3R-1039

Tocito Central Tank Battery

Delineation Report

Date Oct 2015

CONTAMINATION DELINEATION REPORT
TOCITO CENTRAL TANK BATTERY

UNIT A (NE ¼ NE ¼), SECTION 20, TOWNSHIP 26 NORTH, RANGE 18 WEST;
GPS: 36.478275°, -108.775919°
SAN JUAN COUNTY, NEW MEXICO
October 23, 2015

Submitted To:
Robert L. Bayless, Producer LLC
2700 Farmington Avenue
Building F, Suite 1
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Submitted By:
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1.0 Executive Summary

On behalf of Robert L. Bayless, Producer LLC. (Bayless), SMA has prepared this contamination delineation report to describe the drilling and sample collection activities at the Tocito Central Tank Battery near Shiprock, New Mexico. SMA's services were performed in accordance with SMA's standard operating procedures. The soil borings and sample collection served to delineate the vertical and horizontal extent of hydrocarbon impact to soils and to determine if any hydrocarbon contamination has come into contact with groundwater.

TABLE 1: RELEASE INFORMATION					
Name	Tocito Central Tank Battery				
Location	Latitude/Longitude		Section, Township, Range		
	36.478275°	-108.775919°	NE/NE (Unit A)	Section 20	T26N, R18W
Date Reported to SMA	March, 2015				
Reported by	John Thomas				
Land Owner	Navajo Nation				
Reported To	NM Oil Conservation Division (NMOCD) and Navajo Nation				
Diameter of Pipeline	--				
Source of Release	Failed rupture disk on an oil water separator, historic contamination encountered during excavation				
Release Contents	Hydrocarbon Liquids and Water				
Release Volume	41 bbls				
Nearest Waterway	Unnamed dashed blue line on 7.5 minute USGS Quad in the Tocito Dome Oil Field is over 800 feet from the pit location.				
Depth to Groundwater	Estimated to exceed 500 feet BGS				
Nearest Domestic Water Source	Greater than 1,000 feet				
NMOCD Ranking	10				
SMA Response Dates	August 31 through September 10, 2015				
Subcontractors	Enviro-Drill Inc.				
Disposal Facility	N/A				
Yd^3 Contaminated Soil Excavated and Disposed	N/A				

2.0 Introduction

In March of 2015, Bayless contacted SMA regarding continued remediation of contamination at the Tocito Central Tank Battery. Remedial excavation of the Tocito Central Tank Battery BGT Location commenced during the first quarter of 2015 but did not achieve delineation of the release or closure of the site. The maximum extent of this

initial excavation measured approximately 30 feet wide by 40 feet long by 25 feet deep. The excavation has been left open and was fenced off to prevent injury to personnel, livestock or wildlife. After the initial excavation activities, the full extent of the contaminant impact was still unknown. The extent of the release appeared to be greater than that of the documented 41 barrel release. It was determined that in addition to the current release, there exists an unknown mass of contamination that is the result of an improperly closed historic production pit dated prior to Bayless's acquisition of the Tocito Central Tank Battery. The Tocito Central Tank Battery pipeline release is located in Unit A (NE ¼ NE ¼), Section 20, Township 26 North, Range 18 West; GPS: 36.478275°, -108.775919°, San Juan County, New Mexico. Figure 1, Vicinity Map, illustrates the location of the release.

New Mexico Oil Conservation Division Site Ranking

The release site is located on land is owned by the Navajo Nation and has an elevation of approximately 5,692 feet above sea level. The location of the release is 817 feet north of a waterway (blue-line on the 7.5 minute USGS quad) in an unnamed basin in the Tocito Dome Oil Field. There are no defined banks within the vicinity of the release location. No playa lakes, wetlands, sinkholes, or lakebeds are located within 500 feet of the release location. No groundwater was encountered during the drilling investigation activities. The shallowest aquifer is expected to be within the Jurassic Morrison Formation and exceed a depth of 500 feet below ground surface (BGS).

SMA searched the New Mexico Office of the State Engineer's (OSE) online water well data base for water wells in the vicinity of the release. No recorded wells were located within 1,000 feet of the site. No water wells are located within a 1 mile radius of the site. A windmill and a livestock well were reported to exist within about 1.5 miles of the site; however they were not observed in the field. There is no anticipated impact to either of these wells if they do exist.

The physical location of this release is within the jurisdiction of the NNEPA and the NMOCD. This release location has been assigned an NMOCD ranking of 10, which requires soil remediation action levels (RALs) of 10 parts per million (ppm) benzene, 50 ppm total benzene, toluene, ethyl-benzene, and total xylenes (BTEX), and 1000 ppm total petroleum hydrocarbons (TPH). Table 2 illustrates the site ranking rationale and Figure 2, Site Map, illustrates the location of the site.

Drill Permitting and Clearances

The location of the Tocito Central Tank Battery site is on Navajo Nation land and a drilling permit was required to commence delineation activities. To obtain the drilling permit, clearances from Navajo Nation Historic Preservation Department, The Navajo Nation Department of Fish and Wildlife, and the Navajo Nation Environmental Protection Agency Underground Injection Control were required. Mel Badonie with the Navajo Nation Water Quality Department assisted in directing the permitting process and provided the final

signature after all clearances were obtained. A copy of the Navajo Nation Drilling Permit is enclosed in Appendix C.

3.0 Summary of Field Activities

SMA oversaw the installation and sampling of 7 boreholes in the vicinity of the existing excavation between August 31, and September 10, 2015. Enviro Drill Inc. mobilized to the site with a CME 85 drill rig equipped with hollow stem auger and split spoon soil sampling tool strings.

Soil Boring and Sampling

In order to delineate the extent of the hydrocarbon impact, and to determine if hydrocarbon contamination had come into contact with groundwater, SMA, on behalf of Bayless, conducted a soil boring investigation of the Tocito Central Tank Battery release location.

Soil Boring Locations: Soil boring locations were selected to best define the extent of the contamination. Drilling activities took place in the vicinity of the BGT release site, including one soil boring located within the extent of the existing excavation. SB-6 was located in the center of the excavation, near the location of the BGT release. This soil boring required the construction of a sand drilling pad to support the drill rig and facilitate safe entry and exit of the existing excavation. The pad decreased the depth of the excavation to 10 feet BGS and the overburden was not sampled. Four soil borings were located around the excavation between 40 and 70 feet from the location of the BGT release. Two soil borings were placed over 140 feet from the excavation in the northwest and southeast directions to delineate the extent of the contamination in the supposed up and down gradient directions. Figure 3, Soil Contaminant Concentration Map, illustrates the locations of the seven soil borings.

Drilling and Sampling: From August 31, through September 10, 2015, Enviro-Drill Inc. of Albuquerque, NM, installed boreholes in the vicinity of the Tocito Central Tank Battery BGT release site, utilizing a CME 85. Seven borings were installed to depths varying from 45 to 75 feet BGS. The hollow stem auger (HSA) drilling method was used to advance the soil borings, and samples were collected every 5 feet with a split spoon sampler. Each sample was screened with a calibrated photo ionization detector (PID) and a subset of samples were analyzed for field-verification with a PetroFlag® infrared diffractometer. Soil types and PID results are included in the soil boring lithology logs, Figures 4 through 10.

Sample collection was completed in accordance with the NMOCD accepted workplan. A maximum of two soil samples were collected from each soil boring, one from the interval with the highest PID reading and one from the bottom of the soil boring. In the case that no PID readings exceeded 20 ppm, a single sample was collected from the bottom of the soil boring. The samples were submitted to Hall Environmental Analysis Laboratory (Hall) for analysis via EPA Method 8015 for GRO/DRO/MRO, EPA Method 8021 for BTEX, and

EPA Method 300.0 for chlorides. Soil boring sample results are included in Table 3. Laboratory reports are included in Appendix B.

Geology:
The Tocito Central Tank Battery is located in a basin composed of near horizontal lower cretaceous deposits interrupted by massive volcanic monadnocks, of which the most recognizable is the 1,583 foot tall breccia peak named Shiprock, about 20 miles to the north. The immediate vicinity of the Tank Battery is within a basin in the Tocito Dome Oil Field and exhibits a gentle convergent slope with no apparent flow features or defined erosional banks within a half mile or more. Deposition in this area was historically fluvial. It appears that in the current climatic regime, water does not flow in the vicinity, rather it saturates the upper portions of the soils and is returned to the atmosphere through evaporation and transpiration via the relatively dense cover of sagebrush, chamisa and other associated desert plants supported by this hydrologic regime.

Soil borings located outside of the existing excavation were advanced through an aeolian and fluvial deposit of fine to moderately coarse, unconsolidated, moderately to poorly sorted quartz rich sand ranging from 5 to 15 feet thick. Underlying the sandy deposit and extending to 45 to 55 feet BGS was a brown, dense, clay rich layer increasing in fine grained composition culminating in a dense silty mudstone. Gypsum and other evaporite mineral crystals were observed in this layer. This mudstone overlies a very hard light gray dense fissile shale. In soil boring SB-7 this unit was less fissile in structure but the color, hardness and density was consistent with the other soil borings. Surficial soils held some moisture probably due to recent precipitation, however soils below 15 feet BGS were very dry and no groundwater was encountered in any of the soil borings. Figure 3 depicts soil boring locations and the cross section lines. Soil boring logs describe all lithology and colors and are included as Figures 4 through 10. Geologic Cross Sections are included as Figures 11 and 12.

4.0 Results

Laboratory analytical results of the soil samples collected from the drilling and sampling activities showed residual contamination exists within the soils up to 50 feet BGS. However, all samples collected at the total depths of each soil boring were below the NMOCD Standards. Chloride values range from <30 ppm in SB-1 @ 70', to 5800 ppm in SB-3 @ 25'. Laboratory results are included in Table 3, Summary of Laboratory Results and laboratory reports are included in Appendix B.

Combined TPH in samples collected from the intervals with the highest PID readings ranged from 202 ppm in SB-1 @ 40' BGS to 1929 ppm in SB-7 at 40' BGS. Only samples collected from SB-3 @ 25' BGS and SB-7 @ 40' BGS exceed the NMOCD RALs with TPH values of 1540 ppm and 1929 ppm, respectively. All other interval samples collected were below NMOCD RALs. The borehole locations are shown in Figure 3, Soil

Contaminant Concentration Map. The vertical delineation of the contamination is represented in Figures 11 and 12, Geologic Cross Sections A-A' and B-B' respectively.

The highest combined TPH of samples collected at total depth was collected from SB-7 @ 45', where combined TPH was determined to be 165.8 ppm. This soil boring was unable to be increased in depth as the bedrock was too dense and the drill rig reached refusal.

5.0 Conclusions and Recommendations

Conclusion:
The distribution of the contamination demonstrates the BGT was not the source of the contamination at the Tocito Central Tank Battery. It appears that the BGT was placed within the extent of the abandoned pit however the concentration and distribution of residual contamination shows impact to the soil pre-dated the installation of the BGT. Figure 3 shows the area of contamination concentrations above 1500 mg/kg is located both north and west of the location of the BGT. The local surface gradient is in the opposite direction, to the south and east, and any release originating at the BGT would have flowed in the southeast direction. Furthermore, as seen in Figures 11 and 12, Geologic Cross Sections, the BGT location is positioned in a manner that a release could not be a source for the residual high contamination concentrations.

The soil borings extended about 150 feet in the east-west direction across the existing excavation and about 300 feet in the north south direction, also crossing the existing excavation. SB-5 was located between the excavation and the USGS blue line and is located beyond the extent of the contamination. The contamination appears to be elongated in the north south direction. Only a thin lense of impacted soils was observed in the most northerly soil boring SB-7. All contamination was observed to overlie the shale bedrock located between 40 and 55 feet BGS. Site data indicates that this unit has provided a barrier to further downward contaminant migration. The contaminant mass is thickest in the vicinity of the excavation. Due to the age of the existing contaminant mass as well as the hydrologic regime at the site, the contamination is stable and will not migrate beyond its current extent. The site will continue to attenuate naturally.

SMA Recommendations: Because no groundwater was encountered and because no water resources are at risk, SMA recommends closure of the Tocito Central Tank Battery. It is SMA's opinion that all contamination will naturally attenuate to below the NMOCD RALs and that the residual contamination will not migrate beyond its current extent. The light gray shale bedrock will prevent all contamination from migrating deeper into the soils. The age of the existing contamination and the lithology of the location describe a stable contaminant mass that does not pose any further risk to fresh water, public health or the environment.

6.0 Closure and Limitations

The scope of our services consisted of the verification of release stabilization, regulatory liaison, oversight and control of remediation operations, project management, and preparation of this summary report. All work has been performed in accordance with generally accepted professional environmental consulting practices.

If there are any questions regarding this report, please contact either Jesse Sprague or Reid Allan at 505-325-7535.

Submitted by:

SOUDER, MILLER & ASSOCIATES

Jesse E. Sprague
Staff Scientist

Reviewed by:

Reid S. Allan, PG
Principal Scientist

Figures

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Engineering
Environmental
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CONTAMINATION INVESTIGATION
TOCITO CENTRAL TANK BATTERY
VICINITY MAP

Designed	Drawn	Checked
JES	DJB	RAS

Date: October 2015
Scale: Horiz: 1" = 5000'
Vert: NA
Project No: 5123892
Figure 1

P:\5-Bayless Tocito Samplilng 5123892\CAD\Civil\5123892 TOCITO SAMPLING.dwg, DJB, 10/23/2015 9:35 AM

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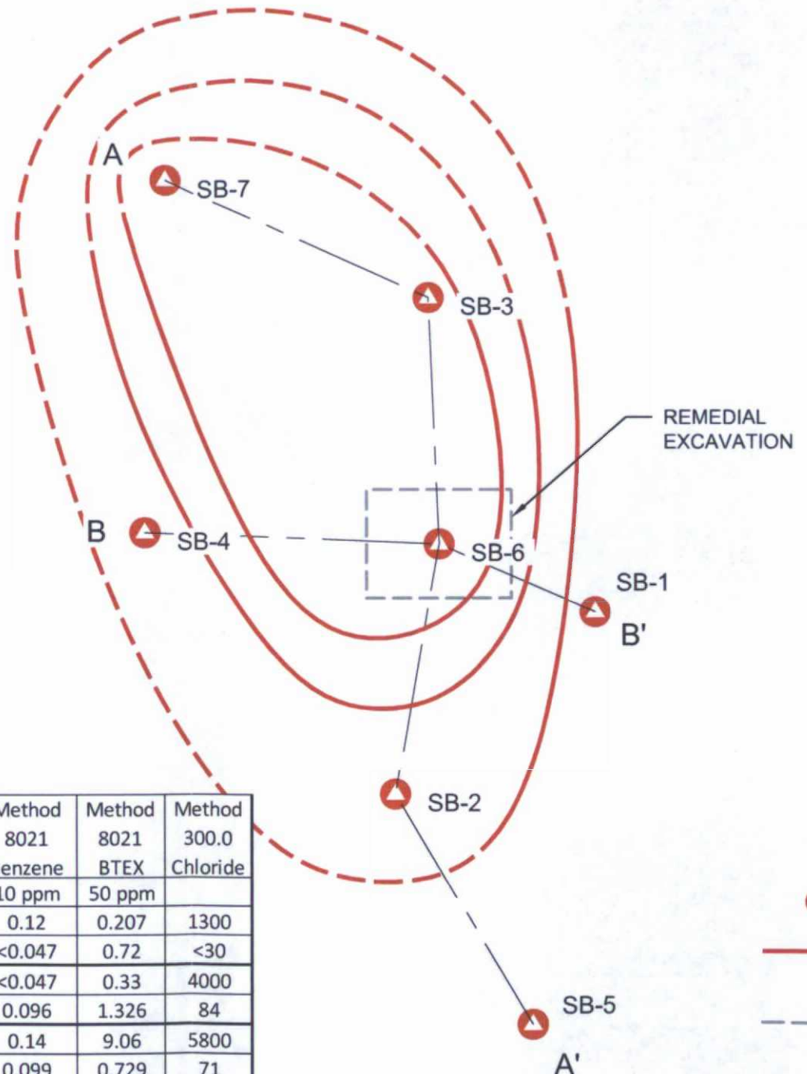
CONTAMINATION INVESTIGATION
TOCITO CENTRAL TANK BATTERY
SITE MAP

Designed	Drawn	Checked
JES	DJB	RAS

Date: October 2015
Scale: Horiz: 1" = 2000'
Vert: NA
Project No: 5123892
Figure 2

P:\5-Bayless Tocito Sampliing 5123892\CAD\Civil\5123892 TOCITO SAMPLING.dwg, DJB, 10/23/2015 9:36 AM



Date	Time	Sample ID	Sample Depth (Feet BGS)	Method 8015 GRO	Method 8015 DRO	Method 8015 MRO	Method 8021 Benzene	Method 8021 BTEX	Method 300.0 Chloride
NMOCD Guidelines		NMOCD Site Ranking: 10		1000 ppm			10 ppm	50 ppm	
8/31/2015	15:30	SB-1 @ 40'	40	<4.8	120	82	0.12	0.207	1300
9/1/2015	9:00	SB-1 @ 70'	70	7.9	13	<50	<0.047	0.72	<30
9/3/2015	15:15	SB-2 @20'	20	34	390	170	<0.047	0.33	4000
9/4/2015	8:20	SB-2 @55'	55	13	<9.5	<47	0.096	1.326	84
9/4/2015	11:20	SB-3 @ 25'	25	**140**	**920**	**480**	0.14	9.06	5800
9/8/2015	14:10	SB-3 @ 55'	55	6.7	<9.9	<49	0.099	0.729	71
9/9/2015	9:53	SB-4 @ 35'	35	17	610	280	<0.095	0.76	4500
9/9/2015	11:20	SB-4 @ 55'	55	11	14	<50	0.09	1.17	120
9/9/2015	15:25	SB-5 @ 40'	40	14	<9.7	<48	2.5	3.008	1200
9/10/2015	8:50	SB-6 @ 35'	35	57	610	200	<0.24	4.46	3600
9/10/2015	10:00	SB-6 @ 45'	45	9.2	19	<48	0.21	1.14	380
9/10/2015	14:00	SB-7 @ 40'	40	**79**	**1400**	**450**	0.57	1.66	2100
9/10/2015	14:40	SB-7 @ 45'	45	9.8	94	62	0.14	0.599	140

LEGEND

- SOIL BOREHOLE LOCATION
- TPH ISO CONCENTRATION CONTOURS (MG/KG)
- APPROXIMATE EXTENT OF EXCAVATION
- A - A' GEOLOGIC CROSS SECTION PROFILE

SCALE

0' 20' 40' 80'

Rev #	Date	Description

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CONTAMINATION INVESTIGATION
TOCITO CENTRAL TANK BATTERY
SOIL BOREHOLE LOCATION MAP

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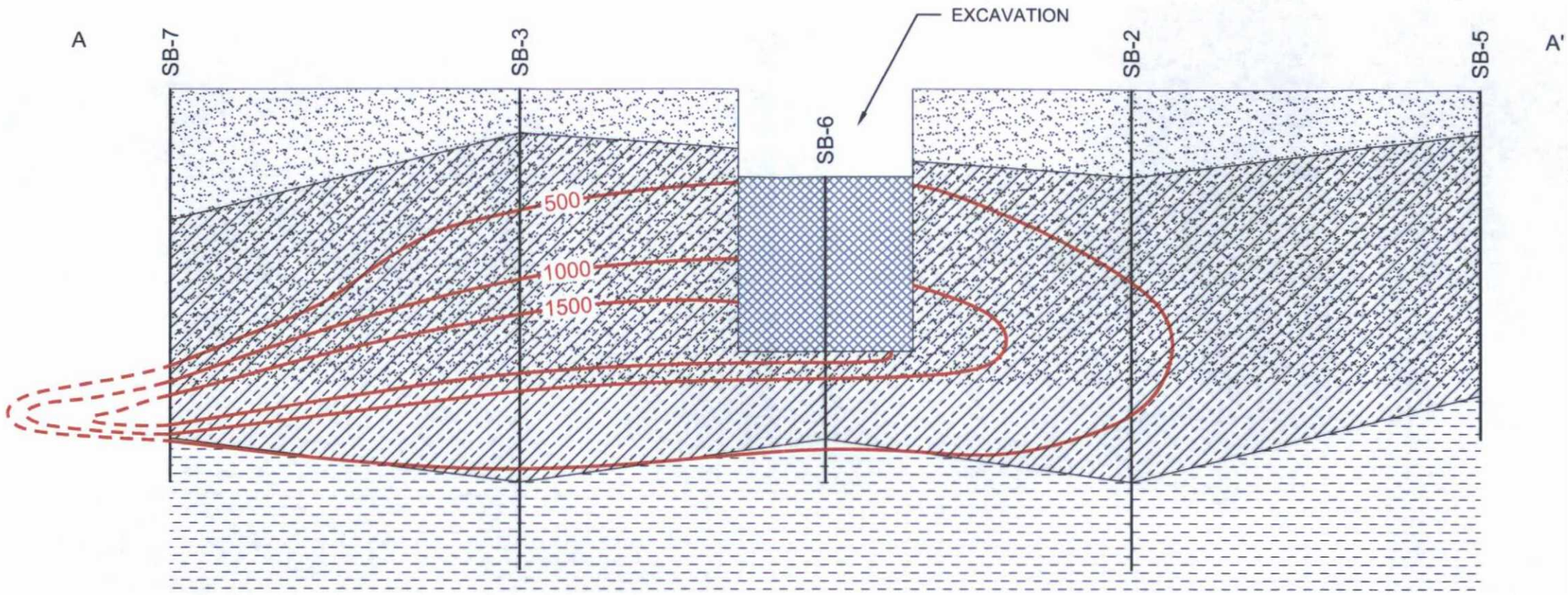
Designed	Drawn	Checked
JES	DJB	RSA

Date: October 2015
Scale: Horiz: 1" = 40' Vert: NA
Project No: 5123892
Figure 3



LEGEND

TPH ISO CONCENTRATION CONTOURS (MG/KG), DASHED WHERE INFERRED

SAND

SHALE

SILTY CLAY

BACKFILL

HORIZONTAL SCALE: 1"=30 ft
VERTICAL SCALE: 1"=15 ft

0' 15' 30' 60'

Description	Date	Rev #

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CONTAMINATION INVESTIGATION
TOCITO CENTRAL TANK BATTERY
GEOLOGIC CROSS SECTION A - A'

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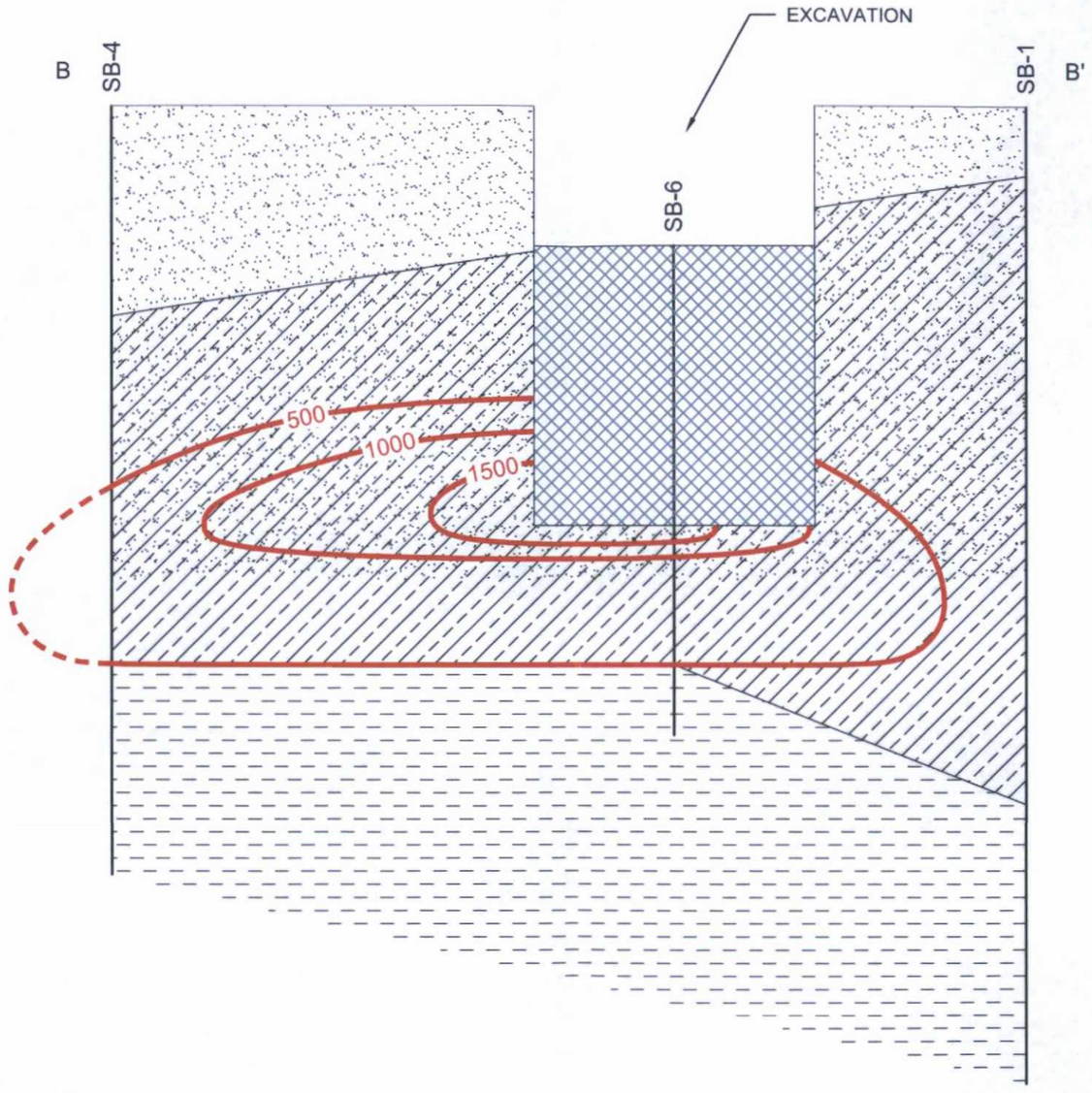
Date: October 201

Scale: Horiz: 1"=30' Vert: 1"=15'

Project No: 5123892

Figure 11



LEGEND

TPH ISO CONCENTRATION CONTOURS (MG/KG), DASHED WHERE INFERRED

SAND

SHALE

SILTY CLAY

BACKFILL

HORIZONTAL SCALE: 1"=20 ft
VERTICAL SCALE: 1"=10 ft

0' 10' 20' 40'

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CONTAMINATION INVESTIGATION
TOCITO CENTRAL TANK BATTERY
GEOLOGIC CROSS SECTION B - B'

Rev #	Date	Description

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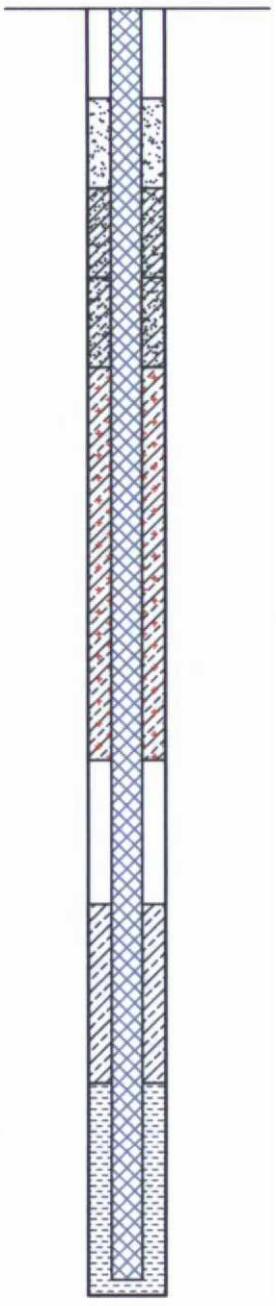
Designed	Drawn	Checked
JES	DJB	RSA

Date: October 2015
Scale: Horiz: 1"=20' Vert: 1"=10'
Project No: 5123892
Figure 12

SB-1 SOIL BORING LOG



DEPTH (FEET)	SOIL TYPE	PID (PPM)	COLOR	SAMPLE DESCRIPTION
0				NS
5		6.8	10YR 4/4	LIGHT BROWN, MOIST, UNCONSOLIDATED, POORLY SORTED, MEDIUM GRAINED CLAYEY SAND WITH SLIGHT HYDROCARBON ODOR AND A THIN BAND OF VISIBLY STAINED SOILS
				NS
10		11.2	10YR 4/4	DARK BROWN, MOIST, DENSE, MODERATELY SORTED MEDIUM GRAINED SANDY CLAY, NO ODOR
				NS
15		360	10YR 4/4	DARK BROWN, MOIST, DENSE, POORLY SORTED MEDIUM GRAINED SANDY SILTY CLAY, STRONG ODOR, VISIBLE BLACK STAINING
				NS
20		45.1	10YR 4/4	DARK GRAY AND DARK BROWN. MOIST, DENSE, MODERATELY WELL SORTED VERY FINE GRAINED SILTY CLAY WITH GYPSUM CRYSTALS AND SLIGHT ODOR, CLAY IS SLIGHTLY FISSILE
				NS
25		103	10YR 3/2	DARK BROWN, MOIST, DENSE, MODERATELY WELL SORTED FINE GRAINED SILTY CLAY WITH GYPSUM CRYSTALS AND SLIGHT ODOR. CLAY IS SIGHTLY FISSILE
				NS
30		529	10YR 3/2	LIGHT TAN TO BROWN, DRY, DENSE, MODERATELY WELL SORTED FINE GRAINED SILTY CLAY WITH GYPSUM CRYSTALS AND NOTICEABLE HYDROCARBON ODOR. CLAY IS SIGHTLY FISSILE
				NS
35		193	7.5YR 4/2	DARK BROWN, DRY, SEMI-CONSOLIDATED, MODERATELY WELL SORTED FINE GRAINED SILTY CLAY WITH GYPSUM CRYSTALS AND SLIGHT ODOR. CLAY IS SIGHTLY FISSILE
				NS
40		613	10YR 4/2	DARK BROWN, DRY, SEMI-CONSOLIDATED, MODERATELY WELL SORTED FINE GRAINED SILTY CLAY WITH GYPSUM CRYSTALS AND STRONG HYDROCARBON ODOR. CLAY IS SIGHTLY FISSILE
45				NO RECOVERY
50		202	5YR 3/1	DARK GRAY, DRY, DENSE TO SEMI-CONSOLIDATED, WELL SORTED VERY FINE GRAINED SILTY CLAY
				NS
55		37.5	5YR 3/1	DARK GRAY, DRY, DENSE TO SEMI-CONSOLIDATED, WELL SORTED VERY FINE GRAINED SILTY CLAY
				NS
60		16.1	5YR 4/1	DARK GRAY, DRY, DENSE TO SEMI-CONSOLIDATED, WELL SORTED VERY FINE GRAINED SILTY CLAYEY FISSILE SHALE BEDROCK
				NS
65		6.7	5YR 6/1	LIGHT GRAY, DRY, SEMI-CONSOLIDATED, WELL SORTED VERY FINE GRAINED SILTY CLAYEY SLIGHTLY FISSILE SHALE FRIABLE BEDROCK
				NS
70		2.6	5YR 4/1	LIGHT GRAY, DRY, VERY HARD, WELL SORTED VERY FINE GRAINED SILTY CLAYEY FISSILE SHALE BEDROCK
75				END OF HOLE

WATER NOT ENCOUNTERED DURING DRILLING

DRILLER: ENVIRO-DRILL, INC.
DATE COMPLETED: SEPTEMBER, 2015
BOREHOLE DIAMETER: 8" O.D.
SAMPLER TYPE: SPLIT SPOON
DRILLING METHOD: HOLLOW STEM AUGER
TOTAL BORING DEPTH: 70 FT.
LOGGED BY: JES
NS = NOT SAMPLED

LOG LEGEND

SAND | SHALE | CEMENT BENTONITE GROUT
CLAY | CRYSTALS | SILT

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THIS DRAWING IS INCOMPLETE AND NOT TO BE USED FOR CONSTRUCTION UNLESS IT IS STAMPED, SIGNED AND DATED

ROBERT L. BAYLESS PRODUCER LLC FARMINGTON, NEW MEXICO

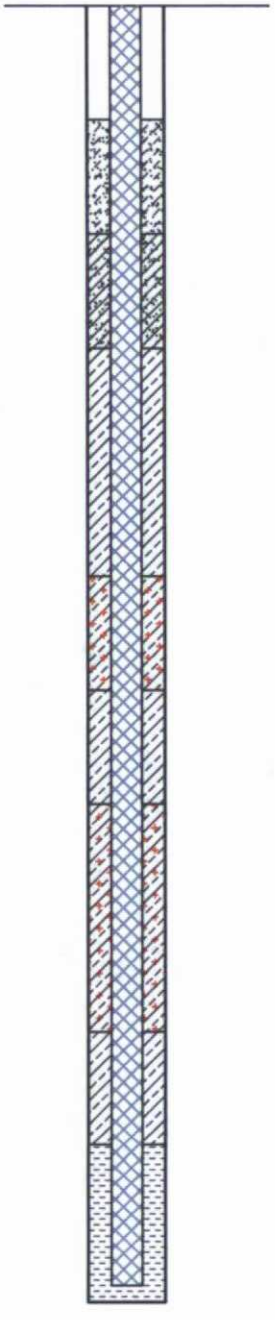
SB-1 SOIL BORING LOG
TOCITO CENTRAL TANK BATTERY

Designed	Drawn	Checked
JES	GJF	RSA

Date: SEPTEMBER 2015
Scale: Horiz: n/a Vert: n/a
Project No: 5123892
Figure: 4

P:\5-Bayless Tocito Sampling 5123892\CAD\Civil\Soil Boring Log.dwg, DJB, 10/23/2015 4:23 PM

SB-2 SOIL BORING LOG



DEPTH (FEET)	SOIL TYPE	PID (PPM)	COLOR	SAMPLE DESCRIPTION
0				NS
5		1.3	10YR 4/4	LIGHT BROWN, DRY, UNCONSOLIDATED, MODERATELY SORTED, MEDIUM GRAINED SILTY SAND
				NS
10		1	2.5YR 5/4	LIGHT BROWN, DRY, UNCONSOLIDATED, MODERATELY SORTED, MEDIUM GRAINED CLAYEY SAND
15		565	2.5YR 3/1	DARK BROWN, DRY, PLASTIC, MODERATELY WELL SORTED FINE GRAINED SILTY CLAY. NOTICEABLE HYDROCARBON ODOR
				NS
20		1895	2.5YR 3/1	DARK BROWN, DRY, DENSE, MODERATELY WELL SORTED VERY FINE GRAINED SILTY CLAY. STRONG HYDROCARBON ODOR
				NS
25		1395	2.5YR 4/2	DARK BROWN, DRY, DENSE, MODERATELY WELL SORTED VERY FINE GRAINED SILTY CLAY WITH GYPSUM CRYSTALS. MODERATELY STRONG HYDROCARBON ODOR
				NS
30		305	2.5YR 3/2	BROWN, DRY, DENSE PLASTIC, POORLY SORTED FINE GRAINED SILTY CLAY
				NS
35		296	2.5YR 4/1	DARK BROWN, DRY, VERY HARD DENSE TO SEMI-CONSOLIDATED, MODERATELY WELL SORTED VERY FINE GRAINED SILTY CLAY WITH GYPSUM CRYSTALS
				NS
40		26	2.5YR 4/1	DARK BROWN, DRY, VERY HARD DENSE TO SEMI-CONSOLIDATED, MODERATELY WELL SORTED VERY FINE GRAINED SILTY CLAY WITH GYPSUM CRYSTALS
				NS
45		238	2.5YR 3/3	DARK BROWN, DRY, DENSE, MODERATELY WELL SORTED FINE GRAINED SILTY CLAY
				NS
50		19.2	5YR 2.5/1	GRAY, DRY, VERY HARD TO SEMI-CONSOLIDATED, WELL SORTED VERY FINE GRAINED SILTY CLAYEY FISSILE SHALE BEDROCK
				NS
55		14.1	5YR 2.5/1	GRAY, DRY, VERY HARD TO SEMI-CONSOLIDATED, WELL SORTED VERY FINE GRAINED SILTY CLAYEY FISSILE SHALE BEDROCK
60				END OF HOLE

WATER NOT ENCOUNTERED DURING DRILLING

DRILLER: ENVIRO-DRILL, INC.
DATE COMPLETED: SEPTEMBER, 2015
BOREHOLE DIAMETER: 8" O.D.
SAMPLER TYPE: SPLIT SPOON
DRILLING METHOD: HOLLOW STEM AUGER
TOTAL BORING DEPTH: 55 FT.
LOGGED BY: JES
NS = NOT SAMPLED

LOG LEGEND

SAND, SHALE, SILT, CLAY, CRYSTALS, CEMENT BENTONITE GROUT

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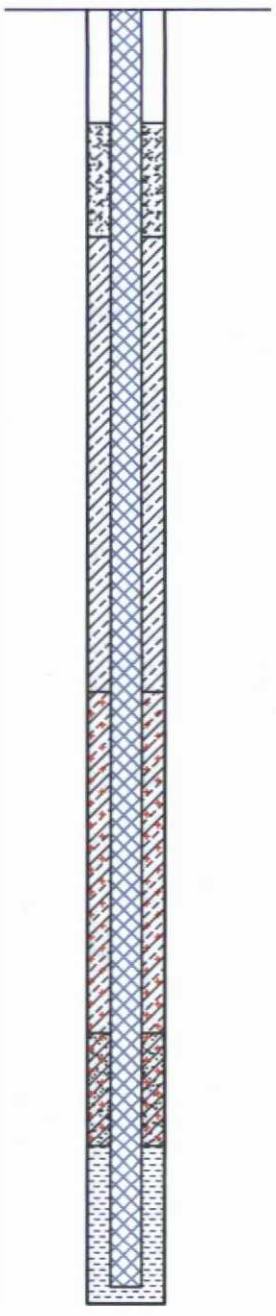
SB-2 SOIL BORING LOG
TOCITO CENTRAL TANK BATTERY

Designed	Drawn	Checked
JES	GJF	RSA

Date: SEPTEMBER 2015
Scale: Horiz: n/a Vert: n/a
Project No: 5123892
Figure: 5

P:\5-Bayless Tocito Sampling 5123892\CAD\Civil\Soil Boring Log.dwg, DJB, 10/23/2015 4:24 PM

SB-3 SOIL BORING LOG



(FEET) DEPTH	SOIL TYPE	PID (PPM)	COLOR	SAMPLE DESCRIPTION
0				NS
5		120	7.5YR 3/2	LIGHT TAN TO LIGHT BROWN, DRY, UNCONSOLIDATED TO DENSE, POORLY SORTED, MEDIUM GRAINED SILTY SAND, SOME BLACK STAINING AND NOTICEABLE HYDROCARBON ODOR
				NS
10		875	7.5YR 2.5/1	DARK GRAY BROWN, DRY, DENSE PLASTIC, MODERATELY SORTED, FINE GRAINED SILTY CLAY, SOME BLACK STAINING AND STRONG HYDROCARBON ODOR
15		1075	7.5YR 3/1	DARK GRAY BROWN, DRY, DENSE PLASTIC, MODERATELY SORTED, VERY FINE GRAINED SILTY CLAY, SOME BLACK STAINING AND STRONG HYDROCARBON ODOR
				NS
20		1427	7.5YR 3/1 AND 3/3	DARK GRAY BROWN, MOTTLED, DRY, DENSE PLASTIC, MODERATELY WELL SORTED, VERY FINE GRAINED SILTY CLAY, SOME BLACK STAINING AND STRONG HYDROCARBON ODOR
				NS
25		1628	7.5YR 3/1 AND 3/3	DARK GRAY BROWN, MOTTLED, DRY, DENSE PLASTIC, MODERATELY WELL SORTED, VERY FINE GRAINED SILTY CLAY, SOME BLACK STAINING AND STRONG HYDROCARBON ODOR
				NS
30		641	10YR 4/3	DARK GRAY BROWN, DRY, DENSE PLASTIC, MODERATELY SORTED, FINE GRAINED SILTY CLAY, SOME GYPSUM CRYSTALS, VERY SLIGHT ODOR
				NS
35		1352	10YR 4/3	DARK GRAY BROWN, DRY, DENSE TO SEMI-CONSOLIDATED, MODERATELY SORTED, FINE GRAINED SILTY CLAY, SOME GYPSUM CRYSTALS, STRONG HYDROCARBON ODOR
				NS
40		843	2.5YR 4/1	DARK GRAY BROWN, DRY, DENSE TO SEMI-CONSOLIDATED, MODERATELY SORTED, FINE GRAINED SILTY CLAY, SOME YELLOWISH WHITE GYPSUM CRYSTALS, STRONG HYDROCARBON ODOR
				NS
45		695	7.5YR 4/2	DARK BROWN, DRY, DENSE TO SEMI-CONSOLIDATED, MODERATELY SORTED, FINE GRAINED SANDY CLAY, SOME YELLOWISH WHITE GYPSUM CRYSTALS, STRONG HYDROCARBON ODOR, SOME BLACK STAINING
				NS
50		105	5YR 4/1	DARK GRAY, DRY, VERY HARD, WELL SORTED VERY FINE GRAINED SILTY CLAYEY FISSILE SHALE BEDROCK
				NS
55		10.5	5YR 4/1	DARK GRAY, DRY, VERY HARD, WELL SORTED VERY FINE GRAINED SILTY CLAYEY FISSILE SHALE BEDROCK
60				END OF HOLE

WATER NOT ENCOUNTERED DURING DRILLING

DRILLER: ENVIRO-DRILL, INC.
DATE COMPLETED: SEPTEMBER, 2015
BOREHOLE DIAMETER: 8" O.D.
SAMPLER TYPE: SPLIT SPOON
DRILLING METHOD: HOLLOW STEM AUGER
TOTAL BORING DEPTH: 55 FT.
LOGGED BY: JES
NS = NOT SAMPLED

LOG LEGEND

SAND | SILT | CEMENT BENTONITE GROUT
CLAY | SHALE | CRYSTALS

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SB-3 SOIL BORING LOG
TOCITO CENTRAL TANK BATTERY

Designed	Drawn	Checked
JES	GJF	RSA

Date: 6
Scale: Horiz: n/a Vert: n/a
Project No: 5123892
Figure: 6

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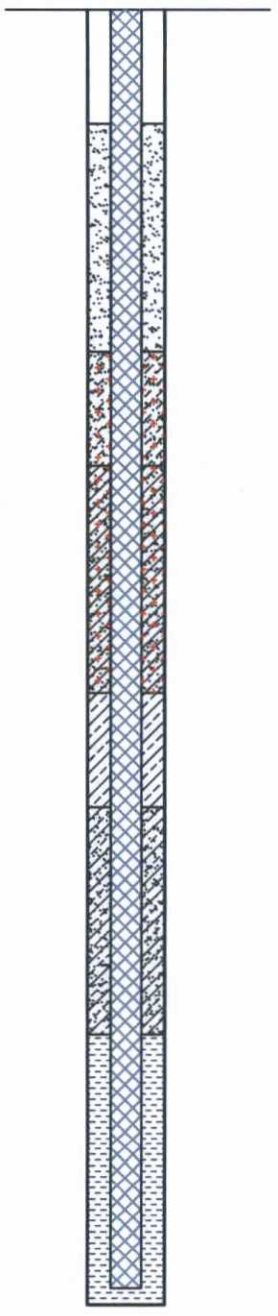
SB-4 SOIL BORING LOG



DEPTH (FEET)	SOIL TYPE	PID (PPM)	COLOR	SAMPLE DESCRIPTION
0				NS
5		0.9	10YR 6/4	TAN, DRY, UNCONSOLIDATED, WELL SORTED, MEDIUM GRAINED SAND
				NS
10		1.2	10YR 5/3	LIGHT BROWN, DRY, UNCONSOLIDATED, MODERATELY SORTED, MEDIUM GRAINED SAND
15		1.2	10YR 4/3	BROWN, DRY, UNCONSOLIDATED, MODERATELY SORTED, MEDIUM GRAINED SILTY SAND WITH OCCASIONAL GYPSUM CRYSTAL GRAINS
				NS
20		1.3	10YR 3/3	DARK BROWN, DRY, UNCONSOLIDATED, POORLY SORTED, FINE GRAINED CLAYEY SAND WITH OCCASIONAL GYPSUM CRYSTAL GRAINS
				NS
25		1.5	10YR 5/3	DARK BROWN, DRY, DENSE PLASTIC, MODERATELY SORTED, FINE GRAINED CLAYEY SAND WITH OCCASIONAL GYPSUM CRYSTAL GRAINS
				NS
30		957	10YR 5/3	DARK BROWN, DRY, PLASTIC, MODERATELY SORTED, FINE GRAINED SILTY CLAY WITH STRONG HYDROCARBON ODOR
				NS
35		1795	10YR 5/3	DARK BROWN, DRY, PLASTIC, POORLY SORTED, FINE TO MEDIUM GRAINED SANDY SILTY CLAY WITH STRONG HYDROCARBON ODOR
				NS
40		876	2.5YR 3/1	DARK BROWN, DRY, DENSE, MODERATELY SORTED, FINE GRAINED SANDY SILTY CLAY WITH HYDROCARBON ODOR
				NS
45		323	5YR 4/1	DARK GRAY, DRY, VERY HARD SEMI-CONSOLDATED, WELL SORTED, VERY FINE GRAINED SILTY CLAYEY FISSILE SHALE BEDROCK
				NS
50		120	5YR 4/1	DARK GRAY, DRY, VERY HARD SEMI-CONSOLDATED, WELL SORTED, VERY FINE GRAINED SILTY CLAYEY FISSILE SHALE BEDROCK
				NS
55		103	5YR 4/1	DARK GRAY, DRY, VERY HARD SEMI-CONSOLDATED, WELL SORTED, VERY FINE GRAINED SILTY CLAYEY FISSILE SHALE BEDROCK
60				END OF HOLE

WATER NOT ENCOUNTERED DURING DRILLING

DRILLER: ENVIRO-DRILL, INC.
DATE COMPLETED: SEPTEMBER, 2015
BOREHOLE DIAMETER: 8" O.D.
SAMPLER TYPE: SPLIT SPOON
DRILLING METHOD: HOLLOW STEM AUGER
TOTAL BORING DEPTH: 55 FT.
LOGGED BY: JES
NS = NOT SAMPLED

LOG LEGEND

SAND | SILT | CEMENT BENTONITE GROUT
CLAY | SHALE | CRYSTALS

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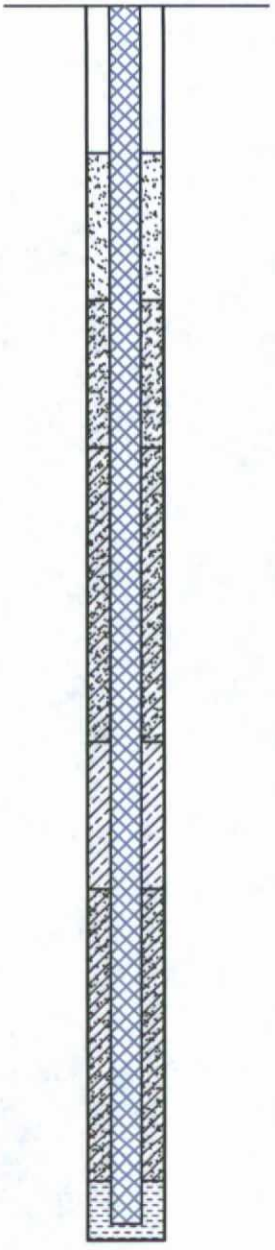
SB-4 SOIL BORING LOG
TOCITO CENTRAL TANK BATTERY

Designed	Drawn	Checked
JES	GJF	RSA

Date: SEPTEMBER 2015
Scale: Horiz: n/a Vert: n/a
Project No: 5123892
Figure: 7

P:\5-Bayless Tocito Sampling 5123892\CAD\Civil\Soil Boring Log.dwg, DJB, 10/23/2015 4:25 PM

SB-5 SOIL BORING LOG



DEPTH (FEET)	SOIL TYPE	PID (PPM)	COLOR	SAMPLE DESCRIPTION
0				NS
5		0	10YR 5/3	TAN, DRY, UNCONSOLIDATED, WELL SORTED, MEDIUM GRAINED SAND
				NS
10		0	10YR 4/3	TAN, DRY, UNCONSOLIDATED, WELL SORTED, MEDIUM GRAINED SILTY SAND
				NS
15		0	2.5YR 6/3	LIGHT TAN, DRY, PLASTIC TO UNCONSOLIDATED, MODERATELY SORTED, MEDIUM GRAINED SILTY CLAYEY SAND
				NS
20		0.4	2.5YR 5/1	GRAY, DRY, DENSE, POORLY SORTED, MEDIUM TO FINE GRAINED SANDY SILTY CLAY
				NS
25		0.5	2.5YR 3/2	DARK GRAY, DRY, DENSE, MODERATELY WELL SORTED, FINE GRAINED SILTY CLAY
				NS
30		0	10YR 4/2	DARK BROWN, DRY, DENSE, POORLY SORTED, MEDIUM GRAINED CLAYEY SAND
				NS
35		1.6	10YR 4/2	DARK BROWN, DRY, DENSE, POORLY SORTED, MEDIUM GRAINED SANDY CLAY
				NS
40		1.3	2.5YR 3/1	DARK GRAY, DRY, VERY HARD SEMI-CONSOLDATED, WELL SORTED, VERY FINE GRAINED SILTY CLAYEY FISSILE SHALE BEDROCK
45				END OF HOLE

WATER NOT ENCOUNTERED DURING DRILLING

DRILLER: ENVIRO-DRILL, INC.
DATE COMPLETED: SEPTEMBER, 2015
BOREHOLE DIAMETER: 8" O.D.
SAMPLER TYPE: SPLIT SPOON
DRILLING METHOD: HOLLOW STEM AUGER
TOTAL BORING DEPTH: 40 FT.
LOGGED BY: JES
NS = NOT SAMPLED

LOG LEGEND

SAND | SILT | CEMENT BENTONITE GROUT
CLAY | SHALE

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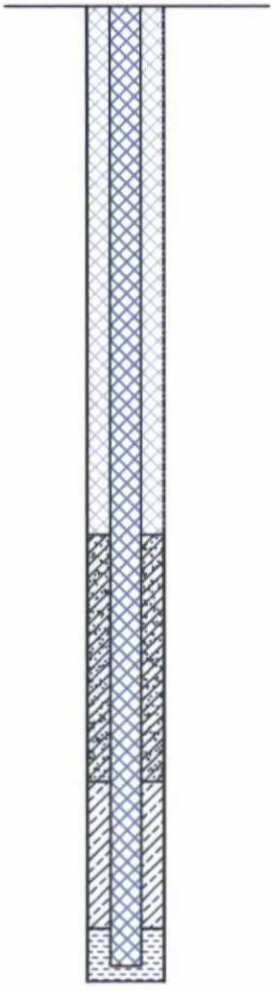
SB-5 SOIL BORING LOG
TOCITO CENTRAL TANK BATTERY

Designed	Drawn	Checked
JES	GJF	RSA

Date: SEPTEMBER 2015
Scale: Horiz: n/a Vert: n/a
Project No: 5123892
Figure: 8

P:\5-Bayless Tocito Sampling 5123892\CADICivil\Soil Boring Log.dwg, DJB, 10/23/2015 4:26 PM

SB-6 SOIL BORING LOG



DEPTH (FEET)	SOIL TYPE	PID (PPM)	COLOR	SAMPLE DESCRIPTION
0				
5				BORING STARTED APPROXIMATELY 10' BELOW GRADE
10				
15				
20				REMEDIAL EXCAVATION BACKFILL, NOT SAMPLE
25				
30		1976	10YR 3/2	DARK BROWN, DRY, PLASTIC, POORLY SORTED, MEDIUM GRAINED SILTY CLAYEY SAND STRONG HYDROCARBON ODOR
				NS
35		3132	10YR 3/2	DARK BROWN, DRY, PLASTIC, POORLY SORTED, MEDIUM GRAINED SILTY CLAYEY SAND STRONG HYDROCARBON ODOR
				NS
40		125	10YR 3/2	DARK BROWN, DRY, PLASTIC, WELL SORTED, VERY FINE GRAINED SILTY CLAY, NO HYDROCARBON ODOR
				NS
45		105	2.5YR 4/1	DARK GRAY, DRY, VERY HARD SEMI-CONSOLDATED, WELL SORTED, VERY FINE GRAINED SILTY CLAYEY FISSILE SHALE BEDROCK
50				END OF HOLE

WATER NOT ENCOUNTERED DURING DRILLING

DRILLER: ENVIRO-DRILL, INC.
DATE COMPLETED: SEPTEMBER, 2015
BOREHOLE DIAMETER: 8" O.D.
SAMPLER TYPE: SPLIT SPOON
DRILLING METHOD: HOLLOW STEM AUGER
TOTAL BORING DEPTH: 45 FT.
LOGGED BY: JES
NS = NOT SAMPLED

LOG LEGEND

SAND | SILT | CEMENT BENTONITE GROUT
CLAY | SHALE | BACKFILL

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ROBERT L. BAYLESS PRODUCER LLC FARMINGTON, NEW MEXICO

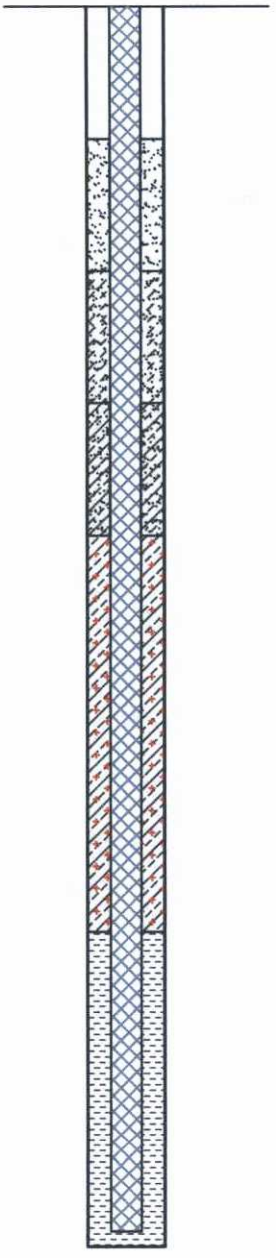
SB-6 SOIL BORING LOG
TOCITO CENTRAL TANK BATTERY

Designed	Drawn	Checked
JES	GJF	RSA

Date: SEPTEMBER 2015
Scale: Horiz: n/a Vert: n/a
Project No: 5123892
Figure: 9

P:\5-Bayless Tocito Sampling 5123892\CAD\Civil\Soil Boring Log.dwg, DJB, 10/23/2015 4:27 PM

SB-7 SOIL BORING LOG



(FEET) DEPTH	SOIL TYPE	PID (PPM)	COLOR	SAMPLE DESCRIPTION
0				NS
5		1.4	10YR 6/3	LIGHT TAN, DRY, UNCONSOLIDATED, WELL SORTED, MEDIUM GRAINED SAND
				NS
10		2.1	10YR 6/2	LIGHT BROWN, DRY, UNCONSOLIDATED, MODERATELY SORTED, FINE GRAINED SILTY SAND
				NS
15		4.1	10YR 5/2	GRAY BROWN, DRY, UNCONSOLIDATED, MODERATELY SORTED, FINE GRAINED SILTY CLAYEY SAND
				NS
20		0.7	2.5YR 4/2	GRAY, DRY, DENSE, MODERATELY SORTED, FINE GRAINED SILTY CLAY WITH OCCASIONAL GYPSUM CRYSTAL GRAINS
				NS
25		0.2	2.5YR 4/2	GRAY, DRY, DENSE, MODERATELY SORTED, FINE GRAINED SILTY CLAY WITH OCCASIONAL GYPSUM CRYSTAL GRAINS
				NS
30		0.3	10YR 5/2	GRAY BROWN, DRY, DENSE, MODERATELY SORTED, FINE GRAINED SILTY CLAY WITH FREQUENT GYPSUM CRYSTAL GRAINS
				NS
35		803	2.5YR 3/1	DARK GRAY BROWN, DRY, DENSE, MODERATELY WELL SORTED, VERY FINE GRAINED SILTY CLAYEY BLOCKY SHALE (NOT VERY FISSILE)
				NS
40		1321	2.5YR 3/1	DARK GRAY BROWN, DRY, DENSE, MODERATELY WELL SORTED, VERY FINE GRAINED SILTY CLAYEY BLOCKY SHALE (NOT VERY FISSILE)
				NS
45		11.4	5YR 2.5/1	DARK GRAY, DRY VERY HARD ROCK, WELL SORTED, VERY FINE GRAINED SILTY CLAYEY BLOCKY SHALE (NOT VERY FISSILE)
50				END OF HOLE

WATER NOT ENCOUNTERED DURING DRILLING

DRILLER: ENVIRO-DRILL, INC.
DATE COMPLETED: SEPTEMBER, 2015
BOREHOLE DIAMETER: 8" O.D.
SAMPLER TYPE: SPLIT SPOON
DRILLING METHOD: HOLLOW STEM AUGER
TOTAL BORING DEPTH: 45 FT.
LOGGED BY: JES
NS = NOT SAMPLED

LOG LEGEND

SAND | SILT | CEMENT BENTONITE GROUT
CLAY | SHALE | CRYSTALS

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SB-7 SOIL BORING LOG
TOCITO CENTRAL TANK BATTERY

Designed	Drawn	Checked
JES	GJF	RSA

Date: SEPTEMBER 2015
Scale: Horiz: n/a Vert: n/a
Project No: 5123892
Figure: 10

P:\5-Bayless Tocito Sampling 5123892\CAD\Civil\Soil Boring Log.dwg, DJB, 10/23/2015 4:27 PM

Tables

Bayless Producers
Table 3: Summary of Laboratory Analysis
Results in mg/Kg

Tocito Central Tank Battery
Contamination Delineation
10/23/2015

Date	Time	Sample ID	Sample Depth (Feet BGS)	Method 8015 GRO	Method 8015 DRO	Method 8015 MRO	Method 8021 Benzene	Method 8021 BTEX	Method 300.0 Chlorides
NMOCD Guidelines		NMOCD Site Ranking: 10		1000 ppm			10 ppm	50 ppm	
8/31/2015	15:30	SB-1 @ 40'	40	<4.8	120	82	0.12	0.207	1300
9/1/2015	9:00	SB-1 @ 70'	70	7.9	13	<50	<0.047	0.72	<30
9/3/2015	15:15	SB-2 @20'	20	34	390	170	<0.047	0.33	4000
9/4/2015	8:20	SB-2 @55'	55	13	<9.5	<47	0.096	1.326	84
9/4/2015	11:20	SB-3 @ 25'	25	**140**	**920**	**480**	0.14	9.06	5800
9/8/2015	14:10	SB-3 @ 55'	55	6.7	<9.9	<49	0.099	0.729	71
9/9/2015	9:53	SB-4 @ 35'	35	17	610	280	<0.095	0.76	4500
9/9/2015	11:20	SB-4 @ 55'	55	11	14	<50	0.09	1.17	120
9/9/2015	15:25	SB-5 @ 40'	40	14	<9.7	<48	2.5	3.008	1200
9/10/2015	8:50	SB-6 @ 35'	35	57	610	200	<0.24	4.46	3600
9/10/2015	10:00	SB-6 @ 45'	45	9.2	19	<48	0.21	1.14	380
9/10/2015	14:00	SB-7 @ 40'	40	**79**	**1400**	**450**	0.57	1.66	2100
9/10/2015	14:40	SB-7 @ 45'	45	9.8	94	62	0.14	0.599	140

SMA

SMA Project #5123892

Bayless Producers
Table 2: Site Ranking

Tocito Central Tank Battery
Contamination Delineation
10/23/2015

Depth to Groundwater	NMOCD Numeric Rank for this Site	Source for Ranking	Notes
< 50 BGS = 20		Estimated with local geology and distance to surface water	Morrison formation probably first aquifer bearing unit, greater than 500' BGS
50' to 99' = 10			
>100' = 0	0		
Ranking Criteria for Horizontal Distance to Nearest Surface Water	**NMOCD Numeric Rank for this Site**	**Source for Ranking**	**Notes**
< 200' = 20		Verified using Topographic Maps and Google Earth; Field Verified	Approximately 820' north of un-named dashed blue line USGS 24k map, no defined banks in vicinity
200' - 1000' = 10	10		
>1000' = 0			
Ranking Criteria for Horizintal Distance to a Water Well or Water Source	**NMOCD Numeric Rank for this Site**	**Source for Ranking**	**Notes**
<1000' from a water source? <200' from a private domestic water source? YES OR NO to BOTH. YES = 20, NO = 0	0	Accessed NMOSE Water Rights Reporting System	No water wells located within 200 feet of release site. no water wells located within a one mile radius.
Total Site Ranking	**10**		
Soil Remedation Standards	0 to 9	**10 to 19**	>19
Benzene	10 PPM	**10 PPM**	10 PPM
BTEX	50 PPM	**50 PPM**	50 PPM
TPH	5000 PPM	**1000 PPM**	100 PPM

SMA

SMA Project #5123892

Appendix A
Photographic Documentation

Site Photographs
Tocito Central Tank Battery Contamination Delineation

Photo 1: Work commences at the Tocito Central Tank Battery.

Photo 2: Split spoon sample of the silty clay material containing gypsum and other evaporite crystals.

Site Photographs
Tocito Central Tank Battery Contamination Delineation

Photo 3: Constructing the ramp and pad for the installation of SB-6 within the existing excavation.

Photo 4: Leveling the CME-85 drill rig within the excavation, concrete pads were used to support the hydraulic jacks.

Site Photographs
Tocito Central Tank Battery Contamination Delineation

Photo 5: Installing a soil boring near the edge of the disturbed area, in the vicinity of the improperly closed pit.

Photo 6: Local geology provides a medium for cultural art, located about half mile from the project site.

Appendix B
Laboratory Analytical Report

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

September 11, 2015

Jesse Sprague
Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-5667
FAX (505) 327-1496

RE: Bayless Tocito OrderNo.: 1509083

Dear Jesse Sprague:

Hall Environmental Analysis Laboratory received 2 sample(s) on 9/2/2015 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

Analytical Report
Lab Order **1509083**
Date Reported: **9/11/2015**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Project: Bayless Tocito
Lab ID: 1509083-001 **Matrix:** SOIL

Client Sample ID: SB-1@40'
Collection Date: 8/31/2015 3:30:00 PM
Received Date: 9/2/2015 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	1300	75		mg/Kg	50	9/8/2015 8:18:54 PM	21158
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**	
Diesel Range Organics (DRO)	120	9.7		mg/Kg	1	9/4/2015 4:30:39 PM	21121
Motor Oil Range Organics (MRO)	82	48		mg/Kg	1	9/4/2015 4:30:39 PM	21121
Surr: DNOP	117	57.9-140		%REC	1	9/4/2015 4:30:39 PM	21121
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/3/2015 12:27:38 PM	21112
Surr: BFB	102	75.4-113		%REC	1	9/3/2015 12:27:38 PM	21112
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	0.12	0.048		mg/Kg	1	9/3/2015 12:27:38 PM	21112
Toluene	ND	0.048		mg/Kg	1	9/3/2015 12:27:38 PM	21112
Ethylbenzene	0.087	0.048		mg/Kg	1	9/3/2015 12:27:38 PM	21112
Xylenes, Total	ND	0.096		mg/Kg	1	9/3/2015 12:27:38 PM	21112
Surr: 4-Bromofluorobenzene	111	80-120		%REC	1	9/3/2015 12:27:38 PM	21112

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		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Project: Bayless Tocito
Lab ID: 1509083-002 **Matrix:** SOIL

Client Sample ID: SB-1@70'
Collection Date: 9/1/2015 9:00:00 AM
Received Date: 9/2/2015 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	30		mg/Kg	20	9/4/2015 2:39:31 PM	21158
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**	
Diesel Range Organics (DRO)	13	10		mg/Kg	1	9/4/2015 4:52:11 PM	21121
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/4/2015 4:52:11 PM	21121
Surr: DNOP	112	57.9-140		%REC	1	9/4/2015 4:52:11 PM	21121
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	7.9	4.7		mg/Kg	1	9/3/2015 1:43:41 PM	21112
Surr: BFB	104	75.4-113		%REC	1	9/3/2015 1:43:41 PM	21112
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.047		mg/Kg	1	9/3/2015 1:43:41 PM	21112
Toluene	0.15	0.047		mg/Kg	1	9/3/2015 1:43:41 PM	21112
Ethylbenzene	0.14	0.047		mg/Kg	1	9/3/2015 1:43:41 PM	21112
Xylenes, Total	0.43	0.095		mg/Kg	1	9/3/2015 1:43:41 PM	21112
Surr: 4-Bromofluorobenzene	114	80-120		%REC	1	9/3/2015 1:43:41 PM	21112

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		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1509083**

11-Sep-15

Client: Souder, Miller and Associates
Project: Bayless Tocito

Sample ID	**MB-21158**	SampType:	**MBLK**		TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**PBS**	Batch ID:	**21158**		RunNo:	**28681**				
Prep Date:	**9/4/2015**	Analysis Date:	**9/4/2015**		SeqNo:	**868771**	Units:	**mg/Kg**		

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

Sample ID	**LCS-21158**	SampType:	**LCS**		TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**LCSS**	Batch ID:	**21158**		RunNo:	**28681**				
Prep Date:	**9/4/2015**	Analysis Date:	**9/4/2015**		SeqNo:	**868772**	Units:	**mg/Kg**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.8	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		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1509083**

11-Sep-15

Client: Souder, Miller and Associates
Project: Bayless Tocito

Sample ID **MB-21121**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **21121**	RunNo: **28657**
Prep Date: **9/3/2015**	Analysis Date: **9/4/2015**	SeqNo: **868052** 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	11		10.00		105	57.9	140			

Sample ID **LCS-21121**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **21121**	RunNo: **28657**
Prep Date: **9/3/2015**	Analysis Date: **9/4/2015**	SeqNo: **868053** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	10	50.00	0	84.9	57.4	139			
Surr: DNOP	5.0		5.000		99.7	57.9	140			

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
- R RPD outside accepted recovery limits
- 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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1509083**

11-Sep-15

Client: Souder, Miller and Associates

Project: Bayless Tocito

Sample ID **1509083-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **SB-1@40'**	Batch ID: **21112**	RunNo: **28662**
Prep Date: **9/2/2015**	Analysis Date: **9/3/2015**	SeqNo: **868060** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	30	4.8	24.06	2.570	112	62.5	151			
Surr: BFB	1100		962.5		116	75.4	113			S

Sample ID **1509083-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **SB-1@40'**	Batch ID: **21112**	RunNo: **28662**
Prep Date: **9/2/2015**	Analysis Date: **9/3/2015**	SeqNo: **868061** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	30	4.8	24.06	2.570	112	62.5	151	0.130	22.1	
Surr: BFB	1200		962.5		122	75.4	113	0	0	S

Sample ID **LCS-21112**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **21112**	RunNo: **28662**
Prep Date: **9/2/2015**	Analysis Date: **9/3/2015**	SeqNo: **868074** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	25.00	0	107	79.6	122			
Surr: BFB	1000		1000		99.7	75.4	113			

Sample ID **MB-21112**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **21112**	RunNo: **28662**
Prep Date: **9/2/2015**	Analysis Date: **9/3/2015**	SeqNo: **868075** 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	890		1000		88.7	75.4	113			

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
- R RPD outside accepted recovery limits
- 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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1509083**

11-Sep-15

Client: Souder, Miller and Associates

Project: Bayless Tocito

Sample ID **LCS-21112**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **21112**	RunNo: **28662**
Prep Date: **9/2/2015**	Analysis Date: **9/3/2015**	SeqNo: **868094** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.050	1.000	0	90.7	80	120			
Toluene	0.89	0.050	1.000	0	89.5	80	120			
Ethylbenzene	0.90	0.050	1.000	0	90.2	80	120			
Xylenes, Total	2.7	0.10	3.000	0	90.4	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		112	80	120			

Sample ID **MB-21112**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **21112**	RunNo: **28662**
Prep Date: **9/2/2015**	Analysis Date: **9/3/2015**	SeqNo: **868095** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		105	80	120			

Qualifiers:

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

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: SMA-FARM | Work Order Number: 1509083 | RcptNo: 1

Received by/date: LM 09/02/15

Logged By: Celina Sessa 9/2/2015 8:00:00 AM Celina Sessa

Completed By: Celina Sessa 9/2/2015 9:00:50 AM Celina Sessa

Reviewed By: JA 09/02/15

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	1.4	Good	Yes			

Chain-of-Custody Record

Client: SMA

Mailing Address: 401 W Broadway
Farmington, NM 87401

Phone #: 505 392 0594

email or Fax#: Jesse.Sprague@Soudermiller.com

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☑ Standard ☐ Rush _____

Project Name: Bayless Tocito

Project #:

Project Manager: Jesse Sprague

Sampler: JES

On Ice: ☑ Yes ☐ No

Sample Temperature: 1.4

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. 1509083	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 Chlorides				Air Bubbles (Y or N)
8/31	1530	Soil	SB-1 @ 40'	1 4oz	—	-001	X		X									X				
9/1	0900	Soil	SB-1 @ 70'	1 4oz	—	-002	X		X									X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/1/15	1654			9/1/15	1654
9/1/15	1805			09/02/15	0800

Remarks:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

September 21, 2015

Jesse Sprague
Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-5667
FAX (505) 327-1496

RE: Bayless Tocito OrderNo.: 1509242

Dear Jesse Sprague:

Hall Environmental Analysis Laboratory received 3 sample(s) on 9/5/2015 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

Analytical Report
Lab Order **1509242**
Date Reported: **9/21/2015**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Project: Bayless Tocito
Lab ID: 1509242-001 **Matrix:** SOIL

Client Sample ID: SB-2 @ 20'
Collection Date: 9/3/2015 3:15:00 PM
Received Date: 9/5/2015 10:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	4000	150		mg/Kg	100	9/17/2015 12:15:51 PM	21248
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **KJH**	
Diesel Range Organics (DRO)	390	9.5		mg/Kg	1	9/10/2015 7:00:44 PM	21185
Motor Oil Range Organics (MRO)	170	48		mg/Kg	1	9/10/2015 7:00:44 PM	21185
Surr: DNOP	98.0	57.9-140		%REC	1	9/10/2015 7:00:44 PM	21185
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	34	4.7		mg/Kg	1	9/10/2015 10:09:19 PM	21175
Surr: BFB	340	75.4-113	S	%REC	1	9/10/2015 10:09:19 PM	21175
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.047		mg/Kg	1	9/10/2015 10:09:19 PM	21175
Toluene	ND	0.047		mg/Kg	1	9/10/2015 10:09:19 PM	21175
Ethylbenzene	0.15	0.047		mg/Kg	1	9/10/2015 10:09:19 PM	21175
Xylenes, Total	0.18	0.093		mg/Kg	1	9/10/2015 10:09:19 PM	21175
Surr: 4-Bromofluorobenzene	141	80-120	S	%REC	1	9/10/2015 10:09:19 PM	21175

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		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Project: Bayless Tocito
Lab ID: 1509242-002 **Matrix:** SOIL

Client Sample ID: SB-2 @ 55'
Collection Date: 9/4/2015 8:20:00 AM
Received Date: 9/5/2015 10:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SRM**	
Chloride	84	30		mg/Kg	20	9/10/2015 6:47:15 PM	21248
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **KJH**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	9/10/2015 8:05:38 PM	21185
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	9/10/2015 8:05:38 PM	21185
Surr: DNOP	88.5	57.9-140		%REC	1	9/10/2015 8:05:38 PM	21185
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	13	4.7		mg/Kg	1	9/10/2015 10:34:40 PM	21175
Surr: BFB	127	75.4-113	S	%REC	1	9/10/2015 10:34:40 PM	21175
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	0.096	0.047		mg/Kg	1	9/10/2015 10:34:40 PM	21175
Toluene	0.31	0.047		mg/Kg	1	9/10/2015 10:34:40 PM	21175
Ethylbenzene	0.22	0.047		mg/Kg	1	9/10/2015 10:34:40 PM	21175
Xylenes, Total	0.70	0.095		mg/Kg	1	9/10/2015 10:34:40 PM	21175
Surr: 4-Bromofluorobenzene	122	80-120	S	%REC	1	9/10/2015 10:34:40 PM	21175

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		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Project: Bayless Tocito
Lab ID: 1509242-003 **Matrix:** SOIL

Client Sample ID: SB-3 @ 25'
Collection Date: 9/4/2015 11:20:00 AM
Received Date: 9/5/2015 10:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	5800	300		mg/Kg	200	9/17/2015 12:28:15 PM	21248
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **KJH**	
Diesel Range Organics (DRO)	920	9.4		mg/Kg	1	9/10/2015 8:49:03 PM	21185
Motor Oil Range Organics (MRO)	480	47		mg/Kg	1	9/10/2015 8:49:03 PM	21185
Surr: DNOP	105	57.9-140		%REC	1	9/10/2015 8:49:03 PM	21185
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	140	24		mg/Kg	5	9/10/2015 11:00:00 PM	21175
Surr: BFB	274	75.4-113	S	%REC	5	9/10/2015 11:00:00 PM	21175
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	0.14	0.12		mg/Kg	5	9/10/2015 11:00:00 PM	21175
Toluene	ND	0.24		mg/Kg	5	9/10/2015 11:00:00 PM	21175
Ethylbenzene	0.62	0.24		mg/Kg	5	9/10/2015 11:00:00 PM	21175
Xylenes, Total	8.3	0.48		mg/Kg	5	9/10/2015 11:00:00 PM	21175
Surr: 4-Bromofluorobenzene	128	80-120	S	%REC	5	9/10/2015 11:00:00 PM	21175

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		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1509242**

21-Sep-15

Client: Souder, Miller and Associates
Project: Bayless Tocito

Sample ID **MB-21248**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **21248**	RunNo: **28773**
Prep Date: **9/10/2015**	Analysis Date: **9/10/2015**	SeqNo: **872640** Units: **mg/Kg**

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

Sample ID **LCS-21248**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **21248**	RunNo: **28773**
Prep Date: **9/10/2015**	Analysis Date: **9/10/2015**	SeqNo: **872641** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.3	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
- R RPD outside accepted recovery limits
- 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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1509242**

21-Sep-15

Client: Souder, Miller and Associates

Project: Bayless Tocito

Sample ID **MB-21185**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **21185**	RunNo: **28740**
Prep Date: **9/8/2015**	Analysis Date: **9/10/2015**	SeqNo: **871391** 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	11		10.00		110	57.9	140			

Sample ID **LCS-21185**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **21185**	RunNo: **28740**
Prep Date: **9/8/2015**	Analysis Date: **9/10/2015**	SeqNo: **871392** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	55	10	50.00	0	110	57.4	139			
Surr: DNOP	5.7		5.000		113	57.9	140			

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
- R RPD outside accepted recovery limits
- 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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1509242**

21-Sep-15

Client: Souder, Miller and Associates

Project: Bayless Tocito

Sample ID **MB-21175**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **21175**	RunNo: **28722**
Prep Date: **9/8/2015**	Analysis Date: **9/9/2015**	SeqNo: **870894** 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	910		1000		91.5	75.4	113			

Sample ID **LCS-21175**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **21175**	RunNo: **28722**
Prep Date: **9/8/2015**	Analysis Date: **9/9/2015**	SeqNo: **870895** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	94.1	79.6	122			
Surr: BFB	990		1000		98.6	75.4	113			

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1509242**

21-Sep-15

Client: Souder, Miller and Associates

Project: Bayless Tocito

Sample ID **MB-21175**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **21175**	RunNo: **28722**
Prep Date: **9/8/2015**	Analysis Date: **9/9/2015**	SeqNo: **870940** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		108	80	120			

Sample ID **LCS-21175**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **21175**	RunNo: **28722**
Prep Date: **9/8/2015**	Analysis Date: **9/9/2015**	SeqNo: **870941** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.050	1.000	0	101	80	120			
Toluene	1.0	0.050	1.000	0	101	80	120			
Ethylbenzene	1.0	0.050	1.000	0	100	80	120			
Xylenes, Total	3.1	0.10	3.000	0	102	80	120			
Surr: 4-Bromofluorobenzene	1.2		1.000		115	80	120			

Qualifiers:

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

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: **SMA-FARM** Work Order Number: **1509242** RcptNo: 1

Received by/date: 09/05/15

Logged By: **Lindsay Mangin** **9/5/2015 10:25:00 AM**

Completed By: **Lindsay Mangin** **9/5/2015 10:48:49 AM**

Reviewed By: 09/08/15

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 ☑	# of preserved bottles checked for pH: (<2 or >12 unless noted)
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 ☐	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	4.4	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: SMA	Turn-Around Time: ☑ Standard ☐ Rush
Mailing Address: 401 W Broadway Farmington, NM, 87401	Project Name: Burgess Tocito
Phone #: 505 325 7535	Project #:
email or Fax#: Jesse.Sprague@sadamiller.com	Project Manager: Jesse Sprague
QA/QC Package: ☐ Standard ☐ Level 4 (Full Validation)	Sampler: Jesse Sprague
Accreditation ☐ NELAP ☐ Other	On Ice: ☑ Yes ☐ No
☐ EDD (Type)	Sample Temperature: 4.6-0.2=4.4

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1509242	(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 Chlorides				Air Bubbles (Y or N)
9/3	1515	Soil	SB-2 @ 20'	1 4oz	—	-001	X		X									X				
9/4	0820	Soil	SB-2 @ 55'	1 4oz	—	-002	X		X									X				
9/4	1120	Soil	SB-3 @ 25'	1 4oz	—	-003	X		X									X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/4/15	1627	Jesse Sprague	Christin Walls	9/4/15	1627
9/4/15	1722	Christin Walls		09/05/15	1025

Remarks:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

September 21, 2015

Jesse Sprague
Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-5667
FAX (505) 327-1496

RE: Tocito OrderNo.: 1509529

Dear Jesse Sprague:

Hall Environmental Analysis Laboratory received 4 sample(s) on 9/10/2015 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

Analytical Report
Lab Order **1509529**
Date Reported: **9/21/2015**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Client Sample ID: SB-3 @ 55'
Project: Tocito
Collection Date: 9/8/2015 2:10:00 PM
Lab ID: 1509529-001 **Matrix:** SOIL **Received Date:** 9/10/2015 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	71	30		mg/Kg	20	9/15/2015 11:30:22 PM	21315
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **KJH**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	9/16/2015 12:03:30 PM	21319
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/16/2015 12:03:30 PM	21319
Surr: DNOP	82.0	57.9-140		%REC	1	9/16/2015 12:03:30 PM	21319
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	6.7	4.9		mg/Kg	1	9/16/2015 9:44:50 AM	21284
Surr: BFB	96.4	75.4-113		%REC	1	9/16/2015 9:44:50 AM	21284
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	0.099	0.049		mg/Kg	1	9/16/2015 9:44:50 AM	21284
Toluene	0.12	0.049		mg/Kg	1	9/16/2015 9:44:50 AM	21284
Ethylbenzene	0.12	0.049		mg/Kg	1	9/16/2015 9:44:50 AM	21284
Xylenes, Total	0.39	0.098		mg/Kg	1	9/16/2015 9:44:50 AM	21284
Surr: 4-Bromofluorobenzene	106	80-120		%REC	1	9/16/2015 9:44:50 AM	21284

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		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Client Sample ID: SB-4 @ 35'
Project: Tocito
Collection Date: 9/9/2015 9:35:00 AM
Lab ID: 1509529-002 **Matrix:** SOIL **Received Date:** 9/10/2015 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	4500	150		mg/Kg	100	9/17/2015 2:35:05 AM	21315
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **KJH**	
Diesel Range Organics (DRO)	610	10		mg/Kg	1	9/16/2015 12:46:32 PM	21319
Motor Oil Range Organics (MRO)	280	50		mg/Kg	1	9/16/2015 12:46:32 PM	21319
Surr: DNOP	104	57.9-140		%REC	1	9/16/2015 12:46:32 PM	21319
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	17	9.5	D	mg/Kg	2	9/16/2015 11:00:52 AM	21284
Surr: BFB	154	75.4-113	SD	%REC	2	9/16/2015 11:00:52 AM	21284
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.095	D	mg/Kg	2	9/16/2015 11:00:52 AM	21284
Toluene	ND	0.095	D	mg/Kg	2	9/16/2015 11:00:52 AM	21284
Ethylbenzene	0.10	0.095	D	mg/Kg	2	9/16/2015 11:00:52 AM	21284
Xylenes, Total	0.66	0.19	D	mg/Kg	2	9/16/2015 11:00:52 AM	21284
Surr: 4-Bromofluorobenzene	115	80-120	D	%REC	2	9/16/2015 11:00:52 AM	21284

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		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Client Sample ID: SB-4 @ 55'
Project: Tocito
Collection Date: 9/9/2015 11:20:00 AM
Lab ID: 1509529-003 **Matrix:** SOIL **Received Date:** 9/10/2015 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	120	30		mg/Kg	20	9/15/2015 11:55:10 PM	21315
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **KJH**	
Diesel Range Organics (DRO)	14	10		mg/Kg	1	9/16/2015 3:05:31 PM	21319
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/16/2015 3:05:31 PM	21319
Surr: DNOP	78.8	57.9-140		%REC	1	9/16/2015 3:05:31 PM	21319
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	11	5.0		mg/Kg	1	9/16/2015 12:17:05 PM	21284
Surr: BFB	128	75.4-113	S	%REC	1	9/16/2015 12:17:05 PM	21284
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	0.090	0.050		mg/Kg	1	9/16/2015 12:17:05 PM	21284
Toluene	0.18	0.050		mg/Kg	1	9/16/2015 12:17:05 PM	21284
Ethylbenzene	0.23	0.050		mg/Kg	1	9/16/2015 12:17:05 PM	21284
Xylenes, Total	0.67	0.10		mg/Kg	1	9/16/2015 12:17:05 PM	21284
Surr: 4-Bromofluorobenzene	112	80-120		%REC	1	9/16/2015 12:17:05 PM	21284

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		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Client Sample ID: SB-5 @ 40'
Project: Tocito
Collection Date: 9/9/2015 3:25:00 PM
Lab ID: 1509529-004 **Matrix:** SOIL **Received Date:** 9/10/2015 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	1200	75		mg/Kg	50	9/17/2015 2:47:29 AM	21315
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **KJH**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	9/16/2015 3:48:35 PM	21319
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	9/16/2015 3:48:35 PM	21319
Surr: DNOP	84.4	57.9-140		%REC	1	9/16/2015 3:48:35 PM	21319
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	14	4.8		mg/Kg	1	9/16/2015 12:42:23 PM	21284
Surr: BFB	101	75.4-113		%REC	1	9/16/2015 12:42:23 PM	21284
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	2.5	0.048		mg/Kg	1	9/16/2015 12:42:23 PM	21284
Toluene	0.058	0.048		mg/Kg	1	9/16/2015 12:42:23 PM	21284
Ethylbenzene	0.14	0.048		mg/Kg	1	9/16/2015 12:42:23 PM	21284
Xylenes, Total	0.31	0.095		mg/Kg	1	9/16/2015 12:42:23 PM	21284
Surr: 4-Bromofluorobenzene	107	80-120		%REC	1	9/16/2015 12:42:23 PM	21284

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		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1509529**

21-Sep-15

Client: Souder, Miller and Associates

Project: Tocito

Sample ID	**MB-21315**	SampType:	**MBLK**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**21315**	RunNo:	**28884**					
Prep Date:	**9/15/2015**	Analysis Date:	**9/15/2015**	SeqNo:	**876240**	Units:	**mg/Kg**			

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

Sample ID	**LCS-21315**	SampType:	**LCS**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**21315**	RunNo:	**28884**					
Prep Date:	**9/15/2015**	Analysis Date:	**9/15/2015**	SeqNo:	**876241**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.3	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		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1509529**

21-Sep-15

Client: Souder, Miller and Associates

Project: Tocito

Sample ID **MB-21313**	SampType: **MBLK**			TestCode: **EPA Method 8015M/D: Diesel Range Organics**					
Client ID: **PBS**	Batch ID: **21313**			RunNo: **28881**					
Prep Date: **9/15/2015**	Analysis Date: **9/16/2015**			SeqNo: **876328**		Units: **%REC**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.8		10.00		87.9	57.9	140			

Sample ID **LCS-21313**	SampType: **LCS**			TestCode: **EPA Method 8015M/D: Diesel Range Organics**					
Client ID: **LCSS**	Batch ID: **21313**			RunNo: **28881**					
Prep Date: **9/15/2015**	Analysis Date: **9/16/2015**			SeqNo: **876329**		Units: **%REC**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.3		5.000		86.2	57.9	140			

Sample ID **MB-21319**	SampType: **MBLK**			TestCode: **EPA Method 8015M/D: Diesel Range Organics**					
Client ID: **PBS**	Batch ID: **21319**			RunNo: **28881**					
Prep Date: **9/15/2015**	Analysis Date: **9/16/2015**			SeqNo: **876353**		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	9.4		10.00		94.3	57.9	140			

Sample ID **LCS-21319**	SampType: **LCS**			TestCode: **EPA Method 8015M/D: Diesel Range Organics**					
Client ID: **LCSS**	Batch ID: **21319**			RunNo: **28881**					
Prep Date: **9/15/2015**	Analysis Date: **9/16/2015**			SeqNo: **876354**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	10	50.00	0	85.6	57.4	139			
Surr: DNOP	4.5		5.000		89.6	57.9	140			

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1509529**

21-Sep-15

Client: Souder, Miller and Associates

Project: Tocito

Sample ID	1509529-002AMS	SampType:	MS			TestCode:	EPA Method 8015D: Gasoline Range			
Client ID:	SB-4 @ 35'	Batch ID:	21284			RunNo:	28925			
Prep Date:	9/15/2015	Analysis Date:	9/16/2015			SeqNo:	877329	Units:	mg/Kg	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	47	9.6	47.94	17.26	61.7	62.5	151			S
Surr: BFB	3400		1918		176	75.4	113			S

Sample ID	1509529-002AMSD	SampType:	MSD			TestCode:	EPA Method 8015D: Gasoline Range			
Client ID:	SB-4 @ 35'	Batch ID:	21284			RunNo:	28925			
Prep Date:	9/15/2015	Analysis Date:	9/16/2015			SeqNo:	877330	Units:	mg/Kg	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	43	9.8	49.07	17.26	52.4	62.5	151	8.60	22.1	S
Surr: BFB	3200		1963		164	75.4	113	0	0	S

Sample ID	LCS-21284	SampType:	LCS			TestCode:	EPA Method 8015D: Gasoline Range			
Client ID:	LCSS	Batch ID:	21284			RunNo:	28925			
Prep Date:	9/14/2015	Analysis Date:	9/16/2015			SeqNo:	877364	Units:	mg/Kg	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	92.9	79.6	122			
Surr: BFB	940		1000		94.1	75.4	113			

Sample ID	MB-21284	SampType:	MBLK			TestCode:	EPA Method 8015D: Gasoline Range			
Client ID:	PBS	Batch ID:	21284			RunNo:	28925			
Prep Date:	9/14/2015	Analysis Date:	9/16/2015			SeqNo:	877366	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	860		1000		86.4	75.4	113			

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1509529**

21-Sep-15

Client: Souder, Miller and Associates
Project: Tocito

Sample ID	1509529-001AMS	SampType:	MS		TestCode:	EPA Method 8021B: Volatiles				
Client ID:	SB-3 @ 55'	Batch ID:	21284		RunNo:	28925				
Prep Date:	9/14/2015	Analysis Date:	9/16/2015		SeqNo:	877374	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.2	0.049	0.9747	0.09924	115	69.6	136			
Toluene	1.2	0.049	0.9747	0.1179	114	76.2	134			
Ethylbenzene	1.2	0.049	0.9747	0.1189	115	75.8	137			
Xylenes, Total	3.7	0.097	2.924	0.3926	115	78.9	133			
Surr: 4-Bromofluorobenzene	1.1		0.9747		114	80	120			

Sample ID	1509529-001AMSD	SampType:	MSD		TestCode:	EPA Method 8021B: Volatiles				
Client ID:	SB-3 @ 55'	Batch ID:	21284		RunNo:	28925				
Prep Date:	9/14/2015	Analysis Date:	9/16/2015		SeqNo:	877375	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.2	0.050	0.9970	0.09924	111	69.6	136	1.41	20	
Toluene	1.2	0.050	0.9970	0.1179	112	76.2	134	0.171	20	
Ethylbenzene	1.2	0.050	0.9970	0.1189	113	75.8	137	0.433	20	
Xylenes, Total	3.7	0.10	2.991	0.3926	110	78.9	133	1.44	20	
Surr: 4-Bromofluorobenzene	1.1		0.9970		114	80	120	0	0	

Sample ID	LCS-21284	SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles				
Client ID:	LCSS	Batch ID:	21284		RunNo:	28925				
Prep Date:	9/14/2015	Analysis Date:	9/16/2015		SeqNo:	877406	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.9	0.050	2.000	0	93.3	80	120			
Toluene	1.8	0.050	2.000	0	92.3	80	120			
Ethylbenzene	0.93	0.050	1.000	0	92.7	80	120			
Xylenes, Total	2.7	0.10	3.000	0	89.4	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120			

Sample ID	MB-21284	SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles				
Client ID:	PBS	Batch ID:	21284		RunNo:	28925				
Prep Date:	9/14/2015	Analysis Date:	9/16/2015		SeqNo:	877408	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120			

Qualifiers:

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

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: **SMA-FARM** Work Order Number: **1509529** RcptNo: **1**

Received by/date: JA 09/10/15

Logged By: **Ashley Gallegos** **9/10/2015 8:00:00 AM** AG

Completed By: **Ashley Gallegos** **9/11/2015 3:36:44 PM** AG

Reviewed By: 09/15/15

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	2.8	Good	Yes			

Chain-of-Custody Record

Client: SMA

Mailing Address: 401 W Broadway
Farmington, NM 87401

Phone #: 505 325 7535

email or Fax#: Jesse.Sprague@Sandwillr.com

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☑ Standard ☐ Rush _____

Project Name: Tocito

Project #:

Project Manager: Jesse Sprague

Sampler: JES

On Ice: ☒ Yes ☐ No

Sample Temperature: 2.9

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. 1509529	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 chlorides				Air Bubbles (Y or N)
9/8	1410	Soil	SB-3 @ 55'	1 4oz	—	-001	X		X									X				
9/9	0935	Soil	SB-4 @ 35'	"	—	-002	X		X									X				
9/9	1120	Soil	SB-4 @ 55'	"	—	-003	X		X									X				
9/9	1525	Soil	SB-5 @ 40'	"	—	-004	X		X									X				

Date	Time	Relinquished by:	Received by:	Date	Time
9/9/15	1705			9/9/15	1705
9/9/15	1737			09/10/15	0800

Remarks:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

September 22, 2015

Jesse Sprague
Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-5667
FAX (505) 327-1496

RE: Tocito OrderNo.: 1509586

Dear Jesse Sprague:

Hall Environmental Analysis Laboratory received 4 sample(s) on 9/11/2015 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

Analytical Report
Lab Order **1509586**
Date Reported: **9/22/2015**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Client Sample ID: SB-6@35'
Project: Tocito
Collection Date: 9/10/2015 8:50:00 AM
Lab ID: 1509586-001 **Matrix:** SOIL **Received Date:** 9/11/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	3600	150		mg/Kg	100	9/17/2015 12:40:40 PM	21348
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	610	10		mg/Kg	1	9/18/2015 5:02:26 PM	21285
Motor Oil Range Organics (MRO)	200	50		mg/Kg	1	9/18/2015 5:02:26 PM	21285
Surr: DNOP	104	57.9-140		%REC	1	9/18/2015 5:02:26 PM	21285
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	57	24	D	mg/Kg	5	9/16/2015 3:14:32 PM	21284
Surr: BFB	196	75.4-113	SD	%REC	5	9/16/2015 3:14:32 PM	21284
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.24	D	mg/Kg	5	9/16/2015 3:14:32 PM	21284
Toluene	ND	0.24	D	mg/Kg	5	9/16/2015 3:14:32 PM	21284
Ethylbenzene	0.46	0.24	D	mg/Kg	5	9/16/2015 3:14:32 PM	21284
Xylenes, Total	4.0	0.49	D	mg/Kg	5	9/16/2015 3:14:32 PM	21284
Surr: 4-Bromofluorobenzene	114	80-120	D	%REC	5	9/16/2015 3:14:32 PM	21284

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		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Client Sample ID: SB-6@45'
Project: Tocito
Collection Date: 9/10/2015 10:00:00 AM
Lab ID: 1509586-002 **Matrix:** SOIL **Received Date:** 9/11/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	380	30		mg/Kg	20	9/17/2015 1:33:01 AM	21348
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	19	9.7		mg/Kg	1	9/18/2015 5:30:02 PM	21285
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	9/18/2015 5:30:02 PM	21285
Surr: DNOP	92.3	57.9-140		%REC	1	9/18/2015 5:30:02 PM	21285
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	9.2	4.8		mg/Kg	1	9/16/2015 8:44:04 PM	21284
Surr: BFB	109	75.4-113		%REC	1	9/16/2015 8:44:04 PM	21284
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	0.21	0.048		mg/Kg	1	9/16/2015 8:44:04 PM	21284
Toluene	0.16	0.048		mg/Kg	1	9/16/2015 8:44:04 PM	21284
Ethylbenzene	0.16	0.048		mg/Kg	1	9/16/2015 8:44:04 PM	21284
Xylenes, Total	0.61	0.095		mg/Kg	1	9/16/2015 8:44:04 PM	21284
Surr: 4-Bromofluorobenzene	106	80-120		%REC	1	9/16/2015 8:44:04 PM	21284

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Client Sample ID: SB-7@40'
Project: Tocito
Collection Date: 9/10/2015 2:00:00 PM
Lab ID: 1509586-003 **Matrix:** SOIL **Received Date:** 9/11/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	2100	75		mg/Kg	50	9/17/2015 12:53:04 PM	21348
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	1400	50		mg/Kg	5	9/21/2015 1:45:55 PM	21285
Motor Oil Range Organics (MRO)	450	250		mg/Kg	5	9/21/2015 1:45:55 PM	21285
Surr: DNOP	125	57.9-140		%REC	5	9/21/2015 1:45:55 PM	21285
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	79	4.9		mg/Kg	1	9/16/2015 9:09:25 PM	21284
Surr: BFB	737	75.4-113	S	%REC	1	9/16/2015 9:09:25 PM	21284
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	0.57	0.049		mg/Kg	1	9/16/2015 9:09:25 PM	21284
Toluene	ND	0.049		mg/Kg	1	9/16/2015 9:09:25 PM	21284
Ethylbenzene	0.79	0.049		mg/Kg	1	9/16/2015 9:09:25 PM	21284
Xylenes, Total	0.30	0.098		mg/Kg	1	9/16/2015 9:09:25 PM	21284
Surr: 4-Bromofluorobenzene	149	80-120	S	%REC	1	9/16/2015 9:09:25 PM	21284

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		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Client Sample ID: SB-7@45'
Project: Tocito
Collection Date: 9/10/2015 2:40:00 PM
Lab ID: 1509586-004 **Matrix:** SOIL **Received Date:** 9/11/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	140	30		mg/Kg	20	9/17/2015 1:57:51 AM	21348
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	94	10		mg/Kg	1	9/18/2015 8:41:31 PM	21313
Motor Oil Range Organics (MRO)	62	51		mg/Kg	1	9/18/2015 8:41:31 PM	21313
Surr: DNOP	94.6	57.9-140		%REC	1	9/18/2015 8:41:31 PM	21313
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	9.8	4.9		mg/Kg	1	9/16/2015 9:34:52 PM	21284
Surr: BFB	151	75.4-113	S	%REC	1	9/16/2015 9:34:52 PM	21284
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	0.14	0.049		mg/Kg	1	9/16/2015 9:34:52 PM	21284
Toluene	0.099	0.049		mg/Kg	1	9/16/2015 9:34:52 PM	21284
Ethylbenzene	0.11	0.049		mg/Kg	1	9/16/2015 9:34:52 PM	21284
Xylenes, Total	0.25	0.098		mg/Kg	1	9/16/2015 9:34:52 PM	21284
Surr: 4-Bromofluorobenzene	108	80-120		%REC	1	9/16/2015 9:34:52 PM	21284

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		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1509586**

22-Sep-15

Client: Souder, Miller and Associates
Project: Tocito

Sample ID	**MB-21348**	SampType:	**MBLK**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**21348**	RunNo:	**28905**					
Prep Date:	**9/16/2015**	Analysis Date:	**9/16/2015**	SeqNo:	**876935**	Units:	**mg/Kg**			

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

Sample ID	**LCS-21348**	SampType:	**LCS**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**21348**	RunNo:	**28905**					
Prep Date:	**9/16/2015**	Analysis Date:	**9/16/2015**	SeqNo:	**876936**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.6	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		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1509586**

22-Sep-15

Client: Souder, Miller and Associates

Project: Tocito

Sample ID **MB-21285**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **21285**	RunNo: **28881**
Prep Date: **9/14/2015**	Analysis Date: **9/16/2015**	SeqNo: **876200** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.7		10.00		86.6	57.9	140			

Sample ID **LCS-21285**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **21285**	RunNo: **28881**
Prep Date: **9/14/2015**	Analysis Date: **9/16/2015**	SeqNo: **876201** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	40	10	50.00	0	80.4	57.4	139			
Surr: DNOP	4.1		5.000		82.2	57.9	140			

Sample ID **MB-21313**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **21313**	RunNo: **28881**
Prep Date: **9/15/2015**	Analysis Date: **9/16/2015**	SeqNo: **876328** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.8		10.00		87.9	57.9	140			

Sample ID **LCS-21313**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **21313**	RunNo: **28881**
Prep Date: **9/15/2015**	Analysis Date: **9/16/2015**	SeqNo: **876329** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	10	50.00	0	83.8	57.4	139			
Surr: DNOP	4.3		5.000		86.2	57.9	140			

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1509586**

22-Sep-15

Client: Souder, Miller and Associates

Project: Tocito

Sample ID **LCS-21284**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **21284**	RunNo: **28925**
Prep Date: **9/14/2015**	Analysis Date: **9/16/2015**	SeqNo: **877364** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	92.9	79.6	122			
Surr: BFB	940		1000		94.1	75.4	113			

Sample ID **MB-21284**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **21284**	RunNo: **28925**
Prep Date: **9/14/2015**	Analysis Date: **9/16/2015**	SeqNo: **877366** 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	860		1000		86.4	75.4	113			

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1509586**

22-Sep-15

Client: Souder, Miller and Associates

Project: Tocito

Sample ID **LCS-21284**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **21284**	RunNo: **28925**
Prep Date: **9/14/2015**	Analysis Date: **9/16/2015**	SeqNo: **877406** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.9	0.050	2.000	0	93.3	80	120			
Toluene	1.8	0.050	2.000	0	92.3	80	120			
Ethylbenzene	0.93	0.050	1.000	0	92.7	80	120			
Xylenes, Total	2.7	0.10	3.000	0	89.4	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120			

Sample ID **MB-21284**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **21284**	RunNo: **28925**
Prep Date: **9/14/2015**	Analysis Date: **9/16/2015**	SeqNo: **877408** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- 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

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: SMA-FARM | Work Order Number: 1509586 | RcptNo: 1

Received by/date: LM 09/11/15

Logged By: Celina Sessa 9/11/2015 7:00:00 AM Celina Sessa

Completed By: Celina Sessa 9/14/2015 2:17:55 PM Celina Sessa

Reviewed By: JA 09/15/15

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 ☐	
13. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
14. Is it clear what analyses were requested?	Yes ☑	No ☐	
15. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted?

Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.0	Good	Yes			

Chain-of-Custody Record

Client: SMA

Mailing Address: 401 W Broadway
Farmington NM 87401

Phone #: 505 325 7535

email or Fax#: Jesse.Sprague@soudermiller.com

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other ______

☐ EDD (Type) ______

Turn-Around Time:
☑ Standard ☐ Rush ______

Project Name: Tocito

Project #:

Project Manager: Jesse Sprague

Sampler: JES

On Ice: ☑ Yes ☐ No

Sample Temperature: 4.0

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. 1509586	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 Chlorides			Air Bubbles (Y or N)
9/10	0850	Soil	SB-6 @ 35'	1 4oz	—	-001	X		X									X			
↓	1000	↓	SB-6 @ 45'	↓	—	-002	X		X									X			
	1400		SB-7 @ 40'		—	-003	X		X									X			
↓	1440	↓	SB-7 @ 45'	↓	—	-004	X		X									X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/10/15	1820	← Jesse Sprague	Christ Walters	9/10/15	1820
9/10/15	1900	Christ Walters	[signature]	09/11/15	0700

Remarks:

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.

Appendix C
Permits and Clearances

APPROVED

Navajo Water Code Administration
Department of Water Resources
P.O. Box 678
Fort Defiance, Arizona 86504
Website: www.watercode.navajo-nsn.gov
Phone: (928) 729-4132 Fax: (928) 729-4421

Well Drilling Permit (WDP) NO: 19

REFERENCE WUP No:

VALID: JUL 13 2015 **TO** ~~AUG 31 2015~~ Extended OCT 31 2015 per Melvin Badonie 8/21/15

WATER WELL DRILLING APPLICATION/PERMIT

TRIBAL WELL NO:

DRILLER'S NAME Kelly Padilla PHONE NO: (505) 320-6671

ADDRESS: 134 C.R. 3000

CITY: Aztec STATE: NM ZIP: 87410

LICENSE NO: CONTACT PERSON: Kelly Padilla

APPLICATION/PERMIT TO: (✓) DRILL ( ) RE-DRILL ( ) RE-CASE ( ) DEEPEN

WELL USE: ( ) DOMESTIC ( ) AGRICULTURE/LIVESTOCK ( ) INDUSTRIAL/MINING
( ) MUNICIPAL ( ) RECREATIONAL (X) OTHER Investigation boreholes

PROPOSED: WELL DEPTH 75 FT WELL DIA. 6 IN CASING DIA. — IN
WEIGHT OF CASING — LBS/FT PRODUCTION CAPACITY — GPM

DRILLING METHOD HSA

PROPOSED DRILLING DATES: START 7 / 20 / 2015 COMPLETION 7 / 31 / 2015

LOCATION: CHAPTER NAME: Sanostee GRAZING DISTRICT 12

ATTACH AN 8 ½" X 11" TOPO MAP SHOWING THE LOCATION OF DRILLING

APPLICANT AGREES, AS A CONDITION AND CONSIDERATION FOR THE PERMIT, TO PROVIDE THE WATER CODE ADMINISTRATION, AT NO COST TO THE WCA, THE FOLLOWING INFORMATION UPON COMPLETION OF THE WELL:

- **A:** **A COMPLETED TRIBAL "WELL RECORD" FORM WITH SUMMARY DRILLER'S LOG INFORMATION AND GEOLOGIC FORMATIONS IDENTIFIED. (See last 2 pages of this form.)**
- **B:** **COPIES OF ALL WELL LOGS**
- **C:** **COPIES OF ALL CHEMICAL & BIOLOGICAL ANALYSES**

APPLICANT AGREES, AS A CONDITION FOR THE PERMIT, TO REASONABLE ACCESS TO, ENTRY UPON, AND INSPECTION OF THEIR PROJECT PREMISES BY NAVAJO NATION EMPLOYEES ENGAGED IN ADMINISTRATION OF THIS PERMIT.

APPLICANT NAME: Souder Miller and Associates

ADDRESS: 401 W Broadway CITY: Farmington STATE: NM

TELEPHONE NUMBER: (505) 325-7535 ZIP: 87401

FAX NUMBER: (505) 326-0045 E-MAIL Jesse.Sprague@soudermiller.com

APPLICANT'S SIGNATURE: Jesse E Sprague DATE: 5/6/2015

WDP NO: APPROVED 15 29

REF. WUP NO. _____

CONDITIONS!

The following data MUST BE furnished to the Water Code Administration within 30 days of completion of the well:

1. Driller's log;
2. Stratigraphic log (if done on the well);
3. Copies of all electric logs;
4. Any completed water quality analyses, including TDS, heavy metals, radionuclides, e-coli, total coliforms, VOCs, and so on;
5. Copy of completed well design and construction showing casing and well screen settings, gravel pack, and packer settings;
6. Cement bonding log;
7. Pump test data, recovery rates, static water level, etc.
8. Copies of any additional special tests conducted on the well.
9. Placing a well in service without submittal of the above information will result in a penalty, and may include fines, forfeiture of the well, and other appropriate measures.
10. Well may be utilized by local livestock permit holders in the area.

A water use permit is required to withdraw water from the new well, and such permit will only be valid if the appropriate data noted above have been supplied.

RECOMMENDATIONS

GRAZING COMMITTEE MEMBER/ DISTRICT LAND BOARD MEMBER (✓) YES( ) NO _____ DATE July 6, 2015

CHAPTER COUNCIL DELEGATE (✓) YES( ) NO _____ DATE July 7, 2015

WATER CODE ADMINISTRATOR ( ) YES( ) NO _____ DATE ___/___/___

TECHNICAL REVIEWER ( ) YES( ) NO _____ DATE ___/___/___

APPROVED: _____ DATE 7, 9, 15
Director, Department of Water Resources

August 19, 2015

Robert L. Bayless, Producer LLC
Attention: John D. Thomas
2700 N. Farmington Ave., Building F, Suite 1
Farmington, NM 87401

Dear Mr. Thomas:

Attached for your files is a copy of the Navajo Nation Archaeology Department's report NNAD 15-260. The archaeological inventory report details the results of the archaeological inventory and ethnographic assessment of an existing Tocito production pit location that requires a delineation plan to clear the area of contamination resulting from a crude oil spill. No cultural resources were encountered during the cultural resource inventory, thus, a determination of no historic properties affected is recommended for the proposed undertaking.

Please note that receipt of this report does not constitute approval. The report has been submitted to the Navajo Nation Historic Preservation Department (NNHPD) for review on behalf of the Bureau of Indian Affairs. Once a determination of archaeological approval has been made on your proposed undertaking, you will be notified by the NNHPD.

Should you have any questions concerning this report, contact me at (505) 368-1214.

Sincerely,

Aleda Myerson
Archaeological Technician

Enclosure

ARCHAEOLOGICAL INVENTORY REPORT DOCUMENTATION PAGE

1. RECIPIENTS ACCESSION NO.	2. (FOR HPD USE ONLY)	3. HPD REPORT NO.

4. TITLE OF REPORT:
A Cultural Resource Inventory and Ethnographic Assessment for an Existing Tocito Production Pit Spill Location South of Shiprock, San Juan County, New Mexico

AUTHOR(S): Aleda Myerson

5. FIELDWORK DATES
July 31, 2015

6. REPORT DATE
August 19, 2015

7. CONSULTANT NAME & ADDRESS:
General Charge: Linda Laughing, ASO/Acting Department Manager
Org. Name: Navajo Nation Archaeology Department
Org. Address: P. O. Box 689
Window Rock, Arizona 86515
Phone: (928) 871-6540

8. PERMIT NO.
NTC

9. CONSULTANT REPORT NO.
NNAD 15-260

10. SPONSOR NAME & ADDRESS:
Ind. Responsible: John D. Thomas
Org. Name: Robert L. Bayless, Producer LLC
Org. Address: 2700 N. Farmington Ave., Bldg F, Suite 1
Farmington, New Mexico 87401
Phone: (505) 326-2659

11. SPONSOR PROJECT NO.
N/A

12. AREA OF EFFECT: 0.05 acre/0.02 ha
AREA SURVEYED: 2.88 acres/1.17 ha

13. LOCATION:
a. Chapter: Sanostee
b. Agency: Shiprock
c. County: San Juan
d. State: New Mexico
e. Land Status: Tribal Trust
f. UTM Center: Zone 12, 4039239 N, 699227E (NAD 83 Datum)
g. Area: T.26N, R.18W; NE¼ NE¼, Sec. 20; NMPM (Derived from Robert L. Bayless, Producer LLC survey plat)
h. 7.5' Map Name(s): Sanostee East, N.Mex., 1966 (Photoinspected 1978)
i. Lead Agency: Bureau of Indian Affairs

14. REPORT OR SUMMARY ***(Attach additional pages if necessary)***

a. Description of Undertaking: On behalf of Robert L. Bayless, Producer LLC, John D. Thomas, Production and Asset Manager, proposes to clear up an existing production pit location as a result of an oil spill that requires a remediation plan. The company will, therefore, initiate corrective action of a hydrocarbon and water release associated with a below grade storage tank line failure at the Tocito Central Tank Battery. The area of potential effect for the Tocito pit location measures approximately 30 feet (9.15 m) wide by 40 feet (12.2 m) long by 25 feet (7.62 m) deep and encompasses 0.05 acre (0.02 ha). Ground disturbance, both surface and subsurface, will be extensive. Construction operations at the location will involve blading and leveling of the pit area, auger drilling, and soil borings to a depth of 75 feet. Soil borings will delineate the vertical and horizontal extents of the release and to determine extent of contamination is observed through field screening as well. Heavy equipment (drilling) will be used during construction. Access will be made by existing roads to the existing production pit location, and thus no new access route is required for the pit location.

b. Existing Data Review: See Supplemental Sheet

c. Area Environmental & Cultural Setting: See Supplemental Sheet

d. Field Methods: See Supplemental Sheet

15. CULTURAL RESOURCE FINDINGS ***(Attach additional pages if necessary)***

a. Location/Identification of Each Resource: No cultural resources were identified within the project area. According to the TCP records search, three TCPs are located within a 2.5 mile radius of the project area. These TCPs include #633–*Tse Naajiin*–Rock Coming Down Black/Bennett Peak/Toadlena, NM 1:100,000 scale map; #673–*Ndishchii' Jołt'o'ii*–Ponderosa That You Shoot At/Target Tree or Menefee Peak/Cortez, CO 1:100,000 scale map; and #794–*Tsezhin*-Lava Rock (near Sanostee)/Toadlena, NM 1:100,000 scale map. These TCPs will not be affected by the project.

b. Evaluation of Significance of Each Resource: N/A

16. MANAGEMENT SUMMARY/RECOMMENDATIONS: A determination of no historic properties affected is recommended for the proposed undertaking since no significant cultural resources meriting protection under any of the current legislation were encountered.

17. CERTIFICATION:

SIGNATURE: _____ **DATE:** _____
General Charge Name: Linda Laughing, ASO/Acting Department Manager

SIGNATURE: _____ **DATE:** August 19, 2015
Direct Charge Name: Aleda Myerson, Archaeological Technician

AIR Supplemental Sheet: NNAD 15-260

14. REPORT:

b. Existing Data Review: A check of Navajo Nation Historic Preservation Department and NNAD Shiprock office archival records was conducted prior to the inventory. As a result of the records search, there are no previous projects conducted and no sites recorded within a 500-foot (152.45-m) radius of the project area. A check of the NNHPD Traditional Cultural Program indicated that three traditional cultural properties (TCPs) are located within the project area. A TCP Record Search Verification Form is attached to this report and the TCPs are described further in the Cultural Resource Findings section of this report.

A check of Van Valkenburgh (1974) indicates the nearest recognized TCP is White Cone (*Séihiits'osi bikáą*—Slender Male Sand [pile]) located approximately 22 miles (35 km) southwest of the project area. A pertinent overview can be found in Geib and Warburton (1991).

Geib, Phil R., and Miranda Warburton
1991 *A Class I Cultural Resources and Ethnographic Overview of the Glen Canyon-Shiprock Transmission Line Corridor*. NNAD Report 91-016. Navajo Nation Archaeology Department, Window Rock, Arizona.

Van Valkenburgh, Richard F.
1974 Navajo Sacred Places. In *Navajo Indians III*, edited by Clyde Kluckhohn, pp. 9-199. Garland Publishing, New York, New York.

c. Area Environmental and Cultural Setting: The project area is located in the Tocito Dome Oil Field in terrain gently sloping to the east. An unnamed drainage is located 35 feet (107 m) to the south. The elevation of the project area is situated at approximately 5700 feet (1738 m) above mean sea level. Soils in the project area are comprised of silty loam. Vegetation observed in the project area includes Russian thistle, snakeweed, rabbitbrush, four-wing saltbush, daisies, and various grasses. Current development in the project area includes a nearby homestead, Tocito Tank Battery site, a gas pipeline, Tocito Dome Oil Field, and dirt roads.

d. Field Methods: On July 31, 2015, an archaeological inventory was conducted by Santana Yazzie and Aleda Myerson (both archaeological technicians of the NNAD). A Class III pedestrian inventory was conducted by walking concentric circular transects spaced 49.2 feet (15 m) apart extending out to a 200-foot (60.98-m) radius area centered over the 0.05-acre (0.02-ha) existing production pit area (30 feet [9.15 m] in width by 40 feet [12.2 m] in length). The total area inventoried equals approximately 2.88 acres (1.17 ha). The existing production pit was fenced in (wire fencing) and was located while in the field. The location point of the project area was collected in the field with a hand-held Garmin Global Positioning System unit. The data was downloaded utilizing Geographic Information System software for map preparation and report preparation. In accordance with NNHPD guidelines, an ethnographic interview was conducted with nearby local residents, Joe and Rose Barber, in order to secure information on potential TCPs and burials in the vicinity of the project area.

Figure 1. Map showing the general project vicinity. Indian Country Regional Map, n.d. (NNAD 15-260).

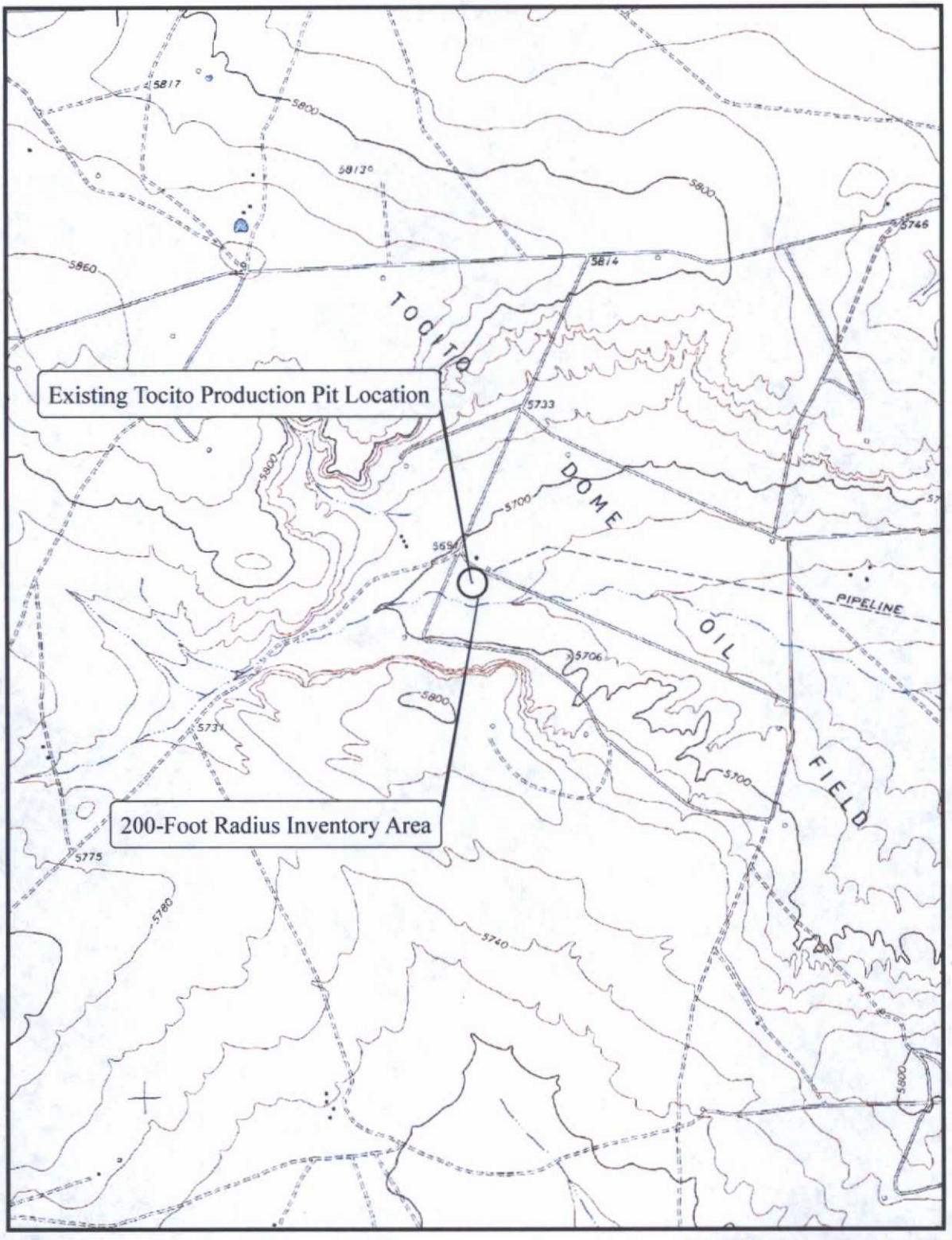

Figure 2. Location map showing project area. Sanostee East, N. Mex., 1966 (Photoinspected 1978), 7.5' series USGS map; T.26N, R.18W, NMPM (NNAD 15-260).

Jesse Sprague

From: Jesse Sprague
Sent: Thursday, August 20, 2015 3:37 PM
To: Melvin Badonie
Subject: Fwd: Request for in-field archaeological approval by August 24, 2015 for Tocito pit location

Per previous email...

Jesse E Sprague
Staff Scientist
505 392 0594

-------- Original message --------
From: John Thomas <jthomas@rlbayless.com>
Date:08/20/2015 14:08 (GMT-07:00)
To: Jesse Sprague <jesse.sprague@soudermiller.com>
Cc: Kevin McCord <KMcCord@rlbayless.com>
Subject: FW: Request for in-field archaeological approval by August 24, 2015 for Tocito pit location

Jesse,

I have a call in to HRL to set this up for next week. Are you available?

JT
John D Thomas
Production and Asset Manager

Robert L. Bayless, Producer LLC
2700 N. Farmington Ave. Building F Suite 1
Farmington, NM 87401
505-326-2659 Main
505-564-7806 Direct
505-320-5234 Cell
jthomas@rlbayless.com

From: ï»¿Navajo Archaeology- Shiprock Branch [mailto:ecmason@frontiernet.net]
Sent: Thursday, August 20, 2015 12:30 PM
To: John Thomas; NNAD Window Rock
Subject: Fw: Request for in-field archaeological approval by August 24, 2015 for Tocito pit location

Mr. Thomas

Per your request, this is the information pertaining to the in-field archaeological approval from NNHPD. Although they are out of the office, they were able to provide you approval to start on Monday. Thank you.

Elaine Cleveland-Mason
NNAD Shiprock Office
505-368-1507

On Wednesday, August 19, 2015 5:19 PM, Navajo Archaeology- Shiprock Branch <ecmason@frontiernet.net> wrote:

Tamara
On behalf of the client, I will contact him tomorrow to let him know he can proceed with the project undertaking on Monday. Thank you.

Elaine

On Wed, Aug 19, 2015 4:05 PM MDT Tamara Billie wrote:

>Elaine,
>
>Since no historic properties will be affected.. And the danger the spill poses to the environment, the project may proceed as stated in the undertaking of the NNAD report.
>
>I will complete the cultural resource compliance form when I return on Monday. I will need a signed copy of the report.
>
>Sent using OWA for iPhone
>_____
>From: ï»¿Navajo Archaeology- Shiprock Branch <ecmason@frontiernet.net>
>Sent: Wednesday, August 19, 2015 1:58:10 PM
>To: Ora V. Marek-Martinez; Tamara Billie; NNAD Window Rock
>Subject: Request for in-field archaeological approval by August 24, 2015 for Tocito pit location
>
>Ora and Tamara, NNHPD
>
>As mentioned earlier this morning, Mr. John Thomas, Production and Asset Manager, is in charge of a remediation plan that concerns an existing Tocito production pit location that requires cleanup activities due to a crude oil spill in the Tocito Dome Oil field located in the vicinity of Sanostee, New Mexico. No cultural resources were encountered within the project area. Three TCPS were noted but are located more than a quarter mile away from the project. The TCPS will not be affected by the project.
>Mr. Thomas is requesting in-field archaeological approval so that he can begin this cleanup starting no later than next Monday, August 24, 2015. He also mentioned that his permit is to expire at the end of the month and he will need all this time to get the job completed ASAP. Please see attached the NNAD 15-260 pdf file report for review and approval if possible by Monday so that the clean up activities can begin on Monday. Appreciate your attention to this matter. A hard copy of the report is

being submitted to the Window Rock office.
>
>Elaine Cleveland-Mason
>Archaeologist/Program Manager
>NNAD Shiprock Office
>505-368-1507
>
>

NNDFW Review No. 15TCTB01a3

BIOLOGICAL RESOURCES COMPLIANCE FORM
NAVAJO NATION DEPARTMENT OF FISH AND WILDLIFE
P.O. BOX 1480, WINDOW ROCK, ARIZONA 86515-1480

It is the Department's opinion the project described below, with applicable conditions, is in compliance with Tribal and Federal laws protecting biological resources including the Navajo Endangered Species and Environmental Policy Codes, U.S. Endangered Species, Migratory Bird Treaty, Eagle Protection and National Environmental Policy Acts. This form does not preclude or replace consultation with the U.S. Fish and Wildlife Service if a Federally-listed species is affected.

PROJECT NAME & NO.: Spill Remediation at Tocito Central Tank Battery

DESCRIPTION: Proposed correction action of a hydrocarbon and water release due to a below grade storage tank line failure. Remediation work would require drilling 4" soil borings to a depth of 75 ft. bgs inside and around the spill site to delineate the vertical and horizontal extent of contamination. The results will determine if additional excavation would be necessary for an appropriate plan of action.

LOCATION: Unit A (NE¼, NE¼), Section 20, T26N, R18W, Sanostee Chapter, San Juan County, New Mexico

REPRESENTATIVE: John D. Thomas, Production and Asset Manager, Robert L. Bayless, Producer LLC

ACTION AGENCY: Navajo Nation EPA deferred regulatory action to the NMOCD

B.R. REPORT TITLE / DATE / PREPARER: Request for biological clearance/20 JUL 2015/John D. Thomas

SIGNIFICANT BIOLOGICAL RESOURCES FOUND: Area 3. The area surrounding the tank battery is highly disturbed from oil & gas production activity, existing roads and homesites.

POTENTIAL IMPACTS

NESL SPECIES POTENTIALLY IMPACTED: NA

FEDERALLY-LISTED SPECIES AFFECTED: NA

OTHER SIGNIFICANT IMPACTS TO BIOLOGICAL RESOURCES: NA

AVOIDANCE / MITIGATION MEASURES: NA

CONDITIONS OF COMPLIANCE*: NA

FORM PREPARED BY / DATE: Pamela A. Kyselka/20 JUL 2015

COPIES TO: (add categories as necessary)

☐ _____ ☐ _____

2 NTC § 164 Recommendation: Signature Date

☒ Approval
☐ Conditional Approval (with memo)
☐ Disapproval (with memo)
☐ Categorical Exclusion (with request letter)
☐ None (with memo)

Gloria M. Tom, Director, Navajo Nation Department of Fish and Wildlife

7/23/15

*I understand and accept the conditions of compliance, and acknowledge that lack of signature may be grounds for the Department not recommending the above described project for approval to the Tribal Decision-maker.

Representative's signature Date

THE NAVAJO NATION

RUSSELL BEGAYE
JONATHAN NEZ

MEMORANDUM

TO : David Mikesic, Zoologist
Department of Fish and Wildlife
DIVISION OF NATURAL RESOURCES

FROM : Gloria M. Tom
Gloria M. Tom, Director
Department of Fish and Wildlife
DIVISION OF NATURAL RESOURCES

DATE : July 23, 2015

SUBJECT : **DELEGATION OF AUTHORITY**

I will be on Annual Leave on Thursday, July 23, 2015 and travel on Friday, July 24, 2015. Therefore, I am delegating you to act in the capacity of the Director, Department of Fish and Wildlife, effective at 8:00 am, July 23, 2015 and ending at 5:00 p.m., July 24, 2015.

Your authority will cover the review and signing off of all routine documents pertaining to the Department of Fish and Wildlife, except for issues that you feel should have the attention of the Director.

ACKNOWLEDGEMENT:

David Mikesic, Zoologist
Department of Fish and Wildlife
DIVISION OF NATURAL RESOURCE

xc: File