10/30/98



Chevron Products Company 6001 Bollinger Canyon Road Building L, Room 1102 PO Box 6004 San Ramon, California 94583-0904

Philip R. Briggs Project Manager Site Assessment & Remediation

## facsimile transmittal

Scott Seery

To:

From	Phil Briggs	Date			
Re:	Soil Analysis Results	Pages:	6		- 1512 (2011년 기술) 현경 -
CC:					
Vrge	ent For Review	Please Comment.	Please Reply	Estimate Reques	st
				1. 5 97	<del></del>
Atta	ched are the results for the	soil analysis that wen	e taken at SS# 9813	9, 16304 Foothill,	
San	Leand		However, I p	ropose to excavate	ŀ
abo	ut 1-2 feet deeper in the are	e under tank A, 2-3 fee	t deeper in the area	a of P4 and P-3 and	
at U	O1. Note that the TPH-g. B	TEX, MTBE analyses a	re in ppb while the	8270 and TOG are	<u>in</u> ,
ppn		nd will be us	ed for backfill into	the tank excavation	1;
UO	stockpile and Pump Island	stockpile will be trans	ported offsite for d	isposal.	
	8270 results detected Bis(				5
ofte	n found as a lab contamin	ant. Affached is a men	o from CRTC notin	ng this analyte and	
that	: the PRG is 210,000ppb. E	cpect removal of soil v	vill be on 11/2. Sarr	ples will be taken.	

Fax:

510 337-9335

CHEVRON U.S.A.

per growe!

PH | BIEX

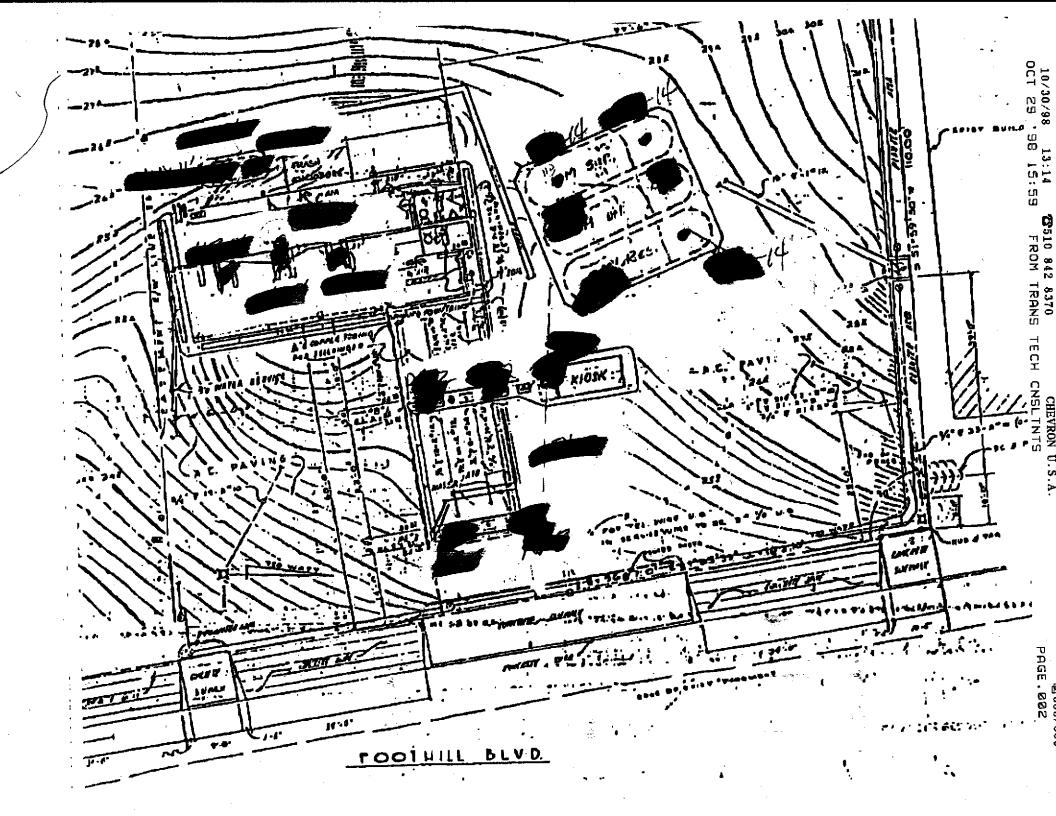
Relection high

7100000



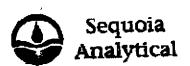
# FAX TRANSMITTAL

DATE: 11-29-98 FAX#: 842 X370
TO: Phil Briggs FROM: Jeff Monroe
NO. PAGES TRANSMITTED (including this page):
ie: 9-8/39
WE ARE SENDING YOU THE FOLLOWING ATTACHMENTS.
Carlo North TOH- B T F X 8270 TOG
$\sqrt{1481}$ $=$ $\sqrt{390}$ $\sqrt{60}$
1 UDZ - 9 ND 476 pm 10050 # 44.3 ppm
A COUNTY TO THE MAN
KI NOZIOSOONKAAD
(mx) BN 14 154000 ND 200 ND 875 9860
15 10 622 17.7 10<25
CS 14 NX 46600 WX 200
P1 Z 11400 434 359 268 1290
P3 Z ND < 400000 ND < 2001 — > ND < 10000
P3 Z ND < 400000 ND < 200 30600 8460 ND < 16000
DE 3 1060 28 NOX5 7.49 NOX10.
P4 Z 1560000 11 5240 30600 8460 ND<10000 P5 3 1060 28 NDS 7.49 NDS10. P6 3 13300 372 90 248 1150
Phil we can reuse UST Stokpilo but ust WD or lump Is had
Phil we can reuse US Storkful but us all of 10th 125 107 107 107 107 107 107 107 107 107 107



۳۳۹۶- مرزی اور ۱۵۵ کا ۱۵۹ کا ۱۵ کا ۱۵۹ کا ۱۵ کا ۱۵۹ کا ۱۵ کا ۱۵۹ کا ۱۵ کا

IIN. PARR SAENSETTOT



680 Chesapeste Lithe 474 M. Wiget Land 819 Sotket Avenue, Suite 9 1455 McDemell Blvd, North, Scc. D Kerwend City, CA 94763 Webut Creek CA 94798 Bacramento, CA 94834 Petakima CA 94924 (559) 364-9600 (925) 988-9600 (916) 921-9660 (707) 192-1865 FAX (650) 364-9233 FAX (925) 988-9673 FAX (914) 921-0100 FAX (707) 792-0342

Touchstone Developments PO Box 2554 Santa Russ, CA 93405 Project Number: 9-8139
Project Manager: Mr. Jeff Monroe

Semples: 10/26/98 Received: 10/27/98 Reported: 10/29/98

#### Semivolatile Organic Compounds by EPA Method 82708 Sequois Analytical - Petaluma

	Back "	Date	D210	Surrogate	Reporting	Result	Units	Notes*
Andyk	Littipei	Prepared	Analyze4	Limits	Liftut		OM119	
			7	on 112	i		Soil	
<u>U01X-11</u>			P8103	<del>77-43</del>	320	ND	ug/kg	:
Accuaphthene	8100483	10/27/95	10/37/98 -		330	ND	• •	
Acmaphthylene	••	"	" "		330	ND	•	
Anthreefine	₩	u u			1570	ND		
Benzois sei4	-		11		330	ND	-	
Beeze (a) enthracenc	. <b>"</b>		7		330	ND	•	
Benzo (b) fluoranthene	-		7 H	•	330	ND	•	
Benzo (k) fluoranthese	•	*	-		330	TO COM	4	
Henzo (g,h.) perylene	Р .	". •	_		330	ND	•	
Вешто (а) ругеле	•	-	4		660	ND	•	
Benzyl alcohol	v	•	ч		330	ND	-	
Biz(2-chlorocthexy)methane	p		-		330	ND	₩	
Bis(2-chlorouthy) other	41		_		330	ND		y agreement in the text
Dis(Z-chloroisopropyl)ethor	•		-		330	3420	17	
Bis/2-ethylhexyl)phthalece	#				330	ND	-	
4-Bromopheryl phanyl class		_			330	ND	• .	
Butyl heazyl philialate	<b>7</b>	· · · · · · · · · · · · · · · · · · ·	_		660	עא		
4-Chlorozoiline	-	-	_		,660	מא	F	
4_Chloro-3-methylphenol	/ <b>-</b>	•	-		330	ΝD	IF.	
2-Chloronaphthalunc	1*	*	**		330	ХĐ	•	
2-Chlorophonel		n.	. •	• •	330	ND	#	
4-Chlorophonyl phenyl ether	7				330	ND	8	
Сытрепе	<b>š</b> į	<b>45</b>	17		330	סא	•	
Dipenz (a,b) anihracene	-	11	i II	•	330	סא		
Dibensofistati	4	4	*		330	ND	11	
Di-n-butyl phihalate	₹	II	•		330 330	ND	-	
1,2 Dichloroben zne	•	•		•	330	ND	•	
i 3-Dichlorobeizone					330	ND	-	
1.4.Dichlorobenzese	<b>R</b>	r.	"		660	ND	-	
3.3 Dichlorobenzidine	٦	•	_		330	ND	-	
2,4-Dichlorophenol	-	, <u>,</u>	-		330	ND	R	
Diethyl phthalate	•	•			330	ND	•	
2,4-Dimethylphenol	-	es.	•	•	330	ND	Ħ	
Dimethyl phthedate	-	•	4		1670	ND	•	
4.6-Dinitro-2-methylphenul	~	<b>.</b>	•		1670	ND	61	
7.4-Dinitrophenol	-	h			330	ND	-	
2_4-Dinitrotoluene	**	-			330	ND	a	
2,6-Dimitrotaluene	19	•	Ħ		330 330	NU		
Di-n-octyl phihalate	м	-	-		330 0 <b>25</b>	ND	F	
Fluorentheme	qt	P	• .		330	ND		:
Fluorene	u	•	-		330	ND	e	
Hexaphlorobenzene	₹1	•	μ		33♥	1-4-		

Sequois Analytical - Petaluma

Refer to end of report for text of notes and deforitions.

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SECTIONA ANALYTICAL



680 Chesposte Drive 406 M. Wiger Loca 619 Serker Avenue, Suite 4 1485 NeDowell Blvd. North, Ste. D Redwood City, CA 94063 Weiner Creek, CA 94598 Spergraphin, CA 95854 Petaluma, CA 94954 (680) 364-9600 (923) 988-9800 (916) 921-9600 (707) 792-1863 PAX (650) 364 9233 PAX (925) 988-9873 PAX (916) 93) - 0106 PAX (707) 792-0342

Touchmone Developments	Project: Chevron/General	Sampled: 10/26/98
PO Box 2554	Project Number: 9-8139	Received: 10/27/98
Senta Rose, CA 95405	Project Manager: Mr. Jeff Montage	Paponed: 10/29/98
1.		

#### Semivolatile Organic Compounds by F.PA Method \$270\$ Sequoia Analytics! - Petaluma

	Datch	Date	Date	Surrogate	Keporting	-	41-4-	Notes
Pative	Number	Prepared	Analyzed	Limite	Limit	Result	. Units	Motos
<u> 301-9</u>	P810399-01						<u>S-41</u>	
reesulppess 201-3	8100483	10/27/95	10/27/98		330	ND	ng/kg	
/esosbygh/sve recombaniene	4140.00	9 140 2110 3	n		330	ND	•	
ruguseeve Iestsburg) iene	-	P	-		330	· ND	**	
rummeene Senzoic scirl	4				1670	ND	^	
- <del> </del>	•	-	r		330	ND	•	
ित्यक्त (a) क्ष्मिक्टला		_	u		330	ND		
Benzo (h) fleorarthene	r				330	ND	1	
Benzu (k) Nuvranthene	-	u)		•	330	ND	-	
Renan (6,h,i) përylëne		4f			170	ND	<del></del>	
Векого (а) ругане	•	_	-		660	מא	-	
Semyl alcohol		-			330	ND	•	
bis(2-chieroethoxy)methane	•		~	•		ND CTM	-	
Ris[7-chlorecthyl)other	В		۳		330	ND ND	-	ri t
Bis(2-chioroisopropyi)criec	•	<b>.</b>	-		330			
Bis(2-ethylberyl)phtholnie	P.	П	EP .		330	533		
Bromophenyl phenyl ether	P	•	**		330	ND	** **	
Buryl bennyl phrimine	ph.	•	-	•	330	ND		
Chloromiline	u	п	41		650	ND	-	•
(-Chlora-3-methylphena)	μ	-	**		560	ND	-	
?-Chlocousphthalene			•		330	ND	**	
		-	<b>-</b> .		330	סא	*	
Chlorophenol	**	₩.	4		330	ND	4	
i-Chlorophenyi phenyi ciher	4		v		330	ND	4	
Currone	<u>.</u>				330	· ND	7	
Dibeaz (a.h) anthracene	-				330	ND	н	
Dibaneofuran	-		-		330	ND	-	
Di-n-butyl phthalate	*	e e				מא		
1_Z-Dichlorobanzene	**	u	<del></del>		330	NO		
3-Dichlorchenzone	•	Ħ	7		330	ND	7	
1.4-Dielderobenzene	•	•	•	•	330			Par .
₹ ¶'alDichlorobenzidine	U	4	T .		660	ND		
2,4-Dichlorophenol	#	"	4)		· 33()	ND		
Diethyi phthalaic	<b>t-</b>	₩.	ų		330	ND	-	
2,4-Dimcûrylphenol	4		7		430	מא	-	
Dimethyl phthalate	10	•			330	ND	**	
4,6-Dinivo-2-methylphenol	u	D	n	•	1670	ND	9	
		•	46		1677	, ND	•	
1.4-Dinitrophenol	*	•	R	4	330	מא י	F	
2,4-Dinitratoluene		4	-		330	ND		
2,6-Dinitrotolucne	. 7				330	ND	6	
Di-a-octyl phthalate	7	-	-		330	ND	=	
Fluoranthene	•	-	-	1	330	379	•	
Phorene	7	_	-		330	ND	t+	
Hexachlorobensene	-	•			POU	140		

Sequoia Analyticol - Petalumo

\*Refer to end of report for text of notes and definitions.

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13:16 10/30/98

**2**510 842 8370

CHEVRON U.S.A.

Briggs, Philip (RBRI)

From:

Magaw, Renae (RIMB)

Sent:

Thursday, July 16, 1998 9:00 AM

To:

Briggs, Philip (RBRI)

Cc;

Beatty, Patrick (PWBE); CRTC THRA Team

Subject:

RE: Determine Toxicity of Analytes Detected in Soil at Service Station Site

#### Phil,

I have reviewed the list of detected analytes that you sent. Except for bis(2-ethylhexyl)phthalate, the detected compounds are polycyclic aromatic hydrocarbons (PAHs). These are chemicals that are not typically found in gasoline or in gasolinecontaminated soils, but they are normal constituents of heavier products and may be found in soils contaminated with those materials. The bis(2-ethylhexyl)phthalate is not a normal constituent of petroleum products. It is a plasticizer that has often been found as a laboratory contaminant in site investigations. .

The concentrations detected (including that for bis(2-ethylhexyl)phthalate) are all quite low and are unlikely to pose a health threat to workers at the site who may come into contact with contaminated materials. This conclusion is based on a comparison of the soil levels to Preliminary Remediation Goals (PRGs) developed by U.S. EPA. PRGs represent riskbased chemical concentrations in soil (or other media) that are unlikely to pose a health threat to people who may come in contact with the soil under a given set of exposure conditions. They are commonly used as a screening tool in site investigation work to determine whether a particular site may pose a threat to human health. PRGs are available for potential residential and industrial exposure settings. For example, under an industrial exposure setting, it is assumed that a worker may be exposed to contaminated soil 250 days/year for 25 years and that during this time the worker may inhale vapors and/or contaminated particles, ingest a small amount of contaminated soil, and get contaminated soil on their skin. The industrial PRGs for the chemicals detected at your site are as follows:

benzo(k)fluoranthene

36,000 ug/kg

benzo(a)pyrene

360 ug/kg

bis(2-ethylhexyl)phthalate

210,000 ug/kg 360,000 ug/kg

chrysene

fluoranthene

37,000,000 ug/kg

pyrene

26,000,000 ug/kg

The detected levels, as described in your message, are well below industrial PRGs, and therefore it is concluded that the detected levels are unlikely to pose a health threat to exposed workers.

PAHs tend to adsorb strongly to soils and thus may pose a threat primarily in situations where people come into direct contact with contaminated soil or through inhaling contaminated particulates. Limiting these types of exposures through the use of institutional controls or safe work practices would add an extra measure of security.

If you have any further questions, please feel free to call me.

### Renae Magaw

Senior Toxicologist Chevron Research and Technology Co.

RIMB@chevron.com

(510)242-7235

11.

FAX (510)242-7022