



Applied Physics & Chemistry Laboratory

13760 Magnolia Ave. Chino CA 91710

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

May 1, 2002

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

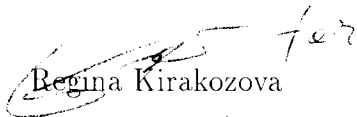
Dear Yu,

This package contains samples in our Service ID 02-2567 and your project is 00HW019 JPL.
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,



Regina Kirakozova

Associate QA/QC Director
Applied P & Ch Laboratory

Applied P & Ch Laboratory

13760 Magnolia Ave. Chino CA 91710

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

APCL Analytical Report

Submitted to:

SOTA Environmental

Attention: Yu Zeng

16835 W. Bernardo Dr, Ste. 212

San Diego CA 92127

Tel: (858)485-8100 Fax: (858)485-0812

Service ID #: 801-022567

Collected by: JNT/TAM

Collected on: 04/23/02

Received: 04/23/02

Extracted: N/A

Tested: 04/24-25/02

Reported: 04/29/02

Sample Description: Water from Pasadena, CA

Project Description: 00HW019 JPL

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result		
				ER-23 02-02567-1	MW-23-1 02-02567-2	MW-23-2 02-02567-3
Dilution Factor				1	1	1
PERCHLORATE	E314	µg/L	4	< 4	< 4	< 4

Component Analyzed	Method	Unit	PQL	Analysis Result		
				MW-23-3 02-02567-4	MW-23-4 02-02567-5	MW-23-5 02-02567-6
Dilution Factor				1	1	1
PERCHLORATE	E314	µg/L	4	< 4	< 4	< 4

Component Analyzed	Method	Unit	PQL	Analysis Result		
				ER-23 02-02567-1	MW-23-1 02-02567-2	MW-23-2 02-02567-3
CHROMIUM (VI)	7196	mg/L	0.01	< 0.01	< 0.01	< 0.01
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	0.6	0.6
1,1-DICHLOROETHANE	524.2	µg/L	0.5	< 0.5	0.4J	0.3J
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
METHYLENE CHLORIDE	524.2	µg/L	1	0.3J	0.4J	0.4J
TETRACHLOROETHENE	524.2	µg/L	0.5	< 0.5	1.1	0.7
TRICHLOROETHENE	524.2	µg/L	0.5	< 0.5	0.8	0.7
112TRICHLORO-122TRIFLUOROETHANE	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5

Component Analyzed	Method	Unit	PQL	Analysis Result		
				MW-23-3 02-02567-4	MW-23-4 02-02567-5	TB-23 02-02567-7
CHROMIUM (VI)	7196	mg/L	0.01	< 0.01	< 0.01	-
VOLATILE ORGANIC COMPOUNDS						
Dilution Factor				1	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

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result		
				MW-23-3 02-02567-4	MW-23-4 02-02567-5	TB-23 02-02567-7
METHYLENE CHLORIDE	524.2	µg/L	1	0.4J	-	1
TETRACHLOROETHENE	524.2	µg/L	0.5	< 0.5	-	< 0.5
TRICHLOROETHENE	524.2	µg/L	0.5	< 0.5	-	< 0.5
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	524.2	µg/L	0.5	< 0.5	-	< 0.5

PQL: Practical Quantitation Limit.

MDL: Method Detection Limit.

CRDL: Contract Required Detection Limit

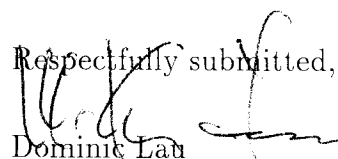
N.D.: Not Detected or less than the practical quantitation limit.

"-": 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

Case Narrative

Project: JPL/Pasadena, CA/00HW019

For SOTA Environmental

APCL Service No: 02-2567

1. Sample Identification

The sample identifications are listed in the following table:

SOTA Environmental Sample ID	APCL Sample ID
TB-23	02-02567-7
MW-23-5	02-02567-6
MW-23-4	02-02567-5
MW-23-3	02-02567-4
MW-23-2	02-02567-3
MW-23-1	02-02567-2
ER-23	02-02567-1

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

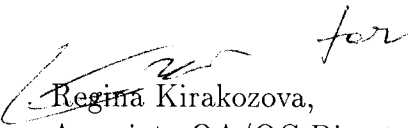
None.

6. Anomaly

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,

 *for*
Regina Kirakozova,
Associate 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 ENVR. TECH INC.**

Contact: **MIKE SAYRE**

Tel #: **858-485-9100**

Fax #: **858-485-0812**

Address: **6835 WEST BERNARDO DRIVE #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: **JNT/TAM**

Field Sample ID No.	Sample Description	Date Collected	Sample Matrix	Preservation	# of Containers	Analysis	Items	Remarks
TB-23	TRIP BLANK	4/23/02 1002	WATER	HCL	2			
MW-23-5	MW-23-5	1045			1			
MW-23-4	MW-23-4	1108		HNO3	2			MS/MSD
MW-23-4	MW-23-4	1133			2			MS/MSD
MW-23-3	MW-23-3	1203		HCL	3			
MW-23-3	MW-23-3	1203		HNO3	1			
MW-23-3	MW-23-3	1203			1			LEVEL IV
MW-23-2	MW-23-2	1414		HCL	3			DATA PACKAGE
MW-23-2	MW-23-2	1414		HNO3	1			
MW-23-2	MW-23-2	1414			1			
MW-23-1	MW-23-1	1457		HCL	3			
MW-23-1	MW-23-1	1457		HNO3	1			
MW-23-1	MW-23-1	1457			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 4/23/02 1549 Received by APCL Date/Time 4-23-02 15:49

Relinquished by [Signature] Date/Time 4/23/02 1100 Received by APCL Date/Time 4/24/02 1600

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



13760 Magnolia Ave. Chino CA 91710
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Page 2 of 2

858-485-0812

Zip code: 92127

Bill to: **SOTA**
Project Name/Code **JPL**

Project Name/Code JPL

Job # 0044019 P.O. #

Project Address PASADENA, CALIFORNIA

APCL Quotation #

Due Date: ☒ regular ☐ rush: _____ days _____ hours
Sampled by: TNT/TAM

TNT/TAM

Field Sample ID No.	Sample Description	Date Collected	Sample Matrix	Preservation	# of Containers	Remarks
ER-23	EQUIP. RINSATE	4/23/02 1431	WATER	HCl	3	LEVEL IV
ER-23	EQUIP. RINSATE	1431		HNO ₃	1	DATA PACKAGE
ER-23	EQUIP. RINSATE	1431		—	1	

QC Requirement: ☐ Regular; ☐ QA/QC Report; ☐ WIP; ☐ Raw Data; ☐ Extended Raw Data; ☐ CLP; ☐ ACE; ☐ AFCEE; ☐ NEESA; ☐ Other (Please specify)

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

Sample Population:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100

Sample Conditions:	Intact;	Broken.	Cooler Seal:	Intact;	Broken;	None.	Tag #	Temperature:	Room	Cold
	☐	☒	☒	☐	☐	☐	7	7	☐	☐
	☐	☒	☒	☐	☐	☐	7	7	☐	☐
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	☐	☒								

Relinquished	by	<i>[Signature]</i>	Date/Time	4/23/02	/	1549
Relinquished	by	<i>[Signature]</i>	Date/Time	4/23/02	/	1549
Received	by	<i>[Signature]</i>	Date/Time	4/23/02	/	1549

Relinquished	by	Date/Time	Received	by	Date/Time
	by <i>[Signature]</i>	4/23/03	Received	by <i>[Signature]</i>	4/23/03

DATE	DESCRIPTION	AMOUNT	CHECK NO.	BANK	INITIALS
11/1	11/1	11/1	11/1	11/1	11/1
11/2	11/2	11/2	11/2	11/2	11/2
11/3	11/3	11/3	11/3	11/3	11/3
11/4	11/4	11/4	11/4	11/4	11/4
11/5	11/5	11/5	11/5	11/5	11/5
11/6	11/6	11/6	11/6	11/6	11/6
11/7	11/7	11/7	11/7	11/7	11/7
11/8	11/8	11/8	11/8	11/8	11/8
11/9	11/9	11/9	11/9	11/9	11/9
11/10	11/10	11/10	11/10	11/10	11/10
11/11	11/11	11/11	11/11	11/11	11/11
11/12	11/12	11/12	11/12	11/12	11/12
11/13	11/13	11/13	11/13	11/13	11/13
11/14	11/14	11/14	11/14	11/14	11/14
11/15	11/15	11/15	11/15	11/15	11/15
11/16	11/16	11/16	11/16	11/16	11/16
11/17	11/17	11/17	11/17	11/17	11/17
11/18	11/18	11/18	11/18	11/18	11/18
11/19	11/19	11/19	11/19	11/19	11/19
11/20	11/20	11/20	11/20	11/20	11/20
11/21	11/21	11/21	11/21	11/21	11/21
11/22	11/22	11/22	11/22	11/22	11/22
11/23	11/23	11/23	11/23	11/23	11/23
11/24	11/24	11/24	11/24	11/24	11/24
11/25	11/25	11/25	11/25	11/25	11/25
11/26	11/26	11/26	11/26	11/26	11/26
11/27	11/27	11/27	11/27	11/27	11/27
11/28	11/28	11/28	11/28	11/28	11/28
11/29	11/29	11/29	11/29	11/29	11/29
11/30	11/30	11/30	11/30	11/30	11/30

[illegible]

APCL reserves the right to terminate its service or withhold delivery of any reports, 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, quotations for this project, and/or the general terms provided in the current APCL price schedules will be followed.

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

Sample Receiving Checklist

APCL ServiceID: **2567**Client Name/Project: Soda Environmental

1. Sample Arrival

Date/Time Received 4/23/02 1544 Date/Time Opened 4/24/02 0900 By (name): PaulCustody Transfer: ☐ Client ☐ Golden State ☐ UPS ☐ US Mail ☐ FedEx ☒ APCL Empl: Rory

2. Chain-of-Custody (CoC)

☒ With Samples? ☐ Faxed? ☒ Client has Copy? ☐ Signed, dated? By: _____
☒ Project ID? ☒ Analyses Clear? ☐ Hold Samples? # on Hold _____ # Received _____
☒ 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 ☐ NoneTemp °C 2.2

(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: 5 days ☐ 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: Paul Date: 23 Apr 2002 Time: 8:07 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

02-02567 (1288_ 349) (4858100_ 349)

04/24/02

Part 1: General Information

☐ Company Information	Name:	<i>SOTA Environmental</i>
	Address:	<i>16835 W. Bernardo Dr, Ste. 212 ,San Diego ,CA 92127</i>
☐ Project Information	Project Description:	<i>JPL</i>
	Project #:	<i>00HW019</i>
☐ 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>
☐ Receiving Information	Who Received Sample?	<i>Paul</i>
	Receiving Date/Time:	<i>04/23/02 1549</i>
	COC No.	
☐ Shipping Information	Shipping Company	<i>APCL pick up</i>
	Packing Information:	<i>Cooler/Ice Chester</i>
	Cooler Temperature:	<i>2.2 °C</i>
☐ Container Information	Container Provider:	<i>Client</i>
☐ Sampling Information	Sampling Person:	<i>JNT/TAM</i>
	Sampling Company:	<i>Client</i>
☐ Turn-Around-Time Option:		<i>Rush 5 working day(s)</i>
☐ QC Option:		<i>NEESA D</i>
☐ Disposal Option:		<i>Not specify</i>

63603

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 mmddyy	Hold ?	Composite Group	TAT Days
1	TB-23 ✓	524.2	02-02567-7	W	V	C	40	2	G	042302	N	0	7 ☐
2	MW-23-5 ✓	Perchl	02-02567-6	W	P		500	1	G	042302	N	0	7 ☐
3	MW-23-4 ✓	CRVI/Perch	02-02567-5	W	P		500	2	G	042302	N	0	7 ☐
4	MW-23-3 ✓	524.2	02-02567-4-α	W	V	C	40	3	G	042302	N	0	7 ☐
	MW-23-3	CRVI/Perch	02-02567-4-β	W	P		500	1	G	042302	N	0	7 ☐
5	MW-23-2 ✓	524.2	02-02567-3-α	W	V	C	40	3	G	042302	N	0	7 ☐
	MW-23-2	CRVI/Perch	02-02567-3-β	W	P		500	1	G	042302	N	0	7 ☐
6	MW-23-1 ✓	524.2	02-02567-2-α	W	V	C	40	3	G	042302	N	0	7 ☐
	MW-23-1	CRVI/Perch	02-02567-2-β	W	P		500	1	G	042302	N	0	7 ☐
7	ER-23 ✓	524.2	02-02567-1-α	W	V	C	40	3	G	042302	N	0	7 ☐
	ER-23	CRVI/Perch	02-02567-1-β	W	P		500	1	G	042302	N	0	7 ☐

Part 3: Analysis Information

Test Items:	☒ 524.2	Volatile Organic Compounds
	☒ 1196	Chromium (VI)
	☒ 300.0	Perchlorate, low level
	☐ 200.7/6010	Sodium, Na, by ICP
	☐ 200.7/6010	Potassium, K, by ICP
	☐ 200.7/6010	Calcium, Ca, by ICP
	☐ 200.7/6010	Magnesium, Mg, by ICP
	☐ 200.7/6010	Iron, Fe, by ICP
	☐ 300.0	Sulfate (SO ₄ ²⁻), by IC
	☐ 300.0/SM4500NOM	Nitrate (NO ₃ ⁻) as N by IC
	☐ 300.0	Chloride Cl ⁻ by IC
	☐ SM2320B	Carbonate
	☐ SM2320B	Bicarbonate
	☐ 9040/150.1	pH
	☐ 160.1	Solids, Total Dissolved (TDS)
	☐ 206.2/7060	Arsenic, As, by GFAA
	☐ 310.1	Alkalinity
	☐ PAH-SIM	PAH (NOAA)

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

Login By En-Yu Paul Kou

Check By *NY*



A P C L

Applied Physics & Chemistry Laboratory

13760 Magnolia Ave. Chino CA 91710

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

May 1, 2002

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

Dear Yu,

This package contains samples in our Service ID 02-2534 and your project is 00HW019 JPL.
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,

Regina Kirakozova
Associate QA/QC Director
Applied P & Ch Laboratory

Applied P & Ch Laboratory

13760 Magnolia Ave. Chino CA 91710

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

APCL Analytical Report

Submitted to:

SOTA Environmental

Attention: Yu Zeng

16835 W. Bernardo Dr, Ste. 212

San Diego CA 92127

Tel: (858)485-8100 Fax: (858)485-0812

Service ID #: 801-022534

Collected by: JNT/TAM

Collected on: 04/22/02

Received: 04/22/02

Extracted: N/A

Tested: 04/23-25/02

Reported: 04/29/02

Sample Description: Water from Pasadena, CA

Project Description: 00HW019 JPL

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result		
				ER-24 02-02534-1	MW-24-1 02-02534-2	MW-24-2 02-02534-3
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01	<0.01
Dilution Factor				1	25	10
PERCHLORATE	E314	µg/L	4	<4	1,280	249
VOLATILE ORGANIC COMPOUNDS						
Dilution Factor				1	1	1
CARBON TETRACHLORIDE	524.2	µg/L	0.5	<0.5	26.0	10.8
CHLOROFORM	524.2	µg/L	0.5	<0.5	9.3	4.3
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	<0.5	0.8	0.6
METHYLENE CHLORIDE	524.2	µg/L	1	0.7J	0.5J	0.6J
TETRACHLOROETHENE	524.2	µg/L	0.5	<0.5	1.6	0.5J
TRICHLOROETHENE	524.2	µg/L	0.5	<0.5	6.8	1.6
112TRICHLORO-122TRIFLUOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5

Component Analyzed	Method	Unit	PQL	Analysis Result		
				MW-24-3 02-02534-4	MW-24-4 02-02534-5	TB-24 02-02534-6
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01	-
Dilution Factor				1	1	1
PERCHLORATE	E314	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
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	0.4J	-	0.8J
TETRACHLOROETHENE	524.2	µg/L	0.5	<0.5	-	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	<0.5	-	<0.5

Applied P & Ch Laboratory

13760 Magnolia Ave. Chino CA 91710

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

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result		
				MW-24-3 02-02534-4	MW-24-4 02-02534-5	TB-24 02-02534-6
112TRICHLORO-122TRIFLUOROETHANE	524.2	µg/L	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.

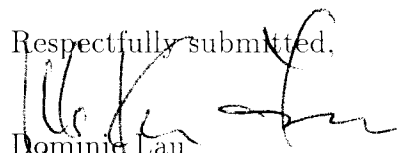
"-": Analysis is not required.

J: Reported between PQL and MDL.

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

(a) MDL reported.

Respectfully submitted,



Dominic Lau
Laboratory Director
Applied P & Ch Laboratory

Case Narrative

Project: JPL/Pasadena, CA/00HW019

For SOTA Environmental

APCL Service No: 02-2534

1. Sample Identification

The sample identifications are listed in the following table:

SOTA Environmental Sample ID	APCL Sample ID
TB-24	02-02534-6
MW-24-4	02-02534-5
MW-24-3	02-02534-4
MW-24-2	02-02534-3
MW-24-1	02-02534-2
ER-24	02-02534-1

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

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,


Regina Kirakozova,
Associate 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 ENVR. TECH INC.** Contact: **MIKE SAYRE**

Tel #: **858-485-8100** Fax #: **858-485-0812**

Address: **16835 WEST BERNARDO DRIVE #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: **JNT/TAM**

Field Sample ID No.	Sample Description	Date Collected	Sample Matrix	Preservation	# of Containers	Analysis	Items	White - With report Yellow - Lab copy Pink - Originator	Remarks
TB-24	TRIP BLANK	4/22/02 0958	WATER	HCl	2	X VOC's (524.2)			LEVEL IV
MW-24-4	MW-24-4	1042		HNO3	1	X			DATA PACKAGE
MW-24-4	MW-24-4	1042		—	1				
MW-24-3	MW-24-3	1120		HCl	9	X			MS/MSD
MW-24-3	MW-24-3	1145		HNO3	2	X			MS/MSD
MW-24-3	MW-24-3	1145		—	2	X			MS/MSD
MW-24-2	MW-24-2	1359		HCl	3	X			
MW-24-2	MW-24-2	1359		HNO3	1	X			
MW-24-2	MW-24-2	1359		—	1				
MW-24-1	MW-24-1	1429		HCl	3	X			
MW-24-1	MW-24-1	1429		HNO3	1	X			
MW-24-1	MW-24-1	1429		—	1				
ER-24	EQUIP. RINSE	1418		HCl	3	X			
ER-24	EQUIP. RINSE	1418		HNO3	1	X			
ER-24	EQUIP. RINSE	1418		—	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 Don N. [Signature] Date/Time 4/22/02 1620 Received by Mike Sayre Date/Time 4/22/02 1620

Relinquished by Mike Sayre Date/Time 4/23/02 1650 Received by Paul [Signature] Date/Time 4/23/02 1650

APCL USE ONLY Service # Note:

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

2534 Sample Receiving Checklist

APCL ServiceID: _____ Client Name/Project: Sate Environmental

1. Sample Arrival

Date/Time Received 4/22/02 1620 Date/Time Opened 4/23/02 6800 By (name): Paul
Custody Transfer: ☐ Client ☐ Golden State ☐ UPS ☐ US Mail ☐ FedEx ☒ APCL Empl: Greg

2. Chain-of-Custody (CoC)

☒ With Samples?	☐ Faxed?	☒ Client has Copy?	☐ Signed, dated? By: _____
☒ Project ID?	☒ Analyses Clear?	☐ Hold Samples?	# on Hold _____ # Received _____
☒ 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 2.8
(Cooler temperature measured from temp blank if present, otherwise measured from the cooler).
Cooler Custody Seal? ☐ Absent ☐ Intact ☐ Tampered?

4. Sample Preservation

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

5. Holding-time Requirements

☐ pH 24hr	☐ BACT 6/24hr	☒ Cr ^{VI} 24hr	☐ NO ₃ ⁻ 48hr	☐ BOD 48hr
☐ Cl ₂ ASAP	☐ Turbidity 48hr	☐ DO ASAP	☐ Fe(II) ASAP	
☐ HT Expired?	☐ Client notified?			

6. Sample Container Condition

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

7. Turn Around Time

☒ RUSH TAT: 5 days ☐ Std (7-10 days) ☐ Not Marked

8. Sample Matrix

☐ Drinking H ₂ O	☒ Other Liq	☐ Soil	☐ Wipe	☐ Polymer	☐ Air	☐ Other: _____
☐ Ground H ₂ O	☐ 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: Paul Date: 22 Apr 2002 Time: 9:12 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

02-02534 (1288_ 348) (4858100_ 348)

04/23/02

Part 1: General Information

☐ Company Information	Name:	<i>SOTA Environmental</i>
	Address:	<i>16835 W. Bernardo Dr, Ste. 212 ,San Diego ,CA 92127</i>
☐ Project Information	Project Description:	<i>JPL</i>
	Project #:	<i>00HW019</i>
☐ 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>
☐ Receiving Information	Who Received Sample?	<i>Paul</i>
	Receiving Date/Time:	<i>04/22/02 1620</i>
	COC No.	
☐ Shipping Information	Shipping Company	<i>APCL pick up</i>
	Packing Information:	<i>Cooler/Ice Chester</i>
	Cooler Temperature:	<i>2.8 °C</i>
☐ Container Information	Container Provider:	<i>Client</i>
☐ Sampling Information	Sampling Person:	<i>JNT/TAM</i>
	Sampling Company:	<i>Client</i>
☐ Turn-Around-Time Option:		<i>Rush 5 working day(s)</i>
☐ QC Option:		<i>NEESA D</i>
☐ 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	TAT Days
1	TB-24 ✓	524.2	02-02534-6	W	V	C	40	2	G	042202	N	0	6 ☐
2	MW-24-4 ✓	CRVI/Perch	02-02534-5	W	P		500	1	G	042202	N	0	6 ☐
3	MW-24-3 ✓	524.2	02-02534-4- α	W	V		40	9	G	042202	N	0	6 ☐
	MW-24-3	CRVI/Perch	02-02534-4-β	W	P		500	2	G	042202	N	0	6 ☐
4	MW-24-2 ✓	524.2	02-02534-3-α	W	V		40	3	G	042202	N	0	6 ☐
	MW-24-2	CRVI/Perch	02-02534-3-β	W	P		500	1	G	042202	N	0	6 ☐
5	MW-24-1 ✓	524.2	02-02534-2-α	W	V		40	3	G	042202	N	0	6 ☐
	MW-24-1	CRVI/Perch	02-02534-2-β	W	P		500	1	G	042202	N	0	6 ☐
6	ER-24 ✓	524.2	02-02534-1-α	W	V		40	3	G	042202	N	0	6 ☐
	ER-24	CRVI/Perch	02-02534-1-β	W	P		500	1	G	042202	N	0	6 ☐

Part 3: Analysis Information

Test Items:	☒ 524.2	Volatile Organic Compounds
	☒ 7196	Chromium (VI)
	☒ 300.0	Perchlorate, low level
	☐ 200.7/6010	Sodium, Na, by ICP
	☐ 200.7/6010	Potassium, K, by ICP
	☐ 200.7/6010	Calcium, Ca, by ICP
	☐ 200.7/6010	Magnesium, Mg, by ICP
	☐ 200.7/6010	Iron, Fe, by ICP
	☐ 300.0	Sulfate (SO_4^{--}), by IC
	☐ 300.0/SM4500NO ₃ -M	Nitrate (NO_3^-) as N by IC
	☐ 300.0	Chloride Cl^- by IC
	☐ SM2320B	Carbonate
	☐ SM2320B	Bicarbonate
	☐ 9040/150.1	pH
	☐ 160.1	Solids, Total Dissolved (TDS)
	☐ 206.2/7060	Arsenic, As, by GFAA
	☐ 310.1	Alkalinity
	☐ PAH-SIM	PAH (NOAA)

Seq. #	Client's Sample ID (as given on COC)	Sample Sub-ID	APCL Sample ID	Matrix	524.2	CHROMIUM	PERCHL	NA	K	CA	MG	FE
1	TB-24	524.2	02-02534-6	W	X ✓							

2	MW-24-4	CRVI/Perch	02-02534-5	W			X ✓	X ✓						☒
3	MW-24-3	524.2	02-02534-4- α	W	X ✓									☐
	MW-24-3	CRVI/Perch	02-02534-4- β	W			X	X						☐
4	MW-24-2	524.2	02-02534-3- α	W	X									☐
	MW-24-2	CRVI/Perch	02-02534-3- β	W			X	X						☐
5	MW-24-1	524.2	02-02534-2- α	W	X									☐
	MW-24-1	CRVI/Perch	02-02534-2- β	W			X	X						☐
6	ER-24	524.2	02-02534-1- α	W	X									☐
	ER-24	CRVI/Perch	02-02534-1- 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-24	524.2	02-02534-6	W								☐
2	MW-24-4	CRVI/Perch	02-02534-5	W								☐
3	MW-24-3	524.2	02-02534-4- α	W								☐
	MW-24-3	CRVI/Perch	02-02534-4- β	W								☐
4	MW-24-2	524.2	02-02534-3- α	W								☐
	MW-24-2	CRVI/Perch	02-02534-3- β	W								☐
5	MW-24-1	524.2	02-02534-2- α	W								☐
	MW-24-1	CRVI/Perch	02-02534-2- β	W								☐
6	ER-24	524.2	02-02534-1- α	W								☐
	ER-24	CRVI/Perch	02-02534-1- β	W								☐

Seq. #	Client's Sample ID (as given on COC)	Sample Sub-ID	APCL Sample ID	Matrix	ALKALIN	SIM
1	TB-24	524.2	02-02534-6	W		☐
2	MW-24-4	CRVI/Perch	02-02534-5	W		☐
3	MW-24-3	524.2	02-02534-4- α	W		☐
	MW-24-3	CRVI/Perch	02-02534-4- β	W		☐
4	MW-24-2	524.2	02-02534-3- α	W		☐
	MW-24-2	CRVI/Perch	02-02534-3- β	W		☐
5	MW-24-1	524.2	02-02534-2- α	W		☐
	MW-24-1	CRVI/Perch	02-02534-2- β	W		☐
6	ER-24	524.2	02-02534-1- α	W		☐
	ER-24	CRVI/Perch	02-02534-1- β	W		☐

- ☐ Client's Requirement: PLEASE RUN MS/MSD ON SAMPLE #4 ✓
- ☐ IF ENOUGH SAMPLE
- ☐ FOR 8270SIM, PLEASE INCLUDE 1,4-DIOXANE

Login By En-Yu Paul Kou

Check By 12/

Applied P & Ch Laboratory

13760 Magnolia Ave. Chino CA 91710

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

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

APCL Analytical Report

Service ID #: 801-022563

Collected by: JNT/IAM

Collected on: 04/18/02

Received: 04/18/02

Extracted: N/A

Tested: N/A

Reported: 05/28/02

Sample Description: Water

Project Description: 00HW019 JPL

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result			
				MW-11-3	MW-11-2	MW-11-1	MW-14-4
				02-02563-1	02-02563-2	02-02563-3	02-02563-4

CHROMIUM ^(a)

Component Analyzed	Method	Unit	PQL	Analysis Result			
				MW-14-4D	MW-14-3	MW-14-2	MW-14-1
				02-02563-5	02-02563-6	02-02563-7	02-02563-8

CHROMIUM ^(a)

Component Analyzed	Method	Unit	PQL	Analysis Result			
				ER-14	ER-3	ER-4	ER-11
				02-02563-9	02-02563-10	02-02563-11	02-02563-12

CHROMIUM ^(a)

Component Analyzed	Method	Unit	PQL	Analysis Result			
				ER-23	ER-24	MW-5	MW-6
				02-02563-13	02-02563-14	02-02563-15	02-02563-16

CHROMIUM ^(a)

Component Analyzed	Method	Unit	PQL	Analysis Result			
				MW-7	MW-8	MW-10	MW-13
				02-02563-17	02-02563-18	02-02563-19	02-02563-20

CHROMIUM ^(a)

Component Analyzed	Method	Unit	PQL	Analysis Result			
				MW-16	MW-3-2	MW-3-3	MW-3-4
				02-02563-21	02-02563-22	02-02563-23	02-02563-24

CHROMIUM ^(a)

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result			
				MW-3-4D	MW-4-1	MW-4-2	MW-4-3
				02-02563-25	02-02563-26	02-02563-27	02-02563-28

CHROMIUM ^(a)

Component Analyzed	Method	Unit	PQL	Analysis Result			
				MW-4-4	MW-4-5	MW-16D	MW-23-1
				02-02563-29	02-02563-30	02-02563-31	02-02563-32

CHROMIUM ^(a)

Component Analyzed	Method	Unit	PQL	Analysis Result			
				MW-23-2	MW-23-3	MW-23-4	MW-24-1
				02-02563-33	02-02563-34	02-02563-35	02-02563-36

CHROMIUM ^(a)

Component Analyzed	Method	Unit	PQL	Analysis Result		
				MW-24-2	MW-24-3	MW-24-4
				02-02563-37	02-02563-38	02-02563-39

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.

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

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 #: 801-022447

Collected by: JNT/TAM

Collected on: 04/10-16/02

Sample Description: Water

Project Description: 00HW019 JPL

Received: 04/10/02

Extracted: N/A

Tested: N/A

Reported: 05/28/02

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result			
				ER-17	ER-12	ER-18	ER-20
				02-02447-1	02-02447-2	02-02447-3	02-02447-4

CHROMIUM ^(a)

Component Analyzed	Method	Unit	PQL	Analysis Result			
				ER-22	MW-12-1	MW-12-2	MW-12-3
				02-02447-5	02-02447-6	02-02447-7	02-02447-8

CHROMIUM ^(a)

Component Analyzed	Method	Unit	PQL	Analysis Result			
				MW-12-3D	MW-17-2	MW-17-3	MW-17-4
				02-02447-9	02-02447-10	02-02447-11	02-02447-12

CHROMIUM ^(a)

Component Analyzed	Method	Unit	PQL	Analysis Result			
				MW-18-2	MW-18-3	MW-18-4	MW-20-1
				02-02447-13	02-02447-14	02-02447-15	02-02447-16

CHROMIUM ^(a)

Component Analyzed	Method	Unit	PQL	Analysis Result			
				MW-20-2	MW-20-3	MW-20-4	MW-20-5
				02-02447-17	02-02447-18	02-02447-19	02-02447-20

CHROMIUM ^(a)

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result		
				MW-20-4D	MW-22-1	MW-22-2
				02-02447-21	02-02447-22	02-02447-23

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.

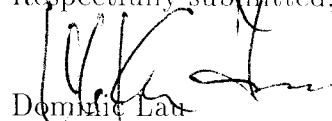
"-": Analysis is not required.

J: Reported between PQL and MDL.

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