#2118

ARTESIAN ENVIRONMENTENDISCHMENTAL August 25, 1999 PROTECTION

Ms. Annie Beal Reliance Petro Chem P. O. Box 21117 Bakersfield, CA 93390 99 AUG 26 PM 1:56



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

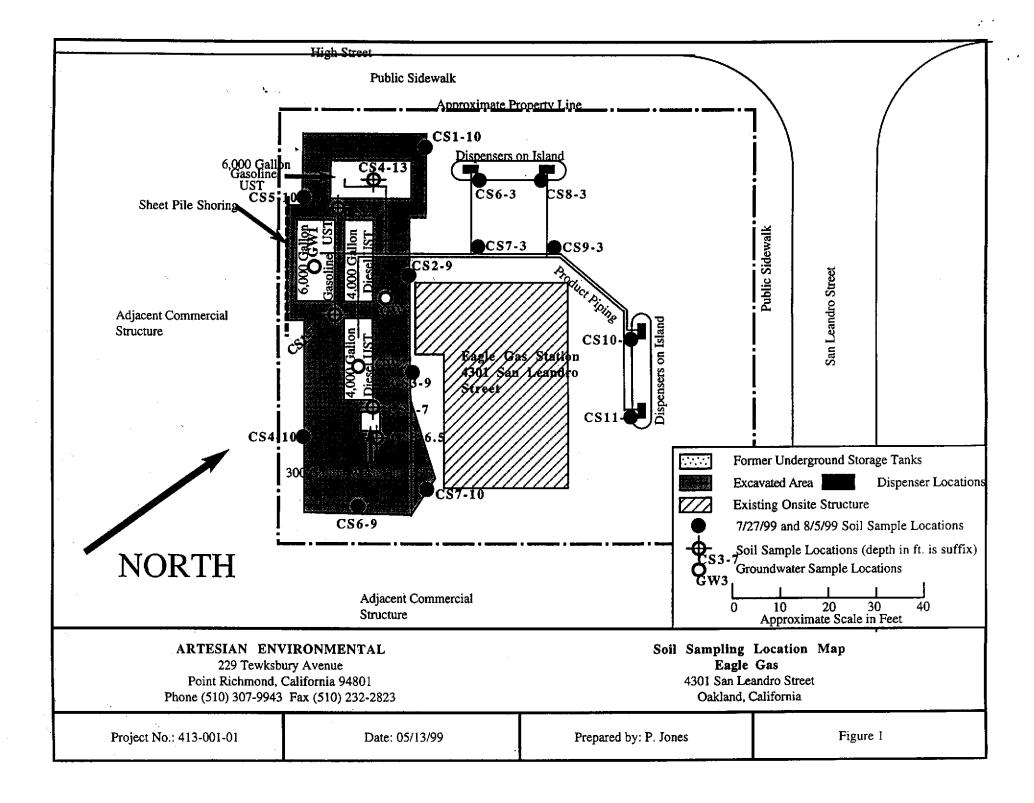
Ms. Farah Naz, Eagle Gas

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



ATTACHMENT B: LABORATORY ANALYTICAL REPORTS AND CHAIN OF CUSTODY DOCUMENTATION

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone: 925-798-1620 Fax: 925-798-1622
http://www.mccampbell.com E-mail: main@mccampbell.com

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

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560 Telephone: 925-798-1620 Fax: 925-798-1622 http://www.mccampbell.com E-mail: main@mccampbell.com

Artesian Environmental	Client Project ID: #413-001-01; RPC/	Date Sampled: 08/05/99
229 Tewksbury Avenue	Okland	Date Received: 08/05/99
Point Richmond, CA 94801	Client Contact Paul Jones	Date Extracted: 08/05/99
	Client P.O:	Date Analyzed: 08/05-08/06/99

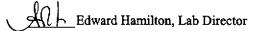
Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with Methyl tert-Butyl Ether* & BTEX*

EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(g)⁺	МТВЕ	Benzene	Toluene	Ethylben- zene	Xyleneś	% Recovery Surrogate
16693	CS6-3	s	4300,a	70	11.	130	82	420	111
16694	CS7-3	s	50,b	14	ND<0.020	2.4	0.85	3.8	100
16695	CS8-3	s	250,g,j	3.8	0.32	0.72	0.81	1.0	105
16696	CS9-3	s	380,g,j	9.5	ND<0.010	ND<0.010	ND<0.010	ND<0.010	101
16697	CS10-3	S	930,b	310	ND<0.50	78	17	99	98
16698	CS11-3	S	1400,a	62	3.2	13	25	90	98
			: -						
	·								
	g Limit unless se stated; ND	w	50 ug/L	5.0	0.5	0.5	0.5	0.5	
means not	detected above porting limit	s	1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	

^{*} water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil and sludge samples in mg/kg, and all TCLP and SPLP extracts in ug/L

^{*}The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment; j) no recognizable pattern.



cluttered chromatogram; sample peak coelutes with surrogate peak

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560 Telephone: 925-798-1620 Fax: 925-798-1622 http://www.mccampbell.com E-mail: main@mccampbell.com

Artesian Environmental	Client Project ID: #413-001-01; RPC/	Date Sampled: 08/05/99
229 Tewksbury Avenue	Okland	Date Received: 08/05/99
Point Richmond, CA 94801	Client Contact Paul Jones	Date Extracted: 08/05/99
	Client P.O:	Date Analyzed: 08/06-08/11/99

Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel *

EPA methods modified 8015, and 3550 or 3510; California RWQCB (SF Bay Region) method GCFID(3550) or GCFID(3510)

	· · ·		ornia RWQCB (SF Bay Region) method GCFID(3550) or GCFII	% Recovery				
Lab ID	Client ID	Matrix	TPH(d) ⁺	Surrogate				
16693	CS6-3	s	1300,d,b	111				
16694	CS7-3	S	200,b,d	113				
16695	CS8-3	S	3400,a	112				
16696	CS9-3	S	1900,a	102				
16697	CS10-3	s	350,d,b	102				
16698	CS11-3	S	5200,a	113				
								
-	T 18811 11 1 1 1							
				, ·				
				···				
				·····				
Reporting Li	mit unless otherwise	w	50 ug/L					
stated; ND me the re	ans not detected above eporting limit	S	1.0 mg/kg					

^{*} water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil and sludge samples in mg/kg, and all TCLP / STLC / SPLP extracts in ug/L

^{*} cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

^{&#}x27;The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) medium boiling point pattern that does not match diesel (?); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment.

QC REPORT FOR HYDROCARBON ANALYSES

Date:

08/05/99

Matrix: SOIL

	Concent	ration	(mg/kg)		% Reco	very	
Analyte	Sample			Amount			RPD
	(#09948) 	MS	MSD	Spiked 	MS 	MSD	
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

* Rec. = (MS - Sample) / amount spiked x 100

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

QC REPORT FOR HYDROCARBON ANALYSES

Date:

08/06/99-08/07/99

Matrix: SOIL

	Concent	ration	(mg/kg)	1	% Reco	very	
Analyte	Sample			Amount			RPD
	(#09948)	MS	MSD	Spiked 	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

% Rec. - (MS - Sample) / amount spiked x 100

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

McCAMPBEL	L ANALYT VENUE SOUTH, IECO: CA 94553	ICAL #D7	INC				*			וויף	וא'סד	ι Δ)	CI ROI					CU	SŢ	ΟI	ΣY	′ R	E	CO	_	<u>)</u>	
Telephone: (925) 798-1620	IECONCA 94553	Fa	x: (92	5) 798-	1622					10	KIN	נתו		OIA	. ريا	L LIV	*	į. Į	RUS	H	2	4 11	δυ.	R A		 HOU	IR A
Report To: Paul Jones	. Bill To	0: 12m		Ton a	A			-		-	-		Ana	alve	e D	e/111/	*e†							Otl			Comments
Company: Artesian Environmental		-40		II II CX				┢		-			7111	7. J		7	T	-	Т	Т	_	\Box			r.	•	
229 Tewksbury Avenue		`		· · · · · · · · · · · · · · · · · · ·					THE SE	Grease (5520 E&F/B&F)			1														16693
Point Richmond, CA 94801	,			J.			įχ.	留		E				A			- 1	≘│	ľ						ji Ji		1000
Tele: (510) 307-9943	Fax: (:	510) 23	32-282	3 7 P	ec/oa	KNU	nd	801 SY MTBE			8.1)		j	.	1	- }	-	≋							,		16694
Project #: 4/13-00/-01	Projec	t Name		1169	280		it.	ğ		35	(41		6]	ន្ត							ľ		16695
Project Location: Son Legadro	€ HGnS7	reet					4	8]	Si Si	pous	, \$.	802	ļ	בָּ		- 1	2			(01				1		
1 - 1	dridge					4 mma b 4		05/20	_	Š	22		02 /		် ရှိ	اه	- 1	V	İ	Ì	760				i		16696
SAM	PLING (E	M.	ATRIX	PR	AETH(ESER	OD VED	Gas (602	(8015)	8	ı FŞ		EPA 6		200	928/		多	اي		1/239.				1 1		16697
SAMPLE ID LOCATION Date	Time Containers	Type Containers	Water Soil	Air Sludge	Other Ice	HCI HNO,	Other	BTEX & TPH as	TPH as Diesel (8015)	Total Petroleung Oil &	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8080	EPA 608 / 8080 PCB's ONLY	EPA 624 / 8240 / 8260	EPA 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals	Lead (7240/7421/239.2/6010)	RCI	MTBE		1 J 1 i 1 l 1		16698
CSG-3 tankpiping BISTIGN	909 1	liner.	MV	1	7			7	/	_					-+	十	+	+	┰┼	_	-						
CS7-3 trankpring 8/5199		liner	V V				+	Ž	/						+		十			-			Y	,			
OS8-3 " 8/5/99		lina	\ <u>\</u>				\top	7	7					\dashv	1	_	寸	7	\dashv	\dashv	-			 			
	0:33 1	liner	V	1	V		+-	7	7					-	+		-+	\dashv	1				1			-	
	0.45 1	line/	1,			十	+		/					一十	寸		7		-	\dashv							
CS11-3 " 8/5/99		liner	V	 	1	-			V					\dashv	-	十	-	_	+	+		-		-			·
512 3 " 85/4			Ť					Ť							ightharpoonup			\equiv		_					_		
8/17							+		-		H			-	-+	-	-	-		+	-					-	7
														干	-		干	\dashv	7	\dashv							
															-	-	\dashv	\Box		\dashv							
	 	 					-		ļ						\dashv	_	\Box	\neg		\dashv			\Box				
							1	_					#	_	_	=	#	+	_	\Rightarrow		_	\dashv	_		_	
							\Box									二	#			\Rightarrow							
																_	\pm							\dashv			
							\perp							\dashv	-	-	_	-		+	-				-		
			_								-	-		\dashv			-	-	\neg	-						=	
Relinquished By: Date:		ived By:		- 1				Re	ma	ks:			1											<u>-</u>			
ampuruandae 1999	1 1 1	rie		, B.		<u> </u>				ľ	<u> </u>	11/	11	4	7 <i>A</i> I	Δv	<i>^</i>	7	14.1	11	٧.	_4	, .	_	_		
Relinquished By: Date:	Time: Rece	W By	1	· MT	7					_	<i>-</i> 1	VV	W	ì	V V	, A	W	U	vu								
Relinquished By: Date:		_02	-v	<u> / /</u> -	<i>-</i>							1								١	OAS	30	&G]1	META	LSI	THE	A
Date:	Time: Rece	ived By:	•						16	EN) 🗸	7							VATI			L					<u>.</u>
·	<u> </u>				· · · · · · · · · · · · · · · · · · ·					00	900	NDI	HON				***		PLAT	_							

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	МТВЕ	Methyl Tertiary Butyl Ether
TPH-d	as gasoline Total Petroleum Hydrocarbons	mg/Kg	milligrams per Kilogram (ppm)
1111-0	as diesel	μg/Kg ND	micrograms per Kilogram (ppb) Not Detected (above method reporting limit)