Level D Data Package Deliverables

General Information

Project: 01HW019 JPL

APCL Service ID: 02-1118

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: 02-1118

1. Sample Identification

The sample identifications are listed in the following table:

SOTA Environmental Sample ID	APCL Sample ID
TB-2	02-01118-7
MW-17-5	02-01118-6
MW-17-4	02-01118-5
MW-17-3	02-01118-4
MW-17-2	02-01118-3
MW-17-1	02-01118-2
ER-2	02-01118-1

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 (Nitrate (NO_3^-) as N by IC),
SM2320B (Carbonate),
SM2320B (Bicarbonate),
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

"I certify that these data are technically accurate, complete, and in compliance with the terms and condi-

173000

tions 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

173001

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 #: 858-485-0817

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

Bill to: SOTA

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

Project Address PASADENA, CA APCL Quotation #

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

Field Sample ID No.	Sample Description	Date Collected	Time Collected	Sample Matrix	Preservation	# of Containers	VOCs (524.2)	Total Cr & Pb (200.8)	As (200.9)	Na, K, Ca, Mg, Fe (200.7)	Nitrate, Sulfate, Chloride (300.0), Carbonate, Bicarb. Alk. (310.1)	Cr VI (7196)	Perchlorate (314.0)	TDS (160.1)	pH (150.1)	1,4 Dioxane (8270 SIM)	NDMA (1625C)	Remarks
TB-2	TRIP BLANK	1/10/02	930	WATER	HCl	2	X											
MW-17-5	MW-17-5		945		HCl	3	X											
					HNO_3	2		X	X	X								
					—	1					X	X	X	X	X	X		
MW-17-4	MW-17-4		1057		HCl	3	X											
					HNO_3	2		X	X	X								
					—	1					X	X	X	X	X	X		
MW-17-3	MW-17-3		1147		HCl	3	X											
					HNO_3	2		X	X	X								
					—	3					X	X	X	X	X	X		
MW-17-2	MW-17-2		1505		HCl	3	X											
					HNO_3	2		X	X	X								
					—	1					X	X	X	X	X	X		
MW-17-1	MW-17-1		1555		HCl	3	X											
MW-17-1	MW-17-1		1555		HNO_3	2		X	X	X								

1118

White – With report
Yellow – Lab copy
Pink – Originator

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

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

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

Relinquished by _____ Date/Time 1/10/02 / 1656 Received by _____ Date/Time 1-10-02 / 1656

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

APCL USE ONLY Service # Note:

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

Applied P & Ch Laboratory

APCL

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

Chain of Custody

Please Print in pen Page 2 of 2

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

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

Bill to: SOTA

Project Name/Code JPL Job # 00HW0019 P.O. #

Project Address PASADENA, CALIFONIA APCL Quotation #

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

Field Sample ID No.	Sample Description	Date Collected	Time Collected	Sample Matrix	Preservation	# of Containers	Analysis Items: VOCs (524.2)	Total Cr (200.8) & Pb	As (200.7)	Na, K, Ca, Mg, Fe (200.7)	Nitrate, Sulfate, Chloride (300.0)	Carbonate/Bicarb Alkalinity (310.1)	Cr VI (7196)	Perchlorate (314.0)	TDS (160.1)	pH (150.1)	NDMA (1625C)	Remarks
MW-17-1	MW-17-1	1/10/02	1555	WATER	—	1					X	X	X	X	X	X		
ER-2	EQUIP. RINSATE		1425		HCl	3	X											
					HNO_3	2		X	X	X								
					—	1					X	X	X	X	X	X		
MW-17-3	MW-17-3		1147		1	2											X	

1118

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 1/10/02 1656 Received by [signature] Date/Time 01-10-02 1656

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

APCL USE ONLY Service # Note:

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

Applied P & Ch Laboratory

APCL

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

Chain of Custody

Please Print in pen Page 2 of 2

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

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

Bill to: SOTA

Project Name/Code STL Job # COLLOQ19 P.O. #

Project Address TARZANA, CALIFORNIA APCL Quotation #

Due Date: ☐regular ☐rush: ___ days ___ hours Sampled by: MIKE SAYRE

Field Sample ID No.	Sample Description	Date Collected	Time Collected	Sample Matrix	Preservation	# of Containers
MW-17-1	MW-17-1	1/10/02	1555	WATER	—	1
ER-2	EQUIP. RINSATE		1425		HCl	3
					HNO_3	2
					—	1
MW-17-3	MW-17-3		1147		1	2

Analysis Items: VOCs (524.2); TPHg, BTEX (8015/8020); As (200.7); Pb, Ni, Cr, Mn, Fe (200.7); Diesel (8015); Oil & Grease (1664); TDS (160.1); pH (150.1); NDMA (625)

White - With report
Yellow - Lab copy
Pink - Originator

Remarks

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

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

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

Relinquished by [signature] Date/Time 1/10/02 1656 Received by [signature] Date/Time 1-10-02 1656

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.

01/15/2002 18:48 5194850812 SOTA ENV TECHNOLOGY PAGE 02

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

Sample Receiving Checklist

APCL ServiceID: 1118 Client Name/Project: Sota Environmental

1. Sample Arrival

Date/Time Received 1/10/02 1656 Date/Time Opened 1/11/02 0832 By (name): Paul

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

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 3.5 ____ ____ ____ ____ ____

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

Cooler Custody Seal? ☐ Absent ☐ Intact ☐ Tampered?

4. Sample Preservation

☐ **pH <2** ☐ pH >12

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

5. Holding-time Requirements

☐ pH 24hr ☐ BACT 6/24hr ☐ Cr^{VI} 24hr ☐ NO_3^- 48hr ☐ BOD 48hr

☐ Cl_2 ASAP ☐ Turbidity 48hr ☐ DO ASAP ☐ Fe(II) ASAP

☐ HT Expired? ☐ Client notified?

6. Sample Container Condition

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

Type: ☑ plastic ☑ glass ☐ Tube: brass/SS ☐ Tedlar Bag

☑ Quantity OK? ☐ Leaking? ☐ Anomaly?

☑ Caps tight? ☐ Air Bubbles? ☐ Anomaly?

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

7. Turn Around Time

☑ RUSH TAT: 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: 10 Jan 2002 Time: 8:42a.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.

173002

2nd Revision

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

Sample Login: Check List

02-01118 (1288_ 297) (4858100_ 297)

01/11/02

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:	*01/10/02 1656*
		COC No.	
☐	Shipping Information	Shipping Company	*APCL pick up*
		Packing Information:	*Cooler/Ice Chester*
		Cooler Temperature:	*2.5 °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*

17303

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-2	524.2	02-01118-7	W	V	C	40	2	G	011002	N	0	7	☐
2	MW-17-5	524.2	02-01118-6-α	W	V	C	40	3	G	011002	N	0	7	☐
	MW-17-5	Metal	02-01118-6-β	W	P	N	500	1	G	011002	N	0	7	☐
	MW-17-5	300	02-01118-6-γ	W	P		500	1	G	011002	N	0	7	☐
3	MW-17-4	524.2	02-01118-5-α	W	V	C	40	3	G	011002	N	0	7	☐
	MW-17-4	Metal	02-01118-5-β	W	P	N	500	1	G	011002	N	0	7	☐
	MW-17-4	300	02-01118-5-γ	W	P		500	1	G	011002	N	0	7	☐
4	MW-17-3	524.2	02-01118-4-α	W	V	C	40	3	G	011002	N	0	7	☐
	MW-17-3	Metal	02-01118-4-β	W	P	N	500	1	G	011002	N	0	7	☐
	MW-17-3	300	02-01118-4-γ	W	P		500	1	G	011002	N	0	7	☐
	MW-17-3	SIM	02-01118-4-δ	W	G		1000	2	G	011002	N	0	7	☐
5	MW-17-2	524.2	02-01118-3-α	W	V	C	40	3	G	011002	N	0	7	☐
	MW-17-2	Metal	02-01118-3-β	W	P	N	500	1	G	011002	N	0	7	☐
	MW-17-2	300	02-01118-3-γ	W	P		500	1	G	011002	N	0	7	☐
6	MW-17-1	524.2	02-01118-2-α	W	V	C	40	3	G	011002	N	0	7	☐
	MW-17-1	Metal	02-01118-2-β	W	P	N	500	1	G	011002	N	0	7	☐
	MW-17-1	300	02-01118-2-γ	W	P		500	1	G	011002	N	0	7	☐
7	ER-2	524.2	02-01118-1-α	W	V	C	40	3	G	011002	N	0	7	☐
	ER-2	Metal	02-01118-1-β	W	P	N	500	1	G	011002	N	0	7	☐
	ER-2	300	02-01118-1-γ	W	P		500	1	G	011002	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

173014

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

Sample Login: Check List

02-01118 (1288_ 297) (4858100_ 297)

01/11/02

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:	*01/10/02 1656*
		COC No.	
☐	Shipping Information	Shipping Company	*APCL pick up*
		Packing Information:	*Cooler/Ice Chester*
		Cooler Temperature:	*2.5 °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*

17305

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-2	524.2	02-01118-7	W	V	C	40	2	G	011002	N	0	7	☐
2	MW-17-5	524.2	02-01118-6-α	W	V	C	40	3	G	011002	N	0	7	☐
	MW-17-5	Metal	02-01118-6-β	W	P	N	500	1	G	011002	N	0	7	☐
	MW-17-5	300	02-01118-6-γ	W	P		500	1	G	011002	N	0	7	☐
3	MW-17-4	524.2	02-01118-5-α	W	V	C	40	3	G	011002	N	0	7	☐
	MW-17-4	Metal	02-01118-5-β	W	P	N	500	1	G	011002	N	0	7	☐
	MW-17-4	300	02-01118-5-γ	W	P		500	1	G	011002	N	0	7	☐
4	MW-17-3	524.2	02-01118-4-α	W	V	C	40	3	G	011002	N	0	7	☐
	MW-17-3	Metal	02-01118-4-β	W	P	N	500	1	G	011002	N	0	7	☐
	MW-17-3	300	02-01118-4-γ	W	P		500	1	G	011002	N	0	7	☐
5	MW-17-2	524.2	02-01118-3-α	W	V	C	40	3	G	011002	N	0	7	☐
	MW-17-2	Metal	02-01118-3-β	W	P	N	500	1	G	011002	N	0	7	☐
	MW-17-2	300	02-01118-3-γ	W	P		500	1	G	011002	N	0	7	☐
6	MW-17-1	524.2	02-01118-2-α	W	V	C	40	3	G	011002	N	0	7	☐
	MW-17-1	Metal	02-01118-2-β	W	P	N	500	1	G	011002	N	0	7	☐
	MW-17-1	300	02-01118-2-γ	W	P		500	1	G	011002	N	0	7	☐
7	ER-2	524.2	02-01118-1-α	W	V	C	40	3	G	011002	N	0	7	☐
	ER-2	Metal	02-01118-1-β	W	P	N	500	1	G	011002	N	0	7	☐
	ER-2	300	02-01118-1-γ	W	P		500	1	G	011002	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)

173016

APCL

Applied Physics & Chemistry Laboratory

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

February 11, 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 02-1166 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 #: 801-021166
Collected by: MES/JNT
Collected on: 01/14/02

Received: 01/14/02
Extracted: N/A
Tested: 01/15-18/02
Reported: 01/30/02

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

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result MW-18-2 02-01166-2	MW-18-3 02-01166-3
ALKALINITY	310.1	mg/L	2	173	192
BICARBONATE [a]	SM2320B	mg/L	2	173	192
CARBONATE [a]	SM2320B	mg-$CaCO_3$/L	2	< 2	< 2
PH	150.1	pH unit	0.01	7.62	7.87
SOLIDS, TOTAL DISSOLVED (TDS)	160.1	mg/L	10	297	298
Dilution Factor				2	2
CHLORIDE CL$^-$	300.0	mg/L	0.2	12.1	15.1
NITRATE AS N	300.0	mg/L	0.04	1.1	0.99
SULFATE SO_4^{--}	300.0	mg/L	0.5	36.4	38.3
Dilution Factor				1	1
CALCIUM	200.7	μg/L	200	53,600	54,400
IRON	200.7	μg/L	50	94.6	< 50
MAGNESIUM	200.7	μg/L	100	17,100	19,600
POTASSIUM	200.7	μg/L	400	2,520	2,920
SODIUM	200.7	μg/L	2000	19,000	21,800

Component Analyzed	Method	Unit	PQL	Analysis Result MW-18-4 02-01166-4	MW-18-5 02-01166-5	MW-18-3D 02-01166-6
ALKALINITY	310.1	mg/L	2	168	134	196
BICARBONATE [a]	SM2320B	mg/L	2	168	104	196
CARBONATE [a]	SM2320B	mg-$CaCO_3$/L	2	< 2	29.8	< 2
PH	150.1	pH unit	0.01	7.95	9.00	7.79
SOLIDS, TOTAL DISSOLVED (TDS)	160.1	mg/L	10	270	194	304
Dilution Factor				2	1.25	2
CHLORIDE CL$^-$	300.0	mg/L	0.2	10.4	10.8	16.1
NITRATE AS N	300.0	mg/L	0.04	1.3	0.15	1.0
SULFATE SO_4^{--}	300.0	mg/L	0.5	25.3	4.8	41.0
Dilution Factor				1	1	1
CALCIUM	200.7	μg/L	200	43,300	6,610	53,600
IRON	200.7	μg/L	50	119	458	< 50
MAGNESIUM	200.7	μg/L	100	10,900	4,350	19,400
POTASSIUM	200.7	μg/L	400	1,330	1,520	2,880
SODIUM	200.7	μg/L	2000	31,700	53,200	21,400

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-4 02-01166-1	MW-18-2 02-01166-2	MW-18-3 02-01166-3
ARSENIC	200.9	µg/L	5	<5	<5	<5
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01	<0.01
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	0.7	1.8
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	2	1	0.9J
TETRACHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	0.3J
TRICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	0.5
112TRICHLORO-122TRIFLUOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5

Component Analyzed	Method	Unit	PQL	Analysis Result MW-18-4 02-01166-4	MW-18-5 02-01166-5	MW-18-3D 02-01166-6	TB-4 02-01166-7
Dilution Factor				1	1	1	1
PERCHLORATE	E314	µg/L	4	17.9	<4	<4	-
ARSENIC	200.9	µg/L	5	<5	<5	<5	-
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01	<0.01	-
VOLATILE ORGANIC COMPOUNDS							
Dilution Factor				1	1	1	1
CARBON TETRACHLORIDE	524.2	µg/L	0.5	4.6	<0.5	<0.5	<0.5
CHLOROFORM	524.2	µg/L	0.5	0.9	<0.5	2.0	<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
METHYLENE CHLORIDE	524.2	µg/L	1	2	2.1	-	2
TETRACHLOROETHENE	524.2	µg/L	0.5	2.2	<0.5	0.4J	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	1.4	-	0.6	<0.5
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
(a) Calculated from alkalinity result by EPA 310.1

Respectfully submitted,

Dommic Lau
Laboratory Director
Applied P & Ch Laboratory

Level D Data Package Deliverables

General Information

Project: 01HW019 JPL

APCL Service ID: 02-1166

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: 02-1166

1. Sample Identification

The sample identifications are listed in the following table:

SOTA Environmental Sample ID	APCL Sample ID
TB-4	02-01166-7
MW-18-5	02-01166-5
MW-18-4	02-01166-4
ER-4	02-01166-1
MW-18-3	02-01166-3
MW-18-3D	02-01166-6
MW-18-2	02-01166-2

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

Fax log regarding cancelled analytical items is included.

6. Anomaly

None.

174400

"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

174401

Applied P & Ch Laboratory

APCL

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

Chain of Custody

Please Print in pen Page 1 of 2

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

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

Bill to: SOTA

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

Project Address PASADENA, CALIFORNIA APCL Quotation #

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

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	Remarks
TB-4	TRIP BLANK	1/14/02	1010	WATER	HCl	2	
MW-18-5	MW-18-5		0948		HCl	3	
					HNO_3	2	
					—	1	
MW-18-4	MW-18-4		1155		HCl	3	
					HNO_3	2	
					—	1	
EB-4	EQUIP. RINSATE		1228		HCl	3	
					HNO_3	2	
					—	1	
MW-18-3	MW-18-3		1240		HCl	3	
					HNO_3	2	
					—	1	
MW-18-3D	MW-18-3 DUP				HCl	3	
MW-18-3D	MW-18-3 DUP				HNO_3	2	

1166

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

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

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

Relinquished by _____ Date/Time 1/14/02 / 1743 Received by _____ Date/Time 01-14-02/1743

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

APCL USE ONLY Service # Note:

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

Applied P & Ch Laboratory

APCL

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

Chain of Custody

Please Print in pen Page 2 of 2

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

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/JMT

Field Sample ID No.	Sample Description	Date Collected	Time Collected	Sample Matrix	Preservation	# of Containers
MW-18-3D	MW-18-3 DUP	1/14/02	1240	WATER	—	1
MW-18-2	MW-18-2		1440		HCl	3
					HNO_3	2
					—	1

Analysis Items: VOCs (524.2); Total Cr & Fe (200.8); As (200.9); Na, K, Ca, Mg, Fe (200.7); Nitrate, Sulfate, Chloride (300.0); Bicarb. Alk (310.1); Cr VI (7196); Perchlorate (314.0); TDS (160.1); pH (150.1)

White – With report
Yellow – Lab copy
Pink – Originator

Remarks

1166

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 1/14/02 1743 Received by [signature] Date/Time 01-14-02 1743

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

APCL USE ONLY Service # Note:

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

Applied P & Ch Laboratory

APCL

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

Chain of Custody

Please Print in pen Page 1 of 2

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

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

Bill to: SOTA

Project Name/Code JPL Job # C01W019 P.O. #

Project Address PASADENA, CALIFORNIA APCL Quotation #

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

Field Sample ID No.	Sample Description	Date Collected	Time Collected	Sample Matrix	Preservation	# of Containers
TB-4	TRIP BLANK	1/14/02	1010	WATER	HCl	2
MW-18-5	MW-18-5		1048		HCl	3
					HNO_3	2
					—	1
MW-18-4	MW-18-4		1155		HCl	3
					HNO_3	2
					—	1
ER-4	EQUIP. RINSATE		1220		HCl	3
					HNO_3	2
					—	1
MW-18-3	MW-18-3		1240		HCl	3
					HNO_3	2
					—	1
MW-18-3D	MW-18-3 DUP				HCl	3
MW-18-3D	MW-18-3 DUP				HNO_3	2

Analysis Items: VOCs (8260B), TPH-G & BTEX (8260B), As (200.8), Mn, K, Ca, Mg, Fe (200.7), NITRATE, SULFATE, CHLORIDE, ALKALINITY, & TDS (2320B), As (200.8), Lead (239.2), PCB's (8082), CHROMATE (7196), TDS (160.1), pH (150.1)

White - With report
Yellow - Lab copy
Pink - Originator

Remarks

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

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

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

Relinquished by [signature] Date/Time 1/14/02 1743 Received by [signature] Date/Time 01-14-02 1743

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.

01/15/2002 18:48 6194850812 SOTA ENV TECHNOLOGY PAGE 04

1166

YU ZENG
16835 W. Bernardo Dr. Suite 212
San Diego, CA 92127
Phone: 858-485-8100
Fax: 858-485-0812

SOTA Environmental Technology, Inc.

Fax

To:	Kenny Chan	**From:**	Yu Zeng
Fax:	1-909-590-1498	**Pages:**	6
Phone:	1-909-590-1828	**Date:**	01/15/02
Re:	JPL 1st. Qtr Testing	**CC:**	

✓ **Urgent** ☐ **For Review** ☐ **Please Comment** ✓ **Please Reply** ☐ **Please Recycle**

Please drop the tests from JPL samples you received:

	Date Collected	Field Sample ID	Test Methods
1)	1/10/02	ER-2	200.7, 300.0, 310.1, 160.1, 150.1
2)	1/11/02	ER-3	200.7, 300.0, 310.1, 160.1, 150.1
3)	1/12/02	ER-4	200.7, 300.0, 310.1, 160.1, 150.1
4)	1/13/02	ER-5	200.7, 300.0, 310.1, 160.1, 150.1

If you have questions about the request, please call me at 858-485-8100.

Thanks and Regards,

Yu Zeng (Project Environmental Engineer)
SOTA Environmental Technology, Inc.

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

Sample Receiving Checklist

APCL ServiceID: 1166 **Client Name/Project:** Sate Environmental

1. Sample Arrival

Date/Time Received 1/14/02 1943 Date/Time Opened 1/15/02 0800 By (name): Paul
Custody Transfer: ☐ Client ☐ Golden State ☐ UPS ☐ US Mail ☐ FedEx ☑ APCL Empl: Richard

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: 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: 14 Jan 2002 Time: 8:41a.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.

174402

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

Sample Login: Check List

02-01166 (1288_ 299) (4858100_ 299)

01/15/02

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:	*01/14/02 1743*
		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*

174403

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-4 ✓	524.2	02-01166-7	W	V	C	40	2	G	011402	N	0	6	☐
2	MW-18-5 ✓	524.2	02-01166-5-α	W	V	C	40	3	G	011402	N	0	6	☐
	MW-18-5	Metals	02-01166-5-β	W	P	N	500	1	G	011402	N	0	6	☐
	MW-18-5	PH/CRVI	02-01166-5-γ	W	P		500	1	G	011402	N	0	6	☐
3	MW-18-4 ✓	524.2	02-01166-4-α	W	V	C	40	3	G	011402	N	0	6	☐
	MW-18-4	Metals	02-01166-4-β	W	P	N	500	1	G	011402	N	0	6	☐
	MW-18-4	PH/CRVI	02-01166-4-γ	W	P		500	1	G	011402	N	0	6	☐
4	ER-4 ✓	524.2	02-01166-1-α	W	V	C	40	3	G	011402	N	0	6	☐
	ER-4	Metals	02-01166-1-β	W	P	N	500	1	G	011402	N	0	6	☐
	ER-4	PH/CRVI	02-01166-1-γ	W	P		500	1	G	011402	N	0	6	☐
5	MW-18-3 ✓	524.2	02-01166-3-α	W	V	C	40	3	G	011402	N	0	6	☐
	MW-18-3	Metals	02-01166-3-β	W	P	N	500	1	G	011402	N	0	6	☐
	MW-18-3	PH/CRVI	02-01166-3-γ	W	P		500	1	G	011402	N	0	6	☐
6	MW-18-3D ✓	524.2	02-01166-6-α	W	V	C	40	3	G	011402	N	0	6	☐
	MW-18-3D	Metals	02-01166-6-β	W	P	N	500	1	G	011402	N	0	6	☐
	MW-18-3D	PH/CRVI	02-01166-6-γ	W	P		500	1	G	011402	N	0	6	☐
7	MW-18-2 ✓	524.2	02-01166-2-α	W	V	C	40	3	G	011402	N	0	6	☐
	MW-18-2	Metals	02-01166-2-β	W	P	N	500	1	G	011402	N	0	6	☐
	MW-18-2	PH/CRVI	02-01166-2-γ	W	P		500	1	G	011402	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/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-4	524.2	02-01166-7	W	X							
2	MW-18-5	524.2	02-01166-5-α	W	X							
	MW-18-5	Metals	02-01166-5-β	W				X	X	X	X	X
	MW-18-5	PH/CRVI	02-01166-5-γ	W		X	X					
3	MW-18-4	524.2	02-01166-4-α	W	X							
	MW-18-4	Metals	02-01166-4-β	W				X	X	X	X	X
	MW-18-4	PH/CRVI	02-01166-4-γ	W		X	X					
4	ER-4	524.2	02-01166-1-α	W	X							
	ER-4	Metals	02-01166-1-β	W				X	X	X	X	X
	ER-4	PH/CRVI	02-01166-1-γ	W		X	X					
5	MW-18-3	524.2	02-01166-3-α	W	X							
	MW-18-3	Metals	02-01166-3-β	W				X	X	X	X	X
	MW-18-3	PH/CRVI	02-01166-3-γ	W		X	X					
6	MW-18-3D	524.2	02-01166-6-α	W	X							
	MW-18-3D	Metals	02-01166-6-β	W				X	X	X	X	X
	MW-18-3D	PH/CRVI	02-01166-6-γ	W		X	X					
7	MW-18-2	524.2	02-01166-2-α	W	X							
	MW-18-2	Metals	02-01166-2-β	W				X	X	X	X	X
	MW-18-2	PH/CRVI	02-01166-2-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-4	524.2	02-01166-7	W								
2	MW-18-5	524.2	02-01166-5-α	W								
	MW-18-5	Metals	02-01166-5-β	W								X
	MW-18-5	PH/CRVI	02-01166-5-γ	W	X	X	X	X	X	X	X	
3	MW-18-4	524.2	02-01166-4-α	W								
	MW-18-4	Metals	02-01166-4-β	W								X
	MW-18-4	PH/CRVI	02-01166-4-γ	W	X	X	X	X	X	X	X	
4	ER-4	524.2	02-01166-1-α	W								
	ER-4	Metals	02-01166-1-β	W								X
	ER-4	PH/CRVI	02-01166-1-γ	W	X	X	X	X	X	X	X	
5	MW-18-3	524.2	02-01166-3-α	W								
	MW-18-3	Metals	02-01166-3-β	W								X
	MW-18-3	PH/CRVI	02-01166-3-γ	W	X	X	X	X	X	X	X	
6	MW-18-3D	524.2	02-01166-6-α	W								
	MW-18-3D	Metals	02-01166-6-β	W								X
	MW-18-3D	PH/CRVI	02-01166-6-γ	W	X	X	X	X	X	X	X	

174405

7	MW-18-2	524.2	02-01166-2-α	W									☐
	MW-18-2	Metals	02-01166-2-β	W								X	☐
	MW-18-2	PH/CRVI	02-01166-2-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-4	524.2	02-01166-7	W			☐
2	MW-18-5	524.2	02-01166-5-α	W			☐
	MW-18-5	Metals	02-01166-5-β	W			☐
	MW-18-5	PH/CRVI	02-01166-5-γ	W	X		☐
3	MW-18-4	524.2	02-01166-4-α	W			☐
	MW-18-4	Metals	02-01166-4-β	W			☐
	MW-18-4	PH/CRVI	02-01166-4-γ	W	X		☐
4	ER-4	524.2	02-01166-1-α	W			☐
	ER-4	Metals	02-01166-1-β	W			☐
	ER-4	PH/CRVI	02-01166-1-γ	W	X		☐
5	MW-18-3	524.2	02-01166-3-α	W			☐
	MW-18-3	Metals	02-01166-3-β	W			☐
	MW-18-3	PH/CRVI	02-01166-3-γ	W	X		☐
6	MW-18-3D	524.2	02-01166-6-α	W			☐
	MW-18-3D	Metals	02-01166-6-β	W			☐
	MW-18-3D	PH/CRVI	02-01166-6-γ	W	X		☐
7	MW-18-2	524.2	02-01166-2-α	W			☐
	MW-18-2	Metals	02-01166-2-β	W			☐
	MW-18-2	PH/CRVI	02-01166-2-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 BY

APCL

Applied Physics & Chemistry Laboratory

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

February 11, 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 02-1199 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 #: 801-021199
Collected by: MES/JNT
Collected on: 01/15/02

Received: 01/15/02
Extracted: N/A
Tested: 01/16-18/02
Reported: 01/28/02

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

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result ER-5 02-01199-1	MW-19-1 02-01199-2	MW-19-2 02-01199-3	MW-19-3 02-01199-4
ALKALINITY	310.1	mg/L	2	-	141	198	236
BICARBONATE [a]	SM2320B	mg/L	2	-	141	198	236
CARBONATE [a]	SM2320B	mg-$CaCO_3$/L	2	-	<2	<2	<2
PH	150.1	pH unit	0.01	-	7.46	6.95	6.99
SOLIDS, TOTAL DISSOLVED (TDS)	160.1	mg/L	10	-	243	447	595
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
Dilution Factor				1	2	5	12.5
CHLORIDE CL^-	300.0	mg/L	0.2	-	8.6	44.4	108
NITRATE AS N	300.0	mg/L	0.04	-	0.90	6.1	9.8
SULFATE SO_4^{--}	300.0	mg/L	0.5	-	28.8	71.9	110
Dilution Factor				1	1	1	1
ARSENIC	200.9	µg/L	5	<5	<5	<5	<5
Dilution Factor				1	1	1	1
CALCIUM	200.7	µg/L	200	-	42,400	79,700	118,000
IRON	200.7	µg/L	50	-	3,240	1,010	693
MAGNESIUM	200.7	µg/L	100	-	13,900	28,200	41,100
POTASSIUM	200.7	µg/L	400	-	2,510	2,170	3,000
SODIUM	200.7	µg/L	2000	-	13,800	21,100	32,700
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	0.6
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
METHYLENE CHLORIDE	524.2	µg/L	1	-	1	0.9J	-
TETRACHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	0.3J	3.1
TRICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	0.6	1.1
112TRICHLORO-122TRIFLUOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5

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

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-19-4 02-01199-5	MW-19-5 02-01199-6	MW-19-3D 02-01199-7	TB-5 02-01199-8
ALKALINITY	310.1	mg/L	2	158	222	249	-
BICARBONATE [a]	SM2320B	mg/L	2	158	222	249	-
CARBONATE [a]	SM2320B	mg-$CaCO_3$/L	2	< 2	< 2	< 2	-
PH	150.1	pH unit	0.01	7.56	7.42	7.03	-
SOLIDS, TOTAL DISSOLVED (TDS)	160.1	mg/L	10	278	522	597	-
CHROMIUM (VI)	7196	mg/L	0.01	< 0.01	< 0.01	< 0.01	-
Dilution Factor				1	1	1	1
PERCHLORATE	E314	µg/L	4	< 4	< 4	< 4	-
Dilution Factor				2	8	12.5	1
CHLORIDE CL⁻	300.0	mg/L	0.2	11.5	77.4	111	-
NITRATE AS N	300.0	mg/L	0.04	1.3	8.0	10.3	-
SULFATE SO_4^{--}	300.0	mg/L	0.5	32.6	84.3	116	-
Dilution Factor				1	1	1	1
ARSENIC	200.9	µg/L	5	< 5	< 5	< 5	-
Dilution Factor				1	1	1	1
CALCIUM	200.7	µg/L	200	45,600	94,600	120,000	-
IRON	200.7	µg/L	50	53.8	77.9	476	-
MAGNESIUM	200.7	µg/L	100	16,000	32,900	42,200	-
POTASSIUM	200.7	µg/L	400	1,700	2,560	3,050	-
SODIUM	200.7	µg/L	2000	20,100	30,800	32,900	-
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	2.6	0.8	0.5J	< 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
METHYLENE CHLORIDE	524.2	µg/L	1	0.5J	2.7	0.7J	0.8J
TETRACHLOROETHENE	524.2	µg/L	0.5	< 0.5	1.4	1.6	< 0.5
TRICHLOROETHENE	524.2	µg/L	0.5	< 0.5	0.5	0.6	< 0.5
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
[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: 01HW019 JPL

APCL Service ID: 02-1199

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: 02-1199

1. Sample Identification

The sample identifications are listed in the following table:

SOTA Environmental Sample ID	APCL Sample ID
TB-5	02-01199-8
MW-19-5	02-01199-6
MW-19-4	02-01199-5
MW-19-3	02-01199-4
MW-19-3D	02-01199-7
ER-5	02-01199-1
MW-19-2	02-01199-3
MW-19-1	02-01199-2

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

Fax log inclueded.

6. Anomaly

None.

53901

"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

50902

Applied P & Ch Laboratory

APCL

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

Chain of Custody

Please Print in pen Page 1 of 2

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

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

Bill to: SOTA

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

Project Address PASADENA, CALIFORNIA APCL Quotation #

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

Field Sample ID No.	Sample Description	Date Collected	Time Collected	Sample Matrix	Preservation	# of Containers	VOCs (524.2)	Total Cr & Pb (200.8)	As (200.9)	Mn, Na, Ca, Mg, Fe (200.7)	Nitrate, Sulfate, Chloride (300.0)	Carbonate, Bicarb. Alk. (310.1)	Cr VI (7196)	Perchlorate (314.0)	TDS (160.1)	pH (150.1)	Remarks
TB-5	TRIP BLANK	1/15/02	1000	WATER	HCl	2	X										
MW-19-5	MW-19-5		1042		HCl	3	X										
					HNO_3	2		X	X	X							
					—	1					X	X	X	X	X	X	
MW-19-4	MW-19-4		1133		HCl	3	X										
					HNO_3	2		X	X	X							
					—	1					X	X	X	X	X	X	
MW-19-3	MW-19-3		1237		HCl	9	X										MS/MSD ON ALL EXCEPT 200.7, 300.0, 310.1, 160.1, & 150.1
					HNO_3	2		X	X	X							
					—	2					X	X	X	X	X	X	
MW-19-3D	MW-19-3 DUP				HCl	3	X										
					HNO_3	2		X	X	X							
					—	1					X	X	X	X	X	X	
ER-5	EQUIP. RINSATE		1206		HCl	3	X										
ER-5	EQUIP. RINSATE		1206		HNO_3	2		X	X	X							

1199

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 1/15/02 / 1645 Received by [signature] Date/Time 1/15/02 / 1645

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

APCL USE ONLY Service # Note:

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

Applied P & Ch Laboratory

APCL

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

Chain of Custody

Please Print in pen Page 2 of 2

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

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/~~MET~~

Field Sample ID No.	Sample Description	Date Collected	Time Collected	Sample Matrix	Preservation	# of Containers
ER-5	EQUIP. RINSATE	1/15/02	1206	WATER	—	1
MW-19-2	MW-19-2		1407		HCl	3
					HNO_3	2
					—	1
MW-19-1	MW-19-1		1533		HCl	3
					HNO_3	2
					—	1

Analysis Items: VOCs (524.2); Total Cr & Pb (200.8); As (200.9); Na, K, Ca, Mg, Fe (200.7); Nitrate, Sulfate, Chloride (300.0); Carbonate, Bicarb. Alk. (310.1); Cr VI (7196); Perchlorate (314.0); TDS (160.1); pH (150.1)

White – With report
Yellow – Lab copy
Pink – Originator

Remarks

1199

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

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

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

Relinquished by _____ Date/Time 1/15/02 / 1645 Received by Richard Stenson Date/Time 1/15/02 / 1645

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.

1199

YU ZENG
16835 W. Bernardo Dr. Suite 212
San Diego, CA 92127
Phone: 858-485-8100
Fax: 858-485-0812

SOTA Environmental Technology, Inc.

Fax

To:	Kenny Chan	**From:**	Yu Zeng
Fax:	1-909-590-1498	**Pages:**	6
Phone:	1-909-590-1828	**Date:**	01/15/02
Re:	JPL 1st. Qtr Testing	**CC:**	

✓ **Urgent** ☐ **For Review** ☐ **Please Comment** ✓ **Please Reply** ☐ **Please Recycle**

Please drop the tests from JPL samples you received:

	Date Collected	Field Sample ID	Test Methods
1)	1/10/02	ER-2	200.7, 300.0, 310.1, 160.1, 150.1
2)	1/11/02	ER-3	200.7, 300.0, 310.1, 160.1, 150.1
3)	1/12/02	ER-4	200.7, 300.0, 310.1, 160.1, 150.1
4)	1/13/02	ER-5	200.7, 300.0, 310.1, 160.1, 150.1

If you have questions about the request, please call me at 858-485-8100.

Thanks and Regards,

Yu Zeng (Project Environmental Engineer)
SOTA Environmental Technology, Inc.

050903

Applied P & Ch Laboratory

APCL

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

Chain of Custody

Please Print in pen Page 1 of 2

Client: SOTA ENVIR. TECH., INC. Contact: MIKE SAYRE Tel #: 858-485-8100 Fax #: 858-485-0892

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

Bill to: SOTA

Project Name/Code STL Job #08HW019 P.O. #

Project Address PASADENA, CALIFORNIA APCL Quotation #

Due Date: ☐regular ☐rush: ___ days ___ hours Sampled by: MLS/JNT

Field Sample ID No.	Sample Description	Date Collected	Time Collected	Sample Matrix	Preservation	# of Containers	Analysis Items: VOCs (8240.2)	Total Cr & Pb (200.7)	As (200.8)	Ni, K, Ca, Mg (6010)	Mitram, Styrene, Chloroform, Bromodichloromethane, Dibromochloromethane, Bromoform, Naphthalene (8260)	Vc, VC (7196)	Perchlorate (314.0)	TDS (160.1)	pH (150.1)	Remarks
TB-5	TRIP BLANK	1/15/02	1010	WATER	HCl	2	X									
MW-19-5	MW-19-5		1042		HCl	3	X									
					HNO_3	2		X	X	X						
					—	1					X	X	X	X	X	
MW-19-4	MW-19-4		1133		HCl	3	X									
					HNO_3	2		X	X	X						
					—	1					X	X	X	X	X	
MW-19-3	MW-19-3		1237		HCl	9	X									MS/MSD on ALL EXCEPT 200.7, 200.8, 310.2, 160.1, & 150.1
					HNO_3	2		X	X	X						
					—	2					X	X	X	X	X	
MW-19-3D	MW-19-3 DUP				HCl	3	X									
					HNO_3	2		X	X	X						
					—	1					X	X	X	X	X	
ER-5	EQUIP. RINSATE		1206		HCl	3	X									
ER-5	EQUIP. RINSATE		1206		HNO_3	2		X	X	X						

White - With report
Yellow - Lab copy
Pink - Originator

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

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

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

Relinquished by _____ Date/Time 1/15/02 / 1645 Received by _____ Date/Time 1/15/02 / 1645

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.

01/15/2002 18:48 6194858812 SOTA ENV TECHNOLOGY PAGE 05

APCL

Applied P & Ch Laboratory

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

Chain of Custody

Please Print in pen Page 2 of 2

Client: SOTA ENVIRTECH, 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)	Total Cr & Pb (200.8)	As (200.9)	Na, K, Ca, Mg, Fe (200.7)	Nitrate, Sulfate, Chloride (300.0)	Carbonate, Bicarb. (310.1)	Cr VI (7196)	Perchlorate (314.0)	TDS (160.1)	pH (150.1)			Remarks
ER-5	EQUIP RINSATE	1/15/02	1206	WATER	—	1					X	X	X	X	X	X			
MW-19-2	MW-19-2		1407		HCl	3	X												
					HNO_3	2		X	X	X									
					—	1					X	X	X	X	X	X			
MW-19-1	MW-19-1		1533		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 ☐ 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 1/15/02 / 1645 Received by [signature] Date/Time 1/15/02 1645

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 4-195, Ver. 4.0, Dec. 30, 1994

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

Sample Receiving Checklist

APCL ServiceID: 1199 Client Name/Project: Sota

1. Sample Arrival

Date/Time Received 1/15/02 1645 Date/Time Opened 1/15/02 1800 By (name): Richard

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

2. Chain-of-Custody (CoC)

☑ With Samples? ☐ Faxed? ☑ Client has Copy? ☐ Signed, dated? By: _____

☐ Project ID? ☑ Analyses Clear? ☐ Hold Samples? #on Hold _____ # Received 8

☑ 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 4.4

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

Cooler Custody Seal? ☐ Absent ☐ Intact ☐ Tampered?

4. Sample Preservation

☐ pH <2 ☐ pH >12

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

5. Holding-time Requirements

☐ pH 24hr ☐ BACT 6/24hr ☐ Cr^{VI} 24hr ☐ NO_3^- 48hr ☐ BOD 48hr

☐ Cl_2 ASAP ☐ Turbidity 48hr ☐ DO ASAP ☐ Fe(II) ASAP

☐ HT Expired? ☐ Client notified?

6. Sample Container Condition

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

Type: ☑ plastic ☑ glass ☐ Tube: brass/SS ☐ Tedlar Bag

☑ Quantity OK? ☐ Leaking? ☐ Anomaly?

☑ Caps tight? ☐ Air Bubbles? ☐ Anomaly?

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

7. Turn Around Time

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

8. Sample Matrix

☐ Drinking H_2O ☑ Other Liq ☐ Soil ☐ Wipe ☐ Polymer ☐ Air ☐ Other: _____

☐ Ground H_2O ☐ Sludge ☐ Filter ☐ Oil/Petro ☐ Paint ☐ W. Water ☐ Extract ☐ Unknown

9. Pre-Login Check List Completed & OK?

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

Received/Checked by: [signature] Date: 15 Jan 2002 Time: 8:39 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: [ucal.texfiles]smprcl.tex.

050904

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

Sample Login: Check List

02-01199 (1288_ 300) (4858100_ 300)

01/16/02

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?	*Richard*
	Receiving Date/Time:	*01/15/02 1645*
	COC No.	
☐ Shipping Information	Shipping Company	*APCL pick up*
	Packing Information:	*Cooler/Ice Chester*
	Cooler Temperature:	*4.4 °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*

C50905

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-5	524.2	02-01199-8	W	V	C	40	2	G	011502	N	0	6	☐
2	MW-19-5	524.2	02-01199-6-α	W	V	C	40	3	G	011502	N	0	6	☐
	MW-19-5	Metals	02-01199-6-β	W	P	N	500	1	G	011502	N	0	6	☐
	MW-19-5	PH/CRVI	02-01199-6-γ	W	P		500	1	G	011502	N	0	6	☐
3	MW-19-4	524.2	02-01199-5-α	W	V	C	40	3	G	011502	N	0	6	☐
	MW-19-4	Metals	02-01199-5-β	W	P	N	500	1	G	011502	N	0	6	☐
	MW-19-4	PH/CRVI	02-01199-5-γ	W	P		500	1	G	011502	N	0	6	☐
4	MW-19-3	524.2	02-01199-4-α	W	V	C	40	9	G	011502	N	0	6	☐
	MW-19-3	Metals	02-01199-4-β	W	P	N	500	1	G	011502	N	0	6	☐
	MW-19-3	PH/CRVI	02-01199-4-γ	W	P		500	2	G	011502	N	0	6	☐
5	MW-19-3D	524.2	02-01199-7-α	W	V	C	40	3	G	011502	N	0	6	☐
	MW-19-3D	Metals	02-01199-7-β	W	P	N	500	1	G	011502	N	0	6	☐
	MW-19-3D	PH/CRVI	02-01199-7-γ	W	P		500	1	G	011502	N	0	6	☐
6	ER-5	524.2	02-01199-1-α	W	V	C	40	3	G	011502	N	0	6	☐
	ER-5	Metals	02-01199-1-β	W	P	N	500	1	G	011502	N	0	6	☐
	ER-5	PH/CRVI	02-01199-1-γ	W	P		500	1	G	011502	N	0	6	☐
7	MW-19-2	524.2	02-01199-3-α	W	V	C	40	3	G	011502	N	0	6	☐
	MW-19-2	Metals	02-01199-3-β	W	P	N	500	1	G	011502	N	0	6	☐
	MW-19-2	PH/CRVI	02-01199-3-γ	W	P		500	1	G	011502	N	0	6	☐
8	MW-19-1	524.2	02-01199-2-α	W	V	C	40	3	G	011502	N	0	6	☐
	MW-19-1	Metals	02-01199-2-β	W	P	N	500	1	G	011502	N	0	6	☐
	MW-19-1	PH/CRVI	02-01199-2-γ	W	P		500	1	G	011502	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/SM4500NO3C*	Nitrate (NO_3^-) as N by IC
☑ *300.0*	Chloride Cl^- by IC
☑ *SM2320B*	Carbonate

050906

☐ *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-5	524.2	02-01199-8	W	X							
2	MW-19-5	524.2	02-01199-6-α	W	X							
	MW-19-5	Metals	02-01199-6-β	W				X	X	X	X	X
	MW-19-5	PH/CRVI	02-01199-6-γ	W		X	X					
3	MW-19-4	524.2	02-01199-5-α	W	X							
	MW-19-4	Metals	02-01199-5-β	W				X	X	X	X	X
	MW-19-4	PH/CRVI	02-01199-5-γ	W		X	X					
4	MW-19-3	524.2	02-01199-4-α	W	X							
	MW-19-3	Metals	02-01199-4-β	W				X	X	X	X	X
	MW-19-3	PH/CRVI	02-01199-4-γ	W		X	X					
5	MW-19-3D	524.2	02-01199-7-α	W	X							
	MW-19-3D	Metals	02-01199-7-β	W				X	X	X	X	X
	MW-19-3D	PH/CRVI	02-01199-7-γ	W		X	X					
6	ER-5	524.2	02-01199-1-α	W	X							
	ER-5	Metals	02-01199-1-β	W				X	X	X	X	X
	ER-5	PH/CRVI	02-01199-1-γ	W		X	X					
7	MW-19-2	524.2	02-01199-3-α	W	X							
	MW-19-2	Metals	02-01199-3-β	W				X	X	X	X	X
	MW-19-2	PH/CRVI	02-01199-3-γ	W		X	X					
8	MW-19-1	524.2	02-01199-2-α	W	X							
	MW-19-1	Metals	02-01199-2-β	W				X	X	X	X	X
	MW-19-1	PH/CRVI	02-01199-2-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-5	524.2	02-01199-8	W								
2	MW-19-5	524.2	02-01199-6-α	W								
	MW-19-5	Metals	02-01199-6-β	W								X
	MW-19-5	PH/CRVI	02-01199-6-γ	W	X	X	X	X	X	X	X	
3	MW-19-4	524.2	02-01199-5-α	W								
	MW-19-4	Metals	02-01199-5-β	W								X
	MW-19-4	PH/CRVI	02-01199-5-γ	W	X	X	X	X	X	X	X	
4	MW-19-3	524.2	02-01199-4-α	W								
	MW-19-3	Metals	02-01199-4-β	W								X

050907

	MW-19-3	PH/CRVI	02-01199-4-γ	W	X	X	X	X	X	X	X		
5	MW-19-3D	524.2	02-01199-7-α	W									
	MW-19-3D	Metals	02-01199-7-β	W								X	
	MW-19-3D	PH/CRVI	02-01199-7-γ	W	X	X	X	X	X	X	X		
6	ER-5	524.2	02-01199-1-α	W									
	ER-5	Metals	02-01199-1-β	W								X	
	ER-5	PH/CRVI	02-01199-1-γ	W	X	X	X	X	X	X	X		
7	MW-19-2	524.2	02-01199-3-α	W									
	MW-19-2	Metals	02-01199-3-β	W								X	
	MW-19-2	PH/CRVI	02-01199-3-γ	W	X	X	X	X	X	X	X		
8	MW-19-1	524.2	02-01199-2-α	W									
	MW-19-1	Metals	02-01199-2-β	W								X	
	MW-19-1	PH/CRVI	02-01199-2-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-5	524.2	02-01199-8	W		
2	MW-19-5	524.2	02-01199-6-α	W		
	MW-19-5	Metals	02-01199-6-β	W		
	MW-19-5	PH/CRVI	02-01199-6-γ	W	X	
3	MW-19-4	524.2	02-01199-5-α	W		
	MW-19-4	Metals	02-01199-5-β	W		
	MW-19-4	PH/CRVI	02-01199-5-γ	W	X	
4	MW-19-3	524.2	02-01199-4-α	W		
	MW-19-3	Metals	02-01199-4-β	W		
	MW-19-3	PH/CRVI	02-01199-4-γ	W	X	
5	MW-19-3D	524.2	02-01199-7-α	W		
	MW-19-3D	Metals	02-01199-7-β	W		
	MW-19-3D	PH/CRVI	02-01199-7-γ	W	X	
6	ER-5	524.2	02-01199-1-α	W		
	ER-5	Metals	02-01199-1-β	W		
	ER-5	PH/CRVI	02-01199-1-γ	W	X	
7	MW-19-2	524.2	02-01199-3-α	W		
	MW-19-2	Metals	02-01199-3-β	W		
	MW-19-2	PH/CRVI	02-01199-3-γ	W	X	
8	MW-19-1	524.2	02-01199-2-α	W		
	MW-19-1	Metals	02-01199-2-β	W		
	MW-19-1	PH/CRVI	02-01199-2-γ	W	X	

☐ Client"s Requirement: **PLEASE RUN MS/MSD ON SAMPLE #4** ✓

☐ **IF ENOUGH SAMPLE**

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

050908

Login By En-Yu Paul Kou

Check By

050909

APCL

Applied Physics & Chemistry Laboratory

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

February 13, 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 02-1220 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 #: 801-021220
Collected by: MES/JNT
Collected on: 01/16/02

Received: 01/16/02
Extracted: N/A
Tested: 01/16-18/02
Reported: 01/30/02

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

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result MW-20-1 02-01220-2	MW-20-2 02-01220-3
ALKALINITY	310.1	mg/L	2	160	119
BICARBONATE [a]	SM2320B	mg/L	2	160	119
CARBONATE [a]	SM2320B	mg-$CaCO_3$/L	2	< 2	< 2
PH	150.1	pH unit	0.01	7.97	8.44
SOLIDS, TOTAL DISSOLVED (TDS)	160.1	mg/L	10	503	212
Dilution Factor				8	2
CHLORIDE CL$^-$	300.0	mg/L	0.2	57.9	11.5
NITRATE AS N	300.0	mg/L	0.04	16.1	0.36
SULFATE SO_4^{--}	300.0	mg/L	0.5	133	30.9
Dilution Factor				1	1
CALCIUM	200.7	μg/L	200	99,200	25,900
IRON	200.7	μg/L	50	16.7J	82.5
MAGNESIUM	200.7	μg/L	100	31,800	17,200
POTASSIUM	200.7	μg/L	400	3,630	2,070
SODIUM, NA,	200.7	μg/L	2000	23,100	17,500

Component Analyzed	Method	Unit	PQL	Analysis Result MW-20-3 02-01220-4	MW-20-4 02-01220-5	MW-20-5 02-01220-6
ALKALINITY	310.1	mg/L	2	215	132	134
BICARBONATE [a]	SM2320B	mg/L	2	215	132	104
CARBONATE [a]	SM2320B	mg-$CaCO_3$/L	2	< 2	< 2	29.8
PH	150.1	pH unit	0.01	8.06	8.40	8.88
SOLIDS, TOTAL DISSOLVED (TDS)	160.1	mg/L	10	378	220	235
Dilution Factor				5	1.25	1.25
CHLORIDE CL$^-$	300.0	mg/L	0.2	43.8	10.0	10.2
NITRATE AS N	300.0	mg/L	0.04	4.0	0.073	0.11
SULFATE SO_4^{--}	300.0	mg/L	0.5	34.7	18.2	21.1
Dilution Factor				1	1	1
CALCIUM	200.7	μg/L	200	52,100	11,700	8,230
IRON	200.7	μg/L	50	< 50	748	27.7J
MAGNESIUM	200.7	μg/L	100	15,300	3,370	1,820
POTASSIUM	200.7	μg/L	400	2,340	993	1,570
SODIUM	200.7	μg/L	2000	60,900	59,100	75,200

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-6 02-01220-1	MW-20-1 02-01220-2	MW-20-2 02-01220-3
ARSENIC	200.9	µg/L	5	<5	<5	<5
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01	<0.01
Dilution Factor				1	1	1
PERCHLORATE	E314	µg/L	4	<4	6.6	<4
VOLATILE ORGANIC COMPOUNDS						
Dilution Factor				1	1	1
BROMODICHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	0.3J
CARBON TETRACHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROFORM	524.2	µg/L	0.5	<0.5	0.8	3.2
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	2	0.7J	<1
TETRACHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
112TRICHLORO-122TRIFLUOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5

Component Analyzed	Method	Unit	PQL	Analysis Result MW-20-3 02-01220-4	MW-20-4 02-01220-5	MW-20-5 02-01220-6	TB-6 02-01220-7
ARSENIC	200.9	µg/L	5	<5	<5	<5	-
CHROMIUM (VI)	7196	mg/L	0.01	<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
METHYLENE CHLORIDE	524.2	µg/L	1	0.4J	0.4J	0.7J	0.6J
TETRACHLOROETHENE	524.2	µg/L	0.5	0.3J	<0.5	<0.5	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
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
(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: 01HW019 JPL

APCL Service ID: 02-1220

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: 02-1220

1. Sample Identification

The sample identifications are listed in the following table:

SOTA Environmental Sample ID	APCL Sample ID
TB-6	02-01220-7
MW-20-5	02-01220-6
MW-20-4	02-01220-5
ER-6	02-01220-1
MW-20-3	02-01220-4
MW-20-2	02-01220-3
MW-20-1	02-01220-2

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 (Nitrate (NO_3^-) as N by IC),
300.0 (Chloride by IC),
300.0 (Sulfate by IC),
SM2320B (Carbonate),
SM2320B (Bicarbonate),
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

C49501

"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

C49502

Applied P & Ch Laboratory

APCL

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

Chain of Custody

Please Print in pen Page 1 of 2

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

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

Bill to: SOTA

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

Project Address PASADENA, CALIFORNIA APCL Quotation #

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

Field Sample ID No.	Sample Description	Date Collected	Time	Sample Matrix	Preservation	# of Containers	Analysis Items	Remarks
TB-6	TRIP BLANK	1/16/02	940	WATER	HCl	2	VOCs (524.2)	
MW-20-5	MW-20-5		1009		HCl	3	VOCs (524.2)	
					HNO_3	2	Total Cr & Pb (200.8), As (200.9), Mn, K, Ca, Mg, Fe (200.7)	
					—	1	Nitrate, Sulfate, Chloride (300.0), Carbonate, Bicarb. Alk (310.1)	
MW-20-4	MW-20-4		1112		HCl	3	VOCs (524.2)	
					HNO_3	2	Total Cr & Pb (200.8), As (200.9), Mn, K, Ca, Mg, Fe (200.7)	
					—	1	Nitrate, Sulfate, Chloride (300.0), Carbonate, Bicarb. Alk (310.1)	
ER-6	EQUIP. RINSATE		1130		HCl	3	VOCs (524.2)	
					HNO_3	2	Total Cr & Pb (200.8), As (200.9)	
					—	1	Cr VI (7196)	1220
MW-20-3	MW-20-3		1209		HCl	3	VOCs (524.2)	
					HNO_3	2	Total Cr & Pb (200.8), As (200.9), Mn, K, Ca, Mg, Fe (200.7)	
					—	1	Nitrate, Sulfate, Chloride (300.0), Carbonate, Bicarb. Alk (310.1), Perchlorate (314.0), TDS (160.1), pH (150.1)	
MW-20-2	MW-20-2		1448		HCl	3	VOCs (524.2)	
MW-20-2	MW-20-2		1448		HNO_3	2	Total Cr & Pb (200.8), As (200.9)	

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 1/16/02 1645 Received by [signature] Date/Time 1-16-02 1645

Relinquished by Date/Time / Received by Date/Time

APCL USE ONLY Service # Note:

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

Applied P & Ch Laboratory

APCL

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

Chain of Custody

Please Print in pen Page 2 of 2

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

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

Field Sample ID No.	Sample Description	Date Collected	Time Collected	Sample Matrix	Preservation	# of Containers	VOCs (524.2)	Total Chrome & Pb (200.8)	As (200.9)	Na, K, Ca, Mg, Fe (200.7)	Nitrate, Sulfate, Chloride (300.0)	Carbonate, Bicarb. Alk. (310.1)	Cr VI (7196)	Perchlorate (314.0)	TDS (160.1)	pH (150.1)	Remarks
MW-20-2	MW-20-2	1/16/02	1448	WATER	–	1					X	X	X	X	X	X	
MW-20-1	MW-20-1		1543		HCl	3	X										
					HNO_3	2		X	X	X							
					–	1					X	X	X	X	X	X	

White – With report
Yellow – Lab copy
Pink – Originator

1220

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

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

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

Relinquished by _____ Date/Time 1/16/02 1645 Received by Richard Stinson Date/Time 1/16/02 1645

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

APCL USE ONLY Service # Note:

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

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

Sample Receiving Checklist

APCL ServiceID: 1220 Client Name/Project: Soto Environmental

1. Sample Arrival

Date/Time Received 1/16/02 1645 Date/Time Opened 1/16/02 1800 By (name): Paul
Custody Transfer: ☐ Client ☐ Golden State ☐ UPS ☐ US Mail ☐ FedEx ☑ APCL Empl: Richard

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 2.3 _____ _____ _____ _____ _____
(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: 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: 16 Jan 2002 Time: 9:00 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.

C49503

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

Sample Login: Check List

02-01220 (1288_ 301) (4858100_ 301)

01/16/02

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?	*Paul*
	Receiving Date/Time:	*01/16/02 1645*
	COC No.	
☐ Shipping Information	Shipping Company	*APCL pick up*
	Packing Information:	*Cooler/Ice Chester*
	Cooler Temperature:	*2.3 °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*

49504

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-6	524.2	02-01220-7	W	V	C	40	2	G	011602	N	0	6	☐
2	MW-20-5	524.2	02-01220-6-α	W	V	C	40	3	G	011602	N	0	6	☐
	MW-20-5	Metals	02-01220-6-β	W	P	N	500	1	G	011602	N	0	6	☐
	MW-20-5	PH/CRVI	02-01220-6-γ	W	P		500	1	G	011602	N	0	6	☐
3	MW-20-4	524.2	02-01220-5-α	W	V	C	40	3	G	011602	N	0	6	☐
	MW-20-4	Metals	02-01220-5-β	W	P	N	500	1	G	011602	N	0	6	☐
	MW-20-4	PH/CRVI	02-01220-5-γ	W	P		500	1	G	011602	N	0	6	☐
4	ER-6	524.2	02-01220-1-α	W	V	C	40	3	G	011602	N	0	6	☐
	ER-6	Metals	02-01220-1-β	W	P	N	500	1	G	011602	N	0	6	☐
	ER-6	PH/CRVI	02-01220-1-γ	W	P		500	1	G	011602	N	0	6	☐
5	MW-20-3	524.2	02-01220-4-α	W	V	C	40	3	G	011602	N	0	6	☐
	MW-20-3	Metals	02-01220-4-β	W	P	N	500	1	G	011602	N	0	6	☐
	MW-20-3	PH/CRVI	02-01220-4-γ	W	P		500	1	G	011602	N	0	6	☐
6	MW-20-2	524.2	02-01220-3-α	W	V	C	40	3	G	011602	N	0	6	☐
	MW-20-2	Metals	02-01220-3-β	W	P	N	500	1	G	011602	N	0	6	☐
	MW-20-2	PH/CRVI	02-01220-3-γ	W	P		500	1	G	011602	N	0	6	☐
7	MW-20-1	524.2	02-01220-2-α	W	V	C	40	3	G	011602	N	0	6	☐
	MW-20-1	Metals	02-01220-2-β	W	P	N	500	1	G	011602	N	0	6	☐
	MW-20-1	PH/CRVI	02-01220-2-γ	W	P		500	1	G	011602	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/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)

C49505

☐ ~~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-6	524.2	02-01220-7	W	X							
2	MW-20-5	524.2	02-01220-6-α	W	X							
	MW-20-5	Metals	02-01220-6-β	W				X	X	X	X	X
	MW-20-5	PH/CRVI	02-01220-6-γ	W		X	X					
3	MW-20-4	524.2	02-01220-5-α	W	X							
	MW-20-4	Metals	02-01220-5-β	W				X	X	X	X	X
	MW-20-4	PH/CRVI	02-01220-5-γ	W		X	X					
4	ER-6	524.2	02-01220-1-α	W	X							
	ER-6	Metals	02-01220-1-β	W								
	ER-6	PH/CRVI	02-01220-1-γ	W		X	X					
5	MW-20-3	524.2	02-01220-4-α	W	X							
	MW-20-3	Metals	02-01220-4-β	W				X	X	X	X	X
	MW-20-3	PH/CRVI	02-01220-4-γ	W		X	X					
6	MW-20-2	524.2	02-01220-3-α	W	X							
	MW-20-2	Metals	02-01220-3-β	W				X	X	X	X	X
	MW-20-2	PH/CRVI	02-01220-3-γ	W		X	X					
7	MW-20-1	524.2	02-01220-2-α	W	X							
	MW-20-1	Metals	02-01220-2-β	W				X	X	X	X	X
	MW-20-1	PH/CRVI	02-01220-2-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-6	524.2	02-01220-7	W								
2	MW-20-5	524.2	02-01220-6-α	W								
	MW-20-5	Metals	02-01220-6-β	W								X
	MW-20-5	PH/CRVI	02-01220-6-γ	W	X	X	X	X	X	X	X	
3	MW-20-4	524.2	02-01220-5-α	W								
	MW-20-4	Metals	02-01220-5-β	W								X
	MW-20-4	PH/CRVI	02-01220-5-γ	W	X	X	X	X	X	X	X	
4	ER-6	524.2	02-01220-1-α	W								
	ER-6	Metals	02-01220-1-β	W								X
	ER-6	PH/CRVI	02-01220-1-γ	W								
5	MW-20-3	524.2	02-01220-4-α	W								
	MW-20-3	Metals	02-01220-4-β	W								X
	MW-20-3	PH/CRVI	02-01220-4-γ	W	X	X	X	X	X	X	X	
6	MW-20-2	524.2	02-01220-3-α	W								
	MW-20-2	Metals	02-01220-3-β	W								X
	MW-20-2	PH/CRVI	02-01220-3-γ	W	X	X	X	X	X	X	X	

C49506

7	MW-20-1	524.2	02-01220-2-α	W									☐
	MW-20-1	Metals	02-01220-2-β	W								X	☐
	MW-20-1	PH/CRVI	02-01220-2-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-6	524.2	02-01220-7	W			☐
2	MW-20-5	524.2	02-01220-6-α	W			☐
	MW-20-5	Metals	02-01220-6-β	W			☐
	MW-20-5	PH/CRVI	02-01220-6-γ	W	X		☐
3	MW-20-4	524.2	02-01220-5-α	W			☐
	MW-20-4	Metals	02-01220-5-β	W			☐
	MW-20-4	PH/CRVI	02-01220-5-γ	W	X		☐
4	ER-6	524.2	02-01220-1-α	W			☐
	ER-6	Metals	02-01220-1-β	W			☐
	ER-6	PH/CRVI	02-01220-1-γ	W			☐
5	MW-20-3	524.2	02-01220-4-α	W			☐
	MW-20-3	Metals	02-01220-4-β	W			☐
	MW-20-3	PH/CRVI	02-01220-4-γ	W	X		☐
6	MW-20-2	524.2	02-01220-3-α	W			☐
	MW-20-2	Metals	02-01220-3-β	W			☐
	MW-20-2	PH/CRVI	02-01220-3-γ	W	X		☐
7	MW-20-1	524.2	02-01220-2-α	W			☐
	MW-20-1	Metals	02-01220-2-β	W			☐
	MW-20-1	PH/CRVI	02-01220-2-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 DY

C49507

APCL

Applied Physics & Chemistry Laboratory

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

January 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 02-1098 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 #: 801-021098
Collected by: MES/JNT
Collected on: 01/09/02

Received: 01/09/02
Extracted: N/A
Tested: 01/10-15/02
Reported: 01/21/02

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

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result MW-21-1 02-01098-2	MW-21-2 02-01098-3
ALKALINITY	310.1	mg/L	2	181	277
BICARBONATE	SM2320B	mg/L	2	181	277
CARBONATE	SM2320B	mg-$CaCO_3$/L	2	< 2	< 2
PH	9040	pH unit	0.01	7.09	7.16
SOLIDS, TOTAL DISSOLVED (TDS)	160.1	mg/L	10	437	516
Dilution Factor				12.5	20
CHLORIDE CL^-	300.0	mg/L	0.2	99.2	160
NITRATE AS N	300.0	mg/L	0.04	17.3	9.6
SULFATE SO_4^{--}	300.0	mg/L	0.5	126	171

Component Analyzed	Method	Unit	PQL	Analysis Result MW-21-3 02-01098-4	MW-21-4 02-01098-5	MW-21-5 02-01098-6
ALKALINITY	310.1	mg/L	2	266	192	204
BICARBONATE	SM2320B	mg/L	2	266	192	204
CARBONATE	SM2320B	mg-$CaCO_3$/L	2	< 2	< 2	< 2
PH	9040	pH unit	0.01	7.36	7.46	7.68
SOLIDS, TOTAL DISSOLVED (TDS)	160.1	mg/L	10	619	858	665
Dilution Factor				12.5	8	10
CHLORIDE CL^-	300.0	mg/L	0.2	111	62.5	77.5
NITRATE AS N	300.0	mg/L	0.04	10.8	8.5	8.7
SULFATE SO_4^{--}	300.0	mg/L	0.5	124	69.8	109

Component Analyzed	Method	Unit	PQL	Analysis Result ER-1 02-01098-1	MW-21-1 02-01098-2	MW-21-2 02-01098-3	MW-21-3 02-01098-4
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	8.2	3.3J	4.1
Dilution Factor				1	1	1	1
ARSENIC	200.9	µg/L	5	< 5	< 5	< 5	< 5
CALCIUM	6010B	µg/L	200	< 200	108,000	134,000	120,000
IRON	6010B	µg/L	50	12.1J	199	29.2J	121
MAGNESIUM	6010B	µg/L	100	9.5J	34,100	42,100	36,100
POTASSIUM	6010B	µg/L	400	118J	2,040	3,050	2,780
SODIUM	6010B	µg/L	2000	< 2000	33,400	64,100	40,000

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-1 02-01098-1	MW-21-1 02-01098-2	MW-21-2 02-01098-3	MW-21-3 02-01098-4
VOLATILE ORGANIC COMPOUNDS							
Dilution Factor				1	1	1	1
BROMODICHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	0.6
CARBON TETRACHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLORODIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	0.4J
CHLOROFORM	524.2	µg/L	0.5	<0.5	1.7	0.5J	1.3
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
CIS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	0.4J
METHYLENE CHLORIDE	524.2	µg/L	1	<1	0.4J	<1	<1
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	0.6J	<1	<1	<1
TETRACHLOROETHENE	524.2	µg/L	0.5	<0.5	0.6	1.9	3.5
TRICHLOROETHENE	524.2	µg/L	0.5	<0.5	17.5	<0.5	1.6
112TRICHLORO-122TRIFLUOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5

Component Analyzed	Method	Unit	PQL	Analysis Result MW-21-4 02-01098-5	MW-21-5 02-01098-6	SB-1 02-01098-7	TB-1 02-01098-8
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01	-	-
Dilution Factor				1	1	1	1
PERCHLORATE	E314	µg/L	4	2.7J	4.6	-	-
Dilution Factor				1	1	1	1
ARSENIC	200.9	µg/L	5	<5	<5	-	-
CALCIUM	6010B	µg/L	200	78,200	86,100	-	-
IRON	6010B	µg/L	50	344	372	-	-
MAGNESIUM	6010B	µg/L	100	23,400	26,700	-	-
POTASSIUM	6010B	µg/L	400	2,030	2,160	-	-
SODIUM	6010B	µg/L	2000	27,700	31,300	-	-

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-21-4 02-01098-5	MW-21-5 02-01098-6	SB-1 02-01098-7	TB-1 02-01098-8
VOLATILE ORGANIC COMPOUNDS							
Dilution Factor				1	1	1	1
BROMODICHLOROMETHANE	524.2	µg/L	0.5	0.6	0.8	<0.5	<0.5
CARBON TETRACHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLORODIBROMOMETHANE	524.2	µg/L	0.5	0.4J	<0.5	<0.5	<0.5
CHLOROFORM	524.2	µg/L	0.5	1.7	2.8	<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
CIS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	1.8	3.4	<0.5	<0.5
METHYLENE CHLORIDE	524.2	µg/L	1	<1	<1	<1	1
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	0.7J	1J	<1	<1
TETRACHLOROETHENE	524.2	µg/L	0.5	9.9	19.2	<0.5	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	0.8	1.2	<0.5	<0.5
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