

Limited Site Investigation

Old Judicial Courthouse
100 Catron Street
Santa Fe, New Mexico

April 1, 2014
Terracon Project No. 66147006



Prepared for:
Santa Fe County
Santa Fe, New Mexico

Prepared by:
Terracon Consultants, Inc.
Albuquerque, New Mexico

Offices Nationwide
Employee-Owned

Established in 1965
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Terracon

Geotechnical ■ Environmental ■ Construction Materials ■ Facilities

April 1, 2014



Santa Fe County Public Works Department
Projects, Facilities and Open Space Division
PO Box 276
Santa Fe, New Mexico 87504-0276

Attn: Mr. Paul M. Olafson
P: (505) 992-9866
polafson@santafecountynm.gov

Re: Limited Site Investigation
Old Judicial Courthouse
100 Catron Street
Santa Fe, New Mexico
Terracon Project No. 66147006

Dear Mr. Olafson:

Terracon Consultants, Inc. (Terracon) is pleased to submit our report of Limited Site Investigation (LSI) activities completed at the site referenced above. The report presents data from recent field activities that included the completion of soil borings and the collection of soil samples for laboratory analysis. The activities were completed in response to your request for Letters of Interest dated October 10, 2013, requesting an assessment of the soil and groundwater of the site for evidence of impact of petroleum hydrocarbons from an off-site leaking underground storage tank (LUST) facility. Terracon conducted the LSI in general accordance with our proposal (P6613-086) dated November 6, 2013 and your notice to proceed dated January 30, 2014.

Terracon appreciates this opportunity to provide environmental engineering services to Santa Fe County. Should you have any questions or require additional information, please do not hesitate to contact our office.

Sincerely,
Terracon Consultants, Inc.

A handwritten signature in blue ink, appearing to read 'Julie A. Smith'.

Julie A. Smith
Environmental Scientist

A handwritten signature in blue ink, appearing to read 'Mark R. Hillier'.

Mark R. Hillier, P.G. (TX)
Department Manager



Terracon Consultants, Inc. 4905 Hawkins St. NE Albuquerque, New Mexico 87109
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**LIMITED SITE INVESTIGATION
OLD JUDICIAL COURTHOUSE
100 CATRON STREET
SANTA FE, NEW MEXICO**

**Terracon Project No. 66147006
April 1, 2014**

1.0 SITE DESCRIPTION

The site is located at 100 Catron Street, Santa Fe, New Mexico, and is comprised of one parcel encompassing approximately 2.35 acres of land developed with the former Santa Fe County Judicial Complex. The site is currently occupied by the Santa Fe County Sheriff's Department. A Topographic Map showing the site location is included as Exhibit 1 and a Site Diagram is included as Exhibit 2 in Appendix A.

Terracon received letter from Santa Fe County, dated October 10, 2013, requesting Letters of Interest for an assessment of the soil and groundwater of the site for evidence of impact of petroleum hydrocarbons from an off-site leaking underground storage tank (LUST) facility. The off-site LUST facility, historical Washington Avenue Gulf, is located approximately 0.2 mile east of the site in a hydrogeologically up-gradient position relative to the site. The underground storage tank (UST) system was removed from the facility in June 1992 and indications of releases were observed. Approximately 50 cubic yards of contaminated soil was removed from the property for off-site disposal and confirmation soil samples collected from the excavation indicated that in-situ concentrations of petroleum constituents were within acceptable limits.

In 1995, additional soil samples taken across the facility and in surface areas of observed staining resulted in additional excavation, to a depth of 15 feet below ground surface (bgs), in the former building bay area. Confirmation samples collected at the base of the excavation indicated in-situ contaminant concentrations were within acceptable limits. The excavation was subsequently backfilled with clean fill and compacted. No groundwater was encountered during soil removal in 1992 or the soil removal in 1995.

2.0 SCOPE OF SERVICES

Terracon's LSI was undertaken in response to your letter dated October 10, 2013, requesting an assessment of the soil and groundwater of the site for evidence of impact of petroleum hydrocarbons from an off-site LUST facility. The objective of this LSI was to evaluate the presence of total petroleum hydrocarbons (TPH), benzene, toluene, ethyl benzene, total xylenes, methyl tert-butyl ether and trimethylbenzene (BETEX/MTBE/TMB) above relevant laboratory reporting limits in the on-site soils and groundwater as a result of potential releases

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from the historical Washington Avenue Gulf LUST facility located approximately 0.2-miles east of the site in a hydrogeologically up-gradient position relative to the site.

The LSI was conducted to determine the presence or absence of indicator contaminants associated with the off-site gas station. The scope of services was not intended to identify every chemical possibly associated with the site. Similarly, the proposed scope was not intended to determine the extent or magnitude of any existing contamination.

2.1 Standard of Care

Terracon's services were performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time. Terracon makes no warranties, either express or implied, regarding the findings, conclusions, or recommendations. Please note that Terracon does not warrant the work of laboratories, regulatory agencies, or other third parties supplying information used in the preparation of the report. These LSI services were performed in accordance with the scope of work agreed with you, our client, as reflected in our proposal and were not restricted by ASTM E1903-11.

2.2 Additional Scope Limitations

Findings, conclusions, and recommendations resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work; such information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, non-detectable, or not present during these services. We cannot represent that the site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this LSI. Subsurface conditions may vary from those encountered at specific borings or wells or during other surveys, tests, assessments, investigations, or exploratory services. The data, interpretations, findings, and our recommendations are based solely upon data obtained at the time and within the scope of these services.

2.3 Reliance

This report has been prepared for the exclusive use of Santa Fe County and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the site) is prohibited without the express written authorization of Santa Fe County and Terracon. Any unauthorized distribution or reuse is at Santa Fe County's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions, and limitations stated in the proposal, LSI report, and the Professional Services Agreement between Terracon and Santa Fe County dated January 30, 2013. The limitation of liability defined in the terms and

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conditions is the aggregate limit of Terracon's liability to Santa Fe County and all relying parties unless otherwise agreed in writing.

3.0 FIELD INVESTIGATION

Terracon conducted the fieldwork under a safety plan developed for this project. Work was performed using United States Occupational Health and Safety Administration (OSHA) Level D work attire consisting of hard hats, safety glasses, protective gloves, and protective boots. Terracon contacted the State of New Mexico Hotline and requested location and markings for all utilities that the service was responsible for before commencing intrusive activities at the site. In addition, a private utility locator was contracted to locate private utilities in the vicinity of the planned borings.

Terracon advanced three soil borings in the eastern portion of the site. Soil boring B-1, located in the northeast corner of the site, was advanced to a depth of 40 feet bgs, where auger refusal was encountered. Soil boring B-2, located near the east entrance to the on-site building, was advanced to a depth of 54 feet bgs, where auger refusal was encountered. Soil boring B-3, located near the parking lot exit gate along Grant Avenue, was advanced to a depth of 64 feet bgs, where auger refusal was encountered on bedrock. Terracon collected soil samples continuously for observation and field screening, and selected two soil samples from each soil boring for laboratory analysis. Groundwater was not encountered during the advancement of soil borings B-1, B-2 or B-3.

Terracon field screened soil samples for organic vapors using a photoionization detector (PID). This device provides a direct reading in parts per million (ppm) isobutylene equivalents. Upon removal of the sampler from the borehole, Terracon put a portion of each sample in a sealable plastic bag. After a stabilization period, Terracon screened the headspace above the soil using the PID equipped with a 10.2 electron-volt (eV) ultraviolet lamp source. Terracon calibrated the PID in accordance with the manufacturer's recommendations before the field activities. The boring logs include the field screening results for each soil boring. Elevated PID screening results were not observed during the field screening activities. Based on an absence of elevated PID readings, Terracon selected soil samples from depths of approximately 15 feet bgs and from the bottom of the borings for laboratory analysis.

After packaging each sample in laboratory-provided containers, Terracon recorded the sample time on each container label in permanent ink and place the filled containers in an ice-filled cooler for transport to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico, a National Environmental Laboratory Accreditation Program (NELAP)-accredited laboratory (NM100001).

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The samples were analyzed for TPH using United States Environmental Protection Agency (USEPA) SW-846 Method 8015D and for BTEX/MTBE/TMB using USEPA SW-846 Method 8260B.

Based on an absence of encountered groundwater, Terracon abandoned the borings with cement-bentonite grout upon completion of field activities. The bricks that were removed in order to drill soil boring B-2 were restored to their original placement upon completion of drilling.

4.0 RESULTS OF THE FIELD INVESTIGATION

4.1 Geology/Hydrogeology

The boring logs in Appendix B detail the observed soil stratigraphy. In general, Terracon encountered fill material consisting of silty well-graded sand from the surface to approximately two to five feet bgs. Silty sand, sandy silt, poorly graded sand and silt were encountered below the fill to depths of between 16 feet bgs to 30 feet bgs, where well-graded sands were encountered to the termini of the soil borings at depths ranging from 40 feet bgs to 64 feet bgs. The borings were terminated due to auger refusal on bedrock.

4.2 Field Screening

The field screening results are summarized on the boring logs in Appendix B. Elevated PID readings were not detected in the soil samples collected from soil borings B-1 through B-3.

5.0 ANALYTICAL RESULTS

The laboratory analytical report and chain-of-custody record are attached in Appendix C. The following sections describe the results of the testing.

Based on the results of laboratory analyses, TPH and BTEX/MTBE/TMBs were not detected above the laboratory reporting limits in the soil samples collected from soil borings B-1, B-2 and B-3.

6.0 INVESTIGATION DERIVED WASTES

Six 55-gallon drums of drill cuttings were containerized during the field activities. Based on the absence of detected concentrations of TPH or BTEX/MTBE/TMBs, the soil may be disposed on- or off-site as unaffected material.

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7.0 CONCLUSIONS

Based on the scope of services described in this report and subject to the limitations described herein, Terracon concludes the following.

- The on-site soils in the vicinity of soil borings B-1, B-2 and B-3 have not been affected by releases of TPH or BTEX/MTBE/TMP at concentrations exceeding laboratory reporting limits.
- Based on the absence of detected concentrations of TPH or BTEX/MTBE/TMBs in the soil samples collected at the site, releases at the off-site historical Washington Avenue Gulf station do not appear to have the on-site soils above 64 feet bgs.

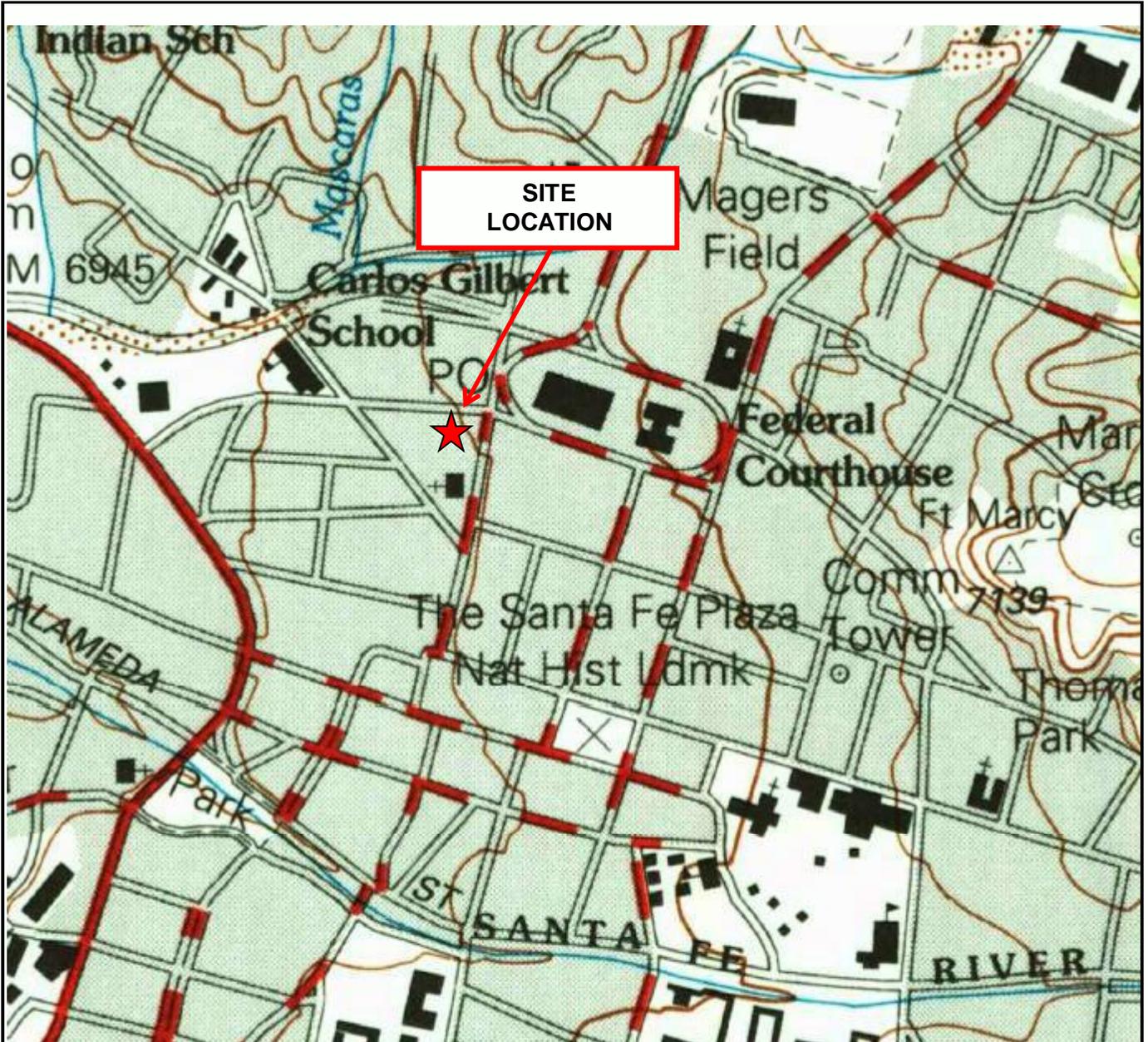
8.0 RECOMMENDATIONS

Based on the results of this investigation, Terracon does not recommend further environmental investigation of potential impacts to the site from the historical off-site Washington Avenue Gulf station.

APPENDIX A – EXHIBITS

Exhibit 1 – Topographic Map

Exhibit 2 – Site Diagram



USGS Santa Fe, NM published 2002 (1:24,000)

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES



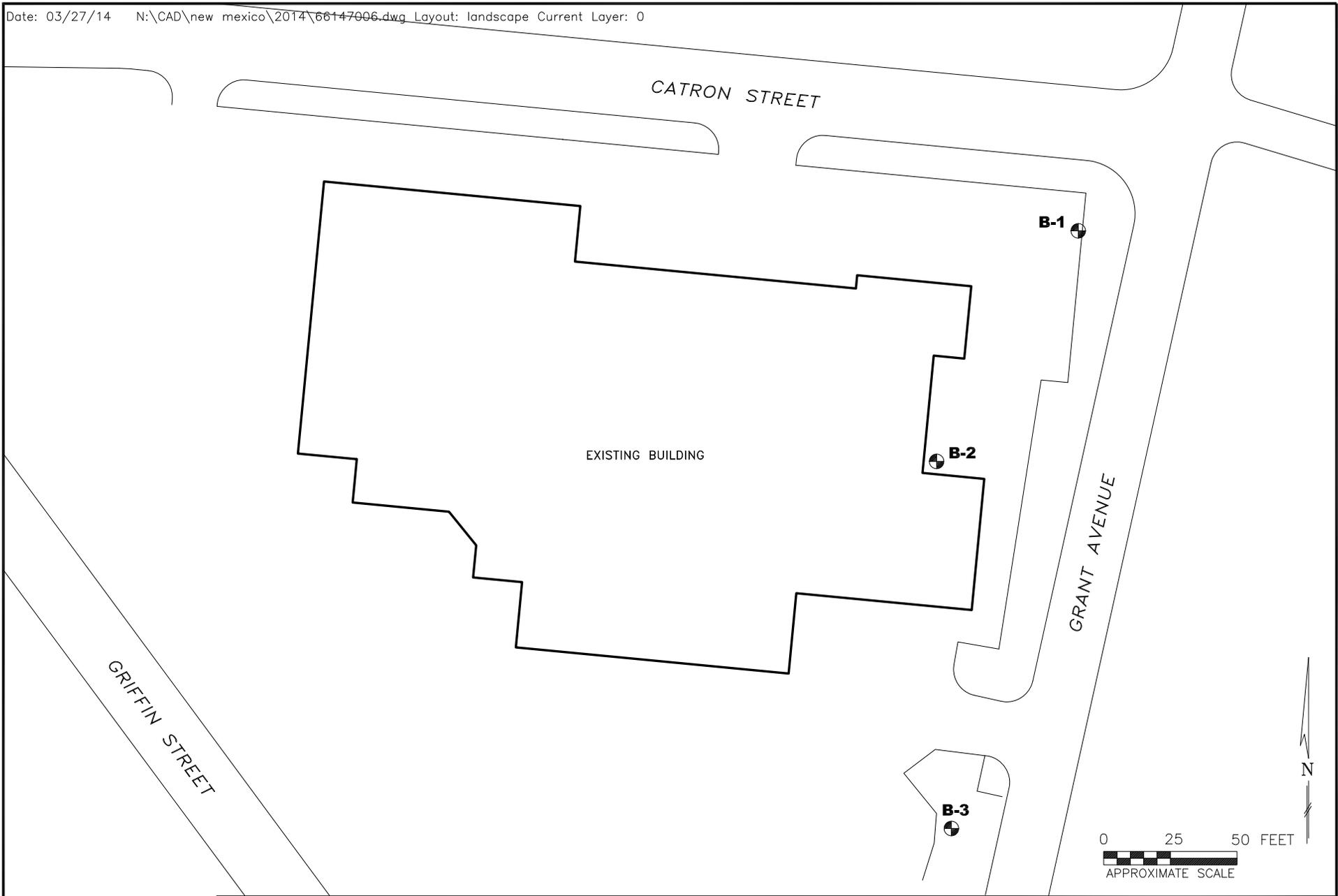
Project Manager: MRH	Project No. 66147006
Drawn by: JAS	Scale: 1 ≈ 400'
Checked by: MRH	File Name:
Approved by: MRH	Date: March 2014

Terracon
Consulting Engineers & Scientists

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SITE TOPOGRAPHIC MAP
OLD JUDICIAL COURTHOUSE 100 CATRON STREET SANTA FE, SANTA FE COUNTY, NEW MEXICO

EXHIBIT
1



THIS DRAWING SHOULD NOT BE USED SEPARATELY FROM ORIGINAL REPORT.

NOTE: ALL BORING LOCATIONS ARE APPROXIMATE.

Project Mngr:	JAS
Drawn By:	CDD
Checked By:	JAS
Approved By:	MRH

Project No.	66147006
Scale:	AS SHOWN
Date:	03/27/14

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BORING LOCATION PLAN

OLD JUDICIAL COURT HOUSE
 100 CATRON STREET
 SANTA FE, NEW MEXICO

EXHIBIT

2

APPENDIX B – SOIL BORING LOGS

General Notes

Unified Soil Classification System

Boring Logs for B-1 through B-3

GENERAL NOTES

DRILLING & SAMPLING SYMBOLS:

SS:	Split Spoon – 1- ³ / ₈ " I.D., 2" O.D., unless otherwise noted	HS:	Hollow Stem Auger
ST:	Thin-Walled Tube - 3" O.D., unless otherwise noted	PA:	Power Auger
RS:	Ring Sampler - 2.42" I.D., 3" O.D., unless otherwise noted	HA:	Hand Auger
DB:	Diamond Bit Coring - 4", N, B	RB:	Rock Bit
BS:	Bulk Sample or Auger Sample	WB:	Wash Boring or Mud Rotary

The number of blows required to advance a standard 2-inch O.D. split-spoon sampler (SS) the last 12 inches of the total 18-inch penetration with a 140-pound hammer falling 30 inches is considered the "Standard Penetration" or "N-value".

WATER LEVEL MEASUREMENT SYMBOLS:

WL:	Water Level	WS:	While Sampling	N/E:	Not Encountered
WCI:	Wet Cave in	WD:	While Drilling		
DCI:	Dry Cave in	BCR:	Before Casing Removal		
AB:	After Boring	ACR:	After Casing Removal		

Water levels indicated on the boring logs are the levels measured in the borings at the times indicated. Groundwater levels at other times and other locations across the site could vary. In pervious soils, the indicated levels may reflect the location of groundwater. In low permeability soils, the accurate determination of groundwater levels may not be possible with only short-term observations.

DESCRIPTIVE SOIL CLASSIFICATION: Soil classification is based on the Unified Soil Classification System. Coarse Grained Soils have more than 50% of their dry weight retained on a #200 sieve; their principal descriptors are: boulders, cobbles, gravel or sand. Fine Grained Soils have less than 50% of their dry weight retained on a #200 sieve; they are principally described as clays if they are plastic, and silts if they are slightly plastic or non-plastic. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size. In addition to gradation, coarse-grained soils are defined on the basis of their in-place relative density and fine-grained soils on the basis of their consistency.

CONSISTENCY OF FINE-GRAINED SOILS

<u>Unconfined Compressive Strength, Qu, psf</u>	<u>Standard Penetration or N-value (SS) Blows/Ft.</u>	<u>Consistency</u>
< 500	0-1	Very Soft
500 – 1,000	2-3	Soft
1,001 – 2,000	4-6	Medium Stiff
2,001 – 4,000	7-12	Stiff
4,001 – 8,000	13-26	Very Stiff
8,000+	26+	Hard

RELATIVE DENSITY OF COARSE-GRAINED SOILS

<u>Standard Penetration or N-value (SS) Blows/Ft.</u>	<u>Ring Sampler (RS) Blows/Ft.</u>	<u>Relative Density</u>
0 – 3	0-6	Very Loose
4 – 9	7-18	Loose
10 – 29	19-58	Medium Dense
30 – 49	59-98	Dense
50+	99+	Very Dense

RELATIVE PROPORTIONS OF SAND AND GRAVEL

<u>Descriptive Term(s) of other Constituents</u>	<u>Percent of Dry Weight</u>
Trace	< 15
With	15 – 30
Modifier	> 30

GRAIN SIZE TERMINOLOGY

<u>Major Component of Sample</u>	<u>Particle Size</u>
Boulders	Over 12 in. (300mm)
Cobbles	12 in. to 3 in. (300mm to 75 mm)
Gravel	3 in. to #4 sieve (75mm to 4.75 mm)
Sand	#4 to #200 sieve (4.75mm to 0.075mm)
Silt or Clay	Passing #200 Sieve (0.075mm)

RELATIVE PROPORTIONS OF FINES

<u>Descriptive Term(s) of other Constituents</u>	<u>Percent of Dry Weight</u>
Trace	< 5
With	5 – 12
Modifier	> 12

PLASTICITY DESCRIPTION

<u>Term</u>	<u>Plasticity Index</u>
Non-plastic	0
Low	1-10
Medium	11-30
High	30+

UNIFIED SOIL CLASSIFICATION SYSTEM

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests^A

			Soil Classification		
			Group Symbol	Group Name ^B	
Coarse Grained Soils More than 50% retained on No. 200 sieve	Gravels More than 50% of coarse fraction retained on No. 4 sieve	Clean Gravels Less than 5% fines ^C	$Cu \geq 4$ and $1 \leq Cc \leq 3^E$	GW	Well-graded gravel ^F
		Gravels with Fines More than 12% fines ^C	$Cu < 4$ and/or $1 > Cc > 3^E$	GP	Poorly graded gravel ^F
	Sands 50% or more of coarse fraction passes No. 4 sieve	Clean Sands Less than 5% fines ^D	Fines classify as ML or MH	GM	Silty gravel ^{F,G,H}
		Sands with Fines More than 12% fines ^D	Fines classify as CL or CH	GC	Clayey gravel ^{F,G,H}
		Clean Sands Less than 5% fines ^D	$Cu \geq 6$ and $1 \leq Cc \leq 3^E$	SW	Well-graded sand ^I
		Sands with Fines More than 12% fines ^D	$Cu < 6$ and/or $1 > Cc > 3^E$	SP	Poorly graded sand ^I
Fine-Grained Soils 50% or more passes the No. 200 sieve	Silts and Clays Liquid limit less than 50	inorganic	$PI > 7$ and plots on or above "A" line ^J	CL	Lean clay ^{K,L,M}
		organic	$PI < 4$ or plots below "A" line ^J	ML	Silt ^{K,L,M}
		inorganic	$\frac{\text{Liquid limit - oven dried}}{\text{Liquid limit - not dried}} < 0.75$	OL	Organic clay ^{K,L,M,N}
		organic	$\frac{\text{Liquid limit - oven dried}}{\text{Liquid limit - not dried}} < 0.75$	OH	Organic silt ^{K,L,M,O}
	Silts and Clays Liquid limit 50 or more	inorganic	PI plots on or above "A" line	CH	Fat clay ^{K,L,M}
		organic	PI plots below "A" line	MH	Elastic Silt ^{K,L,M}
		inorganic	$\frac{\text{Liquid limit - oven dried}}{\text{Liquid limit - not dried}} < 0.75$	OH	Organic clay ^{K,L,M,P}
		organic	$\frac{\text{Liquid limit - oven dried}}{\text{Liquid limit - not dried}} < 0.75$	OH	Organic silt ^{K,L,M,O}
Highly organic soils	Primarily organic matter, dark in color, and organic odor		PT	Peat	

^ABased on the material passing the 3-in. (75-mm) sieve

^BIf field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

^CGravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.

^DSands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay

$$^E Cu = D_{60}/D_{10} \quad Cc = \frac{(D_{30})^2}{D_{10} \times D_{60}}$$

^FIf soil contains $\geq 15\%$ sand, add "with sand" to group name.

^GIf fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

^HIf fines are organic, add "with organic fines" to group name.

^IIf soil contains $\geq 15\%$ gravel, add "with gravel" to group name.

^JIf Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.

^KIf soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.

^LIf soil contains $\geq 30\%$ plus No. 200 predominantly sand, add "sandy" to group name.

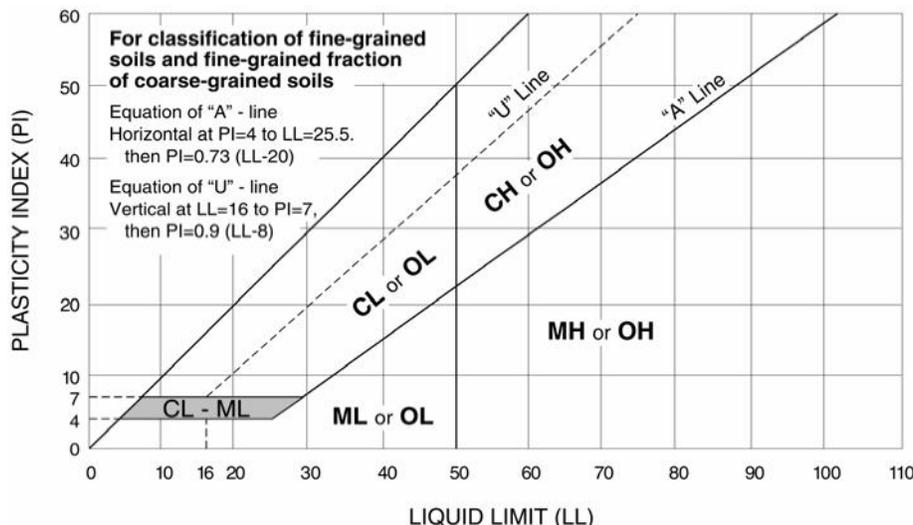
^MIf soil contains $\geq 30\%$ plus No. 200, predominantly gravel, add "gravelly" to group name.

^N $PI \geq 4$ and plots on or above "A" line.

^O $PI < 4$ or plots below "A" line.

^P PI plots on or above "A" line.

^Q PI plots below "A" line.



BORING LOG NO. B-1

PROJECT: Old Judicial Courthouse

CLIENT: Santa Fe County Purchasing Division

SITE: 100 Catron Street
Santa Fe, New Mexico

GRAPHIC LOG	LOCATION: Corner of Grant and Catron Street	INSTALLATION DETAILS	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	Sample	SOIL PID
	DEPTH						
	3.0 FILL - SILTY SAND (SM) , fine grained, brown, mix of ash, damp					1.3	
	SILTY SAND (SM) , trace clay, brown, damp -becomes light brown		5			0.4 1.0 3.8 2.9 2.9 1.8	
	16.0 WELL GRADED SAND WITH SILT (SW-SM) , brown, gravelly, fine to coarse grained, brown, damp, weakly cemented		15			2.4	
			20			2.7 2.0 1.4 2.2	
			25			2.7	
			30			2.0 2.6	
			35			2.7 3.1	
	40.0 Auger refusal at 40 Feet		40			4.0	

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method: Hollow stem auger	See Exhibit B for description of field procedures See Appendix B for description of laboratory procedures and additional data (if any). See Appendix B for explanation of symbols and abbreviations.	Notes:	
Abandonment Method: Borings backfilled with cement-bentonite grout upon completion.			
WATER LEVEL OBSERVATIONS Water not encountered		Boring Started: 3/11/2014 Drill Rig: CME-75 Project No.: 66147006	Boring Completed: 3/11/2014 Driller: Enviro-Drill Exhibit: B-1

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-WELL. BORING LOGS.GPJ. TERRACON.STD. TEMPLATE.GDT. 4/1/14

BORING LOG NO. B-2

PROJECT: Old Judicial Courthouse

CLIENT: Santa Fe County Purchasing Division

SITE: 100 Catron Street
Santa Fe, New Mexico

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-WELL BORING LOGS.GPJ TERRACON STD. TEMPLATE GDT 4/1/14

GRAPHIC LOG	LOCATION: Near the building wall on the Catron Street side	INSTALLATION DETAILS	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	Sample	SOIL PID
DEPTH							
5.0	FILL - WELL GRADED SAND (SW) , light brown, moist		5			2.8	
20.0	SILTY SAND (SM) , brown, damp -becomes moist and poorly graded -interbedded sandy silt approximately 3-inches in length		10 15			3.2 4.1	
54.0	WELL GRADED SAND (SW) , with silt, brown, gravelly, fine to coarse grained, brown, damp, weakly cemented		20 25 30 35 40 45 50			2.1 2.9 3.2 4.9 2.7 2.3 4.9	
	Auger refusal at 54 Feet					4.1	

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method: Hollow stem auger	See Exhibit B for description of field procedures See Appendix B for description of laboratory procedures and additional data (if any). See Appendix B for explanation of symbols and abbreviations.	Notes:
Abandonment Method: Borings backfilled with cement-bentonite grout upon completion.		
WATER LEVEL OBSERVATIONS Water not encountered		Boring Started: 3/12/2014 Drill Rig: CME-75 Project No.: 66147006
		Boring Completed: 3/12/2014 Driller: Enviro-Drill Exhibit: B-2

BORING LOG NO. B-3

PROJECT: Old Judicial Courthouse

CLIENT: Santa Fe County Purchasing Division

SITE: 100 Catron Street
Santa Fe, New Mexico

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-WELL BORING LOGS.GPJ TERRACON_STD_TEMPLATE.GDT 4/1/14

GRAPHIC LOG	LOCATION: Near the parking lot exit along Catron Street	INSTALLATION DETAILS	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	Sample	SOIL PID
	DEPTH						
	2.0 FILL - SILT (ML) , dark brown, ash, brick pieces, 3/4-inch base course, moist						
	SILTY SAND (SM) , brown, moist		5			0.4	
			10			0.6	
			15			1.2	
	-becomes light brown, damp		20			1.3	
			25			1.5	
	-interbedded 4-inch interval of clayey silt, dark brown, moist		30			2.1	
	34.0 -interbedded 2-inches interval of clayey silt, brown and grey, moist, no hydrocarbon odor		35			1.4	
	WELL GRADED SAND (SW) , gravelly, fine to coarse grained, brown, damp, weakly cemented		40			4.1	
			45			1.4	
			50			2.3	
			55			4.7	
			60			1.6	
	64.0 Auger refusal at 64 Feet					2.5	

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method: Hollow stem auger	See Exhibit B for description of field procedures See Appendix B for description of laboratory procedures and additional data (if any). See Appendix B for explanation of symbols and abbreviations.	Notes:
Abandonment Method: Borings backfilled with cement-bentonite grout upon completion.		
WATER LEVEL OBSERVATIONS Water not encountered		Boring Started: 3/13/2014 Drill Rig: CME-75 Project No.: 66147006
		Boring Completed: 3/13/2014 Driller: Enviro-Drill Exhibit: B-3

**APPENDIX C – ANALYTICAL REPORT AND CHAIN OF
CUSTODY**



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

March 20, 2014

Mark Hillier

Terracon

4905 Hawkins, NE

Albuquerque, NM 87109

TEL: (505) 715-0375

FAX (505) 797-4288

RE: Old Santa Fe County Courthouse

OrderNo.: 1403588

Dear Mark Hillier:

Hall Environmental Analysis Laboratory received 4 sample(s) on 3/12/2014 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 qualifiers 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,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a white background.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1403588

Date Reported: 3/20/2014

CLIENT: Terracon

Client Sample ID: B1 (14-16)

Project: Old Santa Fe County Courthouse

Collection Date: 3/11/2014 11:00:00 AM

Lab ID: 1403588-001

Matrix: SOIL

Received Date: 3/12/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	3/17/2014 3:36:07 PM	12179
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	3/17/2014 3:36:07 PM	12179
Surr: DNOP	90.1	66-131		%REC	1	3/17/2014 3:36:07 PM	12179
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/18/2014 9:22:43 PM	12182
Surr: BFB	89.9	74.5-129		%REC	1	3/18/2014 9:22:43 PM	12182
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: cadg
Methyl tert-butyl ether (MTBE)	ND	0.048		mg/Kg	1	3/17/2014 3:08:27 PM	12182
Benzene	ND	0.048		mg/Kg	1	3/17/2014 3:08:27 PM	12182
Toluene	ND	0.048		mg/Kg	1	3/17/2014 3:08:27 PM	12182
Ethylbenzene	ND	0.048		mg/Kg	1	3/17/2014 3:08:27 PM	12182
Xylenes, Total	ND	0.096		mg/Kg	1	3/17/2014 3:08:27 PM	12182
1,2,4-Trimethylbenzene	ND	0.048		mg/Kg	1	3/17/2014 3:08:27 PM	12182
1,3,5-Trimethylbenzene	ND	0.048		mg/Kg	1	3/17/2014 3:08:27 PM	12182
Surr: 1,2-Dichloroethane-d4	107	70-130		%REC	1	3/17/2014 3:08:27 PM	12182
Surr: 4-Bromofluorobenzene	86.8	70-130		%REC	1	3/17/2014 3:08:27 PM	12182
Surr: Dibromofluoromethane	108	70-130		%REC	1	3/17/2014 3:08:27 PM	12182
Surr: Toluene-d8	91.5	70-130		%REC	1	3/17/2014 3:08:27 PM	12182

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	
	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	Page 1 of 7
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1403588

Date Reported: 3/20/2014

CLIENT: Terracon

Client Sample ID: B1 (35-40)

Project: Old Santa Fe County Courthouse

Collection Date: 3/11/2014 2:00:00 PM

Lab ID: 1403588-002

Matrix: SOIL

Received Date: 3/12/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	3/17/2014 4:06:55 PM	12179
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	3/17/2014 4:06:55 PM	12179
Surr: DNOP	97.3	66-131		%REC	1	3/17/2014 4:06:55 PM	12179
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/18/2014 9:51:19 PM	12182
Surr: BFB	90.1	74.5-129		%REC	1	3/18/2014 9:51:19 PM	12182
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: cadg
Methyl tert-butyl ether (MTBE)	ND	0.049		mg/Kg	1	3/17/2014 3:37:19 PM	12182
Benzene	ND	0.049		mg/Kg	1	3/17/2014 3:37:19 PM	12182
Toluene	ND	0.049		mg/Kg	1	3/17/2014 3:37:19 PM	12182
Ethylbenzene	ND	0.049		mg/Kg	1	3/17/2014 3:37:19 PM	12182
Xylenes, Total	ND	0.097		mg/Kg	1	3/17/2014 3:37:19 PM	12182
1,2,4-Trimethylbenzene	ND	0.049		mg/Kg	1	3/17/2014 3:37:19 PM	12182
1,3,5-Trimethylbenzene	ND	0.049		mg/Kg	1	3/17/2014 3:37:19 PM	12182
Surr: 1,2-Dichloroethane-d4	98.9	70-130		%REC	1	3/17/2014 3:37:19 PM	12182
Surr: 4-Bromofluorobenzene	92.0	70-130		%REC	1	3/17/2014 3:37:19 PM	12182
Surr: Dibromofluoromethane	101	70-130		%REC	1	3/17/2014 3:37:19 PM	12182
Surr: Toluene-d8	86.4	70-130		%REC	1	3/17/2014 3:37:19 PM	12182

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
	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
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1403588

Date Reported: 3/20/2014

CLIENT: Terracon

Client Sample ID: B2 (15-20)

Project: Old Santa Fe County Courthouse

Collection Date: 3/12/2014 11:00:00 AM

Lab ID: 1403588-003

Matrix: SOIL

Received Date: 3/12/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	3/17/2014 5:08:25 PM	12179
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	3/17/2014 5:08:25 PM	12179
Surr: DNOP	101	66-131		%REC	1	3/17/2014 5:08:25 PM	12179
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/18/2014 10:19:54 PM	12182
Surr: BFB	88.6	74.5-129		%REC	1	3/18/2014 10:19:54 PM	12182
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: cadg
Methyl tert-butyl ether (MTBE)	ND	0.048		mg/Kg	1	3/17/2014 4:06:09 PM	12182
Benzene	ND	0.048		mg/Kg	1	3/17/2014 4:06:09 PM	12182
Toluene	ND	0.048		mg/Kg	1	3/17/2014 4:06:09 PM	12182
Ethylbenzene	ND	0.048		mg/Kg	1	3/17/2014 4:06:09 PM	12182
Xylenes, Total	ND	0.097		mg/Kg	1	3/17/2014 4:06:09 PM	12182
1,2,4-Trimethylbenzene	ND	0.048		mg/Kg	1	3/17/2014 4:06:09 PM	12182
1,3,5-Trimethylbenzene	ND	0.048		mg/Kg	1	3/17/2014 4:06:09 PM	12182
Surr: 1,2-Dichloroethane-d4	100	70-130		%REC	1	3/17/2014 4:06:09 PM	12182
Surr: 4-Bromofluorobenzene	91.6	70-130		%REC	1	3/17/2014 4:06:09 PM	12182
Surr: Dibromofluoromethane	102	70-130		%REC	1	3/17/2014 4:06:09 PM	12182
Surr: Toluene-d8	90.6	70-130		%REC	1	3/17/2014 4:06:09 PM	12182

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
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
O	RSD is greater than RSDlimit	P Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1403588

Date Reported: 3/20/2014

CLIENT: Terracon

Client Sample ID: B2 (50-54)

Project: Old Santa Fe County Courthouse

Collection Date: 3/12/2014 1:30:00 PM

Lab ID: 1403588-004

Matrix: SOIL

Received Date: 3/12/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	3/17/2014 5:39:12 PM	12179
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	3/17/2014 5:39:12 PM	12179
Surr: DNOP	97.6	66-131		%REC	1	3/17/2014 5:39:12 PM	12179
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/18/2014 10:48:28 PM	12182
Surr: BFB	88.8	74.5-129		%REC	1	3/18/2014 10:48:28 PM	12182
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: cadg
Methyl tert-butyl ether (MTBE)	ND	0.048		mg/Kg	1	3/17/2014 4:34:55 PM	12182
Benzene	ND	0.048		mg/Kg	1	3/17/2014 4:34:55 PM	12182
Toluene	ND	0.048		mg/Kg	1	3/17/2014 4:34:55 PM	12182
Ethylbenzene	ND	0.048		mg/Kg	1	3/17/2014 4:34:55 PM	12182
Xylenes, Total	ND	0.096		mg/Kg	1	3/17/2014 4:34:55 PM	12182
1,2,4-Trimethylbenzene	ND	0.048		mg/Kg	1	3/17/2014 4:34:55 PM	12182
1,3,5-Trimethylbenzene	ND	0.048		mg/Kg	1	3/17/2014 4:34:55 PM	12182
Surr: 1,2-Dichloroethane-d4	104	70-130		%REC	1	3/17/2014 4:34:55 PM	12182
Surr: 4-Bromofluorobenzene	93.1	70-130		%REC	1	3/17/2014 4:34:55 PM	12182
Surr: Dibromofluoromethane	107	70-130		%REC	1	3/17/2014 4:34:55 PM	12182
Surr: Toluene-d8	92.2	70-130		%REC	1	3/17/2014 4:34:55 PM	12182

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
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
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1403588

20-Mar-14

Client: Terracon
Project: Old Santa Fe County Courthouse

Sample ID MB-12179	SampType: MBLK	TestCode: EPA Method 8015D: Diesel Range Organics								
Client ID: PBS	Batch ID: 12179	RunNo: 17323								
Prep Date: 3/14/2014	Analysis Date: 3/14/2014	SeqNo: 499010			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	10		10.00		101	66	131			

Sample ID LCS-12179	SampType: LCS	TestCode: EPA Method 8015D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 12179	RunNo: 17323								
Prep Date: 3/14/2014	Analysis Date: 3/14/2014	SeqNo: 499012			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	53	10	50.00	0	106	60.8	145			
Surr: DNOP	4.9		5.000		98.5	66	131			

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| 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 |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1403588

20-Mar-14

Client: Terracon
Project: Old Santa Fe County Courthouse

Sample ID MB-12211	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 12211		RunNo: 17388							
Prep Date: 3/17/2014	Analysis Date: 3/18/2014		SeqNo: 501319		Units: %REC					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	870		1000		86.7	74.5	129			

Sample ID LCS-12211	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 12211		RunNo: 17388							
Prep Date: 3/17/2014	Analysis Date: 3/18/2014		SeqNo: 501320		Units: %REC					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	950		1000		94.6	74.5	129			

Sample ID MB-12182	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 12182		RunNo: 17388							
Prep Date: 3/14/2014	Analysis Date: 3/18/2014		SeqNo: 501382		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	880		1000		87.8	74.5	129			

Sample ID LCS-12182	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 12182		RunNo: 17388							
Prep Date: 3/14/2014	Analysis Date: 3/18/2014		SeqNo: 501402		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	110	71.7	134			
Surr: BFB	970		1000		96.7	74.5	129			

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| 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 |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1403588

20-Mar-14

Client: Terracon
Project: Old Santa Fe County Courthouse

Sample ID	mb-12182	SampType:	MBLK	TestCode:	EPA Method 8260B: Volatiles Short List					
Client ID:	PBS	Batch ID:	12182	RunNo:	17373					
Prep Date:	3/14/2014	Analysis Date:	3/17/2014	SeqNo:	500343	Units:	mg/Kg			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	0.050								
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
1,2,4-Trimethylbenzene	ND	0.050								
1,3,5-Trimethylbenzene	ND	0.050								
Surr: 1,2-Dichloroethane-d4	0.53		0.5000		105	70	130			
Surr: 4-Bromofluorobenzene	0.48		0.5000		95.7	70	130			
Surr: Dibromofluoromethane	0.51		0.5000		103	70	130			
Surr: Toluene-d8	0.47		0.5000		93.0	70	130			

Sample ID	ics-12182	SampType:	LCS	TestCode:	EPA Method 8260B: Volatiles Short List					
Client ID:	LCSS	Batch ID:	12182	RunNo:	17373					
Prep Date:	3/14/2014	Analysis Date:	3/17/2014	SeqNo:	500350	Units:	mg/Kg			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.83	0.050	1.000	0	82.9	70	130			
Toluene	0.70	0.050	1.000	0	69.6	60.1	120			
Surr: 1,2-Dichloroethane-d4	0.52		0.5000		103	70	130			
Surr: 4-Bromofluorobenzene	0.47		0.5000		94.0	70	130			
Surr: Dibromofluoromethane	0.52		0.5000		105	70	130			
Surr: Toluene-d8	0.44		0.5000		88.8	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Sample Log-In Check List

Client Name: TER-AIB Work Order Number: 1403588 RcptNo: 1

Received by/date: *LM* 03/12/14

Logged By: Ashley Gallegos 3/12/2014 3:48:00 PM *AG*

Completed By: Ashley Gallegos 3/14/2014 8:59:05 AM *AG*

Reviewed By: *LM* 03/14/14

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? Client

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? Yes No
 (Note discrepancies on chain of custody)
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? Yes No
 (If no, notify customer for authorization.)

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	5.1	Good	Not Present			

Chain-of-Custody Record

Client: Terracon Consultants Inc

Mailing Address: 4905 Hawkins NE
ABQ, NM 87109

Phone #: 505-797-4287

email or Fax#: Mr Hillier @ terracon.com

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

Accreditation
 NELAP Other _____

EDD (Type) _____

Turn-Around Time:

Standard Rush

Project Name: Old Santa Fe
~~66147006~~ County Courthouse

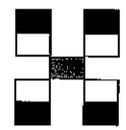
Project #: 66147006

Project Manager: MARK Hillier

Sampler: Julie Smith

On Ice: Yes No

Sample Temperature: 5.1



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8260B)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 8260B) EPA SW 846	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)
3/11/14	1100	SOIL	B1 (14-16)	4oz jar	NA	1403588-001	X			X							
3/11/14	1400	SOIL	B1 (35-40)	4oz jar	NA	-002	X			X							
3/12/14	1100	SOIL	B2 (15-20)	4oz jar	NA	-003	X			X							
3/12/14	1330	SOIL	B2 (50-54)	4oz jar	NA	-004	X			X							

Date: 3-12-14 Time: 1548 Relinquished by: [Signature]

Received by: [Signature] Date: 03/12/14 Time: 1548

Remarks: * BTEX/MTBE/TMB USING EPA SW 846 Method 8260B
* TPH USING EPA SW-846 Method 8015B

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

March 20, 2014

Mark Hillier

Terracon

4905 Hawkins, NE

Albuquerque, NM 87109

TEL: (505) 715-0375

FAX (505) 797-4288

RE: Old Santa Fe County Courthouse

OrderNo.: 1403598

Dear Mark Hillier:

Hall Environmental Analysis Laboratory received 2 sample(s) on 3/14/2014 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 qualifiers 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,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a light blue horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1403598

Date Reported: 3/20/2014

CLIENT: Terracon

Client Sample ID: B3 (15-20)

Project: Old Santa Fe County Courthouse

Collection Date: 3/13/2014

Lab ID: 1403598-001

Matrix: SOIL

Received Date: 3/14/2014 9:36:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	3/17/2014 6:09:59 PM	12179
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	3/17/2014 6:09:59 PM	12179
Surr: DNOP	111	66-131		%REC	1	3/17/2014 6:09:59 PM	12179
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/18/2014 11:17:09 PM	12182
Surr: BFB	89.7	74.5-129		%REC	1	3/18/2014 11:17:09 PM	12182
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: cadg
Methyl tert-butyl ether (MTBE)	ND	0.048		mg/Kg	1	3/17/2014 5:03:39 PM	12182
Benzene	ND	0.048		mg/Kg	1	3/17/2014 5:03:39 PM	12182
Toluene	ND	0.048		mg/Kg	1	3/17/2014 5:03:39 PM	12182
Ethylbenzene	ND	0.048		mg/Kg	1	3/17/2014 5:03:39 PM	12182
Xylenes, Total	ND	0.096		mg/Kg	1	3/17/2014 5:03:39 PM	12182
1,2,4-Trimethylbenzene	ND	0.048		mg/Kg	1	3/17/2014 5:03:39 PM	12182
1,3,5-Trimethylbenzene	ND	0.048		mg/Kg	1	3/17/2014 5:03:39 PM	12182
Surr: 1,2-Dichloroethane-d4	113	70-130		%REC	1	3/17/2014 5:03:39 PM	12182
Surr: 4-Bromofluorobenzene	95.7	70-130		%REC	1	3/17/2014 5:03:39 PM	12182
Surr: Dibromofluoromethane	106	70-130		%REC	1	3/17/2014 5:03:39 PM	12182
Surr: Toluene-d8	93.0	70-130		%REC	1	3/17/2014 5:03:39 PM	12182

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	
	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	Page 1 of 5
	O RSD is greater than RSDlimit	P Sample pH greater than 2.	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1403598

Date Reported: 3/20/2014

CLIENT: Terracon

Client Sample ID: B3 (60-64)

Project: Old Santa Fe County Courthouse

Collection Date: 3/13/2014 1:50:00 PM

Lab ID: 1403598-002

Matrix: SOIL

Received Date: 3/14/2014 9:36:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	3/17/2014 6:40:28 PM	12179
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	3/17/2014 6:40:28 PM	12179
Surr: DNOP	101	66-131		%REC	1	3/17/2014 6:40:28 PM	12179
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/18/2014 11:45:49 PM	12182
Surr: BFB	90.1	74.5-129		%REC	1	3/18/2014 11:45:49 PM	12182
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: cadg
Methyl tert-butyl ether (MTBE)	ND	0.049		mg/Kg	1	3/17/2014 5:32:21 PM	12182
Benzene	ND	0.049		mg/Kg	1	3/17/2014 5:32:21 PM	12182
Toluene	ND	0.049		mg/Kg	1	3/17/2014 5:32:21 PM	12182
Ethylbenzene	ND	0.049		mg/Kg	1	3/17/2014 5:32:21 PM	12182
Xylenes, Total	ND	0.098		mg/Kg	1	3/17/2014 5:32:21 PM	12182
1,2,4-Trimethylbenzene	ND	0.049		mg/Kg	1	3/17/2014 5:32:21 PM	12182
1,3,5-Trimethylbenzene	ND	0.049		mg/Kg	1	3/17/2014 5:32:21 PM	12182
Surr: 1,2-Dichloroethane-d4	101	70-130		%REC	1	3/17/2014 5:32:21 PM	12182
Surr: 4-Bromofluorobenzene	94.6	70-130		%REC	1	3/17/2014 5:32:21 PM	12182
Surr: Dibromofluoromethane	100	70-130		%REC	1	3/17/2014 5:32:21 PM	12182
Surr: Toluene-d8	93.0	70-130		%REC	1	3/17/2014 5:32:21 PM	12182

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
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
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1403598

20-Mar-14

Client: Terracon
Project: Old Santa Fe County Courthouse

Sample ID MB-12179	SampType: MBLK	TestCode: EPA Method 8015D: Diesel Range Organics								
Client ID: PBS	Batch ID: 12179	RunNo: 17323								
Prep Date: 3/14/2014	Analysis Date: 3/14/2014	SeqNo: 499010	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	10		10.00		101	66	131			

Sample ID LCS-12179	SampType: LCS	TestCode: EPA Method 8015D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 12179	RunNo: 17323								
Prep Date: 3/14/2014	Analysis Date: 3/14/2014	SeqNo: 499012	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	53	10	50.00	0	106	60.8	145			
Surr: DNOP	4.9		5.000		98.5	66	131			

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| 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 |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1403598

20-Mar-14

Client: Terracon
Project: Old Santa Fe County Courthouse

Sample ID	MB-12211	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	12211	RunNo:	17388					
Prep Date:	3/17/2014	Analysis Date:	3/18/2014	SeqNo:	501319	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	870		1000		86.7	74.5	129			

Sample ID	LCS-12211	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	12211	RunNo:	17388					
Prep Date:	3/17/2014	Analysis Date:	3/18/2014	SeqNo:	501320	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	950		1000		94.6	74.5	129			

Sample ID	MB-12182	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	12182	RunNo:	17388					
Prep Date:	3/14/2014	Analysis Date:	3/18/2014	SeqNo:	501382	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	880		1000		87.8	74.5	129			

Sample ID	LCS-12182	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	12182	RunNo:	17388					
Prep Date:	3/14/2014	Analysis Date:	3/18/2014	SeqNo:	501402	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	110	71.7	134			
Surr: BFB	970		1000		96.7	74.5	129			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1403598

20-Mar-14

Client: Terracon
Project: Old Santa Fe County Courthouse

Sample ID	mb-12182	SampType:	MBLK	TestCode:	EPA Method 8260B: Volatiles Short List					
Client ID:	PBS	Batch ID:	12182	RunNo:	17373					
Prep Date:	3/14/2014	Analysis Date:	3/17/2014	SeqNo:	500343	Units:	mg/Kg			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	0.050								
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
1,2,4-Trimethylbenzene	ND	0.050								
1,3,5-Trimethylbenzene	ND	0.050								
Surr: 1,2-Dichloroethane-d4	0.53		0.5000		105	70	130			
Surr: 4-Bromofluorobenzene	0.48		0.5000		95.7	70	130			
Surr: Dibromofluoromethane	0.51		0.5000		103	70	130			
Surr: Toluene-d8	0.47		0.5000		93.0	70	130			

Sample ID	ics-12182	SampType:	LCS	TestCode:	EPA Method 8260B: Volatiles Short List					
Client ID:	LCSS	Batch ID:	12182	RunNo:	17373					
Prep Date:	3/14/2014	Analysis Date:	3/17/2014	SeqNo:	500350	Units:	mg/Kg			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.83	0.050	1.000	0	82.9	70	130			
Toluene	0.70	0.050	1.000	0	69.6	60.1	120			
Surr: 1,2-Dichloroethane-d4	0.52		0.5000		103	70	130			
Surr: 4-Bromofluorobenzene	0.47		0.5000		94.0	70	130			
Surr: Dibromofluoromethane	0.52		0.5000		105	70	130			
Surr: Toluene-d8	0.44		0.5000		88.8	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Sample Log-In Check List

Client Name: TER-Alb

Work Order Number: 1403598

RcptNo: 1

Received by/date:

[Signature]

03/14/14

Logged By: Ashley Gallegos

3/14/2014 9:36:00 AM

[Signature]

Completed By: Ashley Gallegos

3/14/2014 9:53:46 AM

[Signature]

Reviewed By:

IC

03/14/14

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? Client

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? Yes No
 (Note discrepancies on chain of custody)
- 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? Yes No
 (If no, notify customer for authorization.)

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	5.1	Good	Not Present			

Client: Terracon Consultants

Standard Rush

Mailing Address: 4905 Hawkins NE
ABQ, NM 87109

Project Name: Old Santa Fe County Courthouse

Phone #: 505-797-4287
email or Fax#: mrhillier@terracon.com

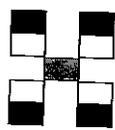
Project #: 616147006

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

Project Manager: Mark Hillier

Accreditation
 NELAP Other _____
 EDD (Type) _____

Sampler: Julie Smith
On Ice: Yes No
Sample Temperature: 33



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8024) S	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 8015B)	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)
3/13/14	1000	SOIL	B3 (15-20)	4oz jar	None	1403598	X			X							
3/13/14	1350	SOIL	B3 (60-64)	"	"	-001	X			X							
						-002	X			X							

Date: 1/4/14 Time: 0936 Relinquished by: [Signature]

Received by: [Signature] Date: 03/14/14 Time: 0936

Date: _____ Time: _____ Relinquished by: _____

Received by: _____ Date: _____ Time: _____

Remarks: * BTEX/MTBE/TMB USING EPA METHOD 8260B (SW 846)
* TPH USING EPA SW 846, method 8015B

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.