APCL

Applied Physics & Chemistry Laboratory

13760 Magnolia Ave. Chino CA 91710
Tel. (909) 590-1828 Fax (909) 590-1498

August 21, 2002

SOTA Environmental
Attention: Yu Zeng
16835 W. Bernardo Dr. Suite 212
San Diego CA 92127

Dear Yu,

This package contains samples in our Service ID 02-4025 and your project is 00HW019 JPL water from Pasadena, CA. Enclosed please find:

(1) One original report.
(2) One original Chain of Custody.
(3) One diskette containing EDD Deliverable.
(4) One original of Level D Data Package Deliverable.

If anything is missing or you have any questions, please feel free to contact me.

Respectfully submitted,

Kevin Xie, Ph.D.,
QA/QC Director
Applied P & Ch Laboratory

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Submitted to:
SOTA Environmental
Attention: Yu Zeng
16835 W. Bernardo Dr, Ste. 212
San Diego CA 92127
Tel: (858)485-8100 Fax: (858)485-0812

Service ID #: 801-024025
Collected by: MES/TAM
Collected on: 07/24/02

Received: 07/24/02
Extracted: N/A
Tested: 07/25-08/08/02
Reported: 08/09/02

Sample Description: Water from Pasadena, CA
Project Description: 00HW019 JPL

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result MW-5 02-04025-1	MW-6 02-04025-2	MW-10 02-04025-3	TB-15 02-04025-4
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01	<0.01	
Dilution Factor				1	1	1	1
PERCHLORATE	314.0	µg/L	4	4.1	<4	13.0	-
VOLATILE ORGANIC COMPOUNDS							
Dilution factor				1	1	1	1
CARBON TETRACHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLOROFORM	524.2	µg/L	0.5	<0.5	<0.5	1.0	<0.5
1,1-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	0.5J	0.9	<0.5
1,2-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	524.2	µg/L	1		-		0.5J
TETRACHLOROETHENE	524.2	µg/L	0.5	<0.5	1.1	1.2	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	0.6	<0.5	8.4	<0.5
1,2,1-TRICHLORO-1,2,2-TRIFLUOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5

PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit
N.D.: Not Detected or less than the practical quantitation limit. "-": Analysis is not required.
J: Reported between PQL and MDL.
Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0

Respectfully submitted,

Dominic Lau
Laboratory Director
Applied P & Ch Laboratory

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Analysis of Water Samples

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CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01	<0.01	
Dilution Factor				1	1	1	1
PERCHLORATE	314.0	µg/L	4	4.1	<4	13.0	-
VOLATILE ORGANIC COMPOUNDS							
Dilution Factor				1	1	1	1
BENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMODICHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOFORM	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOMETHANE	524.2	µg/L	0.73 [a]	<0.73	<0.73	<0.73	<0.73
N-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
SEC-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TERT-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CARBON TETRACHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLORODIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLOROFORM	524.2	µg/L	0.5	<0.5	<0.5	1.0	<0.5
CHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
2-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
4-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	µg/L	0.54 [a]	<0.54	<0.54	<0.54	<0.54
1,2-DIBROMOETHANE (EDB)	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	0.5J	0.9	<0.5
1,2-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CIS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-5 02-04025-1	MW-6 02-04025-2	MW-10 02-04025-3	TB-15 02-04025-4
TRANS 1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CIS 1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRANS 1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
HEXACHLOROBUTADIENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
ISOPROPYLBENZENE (CUMENE)	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
P-ISOPROPYLTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	524.2	µg/L	1	<1	<1	<1	0.5J
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	<1	<1	<1	<1
NAPHTHALENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
N-PROPYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
STYRENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TETRACHLOROETHENE	524.2	µg/L	0.5	<0.5	1.1	1.2	<0.5
TOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	0.6	<0.5	8.1	<0.5
TRICHLOROFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
VINYL CHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
O-XYLENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
M/P-XYLENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5

PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit
N.D.: Not Detected at or less than the practical quantitation limit "-": Analysis is not required
J: Reported between PQL and MDL
Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0
* MDL reported

Respectfully submitted,

Dominic Lau
Laboratory Director
Applied P & Ch Laboratory

Level D Data Package Deliverables

General Information

Project: 00HW019 JPL

APCL Service ID: 02-4025

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino, CA 91710
Telephone (909)590-1828
Fax (909)590-1498

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Case Narrative

Project: JPL /Pasadena, CA./00HW019

For SOTA Environmental

APCL Service No: 02-4025

1. Sample Identification

The sample identifications are listed in the following table:

SOTA Environmental Sample ID	APCL Sample ID
MW-10	02-04025-3
TB-15	02-04025-4
MW-5	02-04025-1
MW-6	02-04025-2

2. Analytical Methodology

Samples are analyzed by EPA methods

524.2 (Volatile Organic Compounds),
7196 (Chromium (VI)),
314.0 (Perchlorate, low level),

3. Holding Time

All samples were extracted, digested and analyzed within the holding times defined by the appropriate EPA methods of the analyses.

4. Preservation

All samples were preserved and stored according to the appropriate EPA methods.

5. Tele-log

None

6. Anomaly

None

12650

"I certify that these data are technically accurate, complete, and in compliance with the terms and conditions of the contract, for other than the conditions detailed above. Release of the data contained in the hardcopy data package and its electronic data deliverable submitted on diskette had been authorized by the Laboratory Manager or her/his designee, as verified by the following signature."

Respectfully submitted,

Kevin Xie, Ph.D.,
QA/QC Director
Applied P & Ch Laboratory

Applied P & Ch Laboratory

APCL

13760 Magnolia Ave. Chino CA 91710
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Chain of Custody

Please Print in pen Page 1 of 1

Client: SOTA ENVIR. TECH., INC. Contact: MIKE SAYRE Tel #: 858-485-8100 Fax #: 858-485-0812

Address: 16835 W. BERNARDO DR. #212 City: SAN DIEGO State: CA Zip code: 92127

Bill to: SOTA

Project Name/Code JPL Job #00HW019 P.O. #

Project Address PASADENA, CALIFORNIA APCL Quotation #

Due Date: ☑ regular ☐ rush: ___ days ___ hours Sampled by: MES/TAM

White - With report
Yellow Lab copy
Pink - Originator

Field Sample ID No.	Sample Description	Date Collected	Time Collected	Sample Matrix	Preservation	# of Containers	Analysis Items: VOCs (524.2)	Perchlorate (314.0)	Cr VI (7196)	Total Cr (200.8)	Remarks
MW-10	MW-10	7/24/02	1001	WATER	HCl	9	X				MS/MSD EPA LEVEL IV QA/QC
					—	2		X	X		
					HNO_3	2				X	
TB-15	TRIP BLANK		0911		HCl	2	X				
MW-5	MW-5		1127		HCl	3	X				
					—	1		X	X		
					HNO_3	1				X	
MW-6	MW-6		1408		HCl	3	X				
					—	1		X	X		
					HNO_3	1				X	

4025

QC Requirement: ☐ Regular; ☐ QA/QC Report; ☐ WIP; ☐ Raw Data; ☐ Extended Raw Data ☐ CLP; ☐ ACE ☐ AFCEE ☐ NEESA ___ (I, C or D); ☐ Other _____ (Please specify)

Sample Disposal: ☐ Return ☐ Disposal by APCL ☐ Hold for _____ days after receiving date. **If not specified, samples will be discarded 45 days after samples are received.**

Sample Conditions: ☐ Intact; ☐ Broken. Cooler Seal: ☐ Intact; ☐ Broken; ☐ None. Tag # _____ Temperature: ☐ Room ☐ Cold (_____ °C).

Relinquished by _____ Date/Time 7/24/02 1556 Received by _____ Date/Time 7/24/02 1556

Relinquished by _____ Date/Time 7/24/02 1655 Received by _____ Date/Time 7/24/02 1655

APCL USE ONLY Service # Note:

Clients understand that all terms described in the proposals, quotations for this project, and/or the general terms provided in the current APCL price schedules will be followed. APCL reserves the right to terminate its service or withhold delivery of any reports, if in APCL's sole discretion the terms of the project have been broken.

Applied P & Ch Laboratory
1300 Macdonald Ave Chico CA 95928
Tel (800) 345-1825 Fax (530) 895-1498

Sample Receiving Checklist

APCL ServiceID: **4025** Client Name/Project: Sota Environmental

1. Sample Arrival

Date/Time Received 7/24/02 1655 Date/Time Opened 7/24/02 1655 By (name): KennyChan
Custody Transfer ☐ Client ☐ Golden State ☐ UPS ☐ US Mail ☐ FedEx ☑ APCL Empl: Richard Stinson

2. Chain-of-Custody (CoC)

☑ With Samples? ☐ Faxed? ☐ Client has Copy? ☑ Signed, dated? By: Mike 7/24/02
☑ Project ID? ☑ Analyses Clear? ☐ Hold Samples? #on Hold ___ # Received 4
☑ CoC/Docs Zip Locked under lid? ☐ Compos #: ___ ☑ #Samples OK?
☐ Discrepancies? ☐ Client notified? ☐ Response (attach docs): ___

3. Shipping Container/Cooler

☑ Cooler Used? # of 1 Cooled by: ☑ Ice ☐ Blue Ice ☐ Dry Ice ☐ None
Temp °C 3.6
(Cooler temperature measured from temp blank if present, otherwise measured from the cooler).
Cooler Custody Seal? ☐ Absent ☐ Intact ☐ Tampered?

4. Sample Preservation

☐ pH ≤2 ☐ pH ≥12
If Not, pH = ___ Preserved by ☐ Client ☐ APCL ☐ Third Party

5. Holding-time Requirements

☐ pH 24hr ☐ BACT 6/24hr ☑ Cr^{VI} 24hr ☐ NO_3^- 48hr ☐ BOD 48hr
☐ Cl_2 ASAP ☐ Turbidity 48hr ☐ DO ASAP ☐ Fe(II) ASAP
☐ HT Expired? ☐ Client notified?

6. Sample Container Condition

☑ Intact? ☐ Broken? ☐ Documented? Number: ___
Type: ☑ plastic ☑ glass ☐ Tube: brass/SS ☐ Tedlar Bag
☑ Quantity OK? ☐ Leaking? ☐ Anomaly?
☑ Caps tight? ☐ Air Bubbles? ☐ Anomaly?
Labels ☑ Unique ID? ☑ Date/Time ☐ Preserved?

7. Turn Around Time

☐ RUSH TAT: ___ ☑ Std (7-10 days) ☐ Not Marked

8. Sample Matrix

☐ Drinking H_2O ☑ Other Liq ☐ Soil ☐ Wipe ☐ Polymer ☐ Air ☐ Other: ___
☐ Ground H_2O ☐ Sludge ☐ Filter ☐ Oil/Petro ☐ Paint ☐ W. Water ☐ Extract ☐ Unknown

9. Pre-Login Check List Completed & OK?

☑ ALL OK? (if not, attach docs) ☐ Client Contact? (Name: ___)Date/Time: ___

Received/Checked by KennyChan Date: 24 Jul 2002 Time: 9:05 a.m

*HT: Samples must be analyzed for results to reflect total concentrations. Results generated outside required of holding times are considered minimal values and may be used to define waste as hazardous but not as non-hazardous.

1 of 2

Applied P & Ch Laboratory
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Tel: (909) 590-1828 Fax: (909) 590-1498

Sample Login: Check List

02-04025 (1288_ 390) (4858100_ 390)

07/25/02

Part 1: General Information

☐ Company Information	Name:	*SOTA Environmental*
	Address:	*16835 W. Bernardo Dr, Ste. 212 ,San Diego ,CA 92127*
☐ Project Information	Project Description:	*JPL*
	Project #:	*00HW019*
☐ Billing Information	P.O. #:	
	Bill Address:	*16835 W. Bernardo Dr, Ste. 212 ,San Diego ,CA 92127*
	Lab Project ID:	*2002_0002*
	Client Database #:	*01*
☐ Receiving Information	Who Received Sample?	*Kenny Chan*
	Receiving Date/Time:	*07/24/02 1655PM*
	COC No.	
☐ Shipping Information	Shipping Company	*APCL pick up*
	Packing Information:	*Cooler/Ice Chester*
	Cooler Temperature:	*3.6 °C*
☐ Container Information	Container Provider:	*Client*
☐ Sampling Information	Sampling Person:	*MES/TAM*
	Sampling Company:	*Client*
☐ Turn-Around-Time Option:		*Normal*
☐ QC Option:		*NEESA D*
☐ Disposal Option:		*Not specify*

Part 2: Sample Information

Seq. #	Sample ID (on COC)	Sample Sub-ID	APCL Sample ID	Matrix	Cont-tainer	Preser-vative	Vol, ml Am. g	# of Replica	Condition G, L, B	Collected mmddyy	Hold ?	Composite Group	TAT Days	
1	MW-10	VOC	02-04025-3-α	W	V	C	40	9	G	072402	N	0	9	☐
	MW-10	CRVI/PERCH	02-04025-3-β	W	P		500	2	G	072402	N	0	9	☐
2	TB-15	VOC	02-04025-4	W	V	C	40	2	G	072402	N	0	9	☐
3	MW-5	VOC	02-04025-1-α	W	V	C	40	3	G	072402	N	0	9	☐
	MW-5	CRVI/PERCH	02-04025-1-β	W	P		500	1	G	072402	N	0	9	☐
4	MW 6	VOC	02-04025-2-α	W	V	C	40	3	G	072402	N	0	9	☐
	MW 6	CRVI/PERCH	02-04025-2-β	W	P		500	1	G	072402	N	0	9	☐

Part 3: Analysis Information

Test Items:

☐ *524.2*	Volatile Organic Compounds
☐ *7196*	Chromium (VI)
☐ *300.0*	Perchlorate, low level
☐ *200.7/6010*	Sodium, Na, by ICP
☐ *200.7/6010*	Potassium, K, by ICP
☐ *200.7/6010*	Calcium, Ca, by ICP
☐ *200.7/6010*	Magnesium, Mg, by ICP
☐ *200.7/6010*	Iron, Fe, by ICP
☐ *300.0*	Sulfate (SO_4^{--}), by IC
☐ *300.0/SM4500NO3*	Nitrate (NO_3^-) as N by IC
☐ *300.0*	Chloride Cl^- by IC
☐ *SM2320B*	Carbonate
☐ *SM2320B*	Bicarbonate
☐ *9040/150.1*	pH
☐ *160.1*	Solids, Total Dissolved (TDS)
☐ *206.2/7060*	Arsenic, As, by GFAA
☐ *310.1*	Alkalinity
☐ *PAH-SIM*	PAH (NOAA)

Seq. #	Client"s Sample ID (as given on COC)	Sample Sub-ID	APCL Sample ID	Matrix	524.2	CHROMIUM	PERCHL	NA	K	CA	MG	FE	
1	MW-10	VOC	02-04025-3-α	W	X								☐
	MW-10	CRVI/PERCH	02-04025-3-β	W		X	X						☐
2	TB-15	VOC	02-04025-4	W	X								☐
3	MW-5	VOC	02-04025-1-α	W	X								☐

	MW-5	CRVI/PERCH	02-04025-1-β	W		X	X							☐
4	MW-6	VOC	02 04025-2 α	W	X									☐
	MW-6	CRVI/PERCH	02 04025-2 β	W		X	X							☐

Seq. #	Client"s Sample ID (as given on COC)	Sample Sub-ID	APCL Sample ID	Matrix	SO4	NO3	CL	CARBONATE	BICARBON	PH	TDS	AS	
1	MW-10	VOC	02-04025-3-α	W									☐
	MW-10	CRVI/PERCH	02-04025-3-β	W									☐
2	TB-15	VOC	02-04025-4	W									☐
3	MW-5	VOC	02-04025-1-α	W									☐
	MW-5	CRVI/PERCH	02-04025-1 β	W									☐
4	MW-6	VOC	02-04025-2-α	W									☐
	MW-6	CRVI/PERCH	02-04025-2-β	W									☐

Seq. #	Client"s Sample ID (as given on COC)	Sample Sub-ID	APCL Sample ID	Matrix	ALKALIN	SIM	
1	MW-10	VOC	02-04025-3-α	W			☐
	MW-10	CRVI/PERCH	02-04025-3-β	W			☐
2	TB-15	VOC	02-04025-4	W			☐
3	MW-5	VOC	02-04025-1-α	W			☐
	MW-5	CRVI/PERCH	02-04025-1-β	W			☐
4	MW-6	VOC	02-04025-2-α	W			☐
	MW-6	CRVI/PERCH	02-04025-2-β	W			☐

☐ Client"s Requirement: **PLEASE RUN MS/MSD ON SAMPLE # 3**

☐ **IF ENOUGH SAMPLE**

☐ **FOR 8270SIM, PLEASE INCLUDE 1,4-DIOXANE**

Login By Kenny Chan

Check By DY

APCL

Applied Physics & Chemistry Laboratory

13760 Magnolia Ave. Chino CA 91710
Tel. (909) 590-1828 Fax (909) 590-1498

August 21, 2002

SOTA Environmental
Attention: Yu Zeng
16835 W. Bernardo Dr. Suite 212
San Diego CA 92127

Dear Yu,

This package contains samples in our Service ID 02-4033 and your project is 00IIW019 JPL from Pasadena, CA. Enclosed please find:

(1) One original report.
(2) One original Chain of Custody.
(3) One diskette containing EDD Deliverable.
(4) One original of Level D Data Package Deliverable.

If anything is missing or you have any questions, please feel free to contact me.

Respectfully submitted,

Kevin Xie, Ph.D.,
QA/QC Director
Applied P & Ch Laboratory

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Submitted to:
SOTA Environmental
Attention: Yu Zeng
16835 W. Bernardo Dr. Ste. 212
San Diego CA 92127
Tel: (858)485-8100 Fax: (858)485-0812

Service ID #: 801-024033
Collected by: MES/IAM
Collected on: 07/25/02

Received: 07/25/02
Extracted: N/A
Tested: 07/25-26/02
Reported: 08/01/02

Sample Description: Water from Pasadena, CA
Project Description: 00HW019 JPL

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result MW-7 02-04033-1	Analysis Result MW-8 02-04033-2
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01
Dilution Factor				50	1
PERCHLORATE	314.0	µg/L	1	2,590	21.7

Component Analyzed	Method	Unit	PQL	Analysis Result MW-7 02-04033-1	Analysis Result MW-8 02-04033-2	Analysis Result FB-16 02-04033-3
VOLATILE ORGANIC COMPOUNDS						
Dilution Factor				1	1	1
CARBON TETRACHLORIDE	524.2	µg/L	0.5	70.7 [1,2]	0.7	<0.5
CHLOROFORM	524.2	µg/L	0.5	6.8	<0.5	<0.5
1,1-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHENE	524.2	µg/L	0.5	3.1	<0.5	<0.5
METHYLENE CHLORIDE	524.2	µg/L	1		-	3.5
1,1-TRICHLOROETHENE	524.2	µg/L	0.5	7.6	<0.5	<0.5
1,1-DICHLOROETHENE	524.2	µg/L	0.5	6.3	<0.5	<0.5
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	524.2	µg/L	0.5	1.6	<0.5	<0.5

PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit
N/D: Not Detected or less than the practical quantitation limit. "-": Analysis is not required
[1] Reported between PQL and MDL.
Listed [illegible] factors (DFs) are relative to the method default DF. All unlisted DFs are 1.0
[2] Analyzed with a dilution factor of 5.

Respectfully submitted,

Dominic Lau
Laboratory Director
Applied P & Ch Laboratory

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Submitted to:
SOTA Environmental
Attention: Yu Zeng
16835 W. Bernardo Dr. Ste. 212
San Diego CA 92127
Tel: (858)485-8100 Fax: (858)485-0812

Service ID #: 801-024033
Collected by: MES/TAM
Collected on: 07/25/02

Received: 07/25/02
Extracted: N/A
Tested: 07/25-26/02
Reported: 08/01/02

Sample Description: Water from Pasadena, CA
Project Description: 00HW019 JPL

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result MW-7 02-04033-1	MW-8 02-04033-2
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01
Dilution Factor				50	1
PERCHLORATE	314.0	µg/L	4	2,590	21.7

Component Analyzed	Method	Unit	PQL	Analysis Result MW-7 02-04033-1	MW-8 02-04033-2	FB-16 02-04033-3
VOLATILE ORGANIC COMPOUNDS						
Dilution Factor				1	1	1
BENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMODICHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOFORM	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOMETHANE	524.2	µg/L	0.73 [4]	<0.73	<0.73	<0.73
N-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
SEC-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TERT-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CARBON TETRACHLORIDE	524.2	µg/L	0.5	70.7 [2]	0.7	<0.5
CHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLORODIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROFORM	524.2	µg/L	0.5	6.8	<0.5	<0.5
CHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
4-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	µg/L	0.54 [4]	<0.54	<0.54	<0.54
1,2-DIBROMOETHANE (EDB)	524.2	µg/L	0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-7 02-04033-1	MW-8 02-04033-2	FB-16 02-04033-3
1,2-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHENE	524.2	µg/L	0.5	3.1	<0.5	<0.5
CIS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
HEXACHLOROBUTADIENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
ISOPROPYLBENZENE (CUMENE)	524.2	µg/L	0.5	<0.5	<0.5	<0.5
P-ISOPROPYLTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	524.2	µg/L	1	<1	<1	3.5
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	<1	<1	<1
NAPHTHALENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
N-PROPYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
STYRENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TETRACHLOROETHENE	524.2	µg/L	0.5	7.6	<0.5	<0.5
TOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	6.3	<0.5	<0.5
TRICHLOROFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	524.2	µg/L	0.5	1.6	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
VINYL CHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
O-XYLENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
M-P-XYLENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5

PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit.
ND: Not Detected or less than the practical quantitation limit. "-": Analysis is not required.
*: Reported between PQL and MDL.
Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0.
MDL: reported.
Analyzed with a dilution factor of 5.

Respectfully submitted,

Dominic Lau
Laboratory Director
Applied P & Ch Laboratory

Level D Data Package Deliverables

General Information

Project: 00HW019 JPL

APCL Service ID: 02-4033

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino, CA 91710
Telephone (909)590-1828
Fax (909)590-1498

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Case Narrative

Project: JPL/Pasadena, CA./00HW019

For SOTA Environmental

APCL Service No: 02-4033

1. Sample Identification

The sample identifications are listed in the following table:

SOTA Environmental Sample ID	APCL Sample ID
TB-16	02-04033-3
MW-7	02-04033-1
MW-8	02-04033-2

2. Analytical Methodology

Samples are analyzed by EPA methods

524.2 (Volatile Organic Compounds),
7196 (Chromium (VI)),
314.0 (Perchlorate, low level)

3. Holding Time

All samples were extracted, digested and analyzed within the holding times defined by the appropriate EPA methods of the analyses.

4. Preservation

All samples were preserved and stored according to the appropriate EPA methods.

5. Tele-log

None

6. Anomaly

None

"I certify that these data are technically accurate, complete, and in compliance with the terms and conditions of the contract, for other than the conditions detailed above. Release of the data contained in the hardcopy data package and its electronic data deliverable submitted on diskette had been authorized by the Laboratory Manager or her/his designee, as verified by the following signature."

Respectfully submitted,

Kevin Xie, Ph.D.,
QA/QC Director
Applied P & Ch Laboratory

Applied P & Ch Laboratory

APCL

13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Chain of Custody

Please Print in pen Page 1 of 1

Client: SOTA ENVIR. TECH., INC. Contact: MIKE SAYRE Tel #: 858-485-8100 Fax #: 858-485-0812

Address: 16835 W. BERNARDO DR. #212 City: SAN DIEGO State: CA Zip code: 92127

Bill to: SOTA

Project Name/Code JPL Job #00HW019 P.O. #

Project Address PASADENA, CALIFORNIA APCL Quotation #

Due Date: ☑ regular ☐ rush: ___ days ___ hours Sampled by: MES/TAM

Field Sample ID No.	Sample Description	Date Collected	Time Collected	Sample Matrix	Preservation	# of Containers	Analysis Items: VOCs (524.2)	Perchlorate (314.0)	Cr VI (7196)	Total Cr (200.8)	Remarks
TB-16	TRIP BLANK	7/25/02	1005	WATER	HCl	2	X				EPA LEVEL IV QA/QC
MW-7	MW-7		1030		HCl	3	X				
					—	1		X	X		
					HNO_3	1				X	
MW-8	MW-8		1251		HCl	3	X				
					—	1		X	X		
					HNO_3	1				X	

4053

White With report
Yellow Lab copy
Pink Originator

QC Requirement: ☐ Regular; ☐ QA/QC Report; ☐ WIP; ☐ Raw Data; ☐ Extended Raw Data ☐ CLP; ☐ ACE ☐ AFCEE ☐ NEESA ___ (E, C or D); ☐ Other _____ (Please specify)

Sample Disposal ☐ Return ☐ Disposal by APCL ☐ Hold for _____ days after receiving date. **If not specified, samples will be discarded 45 days after samples are received.**

Sample Conditions: ☐ Intact; ☐ Broken. Cooler Seal: ☐ Intact; ☐ Broken; ☐ None. Tag # _____ Temperature: ☐ Room ☐ Cold (_____ °C).

Relinquished by _____ Date/Time 7/25/02 / 1530 Received by _____ Date/Time 7/25/02 1530

Relinquished by _____ Date/Time 7/25/02 1630 Received by _____ Date/Time 7/25/02 1630

APCL USE ONLY Service # Note:

Clients understand that all terms described in the proposals, quotations for this project, and/or the general terms provided in the current APCL price schedules will be followed. APCL reserves the right to terminate its service or withhold delivery of any reports, if in APCL's sole discretion the terms of the project have been broken.

Applied P & Ch Laboratory
1370 Magnolia Ave., Chino, CA 91710
Tel (909) 590-1828 Fax (909) 590-1498

Sample Receiving Checklist

APCL ServiceID: **4033** Client Name/Project: Sota Environmental

1. Sample Arrival

Date/Time Received 7/25/02 1630 Date/Time Opened 7/25/02 1630 By (name): Kenny Chan

Custody Transfer: ☐ Client ☐ Golden State ☐ UPS ☐ US Mail ☐ FedEx ☑ APCL Empl: Richard Stinson

2. Chain-of-Custody (CoC)

☑ With Samples? ☐ Faxed? ☐ Client has Copy? ☑ Signed, dated? By: 7/25/02 Mike Sayre
☑ Project ID? ☑ Analyses Clear? ☐ Hold Samples? #on Hold ____ # Received 3
☑ CoC/Docs Zip-Locked under lid? ☐ Compos.#: ____ ☐ #Samples OK?
☐ Discrepancies? ☐ Client notified? ☐ Response (attach docs): ____

3. Shipping Container/Cooler

☑ Cooler Used? # of 1 Cooled by: ☑ Ice ☐ Blue Ice ☐ Dry Ice ☐ None
Temp °C 3.5
(Cooler temperature measured from temp blank if present, otherwise measured from the cooler).
Cooler Custody Seal? ☐ Absent ☐ Intact ☐ Tampered?

4. Sample Preservation

☐ pH < 2 ☐ pH >12
If Not, pH = ____ Preserved by: ☐ Client ☐ APCL ☐ Third Party ____

5. Holding-time Requirements

☐ pH 24hr ☐ BACT 6/24hr ☑ Cr^{VI} 24hr ☐ NO_3^- 48hr ☐ BOD 48hr
☐ Cl_2 ASAP ☐ Turbidity 48hr ☐ DO ASAP ☐ Fe(II) ASAP
☐ HT Expired? ☐ Client notified?

6. Sample Container Condition

☑ Intact? ☐ Broken? ☐ Documented? Number: ____
Type: ☑ plastic ☑ glass ☐ Tube: brass/SS ☐ Tedlar Bag
☑ Quantity OK? ☐ Leaking? ☐ Anomaly?
☑ Caps tight? ☐ Air Bubbles? ☐ Anomaly?
Labels ☑ Unique ID? ☑ Date/Time ☐ Preserved?

7. Turn Around Time

☐ RUSH TAT: ____ ☑ Std (7-10 days) ☐ Not Marked

8. Sample Matrix

☐ Drinking H_2O ☑ Other Liq ☐ Soil ☐ Wipe ☐ Polymer ☐ Air ☐ Other: ____
☐ Ground H_2O ☐ Sludge ☐ Filter ☐ Oil/Petro ☐ Paint ☐ W. Water ☐ Extract ☐ Unknown

9. Pre-Login Check List Completed & OK?

☑ ALL OK? (if not, attach docs) ☐ Client Contact? (Name: ____)Date/Time: ____

Received/Checked by: Kenny Chan Date: 25 Jul 2002 Time: 8:57 a.m.

*HT: Samples must be analyzed for results to reflect total concentrations. Results generated outside required of holding times are considered minimal values and may be used to define waste as hazardous but not as non-hazardous.

DocumentFile: [neal texfiles]smprcl.tex

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Sample Login: Check List

02-04033 (1288_ 391) (4858100_ 391)

07/25/02

Part 1: General Information

☐ Company Information	Name:	*SOTA Environmental*
	Address:	*16835 W. Bernardo Dr, Ste. 212 ,San Diego ,CA 92127*
☐ Project Information	Project Description:	*JPL*
	Project #:	*00HW019*
☐ Billing Information	P.O. #:	
	Bill Address:	*16835 W. Bernardo Dr, Ste. 212 ,San Diego ,CA 92127*
	Lab Project ID:	*2002_0002*
	Client Database #:	*01*
☐ Receiving Information	Who Received Sample?	*Kenny Chan*
	Receiving Date/Time:	*07/25/02 1630PM*
	COC No.	
☐ Shipping Information	Shipping Company	*APCL pick up*
	Packing Information:	*Cooler/Ice Chester*
	Cooler Temperature:	*3.5 °C*
☐ Container Information	Container Provider:	*Client*
☐ Sampling Information	Sampling Person:	*MES/TAM*
	Sampling Company:	*Client*
☐ Turn-Around-Time Option:		*Normal*
☐ QC Option:		*NEESA D*
☐ Disposal Option:		*Not specify*

Part 2: Sample Information

Seq. #	Sample ID (on COC)	Sample Sub-ID	APCL Sample ID	Matrix	Cont-tainer	Preser-vative	Vol, ml Am. g	# of Replica	Condition G, L, B	Collected mmddyy	Hold ?	Composite Group	TAT Days	
1	TB-16	VOC	02-04033-3	W	V	C	40	2	G	072502	N	0	9	☐
2	MW-7	VOC	02-04033-1-α	W	V	C	40	3	G	072502	N	0	9	☐
	MW-7	CRVI/PERCH	02-04033-1-β	W	P		500	1	G	072502	N	0	9	☐
3	MW-8	VOC	02-04033-2-α	W	V	C	40	3	G	072502	N	0	9	☐
	MW-8	CRVI/PERCH	02-04033-2-β	W	P		500	1	G	072502	N	0	9	☐

Part 3: Analysis Information

Test Items:

☐	*524.2*	Volatile Organic Compounds
☐	*7196*	Chromium (VI)
☐	*300.0*	Perchlorate, low level
☐	*200.7/6010*	Sodium, Na, by ICP
☐	*200.7/6010*	Potassium, K, by ICP
☐	*200.7/6010*	Calcium, Ca, by ICP
☐	*200.7/6010*	Magnesium, Mg, by ICP
☐	*200.7/6010*	Iron, Fe, by ICP
☐	*300.0*	Sulfate (SO_4^{--}), by IC
☐	*300.0/SM4500NO3*	Nitrate (NO_3^-) as N by IC
☐	*300.0*	Chloride Cl^- by IC
☐	*SM2320B*	Carbonate
☐	*SM2320B*	Bicarbonate
☐	*9040/150.1*	pH
☐	*160.1*	Solids, Total Dissolved (TDS)
☐	*206.2/7060*	Arsenic, As, by GFAA
☐	*310.1*	Alkalinity
☐	*PAH-SIM*	PAH (NOAA)

Seq. #	Client"s Sample ID (as given on COC)	Sample Sub-ID	APCL Sample ID	Matrix	524.2	CHROMIUM	PERCHL	NA	K	CA	MG	FE	
1	TB-16	VOC	02-04033-3	W	X								☐
2	MW-7	VOC	02-04033-1-α	W	X								☐
	MW-7	CRVI/PERCH	02-04033-1-β	W		X	X						☐
3	MW-8	VOC	02-04033-2-α	W	X								☐
	MW-8	CRVI/PERCH	02-04033-2-β	W		X	X						☐

Seq. #	Client"s Sample ID (as given on COC)	Sample Sub-ID	APCL Sample ID	Matrix	SO4	NO3	CL	CARBONATE	BICARBON	PH	TDS	AS	
1	TB-16	VOC	02-04033-3	W									☐
2	MW-7	VOC	02-04033-1-α	W									☐
	MW-7	CRVI/PERCH	02-04033-1-β	W									☐
3	MW-8	VOC	02-04033-2-α	W									☐
	MW-8	CRVI/PERCH	02-04033-2-β	W									☐

Seq. #	Client"s Sample ID (as given on COC)	Sample Sub-ID	APCL Sample ID	Matrix	ALKALIN	SIM	
1	TB-16	VOC	02-04033-3	W			☐
2	MW-7	VOC	02-04033-1-α	W			☐
	MW-7	CRVI/PERCH	02-04033-1-β	W			☐
3	MW-8	VOC	02-04033-2-α	W			☐
	MW-8	CRVI/PERCH	02-04033-2-β	W			☐

☐ Client"s Requirement: **~~PLEASE RUN MS/MSD ON SAMPLE #~~**

☐ **IF ENOUGH SAMPLE**

☐ **FOR 8270SIM, PLEASE INCLUDE 1,4-DIOXANE**

Login By Kenny Chan

Check By

APCL

Applied Physics & Chemistry Laboratory

13760 Magnolia Ave. Chino CA 91710
Tel. (909) 590-1828 Fax (909) 590-1498

August 1, 2002

SOTA Environmental
Attention: Yu Zeng
16835 W. Bernardo Dr. Suite 212
San Diego CA 92127

Dear Yu,

This package contains samples in our Service ID 02 3965 and your project is 00HW019 JPL from Pasadena, CA. Enclosed please find:

(1) One original report.
(2) One original Chain of Custody.
(3) One diskette containing EDD Deliverable.
(4) One original of Level D Data Package Deliverable.

If anything is missing or you have any questions, please feel free to contact me.

Respectfully submitted,

Kevin Xie, Ph.D.,
Q.A./Q.C. Director
Applied P & Ch Laboratory

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Submitted to:
SOLA Environmental
Attention: Yu Zeng
16835 W. Bernardo Dr. Ste. 212
San Diego CA 92127
Tel: (858)485-8100 Fax: (858)485-0812

Service ID #: 801-023965
Collected by: MES/TAM
Collected on: 07/22/02

Received: 07/22/02
Extracted: N/A
Tested: 07/22-23/02
Reported: 07/26/02

Sample Description: Water from Pasadena CA
Project Description: 00HW019 JPL

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result ER-4 02-03965-1	MW-4-1 02-03965-2
Dilution Factor				1	1
PERCHLORATE	314.0	µg/L	4	<4	<4
VOLATILE ORGANIC COMPOUNDS					
Dilution Factor				1	1
CARBON TETRACHLORIDE	524.2	µg/L	0.5	<0.5	<0.5
CHLOROFORM	524.2	µg/L	0.5	<0.5	<0.5
1,1-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5
1,1-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5
METHYLENE CHLORIDE	524.2	µg/L	1	0.6J	0.5J
TETRACHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	524.2	µg/L	0.5	<0.5	<0.5

Component Analyzed	Method	Unit	PQL	Analysis Result MW-4-2 02-03965-3	MW-4-3 02-03965-4	FB-13 02-03965-7
Dilution Factor				1	1	1
PERCHLORATE	314.0	µg/L	4	<4	<4	
VOLATILE ORGANIC COMPOUNDS						
Dilution Factor				1	1	1
CARBON TETRACHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROFORM	524.2	µg/L	0.5	0.5	<0.5	<0.5
1,1-DICHLOROETHANE	524.2	µg/L	0.5	0.7	<0.5	<0.5
1,2-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	524.2	µg/L	0.5	-	1.6	
METHYLENE CHLORIDE	524.2	µg/L	1	0.6J	0.4J	0.8J
TETRACHLOROETHENE	524.2	µg/L	0.5	1.6	<0.5	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	0.8	<0.5	<0.5
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result ER-4 02-03965-1	MW-4-1 02-03965-2	MW-4-2 02-03965-3
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01	<0.01

Component Analyzed	Method	Unit	PQL	Analysis Result MW-4-3 02-03965-4	MW-4-4 02-03965-5	MW-4-5 02-03965-6
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01	<0.01

PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit
N.D.: Not Detected or, ess than the practical quantitation limit. "-": Analysis is not required.
J: Reported between PQL and MDL.
Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0

Respectfully submitted,

Dominic Lau
Laboratory Director
Applied P & Ch Laboratory

Level D Data Package Deliverables

General Information

Project: 00HW019 JPL

APCL Service ID: 02-3965

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino, CA 91710
Telephone (909)590-1828
Fax (909)590-1498

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Case Narrative

Project: JPL/Pasadena, CA/00HW019

For SOTA Environmental

APCL Service No: 02-3965

1. Sample Identification

The sample identifications are listed in the following table:

SOTA Environmental Sample ID	APCL Sample ID
TB-13	02-03965-7
MW-4-5	02-03965-6
MW-4-4	02-03965-5
ER-4	02-03965-1
MW-4-3	02-03965-4
MW-4-2	02-03965-3
MW-4-1	02-03965-2

2. Analytical Methodology

Samples are analyzed by EPA methods

524.2 (Volatile Organic Compounds),
7196 (Chromium (VI)),
E314 (Perchlorate, low level),

3. Holding Time

All samples were extracted, digested and analyzed within the holding times defined by the appropriate EPA methods of the analyses.

4. Preservation

All samples were preserved and stored according to the appropriate EPA methods.

5. Tele-log

None

6. Anomaly

(1) 524.2:

Methylene Chloride in the amount of 0.6 μg/L was detected in the Method Blank of batch 02G3239. Similar levels of Methylene Chloride were also detected in the field samples due to lab contamination.

"I certify that these data are technically accurate, complete, and in compliance with the terms and conditions of the contract, for other than the conditions detailed above. Release of the data contained in the hardcopy data package and its electronic data deliverable submitted on diskette had been authorized by the Laboratory Manager or her/his designee, as verified by the following signature."

Respectfully submitted,

Kevin Xie, Ph.D.,
QA/QC Director
Applied P & Ch Laboratory

Applied P & Ch Laboratory

APCL

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Chain of Custody

Please Print in pen Page 1 of 2

Client: SOTA ENVIR. TECH., INC. Contact: MIKE SAYRE Tel #: 858-485-8100 Fax #: 858-485-0812

Address: 16835 W. BERNARDO DR. #212 City: SAN DIEGO State: CA Zip code: 92127

Bill to: SOTA

Project Name/Code JPL Job #00HW019 P.O. #

Project Address PASADENA, CALIFORNIA APCL Quotation #

Due Date: ☑ regular ☐ rush: ___ days ___ hours Sampled by: MES/THM

Field Sample ID No.	Sample Description	Date Collected	Time	Sample Matrix	Preservation	# of Containers	VOCs (524.2)	PERCHLORATE (314.0)	Cr VI (7196)	TOTAL Cr (200.8)	Remarks
TB-13	TRIP BLANK	7/22/02	0858	WATER	HCl	2	X				EPA LEVEL IV QA/QC
MW-4-5	MW-4-5		0938		—	1			X		
MW-4-5	MW-4-5		0938		HNO_3	1				X	
MW-4-4	MW-4-4		1007		—	1			X		
MW-4-4	MW-4-4		1007		HNO_3	1				X	
ER-4	EQUIP. RINSATE		1021		HCl	3	X				
					—	1		X	X		
					HNO_3	1				X	
MW-4-3	MW-4-3		1037		HCl	3	X				
					—	1		X	X		
					HNO_3	1				X	
MW-4-2	MW-4-2		1117		HCl	3	X				
					—	1		X	X		
					HNO_3	1				X	
MW-4-1	MW-4-1		1148		HCl	3	X				

3965

Analysis Items

White – With report
Yellow – Lab copy
Pink – Originator

QC Requirement: ☐ Regular; ☐ QA/QC Report; ☐ WIP; ☐ Raw Data; ☐ Extended Raw Data ☐ CLP; ☐ ACE ☐ AFCEE ☐ NEESA ___ (E, C or D); ☐ Other _____ (Please specify)

Sample Disposal: ☐ Return ☐ Disposal by APCL ☐ Hold for _____ days after receiving date. **If not specified, samples will be discarded 45 days after samples are received.**

Sample Conditions: ☐ Intact; ☐ Broken. Cooler Seal: ☐ Intact; ☐ Broken; ☐ None. Tag # _____ Temperature: ☐ Room ☐ Cold (_____ °C).

Relinquished by [signature] Date/Time 7/22/02 1502 Received by [signature] Date/Time 7/22/02 1502

Relinquished by [signature] Date/Time 7/22/02 1605 Received by [signature] Date/Time 7/22/02 1605

APCL USE ONLY Service # Note:

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Chain of Custody

Please Print in pen Page 2 of 2

Client: SOTA ENVIR. TECH., INC. Contact: MIKE SAYRE Tel #: 858-485-8100 Fax #: 858-485-0812

Address: 16835 W. BERNARDO DR. #212 City: SAN DIEGO State: CA Zip code: 92127

Bill to: SOTA

Project Name/Code JPL Job # 00HW019 P.O. #

Project Address PASADENA, CALIFORNIA APCL Quotation #

Due Date: ☐regular ☐rush: ___ days ___ hours Sampled by: MES/TAM

Field Sample ID No.	Sample Description	Date Collected	Time Collected	Sample Matrix	Preservation	# of Containers	Perchlorate (314.0)	Cr VI (7196)	Total Cr (200.8)
MW-4-1	MW-4-1	7/22/02	1148	WATER	—	1	X	X	
MW-4-1	MW-4-1	7/22/02	1148	WATER	HNO_3	1			X

Analysis Items

White – With report
Yellow – Lab copy
Pink – Originator

Remarks

3965

QC Requirement: ☐Regular; ☐QA/QC Report; ☐WIP; ☐Raw Data; ☐Extended Raw Data ☐CLP; ☐ACE ☐AFCEE ☐NEESA ___ (E, C or D); ☐Other _____ (Please specify)

Sample Disposal: ☐Return ☐Disposal by APCL ☐Hold for _____ days after receiving date. **If not specified, samples will be discarded 45 days after samples are received.**

Sample Conditions: ☐Intact; ☐Broken. Cooler Seal: ☐Intact; ☐Broken; ☐None. Tag # _____ Temperature: ☐Room ☐Cold (_____ °C).

Relinquished by _____ Date/Time 7/22/02 1502 Received by _____ Date/Time 7/22/02 1502

Relinquished by _____ Date/Time 7/22/02 1605 Received by _____ Date/Time 7/22/02 1605

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Sample Receiving Checklist

APCL ServiceID: 3965 Client Name/Project: Seta Environmental

1. Sample Arrival

Date/Time Received 7/22/02 1625 Date/Time Opened 7/22/02 1625 By (name): Kenny Chan
Custody Transfer: ☐ Client ☐ Golden State ☐ UPS ☐ US Mail ☐ FedEx ☑ APCL Empl: Richard Simon

2. Chain-of-Custody (CoC)

☑ With Samples? ☐ Faxed? ☐ Client has Copy? ☑ Signed, dated? By: Mike Sage
☑ Project ID? ☑ Analyses Clear? ☐ Hold Samples? #on Hold _____ # Received 7
☑ CoC/Docs Zip-Locked under lid? ☐ Compos.#: _ ☑ #Samples OK? _____
☐ Discrepancies? ☐ Client notified? ☐ Response (attach docs): _____

3. Shipping Container/Cooler

☑ Cooler Used? # of 1 Cooled by: ☑ Ice ☐ Blue Ice ☐ Dry Ice ☐ None
Temp °C 3.6 _____ _____ _____ _____ _____
(Cooler temperature measured from temp blank if present, otherwise measured from the cooler).
Cooler Custody Seal? ☐ Absent ☐ Intact ☐ Tampered?

4. Sample Preservation

☐ pH <2 ☐ pH >12
If Not, pH = _____ Preserved by: ☐ Client ☐ APCL ☐ Third Party _____

5. Holding-time Requirements

☐ pH 24hr ☐ BACT 6/24hr ☑ Cr^{VI} 24hr ☐ NO_3^- 48hr ☐ BOD 48hr
☐ Cl_2 ASAP ☐ Turbidity 48hr ☐ DO ASAP ☐ Fe(II) ASAP
☐ HT Expired? ☐ Client notified?

6. Sample Container Condition

☑ Intact? ☐ Broken? ☐ Documented? Number: _____
Type: ☑ plastic ☑ glass ☐ Tube: brass/SS ☐ Tedlar Bag
☑ Quantity OK? ☐ Leaking? ☐ Anomaly?
☑ Caps tight? ☐ Air Bubbles? ☐ Anomaly?
Labels: ☑ Unique ID? ☑ Date/Time ☐ Preserved?

7. Turn Around Time

☐ RUSH TAT: _____ ☑ Std (7-10 days) ☐ Not Marked

8. Sample Matrix

☐ Drinking H_2O ☑ Other Liq ☐ Soil ☐ Wipe ☐ Polymer ☐ Air ☐ Other: _____
☐ Ground H_2O ☐ Sludge ☐ Filter ☐ Oil/Petro ☐ Paint ☐ W. Water ☐ Extract ☐ Unknown

9. Pre-Login Check List Completed & OK?

☑ ALL OK? (if not, attach docs) ☐ Client Contact? (Name:_____)Date/Time:_____
Received/Checked by: Kenny Chan Date: 22 Jul 2002 Time: 8:25 a.m.

*HT: Samples must be analyzed for results to reflect total concentrations. Results generated outside required of holding times are considered minimal values and may be used to define waste as hazardous but not as non-hazardous.

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Sample Login: Check List

02-03965 (1288_ 388) (4858100_ 388)

07/22/02

Part 1: General Information

☐	Company Information	Name:	*SOTA Environmental*
		Address:	*16835 W. Bernardo Dr, Ste. 212 ,San Diego ,CA 92127*
☐	Project Information	Project Description:	*JPL*
		Project #:	*00HW019*
☐	Billing Information	P.O. #:	
		Bill Address:	*16835 W. Bernardo Dr, Ste. 212 ,San Diego ,CA 92127*
		Lab Project ID:	*2002_0002*
		Client Database #:	*01*
☐	Receiving Information	Who Received Sample?	*Kenny Chan*
		Receiving Date/Time:	*07/22/02 1605*
		COC No.	
☐	Shipping Information	Shipping Company	*APCL pick up*
		Packing Information:	*Cooler/Ice Chester*
		Cooler Temperature:	*3.6 °C*
☐	Container Information	Container Provider:	*Client*
☐	Sampling Information	Sampling Person:	*MES/TAM*
		Sampling Company:	*Client*
☐	Turn-Around-Time Option:		*Rush 5 working day(s)*
☐	QC Option:		*NEESA D*
☐	Disposal Option:		*Not specify*

Part 2: Sample Information

Seq. #	Sample ID (on COC)	Sample Sub-ID	APCL Sample ID	Matrix	Cont-tainer	Preser-vative	Vol, ml Am. g	# of Replica	Condition G, L, B	Collected mmddyy	Hold ?	Composite Group	TAT Days	
1	TB-13	VOC	02-03965-7	W	V	C	40	2	G	072202	N	0	6	☐
2	MW-4-5	CR VI	02-03965-6	W	P		500	1	G	072202	N	0	6	☐
3	MW 4-4	CR VI	02-03965-5	W	P		500	1	G	072202	N	0	6	☐
4	ER-4	VOC	02-03965-1-α	W	V	C	40	3	G	072202	N	0	6	☐
	ER-4	CRVI/Perch	02-03965-1-β	W	P		500	1	G	072202	N	0	6	☐
5	MW-4-3	VOC	02-03965-4-α	W	V	C	40	3	G	072202	N	0	6	☐
	MW-4-3	CRVI/Perch	02 03965-4-β	W	P		500	1	G	072202	N	0	6	☐
6	MW-4-2	VOC	02-03965-3 α	W	V	C	40	3	G	072202	N	0	6	☐
	MW-4-2	CRVI/Perch	02-03965-3-β	W	P		500	1	G	072202	N	0	6	☐
7	MW-4-1	VOC	02-03965-2-α	W	V	C	40	3	G	072202	N	0	6	☐
	MW-4-1	CRVI/Perch	02-03965-2-β	W	P		500	1	G	072202	N	0	6	☐

Part 3: Analysis Information

Test Items:

☐ *524.2*	Volatile Organic Compounds
☐ *7196*	Chromium (VI)
☐ *300.0*	Perchlorate, low level
☐ *200.7/6010*	Sodium, Na, by ICP
☐ *200.7/6010*	Potassium, K, by ICP
☐ *200.7/6010*	Calcium, Ca, by ICP
☐ *200.7/6010*	Magnesium, Mg, by ICP
☐ *200.7/6010*	Iron, Fe, by ICP
☐ *300.0*	Sulfate (SO_4^{--}), by IC
☐ *300.0/SM4500NO3*	Nitrate (NO_3^-) as N by IC
☐ *300.0*	Chloride Cl^- by IC
☐ *SM2320B*	Carbonate
☐ *SM2320B*	Bicarbonate
☐ *9040/150.1*	pH
☐ *160.1*	Solids, Total Dissolved (TDS)
☐ *206.2/7060*	Arsenic, As, by GFAA
☐ *310.1*	Alkalinity
☐ *PAH-SIM*	PAH (NOAA)

Seq. #	Client's Sample ID (as given on COC)	Sample Sub-ID	APCL Sample ID	Matrix	524.2	CHROMIUM	PERCHL	NA	K	CA	MG	FE

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APCL Analytical Report

Submitted to
SOTA Environmental
Attention: Yu Zeng
16835 W. Bernardo Dr, Ste. 212
San Diego CA 92127
Tel: (858)485-8100 Fax: (858)485-0812

Service ID #: 801-023887
Collected by:
Collected on: 07/12-17/02

Received: 07/12-17/02
Extracted: N/A
Tested: N/A
Reported: 08/01/02

Sample Description: Water
Project Description: 00HW019 JPL

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result ER-3 02-03887-1	ER-11 02-03887-2	ER-14 02-03887-3	ER-22 02-03887-4
CHROMIUM *							

Component Analyzed	Method	Unit	PQL	Analysis Result MW-3-2 02-03887-5	MW-3-3 02-03887-6	MW-3-4 02-03887-7	MW-3-4D 02-03887-8
CHROMIUM *							

Component Analyzed	Method	Unit	PQL	Analysis Result MW-11-1 02-03887-9	MW-11-2 02-03887-10	MW-11-3 02-03887-11	MW-11-4 02-03887-12
CHROMIUM *							

Component Analyzed	Method	Unit	PQL	Analysis Result MW-14-2 02-03887-13	MW-14-3 02-03887-14	MW-14-4 02-03887-15
CHROMIUM *						

Component Analyzed	Method	Unit	PQL	Analysis Result MW-14-4D 02-03887-16	MW-22-1 02-03887-17	MW-22-2 02-03887-18
CHROMIUM *						

PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit.
N/A: Not Detected or less than the practical quantitation limit. "*": Analysis is not required.
J: Reported between PQL and MDL.
Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0
* Subcontracted to BSK Analytical Laboratories Inc. See attached.

Respectfully submitted,

Dominic Lau
Laboratory Director
Applied P & Ch Laboratory

Applied P & Ch Laboratory

APCL

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Chain of Custody

Please Print in pen Page 1 of 2

Client: SOTA ENVIR. TECH., INC. Contact: MIKE SAYRE Tel #: 858-485-8100 Fax #: 858-485-0812

Address: 16835 W. BERNARDO DR. #212 City: SAN DIEGO State: CA Zip code: 92127

Bill to: SOTA

Project Name/Code JPL Job # 00HW019 P.O. #

Project Address PASADENA, CALIFORNIA APCL Quotation #

Due Date: ☑ Regular ☐ rush: ___ days ___ hours Sampled by: MES/TAM

Analysis Items: VOCs (524.2); PERCHLORATE (314.0); CrVI (7196); TOTAL Cr (200.8)

White – With report
Yellow – Lab copy
Pink – Originator

Field Sample ID No.	Sample Description	Date Collected	Time Collected	Sample Matrix	Preservation	# of Containers	Remarks
TB-7	TRIP BLANK	7/12/02	0720	WATER	HCl	2	EPA LEVEL IV QA/QC
MW-14-5	MW-14-5		0753		HCl	3	
MW-14-5	MW-14-5		0753		—	1	
MW-14-4	MW-14-4		0832		HCl	3	
					—	1	
					HNO_3	1	
MW-14-4D	MW-14-4 DUPL.				HCl	3	
					—	1	
					HNO_3	1	
MW-14-3	MW-14-3		0925		HCl	3	
					—	1	
					HNO_3	1	
MW-14-2	MW-14-2		0952		HCl	3	
					—	1	
					HNO_3	1	

988

QC Requirement: ☐ Regular; ☐ QA/QC Report; ☐ WIP; ☐ Raw Data; ☐ Extended Raw Data ☐ CLP; ☐ ACE ☐ AFCEE ☐ NEESA ___ (E, C or D); ☐ Other _____ (Please specify)

Sample Disposal: ☐ Return ☐ Disposal by APCL ☐ Hold for _____ days after receiving date. **If not specified, samples will be discarded 45 days after samples are received.**

Sample Conditions: ☐ Intact; ☐ Broken. Cooler Seal: ☐ Intact; ☐ Broken; ☐ None. Tag # _____ Temperature: ☐ Room ☐ Cold (_____ °C).

Relinquished by: [signature] Date/Time 7/12/02/1147 Received by: [signature] Date/Time 7/12/02/1147

Relinquished by: Date/Time / Received by: Date/Time /

APCL USE ONLY Service # Note:

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Chain of Custody

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Client: SOTA ENVIR. TECH., INC. Contact: MIKE SAYRE Tel #: 858-485-8100 Fax #: 858-485-0812

Address: 16835 W. BERNARDO DR. #212 City: SAN DIEGO State: CA Zip code: 92127

Bill to: SOTA

Project Name/Code JPL Job #00HW019 P.O. #

Project Address PASADENA, CALIFORNIA APCL Quotation #

Due Date: ☑ regular ☐ rush: ___ days ___ hours Sampled by: MES/TAM

White – With report
Yellow – Lab copy
Pink - Originator

Field Sample ID No.	Sample Description	Date Collected	Time Collected	Sample Matrix	Preservation	# of Containers	Analysis Items: VOCs (524.2)	Perchlorate (314.0)	Cr VI (7196)	Total Cr (200.8)	Remarks
ER-14	EQUIP. RINSATE	7/12/02	0812	WATER	HCl	3	X				EPA LEVEL IV QA/QC
					—	1		X	X		
					HNO_3	1				X	
MW-14-1	MW-14-1		1021		HCl	3	X				
					—	1		X	X		
					HNO_3	1				X	

300

QC Requirement: ☐ Regular; ☐ QA/QC Report; ☐ WIP; ☐ Raw Data; ☐ Extended Raw Data ☐ CLP; ☐ ACE ☐ AFCEE ☐ NEESA ___ (E, C or D); ☐ Other _____ (Please specify)

Sample Disposal: ☐ Return ☐ Disposal by APCL ☐ Hold for _____ days after receiving date. **If not specified, samples will be discarded 45 days after samples are received.**

Sample Conditions: ☐ Intact; ☐ Broken. Cooler Seal: ☐ Intact; ☐ Broken; ☐ None. Tag # _____ Temperature: ☐ Room ☐ Cold (_____ °C)

Relinquished by [signature] Date/Time 7/12/02 / 1147 Received by [signature] Date/Time 7/12/02 / 1147

Relinquished by Date/Time / Received by Date/Time /

APCL USE ONLY Service # Note:

Clients understand that all terms described in the proposals, quotations for this project, and/or the general terms provided in the current APCL price schedules will be followed. APCL reserves the right to terminate its service or withhold delivery of any reports, if in APCL's sole discretion the terms of the project have been broken.

Root-file:[CUST.DATA.LAB]CHAIN_ROOT.TEX File:[CUST.DATA.LAB]CHAIN4.TEX

Applied P & Ch Laboratory

APCL

13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Chain of Custody

Please Print in pen Page 1 of 1

Client: SOTA ENVIR. TECH., INC. Contact: MIKE SAYRE Tel #: 858-485-8100 Fax #: 858-485-0812

Address: 16835 W. BERNARDO DR. #212 City: SAN DIEGO State: CA Zip code: 92127

Bill to: SOTA

Project Name/Code JPL Job #00HW019 P.O. #

Project Address PASADENA, CALIFORNIA APCL Quotation #

Due Date: ☑ regular ☐ rush: ____ days ____ hours Sampled by: MES/TAM

Field Sample ID No.	Sample Description	Date Collected	Time Collected	Sample Matrix	Preservation	# of Containers	VOCs (524.2)	Perchlorate (314.0)	Cr VI (7196)	Total Cr (200.8)	Remarks
TB-8	TRIP BLANK	7/15/02	1005	WATER	HCl	2	X				EPA LEVEL IV QA/QC
MW-11-4	MW-11-4		1043		HCl	3	X				
MW-11-4	MW-11-4		1043		—	1		X			
MW-11-3	MW-11-3		1123		HCl	9	X				MS/MSD
					—	2		X	X		
					HNO_3	2				X	
ER-11	EQUIP. RINSATE		1142		HCl	3	X				
					—	1		X	X		
					HNO_3	1				X	
MW-11-2	MW-11-2		1219		HCl	3	X				
			1219		—	1		X	X		
			1219		HNO_3	1				X	
MW-11-1	MW-11-1		1244		HCl	3	X				
					—	1		X	X		
					HNO_3	1				X	

3987

White – With report
Yellow – Lab copy
Pink – Originator

QC Requirement: ☐ Regular; ☐ QA/QC Report; ☐ WIP; ☐ Raw Data; ☐ Extended Raw Data ☐ CLP; ☐ ACE ☐ AFCEE ☐ NEESA ___ (E, C or D); ☐ Other _____ (Please specify)

Sample Disposal: ☐ Return ☐ Disposal by APCL ☐ Hold for _____ days after receiving date. **If not specified, samples will be discarded 45 days after samples are received.**

Sample Conditions: ☐ Intact; ☐ Broken. Cooler Seal: ☐ Intact; ☐ Broken; ☐ None. Tag # _____ Temperature: ☐ Room ☐ Cold (_____ °C).

Relinquished by _____ Date/Time 7/15/02 1607 Received by _____ Date/Time 7/15/02 1607

Relinquished by _____ Date/Time 7/15/02 1710 Received by _____ Date/Time 7/15/02 1710

APCL USE ONLY Service # Note:

Clients understand that all terms described in the proposals, quotations for this project, and/or the general terms provided in the current APCL price schedules will be followed. APCL reserves the right to terminate its service or withhold delivery of any reports, if in APCL's sole discretion the terms of the project have been broken.

Applied P & Ch Laboratory

APCL

13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Chain of Custody

Please Print in pen Page 1 of 2

Client: SOTA ENVIR. TECH., INC. Contact: [illegible] Tel #: 858-485-8100 Fax #: 858-485-[illegible]

Address: 6035 W. BERNARDO DR #212 City: SAN DIEGO State: CA Zip code: 92127

Bill to: SOTA

Project Name/Code JPL Job # 00HW[illegible] P.O. #

Project Address PASADENA, CALIFORNIA APCL Quotation #

Due Date: ☑ regular ☐ rush: ___ days ___ hours Sampled by: MES/[illegible]

White – With report
Yellow – Lab copy
Pink – Originator

Field Sample ID No.	Sample Description	Date Collected	Time Collected	Sample Matrix	Preservation	# of Containers	VOCs (524.2)	PERCHLORATE (314.0)	Cr VI (7196)	TOTAL Cr (200.8)									Remarks
TB-9	TRIP BLANK	7/16/02	0705	WATER	HCl	2	X												[illegible]
MW-22-4	MW-22-4		0721		—	1		X											
ER-22	EQUIP. RINSATE		0733		HCl	3	X												
					—	1		X	X										
					HNO_3	1				X									
MW-22-3	MW-22-3		0747		HCl	3	X												
MW-22-3	MW-22-3				—	1		X											
MW-22-3D	MW-22-3DUPL.				HCl	3	X												
MW-22-3D	MW-22-3 DUPL.				—	1		X											
FB-1	FIELD BLANK		0749		HCl	2	X												
MW-22-2	MW-22-2		0818		HCl	3	X												
					—	1		X	X										
					HNO	1				X									
MW-22-1	MW-22-1		0846		HCl	3	X												
MW-22-1	MW-22-1		0846		—	1		X	X										

8887

QC Requirement: ☐ Regular; ☐ QA/QC Report; ☐ WIP; ☐ Raw Data; ☐ Extended Raw Data ☐ CLP; ☐ ACE ☐ AFCEE ☐ NEESA ___ (E, C or D); ☐ Other _____ (Please specify)

Sample Disposal: ☐ Return ☐ Disposal by APCL ☐ Hold for _____ days after receiving date. **If not specified, samples will be discarded 45 days after samples are received.**

Sample Conditions: ☐ Intact; ☐ Broken. Cooler Seal: ☐ Intact; ☐ Broken; ☐ None. Tag # _____ Temperature: ☐ Room ☐ Cold (_____ °C).

Relinquished by [signature] Date/Time 7/16/02 [illegible] Received by [signature] Date/Time 7/16/02 [illegible]

Relinquished by [signature] Date/Time 7/16/02 [illegible] Received by [signature] Date/Time 7/16/02 [illegible]

APCL USE ONLY Service # Note:

Clients understand that all terms described in the proposals, quotations for this project, and/or the general terms provided in the current APCL price schedules will be followed. APCL reserves the right to terminate its service or withhold delivery of any reports, if in APCL's sole discretion the terms of the project have been broken

APCL Form 4-101 Ver. 4.0 Dec. 20, 1994

APCL

Applied P & Ch Laboratory

13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Chain of Custody

Please Print in pen Page 2 of 2

Client: SITA Envir. Tech, Inc Contact: M. Sayre Tel #: 858 485-8100 Fax #: 858-485-[illegible]

Address: 1235 West Bernardo Dr. #212 City: San [illegible] State: CA Zip code: 92127

Bill to: SITA

Project Name/Code: JPL Job #: [illegible] P.O. #:

Project Address: Pasadena, California APCL Quotation #:

Due Date: ☑ regular ☐ rush: ___ days ___ hours Sampled by: [illegible]

Analysis Items

White – With report
Yellow – Lab copy
Pink – Originator

Field Sample ID No.	Sample Description	Date Collected	Time Collected	Sample Matrix	Preservation	# of Containers	[illegible]												Remarks
MW-22-1	MW-22-1	7/16/02	0846	Water	[illegible]	1	X												[illegible]

QC Requirement: ☐ Regular, ☐ QA/QC Report; ☐ WIP; ☐ Raw Data; ☐ Extended Raw Data ☐ CLP; ☐ ACE ☐ AFCEE ☐ NEESA ___ (E, C or D); ☐ Other _____ (Please specify)

Sample Disposal ☐ Return ☐ Disposal by APCL ☐ Hold for _____ days after receiving date. **If not specified, samples will be discarded 45 days after samples are received.**

Sample Conditions: ☐ Intact; ☐ Broken. Cooler Seal: ☐ Intact; ☐ Broken; ☐ None. Tag # _____ Temperature: ☐ Room ☐ Cold (_____ °C).

Relinquished by [signature] Date/Time 7/16/02 [illegible] Received by [signature] Date/Time [illegible]

Relinquished by [signature] Date/Time 7/16/02 [illegible] Received by [signature] Date/Time 7/16/02 [illegible]

APCL USE ONLY Service # Note:

Clients understand that all terms described in the proposals, quotations for this project, and/or the general terms provided in the current APCL price schedules will be followed. APCL reserves the right to terminate its service or withhold delivery of any reports, if in APCL's sole discretion the terms of the project have been broken.

Applied P & Ch Laboratory

APCL

13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Chain of Custody

Please Print in pen Page ____ of ____

Client: SOTA ENVR. TECH., INC. Contact: MIKE SOTA Tel #: 858 485 8100 Fax #: 858 485 0851

Address: 11682 EL CAMINO REAL #212 City: SAN DIEGO State: CA Zip code: 92130

Bill to: SOTA

Project Name/Code STL Job # 021101 P.O. #

Project Address PARAMOUNT, CALIFORNIA APCL Quotation #

Due Date: ☒ regular ☐ rush: ___ days ___ hours Sampled by: M. SOTA

Field Sample ID No.	Sample Description	Date Collected	Time Collected	Sample Matrix	Preservation	# of Containers
TB-1	TRIP BLANK	7/17/02	0855	WATER	HCl	2
MW-3-5	MW-3-5		0933		—	1
MW-3-4	MW-3-4		1008		HCl	3
					—	1
					HNO_3	1
MW-3-4D	MW-3-4 DUP				HCl	3
					—	1
					HNO_3	1
MW-3-3	MW-3-3		1447		HCl	3
					—	1
					HNO_3	1
MW-3-2	MW-3-2		1513		HCl	3
					HNO_3	1
					—	1

Analysis Items: VOCs (524.2); PCB (Aroclors 8082); CAM 17 Metals; TPH-G (8015M)

White – With report
Yellow – Lab copy
Pink – Originator

Remarks: FOR WATER

2087

QC Requirement: ☐ Regular; ☐ QA/QC Report; ☐ WIP; ☐ Raw Data; ☐ Extended Raw Data ☐ CLP; ☐ ACE ☐ AFCEE ☐ NEESA ___ (E, C or D); ☐ Other _____ (Please specify)

Sample Disposal: ☐ Return ☐ Disposal by APCL ☐ Hold for _____ days after receiving date. **If not specified, samples will be discarded 45 days after samples are received.**

Sample Conditions: ☐ Intact; ☒ Broken. Cooler Seal: ☐ Intact; ☐ Broken; ☐ None. Tag # _____ Temperature: ☐ Room ☐ Cold (_____ °C).

Relinquished by [signature] Date/Time 7/17/02 1720 Received by [signature] Date/Time 7/17/02 1720

Relinquished by [signature] Date/Time 7/17/02 1850 Received by Date/Time /

APCL USE ONLY Service # Note:

Clients understand that all terms described in the proposals, quotations for this project, and/or the general terms provided in the current APCL price schedules will be followed. APCL reserves the right to terminate its service or withhold delivery of any reports, if in APCL's sole discretion the terms of the project have been broken

Applied P & Ch Laboratory

APCL

13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Chain of Custody

Please Print in pen

Page 2 of 2

Client: SOTA Engr. Tech. Inc. Contact: Mike Sam Tel #: 858-485-8100 Fax #: 858-485-0812

Address: 16835 W. Bernardo Dr. #212 City: San Diego State: CA Zip code: 92127

Bill to: SOTA

Project Name/Code JPL Job # [illegible] P.O. #

Project Address Pasadena, California APCL Quotation #

Due Date: ☑ regular ☐ rush: ___ days ___ hours Sampled by: [illegible]

White – With report
Yellow – Lab copy
Pink – Originator

Field Sample ID No.	Sample Description	Date Collected	Time Collected	Sample Matrix	Preservation	# of Containers	VOCs (524.2)	Perchlorate (314.0)	Cr VI (7196)	Total Cr (200.8)	Remarks
FR-3	Equip. Rinsate	7/17/02	0918	[illegible]	HCl	3	X				[illegible]
					—	1		X	X		
					HNO3	1				X	

QC Requirement: ☐ Regular; ☐ QA/QC Report; ☐ WIP; ☐ Raw Data; ☐ Extended Raw Data ☐ CLP; ☐ ACE ☐ AFCEE ☐ NEESA ___ (E, C or D); ☐ Other _____ (Please specify)

Sample Disposal: ☐ Return ☐ Disposal by APCL ☐ Hold for _____ days after receiving date. **If not specified, samples will be discarded 45 days after samples are received.**

Sample Conditions: ☐ Intact; ☑ Broken. Cooler Seal: ☐ Intact; ☐ Broken; ☐ None. Tag # _____ Temperature: ☐ Room ☐ Cold (_____ °C).

Relinquished by [signature] Date/Time 7/17/02 1725 Received by [signature] Date/Time 7/17/02 1[illegible]

Relinquished by [signature] Date/Time 7/17/02 1630 Received by Date/Time /

APCL USE ONLY Service # Note:

Clients understand that all terms described in the proposals, quotations for this project, and/or the general terms provided in the current APCL price schedules will be followed. APCL reserves the right to terminate its service or withhold delivery of any reports, if in APCL's sole discretion the terms of the project have been broken.

APCL

Applied P & Ch Laboratory
13760 E. Magnolia Ave., Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

2002071194 07/19/2002
APCL_LAB TAT: Standard
719037

Custody

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ge 1 of 1

TO: BSK Analytical Labs Contact Rach
Address 1414 Stanislaus st. City Fresno State CA Zip code 93706 485-6435
APCL Project Title/Code JPL # 3887 Sampler MES/TAM Sample disposition: Date ☒Client; ☐APCL
Bill to (if different from above) APCL Quotation # P.O.#
Due date ☒regular ☐rush Client signature Joe Saldana Date 7/18/02

	Sample Description	Date Collected	Time	Matrix	Pres. Y/N	Filtered Y/N	Analysis items	Unit Price*	APCL Lab-ID
294721	MW-14-4	7/12/02	832	W	HNO_3	N	Total Cr (200.8)		3887-15
294723	MW-14-4D		832						3887-16
294724	MW-14-3		925				* please include raw *		3887-14
294725	MW-14-2		952				data		3887-13
294726	ER-14		812						3887-3
294727	MW-14-1		1021						3887-12
294728	MW-11-3 2 containers	7/15/02	1123				← MS/MSD		3887-11
294729	ER-11		1142						3887-2
294730	MW-11-2		1219						3887-10
294731	MW-11-1		1244						3887-9
294732	ER-22	7/16	0739						3887-4
294733	MW-22-2		0818						3887-18
294734	MW-22-1		0846						3887-17
294735	MW-3-4	7/17/02	1008						3887-7
294736	MW-3-4D		1008						3887-8
294737	MW-3-3		1447						3887-6
294738	MW-3-2		1513						3887-5
294739	ER-3		0918						3887-1

Sample Conditions: Seal ☒Intact ☐Broken ☐None; Temperature ☒Cold ☐Room; Other

Relinquished by	Joe Saldana	Date/Time 7/18/02 1700	Received by		Date/Time
Relinquished by		Date/Time	Received by		Date/Time
Relinquished by		Date/Time	Received by		Date/Time
Relinquished by		Date/Time	Received by		Date/Time 7/19/02 7:30

* APCL must be notified if unit price is incorrect.

BSK ANALYTICAL LABORATORIES

Certificate of Analysis
ELAP Certificate #1180

Report Issue Date: 07/29/2002

Applied P and Ch Laboratory
13760 Magnolia Avenue
Chino, CA 91710

BSK Submission #: 2002071194

BSK Sample ID #: 229472

Project ID: Project Desc: JPL #3887

Submission Comments:

Sample Type: Liquid
Sample Description: MW-14-4 3887-15
Sample Comments: Please include raw data

Date Sampled: 07/12/2002
Time Sampled: 0832
Date Received: 07/19/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**8.0**	µg/L	1	1	1	07/24/2002	07/25/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

1414 Stanislaus Street Fresno, CA 93706-1623 Phone 559-497-2888, In CA 800-877-8310 Fax 559-485-6935

BSK ANALYTICAL LABORATORIES

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 07/29/2002

Applied P and Ch Laboratory
13760 Magnolia Avenue
Chino, CA 91710

BSK Submission #: 2002071194

BSK Sample ID #: 229473

Project ID: Project Desc: JPL #3887

Submission Comments:

Sample Type: Liquid
Sample Description: MW-14-4D 3887-16
Sample Comments: Please include raw data

Date Sampled: 07/12/2002
Time Sampled: 0832
Date Received: 07/19/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**7.0**	µg/L	1	1	1	07/24/2002	07/25/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

1414 Stanislaus Street Fresno, CA 93706-1623 Phone 559-497-2888, In CA 800-877-8310 Fax 559-485-6935

BSK ANALYTICAL LABORATORIES

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 07/29/2002

Applied P and Ch Laboratory
13760 Magnolia Avenue
Chino, CA 91710

BSK Submission #: 2002071194

BSK Sample ID #: 229474

Project ID: Project Desc: JPL #3887

Submission Comments:

Sample Type: Liquid
Sample Description: MW-14-3 3887-14
Sample Comments: Please include raw data

Date Sampled: 07/12/2002
Time Sampled: 0925
Date Received: 07/19/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**7.0**	µg/L	1	1	1	07/24/2002	07/25/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

1414 Stanislaus Street Fresno, CA 93706-1623 Phone 559-497-2888, In CA 800-877-8310 Fax 559-485-6935

BSK ANALYTICAL LABORATORIES

Certificate of Analysis
ELAP Certificate #1180

Report Issue Date: 07/29/2002

Applied P and Ch Laboratory
13760 Magnolia Avenue
Chino, CA 91710

BSK Submission #: 2002071194

BSK Sample ID #: 229475

Project ID: Project Desc: JPL #3887

Submission Comments:

Sample Type: Liquid
Sample Description: MW-14-2 3887-13
Sample Comments: Please include raw data

Date Sampled: 07/12/2002
Time Sampled: 0952
Date Received: 07/19/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**8.0**	µg/L	1	1	1	07/24/2002	07/25/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

1414 Stanislaus Street Fresno, CA 93706-1623 Phone 559-497-2888, In CA 800-877-8310 Fax 559-485-6935

BSK ANALYTICAL LABORATORIES

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 07/29/2002

Applied P and Ch Laboratory
13760 Magnolia Avenue
Chino, CA 91710

BSK Submission #: 2002071194

BSK Sample ID #: 229476

Project ID: Project Desc: JPL #3887

Submission Comments:

Sample Type: Liquid
Sample Description: ER-14 3887-3
Sample Comments: Please include raw data

Date Sampled: 07/12/2002
Time Sampled: 0812
Date Received: 07/19/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**ND**	µg/L	1	1	1	07/24/2002	07/25/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

1414 Stanislaus Street Fresno, CA 93706-1623 Phone 559-497-2888, In CA 800-877-8310 Fax 559-485-6935

BSK ANALYTICAL LABORATORIES

Certificate of Analysis
ELAP Certificate #1180

Report Issue Date: 07/29/2002

Applied P and Ch Laboratory
13760 Magnolia Avenue
Chino, CA 91710

BSK Submission #: 2002071194

BSK Sample ID #: 229477

Project ID: Project Desc: JPL #3887

Submission Comments:

Sample Type: Liquid
Sample Description: MW-14-1 3887-12
Sample Comments: Please include raw data

Date Sampled: 07/12/2002
Time Sampled: 1021
Date Received: 07/19/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**7.0**	µg/L	1	1	1	07/24/2002	07/25/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

1414 Stanislaus Street Fresno, CA 93706-1623 Phone 559-497-2888, In CA 800-877-8310 Fax 559-485-6935

BSK ANALYTICAL LABORATORIES

Certificate of Analysis
ELAP Certificate #1180

Report Issue Date: 07/29/2002

Applied P and Ch Laboratory
13760 Magnolia Avenue
Chino, CA 91710

BSK Submission #: 2002071194

BSK Sample ID #: 229478

Project ID: Project Desc: JPL #3887

Submission Comments:

Sample Type: Liquid
Sample Description: MW-11-3 3887-11
Sample Comments: Please include raw data

Date Sampled: 07/15/2002
Time Sampled: 1123
Date Received: 07/19/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**5.0**	µg/L	1	1	1	07/24/2002	07/25/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

1414 Stanislaus Street Fresno, CA 93706-1623 Phone 559-497-2888, In CA 800-877-8310 Fax 559-485-6935

BSK ANALYTICAL LABORATORIES

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 07/29/2002

Applied P and Ch Laboratory
13760 Magnolia Avenue
Chino, CA 91710

BSK Submission #: 2002071194

BSK Sample ID #: 229479

Project ID: Project Desc: JPL #3887

Submission Comments:

Sample Type: Liquid
Sample Description: ER-11 3887-2
Sample Comments: Please include raw data

Date Sampled: 07/15/2002
Time Sampled: 1142
Date Received: 07/19/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**ND**	µg/L	1	1	1	07/24/2002	07/25/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

1414 Stanislaus Street Fresno, CA 93706-1623 Phone 559-497-2888, In CA 800-877-8310 Fax 559-485-6935

BSK ANALYTICAL LABORATORIES

Certificate of Analysis
ELAP Certificate #1180

Report Issue Date: 07/29/2002

Applied P and Ch Laboratory
13760 Magnolia Avenue
Chino, CA 91710

BSK Submission #: 2002071194

BSK Sample ID #: 229480

Project ID: Project Desc: JPL #3887

Submission Comments:

Sample Type: Liquid
Sample Description: MW-11-2 3887-10
Sample Comments: Please include raw data

Date Sampled: 07/15/2002
Time Sampled: 1219
Date Received: 07/19/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**4.0**	µg/L	1	1	1	07/24/2002	07/25/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

1414 Stanislaus Street Fresno, CA 93706-1623 Phone 559-497-2888, In CA 800-877-8310 Fax 559-485-6935

BSK ANALYTICAL LABORATORIES

Certificate of Analysis
ELAP Certificate #1180

Report Issue Date: 07/29/2002

Applied P and Ch Laboratory
13760 Magnolia Avenue
Chino, CA 91710

BSK Submission #: 2002071194

BSK Sample ID #: 229481

Project ID: Project Desc: JPL #3887

Submission Comments:

Sample Type: Liquid
Sample Description: MW-11-1 3887-9
Sample Comments: Please include raw data

Date Sampled: 07/15/2002
Time Sampled: 1244
Date Received: 07/19/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**4.0**	µg/L	1	1	1	07/24/2002	07/25/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

1414 Stanislaus Street Fresno, CA 93706-1623 Phone 559-497-2888, In CA 800-877-8310 Fax 559-485-6935

BSK ANALYTICAL LABORATORIES

Certificate of Analysis
ELAP Certificate #1180

Report Issue Date: 07/29/2002

Applied P and Ch Laboratory
13760 Magnolia Avenue
Chino, CA 91710

BSK Submission #: 2002071194

BSK Sample ID #: 229482

Project ID: Project Desc: JPL #3887

Submission Comments:

Sample Type: Liquid
Sample Description: ER-22 3887-4
Sample Comments: Please include raw data

Date Sampled: 07/17/2002
Time Sampled: 0733
Date Received: 07/19/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**ND**	µg/L	1	1	1	07/24/2002	07/25/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

1414 Stanislaus Street Fresno, CA 93706-1623 Phone 559-497-2888, In CA 800-877-8310 Fax 559-485-6935

BSK ANALYTICAL LABORATORIES

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 07/29/2002

Applied P and Ch Laboratory
13760 Magnolia Avenue
Chino, CA 91710

BSK Submission #: 2002071194

BSK Sample ID #: 229483

Project ID: Project Desc: JPL #3887

Submission Comments:

Sample Type: Liquid
Sample Description: MW-22-2 3887-18
Sample Comments: Please include raw data

Date Sampled: 07/17/2002
Time Sampled: 0818
Date Received: 07/19/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**6.0**	µg/L	1	1	1	07/24/2002	07/25/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

1414 Stanislaus Street Fresno, CA 93706-1623 Phone 559-497-2888, In CA 800-877-8310 Fax 559-485-6935

BSK ANALYTICAL LABORATORIES

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 07/29/2002

Applied P and Ch Laboratory
13760 Magnolia Avenue
Chino, CA 91710

BSK Submission #: 2002071194

BSK Sample ID #: 229484

Project ID: Project Desc: JPL #3887

Submission Comments:

Sample Type: Liquid
Sample Description: MW-22-1 3887-17
Sample Comments: Please include raw data

Date Sampled: 07/17/2002
Time Sampled: 0846
Date Received: 07/19/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	10	µg/L	1	1	1	07/24/2002	07/25/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

1414 Stanislaus Street Fresno, CA 93706-1623 Phone 559-497-2888, In CA 800-877-8310 Fax 559-485-6935

BSK ANALYTICAL LABORATORIES

Certificate of Analysis
ELAP Certificate #1180

Report Issue Date: 07/29/2002

Applied P and Ch Laboratory
13760 Magnolia Avenue
Chino, CA 91710

BSK Submission #: 2002071194

BSK Sample ID #: 229485

Project ID: Project Desc: JPL #3887

Submission Comments:

Sample Type: Liquid
Sample Description: MW3-4 3887-7
Sample Comments: Please include raw data

Date Sampled: 07/17/2002
Time Sampled: 1008
Date Received: 07/19/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**4.0**	µg/L	1	1	1	07/24/2002	07/25/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

1414 Stanislaus Street Fresno, CA 93706-1623 Phone 559-497-2888, In CA 800-877-8310 Fax 559-485-6935

BSK ANALYTICAL LABORATORIES

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 07/29/2002

Applied P and Ch Laboratory
13760 Magnolia Avenue
Chino, CA 91710

BSK Submission #: 2002071194

BSK Sample ID #: 229486

Project ID: Project Desc: JPL #3887

Submission Comments:

Sample Type: Liquid
Sample Description: MW-3-4D 3887-8
Sample Comments: Please include raw data

Date Sampled: 07/17/2002
Time Sampled: 1008
Date Received: 07/19/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**4.0**	µg/L	1	1	1	07/24/2002	07/25/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

1414 Stanislaus Street Fresno, CA 93706-1623 Phone 559-497-2888, In CA 800-877-8310 Fax 559-485-6935

BSK ANALYTICAL LABORATORIES

Certificate of Analysis
ELAP Certificate #1180

Report Issue Date: 07/29/2002

Applied P and Ch Laboratory
13760 Magnolia Avenue
Chino, CA 91710

BSK Submission #: 2002071194

BSK Sample ID #: 229487

Project ID: Project Desc: JPL #3887

Submission Comments:

Sample Type: Liquid
Sample Description: MW-3-3 3887-6
Sample Comments: Please include raw data

Date Sampled: 07/17/2002
Time Sampled: 1447
Date Received: 07/19/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**4.0**	µg/L	1	1	1	07/24/2002	07/25/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

1414 Stanislaus Street Fresno, CA 93706-1623 Phone 559-497-2888, In CA 800-877-8310 Fax 559-485-6935

BSK ANALYTICAL LABORATORIES

Certificate of Analysis
ELAP Certificate #1180

Report Issue Date: 07/29/2002

Applied P and Ch Laboratory
13760 Magnolia Avenue
Chino, CA 91710

BSK Submission #: 2002071194
BSK Sample ID #: 229488

Project ID: Project Desc: JPL #3887
Submission Comments:
Sample Type: Liquid
Sample Description: MW-3-2 3887-5
Sample Comments: Please include raw data

Date Sampled: 07/17/2002
Time Sampled: 1513
Date Received: 07/19/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**1.0**	µg/L	1	1	1	07/24/2002	07/26/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

1414 Stanislaus Street Fresno, CA 93706-1623 Phone 559-497-2888, In CA 800-877-8310 Fax 559-485-6935

BSK ANALYTICAL LABORATORIES

Certificate of Analysis
ELAP Certificate #1180

Report Issue Date: 07/29/2002

Applied P and Ch Laboratory
13760 Magnolia Avenue
Chino, CA 91710

BSK Submission #: 2002071194
BSK Sample ID #: 229489

Project ID: Project Desc: JPL #3887
Submission Comments:
Sample Type: Liquid
Sample Description: ER-3 3887-1
Sample Comments: Please include raw data

Date Sampled: 07/17/2002
Time Sampled: 0918
Date Received: 07/19/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**ND**	µg/L	1	1	1	07/24/2002	07/25/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

1414 Stanislaus Street Fresno, CA 93706-1623 Phone 559-497-2888, In CA 800-877-8310 Fax 559-485-6935

BSK ANALYTICAL LABORATORIES

QC Summary Report 07/29/2002

BSK Submission : **2002071194**
Client : **Applied P and Ch Laboratory**
Date Submitted : **07/19/2002**
Project ID :
Project Desc : **JPL #3887**

BSK StarLims Run #: 40597 Instrument ID: **ICPMS1**
Analyst Initials: **PARMINDERS** Method Number: **CR_MS_TS**

Analyte Results

Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date	
Chromium - Total (Cr)	LCS	N/A	20.5	µg/L	102		20	ND	120	80	07/25/02	*Acceptable*
Chromium - Total (Cr)	LCSD	N/A	20.4	µg/L	102	0.48	20	ND	120	80	07/25/02	*Acceptable*
Chromium - Total (Cr)	MS	229478	25.7	µg/L	103		20	5.0	120	80	07/25/02	*Acceptable*
Chromium - Total (Cr)	MSD	229478	25.4	µg/L	102	1.1	20	5.0	120	80	07/25/02	*Acceptable*
Chromium - Total (Cr)	RBLK	N/A	0	µg/L	< 1				1	N/A	07/25/02	*Acceptable*

BSK StarLims Run #: 40598 Instrument ID: **ICPMS1**
Analyst Initials: **PARMINDERS** Method Number: **CR_MS_TS**

Analyte Results

Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date	
Chromium - Total (Cr)	LCS	N/A	20.4	µg/L	102		20	ND	120	80	07/25/02	*Acceptable*
Chromium - Total (Cr)	LCSD	N/A	20.4	µg/L	102	0.0	20	ND	120	80	07/25/02	*Acceptable*
Chromium - Total (Cr)	MS	229481	24.7	µg/L	103		20	4.0	120	80	07/25/02	*Acceptable*
Chromium - Total (Cr)	MSD	229481	24.3	µg/L	101	1.7	20	4.0	120	80	07/25/02	*Acceptable*
Chromium - Total (Cr)	RBLK	N/A	0	µg/L	< 1				1	N/A	07/25/02	*Acceptable*

Approved by: _____

%Rec: Percent Recovered
RPD: Relative Percent Difference
UCL: Upper Control Limit
LCL: Lower Control Limit

Parent Sample: Sample used as background matrix for MS/MSD
OOS-High: QC Result Above UCL
OOS-Low: QC Result Below LCL

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Submitted to:
SOTA Environmental
Attention: Yu Zeng
16835 W. Bernardo Dr. Ste. 212
San Diego CA 92127
Tel: (858)485-8100 Fax (858)485-0812

Service ID #: 801-023799
Collected by:
Collected on: 07/03-11/02

Received: 07/03/02
Extracted: N/A
Tested: N/A
Reported: 08/01/02

Sample Description: Water
Project Description: 00HW019 JPL

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result ER-12 02-03799-1	ER-17 02-03799-2	ER-18 02-03799-3	ER-20 02-03799-4
CHROMIUM							

Component Analyzed	Method	Unit	PQL	Analysis Result MW-12-1 02-03799-5	MW-12-2 02-03799-6	MW-12-3 02-03799-7	MW-12-3D 02-03799-8
CHROMIUM [illegible]							

Component Analyzed	Method	Unit	PQL	Analysis Result MW-17-2 02-03799-9	MW-17-3 02-03799-10	MW-17-4 02-03799-11	MW-18-2 02-03799-12
CHROMIUM [illegible]							

Component Analyzed	Method	Unit	PQL	Analysis Result MW-18-3 02-03799-13	MW-18-4 02-03799-14	MW-20-1 02-03799-15	MW-20-2 02-03799-16
CHROMIUM [illegible]							

Component Analyzed	Method	Unit	PQL	Analysis Result MW-20-3 02-03799-17	MW-20-4 02-03799-18	MW-20-5 02-03799-19	MW-20-4D 02-03799-20
CHROMIUM [illegible]							

PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit
N.D.: Not Detected or less than the practical quantitation limit. "-": Analysis is not required.
#: Reported between PQL and MDL.
Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0
[illegible]: Subcontracted to BSK Analytical Laboratories Inc. See attached.

Respectfully submitted,

Dominic Lau
Laboratory Director
Applied P & Ch Laboratory

Applied P & Ch Laboratory

APCL

13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Chain of Custody

Please Print in pen Page 1 of 2

Client: SOTA ENVIR. TECH., INC. Contact: MIKE SAYRE Tel #: 858-485-8100 Fax #: 858-485-0812

Address: 16835 W. BERNARDO DR. #212 City: SAN DIEGO State: CA Zip code: 92127

Bill to: SOTA

Project Name/Code JPL Job # 00HW019 P.O. #

Project Address PASADENA, CA APCL Quotation #

Due Date: ☒ regular ☐ rush: ___ days ___ hours Sampled by: MES/TAM

Field Sample ID No.	Sample Description	Date Collected	Time Collected	Sample Matrix	Preservation	# of Containers	VOCs (524.2)	PEACH LOGATE (314.0)	TOTAL Cr (200.8)	Cr VI (7196)	Remarks
TB-3	TRIP BLANK	7/8/02	905	WATER	HCl	2	X				EPA LEVEL IV
MW-12-5	MW-12-5		1020		HCl	3	X				QA/QC
MW-12-5	MW-12-5		1020		—	1		X			
MW-12-4	MW-12-4		1054		HCl	3	X				
MW-12-4	MW-12-4		1054		—	1		X			
MW-12-3	MW-12-3		1123		HCl	3	X				
					—	1		X	X		
					HNO_3	1			X		
MW-12-3D	MW-12-3 DUP				HCl	3	X				
					—	1		X	X		
					HNO_3	1			X		
ER-12	EQUIP. RINSATE		1136		HCl	3	X				
					—	1		X	X		
					HNO_3	1			X		
MW-12-2	MW-12-2		1215		HCl	3	X				

3790

White - With report
Yellow - Lab copy
Pink - Originator

QC Requirement: ☐ Regular; ☐ QA/QC Report; ☐ WIP; ☐ Raw Data; ☐ Extended Raw Data ☐ CLP; ☐ ACE ☐ AFCEE ☐ NEESA ___ (E, C or D); ☐ Other _____ (Please specify)

Sample Disposal: ☐ Return ☐ Disposal by APCL ☐ Hold for _____ days after receiving date. **If not specified, samples will be discarded 45 days after samples are received.**

Sample Conditions: ☐ Intact; ☐ Broken. Cooler Seal: ☐ Intact; ☐ Broken; ☐ None. Tag # _____ Temperature: ☐ Room ☐ Cold (_____ °C).

Relinquished by Date/Time 7/8/02 1601 Received by Date/Time 7/8/02 16:00

Relinquished by Date/Time 7/8/02 16:50 Received by Date/Time 7/8/02 1650

APCL USE ONLY Service # Note:

Clients understand that all terms described in the proposals, quotations for this project, and/or the general terms provided in the current APCL price schedules will be followed APCL reserves the right to terminate its service or withhold delivery of any reports, if in APCL's sole discretion the terms of the project have been broken.

Applied P & Ch Laboratory

APCL

13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Chain of Custody

Please Print in pen Page 1 of 1

Client: SOTA ENVIR. TECH., INC. Contact: MIKE SAYRE Tel #: 858-485-8100 Fax #: 858-485-0812

Address: 16835 W. BERNARDO DR. #212 City: SAN DIEGO State: CA Zip code: 92127

Bill to: SOTA

Project Name/Code JPL Job # 00HW019 P.O. #

Project Address PASADENA, CALIFORNIA APCL Quotation #

Due Date: ☑ regular ☐ rush: ___ days ___ hours Sampled by: MES/TAM

Field Sample ID No.	Sample Description	Date Collected	Time Collected	Sample Matrix	Preservation	# of Containers	VOCs (524.2)	PERCHLORATE (314.0)	TOTAL CR (200.8)	CrVI (7196)	Remarks
TB-2	TRIP BLANK	7/3/02	0745	WATER	HCl	2	X				EPA LEVEL IV QA/QC
ER-18	EQUIP. RINSATE		0755		HCl	3	X				
					HNO_3	1			X		
					—	1		X		X	
MW-18-5	MW-18-5		0814		HCl	9	X				MS/MSD
MW-18-5	MW-18-5		0814		—	1		X			
MW-18-4	MW-18-4		0850		HCl	3	X				
					HNO_3	1			X		
					—	1		X		X	
MW-18-3	MW-18-3		0922		HCl	3	X				
					HNO_3	1			X		
					—	1		X		X	
MW-18-2	MW-18-2		0958		HCl	3	X				
					HNO_3	1			X		
					—	1		X		X	

3700

Analysis Items

White - With report
Yellow - Lab copy
Pink - Originator

QC Requirement: ☐ Regular; ☐ QA/QC Report; ☐ WIP; ☐ Raw Data; ☐ Extended Raw Data ☐ CLP; ☐ ACE ☐ AFCEE ☐ NEESA ___ (E, C or D); ☐ Other _____ (Please specify)

Sample Disposal: ☐ Return ☐ Disposal by APCL ☐ Hold for _____ days after receiving date. **If not specified, samples will be discarded 45 days after samples are received.**

Sample Conditions: ☐ Intact; ☐ Broken. Cooler Seal: ☐ Intact; ☐ Broken; ☐ None. Tag # _____ Temperature: ☐ Room ☐ Cold (_____ °C).

Relinquished by _____ Date/Time 7/3/02 / 1147 Received by _____ Date/Time 7/3/02 / 1147

Relinquished by _____ Date/Time / Received by _____ Date/Time /

APCL USE ONLY Service # Note:

Clients understand that all terms described in the proposals, quotations for this project, and/or the general terms provided in the current APCL price schedules will be followed. APCL reserves the right to terminate its service or withhold delivery of any reports, if in APCL's sole discretion the terms of the project have been broken.

Applied P & Ch Laboratory

APCL

13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Chain of Custody

Please Print in pen Page 2 of 2

Client: SOTA ENVIR. TECH., INC. Contact: MIKE SAYRE Tel #: 858-485-8100 Fax #: 858-485-8100

Address: 16835 W. BERNARDO DR. #212 City: SAN DIEGO State: CA Zip code: 92127

Bill to: SOTA

Project Name/Code JPL Job #00HW019 P.O. #

Project Address PASADENA, CALIFORNIA APCL Quotation #

Due Date: ☑ regular ☐ rush: ___ days ___ hours Sampled by: MES/TAM

White – With report
Yellow – Lab copy
Pink – Originator

Field Sample ID No.	Sample Description	Date Collected	Time Collected	Sample Matrix	Preservation	# of Containers	Analysis Items: VOCs (524.2)	Perchlorate (314.0)	Cr VI (7196)	Total Cr (200.8)	Remarks
MW-12-2	MW-12-2	7/8/02	1215	WATER	—	1		X	X		EPA LEVEL IV QA/QC
MW-12-2	MW-12-2		1215		HNO_3	1				X	
MW-12-1	MW-12-1		1239		HCl	3	X				
MW-12-1	MW-12-1				—	1		X	X		
MW-12-1	MW-12-1				HNO_3	1				X	

3700

QC Requirement: ☐ Regular; ☐ QA/QC Report; ☐ WIP; ☐ Raw Data; ☐ Extended Raw Data ☐ CLP; ☐ ACE ☐ AFCEE ☐ NEESA ___ (E, C or D); ☐ Other _____ (Please specify)

Sample Disposal: ☐ Return ☐ Disposal by APCL ☐ Hold for _____ days after receiving date. **If not specified, samples will be discarded 45 days after samples are received.**

Sample Conditions: ☐ Intact; ☐ Broken. Cooler Seal: ☐ Intact; ☐ Broken; ☐ None. Tag # _____ Temperature: ☐ Room ☐ Cold (_____ °C).

Relinquished by [signature] Date/Time 7/8/02 1160[illegible] Received by [signature] Date/Time 7/8/02 1600

Relinquished by [signature] Date/Time 7/8/02 1650 Received by [signature] Date/Time 7/8/02 1650

APCL USE ONLY Service # Note:

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Applied P & Ch Laboratory

APCL

13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Chain of Custody

Please Print in pen Page 1 of 2

Client: SOTA ENVIR. TECH., INC. Contact: MIKE SAYRE Tel #: 858-485-8100 Fax #: 858-485-0812

Address: 16835 W. BERNARDO DR. #212 City: SAN DIEGO State: CA Zip code: 92127

Bill to: SOTA

Project Name/Code JPL Job # 00HW019 P.O. #

Project Address PASADENA, CALIFORNIA APCL Quotation #

Due Date: ☑ regular ☐ rush: ___ days ___ hours Sampled by: MES/TAM

Analysis Items

White - With report
Yellow - Lab copy
Pink - Originator

Field Sample ID No.	Sample Description	Date Collected	Time Collected	Sample Matrix	Preservation	# of Containers	VOCs (524.2)	PERCHLORATE (314.0)	Cr VI (7196)	Total Cr (200.8)	Remarks
TB-5	TRIP BLANK	7/10/02	0938	WATER	HCl	2	X				EPA LEVEL IV
MW-20-5	MW-20-5		1028		HCl	3	X				QA/QC
					—	1		X	X		
					HNO_3	1				X	
MW-20-4	MW-20-4		1112		HCl	3	X				
					—	1		X	X		
					HNO_3	1				X	
MW-20-4D	MW-20-4 DUPL.				HCl	3	X				
					—	1		X	X		
					HNO_3	1				X	
ER-20	EQUIP. RINSATE		1123		HCl	3	X				
					—	1		X	X		
					HNO_3	1				X	
MW-20-3	MW-20-3		1352		HCl	3	X				
MW-20-3	MW-20-3		1352		—	1		X	X		

3790

QC Requirement: ☐ Regular, ☐ QA/QC Report; ☐ WIP; ☐ Raw Data; ☐ Extended Raw Data ☐ CLP; ☐ ACE ☐ AFCEE ☐ NEESA ___ (E, C or D); ☐ Other _____ (Please specify)

Sample Disposal: ☐ Return ☐ Disposal by APCL ☐ Hold for _____ days after receiving date. **If not specified, samples will be discarded 45 days after samples are received.**

Sample Conditions: ☐ Intact; ☐ Broken. Cooler Seal: ☐ Intact; ☐ Broken; ☐ None. Tag # _____ Temperature: ☐ Room ☐ Cold (_____ °C).

Relinquished by [signature] Date/Time 7/10/02 1628 Received by [signature] Date/Time 7/10/02 1628

Relinquished by [signature] Date/Time 7/10/02 1740 Received by [signature] Date/Time 7/10/02 1740

APCL USE ONLY Service # Note:

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Applied P & Ch Laboratory

APCL

13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Chain of Custody

Please Print in pen Page 2 of 2

Client: SOTA ENVIR. TECH., INC. Contact: MIKE SAYRE Tel #: 858-485-8100 Fax #: 858-485-0812

Address: 16835 W. BERNARDO DR. #212 City: SAN DIEGO State: CA Zip code: 92127

Bill to: SOTA

Project Name/Code JPL Job # 00HW019 P.O. #

Project Address PASADENA, CALIFORNIA APCL Quotation #

Due Date: ☑ regular ☐ rush: ___ days ___ hours Sampled by: MES/TAM

Field Sample ID No.	Sample Description	Date Collected	Time Collected	Sample Matrix	Preservation	# of Containers	VOCs (524.2)	PERCHLORATE (314.0)	Cr VI (7196)	TOTAL Cr (200.8)	Remarks
MW-20-3	MW-20-3	7/10/02	1352	WATER	HNO_3	1				X	EPA LEVEL IV QA/QC
MW-20-2	MW-20-2		1423		HCl	3	X				
					—	1		X	X		
					HNO_3	1				X	
MW-20-1	MW-20-1		1452		HCl	3	X				
					—	1		X	X		
					HNO_3	1				X	

Analysis Items

White – With report
Yellow – Lab copy
Pink – Originator

3799

QC Requirement: ☐ Regular; ☐ QA/QC Report; ☐ WIP; ☐ Raw Data; ☐ Extended Raw Data ☐ CLP; ☐ ACE ☐ AFCEE ☐ NEESA ___ (E, C or D); ☐ Other _____ (Please specify)

Sample Disposal: ☐ Return ☐ Disposal by APCL ☐ Hold for _____ days after receiving date. **If not specified, samples will be discarded 45 days after samples are received.**

Sample Conditions: ☐ Intact; ☒ Broken. Cooler Seal: ☐ Intact; ☐ Broken; ☐ None. Tag # _____ Temperature: ☐ Room ☐ Cold (_____ °C).

Relinquished by [signature] Date/Time 7/10/02 1628 Received by [signature] Date/Time 7/10/02 1628

Relinquished by [signature] Date/Time 7/10/02 1740 Received by [signature] Date/Time 7/10/02 1740

APCL USE ONLY Service # Note:

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Chain of Custody

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Tel: (909) 590-1828 Fax: (909) 590-1498

Please Print in pen Page 1 of 1

Client: SOTA ENVIR. TECH., INC. Contact: MIKE SAYRE Tel #: 858-485-8100 Fax #: 858-485-0812

Address: 16835 W. BERNARDO DR. #212 City: SAN DIEGO State: CA Zip code: 92127

Bill to: SOTA

Project Name/Code JPL Job # 00HW019 P.O. #

Project Address PASADENA, CALIFORNIA APCL Quotation #

Due Date: ☑ regular ☐ rush: ___ days ___ hours Sampled by: MES/TAM

Field Sample ID No.	Sample Description	Date Collected	Time	Sample Matrix	Preservation	# of Containers	VOCs (524.2)	PERCHLORATE (314.0)	CrVI (7196)	TOTAL Cr (200.8)	Remarks
TB-60	TRIP BLANK	7/11/02	0905	WATER	HCl	2	X				EPA LEVEL IV QA/QC
MW-17-5	MW-17-5		1043		HCl	3	X				
MW-17-5	MW-17-5		1043		—	1		X			
MW-17-4	MW-17-4		1124		HCl	9	X				MS/MSD
					—	2		X	X		
					HNO_3	2				X	
ER-17	EQUIP. RINSATE		1102		HCl	3	X				
					—	1		X	X		
					HNO_3	1				X	
MW-17-3	MW-17-3		1224		HCl	3	X				
					—	1		X	X		
					HNO_3	1				X	
MW-17-2	MW-17-2		1253		HCl	3	X				
					—	1		X	X		
					HNO_3	1				X	

Analysis Items

White – With report
Yellow – Lab copy
Pink – Originator

3799

QC Requirement: ☐ Regular; ☐ QA/QC Report; ☐ WIP; ☐ Raw Data; ☐ Extended Raw Data ☐ CLP; ☐ ACE ☐ AFCEE ☐ NEESA ___ (E, C or D); ☐ Other _____ (Please specify)

Sample Disposal: ☐ Return ☐ Disposal by APCL ☐ Hold for _____ days after receiving date. **If not specified, samples will be discarded 45 days after samples are received.**

Sample Conditions: ☐ Intact; ☐ Broken. Cooler Seal: ☐ Intact; ☐ Broken; ☐ None. Tag # _____ Temperature: ☐ Room ☐ Cold (_____ °C).

Relinquished by [signature] Date/Time 7/11/02 1160 Received by [signature] Date/Time 7-11-02 1600

Relinquished by [signature] Date/Time 7/11/02 1700 Received by [signature] Date/Time 7/11/02 1700

APCL USE ONLY Service # Note:

Clients understand that all terms described in the proposals, quotations for this project, and/or the general terms provided in the current APCL price schedules will be followed. APCL reserves the right to terminate its service or withhold delivery of any reports, if in APCL's sole discretion the terms of the project have been broken.

APCL Form 4-101, Ver. 4.0, Dec. 20, 1994. Root-file:[CUST.DATA.LAB]CHAIN-ROOT.TEX File:[CUST.DATA.LAB]CHAIN4.TEX

APCL

Applied P & Ch Laboratory
13760 E. Magnolia Ave., Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Subcontract Chain of Custody

716042

Please Print in pen

Page 1 of 2

TO: BSK Analytical Labs — Contact ~~Eric~~ Rachael Wilcox — Tel: (559) 497-2888 — Fax: (559) 485-6935

Address 1414 Stanislaus St. — City Fresno — State CA — Zip code 93706

APCL Project Title/Code JPL #3799 — Sampler MES/JAM — Sample disposition: Date ☒ client; ☐ APCL

Bill to (if different from above) APCL — Quotation # — P.O.#

Due date ☒ regular ☐ rush — Client signature Joe Saldana — Date 7/12/02

	Sample Description	Date Collected	Time	Matrix	Pres. Y/N	Filtered Y/N	Analysis items	Unit Price*	APCL Lab-ID
1	ER-18	7/3/02	755	W	HNO3	N	Total Cr (200.8)	227919	3799-3
2	MW-18-4		850					227920	3799-14
3	MW-18-3		922				*please include raw*	227921	3799-13
4	MW-18-2		958				data	227922	3799-12
5	MW-12-3	7/8/02	1123					227923	3799-7
6	MW-12-3D		1123					227924	3799-8
7	ER-12		1136					227925	3799-1
8	MW-12-2		1215					227926	3799-6
9	MW-12-1		1239					227927	3799-5
10	MW-20-5	7/10/02	1028					227928	3799-19
11	MW-20-4		1112					227929	3799-18
12	MW-20-4-Dupl.		1112					227930	3799-20
13	ER-20		1123					227931	3799-4
14	MW-20-3		1352					227932	3799-17
15	MW-20-2		1423					227933	3799-16
16	MW-20-1		1452					227934	3799-15
17	MW-17-4	7/11/02	1124				227935 ← MS/MSD		3799-11
18	ER-17	7/11/02	1102				227936		3799-2

2002070894 07/16/2002
APCL_LAB TAT: Standard
716042

Sample Conditions: Seal ☒ Intact ☐ Broken ☐ None; Temperature ☒ Cold ☐ Room; Other

Relinquished by Joe Saldana	Date/Time 7/15/02 1400	Received by	Date/Time
Relinquished by	Date/Time	Received by	Date/Time
Relinquished by	Date/Time	Received by	Date/Time
Relinquished by	Date/Time	Received by M. LAGORIO	Date/Time 7/16/02 0800

* APCL must be notified if unit price is incorrect.

APCL

Applied P & Ch Laboratory
13760 E. Magnolia Ave., Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Subcontract Chain of Custody

716042

Please Print in pen

Page 2 of 2

TO: BSK Analytical labs
Contact ~~E Bachael Wilcox~~ Tel: (559) 497-2888 Fax: ( )
Address 1414 Stanislaus St.
City Fresno State CA Zip code 93706
APCL Project Title/Code JPL # 3799
Sampler MES/TAM
Sample disposition: Date ☒client; ☐APCL
Bill to (if different from above) APCL
Quotation #
P.O.#
Due date ☒regular ☐rush
Client signature Joe Saldano
Date 7/15/02

	Sample Description	Date Collected	Time Collected	Matrix	Pres. Y/N	Filtered Y/N	Analysis items	Unit Price*	APCL Lab-ID
19	MW-17-3	7/11/02	1224	W	HNO_3	N	Total Cr (200.8)	227937	3799-10
20	MW-17-2	↓	1253	↓	↓	↓		227938	3799-9
	temp blank 8°C								

2002070894 07/16/2002
APCL_LAB TAT: Standard
716042

Sample Conditions: Seal ☒Intact ☐ Broken ☐ None; Temperature ☒Cold ☐ Room; Other

Relinquished by	Joe Saldano	Date/Time 7/15/02 1400	Received by		Date/Time
Relinquished by		Date/Time	Received by		Date/Time
Relinquished by		Date/Time	Received by		Date/Time
Relinquished by		Date/Time	Received by	M. LAGORIO	Date/Time 7/16/02 0800

* APCL must be notified if unit price is incorrect.

BSK ANALYTICAL LABORATORIES

Jim Lin
Applied P and Ch Laboratory
13760 Magnolia Avenue
Chino, CA 91710

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 07/26/2002

BSK Submission #: 2002070894

BSK Sample ID #: 227919

Project ID: Project Desc: JPL # 3799

Submission Comments:

Sample Type: Liquid
Sample Description: ER-18 3799-3
Sample Comments:

Date Sampled: 07/03/2002
Time Sampled: 0755
Date Received: 07/16/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**ND**	µg/L	1	1	1	07/18/2002	07/25/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

1414 Stanislaus Street Fresno, CA 93706-1623 Phone 559-497-2888, In CA 800-877-8310 Fax 559-485-6935

BSK ANALYTICAL LABORATORIES

Jim Lin
Applied P and Ch Laboratory
13760 Magnolia Avenue
Chino, CA 91710

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 07/26/2002

BSK Submission #: 2002070894

BSK Sample ID #: 227920

Project ID: Project Desc: JPL # 3799

Submission Comments:

Sample Type: Liquid

Sample Description: MW-18-4 3799-14

Sample Comments:

Date Sampled: 07/03/2002
Time Sampled: 0850
Date Received: 07/16/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**4.0**	µg/L	1	1	1	07/18/2002	07/25/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
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BSK ANALYTICAL LABORATORIES

Jim Lin
Applied P and Ch Laboratory
13760 Magnolia Avenue
Chino, CA 91710

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 07/26/2002

BSK Submission #: 2002070894

BSK Sample ID #: 227921

Project ID: Project Desc: JPL # 3799

Submission Comments:

Sample Type: Liquid
Sample Description: MW-18-3 3799-13
Sample Comments:

Date Sampled: 07/03/2002
Time Sampled: 0922
Date Received: 07/16/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**7.0**	µg/L	1	1	1	07/18/2002	07/25/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

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BSK ANALYTICAL LABORATORIES

Jim Lin
Applied P and Ch Laboratory
13760 Magnolia Avenue
Chino, CA 91710

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 07/26/2002

BSK Submission #: 2002070894

BSK Sample ID #: 227922

Project ID: Project Desc: JPL # 3799

Submission Comments:

Sample Type: Liquid
Sample Description: MW-18-2 3799-12
Sample Comments:

Date Sampled: 07/03/2002
Time Sampled: 0958
Date Received: 07/16/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	3.0	µg/L	1	1	1	07/18/2002	07/25/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

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BSK ANALYTICAL LABORATORIES

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Applied P and Ch Laboratory
13760 Magnolia Avenue
Chino, CA 91710

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 07/26/2002

BSK Submission #: 2002070894

BSK Sample ID #: 227923

Project ID: Project Desc: JPL # 3799

Submission Comments:

Sample Type: Liquid
Sample Description: MW-12-3 3799-7
Sample Comments:

Date Sampled: 07/08/2002
Time Sampled: 1123
Date Received: 07/16/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**2.0**	µg/L	1	1	1	07/18/2002	07/25/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

1414 Stanislaus Street Fresno, CA 93706-1623 Phone 559-497-2888, In CA 800-877-8310 Fax 559-485-6935

BSK ANALYTICAL LABORATORIES

Jim Lin
Applied P and Ch Laboratory
13760 Magnolia Avenue
Chino, CA 91710

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 07/26/2002

BSK Submission #: 2002070894

BSK Sample ID #: 227924

Project ID: Project Desc: JPL # 3799

Submission Comments:

Sample Type: Liquid
Sample Description: MW-12-3D 3799-8
Sample Comments:

Date Sampled: 07/08/2002
Time Sampled: 1123
Date Received: 07/16/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**4.0**	µg/L	1	1	1	07/18/2002	07/25/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

1414 Stanislaus Street Fresno, CA 93706-1623 Phone 559-497-2888, In CA 800-877-8310 Fax 559-485-6935

BSK ANALYTICAL LABORATORIES

Jim Lin
Applied P and Ch Laboratory
13760 Magnolia Avenue
Chino, CA 91710

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 07/26/2002

BSK Submission #: 2002070894

BSK Sample ID #: 227925

Project ID: Project Desc: JPL # 3799

Submission Comments:

Sample Type: Liquid
Sample Description: ER-12 3799-1
Sample Comments:

Date Sampled: 07/08/2002
Time Sampled: 1136
Date Received: 07/16/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**ND**	µg/L	1	1	1	07/18/2002	07/25/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

1414 Stanislaus Street Fresno, CA 93706-1623 Phone 559-497-2888, In CA 800-877-8310 Fax 559-485-6935

BSK ANALYTICAL LABORATORIES

Jim Lin
Applied P and Ch Laboratory
13760 Magnolia Avenue
Chino, CA 91710

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 07/26/2002

BSK Submission #: 2002070894

BSK Sample ID #: 227926

Project ID: Project Desc: JPL # 3799

Submission Comments:

Sample Type: Liquid
Sample Description: MW-12-2 3799-6
Sample Comments:

Date Sampled: 07/08/2002
Time Sampled: 1215
Date Received: 07/16/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**3.0**	µg/L	1	1	1	07/18/2002	07/25/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
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S: Suspect result. See Cover Letter for comments.
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Chino, CA 91710

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 07/26/2002

BSK Submission #: 2002070894

BSK Sample ID #: 227927

Project ID: Project Desc: JPL # 3799

Submission Comments:

Sample Type: Liquid
Sample Description: MW-12-1 3799-5
Sample Comments:

Date Sampled: 07/08/2002
Time Sampled: 1239
Date Received: 07/16/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**5.0**	µg/L	1	1	1	07/18/2002	07/25/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
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Report Authentication Code:

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Chino, CA 91710

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 07/26/2002

BSK Submission #: 2002070894

BSK Sample ID #: 227928

Project ID: Project Desc: JPL # 3799

Submission Comments:

Sample Type: Liquid
Sample Description: MW-20-5 3799-19
Sample Comments:

Date Sampled: 07/10/2002
Time Sampled: 1028
Date Received: 07/16/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**3.0**	µg/L	1	1	1	07/18/2002	07/25/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

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BSK ANALYTICAL LABORATORIES

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Applied P and Ch Laboratory
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Chino, CA 91710

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 07/26/2002

BSK Submission #: 2002070894

BSK Sample ID #: 227929

Project ID: Project Desc: JPL # 3799

Submission Comments:

Sample Type: Liquid
Sample Description: MW-20-4 3799-18
Sample Comments:

Date Sampled: 07/10/2002
Time Sampled: 1112
Date Received: 07/16/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**3.0**	µg/L	1	1	1	07/18/2002	07/25/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

1414 Stanislaus Street Fresno, CA 93706-1623 Phone 559-497-2888, In CA 800-877-8310 Fax 559-485-6935

BSK ANALYTICAL LABORATORIES

Jim Lin
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Chino, CA 91710

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 07/26/2002

BSK Submission #: 2002070894

BSK Sample ID #: 227930

Project ID: Project Desc: JPL # 3799

Submission Comments:

Sample Type: Liquid
Sample Description: MW-20-4 DUP 3799-20
Sample Comments:

Date Sampled: 07/10/2002
Time Sampled: 1112
Date Received: 07/16/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**3.0**	µg/L	1	1	1	07/18/2002	07/25/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

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BSK ANALYTICAL LABORATORIES

Jim Lin
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Chino, CA 91710

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 07/26/2002

BSK Submission #: 2002070894

BSK Sample ID #: 227931

Project ID: Project Desc: JPL # 3799

Submission Comments:

Sample Type: Liquid
Sample Description: ER-20 3799-4
Sample Comments:

Date Sampled: 07/10/2002
Time Sampled: 1123
Date Received: 07/16/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**ND**	µg/L	1	1	1	07/18/2002	07/25/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

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BSK ANALYTICAL LABORATORIES

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Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 07/26/2002

BSK Submission #: 2002070894

BSK Sample ID #: 227932

Project ID: Project Desc: JPL # 3799

Submission Comments:

Sample Type: Liquid
Sample Description: MW-20-3 3799-17
Sample Comments:

Date Sampled: 07/10/2002
Time Sampled: 1352
Date Received: 07/16/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**2.0**	µg/L	1	1	1	07/18/2002	07/25/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

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BSK ANALYTICAL LABORATORIES

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Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 07/26/2002

BSK Submission #: 2002070894

BSK Sample ID #: 227933

Project ID: Project Desc: JPL # 3799

Submission Comments:

Sample Type: Liquid
Sample Description: MW-20-2 3799-16
Sample Comments:

Date Sampled: 07/10/2002
Time Sampled: 1423
Date Received: 07/16/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**1.0**	µg/L	1	1	1	07/18/2002	07/25/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

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BSK ANALYTICAL LABORATORIES

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Chino, CA 91710

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 07/26/2002

BSK Submission #: 2002070894

BSK Sample ID #: 227934

Project ID: Project Desc: JPL # 3799

Submission Comments:

Sample Type: Liquid
Sample Description: MW-20-1 3799-15
Sample Comments:

Date Sampled: 07/10/2002
Time Sampled: 1452
Date Received: 07/16/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**4.0**	µg/L	1	1	1	07/18/2002	07/25/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

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Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 07/26/2002

BSK Submission #: 2002070894

BSK Sample ID #: 227935

Project ID: Project Desc: JPL # 3799

Submission Comments:

Sample Type: Liquid
Sample Description: MW-17-4 3799-11
Sample Comments:

Date Sampled: 07/11/2002
Time Sampled: 1124
Date Received: 07/16/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**2.0**	µg/L	1	1	1	07/18/2002	07/25/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

1414 Stanislaus Street Fresno, CA 93706-1623 Phone 559-497-2888, In CA 800-877-8310 Fax 559-485-6935

BSK ANALYTICAL LABORATORIES

Jim Lin
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13760 Magnolia Avenue
Chino, CA 91710

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 07/26/2002

BSK Submission #: 2002070894

BSK Sample ID #: 227936

Project ID: Project Desc: JPL # 3799

Submission Comments:

Sample Type: Liquid
Sample Description: ER-17 3799-2
Sample Comments:

Date Sampled: 07/11/2002
Time Sampled: 1102
Date Received: 07/16/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**ND**	µg/L	1	1	1	07/18/2002	07/25/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

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BSK ANALYTICAL LABORATORIES

Jim Lin
Applied P and Ch Laboratory
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Chino, CA 91710

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 07/26/2002

BSK Submission #: 2002070894

BSK Sample ID #: 227937

Project ID: Project Desc: JPL # 3799

Submission Comments:

Sample Type: Liquid
Sample Description: MW-17-3 3799-10
Sample Comments:

Date Sampled: 07/11/2002
Time Sampled: 1224
Date Received: 07/16/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**6.0**	µg/L	1	1	1	07/18/2002	07/25/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

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BSK ANALYTICAL LABORATORIES

Jim Lin
Applied P and Ch Laboratory
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Chino, CA 91710

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 07/26/2002

BSK Submission #: 2002070894

BSK Sample ID #: 227938

Project ID: Project Desc: JPL # 3799

Submission Comments:

Sample Type: Liquid
Sample Description: MW-17-2 3799-9
Sample Comments:

Date Sampled: 07/11/2002
Time Sampled: 1253
Date Received: 07/16/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**2.0**	µg/L	1	1	1	07/18/2002	07/25/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

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BSK ANALYTICAL LABORATORIES

QC Summary Report 07/31/2002

BSK Submission : **2002070894**
Client : **Applied P and Ch Laboratory**
Date Submitted : **07/16/2002**
Project ID :
Project Desc : **JPL # 3799**

BSK StarLims Run #: 40597 Instrument ID: **ICPMS1**
Analyst Initials: **PARMINDERS** Method Number: **CR_MS_TS**

Analyte Results

Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date	
Chromium - Total (Cr)	CCB	N/A	0	µg/l	< 1					N/A	07/25/02	*Acceptable*
Chromium - Total (Cr)	CCV	N/A	51.9	µg/L	3.80				30	-30	07/25/02	*Acceptable*
Chromium - Total (Cr)	LCS	N/A	20.5	µg/L	102		20	ND	120	80	07/25/02	*Acceptable*
Chromium - Total (Cr)	LCSD	N/A	20.4	µg/L	102	0.48	20	ND	120	80	07/25/02	*Acceptable*
Chromium - Total (Cr)	MS	229478	25.7	µg/L	103		20	5.0	120	80	07/25/02	*Acceptable*
Chromium - Total (Cr)	MSD	229478	25.4	µg/L	102	1.1	20	5.0	120	80	07/25/02	*Acceptable*
Chromium - Total (Cr)	RBLK	N/A	0	µg/L	< 1				1	N/A	07/25/02	*Acceptable*

BSK StarLims Run #: 40599 Instrument ID: **ICPMS1**
Analyst Initials: **PARMINDERS** Method Number: **CR_MS_TS**

Analyte Results

Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date	
Chromium - Total (Cr)	CCB	N/A	0	µg/L	< 1					N/A	07/25/02	*Acceptable*
Chromium - Total (Cr)	CCV	N/A	51.2	µg/L	2.40				30	-30	07/25/02	*Acceptable*
Chromium - Total (Cr)	LCS	N/A	405	µg/L	101		400	ND	120	80	07/25/02	*Acceptable*
Chromium - Total (Cr)	LCSD	N/A	414	µg/L	103	2.1	400	ND	120	80	07/25/02	*Acceptable*
Chromium - Total (Cr)	MS	227935	21.5	µg/L	97		20	2.0	120	80	07/25/02	*Acceptable*
Chromium - Total (Cr)	MSD	227935	21.6	µg/L	98	0.46	20	2.0	120	80	07/25/02	*Acceptable*
Chromium - Total (Cr)	RBLK	N/A	0	µg/L	< 1				1	N/A	07/25/02	*Acceptable*

Approved by: _____

%Rec: Percent Recovered
RPD: Relative Percent Difference
UCL: Upper Control Limit
LCL: Lower Control Limit

Parent Sample: Sample used as background matrix for MS/MSD
OOS-High: QC Result Above UCL
OOS-Low: QC Result Below LCL

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Submitted to:
SOTA Environmental
Attention: Mike Sayre
16835 W. Bernardo Dr. Ste. 212
San Diego CA 92127
Tel: (858)485-8100 Fax: (858)485-0812

Service ID #: 801-024084
Collected by: MES/TAM
Collected on: 07/18-25/02

Received: 07/25/02
Extracted: N/A
Tested: N/A
Reported: 08/22/02

Sample Description: Water from Pasadena, CA
Project Description: JOB#00IIW019 JPL

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result ER-4 02-04084-1	ER-23 02-04084-2	ER-24 02-04084-3	MW-5 02-04084-4
CHROMIUM [a]							

Component Analyzed	Method	Unit	PQL	Analysis Result MW-6 02-04084-5	MW-7 02-04084-6	MW-8 02-04084-7	MW-10 02-04084-8
CHROMIUM [a]							

Component Analyzed	Method	Unit	PQL	Analysis Result MW-13 02-04084-9	MW-16 02-04084-10	MW-4-1 02-04084-11	MW-4-2 02-04084-12
CHROMIUM [a]							

Component Analyzed	Method	Unit	PQL	Analysis Result MW-4-3 02-04084-13	MW-4-4 02-04084-14	MW-4-5 02-04084-15	MW-13D 02-04084-16
CHROMIUM [a]							

Component Analyzed	Method	Unit	PQL	Analysis Result MW-23-1 02-04084-17	MW-23-2 02-04084-18	MW-23-3 02-04084-19	MW-23-4 02-04084-20
CHROMIUM [a]							

Applied P & Ch Laboratory
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Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-24-1 02-04084-21	MW-24-2 02-04084-22	MW-24-3 02-04084-23	MW-24-4 02-04084-24
CHROMIUM [a]							

PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit

N.D.: Not Detected or less than the practical quantitation limit. "-": Analysis is not required.

J: Reported between PQL and MDL.

† All results are reported on dry basis for soil samples.

Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0

[a] Subcontracted to BSK Analytical Laboratories Inc. See attached.

Respectfully submitted,

Dominic Lau
Laboratory Director
Applied P & Ch Laboratory

Applied P & Ch Laboratory

APCL

13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Chain of Custody

Please Print in pen Page 1 of 2

Client: SOTA ENVIR. TECH., INC. Contact: MIKE SAYRE Tel #: 858-485-8100 Fax #: 858-485-0812

Address: 16835 W. BERNARDO DR. City: SAN DIEGO State: CA Zip code: 92127

Bill to: SOTA

Project Name/Code JPL Job #00HW019 P.O. #

Project Address PASADENA, CALIFORNIA APCL Quotation #

Due Date: ☑ regular ☐ rush: ___ days ___ hours Sampled by: MES/TAM

White – With report
Yellow – Lab copy
Pink – Originator

Field Sample ID No.	Sample Description	Date Collected	Time Collected	Sample Matrix	Preservation	# of Containers	VOCs (524.2)	PERCHLORATE (314.0)	Cr VI (7196)	TOTAL Cr (200.8)	Remarks
TB-	TRIP BLANK	7/18/02	0657	WATER	HCl	2	X				EPA LEVEL IV QA/QC
MW-23-5	MW-23-5		0723		—	1		X			
MW-23-4	MW-23-4		0749		—	2		X	X		MS/MSD
MW-23-4	MW-23-4		0749		HNO_3	2				X	MS/MSD
ER-23	EQUIP. RINSATE		0811		HCl	3	X				
					—	1		X	X		
					HNO_3	1				X	
MW-23-3	MW-23-3		0839		HCl	3	X				
					—	1		X	X		
					HNO_3	1				X	
MW-23-2	MW-23-2		0900		HCl	3	X	X			
					—	1		X	X		
					HNO_3	1				X	
MW-23-1	MW-23-1		0949		HCl	3	X				
MW-23-1	MW-23-1		0949		—	1		X	X		

4084

QC Requirement: ☐ Regular; ☐ QA/QC Report; ☐ WIP; ☐ Raw Data; ☐ Extended Raw Data ☐ CLP; ☐ ACE ☐ AFCEE ☐ NEESA ___ (E, C or D); ☐ Other _____ (Please specify)

Sample Disposal: ☐ Return ☐ Disposal by APCL ☐ Hold for _____ days after receiving date. **If not specified, samples will be discarded 45 days after samples are received.**

Sample Conditions: ☐ Intact; ☐ Broken Cooler Seal: ☐ Intact; ☐ Broken; ☐ None. Tag # _____ Temperature: ☐ Room ☐ Cold (_____ °C).

Relinquished by _____ Date/Time 7/18/02 / 1105 Received by _____ Date/Time 7-18-02 / 1105

Relinquished by _____ Date/Time 7/18/02 / 1127 Received by _____ Date/Time 7/19/02 1327

APCL USE ONLY Service # Note:

Clients understand that all terms described in the proposals, quotations for this project, and/or the general terms provided in the current APCL price schedules will be followed. APCL reserves the right to terminate its service or withhold delivery of any reports, if in APCL's sole discretion the terms of the project have been broken.

Applied P & Ch Laboratory

APCL

13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Chain of Custody

Please Print in pen Page 2 of 2

Client: SOTA ENVIR. TECH., INC. Contact: MIKE SAYRE Tel #: 858-485-8100 Fax #: 858-485-0812

Address: 16835 W. BERNARDO DR. #212 City: SAN DIEGO State: CA Zip code: 92127

Bill to: SOTA

Project Name/Code JPL Job #00HW019 P.O. #

Project Address PASADENA, CALIFORNIA APCL Quotation #

Due Date: ☐regular ☐rush: ___ days ___ hours Sampled by: MES/TAM

Field Sample ID No.	Sample Description	Date Collected	Time	Sample Matrix	Preservation	# of Containers	TOTAL Cr (200.8)	Analysis Items
MW-23-1	MW-23-1	7/18/02	0949	WATER	HNO_3	1	X	4084

White – With report
Yellow – Lab copy
Pink – Originator

Remarks: EPA Level IV QA/QC

QC Requirement: ☐Regular; ☐QA/QC Report; ☐WIP; ☐Raw Data; ☐Extended Raw Data ☐CLP; ☐ACE ☐AFCEE ☐NEESA ___ (E, C or D); ☐Other _____ (Please specify)

Sample Disposal. ☐Return ☐Disposal by APCL ☐Hold for _____ days after receiving date. **If not specified, samples will be discarded 45 days after samples are received.**

Sample Conditions: ☐Intact; ☐Broken. Cooler Seal: ☐Intact; ☐Broken; ☐None. Tag # _____ Temperature: ☐Room ☐Cold (_____ °C).

Relinquished by _____ Date/Time 7/18/02 1105 Received by _____ Date/Time 7-18-02 1105

Relinquished by _____ Date/Time 7/18/02 1125 Received by _____ Date/Time 7/18/02 1327

APCL USE ONLY Service # Note:

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Applied P & Ch Laboratory

APCL

13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Chain of Custody

Please Print in pen Page 1 of 1

Client: SOTA ENVIR. TECH., INC. Contact: MIKE SAVRE Tel #: 858-485-8100 Fax #: 858-485-0812

Address: 6835 W. BERNARDO DR. #212 City: SAN DIEGO State: CA Zip code: 92127

Bill to: SOTA

Project Name/Code JPL Job # 00HW019 P.O. #

Project Address PASADENA, CALIFORNIA APCL Quotation #

Due Date: ☑ regular ☐ rush: ___ days ___ hours Sampled by: MES/TAM

Analysis Items: VOCs (524.2); PERCHLORATE (314.0); Cr VI (7196); TOTAL Cr (200.8); 4084

White – With report
Yellow – Lab copy
Pink – Originator

Field Sample ID No.	Sample Description	Date Collected	Time Collected	Sample Matrix	Preservation	# of Containers	Remarks
TB-12	TRIP BLANK	7/19/02	0846	WATER	HCl	2	EPA LEVEL IV QA/QC
MW-24-4	MW-24-4		0911		—	1	
MW-24-4	MW-24-4		0911		HNO_3	1	
MW-24-3	MW-24-3		0944		HCl	9	MS/MSD
					—	2	
					HNO_3	2	
ER-24	ER-24		0956		HCl	3	
					HNO_3	1	
					—	1	
MW-24-2	MW-24-2		1040		HCl	3	
					—	1	
					HNO_3	1	
MW-24-1	MW-24-1		1106		HCl	3	
					HNO_3	1	
					—	1	

QC Requirement: ☐ Regular; ☐ QA/QC Report; ☐ WIP; ☐ Raw Data; ☐ Extended Raw Data ☐ CLP; ☐ ACE ☐ AFCEE ☐ NEESA ___ (E, C or D), ☐ Other _____ (Please specify)

Sample Disposal: ☐ Return ☐ Disposal by APCL ☐ Hold for _____ days after receiving date. **If not specified, samples will be discarded 45 days after samples are received.**

Sample Conditions: ☐ Intact; ☐ Broken. Cooler Seal: ☐ Intact; ☐ Broken; ☐ None. Tag # _____ Temperature: ☐ Room ☐ Cold (_____ °C).

Relinquished by [signature] Date/Time 7/19/02 / 1234 Received by [signature] Date/Time 7/19/02 / 1234

Relinquished by Date/Time / Received by Date/Time /

APCL USE ONLY Service # Note:

Clients understand that all terms described in the proposals, quotations for this project, and/or the general terms provided in the current APCL price schedules will be followed. APCL reserves the right to terminate its service or withhold delivery of any reports, if in APCL's sole discretion the terms of the project have been broken.

Applied P & Ch Laboratory

APCL

13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Chain of Custody

Please Print in pen Page 1 of 2

Client: SOTA ENVIR. TECH., INC. Contact: MIKE SAYRE Tel #: 858-485-8100 Fax #: 858-485-0812

Address: 16835 W. BERNARDO DR. #212 City: SAN DIEGO State: CA Zip code: 92127

Bill to: SOTA

Project Name/Code JPL Job #00HW019 P.O. #

Project Address PASADENA, CALIFORNIA APCL Quotation #

Due Date: ☑ regular ☐ rush: ___ days ___ hours Sampled by: MES/TAM

Field Sample ID No.	Sample Description	Date Collected	Time Collected	Sample Matrix	Preservation	# of Containers	VOCs (524.2)	PERCHLORATE (314.0)	CrVI (7196)	TOTAL Cr (200.8)	Remarks
TB-13	TRIP BLANK	7/22/02	0858	WATER	HCl	2	X				EPA LEVEL IV QA/QC
MW-4-5	MW-4-5		0938		—	1			X		
MW-4-5	MW-4-5		0938		HNO_3	1				X	
MW-4-4	MW-4-4		1007		—	1			X		
MW-4-4	MW-4-4		1007		HNO_3	1				X	
ER-4	EQUIP. RINSATE		1021		HCl	3	X				
					—	1			X		
					HNO_3	1				X	
MW-4-3	MW-4-3		1037		HCl	3	X				
					—	1			X		
					HNO_3	1				X	
MW-4-2	MW-4-2		1117		HCl	3	X				
					—	1			X		
					HNO_3	1				X	
MW-4-1	MW-4-1		1148		HCl	3	X				

White – With report
Yellow – Lab copy
Pink – Originator

Analysis Items

QC Requirement: ☐ Regular; ☐ QA/QC Report; ☐ WIP; ☐ Raw Data; ☐ Extended Raw Data ☐ CLP; ☐ ACE ☐ AFCEE ☐ NEESA ___ (E, C or D); ☐ Other _____ (Please specify)

Sample Disposal: ☐ Return ☐ Disposal by APCL ☐ Hold for _____ days after receiving date. **If not specified, samples will be discarded 45 days after samples are received.**

Sample Conditions: ☐ Intact; ☐ Broken. Cooler Seal: ☐ Intact; ☐ Broken; ☐ None. Tag # _____ Temperature: ☐ Room ☐ Cold (_____ °C).

Relinquished by [signature] Date/Time 7/22/02/1502 Received by [signature] Date/Time 7/22/02/1502

Relinquished by [signature] Date/Time 7/22/02/1605 Received by [signature] Date/Time 7/22/02/1605

APCL USE ONLY Service # Note:

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Applied P & Ch Laboratory

APCL

13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Chain of Custody

Please Print in pen Page 2 of 2

Client: SOTA ENVIR. TECH., INC. Contact: MIKE SAYRE Tel #: 858-485-8100 Fax #: 858-485-0812

Address: 16835 W. BERNARDO DR. #212 City: SAN DIEGO State: CA Zip code: 92127

Bill to: SOTA

Project Name/Code JPL Job # 00HW019 P.O. #

Project Address PASADENA, CALIFORNIA APCL Quotation #

Due Date: ☐regular ☐rush: ___ days ___ hours Sampled by: MES/TAM

Field Sample ID No.	Sample Description	Date Collected	Time Collected	Sample Matrix	Preservation	# of Containers
MW-4-1	MW-4-1	7/22/02	1148	WATER	—	1
MW-4-1	MW-4-1	7/22/02	1148	WATER	HNO_3	1

Analysis Items

PERCHLORATE (314.0)	Cr VI (7196)	Total Cr (200.8)
		X

4084

White With report
Yellow – Lab copy
Pink – Originator

Remarks

QC Requirement: ☐Regular; ☐QA/QC Report; ☐WIP; ☐Raw Data; ☐Extended Raw Data ☐CLP; ☐ACE ☐AFCEE ☐NEESA ___ (E, C or D); ☐Other _____ (Please specify)

Sample Disposal: ☐Return ☐Disposal by APCL ☐Hold for _____ days after receiving date. **If not specified, samples will be discarded 45 days after samples are received.**

Sample Conditions: ☐Intact; ☐Broken. Cooler Seal: ☐Intact; ☐Broken; ☐None. Tag # _____ Temperature: ☐Room ☐Cold (_____ °C).

Relinquished by _____ Date/Time 7/22/02 1502 Received by _____ Date/Time 7/22/02 1502

Relinquished by _____ Date/Time 7/22/02 1605 Received by _____ Date/Time 7/22/02 1605

APCL USE ONLY Service # Note:

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Applied P & Ch Laboratory

APCL

13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Chain of Custody

Please Print in pen Page 1 of 1

Client: SOTA ENVIR. TECH., INC. Contact: MIKE SAYRE Tel #: 858-485-8100 Fax #: 858-485-0812

Address: 16835 W. BERNARDO DR. #212 City: SAN DIEGO State: CA Zip code: 92127

Bill to: SOTA

Project Name/Code JPL Job # 004W019 P.O. #

Project Address PASADENA, CALIFORNIA APCL Quotation #

Due Date: ☒ Regular ☐ rush: ___ days ___ hours Sampled by: MRS/TAM

White – With report
Yellow – Lab copy
Pink – Originator

Field Sample ID No.	Sample Description	Date Collected	Time Collected	Sample Matrix	Preservation	# of Containers	VOCs (524.2)	PERCHLORATE (314.0)	Cr VI (7196)	TOTAL Cr (200.8)	Remarks
TB-14	TRIP BLANK	7/23/02	0946	WATER	HCl	2	X				EPA LEVEL IV QA/QC
MW-16	MW-16		1125		HCl	3	X				
					—	1		X	X		
					HNO_3	1				X	
MW-13	MW-13		1325		HCl	3	X				
					—	1		X	X		
					HNO_3	1				X	
MW-13D	MW-13 DUPL.				HCl	3	X				
					—	1		X	X		
					HNO_3	1				X	

QC Requirement: ☐ Regular; ☐ QA/QC Report; ☐ WIP; ☐ Raw Data; ☐ Extended Raw Data ☐ CLP; ☐ ACE ☐ APCEE ☐ NEESA ___ (E, C or D); ☐ Other _____ (Please specify)

Sample Disposal: ☐ Return ☐ Disposal by APCL ☐ Hold for _____ days after receiving date. **If not specified, samples will be discarded 45 days after samples are received.**

Sample Conditions: ☐ Intact; ☒ Broken. Cooler Seal: ☐ Intact; ☐ Broken; ☐ None. Tag # _____ Temperature: ☐ Room ☐ Cold (_____ °C).

Relinquished by _____ Date/Time 7/23/02 1422 Received by _____ Date/Time 7/23/02 1422

Relinquished by _____ Date/Time 7/23/02 1727 Received by _____ Date/Time 7/23/02 1727

APCL USE ONLY Service # Note:

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Chain of Custody

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Client: SOTA ENVIR. TECH., INC. Contact: MIKE SAYRE Tel #: 858-485-8100 Fax #: 858-485-0812

Address: 16835 W. BERNARDO DR. #212 City: SAN DIEGO State: CA Zip code: 92127

Bill to: SOTA

Project Name/Code JPL Job #00HW019 P.O. #

Project Address PASADENA, CALIFORNIA APCL Quotation #

Due Date: ☑ regular ☐ rush: ___ days ___ hours Sampled by: MES/TAM

Field Sample ID No.	Sample Description	Date Collected	Time Collected	Sample Matrix	Preservation	# of Containers	VOCs (524.2)	PERCHLORATE (314.0)	Cr VI (7196)	TOTAL Cr (200.8)	Remarks
MW-10	MW-10	7/24/02	1001	WATER	HCl	9	X				MS/MSD EPA LEVEL IV QA/QC
					—	2		X	X		
					HNO_3	2				X	
TB-15	TRIP BLANK		0911		HCl	2	X				
MW-5	MW-5		1127		HCl	3	X				
					—	1		X	X		
					HNO_3	1				X	
MW-6	MW-6		1408		HCl	3	X				
					—	1		X	X		
					HNO_3	1				X	

4084

White – With report
Yellow – Lab copy
Pink – Originator

QC Requirement: ☐ Regular; ☐ QA/QC Report; ☐ WIP; ☐ Raw Data; ☐ Extended Raw Data ☐ CLP; ☐ ACE ☐ AFCEE ☐ NEESA ___ (E, C or D); ☐ Other _____ (Please specify)

Sample Disposal: ☐ Return ☐ Disposal by APCL ☐ Hold for _____ days after receiving date **If not specified, samples will be discarded 45 days after samples are received.**

Sample Conditions: ☐ Intact; ☐ Broken. Cooler Seal: ☐ Intact; ☐ Broken; ☐ None. Tag # _____ Temperature: ☐ Room ☐ Cold (_____ °C).

Relinquished by _____ Date/Time 7/24/02 1556 Received by Richard Stevenson Date/Time 7/24/02 1556

Relinquished by Richard Stevenson Date/Time 7/24/02 1655 Received by _____ Date/Time 7/24/02 1655

APCL USE ONLY Service # Note:

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Applied P & Ch Laboratory

APCL

13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Chain of Custody

Please Print in pen Page 1 of 1

Client: SOTA ENVIR. TECH., INC. Contact: MIKE SAYRE Tel #: 858-485-8100 Fax #: 858-485-0812

Address: 16835 W. BERNARDO DR. #212 City: SAN DIEGO State: CA Zip code: 92127

Bill to: SOTA

Project Name/Code JPL Job #00HW019 P.O. #

Project Address PASADENA, CALIFORNIA APCL Quotation #

Due Date: ☒ Regular ☐ rush: ___ days ___ hours Sampled by: MES / TAM

Field Sample ID No.	Sample Description	Date Collected	Time Collected	Sample Matrix	Preservation	# of Containers	VOCs (524.2)	PERCHLORATE (314.0)	Cr VI (7196)	Total Cr (200.8)	Remarks
TB-16	TRIP BLANK	7/25/02	1005	WATER	HCl	2	X				EPA LEVEL IV
MW-7	MW-7		1030		HCl	3	X				QA/QC
					—	1		X	X		
					HNO_3	1				X	
MW-8	MW-8		1251		HCl	3	X				
					—	1		X	X		
					HNO_3	1				X	

White - With report
Yellow - Lab copy
Pink - Originator

QC Requirement: ☐ Regular; ☐ QA/QC Report; ☐ WIP; ☐ Raw Data; ☐ Extended Raw Data ☐ CLP; ☐ ACE ☐ AFCEE ☐ NEESA ___ (E, C or D); ☐ Other _____ (Please specify)

Sample Disposal: ☐ Return ☐ Disposal by APCL ☐ Hold for _____ days after receiving date. **If not specified, samples will be discarded 45 days after samples are received.**

Sample Conditions: ☐ Intact; ☐ Broken. Cooler Seal: ☐ Intact; ☐ Broken; ☐ None. Tag # _____ Temperature: ☐ Room ☐ Cold (_____ °C).

Relinquished by _____ Date/Time 7/25/02 / 1530 Received by _____ Date/Time 7/25/02 1530

Relinquished by _____ Date/Time 7/25/02 1630 Received by _____ Date/Time 7/25/02 1630

APCL USE ONLY Service # Note:

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82020

APCL

Applied P & Ch Laboratory
13760 E. Magnolia Ave., Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Subcontract Chain of Custody

Please Print in pen

TO: BSK Analytical Labs | Contact Rachael Wilcox | Tel: (559) 497-2888 | Fax: (559) 485-6935

Address 1414 Stanislaus ST | City Fresno | State CA | Zip code 93706

APCL Project Title/Code JPL # 4084 | Sampler MES/TAM | Sample disposition: Date ☒client; ☐APCL

Bill to (if different from above) APCL | Quotation # | P.O.#

Due date ☒regular ☐rush | Client signature Kenny Chan | Date 7/31/02

	Sample Description		Date Collected	Time	Matrix	Pres. Y/N	Filtered Y/N	Analysis items	Unit Price*	APCL Lab-ID
(3) 233985	1 MW-23-4	233984	7/18/02	0749	W	HNO3	N	← MS/MSD		4084-20
86	2 ER-23	85		0811						-2
87	3 MW-23-3	86		0839				Total Cr (200.8)		-19
88	4 MW-23-2	87		0900						-18
89	5 MW-23-1	88	↓	0949				* please include raw data *		-17
90	6 MW-24-4	89	7/19/02	0911						-24
(2) 91	7 MW-24-3	90		0944				← MS/MSD		-23
92	8 MW-24-2	91		1040						-22
93	9 MW-24-1	92		1106						-21
94	10 ER-24	93	↓	0956						-3
95	11 MW-4-5	94	7/22/02	0938						-15
96	12 MW-4-4	95		1007						-14
97	13 ER-4	96		1021						-1
98	14 MW-4-3	97		1037						-13
99	15 MW-4-2	98		1117						-12
234000	16 MW-4-1	↓ 99	↓	1148						-11
01	17 MW-16	234000	7/23/02	1125						-10
02	18 MW-13	↓ 01	↓	1325	↓	↓	↓			-9

2002080105 08/02/2002
APCL_LAB TAT: Standard
82020

Sample Conditions: Seal ☒Intact ☐Broken ☐None; Temperature ☒Cold ☐Room; Other

Relinquished by		Date/Time 8/1/02 1700	Received by		Date/Time
Relinquished by		Date/Time	Received by		Date/Time
Relinquished by		Date/Time	Received by		Date/Time
Relinquished by		Date/Time	Received by		Date/Time

* APCL must be notified if unit price is incorrect.

82020

APCL

Applied P & Ch Laboratory
13760 E. Magnolia Ave., Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Subcontract Chain of Custody

Please Print in pen
Page 2 of 2

TO: BSK Analytical Labs | Contact Rachae Wilcox | Tel: (559) 497-2888 | Fax: (559) 485-6935
Address 1414 Stanislaus ST. | City Fresno | State CA | Zip code 93706
APCL Project Title/Code JPL #4084 | Sampler MES/TAM | Sample disposition: Date ☒client; ☐APCL
Bill to (if different from above) APL | Quotation # | P.O.#
Due date ☒regular ☐rush | Client signature Kenny Chan | Date 7/31/02

	Sample Description		Date Collected	Time Collected	Matrix	Pres. Y/N	Filtered Y/N	Analysis items	Unit Price*	APCL Lab-ID
1 2340B3	19 MW-13D 234002		7/23/02	1325	W	HNO_3	N			4084-16
(2) 04	20 MW-10	03	7/24/02	1001				← MS/MSD		-8
05	21 MW-5	04		1127				Total Cr (220.8)		-4
06	22 MW-6	05		1408						-5
07	23 MW-7	06	7/25/02	1030				*please include		-6
08	24 MW-8	07		1251				raw data *		-7

2002080105 08/02/2002
APCL_LAB TAT: Standard
82020

Sample Conditions: Seal ☒Intact ☐Broken ☐None; Temperature ☒Cold ☐Room; Other

Relinquished by		Date/Time 8/1/02 1700	Received by		Date/Time
Relinquished by		Date/Time	Received by		Date/Time
Relinquished by		Date/Time	Received by		Date/Time
Relinquished by		Date/Time	Received by		Date/Time 8/2/02 0700

* APCL must be notified if unit price is incorrect.

BSK ANALYTICAL LABORATORIES

Jim Lin
Applied P and Ch Laboratory
13760 Magnolia Avenue
Chino, CA 91710

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 08/16/2002

BSK Submission #: 2002080105

BSK Sample ID #: 233984

Project ID: Project Desc: JPL No. 4084

Submission Comments: Please include raw data

Sample Type: Liquid
Sample Description: MW-23-4
Sample Comments:

Date Sampled: 07/18/2002
Time Sampled: 0749
Date Received: 08/02/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**2.0**	µg/L	1	1	1	08/06/2002	08/15/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code

1414 Stanislaus Street Fresno, CA 93706-1623 Phone 559-497-2888, In CA 800-877-8310 Fax 559-485-6935

BSK ANALYTICAL LABORATORIES

Jim Lin
Applied P and Ch Laboratory
13760 Magnolia Avenue
Chino, CA 91710

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 08/16/2002

BSK Submission #: 2002080105

BSK Sample ID #: 233985

Project ID: Project Desc: JPL No. 4084

Submission Comments: Please include raw data

Sample Type: Liquid
Sample Description: ER-23
Sample Comments:

Date Sampled: 07/18/2002
Time Sampled: 0811
Date Received: 08/02/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**ND**	µg/L	1	1	1	08/06/2002	08/15/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

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BSK ANALYTICAL LABORATORIES

Jim Lin
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13760 Magnolia Avenue
Chino, CA 91710

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 08/16/2002

BSK Submission #: 2002080105

BSK Sample ID #: 233986

Project ID: Project Desc: JPL No. 4084

Submission Comments: Please include raw data

Sample Type: Liquid
Sample Description: MW-23-3
Sample Comments:

Date Sampled: 07/18/2002
Time Sampled: 0839
Date Received: 08/02/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**7.0**	µg/L	1	1	1	08/06/2002	08/15/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

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Report Issue Date: 08/16/2002

BSK Submission #: 2002080105

BSK Sample ID #: 233987

Project ID: Project Desc: JPL No. 4084

Submission Comments: Please include raw data

Sample Type: Liquid
Sample Description: MW-23-2
Sample Comments:

Date Sampled: 07/18/2002
Time Sampled: 0900
Date Received: 08/02/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**7.0**	µg/L	1	1	1	08/06/2002	08/15/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
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Report Issue Date: 08/16/2002

BSK Submission #: 2002080105

BSK Sample ID #: 233988

Project ID: Project Desc: JPL No. 4084

Submission Comments: Please include raw data

Sample Type: Liquid
Sample Description: MW-23-1
Sample Comments:

Date Sampled: 07/18/2002
Time Sampled: 0949
Date Received: 08/02/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**3.0**	µg/L	1	1	1	08/06/2002	08/15/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
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Report Issue Date: 08/16/2002

BSK Submission #: 2002080105

BSK Sample ID #: 233989

Project ID: Project Desc: JPL No. 4084

Submission Comments: Please include raw data

Sample Type: Liquid
Sample Description: MW-24-4
Sample Comments:

Date Sampled: 07/19/2002
Time Sampled: 0911
Date Received: 08/02/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**3.0**	µg/L	1	1	1	08/06/2002	08/15/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
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Report Issue Date: 08/16/2002

BSK Submission #: 2002080105

BSK Sample ID #: 233990

Project ID: Project Desc: JPL No. 4084

Submission Comments: Please include raw data

Sample Type: Liquid
Sample Description: MW-24-3
Sample Comments:

Date Sampled: 07/19/2002
Time Sampled: 0944
Date Received: 08/02/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**5.0**	µg/L	1	1	1	08/06/2002	08/15/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

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Report Issue Date: 08/16/2002

BSK Submission #: 2002080105

BSK Sample ID #: 233991

Project ID: Project Desc: JPI. No. 4084

Submission Comments: Please include raw data

Sample Type: Liquid
Sample Description: MW-24-2
Sample Comments:

Date Sampled: 07/19/2002
Time Sampled: 1040
Date Received: 08/02/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**6.0**	µg/L	1	1	1	08/06/2002	08/15/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

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Report Issue Date: 08/16/2002

BSK Submission #: 2002080105

BSK Sample ID #: 233992

Project ID: Project Desc: JPL No. 4084

Submission Comments: Please include raw data

Sample Type: Liquid
Sample Description: MW-24-1
Sample Comments:

Date Sampled: 07/19/2002
Time Sampled: 1106
Date Received: 08/02/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**7.0**	µg/L	1	1	1	08/06/2002	08/15/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

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Report Issue Date: 08/16/2002

BSK Submission #: 2002080105

BSK Sample ID #: 233993

Project ID: Project Desc: JPL No. 4084

Submission Comments: Please include raw data

Sample Type: Liquid
Sample Description: ER-24
Sample Comments:

Date Sampled: 07/19/2002
Time Sampled: 0956
Date Received: 08/02/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**ND**	µg/L	1	1	1	08/06/2002	08/15/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

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Report Issue Date: 08/16/2002

BSK Submission #: 2002080105

BSK Sample ID #: 233994

Project ID: Project Desc: JPL No. 4084

Submission Comments: Please include raw data

Sample Type: Liquid
Sample Description: MW-4-5
Sample Comments:

Date Sampled: 07/22/2002
Time Sampled: 0938
Date Received: 08/02/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**3.0**	µg/L	1	1	1	08/06/2002	08/15/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

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Report Issue Date: 08/16/2002

BSK Submission #: 2002080105

BSK Sample ID #: 233995

Project ID: Project Desc: JPL No. 4084

Submission Comments: Please include raw data

Sample Type: Liquid
Sample Description: MW-4-4
Sample Comments:

Date Sampled: 07/22/2002
Time Sampled: 1007
Date Received: 08/02/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**7.0**	µg/L	1	1	1	08/06/2002	08/15/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

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Report Issue Date: 08/16/2002

BSK Submission #: 2002080105

BSK Sample ID #: 233996

Project ID: Project Desc: JPL No. 4084

Submission Comments: Please include raw data

Sample Type: Liquid
Sample Description: ER-4
Sample Comments:

Date Sampled: 07/22/2002
Time Sampled: 1021
Date Received: 08/02/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**ND**	µg/L	1	1	1	08/06/2002	08/15/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

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Report Issue Date: 08/16/2002

BSK Submission #: 2002080105

BSK Sample ID #: 233997

Project ID: Project Desc: JPL No. 4084

Submission Comments: Please include raw data

Sample Type: Liquid
Sample Description: MW-4-3
Sample Comments:

Date Sampled: 07/22/2002
Time Sampled: 1037
Date Received: 08/02/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**ND**	µg/L	1	1	1	08/06/2002	08/15/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

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Report Issue Date: 08/16/2002

BSK Submission #: 2002080105

BSK Sample ID #: 233998

Project ID: Project Desc: JPL No. 4084

Submission Comments: Please include raw data

Sample Type: Liquid
Sample Description: MW-4-2
Sample Comments:

Date Sampled: 07/22/2002
Time Sampled: 1117
Date Received: 08/02/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**3.0**	µg/L	1	1	1	08/06/2002	08/15/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

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Report Issue Date: 08/16/2002

BSK Submission #: 2002080105

BSK Sample ID #: 233999

Project ID: Project Desc: JPL No. 4084

Submission Comments: Please include raw data

Sample Type: Liquid
Sample Description: MW-4-1
Sample Comments:

Date Sampled: 07/22/2002
Time Sampled: 1148
Date Received: 08/02/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**4.0**	µg/L	1	1	1	08/06/2002	08/15/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

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Report Issue Date: 08/16/2002

BSK Submission #: 2002080105

BSK Sample ID #: 234000

Project ID: Project Desc: JPL No. 4084

Submission Comments: Please include raw data

Sample Type: Liquid
Sample Description: MW-16
Sample Comments:

Date Sampled: 07/23/2002
Time Sampled: 1125
Date Received: 08/02/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	11	µg/L	1	1	1	08/06/2002	08/15/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

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Report Issue Date: 08/16/2002

BSK Submission #: 2002080105

BSK Sample ID #: 234001

Project ID: Project Desc: JPL No. 4084

Submission Comments: Please include raw data

Sample Type: Liquid
Sample Description: MW-13
Sample Comments:

Date Sampled: 07/23/2002
Time Sampled: 1325
Date Received: 08/02/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**28**	µg/L	1	1	1	08/06/2002	08/15/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

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Report Issue Date: 08/16/2002

BSK Submission #: 2002080105

BSK Sample ID #: 234002

Project ID: Project Desc: JPL No. 4084

Submission Comments: Please include raw data

Sample Type: Liquid
Sample Description: MW-13D
Sample Comments:

Date Sampled: 07/23/2002
Time Sampled: 1325
Date Received: 08/02/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**28**	µg/L	1	1	1	08/06/2002	08/15/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

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Report Issue Date: 08/16/2002

BSK Submission #: 2002080105

BSK Sample ID #: 234003

Project ID: Project Desc: JPL No. 4084

Submission Comments: Please include raw data

Sample Type: Liquid
Sample Description: MW-10
Sample Comments:

Date Sampled: 07/24/2002
Time Sampled: 1001
Date Received: 08/02/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	13	µg/L	1	1	1	08/06/2002	08/15/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

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Report Issue Date: 08/16/2002

BSK Submission #: 2002080105

BSK Sample ID #: 234004

Project ID: Project Desc: JPL No. 4084

Submission Comments: Please include raw data

Sample Type: Liquid
Sample Description: MW-5
Sample Comments:

Date Sampled: 07/24/2002
Time Sampled: 1127
Date Received: 08/02/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**5.0**	µg/L	1	1	1	08/06/2002	08/15/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

1414 Stanislaus Street Fresno, CA 93706-1623 Phone 559-497-2888, In CA 800-877-8310 Fax 559-485-6935

BSK ANALYTICAL LABORATORIES

Jim Lin
Applied P and Ch Laboratory
13760 Magnolia Avenue
Chino, CA 91710

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 08/16/2002

BSK Submission #: 2002080105

BSK Sample ID #: 234005

Project ID: Project Desc: JPL No. 4084

Submission Comments: Please include raw data

Sample Type: Liquid
Sample Description: MW-6
Sample Comments:

Date Sampled: 07/24/2002
Time Sampled: 1408
Date Received: 08/02/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**15**	µg/L	1	1	1	08/06/2002	08/15/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

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Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 08/16/2002

BSK Submission #: 2002080105

BSK Sample ID #: 234006

Project ID: Project Desc: JPL No. 4084

Submission Comments: Please include raw data

Sample Type: Liquid
Sample Description: MW-7
Sample Comments:

Date Sampled: 07/25/2002
Time Sampled: 1030
Date Received: 08/02/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**6.0**	µg/L	1	1	1	08/06/2002	08/15/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

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BSK ANALYTICAL LABORATORIES

Jim Lin
Applied P and Ch Laboratory
13760 Magnolia Avenue
Chino, CA 91710

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 08/16/2002

BSK Submission #: 2002080105

BSK Sample ID #: 234007

Project ID: Project Desc: JPL No. 4084

Submission Comments: Please include raw data

Sample Type: Liquid
Sample Description: MW-8
Sample Comments:

Date Sampled: 07/25/2002
Time Sampled: 1251
Date Received: 08/02/2002

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
Chromium - Total (Cr)	EPA 200.8	**28**	µg/L	1	1	1	08/06/2002	08/15/2002

mg/L: Milligrams/Liter (ppm)
mg/Kg: Milligrams/Kilogram (ppm)
µg/L: Micrograms/Liter (ppb)
µg/Kg: Micrograms/Kilogram (ppb)
%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
DLR: Detection Limit for Reporting : PQL x Dilution
ND: None Detected at DLR

H: Analyzed outside of hold time
P: Preliminary result
S: Suspect result. See Cover Letter for comments.
E: Analysis performed by External laboratory. See External Laboratory Report attachments.

Report Authentication Code:

1414 Stanislaus Street Fresno, CA 93706-1623 Phone 559-497-2888, In CA 800-877-8310 Fax 559-485-6935

BSK ANALYTICAL LABORATORIES

QC Summary Report 08/19/2002

BSK Submission : **2002080105**
Client : **Applied P and Ch Laboratory**
Date Submitted : **08/02/2002**
Project ID :
Project Desc : **JPL No. 4084**

BSK StarLims Run #: 41689 Instrument ID: **ICPMS1**
Analyst Initials: **PARMINDERS** Method Number: **CR_MS_TS**

Analyte Results

Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date	
Chromium Total (Cr)	CCB	N/A	0	µg/L	0					N/A	08/15/02	*Acceptable*
	CCB	N/A	0	µg/L	0					N/A	08/15/02	*Acceptable*
Chromium - Total (Cr)	CCV	N/A	49.6	µg/L	-0.80				30	-30	08/15/02	*Acceptable*
	CCV	N/A	48.7	µg/L	-2.60				30	-30	08/15/02	*Acceptable*
Chromium - Total (Cr)	LCS	N/A	19.6	µg/L	98		20	ND	120	80	08/15/02	*Acceptable*
	LCS	N/A	402	µg/L	100		400	ND	120	80	08/15/02	*Acceptable*
Chromium - Total (Cr)	LCSD	N/A	19.9	µg/L	99	1.6	20	ND	120	80	08/15/02	*Acceptable*
	LCSD	N/A	409	µg/L	102	1.8	400	ND	120	80	08/15/02	*Acceptable*
Chromium - Total (Cr)	MS	233985	20.2	µg/L	101		20	ND	120	80	08/15/02	*Acceptable*
	MS	234006	416	µg/L	102		400	6.0	120	80	08/15/02	*Acceptable*
Chromium - Total (Cr)	MSD	233985	20.5	µg/L	102	1.4	20	ND	120	80	08/15/02	*Acceptable*
	MSD	234006	420	µg/L	103	0.96	400	6.0	120	80	08/15/02	*Acceptable*
Chromium - Total (Cr)	RBLK	N/A	0	µg/L	< 1				1	N/A	08/15/02	*Acceptable*
	RBLK	N/A	0	µg/L	< 1				1	N/A	08/15/02	*Acceptable*

Approved by: _____

%Rec: Percent Recovered
RPD: Relative Percent Difference
UCL: Upper Control Limit
LCL: Lower Control Limit

Parent Sample: Sample used as background matrix for MS/MSD
OOS-High: QC Result Above UCL
OOS-Low: QC Result Below LCL