Form R-149: Acceptance Authorization for Remediation Wastewater to Tosco's San Francisco Area Refinery at Rodeo

WASTEWATER TREATMENT PLANT (UNIT 100) OPERATORS:
This form, if approved below, serves as an acceptance document to process the wastewater at the San Francisco Area Refinery at Rodeo Wastewater Treatment Plant, Unit 100.

Requester's Name/Signature:	David De Witt	David B. DeWitt
Company:	Tosco Marketing Co.	
Address:	2000 Crow Canyon Pl., Suite 400, San Ramon, CA	
Telephone/Fax:	925-277-2384	925-277-2361
Station No. and Location:	Tosco Unit # 5325, 3200 Lakeshore Blvd., Oakland, CA	
Description of Water Source:	Tank pit water	
Volume of Water/Solids Expected:	Max. 5000gal/wk	minimal
Volume of Water Expected:	Maximum total of 250,000 gal/yr	
Pesticides/Fish Toxicity Expected:	Yes (No)	Yes (No)
Maximum Rate of Disposal (**EAD**):		

The remediation wastewater described above has been reviewed for Federal and California Hazardous Waste characteristics. The wastewater is *(circle one)* recommend / not recommended for processing at the WWTP.

This form is valid until: _____

EAD Personnel: _____ Recommended Date: _____

Operations Personnel: _____ Approval Date: _____

Truck drivers: Please provide a copy of this R-149 form upon delivery of wastewater to Unit 100.

Driver's info: **Truck No.** _____ **pH at site** _____

UNIT 100 OPERATORS: Please fill out the portion below and forward this completed form to EAD in Room 110 of the Administration Building.

WESTERN REGION BOX: 9509

Date and time of delivery:	**Delivered on:** ____/____/____	@ _____ **AM / PM**
Volume delivered:	_____**gallons** or _____**bbl.**	pH _____

Store # 25325 Date 2/5/01
Unit # 5325 Code LAB Color ☐
Description: RIG UNSIGNED AND LAB RESULTS

COMMENTS: No free product accepted. Gravity off-load only.

Any questions? Call (510) 245-4465, (510) 245-4403 or Fax (510) 245-4476.

ENVIRONMENTAL REVIEW ON WASTE WATER TO UNIT 100

Process/Waste Water For Disposal to Unit 100

Unit 100 Feed Rate = [redacted]
Date R-149 Received

Name David De Witt
Site # (Street address): 3220 Lakeshore Avenue
City, State: Oakland, CA
Date you'll fax the info: 9-25-00

Water Description				4000 gal/week of tank pit water		
	Eff. Limit mg/L	Limit kg/day	HW mg/L	Conc mg/L	Loading kg/day	U100 mg/L
Volume (MGD, million gallons per day)				0.00400	0.00400	0.00400
Arsenic	0.2		5	< 0.1	0.002	0.0002
Cadmium	0.03		1	< 0.01	0.000	0.0000
Chromium	0.110	0.21	5	< 0.01	0.000	0.0000
Copper	0.037	0.176	25	< 0.01	0.000	0.0000
Lead	0.053		5	< 0.02	0.000	0.0000
Mercury	0.0002		0.2	< 0.0002	0.00000	0.00000
Nickel	0.065		20	0.047	0.001	0.0001
Selenium	0.4		1	< 0.1	0.002	0.0002
Silver	0.023		5	< 0.01	0.000	0.0000
Vanadium	1		24	< 0.01	0.000	0.0000
Zinc	0.58		250	0.035	0.001	0.0001
MTBE	none	453.72		460	6.964	0.9200
Bioassay (LC-50)			>500 ppm		passed 4-19-99	
Cyanides	0.025			< 0.01	0.00	0.000
O&G	8	115			0.00	0.00
PCBs						
pH (corrosivity)	6 - 8		2.1 <pH>12.4	8.18		
Sulfide	0.31	2		< 0.1	0.00	0.00
Phenol	10					
TCDD	1.4E-10					
TPH						
Reactive CN			250	< 1		
Reactive Sulfide			500	< 5		
Flash point			>60 C (>140 F)	> 95C		
Pesticides						

Volume in gallons/1000000
Enter the detection limit (if ND) or
Enter actual value in mg/L & remove the less than sign.

passed screen bioassay or
no toxicity expected per generator

Recommended or Rejected

Recommended on
All metals from 4-19-1999

Authorization good thru

Enter date (typically 3 months for routine or 30 days for single pump test or non-routine)

Benzene NESHAP / MISC.

Baker Tank #						
	Limit mg/L	Limit kg/day	HW mg/L	Conc mg/L	Loading kg/day	U100 mg/L
Benzene	0.21	n/a	0.5*	< 0.91	0.01	0.002
EPA 608	0.00046	n/a	n/a			

* 0.5 ppm benzene criteria does not apply to remediation waste water (such waste is exempt). See correspondence in WCR Files. However, off-site non-remediation waste water are subject to the criteria (e.g., contaminated rainwater, tank draws, etc).

Sequoia Analytical
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February 15 , 2001

Dave Vossler
Gettler - Ryan Inc.
1364 North Mc Dowell Blvd., Suite B2
Petaluma, CA 94954-1116
RE: TOSCO / P101732

Enclosed are the results of analyses for samples received by the laboratory on 01/29/01. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Angelee Cari
Client Services Representative

CA ELAP Certificate Number 2374

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Gettler - Ryan Inc.	Project: TOSCO	
1364 North Mc Dowell Blvd., Suite B2	Project Number: SS #5325, Oakland	Reported:
Petaluma CA, 94954-1116	Project Manager: Dave Vossler	02/15/01 16:49

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
CC-1	P101732-01	Water	01/29/01 12:30	01/29/01 14:20

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Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
CC-1 (P101732-01) Water Sampled: 01/29/01 12:30 Received: 01/29/01 14:20									
Gasoline	ND	5000	ug/l	100	1020008	02/01/01	02/01/01	EPA 8015M/8020M	
Benzene	ND	50.0	"	"	"	"	"	"	
Toluene	ND	50.0	"	"	"	"	"	"	
Ethylbenzene	ND	50.0	"	"	"	"	"	"	
Xylenes (total)	ND	50.0	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*110 %*		*65-135*		"	"	"	
Surrogate: 4-Bromofluorobenzene		*96.0 %*		*65-135*		"	"	"	

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1364 North Mc Dowell Blvd., Suite B2	Project Number: SS #5325, Oakland	Reported:
Petaluma CA, 94954-1116	Project Manager: Dave Vossler	02/15/01 16:49

Total Metals by EPA 6000/7000 Series Methods

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
CC-1 (P101732-01) Water Sampled: 01/29/01 12:30 Received: 01/29/01 14:20									
Mercury	ND	0.200	ug/l	1	1010678	01/31/01	01/31/01	EPA 7470A	
Antimony	ND	60.0	"	"	1010677	01/31/01	02/02/01	EPA 6010B	
Arsenic	ND	100	"	"	"	"	"	"	
Barium	**1050**	10.0	"	"	"	"	"	"	
Beryllium	ND	1.00	"	"	"	"	"	"	
Cadmium	ND	10.0	"	"	"	"	"	"	
Chromium	**55.1**	10.0	"	"	"	"	"	"	
Cobalt	**26.8**	7.00	"	"	"	"	"	"	
Copper	**163**	10.0	"	"	"	"	"	"	
Lead	ND	75.0	"	"	"	"	"	"	
Molybdenum	ND	20.0	"	"	"	"	"	"	
Nickel	**67.5**	30.0	"	"	"	"	"	"	
Selenium	ND	100	"	"	"	"	"	"	
Silver	ND	7.00	"	"	"	"	"	"	
Thallium	ND	100	"	"	"	"	"	"	
Vanadium	**33.8**	10.0	"	"	"	"	"	"	
Zinc	**1870**	400	"	20	"	"	02/02/01	"	

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1364 North Mc Dowell Blvd., Suite B2	Project Number: SS #5325, Oakland	Reported:
Petaluma CA, 94954-1116	Project Manager: Dave Vossler	02/15/01 16:49

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
CC-1 (P101732-01) Water Sampled: 01/29/01 12:30 Received: 01/29/01 14:29									
Acetone	ND	10000	ug/l	1000	1010750	01/31/01	01/31/01	EPA 8260B	
Tert-amyl methyl ether	ND	1000	"	"	"	"	"	"	
Benzene	ND	500	"	"	"	"	"	"	
Bromobenzene	ND	500	"	"	"	"	"	"	
Bromochloromethane	ND	500	"	"	"	"	"	"	
Bromodichloromethane	ND	500	"	"	"	"	"	"	
Bromoform	ND	500	"	"	"	"	"	"	
Bromomethane	ND	500	"	"	"	"	"	"	
2-Butanone	ND	5000	"	"	"	"	"	"	
Tert-butyl alcohol	ND	20000	"	"	"	"	"	"	
n-Butylbenzene	ND	500	"	"	"	"	"	"	
sec-Butylbenzene	ND	500	"	"	"	"	"	"	
tert-Butylbenzene	ND	500	"	"	"	"	"	"	
Carbon disulfide	ND	5000	"	"	"	"	"	"	
Carbon tetrachloride	ND	500	"	"	"	"	"	"	
Chlorobenzene	ND	500	"	"	"	"	"	"	
Chloroethane	ND	500	"	"	"	"	"	"	
2-Chloroethylvinyl ether	ND	5000	"	"	"	"	"	"	
Chloroform	ND	500	"	"	"	"	"	"	
Chloromethane	ND	500	"	"	"	"	"	"	
2-Chlorotoluene	ND	500	"	"	"	"	"	"	
4-Chlorotoluene	ND	500	"	"	"	"	"	"	
Di-isopropyl ether	ND	1000	"	"	"	"	"	"	
Dibromochloromethane	ND	500	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1000	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	500	"	"	"	"	"	"	
Dibromomethane	ND	500	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	500	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	500	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	500	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	500	"	"	"	"	"	"	
1,1-Dichloroethane	ND	500	"	"	"	"	"	"	
1,2-Dichloroethane	ND	500	"	"	"	"	"	"	
1,1-Dichloroethene	ND	500	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	500	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	500	"	"	"	"	"	"	
1,2-Dichloropropane	ND	500	"	"	"	"	"	"	
1,3-Dichloropropane	ND	500	"	"	"	"	"	"	
2,2-Dichloropropane	ND	500	"	"	"	"	"	"	
1,1-Dichloropropene	ND	500	"	"	"	"	"	"	

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Gettler - Ryan Inc.	Project: TOSCO	
1364 North Mc Dowell Blvd., Suite B2	Project Number: SS #5525, Oakland	Reported:
Petaluma CA, 94954-1116	Project Manager: Dave Vossler	02/15/01 16:49

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
CC-1 (P101732-01) Water Sampled: 01/29/01 12:30 Received: 01/29/01 14:20									
cis-1,3-Dichloropropene	ND	500	ug/l	1000	1010750	01/31/01	01/31/01	EPA 8260B	
trans-1,3-Dichloropropene	ND	500	"	"	"	"	"	"	
Ethanol	ND	100000	"	"	"	"	"	"	
Ethylbenzene	ND	500	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	1000	"	"	"	"	"	"	
Freon 113	ND	500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	500	"	"	"	"	"	"	
2-Hexanone	ND	5000	"	"	"	"	"	"	
Isopropylbenzene	ND	500	"	"	"	"	"	"	
p-Isopropyltoluene	ND	500	"	"	"	"	"	"	
Methylene chloride	ND	500	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	5000	"	"	"	"	"	"	
Methyl tert-butyl ether	20100	500	"	"	"	"	"	"	
Naphthalene	ND	500	"	"	"	"	"	"	
n-Propylbenzene	ND	500	"	"	"	"	"	"	
Styrene	ND	500	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	500	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	500	"	"	"	"	"	"	
Tetrachloroethene	ND	500	"	"	"	"	"	"	
Toluene	ND	500	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	500	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	500	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	500	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	500	"	"	"	"	"	"	
Trichloroethene	ND	500	"	"	"	"	"	"	
Trichlorofluoromethane	ND	500	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	500	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	500	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	500	"	"	"	"	"	"	
Vinyl acetate	ND	5000	"	"	"	"	"	"	
Vinyl chloride	ND	500	"	"	"	"	"	"	
m,p-Xylene	ND	500	"	"	"	"	"	"	
o-Xylene	ND	500	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*106 %*		*88-118*		"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*119 %*		*81-130*		"	"	"	
Surrogate: Toluene-d8		*103 %*		*84-115*		"	"	"	
Surrogate: 4-Bromofluorobenzene		*117 %*		*78-124*		"	"	"	

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Gettler - Ryan Inc.	Project: TOSCO	
1364 North Mc Dowell Blvd., Suite B2	Project Number: SS #5325, Oakland	Reported:
Petaluma CA, 94954-1116	Project Manager: Dave Vossler	02/15/01 16:49

Conventional Chemistry Parameters by APHA/EPA Methods

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
CC-1 (P101732-01) Water Sampled: 01/29/01 12:30 Received: 01/29/01 14:20									
Cyanide (total)	ND	10.0	ug/l	1	1010704	01/30/01	01/30/01	EPA 335.2	
Sulfide	ND	0.500	mg/l	"	1020116	02/05/01	02/05/01	EPA 376.1	

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1364 North Mc Dowell Blvd., Suite B2	Project Number: SS #5325, Oakland	Reported:
Petaluma CA, 94954-1116	Project Manager: Dave Vossler	02/15/01 16:49

Physical Parameters by APHA/ASTM/EPA Methods

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
CC-1 (P101732-01) Water Sampled: 01/29/01 12:30 Received: 01/29/01 14:20									
Corrosivity	**7.10**	2.00	pH Units	1	1010718	01/30/01	01/30/01	EPA 9045B	
Ignitability by Flashpoint	ND	20.0	°C	"	1020225	02/09/01	02/09/01	EPA 1010	I-01
Reactivity in Water	ND	1.00	N/A	"	1010663	02/03/01	02/14/01	EPA Chapter 7	
Reactive Cyanide	ND	10.0	mg/l	"	1020112	02/05/01	02/05/01	SW846 Ch. 7.3	HT-04
Reactive Sulfide	ND	50.0	"	"	1010663	02/03/01	02/03/01	SW846 Ch 7.3	

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1364 North Mc Dowell Blvd., Suite B2	Project Number: SS #5325, Oakland	Reported:
Petaluma CA, 94954-1116	Project Manager: Dave Vossler	02/15/01 16:49

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M - Quality Control
Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1020008 - EPA 5030, waters										
Blank (1020008-BLK1)				Prepared & Analyzed: 02/01/01						
Gasoline	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	0.500	"							
Surrogate: a,a,a-Trifluorotoluene	*324*		"	*300*		*108*	*65-135*			
Surrogate: 4-Bromofluorobenzene	*299*		"	*300*		*99.7*	*65-135*			
LCS (1020008-BS1)				Prepared & Analyzed: 02/01/01						
Gasoline	2330	50.0	ug/l	2750		84.7	65-135			
Benzene	35.5	0.500	"	32.0		111	65-135			
Toluene	179	0.500	"	193		92.7	65-135			
Ethylbenzene	46.5	0.500	"	46.0		101	65-135			
Xylenes (total)	228	0.500	"	231		98.7	65-135			
Surrogate: a,a,a-Trifluorotoluene	*356*		"	*300*		*119*	*65-135*			
Surrogate: 4-Bromofluorobenzene	*312*		"	*300*		*104*	*65-135*			
Matrix Spike (1020008-MS1)	Source: P101685-01			Prepared & Analyzed: 02/01/01						
Gasoline	2490	50.0	ug/l	2750	ND	90.5	65-135			
Benzene	36.9	0.500	"	32.0	ND	115	65-135			
Toluene	184	0.500	"	193	ND	95.3	65-135			
Ethylbenzene	47.3	0.500	"	46.0	ND	103	65-135			
Xylenes (total)	237	0.500	"	231	ND	103	65-135			
Surrogate: a,a,a-Trifluorotoluene	*352*		"	*300*		*117*	*65-135*			
Surrogate: 4-Bromofluorobenzene	*319*		"	*300*		*106*	*65-135*			
Matrix Spike Dup (1020008-MSD1)	Source: P101685-01			Prepared & Analyzed: 02/01/01						
Gasoline	2510	50.0	ug/l	2750	ND	91.3	65-135	0.800	20	
Benzene	36.5	0.500	"	32.0	ND	114	65-135	1.09	20	
Toluene	183	0.500	"	193	ND	94.7	65-135	0.545	20	
Ethylbenzene	48.4	0.500	"	46.0	ND	105	65-135	2.30	20	
Xylenes (total)	236	0.500	"	231	ND	102	65-135	0.423	20	
Surrogate: a,a,a-Trifluorotoluene	*353*		"	*300*		*118*	*65-135*			
Surrogate: 4-Bromofluorobenzene	*319*		"	*300*		*106*	*65-135*			

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1364 North Mc Dowell Blvd., Suite B2	Project Number: SS #5325, Oakland	Reported:
Petaluma CA, 94954-1116	Project Manager: Dave Vossler	02/15/01 16:49

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1010677 - EPA 3010A										
Blank (1010677-BLK1)				Prepared: 01/31/01 Analyzed: 02/02/01						
Antimony	ND	60.0	ug/l							
Arsenic	ND	100	"							
Barium	ND	10.0	"							
Beryllium	ND	1.00	"							
Cadmium	ND	10.0	"							
Chromium	ND	10.0	"							
Cobalt	ND	7.00	"							
Copper	ND	10.0	"							
Lead	ND	75.0	"							
Molybdenum	ND	20.0	"							
Nickel	ND	30.0	"							
Selenium	ND	100	"							
Silver	ND	7.00	"							
Thallium	ND	100	"							
Vanadium	ND	10.0	"							
Zinc	ND	20.0	"							
LCS (1010677-BS1)				Prepared: 01/31/01 Analyzed: 02/02/01						
Antimony	468	60.0	ug/l	500		93.6	80-120			
Arsenic	560	100	"	500		112	80-120			
Barium	527	10.0	"	500		105	80-120			
Beryllium	54.5	1.00	"	50.0		109	80-120			
Cadmium	55.0	10.0	"	50.0		110	80-120			
Chromium	546	10.0	"	500		109	80-120			
Cobalt	542	7.00	"	500		108	80-120			
Copper	537	10.0	"	500		107	80-120			
Lead	556	75.0	"	500		111	80-120			
Molybdenum	469	20.0	"	500		93.8	80-120			
Nickel	544	30.0	"	500		109	80-120			
Selenium	565	100	"	500		113	80-120			
Silver	51.7	7.00	"	50.0		103	80-120			
Thallium	543	100	"	500		109	80-120			
Vanadium	537	10.0	"	500		107	80-120			
Zinc	525	20.0	"	500		105	80-120			

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Gettler - Ryan Inc.	Project: TOSCO	
1364 North Mc Dowell Blvd., Suite B2	Project Number: SS #5325, Oakland	Reported:
Petaluma CA, 94954-1116	Project Manager: Dave Vossler	02/15/01 16:49

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1010677 - EPA 3010A										
Matrix Spike (1010677-MS1)	Source: P101467-34			Prepared: 01/31/01		Analyzed: 02/02/01				
Antimony	444	60.0	ug/l	500	ND	88.8	75-125			
Arsenic	543	100	"	500	ND	109	75-125			
Barium	507	10.0	"	500	ND	100	75-125			
Beryllium	52.5	1.00	"	50.0	ND	104	75-125			
Cadmium	48.8	10.0	"	50.0	ND	97.6	75-125			
Chromium	526	10.0	"	500	ND	104	75-125			
Cobalt	521	7.00	"	500	ND	103	75-125			
Copper	514	10.0	"	500	ND	102	75-125			
Lead	535	75.0	"	500	ND	107	75-125			
Molybdenum	455	20.0	"	500	ND	89.9	75-125			
Nickel	520	30.0	"	500	ND	104	75-125			
Selenium	530	100	"	500	ND	106	75-125			
Silver	50.0	7.00	"	50.0	ND	100	75-125			
Thallium	523	100	"	500	ND	104	75-125			
Vanadium	518	10.0	"	500	ND	102	75-125			
Zinc	519	20.0	"	500	ND	101	75-125			
Matrix Spike Dup (1010677-MSD1)	Source: P101467-34			Prepared: 01/31/01		Analyzed: 02/02/01				
Antimony	476	60.0	ug/l	500	ND	95.2	75-125	6.96	20	
Arsenic	487	100	"	500	ND	97.4	75-125	10.9	20	
Barium	454	10.0	"	500	ND	89.8	75-125	11.0	20	
Beryllium	47.2	1.00	"	50.0	ND	93.3	75-125	10.6	20	
Cadmium	45.7	10.0	"	50.0	ND	91.4	75-125	6.56	20	
Chromium	477	10.0	"	500	ND	94.3	75-125	9.77	20	
Cobalt	474	7.00	"	500	ND	94.1	75-125	9.45	20	
Copper	463	10.0	"	500	ND	91.5	75-125	10.4	20	
Lead	493	75.0	"	500	ND	98.6	75-125	8.17	20	
Molybdenum	471	20.0	"	500	ND	93.1	75-125	3.46	20	
Nickel	480	30.0	"	500	ND	96.0	75-125	8.00	20	
Selenium	479	100	"	500	ND	95.8	75-125	10.1	20	
Silver	47.2	7.00	"	50.0	ND	94.4	75-125	5.76	20	
Thallium	475	100	"	500	ND	95.0	75-125	9.24	20	
Vanadium	466	10.0	"	500	ND	92.0	75-125	10.6	20	
Zinc	474	20.0	"	500	ND	91.9	75-125	9.06	20	

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Gettler - Ryan Inc.	Project: TOSCO	
1364 North Mc Dowell Blvd., Suite B2	Project Number: SS #5325, Oakland	Reported:
Petaluma CA, 94954-1116	Project Manager: Dave Vossler	02/15/01 16:49

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1010678 - EPA 7470A										
Blank (1010678-BLK1)				Prepared & Analyzed: 01/31/01						
Mercury	ND	0.200	ug/l							
LCS (1010678-BS1)				Prepared & Analyzed: 01/31/01						
Mercury	1.78	0.200	ug/l	1.60		111	80-120			
Matrix Spike (1010678-MS1)	Source: P101467-34			Prepared & Analyzed: 01/31/01						
Mercury	1.81	0.200	ug/l	1.60	ND	113	75-125			
Matrix Spike Dup (1010678-MSD1)	Source: P101467-34			Prepared & Analyzed: 01/31/01						
Mercury	1.95	0.200	ug/l	1.60	ND	122	75-125	7.45	20	

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1364 North Mc Dowell Blvd., Suite B2	Project Number: SS #5325, Oakland	Reported:
Petaluma CA, 94954-1116	Project Manager: Dave Vossler	02/15/01 16:49

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1010750 - EPA 5030 waters										
Blank (1010750-BLK1)			Prepared & Analyzed: 01/31/01							
1,2-Dichloropropane	ND	0.500	ug/l							
1,3-Dichloropropane	ND	0.500	"							
2,2-Dichloropropane	ND	0.500	"							
1,1-Dichloropropene	ND	0.500	"							
cis-1,3-Dichloropropene	ND	0.500	"							
trans-1,3-Dichloropropene	ND	0.500	"							
Ethanol	ND	100	"							
Ethylbenzene	ND	0.500	"							
Ethyl tert-butyl ether	ND	1.00	"							
Freon 113	ND	0.500	"							
Hexachlorobutadiene	ND	0.500	"							
2-Hexanone	ND	5.00	"							
Isopropylbenzene	ND	0.500	"							
p-Isopropyltoluene	ND	0.500	"							
Methylene chloride	ND	0.500	"							
4-Methyl-2-pentanone	ND	5.00	"							
Methyl tert-butyl ether	ND	0.500	"							
Naphthalene	ND	0.500	"							
n-Propylbenzene	ND	0.500	"							
Styrene	ND	0.500	"							
1,1,2,2-Tetrachloroethane	ND	0.500	"							
1,1,1,2-Tetrachloroethane	ND	0.500	"							
Tetrachloroethene	ND	0.500	"							
Toluene	ND	0.500	"							
1,2,3-Trichlorobenzene	ND	0.500	"							
1,2,4-Trichlorobenzene	ND	0.500	"							
1,1,2-Trichloroethane	ND	0.500	"							
1,1,1-Trichloroethane	ND	0.500	"							
Trichloroethene	ND	0.500	"							
Trichlorofluoromethane	ND	0.500	"							
1,2,3-Trichloropropane	ND	0.500	"							
1,3,5-Trimethylbenzene	ND	0.500	"							
1,2,4-Trimethylbenzene	ND	0.500	"							
Vinyl acetate	ND	5.00	"							
Vinyl chloride	ND	0.500	"							
m,p-Xylene	ND	0.500	"							

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1364 North Mc Dowell Blvd., Suite B2	Project Number: SS #5325, Oakland	Reported:
Petaluma CA, 94954-1116	Project Manager: Dave Vossler	02/15/01 16:49

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1010750 - EPA 5030 waters										
Blank (1010750-BLK1)				Prepared & Analyzed: 01/31/01						
Acetone	ND	10.0	ug/l							
Tert-amyl methyl ether	ND	1.00	"							
Benzene	ND	0.500	"							
Bromobenzene	ND	0.500	"							
Bromochloromethane	ND	0.500	"							
Bromodichloromethane	ND	0.500	"							
Bromoform	ND	0.500	"							
Bromomethane	ND	0.500	"							
2-Butanone	ND	5.00	"							
Tert-butyl alcohol	ND	20.0	"							
n-Butylbenzene	ND	0.500	"							
sec-Butylbenzene	ND	0.500	"							
tert-Butylbenzene	ND	0.500	"							
Carbon disulfide	ND	5.00	"							
Carbon tetrachloride	ND	0.500	"							
Chlorobenzene	ND	0.500	"							
Chloroethane	ND	0.500	"							
2-Chloroethylvinyl ether	ND	5.00	"							
Chloroform	ND	0.500	"							
Chloromethane	ND	0.500	"							
2-Chlorotoluene	ND	0.500	"							
4-Chlorotoluene	ND	0.500	"							
Di-isopropyl ether	ND	1.00	"							
Dibromochloromethane	ND	0.500	"							
1,2-Dibromo-3-chloropropane	ND	1.00	"							
1,2-Dibromoethane (EDB)	ND	0.500	"							
Dibromomethane	ND	0.500	"							
1,2-Dichlorobenzene	ND	0.500	"							
1,3-Dichlorobenzene	ND	0.500	"							
1,4-Dichlorobenzene	ND	0.500	"							
Dichlorodifluoromethane	ND	0.500	"							
1,1-Dichloroethane	ND	0.500	"							
1,2-Dichloroethane	ND	0.500	"							
1,1-Dichloroethene	ND	0.500	"							
cis-1,2-Dichloroethene	ND	0.500	"							
trans-1,2-Dichloroethene	ND	0.500	"							

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1364 North Mc Dowell Blvd., Suite B2	Project Number: SS #5325, Oakland	Reported:
Petaluma CA, 94954-1116	Project Manager: Dave Vossler	02/15/01 16:49

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1010750 - EPA 5030 waters										
Blank (1010750-BLK1)				Prepared & Analyzed: 01/31/01						
o-Xylene	ND	0.500	ug/l							
Surrogate: Dibromofluoromethane	*5.36*		"	*5.00*		*107*	*88-118*			
Surrogate: 1,2-Dichloroethane-d4	*5.76*		"	*5.00*		*115*	*81-130*			
Surrogate: Toluene-d8	*5.09*		"	*5.00*		*102*	*84-115*			
Surrogate: 4-Bromofluorobenzene	*5.89*		"	*5.00*		*118*	*78-124*			
LCS (1010750-BS1)				Prepared & Analyzed: 01/31/01						
Benzene	4.75	0.500	ug/l	5.00		95.0	80-119			
Chlorobenzene	4.74	0.500	"	5.00		94.8	86-117			
1,1-Dichloroethene	4.43	0.500	"	5.00		88.6	74-114			
Methyl tert-butyl ether	5.33	0.500	"	5.00		107	79-118			
Toluene	4.51	0.500	"	5.00		90.2	86-115			
Trichloroethene	4.19	0.500	"	5.00		83.8	84-120			
Surrogate: Dibromofluoromethane	*5.38*		"	*5.00*		*108*	*88-118*			
Surrogate: 1,2-Dichloroethane-d4	*5.62*		"	*5.00*		*112*	*81-130*			
Surrogate: Toluene-d8	*5.06*		"	*5.00*		*101*	*84-115*			
Surrogate: 4-Bromofluorobenzene	*5.70*		"	*5.00*		*114*	*78-124*			
Matrix Spike (1010750-MS1)	Source: P101732-01			Prepared & Analyzed: 01/31/01						
Benzene	5200	500	ug/l	5000	ND	104	80-119			
Chlorobenzene	4800	500	"	5000	ND	96.0	86-117			
1,1-Dichloroethene	5090	500	"	5000	ND	102	74-114			
Methyl tert-butyl ether	27600	500	"	5000	20100	150	79-118			QM-4X
Toluene	4730	500	"	5000	ND	94.6	86-115			
Trichloroethene	4370	500	"	5000	ND	87.4	84-120			
Surrogate: Dibromofluoromethane	*5.73*		"	*5.00*		*115*	*88-118*			
Surrogate: 1,2-Dichloroethane-d4	*6.44*		"	*5.00*		*129*	*81-130*			
Surrogate: Toluene-d8	*5.09*		"	*5.00*		*102*	*84-115*			
Surrogate: 4-Bromofluorobenzene	*5.79*		"	*5.00*		*116*	*78-124*			

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Gettler - Ryan Inc.	Project: TOSCO	
1364 North Mc Dowell Blvd., Suite B2	Project Number: SS #5325, Oakland	Reported:
Petaluma CA, 94954-1116	Project Manager: Dave Vossler	02/15/01 16:49

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1010750 - EPA 5030 waters										
Matrix Spike Dup (1010750-MSD1)	**Source: P101732-01**			Prepared & Analyzed: 01/31/01						
Benzene	5130	500	ug/l	5000	ND	103	80-119	1.36	20	
Chlorobenzene	4730	500	"	5000	ND	94.6	86-117	1.47	20	
1,1-Dichloroethene	5020	500	"	5000	ND	100	74-114	1.38	20	
Methyl tert-butyl ether	26500	500	"	5000	20100	128	79-118	4.07	20	QM-4X
Toluene	4590	500	"	5000	ND	91.8	86-115	3.00	20	
Trichloroethene	4210	500	"	5000	ND	84.2	84-120	3.73	20	
Surrogate: Dibromofluoromethane	*5.51*		"	*5.00*		*110*	*88-118*			
Surrogate: 1,2-Dichloroethane-d4	*6.26*		"	*5.00*		*125*	*81-130*			
Surrogate: Toluene-d8	*5.09*		"	*5.00*		*102*	*84-115*			
Surrogate: 4-Bromofluorobenzene	*5.75*		"	*5.00*		*115*	*78-124*			

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Gettler - Ryan Inc.	Project: TOSCO	
1364 North Mc Dowell Blvd., Suite B2	Project Number: SS #5325, Oakland	Reported:
Petaluma CA, 94954-1116	Project Manager: Dave Vossler	02/15/01 16:49

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control
Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1010704 - General Preparation										
Blank (1010704-BLK1)				Prepared & Analyzed: 01/30/01						
Cyanide (total)	ND	10.0	ug/l							
LCS (1010704-BS1)				Prepared & Analyzed: 01/30/01						
Cyanide (total)	191	10.0	ug/l	200		95.5	80-120			
Matrix Spike (1010704-MS1)	Source: P101541-01			Prepared & Analyzed: 01/30/01						
Cyanide (total)	191	10.0	ug/l	200	16.5	87.3	75-125			
Matrix Spike Dup (1010704-MSD1)	Source: P101541-01			Prepared & Analyzed: 01/30/01						
Cyanide (total)	195	10.0	ug/l	200	16.5	89.3	75-125	2.07	20	
Batch 1020116 - General Preparation										
Blank (1020116-BLK1)				Prepared & Analyzed: 02/05/01						
Sulfide	ND	0.500	mg/l							
LCS (1020116-BS1)				Prepared & Analyzed: 02/05/01						
Sulfide	15.0	0.500	mg/l	15.0		100	80-120			
LCS Dup (1020116-BSD1)				Prepared & Analyzed: 02/05/01						
Sulfide	15.0	0.500	mg/l	15.0		100	80-120	0	20	

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1364 North Mc Dowell Blvd., Suite B2	Project Number: SS #5325, Oakland	Reported:
Petaluma CA, 94954-1116	Project Manager: Dave Vossler	02/15/01 16:49

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1010663 - General Preparation										
Blank (1010663-BLK1)				Prepared: 01/29/01 Analyzed: 02/03/01						
Reactive Sulfide	ND	50.0	mg/l							
Reactivity in Water	ND	1.00	N/A							
LCS (1010663-BS2)				Prepared: 01/29/01 Analyzed: 02/03/01						
Reactive Sulfide	1620	50.0	mg/l	2600		62.3	5-120			
Batch 1010718 - None										
Duplicate (1010718-DUP1)		Source: P101732-01		Prepared & Analyzed: 01/30/01						
Corrosivity	7.12	2.00	pH Units		7.10			0.281	20	
Batch 1020112 - General Preparation										
Blank (1020112-BLK1)				Prepared & Analyzed: 02/05/01						
Reactive Cyanide	ND	10.0	mg/l							
LCS (1020112-BS1)				Prepared & Analyzed: 02/05/01						
Reactive Cyanide	169	10.0	mg/l	500		33.8	5-120			

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Petaluma CA, 94954-1116	Project Manager: Dave Vossler	02/15/01 16:49

Notes and Definitions

F-01	No flash detected up to 60 °C (140 °F).
HT-04	This sample was analyzed beyond the EPA recommended holding time.
QM-4X	The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

№ 000420

TOSCO

☐ 885 Jarvis Drive • Morgan Hill, CA 95037 • (408) 776-9600 • FAX (408) 782-6308
☐ 819 Striker Ave., Suite 8 • Sacramento, CA 95834 • (916) 921-9600 FAX (916) 921-0100
☐ 404 N. Wiget Lane • Walnut Creek, CA 94598 • (925) 988-9600 FAX (925) 988-9673
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☐ 1551 Industrial Road • San Carlos, CA 94070 • (650) 232-9600 FAX (650) 232-9612

Consultant Company: Gettler-Ryan Inc.	Project Name: Tosco SS #5325 140
Address: 1364 N. McDowell Blvd. Suite B2	TOSCO Engineer (required) D. DeWitt
City: Petaluma State: CA Zip Code: 94954	
Telephone: 707-789-3251 FAX #: 707-789-3218	Site #, City, State: SS #5325, Oakland, CA
Report To: D. Vossler Sampler: D. Vossler	QC Data: ☐ Level D (Standard) ☐ Level C ☐ Level B ☐ Level A

Turnaround Time: ☐ 10 Work Days ☒ 5 Work Days ☐ 3 Work Days ☐ 2 Work Days ☐ 1 Work Day ☐ 2-8 Hours

☐ Drinking Water ☐ Waste Water ☐ Other

CODE: ☐ Misc. ☐ Detect. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Sequoia's Sample #	TPH (EPA 8015 Mod. Gas)	BTEX (EPA 8020)	TPH (EPA 8015 Mod. Diesel)	Total Extractable Petroleum Hydrocarbons (EPA 8015)	Volatile Organics (EPA 8240)	MTBE Confirmation (EPA 8260)	8260B full scan CAM 17 list	RCI	Comments
1. CC-1	1-29-01 12:30pm	Water	4	VOA's	P101732-01	X	X					X		
2.			1	1L Amber									X	
3.			3	500 ml Plastic				X	X			X		Metals unfiltered and unpreserved
4.														
5.														
6.	COOLER CUSTODY SEALS INTACT ☐													FAX data
7.	NOT INTACT ☐													by 2-5-01
8.														am.
9.	COOLER TEMPERATURE: 6 °C													
10.														

Relinquished By: D. Vossler	Date: 1-29-01	Time: 1420	Received By: Gail Hamner	Date: 1/29/01	Time: 1420
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received in Good Condition? ☐ Yes ☐ No Samples on Ice? ☐ Yes ☐ No Method of Shipment_____ Page ___ of ___

To be completed upon receipt of report:

1) Were the analyses requested on the Chain of Custody reported? ☒ Yes ☐ No If no, what analyses are still needed?

2) Was the report issued within the requested turnaround time? ☐ Yes ☒ No If no, what was the turnaround time? 10 days late

Approved by: Dan J. Vossler Signature: D. Vossler Company: Date:

Pink - Client

Yellow - Sequoia

White - Sequoia

SEQUOIA ANALYTICAL

FEB. 15 2001 5:25PM

P. 21/21