

FAX

PORT OF OAKLAND
 ENVIRONMENTAL
 DEPARTMENT
 530 WATER STREET,
 5TH FLOOR
 OAKLAND, CA 94607
 FAX (510) 465-3755
 PHONE (510) 272-1174

FACSIMILE TRANSMITTAL

TO: Jennifer Ekerle

ATTENTION Alameda County Health Care,

FROM MICHAEL JAMES

DATE & TIME 10/25/93 10:30 AM

FAX NUMBER (510) 465-3755

NO. OF PAGES: 26

Jennifer,

Sorry I thought that I had sent these to you. Any-way this is a copy of/ or Fax of the Shippers Imperial Stockpile Soil Sample Analysis results.

Please look for my letter in the mail concerning SP-J-9 & SP-J-6 for 3-4, & 5-5.

I will be in the office most of the week. Next week I will be gone for out for a little over a month.

Thanks



PORT OF OAKLAND



URIBE & ASSOCIATES
2530 LAKESHORE AVENUE
SUITE TWO HUNDRED
OAKLAND, CALIFORNIA 94610
510-832-2237
FAX 510-832-2237

ENVIRONMENTAL CONSULTING SERVICES

October 15, 1993

RECEIVED
OCT 17 1993

Michael James
Port of Oakland
530 Water Street
Oakland, California 94607

SUBJECT: Shippers Imperial Stockpiled Soil Sample Analysis Results

Dear Mr. James:

This letter transmits the soil sample analysis results for the stockpiled soils at the Shippers Imperial tank removal site. The samples were collected on the day of the tank removal. I have already faxed a copy of these results to PTS Environmental (the contractor) to determine disposal options. If you have any questions, please give me a call.

Sincerely,

Tom Barnes
URIBE & ASSOCIATES



Printed on Recycled Paper



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710. Phone (510) 486-0900

ANALYTICAL REPORT

Prepared for:

Uribe & Associates
2930 Lakeshore Avenue
Suite Two Hundred
Oakland, CA 94610

Date: 05-OCT-93
Lab Job Number: 112460
Project ID: 96-209
Location: Shipper Imperial

Reviewed by:

Reviewed by:

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Berkeley

Los Angeles



Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 112460
 CLIENT: URIBE & ASSOCIATES
 PROJECT ID: 96-209
 LOCATION: PORT OF OAKLAND, SHIPPERS IMPERIAL

DATE SAMPLED: 09/23/93
 DATE RECEIVED: 09/27/93
 DATE ANALYZED: 10/03,04/93
 DATE REPORTED: 10/05/93

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)
112460-11	SPT-1,2			11	41	3,300
112460-12	SPT-3,4		ND(300)	ND(300)	ND(300)	2,900
112460-13	SPT-7,8		ND(300)	400	1,000	11,000
112460-14	SPT-6,9			6	ND(5)	220
112460-15	SPT-5,10		ND(300)	ND(300)	ND(300)	6,000

NOTE: Benzene, Toluene, Ethyl Benzene and Xylenes have not been confirmed with second column.

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

QA/QC SUMMARY

LCS RECOVERY, %

100



Curtis & Tompkins, Ltd

LABORATORY NUMBER: 112460
 CLIENT: URIBE & ASSOCIATES
 PROJECT ID: 96-209
 LOCATION: PORT OF OAKLAND, SHIPPERS IMPERIAL

DATE SAMPLED: 09/23/93
 DATE RECEIVED: 09/27/93
 DATE EXTRACTED: 09/30/93
 DATE ANALYZED: 10/02/93
 DATE REPORTED: 10/04/93

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)
112460-11	SPT-1,2	320	***	10
112460-12	SPT-3,4	**	***	10
112460-13	SPT-7,8	**	***	10
112460-14	SPT-6,9	**	***	10
112460-15	SPT-5,10	**	***	10

* Reporting limit applies to all analytes.

** Kerosene range not reported due to overlap of hydrocarbon ranges.

*** Diesel range not reported due to overlap of hydrocarbon ranges.

QA/QC SUMMARY

RPD, %	8
RECOVERY, %	92



Curtis & Tompkins, Ltd.

CLIENT: Uribe & Associates
JOB NUMBER: 112460

DATE REPORTED: 10/04/93

BATCH QC REPORT
PREP BLANK

Compound	Result	Reporting Limit	Units	QC Batch	Method	Analysis Date
Cadmium	ND	0.25	mg/Kg	10727	EPA 6010	09/29/93
Chromium (total)	ND	0.5	mg/Kg	10727	EPA 6010	09/29/93
Lead	ND	5	mg/Kg	10727	EPA 7420	09/29/93
Nickel	ND	1.6	mg/Kg	10727	EPA 6010	09/29/93
Zinc	ND	1	mg/Kg	10727	EPA 6010	09/29/93

ND = Not detected at or above reporting limit



CLIENT: Uribe & Associates
JOB NUMBER: 112460

DATE REPORTED: 10/04/93

**BATCH QC REPORT
BLANK SPIKE/BLANK SPIKE DUPLICATE**

Compound	Spike Amount	BS Result	BSD Result	Units	BS % Recovery	BSD % Recovery	Average Recovery	RPD	QC Batch	Method	Analysis Date
Cadmium	50	48.2	50.1	ug/L	96	100	98	4	10727	EPA 6010	09/29/93
Chromium (total)	200	193.7	198.6	ug/L	97	99	98	3	10727	EPA 6010	09/29/93
Lead	500	410	400	ug/L	82	80	81	2	10727	EPA 7420	09/29/93
Nickel	500	470.2	485.1	ug/L	94	97	96	3	10727	EPA 6010	09/29/93
Zinc	500	457.6	470.2	ug/L	92	94	93	3	10727	EPA 6010	09/29/93

ND = Not detected at or above reporting limit



Curtis & Tompkins, Ltd.

SAMPLE ID: SPT-6,9
 LAB ID: 112460-014
 CLIENT: Uribe & Associates
 PROJECT ID: 96-209
 LOCATION: Shipper Imperial
 MATRIX: Soil

DATE SAMPLED: 09/23/93
 DATE RECEIVED: 09/27/93
 DATE REPORTED: 10/04/93

sample ?

METALS ANALYTICAL REPORT

Compound	Result (mg/Kg)	Reporting Limit (mg/Kg)	QC Batch	Method	Analysis Date
Cadmium	0.94 <i>ok</i>	0.25	10727	EPA 6010	09/29/93
Chromium (total)	32 <i>ok</i>	0.50	10727	EPA 6010	09/29/93
Lead	48 <i>ok</i>	5.0	10727	EPA 7420	09/29/93
Nickel	34 <i>ok</i>	1.6	10727	EPA 6010	09/29/93
Zinc	75 <i>ok</i>	0.99	10727	EPA 6010	09/29/93

ND = Not detected at or above reporting limit



Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 112460-METHOD BLANK
 CLIENT: URIBE & ASSOCIATES
 PROJECT ID: 96-209
 LOCATION: PORT OF OAKLAND, SHIPPERS IMPERIAL

DATE ANALYZED: 09/29/93
 DATE REPORTED: 10/04/93

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
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
cis-1,2-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethene	ND	5
1,1,2-Trichloroethane	ND	5
trans-1,3-Dichloropropene	ND	5
Dibromochloromethane	ND	5
Bromoform	ND	10
Tetrachloroethene	ND	5
1,1,2,2-Tetrachloroethane	ND	5
Chlorobenzene	ND	5
1,3-Dichlorobenzene	ND	5
1,4-Dichlorobenzene	ND	5
1,2-Dichlorobenzene	ND	5

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

Surrogate Recovery, %

95



Curtis & Tompkins Ltd

LABORATORY NUMBER: 112460-14
 CLIENT: URIBE & ASSOCIATES
 PROJECT ID: 96-209
 LOCATION: PORT OF OAKLAND, SHIPPERS IMPERIAL
 SAMPLE ID: COMP SPT-6,9

DATE SAMPLED: 09/23/93
 DATE RECEIVED: 09/27/93
 DATE ANALYZED: 09/29/93
 DATE REPORTED: 10/04/93

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	60	20
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
cis-1,2-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethene	ND	5
1,1,2-Trichloroethane	ND	5
trans-1,3-Dichloropropene	ND	5
Dibromochloromethane	ND	5
Bromoform	ND	10
Tetrachloroethene	ND	5
1,1,2,2-Tetrachloroethane	ND	5
Chlorobenzene	ND	5
1,3-Dichlorobenzene	ND	5
1,4-Dichlorobenzene	ND	5
1,2-Dichlorobenzene	ND	5

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

Surrogate Recovery, %

67



Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 112460-14

DATE SAMPLED: 09/23/93

CLIENT: URIBE & ASSOCIATES

DATE RECEIVED: 09/27/93

PROJECT ID: 96-209

DATE EXTRACTED: 09/27/93

LOCATION: PORT OF OAKLAND, SHIPPERS IMPERIAL

DATE ANALYZED: 09/28/93

SAMPLE ID: COMP SPT-6,9

DATE REPORTED: 10/04/93

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	3,000
2-Chlorophenol	ND	3,000
Benzyl Alcohol	ND	3,000
2-Methylphenol	ND	3,000
4-Methylphenol	ND	3,000
2-Nitrophenol	ND	20,000
2,4-Dimethylphenol	ND	3,000
Benzoic Acid	ND	20,000
2,4-Dichlorophenol	ND	20,000
4-Chloro-3-methylphenol	ND	3,000
2,4,6-Trichlorophenol	ND	3,000
2,4,5-Trichlorophenol	ND	20,000
2,4-Dinitrophenol	ND	20,000
4-Nitrophenol	ND	20,000
4,6-Dinitro-2-methylphenol	ND	20,000
Pentachlorophenol	ND	20,000
BASE/NEUTRAL COMPOUNDS		
N-Nitrosodimethylamine	ND	3,000
Aniline	ND	3,000
Bis(2-chloroethyl)ether	ND	3,000
1,3-Dichlorobenzene	ND	3,000
1,4-Dichlorobenzene	ND	3,000
1,2-Dichlorobenzene	ND	3,000
Bis(2-chloroisopropyl)ether	ND	3,000
N-Nitroso-di-n-propylamine	ND	3,000
Hexachloroethane	ND	3,000
Nitrobenzene	ND	3,000
Isophorone	ND	3,000
Bis(2-chloroethoxy)methane	ND	3,000
1,2,4-Trichlorobenzene	ND	3,000
Naphthalene	ND	3,000
4-Chloroaniline	ND	3,000
Hexachlorobutadiene	ND	3,000
2-Methylnaphthalene	ND	3,000
Hexachlorocyclopentadiene	ND	3,000
2-Chloronaphthalene	ND	3,000
2-Nitroaniline	ND	20,000



Curtis & Tompkins, Ltd

LABORATORY NUMBER: 112460-14
 SAMPLE ID: COMP SPT-6,9

EPA 8270

BASE/NEUTRAL COMPOUNDS

	RESULT ug/Kg	REPORTING LIMIT ug/Kg
Dimethylphthalate	ND	3,000
Acenaphthylene	ND	3,000
2,6-Dinitrotoluene	ND	3,000
3-Nitroaniline	ND	20,000
Acenaphthene	ND	3,000
Dibenzofuran	ND	3,000
2,4-Dinitrotoluene	ND	3,000
Diethylphthalate	ND	3,000
4-Chlorophenyl-phenylether	ND	3,000
Fluorene	ND	3,000
4-Nitroaniline	ND	20,000
N-Nitrosodiphenylamine	ND	3,000
Azobenzene	ND	3,000
4-Bromophenyl-phenylether	ND	3,000
Hexachlorobenzene	ND	3,000
Phenanthrene	ND	3,000
Anthracene	ND	3,000
Di-n-butylphthalate	ND	3,000
Fluoranthene	ND	3,000
Pyrene	ND	3,000
Butylbenzylphthalate	ND	3,000
3,3'-Dichlorobenzidine	ND	20,000
Benzo(a)anthracene	ND	3,000
Chrysene	ND	3,000
Bis(2-ethylhexyl)phthalate	ND	3,000
Di-n-octylphthalate	ND	3,000
Benzo(b)fluoranthene	ND	3,000
Benzo(k)fluoranthene	ND	3,000
Benzo(a)pyrene	ND	3,000
Indeno(1,2,3-cd)pyrene	ND	3,000
Dibenzo(a,h)anthracene	ND	3,000
Benzo(g,h,i)perylene	ND	3,000

ND = Not detected at or above reporting limit.

QA/QC SUMMARY: % SURROGATE RECOVERIES

2-Fluorophenol	117	Nitrobenzene-d5	114
Phenol-d6	130	2-Fluorobiphenyl	116
2,4,6-Tribromophenol	132	Terphenyl-d14	111



Curtis & Tompkins, Ltd.

Q C Batch Report

Client: Uribe & Associates
 Project Name: Shipper Imperial
 Project Number: 96-209

Laboratory Login Number: 112460
 Report Date: 04 October 93

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric)

QC Batch Number: 10798

Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:5520EF	01-OCT-93

Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	88%	SMWW 17:5520EF	01-OCT-93
BSD	87%	SMWW 17:5520EF	01-OCT-93

Average Spike Recovery
 Relative Percent Difference

87%
 1.4%

Control Limits

80% - 120%
 < 20%



Curtis & Tompkins, Ltd.

Client: Uribe & Associates

Laboratory Login Number: 112460

Project Name: Shipper Imperial

Report Date: 04 October 93

Project Number: 96-209

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric)

METHOD: SMWW 17:5520EF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
112460-014	SPT-6,9	Soil	25-SEP-93	27-SEP-93	01-OCT-93	ND	mg/kg	50	TR	10798

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



Curtis & Tompkins, Ltd

MS/MSD SUMMARY SHEET FOR EPA 8010

Laboratory Number: 112460
 Client: Uribe & Associates
 Analysis date: 09/29/93
 Sample type: Soil

Spike file: 270W038
 Spike dup file: 270W039

8010 MS/MSD DATA (spiked at 20 ppb)

SPIKE COMPOUNDS	READING	RECOVERY	STATUS	LIMITS
1,1-Dichloroethene	23.27	116 %	OK	59 - 172
Trichloroethene	24.44	122 %	OK	62 - 137
Chlorobenzene	24.60	123 %	OK	60 - 133
SPIKE DUP COMPOUNDS				
1,1-Dichloroethene	22.27	111 %	OK	59 - 172
Trichloroethene	24.44	122 %	OK	62 - 137
Chlorobenzene	21.67	108 %	OK	60 - 133
SURROGATES				
Bromobenzene (MS)	101.46	101 %	OK	59 - 172
Bromobenzene (MSD)	103.53	104 %	OK	59 - 172
MATRIX RESULTS				
1,1-Dichloroethene	0			
Trichloroethene	0.034			
Chlorobenzene	0			

RPD DATA

8010 COMPOUNDS	SPIKE	SPIKE DUP	RPD	STATUS	LIMITS
1,1-Dichloroethe	23.27	22.27	4 %	OK	<= 22
Trichloroethene	24.44	24.44	0 %	OK	<= 24
Chlorobenzene	24.60	21.67	13 %	OK	<= 21

AQUATIC BIOASSAY AND CONSULTING LABORATORIES, INC.

28 North Olive Street

Ventura, CA 93061

(805) 643-3571

DOHS # [REDACTED] (Title 22)

SAMPLE INFORMATION

CLIENT:	Curtis & Tompkins, Ltd.	Date:	10/04/93
SAMPLE I.D.:	[REDACTED]	LAB #:	CST1232.207

WATER QUALITY

DILUTION WATER: Reconst. Fresh				AERATION: Single Bubble Air			
CONTROL HARDNESS				CONTROL ALKALINITY			
Seq.:	41 mg/l	End:	48 mg/l	Seq.:	30 mg/l	End:	32 mg/l
SAMPLE HARDNESS				SAMPLE ALKALINITY			
Seq.:	44 mg/l	End:	50 mg/l	Seq.:	38 mg/l	End:	40 mg/l

ORGANISM INFORMATION

SPECIES:	Pimephales promelas	DATE REC'D:	9/22/93
COMMON NAME:	Fathead Minnow	AVERAGE LNTH:	56 mm
SOURCE:	Thomas Fish Co.	AVERAGE WT:	0.88 gm
CARRIER:	Greyhound Bus Co.	NO. FISH / TANK:	10

TEST DATA

DATE TIME:	INITIAL		72 HOURS					48 HOURS				72 HOURS				96 HOURS			
	10/04/93		10/05/93					10/06/93				10/07/93				10/08/93			
	1700		1030					1600				1630				1700			
COND.	Dis. Oxy.	Temp. dg.C	pH	Dis. Oxy.	Temp. dg.C	pH	#Fish Dead	Dis. Oxy.	Temp. dg.C	pH	#Fish Dead	Dis. Oxy.	Temp. dg.C	pH	#Fish Dead	Dis. Oxy.	Temp. dg.C	pH	#Fish Dead
0 (Control)	8.6	22.0	7.6	8.6	22.0	7.6	0	8.2	20.8	7.4	0	8.1	21.8	7.2	0	8.0	20.5	7.4	0
400 mg/l	8.4	22.0	7.8	8.1	21.8	7.8	0	8.1	21.0	7.4	0	8.0	20.6	7.7	0	7.8	20.8	7.5	0
450 mg/l	8.4	22.0	7.5	8.1	21.8	7.2	0	8.0	21.0	7.4	0	8.0	20.6	7.7	0	8.0	20.2	7.5	0
750 mg/l	8.5	22.0	7.5	8.1	21.8	7.2	0	8.0	21.0	7.4	0	8.0	20.8	7.7	0	8.0	20.3	7.3	0
750 mg/l	8.4	22.0	7.5	8.2	21.5	7.2	0	8.1	21.1	7.4	0	8.0	20.7	7.7	0	8.0	20.3	7.3	0

FINAL DATA

TOTAL MORTALITIES	
0 (Control)	0
400 mg/l	0
450 mg/l	0
750 mg/l	0
750 mg/l	0

FINAL RESULTS

96 HOUR LC50 =	> 750 mg/l
STATUS =	[REDACTED]
CALCULATION METHOD =	Binomial Test

Martina Meyer
Martina Meyer, Chief Biologist

Date 10/11/93



CLIENT: Uribe & Associates
 JOB NUMBER: 112552

DATE REPORTED: 10/12/93

**BATCH QC REPORT
 PREP BLANK**

Compound	Result	Reporting Limit	Units	QC Batch	Method	Analysis Date
Antimony	ND	3	mg/Kg	10820	EPA 6010	10/05/93
Barium	ND	0.5	mg/Kg	10820	EPA 6010	10/05/93
Beryllium	ND	0.1	mg/Kg	10820	EPA 6010	10/05/93
Cadmium	ND	0.25	mg/Kg	10820	EPA 6010	10/05/93
Chromium (total)	ND	0.5	mg/Kg	10820	EPA 6010	10/05/93
Cobalt	ND	0.9	mg/Kg	10820	EPA 6010	10/05/93
Copper	ND	0.5	mg/Kg	10820	EPA 6010	10/05/93
Molybdenum	ND	0.7	mg/Kg	10820	EPA 6010	10/05/93
Nickel	ND	1.6	mg/Kg	10820	EPA 6010	10/05/93
Silver	ND	0.5	mg/Kg	10820	EPA 6010	10/05/93
Vanadium	ND	0.5	mg/Kg	10820	EPA 6010	10/05/93
Zinc	ND	1	mg/Kg	10820	EPA 6010	10/05/93
Arsenic	ND	2.5	mg/Kg	10821	EPA 7060	10/06/93
Lead	ND	1.5	mg/Kg	10821	EPA 7421	10/06/93
Selenium	ND	2.5	mg/Kg	10821	EPA 7740	10/06/93
Thallium	ND	2.5	mg/Kg	10821	EPA 7841	10/06/93
Mercury	ND	0.1	mg/Kg	10830	EPA 7471	10/06/93

ND = Not detected at or above reporting limit



Curtis & Tompkins, Ltd.

CLIENT: Uribe & Associates
JOB NUMBER: 112552

DATE REPORTED: 10/12/93

BATCH QC REPORT
BLANK SPIKE/BLANK SPIKE DUPLICATE

Compound	Spike Amount	SS Result	SSD Result	Units	SS % Recovery	SSD % Recovery	Average Recovery	RPD	QC Batch	Method	Analysis Date
Antimony	500	439.5	459.1	ug/L	86	92	89	7	10820	EPA 6010	10/05/93
Barium	2000	1726	1600	ug/L	89	90	90	1	10820	EPA 6010	10/05/93
Beryllium	50	43.5	43.7	ug/L	87	87	87	1	10820	EPA 6010	10/05/93
Cadmium	50	45.6	49.4	ug/L	97	99	98	2	10820	EPA 6010	10/05/93
Chromium (total)	200	187.1	185.2	ug/L	94	93	94	1	10820	EPA 6010	10/05/93
Cobalt	500	440.3	449.9	ug/L	88	90	89	2	10820	EPA 6010	10/05/93
Copper	250	229.1	230	ug/L	92	92	92	0	10820	EPA 6010	10/05/93
Molybdenum	400	353.7	364.3	ug/L	88	91	90	3	10820	EPA 6010	10/05/93
Nickel	500	464	476.5	ug/L	93	96	95	3	10820	EPA 6010	10/05/93
Silver	50	45.2	46.4	ug/L	96	95	95	4	10820	EPA 6010	10/05/93
Vanadium	500	439.1	443.8	ug/L	88	89	89	1	10820	EPA 6010	10/05/93
Zinc	500	432.3	433.9	ug/L	87	87	87	0	10820	EPA 6010	10/05/93
Arsenic	40	40.02	43.46	ug/L	100	109	105	8	10821	EPA 7060	10/06/93
Lead	30	30.48	31.17	ug/L	102	104	105	3	10821	EPA 7421	10/06/93
Selenium	30	31.49	32.16	ug/L	103	107	106	2	10821	EPA 7740	10/06/93
Selenium	30	32.53	32.16	ug/L	106	107	108	2	10821	EPA 7740	10/06/93
Thallium	40	41.53	42.04	ug/L	104	107	106	3	10821	EPA 7841	10/06/93



Curtis & Tompkins, Ltd.

q c b a t c h R e p o r t

Client: Uribe & Associates
 Project Name: Shipper Imperial
 Project Number: 96-209

Laboratory Login Number: 112552
 Report Date: 12 October 93

QC Batch Number: 10976

Calibration Verification Results

Sample	Result	TV	Difference	Limit	Analyzed
ICV	10.02	10.00	.02	< 0.10	07-OCT-93
CCV	10.02	10.00	.02	< 0.10	07-OCT-93

Sample Duplicate Results

Sample	Duplicate	RPD	Analyzed
8.60	8.61	.1%	07-OCT-93



Client: Uribe & Associates
Project Name: Shipper Imperial
Project Number: 96-209

Laboratory Login Number: 112552
Report Date: 12 October 93

ANALYSIS: pH

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Units	Method	Analyst	QC Bench
112552-001	[REDACTED]	Soil	25-SEP-93	27-SEP-93	07-OCT-93	[REDACTED]	EPA 9045	TR	10876
112552-002	[REDACTED]	Soil	25-SEP-93	27-SEP-93	07-OCT-93	[REDACTED]	EPA 9045	TR	10876
112552-003	[REDACTED]	Soil	25-SEP-93	27-SEP-93	07-OCT-93	[REDACTED]	EPA 9045	TR	10876
112552-004	[REDACTED]	Soil	25-SEP-93	27-SEP-93	07-OCT-93	[REDACTED]	EPA 9045	TR	10876
112552-005	[REDACTED]	Soil	25-SEP-93	27-SEP-93	07-OCT-93	[REDACTED]	EPA 9045	TR	10876

Soil pH measured as water



Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 112552-5
 CLIENT: URIBE & ASSOCIATES
 PROJECT ID: 96-209
 LOCATION: PORT OF OAKLAND, SHIPPERS IMPERIAL
 SAMPLE ID: ~~CONFIDENTIAL~~

DATE SAMPLED: 09/23/93
 DATE RECEIVED: 09/27/93
 DATE REQUESTED: 09/30/93
 DATE REPORTED: 10/12/93

PARAMETER	RESULT	UNITS	REPORTING LIMIT	METHOD
Releasable Cyanide	ND	ng/Kg	1	SW-846 Section 7.3.3.2
Releasable Sulfide	ND	ng/Kg	1	SW-846 Section 7.3.4.1
Ignitability	Does Not Ignite			SW-846 Section 7.1

ND - Not detected at or above reporting limit.

QA/QC SUMMARY	Analysis Date	RPD, %	RECOVERY, %
Cyanide	10/05/93	7	79
Sulfide	10/05/93	7	76
Ignitability	10/05/93	--	--



Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 112552-4
 CLIENT: URIBE & ASSOCIATES
 PROJECT ID: 96-209
 LOCATION: PORT OF OAKLAND, SHIPPERS IMPERIAL
 SAMPLE ID: COMP SPT-9,6

DATE SAMPLED: 09/23/93
 DATE RECEIVED: 09/27/93
 DATE REQUESTED: 09/30/93
 DATE REPORTED: 10/12/93

PARAMETER	RESULT	UNITS	REPORTING LIMIT	METHOD
Releasable Cyanide	ND	mg/Kg	1	SW-846 Section 7.3.3.2
Releasable Sulfide	ND	mg/Kg	1	SW-846 Section 7.3.4.1
Ignitability	Does Not Ignite			SW-846 Section 7.1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY	Analysis Date	RPD, %	RECOVERY, %
Cyanide	10/05/93	7	79
Sulfide	10/05/93	7	76
Ignitability	10/05/93	--	--



Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 112552-3
 CLIENT: URIBE & ASSOCIATES
 PROJECT ID: 96-209
 LOCATION: PORT OF OAKLAND, SHIPPERS IMPERIAL
 SAMPLE ID: COMP SPT-7,8

DATE SAMPLED: 09/23/93
 DATE RECEIVED: 09/27/93
 DATE REQUESTED: 09/30/93
 DATE REPORTED: 10/12/93

PARAMETER	RESULT	UNITS	REPORTING LIMIT	METHOD
Releasable Cyanide	ND	mg/Kg	1	SW-846 Section 7.3.3.2
Releasable Sulfide	ND	mg/Kg	1	SW-846 Section 7.3.4.1
Ignitability	Does Not Ignite			SW-846 Section 7.1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY	Analysis Date	RPD, %	RECOVERY, %
Cyanide	10/05/93	7	79
Sulfide	10/05/93	7	76
Ignitability	10/05/93	--	--

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OCT 25 '93 10:50AM PORT OF OAKLAND ENVIRON DEPT



Curtis & Tompkins, Ltd.
2325 Fifth Street
Berkeley, CA 94710
(510) 486-0900 Phone
(510) 486-0532 Fax

Sampler: Tom Barnes

Report to: Tom Barnes

Company: Orion Assoc.

Project No: 96-209

Project Name: Port Oakland Slugs SPT-1 Telephone: 832-2233

Turnaround Time: 5 day Fax: 832-2237

Analyses

Laboratory Number	Sample ID.	Sampling Date	Time	Matrix			# of Containers	Preservative				Field Notes	TPH - Guadalupe	STEX	TPH - Diesel	TPH - Motor Oil	Oil - Grease	80/10	82/70
				Soil	Water	Sediment		None	None	None	None								
	SPT-1	9/23	9:50				1						X	X	X				
	SPT-2	"	9:55				1						X	X	X				
	SPT-3	"	9:59				1						X	X	X				
	SPT-4	"	10:10				1						X	X	X				
	SPT-5																		
	SPT-7	"	10:45				1						X	X	X				
	SPT-8	"	10:50				1						X	X	X	X	X	X	X
	SPT-9	"	12:30				1						X	X	X				
	SPT-6	"	10:20				1						X	X	X				
	SPT-10	"	9:00				1						X	X	X				
	SPT-5	"	10:15				1						X	X	X				

NOTE: FILE

RELINQUISHED BY:

Tom Barnes DATE/TIME

DATE/TIME

DATE/TIME

RECEIVED BY:

[Signature] 9-27-93 DATE/TIME

1030 DATE/TIME

DATE/TIME

DATE/TIME

OCT 12 '93 13:51 CURTIS & TOMPKINS BERKELEY

VERBAL ADDITIONS / CANCELLATIONS TO ANALYSIS REQUEST SHEET

CLIENT: Units & Associates DATE: 9/30/93
 REQUESTED BY: Tom Barnes TIME: am 15:45 pm
 RECORDED BY: J. Brown Normal TAT

Current Lab ID (Previous Lab ID)	Client ID	Circle matrix	Specify add or cancel	Analysis	Due date
112552-1 112460-11	Comp SPT-1,2	soil water other	+	T26 net 8240 I quit React CNV... Soil	
112552-2 112460-12	Comp SPT-3,4	soil water other	+		
112552-3 112460-13	Comp SPT-7,8	soil water other	+	Bromine	
112552-5 112460-15	Comp SPT 5,10	soil water other	+	↓	
112552-4 112460-14	Comp SPT-9,6	soil water other	+	React concentrif + ignit	
		soil water other			
		soil water other			
		soil water other			

Original in job jacket.

Copies to analytical departments.