

Sample ID	MB-34298	SampType: MBLK			TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID: 34298			RunNo: 46197					
Prep Date:	10/9/2017	Analysis Date: 10/9/2017			SeqNo: 1470768		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	9.8		10.00		98.1	70	130			

## 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
PQL Practical Quantitative 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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1710438

11-Oct-17

Client: Blagg Engineering  
Project: SANDOVAL GC A 1A

Sample ID	RB	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	G46204	RunNo:	46204					
Prep Date:		Analysis Date:	10/9/2017	SeqNo:	1471397	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	930		1000		93.3	54	150			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	G46204	RunNo:	46204					
Prep Date:		Analysis Date:	10/9/2017	SeqNo:	1471398	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	25.00	0	114	76.4	125			
Surr: BFB	1100		1000		107	54	150			

## 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                                    |
| PQL Practical Quantitative 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 |



# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1710438

11-Oct-17

Client: Blagg Engineering  
Project: SANDOVAL GC A 1A

Sample ID	RB	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	B46204	RunNo:	46204					
Prep Date:		Analysis Date:	10/9/2017	SeqNo:	1471413	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	0.97		1.000		97.4	66.6	132			

Sample ID	100NG BTEX LCS	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	B46204	RunNo:	46204					
Prep Date:		Analysis Date:	10/9/2017	SeqNo:	1471414	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.025	1.000	0	97.7	80	120			
Toluene	0.96	0.050	1.000	0	96.5	80	120			
Ethylbenzene	1.0	0.050	1.000	0	99.8	80	120			
Xylenes, Total	3.0	0.10	3.000	0	99.8	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		103	66.6	132			

## 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
PQL Practical Quantitative 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



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Website: www.hallenvironmental.com

## Sample Log-In Check List

Client Name: BLAGG

Work Order Number: 1710438

RcptNo: 1

Received By: Andy Freeman

10/7/2017 10:35:00 AM

*Andy Freeman*

Completed By: Anne Thorne

10/9/2017 7:46:24 AM

*Anne Thorne*

Reviewed By:

*RL*

10/9/17

### 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  $6.0^{\circ}\text{C}$ ? 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:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> 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	2.2	Good	Yes			