Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 02/14/92
DATE REPORTED: 02/26/92

LABORATORY NUMBER: 106568

CLIENT: ENVIRONMENTAL SCIENCE & ENGINEERING

PROJECT ID: 6-92-5314

LOCATION: ALCOPARK

RESULTS: SEE ATTACHED

Reviewed By

Reviewed By

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 106568-1
CLIENT: ENVIRONMENTAL SCIENCE & ENGINEERING
PROJECT ID: 6-92-5314
LOCATION: ALCOPARK
SAMPLE ID: COMPOSITE SS-WO-1,2,3,4

DATE RECEIVED: 02/14/92
DATE EXTRACTED: 02/18/92
DATE ANALYZED: 02/22/92
DATE REPORTED: 02/26/92

EPA 8270: Base/Neutral and Acid Extractables in Soils & Wastes
Extraction Method: EPA 3550 Sonication

ACID COMPOUNDS	RESULT ug/kg	REPORTING LIMIT ug/kg
Phenol	ND	330
2-Chlorophenol	ND	330
Benzyl Alcohol	ND	330
2-Methylphenol	ND	330
4-Methylphenol	ND	330
2-Nitrophenol	ND	1,650
2,4-Dimethylphenol	ND	330
Benzoic Acid	ND	1,650
2,4-Dichlorophenol	ND	1,650
4-Chloro-3-methylphenol	ND	330
2,4,6-Trichlorophenol	ND	330
2,4,5-Trichlorophenol	ND	1,650
2,4-Dinitrophenol	ND	1,650
4-Nitrophenol	ND	1,650
4,6-Dinitro-2-methylphenol	ND	1,650
Pentachlorophenol	ND	1,650
BASE/NEUTRAL COMPOUNDS		
N-Nitrosodimethylamine	ND	330
Aniline	ND	330
Bis(2-chloroethyl)ether	ND	330
1,3-Dichlorobenzene	ND	330
1,4-Dichlorobenzene	ND	330
1,2-Dichlorobenzene	ND	330
Bis(2-chloroisopropyl)ether	ND	330
N-Nitroso-di-n-propylamine	ND	330
Hexachloroethane	ND	330
Nitrobenzene	ND	330
Isophorone	ND	330
Bis(2-chloroethoxy)methane	ND	330
1,2,4-Trichlorobenzene	ND	330
Naphthalene	1,400	330
4-Chloroaniline	ND	330
Hexachlorobutadiene	ND	330
2-Methylnaphthalene	1,300	330
Hexachlorocyclopentadiene	ND	330
2-Chloronaphthalene	ND	330
2-Nitroaniline	ND	1,650

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 106568-1 EPA 8270
SAMPLE ID: COMPOSITE SS-WO-1,2,3,4

BASE/NEUTRAL COMPOUNDS	RESULT ug/kg	REPORTING LIMIT ug/kg
Dimethylphthalate	ND	330
Acenaphthylene	ND	330
2,6-Dinitrotoluene	ND	330
3-Nitroaniline	ND	1,650
Acenaphthene	510	330
Dibenzofuran	350	330
2,4-Dinitrotoluene	ND	330
Diethylphthalate	ND	330
4-Chlorophenyl-phenylether	ND	330
Fluorene	570	330
4-Nitroaniline	ND	1,650
N-Nitrosodiphenylamine	ND	330
Azobenzene	ND	330
4-Bromophenyl-phenylether	ND	330
Hexachlorobenzene	ND	330
Phenanthrene	3,100	330
Anthracene	ND	330
Di-n-butylphthalate	ND	330
Fluoranthene	1,700	330
Benzidine	ND	330
Pyrene	ND	330
Butylbenzylphthalate	ND	330
3,3'-Dichlorobenzidine	ND	1,650
Benzo(a)anthracene	ND	330
Chrysene	ND	330
Bis(2-ethylhexyl)phthalate	ND	330
Di-n-octylphthalate	ND	330
Benzo(b)fluoranthene	ND	330
Benzo(k)fluoranthene	1,000	330
Benzo(a)pyrene	ND	330
Indeno(1,2,3-cd)pyrene	340	330
Dibenzo(a,h)anthracene	ND	330
Benzo(g,h,i)perylene	ND	330

ND = Not detected at or above reporting limit.

QA/QC SUMMARY: % SURROGATE RECOVERIES

2-Fluorophenol	100	Nitrobenzene-d5	89
Phenol-d6	95	2-Fluorobiphenyl	97
2,4,6-Tribromophenol	108	Terphenyl-d14	113

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 106568-5
CLIENT: ENVIRONMENTAL SCIENCE & ENGINEERING
PROJECT ID: 6-92-5314
LOCATION: ALCOPARK
SAMPLE ID: COMPOSITE SS-WO-1,2,3,4

DATE RECEIVED: 02/14/92
DATE ANALYZED: 02/21/92
DATE REPORTED: 02/24/92

EPA 8010: Volatile Halocarbons in Soil & Wastes
Extraction Method: EPA 5030 - Purge & Trap

Compound	RESULT ug/Kg	REPORTING LIMIT ug/Kg
Chloromethane	ND	50
Bromomethane	ND	50
Vinyl chloride	ND	50
Chloroethane	ND	50
Methylene chloride	ND	100
Trichlorofluoromethane	ND	25
1,1-Dichloroethene	ND	25
1,1-Dichloroethane	ND	25
cis-1,2-Dichloroethene	ND	25
trans-1,2-Dichloroethene	ND	25
Chloroform	ND	25
Freon 113	ND	25
1,2-Dichloroethane	ND	25
1,1,1-Trichloroethane	ND	25
Carbon tetrachloride	ND	25
Bromodichloromethane	ND	25
1,2-Dichloropropane	ND	25
cis-1,3-Dichloropropene	ND	25
Trichloroethylene	ND	25
1,1,2-Trichloroethane	ND	25
trans-1,3-Dichloropropene	ND	25
Dibromochloromethane	ND	25
2-Chloroethylvinyl ether	ND	50
Bromoform	ND	25
Tetrachloroethylene	330	25
1,1,2,2-Tetrachloroethane	ND	25
Chlorobenzene	ND	25
1,3-Dichlorobenzene	ND	25
1,2-Dichlorobenzene	ND	25
1,4-Dichlorobenzene	ND	25

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

Surrogate Recovery, %	93

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 106568-METHOD BLANK
CLIENT: ENVIRONMENTAL SCIENCE & ENGINEERING
PROJECT ID: 6-92-5314
LOCATION: ALCOPARK

DATE ANALYZED: 02/21/92
DATE REPORTED: 02/24/92

EPA 8010: Volatile Halocarbons in Soil & Wastes
Extraction Method: EPA 5030 - Purge & Trap

Compound	RESULT ug/Kg	REPORTING LIMIT ug/Kg
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	20
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon tetrachloride	ND	5.0
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethylene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Dibromochloromethane	ND	5.0
2-Chloroethylvinyl ether	ND	10
Bromoform	ND	5.0
Tetrachloroethylene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
Chlorobenzene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

Surrogate Recovery, %	84

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 106568
CLIENT: ENVIRONMENTAL SCIENCE & ENGINEERING
PROJECT ID: 6-92-5314
LOCATION: ALCOPARK

DATE RECEIVED: 02/14/92
DATE EXTRACTED: 02/19/92
DATE ANALYZED: 02/20/92
DATE REPORTED: 02/21/92

Extractable Petroleum Hydrocarbons in Soils & Wastes
California DOHS Method
LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
106568-5	COMP SS-WO-1 SS-WO-2 SS-WO-3 SS-WO-4	ND	53	1.0

ND = Not Detected at or above reporting limit.

*Reporting limit applies to all analytes.

QA/QC SUMMARY

LCS RECOVERY, %	82

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 106568
CLIENT: ENVIRONMENTAL SCIENCE & ENGINEERING
PROJECT ID: 6-92-5314
LOCATION: ALCOPARK

DATE RECEIVED: 02/14/92
DATE ANALYZED: 02/19/92
DATE REPORTED: 02/21/92

ANALYSIS: HYDROCARBON OIL AND GREASE
METHOD: SMWW 17:5520 E&F

LAB ID	SAMPLE ID	RESULT	UNITS	REPORTING LIMIT
106568-5	COMP SS-WO-1 SS-WO-2 SS-WO-3 SS-WO-4	250	mg/Kg	50 mg/Kg

QA/QC SUMMARY

RPD, %	4
RECOVERY, %	84

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 106568-5
CLIENT: ENVIRONMENTAL SCIENCE & ENGINEERING
PROJECT ID: 6-92-5314
LOCATION: ALCOPARK
SAMPLE ID: COMPOSITE SS-WO-1
SS-WO-2
SS-WO-3
SS-WO-4

DATE RECEIVED: 02/14/92
DATE ANALYZED: 02/18,19/92
DATE REPORTED: 02/21/92

PARAMETER	RESULT	UNITS	REPORTING LIMIT	METHOD
CADMIUM	ND	mg/Kg	0.25	EPA 6010
CHROMIUM	42.0	mg/Kg	0.50	EPA 6010
LEAD	ND	mg/Kg	3.0	EPA 7420
NICKEL	31.7	mg/Kg	1.6	EPA 6010
ZINC	32.5	mg/Kg	1.0	EPA 6010

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

	RPD, %	Recovery, %
CADMIUM	4	102
CHROMIUM	<1	93
LEAD	<1	102
NICKEL	5	90
ZINC	3	91

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 106568 DATE RECEIVED: 02/14/92
CLIENT: ENVIRONMENTAL SCIENCE & ENGINEERING DATE ANALYZED: 02/18/92
PROJECT ID: 6-92-5314 DATE REPORTED: 02/21/92
LOCATION: ALCOPARK

Total Volatile Hydrocarbons with BTXE in Soils & Wastes
TVH by California DOHS Method/LUFT Manual October 1989
BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
106568-5	COMP SS-WO-1 SS-WO-2 SS-WO-3 SS-WO-4	13*	ND(5.0)	39	99	710

* Pattern does not match gasoline standard.

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %	3
RECOVERY, %	102

106568

CHAIN OF CUSTODY RECORD

DATE 2-13-92 PAGE 2 OF 2

PROJECT NAME ALCOPARK

ADDRESS OAKLAND, CA

PROJECT NO: ~~6-90-5042~~ → 6925314 PA

SAMPLED BY Mike Edmonson

LAB NAME Curtis & Tompkins

SAMPLE #	DATE	TIME	LOCATION	BTEX, TPH-G	TPH-D (3550)	Oil + Grease 5520 (Diff)	8270 (Semi Vol. HC)	Cd, Cr, Pb, Zn, Ni (6010)	8010 (Cl-HC's)	MATRIX	NUMBER OF CONTAINERS	REMARKS (CONTAINER, SIZE, ETC.)
SS-WO-1	2-13-92	17:25	Stockpile	X	X	X	X	X	X	SOIL	1	1 Brass Ring
SS-WO-2	2-13-92	17:30	Stockpile	↓	↓	↓	↓	↓	↓	SOIL	1	1 Brass Ring Composite
SS-WO-3	2-13-92	17:40	Stockpile							SOIL	1	1 Brass Ring
SS-WO-4	2-13-92	17:45	Stockpile							SOIL	1	1 Brass Ring

ANALYSES TO BE PERFORMED

MATRIX

ESE Environmental Science & Engineering, Inc.
A CH2MHILL Company
4090 Nelson Avenue
Suite J
Concord, CA 94520
(415) 685-4053
Fax (415) 685-5323

RELINQUISHED BY: (signature)	RECEIVED BY: (signature)	date	time
1. Mike Edmonson (ESE)	Pat Hall (CESE)	2/14/92	0900
2. Pat Hall	Matt Moseck	2/14/92	
3.			
4.			
5.			

4 TOTAL NUMBER OF CONTAINERS

REPORT RESULTS TO: Patrick Galvin

SPECIAL SHIPMENT REQUIREMENTS: Keep Chilled

SAMPLE RECEIPT

CHAIN OF CUSTODY SEALS	
REC'D GOOD CONDTN/COLD	
CONFORMS TO RECORD	

INSTRUCTIONS TO LABORATORY (handling, analyses, storage, etc.):
Composite 4 Samples, SS-WO-1, SS-WO-2, SS-WO-3, SS-WO-4 and Analyze as one sample. Note revised Project Number. Please Store 90 days.

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 02/14/92
DATE REPORTED: 02/26/92

LABORATORY NUMBER: 106569

CLIENT: ENVIRONMENTAL SCIENCE & ENGINEERING

PROJECT ID: 6-92-5314

LOCATION: ALCO PARK-OAKLAND, CA

RESULTS: SEE ATTACHED

Reviewed By

Reviewed By

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 106569
CLIENT: ENVIRONMENTAL SCIENCE & ENGINEERING
PROJECT ID: 6-92-5314
LOCATION: ALCO PARK-OAKLAND, CA

DATE RECEIVED: 02/14/92
DATE ANALYZED: 02/20/92
DATE REPORTED: 02/26/92

ANALYSIS: OIL & GREASE
ANALYSIS METHOD: SMWW 5520EF

LAB ID	SAMPLE ID	RESULT	UNITS	REPORTING LIMIT
106569-2	WOTP-DL-8'	ND	mg/Kg	50
106569-3	WOTP-FE-8'	ND	mg/Kg	50
106569-7	COMP WOL-1,2,3	70	mg/Kg	50

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	4
RECOVERY, %	84

Curtis & Tompkins, Ltd.

Client: Environmental Science & Engineering

Laboratory Login Number: 106569

Project Name: Alco Park- Oakland, CA
Project Number: 6-92-5314

Report Date: 25 February 92

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric) **METHOD:** SMWW 17:5520BF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
106569-001	WOP-GW-8.5'	Water	13-FEB-92	14-FEB-92	18-FEB-92	ND	mg/L	5	TR	4297

ND = Not Detected at or above Reporting Limit (RL).

Curtis & Tompkins, Ltd.

QC Batch Report

Client: Environmental Science & Engineering Laboratory Login Number: 106569
Project Name: Alco Park- Oakland, CA Report Date: 25 February 92
Project Number: 6-92-5314

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric) **QC Batch Number: 4297**

Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	5	mg/L	SMWW 17:5520BF	18-FEB-92

Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	91%	SMWW 17:5520BF	18-FEB-92
BSD	93%	SMWW 17:5520BF	18-FEB-92

		Control Limits
Average Spike Recovery	92%	80% - 120%
Relative Percent Difference	2.2%	< 20%

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 106569-1
CLIENT: ENVIRONMENTAL SCIENCE & ENGINEERING
PROJECT ID: 6-92-5314
LOCATION: ALCO PARK-OAKLAND, CA
SAMPLE ID: WOP-GW-8.5'

DATE RECEIVED: 02/14/92
DATE ANALYZED: 02/20/92
DATE REPORTED: 02/25/92

EPA 8010
Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	100
Trichlorofluoromethane	110	5.0
1,1-Dichloroethene	5.5	5.0
1,1-Dichloroethane	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
1,1,1-Trichloroethane	320	5.0
Carbon tetrachloride	ND	5.0
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethylene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Dibromochloromethane	ND	5.0
2-Chloroethylvinyl ether	ND	10
Bromoform	ND	5.0
Tetrachloroethene	75	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
Chlorobenzene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

Surrogate Recovery, %	88

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 106569-2
CLIENT: ENVIRONMENTAL SCIENCE & ENGINEERING
PROJECT ID: 6-92-5314
LOCATION: ALCO PARK-OAKLAND, CA
SAMPLE ID: WOTP-DL-8'

DATE RECEIVED: 02/14/92
DATE ANALYZED: 02/21/92
DATE REPORTED: 02/25/92

EPA 8010: Volatile Halocarbons in Soil & Wastes
Extraction Method: EPA 5030 - Purge & Trap

Compound	RESULT ug/Kg	REPORTING LIMIT ug/Kg
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	20
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon tetrachloride	ND	5.0
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethylene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Dibromochloromethane	ND	5.0
2-Chloroethylvinyl ether	ND	10
Bromoform	ND	5.0
Tetrachloroethylene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
Chlorobenzene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

Surrogate Recovery, %	84

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 106569-3
CLIENT: ENVIRONMENTAL SCIENCE & ENGINEERING
PROJECT ID: 6-92-5314
LOCATION: ALCO PARK-OAKLAND, CA
SAMPLE ID: WOTP-FE-8'

DATE RECEIVED: 02/14/92
DATE ANALYZED: 02/21/92
DATE REPORTED: 02/25/92

EPA 8010: Volatile Halocarbons in Soil & Wastes
Extraction Method: EPA 5030 - Purge & Trap

Compound	RESULT ug/Kg	REPORTING LIMIT ug/Kg
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	20
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon tetrachloride	ND	5.0
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethylene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Dibromochloromethane	ND	5.0
2-Chloroethylvinyl ether	ND	10
Bromoform	ND	5.0
Tetrachloroethylene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
Chlorobenzene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

Surrogate Recovery, %	79

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 106569-7
CLIENT: ENVIRONMENTAL SCIENCE & ENGINEERING
PROJECT ID: 6-92-5314
LOCATION: ALCO PARK-OAKLAND, CA
SAMPLE ID: COMP WOL-1,2,3

DATE RECEIVED: 02/14/92
DATE ANALYZED: 02/21/92
DATE REPORTED: 02/25/92

EPA 8010: Volatile Halocarbons in Soil & Wastes
Extraction Method: EPA 5030 - Purge & Trap

Compound	RESULT ug/Kg	REPORTING LIMIT ug/Kg
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	20
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon tetrachloride	ND	5.0
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethylene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Dibromochloromethane	ND	5.0
2-Chloroethylvinyl ether	ND	10
Bromoform	ND	5.0
Tetrachloroethylene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
Chlorobenzene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

Surrogate Recovery, %	85

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 106569
CLIENT: ENVIRONMENTAL SCIENCE & ENGINEERING
PROJECT ID: 6-92-5314
LOCATION: ALCO PARK-OAKLAND, CA
SAMPLE ID: METHOD BLANK

DATE ANALYZED: 02/21/92
DATE REPORTED: 02/25/92

EPA 8010: Volatile Halocarbons in Soil & Wastes
Extraction Method: EPA 5030 - Purge & Trap

Compound	RESULT ug/Kg	REPORTING LIMIT ug/Kg
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	20
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon tetrachloride	ND	5.0
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethylene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Dibromochloromethane	ND	5.0
2-Chloroethylvinyl ether	ND	10
Bromoform	ND	5.0
Tetrachloroethylene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
Chlorobenzene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

Surrogate Recovery, %	84

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 106569
CLIENT: ENVIRONMENTAL SCIENCE & ENGINEERING
PROJECT ID: 6-92-5314
LOCATION: ALCO PARK-OAKLAND, CA
SAMPLE ID: METHOD BLANK

DATE ANALYZED: 02/20/92
DATE REPORTED: 02/25/92

EPA 8010
Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	2.0
Bromomethane	ND	2.0
Vinyl chloride	ND	2.0
Chloroethane	ND	2.0
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1.0
1,1-Dichloroethene	ND	1.0
1,1-Dichloroethane	ND	1.0
cis-1,2-Dichloroethene	ND	1.0
trans-1,2-Dichloroethene	ND	1.0
Chloroform	ND	1.0
Freon 113	ND	1.0
1,2-Dichloroethane	ND	1.0
1,1,1-Trichloroethane	ND	1.0
Carbon tetrachloride	ND	1.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	1.0
Trichloroethylene	ND	1.0
1,1,2-Trichloroethane	ND	1.0
trans-1,3-Dichloropropene	ND	1.0
Dibromochloromethane	ND	1.0
2-Chloroethylvinyl ether	ND	2
Bromoform	ND	1.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Chlorobenzene	ND	1.0
1,3-Dichlorobenzene	ND	1.0
1,2-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

Surrogate Recovery, %	84

MS/MSD SUMMARY SHEET FOR EPA 8010/8020

Operator: CW
Analysis date: 2/20/92
Sample type: WATER
Sample Number: 106585-001 5ml

Spike file: 051E/F005
Spike dup file: 051E/F006
Instrument: GC05

8010 MS/MSD DATA (spiked at 20 ppb) — *Ave Rec= 105 %*

SPIKE COMPOUNDS	READING	RECOVERY	STATUS	LIMITS
1,1-Dichloroethene	21.23	106 %	OK	1 - 183
Trichloroethene	22.81	114 %	OK	55 - 155
Chlorobenzene	19.96	100 %	OK	66 - 133
SPIKE DUP COMPOUNDS				
1,1-Dichloroethene	18.49	92 %	OK	1 - 183
Trichloroethene	22.06	110 %	OK	55 - 155
Chlorobenzene	21.58	108 %	OK	66 - 133
SURROGATES				
1-bromo-4-fluorobenzene (MS)	90.00	90 %	OK	72 - 131
1-bromo-4-fluorobenzene (MSD)	90.00	90 %	OK	72 - 131

8020 MS/MSD DATA (spiked at 20 ppb) — *Ave Rec= 117 %*

SPIKE COMPOUNDS	READING	RECOVERY	STATUS	LIMITS
Benzene	22.96	115 %	OK	76 - 127
Toluene	23.43	117 %	OK	76 - 125
Chlorobenzene	23.61	118 %	OK	66 - 133
SPIKE DUP COMPOUNDS				
Benzene	22.77	114 %	OK	76 - 127
Toluene	23.17	116 %	OK	76 - 125
Chlorobenzene	23.91	120 %	OK	66 - 133
SURROGATES				
Bromobenzene (MS)	100.00	100 %	OK	72 - 131
Bromobenzene (MSD)	100.00	100 %	OK	72 - 131

RPD DATA — *8010 RPD= 8.3 %* — *8020 RPD= 1.1 %*

8010 COMPOUNDS	SPIKE	SPIKE DUP	RPD	STATUS	LIMITS
1,1-Dichloroethene	21.23	18.49	14 %	OK	< 14
Trichloroethene	22.81	22.06	3 %	OK	< 14
Chlorobenzene	19.96	21.58	8 %	OK	< 13
8020 COMPOUNDS					
Benzene	22.96	22.77	1 %	OK	< 11
Toluene	23.43	23.17	1 %	OK	< 13
Chlorobenzene	23.61	23.91	1 %	OK	< 13

LABORATORY CONTROL SAMPLE SUMMARY SHEET FOR EPA 8010/8020

Operator:	CW	Spike file:	051E/F003
Analysis date:	2/20/92	Instrument :	GC05 (QUANT COLUMN)
Sample type:	WATER	Sequence Name	FEB20

LCS SPIKE DATA (spiked at 20 ppb)

8010 COMPOUNDS	READING	RECOVERY	STATUS	LIMITS
1,1-Dichloroethene	21.64	108 %	OK	60 - 133
Trichloroethene	24.29	121 %	OK	88 - 125
Chlorobenzene	21.57	108 %	OK	90 - 127
SURROGATES				
~~Bromobenzene~~ Bromofluorobenzene	91.02	91 %	~~NOT~~ OK	98 - 115

8020 COMPOUNDS	READING	RECOVERY	STATUS	LIMITS
Benzene	23.67	118 %	OK	62 - 120
Toluene	24.02	120 %	OK	61 - 121
Chlorobenzene	20.62	103 %	OK	84 - 115
SURROGATES				
Bromobenzene	100.57	101 %	OK	91 - 107

need to set new control limits due to change of surrogate.

LABORATORY CONTROL SAMPLE SUMMARY SHEET FOR EPA 8010/8020

Operator:	CW	Spike file:	051E/F004
Analysis date:	2/20/92	Instrument :	GC05 (QUANT COLUMN)
Sample type:	SOIL	Sequence Name	FEB20

LCS SPIKE DATA (spiked at 20 ppb)

8010 COMPOUNDS	READING	RECOVERY	STATUS	LIMITS
1,1-Dichloroethene	21.78	109 %	OK	28 - 167
Trichloroethene	23.57	118 %	OK	35 - 146
Chlorobenzene	21.77	109 %	OK	38 - 150
SURROGATES				
Bromofluorobenzene	89.28	89 %	~~NOT~~ OK	98 - 115

8020 COMPOUNDS	READING	RECOVERY	STATUS	LIMITS
Benzene	23.31	117 %	OK	39 - 150
Toluene	23.25	116 %	OK	46 - 148
Chlorobenzene	23.20	116 %	OK	55 - 135
SURROGATES				
Bromobenzene	97.30	97 %	OK	91 - 107

Changed surrogate for 8010. Need to set new control limits.

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 106569-1
CLIENT: ENVIRONMENTAL SCIENCE & ENGINEERING
PROJECT ID: 6-92-5314
LOCATION: ALCO PARK-OAKLAND, CA
SAMPLE ID: WOP-GW-8.5'

DATE RECEIVED: 02/14/92
DATE EXTRACTED: 02/18/92
DATE ANALYZED: 02/25/92
DATE REPORTED: 02/26/92

EPA 8270: Base/Neutral and Acid Extractables in Water
Extraction Method: EPA 3520 Continuous Liquid/Liquid

ACID COMPOUNDS	RESULT ug/L	REPORTING LIMIT ug/L
Phenol	102	5.0
2-Chlorophenol	ND	5.0
Benzyl Alcohol	ND	5.0
2-Methylphenol	90	5.0
4-Methylphenol	120	5.0
2-Nitrophenol	ND	25
2,4-Dimethylphenol	ND	5.0
Benzoic Acid	ND	25
2,4-Dichlorophenol	ND	5.0
4-Chloro-3-methylphenol	ND	5.0
2,4,6-Trichlorophenol	ND	5.0
2,4,5-Trichlorophenol	ND	25
2,4-Dinitrophenol	ND	25
4-Nitrophenol	ND	25
4,6-Dinitro-2-methylphenol	ND	25
Pentachlorophenol	ND	25
BASE/NEUTRAL COMPOUNDS		
N-Nitrosodimethylamine	ND	5.0
Aniline	ND	5.0
Bis(2-chloroethyl)ether	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Bis(2-chloroisopropyl)ether	ND	5.0
N-Nitroso-di-n-propylamine	ND	5.0
Hexachloroethane	ND	5.0
Nitrobenzene	ND	5.0
Isophorone	ND	5.0
Bis(2-chloroethoxy)methane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Naphthalene	30	5.0
4-Chloroaniline	ND	5.0
Hexachlorobutadiene	ND	5.0
2-Methylnaphthalene	ND	5.0
Hexachlorocyclopentadiene	ND	5.0
2-Chloronaphthalene	ND	5.0
2-Nitroaniline	ND	25

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 106569-1
SAMPLE ID: WOP-GW-8.5'

EPA 8270

BASE/NEUTRAL COMPOUNDS	RESULT ug/L	REPORTING LIMIT ug/L
Dimethylphthalate	ND	5.0
Acenaphthylene	ND	5.0
2,6-Dinitrotoluene	ND	5.0
3-Nitroaniline	ND	25
Acenaphthene	ND	5.0
Dibenzofuran	ND	5.0
2,4-Dinitrotoluene	ND	5.0
Diethylphthalate	ND	5.0
4-Chlorophenyl-phenylether	ND	5.0
Fluorene	ND	5.0
4-Nitroaniline	ND	25
N-Nitrosodiphenylamine	ND	5.0
Azobenzene	ND	5.0
4-Bromophenyl-phenylether	ND	5.0
Hexachlorobenzene	ND	5.0
Phenanthrene	ND	5.0
Anthracene	ND	5.0
Di-n-butylphthalate	ND	5.0
Fluoranthene	ND	5.0
Benzidine	ND	5.0
Pyrene	ND	5.0
Butylbenzylphthalate	ND	5.0
3,3'-Dichlorobenzidine	ND	25
Benzo(a)anthracene	ND	5.0
Chrysene	ND	5.0
Bis(2-ethylhexyl)phthalate	ND	5.0
Di-n-octylphthalate	ND	5.0
Benzo(b)fluoranthene	ND	5.0
Benzo(k)fluoranthene	ND	5.0
Benzo(a)pyrene	ND	5.0
Indeno(1,2,3-cd)pyrene	ND	5.0
Dibenzo(a,h)anthracene	ND	5.0
Benzo(g,h,i)perylene	ND	5.0

ND = Not detected at or above reporting limit.

QA/QC SUMMARY: % SURROGATE RECOVERIES

2-Fluorophenol	100	Nitrobenzene-d5	103
Phenol-d6	107	2-Fluorobiphenyl	62
2,4,6-Tribromophenol	84	Terphenyl-d14	80

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 106569-2
CLIENT: ENVIRONMENTAL SCIENCE & ENGINEERING
PROJECT ID: 6-92-5314
LOCATION: ALCO PARK-OAKLAND, CA
SAMPLE ID: WOTP-DL-8'

DATE RECEIVED: 02/14/92
DATE EXTRACTED: 02/18/92
DATE ANALYZED: 02/23/92
DATE REPORTED: 02/26/92

EPA 8270: Base/Neutral and Acid Extractables in Soils & Wastes
Extraction Method: EPA 3550 Sonication

ACID COMPOUNDS	RESULT ug/kg	REPORTING LIMIT ug/kg
Phenol	ND	330
2-Chlorophenol	ND	330
Benzyl Alcohol	ND	330
2-Methylphenol	ND	330
4-Methylphenol	ND	330
2-Nitrophenol	ND	1650
2,4-Dimethylphenol	ND	330
Benzoic Acid	ND	1650
2,4-Dichlorophenol	ND	1650
4-Chloro-3-methylphenol	ND	330
2,4,6-Trichlorophenol	ND	330
2,4,5-Trichlorophenol	ND	1650
2,4-Dinitrophenol	ND	1650
4-Nitrophenol	ND	1650
4,6-Dinitro-2-methylphenol	ND	1650
Pentachlorophenol	ND	1650
BASE/NEUTRAL COMPOUNDS		
N-Nitrosodimethylamine	ND	330
Aniline	ND	330
Bis(2-chloroethyl)ether	ND	330
1,3-Dichlorobenzene	ND	330
1,4-Dichlorobenzene	ND	330
1,2-Dichlorobenzene	ND	330
Bis(2-chloroisopropyl)ether	ND	330
N-Nitroso-di-n-propylamine	ND	330
Hexachloroethane	ND	330
Nitrobenzene	ND	330
Isophorone	ND	330
Bis(2-chloroethoxy)methane	ND	330
1,2,4-Trichlorobenzene	ND	330
Naphthalene	ND	330
4-Chloroaniline	ND	330
Hexachlorobutadiene	ND	330
2-Methylnaphthalene	ND	330
Hexachlorocyclopentadiene	ND	330
2-Chloronaphthalene	ND	330
2-Nitroaniline	ND	1650

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 106569-2
SAMPLE ID: WOTP-DL-8'

EPA 8270

BASE/NEUTRAL COMPOUNDS	RESULT ug/kg	REPORTING LIMIT ug/kg
Dimethylphthalate	ND	330
Acenaphthylene	ND	330
2,6-Dinitrotoluene	ND	330
3-Nitroaniline	ND	1650
Acenaphthene	ND	330
Dibenzofuran	ND	330
2,4-Dinitrotoluene	ND	330
Diethylphthalate	ND	330
4-Chlorophenyl-phenylether	ND	330
Fluorene	ND	330
4-Nitroaniline	ND	1650
N-Nitrosodiphenylamine	ND	330
Azobenzene	ND	330
4-Bromophenyl-phenylether	ND	330
Hexachlorobenzene	ND	330
Phenanthrene	ND	330
Anthracene	ND	330
Di-n-butylphthalate	ND	330
Fluoranthene	ND	330
Benzidine	ND	330
Pyrene	ND	330
Butylbenzylphthalate	ND	330
3,3'-Dichlorobenzidine	ND	1650
Benzo(a)anthracene	ND	330
Chrysene	ND	330
Bis(2-ethylhexyl)phthalate	ND	330
Di-n-octylphthalate	ND	330
Benzo(b)fluoranthene	ND	330
Benzo(k)fluoranthene	ND	330
Benzo(a)pyrene	ND	330
Indeno(1,2,3-cd)pyrene	ND	330
Dibenzo(a,h)anthracene	ND	330
Benzo(g,h,i)perylene	ND	330

ND = Not detected at or above reporting limit.

QA/QC SUMMARY: % SURROGATE RECOVERIES

2-Fluorophenol	107	Nitrobenzene-d5	85
Phenol-d6	100	2-Fluorobiphenyl	96
2,4,6-Tribromophenol	97	Terphenyl-d14	85

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 106569-3
CLIENT: ENVIRONMENTAL SCIENCE & ENGINEERING
PROJECT ID: 6-92-5314
LOCATION: ALCO PARK-OAKLAND, CA
SAMPLE ID: WOTP-FE-8'

DATE RECEIVED: 02/14/92
DATE EXTRACTED: 02/18/92
DATE ANALYZED: 02/23/92
DATE REPORTED: 02/26/92

EPA 8270: Base/Neutral and Acid Extractables in Soils & Wastes
Extraction Method: EPA 3550 Sonication

ACID COMPOUNDS	RESULT ug/kg	REPORTING LIMIT ug/kg
Phenol	ND	330
2-Chlorophenol	ND	330
Benzyl Alcohol	ND	330
2-Methylphenol	ND	330
4-Methylphenol	ND	330
2-Nitrophenol	ND	1650
2,4-Dimethylphenol	ND	330
Benzoic Acid	ND	1650
2,4-Dichlorophenol	ND	1650
4-Chloro-3-methylphenol	ND	330
2,4,6-Trichlorophenol	ND	330
2,4,5-Trichlorophenol	ND	1650
2,4-Dinitrophenol	ND	1650
4-Nitrophenol	ND	1650
4,6-Dinitro-2-methylphenol	ND	1650
Pentachlorophenol	ND	1650
BASE/NEUTRAL COMPOUNDS		
N-Nitrosodimethylamine	ND	330
Aniline	ND	330
Bis(2-chloroethyl)ether	ND	330
1,3-Dichlorobenzene	ND	330
1,4-Dichlorobenzene	ND	330
1,2-Dichlorobenzene	ND	330
Bis(2-chloroisopropyl)ether	ND	330
N-Nitroso-di-n-propylamine	ND	330
Hexachloroethane	ND	330
Nitrobenzene	ND	330
Isophorone	ND	330
Bis(2-chloroethoxy)methane	ND	330
1,2,4-Trichlorobenzene	ND	330
Naphthalene	ND	330
4-Chloroaniline	ND	330
Hexachlorobutadiene	ND	330
2-Methylnaphthalene	ND	330
Hexachlorocyclopentadiene	ND	330
2-Chloronaphthalene	ND	330
2-Nitroaniline	ND	1650

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 106569-3
SAMPLE ID: WOTP-FE-8'

EPA 8270

BASE/NEUTRAL COMPOUNDS	RESULT ug/kg	REPORTING LIMIT ug/kg
Dimethylphthalate	ND	330
Acenaphthylene	ND	330
2,6-Dinitrotoluene	ND	330
3-Nitroaniline	ND	1650
Acenaphthene	ND	330
Dibenzofuran	ND	330
2,4-Dinitrotoluene	ND	330
Diethylphthalate	ND	330
4-Chlorophenyl-phenylether	ND	330
Fluorene	ND	330
4-Nitroaniline	ND	1650
N-Nitrosodiphenylamine	ND	330
Azobenzene	ND	330
4-Bromophenyl-phenylether	ND	330
Hexachlorobenzene	ND	330
Phenanthrene	ND	330
Anthracene	ND	330
Di-n-butylphthalate	ND	330
Fluoranthene	ND	330
Benzidine	ND	330
Pyrene	ND	330
Butylbenzylphthalate	ND	330
3,3'-Dichlorobenzidine	ND	1650
Benzo(a)anthracene	ND	330
Chrysene	ND	330
Bis(2-ethylhexyl)phthalate	ND	330
Di-n-octylphthalate	ND	330
Benzo(b)fluoranthene	ND	330
Benzo(k)fluoranthene	ND	330
Benzo(a)pyrene	ND	330
Indeno(1,2,3-cd)pyrene	ND	330
Dibenzo(a,h)anthracene	ND	330
Benzo(g,h,i)perylene	ND	330

ND = Not detected at or above reporting limit.

QA/QC SUMMARY: % SURROGATE RECOVERIES

2-Fluorophenol	103	Nitrobenzene-d5	89
Phenol-d6	94	2-Fluorobiphenyl	91
2,4,6-Tribromophenol	96	Terphenyl-d14	84

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 106569-7
CLIENT: ENVIRONMENTAL SCIENCE & ENGINEERING
PROJECT ID: 6-92-5314
LOCATION: ALCO PARK-OAKLAND, CA
SAMPLE ID: COMP WOL-1,2,3

DATE RECEIVED: 02/14/92
DATE EXTRACTED: 02/18/92
DATE ANALYZED: 02/25/92
DATE REPORTED: 02/26/92

EPA 8270: Base/Neutral and Acid Extractables in Soils & Wastes
Extraction Method: EPA 3550 Sonication

ACID COMPOUNDS	RESULT ug/kg	REPORTING LIMIT ug/kg
Phenol	ND	330
2-Chlorophenol	ND	330
Benzyl Alcohol	ND	330
2-Methylphenol	ND	330
4-Methylphenol	ND	330
2-Nitrophenol	ND	1650
2,4-Dimethylphenol	ND	330
Benzoic Acid	ND	1650
2,4-Dichlorophenol	ND	1650
4-Chloro-3-methylphenol	ND	330
2,4,6-Trichlorophenol	ND	330
2,4,5-Trichlorophenol	ND	1650
2,4-Dinitrophenol	ND	1650
4-Nitrophenol	ND	1650
4,6-Dinitro-2-methylphenol	ND	1650
Pentachlorophenol	ND	1650
BASE/NEUTRAL COMPOUNDS		
N-Nitrosodimethylamine	ND	330
Aniline	ND	330
Bis(2-chloroethyl)ether	ND	330
1,3-Dichlorobenzene	ND	330
1,4-Dichlorobenzene	ND	330
1,2-Dichlorobenzene	ND	330
Bis(2-chloroisopropyl)ether	ND	330
N-Nitroso-di-n-propylamine	ND	330
Hexachloroethane	ND	330
Nitrobenzene	ND	330
Isophorone	ND	330
Bis(2-chloroethoxy)methane	ND	330
1,2,4-Trichlorobenzene	ND	330
Naphthalene	ND	330
4-Chloroaniline	ND	330
Hexachlorobutadiene	ND	330
2-Methylnaphthalene	ND	330
Hexachlorocyclopentadiene	ND	330
2-Chloronaphthalene	ND	330
2-Nitroaniline	ND	1650

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 106569-7
SAMPLE ID: COMP WOL-1,2,3

EPA 8270

BASE/NEUTRAL COMPOUNDS	RESULT ug/kg	REPORTING LIMIT ug/kg
Dimethylphthalate	ND	330
Acenaphthylene	ND	330
2,6-Dinitrotoluene	ND	330
3-Nitroaniline	ND	1650
Acenaphthene	ND	330
Dibenzofuran	ND	330
2,4-Dinitrotoluene	ND	330
Diethylphthalate	ND	330
4-Chlorophenyl-phenylether	ND	330
Fluorene	ND	330
4-Nitroaniline	ND	1650
N-Nitrosodiphenylamine	ND	330
Azobenzene	ND	330
4-Bromophenyl-phenylether	ND	330
Hexachlorobenzene	ND	330
Phenanthrene	740	330
Anthracene	ND	330
Di-n-butylphthalate	ND	330
Fluoranthene	440	330
Benzidine	ND	330
Pyrene	380	330
Butylbenzylphthalate	ND	330
3,3'-Dichlorobenzidine	ND	1650
Benzo(a)anthracene	ND	330
Chrysene	ND	330
Bis(2-ethylhexyl)phthalate	ND	330
Di-n-octylphthalate	ND	330
Benzo(b)fluoranthene	ND	330
Benzo(k)fluoranthene	ND	330
Benzo(a)pyrene	ND	330
Indeno(1,2,3-cd)pyrene	ND	330
Dibenzo(a,h)anthracene	ND	330
Benzo(g,h,i)perylene	ND	330

ND = Not detected at or above reporting limit.

QA/QC SUMMARY: % SURROGATE RECOVERIES

2-Fluorophenol	83	Nitrobenzene-d5	94
Phenol-d6	90	2-Fluorobiphenyl	90
2,4,6-Tribromophenol	46	Terphenyl-d14	79

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 106569-1
CLIENT: ENVIRONMENTAL SCIENCE & ENGINEERING
PROJECT ID: 6-92-5314
LOCATION: ALCO PARK- OAKLAND, CA
SAMPLE ID: WOP-GW-8.5'

DATE RECEIVED: 02/14/92
DATE ANALYZED: 02/19-20/92
DATE REPORTED: 02/21/92

METAL	RESULT ug/L	REPORTING LIMIT ug/L	METHOD
Cadmium	ND	5.0	EPA 6010
Chromium (total)	ND	10.0	EPA 6010
Lead	5.7	3.0	EPA 7421
Nickel	70	32.0	EPA 6010
Zinc	270	20.0	EPA 6010

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

	RPD,%	RECOVERY,%
Cadmium	13	109
Chromium (total)	2	104
Lead	6	101
Nickel	5	103
Zinc	1	99

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 106569-2
CLIENT: ENVIRONMENTAL SCIENCE & ENGINEERING
PROJECT ID: 6-92-5314
LOCATION: ALCO PARK- OAKLAND, CA
SAMPLE ID: WOTP-DL-8'

DATE RECEIVED: 02/14/92
DATE ANALYZED: 02/18-19/92
DATE REPORTED: 02/21/92

METAL	RESULT mg/Kg	REPORTING LIMIT mg/Kg	METHOD
Cadmium	0.28	0.25	EPA 6010
Chromium (total)	39.7	0.50	EPA 6010
Lead	ND	3.0	EPA 7420
Nickel	30.9	1.6	EPA 6010
Zinc	18.2	1.0	EPA 6010

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

	RPD,%	RECOVERY,%
Cadmium	4	102
Chromium (total)	<1	93
Lead	<1	102
Nickel	5	90
Zinc	3	91

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 106569-3
CLIENT: ENVIRONMENTAL SCIENCE & ENGINEERING
PROJECT ID: 6-92-5314
LOCATION: ALCO PARK- OAKLAND, CA
SAMPLE ID: WOTP-FE-8'

DATE RECEIVED: 02/14/92
DATE ANALYZED: 02/18-19/92
DATE REPORTED: 02/21/92

METAL	RESULT mg/Kg	REPORTING LIMIT mg/Kg	METHOD
Cadmium	ND	0.25	EPA 6010
Chromium (total)	43.6	0.50	EPA 6010
Lead	ND	3.0	EPA 7420
Nickel	35.1	1.6	EPA 6010
Zinc	20.4	1.0	EPA 6010

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

	RPD,%	RECOVERY,%
Cadmium	4	102
Chromium (total)	<1	93
Lead	<1	102
Nickel	5	90
Zinc	3	91

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 106569-7
CLIENT: ENVIRONMENTAL SCIENCE & ENGINEERING
PROJECT ID: 6-92-5314
LOCATION: ALCO PARK- OAKLAND, CA
SAMPLE ID: COMP WOL-1,2,3

DATE RECEIVED: 02/14/92
DATE ANALYZED: 02/18-19/92
DATE REPORTED: 02/21/92

METAL	RESULT mg/Kg	REPORTING LIMIT mg/Kg	METHOD
Cadmium	ND	0.25	EPA 6010
Chromium (total)	41.2	0.50	EPA 6010
Lead	ND	3.0	EPA 7420
Nickel	30.8	1.6	EPA 6010
Zinc	25.5	1.0	EPA 6010

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

	RPD,%	RECOVERY,%
Cadmium	4	102
Chromium (total)	<1	93
Lead	<1	102
Nickel	5	90
Zinc	3	91

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 106569
CLIENT: ENVIRONMENTAL SCIENCE & ENGINEERING
PROJECT ID: 6-92-5314
LOCATION: ALCO PARK- OAKLAND

DATE RECEIVED: 02/14/92
DATE EXTRACTED: 02/19/92
DATE ANALYZED: 02/20/92
DATE REPORTED: 02/24/92

Extractable Petroleum Hydrocarbons in Soils & Wastes
California DOHS Method
LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
106569-2	WOTP-DL-8'	ND	ND	1.0
106569-3	WOTP-FE-8'	ND	ND	1.0
106569-7	COMP WOL-1,2,3	**	140	1.0

ND = Not Detected at or above reporting limit.

*Reporting limit applies to all analytes.
**Kerosene Range not reported.

QA/QC SUMMARY: LABORATORY CONTROL SAMPLE

RECOVERY, %	82

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 106569
CLIENT: ENVIRONMENTAL SCIENCE & ENGINEERING
PROJECT ID: 6-92-5314
LOCATION: ALCO PARK- OAKLAND

DATE RECEIVED: 02/14/92
DATE EXTRACTED: 02/18/92
DATE ANALYZED: 02/21/92
DATE REPORTED: 02/24/92

Extractable Petroleum Hydrocarbons in Aqueous Solutions
California DOHS Method
LUFT Manual October 1989

LAB ID	CLIENT ID	KEROSENE RANGE (ug/L)	DIESEL RANGE (ug/L)	REPORTING LIMIT* (ug/L)
106569-1	WOP-GW-8.5'	19,000	**	500

ND = Not detected at or above reporting limit.

*Reporting limit applies to all analytes.
**Diesel Range not reported.

QA/QC SUMMARY

RPD, %	13
RECOVERY, %	78

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 106569 DATE RECEIVED: 02/14/92
CLIENT: ENVIRONMENTAL SCIENCE & ENGINEERING DATE ANALYZED: 02/18/92
PROJECT ID: 6-92-5314 DATE REPORTED: 02/21/92
LOCATION: ALCO PARK- OAKLAND, CA

Total Volatile Hydrocarbons with BTXE in Soils & Wastes
TVH by California DOHS Method/LUFT Manual October 1989
BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
106569-2	WOTP-DL-8'	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	6.8
106569-3	WOTP-FE-8'	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
106569-7	COMP WOL-1,2,3	1.8	ND(5.0)	11	ND(5.0)	21

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %	3
RECOVERY, %	102

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 106569 DATE RECEIVED: 02/14/92
CLIENT: ENVIRONMENTAL SCIENCE & ENGINEERING DATE ANALYZED: 02/21/92
PROJECT ID: 6-92-5314 DATE REPORTED: 02/21/92
LOCATION: ALCO PARK- OAKLAND, CA

Total Volatile Hydrocarbons with BTXE in Aqueous Solutions
TVH by California DOHS Method/LUFT Manual October 1989
BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (ug/L)	BENZENE (ug/L)	TOLUENE (ug/L)	ETHYL BENZENE (ug/L)	TOTAL XYLENES (ug/L)
106569-1	WOP-GW-8.5'	2,800	52	200	40	310

QA/QC SUMMARY

RPD, %	9
RECOVERY, %	93

106564

CHAIN OF COUNTDY RECORD

DATE 2-13-92 PAGE 1 OF ~~1~~ 2 (PA)

PROJECT NAME ALCOPARK

ADDRESS OAKLAND, CA

PROJECT NO. ~~0-90-5042~~ PL → 6925314

SAMPLED BY Mike Edmonson

LAB NAME Curtis & Tompkins

Environmental Science & Engineering, Inc.
A CILCORP Company
4090 Nelson Avenue
Suite J
Concord, CA 94520
(415) 685-4053
Fax (415) 685-5323

SAMPLE #	DATE	TIME	LOCATION	TPH-G w/BTEX (5030)(8015)	TPH-D - (3550)(8015)	Oil+Grease 5520(D+F)	8270 (Semi Vol H.C.)	(6010) Cd, Cr, Pb, Zn, Ni	8010 (Cl - HC's)					MATRIX	NUMBER OF CONTAINERS	REMARKS (CONTAINER, SIZE, ETC.)
WOP-GW-8.5	2-13-92	16:30	WASTE OIL PIT	X	X	X	X	X	X					Aq.	9	4 liters, 2 VOA(HCL), 2 VOA, 1 Pint (HNO3)
WOP DL-8'	2-13-92	16:55	WASTE OIL PIT	X	X	X	X	X	X					SOIL	1	1 Brass Ring
WOTP-FE-8'	2-13-92	17:00	WASTE OIL PIT	X	X	X	X	X	X					SOIL	1	1 Brass Ring
WOL-1-4'	2-13-92	11:15	Pipeline	X	X	X	X	X	X					SOIL	1	1 Brass Ring } Composite
WOL-2-4'	2-13-92	11:30	Pipeline	↓	↓	↓	↓	↓	↓					SOIL	1	1 Brass Ring } Composite
WOL-3-4'	2-13-92	12:40	Pipeline	↓	↓	↓	↓	↓	↓					SOIL	1	1 Brass Ring } Composite

2nd Sample ID is "WOTP-DL-8'"

RELIN[QUISHED BY]	[RECEI]VED BY: (signature)	date	time
1. [signature]	[signature] (ESE)	2/14/92	0900
2. [signature]	[signature] Massie	2/14/92	
3.			
4.			
5.			

TOTAL NUMBER OF CONTAINERS: 14

REPORT RESULTS TO: Patrick Galvin

SPECIAL SHIPMENT REQUIREMENTS: Keep Chilled

SAMPLE RECEIPT

CHAIN OF CUSTODY SEALS	
REC'D GOOD CONDTN/COLD	
CONFORMS TO RECORD	

INSTR[UCTIONS] (handling, analyses, storage, etc.):
Composite 3 samples, WOL-1-4', WOL-2-4', WOL-3-4' and analyze as one sample. Note Revised Project Number, Store all samples 90 days. / Client forgot to send 1 Pint (HNO3) w/ rest of samples on 2/14/ C+T Rcp/U sample 2/18. JH 2/18