APCL

Applied Physics & Chemistry Laboratory

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

April 29, 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 02-2483 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,

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

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

APCL Analytical Report

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

Service ID #: 801-022483
Collected by: JNT/TAM
Collected on: 04/18/02

Received: 04/18/02
Extracted: N/A
Tested: 04/19-23/02
Reported: 04/24/02

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

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result ER-14 02-02483-1	MW-14-1 02-02483-2	MW-14-2 02-02483-3	MW-14-3 02-02483-4
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01	<0.01	<0.01
Dilution Factor				1	1	1	1
PERCHLORATE	E314	µg/L	4	<4	<4	<4	<4
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	<0.5	0.5J
1,1-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<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
TETRACHLOROETHENE	524.2	µg/L	0.5	<0.5	0.6	0.4J	0.4J
TRICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	3.3	0.9
112TRICHLORO-122TRIFLUOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5

Component Analyzed	Method	Unit	PQL	Analysis Result MW-14-4 02-02483-5	MW-14-5 02-02483-6	MW-14-4D 02-02483-7	TB-14 02-02483-8
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	-	<0.01	-
Dilution Factor				1	1	1	1
PERCHLORATE	E314	µg/L	4	<4	<4	<4	-
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	<0.5	<0.5
1,1-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<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
TETRACHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-14-4 02-02483-5	MW-14-5 02-02483-6	MW-14-4D 02-02483-7	TB-14 02-02483-8
112TRICHLORO-122TRIFLUOROETHANE	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

Case Narrative

Project: JPL/Pasadena, CA/00HW019

For SOTA Environmental

APCL Service No: 02-2483

1. Sample Identification

The sample identifications are listed in the following table:

SOTA Environmental Sample ID	APCL Sample ID
MW-14-5	02-02483-6
MW-14-4	02-02483-5
MW-14-4D	02-02483-7
MW-14-3	02-02483-4
MW-14-2	02-02483-3
MW-14-1	02-02483-2
TB-14	02-02483-8
ER-14	02-02483-1

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,

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

Applied P & Ch Laboratory

APCL

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

Chain of Custody

Please Print in pen Page 1 of 2

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 # 001W019 P.O. #

Project Address PASADENA, CALIFORNIA APCL Quotation #

Due Date: [X] regular [ ] rush: ___ days ___ hours Sampled by: JNT/TAM

White - With report
Yellow - Lab copy
Pink - Originator

Field Sample ID No.	Sample Description	Date Collected	Time Collected	Sample Matrix	Preservation	# of Containers	VOCs (524.2)	Tot Cr (200.8)	Cr VI (7196)	Perchlorate (314.0)	Remarks
MW-14-5	MW-14-5	4/18/02	1008	WATER	HCl	3	X				LEVEL IV
MW-14-5	MW-14-5		1008		—	1				X	DATA PACKAGE
MW-14-4	MW-14-4		1104		HCl	3	X				
MW-14-4	MW-14-4		1104		HNO_3	1		X			
MW-14-4	MW-14-4		1104		—	1			X	X	
MW-14-4D	MW-14-4D		1104		HCl	3	X				
MW-14-4D	MW-14-4D		1139		HNO_3	1		X			
MW-14-4D	MW-14-4D		1139		—	1			X	X	
MW-14-3	MW-14-3		1202		HCl	3	X				
MW-14-3	MW-14-3		1202		HNO_3	1		X			
MW-14-3	MW-14-3		1202		—	1			X	X	
MW-14-2	MW-14-2		1340		HCl	3	X				
MW-14-2	MW-14-2		1340		HNO_3	1		X			
MW-14-2	MW-14-2		1340		—	1			X	X	

2483

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 4/19/02 / 1552 Received by [signature] Date/Time 4/19/02 / 1552

Relinquished by [signature] Date/Time / Received by [signature] Date/Time 4/19/02 / 0800

APCL USE ONLY Service # Note:

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

Applied P & Ch Laboratory

APCL

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

Chain of Custody

Please Print in pen Page 2 of 2

Client: SOTA 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: [X] regular [ ] rush: ___ days ___ hours Sampled by: JNT/TAM

Field Sample ID No.	Sample Description	Date Collected	Time Collected	Sample Matrix	Preservation	# of Containers	VOC's (524.2)	TOT Cr (200.8)	(Cr VI (7196)	PERCHLORATE (314.0)	Remarks
MW-14-1	MW-14-1	4/18/02	1410	WATER	HCl	3	X				LEVEL IV
MW-14-1	MW-14-1		1410		HNO_3	1		X			DATA PACKAGE
MW-14-1	MW-14-1		1410		—	1			X	X	
TB-14	TRIP BLANK		0940		HCl	2	X				
ER-14	EQUIP. RINSATE		1400		HCl	3	X				
ER-14	EQUIP. RINSATE		1400		HNO_3	1		X			
ER-14	EQUIP. RINSATE		1400		—	1			X	X	

Analysis Items

White – With report
Yellow – Lab copy
Pink – Originator

2493

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 4/18/02 / 1652 Received by [signature] Date/Time 4/18/02 / 1552

Relinquished by [signature] Date/Time / Received by [signature] Date/Time 4/19/02 / 0830

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
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Sample Receiving Checklist

APCL ServiceID: 2483 Client Name/Project: Sota Environmental

1. Sample Arrival

Date/Time Received 4/18/02 1552 Date/Time Opened 4/19/02 0800 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 3.3
(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 day ☐ Std (7-10 days) ☐ Not Marked

8. Sample Matrix

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

9. Pre-Login Check List Completed & OK?

☑ ALL OK? (if not, attach docs) ☐ Client Contact? (Name:)Date/Time:
Received/Checked by: Paul Date: 18 Apr 2002 Time: 8:35 a.m.

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

DocumentFile: [neal.texfiles]smprcl.tex.

62302

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

Sample Login: Check List

02-02483 (1288_346) (4858100_346)

04/19/02

Part 1: General Information

☐ Company Information	Name:	*SOTA Environmental*
	Address:	*16835 W. Bernardo Dr, Ste. 212 ,San Diego ,CA 92127*
☐ Project Information	Project Description:	*JPL*
	Project #:	*00HW019*
☐ Billing Information	P.O. #:	
	Bill Address:	*16835 W. Bernardo Dr, Ste. 212 ,San Diego ,CA 92127*
	Lab Project ID:	*2002_0002*
	Client Database #:	*01*
☐ Receiving Information	Who Received Sample?	*Paul*
	Receiving Date/Time:	*04/18/02 1552*
	COC No.	
☐ Shipping Information	Shipping Company	*APCL pick up*
	Packing Information:	*Cooler/Ice Chester*
	Cooler Temperature:	*3.3 °C*
☐ Container Information	Container Provider:	*Client*
☐ Sampling Information	Sampling Person:	*JNT/TAM*
	Sampling Company:	*Client*
☐ Turn-Around-Time Option:		*Rush 5 working day(s)*
☐ QC Option:		*NEESA D*
☐ Disposal Option:		*Not specify*

Part 2: Sample Information

Seq. #	Sample ID (on COC)	Sample Sub-ID	APCL Sample ID	Matrix	Cont-tainer	Preser-vative	Vol, ml Am. g	# of Replica	Condition G, L, B	Collected mmddyy	Hold ?	Composite Group	TAT Days	
1	MW-14-5	524.2	02-02483-6-α	W	V	C	40	3	G	041802	N	0	7	☐
	MW-14-5	Perch	02-02483-6-β	W	P		500	1	G	041802	N	0	7	☐
2	MW-14-4	524.2	02-02483-5-α	W	V	C	40	3	G	041802	N	0	7	☐
	MW-14-4	CRVI/Perch	02-02483-5-β	W	P		500	1	G	041802	N	0	7	☐
3	MW-14-4D	524.2	02-02483-7-α	W	V	C	40	3	G	041802	N	0	7	☐
	MW-14-4D	CRVI/Perch	02-02483-7-β	W	P		500	1	G	041802	N	0	7	☐
4	MW-14-3	524.2	02-02483-4-α	W	V	C	40	3	G	041802	N	0	7	☐
	MW-14-3	CRVI/Perch	02-02483-4-β	W	P		500	1	G	041802	N	0	7	☐
5	MW-14-2	524.2	02-02483-3-α	W	V	C	40	3	G	041802	N	0	7	☐
	MW-14-2	CRVI/Perch	02-02483-3-β	W	P		500	1	G	041802	N	0	7	☐
6	MW-14-1	524.2	02-02483-2-α	W	V	C	40	3	G	041802	N	0	7	☐
	MW-14-1	CRVI/Perch	02-02483-2-β	W	P		500	1	G	041802	N	0	7	☐
7	TB-14	524.2	02-02483-8	W	V	C	40	2	G	041802	N	0	7	☐
8	ER-14	524.2	02-02483-1-α	W	V	C	40	3	G	041802	N	0	7	☐
	ER-14	CRVI/Perch	02-02483-1-β	W	P		500	1	G	041802	N	0	7	☐

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/SM4500NO3C*	Nitrate (NO_3^-) as N by IC
☐	*300.0*	Chloride Cl^- by IC
☐	*SM2320B*	Carbonate
☐	*SM2320B*	Bicarbonate
☐	*9040/150.1*	pH
☐	*160.1*	Solids, Total Dissolved (TDS)
☐	*206.2/7060*	Arsenic, As, by GFAA
☐	*310.1*	Alkalinity

☐ *PAH-SIM* **PAH (NOAA)**

Seq. #	Client"s Sample ID (as given on COC)	Sample Sub-ID	APCL Sample ID	Matrix	524.2	CHROMIUM	PERCHL	NA	K	CA	MG	FE
1	MW-14-5	524.2	02-02483-6-α	W	X							
	MW-14-5	Perch	02-02483-6-β	W			X					
2	MW-14-4	524.2	02-02483-5-α	W	X							
	MW-14-4	CRVI/Perch	02-02483-5-β	W		X	X					
3	MW-14-4D	524.2	02-02483-7-α	W	X							
	MW-14-4D	CRVI/Perch	02-02483-7-β	W		X	X					
4	MW-14-3	524.2	02-02483-4-α	W	X							
	MW-14-3	CRVI/Perch	02-02483-4-β	W		X	X					
5	MW-14-2	524.2	02-02483-3-α	W	X							
	MW-14-2	CRVI/Perch	02-02483-3-β	W		X	X					
6	MW-14-1	524.2	02-02483-2-α	W	X							
	MW-14-1	CRVI/Perch	02-02483-2-β	W		X	X					
7	TB-14	524.2	02-02483-8	W	X							
8	ER-14	524.2	02-02483-1-α	W	X							
	ER-14	CRVI/Perch	02-02483-1-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	MW-14-5	524.2	02-02483-6-α	W								
	MW-14-5	Perch	02-02483-6-β	W								
2	MW-14-4	524.2	02-02483-5-α	W								
	MW-14-4	CRVI/Perch	02-02483-5-β	W								
3	MW-14-4D	524.2	02-02483-7-α	W								
	MW-14-4D	CRVI/Perch	02-02483-7-β	W								
4	MW-14-3	524.2	02-02483-4-α	W								
	MW-14-3	CRVI/Perch	02-02483-4-β	W								
5	MW-14-2	524.2	02-02483-3-α	W								
	MW-14-2	CRVI/Perch	02-02483-3-β	W								
6	MW-14-1	524.2	02-02483-2-α	W								
	MW-14-1	CRVI/Perch	02-02483-2-β	W								
7	TB-14	524.2	02-02483-8	W								
8	ER-14	524.2	02-02483-1-α	W								
	ER-14	CRVI/Perch	02-02483-1-β	W								

Seq. #	Client"s Sample ID (as given on COC)	Sample Sub-ID	APCL Sample ID	Matrix	ALKALIN	SIM
1	MW-14-5	524.2	02-02483-6-α	W		
	MW-14-5	Perch	02-02483-6-β	W		
2	MW-14-4	524.2	02-02483-5-α	W		
	MW-14-4	CRVI/Perch	02-02483-5-β	W		

62305

3	MW-14-4D	524.2	02-02483-7-α	W	☐
	MW-14-4D	CRVI/Perch	02-02483-7-β	W	☐
4	MW-14-3	524.2	02-02483-4-α	W	☐
	MW-14-3	CRVI/Perch	02-02483-4-β	W	☐
5	MW-14-2	524.2	02-02483-3-α	W	☐
	MW-14-2	CRVI/Perch	02-02483-3-β	W	☐
6	MW-14-1	524.2	02-02483-2-α	W	☐
	MW-14-1	CRVI/Perch	02-02483-2-β	W	☐
7	TB-14	524.2	02-02483-8	W	☐
8	ER-14	524.2	02-02483-1-α	W	☐
	ER-14	CRVI/Perch	02-02483-1-β	W	☐

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

☐ **IF ENOUGH SAMPLE**

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

Login By En-Yu Paul Kou

Check By

APCL

Applied Physics & Chemistry Laboratory

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

April 24, 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 02-2373 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,

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

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

APCL Analytical Report

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

Service ID #: 801-022373
Collected by: JNT/TAM
Collected on: 04/10/02

Received: 04/10/02
Extracted: N/A
Tested: 04/11-15/02
Reported: 04/16/02

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

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result ER-17 02-02373-1	MW-17-2 02-02373-2	MW-17-3 02-02373-3
Dilution Factor				1	1	1
PERCHLORATE	E314	µg/L	4	<4	<4	3.7J
VOLATILE ORGANIC COMPOUNDS						
Dilution Factor				1	1	1
CARBON TETRACHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	1.6
CHLOROFORM	524.2	µg/L	0.5	<0.5	<0.5	2.6
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	<0.5	<0.5
METHYLENE CHLORIDE	524.2	µg/L	1	-	0.3J	0.3J
TETRACHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	1.9
112TRICHLORO-122TRIFLUOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5

Component Analyzed	Method	Unit	PQL	Analysis Result MW-17-4 02-02373-4	MW-17-5 02-02373-5	TB-17 02-02373-6
Dilution Factor				1	1	1
PERCHLORATE	E314	µg/L	4	7.0	4.4	-
VOLATILE ORGANIC COMPOUNDS						
Dilution Factor				1	1	1
CARBON TETRACHLORIDE	524.2	µg/L	0.5	0.8	0.3J	<0.5
CHLOROFORM	524.2	µg/L	0.5	2.2	1.6	<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	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	524.2	µg/L	1	-	0.4J	0.6J
TETRACHLOROETHENE	524.2	µg/L	0.5	1.4	0.8	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	15.5	9.5	<0.5
112TRICHLORO-122TRIFLUOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5

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

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result ER-17 02-02373-1	MW-17-2 02-02373-2	MW-17-3 02-02373-3	MW-17-4 02-02373-4
CHROMIUM (VI)	7196	mg/L	0.01	< 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

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

Case Narrative

Project: JPL/Pasadena, CA/00HW019

For SOTA Environmental

APCL Service No: 02-2373

1. Sample Identification

The sample identifications are listed in the following table:

SOTA Environmental Sample ID	APCL Sample ID
MW-17-5	02-02373-5
MW-17-4	02-02373-4
ER-17	02-02373-1
MW-17-3	02-02373-3
MW-17-2	02-02373-2
TB-17	02-02373-6

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,

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

Applied P & Ch Laboratory

APCL

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

Chain of Custody

Please Print in pen Page 1 of 1

Client: SOTA ENVR. TECH. INC Contact: MIKE SAFRE Tel #: 858-485-8100 Fax #: 858-485-0812

Address: 16835 WEST BERNARDO DR. STE# 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	Time Collected	Sample Matrix	Preservation	# of Containers	VOC's (524.2)	PERCHLORATE (314.0)	TOT CR (200.8)	CR VI (7196)	Remarks
MW-17-5	MW-17-5	4/10/02	1040	WATER	HCl	3	X				
MW-17-5	MW-17-5		1040		—	1		X			
MW-17-4	MW-17-4		1122		HCl	9	X				
MW-17-4	MW-17-4		1224		HNO_3	2			X		
MW-17-4	MW-17-4		1224		—	2		X		X	
ER-17	EQUIP. RINSATE		1351		HCl	3	X				
MW-17-3	MW-17-3		1416		HCl	3	X				
MW-17-3	MW-17-3		1443		HNO_3	1			X		
MW-17-3	MW-17-3		1416		—	1		X		X	
MW-17-2	MW-17-2		1520		HCl	3	X				
MW-17-2	MW-17-2		1520		HNO_3	1			X		
MW-17-2	MW-17-2		1520		—	1		X		X	
TB-17	TRIP BLANK		0948		HCl	2	X				
ER-17	EQUIPMENT RINSATE.		1351		HNO_3	1			X		
ER-17	EQUIP. RINSATE		1351		—	1		X		X	

2373

LEVEL IV DATA PACKAGE

White – With report
Yellow – Lab copy
Pink – Originator

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

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

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

Relinquished by [signature] Date/Time 4/10/02 1719 Received by [signature] Date/Time 4/10/02 1719

Relinquished by Adam Wood Date/Time 4/10/02 1830 Received by Paul C Date/Time 4/11/02 0800

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.

SOTA
Environmental Technology, Inc.
16635 W. Bernardo Dr., Suite 212
San Diego, CA 92127-1613
Phone: 858-485-6100
Fax: 858-485-0812

Transmittal

Date: 4/11/02

To: Kenny Chan
From: Yu
FAX: 909-590-1498
Phone:
No. of Pages: (2)

☐ Urgent ☐ For Review ☐ Please Comment ☐ Please Reply ☐ as Requested

Subject:

Enclosures:

Comments:

For JPL sampled on 4/10/02

Thanks,

Yu

Applied P & Ch Laboratory

APCL

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

Chain of Custody

Please Print in pen Page 1 of 1

Client: SOTA ENVR. TECH. INC Contact: MIKE SAPRE Tel #: 858-485-9100 Fax #: 858-485-0812

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

Bill to: SOTA

Project Name/Code JPL Job # 00HW619 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	Time Collected	Sample Matrix	Preservation	# of Containers	VOC's (524.2)	PERCHLORATE (314.0)	TOT CR (200.8)	CR VI (7196)	Remarks
MW-17-5	MW-17-5	4/10/02	1040	WATER	HCl	3	X				
MW-17-5	MW-17-5		1040		—	1		X			
MW-17-4	MW-17-4		1122		HCl	9	X				MS/MSD
MW-17-4	MW-17-4		1224		HNO_3	2			X		OF MW-17-4
MW-17-4	MW-17-4		1224		—	2		X		X	
ER-17	EQUIP. RINSATE		1351		HCl	3	X				
MW-17-3	MW-17-3		1416		HCl	3	X				
MW-17-3	MW-17-3		1443		HNO_3	1			X		
MW-17-3	MW-17-3		1416		—	1		X		X	
MW-17-2	MW-17-2		1520		HCl	3	X				
MW-17-2	MW-17-2		1520		HNO_3	1			X		
MW-17-2	MW-17-2		1520		—	1		X		X	
TB-17	TRIP BLANK		0948		HCl	2	X				
ER-17	EQUIPMENT RINSATE		1351		HNO_3	1			X		
ER-17	EQUIP. RINSATE		1351		—	1		X		X	

2373

Analysis Items

White – With report
Yellow – Lab copy
Pink – Originator

Remarks

LEVEL IV DATA PACKAGE

1/2

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 4/10/02 1719 Received by Adam Wood Date/Time 4/10/02 1719

Relinquished by Adam Wood Date/Time 4/10/02 1830 Received by [signature] Date/Time 4/11/02 0850

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.

File:/CUST_DATA/LABCHAIN_ROOT.TEX File:/CUST_DATA/LABCHAIN4.TEX

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

Sample Receiving Checklist

APCL ServiceID: 2373 Client Name/Project: Soiltq Environmental

1. Sample Arrival

Date/Time Received 4/10/02 1719 Date/Time Opened 4/11/02 0800 By (name): Paul

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

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 3.2 _____ _____ _____ _____ _____
(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 ☐ 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 Day ☐ Std (7-10 days) ☐ Not Marked

8. Sample Matrix

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

9. Pre-Login Check List Completed & OK?

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

Received/Checked by: Paul Date: 10 Apr 2002 Time: 7:33 a.m.

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

DocumentFile: [neal.texfiles]smprcl.tex.

59902

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

Sample Login: Check List

02-02373 (1288_ 340) (4858100_ 340)

04/11/02

Part 1: General Information

☐ Company Information	Name:	*SOTA Environmental*
	Address:	*16835 W. Bernardo Dr, Ste. 212 ,San Diego ,CA 92127*
☐ Project Information	Project Description:	*JPL*
	Project #:	*00HW019*
☐ Billing Information	P.O. #:	
	Bill Address:	*16835 W. Bernardo Dr, Ste. 212 ,San Diego ,CA 92127*
	Lab Project ID:	*2002_0002*
	Client Database #:	*01*
☐ Receiving Information	Who Received Sample?	*Paul*
	Receiving Date/Time:	*04/10/02 1719*
	COC No.	
☐ Shipping Information	Shipping Company	*APCL pick up*
	Packing Information:	*Cooler/Ice Chester*
	Cooler Temperature:	*3.2 °C*
☐ Container Information	Container Provider:	*Client*
☐ Sampling Information	Sampling Person:	*JNT/TAM*
	Sampling Company:	*Client*
☐ Turn-Around-Time Option:		*Rush 5 working day(s)*
☐ QC Option:		*NEESA D*
☐ Disposal Option:		*Not specify*

Part 2: Sample Information

Seq. #	Sample ID (on COC)	Sample Sub-ID	APCL Sample ID	Matrix	Cont-tainer	Preser-vative	Vol, ml Am. g	# of Replica	Condition G, L, B	Collected mmddyy	Hold ?	Composite Group	TAT Days	
1	MW-17-5	524.2	02-02373-5-α	W	V	C	40	3	G	041002	N	0	7	☐
	MW-17-5	Perchlo	02-02373-5-β	W	P		500	1	G	041002	N	0	7	☐
2	MW-17-4	524.2	02-02373-4-α	W	V	C	40	9	G	041002	N	0	7	☐
	MW-17-4	CRVI/Perch	02-02373-4-β	W	P		500	2	G	041002	N	0	7	☐
3	ER-17	524.2	02-02373-1-α	W	V	C	40	3	G	041002	N	0	7	☐
	ER-17	CRVI/Perch	02-02373-1-β	W	P		500	1	G	041002	N	0	7	☐
4	MW-17-3	524.2	02-02373-3-α	W	V	C	40	3	G	041002	N	0	7	☐
	MW-17-3	CRVI/Perch	02-02373-3-β	W	P		500	1	G	041002	N	0	7	☐
5	MW-17-2	524.2	02-02373-2-α	W	V	C	40	3	G	041002	N	0	7	☐
	MW-17-2	CRVI/Perch	02-02373-2-β	W	P		500	1	G	041002	N	0	7	☐
6	TB-17	524.2	02-02373-6	W	V	C	40	2	G	041002	N	0	7	☐

Part 3: Analysis Information

Test Items:

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

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

1	MW-17-5	524.2	02-02373-5-α	W	X ✓			
	MW-17-5	Perchlo	02-02373-5-β	W			X ✓	
2	MW-17-4	524.2	02-02373-4-α	W	X ✓			
	MW-17-4	CRVI/Perch	02-02373-4-β	W		X ✓	X ✓	
3	ER-17	524.2	02-02373-1-α	W	X ✓			
	ER-17	CRVI/Perch	02-02373-1-β	W		X ✓	X ✓	
4	MW-17-3	524.2	02-02373-3-α	W	X ✓			
	MW-17-3	CRVI/Perch	02-02373-3-β	W		X ✓	X ✓	
5	MW-17-2	524.2	02-02373-2-α	W	X ✓			
	MW-17-2	CRVI/Perch	02-02373-2-β	W		X ✓	X ✓	
6	TB-17	524.2	02-02373-6	W	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-17-5	524.2	02-02373-5-α	W								
	MW-17-5	Perchlo	02-02373-5-β	W								
2	MW-17-4	524.2	02-02373-4-α	W								
	MW-17-4	CRVI/Perch	02-02373-4-β	W								
3	ER-17	524.2	02-02373-1-α	W								
	ER-17	CRVI/Perch	02-02373-1-β	W								
4	MW-17-3	524.2	02-02373-3-α	W								
	MW-17-3	CRVI/Perch	02-02373-3-β	W								
5	MW-17-2	524.2	02-02373-2-α	W								
	MW-17-2	CRVI/Perch	02-02373-2-β	W								
6	TB-17	524.2	02-02373-6	W								

Seq. #	Client"s Sample ID (as given on COC)	Sample Sub-ID	APCL Sample ID	Matrix	ALKALIN	SIM
1	MW-17-5	524.2	02-02373-5-α	W		
	MW-17-5	Perchlo	02-02373-5-β	W		
2	MW-17-4	524.2	02-02373-4-α	W		
	MW-17-4	CRVI/Perch	02-02373-4-β	W		
3	ER-17	524.2	02-02373-1-α	W		
	ER-17	CRVI/Perch	02-02373-1-β	W		
4	MW-17-3	524.2	02-02373-3-α	W		
	MW-17-3	CRVI/Perch	02-02373-3-β	W		
5	MW-17-2	524.2	02-02373-2-α	W		
	MW-17-2	CRVI/Perch	02-02373-2-β	W		
6	TB-17	524.2	02-02373-6	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

APCL

Applied Physics & Chemistry Laboratory

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

April 25, 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 02-2427 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,

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

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

APCL Analytical Report

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

Service ID #: 801-022427
Collected by: JNT/TAM
Collected on: 04/15/02

Received: 04/15/02
Extracted: N/A
Tested: 04/16-18/02
Reported: 04/22/02

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

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result ER-18 02-02427-1	MW-18-2 02-02427-2	MW-18-3 02-02427-3
Dilution Factor				1	1	1
PERCHLORATE	E314	µg/L	4	<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	2.9
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	<0.5	<0.5
METHYLENE CHLORIDE	524.2	µg/L	1	0.3J	-	0.4J
TETRACHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	0.5
TRICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	0.6
112TRICHLORO-122TRIFLUOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5

Component Analyzed	Method	Unit	PQL	Analysis Result MW-18-4 02-02427-4	MW-18-5 02-02427-5	TB-18 02-02427-6
Dilution Factor				1	1	1
PERCHLORATE	E314	µg/L	4	24.5	<4	-
VOLATILE ORGANIC COMPOUNDS						
Dilution Factor				1	1	1
CARBON TETRACHLORIDE	524.2	µg/L	0.5	11.7	<0.5	<0.5
CHLOROFORM	524.2	µg/L	0.5	2.8	<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	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	524.2	µg/L	1	0.4J	-	0.7J
TETRACHLOROETHENE	524.2	µg/L	0.5	7.7	<0.5	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	5.5	<0.5	<0.5
112TRICHLORO-122TRIFLUOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5

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

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result ER-18 02-02427-1	MW-18-2 02-02427-2	MW-18-3 02-02427-3	MW-18-4 02-02427-4
CHROMIUM (VI)	7196	mg/L	0.01	< 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

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

Case Narrative

Project: JPL/Pasadena, CA/00HW019

For SOTA Environmental

APCL Service No: 02-2427

1. Sample Identification

The sample identifications are listed in the following table:

SOTA Environmental Sample ID	APCL Sample ID
TB-18	02-02427-6
MW-18-5	02-02427-5
MW-18-4	02-02427-4
MW-18-3	02-02427-3
MW-18-2	02-02427-2
ER-18	02-02427-1

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

One fax log requesting the amendment of COC.

6. Anomaly

(1) SW8260B:

Methylene Chloride was detected in the Method Blank in the amount of 2.5 μg/L, exceeding 1 μg/L reporting limit. However only traces of Methylene Chloride less than 1 μg/L reporting limit were detected in the field samples.

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

Respectfully submitted,

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

Applied P & Ch Laboratory

APCL

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

Chain of Custody

Please Print in pen Page 1 of 1

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

Address: 16385 WEST BERNARDO DR. STE 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: [X] regular [ ] rush: ___ days ___ hours Sampled by: JNT/TAM

White – With report
Yellow – Lab copy
Pink – Originator

Field Sample ID No.	Sample Description	Date Collected	Time Collected	Sample Matrix	Preservation	# of Containers	Analysis Items: VOCs (524.2)	Perchlorate (314.0)	Tot Cr (200.8)	Cr VI (7196)	Remarks
TB-18	TRIP BLANK	4/15/02	1034	WATER	HCl	2					
MW-18-5	MW-18-5		1048		HCl	9	X				MS/MSD
MW-18-5	MW-18-5		1112		—	1		X			
MW-18-4	MW-18-4		1150		HCl	3	X				
MW-18-4	MW-18-4		1150		HNO_3	1			X		
MW-18-4	MW-18-4		1150		—	1		X		X	LEVEL IV
MW-18-3	MW-18-3		1221		HCl	3	X				DATA PACKAGE
MW-18-3	MW-18-3		1221		HNO_3	1			X		
MW-18-3	MW-18-3		1221		—	1		X		X	
MW-18-2	MW-18-2		1429		HCl	3	X				
MW-18-2	MW-18-2		1429		HNO_3	1			X		
MW-18-2	MW-18-2		1429		—	1		X		X	
ER-18	~~ER-18~~ EQUIP. RINSATE		1240		HCl	3	X				
ER-18	EQUIP. RINSATE		1240		HNO_3	1			X		
ER-18	EQUIP. RINSATE		1240		—	1		X		X	

2427

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 4/15/02 / 1518 Received by [signature] Date/Time 4/15/02 15:18

Relinquished by [signature] Date/Time 4/15/02 14:30 Received by [signature] Date/Time 4/15/02 / 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.

SOTA
Environmental Technology, Inc.
16835 W. Bernardo Dr., Suite 212
San Diego, CA 92127-1613
Phone: 858-485-8100
Fax: 858-485-0812

Transmittal

Date: 4/15/02

To: Kenny Chan
From: Yu
FAX: 909-590-1498
Phone:
No. of Pages: 2

☑ Urgent ☑ For Review ☐ Please Comment ☐ Please Reply ☐ as Requested

Subject: Amend to 4/15/02 JPL COC

Enclosures:

Comments:

Kenny,

Please revise ele. 4/15/02 COC for JPL projects. The original Analysis Item was missing for TB-18. Need Hdd. VOCs (524.2).

2127

Yu

Thanks.

Applied P & Ch Laboratory

APCL

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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: 16305 WEST BERNARDO DR. STE 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	Time Collected	Sample Matrix	Preservation	# of Containers	VOCs (524.2)	PERCHLORATE (314.0)	TOT Cr (200.8)	Cr VI (7196)	Remarks
TB-18	TRIP BLANK	4/15/02	1034	WATER	HCl	2	X	X			
MW-18-5	MW-18-5		1048		HCl	9	X				
MW-18-5	MW-18-5		1112		—	1		X			MS/MSD
MW-18-4	MW-18-4		1150		HCl	3	X				
MW-18-4	MW-18-4		1150		HNO_3	1			X		
MW-18-4	MW-18-4		1150		—	1		X		X	
MW-18-3	MW-18-3		1221		HCl	3	X				LEVEL IV
MW-18-3	MW-18-3		1221		HNO_3	1			X		DATA PACKAGE
MW-18-3	MW-18-3		1221		—	1		X		X	
MW-18-2	MW-18-2		1429		HCl	3	X				
MW-18-2	MW-18-2		1429		HNO_3	1			X		
MW-18-2	MW-18-2		1429		—	1		X		X	
ER-18	~~ER-18~~ EQUIP. RINSATE		1240		HCl	3	X				
ER-18	EQUIP. RINSATE		1240		HNO_3	1			X		
ER-18	EQUIP. RINSATE		1240		—	1		X		X	

2427

White – With report
Yellow – Lab copy
Pink – Originator

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

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

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

Relinquished by _____ Date/Time 4/15/02 / 1518 Received by _____ Date/Time 4/15/02 15:18

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.

APCL Form 4-161, Ver. 4.0, Dec. 20, 1994.

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

Sample Receiving Checklist

APCL ServiceID: 2427 Client Name/Project: Sota

1. Sample Arrival

Date/Time Received 4/15/02 1630 Date/Time Opened 4/15/02 1630 By (name): [illegible]
Custody Transfer: ☐ Client ☐ Golden State ☐ UPS ☐ US Mail ☐ FedEx ☑ APCL Empl: Kay

2. Chain-of-Custody (CoC)

☑ With Samples? ☐ Faxed? ☑ Client has Copy? ☐ Signed, dated? By: _____
☑ Project ID? ☑ Analyses Clear? ☐ Hold Samples? #on Hold _____ # Received 6
☑ 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 3.9 _____ _____ _____ _____ _____
(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: 5days ☐ Std (7-10 days) ☐ Not Marked

8. Sample Matrix

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

9. Pre-Login Check List Completed & OK?

☑ ALL OK? (if not, attach docs) ☐ Client Contact? (Name:_____)Date/Time:_____
Received/Checked by: [illegible] Date: 15 Apr 2002 Time: 8:03 a.m.

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

DocumentFile: [neal.texfiles]smprcl.tex.

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Sample Login: Check List

02-02427 (1288_ 343) (4858100_ 343)

04/16/02

Part 1: General Information

☐ Company Information	Name:	*SOTA Environmental*
	Address:	*16835 W. Bernardo Dr, Ste. 212 ,San Diego ,CA 92127*
☐ Project Information	Project Description:	*JPL*
	Project #:	*00HW019*
☐ Billing Information	P.O. #:	
	Bill Address:	*16835 W. Bernardo Dr, Ste. 212 ,San Diego ,CA 92127*
	Lab Project ID:	*2002_0002*
	Client Database #:	*01*
☐ Receiving Information	Who Received Sample?	*Kenny*
	Receiving Date/Time:	*04/15/02 1518*
	COC No.	
☐ Shipping Information	Shipping Company	*APCL pick up*
	Packing Information:	*Cooler/Ice Chester*
	Cooler Temperature:	*3.9 °C*
☐ Container Information	Container Provider:	*Client*
☐ Sampling Information	Sampling Person:	*JNT/TAM*
	Sampling Company:	*Client*
☐ Turn-Around-Time Option:		*Rush 5 working day(s)*
☐ QC Option:		*NEESA D*
☐ Disposal Option:		*Not specify*

Part 2: Sample Information

Seq. #	Sample ID (on COC)	Sample Sub-ID	APCL Sample ID	Matrix	Cont-tainer	Preser-vative	Vol, ml Am. g	# of Replica	Condition G, L, B	Collected mmddyy	Hold ?	Composite Group	TAT Days	
1	TB-18	524.2	02-02427-6	W	V	C	40	2	G	041502	N	0	6	☐
2	MW-18-5	524.2	02-02427-5-α	W	V	C	40	9	G	041502	N	0	6	☐
	MW-18-5	Perch	02-02427-5-β	W	P		500	1	G	041502	N	0	6	☐
3	MW-18-4	524.2	02-02427-4-α	W	V	C	40	3	G	041502	N	0	6	☐
	MW-18-4	CRVI/Perch	02-02427-4-β	W	P		500	1	G	041502	N	0	6	☐
4	MW-18-3	524.2	02-02427-3-α	W	V	C	40	3	G	041502	N	0	6	☐
	MW-18-3	CRVI/Perch	02-02427-3-β	W	P		500	1	G	041502	N	0	6	☐
5	MW-18-2	524.2	02-02427-2-α	W	V	C	40	3	G	041502	N	0	6	☐
	MW-18-2	CRVI/Perch	02-02427-2-β	W	P		500	1	G	041502	N	0	6	☐
6	ER-18	524.2	02-02427-1-α	W	V	C	40	3	G	041502	N	0	6	☐
	ER-18	CRVI/Perch	02-02427-1-β	W	P		500	1	G	041502	N	0	6	☐

Part 3: Analysis Information

Test Items:

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

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

1	TB-18	524.2	02-02427-6	W	X ✓			☐
2	MW-18-5	524.2	02-02427-5-α	W	X ✓			☐
	MW-18-5	Perch	02-02427-5-β	W			X ✓	☐
3	MW-18-4	524.2	02-02427-4-α	W	X ✓			☐
	MW-18-4	CRVI/Perch	02-02427-4-β	W		X ✓	X ✓	☐
4	MW-18-3	524.2	02-02427-3-α	W	X			☐
	MW-18-3	CRVI/Perch	02-02427-3-β	W		X	X	☐
5	MW-18-2	524.2	02-02427-2-α	W	X			☐
	MW-18-2	CRVI/Perch	02-02427-2-β	W		X	X	☐
6	ER-18	524.2	02-02427-1-α	W	X			☐
	ER-18	CRVI/Perch	02-02427-1-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-18	524.2	02-02427-6	W									☐
2	MW-18-5	524.2	02-02427-5-α	W									☐
	MW-18-5	Perch	02-02427-5-β	W									☐
3	MW-18-4	524.2	02-02427-4-α	W									☐
	MW-18-4	CRVI/Perch	02-02427-4-β	W									☐
4	MW-18-3	524.2	02-02427-3-α	W									☐
	MW-18-3	CRVI/Perch	02-02427-3-β	W									☐
5	MW-18-2	524.2	02-02427-2-α	W									☐
	MW-18-2	CRVI/Perch	02-02427-2-β	W									☐
6	ER-18	524.2	02-02427-1-α	W									☐
	ER-18	CRVI/Perch	02-02427-1-β	W									☐

Seq. #	Client"s Sample ID (as given on COC)	Sample Sub-ID	APCL Sample ID	Matrix	ALKALIN	SIM	
1	TB-18	524.2	02-02427-6	W			☐
2	MW-18-5	524.2	02-02427-5-α	W			☐
	MW-18-5	Perch	02-02427-5-β	W			☐
3	MW-18-4	524.2	02-02427-4-α	W			☐
	MW-18-4	CRVI/Perch	02-02427-4-β	W			☐
4	MW-18-3	524.2	02-02427-3-α	W			☐
	MW-18-3	CRVI/Perch	02-02427-3-β	W			☐
5	MW-18-2	524.2	02-02427-2-α	W			☐
	MW-18-2	CRVI/Perch	02-02427-2-β	W			☐
6	ER-18	524.2	02-02427-1-α	W			☐
	ER-18	CRVI/Perch	02-02427-1-β	W			☐

☐ Client"s Requirement: **PLEASE RUN MS/MSD ON SAMPLE (#5) ✓**

☐ **IF ENOUGH SAMPLE**

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

Login By En-Yu Paul Kou

Check By PY