Texaco Refining
and Marketing Inc

February 3, 1995

ENV - STUDIES, SURVEYS & REPORTS
Former Texaco Service Station
2225 Telegraph Avenue, Oakland, CA

Mr. Safa Toma
East Bay Municipal Utility District
Source Control Division, Mail slot #702
P.O. Box 24055
375 11th Street,
Oakland, California 94623

Dear Mr. Toma:

Enclosed is the Semi-Annual Self-Monitoring Report Summary, dated January 31, 1995, for the subject site.

Regarding the above-referenced report,

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Any questions regarding this report may be directed to me at (510) 236-9139.

Best Regards,

Karen E. Petryna
Project Coordinator
Texaco Environmental Services

KEP:eg
P:\EG\KEPCVRS\2225SEMI.CVR

Enclosure

cc: Mr. Thomas Peacock
Alameda County Environmental Health Department
80 Swan Way, Room 200
Oakland, CA 94621

Mr. Michael Faber - Exxon

RAOFile-UCPFile (w/enclosure)
RRZielinski (w/o enclosure)

PR RD

GENERAL NPDES PERMIT NO. CA0024660
SELF MONITORING REPORT SUMMARY

Reporting Period:	*07/14/94 to 12/31/94*	Due Date:	*01/31/95*
Permittee:	*Texaco Environmental Services*	EBMUD File No:	*502-27801*
Site Name:	*Former Texaco Service Station*		
Site Address:	*2225 Telegraph, Oakland, CA*		
Company Contact:	*Karen Petryna*	Consultant:	*Groundwater Technology, Inc.*
Mailing Adddress:	*108 Cutting Boulevard*	Address:	*1401 Halyard Drive, Suite 140*
	Richmond, CA 94804		*West Sacramento, CA 95691*
Phone Number:	*(510) 236-9139*	Contact:	*Brian Garber*
		Phone Number:	*(916) 372-4700*

Any violation of waste discharge requirement during this period? Yes _____ No *X*
If yes, include attachment describing violation and corrective actions taken.

GROUNDWATER DISCHARGE DATA

Sample Location	Date	Flow Rate (gpm)	Totalizer Readings (gallons)	Cumulative Volume (gallons)
Effluent	14-Jul-94	2.3	338080	153470
	04-Aug-94	3.0	352696	168086
	16-Aug-94	2.6	353239	168629
	05-Sep-94	3.4	373220	188610
	23-Sep-94	3.2	373927	189317
	05-Oct-94	3.3	373976	189366
	20-Oct-94	OFF	374003	189393
	03-Nov-94	2.6	389908	205298
	23-Nov-94	2.5	409593	224983
	01-Dec-94	2.8	423355	238745
	21-Dec-94	2.6	455430	270820

Combined Average Flow Rate from 08/04/94 to 12/31/94: 0.51

Total Volume of Discharged Groundwater as of 12/31/94: 270820

all of these are reported wrong

SEMI-ANNUAL REPORTING

Sample Location	Date	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)	TPH-G (ppb)
Influent	07/14/94	2.3	0.37	0.11	0.55	5.7
	08/04/94	1.1	0.18	0.032	0.44	5.2
	09/05/94	0.29	0.037	0.0084	0.18	2.3
	10/05/94	0.19	0.041	0.01	0.15	2.9
	11/03/94	0.41	0.54	0.18	0.34	3.7
	12/01/94	2.4	0.42	0.11	0.73	7.9
Effluent	07/14/94	ND	ND	ND	ND	ND
	08/04/94	NA	NA	NA	NA	NA
	09/05/94	NA	NA	NA	NA	NA
	10/05/94	ND	ND	ND	ND	ND
	11/03/94	---	---	---	---	---
	12/01/94	---	---	---	---	---
BT-2	07/14/94	ND	ND	ND	ND	ND
	08/04/94	ND	ND	ND	ND	ND
	09/05/94	ND	ND	ND	1.3	ND
	10/05/94	ND	ND	ND	ND	ND
	11/03/94	ND	ND	ND	ND	ND
	12/01/94	ND	ND	ND	ND	ND

2300 ppb 5700 ppb
1100 ppb 5200 ppb

They should be PPM, or else add 3 zeroes.

BT-2 = Sample port between carbon drums.

Explanation:

TPG-G = Total petroleum hydrocarbons-as-gasoline	
— = Not Analyzed	
gpm = Gallons per minute	N/A = Not applicable
pgd = Gallons per day	umhos/cm = Micromhos per centimeter
NM = Not measured	g/day = Grams per day
ppb = Parts per billion	ND = Not detected

Company : Groundwater Technology, Inc.

Signature: _____ Date: _____

Brian H. Garber
Project Manager

H2O694.WK3 (TES-47)

SITE VISITATION FORM
FOR
WASTEWATER DISCHARGE SAMPLING
SYSTEM OPERATION AND MAINTENANCE

2225 Telegraph Ave Oakland CA
Site Address

Sampled By: Paul Priebe Date: 7/14/94

SYSTEM CHECK / READINGS

If Applicable	Yes	No	N/A
Is System Operational		X	
2nd Contain. Float Switch Working	X		
Adjust Flow Rate		X	
Filter Checked and Cleaned	X		
Strainer Checked and Cleaned			X
Check/Add Water Conditioner			X
Calibrate LEL			X

	N/A	Field Data
Effluent Totalizer (gal)		338080
Effluent Flow Rate (gpm)		2.3
Aeration Pressure (psi)	X	
Bag Filter INFL Pressure (psi)	X	
Bag Filter EFFL Pressure (psi)	X	
Carbon Vessel #1 Pressure (psi)		4
Carbon Vessel #2 Pressure (psi)	X	
Air Compressor Pressure (psi)		100
Hour Meter (hours)	X	

SYSTEM SAMPLING

	Sample Point	Sample Point	Sample Point	Sample Point
	_____	_____	_____	_____
Temperature (F)				
pH (units)				
Dissovlved O_2 (ppm)				
Electrical Conductivity				

WELL READINGS

	Well # RI	Well # R-7	Well # _____	Well # _____
Flow Totalizer (gpm)	525092	746702		
Flow Rate (gpm)				
Hour Meter (hours)				
DTW from TOC (ft)				

SITE VISITATION FORM
FOR
WASTEWATER DISCHARGE SAMPLING
SYSTEM OPERATION AND MAINTENANCE

2225 Telegraph, Oakland
Site Address

Sampled By: Mark Czipka Date: 8/4/94

SYSTEM CHECK / READINGS

If Applicable	Yes	No	N/A
Is System Operational	✓		
2nd Contain. Float Switch Working			
Adjust Flow Rate		✓	
Filter Checked and Cleaned			
Strainer Checked and Cleaned			
Check/Add Water Conditioner			✓
Calibrate LEL			✓

	N/A	Field Data
Effluent Totalizer (gal)		0352696
Effluent Flow Rate (gpm)		3.0
Aeration Pressure (psi)	✓	
Bag Filter INFL Pressure (psi)	✓	
Bag Filter EFFL Pressure (psi)	✓	
Carbon Vessel #1 Pressure (psi)		5.5
Carbon Vessel #2 Pressure (psi)	✓	
Air Compressor Pressure (psi)		120 psi
Hour Meter (hours) Compressor		2571.1

SYSTEM SAMPLING

	Sample Point INF	Sample Point BT-2	Sample Point	Sample Point
Temperature (F)	Not Req'd	Not Req'd		
pH (units)	↓	↓		
Dissolved O_2 (ppm)	↓	↓		
Electrical Conductivity	↓	↓		

WELL READINGS

	Well # R-1	Well # R-2	Well #	Well #
Flow Totalizer (gpm)	Not Accesable	Not Accessable		
Flow Rate (gpm)				
Hour Meter (hours)				
DTW from TOC (ft)				

SITE VISITATION FORM
FOR
WASTEWATER DISCHARGE SAMPLING
SYSTEM OPERATION AND MAINTENANCE

2225 Telegraph, Oakland
Site Address

Sampled By: Mark Czipka Date: 8/16/94

SYSTEM CHECK / READINGS

If Applicable	Yes	No	N/A
Is System Operational		✓	
2nd Contain. Float Switch Working	✓		
Adjust Flow Rate			
Filter Checked and Cleaned		✓	
Strainer Checked and Cleaned	✓		
Check/Add Water Conditioner			✓
Calibrate LEL			✓

System Operational upon leaving – had to clean Level switches in batch tanks.

	N/A	Field Data
Effluent Totalizer (gal)		0353239
Effluent Flow Rate (gpm)		2.6
Aeration Pressure (psi)	✓	
Bag Filter INFL Pressure (psi)	✓	
Bag Filter EFFL Pressure (psi)	✓	
Carbon Vessel #1 Pressure (psi)		6.5
Carbon Vessel #2 Pressure (psi)	✓	
Air Compressor Pressure (psi)		90
Hour Meter (hours)		2575.5

SYSTEM SAMPLING

	Sample Point	Sample Point	Sample Point	Sample Point
	____	____	____	____
Temperature (F)				
pH (units)				
Dissolved O_2 (ppm)				
Electrical Conductivity				

WELL READINGS

	Well # R1	Well # R2	Well # ____	Well # ____
Flow Totalizer (gpm)	533369	753574		
Flow Rate (gpm)				
Hour Meter (hours)				
DTW from TOC (ft)				

SITE VISITATION FORM
FOR
WASTEWATER DISCHARGE SAMPLING
SYSTEM OPERATION AND MAINTENANCE

2225 Telegraph, Oakland
Site Address

Sampled By: Mark N Czipko Date: 9/6/94

SYSTEM CHECK / READINGS

If Applicable	Yes	No	N/A
Is System Operational	✓		
2nd Contain. Float Switch Working	✓		
Adjust Flow Rate		✓	
Filter Checked and Cleaned Compressor		✓	
Strainer Checked and Cleaned	✓		
Check/Add Water Conditioner			✓
Calibrate LEL			✓

Pumped Water from secondary containment into batch tank.

	N/A	Field Data
Effluent Totalizer (gal)		0373220
Effluent Flow Rate (gpm)		3.4
Aeration Pressure (psi)	✓	
Bag Filter INFL Pressure (psi)	✓	
Bag Filter EFFL Pressure (psi)	✓	
Carbon Vessel #1 Pressure (psi)		7.0
Carbon Vessel #2 Pressure (psi)	✓	
Air Compressor Pressure (psi)		120
Hour Meter (hours) Compressor		0260.1

MONTHLY SYSTEM SAMPLING

	Sample Point INF	Sample Point BT-2	Sample Point	Sample Point
Temperature (F)	NOT REQ'D	NOT REQ'D		
pH (units)	↓	↓		
Dissovived O_2 (ppm)				
Electrical Conductivity				

WELL READINGS

	Well # R1	Well # R2	Well #	Well #
Flow Totalizer (gpm)	540256	760655		
Flow Rate ~~(gpm)~~ ≈ GPD	327	337		
Hour Meter (hours)				
DTW from TOC (ft)				

SITE VISITATION FORM
FOR
WASTEWATER DISCHARGE SAMPLING
SYSTEM OPERATION AND MAINTENANCE

2225 Telegraph Av OAKLAND
Site Address

Sampled By: Greg MASON

Date: 9/23/94

SYSTEM CHECK / READINGS

If Applicable	Yes	No	N/A
Is System Operational		X	
2nd Contain. Float Switch Working	X		
Adjust Flow Rate			X
Filter Checked and Cleaned	X		
Strainer Checked and Cleaned	X		
Check/Add Water Conditioner			X
Calibrate LEL			X

	N/A	When arrived Field Data	Left
Effluent Totalizer (gal)		0373927	
Effluent Flow Rate (gpm)	.4	.4	3
Aeration Pressure (psi)	X		
Bag Filter INFL Pressure (psi)		7	
Bag Filter EFFL Pressure (psi)		0	
Carbon Vessel #1 Pressure (psi)	X		
Carbon Vessel #2 Pressure (psi)	X		
Air Compressor Pressure (psi)		210	
Hour Meter (hours)		2602	

SYSTEM SAMPLING

	Sample Point ____	Sample Point ____	Sample Point ____	Sample Point ____
Temperature (F)				
pH (units)				
Dissovived O_2 (ppm)				
Electrical Conductivity				

WELL READINGS

	Well # ____	Well # ____	Well # ____	Well # ____
Flow Totalizer (gpm)				
Flow Rate (gpm)				
Hour Meter (hours)				
DTW from TOC (ft)				

SITE VISITATION FORM
FOR
WASTEWATER DISCHARGE SAMPLING
SYSTEM OPERATION AND MAINTENANCE

2225 Telegraph, Oakland
Site Address

Sampled By: Mark Czipka Date: 10/5/94

SYSTEM CHECK / READINGS

If Applicable	Yes	No	N/A
Is System Operational Restarted/Stopped		✓	
2nd Contain. Float Switch Working	✓		
Adjust Flow Rate		✓	
Filter Checked and Cleaned Compressor		✓	
Strainer Checked and Cleaned	✓		
Check/Add Water Conditioner			✓
Calibrate LEL			✓

	N/A	Field Data
Effluent Totalizer (gal)		373976
Effluent Flow Rate (gpm)		3.3
Aeration Pressure (psi)	✓	
Bag Filter INFL Pressure (psi)	✓	
Bag Filter EFFL Pressure (psi)	✓	
Carbon Vessel #1 Pressure (psi)		5
Carbon Vessel #2 Pressure (psi)	✓	
Air Compressor Pressure (psi)		120 ~~360 2.5~~
Hour Meter (hours)		2602.6

SYSTEM SAMPLING

Quarterly

	Sample Point INF	Sample Point BT-2	Sample Point EFF	Sample Point
Temperature (F)	Not Req'd	—	→	
pH (units)	↓	|	|	
Dissovived O_2 (ppm)				
Electrical Conductivity	↓			

WELL READINGS

	Well # R1	Well # R2	Well #	Well #
Flow Totalizer (gpm)	054013	0760827		
Flow Rate (gpm)				
Hour Meter (hours)				
DTW from TOC (ft)				

SITE VISITATION FORM
FOR
WASTEWATER DISCHARGE SAMPLING
SYSTEM OPERATION AND MAINTENANCE

2225 Telegraph, Oakland
Site Address

Sampled By: Mark Czipko Date: 10/20/94

SYSTEM CHECK / READINGS

If Applicable	Yes	No	N/A
Is System Operational Repaired	✓		
2nd Contain. Float Switch Working	✓		
Adjust Flow Rate		✓	
Filter Checked and Cleaned			
Strainer Checked and Cleaned			
Check/Add Water Conditioner			✓
Calibrate LEL			✓

	N/A	Field Data
Effluent Totalizer (gal)		0374003
Effluent Flow Rate (gpm)		∅ Cycled OFF
Aeration Pressure (psi)	✓	
Bag Filter INFL Pressure (psi)	✓	
Bag Filter EFFL Pressure (psi)	✓	
Carbon Vessel #1 Pressure (psi)		∅
Carbon Vessel #2 Pressure (psi)	✓	
Air Compressor Pressure (psi)		100
Hour Meter (hours)		2602.8

SYSTEM SAMPLING

No Sampling

	Sample Point	Sample Point	Sample Point	Sample Point
Temperature (F)	N/A	→	→	→
pH (units)	↓	↓	↓	↓
Dissovlved O_2 (ppm)	↓	↓	↓	↓
Electrical Conductivity	↓	↓	↓	↓

WELL READINGS

	Well # R1	Well # R2	Well #	Well #
Flow Totalizer (gpm)	0540327.8	0760913.3		
Flow Rate (gpm)	0.4	1.6		
Hour Meter (hours)				
DTW from TOC (ft)				

SITE VISITATION FORM
FOR
WASTEWATER DISCHARGE SAMPLING
SYSTEM OPERATION AND MAINTENANCE

TES/ 2225 Telegraph, Oakland
Site Address

Sampled By: Mark Czipka Date: 11/3/94

SYSTEM CHECK / READINGS

If Applicable	Yes	No	N/A
Is System Operational	✓		
2nd Contain. Float Switch Working	✓		
Adjust Flow Rate		✓	
Filter Checked ~~and Cleaned~~ Compressor	✓		
Strainer Checked and Cleaned	✓		
Check/Add Water Conditioner			✓
Calibrate LEL			✓

	N/A	Field Data
Effluent Totalizer (gal)		0389908
Effluent Flow Rate (gpm)		2.6
Aeration Pressure (psi)	✓	
Bag Filter INFL Pressure (psi)	✓	
Bag Filter EFFL Pressure (psi)	✓	
Carbon Vessel #1 Pressure (psi)		5
Carbon Vessel #2 Pressure (psi)	✓	
Air Compressor Pressure (psi)		100
Hour Meter (hours)		2612.8

SYSTEM SAMPLING

	Sample Point INF	Sample Point BT-2	Sample Point	Sample Point
Temperature (F)	Not Req'd	Not Req'd		
pH (units)	↓	↓		
Dissovived O_2 (ppm)				
Electrical Conductivity				

WELL READINGS

	Well # R1	Well # K2	Well # TOTAL	Well # Discrepancy
Flow Totalizer (gpm)	054536	076626 4	0389908	—
Flow Rate (gpm) Calculated	0.25	0.27	0.78	.78 − (.25+.27) = .26
~~Hour Meter (hours)~~ since last VBH gals	5019	5351	15905	5535
DTW from TOC (ft)				

SITE VISITATION FORM
FOR
WASTEWATER DISCHARGE SAMPLING
SYSTEM OPERATION AND MAINTENANCE

2225 Telegraph, Oakland
Site Address

Sampled By: Mark Czipka

Date: 11/23/94

SYSTEM CHECK / READINGS

If Applicable	Yes	No	N/A
Is System Operational	✓		
2nd Contain. Float Switch Working	✓		
Adjust Flow Rate		✓	
Filter Checked ~~and Cleaned~~ Compressor			
Strainer Checked and Cleaned	✓		
Check/Add Water Conditioner			✓
Calibrate LEL			✓

	N/A	Field Data
Effluent Totalizer (gal)		0409593
Effluent Flow Rate (gpm)		2.5
Aeration Pressure (psi)	✓	
Bag Filter INFL Pressure (psi)	✓	
Bag Filter EFFL Pressure (psi)	✓	
Carbon Vessel #1 Pressure (psi)		5
Carbon Vessel #2 Pressure (psi)	✓	
Air Compressor Pressure (psi)		140
Hour Meter (hours) Compressor		2623.0

SYSTEM SAMPLING

NONE

	Sample Point	Sample Point	Sample Point	Sample Point
Temperature (F)				
pH (units)				
Dissovived O_2 (ppm)				
Electrical Conductivity				

WELL READINGS

	Well # R1	Well # R2	Well #	Well #
Flow Totalizer (gpm)	Car on Well	Car on Well		
Flow Rate (gpm)				
Hour Meter (hours)				
DTW from TOC (ft)				

SITE VISITATION FORM
FOR
WASTEWATER DISCHARGE SAMPLING
SYSTEM OPERATION AND MAINTENANCE

2225 Telegraph, Oakland
Site Address

Sampled By: Mark Czipka

Date: 12/1/94

SYSTEM CHECK / READINGS

If Applicable	Yes	No	N/A
Is System Operational	✓		
2nd Contain. Float Switch Working	✓		
Adjust Flow Rate		✓	
Filter Checked ~~and Cleaned~~ Compressor		✓	
Strainer Checked and Cleaned	✓		
Check/Add Water Conditioner			✓
Calibrate LEL			✓

	N/A	Field Data
Effluent Totalizer (gal)		0423355
Effluent Flow Rate (gpm)		2.8
Aeration Pressure (psi)	✓	
Bag Filter INFL Pressure (psi)	✓	
Bag Filter EFFL Pressure (psi)	✓	
Carbon Vessel #1 Pressure (psi)		5
Carbon Vessel #2 Pressure (psi)	✓	
Air Compressor Pressure (psi)		140
Hour Meter (hours) Compressor		2629.3

SYSTEM SAMPLING

	Sample Point INF	Sample Point BT-2	Sample Point	Sample Point
Temperature (F)	Not Req'd	Not Req'd		
pH (units)	↓	↓		
Dissovlved O_2 (ppm)				
Electrical Conductivity				

WELL READINGS

	Well # ~~R1~~	Well # ~~R2~~	Well # R1	Well # R2
Flow Totalizer (gpm)	~~0776989~~	~~0553569~~	0553569	0776989
Flow Rate (gpm)			N/A	N/A
Hour Meter (hours)			|	|
DTW from TOC (ft)				

SITE VISITATION FORM
FOR
WASTEWATER DISCHARGE SAMPLING
SYSTEM OPERATION AND MAINTENANCE

2225 Telegraph, Oakland
Site Address

Sampled By: Mark Czipka Date: 12/21/94

SYSTEM CHECK / READINGS

If Applicable	Yes	No	N/A
Is System Operational	✓		
2nd Contain. Float Switch Working	✓		
Adjust Flow Rate		✓	
Filter Checked ~~and Cleaned~~ Checked		✓	
Strainer Checked and Cleaned	✓		
Check/Add Water Conditioner			✓
Calibrate LEL			✓

	N/A	Field Data
Effluent Totalizer (gal)		0455430
Effluent Flow Rate (gpm)		2.6
Aeration Pressure (psi)	✓	
Bag Filter INFL Pressure (psi)	✓	
Bag Filter EFFL Pressure (psi)	✓	
Carbon Vessel #1 Pressure (psi)		6.5
Carbon Vessel #2 Pressure (psi)	✓	
Air Compressor Pressure (psi)		125
Hour Meter (hours) Compressor		02644.7

SYSTEM SAMPLING

NONE

	Sample Point	Sample Point	Sample Point	Sample Point
Temperature (F)				
pH (units)				
Dissovived O_2 (ppm)				
Electrical Conductivity				

WELL READINGS

	Well # R1	Well # R2	Well # TOTALIZER	Well #
Flow Totalizer (gpm)	0561053	0786972	0455430	Discrepency
Flow Rate (gpm) Calculated gals since last visit	0.26	0.35	1.11	R1+R2 = 0.61 GPM
~~Hour Meter (hours)~~	7484	9983	32075	R1+R2 = 17467 gals
DTW from TOC (ft)				

3 C Analytical

801 Western Avenue
Glendale, CA 91201
818/247-5737
Fax: 818/247-9797

ANALYTICAL REPORT

LOG NO: G94-07-235
Received: 15 JUL 94
Mailed: JUL 25 1994

Mr. Brian Garber
Groundwater Technology, Inc.
1401 Halyard Drive, Suite 140
West Sacramento, California 95691

Purchase Order: 94-1446346+4370
Requisition: 624880195
Project: FKEP1015L

CC: Paul Priebe, TES

REPORT OF ANALYTICAL RESULTS

AQUEOUS

SAMPLE DESCRIPTION	DATE SAMPLED	TPH/BTEX (CADHS/8020) Date Analyzed	Dilution Factor Times 1	TPH-g ug/L	Benzene ug/L	Toluene ug/L	Ethyl-Benzene ug/L	Total Xylenes Isomers ug/L
RDL			1	50	0.5	0.5	0.5	0.5
1*Eff	07/14/94	07/19/94	1	<50	<0.5	<0.5	<0.5	<0.5
2*BI-2	07/14/94	07/20/94	1	<50	<0.5	<0.5	<0.5	<0.5
3*Inf	07/14/94	07/21/94	20	5700	2300	370	110	550

Karen Petryna
2225 Telegraph Avenue, Oakland
Alameda County

James C. Hein, Laboratory Director

SAMPLES...	SAMPLE DESCRIPTION..	DETERM.....	DATE..... ANALYZED	METHOD.....	EQUIP.	BATCH..	ID.NO
9407235*1	Eff	GAS.BTX.TESNC	07.19.94	8015M.TX	536-21	94092	7961
9407235*2	BT-2	GAS.BTX.TESNC	07.20.94	8015M.TX	536-21	94093	7961
9407235*3	Inf	GAS.BTX.TESNC	07.21.94	8015M.TX	536-21	94093	7961

***

Notes: Equipment = BC Analytical identification number for a particular piece of analytical equipment.

ID.NO = BC Analytical employee identification number of analyst.

ORDER QC REPORT: Definitions and Terms

BCA

Accuracy	The ability of a procedure to determine the "true" concentration of an analyte.
Precision	The reproducibility of a procedure demonstrated by the agreement between analyses performed on either duplicates of the same sample or a pair of duplicate spikes.
Batch	A group of twenty samples or less, of similar matrix type, prepped together or analyzed together if no sample preparation is required, under the same conditions and with the same reagents. The batch must include a method blank, LCS and matrix QC.
Laboratory Control Standard (LCS)	A blank that is spiked with a known amount of analyte and subjected to the same procedures as the samples. The LCS indicates the accuracy of the analytical method. It also serves to double-check the calibration because it is prepared from a different source than the standard used to calibrate the instrument.
Matrix QC	Quality control performed on actual client samples. The matrix spike is a client's sample spiked with a known amount of analyte. For most analyses, the laboratory performs matrix spikes in duplicate (duplicate spikes).
Method Blank	A sample that contains no analyte. For water analysis, organic-free or deionized water is used. For solids analysis, analyte-free solvent is used. The method blank serves to measure contamination associated with laboratory storage, preparation or instrumentation.
Batch Number	Numeric designation for a batch of samples and the associated QC. The batch number sequence is unique for each determination.
LC Result	Laboratory result of an LCS analysis.
LT Result	Expected result, or true value, of the LCS analysis.
Percent Recovery	The percentage of analyte recovered. For LCS, the percent recovery calculation is: $LC/LT \times 100$
LC1, LC2 Result	Result of analyzing two separately prepared LCSs; used to determine precision.
R1, R2 Result	Result of analyzing replicate aliquots of a sample, with R1 indicating the first analysis of the sample and R2 its corresponding duplicate; used to determine precision.
S1, S2 Result	Result of the analysis of replicate spiked aliquots, with S1 indicating one spike of the sample and S2 the second spike; used to determine precision and accuracy.
Relative Percent Difference (RPD)	Calculated using one of the following: $\frac{\lvert LC1 - LC2\rvert \times 100}{(LC1 + LC2) \div 2}$ $\frac{\lvert R1 - R2\rvert \times 100}{(R1 + R2) \div 2}$ $\frac{\lvert S1 - S2\rvert \times 100}{(S1 + S2) \div 2}$
S1, S2 Recovery	The percentage of analyte recovered. The percent recovery calculation is: S1 Recovery: $\frac{(S1 - R1)}{(True - R1)} \times 100$ S2 Recovery: $\frac{(S2 - R1)}{(True - R1)} \times 100$
True Value	The theoretical, or expected, result of a spike sample analysis.
NC Flag	Indicates that the spike recovery was not calculated due to high sample concentration relative to the amount of spike added.
Q Flag	Indicates that the quality control measurement is outside the specified control limits.
Blank Result	Laboratory result of analysis of the method blank.
Reporting Detection Limit (RDL)	BCA-assigned limit based on; but not the same as, method detection limits (MDLs) determined using EPA guidelines. Sample RDLs may differ from the blank RDL if the samples were diluted.

BC ANALYTICAL

ORDER QC REPORT FOR G9407235

DATE REPORTED : 07/22/94

LABORATORY CONTROL STANDARDS
FOR BATCHES WHICH INCLUDE THIS ORDER

PARAMETER	DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
1. TPH-gas/BTEX (CADHS/80 C4071037*1						
Date Analyzed	07.19.94	94092	07/19/94	07/19/94	Date	N/A
Benzene	07.19.94	94092	24.4	21.9	ug/L	111
Toluene	07.19.94	94092	85.4	84.9	ug/L	101
Ethylbenzene	07.19.94	94092	17.0	18.4	ug/L	92
Total Xylene Isomers	07.19.94	94092	99.0	96.7	ug/L	102
TPH (as Gasoline)	07.19.94	94092	872	1000	ug/L	87
2. TPH-gas/BTEX (CADHS/80 C4071038*1						
Date Analyzed	07.20.94	94092	07/20/94	07/20/94	Date	N/A
Benzene	07.20.94	94092	18.3	21.9	ug/L	84
Toluene	07.20.94	94092	80.1	84.9	ug/L	94
Ethylbenzene	07.20.94	94092	15.7	18.4	ug/L	85
Total Xylene Isomers	07.20.94	94092	90.8	96.7	ug/L	94
TPH (as Gasoline)	07.20.94	94092	884	1000	ug/L	88
3. TPH-gas/BTEX (CADHS/80 C4071090*1						
Date Analyzed	07.20.94	94093	07/20/94	07/20/94	Date	N/A
Benzene	07.20.94	94093	22.8	21.9	ug/L	104
Toluene	07.20.94	94093	80.7	84.9	ug/L	95
Ethylbenzene	07.20.94	94093	16.5	18.4	ug/L	90
Total Xylene Isomers	07.20.94	94093	95.1	96.7	ug/L	98
TPH (as Gasoline)	07.20.94	94093	886	1000	ug/L	89
4. TPH-gas/BTEX (CADHS/80 C4071091*1						
Date Analyzed	07.21.94	94093	07/21/94	07/21/94	Date	N/A
Benzene	07.21.94	94093	23.0	21.9	ug/L	105
Toluene	07.21.94	94093	76.5	84.9	ug/L	90
Ethylbenzene	07.21.94	94093	15.6	18.4	ug/L	85
Total Xylene Isomers	07.21.94	94093	89.0	96.7	ug/L	92
TPH (as Gasoline)	07.21.94	94093	856	1000	ug/L	86

BC ANALYTICAL

ORDER QC REPORT FOR G9407235

DATE REPORTED : 07/22/94

ADDITIONAL LCS PRECISION (DUPLICATES)
BATCH QC REPORT

PARAMETER	SAMPLE NUMBER	DATE ANALYZED	BATCH NUMBER	LC1 RESULT	LC2 RESULT	UNIT	RELATIVE % DIFF
1. TPH-gas/BTEX (CADHS/80							
Date Analyzed		07.19.94	94092	07/19/94	07/20/94	Date	N/A
Benzene		07.19.94	94092	24.4	18.3	ug/L	29
Toluene		07.19.94	94092	85.4	80.1	ug/L	6
Ethylbenzene		07.19.94	94092	17.0	15.7	ug/L	8
Total Xylene Isomers		07.19.94	94092	99.0	90.8	ug/L	9
TPH (as Gasoline)		07.19.94	94092	872	884	ug/L	1
2. TPH-gas/BTEX (CADHS/80							
Date Analyzed		07.20.94	94093	07/20/94	07/21/94	Date	N/A
Benzene		07.20.94	94093	22.8	23.0	ug/L	1
Toluene		07.20.94	94093	80.7	76.5	ug/L	5
Ethylbenzene		07.20.94	94093	16.5	15.6	ug/L	6
Total Xylene Isomers		07.20.94	94093	95.1	89.0	ug/L	7
TPH (as Gasoline)		07.20.94	94093	886	856	ug/L	3

BC ANALYTICAL

ORDER QC REPORT FOR G9407235

ATE REPORTED : 07/22/94

METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)
FOR BATCHES WHICH INCLUDE THIS ORDER

ARAMETER	DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT	METHOD
. TPH-gas/BTEX (CADHS/80 B407738*1						
Date Analyzed	07.19.94	94092	07/19/94	NA	Date	8015M.TX
Benzene	07.19.94	94092	0	0.5	ug/L	8015M.TX
Toluene	07.19.94	94092	0	0.5	ug/L	8015M.TX
Ethylbenzene	07.19.94	94092	0	0.5	ug/L	8015M.TX
Total Xylene Isomers	07.19.94	94092	0	0.5	ug/L	8015M.TX
TPH (as Gasoline)	07.19.94	94092	0	50	ug/L	8015M.TX
. TPH-gas/BTEX (CADHS/80 B407776*1						
Date Analyzed	07.20.94	94093	07/20/94	NA	Date	8015M.TX
Benzene	07.20.94	94093	0	0.5	ug/L	8015M.TX
Toluene	07.20.94	94093	0	0.5	ug/L	8015M.TX
Ethylbenzene	07.20.94	94093	0	0.5	ug/L	8015M.TX
Total Xylene Isomers	07.20.94	94093	0	0.5	ug/L	8015M.TX
TPH (as Gasoline)	07.20.94	94093	0	50	ug/L	8015M.TX

: SURROGATE SUMMARY :
: BC ANALYTICAL : GLEN LAB : 11:59:39 22 JUL 1994 - P. 1 :

DETERM	SUBDET	REPORTED	TRUE	%RECOVERY	FLAG
9407235*1					
GAS.BTX.TESNC	|a,a,a-TFTol.R	55.7	50.0	111	
9407235*2					
GAS.BTX.TESNC	|a,a,a-TFTol.R	54.6	50.0	109	
9407235*3					
GAS.BTX.TESNC	|a,a,a-TFTol.R	50.4	50.0	101	

: SURROGATE SUMMARY :
: BC ANALYTICAL : GLEN LAB : 11:59:41 22 JUL 1994 - P. 1 :

DETERM	SUBDET	REPORTED	TRUE	%RECOVERY	FLAG
B407738*1*MB GAS.BTX.TESNC	|a,a,a-TFTol.R	55.1	50.0	110	
B407776*1*MB GAS.BTX.TESNC	|a,a,a-TFTol.R	55.3	50.0	111	
C4071037*1*LC GAS.BTX.TESNC	|a,a,a-TFTol.R	52.9	50.0	106	
C4071037*1*LT GAS.BTX.TESNC	|a,a,a-TFTol.R	50.0	50.0	100	
C4071038*1*LC GAS.BTX.TESNC	|a,a,a-TFTol.R	48.7	50.0	97	
C4071038*1*LT GAS.BTX.TESNC	|a,a,a-TFTol.R	50.0	50.0	100	
C4071090*1*LC GAS.BTX.TESNC	|a,a,a-TFTol.R	52.0	50.0	104	
C4071090*1*LT GAS.BTX.TESNC	|a,a,a-TFTol.R	50.0	50.0	100	
C4071091*1*LC GAS.BTX.TESNC	|a,a,a-TFTol.R	57.1	50.0	114	
C4071091*1*LT GAS.BTX.TESNC	|a,a,a-TFTol.R	50.0	50.0	100	

: SURROGATE SUMMARY :
: BC ANALYTICAL : GLEN LAB : 14:21:48 25 JUL 1994 - P. 1 :

DETERM	SUBDET	REPORTED	TRUE	%RECOVERY	FLAG
9407235*1					
GAS.BTX.TESNC	|a,a,a-TFTol.R	55.7	50.0	111	
9407235*2					
GAS.BTX.TESNC	|a,a,a-TFTol.R	54.6	50.0	109	
9407235*3					
GAS.BTX.TESNC	|a,a,a-TFTol.R	50.4	50.0	101	

: SURROGATE SUMMARY :
: BC ANALYTICAL : GLEN LAB : 14:21:51 25 JUL 1994 - P. 1 :

DETERM	SUBDET	REPORTED	TRUE	%RECOVERY	FLAG
9407115*17*R1 GAS.IMTN	{a,a,a-TFTol.R	53.6	50.0	107	
9407115*17*S1 GAS.IMTN	{a,a,a-TFTol.R	56.0	50.0	112	
9407115*17*S2 GAS.IMTN	{a,a,a-TFTol.R	55.7	50.0	111	
9407115*17*T GAS.IMTN	{a,a,a-TFTol.R	50.0	50.0	100	
9407142*1*R1 GAS.5030	|a,a,a-TFTol.R	53.3	50.0	107	
9407142*1*S1 GAS.5030	|a,a,a-TFTol.R	50.9	50.0	102	
9407142*1*S2 GAS.5030	|a,a,a-TFTol.R	47.7	50.0	95	
9407142*1*T GAS.5030	|a,a,a-TFTol.R	50.0	50.0	100	
B407738*1*MB GAS.BTX.TESNC	|a,a,a-TFTol.R	55.1	50.0	110	
B407741*1*MB GAS.IMTN	{a,a,a-TFTol.R	52.5	50.0	105	
B407776*1*MB GAS.BTX.TESNC	|a,a,a-TFTol.R	55.3	50.0	111	
C4071037*1*LC GAS.BTX.TESNC	|a,a,a-TFTol.R	52.9	50.0	106	
C4071037*1*LT GAS.BTX.TESNC	|a,a,a-TFTol.R	50.0	50.0	100	
C4071038*1*LC GAS.BTX.TESNC	|a,a,a-TFTol.R	48.7	50.0	97	
C4071038*1*LT GAS.BTX.TESNC	|a,a,a-TFTol.R	50.0	50.0	100	
C4071042*1*LC GAS.IMTN	{a,a,a-TFTol.R	52.9	50.0	106	
C4071042*1*LT GAS.IMTN	{a,a,a-TFTol.R	50.0	50.0	100	
C4071043*1*LC GAS.IMTN	{a,a,a-TFTol.R	48.7	50.0	97	
C4071043*1*LT					

DETERM	SUBDET	REPORTED	TRUE	%RECOVERY	FLAG
GAS.IMTN	{a,a,a-TFTol.R	50.0	50.0	100	
C4071090*1*LC GAS.BTX.TESNC	|a,a,a-TFTol.R	52.0	50.0	104	
C4071090*1*LT GAS.BTX.TESNC	|a,a,a-TFTol.R	50.0	50.0	100	
C4071091*1*LC GAS.BTX.TESNC	|a,a,a-TFTol.R	57.1	50.0	114	
C4071091*1*LT GAS.BTX.TESNC	|a,a,a-TFTol.R	50.0	50.0	100	

CHAIN OF CUSTODY RECORD LEE Tibbets Ave. Oakland CA — BCA Log Number

Client name: Texaco	Project or PO#: 624880195
Address: 108 Cutting Blvd	Phone #: 510 236 354
City, State, Zip: Richmond CA 94804	Report attention: Paul Priebe

Sampled by: Paul Priebe

Analyses required: BTEX/TPH-G; Hazardous sample / Special handling required

72 hr TAT req. by K.D. 7/18/94

Lab Sample number	Date sampled	Time sampled	Type* See key below	Sample description	Number of containers	BTEX TPH G								Remarks
	7-15-94	13:50	GW	EFF	2	X	-	1						Send Results To
		13:55	↓	BT-2	2	X	-	2						GTI
		1400	↓	INF	2	X	-	3						1401 Halyard Dr.
														Suite 140
														W. Sacramento
														95[illegible]
														Att Brian G[illegible]
														CC: Paul Priebe
														Texaco

	Signature	Print Name	Company	Date	Time
Relinquished by	[signature]	Paul Priebe	Texaco	7-15-94	9:3[illegible]
Received by	Karel Detterman	Karel DeHerman	Texaco	7/15/94	9:3[illegible]
Relinquished by	Karel Detterman	Karel DeHerman	Texaco	7/15/94	215[illegible]
Received by	Bill Lyons	Bill Lyons	BCA	7-15-94	215
Relinquished by	Bill Lyons	Bill "	"	"	"
Received by Laboratory	Maria Advance	Maria Advance	BCA	7/15/94	1740

B C ANALYTICAL

[ ] 1255 Powell Street, Emeryville, CA 94608 (510) 428-2300

[ ] 801 Western Avenue, Glendale, CA 91201 (818) 247-5737

[ ] 1200 Gene Autry Way, Anaheim, CA 92805 (714) 978-0113

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client's expense.

Disposal arrangements: ____________

*KEY: AQ—Aqueous NA—Nonaqueous SL—Sludge GW—Groundwater SO—Soil OT—Other PE—Petro

B C Analytical

801 Western Avenue
Glendale, CA 91201
818/247-5737
Fax: 818/247-9797

ANALYTICAL REPORT

LOG NO: G94-08-071
Received: 05 AUG 94
Mailed: AUG 19 1994

Mr. Brian Garber
Groundwater Technology, Inc.
1401 Halyard Drive, Suite 140
West Sacramento, California 95691

Purchase Order: 94-1446346+4370
Requisition: 624880195
Project: FKEP1015L

REPORT OF ANALYTICAL RESULTS

AQUEOUS

SAMPLE DESCRIPTION	DATE SAMPLED	TPH/BTEX (CADHS/8020)							
		Date Analyzed Date	Dilution Factor Times 1	TPH-g ug/L	Benzene ug/L	Toluene ug/L	Ethyl-Benzene ug/L	Total Xylenes Isomers ug/L	
RDL			1	50	0.5	0.5	0.5	0.5	
1*INF	08/04/94	08/16/94	20	5200	1100	180	32	440	
2*BT-2	08/04/94	08/16/94	1	<50	<0.5	<0.5	<0.5	<0.5	

Karen Petryna
2225 Telegraph Ave., Oakland
Alameda County

James C. Hein, Laboratory Director

SAMPLES...	SAMPLE DESCRIPTION..	DETERM.....	DATE..... ANALYZED	METHOD.....	EQUIP.	BATCH..	ID.NO
408071*1	INF	GAS.BTX.TESNC	08.16.94	8015M.TX	536-23	94556	8042
408071*2	BT-2	GAS.BTX.TESNC	08.16.94	8015M.TX	536-23	94556	8042

**

Notes: Equipment = BC Analytical identification number for a particular piece of analytical equipment.

ID.NO = BC Analytical employee identification number of analyst.

ORDER QC REPORT: Definitions and Terms

BCA

Accuracy	The ability of a procedure to determine the "true" concentration of an analyte.
Precision	The reproducibility of a procedure demonstrated by the agreement between analyses performed on either duplicates of the same sample or a pair of duplicate spikes.
Batch	A group of twenty samples or less, of similar matrix type, prepped together or analyzed together if no sample preparation is required, under the same conditions and with the same reagents. The batch must include a method blank, LCS and matrix QC.
Laboratory Control Standard (LCS)	A blank that is spiked with a known amount of analyte and subjected to the same procedures as the samples. The LCS indicates the accuracy of the analytical method. It also serves to double-check the calibration because it is prepared from a different source than the standard used to calibrate the instrument.
Matrix QC	Quality control performed on actual client samples. The matrix spike is a client's sample spiked with a known amount of analyte. For most analyses, the laboratory performs matrix spikes in duplicate (duplicate spikes).
Method Blank	A sample that contains no analyte. For water analysis, organic-free or deionized water is used. For solids analysis, analyte-free solvent is used. The method blank serves to measure contamination associated with laboratory storage, preparation or instrumentation.
Batch Number	Numeric designation for a batch of samples and the associated QC. The batch number sequence is unique for each determination.
LC Result	Laboratory result of an LCS analysis.
LT Result	Expected result, or true value, of the LCS analysis.
Percent Recovery	The percentage of analyte recovered. For LCS, the percent recovery calculation is: $LC/LT \times 100$
LC1, LC2 Result	Result of analyzing two separately prepared LCSs; used to determine precision.
R1, R2 Result	Result of analyzing replicate aliquots of a sample, with R1 indicating the first analysis of the sample and R2 its corresponding duplicate; used to determine precision.
S1, S2 Result	Result of the analysis of replicate spiked aliquots, with S1 indicating one spike of the sample and S2 the second spike; used to determine precision and accuracy.
Relative Percent Difference (RPD)	Calculated using one of the following: $\frac{\lvert LC1 - LC2\rvert \times 100}{(LC1 + LC2) \div 2}$ $\frac{\lvert R1 - R2\rvert \times 100}{(R1 + R2) \div 2}$ $\frac{\lvert S1 - S2\rvert \times 100}{(S1 + S2) \div 2}$
S1, S2 Recovery	The percentage of analyte recovered. The percent recovery calculation is: S1 Recovery: $\frac{(S1 - R1) \times 100}{(True - R1)}$ S2 Recovery: $\frac{(S2 - R1) \times 100}{(True - R1)}$
True Value	The theoretical, or expected, result of a spike sample analysis.
NC Flag	Indicates that the spike recovery was not calculated due to high sample concentration relative to the amount of spike added.
Q Flag	Indicates that the quality control measurement is outside the specified control limits.
Blank Result	Laboratory result of analysis of the method blank.
Reporting Detection Limit (RDL)	BCA-assigned limit based on; but not the same as, method detection limits (MDLs) determined using EPA guidelines. Sample RDLs may differ from the blank RDL if the samples were diluted.

BC ANALYTICAL

ORDER QC REPORT FOR G9408071

DATE REPORTED : 08/19/94

LABORATORY CONTROL STANDARDS
FOR BATCHES WHICH INCLUDE THIS ORDER

PARAMETER	DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
1. TPH-gas/BTEX (CADHS/80 C4081605*1						
Date Analyzed	08.16.94	94556	08/16/94	08/16/94	Date	N/A
Benzene	08.16.94	94556	11.2	15.9	ug/L	70
Toluene	08.16.94	94556	48.5	70.5	ug/L	69 Q
Ethylbenzene	08.16.94	94556	10.8	15.9	ug/L	68 Q
Total Xylene Isomers	08.16.94	94556	53.3	54.0	ug/L	99
TPH (as Gasoline)	08.16.94	94556	794	1000	ug/L	79
a,a,a-Trifluorotoluene Reported	08.16.94	94556	53.7	50.0	ug/L	107
a,a,a-Trifluorotoluene Theoretic	08.16.94	94556	50.0	50.0	ug/L	100
2. TPH-gas/BTEX (CADHS/80 C4081606*1						
Date Analyzed	08.17.94	94556	08/17/94	08/17/94	Date	N/A
Benzene	08.17.94	94556	10.1	15.9	ug/L	63 Q
Toluene	08.17.94	94556	49.1	70.5	ug/L	70 Q
Ethylbenzene	08.17.94	94556	11.4	15.9	ug/L	72 Q
Total Xylene Isomers	08.17.94	94556	54.1	54.0	ug/L	100
TPH (as Gasoline)	08.17.94	94556	849	1000	ug/L	85
a,a,a-Trifluorotoluene Reported	08.17.94	94556	53.8	50.0	ug/L	108
a,a,a-Trifluorotoluene Theoretic	08.17.94	94556	50.0	50.0	ug/L	100

BC ANALYTICAL

ORDER QC REPORT FOR G9408071

DATE REPORTED : 08/19/94

ADDITIONAL LCS PRECISION (DUPLICATES)
BATCH QC REPORT

PARAMETER	SAMPLE NUMBER	DATE ANALYZED	BATCH NUMBER	LC1 RESULT	LC2 RESULT	UNIT	RELATIVE % DIFF
1. TPH-gas/BTEX (CADHS/80							
Date Analyzed		08.16.94	94556	08/16/94	08/17/94	Date	N/A
Benzene		08.16.94	94556	11.2	10.1	ug/L	10
Toluene		08.16.94	94556	48.5	49.1	ug/L	1
Ethylbenzene		08.16.94	94556	10.8	11.4	ug/L	5
Total Xylene Isomers		08.16.94	94556	53.3	54.1	ug/L	1
TPH (as Gasoline)		08.16.94	94556	794	849	ug/L	7
a,a,a-Trifluorotoluene	Reported	08.16.94	94556	53.7	53.8	ug/L	0
a,a,a-Trifluorotoluene	Theoretic	08.16.94	94556	50.0	50.0	ug/L	0

BC ANALYTICAL

ORDER QC REPORT FOR G9408071

DATE REPORTED : 08/19/94

METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)
FOR BATCHES WHICH INCLUDE THIS ORDER

PARAMETER	DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT	METHOD
1. TPH-gas/BTEX (CADHS/80 B4081363*1						
Date Analyzed	08.16.94	94556	08/16/94	NA	Date	8015M.TX
Benzene	08.16.94	94556	0	0.5	ug/L	8015M.TX
Toluene	08.16.94	94556	0.13	0.5	ug/L	8015M.TX
Ethylbenzene	08.16.94	94556	0	0.5	ug/L	8015M.TX
Total Xylene Isomers	08.16.94	94556	0.12	0.5	ug/L	8015M.TX
TPH (as Gasoline)	08.16.94	94556	0	50	ug/L	8015M.TX

SURROGATE RECOVERIES :
BC ANALYTICAL : GLEN LAB : 08:54:14 19 AUG 1994 - P. 1 :

METHOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG
9408071*1							
8015M.TX	a,a,a-Trifluorotoluene	94556	08/16/94	50.4	50.0	101	
9408071*2							
8015M.TX	a,a,a-Trifluorotoluene	94556	08/16/94	51.5	50.0	103	

SURROGATE RECOVERIES :
BC ANALYTICAL : GLEN LAB : 08:54:15 19 AUG 1994 - P. 1 :

ETHOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG
4081363*1*MB							
015M.TX	a,a,a-Trifluorotoluene	94556	08/16/94	51.8	50.0	104	
4081605*1*LC							
015M.TX	a,a,a-Trifluorotoluene	94556	08/16/94	53.7	50.0	107	
4081605*1*LT							
015M.TX	a,a,a-Trifluorotoluene	94556	08/16/94	50.0	50.0	100	
4081606*1*LC							
015M.TX	a,a,a-Trifluorotoluene	94556	08/17/94	53.8	50.0	108	
4081606*1*LT							
015M.TX	a,a,a-Trifluorotoluene	94556	08/17/94	50.0	50.0	100	

CHAIN OF CUSTODY RECORD

1225 Telegraph

BCA Log Number 64080+1

Client name	Ground Water Technology
Address	1401 Halyard Ste 140
City, State, Zip	West Sacramento, CA 95691
Project or PO#	020700008 - 051005
Phone #	(916) 372-4700
Report attention	Brian Garber

Lab sample number	Date sampled	Time sampled	Type* See key below	Sampled by: Mark Czipku — Sample description	Number of containers	BTEX, TPH as Gas	Hazardous sample / Special handling required	Remarks
	8/4/94	14:58	GW	INF	2	X	—	1
	8/4/94	15:02	GW	BT-2	2	X	—	2
								924880 195
								Alameda City
								KEP
								FKEP 1015L

	Signature	Print Name	Company	Date	Time
Relinquished by	[signature]	Mark N. Czipku	GTI	8/5/94	6:00
Received by	[signature]	Bill Lyons	BCA	8-5-94	9:00
Relinquished by	[signature]	Bill Lyons	BCA	8-5-94	5:15
Received by					
Relinquished by					
Received by Laboratory					

BC ANALYTICAL
1275 Powell Street, Emeryville, CA 94608 (510) 420-2300
1001 Western Avenue, Glendale, CA 91201 (818) 247-5737

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client's expense.

Disposal arrangements: _____

*KEY: AQ—Aqueous NA—Nonaqueous SL—Sludge GW—Groundwater SO—Soil OT—Other PE—Petrole

B C Analytic

301 Western Avenue
Glendale, CA 91201
818/247-5737
Fax: 818/247-9797

ANALYTICAL REPORT

LOG NO: G94-08-071
Received: 05 AUG 94
Mailed: AUG 19 1994

Mr. Brian Garber
Groundwater Technology, Inc.
1401 Halyard Drive, Suite 140
West Sacramento, California 95691

Purchase Order: 94-1446346+4370
Requisition: 624880195
Project: FKEP1015L

REPORT OF ANALYTICAL RESULTS

AQUEOUS

SAMPLE DESCRIPTION	DATE SAMPLED	TPH/BTEX (CADHS/8020) Date Analyzed	Dilution Factor Times 1	TPH-g ug/L	Benzene ug/L	Toluene ug/L	Ethyl-Benzene ug/L	Total Xylenes Isomers ug/L
RDL			1	50	0.5	0.5	0.5	0.5
1*INF	08/04/94	08/16/94	20	5200	1100	180	32	440
2*BT-2	08/04/94	08/16/94	1	<50	<0.5	<0.5	<0.5	<0.5

Karen Petryna
2225 Telegraph Ave., Oakland
Alameda County

James C. Hein, Laboratory Director

SITE VISITATION FORM
FOR
WASTEWATER DISCHARGE SAMPLING
SYSTEM OPERATION AND MAINTENANCE

2225 Telegraph, Oakland
Site Address

Sampled By: Mark Czipka Date: 8/4/94

SYSTEM CHECK / READINGS

If Applicable	Yes	No	N/A
Is System Operational	✓		
2nd Contain. Float Switch Working			
Adjust Flow Rate		✓	
Filter Checked and Cleaned			
Strainer Checked and Cleaned			
Check/Add Water Conditioner			✓
Calibrate LEL			✓

	N/A	Field Data
Effluent Totalizer (gal)		0352696
Effluent Flow Rate (gpm)		3.0
Aeration Pressure (psi)	✓	
Bag Filter INFL Pressure (psi)	✓	
Bag Filter EFFL Pressure (psi)	✓	
Carbon Vessel #1 Pressure (psi)		5.5
Carbon Vessel #2 Pressure (psi)	✓	
Air Compressor Pressure (psi)		120 psi
Hour Meter (hours) Compressor		2571.1

SYSTEM SAMPLING

	Sample Point INF	Sample Point BT-2	Sample Point	Sample Point
Temperature (F)	Not Req'd	Not Req'd		
pH (units)	↓	↓		
Dissolved O_2 (ppm)				
Electrical Conductivity				

WELL READINGS

	Well # R-1	Well # R-2	Well #	Well #
Flow Totalizer (gpm)	Not Accesable	Not Accesable		
Flow Rate (gpm)				
Hour Meter (hours)				
DTW from TOC (ft)				

B C Analytical

801 Western Avenue
Glendale, CA 91201
818/247-5737
Fax: 818/247-9797

ANALYTICAL REPORT

LOG NO: G94-07-235
Received: 15 JUL 94
Mailed: JUL 25 1994

Mr. Brian Garber
Groundwater Technology, Inc.
1401 Halyard Drive, Suite 140
West Sacramento, California 95691

Purchase Order: 94-1446346+4370
Requisition: 624880195
Project: FKEP1015L

CC: Paul Priebe, TES

REPORT OF ANALYTICAL RESULTS

AQUEOUS

SAMPLE DESCRIPTION	DATE SAMPLED	TPH/BTEX (CADHS/8020) Date Analyzed Date	Dilution Factor Times 1	TPH-g ug/L	Benzene ug/L	Toluene ug/L	Ethyl-Benzene ug/L	Total Xylenes Isomers ug/L
RDL			1	50	0.5	0.5	0.5	0.5
1*Eff	07/14/94	07/19/94	1	<50	<0.5	<0.5	<0.5	<0.5
2*BI-2	07/14/94	07/20/94	1	<50	<0.5	<0.5	<0.5	<0.5
3*Inf	07/14/94	07/21/94	20	5700	2300	370	110	550

Karen Petryna
2225 Telegraph Avenue, Oakland
Alameda County

James C. Hein, Laboratory Director

B C Analytical

ANALYTICAL REPORT

801 Western Avenue
Glendale, CA 91201
818/247-5737
Fax: 818/247-9797

LOG NO: G94-09-041

Received: 07 SEP 94
Mailed : 23 SEP 94

Mr. Brian Garber
Groundwater Technology, Inc.
1401 Halyard Drive, Suite 140
West Sacramento, California 95691

Purchase Order: 94-1446346+4370

Requisition: 625880195
Project: FKEP1015L

REPORT OF ANALYTICAL RESULTS

AQUEOUS

SAMPLE DESCRIPTION	DATE SAMPLED	TPH/BTEX (CADHS/8020) Date Analyzed Date	Dilution Factor Times 1	TPH-g ug/L	Benzene ug/L	Toluene ug/L	Ethyl-Benzene ug/L	Total Xylenes Isomers ug/L
RDL			1	50	0.5	0.5	0.5	0.5
1*INF	09/06/94	09/16/94	1	2300	290	37	8.4	180
2*BI-2	09/06/94	09/16/94	1	<50	<0.5	<0.5	<0.5	1.3

Ms. Karen Petryna
2225 Telegraph, Oakland
Alameda County

Mark A. Valentini, PhD, Laboratory Director

ORDER PLACED FOR CLIENT: Groundwater Technology, Inc. 9409041 :
: BC ANALYTICAL : GLEN LAB : 11:42:58 22 SEP 1994 - P. 1 :

SAMPLES...	SAMPLE DESCRIPTION..	DETERM.....	DATE..... ANALYZED	METHOD.....	EQUIP.	BATCH..	ID.NO
9409041*1	INF	GAS.BTX.TESNC	09.16.94	8015M.TX	516-24	947059	8523
9409041*2	BT-2	GAS.BTX.TESNC	09.16.94	8015M.TX	516-24	947059	8523

***

Notes: Equipment = BC Analytical identification number for a particular piece of analytical equipment.

ID.NO = BC Analytical employee identification number of analyst.

BC ANALYTICAL

ORDER QC REPORT FOR G9409041

ATE REPORTED : 09/22/94

LABORATORY CONTROL STANDARDS
FOR BATCHES WHICH INCLUDE THIS ORDER

ARAMETER	DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
. TPH-gas/BTEX (CADHS/80 C4091042*1						
Date Analyzed	09.16.94	947059	09/16/94	09/16/94	Date	N/A
Benzene	09.16.94	947059	18.9	19.6	ug/L	96
Toluene	09.16.94	947059	57.7	57.0	ug/L	101
Ethylbenzene	09.16.94	947059	16.3	13.9	ug/L	117 Q
Total Xylene Isomers	09.16.94	947059	75.6	67.3	ug/L	112
TPH (as Gasoline)	09.16.94	947059	788	1000	ug/L	79
a,a,a-Trifluorotoluene Reported	09.16.94	947059	59.6	50.0	ug/L	119 Q
a,a,a-Trifluorotoluene Theoretic	09.16.94	947059	50.0	50.0	ug/L	100

BC ANALYTICAL

ORDER QC REPORT FOR G9409041

DATE REPORTED : 09/22/94

MATRIX QC PRECISION (DUPLICATE SPIKES)
BATCH QC REPORT

PARAMETER	SAMPLE NUMBER	DATE ANALYZED	BATCH NUMBER	MS RESULT	MSD RESULT	UNIT	RELATIVE % DIFF
1. TPH-gas/BTEX (CADHS/80	9409145*3						
Date Analyzed		09.16.94	947059	09/16/94	09/16/94	Date	N/A
Benzene		09.16.94	947059	17.5	18.5	ug/L	6
Toluene		09.16.94	947059	53.9	55.9	ug/L	4
Ethylbenzene		09.16.94	947059	14.7	15.5	ug/L	5
Total Xylene Isomers		09.16.94	947059	68.3	73.5	ug/L	7
TPH (as Gasoline)		09.16.94	947059	786	775	ug/L	1
a,a,a-Trifluorotoluene	Reported	09.16.94	947059	55.6	58.2	ug/L	5
a,a,a-Trifluorotoluene	Theoretic	09.16.94	947059	50.0	50.0	ug/L	0

BC ANALYTICAL

ORDER QC REPORT FOR G9409041

DATE REPORTED : 09/22/94

MATRIX QC ACCURACY (SPIKES)
BATCH QC REPORT

PARAMETER	SAMPLE NUMBER	DATE ANALYZED	BATCH NUMBER	MS %	MSD %	TRUE RESULT	UNIT	
1. TPH-gas/BTEX (CADHS/80	9409145*3							
Benzene		09.16.94	947059	89	94	19.6	ug/L	
Toluene		09.16.94	947059	94	98	57.0	ug/L	
Ethylbenzene		09.16.94	947059	106	112	13.9	ug/L	
Total Xylene Isomers		09.16.94	947059	101	109	67.3	ug/L	
TPH (as Gasoline)		09.16.94	947059	79	78	1000	ug/L	
a,a,a-Trifluorotoluene	Reported	09.16.94	947059	NC	NC	58.2	ug/L	NC
a,a,a-Trifluorotoluene	Theoretic	09.16.94	947059	NC	NC	50.0	ug/L	NC

BC ANALYTICAL

ORDER QC REPORT FOR G9409041

DATE REPORTED : 09/22/94

METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)
FOR BATCHES WHICH INCLUDE THIS ORDER

PARAMETER	DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT	METHOD
1. TPH-gas/BTEX (CADHS/80 B409879*1						
Date Analyzed	09.16.94	947059	09/16/94	NA	Date	8015M.TX
Benzene	09.16.94	947059	0	0.5	ug/L	8015M.TX
Toluene	09.16.94	947059	0.41	0.5	ug/L	8015M.TX
Ethylbenzene	09.16.94	947059	0	0.5	ug/L	8015M.TX
Total Xylene Isomers	09.16.94	947059	0.38	0.5	ug/L	8015M.TX
TPH (as Gasoline)	09.16.94	947059	5.3	50	ug/L	8015M.TX
a,a,a-Trifluorotoluene Reported	09.16.94	947059	47.3	NA	ug/L	8015M.TX
a,a,a-Trifluorotoluene Theoretic	09.16.94	947059	50.0	NA	ug/L	8015M.TX

SURROGATE RECOVERIES :
BC ANALYTICAL : GLEN LAB : 11:43:31 22 SEP 1994 - P. 1 :

METHOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG
9409041*1							
8015M.TX	a,a,a-Trifluorotoluene	947059	09/16/94	52.5	50.0	105	
9409041*2							
8015M.TX	a,a,a-Trifluorotoluene	947059	09/16/94	59.0	50.0	118	

SURROGATE RECOVERIES :
BC ANALYTICAL : GLEN LAB : 11:43:34 22 SEP 1994 - P. 1 :

METHOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG
9409145*3*R1							
8015M.TX	a,a,a-Trifluorotoluene	947059	09/16/94	57.0	50.0	114	
9409145*3*S1							
8015M.TX	a,a,a-Trifluorotoluene	947059	09/16/94	55.6	50.0	111	NC
9409145*3*S2							
8015M.TX	a,a,a-Trifluorotoluene	947059	09/16/94	58.2	50.0	116	NC
9409145*3*T							
8015M.TX	a,a,a-Trifluorotoluene	947059	09/16/94	58.2	50.0	116	
3409879*1*MB							
8015M.TX	a,a,a-Trifluorotoluene	947059	09/16/94	47.3	50.0	95	
C4091042*1*LC							
8015M.TX	a,a,a-Trifluorotoluene	947059	09/16/94	59.6	50.0	119	Q
C4091042*1*LT							
8015M.TX	a,a,a-Trifluorotoluene	947059	09/16/94	50.0	50.0	100	

CHAIN OF CUSTODY RECORD

BCA Log Number [illegible]

Client name: GroundWater Technology, Inc

Project or PO#: 020700008.051005

Address: 1401 Halyard Ste 140

Phone #: (916) 372-4700

City, State, Zip: West Sacramento, CA

Report attention: Brian Garber

Sampled by:

Lab Sample number	Date sampled	Time sampled	Type* See key below	Sample description	Number of containers		BTEX, TPH-G,					Hazardous sample Special handling required	Remarks
	9/6/94	11:45	GW	INF	2		X						
	↓	11:50	GW	BT-2	2		X						

Analyses required

	Signature	Print Name	Company	Date	Time
Relinquished by	[signature]	Mark N Czyzky	GroundWater Technology Inc.	9/6/94	16:50
Received by	[signature]	Carlos Metcalfe	BCA	9-6-94	16:50
Relinquished by					
Received by					
Relinquished by					
Received by Laboratory					

C ANALYTICAL

[illegible] Concord CA 94518 (510) 825 3891

[illegible] Glendale CA 91201 (818) 247-5737

[illegible] Anaheim CA 92805 (714) 978 0113

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client's expense.

Disposal arrangements: ____

*KEY: AQ - Aqueous NA - Nonaqueous SL - Sludge GW - Groundwater SO - Soil PE - Petroleum

B C Analytical

801 Western Avenue
Glendale, CA 91201
818/247-5737
Fax: 818/247-9797

ANALYTICAL REPORT

LOG NO: G94-10-071

Received: 06 OCT 94

Mailed: OCT 19 1994

Mr. Brian Garber
Groundwater Technology, Inc.
1401 Halyard Drive, Suite 140
West Sacramento, California 95691

Purchase Order: 94-1446346+4370

Requisition: 624880195
Project: FKEP1015L

REPORT OF ANALYTICAL RESULTS

AQUEOUS

SAMPLE DESCRIPTION	DATE SAMPLED	TPH/BTEX (CADHS/8020) Date Analyzed	Dilution Factor Times 1	TPH-g ug/L	Benzene ug/L	Toluene ug/L	Ethyl-Benzene ug/L	Total Xylenes Isomers ug/L
RDL			1	50	0.5	0.5	0.5	0.5
1*INF	10/05/94	10/11/94	20	2000	190	41	10	150
2*BT-2	10/05/94	10/11/94	1	<50	<0.5	<0.5	<0.5	<0.5
3*EFF	10/05/94	10/11/94	1	<50	<0.5	<0.5	<0.5	<0.5

Karen Petryna
2225 Telegraph Avenue, Oakland
Alameda County

Mark A. Valentini, PhD, Laboratory Director

B C Analytical

SITE VISITATION FORM
FOR
WASTEWATER DISCHARGE SAMPLING
SYSTEM OPERATION AND MAINTENANCE

2225 Telegraph, Oakland
Site Address

Sampled By: Mark Czipka Date: 10/5/94

SYSTEM CHECK / READINGS

If Applicable	Yes	No	N/A
Is System Operational Restarted/Stopped		✓	
2nd Contain. Float Switch Working	✓		
Adjust Flow Rate		✓	
Filter Checked and Cleaned Compressor		✓	
Strainer Checked and Cleaned	✓		
Check/Add Water Conditioner			✓
Calibrate LEL			✓

	N/A	Field Data
Effluent Totalizer (gal)		373976
Effluent Flow Rate (gpm)		3.3
Aeration Pressure (psi)	✓	
Bag Filter INFL Pressure (psi)	✓	
Bag Filter EFFL Pressure (psi)	✓	
Carbon Vessel #1 Pressure (psi)		5
Carbon Vessel #2 Pressure (psi)	✓	
Air Compressor Pressure (psi)		120
Hour Meter (hours)		2602.6

SYSTEM SAMPLING

Quarterly

	Sample Point INF	Sample Point BT-2	Sample Point EFF	Sample Point
Temperature (F)	Not Req'd	→	→	
pH (units)	↓	↓	↓	
Dissovlved O_2 (ppm)	↓	↓	↓	
Electrical Conductivity	↓	↓	↓	

WELL READINGS

	Well # R1	Well # R2	Well #	Well #
Flow Totalizer (gpm)	0540313	0760827		
Flow Rate (gpm)				
Hour Meter (hours)				
DTW from TOC (ft)				

SITE VISITATION FORM
FOR
WASTEWATER DISCHARGE SAMPLING
SYSTEM OPERATION AND MAINTENANCE

2225 Telegraph Av OAKLAND
Site Address

Sampled By: Greg MASON

Date: 9/23/94

SYSTEM CHECK / READINGS

If Applicable	Yes	No	N/A
Is System Operational		X	
2nd Contain. Float Switch Working	X		
Adjust Flow Rate			X
Filter Checked and Cleaned	X		
Strainer Checked and Cleaned	X		
Check/Add Water Conditioner			X
Calibrate LEL			X

	N/A	When I arrived Field Data	Left
Effluent Totalizer (gal)		0373927	
Effluent Flow Rate (gpm)	.4	.4	3.2
Aeration Pressure (psi)	X		
Bag Filter INFL Pressure (psi)		7	
Bag Filter EFFL Pressure (psi)		0	
Carbon Vessel #1 Pressure (psi)	X		
Carbon Vessel #2 Pressure (psi)	X		
Air Compressor Pressure (psi)		210	
Hour Meter (hours)		2602	

SYSTEM SAMPLING

	Sample Point	Sample Point	Sample Point	Sample Point
Temperature (F)				
pH (units)				
Dissovlved O_2 (ppm)				
Electrical Conductivity				

WELL READINGS

	Well #	Well #	Well #	Well #
Flow Totalizer (gpm)				
Flow Rate (gpm)				
Hour Meter (hours)				
DTW from TOC (ft)				

SITE VISITATION FORM
FOR
WASTEWATER DISCHARGE SAMPLING
SYSTEM OPERATION AND MAINTENANCE

2225 Telegraph, Oakland
Site Address

Sampled By: Mark N Czipko Date: 9/6/94

SYSTEM CHECK / READINGS

If Applicable	Yes	No	N/A
Is System Operational	✓		
2nd Contain. Float Switch Working	✓		
Adjust Flow Rate		✓	
Filter Checked and Cleaned Compressor		✓	
Strainer Checked and Cleaned	✓		
Check/Add Water Conditioner			✓
Calibrate LEL			✓

Pumped Water from secondary containment into batch tank.

	N/A	Field Data
Effluent Totalizer (gal)		0373220
Effluent Flow Rate (gpm)		3.4
Aeration Pressure (psi)	✓	
Bag Filter INFL Pressure (psi)	✓	
Bag Filter EFFL Pressure (psi)	✓	
Carbon Vessel #1 Pressure (psi)		7.0
Carbon Vessel #2 Pressure (psi)	✓	
Air Compressor Pressure (psi)		120
Hour Meter (hours) Compressor		026021

MONTHLY SYSTEM SAMPLING

	Sample Point INF	Sample Point BT-2	Sample Point	Sample Point
Temperature (F)	NOT REQ'D	NOT REQ'D		
pH (units)	↓	↓		
Dissovlved O_2 (ppm)				
Electrical Conductivity				

WELL READINGS

	Well # R1	Well # R2	Well #	Well #
Flow Totalizer (gpm)	540256	760655		
Flow Rate ~~(gpm)~~ ≈ GPD	327	337		
Hour Meter (hours)				
DTW from TOC (ft)				

SITE VISITATION FORM
FOR
WASTEWATER DISCHARGE SAMPLING
SYSTEM OPERATION AND MAINTENANCE

2225 Telegraph, Oakland
Site Address

Sampled By: Mark Czipka Date: 8/16/94

SYSTEM CHECK / READINGS

If Applicable	Yes	No	N/A
Is System Operational		✓	
2nd Contain. Float Switch Working	✓		
Adjust Flow Rate			
Filter Checked and Cleaned		✓	
Strainer Checked and Cleaned	✓		
Check/Add Water Conditioner			✓
Calibrate LEL			✓

System Operational upon leaving - had to clean Level switches in batch tanks

	N/A	Field Data
Effluent Totalizer (gal)		0353239
Effluent Flow Rate (gpm)		2.6
Aeration Pressure (psi)	✓	
Bag Filter INFL Pressure (psi)	✓	
Bag Filter EFFL Pressure (psi)	✓	
Carbon Vessel #1 Pressure (psi)		6.5
Carbon Vessel #2 Pressure (psi)	✓	
Air Compressor Pressure (psi)		90
Hour Meter (hours)		2575.5

SYSTEM SAMPLING

	Sample Point	Sample Point	Sample Point	Sample Point
Temperature (F)				
pH (units)				
Dissovlved O_2 (ppm)				
Electrical Conductivity				

WELL READINGS

	Well # R1	Well # R2	Well #	Well #
Flow Totalizer (gpm)	533369	753574		
Flow Rate (gpm)				
Hour Meter (hours)				
TW from TOC (ft)				

SITE VISIT FORM
Groundwater Technology, Inc. - Concord, California

Project: 20700008.00 Technician:
Site: Tex/2225 Telegraph, Oakla Scheduled: 8/08/94
Project Mgr: Brian Garber Site Mgr:

TECHNICIAN'S COMMENTS

Do not have key to site. Manager has keys. Need 3 locks (New Texaco), give a key to manager. Secondary containment full. Batch tank has overflowed. Discharge pump works in "Hand" but not in "Auto" mode. Level switch may need cleaning. Cannot empty containment until there is enough room in batch tank. No spare electrical outlets to allow running trash pump. Need combination to lock on electrical panel.

Total Hours Estimated	1.00	Total Hours Used	
Travel Time Estimated	.50	Travel Time Used	

Secondary Containment
7' x 16" x 6½" Deep Water

MLN 8/8
Technician

84" x 192" x 6.5" = 104832 cu in.

$104832 \text{ cu in} \times 0.00433 \frac{\text{gals}}{\text{cu in}} = 453.9 \text{ gals}$

To empty batch tank 450 gals @ 2.6 GPM = 173 minutes or 2 hrs 53 min.

FIELD NOTES

Project: TES/2225 Telegraph Date: 8/16/94 Project No.: 020700008

Name(s): Mark Ziff Did you call in? Yes No

Arrival Time: 14:11 Departure Time: _____ Who did you call? _____

Weather Notations: (SUN) CLOUDY RAIN SNOW Temperature: 80's °F

PURPOSE OF VISIT

_____	BAIL SEPARATE–PHASE	_____	MONITOR VAPORS	_____	INSTALL SYSTEM
_____	SAMPLE A/S INF EFF	_____	SAMPLE CARBON	OTHER:	_____
_____	SYSTEM CHECK	_____	EQUIPMENT REPAIR		_____

DRUM INVENTORY

_____	WATER	_____	CARBON	TOTAL OPEN TOP	_____
_____	SOIL	_____	EMPTY	TOTAL BUNG TOP	_____

SAMPLE INFORMATION

SAMPLED: _____ YES ✓ NO LABORATORY: B C Analytical

_____ WATER _____ SOIL _____ AIR _____ OTHER

REMEDIATION SYSTEM

FLOW TOTALIZER: 1) R1=533361 R2= 753574
2) TOTAL= 0353239

FLOW RATE: _____

% LEL: _____

AIR VELOCITY: _____

PID INF: _____

PID EFF: _____

DESCRIPTION OF ACTIVITIES ON SITE AND NOTES

B C Analytical

801 Western Avenue
Glendale, CA 91201
818/247-5737
Fax: 818/247-9797

ANALYTICAL REPORT

LOG NO: G94-11-063
Received: 03 NOV 94
Mailed: NOV 21 1994

Mr. Brian Garber
Groundwater Technology, Inc.
1401 Halyard Drive, Suite 140
West Sacramento, California 95691

Purchase Order: 94-1446346+4370
Requisition: 624880195
Project: FKEP1015L

REPORT OF ANALYTICAL RESULTS

AQUEOUS

SAMPLE DESCRIPTION	DATE SAMPLED	TPH/BTEX (CADHS/8020) Date Analyzed	Dilution Factor Times	TPH-g ug/L	Benzene ug/L	Toluene ug/L	Ethyl-Benzene ug/L	Total Xylenes Isomers ug/L
RDL			1		0.5	0.5	0.5	0.5
1*INF	11/03/94	11/16/94	20	3700	410	54	18	340
2*BT-2	11/03/94	11/16/94	1	<50	<0.5	<0.5	<0.5	<0.5

Karen Petryna
2225 Telegraph Avenue, Oakland
Alameda County

Mark A. Valentini, PhD, Laboratory Director

: ORDER PLACED FOR CLIENT: Groundwater Technology, Inc. 9411063 :
: BC ANALYTICAL : GLEN LAB : 17:13:07 19 NOV 1994 - P. 1 :

SAMPLES...	SAMPLE DESCRIPTION..	DETERM.....	DATE..... ANALYZED	METHOD.....	EQUIP.	BATCH..	ID.NO
9411063*1	INF	GAS.BTX.TESNC	11.16.94	8015M.TX	516-20	948036	8607
9411063*2	BT-2	GAS.BTX.TESNC	11.16.94	8015M.TX	516-20	948036	8607

***

Notes: Equipment = BC Analytical identification number for a particular piece of analytical equipment.

ID.NO = BC Analytical employee identification number of analyst.

BC ANALYTICAL

ORDER QC REPORT FOR G9411063

DATE REPORTED : 11/19/94

LABORATORY CONTROL STANDARDS
FOR BATCHES WHICH INCLUDE THIS ORDER

PARAMETER	DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
1. TPH-gas/BTEX (CADHS/80 C4111891*1						
Date Analyzed	11.16.94	948036	11/16/94	11/16/94	Date	N/A
Benzene	11.16.94	948036	24.3	19.6	ug/L	124
Toluene	11.16.94	948036	62.5	57.0	ug/L	110
Ethylbenzene	11.16.94	948036	16.2	13.9	ug/L	117 Q
Total Xylene Isomers	11.16.94	948036	76.7	57.3	ug/L	134 Q

BC ANALYTICAL

ORDER QC REPORT FOR G9411063

DATE REPORTED : 11/19/94

MATRIX QC PRECISION (DUPLICATE SPIKES)
BATCH QC REPORT

PARAMETER	SAMPLE NUMBER	DATE ANALYZED	BATCH NUMBER	MS RESULT	MSD RESULT	UNIT	RELATIVE % DIFF
1. TPH-gas/BTEX (CADHS/80	9411063*2						
Date Analyzed		11.16.94	948036	11/16/94	11/16/94	Date	N/A
Benzene		11.16.94	948036	22.5	21.0	ug/L	7
Toluene		11.16.94	948036	59.4	55.7	ug/L	6
Ethylbenzene		11.16.94	948036	16.3	15.8	ug/L	3
Total Xylene Isomers		11.16.94	948036	78.3	73.6	ug/L	6
TPH (as Gasoline)		11.16.94	948036	1220	1120	ug/L	9

BC ANALYTICAL

ORDER QC REPORT FOR G9411063

DATE REPORTED : 11/19/94

MATRIX QC ACCURACY (SPIKES)
BATCH QC REPORT

PARAMETER	SAMPLE NUMBER	DATE ANALYZED	BATCH NUMBER	MS %	MSD %	TRUE RESULT	UNIT
1. TPH-gas/BTEX (CADHS/80	9411063*2						
Benzene		11.16.94	948036	115	107	19.6	ug/L
Toluene		11.16.94	948036	104	98	57.0	ug/L
Ethylbenzene		11.16.94	948036	117	114	13.9	ug/L
Total Xylene Isomers		11.16.94	948036	116	109	67.3	ug/L
TPH (as Gasoline)		11.16.94	948036	122	112	1000	ug/L

BC ANALYTICAL

ORDER QC REPORT FOR G9411063

DATE REPORTED : 11/19/94

METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)
FOR BATCHES WHICH INCLUDE THIS ORDER

PARAMETER	DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT	METHOD
1. TPH-gas/BTEX (CADHS/80 B4111512*1						
Date Analyzed	11.16.94	948036	11/16/94	NA	Date	8015M.TX
Benzene	11.16.94	948036	0	0.5	ug/L	8015M.TX
Toluene	11.16.94	948036	0.33	0.5	ug/L	8015M.TX
Ethylbenzene	11.16.94	948036	0	0.5	ug/L	8015M.TX
Total Xylene Isomers	11.16.94	948036	0.081	0.5	ug/L	8015M.TX
TPH (as Gasoline)	11.16.94	948036	12	50	ug/L	8015M.TX

: SURROGATE RECOVERIES :
: BC ANALYTICAL : GLEN LAB : 17:13:42 19 NOV 1994 - P. 1 :

METHOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG
9411063*1							
8015M.TX	a,a,a-Trifluorotoluene	948036	11/16/94	55.1	50.0	110	
9411063*2							
8015M.TX	a,a,a-Trifluorotoluene	948036	11/16/94	56.6	50.0	113	

: SURROGATE RECOVERIES :
: BC ANALYTICAL : GLEN LAB : 17:13:42 19 NOV 1994 - P. 1 :

METHOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG
9411063*2*R1							
8015M.TX	a,a,a-Trifluorotoluene	948036	11/16/94	56.6	50.0	113	
9411063*2*S1							
8015M.TX	a,a,a-Trifluorotoluene	948036	11/16/94	58.1	50.0	116	
9411063*2*S2							
8015M.TX	a,a,a-Trifluorotoluene	948036	11/16/94	57.3	50.0	115	
9411063*2*T							
8015M.TX	a,a,a-Trifluorotoluene	948036	11/16/94	50.0	50.0	100	
B4111512*1*MB							
8015M.TX	a,a,a-Trifluorotoluene	948036	11/16/94	55.7	50.0	111	
C4111891*1*LC							
8015M.TX	a,a,a-Trifluorotoluene	948036	11/16/94	59.9	50.0	120	
C4111891*1*LT							
8015M.TX	a,a,a-Trifluorotoluene	948036	11/16/94	50.0	50.0	100	

Client name: Ground Water Technology, Inc.
Project or PO#: 02070008.051005
Address: 1401 Halyard Ste 170
Phone # (916) 372-4200
City, State, Zip: West Sacramento, CA
Report attention: Brian Gaiber
Sampled by: Mark N Czipka

Lab Sample number	Date sampled	Time sampled	Type* See key below	Sample description	Number of containers	BTEX, TPH as Gas	Hazardous sample Special handling required	Remarks
	11/3/94	16:50	GW	INF	2	X		pres w/ HCL
	1	16:52	GW	BT-2	2	X		pres. w/ HCL

P. 1 of 1

	Signature	Print Name	Company	Date	Time
Relinquished by	Mark CSS	Mark N. Czipka	Ground Water Technology, Inc.	11/3/94	6:00 PM
Received by		Jan Winter	BCA	11/3/94	6:00 PM
Relinquished by					
Received by					
Relinquished by					
Received by Laboratory					

B C ANALYTICAL

[illegible] Circle, Concord, CA 94518 (510) 825-3800
[illegible] Avenue, Glendale, CA 91201 (818) 247-5737
[illegible] Way, Anaheim, CA 92805 (714) 978-0113

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client's expense.

Disposal arrangements: _____

*KEY: AG—Aqueous NA—Nonaqueous SL—Sludge GW—Groundwater SO—Soil PE—Petroleum

B C Analytical

801 Western Avenue
Glendale, CA 91201
818/247-5737
Fax: 818/247-9797

ANALYTICAL REPORT

LOG NO: G94-12-022
Received: 01 DEC 94
Mailed: DEC 19

Purchase Order: 94-1446346+4370
Requisition: 624880195
Project: FKEP1015L

Mr. Brian Garber
Groundwater Technology, Inc.
1401 Halyard Drive, Suite 140
West Sacramento, California 95691

REPORT OF ANALYTICAL RESULTS

AQUEOUS

SAMPLE DESCRIPTION	DATE SAMPLED	TPH/BTEX (CADHS/8020) Date Analyzed	Dilution Factor Times	TPH-g ug/L	Benzene ug/L	Toluene ug/L	Ethyl-Benzene ug/L	Total Xylenes Isomers ug/L
RDL			1		0.5	0.5	0.5	0.5
1*INF	12/01/94	12/13/94	10	7900	2400	420	110	730
2*BT-2	12/01/94	12/08/94	1	<50	<0.5	<0.5	<0.5	<0.5

Karen Petryna
2225 Telegraph Road, Oakland
Alameda County

Mark A. Valentini, PhD, Laboratory Director

ORDER PLACED FOR CLIENT: Groundwater Technology, Inc. 9412022 :
BC ANALYTICAL : GLEN LAB : 15:21:01 16 DEC 1994 - P. 1 :

SAMPLES...	SAMPLE DESCRIPTION..	DETERM.....	DATE..... ANALYZED	METHOD.....	EQUIP.	BATCH..	ID.NO
9412022*1	INF	GAS.BTX.TESNC	12.13.94	8015M.TX	516-20	948056	8607
9412022*2	BT-2	GAS.BTX.TESNC	12.08.94	8015M.TX	516-20	948051	8607

***

Notes: Equipment = BC Analytical identification number for a particular piece of analytical equipment.

ID.NO = BC Analytical employee identification number of analyst.

BC ANALYTICAL

ORDER QC REPORT FOR G9412022

ATE REPORTED : 12/16/94

LABORATORY CONTROL STANDARDS
FOR BATCHES WHICH INCLUDE THIS ORDER

ARAMETER	DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
. TPH-gas/BTEX (CADHS/80 C4121650*1						
Date Analyzed	12.13.94	948056	12/13/94	12/13/94	Date	N/A
Benzene	12.13.94	948056	14.4	12.5	ug/L	115
Toluene	12.13.94	948056	54.1	55.5	ug/L	97
Ethylbenzene	12.13.94	948056	12.1	12.5	ug/L	97
Total Xylene Isomers	12.13.94	948056	63.2	66.5	ug/L	95
TPH (as Gasoline)	12.13.94	948056	940	1000	ug/L	94
. TPH-gas/BTEX (CADHS/80 C4121651*1						
Date Analyzed	12.13.94	948056	12/13/94	12/13/94	Date	N/A
Benzene	12.13.94	948056	14.4	12.5	ug/L	115
Toluene	12.13.94	948056	58.2	55.5	ug/L	105
Ethylbenzene	12.13.94	948056	11.8	12.5	ug/L	94
Total Xylene Isomers	12.13.94	948056	66.4	66.5	ug/L	100
TPH (as Gasoline)	12.13.94	948056	900	1000	ug/L	90
. TPH-gas/BTEX (CADHS/80 C4121298*1						
Date Analyzed	12.08.94	948051	12/08/94	12/08/94	Date	N/A
Benzene	12.08.94	948051	17.3	12.5	ug/L	138 Q
Toluene	12.08.94	948051	63.3	55.5	ug/L	114
Ethylbenzene	12.08.94	948051	13.5	12.5	ug/L	108
Total Xylene Isomers	12.08.94	948051	71.9	66.5	ug/L	108
TPH (as Gasoline)	12.08.94	948051	994	1000	ug/L	99

BC ANALYTICAL

ORDER QC REPORT FOR G9412022

DATE REPORTED : 12/16/94

ADDITIONAL LCS PRECISION (DUPLICATES)
BATCH QC REPORT

PARAMETER	SAMPLE NUMBER	DATE ANALYZED	BATCH NUMBER	LC1 RESULT	LC2 RESULT	UNIT	RELATIVE % DIFF
1. TPH-gas/BTEX (CADHS/80							
Date Analyzed		12.13.94	948056	12/13/94	12/13/94	Date	N/A
Benzene		12.13.94	948056	14.4	14.4	ug/L	0
Toluene		12.13.94	948056	54.1	58.2	ug/L	7
Ethylbenzene		12.13.94	948056	12.1	11.8	ug/L	3
Total Xylene Isomers		12.13.94	948056	63.2	66.4	ug/L	5
TPH (as Gasoline)		12.13.94	948056	940	900	ug/L	4

BC ANALYTICAL

ORDER QC REPORT FOR G9412022

DATE REPORTED : 12/16/94

MATRIX QC PRECISION (DUPLICATE SPIKES)
BATCH QC REPORT

PARAMETER	SAMPLE NUMBER	DATE ANALYZED	BATCH NUMBER	MS RESULT	MSD RESULT	UNIT	RELATIVE % DIFF
1. TPH-gas/BTEX (CADHS/80	9412024*4						
Date Analyzed		12.08.94	948051	12/08/94	12/08/94	Date	N/A
Benzene		12.08.94	948051	16.5	18.8	ug/L	13
Toluene		12.08.94	948051	60.2	63.4	ug/L	5
Ethylbenzene		12.08.94	948051	12.5	13.1	ug/L	5
Total Xylene Isomers		12.08.94	948051	70.5	73.5	ug/L	4

BC ANALYTICAL

ORDER QC REPORT FOR G9412022

ATE REPORTED : 12/16/94

MATRIX QC ACCURACY (SPIKES)
BATCH QC REPORT

ARAMETER	SAMPLE NUMBER	DATE ANALYZED	BATCH NUMBER	MS %	MSD %	TRUE RESULT	UNIT	
. TPH-gas/BTEX (CADHS/80 9412024*4								
Benzene		12.08.94	948051	112	130 Q	15.0	ug/L	Q
Toluene		12.08.94	948051	103	109	58.4	ug/L	
Ethylbenzene		12.08.94	948051	92	97	13.5	ug/L	
Total Xylene Isomers		12.08.94	948051	95	100	73.5	ug/L	
TPH (as Gasoline)		12.08.94	948051	91	NC	1120	ug/L	NC

BC ANALYTICAL

ORDER QC REPORT FOR G9412022

DATE REPORTED : 12/16/94

METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)
FOR BATCHES WHICH INCLUDE THIS ORDER

PARAMETER	DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT	METHOD
1. TPH-gas/BTEX (CADHS/80 B412878*1						
Date Analyzed	12.13.94	948056	12/13/94	NA	Date	8015M.TX
Benzene	12.13.94	948056	0.064	0.5	ug/L	8015M.TX
Toluene	12.13.94	948056	0.19	0.5	ug/L	8015M.TX
Ethylbenzene	12.13.94	948056	0.069	0.5	ug/L	8015M.TX
Total Xylene Isomers	12.13.94	948056	0.39	0.5	ug/L	8015M.TX
TPH (as Gasoline)	12.13.94	948056	24	50	ug/L	8015M.TX
2. TPH-gas/BTEX (CADHS/80 B412672*1						
Date Analyzed	12.08.94	948051	12/08/94	NA	Date	8015M.TX
Benzene	12.08.94	948051	0.17	0.5	ug/L	8015M.TX
Toluene	12.08.94	948051	0.44	0.5	ug/L	8015M.TX
Ethylbenzene	12.08.94	948051	0.13	0.5	ug/L	8015M.TX
Total Xylene Isomers	12.08.94	948051	0.40	0.5	ug/L	8015M.TX
TPH (as Gasoline)	12.08.94	948051	25	50	ug/L	8015M.TX

: SURROGATE RECOVERIES :
: BC ANALYTICAL : GLEN LAB : 15:22:10 16 DEC 1994 - P. 1 :

METHOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG
9412022*1							
8015M.TX	a,a,a-Trifluorotoluene	948056	12/13/94	56.0	50.0	112	
9412022*2							
8015M.TX	a,a,a-Trifluorotoluene	948051	12/08/94	51.7	50.0	103	

SURROGATE RECOVERIES :
BC ANALYTICAL : GLEN LAB : 15:22:15 16 DEC 1994 - P. 1 :

METHOD ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG
9412024*4*R1						
8015M.TXa,a,a-Trifluorotoluene	948051	12/08/94	53.7	50.0	107	
9412024*4*S1						
8015M.TXa,a,a-Trifluorotoluene	948051	12/08/94	49.1	50.0	98	
9412024*4*S2						
8015M.TXa,a,a-Trifluorotoluene	948051	12/08/94	55.3	50.0	111	
9412024*4*T						
8015M.TXa,a,a-Trifluorotoluene	948051	12/08/94	50.0	50.0	100	
B412672*1*MB						
8015M.TXa,a,a-Trifluorotoluene	948051	12/08/94	51.2	50.0	102	
B412878*1*MB						
8015M.TXa,a,a-Trifluorotoluene	948056	12/13/94	54.0	50.0	108	
C4121298*1*LC						
8015M.TXa,a,a-Trifluorotoluene	948051	12/08/94	54.7	50.0	109	
C4121298*1*LT						
8015M.TXa,a,a-Trifluorotoluene	948051	12/08/94	50.0	50.0	100	
C4121650*1*LC						
8015M.TXa,a,a-Trifluorotoluene	948056	12/13/94	54.3	50.0	109	
C4121650*1*LT						
8015M.TXa,a,a-Trifluorotoluene	948056	12/13/94	50.0	50.0	100	
C4121651*1*LC						
8015M.TXa,a,a-Trifluorotoluene	948056	12/13/94	54.6	50.0	109	
C4121651*1*LT						
8015M.TXa,a,a-Trifluorotoluene	948056	12/13/94	50.0	50.0	100	

CHAIN OF CUSTODY RECORD

BCA Log Number

Client name: Ground Water Technology Inc	Project or PO#: 0207000B . 051005
Address: 1401 Halyard Suite 140	Phone #:
City, State, Zip: West Sacramento, CA	Report attention: Brian Gerber

Lab Sample number	Date sampled	Time sampled	Type* See key below	Sampled by: Mark Czipku / Sample description	Number of containers	Analyses required: BTEX, TPH as Gas	Hazardous sample Special handling required	Remarks: A3 lot 1
	12/1/94		GW	INF	2	X		
	1		GW	BT-2	2	X		

	Signature	Print Name	Company	Date	Time
Relinquished by		Mark N Czipku	Ground Water Technology, Inc	12/1/94	5:55 PM
Received by		[illegible] Adviento	BCA	12/1/94	5:55 PM
Relinquished by					
Received by					
Relinquished by					
Received by Laboratory					

B C ANALYTICAL

1085 Shary Circle, Concord, CA 94518 (510) 825-3894

901 Western Avenue, Glendale, CA 91201 (818) 247-5737

1380 Gene Autry Way, Anaheim, CA 92805 (714) 978-0113

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client's expense.

Disposal arrangements: _____

*KEY: AG--Aqueous NA Nonaqueous SL Sludge GW—Groundwater SO- Soil PE Petroleum