

RED

Limited Site Investigation

**Proposed Chick-fil-A #04046
6602 19th Street West
Tacoma, Pierce County, Washington**

February 16, 2018
Terracon Project No. 81177692

Prepared for:
Chick-fil-A, Inc.
Atlanta, Georgia

Prepared by:
Terracon Consultants, Inc.
Mountlake Terrace, Washington

terracon.com

Terracon

Environmental ■ Facilities ■ Geotechnical ■ Materials

February 16, 2018



Chick-fil-A, Inc.
5200 Buffington Road
Atlanta, GA 30349

Attn: Mr. Steve Schwartz

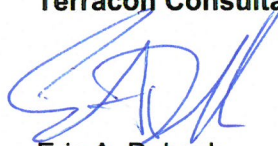
Re: **Limited Site Investigation**
Proposed Chick-fil-A #04046
6602 19th Street West
Tacoma, Washington 98466
Terracon Project No. 81177692

Dear Mr. Schwartz:

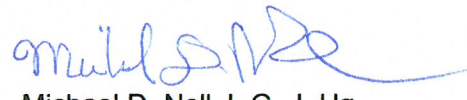
Terracon Consultants, Inc. (Terracon) is pleased to submit our report of Limited Site Investigation (LSI) activities completed at the site referenced above. The report presents data from recent field activities that included the completion of hand auger borings and the collection of shallow soil samples to be analyzed for arsenic and lead. The activities were completed to address the findings of the Phase I Environmental Site Assessment (ESA) of the property, dated January 5, 2018. Terracon conducted the LSI in general accordance with the signed proposal P81187014, dated January 16, 2018, and the Master Environmental Services Agreement (MESA), dated March 31, 2005.

Terracon appreciates this opportunity to provide environmental services to Chick-fil-A (CFA). Should you have any questions or require additional information, please do not hesitate to contact our office.

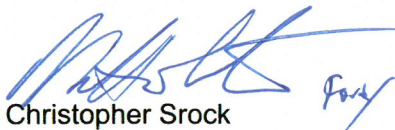
Sincerely,
Terracon Consultants, Inc.



Eric A. Dubcak
Project Manager



Michael D. Noll, L.G., L.Hg.
Senior Project Manager



Christopher Srock
Senior Principal

Terracon Consultants, Inc. 21905 64th Avenue West Suite 100 Mountlake Terrace, Washington 98043
P (425) 771 3304 F (425) 771 3549 terracon.com

TABLE OF CONTENTS

1.0	SITE DESCRIPTION	1
2.0	SCOPE OF SERVICES	1
2.1	Standard of Care.....	2
2.2	Additional Scope Limitations	2
2.3	Reliance.....	2
3.0	FIELD INVESTIGATION	2
3.1	Soil Sampling.....	3
4.0	RESULTS OF THE FIELD INVESTIGATION	4
4.1	Shallow Soil	4
5.0	ANALYTICAL RESULTS	4
5.1	Soil Analytical Results.....	4
6.0	FINDINGS AND CONCLUSIONS	5
7.0	RECOMMENDATIONS	5

APPENDIX A – EXHIBITS

Exhibit 1 – Topographic Map

Exhibit 2 – Site Diagram

APPENDIX B – TABLES

Table 1 - Summary of Soil Analytical Results – TSP Grid Sampling

APPENDIX C – ANALYTICAL REPORT AND CHAIN OF CUSTODY

LIMITED SITE INVESTIGATION
PROPOSED CHICK-FIL-A # 04046
6602 19th STREET WEST
TACOMA, WASHINGTON

Terracon Project No. 81177692
February 16, 2018

1.0 SITE DESCRIPTION

The site is located at 6602 19th Street West in Tacoma, Washington (Pierce County Parcel No. 0220112063), and consists of an approximate 0.44-acre site developed with an approximate 4,678-square foot office building constructed in 1975. The building is currently occupied and operating as a private legal office with associated exterior paved parking and perimeter landscaping. 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 previously performed a Phase I Environmental Site Assessment (ESA) of the property for Chick-fil-A (Terracon Project No. 81177692, dated January 5, 2018). Based on the findings of our report, the site was not identified on the regulatory database report or through local agency inquiries. However, the site is mapped within the Tacoma Smelter Plume study area as possibly containing concentrations of arsenic and lead in shallow soils above the Washington State Model Toxics Control Act (MTCA) Method A cleanup level. This was identified as a recognized environmental condition (REC).

Based on these findings, Terracon recommended sampling of shallow soils for laboratory analysis for arsenic and lead in accordance with Ecology's *Tacoma Smelter Plume Model Remedies Guidance*, dated June 2012.

2.0 SCOPE OF SERVICES

Terracon's scope of services included completion of the following tasks:

- Perform pre-mobilization activities including public underground utility clearances and preparation of a site specific health and safety plan;
- Advance twelve hand auger borings and collect soil samples from each boring;
- Complete laboratory analyses of soil samples for lead and arsenic; and
- Prepare this LSI summary report.

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 the MESA, and were not restricted by ASTM E1903-11 *Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process*.

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 Chick-fil-A, 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 Chick-fil-A and Terracon. Any unauthorized distribution or reuse is at Chick-fil-A'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 MESA. The limitation of liability defined in the terms and conditions is the aggregate limit of Terracon's liability to Chick-fil-A and all relying parties unless otherwise agreed in writing.

3.0 FIELD INVESTIGATION

Terracon has a commitment to the safety of all its employees. As such, and in accordance with our *Incident and Injury Free®* safety goals, Terracon conducted the fieldwork under a site specific

health and safety plan developed for this project. Work was performed using the Occupational Health and Safety Administration (OSHA) Level D work attire consisting of hard hats, safety glasses, protective gloves, and protective boots. In an effort to locate underground utilities in the work area, Terracon contacted the Washington State Utility Notification Center to arrange for public underground utility clearance at the site.

3.1 Soil Sampling

Field activities consisted of advancing 12 hand auger borings in a general grid pattern across the site, as accessible and to the extent practical, in accordance with Ecology's *Tacoma Smelter Plume Model Remedies Guidance*, dated June 2012. Boring locations relative to site features are depicted on Exhibit 2 of Appendix A.

Terracon field representatives, Natalie Baker and Kyle Bennett, mobilized to the site on January 24, 2018 to advance the hand auger borings. The 12 hand auger borings, identified as HA1 through HA4 and B1 through B8, were advanced utilizing a stainless steel hand auger and/or trowel. Overlying landscaping and/or topsoil were removed using a shovel, while overlying asphalt pavement/base course material were removed by coring using an electric powered rotary hammer with coring bit. Non-disposable sampling equipment was cleaned using a non-phosphate soap wash and potable water rinse prior to the beginning of the project and before collecting each soil sample.

Soil samples were collected from the upper foot of native soil for each hand auger boring to assess for potential smelter plume impacts. Specifically, one sample was collected from the 6-inch interval (below any topsoil or asphalt/base course material) in each boring and one sample was collected from the next 6-inch interval from a quarter (three) of the borings. Twelve 0- to 6-inch interval soil samples and three 6- to 12-inch interval samples were submitted to the laboratory for analysis. Soil samples were extracted by hand using disposable gloves and placed directly into laboratory-supplied glassware.

Each sample container was labeled with the project number, date, time, boring number, and sample number. Sample containers were placed in a chilled cooler immediately after sampling, and subsequently transported to a Washington State-accredited laboratory under strict chain-of-custody procedures.

At the completion of field activities, the hand auger borings were backfilled with the respective excavated soil and capped with asphalt cold patch, where applicable.

4.0 RESULTS OF THE FIELD INVESTIGATION

4.1 Shallow Soil

In general, Terracon encountered what was inferred to be native soil consisting of brown/gray silty sand with trace gravel below the pavement and/or landscaping. Hand auger samples were collected approximately 2 to 4 inches below topsoil and landscaping, and approximately 8 to 11 inches below asphalt pavement/base course material.

5.0 ANALYTICAL RESULTS

The selected soil samples were analyzed for select metals analysis for arsenic and lead by EPA Method 6020. Reported soil concentrations were compared with MTCA Method A cleanup levels and the “elevated” arsenic and lead levels defined by Ecology’s *Tacoma Smelter Plume Model Remedies Guidance*. “Elevated” arsenic is defined as an average concentration over 20 milligrams per kilogram (mg/kg) for the site (which is the MTCA Method A Cleanup Level for unrestricted land use) **or** any one sample with a concentration over 40 mg/kg. “Elevated” lead is defined as an average concentration over 250 mg/kg (which is the MTCA Method A Cleanup Level for unrestricted land use) **or** any one sample with a concentration over 500 mg/kg. The average concentration was calculated by the sum of the concentration values reported for all soil samples divided by the total number of samples in the data set. An average concentration was calculated for each analyte and sample depth interval group. For example, the 12 samples collected from the shallow (0- to 6-inch) interval were averaged and the 3 samples collected from the deeper (6 to 12-inch) interval were averaged for comparison.

Data packages were checked for completeness immediately upon receipt from the laboratory to ensure that data and QA/QC information requested were present. Data quality was assessed by considering holding times, surrogate recovery, method blanks, matrix spike and matrix spike duplicate recovery, and detection limits. Based upon our interpretation of quality control information provided by the laboratory, it is our opinion that the overall dataset is useable as qualified for the purposes of this LSI.

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

5.1 Soil Analytical Results

Arsenic was detected above the MTCA Method A soil cleanup level (20 mg/kg) in one soil sample (HA1, collected from the upper 6-inch interval at boring HA1) at a concentration of 180 mg/kg. Per Ecology’s *Tacoma Smelter Plume Model Remedies Guidance*, this arsenic concentration exceeds Ecology’s elevated concentration level established for a single sampling point of 40

mg/kg. The remaining arsenic concentrations detected in the soil samples ranged from 1.8 mg/kg to 17 mg/kg, which are below the MTCA Method A soil cleanup level of 20 mg/kg. Lead was detected at concentrations ranging from 2.6 mg/kg to 24 mg/kg, which are below the MTCA Method A cleanup level of 250 mg/kg.

The soil analytical results are summarized in Table 1 of Appendix B.

6.0 FINDINGS AND CONCLUSIONS

Site soils were investigated during this assessment in accordance with Ecology's *Tacoma Smelter Plume Model Remedies Guidance*. Terracon obtained 15 soil samples from 12 hand auger borings, at depth intervals of 0-6 inches below ground surface (bgs) and 6-12 inches bgs. Based on the findings of this assessment, Terracon concludes the following:

- The soil samples submitted for analysis did not contain lead at concentrations above the MTCA Method A cleanup level.
- One soil sample collected from hand auger boring HA1 at a depth of 0-6 inches bgs contained arsenic at a concentration of 180 mg/kg, which exceeds both the MTCA Method A cleanup level of 20 mg/kg and the elevated arsenic concentration level of 40 mg/kg listed in Ecology's *Tacoma Smelter Plume Model Remedies Guidance*. Since the arsenic concentration for the sample collected at HA1 exceeded 40 mg/kg, the arsenic level for the location of the property is considered "elevated" and will require additional assessment and possibly cleanup measures.
- The remaining soil samples did not contain arsenic at concentrations above the MTCA Method A cleanup level.

7.0 RECOMMENDATIONS

Based on the findings of this investigation, and in accordance with the *Tacoma Smelter Plume Model Remedies Guidance*, Terracon recommends that the area documented with an elevated arsenic concentration (HA1) be excavated, properly disposed, and confirmation samples be collected in order to document the removal of the arsenic contaminated soil. In addition, when the structure is removed, sampling within its footprint is recommended in order to further characterize the shallow soils not currently accessible. Submittal of the final report and review by Ecology will be required to work towards receiving a No Further Action (NFA) determination for the site.

Given the limited arsenic impacted-soil encountered across the site, widespread impacts do not appear to be present at the site. However, Terracon recommends that a Soil Management Plan be prepared for any soils generated for export from the site. The plan will provide direction to the contractor to initially stockpile and sample for the presence of arsenic. Then the soils can be

Limited Site Investigation

Proposed Chick-fil-A # 04046 ■ Tacoma, Washington

February 16, 2018 ■ Terracon Project No. 81177692

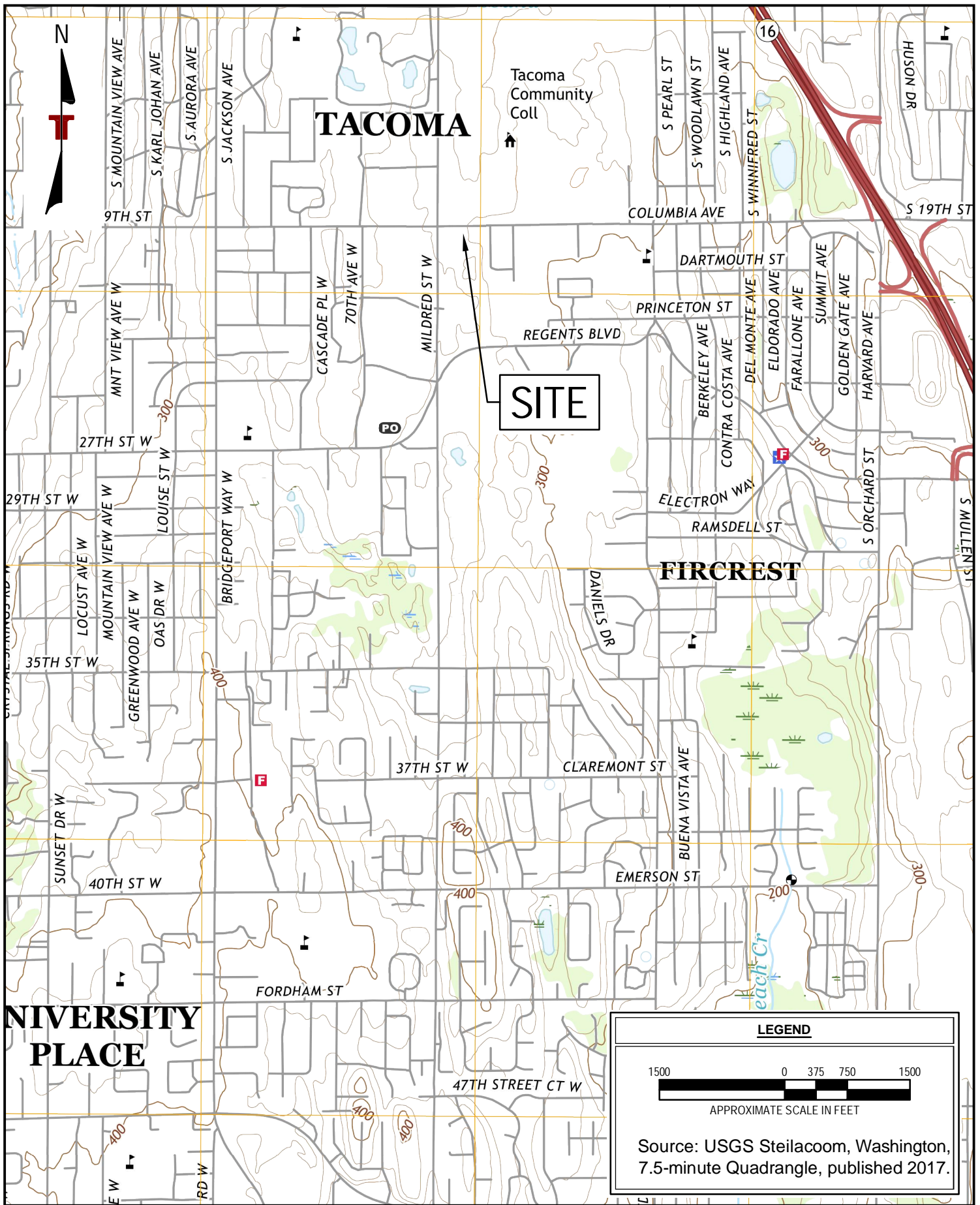


delivered to proper facility based on the laboratory results. Due to the documented arsenic in the other sampling locations, although below respective cleanup levels, soils exported from the site should not be reused as fill in sensitive areas (schools, day cares, wetlands, etc.); rather, they should be reused at approved locations and/or disposed in accordance with local and state regulations.

APPENDIX A – EXHIBITS

Exhibit 1 – Topographic Map

Exhibit 2 – Site Diagram



Project Mng:	MYW
Drawn By:	AMP
Checked By:	NDB
Approved By:	MYW

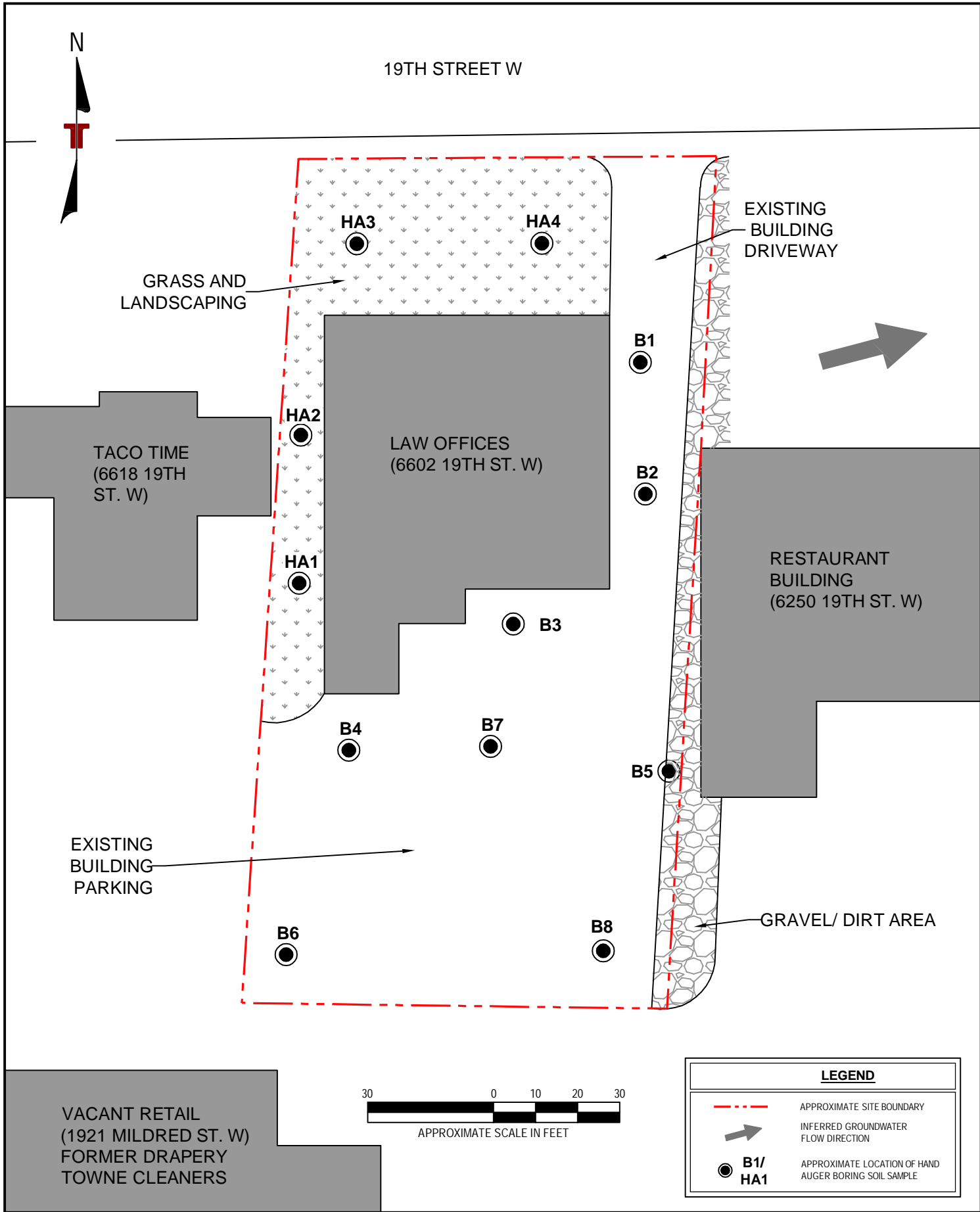
Project No.	81177692
Scale:	AS SHOWN
File No.	Exhibit 1
Date:	January 2018

Terracon
Consulting Engineers and Scientists

21905 64th Avenue W, Ste 100 Mountlake Terrace, WA 98043
PH. (425) 771-3304 FAX. (425) 771-3549

TOPOGRAPHIC MAP
Proposed Chick-fil-A #04046
6602 19th Street West
Tacoma, Pierce County, Washington

EXHIBIT
1



Project Mng:	MYW
Drawn By:	AMP
Checked By:	NDB
Approved By:	MYW

Project No.	81177692
Scale:	AS SHOWN
File No.	Exhibit 2
Date:	January 2018

Terracon
 Consulting Engineers and Scientists
 21905 64th Avenue W., Ste 100 Mountlake Terrace, WA 98043
 PH. (425) 771-3304 FAX. (425) 771-3549

SITE DIAGRAM
 Proposed Chick-fil-A #04046
 6602 19th Street West
 Tacoma, Pierce County, Washington

EXHIBIT
2

APPENDIX B – TABLES

Table 1 – Summary of Soil Analytical Results –
TSP Grid Sampling

TABLE 1

**SUMMARY OF SOIL ANALYTICAL RESULTS -
TSP GRID SAMPLING
Chick-fil-A #04046
6602 19th Street West
Tacoma, Pierce County, Washington**

all concentrations are in milligrams per kilogram (mg/kg)

Sample Location No.	Sample ID	Sample Depth (inches)	Sample Date	Metals	
				Arsenic	Lead
HA1	HA1	0-6	1/24/2018	180	10
HA2	HA2	0-6	1/24/2018	6.1	11
	HA2B	6-12	1/24/2018	7.0	15
HA3	HA3	0-6	1/24/2018	6.3	24
HA4	HA4	0-6	1/24/2018	2.4	5.3
B1	B1	0-6	1/24/2018	3.8	6.5
	B1B	6-12	1/24/2018	3.4	5.7
B2	B2	0-6	1/24/2018	1.9	2.6
B3	B3	0-6	1/24/2018	3.2	6.0
B4	B4	0-6	1/24/2018	2.0	2.6
B5	B5	0-6	1/24/2018	7.3	15
B6	B6	0-6	1/24/2018	1.8	3.4
B7	B7	0-6	1/24/2018	6.2	11
B8	B8	0-6	1/24/2018	17	8.2
	B8B	6-12	1/24/2018	13	9.1
0 to 6 Inch Sample Average (12 Samples)				19.83	8.80
6 to 12 Inch Sample Average (3 Samples)				7.80	9.93
MTCA Method A Cleanup Level				20	250
Ecology's Tacoma Smelter Plume Elevated Concentration Level				40	500

Note: Concentrations detected above laboratory reporting limits are in **BOLD** type. Concentrations above Ecology's Tacoma Smelter Plume Elevated Concentration Level are **BOLD** red type and shaded.

TSP *Tacoma Smelter Plume Model Remedies Guidance* for sampling and cleanup of arsenic and lead contaminated soils. Where the average soil concentration is greater than greater than 20 mg/kg for arsenic or 250 mg/kg for lead or any one sample concentration is greater than 40 mg/kg for arsenic and 500 mg/kg for lead, the site is considered "elevated" and cleanup measures are required per Ecology.

MTCA - Model Toxics Control Act

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



January 26, 2018

Mr. Eric Dubcak
Terracon
21905 - 64th Ave W, Suite 100
Mountlake Terrace, WA 98043

Dear Mr. Dubcak,

On January 25th, 15 samples were received by our laboratory and assigned our laboratory project number EV18010149. The project was identified as your 81177692. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Glen Perry
Technical Manager

CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	1/26/2018
		ALS JOB#:	EV18010149
		ALS SAMPLE#:	EV18010149-01
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	01/25/2018
CLIENT PROJECT:	81177692	COLLECTION DATE:	1/24/2018 12:15:00 PM
CLIENT SAMPLE ID	HA1	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-6020	180	1.0	5	MG/KG	01/26/2018	RAL
Lead	EPA-6020	10	0.50	5	MG/KG	01/26/2018	RAL



CERTIFICATE OF ANALYSIS

CLIENT: Terracon
21905 - 64th Ave W, Suite 100
Mountlake Terrace, WA 98043
DATE: 1/26/2018
ALS JOB#: EV18010149
ALS SAMPLE#: EV18010149-02
CLIENT CONTACT: Eric Dubcak
DATE RECEIVED: 01/25/2018
CLIENT PROJECT: 81177692
COLLECTION DATE: 1/24/2018 12:27:00 PM
CLIENT SAMPLE ID HA2
WDOE ACCREDITATION: C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
Arsenic	EPA-6020	6.1	1.0	5	MG/KG	01/26/2018	RAL
Lead	EPA-6020	11	0.50	5	MG/KG	01/26/2018	RAL



CERTIFICATE OF ANALYSIS

CLIENT: Terracon
21905 - 64th Ave W, Suite 100
Mountlake Terrace, WA 98043
DATE: 1/26/2018
ALS JOB#: EV18010149
ALS SAMPLE#: EV18010149-03
CLIENT CONTACT: Eric Dubcak
DATE RECEIVED: 01/25/2018
CLIENT PROJECT: 81177692
COLLECTION DATE: 1/24/2018 12:38:00 PM
CLIENT SAMPLE ID HA2B
WDOE ACCREDITATION: C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
Arsenic	EPA-6020	7.0	1.0	5	MG/KG	01/26/2018	RAL
Lead	EPA-6020	15	0.50	5	MG/KG	01/26/2018	RAL



CERTIFICATE OF ANALYSIS

CLIENT: Terracon
21905 - 64th Ave W, Suite 100
Mountlake Terrace, WA 98043
DATE: 1/26/2018
ALS JOB#: EV18010149
ALS SAMPLE#: EV18010149-04
CLIENT CONTACT: Eric Dubcak
DATE RECEIVED: 01/25/2018
CLIENT PROJECT: 81177692
COLLECTION DATE: 1/24/2018 12:51:00 PM
CLIENT SAMPLE ID HA3
WDOE ACCREDITATION: C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
Arsenic	EPA-6020	6.3	1.0	5	MG/KG	01/26/2018	RAL
Lead	EPA-6020	24	0.50	5	MG/KG	01/26/2018	RAL



CERTIFICATE OF ANALYSIS

CLIENT: Terracon
21905 - 64th Ave W, Suite 100
Mountlake Terrace, WA 98043
DATE: 1/26/2018
ALS JOB#: EV18010149
ALS SAMPLE#: EV18010149-05
CLIENT CONTACT: Eric Dubcak
DATE RECEIVED: 01/25/2018
CLIENT PROJECT: 81177692
COLLECTION DATE: 1/24/2018 1:05:00 PM
CLIENT SAMPLE ID HA4
WDOE ACCREDITATION: C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-6020	2.4	1.0	5	MG/KG	01/26/2018	RAL
Lead	EPA-6020	5.3	0.50	5	MG/KG	01/26/2018	RAL



CERTIFICATE OF ANALYSIS

CLIENT: Terracon
21905 - 64th Ave W, Suite 100
Mountlake Terrace, WA 98043
DATE: 1/26/2018
ALS JOB#: EV18010149
ALS SAMPLE#: EV18010149-06
CLIENT CONTACT: Eric Dubcak
DATE RECEIVED: 01/25/2018
CLIENT PROJECT: 81177692
COLLECTION DATE: 1/24/2018 1:45:00 PM
CLIENT SAMPLE ID: B1
WDOE ACCREDITATION: C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-6020	3.8	1.0	5	MG/KG	01/26/2018	RAL
Lead	EPA-6020	6.5	0.50	5	MG/KG	01/26/2018	RAL



CERTIFICATE OF ANALYSIS

CLIENT: Terracon
21905 - 64th Ave W, Suite 100
Mountlake Terrace, WA 98043
DATE: 1/26/2018
ALS JOB#: EV18010149
ALS SAMPLE#: EV18010149-07
CLIENT CONTACT: Eric Dubcak
DATE RECEIVED: 01/25/2018
CLIENT PROJECT: 81177692
COLLECTION DATE: 1/24/2018 1:57:00 PM
CLIENT SAMPLE ID: B1B
WDOE ACCREDITATION: C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-6020	3.4	1.0	5	MG/KG	01/26/2018	RAL
Lead	EPA-6020	5.7	0.50	5	MG/KG	01/26/2018	RAL



CERTIFICATE OF ANALYSIS

CLIENT: Terracon
21905 - 64th Ave W, Suite 100
Mountlake Terrace, WA 98043
DATE: 1/26/2018
ALS JOB#: EV18010149
ALS SAMPLE#: EV18010149-08
CLIENT CONTACT: Eric Dubcak
DATE RECEIVED: 01/25/2018
CLIENT PROJECT: 81177692
COLLECTION DATE: 1/24/2018 1:45:00 PM
CLIENT SAMPLE ID: B2
WDOE ACCREDITATION: C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-6020	1.9	1.0	5	MG/KG	01/26/2018	RAL
Lead	EPA-6020	2.6	0.50	5	MG/KG	01/26/2018	RAL



CERTIFICATE OF ANALYSIS

CLIENT: Terracon
21905 - 64th Ave W, Suite 100
Mountlake Terrace, WA 98043
DATE: 1/26/2018
ALS JOB#: EV18010149
ALS SAMPLE#: EV18010149-09
CLIENT CONTACT: Eric Dubcak
DATE RECEIVED: 01/25/2018
CLIENT PROJECT: 81177692
COLLECTION DATE: 1/24/2018 2:00:00 PM
CLIENT SAMPLE ID: B3
WDOE ACCREDITATION: C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-6020	3.2	1.0	5	MG/KG	01/26/2018	RAL
Lead	EPA-6020	6.0	0.50	5	MG/KG	01/26/2018	RAL



CERTIFICATE OF ANALYSIS

CLIENT: Terracon
21905 - 64th Ave W, Suite 100
Mountlake Terrace, WA 98043
DATE: 1/26/2018
ALS JOB#: EV18010149
ALS SAMPLE#: EV18010149-10
CLIENT CONTACT: Eric Dubcak
DATE RECEIVED: 01/25/2018
CLIENT PROJECT: 81177692
COLLECTION DATE: 1/24/2018 2:10:00 PM
CLIENT SAMPLE ID: B4
WDOE ACCREDITATION: C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-6020	2.0	1.0	5	MG/KG	01/26/2018	RAL
Lead	EPA-6020	2.6	0.50	5	MG/KG	01/26/2018	RAL



CERTIFICATE OF ANALYSIS

CLIENT: Terracon
21905 - 64th Ave W, Suite 100
Mountlake Terrace, WA 98043
DATE: 1/26/2018
ALS JOB#: EV18010149
ALS SAMPLE#: EV18010149-11
CLIENT CONTACT: Eric Dubcak
DATE RECEIVED: 01/25/2018
CLIENT PROJECT: 81177692
COLLECTION DATE: 1/24/2018 2:15:00 PM
CLIENT SAMPLE ID B5
WDOE ACCREDITATION: C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-6020	7.3	1.0	5	MG/KG	01/26/2018	RAL
Lead	EPA-6020	15	0.50	5	MG/KG	01/26/2018	RAL



CERTIFICATE OF ANALYSIS

CLIENT: Terracon
21905 - 64th Ave W, Suite 100
Mountlake Terrace, WA 98043
DATE: 1/26/2018
ALS JOB#: EV18010149
ALS SAMPLE#: EV18010149-12
CLIENT CONTACT: Eric Dubcak
DATE RECEIVED: 01/25/2018
CLIENT PROJECT: 81177692
COLLECTION DATE: 1/24/2018 2:30:00 PM
CLIENT SAMPLE ID B6
WDOE ACCREDITATION: C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-6020	1.8	1.0	5	MG/KG	01/26/2018	RAL
Lead	EPA-6020	3.4	0.50	5	MG/KG	01/26/2018	RAL



CERTIFICATE OF ANALYSIS

CLIENT: Terracon
21905 - 64th Ave W, Suite 100
Mountlake Terrace, WA 98043
DATE: 1/26/2018
ALS JOB#: EV18010149
ALS SAMPLE#: EV18010149-13
CLIENT CONTACT: Eric Dubcak
DATE RECEIVED: 01/25/2018
CLIENT PROJECT: 81177692
COLLECTION DATE: 1/24/2018 2:20:00 PM
CLIENT SAMPLE ID B7
WDOE ACCREDITATION: C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-6020	6.2	1.0	5	MG/KG	01/26/2018	RAL
Lead	EPA-6020	11	0.50	5	MG/KG	01/26/2018	RAL



CERTIFICATE OF ANALYSIS

CLIENT: Terracon
21905 - 64th Ave W, Suite 100
Mountlake Terrace, WA 98043
DATE: 1/26/2018
ALS JOB#: EV18010149
ALS SAMPLE#: EV18010149-14
CLIENT CONTACT: Eric Dubcak
DATE RECEIVED: 01/25/2018
CLIENT PROJECT: 81177692
COLLECTION DATE: 1/24/2018 2:20:00 PM
CLIENT SAMPLE ID: B8
WDOE ACCREDITATION: C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-6020	17	1.0	5	MG/KG	01/26/2018	RAL
Lead	EPA-6020	8.2	0.50	5	MG/KG	01/26/2018	RAL



CERTIFICATE OF ANALYSIS

CLIENT: Terracon
21905 - 64th Ave W, Suite 100
Mountlake Terrace, WA 98043
DATE: 1/26/2018
ALS JOB#: EV18010149
ALS SAMPLE#: EV18010149-15
CLIENT CONTACT: Eric Dubcak
DATE RECEIVED: 01/25/2018
CLIENT PROJECT: 81177692
COLLECTION DATE: 1/24/2018 2:32:00 PM
CLIENT SAMPLE ID: B8B
WDOE ACCREDITATION: C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
Arsenic	EPA-6020	13	1.0	5	MG/KG	01/26/2018	RAL
Lead	EPA-6020	9.1	0.50	5	MG/KG	01/26/2018	RAL



CERTIFICATE OF ANALYSIS

CLIENT: Terracon
21905 - 64th Ave W, Suite 100
Mountlake Terrace, WA 98043
DATE: 1/26/2018
ALS SDG#: EV18010149
WDOE ACCREDITATION: C601
CLIENT CONTACT: Eric Dubcak
CLIENT PROJECT: 81177692

LABORATORY BLANK RESULTS

MB-012518S - Batch 124691 - Soil by EPA-6020

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-6020	U	MG/KG	0.20	01/26/2018	RAL
Lead	EPA-6020	U	MG/KG	0.10	01/26/2018	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	1/26/2018
		ALS SDG#:	EV18010149
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Eric Dubcak		
CLIENT PROJECT:	81177692		

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 124691 - Soil by EPA-6020

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Arsenic - BS	EPA-6020	96.1			80	120	01/26/2018	RAL
Arsenic - BSD	EPA-6020	95.0	1		80	120	01/26/2018	RAL
Lead - BS	EPA-6020	99.1			80	120	01/26/2018	RAL
Lead - BSD	EPA-6020	98.9	0		80	120	01/26/2018	RAL

APPROVED BY



Technical Manager



ALS Environmental
 8620 Holly Drive, Suite 100
 Everett, WA 98208
 Phone (425) 356-2600
 Fax (425) 356-2626
 http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only)

EV18010149

Date 1/24/18 Page 1 Of 2

PROJECT ID: 81177692					ANALYSIS REQUESTED															OTHER (Specify)	
REPORT TO COMPANY: Terracon					NWTPH-HCID NWTPH-DX NWTPH-GX BTEX by EPA 8021 <input type="checkbox"/> BTEX by EPA 8260 <input type="checkbox"/> MTBE by EPA 8021 <input type="checkbox"/> MTBE by EPA 8260 <input type="checkbox"/> Halogenated Volatiles by EPA 8260 Volatile Organic Compounds by EPA 8260 EDB / EDC by EPA 8260 SIM (water) EDB / EDC by EPA 8260 (soil) Semivolatile Organic Compounds by EPA 8270 Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM PCB by EPA 8082 <input type="checkbox"/> Pesticides by EPA 8081 <input type="checkbox"/> Metals-MTCA-5 <input type="checkbox"/> RCRA-8 <input type="checkbox"/> Pri Pol <input type="checkbox"/> TAL <input type="checkbox"/> Metals Other (Specify) TCLP-Metals <input type="checkbox"/> VOA <input type="checkbox"/> Semi-Vol <input type="checkbox"/> Pest <input type="checkbox"/> Herbs <input type="checkbox"/> arsenic & lead																NUMBER OF CONTAINERS RECEIVED IN GOOD CONDITION?
PROJECT MANAGER: Eric Dubcak																					
ADDRESS: 2905 64th Ave W Ste. 100																					
Mountlake Terrace, WA 98043																					
PHONE: (425) 791-3304 FAX:																					
P.O. #: _____ E-MAIL: eric.dubcak@terracon.com																					
INVOICE TO COMPANY: terracon.com																					
ATTENTION:																					
ADDRESS:																					
SAMPLE I.D.	DATE	TIME	TYPE	LAB#																	
1. HA1	1/24/18	12:15	soil	1																X	1
2. HA2		12:27		2																X	1
3. HA2B		12:38		3																X	1
4. HA3		12:51		4																X	1
5. HA4		13:05		5																X	1
6. B1		13:45		6																X	1
7. B1B		13:57		7																X	1
8. B2		13:45		8																X	1
9. B3		14:00		9																X	1
10. B4		14:10		10																X	1

SPECIAL INSTRUCTIONS

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: TRB Terracon 1/24/18 17:19
 Received By: Bluffern ALS 1/25/18 9:45AM

2. Relinquished By: _____
 Received By: _____

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis

10 Standard 5 3 2 SAME DAY

Fuels & Hydrocarbon Analysis

5 3 1 SAME DAY

OTHER:

Specify: EOD Friday 1/26 for results

*Turnaround request less than standard may incur Rush Charges



ALS Environmental
 8620 Holly Drive, Suite 100
 Everett, WA 98208
 Phone (425) 356-2600
 Fax (425) 356-2626
 http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only)

EV18010149

Date 1/24/18 Page 2 Of 2

PROJECT ID: <u>8177692</u>					ANALYSIS REQUESTED															OTHER (Specify)		
REPORT TO COMPANY: <u>Terracon</u>					NWTPH-HCID NWTPH-DX NWTPH-GX BTEX by EPA 8021 <input type="checkbox"/> BTEX by EPA 8260 <input type="checkbox"/> MTBE by EPA 8021 <input type="checkbox"/> MTBE by EPA 8260 <input type="checkbox"/> Halogenated Volatiles by EPA 8260 Volatile Organic Compounds by EPA 8260 EDB / EDC by EPA 8260 SIM (water) EDB / EDC by EPA 8260 (soil) Semivolatile Organic Compounds by EPA 8270 Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM PCB by EPA 8082 <input type="checkbox"/> Pesticides by EPA 8081 <input type="checkbox"/> Metals-MTCA-5 <input type="checkbox"/> RCRA-8 <input type="checkbox"/> Pri Pol <input type="checkbox"/> TAL <input type="checkbox"/> Metals Other (Specify) TCLP-Metals <input type="checkbox"/> VOA <input type="checkbox"/> Semi-Vol <input type="checkbox"/> Pest <input type="checkbox"/> Herbs <input type="checkbox"/>	ADDRESS: <u>21905 64th Ave W Ste. 100</u>		PHONE: <u>(425) 771-3304</u> P.O. #:		E-MAIL: <u>eric.dubcak@terracon.com</u>		INVOICE TO COMPANY:		ATTENTION:		ADDRESS:		arsenic & lead NUMBER OF CONTAINERS RECEIVED IN GOOD CONDITION?				
PROJECT MANAGER: <u>Eric Dubcak</u>						ADDRESS: <u>Mountlake Terrace, WA 98043</u>		INVOICE TO COMPANY:		ATTENTION:		ADDRESS:										
SAMPLE I.D.	DATE	TIME	TYPE	LAB#																		
1. <u>B5</u>	<u>1/24/18</u>	<u>1415</u>	<u>soil</u>	<u>11</u>																		
2. <u>B6</u>		<u>1430</u>		<u>12</u>																		
3. <u>B7</u>		<u>1420</u>		<u>13</u>																		
4. <u>B8</u>		<u>1420</u>		<u>14</u>																		
5. <u>B8B</u>		<u>1432</u>		<u>15</u>																		
6.																						
7.																						
8.																						
9.																						
10.																						

SPECIAL INSTRUCTIONS

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: Eric Dubcak, Terracon, 1/24/18 17:19
 Received By: Eric Dubcak, 1/25/18 9:45AM

2. Relinquished By: _____
 Received By: _____

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis

Standard 10 5 3 2 SAME DAY

Fuels & Hydrocarbon Analysis

Standard 5 3 1 SAME DAY

OTHER:
 Specify: 1 DAY RUSH
TAT, EOD
Friday 1/26

*Turnaround request less than standard may incur Rush Charges