

December 17, 2020

J.N. 19-142

**DIAMOND VALLEY PARTNERS, LLC**

c/o Cambridge Homes  
41197 Golden Gate Circle, Suite 201  
Murrieta, California 92562

Attention: Mr. Wayne Dollarhide

Subject: **Report of Limited Phase II Assessment; 6-Acre Site, Assessor Parcel Numbers (APN's) 466-050-019; -020; and -021, Located Adjacent the Southwest Corner of Highway 79 and Newport Road, Riverside County, California**

Dear Mr. Dollarhide:

At your request, **Petra Geosciences, Inc. (Petra)** is submitting this Limited Phase II assessment for the subject 6-Acre site, Assessor Parcel Numbers (APN's) 466-050-019; -020; and -021, located adjacent to the southwest corner of Highway 79 and Newport Road, Riverside County, California. This assessment has been conducted in accordance with our supplemental proposal J.N. 19-142, dated November 30, 2020.

The information presented in this report discusses the results of our recent field sampling and analytical laboratory testing, as well as a summary of our findings and recommendations. This report was prepared for the exclusive use of the client, Diamond Valley Partners, LLC, and Riverside County Department of Environmental Health (RCDEH). Use of the report or reliance thereon by other parties or for other projects is not authorized.

### **SITE DESCRIPTION**

The subject site is a rectangular-shaped, vacant property comprising approximately 6(±)-acres which consists of three parcels identified as Riverside County Assessor Parcel Numbers (APN's) 466-050-019, -020 and -21. Based upon a Riverside County Parcel Report for the site (RCIT, 2019), the north parcel, APN 466-050-019, consists of 1.77 acres. The center parcel, APN 466-050-020, consists of 1.99 acres. The south parcel, APN 466-050-021, consists of 2.04 acres. The site generally ascends in an overall easterly direction and at a gentle gradient in the north parcel. The south parcel has a moderate to steep gradient to the east. The site currently consists of a large open field with well-developed weeds and grasses. Trees are located along E. Newport Road and near the western site boundary. Fencing is visible along the west boundary with the Highway 79 easement as well as locally within the site. Tubular fencing in the central portion of the property suggest animal pens. Surface rocks are scattered at various locations. Remnants of former

structures are visible within the property, consisting predominantly of old walls, foundations and slabs. Wooden pole near the remnants suggest overhead lines were present.

### **PURPOSE**

Based on information obtained during our Phase I Environmental Site Assessment, the purpose of the limited phase II site assessment was to evaluate the potential for impact to the near surface soils due to dark staining of the soils which was observed adjacent a rusted 55-gallon steel drum observed within the west-central portion of the site, the contents of which are unknown but appear to be waste oil. A plan showing the approximate location of the drum within the site is provided as Figure 1 and pictures of the area are provided in Appendix A.

### **SCOPE OF SERVICES**

Petra conducted this limited Phase II Soil Residue Survey to evaluate the potential for the presence of Total Petroleum Carbon Chain (TPH-Carbon Chain) and CAM Title 22 Metals adjacent the rusted 55-gallon steel drum observed within the west-central portion of the site. A general plan showing approximate location of the Hand-Auger borings is provided as Figure 2. This work consisted of the following tasks:

#### **Task 1 – Soil Sampling**

Petra collected soil samples from two (2) boring locations utilizing a stainless-steel hand-auger. The borings were excavated adjacent the rusted 55-gallon steel drum within the areas observed to have soil staining. Samples were proposed to be collected at depths from approximately 0.5 foot and 1.5 and 3.0 feet below ground surface (bgs), however the borings encountered granitic bedrock at 4-inches bgs. Therefore, soil samples were collected at depths from ground surface to 4-inches bgs in each boring. Each sample was logged into a chain-of-custody form and immediately placed in an ice filled cooler. Samples were delivered to a fixed-base, State of California-certified laboratory.

As required, the hand-auger equipment was cleaned between sampling events with an Alconox-water wash, followed by a tap water rinse and a final rinse with distilled water. Purge water from the decontamination of sampling equipment is being stored pending laboratory results and prior to appropriate disposal.

#### **Task 2 – Laboratory Analysis**

All samples collected during the sampling phase were submitted under chain-of-custody documentation to Enviro-Chem, Inc., a state-certified laboratory in Pomona, California. The soil samples were tested discreetly for Total Petroleum Hydrocarbons (TPH)-Carbon Chain using EPA Method 8015B; and CAM Title 22 Metals using EPA Method 6010B/7471.

#### **Task 3 – Data Evaluation and Reporting**

Petra reviewed the laboratory findings and a discussion of these findings is presented herein. A copy of the laboratory results and chain-of-custody form is provided in Appendix A.

## **SAMPLING PROTOCOL**

### **Soil Sampling**

The soil samples were obtained utilizing a stainless-steel hand auger with a three-inch outside diameter. Hand auger sampling equipment was decontaminated prior to the collection of each subsequent sample. Each soil sample was collected, placed into a glass jar, sealed, labeled, and placed in a cooler with ice for subsequent laboratory analysis. To prevent cross-contamination, all sampling equipment was washed with a Liquinox™ and water solution, and rinsed with distilled water, prior to introduction into the subsurface. Each sample was collected, sealed, labeled, and placed in a cooler with ice for subsequent transport and laboratory analyses under a Chain of Custody (COC) record.

All samples collected were transported to, and analyzed by Enviro-Chem, Inc. in Pomona, California, (a state certified laboratory). Sample security was maintained and documented using sample labels and chain-of-custody records. Copies of the official laboratory reports and chain-of-custody records are included in Appendix B.

## **LIMITED PHASE II FIELD ASSESSMENT**

Petra conducted soil sampling activities for the limited Phase II Soil Residue Survey within the subject property on December 2, 2020. A discussion of the field activities is provided below. A plan showing the approximate location of the drum within the site is provided as Figure 1 and a general plan showing approximate location of the Hand-Auger borings is provided as Figure 2.

### **Field Activities**

The rusted 55-gallon steel drum was observed within the west-central portion of the site. A rock wall and wooden railroad tie wall are located adjacent the drum on the west and south sides, respectively. Staining of the soils was observed adjacent the drum in an approximate 7-feet long and 5-feet wide area extending to the north-northeast from the drum. To evaluate soil residues due to dark staining of the soils observed adjacent the steel drum, a total of two (2) hand auger borings (HA-1 and HA-2) were advanced to only a depth of 4-inches bgs due to the borings encountering granitic bedrock. The samples collected from the surface to 4-inches bgs were discretely analyzed for Total Petroleum Carbon Chain (TPH-Carbon Chain) according to EPA Method 8015B and CAM Title 22 Metals using EPA Method 6010B/7471. The decontamination water (rinsate) was also collected during the subsurface field work and contained for future laboratory testing in the event elevated concentrations of soil residues were detected.

### **Decontamination Procedures**

All equipment that came into contact with potential soil residues was decontaminated consistently as to assure the quality of samples collected. Decontamination occurred prior to and after each use of the hand-auger sampling equipment. All sampling devices used were decontaminated utilizing the following procedures:

- Liquinox™ and water solution
- Initial deionized/distilled water rinse
- Final deionized/distilled water rinse

### **Laboratory Analysis**

All soil samples analyzed during this assessment were analyzed by Enviro-Chem, Inc. (ECI) in Pomona, California. ECI is accredited by the California Environmental Protection Agency, Department of Health Services Environmental Laboratory Accreditation Program (ELAP). Analyses were requested on a chain-of-custody record. Below is a discussion of the laboratory results.

The following analytical tests were performed on select samples:

- Total Petroleum Carbon Chain (TPH-Carbon Chain) according to EPA Method 8015B
- CAM Title 22 Metals using EPA Method 6010B/7471

#### **Total Petroleum Hydrocarbon Chain (TPH-Carbon Chain)**

Two (2) discrete samples collected at a depth from ground surface to 4-inches bgs were tested for TPH according to EPA Method 8015B. No concentrations were detected above the laboratory reporting limit for C4-C10 Gasoline Range. Concentrations were detected above the laboratory reporting limit for C10-C28 Diesel Range in both discrete samples, HP-1 @ -4" at 806 milligrams per kilograms mg/kg and HA-2 @ -4" at 2450 mg/kg. Concentrations were also detected above the laboratory reporting limit for C28-C35 Motor Oil Range in both samples, HP-1 @ -4" at 4880 milligrams per kilograms mg/kg and HA-2 @ -4" at 20700 mg/kg.

#### **Title 22 Metals**

Two (2) discrete samples collected at a depth from ground surface to 4-inches bgs were tested for CAM Title 22 Metals using EPA Method 6010B/7471. Detected levels of barium, chromium, cobalt, copper, lead, vanadium, and zinc were reported below their respective Regional Screening Levels (RSLs) for residential use soil (US EPA, 2020).

## **CONCLUSIONS**

Based on the laboratory results of the soil samples collected, the following conclusions are made:

### **Total Petroleum Hydrocarbon Chain (TPH-Carbon Chain)**

Two (2) discreet samples collected at a depth from ground surface to 4-inches bgs were tested for TPH according to EPA Method 8015B. The results were compared with the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) 2019 Tier 1 Environmental Screening Level (ESL) of 100 mg/kg for Gasoline Range; 260 mg/kg for Diesel Range; and 1,600 mg/kg for Motor Oil Range. No concentrations were detected above the laboratory reporting limit for C4-C10 Gasoline Range. Concentrations were detected above the laboratory reporting limit for C10-C28 Diesel Range in both discreet samples HP-1 @ -4" at 806 milligrams per kilograms mg/kg and HA-2 @ -4" at 2450 mg/kg. Concentrations were also detected above the laboratory reporting limit for C28-C35 Motor Oil Range in both samples HP-1 @ -4" at 4880 milligrams per kilograms mg/kg and HA-2 @ -4" at 20700 mg/kg. The concentrations reported for C10-C28 Diesel Range and C28-C35 Motor Oil Range in both samples are above their respected SFBRWQCB Environmental Screening Level (ESL). Results are summarized in Table 1 and the laboratory test results are included in Appendix A.

### **Title 22 Metals**

Two (2) discreet samples collected at a depth from ground surface to 4-inches bgs were tested for CAM Title 22 Metals using EPA Method 6010B/7471. Detected levels of barium, chromium, cobalt, copper, lead, vanadium and zinc were reported below their respective Regional Screening Levels (RSLs) for residential use soil (US EPA, 2020). Therefore Title 22 Metals are do not appear to represent a risk to human health with regards to the site soils analyzed.

## **RECOMMENDATIONS**

Based upon the laboratory test results reported herein, Petra provides the following recommendations:

1. It is recommended that the 55-gallon steel drum be removed from the site by a licensed environmental contractor in accordance with current regulations.
2. Staining of the soils was observed adjacent the 55-gallon steel drum in an approximate 7-feet long and 5-feet wide area extending to the north-northeast from the drum. Soils with elevated concentrations above the ESL for TPH-d and TPH-mo detected in the area of samples HA-1 and HA-2 should be excavated and removed from the subject property by a licensed environmental contractor. The soil removal excavation should extend to a width of 10 x 10 feet and a depth of 1 foot below the ground surface and or refusal in bedrock. The excavated soils should be placed in steel drums and sealed for proper disposal. Once the excavation is completed, confirmation sidewall

and bottom samples should be collected for TPH testing to verify removal of hydrocarbon soil residues. The excavation should be monitored by a representative from Petra to identify stained soils and noxious odors, and to collect the confirmation samples for laboratory analysis.

### **LIMITATIONS**

The work activities described herein were conducted, at the request of the client and Riverside County Department of Environmental Health (RCDEH). Petra has completed the above scope of work in general accordance with our supplemental proposal for Job No. 19-142, dated November 30, 2020. The work activities described herein were conducted to address the specific issues as discussed in this report. No other areas of the subject site were assessed as part of this limited assessment. Since no environmental assessment can wholly eliminate uncertainty regarding potential recognized environmental conditions, some uncertainty regarding potential recognized environmental conditions at the site may remain at the conclusion of this assessment.

This opportunity to be of service to you is sincerely appreciated. Please do not hesitate to call this office if you have questions pertaining to this report.

Respectfully submitted,

**PETRA GEOSCIENCES, INC.**



Jonathan Cain  
Senior Associate Geologist



12/17/2020

Siamak Jafroudi, PhD  
Senior Principal Engineer  
GE 2024



JC/SJ/lv

Distribution: Addressee

Attachments: References  
Table 1 – Summary of Total Petroleum Hydrocarbon  
Table 2 – Summary of CAM Title 22 Metals  
Figure 1 – Site Plan  
Figure 2 – General Plan  
Appendix A – Photographs  
Appendix B – Laboratory Test Data and Chain-Of-Custody

**REFERENCES**

Goggle Earth™, 2020.

Petra Geosciences, Inc., 2019, Phase I Environmental Site Assessment, 6-Acre Site, Assessor Parcel Numbers (APN's) 466-050-019; -020; and -021, Located Adjacent to the Southwest Corner of Highway 79 and Newport Road, Riverside County, California; prepared for Diamond Valley, LLC, J.N. 19-429, dated April 23.

San Francisco Bay Regional Water Quality Control Board (SFBRWQCB), 2019 (Rev 2), Environmental Screening Levels, Tier 1, dated December.

United States Environmental Protection Agency (US EPA), 2020, EPA Region 9 Regional Screening Levels (RSLs), dated November.

**TABLE 1**  
**Summary of Total Petroleum Hydrocarbon**

Boring and Sample ID	TPH-g <sup>(1)</sup> (mg/kg) <sup>(4)</sup>	TPH-d <sup>(2)</sup> (mg/kg)	TPH-mo <sup>(3)</sup> (mg/kg)
HA-1 @ -4"	ND <sup>(5)</sup>	806	4,880
HA-2 @ -4"	ND	2,450	20,700
<b>Screening Levels<sup>(6)</sup></b>	100.0	260.0	1,600
<p>Notes:</p> <p>(1) TPH-gasoline range</p> <p>(2) TPH-diesel range</p> <p>(3) TPH-motor oil range</p> <p>(4) Milligrams per kilogram (mg/kg)</p> <p>(5) Non-detected or below the detection limit</p> <p>(6) San Francisco Bay Regional Water Quality Control Board (RWQCB-SFB, 2019) Environmental Screening Levels (ESL's), Tier 1 ESL</p>			



**TABLE 2**  
**Summary of CAM Title 22 Metals**

Boring & Sample ID	Barium (mg/kg) <sup>(1)</sup>	Chromium (total) (mg/kg)	Cobalt (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Vanadium (mg/kg)	Zinc (mg/kg)
HA-1 @ -4"	114	24.6	7.74	8.93	1.83	40.1	56.3
HA-2 @ -4"	86.4	21.6	5.91	4.10	1.57	32.0	32.5
<b>Residential Screening Levels</b>	15,000 <sup>(2)</sup>	160 <sup>(3)</sup>	23 <sup>(2)</sup>	3,100 <sup>(2)</sup>	400 <sup>(2)</sup>	390 <sup>(2)</sup>	23,000 <sup>(2)</sup>
Notes: (1) Milligrams per kilogram (2) Regional Screening Levels, RSLs (US EPA, 2020) (3) San Francisco Bay Regional Water Quality Control Board (RWQCB-SFB, 2019) Environmental Screening Levels (ESL's), Tier 1 ESL							



## EXPLANATION



Approximate Site Boundary



Approximate Location of Steel Drum



Base Map Reference: Google Earth (2019) Map

## **PETRA GEOSCIENCES, INC.**

40880 County Center Drive, Suite R

Temecula, California 92591

PHONE: (951) 600-9271

COSTA MESA TEMECULA VALENCIA PALM DESERT CORONA

## **SITE PLAN**

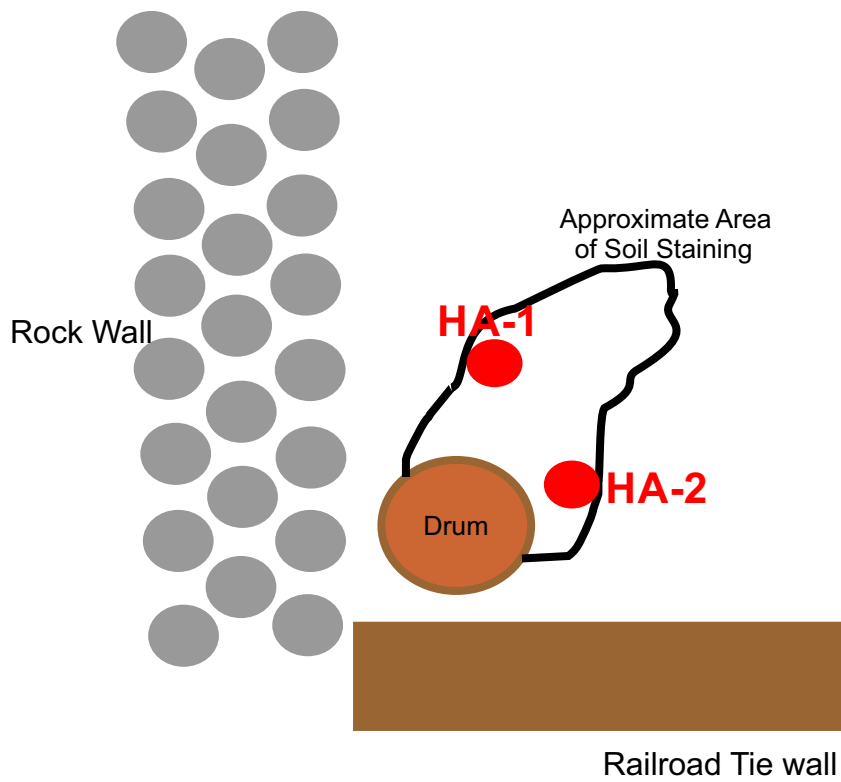
Highway 79 and Newport Road Project  
Riverside County, California




DATE: December 2020

J.N.: 19-142

**Figure 1**



## EXPLANATION

 Approximate Location of  
**HA-2** Hand-Augur Borings



(Plan Not to Scale)

Base Map Reference: Google Earth (2019) Map

### **PETRA GEOSCIENCES, INC.**

40880 County Center Drive, Suite R  
Temecula, California 92591  
PHONE: (951) 600-9271  
COSTA MESA TEMECULA VALENCIA PALM DESERT CORONA

### **GENERAL PLAN**

Highway 79 and Newport Road Project  
Riverside County, California



DATE: December 2020

J.N.: 19-142

**Figure 2**

# ***APPENDIX A***

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## ***PHOTOGRAPHS***











## ***APPENDIX B***

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### ***LABORATORY TEST DATA AND CHAIN-OF-CUSTODY***

**Enviro – Chem, Inc.**

**1214 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907**

Date: December 9, 2020

Mr. Jon Cain  
Petra Geotechnical, Inc  
40880 County Center Dr  
Temecula, CA 92591  
Tel: (951) 830-9455 E-Mail: JCain@Petra-Inc.com

Project: **19-142**  
Lab I.D.: **201202-20, -21**

Dear Mr. Cain:

The **analytical results** for the soil samples, received by our laboratory on December 2, 2020, are attached. The samples were received intact, and accompanying chain of custody.

Enviro-Chem appreciates the opportunity to provide you and your company this and other services. Please do not hesitate to call us if you have any questions.

Sincerely,



Curtis Desilets  
Vice President/Program Manager



Andy Wang

Laboratory Manager



**Enviro - Chem, Inc.**

**1214 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907**

**LABORATORY REPORT**

CUSTOMER: **Petra Geotechnical**  
40880 Country Center Drive  
Temecula, CA 92591  
Tel: (951) 830-9455 E-Mail: JCain@Petra-Inc.com

PROJECT: **19-142** DATE RECEIVED: 12/02/20  
MATRIX: SOIL DATE EXTRACTED: 12/07/20  
SAMPLING DATE: 12/02/20 DATE ANALYZED: 12/07/20  
REPORT TO: MR. JON CAIN DATE REPORTED: 12/09/20

**TOTAL PETROLEUM HYDROCARBONS (TPH) - CARBON CHAIN ANALYSIS**

**METHOD: EPA 8015B**

**UNIT: mg/Kg = MILLIGRAM PER KILOGRAM = PPM**

SAMPLE I.D.	LAB I.D.	C4-C10	C10-C28	C28-C35	DF
HA-1 @ -4"	201202-20	ND	806 *	4880	10
HA-2 @ -4"	201202-21	ND	2450 *	20700	100
METHOD BLANK		ND	ND	ND	1
	PQL	10	10	50	

**COMMENTS**

C4-C10 = GASOLINE RANGE

C10-C28 = DIESEL RANGE

C23-C35 = MOTOR OIL RANGE

DF = DILUTION FACTOR

PQL = PRACTICAL QUANTITATION LIMIT

ACTUAL DETECTION LIMIT = DF X PQL

ND = NON-DETECTED OR BELOW THE ACTUAL DETECTION LIMIT

\* = PEAKS IN DIESEL RANGE BUT CHROMATOGRAM DOES NOT MATCH THAT OF  
DIESEL STANDARD

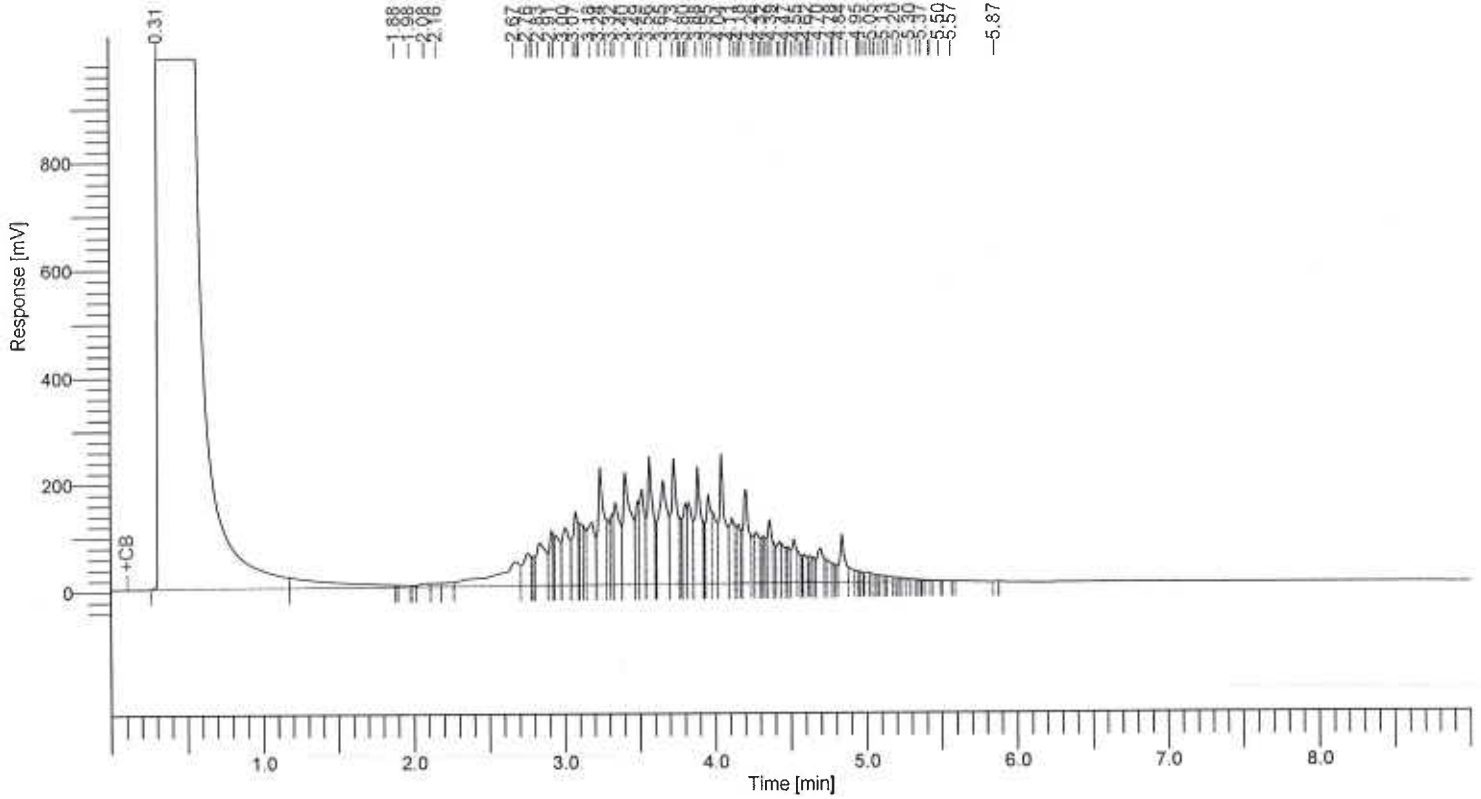
Data Reviewed and Approved by:   
CAL-DHS ELAP CERTIFICATE No.: 1555

Software Version : 6.3.2.0646  
 Sample Name : DIESEL CCV 2000PPM (GC-3900)  
 Instrument Name : GC-1  
 Rack/Vial : 0/3  
 Sample Amount : 1.000000  
 Cycle : 4

Date : 12/8/2020 8:51:38 AM  
 Data Acquisition Time : 12/7/2020 9:04:45 AM  
 Channel : A  
 Operator : Administrator  
 Dilution Factor : 1.000000

*DIESEL  
STANDARD*

Result File : E:\GC DATA\GC-1\2020\12\201207\A004.rst  
 Sequence File : E:\GC DATA\GC-1\2020\12\201207\201207.seq



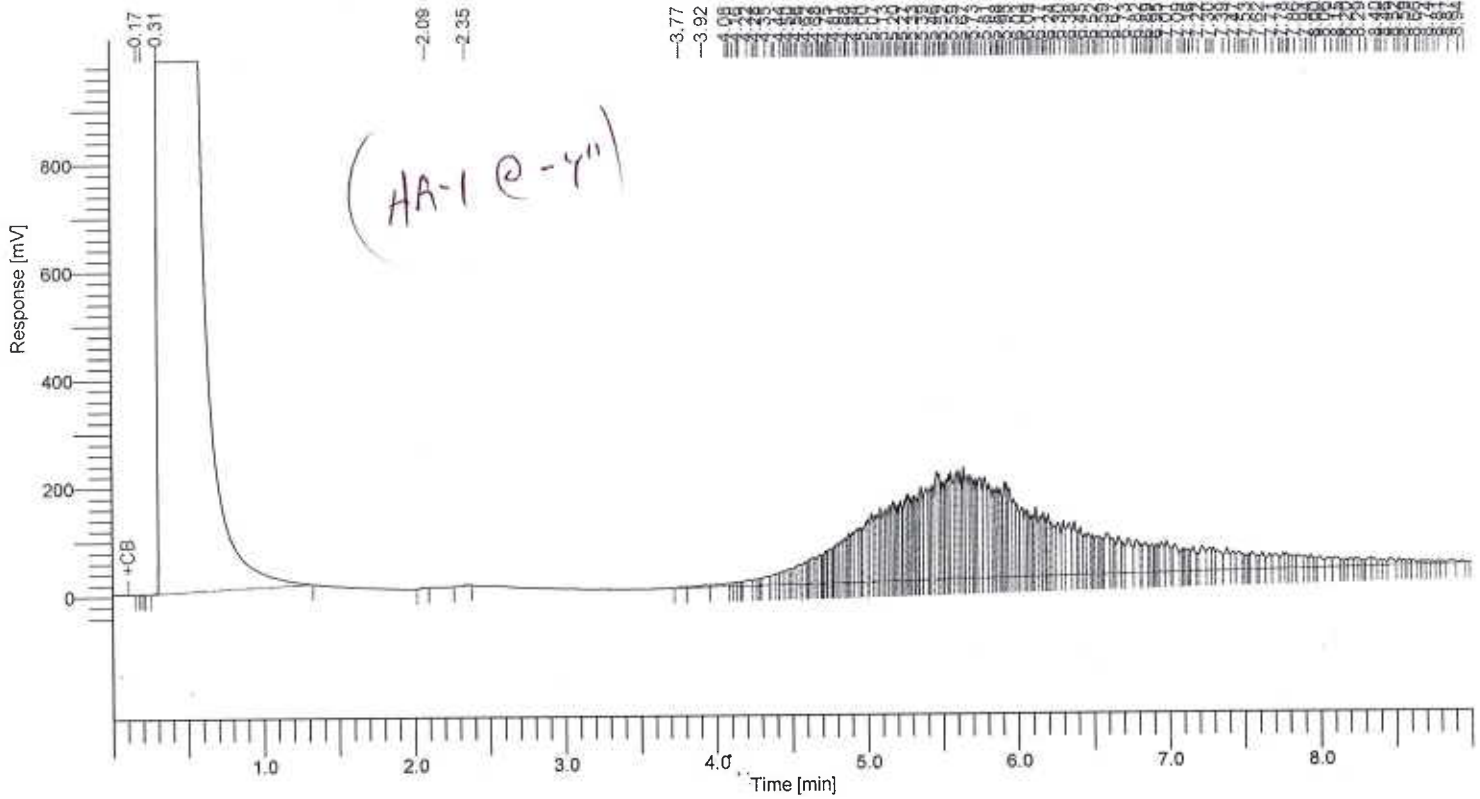
### 8015 Results

Component Name	Area [uV*sec]	Adjusted Amount
C10-C28	13228892	1923.9
	13228892	1923.9

Software Version : 6.3.2.0646  
Sample Name : 201202-20 20/20  
Instrument Name : GC-1  
Rack/Vial : 0/23  
Sample Amount : 1.000000  
Cycle : 1

Date : 12/8/2020 8:51:34 AM  
Data Acquisition Time : 12/7/2020 2:12:05 PM  
Channel : A  
Operator : Administrator  
Dilution Factor : 1.000000

Result File : E:\GC DATA\GC-IN\2020\12\201207\A030.rst  
Sequence File : E:\GC DATA\GC-IN\2020\12\201207\201207.seq  
Sample Notes:  
FAST EPA 8015 Analysis FOR CCID



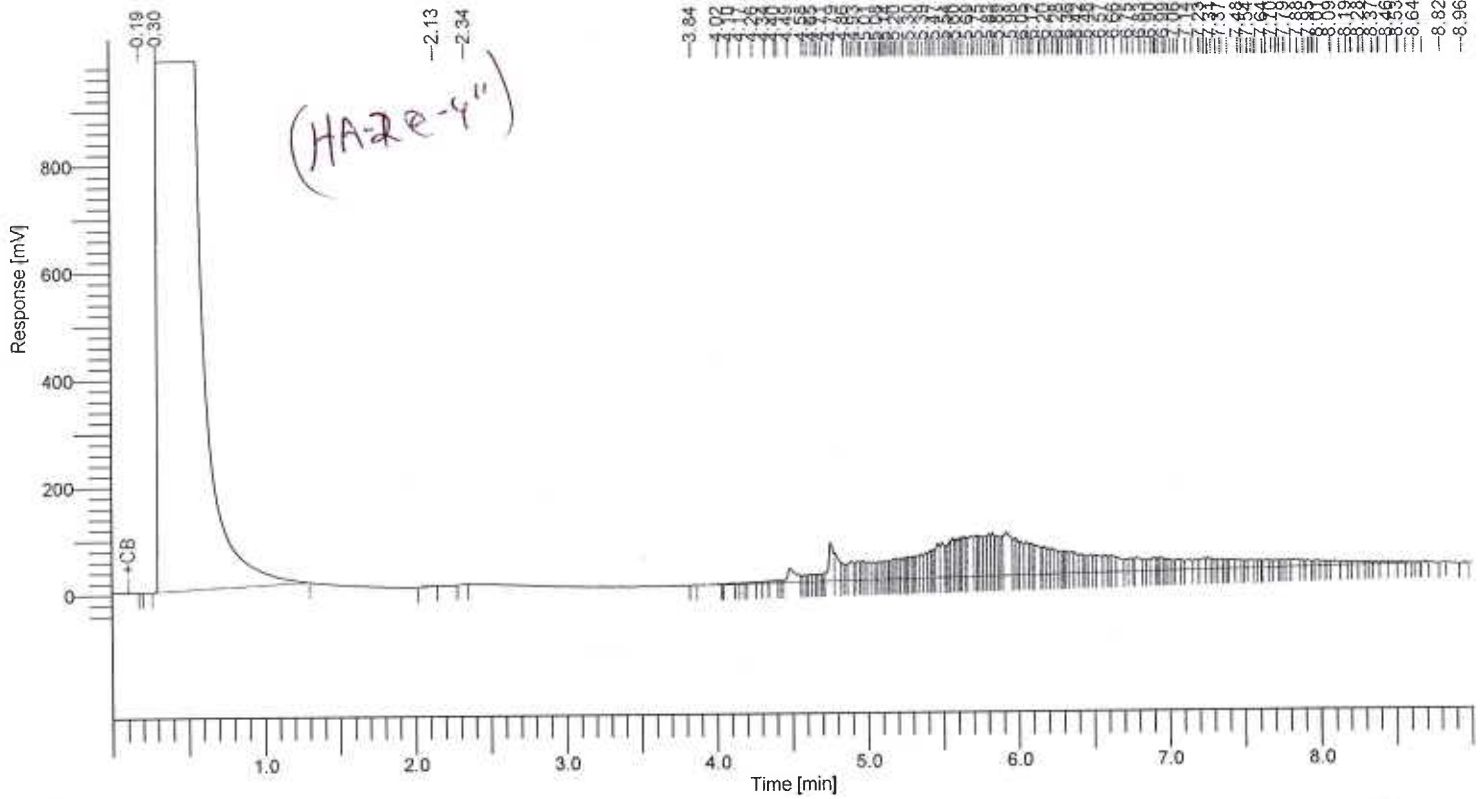
### 8015 Results

Component Name	Area [uV*sec]	Adjusted Amount
C4-C10	9745	30.6
C10-C28	8894031	806.0
C28-C35	9615358	4877.0
	18519134	5713.6

Software Version : 6.3.2.0546  
 Sample Name : 201202-21 20/200 RE  
 Instrument Name : GC-1  
 Rack/Vial : 0/37  
 Sample Amount : 1.000000  
 Cycle : 27

Date : 12/8/2020 9:07:14 AM  
 Data Acquisition Time : 12/7/2020 7:45:06 PM  
 Channel : A  
 Operator : Administrator  
 Dilution Factor : 1.000000

Result File : E:\GC DATA\GC-1\2020\12\201207\A057.rst  
 Sequence File : E:\GC DATA\GC-1\2020\12\201207\1201207.seq



### 8015 Results

Component Name	Area [uV*sec]	Adjusted Amount
C4-C10	7860	30.0
C10-C28	2874333	245.2
C28-C35	4162159	2072.4
	7044352	2347.6

Enviro Chem, Inc

1214 E. Lexington Avenue, Pomona, CA 91766

Tel (909)590-5905 Fax (909)590-5907

## 8015B QA/QC Report

Date Analyzed: 12/7/2020

Units: mg/Kg (ppm)

Matrix: **Soil/Solid/Sludge/Liquid**

Matrix Spike (MS)/Matrix Spike Duplicate (MSD)

Spiked Sample Lab I.D.: **201204-4 MS/MSD**

Analyte	SR	spk conc	MS	%MS	MSD	%MSD	%RPD	ACP %MS	ACP RPD
C10~C28 Range	0	200	204	102%	190	95%	7%	75-125	0-20%

### LCS STD RECOVERY:

Analyte	spk conc	LCS	% REC	ACP
C10~C28 Range	200	161	81%	75-125

Analyzed and Reviewed By: \_\_\_\_\_

Final Reviewer: \_\_\_\_\_

## LABORATORY REPORT

CUSTOMER: **Petra Geotechnical**  
40880 County Center Dr., Temecula, CA 92591  
Tel: (951) 830-9455 E-Mail: JCain@Petra-Inc.com

PROJECT: **19-142**

MATRIX: SOIL

SAMPLING DATE: 12/02/20

REPORT TO: MR. JON CAIN

DATE RECEIVED: 12/02/20

DATE ANALYZED: 12/03/20

DATE REPORTED: 12/09/20

SAMPLE I.D.: **HA-1 @ -4"**

LAB I.D.: 201202-20

### TOTAL THRESHOLD LIMIT CONCENTRATION ANALYSIS

UNIT: mg/Kg = MILLIGRAM PER KILOGRAM = PPM

ELEMENT ANALYZED	SAMPLE RESULT	PQL	DF	TTLC LIMIT	STLC LIMIT	EPA METHOD
Antimony (Sb)	ND	1.0	1	500	15	6010B
Arsenic (As)	ND	0.3	1	500	5.0	6010B
Barium (Ba)	114	5.0	1	10,000	100	6010B
Beryllium (Be)	ND	0.5	1	75	0.75	6010B
Cadmium (Cd)	ND	0.5	1	100	1.0	6010B
Chromium Total (Cr)	24.6	0.5	1	2,500	560/5@	6010B
Chromium VI (Cr6)	--	0.2	-	500	5.0	7196A
Cobalt (Co)	7.74	1.0	1	8,000	80	6010B
Copper (Cu)	8.93	1.0	1	2,500	25	6010B
Lead (Pb)	1.83	0.5	1	1,000	5.0	6010B
Mercury (Hg)	ND	0.01	1	20	0.2	7471A
Molybdenum (Mo)	ND	5.0	1	3,500	350	6010B
Nickel (Ni)	ND	2.5	1	2,000	20	6010B
Selenium (Se)	ND	1.0	1	100	1.0	6010B
Silver (Ag)	ND	1.0	1	500	5.0	6010B
Thallium (Tl)	ND	1.0	1	700	7.0	6010B
Vanadium (V)	40.1	5.0	1	2,400	24	6010B
Zinc (Zn)	56.3	0.5	1	5,000	250	6010B

### COMMENTS

DF = Dilution Factor

PQL = Practical Quantitation Limit

Actual Detection Limit = PQL X DF

ND = Below the Actual Detection Limit or non-detected

TTLC = Total Threshold Limit Concentration

STLC = Soluble Threshold Limit Concentration


@ = Must meet both the STLC Limit at 560 and EPA-TCLP Limit at 5

\* = STLC analysis for the metal is recommended (if marked)

\*\* = Additional Analysis required, please call to discuss (if marked)

\*\*\* = The concentration exceeds the TTLC Limit, and the sample is defined as hazardous waste as per CCR-TITLE 22 (if marked)

-- = Not analyzed/not requested

Data Reviewed and Approved by: 

CAL-DHS ELAP CERTIFICATE No.: 1555



**Enviro - Chem, Inc.****1214 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907****LABORATORY REPORT**

CUSTOMER: **Petra Geotechnical**  
**40880 County Center Dr., Temecula, CA 92591**  
**Tel: (951) 830-9455 E-Mail: JCain@Petra-Inc.com**

PROJECT: **19-142**MATRIX: SOILDATE RECEIVED: 12/02/20SAMPLING DATE: 12/02/20DATE ANALYZED: 12/03/20REPORT TO: MR. JON CAINDATE REPORTED: 12/09/20SAMPLE I.D.: **HA-2 @ -4"**LAB I.D.: **201202-21****TOTAL THRESHOLD LIMIT CONCENTRATION ANALYSIS****UNIT: mg/Kg = MILLIGRAM PER KILOGRAM = PPM**

ELEMENT ANALYZED	SAMPLE RESULT	PQL	DF	TTLT LIMIT	STLC LIMIT	EPA METHOD
Antimony (Sb)	ND	1.0	1	500	15	6010B
Arsenic (As)	ND	0.3	1	500	5.0	6010B
Barium (Ba)	86.4	5.0	1	10,000	100	6010B
Beryllium (Be)	ND	0.5	1	75	0.75	6010B
Cadmium (Cd)	ND	0.5	1	100	1.0	6010B
Chromium Total (Cr)	21.6	0.5	1	2,500	560/50	6010B
Chromium VI (Cr6)	--	0.2	--	500	5.0	7196A
Cobalt (Co)	5.91	1.0	1	8,000	80	6010B
Copper (Cu)	4.10	1.0	1	2,500	25	6010B
Lead (Pb)	1.57	0.5	1	1,000	5.0	6010B
Mercury (Hg)	ND	0.01	1	20	0.2	7471A
Molybdenum (Mo)	ND	5.0	1	3,500	350	6010B
Nickel (Ni)	ND	2.5	1	2,000	20	6010B
Selenium (Se)	ND	1.0	1	100	1.0	6010B
Silver (Ag)	ND	1.0	1	500	5.0	6010B
Thallium (Tl)	ND	1.0	1	700	7.0	6010B
Vanadium (V)	32.0	5.0	1	2,400	24	6010B
Zinc (Zn)	32.5	0.5	1	5,000	250	6010B

**COMMENTS**

DF = Dilution Factor

PQL = Practical Quantitation Limit

Actual Detection Limit = PQL X DF

ND = Below the Actual Detection Limit or non-detected

TTLT = Total Threshold Limit Concentration

STLC = Soluble Threshold Limit Concentration


@ = Must meet both the STLC Limit at 560 and EPA-TCLP Limit at 5

\* = STLC analysis for the metal is recommended (if marked)

\*\* = Additional Analysis required, please call to discuss (if marked)

\*\*\* = The concentration exceeds the TTLT Limit, and the sample is defined as hazardous waste as per CCR-TITLE 22 (if marked)

-- = Not analyzed/not requested

Data Reviewed and Approved by: 

CAL-DHS ELAP CERTIFICATE No.: 1555

**Enviro - Chem, Inc.**

**1214 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907**

**METHOD BLANK REPORT**

CUSTOMER: **Petra Geotechnical**  
40880 County Center Dr., Temecula, CA 92591  
Tel: (951) 830-9455 E-Mail: JCain@Petra-Inc.com

PROJECT: **19-142**

MATRIX: **SOIL**

SAMPLING DATE: **12/02/20**

REPORT TO: **MR. JON CAIN**

DATE RECEIVED: **12/02/20**

DATE ANALYZED: **12/03/20**

DATE REPORTED: **12/09/20**

METHOD BLANK FOR LAB I.D.: 201202-20, -21

**TOTAL THRESHOLD LIMIT CONCENTRATION ANALYSIS**

UNIT: mg/Kg = MILLIGRAM PER KILOGRAM = PPM

ELEMENT ANALYZED	SAMPLE RESULT	PQL	DF	TTLC LIMIT	STLC LIMIT	EPA METHOD
Antimony (Sb)	ND	1.0	1	500	15	6010B
Arsenic (As)	ND	0.3	1	500	5.0	6010B
Barium (Ba)	ND	5.0	1	10,000	100	6010B
Beryllium (Be)	ND	0.5	1	75	0.75	6010B
Cadmium (Cd)	ND	0.5	1	100	1.0	6010B
Chromium Total (Cr)	ND	0.5	1	2,500	560/50	6010B
Chromium VI (Cr6)	--	0.2	--	500	5.0	7196A
Cobalt (Co)	ND	1.0	1	8,000	80	6010B
Copper (Cu)	ND	1.0	1	2,500	25	6010B
Lead (Pb)	ND	0.5	1	1,000	5.0	6010B
Mercury (Hg)	ND	0.01	1	20	0.2	7471A
Molybdenum (Mo)	ND	5.0	1	3,500	350	6010B
Nickel (Ni)	ND	2.5	1	2,000	20	6010B
Selenium (Se)	ND	1.0	1	100	1.0	6010B
Silver (Ag)	ND	1.0	1	500	5.0	6010B
Thallium (Tl)	ND	1.0	1	700	7.0	6010B
Vanadium (V)	ND	5.0	1	2,400	24	6010B
Zinc (Zn)	ND	0.5	1	5,000	250	6010B

**COMMENTS**

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-- = Not analyzed/not requested

Data Reviewed and Approved by: 

CAL-DHS ELAP CERTIFICATE No.: 1555



## QA/QC for Metals Analysis --TTLC--SOLID/SOIL MATRIX

**Matrix Spike/ Matrix Spike Duplicate/ LCS :**

ANALYSIS DATE: 12/3/2020

Unit : mg/Kg(ppm)

Analysis	Spk.Sample ID	CONC.	LCS %Rec.	LCS STATUS	Sample Result	Spike Conc.	MS	% Rec MS	MSD	% Rec MSD	% RPD
Arsenic(As)	201202-20	50.0	103	PASS	0	50.0	45.2	90%	46.5	93%	3%
Lead(Pb)	201202-20	50.0	102	PASS	1.83	50.0	52.4	101%	52.5	101%	0%
Nickel(Ni)	201202-20	50.0	105	PASS	0	50.0	47.5	95%	47.7	95%	0%

ANALYSIS DATE. : 12/3/2020

Analysis	Spk.Sample ID	CONC.	LCS %Rec.	LCS STATUS	Sample Result	Spike Conc.	MS	% Rec MS	MSD	% Rec MSD	% RPD
Mercury (Hg)	201202-13	0.125	93	PASS	0	0.125	0.111	89%	0.105	84%	6%

### **MS/MSD Status:**

Analysis	%MS	%MSD	%LCS	%RPD
Arsenic(As)	PASS	PASS	PASS	PASS
Lead(Pb)	PASS	PASS	PASS	PASS
Nickel(Ni)	PASS	PASS	PASS	PASS
Mercury (Hg)	PASS	PASS	PASS	PASS
<b>Accepted Range</b>	<b>75 ~ 125</b>	<b>75 ~ 125</b>	<b>85 ~ 115</b>	<b>0 ~ 20</b>

ANALYST: 

FINAL REVIEWER: 

**CA-DHS ELAP CERTIFICATE #1555**

Other:

[illegible]

## Date:

WHITE WITH SAMPLE • YELLOW TO CLIENT