

BSK & Associates

Geotechnical Consultants, Inc.

LETTER OF TRANSMITTAL

DATE	11/30/92	JOB NO.	P92057.3
ATTENTION	Scott Seery		
RE:	Tiens Unocal		
	20405 Redwood Rd.		
	Castro Valley		

TO Alameda Co, Environmental Health
80 Swan Way, Rm 200
Oakland, CA 94621

WE ARE SENDING YOU Attached Under separate cover via _____ the following items:

- Final reports Draft reports Plans Samples Specifications
 Copy of letter Change order gas chromatograms

COPIES	DATE	NO.	DESCRIPTION
1			BSK-P Chem. Sample # 2674-4 10/12/92
1			PCE Standard 11/23/92
1			Dry Cleaning Facility Data Sheet

THESE ARE TRANSMITTED as checked below:

- For approval For review and comment Returned for corrections
 For your use Approved as submitted _____
 As requested Approved as noted

REMARKS Chromatogram for well MW-7 (BSK Chem Sample 2674-4)
Chromatogram for PCE standard for comparison. Data
sheet for chemical use at dry cleaners also provided, in
response to our phone conversations, and as requested in
the 2nd paragraph, page 2, of your letter to Randall
Nahas of November 17, 1992.

COPY TO Transmittal Letter to R. Nahas SIGNED: Sr Berge

November 24th 1992

TO: Tim Berger
FROM: Jeff Creager(ChemLab)
RE: PCE in BTX-TVH(G)

Here is PCE injected on the BTX-TVH(G) Methodology. It looks very similar to the chromatography of that unknown peak we have spoken of recently. I would suggest an 8010-8020 analysis on this sample to be sure. If worse came to worst, I think there was enough material in the sample to characterize it by mass-spectroscopy.

--jeff

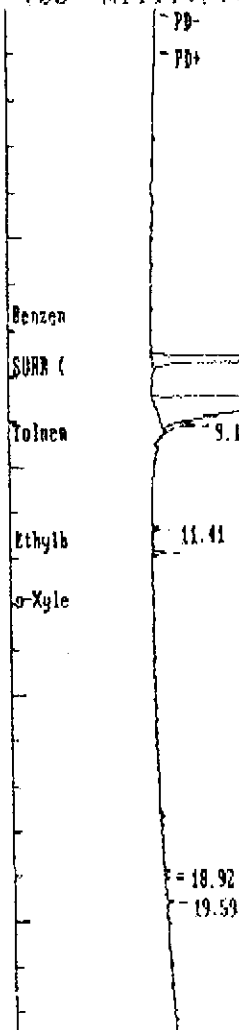
Output redirected to LPT1:
 PCE Standard Processed: 11-24-1992 02:00:29, segment 3, cycle 27
 RAW DATA SAVED IN FILE G:CBAA827.PTS Second Channel Stored in G:DBAA827.PTS

***** EXTERNAL STANDARD TABLE *****
 ***** 11-24-1992 02:00:41 Version 5.1.5 *****
 * Sample Name: PCE Standard Data File: G:CBAA827.PTS
 * Date: 11-24-1992 02:00:29 Method: G:CBTX62A 11-23-1992 12:06:05 # 1988
 * Interface: 15 Cycle#: 27 Operator BG Channel#: 0 Vial#: DEBEDE
 * Starting Peak Width: 10 Threshold: 20 Area Threshold: 100
 * Instrument Type: Varian 60 #2 Column Type: 30 Meter DB-624/WAX
 * Solvent Description: Helium at 5 ml/min
 * Conditions: 50/4--50EG/MIN--200/0--100EG/MIN-->220/5
 * Detector 0: PID Detector 1: FID
 * Misc. Information: BSK: BTX-TVH RUN #320AB LPT1:
 Starting Delay: 0.00 Ending retention time: 25.00
 Area reject: 500 One sample per 1.002 sec.
 Amount injected: 1.00 Dilution factor: 1.00
 Sample Weight: 1.00000

PLAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ug/100ul	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	RET PERK	X DELTA RET TIME	CONC/AREA
1	7.665	SURR (f Benz)	0.5911	91.9766%	462722	89151	5.19	0	.2103	1.2775E-06
3	9.118	Toluene	0.0219	3.5255%	28925	4195	6.94	0	.1834	7.5859E-07
4	11.406	Ethylbenzene	0.0040	0.6482%	5121	1206	4.21	0	.4373	7.8848E-07
5	11.924	m-Xylene	0.0053	0.8492%	7400	2073	3.61	0	1.133	7.1420E-07

TOTAL AMOUNT = 0.6224

Data File = G:CBAA827.PTS Printed on 11-24-1992 at 02:00:57
 Start time: 0.00 min. Stop time: 25.00 min. Offset: -5 mv.
 Full Range: 100 millivolts



← VERY CLOSE TO TOLUENE

***** EXTERNAL STANDARD TABLE *****
 ***** 11-24-1992 02:02:37 Version 5.1.5 *****
 * Sample Name: **ECE Standard** Data File: **G:DBA027** *
 * Date: **11-24-1992 02:00:29** Method: **G:DBTXG2A** **11-23-1992 12:08:19** # **1206** *
 * Interface: **15** Cycle#: **27** Operator **EG** Channel#: **1** Vial#: **BEBEBE** *
 * Starting Peak Width: **10** Threshold: **.5** Area Threshold: **1000** *

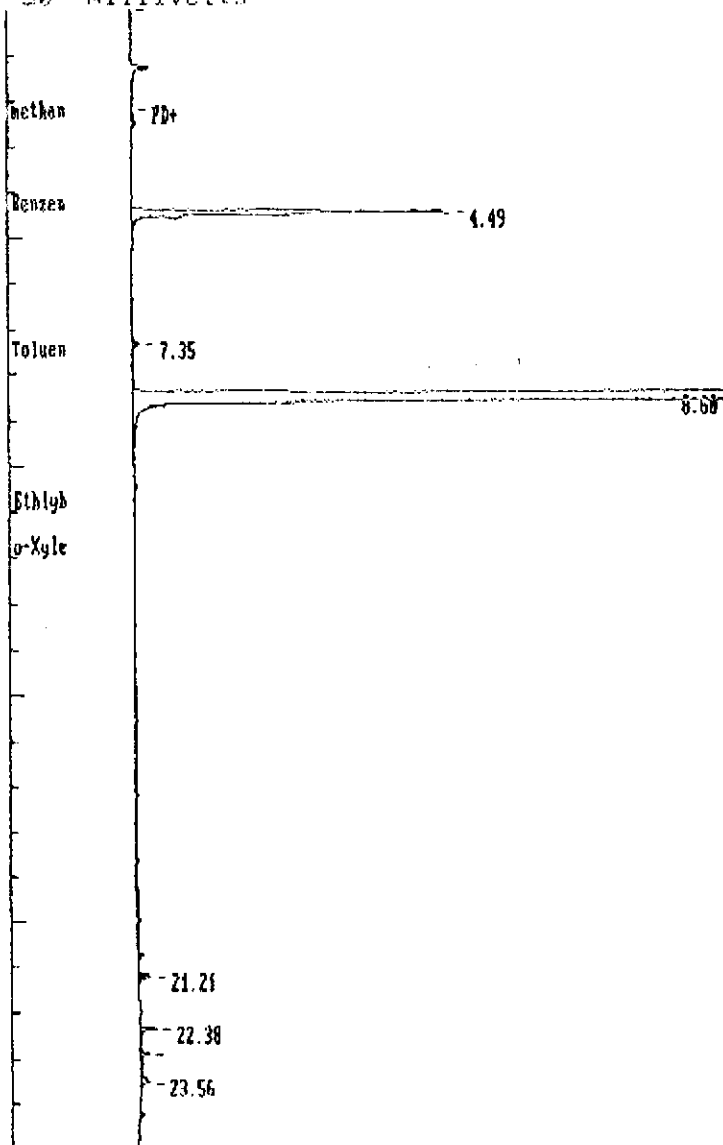
 * Instrument Type: **Varian GC #2** Column Type: **30 Meter DB-624/WAX** *
 * Solvent Description: **Helium at 6 ml/min** *
 * Conditions: **50/4--5DEG/MIN-->80/0--100EG/MIN-->220/5** *
 * Detector 0: **PIQ** Detector 1: **FID** *
 * Misc. Information: **BSK BTX-TVH RUN #320A8** **LPT1:** *

 Starting Delay: **0.00** Ending retention time: **25.00**
 Area reject: **200** One sample per **1.002** sec.
 Amount injected: **1.00** Dilution factor: **1.00**
 Sample Weight: **1.00000**

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ug/unit	NORMALIZED CONC	AREA	HEIGHT	AREA/HEIGHT	REF PEAK	% DELTA RET TIME	CONC/AREA
1	4.492	Styrene (F Benz)	0.5709	35.3363X	139447	24159	5.81	0	0	4.0937E-06
2	7.348	Toluene	1.0446	64.6637X	3331	519	6.42	0	.2277	3.1355E-04

TOTAL AMOUNT = 1.6155

Data File = G:DBA027.PTS Printed on 11-24-1992 at 02:02:51
 Start time: 0.00 min. Stop time: 25.00 min. Offset: 0 mv.
 Full Range: 50 millivolts



SHIFTED AWAY

Handwritten notes:
 Total Volatile Area Count: 2.17E+06

Output redirected to LPT1:
 2674-4 BSK Processed: 10-13-1992 02:04:21, segment 4, cycle 20
 RAW DATA SAVED IN FILE G:CBA9520.PTS Second Channel Stored in G:DBA9520.PTS

***** EXTERNAL STANDARD TABLE *****

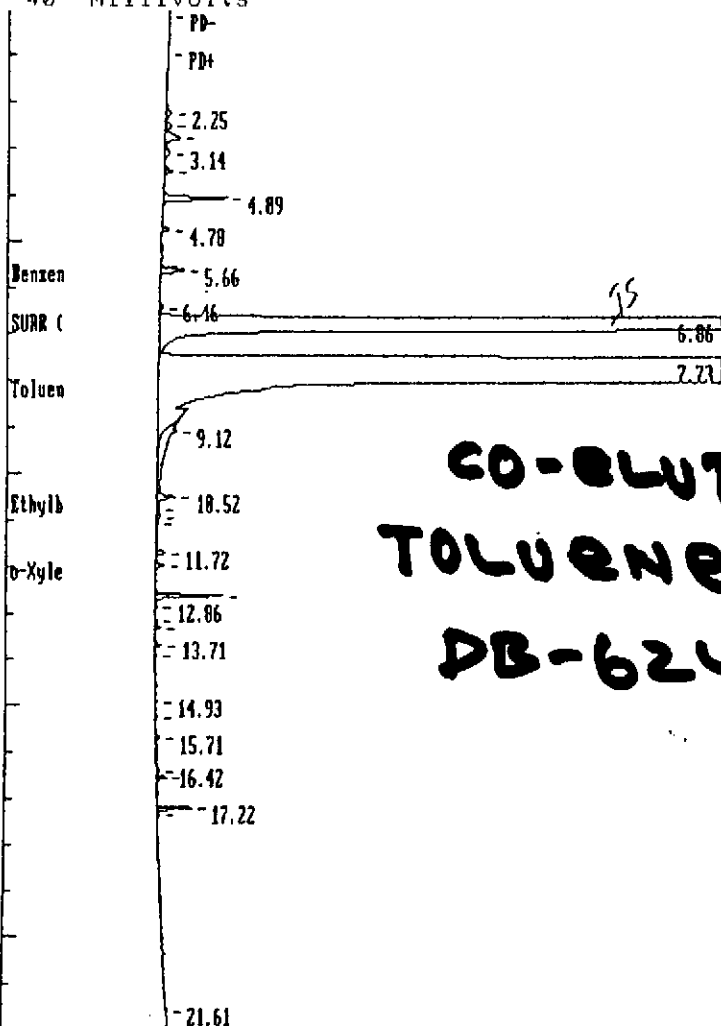
***** 10-13-1992 02:04:34 Version 5.1.5 *****
 * Sample Name: 2674-4 BSK P Data File: G:DBA9520.PTS *
 * Date: 10-13-1992 02:04:21 Method: G:CBTX62A 10-12-1992 16:48:35 # 1900 *
 * Interface: 15 Cycle#: 20 Operator BG Channel#: 0 Vial#: BABABA *
 * Starting Peak Width: 10 Threshold: .1 Area Threshold: 100 *
 * Instrument Type: Varian GC #2 Column Type: 30 Meter DB-624/WAX *
 * Solvent Description: Helium at 6 mls/min *
 * Conditions: 50/4--5DEG/MIN-->80/0--10DEG/MIN-->220/5 *
 * Detector 0: PID Detector 1: FID *
 * Misc. Information: BSK QTX-TVMH RUN #92095 LPT1: *

Starting Delay: 0.00 Ending retention time: 25.00
 Area reject: 500 One sample per 1.002 sec.
 Amount injected: 1.00 Dilution factor: 1.00
 Sample Weight: 0.02000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ug/Unit	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	REF PEAK	% DELTA RET TIME	CONC/AREA
9	5.661	Benzene	0.7071	39.6791X	8889	1468	6.11	0	1.194	7.9549E-05
14	10.521	Ethylbenzene	0.5761	32.3308X	6549	1137	5.03	0	0	8.7970E-05
15	10.771	p-Xylene	0.1151	6.4593X	1119	181	6.24	0	.4672	1.0291E-04
16	10.939	m-Xylene	0.1500	8.4189X	1357	235	5.02	0	.3062	1.1054E-04
19	11.991	o-Xylene	0.2337	13.1120X	2262	531	4.32	0	.2793	1.0332E-04

TOTAL AMOUNT = 1.7820

Data File = G:CBA9520.PTS Printed on 10-13-1992 at 02:04:51
 Start time: 0.00 min. Stop time: 25.00 min. Offset: -4 mv.
 Full Range: 40 millivolts

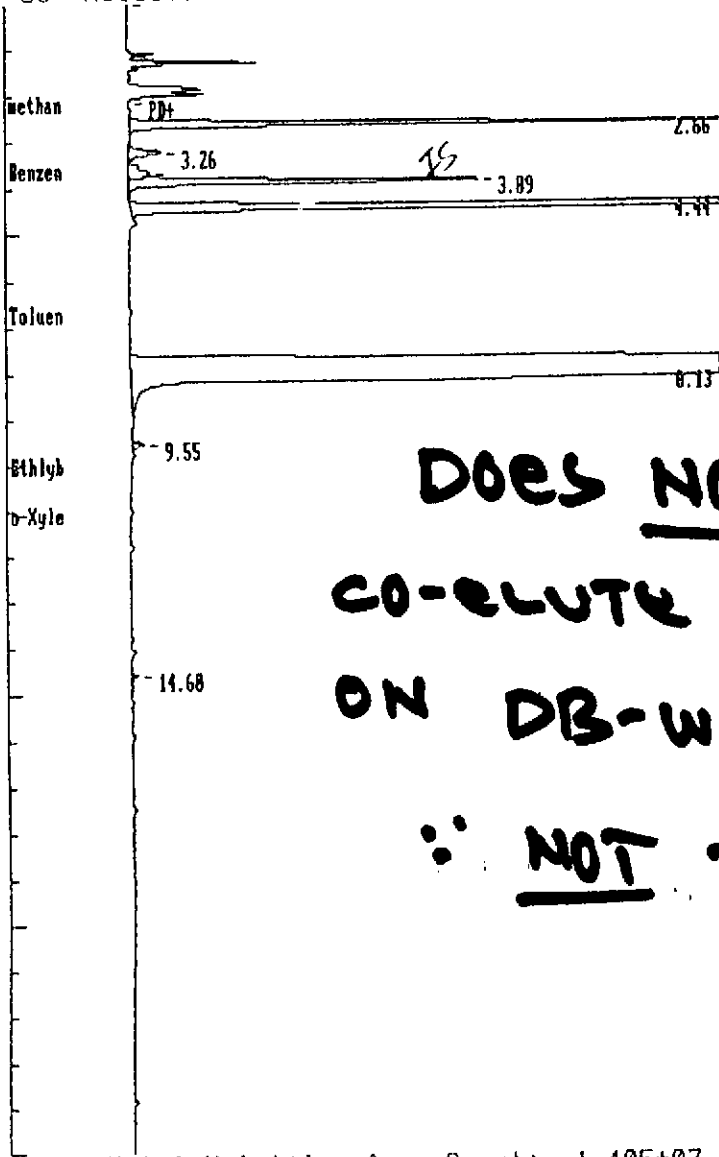


**CO-ELUTES w/
 TOLUENE ON
 DB-624**

***** EXTERNAL STANDARD TABLE *****
 ***** 10-13-1992 02:06:38 Version 5.1.5 *****
 * Sample Name: 2674-4 BSK P Data File: G:DBA9520
 * Date: 10-13-1992 02:04:21 Method: G:DBTXG2A 10-12-1992 16:50:49 # 1122
 * Interface: 15 Cycle#: 20 Operator BG Channel#: 1 Vial#: BABABA
 * Starting Peak Width: 10 Threshold: .5 Area Threshold: 1000
 * Instrument Type: Varian GC #2 Column Type: 30 Meter DB-624/WAX
 * Solvent Description: Helium at 6 mls/min
 * Conditions: 50/4--5DEG/MIN-->80/0--10DEG/MIN-->220/5
 * Detector 0: PID Detector 1: FID
 * Misc. Information: BSK BTX-TVH RUN #92095 LPTI:
 Starting Delay: 0.00 Ending retention time: 25.00
 Area reject: 200 One sample per 1.002 sec.
 Amount injected: 1.00 Dilution factor: 1.00
 Sample Weight: 0.02000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ug/unit	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT UL	REF PEAK	X DELTA RET TIME	CONC/AREA
4	3.891	SURR (f Benz)	32.7491	100.0000X	157150	26620	5.92	0	1.304	2.0839E-04
TOTAL AMOUNT =			32.7491							

Data File = G:DBA9520.PTS Printed on 10-13-1992 at 02:06:50
 Start time: 0.00 min. Stop time: 25.00 min. Offset: 0 mv.
 Full Range: 50 millivolts



Total Volatiles Area Count: 1.40E+07