

#2118

August 25, 1999

ARTESIAN ENVIRONMENTAL  
ENVIRONMENTAL  
PROTECTION

Ms. Annie Beal  
Reliance Petro Chem  
P. O. Box 21117  
Bakersfield, CA 93390

99 AUG 26 PM 1:56



Re: **Underground Storage Tank Removal Report  
Piping Removal Addendum**  
Eagle Gas  
4301 San Leandro Street  
Oakland, California  
Artesian Project # 413-001-01  
StID #2118

Dear Ms. Beal:

Artesian Environmental (Artesian) was retained by Reliance Petro Chem (RPC) to remove two 6,000 gallon gasoline Underground Storage Tanks (USTs), two 4,000 gallon diesel USTs, and one 300 gallon waste oil UST at the premises of the Eagle Gas facility, located at 4301 San Leandro Street in Oakland, California. After removal of the USTs in April, 1999, Artesian collected confirmation soil and groundwater samples and arranged for the proper analyses at the direction of the Oakland Fire Services. Product piping was not removed during the UST removal activities due to a temporary budget limitation imposed by the property owner. On August 5, 1999 Artesian had removed product piping and collected confirmational soil samples from below the piping. This report documents product piping removal activities and confirmational soil sampling performed by Artesian. Artesian holds general engineering contractor 'A' license # 624461 including a Hazardous Material Removal Certificate.

Figure 2 (Site Map) shows the site and major features of the site in relation to major surrounding offsite features. Figure 2 also shows the current dimensions of the excavation along with all confirmational soil and groundwater sample locations. Figure 2 is contained in Attachment A. The property is presently inactive pending installation of new USTs and completion of any prerequisite remediation.

#### **Product Piping Removal**

Product piping at the site was drained of product before the USTs were removed. On August 4 and August 5, 1999, Artesian excavated trenches and removed product piping from approximately 100 linear feet of piping trenches (see Figure 2 for location of piping in relation to major features of the site). Product piping was 2-inches in diameter and made of steel. Artesian also removed all vent piping which was located between the former USTs and the south corner of the onsite building. Product and vent piping was later cut into sections for ease of handling and disposed as scrap metal.

#### **Confirmational Soil Sampling**

On August 5, 1999, Artesian collected 6 soil samples each from a depth of 3 feet below ground surface (piping was buried approximately 1 to 1.5 feet bgs). Four samples were collected from near each of the four former dispenser locations. Two confirmational soil samples were also collected from below the only two intersections of product piping outside the excavation area. Each soil sample was collected by first excavating soil to the

desired depth with a backhoe. Soil samples were then collected into stainless steel soil tube liners using a slide hammer sampler. The soil tube was decontaminated between samples using an alconox wash and two potable water rinses. After collection, each sample was immediately capped, labeled, logged on the chain-of-custody form, and placed in an iced cooler for transport to the laboratory.

### **Laboratory Analyses and Results**

Piping trench soil samples were analyzed for total petroleum hydrocarbons as diesel (TPHd) and TPH as gasoline (TPHg) by EPA Method 8015; methyl tertiary butyl ether (MTBE) by EPA method by EPA Method 8020; and benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8020.

Sample results indicate that soils in the product piping trenches contain concentrations of MTBE ranging from 3.8 mg/Kg to 310 mg/Kg, Total Petroleum Hydrocarbons as Gasoline (TPHg) ranging from 50 mg/Kg to 4,300 mg/Kg, and TPH as diesel (TPHd) ranging from 200 mg/Kg to 5,200 mg/Kg. Concentrations of benzene, toluene, ethylbenzene, and xylenes (BTEX) are widely varied. Benzene concentrations ranged from below laboratory detection limits to 11 mg/Kg, Toluene concentrations ranged from below laboratory detection limits to 130 mg/Kg, ethylbenzene concentrations ranged from below laboratory detection limits to 82 mg/Kg, and concentrations of xylenes ranged from below laboratory detection limits to 420 mg/Kg. Laboratory analytical reports are contained in Attachment B. Table 1 (Attachment C), presents laboratory analytical results in tabular format.

### **Conclusions**

Soil remaining in the product piping trench areas appears to be significantly impacted by gasoline and diesel range hydrocarbons as well as MTBE. Artesian prepared a report dated August 18, 1999 titled "Remedial Options to Treat Elevated Concentrations of MTBE in Soil" for the subject site. The referenced report provides a discussion of remedial options including options to remediate soil in the product piping trench areas and recommendations for the next course of remedial action. Please refer to the referenced report for information regarding recommendations and remedial options.

If you have any questions or comments, please contact Artesian at (510) 307-9943, extension 230.

Sincerely,  
Artesian Environmental



Paul E. Jones  
Project Geologist

attachments

cc: Inspector Hernan Gomez, Oakland Fire Services  
Mr. Barney Chan, Alameda County Environmental Health  
Ms. Farah Naz, Eagle Gas  
Mr. Don Montgomery, Advanced Financial Services

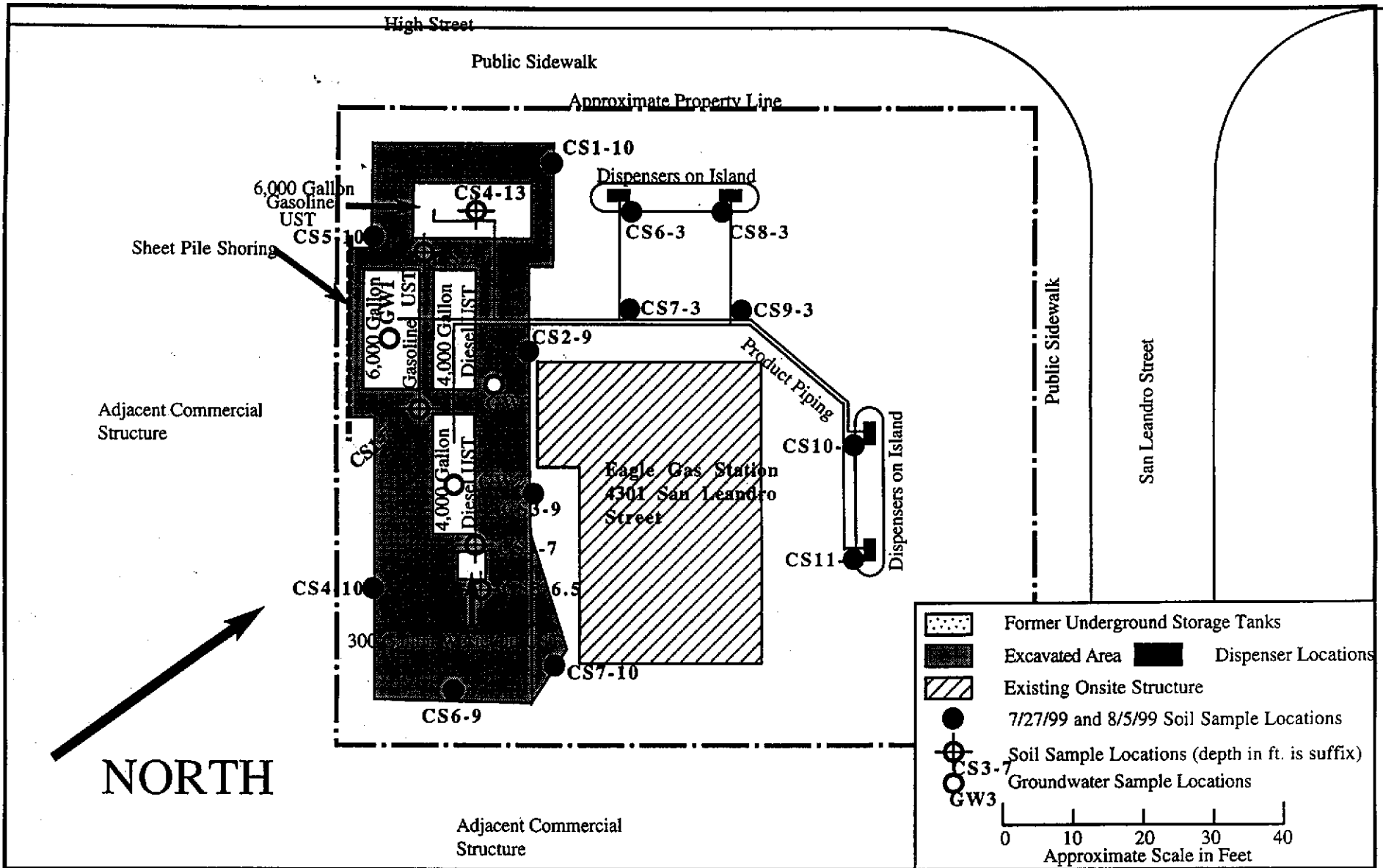
### **Artesian Environmental**

229 Tewksbury Avenue • Point Richmond, CA 94801 • TEL (510) 307- 9943 • FAX (510) 232- 2823

## **ATTACHMENT A: FIGURES**

**Artesian Environmental**

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Soil Sampling Location Map  
 Eagle Gas  
 4301 San Leandro Street  
 Oakland, California

Project No.: 413-001-01

Date: 05/13/99

Prepared by: P. Jones

Figure 1

**ATTACHMENT B: LABORATORY ANALYTICAL REPORTS  
AND CHAIN OF CUSTODY DOCUMENTATION**

**Artesian Environmental**

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McCAMPBELL ANALYTICAL INC.

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Artesian Environmental 229 Tewksbury Avenue Point Richmond, CA 94801	Client Project ID: #413-001-01; RPC/ Okland	Date Sampled: 08/05/99
	Client Contact Paul Jones	Date Received: 08/05/99
	Client P.O:	Date Extracted: 08/05/99
		Date Analyzed: 08/05/99

08/12/99

Dear Paul:

Enclosed are:

- 1). the results of 6 samples from your #413-001-01; RPC/Okland project,
- 2). a QC report for the above samples
- 3). a copy of the chain of custody, and
- 4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,

  
Edward Hamilton, Lab Director







McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553  
Tele: 925-798-1620 Fax: 925-798-1622

## QC REPORT FOR HYDROCARBON ANALYSES

Date: 08/05/99

Matrix: SOIL

Analyte	Concentration (mg/kg)			Amount Spiked	% Recovery		
	Sample (#09948)	MS	MSD		MS	MSD	RPD
TPH (gas)	0.000	1.877	2.004	2.03	92	99	6.6
Benzene	0.000	0.198	0.202	0.2	99	101	2.0
Toluene	0.000	0.204	0.210	0.2	102	105	2.9
Ethylbenzene	0.000	0.212	0.218	0.2	106	109	2.8
Xylenes	0.000	0.630	0.650	0.6	105	108	3.1
TPH(diesel)	0	293	285	300	98	95	3.0
TRPH (oil and grease)	0.0	21.1	22.0	20.8	101	106	4.2

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

## QC REPORT FOR HYDROCARBON ANALYSES

Date: 08/06/99-08/07/99

Matrix: SOIL

Analyte	Concentration (mg/kg) Sample (#09948)			Amount Spiked	% Recovery		RPD
	MS	MSD	MSD		MS	MSD	
TPH (gas)	0.000	2.074	2.209	2.03	102	109	6.3
Benzene	0.000	0.188	0.210	0.2	94	105	11.1
Toluene	0.000	0.194	0.216	0.2	97	108	10.7
Ethylbenzene	0.000	0.202	0.220	0.2	101	110	8.5
Xylenes	0.000	0.588	0.640	0.6	98	107	8.5
TPH(diesel)	0	354	353	300	118	118	0.4
TRPH (oil and grease)	0.0	21.0	21.2	20.8	101	102	0.9

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$



## **ATTACHMENT C: TABLES**

**TABLE 1: SOIL SAMPLE RESULTS - Piping Trenches**

**Eagle Gas**

**4301 San Leandro Street**

**Oakland, California**

Sample Location	Sample Date	TPH-d mg/Kg	TPH-g mg/Kg	Benzene mg/Kg	Toluene mg/Kg	Ethylbenzene mg/Kg	Xylenes mg/Kg	MTBE mg/Kg
CS6-3	8-5-99	1,300	4,300	11.00	130.00	82.00	420	70.00
CS7-3	8-5-99	200	50	ND	2.40	0.85	4	14.00
CS8-3	8-5-99	3,400	250	0.32	0.72	0.81	1	3.80
CS9-3	8-5-99	1,900	380	ND	ND	ND	ND	9.50
CS10-3	8-5-99	350	930	ND	78.00	17.00	99	310.00
CS11-3	8-5-99	5,200	1,400	3.20	13.00	25.00	90	62.00

**NOTES:**

TPH-g Total Petroleum Hydrocarbons as gasoline

TPH-d Total Petroleum Hydrocarbons as diesel

MTBE Methyl Tertiary Butyl Ether  
mg/Kg milligrams per Kilogram (ppm)

µg/Kg micrograms per Kilogram (ppb)

ND Not Detected (above method reporting limit)