APCL

Applied Physics & Chemistry Laboratory

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

March 6, 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 02-1727 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

Level D Data Package Deliverables

General Information

Project: 010HW019 JPL

APCL Service ID: 02-1727

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: 02-1727

1. Sample Identification

The sample identifications are listed in the following table:

SOTA Environmental Sample ID	APCL Sample ID
MW-7	02-01727-1

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 (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.

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

Respectfully submitted,

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

Applied P & Ch Laboratory

APCL

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

Chain of Custody

Please Print in pen Page 1 of 1

Client: SOTA 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

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)	Nitrate, Sulfate, Chloride (300.0)	Carbonate, Bicarb. Alk. (310.1)	Perchlorate (314.0)	Cr VI (7196)	TDS (160.1)	pH (150.1)	1,4 Dioxane (8270)	NDMA (1625C)	Remarks
MW-7	MW-7	2/22/02	1147	WATER	HCl	3	X												
|	|	|	|	|	HNO_3	2		X	X	X									
|	|	|	|	|	—	6					X	X	X	X	X	X	X	X	

White – With report
Yellow – Lab copy
Pink – Originator

1727

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 2/22/02 1338 Received by: Date/Time 2/22/02 1338

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: 1727 **Client Name/Project:** Sota Environmental

1. Sample Arrival

Date/Time Received 2/22/02 1338 Date/Time Opened 2/22/02 1338 By (name): [illegible]

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

2. Chain-of-Custody (CoC)

☑ With Samples? ☐ Faxed? ☑ Client has Copy? ☐ Signed, dated? By: _____
☑ Project ID? ☑ Analyses Clear? ☐ Hold Samples? #on Hold _____ # Received 1
☐ 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 4.1 _____ _____ _____ _____ _____

(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: [illegible] Date: 22 Feb 2002 Time: 8:53 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.

58802

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

Sample Login: Check List

02-01727 (1288_ 322) (4858100_ 322)

02/22/02

Part 1: General Information

☐ Company Information	Name:	*SOTA Environmental*
	Address:	*16835 W. Bernardo Dr, Ste. 212 ,San Diego ,CA 92127*
☐ Project Information	Project Description:	*JPL*
	Project #:	*00HW019*
☐ Billing Information	P.O. #:	
	Bill Address:	*16835 W. Bernardo Dr, Ste. 212 ,San Diego ,CA 92127*
	Lab Project ID:	*2002_0002*
	Client Database #:	*01*
☐ Receiving Information	Who Received Sample?	*Kenny*
	Receiving Date/Time:	*02/22/02 1338*
	COC No.	
☐ Shipping Information	Shipping Company	*by Client*
	Packing Information:	*Cooler/Ice Chester*
	Cooler Temperature:	*4.1 °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	MW-7	524.2	02-01727-1-α	W	V	C	40	3	G	022202	N	0	7	☐
	MW-7	Metals	02-01727-1-β	W	P	N	500	1	G	022202	N	0	7	☐
	MW-7	8270	02-01727-1-γ	W	G		1000	2	G	022202	N	0	7	☐
	MW-7	Anion	02-01727-1-δ	W	P		500	1	G	022202	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/SM4500NO3G*	Nitrate (NO_3^-) as N by IC
☐ *300.0*	Chloride Cl^- by IC
☐ *SM2320B*	Carbonate
☐ *SM2320B*	Bicarbonate
☐ *9040/150.1*	pH
☐ *160.1*	Solids, Total Dissolved (TDS)
☐ *206.2/7060*	Arsenic, As, by GFAA
☐ *310.1*	Alkalinity
☐ *PAH-SIM*	PAH (NOAA)

Seq. #	Client"s Sample ID (as given on COC)	Sample Sub-ID	APCL Sample ID	Matrix	524.2	CHROMIUM	PERCHL	NA	K	CA	MG	FE	
1	MW-7	524.2	02-01727-1-α	W	X								☐
	MW-7	Metals	02-01727-1-β	W				X	X	X	X	X	☐
	MW-7	8270	02-01727-1-γ	W									☐
	MW-7	Anion	02-01727-1-δ	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

5884

1	MW-7	524.2	02-01727-1-α	W									☐
	MW-7	Metals	02-01727-1-β	W								X	☐
	MW-7	8270	02-01727-1-γ	W									☐
	MW-7	Anion	02-01727-1-δ	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	MW-7	524.2	02-01727-1-α	W			☐
	MW-7	Metals	02-01727-1-β	W			☐
	MW-7	8270	02-01727-1-γ	W		X	☐
	MW-7	Anion	02-01727-1-δ	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

Level D Data Package Deliverables

VOLATILE ORGANICS

Applied P & Ch Laboratory

588 6

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 #: 801-021727
Collected by: MES
Collected on: 02/22/02

Received: 02/22/02
Extracted: 02/25/02
Tested: 02/22-27/02
Reported: 03/05/02

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

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result MW-7 02-01727-1
ALKALINITY	310.1	mg/L	2	136
BICARBONATE [a]	SM2320B	mg/L	2	136
CARBONATE [a]	SM2320B	mg-$CaCO_3$/L	2	<2
PH	150.1	pH unit	0.01	7.32
SOLIDS, TOTAL DISSOLVED (TDS)	160.1	mg/L	10	305
CHROMIUM (VI)	7196	mg/L	0.01	<0.01
Dilution Factor				50
PERCHLORATE	E314	μg/L	4	4,090
Dilution Factor				10
CHLORIDE CL^-	300.0	mg/L	0.2	70.3
NITRATE AS N	300.0	mg/L	0.04	21.9
SULFATE SO_4^{--}	300.0	mg/L	0.5	102
Dilution Factor				1
ARSENIC	200.9	μg/L	5	2.2J
Dilution Factor				1
CALCIUM	200.7	μg/L	200	55,700
IRON	200.7	μg/L	50	78.4
MAGNESIUM	200.7	μg/L	100	17,800
POTASSIUM	200.7	μg/L	400	2,620
SODIUM	200.7	μg/L	2000	19,100
VOLATILE ORGANIC COMPOUNDS				
Dilution Factor				1
CARBON TETRACHLORIDE	524.2	μg/L	0.5	135 [b]
CHLOROFORM	524.2	μg/L	0.5	13.3
1,1-DICHLOROETHANE	524.2	μg/L	0.5	<0.5
1,2-DICHLOROETHANE	524.2	μg/L	0.5	<0.5
1,1-DICHLOROETHENE	524.2	μg/L	0.5	6.0
TETRACHLOROETHENE	524.2	μg/L	0.5	17.1
TRICHLOROETHENE	524.2	μg/L	0.5	15.4
TRICHLOROFLUOROMETHANE	524.2	μg/L	0.5	0.4J
112TRICHLORO-122TRIFLUOROETHANE	524.2	μg/L	0.5	6.0

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-7 02-01727-1
Dilution Factor				1
1,4-DIOXANE	8270-SIM	μg/L	3	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.
(b) Analyzed with a dilution factor of 5.

Respectfully submitted,

Dominic Lau
Laboratory Director
Applied P & Ch Laboratory

APCL

Applied Physics & Chemistry Laboratory

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

February 27, 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 02-1514 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 #: 801-021514
Collected by: MES/JNT
Collected on: 02/06/02

Received: 02/06/02
Extracted: N/A
Tested: 02/07-14/02
Reported: 02/19/02

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

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result MW-8 02-01514-1
ALKALINITY	310.1	mg/L	2	151
BICARBONATE [a]	SM2320B	mg/L	2	151
CARBONATE [a]	SM2320B	mg-$CaCO_3$/L	2	<2
PH	150.1	pH unit	0.01	7.00
SOLIDS, TOTAL DISSOLVED (TDS)	160.1	mg/L	10	263
CHROMIUM (VI)	7196	mg/L	0.01	<0.01
Dilution Factor				1
PERCHLORATE	E314	μg/L	4	20.1
Dilution Factor				2.5
CHLORIDE CL^-	300.0	mg/L	0.2	17.2
NITRATE AS N	300.0	mg/L	0.04	3.2
SULFATE SO_4^{--}	300.0	mg/L	0.5	41.2
Dilution Factor				1
ARSENIC	200.9	μg/L	5	<5
Dilution Factor				1
CALCIUM	200.7	μg/L	200	49,500
IRON	200.7	μg/L	50	271
MAGNESIUM	200.7	μg/L	100	16,700
POTASSIUM	200.7	μg/L	400	2,530
SODIUM	200.7	μg/L	2000	15,800

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-8 02-01514-1	TB-18 02-01514-2
VOLATILE ORGANIC COMPOUNDS					
Dilution Factor				1	1
CARBON TETRACHLORIDE	524.2	μg/L	0.5	2.2	<0.5
CHLOROFORM	524.2	μg/L	0.5	0.8	<0.5
1,1-DICHLOROETHANE	524.2	μg/L	0.5	<0.5	<0.5
1,2-DICHLOROETHANE	524.2	μg/L	0.5	<0.5	<0.5
1,1-DICHLOROETHENE	524.2	μg/L	0.5	<0.5	<0.5
METHYLENE CHLORIDE	524.2	μg/L	1	-	1
TETRACHLOROETHENE	524.2	μg/L	0.5	<0.5	<0.5
TRICHLOROETHENE	524.2	μg/L	0.5	1.8	<0.5
TRICHLOROFLUOROMETHANE	524.2	μg/L	0.5	0.4J	-
112TRICHLORO-122TRIFLUOROETHANE	524.2	μg/L	0.5	0.6	<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: 02-1514

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/Pasadena, CA/00HW019

For SOTA Environmental

APCL Service No: 02-1514

1. Sample Identification

The sample identifications are listed in the following table:

SOTA Environmental Sample ID	APCL Sample ID
TB-18	02-01514-2
MW-8	02-01514-1

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 (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.

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

Respectfully submitted,

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

Applied P & Ch Laboratory

APCL

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

Chain of Custody

Please Print in pen

Page 1 of 1

Client: SOTA 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)	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-18	TRIP BLANK	2/6/02	1144	WATER	HCl	2	X												
MW-8	MW-8				HCl	9	X												MS/MSD
					HNO_3	2		X	X	X									MS/MSD on 200.8 & 200.9
					—	2					X	X	X	X	X	X			MS/MSD on 7196 & 314.0

White – With report
Yellow – Lab copy
Pink – Originator

1514

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 2/6/02 1642 Received by [signature] Date/Time 2/6/02 14:41

Relinquished by [signature] Date/Time 2/6/02 16:51 Received by Paul K Date/Time 2/7/02 0830

APCL USE ONLY Service # Note:

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

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

Sample Receiving Checklist

APCL ServiceID: 1514 **Client Name/Project:** Sota Environmental

1. Sample Arrival

Date/Time Received 2/6/02 1641 Date/Time Opened 2/7/02 0830 By (name): Paul

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

2. Chain-of-Custody (CoC)

☑ With Samples? ☐ Faxed? ☑ Client has Copy? ☐ Signed, dated? By:
☑ Project ID? ☑ Analyses Clear? ☐ Hold Samples? #on Hold ____ # Received ____
☑ CoC/Docs Zip-Locked under lid? ☐ Compos.#: ___ ☑ #Samples OK?
☐ Discrepancies? ☐ Client notified? ☐ Response (attach docs):

3. Shipping Container/Cooler

☑ Cooler Used? # of 1 Cooled by: ☑ Ice ☐ Blue Ice ☐ Dry Ice ☐ None

Temp °C 2.2

(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: 6 Feb 2002 Time: 9:05 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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058102

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

Sample Login: Check List

02-01514 (1288_ 319) (4858100_ 319)

02/07/02

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:	*02/06/02 1641*
		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-18	524.2	02-01514-2	W	V	C	40	2	G	020602	N	0	7	☐
2	MW-8	524.2	02-01514-1-α	W	V	C	40	9	G	020602	N	0	7	☐
	MW-8	Metals	02-01514-1-β	W	P	N	1000	1	G	020602	N	0	7	☐
	MW-8	300	02-01514-1-γ	W	P		500	2	G	020602	N	0	7	☐

Part 3: Analysis Information

Test Items:

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

Seq. #	Client"s Sample ID (as given on COC)	Sample Sub-ID	APCL Sample ID	Matrix	524.2	CHROMIUM	PERCHL	NA	K	CA	MG	FE	
1	TB-18	524.2	02-01514-2	W	X								☐
2	MW-8	524.2	02-01514-1-α	W	X								☐
	MW-8	Metals	02-01514-1-β	W				X	X	X	X	X	☐
	MW-8	300	02-01514-1-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

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1	TB-18	524.2	02-01514-2	W									☐
2	MW-8	524.2	02-01514-1-α	W									☐
	MW-8	Metals	02-01514-1-β	W								X	☐
	MW-8	300	02-01514-1-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-18	524.2	02-01514-2	W			☐
2	MW-8	524.2	02-01514-1-α	W			☐
	MW-8	Metals	02-01514-1-β	W			☐
	MW-8	300	02-01514-1-γ	W	X		☐

☐ Client"s Requirement: **PLEASE RUN MS/MSD ON SAMPLE (#1)**

☐ **IF ENOUGH SAMPLE**

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

Login By En-Yu Paul Kou

Check By PK

058105

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 02-1355 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 #: 801-021355
Collected by: MES/JNT
Collected on: 01/25/02

Received: 01/25/02
Extracted: N/A
Tested: 01/25-31/02
Reported: 02/06/02

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

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result MW-11-1 02-01355-2	MW-11-2 02-01355-3
ALKALINITY	310.1	mg/L	2	205	166
BICARBONATE [a]	SM2320B	mg/L	2	205	166
CARBONATE [a]	SM2320B	mg-$CaCO_3$/L	2	<2	<2
PH	150.1	pH unit	0.01	7.83	8.09
SOLIDS, TOTAL DISSOLVED (TDS)	160.1	mg/L	10	329	253
Dilution Factor				4	2
CHLORIDE CL^-	300.0	mg/L	0.2	22.7	15.8
NITRATE AS N	300.0	mg/L	0.04	1.1	0.16
SULFATE SO_4^{--}	300.0	mg/L	0.5	48.4	35.8
Dilution Factor				1	1
CALCIUM	200.7	μg/L	200	59,800	43,300
IRON	200.7	μg/L	50	12.4J	53.6
MAGNESIUM	200.7	μg/L	100	19,100	16,800
POTASSIUM	200.7	μg/L	400	3,320	2,940
SODIUM	200.7	μg/L	2000	25,900	22,900

Component Analyzed	Method	Unit	PQL	Analysis Result MW-11-3 02-01355-4	MW-11-4 02-01355-5	MW-11-5 02-01355-6
ALKALINITY	310.1	mg/L	2	162	124	128
BICARBONATE [a]	SM2320B	mg/L	2	162	107	128
CARBONATE [a]	SM2320B	mg-$CaCO_3$/L	2	<2	17.0	<2
PH	150.1	pH unit	0.01	8.13	8.59	8.32
SOLIDS, TOTAL DISSOLVED (TDS)	160.1	mg/L	10	234	166	195
Dilution Factor				2	2	2
CHLORIDE CL^-	300.0	mg/L	0.2	13.3	11.8	13.8
NITRATE AS N	300.0	mg/L	0.04	0.12	0.12	0.12
SULFATE SO_4^{--}	300.0	mg/L	0.5	25.3	7.6	19.8
Dilution Factor				1	1	1
CALCIUM	200.7	μg/L	200	41,700	18,500	21,800
IRON	200.7	μg/L	50	486	59.2	165
MAGNESIUM	200.7	μg/L	100	13,000	12,000	2,030
POTASSIUM	200.7	μg/L	400	2,040	2,180	1,180
SODIUM	200.7	μg/L	2000	23,700	25,000	47,700

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result ER-11 02-01355-1	MW-11-1 02-01355-2	MW-11-2 02-01355-3
ARSENIC	200.9	µg/L	5	1.6J	<5	1.6J
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	<0.5	0.9
1,1-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	524.2	µg/L	1	2	-	-
TETRACHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	<0.5	0.4J	0.5
112TRICHLORO-122TRIFLUOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5

Component Analyzed	Method	Unit	PQL	Analysis Result MW-11-3 02-01355-4	MW-11-4 02-01355-5	MW-11-5 02-01355-6	TB-11 02-01355-7
ARSENIC	200.9	µg/L	5	2.5J	<5	5.0	-
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	-

Component Analyzed	Method	Unit	PQL	Analysis Result MW-11-3 02-01355-4	MW-11-4 02-01355-5	MW-11-5 02-01355-6	TB-11 02-01355-7
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

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-11-3 02-01355-4	MW-11-4 02-01355-5	MW-11-5 02-01355-6	TB-11 02-01355-7
METHYLENE CHLORIDE	524.2	μg/L	1	-	0.8J	-	1J
TETRACHLOROETHENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRICHLOROETHENE	524.2	μg/L	0.5	0.7	0.5J	0.5J	<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