

921 Ringwood Avenue • San Jose, California 95131-1721 • (408) 453-7300 • Fax (408) 437-9526

RECEIVED

2:37 pm, May 04, 2009

Alameda County Environmental Health February 14, 1995 Project 0952-041.02

Mr. Craig Mayfield Alameda County Flood Control District, Zone 7 5997 Parkside Drive Pleasanton, California 94588

Re: Supplemental site investigation, BP station 11128, 4707 First Street, Livermore, California

Dear Mr. Mayfield:

This letter report presents analytical data obtained during a supplemental site investigation at British Petroleum Station 11128; it was prepared by EMCON on behalf of TOSCO Oil Company in compliance with Alameda County Flood Control District requirements for permit 96463.

Figure 1 is a site plan showing the locations at which samples were collected. Analytical reports are included in Appendix A. The work performed during the supplemental site investigation is described below, and the results are summarized.

On October 21, 1994, EMCON conducted supplemental assessment activities at the site. These activities consisted of advancing three exploratory soil borings (THP-1, THP-2, and THP-3) near the pump islands, the underground storage tank (UST) complex, and the waste-oil UST (Figure 1).

Soil borings THP-1 and THP-3 were advanced to approximately 22 to 23 feet below ground surface (BGS) by using cone-penetrometer test (CPT) equipment. Soil boring THP-2 was advanced to 8 feet BGS. CPT rig refusal was encountered at the total depth of each boring. Soil types encountered in the borings included mixtures of clay, silt, and sand to the total depth of each boring. Groundwater was encountered in THP-1 and THP-3 at approximately 18 and 17 feet BGS, respectively.

Two soil samples per boring were selected for laboratory analysis of total petroleum hydrocarbons as gasoline, as diesel, and as oil (TPHG, TPHD, TPHO), and benzene, toluene, ethylbenzene, and xylenes (BTEX). None of the constituents analyzed for was detected in the soil samples (Table 1). Groundwater samples collected from borings THP-1 and THP-3 using HydroPunchTM equipment were submitted for laboratory analysis of TPHG, TPHD, TPHO, and BTEX. TPHO (770 parts per billion [ppb], ethylbenzene

Mr. Craig Mayfield February 14, 1995 Page 2

Project 0952-041.02

(0.8 ppb) and xylenes (4 ppb) were detected in the groundwater sample collected from THP-1 (Table 1).

In addition to the work described above, EMCQN evaluated fill material samples collected from the base of site fuel dispensers. This report does not discuss the analytical results pertaining to these samples, as their collection was outside the scope of the permit.

Sincerely,

EMCON

Lynn Gallagher Staff Geologist Mark Smolley

Project Supervisor

Attachment: Table 1 - Soil and Groundwater Sample Results of Analyses

Figure 1 - Site Plan

Appendix A - Certified Analytical Reports

Table 1

Site Number 11128 4707 First Street, Livermore, California

Soil Sample Results of Analyses (ppm)

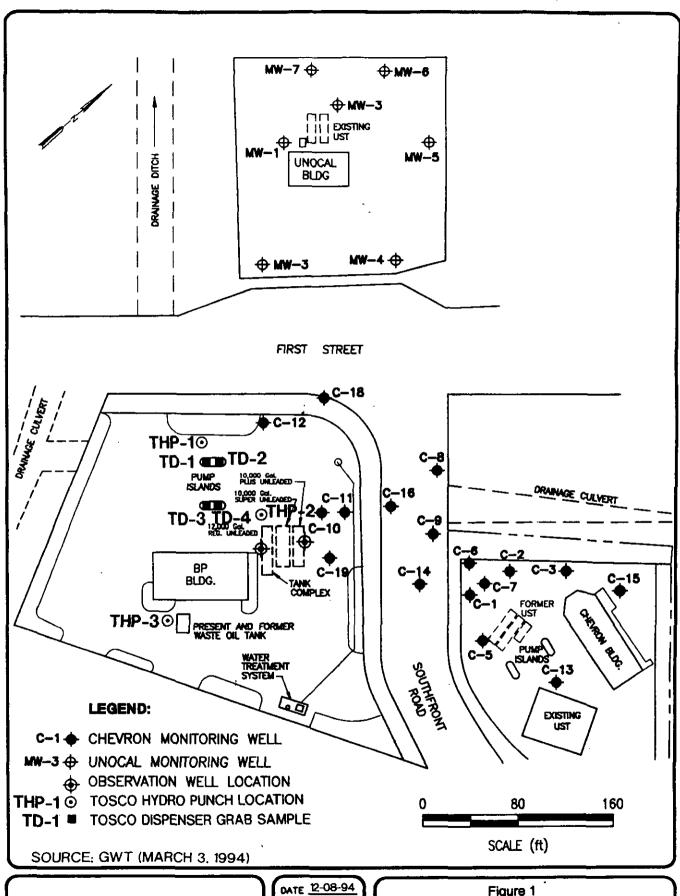
Sample Number	Depth (feet)	Date Collected	California DHS LUFT Method TPH-G	California I Method Hydr	OHS LUFT ocarbon Scan	BTEX EPA Method 5030/8020			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
			TPH-G	TPH-D	ТРН-О	Benzene	Toluene	Ethylbenzene	Total Xylenes
THP1-S-10-10.5**	10-10.5	10/21/94	nd	nd	nd	nd	nd	nd	nd
THP1-S-13.5-14	13.5-14	10/21/94	nd	nd	nd	nd	nd	nd	nd
THP2-S-3-3.5	3-3.5	10/21/94	nd	nd	nd	nd	nd	nd	nd
THP2-S-6.5-7	6.5-7	10/21/94	nd	nd	nd	nd	nd	nd	nd
THP3-S-10-10.5	10-10.5	10/21/94	nd	nd	nd	nd	nd	nd	nd
THP3-S-13.5-14	13.5-14	10/21/94	nd	nd	nd	nd	nd	nd	nd

Table 1 (continued)

Site Number 11128 4707 First Street, Livermore, California

Groundwater Sample Results of Analyses (ppb)

Sample	Number	Depth to Water (feet)	Date Sampled	California DHS LUFT Method TPH-G		DHS LUFT rocarbon Scan			TEX od 5030/8020	
				TPH-G	TPH-D	ТРН-О	Benzene	Toluene	Ethylbenzene	Total Xylenes
THP1-W		18	10/21/94	nd	nd	770	nd	nd	0.8	4
THP3-W		17	10/21/94	nd	nd	nd	nd	nd	nd	nd
BLK-W		n/a	10/21/94	nd			nd	nd	nd	nd
Note:	TPH-G = GPH-D = TPH-O = nd = n/a =	Total petroleum hyd Total petroleum hyd	drocarbons as gasoline drocarbons as diesel drocarbons as oil. above method reporting			TW = TB = THP = BLK = * =	Tosco boring. Tosco HydroPunch. Tosco HydroPunch e Raised method repor	ting limits (see labo	iple ratory report in Attachm IPI through HP3 on the	





DATE 12-08-94
DWN. MLP
REV.
APPR.
PROJECT NO.
0952-041.03

Figure 1
TOSCO #11128
4707 FIRST STREET
LIVERMORE, CALIFORNIA
SITE PLAN

APPENDIX A CERTIFIED ANALYTICAL REPORTS



November 16, 1994

Service Request No: <u>S941286</u>

Mike Noll EMCON Northwest, Inc. 18912 N. Creek Parkway Bothell, WA 98011

Re:

TOSCO # 11128 / 0952-041.02

Dear Mr. Noll:

Attached are the results of the water samples submitted to our lab on October 24, 1994. For your reference, these analyses have been assigned our service request number S941286.

All analyses were performed consistent with our laboratory's quality assurance program. All results are intended to be considered in their entirety, and CAS is not responsible for use of less than the complete report. Results apply only to the samples analyzed.

Please call if you have any questions.

Respectfully submitted:

Keŏni A. Murphy

COLUMBIA ANALYTICAL SERVICES, INC.

KAM/ajb



Acronyms

ASTM — American Society for Testing and Materials

CARB California Air Resources Board

CAS Number Chemical Abstract Service registry Number

CFC Chlorofluorocarbon

DEC Department of Environmental Conservation

DEQ Department of Environmental Quality

DHS Department of Health Services

DOE Department of Ecology

DOH Department of Health

EPA U. S. Environmental Protection Agency

GC Gas Chromatography

GC/MS Gas Chromatography/Mass Spectrometry

LUFT Leaking Underground Fuel Tank

MCL Maximum Contaminant Level is the highest permissible concentration of a substance

allowed in drinking water as established by the USEPA.

MDL Method Detection Limit

MRL Method Reporting Limit

NA Not Applicable

NAN Not Analyzed

NC Not Calculated

NCASI National Council of the Paper Industry for Air and Stream Improvement

ND Not Detected at or above the MRL

NR Not Requested

NIOSH National Institute for Occupational Safety and Health

PQL Practical Quantitation Limit

RCRA Resource Conservation and Recovery Act

SIM Selected Ion Monitoring

TPH Total Petroleum Hydrocarbons

VPH Volatile Petroleum Hydrocarbons

Page 2 of 4



Analytical Report

Client:

-EMCON Associates

Project:

TOSCO # 11128 / 0952-041.02

Sample Matrix:

Water

Service Request: S941286

Date Collected: 10/21/94
Date Received: 10/24/94

Date Extracted: 10/31/94

Date Analyzed: 11/1,2/94

Hydrocarbon Scan

EPA Method 3510/California DHS LUFT Method

Units: ug/L (ppb)

	Analyte: Method Reporting Limit:	Mineral Spirits 50	Jet Fuel 50	Kerosene 50	TPH as Diesel 50	Hydraulic Oil 250
Sample Name	Lab Code					
11128-HP1-W 11128-HP3-W Method Blank	S941286-001 S941286-002 S941031-WB	ND ND ND	ND ND ND	ND ND ND	ND ND ND	770 ND ND

Approved By:

Approve

Date: 1000 Ser 16, 1994

Page 3 of 4





QA/QC Report

Client:

EMCON Associates

Project:

TOSCO # 11128 / 0952-041.02

Sample Matrix: Water

Service Request: S941286

Date Collected: 10/21/94

Date Received: 10/24/94

Date Extracted: 10/31/94

Date Analyzed: 11/1,2/94

Surrogate Recovery Summary Hydrocarbon Scan EPA Method 3510/California DHS LUFT Method

Sample Name	Lab Code	Percent Recovery p-Terphenyl
11128-HP1-W	S941286-001	94
11128-HP3-W	S941286-002	92
Method Blank	S941031-WB	62 *

CAS Acceptance Limits: 66-123

The surrogate recovery for the Method Blank is below the acceptance limits. The surrogate recovery for all samples is within the limits. Some of the samples were ND for all analytes. We do not believe that the data is significantly affected.

SUR1/062994

Page 4 of 4



344 1286

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CUSTODY/LABORATORY ANALYSIS REQUEST FORM

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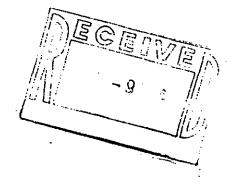
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November 4, 1994



Mike Noll EMCON Northwest 18912 N. Creek Pkwy. Bothell, WA 98011

Re: TOSCO #11128/Project #0952-041.02

Dear Mike:

Enclosed are the results of the samples submitted to our iab on October 26, 1994. For your reference, these analyses have been assigned our service request number L943337.

All analyses were performed in accordance with our laboratory's quality assurance program. Golden State / CAS is certified for environmental analyses by the California Department of Health Services (Certificate # 1296/Expiration - December 1994).

Please call if you have any questions.

Respectfully submitted,

Golden State / CAS Laboratories, Inc.

Elaine R. Thomas

Elaine R. Thomas

Project Chemist

ET/ib

Analytical Report

Client:

EMCON Northwest

Project:

TOSCO #11128/#0952-041.02

Sample Matrix:

Water

Service Request: L943337

Date Collected: 10/21/94

Date Received: 10/26/94

Date Extracted: NA

BTEX and TPH as Gasoline EPA Methods 5030/8020/Modified 8015/California DHS LUFT Method

	Method Rep	Analyte: Units: orting Limit:	Benzene µg/L (ppb) 0.5	Toluene µg/L (ppb) 0.5	Ethylbenzene µg/L (ppb) 0.5	Total Xylenes µg/L (ppb) 0.5	TPH as Gasoline µg/L (ppb) 50
		Date					
Sample Name	Lab Code	Analyzed					
11128-HP1-W	L943337-001	10/27/94	ND	ND	0.8	. 4	ND
11128-HP3-W	L943337-002	10/27/94	ND	ND	ND	ND	ND
11128-BLK-W	L943337-003	10/27/94	ND	ND	ND	ND	ND
Method Blank	L943337-MB	10/27/94	ND	ND	ND	ND	ND

NA

Not Applicable

ND

None Detected at or above the method reporting limit.

Approved By: Elane R. Shona Date: 11-4-94

L943337.XI.S - 8020w 11/494 6925 CANOGA AVENUE

CANOGA PARK, CA 91303

818 587-5550

FAX 818 587-5555

Page No.:

Analytical Report

__at:

EMCON Northwest

Project:

TOSCO #11128/#0952-041.02

Sample Matrix: Soil

Service Request: L943337

Date Collected: 10/21/94

Date Received: 10/26/94

Date Extracted: NA

BTEX and TPH as Gasoline EPA Methods 5030/8020/Modified 8015/California DHS LUFT Method

	Method Repo	Analyte: Units: orting Limit:	Benzene mg/Kg (ppm) 0.005	Toluene mg/Kg (ppm) 0.005	Ethylbenzene mg/Kg (ppm) 0.005	Total Xylenes mg/Kg (ppm) 0.005	TPH as Gasoline mg/Kg (ppm) 0.1
Sample Name	Lab Code	Date Analyzed					
11128-HP1-5-10-10.5	L943337-004	10/27/94	ND	ND	ND	ND	ND
11128-HP1-5-13.5-14	L943337-005	10/27/94	ND	ND	ND	ND	ND
-HP2-5-3-3.5	L943337-006	10/27/94	ND	ND	ND	ND	ND
11128-HP2-5-6,5-7	L943337-007	10/27/94	ND	ND	ND	ND	ND
11128-HP3-5-10-10.5	L943337-008	10/27/94	ND	ND	ND	ND	ND
11128-HP3-5-13.5-14	L943337-009	10/27/94	ND	ND	ND	ND	ND
11128-TD1-0.5	L943337-010	10/29/94	ND	0.006	ND	0.028	0.4
11128-TD2-0,5	L943337-011*	10/29/94	<0.05	< 0.05	<0.05	0.17	35
11128-TD3-0.5	L943337-012*	10/29/94	<0.05	0.14	0.11	0.80	79
11128-TD4-0.5	L943337-013*	10/29/94	<0.05	<0.05	<0.05	0.25	47
Method Blank	L943337-MB	10/27/94	ND	ND	ND	ND	ND

NA

Not Applicable

ND

None Detected at or above the method reporting limit.

MRLs are elevated because of matrix interferences and because the samples required diluting.

Elain R. Shomer Approved By:

SAbout_2/090794

L943337.XLS - 8020s 11/4/94

CANOGA PARK, CA 91303

818 587-5550

Analytical Report

Client:

EMCON Northwest

Project:

TOSCO #11128/#0952-041.02

Sample Matrix:

Water

Service Request: L943337

Date Collected: 10/21/94

Date Received: 10/26/94

Date Extracted: 10/28/94

Date Analyzed: 11/1/94

Hydrocarbon Scan California DHS LUFT Method

	Method Rep	Analyte: Units: orting Limit:	Mineral Spirits mg/L (ppm) l	Jet Fuel mg/L (ppm) l	Kerosene mg/L (ppm)	Diesel mg/L (ppm) l	Hydraulic Oil mg/L (ppm) 5
Sample Name	Lab Code	Date Analyzed					
11128-HP1-W	L943337-001	11/1/94	ND	ND	ND	ND	ND
11128-HP3-W	L943337-002	11/1/94	ND	ND	ND	ND	ND
Method Blank	L943337-MB	11/1/94	ND	ND	ND	ND	ND

NA

Not Applicable

ND

None Detected at or above the method reporting limit.

Approved By:

1,943337.30LS - 2015cs 11/4/94 6925 CANOGA AVENUE

CANOGA PARK, CA 91303

818 587-5550

Analytical Report

ાાંent:

EMCON Northwest

Project:

TOSCO #11128/#0952-041.02

Sample Matrix:

Soil

Service Request: L943337

Date Collected: 10/21/94

Date Received: 10/26/94 Date Extracted: 10/27/94

Date Analyzed: 11/1/94

Hydrocarbon Scan California DHS LUFT Method

	Mineral				Hydraulic
Analyte:	Spirits	Jet Fuel	Kerosene	Diesel	Oil
Units:	mg/Kg (ppm)				
Method Reporting Limit:	1	1	1	1	5

meny %.	Date					
Lab Code	Analyzed					
L943337-004	10/30/94	ND	ND	ND	ND	ND
L943337-005	10/31/94	ND	ND	ND	ND	ND
L943337-006	10/31/94	ND	ND	ND	ND	ND
L943337-007	10/31/94	ND ·	ND	ND	ND	ND
L943337-008	10/31/94	ND	ND	ND	ND	ND
L943337-009	10/31/94	ND	ND	ND	ND	ND
L943337-010	10/31/94	ND	ND	ND	140	ND
L943337-011	10/31/94	ND	ND	ND	360	ND
L943337-012	10/31/94	ND	ND	ND	200	ND
L943337-013	10/31/94	ND	ND	ND	290	ND
L943337-MB	10/27/94	ND	ND	ND	ND	ND
	Lab Code L943337-004 L943337-005 L943337-006 L943337-008 L943337-009 L943337-010 L943337-011 L943337-012 L943337-013	Lab Code Analyzed L943337-004 10/30/94 L943337-005 10/31/94 L943337-006 10/31/94 L943337-007 10/31/94 L943337-008 10/31/94 L943337-010 10/31/94 L943337-011 10/31/94 L943337-012 10/31/94 L943337-013 10/31/94	Lab Code Analyzed L943337-004 10/30/94 ND L943337-005 10/31/94 ND L943337-006 10/31/94 ND L943337-007 10/31/94 ND L943337-008 10/31/94 ND L943337-009 10/31/94 ND L943337-010 10/31/94 ND L943337-011 10/31/94 ND L943337-012 10/31/94 ND L943337-012 10/31/94 ND L943337-013 10/31/94 ND	Date Lab Code Analyzed L943337-004 10/30/94 ND ND L943337-005 10/31/94 ND ND L943337-006 10/31/94 ND ND L943337-007 10/31/94 ND ND L943337-008 10/31/94 ND ND L943337-009 10/31/94 ND ND L943337-010 10/31/94 ND ND L943337-011 10/31/94 ND ND L943337-012 10/31/94 ND ND L943337-013 10/31/94 ND ND	Date Lab Code Analyzed L943337-004 10/30/94 ND ND ND L943337-005 10/31/94 ND ND ND L943337-006 10/31/94 ND ND ND L943337-007 10/31/94 ND ND ND L943337-008 10/31/94 ND ND ND L943337-009 10/31/94 ND ND ND L943337-010 10/31/94 ND ND ND L943337-011 10/31/94 ND ND ND L943337-012 10/31/94 ND ND ND L943337-013 10/31/94 ND ND ND	Date Lab Code Analyzed L943337-004 10/30/94 ND ND ND L943337-005 10/31/94 ND ND ND ND L943337-006 10/31/94 ND ND ND ND L943337-007 10/31/94 ND ND ND ND L943337-008 10/31/94 ND ND ND ND L943337-009 10/31/94 ND ND ND ND L943337-010 10/31/94 ND ND ND 140 L943337-011 10/31/94 ND ND ND 200 L943337-013 10/31/94 ND ND ND ND 200

NA

Not Applicable

ND

None Detected at or above the method reporting limit.

Approved By:

L943337.XLS - 8015cs (2) 11/4/94

QA/QC Report

Client:

EMCON Northwest

Project:

TOSCO #11128/#0952-041.02

Sample Matrix: Water

Service Request: L943337

Date Collected: NA

Date Received: NA

Date Extracted: NA

Date Analyzed: NA

Surrogate Recovery Summary BTEX and TPH as Gasoline

EPA Methods 5030/8020/Modified 8015/California DHS LUFT Method

Sample Name	Lab Code	Percent Recovery 4-Bromofluorobenzene	Percent Recovery a,a,a-Trifluorotoluene
11128-HP1-W	L943337-001	116	93
11128-HP3-W	L943337-002	111	86
11128-BLK-W	L943337-003	113	87
Method Blank	L943337-MB	115	91

CAS Acceptance Limits:

50-130

60-120

NA

Not Applicable

Date: __ Approved By: SUR2/060194 L943337.XLS - 8020erw 11/4/94

6925 CANOGA AVENUE

CANOGA PARK, CA 91303

818 587-5550

QA/QC Report

Client:

EMCON Northwest

Project:

TOSCO #11128/#0952-041.02

Sample Matrix: Soil

Service Request: L943337

Date Collected: NA

Date Received: NA

Date Extracted: NA Date Analyzed: NA

Surrogate Recovery Summary BTEX and TPH as Gasoline

EPA Methods 5030/8020/Modified 8015/California DHS LUFT Method

Sample Name	Lab Code	Percent Recovery 4-Bromofluorobenzene	Percent Recovery a,a,a-Trifluorotoluene
11128-HP1-5-10-10.5	L943337-004	78	90
11128-HP1-5-13.5-14	L943337-005	 78	93
11128-HP2-5-3-3.5	L943337-006	71	94
11128-HP2-5-6.5-7	L943337-007	*	74
1128-HP3-5-10-10.5	L943337-008	80	96
11128-HP3-5-13.5-14	L943337-009	7 6	84
11128-TD1-0.5	L943337-010	60	93
11128-TD2-0.5	L943337-011	58	86
11128-TD3-0.5	L943337-012	69	101
11128-TD4-0.5	L943337-013	59	85
Method Blank	L943337-MB	99	120

CAS Acceptance Limits:

50-130

60-120

NA

Not Applicable

4-Bromofluorobenzene outside acceptance limits.

Trifluorotoluene is within limits, therefore data was approved.

Approved By:

SUR2/060194 L943337.XLS - 8020srs 11/4/94 **6925 CANOGA AVENUE**

CANOGA PARK, CA 91303

818 587-5550

QA/QC Report

Client:

EMCON Northwest

Project:

TOSCO #11128/#0952-041.02

Sample Matrix: Water

Service Request: L943337

Date Collected: NA Date Received: NA

Date Extracted: NA Date Analyzed: NA

Surrogate Recovery Summary Hydrocarbon Scan California DHS LUFT Method

Sample Name	Lab Code	Percent Recovery p-Terphenyl
11128-HP1-W	L943337-001	87
11128-HP3-W	L943337-002	91
Method Blank	L943337-MB	99

CAS Acceptance Limits: 50-140

NA

Not Applicable

Elaine R. Shomes Date: 14.4.99 Approved By:

SUR 1/062994 L940337.XLS - 8015eres 11/4/94 6925 CANOGA AVENUE

CANOGA PARK, CA 91303

818 587-5550

QA/QC Report

Client:

EMCON Northwest

Project:

Sample Matrix: Soil

TOSCO #11128/#0952-041.02

Service Request: L943337

Date Collected: NA

Date Received: NA

Date Extracted: NA

Date Analyzed: NA

Surrogate Recovery Summary Hydrocarbon Scan California DHS LUFT Method

Sample Name	Lab Code	Percent Recovery p-Terphenyl
11128-HP1-5-10-10.5	L943337-004	57
11128-HP1-5-13.5-14	L943337-005	61
11128-HP2-5-3-3.5	L943337-006	65
11128-HP2-5-6.5-7	L943337-007	58
11128-HP3-5-10-10.5	L943337-008	50
11128-HP3-5-13.5-14	L943337-009	52
11128-TD1-0.5	L943337-010	*
11128-TD2-0.5	L943337-011	66
11128-TD3-0.5	L943337-012	*
11128-TD4-0.5	L943337-013	•
Method Blank	L943337-MB	58

CAS Acceptance Limits: 50-140

NA

Not Applicable

Not Applicable because of the sample matrix. The gas chromatogram showed target components that interfered with determination of the surrogate.

Approved By:	Plane	a. Thomas	Date:	11.4.94
. гррготом Бу				

L943337.XLS - 801 Seras (2) 11/4/94

CANOGA PARK, CA 91303



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CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

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CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

1921 Ringwood Ave. • San Jose, CA 95131 • (408) 437-2400, FAX (408)437-9356 50,140-520 ANALYSIS REQUESTED TOSCO PROJECT NAME PROJECT MNGR. NUMBER OF CONTAINERS Joke COMPANY/ADDRESS Month (both or discolved) Of and Greeks Mentor PHONE 408 1453-7300 SAMPLERS SIGNATURE REMARKS SAMPLE SAMPLE LAB MATRIX LD. 1.D. DATE TIME Soil Hold L943337-8 Нο Hold PEY 10 -TD:1-0.5 RELINQUISHED BY: RECEIVED BY: **TURNAROUND REQUIREMENTS:** REPORT REQUIREMENTS INVOICE INFORMATION: SAMPLE RECEIPT: J 5 day 48 br 24 hr L Routine Report P.O. # Shipping VIA: Signature Sandard (~ 10-15 working days) II. Report (includes DUP,MS, MSO, as required, may be charged as samples) Shipping i Printed Name Printed Name Provide Verbal Preliminary Results Firm III. Data Validation Report (Includes All Raw Data) Provide FAX Prefiningry Results Oate/Time Requested Report Date ... Lab No.: IV.CLP Deliverable Report RELINQUISHED BY: RECEIVED BY: SPECIAL INSTRUCTIONS/COMMENTS: 600 Date/Time

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