Level D Data Package Deliverables

General Information

Project: 010HW019 JPL

APCL Service ID: 02-1492

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

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

Case Narrative

Project: JPL/00HW019

For SOTA Environmental

APCL Service No: 02-1492

1. Sample Identification

The sample identifications are listed in the following table:

SOTA Environmental Sample ID	APCL Sample ID
TB-17	02-01492-8
MW-4-5	02-01492-6
MW-4-4	02-01492-5
MW-4-3	02-01492-4
MW-4-3D	02-01492-7
ER-13	02-01492-1
MW-4-2	02-01492-3
MW-4-1	02-01492-2

2. Analytical Methodology

Samples are analyzed by EPA methods

524.2 (Volatile Organic Compounds),
7196 (Chromium (VI)),
E314 (Perchlorate, low level),
200.7 (Metals by ICP),
300.0 (Anions by IC),
SM2320B (Carbonate),
150.1 (pH),
160.1 (Solids, Total Dissolved (TDS)),
200.9 (Arsenic, As, by GFAA),
310.1 (Alkalinity),
8270-SIM (1,4-Dioxane),

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.

057400

"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

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/JMS

Analysis Items

Field Sample ID No.	Sample Description	Date Collected	Time Collected	Sample Matrix	Preservation	# of Containers	VOCs (524.2)	Na, K, Ca, Mg, Fe (200.7)	Total Cr & Pb (200.8)	As (200.9)	Cr VI (7196)	Perchlorate (314.0)	Carbonate, Bicarb. Alk. (310.1)	Nitrate, Sulfate, Chloride (300.0)	TDS (160.1)	pH (150.1)	NDMA (1625C)	1,4 Dioxane (8270)	Remarks
TB-17	TRIP BLANK	2/5/02	1033	WATER	HCl	2	X												
MW-4-5	MW-4-5		1123		HCl	3	X												
					HNO_3	2		X	X	X									
					—	1					X	X	X	X	X	X			
MW-4-4	MW-4-4		1228		HCl	3	X												
					HNO_3	2		X	X	X									
					—	1					X	X	X	X	X	X			
MW-4-3	MW-4-3		1327		HCl	3	X												
					HNO_3	2		X	X	X									
					—	1					X	X	X	X	X	X			
MW-4-3D	MW-4-3 DUP				HCl	3	X												
					HNO_3	2		X	X	X									
					—	1					X	X	X	X	X	X			
ER-13	EQUIP. RINSATE		1344		HCl	3	X												
ER-13	EQUIP. RINSATE		1344		HNO_3	2			X	X									

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Yellow – Lab copy
Pink – Originator

1492

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 2/5/02 1739 Received by [signature] Date/Time 2/8/02 17:39

Relinquished by [signature] Date/Time 2/5/02 17:00 Received by [signature] Date/Time 2/6/02 1083

APCL USE ONLY Service # Note:

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

Applied P & Ch Laboratory

APCL

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

Chain of Custody

Please Print in pen Page 2 of 2

Client: SOTA ENVIR. TECH., INC. Contact: MIKE SAYRE Tel #: 858-485-8100 Fax #: 858-485-0812
Address: 16835 W. BERNARDO DR. #212 City: SAN DIEGO State: CA Zip code: 92127
Bill to: SOTA
Project Name/Code JPL Job # 00HW019 P.O. #
Project Address PASADENA, CALIFORNIA APCL Quotation #
Due Date: ☐regular ☐rush: ___ days ___ hours Sampled by: MES/JNT

Analysis Items

Field Sample ID No.	Sample Description	Date Collected	Time Collected	Sample Matrix	Preservation	# of Containers	VOCs (524.2)	Na, K, Ca, Mg, Fe (200.7)	TotalCr & Pb (200.8)	As (200.9)	Cr VI (7196)	Perchlorate (314.0)	Carbonate, Bicarb. Alk. (310.1)	Nitrate, Sulfate, Chloride (300.0)	TDS (160.1)	pH (150.1)	NDMA (1625C)	1,4 Dioxane (8270)	Remarks
ER-13	EQUIP. RINSATE	2/5/02	1344	WATER	—	5					X	X	X	X	X	X	X	X	
MW-4-2	MW-4-2		1425		HCl	3	X												
MW-4-2					HNO_3	2		X	X	X									
MW-4-2					—	7					X	X	X	X	X	X	X	X	MS/MSD ON 8270 & 1625C
MW-4-1	MW-4-1		1637		HCl	3	X												
					HNO_3	2		X	X	X									
					—	1					X	X	X	X	X	X			

1492

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 2/5/02/1739 Received by [signature] Date/Time 2/5/02 1739
Relinquished by [signature] Date/Time 2/5/02 17:38 Received by [signature] Date/Time 2/6/02 0832

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

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Yellow – Lab copy
Pink – Originator

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

Sample Receiving Checklist

APCL ServiceID: 1492 Client Name/Project: Sotu Environmental

1. Sample Arrival

Date/Time Received 2/5/02 1739 Date/Time Opened 2/6/02 0842 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 2 Cooled by: ☑ Ice ☐ Blue Ice ☐ Dry Ice ☐ None

Temp °C 2.1 2.6 _____ _____ _____ _____

(Cooler temperature measured from temp blank if present, otherwise measured from the cooler).

Cooler Custody Seal? ☐ Absent ☐ Intact ☐ Tampered?

4. Sample Preservation

☐ **pH <2** ☐ pH >12

If Not, pH = _____ Preserved by: ☐ Client ☐ APCL ☐ Third Party _____

5. Holding-time Requirements

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

6. Sample Container Condition

☑ Intact? ☐ Broken? ☐ Documented? Number: _____

Type: ☑ plastic ☑ glass ☐ Tube: brass/SS ☐ Tedlar Bag
☑ Quantity OK? ☐ Leaking? ☐ Anomaly?
☑ Caps tight? ☐ Air Bubbles? ☐ Anomaly?

Labels: ☑ Unique ID? ☐ Date/Time ☐ Preserved?

7. Turn Around Time

☑ RUSH TAT: 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: 5 Feb 2002 Time: 8:42 a.m.

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

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57402

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

Sample Login: Check List

02-01492 (1288_ 317) (4858100_ 317)

02/06/02

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:	*02/05/02 1739*
		COC No.	
☐	Shipping Information	Shipping Company	*APCL pick up*
		Packing Information:	*Cooler/Ice Chester*
		Cooler Temperature:	*2.1 2.6 °C*
☐	Container Information	Container Provider:	*Client*
☐	Sampling Information	Sampling Person:	*MES/JNT*
		Sampling Company:	*Client*
☐	Turn-Around-Time Option:		*Rush 5 working day(s)*
☐	QC Option:		*NEESA D*
☐	Disposal Option:		*Not specify*

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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-17	524.2	02-01492-8	W	V	C	40	2	G	020502	N	0	7	☐
2	MW-4-5	524.2	02-01492-6-α	W	V	C	40	3	G	020502	N	0	7	☐
	MW-4-5	Metals	02-01492-6-β	W	P	N	500	1	G	020502	N	0	7	☐
	MW-4-5	300	02-01492-6-γ	W	P		500	1	G	020502	N	0	7	☐
3	MW-4-4	524.2	02-01492-5-α	W	V	C	40	3	G	020502	N	0	7	☐
	MW-4-4	Metals	02-01492-5-β	W	P	N	500	1	G	020502	N	0	7	☐
	MW-4-4	300	02-01492-5-γ	W	P		500	1	G	020502	N	0	7	☐
4	MW-4-3	524.2	02-01492-4-α	W	V	C	40	3	G	020502	N	0	7	☐
	MW-4-3	Metals	02-01492-4-β	W	P	N	500	1	G	020502	N	0	7	☐
	MW-4-3	300	02-01492-4-γ	W	P		500	1	G	020502	N	0	7	☐
5	MW-4-3D	524.2	02-01492-7-α	W	V	C	40	3	G	020502	N	0	7	☐
	MW-4-3D	Metals	02-01492-7-β	W	P	N	500	1	G	020502	N	0	7	☐
	MW-4-3D	300	02-01492-7-γ	W	P		500	1	G	020502	N	0	7	☐
6	ER-13	524.2	02-01492-1-α	W	V	C	40	3	G	020502	N	0	7	☐
	ER-13	Metals	02-01492-1-β	W	P	N	500	1	G	020502	N	0	7	☐
	ER-13	300	02-01492-1-γ	W	P		500	1	G	020502	N	0	7	☐
	ER-13	SIM	02-01492-1-δ	W	G		1000	2	G	020502	N	0	7	☐
7	MW-4-2	524.2	02-01492-3-α	W	V	C	40	3	G	020502	N	0	7	☐
	MW-4-2	Metals	02-01492-3-β	W	P	N	500	1	G	020502	N	0	7	☐
	MW-4-2	300	02-01492-3-γ	W	P		500	1	G	020502	N	0	7	☐
	MW-4-2	SIM	02-01492-3-δ	W	G		1000	3	G	020502	N	0	7	☐
8	MW-4-1	524.2	02-01492-2-α	W	V	C	40	3	G	020502	N	0	7	☐
	MW-4-1	Metals	02-01492-2-β	W	P	N	500	1	G	020502	N	0	7	☐
	MW-4-1	300	02-01492-2-γ	W	P		500	1	G	020502	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

57404

☐ *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-17	524.2	02-01492-8	W	X							
2	MW-4-5	524.2	02-01492-6-α	W	X							
	MW-4-5	Metals	02-01492-6-β	W				X	X	X	X	X
	MW-4-5	300	02-01492-6-γ	W		X	X					
3	MW-4-4	524.2	02-01492-5-α	W	X							
	MW-4-4	Metals	02-01492-5-β	W				X	X	X	X	X
	MW-4-4	300	02-01492-5-γ	W		X	X					
4	MW-4-3	524.2	02-01492-4-α	W	X							
	MW-4-3	Metals	02-01492-4-β	W				X	X	X	X	X
	MW-4-3	300	02-01492-4-γ	W		X	X					
5	MW-4-3D	524.2	02-01492-7-α	W	X							
	MW-4-3D	Metals	02-01492-7-β	W				X	X	X	X	X
	MW-4-3D	300	02-01492-7-γ	W		X	X					
6	ER-13	524.2	02-01492-1-α	W	X							
	ER-13	Metals	02-01492-1-β	W								
	ER-13	300	02-01492-1-γ	W		X	X					
	ER-13	SIM	02-01492-1-δ	W								
7	MW-4-2	524.2	02-01492-3-α	W	X							
	MW-4-2	Metals	02-01492-3-β	W				X	X	X	X	X
	MW-4-2	300	02-01492-3-γ	W		X	X					
	MW-4-2	SIM	02-01492-3-δ	W								
8	MW-4-1	524.2	02-01492-2-α	W	X							
	MW-4-1	Metals	02-01492-2-β	W				X	X	X	X	X
	MW-4-1	300	02-01492-2-γ	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-17	524.2	02-01492-8	W								
2	MW-4-5	524.2	02-01492-6-α	W								
	MW-4-5	Metals	02-01492-6-β	W								X
	MW-4-5	300	02-01492-6-γ	W	X	X	X	X	X	X	X	
3	MW-4-4	524.2	02-01492-5-α	W								
	MW-4-4	Metals	02-01492-5-β	W								X

57405

	MW-4-4	300	02-01492-5-γ	W	X	X	X	X	X	X	X		
4	MW-4-3	524.2	02-01492-4-α	W									
	MW-4-3	Metals	02-01492-4-β	W								X	
	MW-4-3	300	02-01492-4-γ	W	X	X	X	X	X	X	X		
5	MW-4-3D	524.2	02-01492-7-α	W									
	MW-4-3D	Metals	02-01492-7-β	W								X	
	MW-4-3D	300	02-01492-7-γ	W	X	X	X	X	X	X	X		
6	ER-13	524.2	02-01492-1-α	W									
	ER-13	Metals	02-01492-1-β	W								X	
	ER-13	300	02-01492-1-γ	W									
	ER-13	SIM	02-01492-1-δ	W									
7	MW-4-2	524.2	02-01492-3-α	W									
	MW-4-2	Metals	02-01492-3-β	W								X	
	MW-4-2	300	02-01492-3-γ	W	X	X	X	X	X	X	X		
	MW-4-2	SIM	02-01492-3-δ	W									
8	MW-4-1	524.2	02-01492-2-α	W									
	MW-4-1	Metals	02-01492-2-β	W								X	
	MW-4-1	300	02-01492-2-γ	W	X	X	X	X	X	X	X		

Seq. #	Client"s Sample ID (as given on COC)	Sample Sub-ID	APCL Sample ID	Matrix	ALKALIN	SIM	
1	TB-17	524.2	02-01492-8	W			
2	MW-4-5	524.2	02-01492-6-α	W			
	MW-4-5	Metals	02-01492-6-β	W			
	MW-4-5	300	02-01492-6-γ	W	X		
3	MW-4-4	524.2	02-01492-5-α	W			
	MW-4-4	Metals	02-01492-5-β	W			
	MW-4-4	300	02-01492-5-γ	W	X		
4	MW-4-3	524.2	02-01492-4-α	W			
	MW-4-3	Metals	02-01492-4-β	W			
	MW-4-3	300	02-01492-4-γ	W	X		
5	MW-4-3D	524.2	02-01492-7-α	W			
	MW-4-3D	Metals	02-01492-7-β	W			
	MW-4-3D	300	02-01492-7-γ	W	X		
6	ER-13	524.2	02-01492-1-α	W			
	ER-13	Metals	02-01492-1-β	W			
	ER-13	300	02-01492-1-γ	W			
	ER-13	SIM	02-01492-1-δ	W		X	
7	MW-4-2	524.2	02-01492-3-α	W			
	MW-4-2	Metals	02-01492-3-β	W			
	MW-4-2	300	02-01492-3-γ	W	X		
	MW-4-2	SIM	02-01492-3-δ	W		X	
8	MW-4-1	524.2	02-01492-2-α	W			
	MW-4-1	Metals	02-01492-2-β	W			
	MW-4-1	300	02-01492-2-γ	W	X		

574.6

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

☐ IF ENOUGH SAMPLE

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

Login By En-Yu Paul Kou

Check By DY

57497

APCL

Applied Physics & Chemistry Laboratory

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

February 14, 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 02-1428 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 #: 801-021428
Collected by: MES/JNT
Collected on: 01/31/02

Received: 01/31/02
Extracted: N/A
Tested: 02/01-06/02
Reported: 02/11/02

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

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result MW-5 02-01428-1	MW-10 02-01428-2
ALKALINITY	310.1	mg/L	2	159	218
BICARBONATE [a]	SM2320B	mg/L	2	159	218
CARBONATE [a]	SM2320B	mg-$CaCO_3$/L	2	<2	<2
PH	150.1	pH unit	0.01	6.95	6.92
SOLIDS, TOTAL DISSOLVED (TDS)	160.1	mg/L	10	322	869
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01
Dilution Factor				1	1
PERCHLORATE	E314	μg/L	4	23.4	<4
Dilution Factor				4	20
CHLORIDE CL^-	300.0	mg/L	0.2	29.0	120
NITRATE AS N	300.0	mg/L	0.04	7.2	18.1
SULFATE SO_4^{--}	300.0	mg/L	0.5	51.8	185
Dilution Factor				1	1
ARSENIC	200.9	μg/L	5	1.4J	1.8J
Dilution Factor				1	1
CALCIUM	200.7	μg/L	200	66,000	158,000
IRON	200.7	μg/L	50	1,010	83.6
MAGNESIUM	200.7	μg/L	100	19,900	49,200
POTASSIUM	200.7	μg/L	400	3,490	3,870
SODIUM	200.7	μg/L	2000	19,600	34,400

Component Analyzed	Method	Unit	PQL	Analysis Result MW-5 02-01428-1	MW-10 02-01428-2	TB-14 02-01428-3
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	1.1	1.1

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-5 02-01428-1	MW-10 02-01428-2	TB-14 02-01428-3
1,1-DICHLOROETHANE	524.2	μg/L	0.5	<0.5	0.9	<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
TETRACHLOROETHENE	524.2	μg/L	0.5	<0.5	2.9	<0.5
TRICHLOROETHENE	524.2	μg/L	0.5	4.2	3.0	<0.5
112TRICHLORO-122TRIFLUOROETHANE	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.
J: Reported between PQL and MDL.
Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0
[a] Calculated from alkalinity result by EPA 310.1

Respectfully submitted,

Dominic Lau
Laboratory Director
Applied P & Ch Laboratory

Level D Data Package Deliverables

General Information

Project: 010HW019 JPL

APCL Service ID: 02-1428

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

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Case Narrative

Project: JPL/00HW019

For SOTA Environmental

APCL Service No: 02-1428

1. Sample Identification

The sample identifications are listed in the following table:

SOTA Environmental Sample ID	APCL Sample ID
TB-14	02-01428-3
MW-5	02-01428-1
MW-10	02-01428-2

2. Analytical Methodology

Samples are analyzed by EPA methods

524.2 (Volatile Organic Compounds),
7196 (Chromium (VI)),
E314 (Perchlorate, low level),
200.7 (Metals by ICP),
300.0 (Anions by IC),
SM2320B (Carbonate),
150.1 (pH),
160.1 (Solids, Total Dissolved (TDS)),
200.9 (Arsenic, As, by GFAA),
310.1 (Alkalinity),

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.

052900

"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

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/JNT

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)	Na, Ca, K, Mg, Fe (200.7)	Total Cr & Pb (200.8)	As (200.9)	Cr VI (7196)	Perchlorate (314.0)	Carbonate, Bicarb. Alk. (310.1)	Nitrate, Sulfate, Chloride (300.0)	TDS (160.1)	pH (150.1)			Remarks
TB-14	TRIP BLANK	1/31/02	9:57	WATER	HCl	2	X												
MW-5	MW-5				HCl	3	X												
					HNO_3	2		X	X	X									
					—	1					X	X	X	X	X	X			
MW-10	MW-10		1347		HCl	3	X												
					HNO_3	2		X	X	X									
					—	1					X	X	X	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 data. 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 1/31/02 / 1656 Received by [signature] Date/Time 1/31/02 / 1650

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

SOTA
Environmental Technology, Inc.
16836 W. Bernardo Dr., Suite 212
San Diego, CA 92127-1613
Phone: 858-485-5100
Fax: 858-485-0812

Transmittal

Date: 2/4/02

To: Kenny C.

From: Yu

FAX: 909-590-1498

Phone:

No. of Pages: 2.

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

Subject:

Enclosures:

Comments:

Please replace the COC for 1/31/02 Sample.

Call me

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 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:

Analysis Items

White – With report
Yellow – Lab copy
Pink – Originator

Field Sample ID No.	Sample Description	Date Collected	Time Collected	Sample Matrix	Preservation	# of Containers	VOCs (524.2)	Na, Ca, K, Mg, Fe (200.7)	Total Cr & Pb (200.8)	As (200.9)	Cr VI (7196)	PERCHLORATE (314.0)	CARBONATE, BICARB., ALK. (310.1)	NITRATE, SULFATE, CHLORIDE (300.0)	TDS (160.1)	pH (150.1)			Remarks
TB-14	TRIP BLANK	1/31/02	9:57	WATER	HCl	2	X												
MW-5	MW-5				HCl	3	X												
					HNO_3	2		X	X	X									
					—	1					X	X	X	X	X	X			
MW-10	MW-10		1347		HCl	3	X												
					HNO_3	2		X	X	X									
					—	1					X	X	X	X	X	X			

1428

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 1/31/02 / 1656 Received by [signature] Date/Time 1/31/02 / 1650

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

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

Sample Receiving Checklist

APCL ServiceID: 1498 **Client Name/Project:** Sota Environmental

1. Sample Arrival

Date/Time Received 1/31/02 1650 Date/Time Opened 2/1/02 0830 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 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 ☑ 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: 5day ☐ 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: 31 Jan 2002 Time: 8:31 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.

52902

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

Sample Login: Check List

02-01428 (1288_ 314) (4858100_ 314)

02/01/02

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:	*01/31/02 1650*
		COC No.	
☐	Shipping Information	Shipping Company	*APCL pick up*
		Packing Information:	*Cooler/Ice Chester*
		Cooler Temperature:	*2.2 °C*
☐	Container Information	Container Provider:	*Client*
☐	Sampling Information	Sampling Person:	
		Sampling Company:	*Client*
☐	Turn-Around-Time Option:		*Rush 5 working day(s)*
☐	QC Option:		*NEESA D*
☐	Disposal Option:		*Not specify*

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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-14	524.2	02-01428-3	W	V	C	40	2	G	013102	N	0	7	☐
2	MW-5	524.2	02-01428-1-α	W	V	C	40	3	G	013102	N	0	7	☐
	MW-5	Metals	02-01428-1-β	W	P	N	500	1	G	013102	N	0	7	☐
	MW-5	300	02-01428-1-γ	W	P		500	1	G	013102	N	0	7	☐
3	MW-10	524.2	02-01428-2-α	W	V	C	40	3	G	013102	N	0	7	☐
	MW-10	Metals	02-01428-2-β	W	P	N	500	1	G	013102	N	0	7	☐
	MW-10	300	02-01428-2-γ	W	P		500	1	G	013102	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	TB-14	524.2	02-01428-3	W	X								☐
2	MW-5	524.2	02-01428-1-α	W	X								☐
	MW-5	Metals	02-01428-1-β	W				X	X	X	X	X	☐
	MW-5	300	02-01428-1-γ	W		X	X						☐

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3	MW-10	524.2	02-01428-2-α	W	X									☐
	MW-10	Metals	02-01428-2-β	W					X	X	X	X	X	☐
	MW-10	300	02-01428-2-γ	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-14	524.2	02-01428-3	W									☐
2	MW-5	524.2	02-01428-1-α	W									☐
	MW-5	Metals	02-01428-1-β	W								X	☐
	MW-5	300	02-01428-1-γ	W	X	X	X	X	X	X	X		☐
3	MW-10	524.2	02-01428-2-α	W									☐
	MW-10	Metals	02-01428-2-β	W								X	☐
	MW-10	300	02-01428-2-γ	W	X	X	X	X	X	X	X		☐

Seq. #	Client"s Sample ID (as given on COC)	Sample Sub-ID	APCL Sample ID	Matrix	ALKALIN	SIM	
1	TB-14	524.2	02-01428-3	W			☐
2	MW-5	524.2	02-01428-1-α	W			☐
	MW-5	Metals	02-01428-1-β	W			☐
	MW-5	300	02-01428-1-γ	W	X		☐
3	MW-10	524.2	02-01428-2-α	W			☐
	MW-10	Metals	02-01428-2-β	W			☐
	MW-10	300	02-01428-2-γ	W	X		☐

☐ 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

52905