



A P C L

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

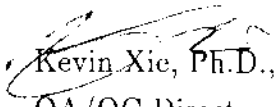
Dear Yu,

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

Submittal #: _____
SOTA Environmental:
Attention: Yu Zeng
13835 W. Bernardo Dr, Ste. 212
San Diego CA 92127
Tel: (858)485-8100 Fax: (858)485-0812

Service ID #: S01-024025 Received: 07/24/02
Collected by: MES/TAM Extracted: N/A
Collected on: 07/24/02 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	MW-6	MW-10	TB 15
				02-04025-1	02-04025-2	02-04025-3	02-04025-4
CHROMIUM (VI)	5196	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
1,1,1-TRICHLORO-2,2,2-TRIFLUOROETHANE	524.2	µg/l	0.5	<0.5	<0.5	<0.5	<0.5

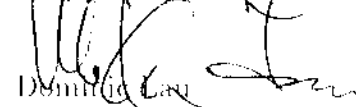
PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit

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

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: Yi Zeng
 16835 W. Bernardo Dr. Ste. 212
 San Diego CA 92127
 Tel: (858)485-8100 Fax: (858)485-0812

Service ID #: 801-024025 Received: 07/21/02
 Collected by: MBS/TAM Extracted: N/A
 Collected on: 07/24/02 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	MW-6	MW-10	FB-15
				02-04025-1	02-04025-2	02-01025-3	02-01025-4
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
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	0.73 ¹⁹¹	<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
CELOROBENZENE	524.2	µg/l	0.5	<0.5	<0.5	<0.5	<0.5
CELORODIBROMOMETHANE	524.2	µg/l	0.5	<0.5	<0.5	<0.5	<0.5
CELOROETHANE	524.2	µg/l	0.5	<0.5	<0.5	<0.5	<0.5
CELOROFORM	524.2	µg/l	0.5	<0.5	<0.5	1.0	<0.5
CELOROMETHANE	524.2	µg/l	0.5	<0.5	<0.5	<0.5	<0.5
1-CELOROFOLFINE	524.2	µg/l	0.5	<0.5	<0.5	<0.5	<0.5
1-CELOROFOLFINE	524.2	µg/l	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CELOROPROPANE	524.2	µg/l	0.54 ¹⁹¹	<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-DICHLOROBEZENE	524.2	µg/l	0.5	<0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBEZENE	524.2	µg/l	0.5	<0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBEZENE	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

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result			
				MW-5	MW-6	MW-10	TB-15
				02-04025-1	02-04025-2	02-04025-3	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
1,3-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
HEXACHLOROBTADIENE	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
PI-SOPROPYLTOLUENE	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 TERT-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
1,1,1,1-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
1-TRICHLOROETHENE	524.2	µg/l	0.5	0.6	<0.5	8.1	<0.5
1-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 or less than the practical quantitation limit

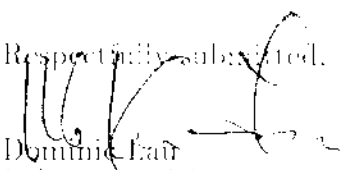
"-": Analysis is not required

J: Reported between PQL and MDL.

Listed Dilution Factors (DF) are relative to the method default DF. All undiluted DF's are 1.0

"-": MDL reported

Respectfully submitted,


 Dominic Faur
 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

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

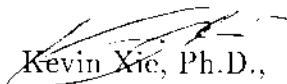
None

6. Anomaly

None

"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

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: 16035 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				Remarks
							VOCs (524.2)	PERCHLORATE (314.0)	Cr VI (7196)	Total Cr (200.8)	
MW-10	MW-10	7/24/02	1001	WATER	HCl	9	X	X	X	X	M5/MSD EPA LEVELS QA/QC
					-	2	X	X	X	X	
					HNO ₃	2	X	X	X	X	
TB-15	TRIP BLANK		0911		HCl	2	X	X	X	X	
MW-5	MW-5		1127		HCl	3	X	X	X	X	
					-	1	X	X	X	X	
					HNO ₃	1	X	X	X	X	
MW-6	MW-6		1408		HCl	3	X	X	X	X	
					-	1	X	X	X	X	
					HNO ₃	1	X	X	X	X	

4025

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 7/24/02 11556 Received by [Signature] Date/Time 7/24/02 1556
Relinquished by [Signature] Date/Time 7/24/02 1655 Received by [Signature] 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.

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) 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 Alise 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 NO₃ 48hr BOD 48hr
 Cl₂ 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 H₂O Other Liq Soil Wipe Polymer Air Other:
 Ground H₂O 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: 24 Jul 2002 Time: 9:05 a.m.

NOTE: 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 determine waste as hazardous but not as non-hazardous.

Applied P & Ch Laboratory

13760 Magnolia Ave. Chino CA 91710

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

<input type="checkbox"/>	Company Information	Name:	<i>SOTA Environmental</i>
		Address:	<i>16835 W. Bernardo Dr, Ste. 212, San Diego, CA 92127</i>
<input type="checkbox"/>	Project Information	Project Description:	<i>JPI</i>
		Project #:	<i>00HW019</i>
<input type="checkbox"/>	Billing Information	P.O. #:	
		Bill Address:	<i>16835 W. Bernardo Dr, Ste. 212, San Diego, CA 92127</i>
		Lab Project ID:	<i>2002-0002</i>
		Client Database #:	<i>01</i>
<input type="checkbox"/>	Receiving Information	Who Received Sample?	<i>Kenny Chan</i>
		Receiving Date/Time:	<i>07/24/02 1655PM</i>
		COC No.	
<input type="checkbox"/>	Shipping Information	Shipping Company	<i>APCL pick up</i>
		Packing Information:	<i>Cooler/Ice Chester</i>
		Cooler Temperature:	<i>3.6 °C</i>
<input type="checkbox"/>	Container Information	Container Provider:	<i>Client</i>
<input type="checkbox"/>	Sampling Information	Sampling Person:	<i>MES/TAM</i>
		Sampling Company:	<i>Client</i>
<input type="checkbox"/>	Turn-Around-Time Option:		<i>Normal</i>
<input type="checkbox"/>	QC Option:		<i>NEESA D</i>
<input type="checkbox"/>	Disposal Option:		<i>Not specify</i>

Part 2: Sample Information

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

Part 3: Analysis Information

Test Items:		
<input checked="" type="checkbox"/> 524.2		Volatile Organic Compounds
<input type="checkbox"/> 7196		Chromium (VI)
<input checked="" type="checkbox"/> 300.0		Perchlorate, low level
<input type="checkbox"/> 200.7/6010		Sodium, Na, by ICP
<input type="checkbox"/> 200.7/6010		Potassium, K, by ICP
<input type="checkbox"/> 200.7/6010		Calcium, Ca, by ICP
<input type="checkbox"/> 200.7/6010		Magnesium, Mg, by ICP
<input type="checkbox"/> 200.7/6010		Iron, Fe, by ICP
<input type="checkbox"/> 300.0		Sulfate (SO_4^{--}), by IC
<input type="checkbox"/> 300.0/SM4500NO3		Nitrate (NO_3^-) as N by IC
<input type="checkbox"/> 300.0		Chloride Cl^- by IC
<input type="checkbox"/> SM2320B		Carbonate
<input type="checkbox"/> SM2320B		Bicarbonate
<input type="checkbox"/> 9040/150.1		pH
<input type="checkbox"/> 160.1		Solids, Total Dissolved (TDS)
<input type="checkbox"/> 206.2/7060		Arsenic, As, by GFAA
<input type="checkbox"/> 310.1		Alkalinity
<input type="checkbox"/> 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								<input type="checkbox"/>
	MW-10	CRVI/PERCH	02-04025-3-β	W								<input type="checkbox"/>
2	TB-15	VOC	02-04025-4	W								<input type="checkbox"/>
3	MW-5	VOC	02-04025-1-α	W								<input type="checkbox"/>
	MW-5	CRVI/PERCH	02-04025-1-β	W								<input type="checkbox"/>
4	MW-6	VOC	02-04025-2-α	W								<input type="checkbox"/>
	MW-6	CRVI/PERCH	02-04025-2-β	W								<input type="checkbox"/>

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		<input type="checkbox"/>
	MW-10	CRVI/PERCH	02-04025-3-β	W		<input type="checkbox"/>
2	TB-15	VOC	02-04025-4	W		<input type="checkbox"/>
3	MW-5	VOC	02-04025-1-α	W		<input type="checkbox"/>
	MW-5	CRVI/PERCH	02-04025-1-β	W		<input type="checkbox"/>
4	MW-6	VOC	02-04025-2-α	W		<input type="checkbox"/>
	MW-6	CRVI/PERCH	02-04025-2-β	W		<input type="checkbox"/>

- 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 BY



A P C L

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

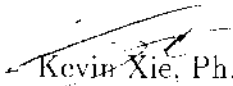
Dear Yu,

This package contains samples in our Service ID 02-4033 and your project is 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.,

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

Service # 15
 SOTA Environmental
 Attention: Yu Zeng
 36835 Wilburton Dr. Ste. 212
 San Diego, CA 92127
 Tel: (858) 485-8100 Fax: (858) 485-0812

APCL Analytical Report

Service ID #: 801 021033 Received: 07/25/02
 Collected by: MJS/EAM Extracted: N/A
 Collected on: 07/25/02 Tested: 07/25 26/02
 Reported: 08/01/02
 Sample Description: Water from Pasadena, CA
 Project Description: 00HAW019 - JPL

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result	
				MW-7 02-04033-1	MW-8 02-04033-2
CHROMIUM (VI) Dilution factor	7196	mg/l	0.01	<0.01 50	<0.01 1
PERCHLORATE	3110	µg/l	1	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
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
1,1,1,2-TETRACHLOROETHENE	524.2	µg/l	0.5	7.6	<0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	524.2	µg/l	0.5	6.3	<0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	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

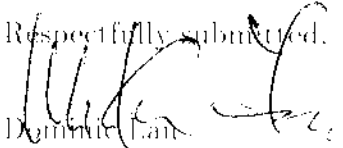
N.D.: Not Detected or less than the practical quantitation limit * -: Analysis is not required

1: Reported between PQL and MDL.

2: Dilution factors (DF) are relative to the method default DF. All unlisted DF's are 1.0.

3: Analyzed with a dilution factor of 5.

Respectfully submitted,


 Dominic Lam
 Laboratory Director
 Applied P & Ch Laboratory

APCL Analytical Report

Submitted to:
 SOTA Environmental
 Attention: Ye Z. ng
 16835 W. Bernardo Dr. Ste. 212
 San Diego CA 92127
 Tel: (619) 498-8100 Fax: (619) 486-0812

Service ID #: 801-024033 Received: 07/25/02
 Collected by: MES/TAM Extracted: N/A
 Collected on: 07/25/02 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	3140	µg/L	1	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
BROMOETHANE	524.2	µg/L	0.73 ¹⁰⁰	<0.73	<0.73	<0.73
N-ETHYLBENZENE	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
CARBOXYMETHYLBORIDE	524.2	µg/L	0.5	70.7 ¹⁰⁰	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	0.8	<0.5	<0.5
CHLOROETHYLENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHYLENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1,1-TRIBROMO-2,2-DICHLOROETHYLENE	524.2	µg/L	0.51 ¹⁰⁰	<0.51	<0.51	<0.51
1,1,2-TRIBROMOETHYLENE (TBE)	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DIBROMOETHYLENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROETHYLENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1,1-TRICHLOROETHYLENE	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

APCL Analytical Report

Compound Analyzed	Method	Unit	PQL	Analysis Result:		
				MW-7	MW-8	EB-10
				02-04033-1	02-04033-2	02-04033-3
1,1-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
1,1-DICHLOROPROPANE	524.2	µg/l	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPENE	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
HEXACHLOROBTADIENE	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
ISOPROPYLTOLUENE	524.2	µg/l	0.5	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	524.2	µg/l	1	<1	<1	3.5
METHYLBUTYL ETHER (MIBK)	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
1,1,1,1-TETRACHLOROETHANE	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
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
1,1,1-TRICHLOROPROPANE	524.2	µg/l	0.5	<0.5	<0.5	<0.5
1,1,1,2-TETRACHLORO-1,2-DIFLUOROETHANE	524.2	µg/l	0.5	1.6	<0.5	<0.5
1,2,3,4-TETRAHYDROBENZENE	524.2	µg/l	0.5	<0.5	<0.5	<0.5
1,2,3,4-TETRAHYDROBENZENE	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
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

N.D.: Not Detected or less than the practical quantitation limit.

- ? - Analysis is not required

DF: Dilution between PQL and MDL

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

MIBK: mg/l

µg/l: µg/l

Report fully 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

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
1B-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

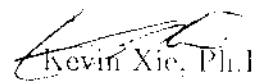
None

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

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: MICHAEL 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: MES/TAM

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

4033

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 7/25/02 1530 Received by [Signature] Date/Time 7/25/02 1530

Relinquished by [Signature] Date/Time 7/25/02 11630 Received by [Signature] Date/Time 7/25/02 11630

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.

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 Mhe Sgre
 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 BAC1 6/24hr Cr^{VI} 24hr NO₃⁻ 48hr BOD 48hr
 Cl₂ 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 H₂O Other Liq Soil Wipe Polymer Air Other: _____
 Ground H₂O 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.

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

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

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	TAI Days	
1	TB-16	VOC	02-04033-3	W	V	C	40	2	G	072502	N	0	9	<input type="checkbox"/>
2	MW-7	VOC	02-04033-1- α	W	V	C	40	3	G	072502	N	0	9	<input type="checkbox"/>
	MW-7	CRVI/PERCH	02-04033-1- β	W	P		500	1	G	072502	N	0	9	<input type="checkbox"/>
3	MW-8	VOC	02-04033-2- α	W	V	C	40	3	G	072502	N	0	9	<input type="checkbox"/>
	MW-8	CRVI/PERCH	02-04033-2- β	W	P		500	1	G	072502	N	0	9	<input type="checkbox"/>

Part 3: Analysis Information

Test Items:	<input checked="" type="checkbox"/> 524.2	Volatile Organic Compounds
	<input type="checkbox"/> 2196	Chromium (VI)
	<input checked="" type="checkbox"/> 300.0	Perchlorate, low level
	<input type="checkbox"/> 200.7/6010	Sodium, Na, by ICP
	<input type="checkbox"/> 200.7/6010	Potassium, K, by ICP
	<input type="checkbox"/> 200.7/6010	Calcium, Ca, by ICP
	<input type="checkbox"/> 200.7/6010	Magnesium, Mg, by ICP
	<input type="checkbox"/> 200.7/6010	Iron, Fe, by ICP
	<input type="checkbox"/> 300.0	Sulfate (SO ₄ ⁻), by IC
	<input type="checkbox"/> 300.0/SM4500NO ₃	Nitrate (NO ₃ ⁻) as N by IC
	<input type="checkbox"/> 300.0	Chloride Cl ⁻ by IC
	<input type="checkbox"/> SM2320B	Carbonate
	<input type="checkbox"/> SM2320B	Bicarbonate
	<input type="checkbox"/> 9040/150.1	pH
	<input type="checkbox"/> 160.1	Solids, Total Dissolved (TDS)
	<input type="checkbox"/> 206.2/7060	Arsenic, As, by GFAA
	<input type="checkbox"/> 310.1	Alkalinity
	<input type="checkbox"/> 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								<input type="checkbox"/>
2	MW-7	VOC	02-04033-1- α	W								<input type="checkbox"/>
	MW-7	CRVI/PERCH	02-04033-1- β	W								<input type="checkbox"/>
3	MW-8	VOC	02-04033-2- α	W								<input type="checkbox"/>
	MW-8	CRVI/PERCH	02-04033-2- β	W								<input type="checkbox"/>

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		<input type="checkbox"/>
2	MW-7	VOC	02-04033-1- α	W		<input type="checkbox"/>
	MW-7	CRVI/PERCH	02-04033-1- β	W		<input type="checkbox"/>
3	MW-8	VOC	02-04033-2- α	W		<input type="checkbox"/>
	MW-8	CRVI/PERCH	02-04033-2- β	W		<input type="checkbox"/>

- 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 *[Signature]*



A P C L

Applied Physics & Chemistry Laboratory

13760 Magnolia Ave. Chino CA 91710

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

August 7, 2002

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

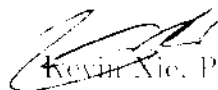
Dear Yu,

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.,

QA/QC Director

Applied P & Ch Laboratory

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 Received: 07/22/02
 Collected by: MES/TAM Extracted: N/A
 Collected on: 07/22/02 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	MW-4-1
				02-03965-1	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
1,1,1-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	MW-4-3	1B-13
				02-03965-3	02-03965-4	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
ETHYL BENZENE	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
1,1,1-TRICHLORO-1,2,2-TRIFLUOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5

APCL Analytical Report

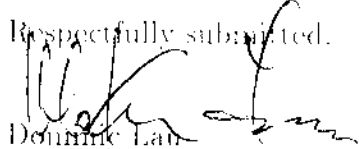
Component Analyzed	Method	Unit	PQL	Analysis Result		
				ER-4 02-03965-1	MW 4-1 02-03965-2	MW 4-2 02-03965-3
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01	<0.01

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 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

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

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

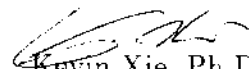
6. Anomaly

(1) 524.2:

Methylene Chloride in the amount of 0.6 $\mu\text{g}/\text{L}$ 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

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 Time Collected	Sample Matrix	Preservation	# of Containers	Analysis Items				Remarks
						VOLs (524.2)	PERCHLORATE (314.0)	Cr VI (7196)	TOTAL Cr (2008)	
TB-13	TRIP BLANK	7/22/02 0858	WATER	HCl	2	X				EPAL 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				

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 [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: _____

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

Sample Receiving Checklist

3965

APCL ServiceID: _____ Client Name/Project: Sota Environmental

1. Sample Arrival

Date/Time Received 7/22/02 1605 Date/Time Opened 7/22/02 1605 By (name): Kenny Chan
Custody Transfer: Client Golden State UPS US Mail FedEx APCL Empl: Richard Stines

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 36
(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 NO₃ 48hr BOD 48hr
 Cl₂ 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 H₂O Other Liq Soil Wipe Polymer Air Other: _____
 Ground H₂O 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.

Applied P & Ch Laboratory

13760 Magnolia Ave. Chino CA 91710

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

Sample Login: Check List

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

07/22/02

Part 1: General Information

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

Part 2: Sample Information

Seq. #	Sample ID (on COC)	Sample Sub-ID	APCL Sample ID	Matrix	Container	Preservative	Vol, ml Am. g	# of Replica	Condition G, L, B	Collected mmdyyy	Hold ?	Composite Group	TAT Days	
1	TB-13	VOC	02-03965-7	W	V	C	40	2	G	072202	N	0	6	<input type="checkbox"/>
2	MW-4-5	CR VI	02-03965-6	W	P		500	1	G	072202	N	0	6	<input type="checkbox"/>
3	MW-4-4	CR VI	02-03965-5	W	P		500	1	G	072202	N	0	6	<input type="checkbox"/>
4	ER-4	VOC	02-03965-1- α	W	V	C	40	3	G	072202	N	0	6	<input type="checkbox"/>
	ER-4	CRVI/Perch	02-03965-1- β	W	P		500	1	G	072202	N	0	6	<input type="checkbox"/>
5	MW-4-3	VOC	02-03965-4- α	W	V	C	40	3	G	072202	N	0	6	<input type="checkbox"/>
	MW-4-3	CRVI/Perch	02-03965-4- β	W	P		500	1	G	072202	N	0	6	<input type="checkbox"/>
6	MW-4-2	VOC	02-03965-3- α	W	V	C	40	3	G	072202	N	0	6	<input type="checkbox"/>
	MW-4-2	CRVI/Perch	02-03965-3- β	W	P		500	1	G	072202	N	0	6	<input type="checkbox"/>
7	MW-4-1	VOC	02-03965-2- α	W	V	C	40	3	G	072202	N	0	6	<input type="checkbox"/>
	MW-4-1	CRVI/Perch	02-03965-2- β	W	P		500	1	G	072202	N	0	6	<input type="checkbox"/>

Part 3: Analysis Information

Test Items:	<input checked="" type="checkbox"/> 524.2	Volatile Organic Compounds
	<input checked="" type="checkbox"/> 7196	Chromium (VI)
	<input checked="" type="checkbox"/> 900.0	Perchlorate, low level
	<input type="checkbox"/> 200.7/6010	Sodium, Na, by ICP
	<input type="checkbox"/> 200.7/6010	Potassium, K, by ICP
	<input type="checkbox"/> 200.7/6010	Calcium, Ca, by ICP
	<input type="checkbox"/> 200.7/6010	Magnesium, Mg, by ICP
	<input type="checkbox"/> 200.7/6010	Iron, Fe, by ICP
	<input type="checkbox"/> 300.0	Sulfate (SO ₄ ²⁻), by IC
	<input type="checkbox"/> 300.0/SM4500NO ₃	Nitrate (NO ₃ ⁻) as N by IC
	<input type="checkbox"/> 300.0	Chloride Cl ⁻ by IC
	<input type="checkbox"/> SM2320B	Carbonate
	<input type="checkbox"/> SM2320B	Bicarbonate
	<input type="checkbox"/> 9040/150.1	pH
	<input type="checkbox"/> 160.1	Solids, Total Dissolved (TDS)
	<input type="checkbox"/> 206.2/7060	Arsenic, As, by GFAA
	<input type="checkbox"/> 310.1	Alkalinity
	<input type="checkbox"/> 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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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 #: 801-023887 Received: 07/12-17/02
Collected by: Extracted: N/A
Collected on: 07/12-17/02 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	LR-22 02-03887-4

CHROMIUM ^{VI}

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-3-1D 02-03887-8

CHROMIUM ^{VI}

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 ^{VI}

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 ^{VI}

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

CHROMIUM ^{VI}

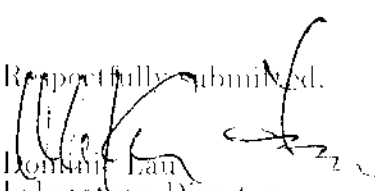
PQL: Practical Quantitation Limit MDL: Method Detection Limit CRDL: Contract Required Detection Limit
N.D.: Not Detected, less than the practical quantitation limit. "": Analysis is not required.

F: Report between PQL and MDL.

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

© 2000-2002, submitted to BSK Analytical Laboratories Inc. See attached.

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

Chain of Custody

Please Print in pen Page 1 of 2

Client: SOTA ENVR. 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 Time Collected		Sample Matrix	Preservation	# of Containers	Analysis Items				Remarks
							VOLs (524.2)	PERCALPATE (314.0)	CPV (719.6)	TOTAL Cr (200.8)	
TB-7	TRIP BLANK	7/12/02	0720	WATER	HCl	2	X	X	X	X	EPA LEVELS QA/QC
MW-14-5	MW-14-5		0753		HCl	3	X	X	X		
MW-14-5	MW-14-5		0753		-	1	X	X	X		
MW-14-4	MW-14-4		0832		HCl	3	X	X	X		
					-	1	X	X	X		
					HNO ₃	1	X	X	X		
MW-14-4D	MW-14-4 DUPL.				HCl	3	X	X	X		
					-	1	X	X	X		
					HNO ₃	1	X	X	X		
MW-14-3	MW-14-3		0925		HCl	3	X	X	X		
					-	1	X	X	X		
					HNO ₃	1	X	X	X		
MW-14-2	MW-14-2		0952		HCl	3	X	X	X		
					-	1	X	X	X		
					HNO ₃	1	X	X	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 [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.



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: SOTA ENVIR. TECHS, 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				Remarks
							NDLS (574.2)	PERCHLORATE (314.0)	Cr VI (7196)	TOTAL Cr (200.8)	
ER-14	EQUIP. RINSEATE	7/2/02	0812	WATER	HCl	3	X	X	X	X	EPA LEVEL IX QA/QC
					HNO ₃	1		X	X		
MW-14-1	MW-14-1		1021		HCl	3	X	X	X		
						1		X	X		
					HNO ₃	1		X	X		

900

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 7/2/02 / 1147 Received by Date/Time 7/2/02 / 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

Chain of Custody

APCL

13760 Magnolia Ave. Chino CA 91710
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 # DDHW019 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 Time Collected		Sample Matrix	Preservation	# of Containers	VOCs (5242)	PERCHLORATE (3140)	Cr VI (7196)	TOTAL Cr (2008)	Analysis Items										Remarks		
TB-8	TRIP BLANK	7/15/02	1005	WATER	HCl	2	X	X	X	X													EPA LEVEL 1 QA/QC
MW-11-4	MW-11-4		1043		HCl	3	X	X	X	X													
MW-11-4	MW-11-4		1043		-	1	X	X	X	X													
MW-11-3	MW-11-3		1123		HCl	9	X	X	X	X													MS/MSD
					-	2	X	X	X	X													
					HNO ₃	2	X	X	X	X													
ER-11	EQUIP. RINGATE		1142		HCl	3	X	X	X	X													
					-	1	X	X	X	X													
					HNO ₃	1	X	X	X	X													
MW-11-2	MW-11-2		1113 1219		HCl	3	X	X	X	X													
			1219		-	1	X	X	X	X													
			1219		HNO ₃	1	X	X	X	X													
MW-11-1	MW-11-1		1244		HCl	3	X	X	X	X													
					-	1	X	X	X	X													
					HNO ₃	1	X	X	X	X													

3097

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 7/15/02 11607 Received by [Signature] Date/Time 7/15/02 11607
Relinquished by [Signature] Date/Time 7/15/02 11710 Received by [Signature] Date/Time 7/15/02 11710

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

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 ENVIR. TECH., INC. Contact: Mike Sample Tel #: 950-485-8100 Fax #: 950-485-0807
 Address: 10835 W. BERNALDO DR. #212 City: SAN DIEGO State: CA Zip code: 92127

Bill to: SOTA
 Project Name/Code: STL Job # 004444 P.O. #
 Project Address: PANAMA, CALIFORNIA APCL Quotation #
 Due Date: Regular Rush: days hours Sampled by:

Field Sample ID No.	Sample Description	Date Time Collected		Sample Matrix	Preservation	# of Containers	Analysis Items				Remarks	
							VOCS (52-2)	PERCHLORATE	CHLORIDE	COBALT		TRANS CHLOR
TRIP-0	TRIP BLANK	7/17/02	0855	WATER	40	2	X					ETA WORK
MW-3-5	MW-3-5		0933			1	X	X				
MW-3-4	MW-3-4		1008		ACI	3	X	X				
						1	X	X				
					HNO ₃	1			X			
MW-3-4B	MW-3-4 DUPE				H ₂ O	3	X	X				
						1	X	X				
					HNO ₃	1			X			
MW-3-3	MW-3-3		1447		H ₂ O	3	X	X				3007
						1	X	X				
					HNO ₃	1			X			
MW-3-2	MW-3-2		1513		H ₂ O	3	X	X				
						1	X	X				
					HNO ₃	1			X			
						1	X	X				

QC Requirement: Regular; QA/QC Report; WIP; Raw Data; Extended Raw Data CLP; ACE AFCBE 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 11:00 Received by [Signature] Date/Time 7/17/02 11:00
 Relinquished by [Signature] Date/Time 7/17/02 10:00 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

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 ENGINEERING, INC. Contact: M. SAM Tel #: 858-495-9100 Fax #: 858-495-0812
Address: 16550 W. BERNARD DR. #212 City: SAN DIEGO State: CA Zip code: 92127
Bill to: SOTA

Project Name/Code: 3PL Job #: 1034007 P.O. #: _____
Project Address: PALMDENA, CALIFORNIA APCL Quotation #: _____
Due Date: Regular Rush: _____ days _____ hours Sampled by: APCL/STAM

Field Sample ID No.	Sample Description	Date Time Collected		Sample Matrix	Preservation	# of Containers	Analysis Items				Remarks	
							VOCs (924.2)	PERCHLORATE (814.0)	CR VI (719)	TRIM (600.8)		
FR-2	EMERALD RINSEATE	7/17/02	0918	WATER	HC	3	X					EPA 1065
					HC	1		X				
					HC	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 11:25 Received by: [Signature] Date/Time 7/17/02 11:25
Relinquished by: [Signature] Date/Time 7/17/02 10:30 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

APCL_LAB

719037

07/19/2002

TAT: Standard

Custody

Case Print in pen
Page 1 of 1

485-6435

TO: BSK Analytical Labs

Contact RachAddress 1414 Stanislaus St.City FresnoState CAZip code 93706APCL Project Title/Code JPL # 3887Sampler MES/TAM

Sample disposition: Date

 Client; APCLBill to (if different from above) APCLQuotation # 101

P.O.#

Due date regular rushClient signature Joe SaldanoDate 7/18/0229472
29473
29474
29475
29476
29477
29478
29479
29480
29481
29482
229483
229484
229485
229486
229487
229488

Sample Description	Date Time Collected	Matrix	Pres. Y/N	Filtered Y/N	Analysis items	Unit Price*	APCL Lab-ID
MW-14-4	7/12/02 832	W	HNO3	N	Total Cr (200.8)		3887-15
MW-14-4D	832						3887-16
MW-14-3	925				* please include raw * data		3887-14
MW-14-2	952						3887-13
ER-14	812						3887-3
MW-14-1	1021						3887-12
MW-11-3 <i>2 containers</i>	7/15/02 1123						3887-11
ER-11	1142						3887-2
MW-11-2	1219						3887-10
MW-11-1	1244						3887-9
ER-22	7/16 0733						3887-4
MW-22-2	0818						3887-18
MW-22-1	0846						3887-17
MW-3-4	7/17/02 1008						3887-7
MW-3-4D	1008						3887-8
MW-3-3	1447						3887-6
MW-3-2	1513						3887-5
ER-3	0918						3887-1

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

Relinquished by <u>Joe Saldano</u>	Date/Time <u>7/18/02 1700</u>	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 <u>Rehul Patel</u>	Date/Time <u>7/19/02 7:30</u>

* APCL must be notified if unit price is incorrect.

BSK ANALYTICAL LABORATORIES

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

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 07/29/2002

BSK Submission #: 2002071194

BSK Sample ID #: 229472

Project ID:

Project Desc: JPL #3887

Submission Comments:

Sample Type: Liquid

Date Sampled: 07/12/2002

Sample Description: MW-14-4 3887-15

Time Sampled: 0832

Sample Comments: Please include raw data

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:



BSK ANALYTICAL LABORATORIES

Certificate of Analysis

ELAP Certificate #1180

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

Report Issue Date: 07/29/2002

BSK Submission #: 2002071194

BSK Sample ID #: 229473

Project ID:

Project Desc: JPL #3887

Submission Comments:

Sample Type: Liquid

Date Sampled: 07/12/2002

Sample Description: MW-14-4D 3887-16

Time Sampled: 0832

Sample Comments: Please include raw data

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:



Page 2 of 18

BSK ANALYTICAL LABORATORIES

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

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 07/29/2002

BSK Submission #: 2002071194

BSK Sample ID #: 229474

Project ID:

Project Desc: JPL #3887

Submission Comments:

Sample Type: Liquid

Date Sampled: 07/12/2002

Sample Description: MW-14-3 3887-14

Time Sampled: 0925

Sample Comments: Please include raw data

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:



BSK ANALYTICAL LABORATORIES

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

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 07/29/2002

BSK Submission #: 2002071194

BSK Sample ID #: 229475

Project ID:

Project Desc: JPL #3887

Submission Comments:

Sample Type: Liquid

Date Sampled: 07/12/2002

Sample Description: MW-14-2 3887-13

Time Sampled: 0952

Sample Comments: Please include raw data

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:



Page 4 of 18

BSK ANALYTICAL LABORATORIES

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

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 07/29/2002

BSK Submission #: 2002071194

BSK Sample ID #: 229476

Project ID:

Project Desc: JPL #3887

Submission Comments:

Sample Type: Liquid

Date Sampled: 07/12/2002

Sample Description: ER-14 3887-3

Time Sampled: 0812

Sample Comments: Please include raw data

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:



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:



Page 6 of 18

BSK ANALYTICAL LABORATORIES

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

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 07/29/2002

BSK Submission #: 2002071194

BSK Sample ID #: 229478

Project ID:

Project Desc: JPI.#3887

Submission Comments:

Sample Type: Liquid

Date Sampled: 07/15/2002

Sample Description: MW-11-3 3887-11

Time Sampled: 1123

Sample Comments: Please include raw data

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)

%Rcc: 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:



Page 7 of 18

BSK ANALYTICAL LABORATORIES

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

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 07/29/2002

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:



Page 8 of 18

BSK ANALYTICAL LABORATORIES

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

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 07/29/2002

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:



BSK ANALYTICAL LABORATORIES

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

Certificate of Analysis ELAP Certificate #1180

Report Issue Date: 07/29/2002

BSK Submission #: 2002071194

BSK Sample ID #: 229481

Project ID:

Project Desc: JPL #3887

Submission Comments:

Sample Type: Liquid

Date Sampled: 07/15/2002

Sample Description: MW-11-1 3887-9

Time Sampled: 1244

Sample Comments: Please include raw data

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:



BSK ANALYTICAL LABORATORIES

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

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 07/29/2002

BSK Submission #: 2002071194

BSK Sample ID #: 229482

Project ID:

Project Desc: JPL #3887

Submission Comments:

Sample Type: Liquid

Date Sampled: 07/17/2002

Sample Description: ER-22 3887-4

Time Sampled: 0733

Sample Comments: Please include raw data

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:



BSK ANALYTICAL LABORATORIES

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

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 07/29/2002

BSK Submission #: 2002071194

BSK Sample ID #: 229483

Project ID:

Project Desc: JPL #3887

Submission Comments:

Sample Type: Liquid

Date Sampled: 07/17/2002

Sample Description: MW-22-2 3887-18

Time Sampled: 0818

Sample Comments: Please include raw data

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:



Page 12 of 18

BSK ANALYTICAL LABORATORIES

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

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 07/29/2002

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:



Page 13 of 18

BSK ANALYTICAL LABORATORIES

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

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 07/29/2002

BSK Submission #: 2002071194

BSK Sample ID #: 229485

Project ID:

Project Desc: JPL #3887

Submission Comments:

Sample Type: Liquid

Date Sampled: 07/17/2002

Sample Description: MW3-4 3887-7

Time Sampled: 1008

Sample Comments: Please include raw data

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)

%Rcc: 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:



Page 14 of 18

BSK ANALYTICAL LABORATORIES

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

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 07/29/2002

BSK Submission #: 2002071194

BSK Sample ID #: 229486

Project ID:

Project Desc: JPL #3887

Submission Comments:

Sample Type: Liquid

Date Sampled: 07/17/2002

Sample Description: MW-3-4D 3887-8

Time Sampled: 1008

Sample Comments: Please include raw data

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:



Page 15 of 18

BSK ANALYTICAL LABORATORIES

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

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 07/29/2002

BSK Submission #: 2002071194

BSK Sample ID #: 229487

Project ID:

Project Desc: JPL #3887

Submission Comments:

Sample Type: Liquid

Date Sampled: 07/17/2002

Sample Description: MW-3-3 3887-6

Time Sampled: 1447

Sample Comments: Please include raw data

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:



Page 16 of 18

BSK ANALYTICAL LABORATORIES

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

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 07/29/2002

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:



Page 17 of 18

BSK ANALYTICAL LABORATORIES

Certificate of Analysis

ELAP Certificate #1180

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

Report Issue Date: 07/29/2002

BSK Submission #: 2002071194

BSK Sample ID #: 229489

Project ID:

Project Desc: JPL #3887

Submission Comments:

Sample Type: Liquid

Date Sampled: 07/17/2002

Sample Description: ER-3 3887-1

Time Sampled: 0918

Sample Comments: Please include raw data

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:



Page 18 of 18

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)	I.CS	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)	I.CS	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: _____

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
19835 W. Bernardo Dr. Ste. 212
San Diego, CA 92127
Tel: (858) 485-8100 Fax: (858) 485-0812

Service ID #: 801-023799 Received: 07/03/02
Collected by: Extracted: N/A
Collected on: 07/03-11/02 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	ER-17	ER-18	ER-20
				02-03799-1	02-03799-2	02-03799-3	02-03799-4

CHROMIUM

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

CHROMIUM

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

CHROMIUM

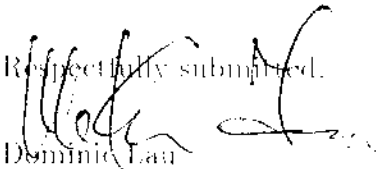
Component Analyzed	Method	Unit	PQL	Analysis Result			
				MW-18-3	MW-18-4	MW-20-1	MW-20-2
				02-03799-13	02-03799-14	02-03799-15	02-03799-16

CHROMIUM

Component Analyzed	Method	Unit	PQL	Analysis Result			
				MW-20-3	MW-20-4	MW-20-5	MW-20-1D
				02-03799-17	02-03799-18	02-03799-19	02-03799-20

CHROMIUM

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.
 n: Reported between PQL and MDL.
 Method Detection Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0
 * Not submitted to BSK Analytical Laboratories Inc. See attached.

Respectfully submitted,

 Dominic Lau
 Laboratory Director
 Applied P & Ch Laboratory



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 1 of 2

Client: SOTA ENVIR. TECH., INC. Contact: Mikie 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 Time Collected		Sample Matrix	Preservation	# of Containers	VOLs (514.2)	PERCHLORATE (314.0)	TOTAL Cr (200.8)	Cr VI (119.6)	Analysis Items										Remarks	
TB-3	TRIP BLANK	7/8/02	905	WATER	HCl	2	X															EPA LEVEL IX
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															
					HNO ₃	1	X															
MW-12-3D	MW-12-3 DUP				HCl	3	X															
					-	1	X															
					HNO ₃	1	X															
ER-12	EQUIP. RINSATE		1136		HCl	3	X															
					-	1	X															
					HNO ₃	1	X															
MW-12-2	MW-12-2		1215		HCl	3	X															

3790

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 [Signature] Date/Time 7/8/02 11:00 Received by [Signature] Date/Time 7/8/02 11:00

Relinquished by [Signature] Date/Time 7/8/02 11:50 Received by [Signature] Date/Time 7/8/02 11:50

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

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 Time Collected		Sample Matrix	Preservation	# of Containers	Analysis Items				Remarks	
							VOLs (524.2)	PERCENTAGE (214.0)	TOTAL Cr (200.8)	Cr VI (7196)		
TB-2	TRIP BLANK	7/3/02	0745	WATER	HCl	2	X	X	X	X		White - With report Yellow - Lab copy Pink - Originator
ER-18	EQUIP. RINSATE		0755		HCl	3	X	X	X	X		EPA LEVEL IV QA/QC
					HNO ₃	1						
					-	1						
MW-18-5	MW-18-5		0814		HCl	9	X	X	X	X		
MW-18-5	MW-18-5		0814		-	1						MS/MSD
MW-18-4	MW-18-4		0850		HCl	3	X	X	X	X		
					HNO ₃	1						
					-	1						
MW-18-3	MW-18-3		0922		HCl	3	X	X	X	X		
					HNO ₃	1						
					-	1						
MW-18-2	MW-18-2		0958		HCl	3	X	X	X	X		
					HNO ₃	1						
					-	1						

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 [Signature] Date/Time 7/3/02 / 1147 Received by [Signature] Date/Time 7/3/02 / 1141
 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

Chain of Custody

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

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. BERNARD 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 Time Collected		Sample Matrix	Preservation	# of Containers	Analysis Items				Remarks
							VOLs (524.2)	PERM-GATE (314.0)	Cr VI (7196)	TOTAL Cr (2008)	
MW-12-2	MW-12-2	7/8/02	1215	WATER	-	1	X	X	X	X	EPA LEVEL IV QAY/QC
MW-12-2	MW-12-2		1215		HNO ₃	1					
MW-12-1	MW-12-1		1239		HCl	3	X				
MW-12-1	MW-12-1				-	1	X	X	X	X	
MW-12-1	MW-12-1				HNO ₃	1					

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 116⁰¹ Received by [Signature] Date/Time 7/8/02 116⁰⁰

Relinquished by [Signature] Date/Time 7/8/02 116:50^{PM} Received by [Signature] Date/Time 7/8/02 116:50

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

Chain of Custody

APCL

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

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 # 00AW019 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 Time Collected		Sample Matrix	Preservation	# of Containers	Analysis Items				Remarks
							NOLs (524.2)	PERCHLORATE (314.0)	Cr VI (7196)	TOTAL Cr (100.8)	
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 11628 Received by [Signature] Date/Time 7/10/02 11628

Relinquished by [Signature] Date/Time 7/10/02 11740 Received by [Signature] Date/Time 7/10/02 11740

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

Chain of Custody

APCL

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

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 Time Collected		Sample Matrix	Preservation	# of Containers	Analysis Items				Remarks	
							VOCs (5242)	PERCHLORATE (3140)	Cr VI (796)	TOTAL Cr (2008)		
MW-20-3	MW-20-3	7/10/02	1352	WATER	HNO ₃	1						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		

3799

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 [Signature] Date/Time 7/10/02 11628 Received by [Signature] Date/Time 7/10/02 1740
Relinquished by [Signature] Date/Time 7/10/02 1740 Received by [Signature] Date/Time 7/10/02 1740

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

Chain of Custody

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

Please Print in pen Page 1 of 1

Client: SOTA ENVIR. TECH., INC. Contact: MIMI 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 Time Collected	Sample Matrix	Preservation	# of Containers	Analysis Items				Remarks
						NDLs (524.2)	PERCHLORATE (314.0)	Cr VI (719.6)	TOTAL Cr (200.8)	
TB-60	TRIP BLANK	7/1/02 0905	WATER	HCl	2	X	X	X	X	EPA LEVELS QA/QC
MW-17-5	MW-17-5	1043		HCl	3	X	X	X	X	
MW-17-5	MW-17-5	1043		-	1	X	X	X	X	
MW-17-4	MW-17-4	1124		HCl	9	X	X	X	X	MS/MSD
				-	2	X	X	X	X	
				HNO ₃	2	X	X	X	X	
ER-17	EQUIP. RINSATE	1102		HCl	3	X	X	X	X	
				-	1	X	X	X	X	
				HNO ₃	1	X	X	X	X	
MW-17-3	MW-17-3	1224		HCl	3	X	X	X	X	
				-	1	X	X	X	X	
				HNO ₃	1	X	X	X	X	
MW-17-2	MW-17-2	1253		HCl	3	X	X	X	X	
				-	1	X	X	X	X	
				HNO ₃	1	X	X	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 7/11/02 11600 Received by [Signature] Date/Time 7-11-02 11600
 Relinquished by [Signature] Date/Time 7/11/02 11700 Received by [Signature] Date/Time 7/11/02 11700

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: E. Michael Wilcox Tel: (559) 497-2888 Fax: (559) 485-6435
 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: 7/12/02

Sample Description	Date Time Collected	Matrix	Pres. Y/N	Filtered Y/N	Analysis items	Unit Price*	APCL Lab-ID
1 ER-18	7/31/02 755	W	HNO3	N	Total Cr (200.8)	227919	3799-3
2 MW-18-4	↓ 850					227920	3799-14
3 MW-18-3	↓ 922					227921	3799-13
4 MW-18-2	↓ 958				*please include van data	227922	3799-12
5 MW-12-3	7/8/02 1123					227923	3799-7
6 MW-12-3D	↓ 1123				2002070894	227924	3799-8
7 ER-12	↓ 1136				APCL LAB	227925	3799-1
8 MW-12-2	↓ 1215				TAT: Standard	227926	3799-6
9 MW-12-1	↓ 1239				716042	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	3799-11
18 ER-17	7/11/02 1102					227936	3799-2

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

Relinquished by <u>Joe Saldano</u>	Date/Time <u>7/15/02 1400</u>	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 <u>M. Lagoria</u>	Date/Time <u>7/16/02 0800</u>

* 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. Michael 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 Saldaña Date: 7/15/02

14
20

Sample Description	Date Time Collected		Matrix	Pres. Y/N	Filtered Y/N	Analysis items	Unit Price*	APCL Lab-ID
MW-17-3	7/11/02	1224	W	HNO ₃	N	Total Cr (200.8)	227937	3799-10
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 Saldaña 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. LA90210 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

Date Sampled: 07/03/2002

Sample Description: ER-18 3799-3

Time Sampled: 0755

Sample Comments:

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:



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

Date Sampled: 07/03/2002

Sample Description: MW-18-4 3799-14

Time Sampled: 0850

Sample Comments:

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:



Page 2 of 20

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

Date Sampled: 07/03/2002

Sample Description: MW-18-3 3799-13

Time Sampled: 0922

Sample Comments:

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:



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

Date Sampled: 07/03/2002

Sample Description: MW-18-2 3799-12

Time Sampled: 0958

Sample Comments:

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:



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 #: 227923

Project ID:

Project Desc: JPL # 3799

Submission Comments:

Sample Type: Liquid

Date Sampled: 07/08/2002

Sample Description: MW-12-3 3799-7

Time Sampled: 1123

Sample Comments:

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:



Page 5 of 20

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 #: 227924

Project ID:

Project Desc: JPL # 3799

Submission Comments:

Sample Type: Liquid

Date Sampled: 07/08/2002

Sample Description: MW-12-3D 3799-8

Time Sampled: 1123

Sample Comments:

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:



Page 6 of 20

1414 Stanislaus Street Fresno, CA 93706-1623

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Fax 559-485-6935

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 #: 227925

Project ID:

Project Desc: JPL # 3799

Submission Comments:

Sample Type: Liquid

Date Sampled: 07/08/2002

Sample Description: ER-12 3799-1

Time Sampled: 1136

Sample Comments:

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:



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: JPI. # 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

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:



Page 8 of 20

1414 Stanislaus Street Fresno, CA 93706-1623

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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 #: 227927

Project ID:

Project Desc: JPL # 3799

Submission Comments:

Sample Type: Liquid

Date Sampled: 07/08/2002

Sample Description: MW-12-1 3799-5

Time Sampled: 1239

Sample Comments:

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.

E: Analysis performed by External laboratory.

See External Laboratory Report attachments.

Report Authentication Code:



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 #: 227928

Project ID:

Project Desc: JPL # 3799

Submission Comments:

Sample Type: Liquid

Date Sampled: 07/10/2002

Sample Description: MW-20-5 3799-19

Time Sampled: 1028

Sample Comments:

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:



Page 10 of 20

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 #: 227929

Project ID:

Project Desc: JPL # 3799

Submission Comments:

Sample Type: Liquid

Date Sampled: 07/10/2002

Sample Description: MW-20-4 3799-18

Time Sampled: 1112

Sample Comments:

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:



Page 11 of 20

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 #: 227930

Project ID:

Project Desc: JPL # 3799

Submission Comments:

Sample Type: Liquid

Date Sampled: 07/10/2002

Sample Description: MW-20-4 DUP 3799-20

Time Sampled: 1112

Sample Comments:

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:



Page 12 of 20

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 #: 227931

Project ID:

Project Desc: JPL # 3799

Submission Comments:

Sample Type: Liquid

Date Sampled: 07/10/2002

Sample Description: ER-20 3799-4

Time Sampled: 1123

Sample Comments:

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:



Page 13 of 20

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 #: 227932

Project ID:

Project Desc: JPL # 3799

Submission Comments:

Sample Type: Liquid

Date Sampled: 07/10/2002

Sample Description: MW-20-3 3799-17

Time Sampled: 1352

Sample Comments:

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:



Page 14 of 20

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 #: 227933

Project ID:

Project Desc: JPL # 3799

Submission Comments:

Sample Type: Liquid

Date Sampled: 07/10/2002

Sample Description: MW-20-2 3799-16

Time Sampled: 1423

Sample Comments:

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:



Page 15 of 20

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 #: 227934

Project ID:

Project Desc: JPL # 3799

Submission Comments:

Sample Type: Liquid

Date Sampled: 07/10/2002

Sample Description: MW-20-1 3799-15

Time Sampled: 1452

Sample Comments:

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:



Page 16 of 20

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 #: 227935

Project ID:

Project Desc: JPL # 3799

Submission Comments:

Sample Type: Liquid

Date Sampled: 07/11/2002

Sample Description: MW-17-4 3799-11

Time Sampled: 1124

Sample Comments:

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:



Page 17 of 20

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 #: 227936

Project ID:

Project Desc: JPL # 3799

Submission Comments:

Sample Type: Liquid

Date Sampled: 07/11/2002

Sample Description: ER-17 3799-2

Time Sampled: 1102

Sample Comments:

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:



Page 18 of 20

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 #: 227937

Project ID:

Project Desc: JPL # 3799

Submission Comments:

Sample Type: Liquid

Date Sampled: 07/11/2002

Sample Description: MW-17-3 3799-10

Time Sampled: 1224

Sample Comments:

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:



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 #: 227938

Project ID:

Project Desc: JPL # 3799

Submission Comments:

Sample Type: Liquid

Date Sampled: 07/11/2002

Sample Description: MW-17-2 3799-9

Time Sampled: 1253

Sample Comments:

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:



Page 20 of 20

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



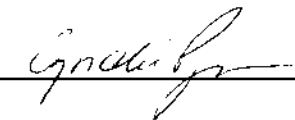
Instrument ID: ICPMS1

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 Received: 07/25/02
Collected by: MBS/TAM Extracted: N/A
Collected on: 07/18-25/02 Tested: N/A
Reported: 08/22/02
Sample Description: Water from Pasadena, CA
Project Description: JOB#00HW019 JPL

Analysis of Water Samples

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

CHROMIUM ^(a)

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

CHROMIUM ^(a)

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

CHROMIUM ^(a)

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

CHROMIUM ^(a)

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

CHROMIUM ^(a)

APCL Analytical Report

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

13766 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

Field Sample ID No.	Sample Description	Date Time Collected		Sample Matrix	Preservation	# of Containers	Analysis Items				Remarks
							VOCs (524.2)	PERCHLORATE (314.02)	CRVI (7196)	TOTAL Cr (200.8)	
TB-	TRIP BLANK	7/18/02	0657	WATER	HCl	2	X	X	X	X	EPA LEVEL IV QA/QC
MW-23-5	MW-23-5		0723		-	1	X	X	X	X	
MW-23-4	MW-23-4		0749		-	2	X	X	X	X	MS/MSD
MW-23-4	MW-23-4		0749		HNO ₃	2	X	X	X	X	MS/MSD
ER-23	EQUIP. RINSATE		0811		HCl	3	X	X	X	X	
					-	1	X	X	X	X	
					HNO ₃	1	X	X	X	X	
MW-23-3	MW-23-3		0839		HCl	3	X	X	X	X	
					-	1	X	X	X	X	
					HNO ₃	1	X	X	X	X	
MW-23-2	MW-23-2		0900		HCl	3	X	X	X	X	
					-	1	X	X	X	X	
					HNO ₃	1	X	X	X	X	
MW-23-1	MW-23-1		0949		HCl	3	X	X	X	X	
MW-23-1	MW-23-1		0949		-	1	X	X	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 [Signature] Date/Time 7/18/02 1105 Received by [Signature] Date/Time 7-18-02 1105
 Relinquished by [Signature] Date/Time 7/18/02 127 Received by [Signature] Date/Time 7/18/02 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

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

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	TOTAL CY (100.8)	Analysis Items	Remarks
MW-23-1	MW-23-1	7/18/02	0949	WATER	NO ₃	1	X		EPA LEVEL 1 QA/QC
4084									
[Large diagonal line across the table]									

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 7/18/02 1105 Received by [Signature] Date/Time 7-18-02 1105

Relinquished by [Signature] Date/Time 7/18/02 1125 Received by [Signature] Date/Time 7/18/02 1327

APCL USE ONLY Service #

Note:

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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: 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 Time Collected		Sample Matrix	Preservation	# of Containers	Analysis Items				Remarks	
							VOLs (524.2)	PERCHLORATE (314.0)	CVI (7196)	TOTAL CV (200.8)		
TB-12	TRIP BLANK	7/19/02	0846	WATER	HCl	2	X					EPA LEVEL 1 QA/QC
MW-24-4	MW-24-4		0911		-	1			X			
MW-24-4	MW-24-4		0911		HNO ₃	1			X			
MW-24-3	MW-24-3		0944		HCl	9	X					MS/MSD
					-	2	X	X				
					HNO ₃	2			X			
ER-24	ER-24		0956		HCl	3	X					
					HNO ₃	1			X			
					-	1	X	X				
MW-24-2	MW-24-2		1040		HCl	3	X					
					-	1	X	X				
					HNO ₃	1			X			
MW-24-1	MW-24-1		1106		HCl	3	X					
					HNO ₃	1	X	X				
					-	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 [Signature] Date/Time 7/19/02 11234 Received by [Signature] Date/Time 7/19/02 11234
 Relinquished by _____ Date/Time _____ Received by _____ Date/Time _____

APCL USE ONLY Service # _____ Note: _____

Client understands 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

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 # 00HWO19 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 Time Collected	Sample Matrix	Preservation	# of Containers	Analysis Items				Remarks
						VOLs (524.2)	PERCHLORATE (314.0)	Cr VI (7196)	TOTAL Cr (200.8)	
TB-13	TRIP BLANK	7/22/02 0858	WATER	HCl	2	X				White - With report Yellow - Lab copy Pink - Originator
MW-4-5	MW-4-5	0938		-	1					EPA LEVEL IV QA/QC
MW-4-5	MW-4-5	0938		HNO ₃	1		X			
MW-4-4	MW-4-4	1007		-	1					
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				

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 1150Z Received by [Signature] Date/Time 7/22/02 1150Z
Relinquished by [Signature] Date/Time 7/22/02 1605 Received by [Signature] Date/Time 7/22/02 1605

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

Chain of Custody

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

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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 # 00HWD19 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 Time Collected		Sample Matrix	Preservation	# of Containers	Analysis Items			Remarks
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	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 [Signature] Date/Time 7/22/02 1150Z Received by [Signature] Date/Time 7/22/02 1150Z
Relinquished by [Signature] Date/Time 7/22/02 1605 Received by [Signature] Date/Time 7/22/02 1605

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 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 SATRE 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

Analysis Items

White - With report
Yellow - Lab copy
Pink - Originator

Field Sample ID No.	Sample Description	Date Time Collected		Sample Matrix	Preservation	# of Containers	VOCs (524.2)	PERCHLORATE (814.0)	Cr. VI (7196)	TOTAL Cr (200.0)	Analysis Items	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	X				[Signature]
					-	1	X	X				
					HNO ₃	1			X			
MW-13	MW-13		1325		HCl	3	X	X				
					-	1	X	X				
					HNO ₃	1			X			
MW-13D	MW-13 DUPL.				HCl	3	X	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 [Signature] Date/Time 7/23/02 11422 Received by [Signature] Date/Time 7/23/02 1422

Relinquished by [Signature] Date/Time 7/23/02 1727 Received by [Signature] Date/Time 7/23/02 1727

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

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 Time Collected		Sample Matrix	Preservation	# of Containers	Analysis Items				Remarks
							VOCs (524.2)	PERCHLORATE (314.0)	Cr VI (7196)	TOTAL Cr (200.8)	
MW-10	MW-10	7/24/02	1001	WATER	HCl	9	X	X	X	X	MS/MSD EPA LEVELS QA/QC
					-	2	X	X	X	X	
					HNO ₃	2	X	X	X	X	
TB-15	TRIP BLANK		0911		HCl	2	X	X	X	X	
MW-5	MW-5		1127		HCl	3	X	X	X	X	
					-	1	X	X	X	X	
					HNO ₃	1	X	X	X	X	
MW-6	MW-6		1408		HCl	3	X	X	X	X	
					-	1	X	X	X	X	
					HNO ₃	1	X	X	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 [Signature] Date/Time 7/24/02 11556 Received by [Signature] Date/Time 7/24/02 1556
 Relinquished by [Signature] Date/Time 7/24/02 1655 Received by [Signature] 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.



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 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 Time Collected	Sample Matrix	Preservation	# of Containers	Analysis Items				Remarks
						VOCs (524.2)	PERCHLORATE (314.0)	Cr VI (7196)	Total Cr (200.8)	
TB-16	TRIP BLANK	7/25/02 1005	WATER	HCl	2	X	X	X	X	EPA LEVEL II
MW-7	MW-7	1030		HCl	3	X	X	X	X	QA/QC
				HNO ₃	1					
MW-8	MW-8	1251		HCl	3	X	X	X	X	
				HNO ₃	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 7/25/02 1530 Received by [Signature] Date/Time 7/25/02 1530
Relinquished by [Signature] Date/Time 7/25/02 1630 Received by [Signature] 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.

APCL

Applied P & Ch Laboratory

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

Subcontract Chain of Custody

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Page 1 of 2

82020

TO: BSK Analytical Labs Contact Michael 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 Collected	Matrix	Pres. Y/N	Filtered Y/N	Analysis items	Unit Price*	APCL Lab-ID
<u>MW-23-4</u> <u>233984</u>	<u>7/18/02</u>	<u>0749</u>	<u>W</u>	<u>HNO3</u>	<u>N</u>		<u>MS/MSD</u>	<u>4084-20</u>
<u>ER-23</u>		<u>0811</u>						<u>-2</u>
<u>MW-23-3</u>		<u>0839</u>				<u>Total Cr (200.8)</u>		<u>-19</u>
<u>MW-23-2</u>		<u>0900</u>						<u>-18</u>
<u>MW-23-1</u>		<u>0949</u>				<u>* please include raw data *</u>		<u>-17</u>
<u>MW-24-4</u>	<u>7/19/02</u>	<u>0911</u>						<u>-24</u>
<u>MW-24-3</u>		<u>0944</u>					<u>MS/MSD</u>	<u>-23</u>
<u>MW-24-2</u>		<u>1040</u>						<u>-22</u>
<u>MW-24-1</u>		<u>1106</u>						<u>-21</u>
<u>ER-24</u>		<u>0956</u>						<u>-3</u>
<u>MW-4-5</u>	<u>7/22/02</u>	<u>0938</u>				<u>2002080105</u>	<u>08/02/2002</u>	<u>-15</u>
<u>MW-4-4</u>		<u>1007</u>				<u>APCL LAB</u>	<u>TAT: Standard</u>	<u>-14</u>
<u>ER-4</u>		<u>1021</u>				<u>82020</u>		<u>-1</u>
<u>MW-4-3</u>		<u>1037</u>						<u>-13</u>
<u>MW-4-2</u>		<u>1117</u>						<u>-12</u>
<u>MW-4-1</u>		<u>1148</u>						<u>-11</u>
<u>MW-16</u> <u>234000</u>	<u>7/23/02</u>	<u>1125</u>						<u>-10</u>
<u>MW-13</u>		<u>1325</u>						<u>-9</u>

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

Relinquished by <u>[Signature]</u>	Date/Time <u>8/1/02 1700</u>	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 <u>[Signature]</u>	Date/Time <u>8/2/02 0700</u>

* 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

82020

Please Print in pen

Page 2 of 2

TO: BSK Analytical Labs Contact Rachae W. Cox Tel: (559) 497-2888 Fax: (559) 485-6935
 Address 1414 Stanislaus St. City Fresno State CA Zip code 93706
 APCL Project Title/Code TPL #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

234083
(2)
↓
↓
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↓
↓
↓

Sample Description	Date Collected	Time Collected	Matrix	Pres. Y/N	Filtered Y/N	Analysis items	Unit Price*	APCL Lab-ID
19 MW-13D	7/23/02	1325	W	HNO ₃	N			4084-16
20 MW-10	7/24/02	1001	↓	↓	↓	Total Cr (200.8)		-8
21 MW-5	↓	1127	↓	↓	↓			-4
22 MW-6	↓	1408	↓	↓	↓	*please include raw data*		-5
23 MW-7	7/25/02	1030	↓	↓	↓			-6
24 MW-8	↓	1251	↓	↓	↓			-7
2002080105						08/02/2002		
APCL LAB						TAT: Standard		
82020								

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

Relinquished by <u>[Signature]</u>	Date/Time <u>8/1/02 1700</u>	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 <u>[Signature]</u>	Date/Time <u>9/2/02 0700</u>

* 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

Date Sampled: 07/18/2002

Sample Description: MW-23-4

Time Sampled: 0749

Sample Comments:

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



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

Date Sampled: 07/18/2002

Sample Description: ER-23

Time Sampled: 0811

Sample Comments:

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:



Page 2 of 24

BSK ANALYTICAL LABORATORIES

Jim Lin
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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

Date Sampled: 07/18/2002

Sample Description: MW-23-3

Time Sampled: 0839

Sample Comments:

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:



Page 3 of 24

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 #: 233987

Project ID:

Project Desc: JPL No. 4084

Submission Comments: Please include raw data

Sample Type: Liquid

Date Sampled: 07/18/2002

Sample Description: MW-23-2

Time Sampled: 0900

Sample Comments:

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:



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 #: 233988

Project ID:

Project Desc: JPL No. 4084

Submission Comments: Please include raw data

Sample Type: Liquid

Date Sampled: 07/18/2002

Sample Description: MW-23-1

Time Sampled: 0949

Sample Comments:

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:



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 #: 233989

Project ID:

Project Desc: JPL No. 4084

Submission Comments: Please include raw data

Sample Type: Liquid

Date Sampled: 07/19/2002

Sample Description: MW-24-4

Time Sampled: 0911

Sample Comments:

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:



Page 6 of 24

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 #: 233990

Project ID:

Project Desc: JPL No. 4084

Submission Comments: Please include raw data

Sample Type: Liquid

Date Sampled: 07/19/2002

Sample Description: MW-24-3

Time Sampled: 0944

Sample Comments:

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:



Page 7 of 24

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 #: 233991

Project ID:

Project Desc: JPI. No. 4084

Submission Comments: Please include raw data

Sample Type: Liquid

Date Sampled: 07/19/2002

Sample Description: MW-24-2

Time Sampled: 1040

Sample Comments:

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:



Page 8 of 24

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 #: 233992

Project ID:

Project Desc: JPL No. 4084

Submission Comments: Please include raw data

Sample Type: Liquid

Date Sampled: 07/19/2002

Sample Description: MW-24-1

Time Sampled: 1106

Sample Comments:

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:



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 #: 233993

Project ID:

Project Desc: JPI. No. 4084

Submission Comments: Please include raw data

Sample Type: Liquid

Date Sampled: 07/19/2002

Sample Description: ER-24

Time Sampled: 0956

Sample Comments:

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:



Page 10 of 24

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 #: 233994

Project ID:

Project Desc: JPL No. 4084

Submission Comments: Please include raw data

Sample Type: Liquid

Date Sampled: 07/22/2002

Sample Description: MW-4-5

Time Sampled: 0938

Sample Comments:

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:



Page 11 of 24

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 #: 233995

Project ID:

Project Desc: JPL No. 4084

Submission Comments: Please include raw data

Sample Type: Liquid

Date Sampled: 07/22/2002

Sample Description: MW-4-4

Time Sampled: 1007

Sample Comments:

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:



Page 12 of 24

BSK ANALYTICAL LABORATORIES

Jim Lin
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Certificate of Analysis

ELAP Certificate #1180

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

Date Sampled: 07/22/2002

Sample Description: ER-4

Time Sampled: 1021

Sample Comments:

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:



Page 13 of 24

BSK ANALYTICAL LABORATORIES

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Certificate of Analysis ELAP Certificate #1180

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

Date Sampled: 07/22/2002

Sample Description: MW-4-3

Time Sampled: 1037

Sample Comments:

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:



Page 14 of 24

BSK ANALYTICAL LABORATORIES

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Chino, CA 91710

Certificate of Analysis

ELAP Certificate #1180

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

Date Sampled: 07/22/2002

Sample Description: MW-4-2

Time Sampled: 1117

Sample Comments:

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:



BSK ANALYTICAL LABORATORIES

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Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 08/16/2002

BSK Submission #: 2002080105

BSK Sample ID #: 233999

Project ID:

Project Desc: JPI. No. 4084

Submission Comments: Please include raw data

Sample Type: Liquid

Date Sampled: 07/22/2002

Sample Description: MW-4-1

Time Sampled: 1148

Sample Comments:

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:



BSK ANALYTICAL LABORATORIES

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Certificate of Analysis ELAP Certificate #1180

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

Date Sampled: 07/23/2002

Sample Description: MW-16

Time Sampled: 1125

Sample Comments:

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:



Page 17 of 24

BSK ANALYTICAL LABORATORIES

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Certificate of Analysis ELAP Certificate #1180

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

Date Sampled: 07/23/2002

Sample Description: MW-13

Time Sampled: 1325

Sample Comments:

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:



Page 18 of 24

BSK ANALYTICAL LABORATORIES

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Certificate of Analysis

ELAP Certificate #1180

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

Date Sampled: 07/23/2002

Sample Description: MW-13D

Time Sampled: 1325

Sample Comments:

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:



Page 19 of 24

BSK ANALYTICAL LABORATORIES

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Certificate of Analysis ELAP Certificate #1180

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

Date Sampled: 07/24/2002

Sample Description: MW-10

Time Sampled: 1001

Sample Comments:

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:



Page 20 of 24

BSK ANALYTICAL LABORATORIES

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Certificate of Analysis ELAP Certificate #1180

Report Issue Date: 08/16/2002

BSK Submission #: 2002080105

BSK Sample ID #: 234004

Project ID:

Project Desc: JPI. No. 4084

Submission Comments: Please include raw data

Sample Type: Liquid

Date Sampled: 07/24/2002

Sample Description: MW-5

Time Sampled: 1127

Sample Comments:

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:



Page 21 of 24

BSK ANALYTICAL LABORATORIES

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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

Date Sampled: 07/24/2002

Sample Description: MW-6

Time Sampled: 1408

Sample Comments:

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:



Page 22 of 24

BSK ANALYTICAL LABORATORIES

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Chino, CA 91710

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

Date Sampled: 07/25/2002

Sample Description: MW-7

Time Sampled: 1030

Sample Comments:

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:



Page 23 of 24

BSK ANALYTICAL LABORATORIES

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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

Date Sampled: 07/25/2002

Sample Description: MW-8

Time Sampled: 1251

Sample Comments:

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:



Page 24 of 24

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
 Method Number: CR_MS_TS

Analyst Initials: PARMINDERS

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