

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result		
				MW-18-4	MW-18-5	Trip Blank
				01-04536-4	01-04536-5	01-04536-6
Hexachlorobutadiene	524.2	µg/L	0.5	<0.5	<0.5	<0.5
Isopropylbenzene (Cumene)	524.2	µg/L	0.5	<0.5	<0.5	<0.5
p-Isopropyltoluene	524.2	µg/L	0.5	<0.5	<0.5	<0.5
Methylene chloride	524.2	µg/L	1	<1	<1	2
Methyl-t-Butyl ether (MTBE)	524.2	µg/L	1	<1	<1	<1
Naphthalene	524.2	µg/L	0.5	<0.5	<0.5	<0.5
n-Propylbenzene	524.2	µg/L	0.5	<0.5	<0.5	<0.5
Styrene	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1,1,2-Tetrachloroethane	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1,2,2-Tetrachloroethane	524.2	µg/L	0.5	<0.5	<0.5	<0.5
Tetrachloroethene	524.2	µg/L	0.5	1.6	<0.5	<0.5
Toluene	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2,3-Trichlorobenzene	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2,4-Trichlorobenzene	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	524.2	µg/L	0.5	<0.5	<0.5	<0.5
Trichloroethene	524.2	µg/L	0.5	1.1	<0.5	<0.5
Trichlorofluoromethane	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2,3-Trichloropropane	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2,4-Trimethylbenzene	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,3,5-Trimethylbenzene	524.2	µg/L	0.5	<0.5	<0.5	<0.5
Vinyl chloride	524.2	µg/L	0.5	<0.5	<0.5	<0.5
o-Xylene	524.2	µg/L	0.5	<0.5	<0.5	<0.5
m/p-Xylene	524.2	µg/L	0.5	<0.5	<0.5	<0.5

PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit

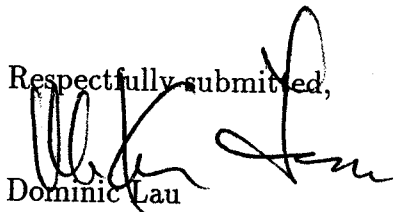
N.D.: Not Detected or less than the practical quantitation limit.

"-": Analysis is not required.

J: Reported between PQL and MDL.

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

Respectfully submitted,


 Dominic Lau
 Laboratory Director
 Applied P & Ch Laboratory

APCL 13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498
Please Print in pen Page 1 of 1

Client: **SOTA ENVIRONMENTAL** Contact: **PAUL JEFFERS** Tel #: **858 485 810** Fax #: **858 485-0812**
Address: **110835 N. Beldorado #212** City: **SAN DIEGO** State: **CA** Zip code: **92121**
Bill to: **SAME**

Project Name/Code: **JPL** Job # **00111019** P.O. #
Project Address: **APCL Quotation #**
Due Date: Regular Rush: ___ days ___ hours Sampled by:

Field Sample ID No.	Sample Description	Date Collected	Sample Matrix	Preservation	# of Containers	Analysis Items	Remarks
MM-18-5		7/5	H ₂ O	Per Lab	4	2, 25, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100	QA/QC
MM-18-4		7/5	H ₂ O	Per Lab	5		REQUIREMENTS
MM-18-3		7/5	H ₂ O	Per Lab	5		EPA LEVEL
MM-18-2		7/5	H ₂ O	Per Lab	5		IV (D)
EE-18		7/5	H ₂ O	Per Lab	5		
TRIP BANK		7/5	H ₂ O	HCl	2		
4536							

QC Requirement: Regular; QA/QC Report; WIP; Raw Data; Extended Raw Data CLP; ACE AFCEE NBSA (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 *7/5/01 11700* Received by *[Signature]* Date/Time *7/5/01 11700*

APCL USE ONLY Service # _____ Note: _____
Clients understand that all terms described in the proposal, 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.
Root-Dir\CUST.DAT\LAB\CHAIN-ROOT.TEX File\CUST.DAT\LAB\CHAIN-ROOT.TEX

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 #: 801-014536 Received: 07/05/01
Collected by: Extracted: N/A
Collected on: 07/05/01 Tested: 07/5-8/8/01
Revised: 08/09/01

Sample Description:
Project Description: 00HW019 JPL

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result		
				ER-18	MW-18-2	MW-18-3
				01-04536-1	01-04536-2	01-04536-3
Perchlorate	E314	µg/L	4	<4	<4	<4
Chromium (VI)	7196	mg/L	0.01	<0.01	<0.01	<0.01
Volatile Organic Compounds						
Dilution Factor				1 (a)	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	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
Tetrachloroethene	524.2	µg/L	0.5	<0.5	<0.5	<0.5
Trichloroethene	524.2	µg/L	0.5	<0.5	0.8	0.4J
1,1,2-Trichlorotrifluoroethane	524.2	µg/L	1	<1	<1	<1

Component Analyzed	Method	Unit	PQL	Analysis Result		
				MW-18-4	MW-18-5	Trip Blank
				01-04536-4	01-04536-5	01-04536-6
Perchlorate	E314	µg/L	4	25	<4	-
Chromium (VI)	7196	mg/L	0.01	<0.01	<0.01	-
Volatile Organic Compounds						
Dilution Factor				1	1	1
Carbon tetrachloride	524.2	µg/L	0.5	3.7	<0.5	<0.5
Chloroform	524.2	µg/L	0.5	0.7	<0.5	<0.5
1,1-Dichloroethane	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-Dichloroethane	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	524.2	µg/L	0.5	<0.5	<0.5	<0.5
Methylene chloride	524.2	µg/L	1	-	-	2

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result		
				MW-18-4 01-04536-4	MW-18-5 01-04536-5	Trip Blank 01-04536-6
Tetrachloroethene	524.2	µg/L	0.5	1.6	<0.5	<0.5
Trichloroethene	524.2	µg/L	0.5	1.1	<0.5	<0.5
1,1,2-Trichlorotrifluoroethane	524.2	µg/L	1	<1	<1	<1

PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit

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

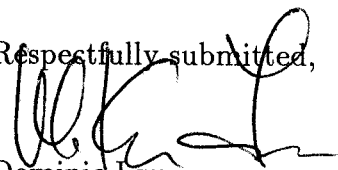
"-": Analysis is not required.

J: Reported between PQL and MDL.

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

(a) Re-analyzed on 08/08/01.

Respectfully submitted,



Dominic Lau

Laboratory Director

Applied P & Ch Laboratory

Advanced Technology Laboratories

Print Date: 8/20/01

CLIENT: Applied P & Ch Laboratories
Lab Order: 052555
Project: JPL
Lab ID: 052555-001A

Client Sample ID: MW-18-4
Collection Date: 7/5/01 2:15:00 PM
Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP-MS METALS		EPA 200.8				
RunID: ICP4_010816C	BatchID: 5430			PrepDate: 8/16/01		Analyst: NS
Chromium	5.3	5.0		µg/L	1.0	8/16/01

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
DO - Surrogate Diluted Out
S - Spike/Surrogate outside of limits due to matrix interference.
H - Samples exceeding analytical holding time
E - Value above quantitation range
M - Not Monitored. Highly Reactive

Initials: RA

013



Advanced Technology Laboratories

Print Date: 8/20/01

CLIENT: Applied P & Ch Laboratories Client Sample ID: MW-18-3
Lab Order: 052555
Project: JPL Collection Date: 7/5/01 2:50:00 PM
Lab ID: 052555-002A Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP-MS METALS		EPA 200.8				
RunID: ICP4_010816C	BatchID: 5430			PrepDate: 8/16/01		Analyst: NS
Chromium	6.5	5.0		µg/L	1.0	8/16/01

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike/Surrogate outside of limits due to matrix interference.
J - Analyte detected below quantitation limits H - Samples exceeding analytical holding time
B - Analyte detected in the associated Method Blank E - Value above quantitation range Initials: RA
DO - Surrogate Diluted Out M - Not Monitored. Highly Reactive 0184



Advanced Technology Laboratories

Print Date: 8/20/01

CLIENT: Applied P & Ch Laboratories

Client Sample ID: MW-18-2

Lab Order: 052555

Project: JPL

Collection Date: 7/5/01 3:15:00 PM

Lab ID: 052555-003A

Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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ICP-MS METALS

EPA 200.8

RunID: ICP4_010816C

BatchID: 5430

PrepDate: 8/16/01

Analyst: NS

Chromium

ND

5.0

µg/L

1.0

8/16/01

Qualifiers: ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interference.

H - Samples exceeding analytical holding time

E - Value above quantitation range

M - Not Monitored. Highly Reactive

Initials: RA

015



Advanced Technology Laboratories

Print Date: 8/20/01

CLIENT: Applied P & Ch Laboratories

Client Sample ID: ER-18

Lab Order: 052555

Project: JPL

Collection Date: 7/5/01 2:35:00 PM

Lab ID: 052555-004A

Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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ICP-MS METALS

EPA 200.8

RunID: ICP4_010816C

BatchID: 5430

PrepDate: 8/16/01

Analyst: NS

Chromium

ND

5.0

µg/L

1.0

8/16/01

Qualifiers: ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interference.

H - Samples exceeding analytical holding time

E - Value above quantitation range

M - Not Monitored. Highly Reactive

Initials: RA

OTC



Advanced Technology Laboratories

Print Date: 8/20/01

CLIENT: Applied P & Ch Laboratories
Lab Order: 052555
Project: JPL
Lab ID: 052555-005A

Client Sample ID: MW-17-4
Collection Date: 7/6/01 11:25:00 AM
Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP-MS METALS		EPA 200.8				
RunID: ICP4_010816C	BatchID: 5430			PrepDate: 8/16/01		Analyst: NS
Chromium	ND	5.0		µg/L	1.0	8/16/01

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interference.
H - Samples exceeding analytical holding time
E - Value above quantitation range
M - Not Monitored. Highly Reactive

Initials: RA



Advanced Technology Laboratories

Print Date: 8/20/01

CLIENT: Applied P & Ch Laboratories
Lab Order: 052555
Project: JPL
Lab ID: 052555-006A

Client Sample ID: MW-17-3
Collection Date: 7/6/01 11:55:00 AM
Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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ICP-MS METALS

EPA 200.8

RunID: ICP4_010816C	BatchID: 5430			PrepDate: 8/16/01		Analyst: NS
Chromium	5.0	5.0		µg/L	1.0	8/16/01

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interference.
H - Samples exceeding analytical holding time
E - Value above quantitation range
M - Not Monitored. Highly Reactive

Initials: RA

018



Advanced Technology
Laboratories

3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Print Date: 8/20/01

CLIENT: Applied P & Ch Laboratories
Lab Order: 052555
Project: JPL
Lab ID: 052555-007A

Client Sample ID: M-17-2
Collection Date: 7/6/01 12:25:00 PM
Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP-MS METALS		EPA 200.8				
RunID: ICP4_010816C	BatchID: 5430			PrepDate: 8/16/01		Analyst: NS
Chromium	ND	5.0		µg/L	1.0	8/16/01

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interference.
H - Samples exceeding analytical holding time
E - Value above quantitation range
M - Not Monitored. Highly Reactive

Initials: RA

019



Advanced Technology Laboratories

Print Date: 8/20/01

CLIENT: Applied P & Ch Laboratories

Client Sample ID: ER-17

Lab Order: 052555

Project: JPL

Collection Date: 7/6/01 11:35:00 AM

Lab ID: 052555-008A

Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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ICP-MS METALS

EPA 200.8

RunID: ICP4_010816C

BatchID: 5430

PrepDate: 8/16/01

Analyst: NS

Chromium

ND

5.0

µg/L

1.0

8/16/01

Qualifiers: ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interference.

H - Samples exceeding analytical holding time

E - Value above quantitation range

M - Not Monitored. Highly Reactive

Initials: RA
020



Advanced Technology
Laboratories

3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Print Date: 8/20/01

CLIENT: Applied P & Ch Laboratories Client Sample ID: MW-20-5
Lab Order: 052555
Project: JPL Collection Date: 7/11/01 12:35:00 PM
Lab ID: 052555-011A Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP-MS METALS		EPA 200.8				
RunID: ICP4_010816C	BatchID: 5430			PrepDate: 8/16/01		Analyst: NS
Chromium	ND	5.0		µg/L	1.0	8/16/01

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike/Surrogate outside of limits due to matrix interference.
J - Analyte detected below quantitation limits H - Samples exceeding analytical holding time
B - Analyte detected in the associated Method Blank E - Value above quantitation range Initials: RA
DO - Surrogate Diluted Out M - Not Monitored. Highly Reactive



023

Advanced Technology Laboratories

Print Date: 8/20/01

CLIENT: Applied P & Ch Laboratories
Lab Order: 052555
Project: JPL
Lab ID: 052555-018A

Client Sample ID: MW-3-4
Collection Date: 7/13/01 9:25:00 AM
Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP-MS METALS		EPA 200.8				
RunID: ICP4_010816C	BatchID: 5430			PrepDate: 8/16/01		Analyst: NS
Chromium	ND	5.0		µg/L	1.0	8/16/01

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interference.
H - Samples exceeding analytical holding time
E - Value above quantitation range
M - Not Monitored. Highly Reactive

Initials: RA



Advanced Technology Laboratories

Print Date: 8/20/01

CLIENT: Applied P & Ch Laboratories
Lab Order: 052555
Project: JPL
Lab ID: 052555-019A

Client Sample ID: MW-3-3
Collection Date: 7/13/01 9:55:00 AM
Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP-MS METALS		EPA 200.8				
RunID: ICP4_010816C	BatchID: 5430			PrepDate: 8/16/01		Analyst: NS
Chromium	ND	5.0		µg/L	1.0	8/16/01

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interference.
H - Samples exceeding analytical holding time
E - Value above quantitation range
M - Not Monitored. Highly Reactive

Initials: RA

2031



Advanced Technology
Laboratories

3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Print Date: 8/20/01

CLIENT: Applied P & Ch Laboratories
Lab Order: 052555
Project: JPL
Lab ID: 052555-020A

Client Sample ID: MW-3-2
Collection Date: 7/13/01 10:20:00 AM
Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP-MS METALS		EPA 200.8				
RunID: ICP4_010816C	BatchID: 5430			PrepDate: 8/16/01		Analyst: NS
Chromium	ND	5.0		µg/L	1.0	8/16/01

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
DO - Surrogate Diluted Out
S - Spike/Surrogate outside of limits due to matrix interference.
H - Samples exceeding analytical holding time
E - Value above quantitation range
M - Not Monitored. Highly Reactive

Initials: RA
032



Advanced Technology Laboratories

Print Date: 8/20/01

CLIENT: Applied P & Ch Laboratories
Lab Order: 052555
Project: JPL
Lab ID: 052555-021A

Client Sample ID: ER-3
Collection Date: 7/13/01 9:30:00 AM
Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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ICP-MS METALS		EPA 200.8				
RunID: ICP4_010816C	BatchID: 5430			PrepDate: 8/16/01		Analyst: NS
Chromium	ND	5.0		µg/L	1.0	8/16/01

Qualifiers:	ND - Not Detected at the Reporting Limit	S - Spike/Surrogate outside of limits due to matrix interference.
	J - Analyte detected below quantitation limits	H - Samples exceeding analytical holding time
	B - Analyte detected in the associated Method Blank	E - Value above quantitation range
	DO - Surrogate Diluted Out	M - Not Monitored. Highly Reactive

Initials: RA
083



Advanced Technology Laboratories

Print Date: 8/20/01

CLIENT: Applied P & Ch Laboratories
Lab Order: 052555
Project: JPL
Lab ID: 052555-022A

Client Sample ID: MW-20-4
Collection Date: 7/16/01 10:35:00 AM
Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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ICP-MS METALS				EPA 200.8		
RunID: ICP4_010816D	BatchID: 5432			PrepDate: 8/16/01		Analyst: NS
Chromium	ND	5.0		µg/L	1.0	8/16/01

034

Qualifiers:	ND - Not Detected at the Reporting Limit	S - Spike/Surrogate outside of limits due to matrix interference.
	J - Analyte detected below quantitation limits	H - Samples exceeding analytical holding time
	B - Analyte detected in the associated Method Blank	E - Value above quantitation range
	DO - Surrogate Diluted Out	M - Not Monitored. Highly Reactive

Initials: RA
23



Advanced Technology Laboratories

Print Date: 8/20/01

CLIENT: Applied P & Ch Laboratories
Lab Order: 052555
Project: JPL
Lab ID: 052555-023A

Client Sample ID: MW-20-3
Collection Date: 7/16/01 11:10:00 AM
Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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ICP-MS METALS

EPA 200.8

RunID: ICP4_010816D BatchID: 5432 PrepDate: 8/16/01 Analyst: NS

Chromium ND 5.0 µg/L 1.0 8/16/01

035

Qualifiers:	ND - Not Detected at the Reporting Limit	S - Spike/Surrogate outside of limits due to matrix interference.
	J - Analyte detected below quantitation limits	H - Samples exceeding analytical holding time
	B - Analyte detected in the associated Method Blank	E - Value above quantitation range
	DO - Surrogate Diluted Out	M - Not Monitored. Highly Reactive

Initials: RA



Advanced Technology Laboratories

Print Date: 8/20/01

CLIENT: Applied P & Ch Laboratories
Lab Order: 052555
Project: JPL
Lab ID: 052555-024A

Client Sample ID: MW-20-2
Collection Date: 7/16/01 11:50:00 AM
Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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ICP-MS METALS				EPA 200.8		
RunID: ICP4_010816D	BatchID: 5432			PrepDate: 8/16/01		Analyst: NS
Chromium	ND	5.0		µg/L	1.0	8/16/01

030

Qualifiers:	ND - Not Detected at the Reporting Limit	S - Spike/Surrogate outside of limits due to matrix interference.	
	J - Analyte detected below quantitation limits	H - Samples exceeding analytical holding time	
	B - Analyte detected in the associated Method Blank	E - Value above quantitation range	Initials: _____
	DO - Surrogate Diluted Out	M - Not Monitored. Highly Reactive	25



Advanced Technology Laboratories

Print Date: 8/20/01

CLIENT: Applied P & Ch Laboratories
 Lab Order: 052555
 Project: JPL
 Lab ID: 052555-025A

Client Sample ID: MW-20-1
 Collection Date: 7/16/01 12:25:00 PM
 Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP-MS METALS		EPA 200.8				
RunID: ICP4_010816D	BatchID: 5432			PrepDate: 8/16/01		Analyst: NS
Chromium	ND	5.0		µg/L	1.0	8/16/01

037

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interference.
 H - Samples exceeding analytical holding time
 E - Value above quantitation range
 M - Not Monitored. Highly Reactive

Initials: RA



Advanced Technology Laboratories

Print Date: 8/20/01

CLIENT: Applied P & Ch Laboratories
 Lab Order: 052555
 Project: JPL
 Lab ID: 052555-026A

Client Sample ID: ER-20
 Collection Date: 7/16/01 11:25:00 AM
 Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP-MS METALS		EPA 200.8				
RunID: ICP4_010816D	BatchID: 5432			PrepDate: 8/16/01		Analyst: NS
Chromium	ND	5.0		µg/L	1.0	8/16/01

038

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike/Surrogate outside of limits due to matrix interference.
 J - Analyte detected below quantitation limits H - Samples exceeding analytical holding time
 B - Analyte detected in the associated Method Blank E - Value above quantitation range **Initials: RA**
 DO - Surrogate Diluted Out M - Not Monitored. Highly Reactive



Advanced Technology Laboratories

Print Date: 8/20/01

CLIENT: Applied P & Ch Laboratories
Lab Order: 052557
Project: JPL
Lab ID: 052557-001A

Client Sample ID: MW-22-2
Collection Date: 7/19/01 11:15:00 AM
Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP-MS METALS		EPA 200.8				
RunID: ICP4_010816A	BatchID: 5433			PrepDate: 8/16/01		Analyst: NS
Chromium	ND	5.0		µg/L	1.0	8/16/01

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interference.
H - Samples exceeding analytical holding time
E - Value above quantitation range
M - Not Monitored. Highly Reactive

Initials: RA

013



Advanced Technology Laboratories

Print Date: 8/20/01

CLIENT: Applied P & Ch Laboratories
Lab Order: 052557
Project: JPL
Lab ID: 052557-002A

Client Sample ID: MW-22-1
Collection Date: 7/19/01 12:00:00 PM
Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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ICP-MS METALS				EPA 200.8		
RunID: ICP4_010816A	BatchID: 5433			PrepDate: 8/16/01		Analyst: NS
Chromium	ND	5.0		µg/L	1.0	8/16/01

Qualifiers:	ND - Not Detected at the Reporting Limit	S - Spike/Surrogate outside of limits due to matrix interference.
	J - Analyte detected below quantitation limits	H - Samples exceeding analytical holding time
	B - Analyte detected in the associated Method Blank	E - Value above quantitation range
	DO - Surrogate Diluted Out	M - Not Monitored. Highly Reactive

Initials: RA

014



Advanced Technology Laboratories

Print Date: 8/20/01

CLIENT: Applied P & Ch Laboratories
Lab Order: 052557
Project: JPL
Lab ID: 052557-003A

Client Sample ID: ER-22
Collection Date: 7/19/01 10:30:00 PM
Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP-MS METALS		EPA 200.8				
RunID: ICP4_010816A	BatchID: 5433			PrepDate: 8/16/01		Analyst: NS
Chromium	ND	5.0		µg/L	1.0	8/16/01

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interference.
H - Samples exceeding analytical holding time
E - Value above quantitation range
M - Not Monitored. Highly Reactive

Initials: RA

015



Advanced Technology Laboratories

Print Date: 8/20/01

CLIENT: Applied P & Ch Laboratories

Client Sample ID: ER-11

Lab Order: 052557

Project: JPL

Collection Date: 7/20/01 9:40:00 AM

Lab ID: 052557-005A

Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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ICP-MS METALS

EPA 200.8

RunID: ICP4_010816A

BatchID: 5433

PrepDate: 8/16/01

Analyst: NS

Chromium

ND

5.0

µg/L

1.0

8/16/01

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike/Surrogate outside of limits due to matrix interference.

J - Analyte detected below quantitation limits

H - Samples exceeding analytical holding time

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

Initials: RA

DO - Surrogate Diluted Out

M - Not Monitored. Highly Reactive



017

Advanced Technology Laboratories

Print Date: 8/20/01

CLIENT: Applied P & Ch Laboratories

Client Sample ID: MW-11-3

Lab Order: 052557

Project: JPL

Collection Date: 7/20/01 10:53:00 AM

Lab ID: 052557-006A

Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP-MS METALS		EPA 200.8				
RunID: ICP4_010816A	BatchID: 5433			PrepDate: 8/16/01		Analyst: NS
Chromium	ND	5.0		µg/L	1.0	8/16/01

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interference.
 H - Samples exceeding analytical holding time
 E - Value above quantitation range
 M - Not Monitored. Highly Reactive

Initials: RA



1715

Advanced Technology Laboratories

Print Date: 8/20/01

CLIENT: Applied P & Ch Laboratories
Lab Order: 052557
Project: JPL
Lab ID: 052557-007A

Client Sample ID: MW-11-2
Collection Date: 7/20/01 11:16:00 AM
Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP-MS METALS		EPA 200.8				
RunID: ICP4_010816A	BatchID: 5433			PrepDate: 8/16/01		Analyst: NS
Chromium	ND	5.0		µg/L	1.0	8/16/01

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
DO - Surrogate Diluted Out
S - Spike/Surrogate outside of limits due to matrix interference.
H - Samples exceeding analytical holding time
E - Value above quantitation range
M - Not Monitored. Highly Reactive

Initials: RA



1819

Advanced Technology Laboratories

Print Date: 8/20/01

CLIENT: Applied P & Ch Laboratories
Lab Order: 052557
Project: JPL
Lab ID: 052557-008A

Client Sample ID: MW-11-1
Collection Date: 7/20/01 11:42:00 AM
Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP-MS METALS		EPA 200.8				
RunID: ICP4_010816A	BatchID: 5433			PrepDate: 8/16/01		Analyst: NS
Chromium	ND	5.0		µg/L	1.0	8/16/01

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
DO - Surrogate Diluted Out
S - Spike/Surrogate outside of limits due to matrix interference.
H - Samples exceeding analytical holding time
E - Value above quantitation range
M - Not Monitored. Highly Reactive

Initials: RA

020



Advanced Technology Laboratories

Print Date: 8/20/01

CLIENT: Applied P & Ch Laboratories
Lab Order: 052557
Project: JPL
Lab ID: 052557-009A

Client Sample ID: ER-12
Collection Date: 7/25/01 11:00:00 AM
Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP-MS METALS		EPA 200.8				
RunID: ICP4_010816A	BatchID: 5433			PrepDate: 8/16/01		Analyst: NS
Chromium	ND	5.0		µg/L	1.0	8/16/01

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interference.
H - Samples exceeding analytical holding time
E - Value above quantitation range
M - Not Monitored. Highly Reactive

Initials: RA



Advanced Technology
Laboratories

3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

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021

Advanced Technology Laboratories

Print Date: 8/20/01

CLIENT: Applied P & Ch Laboratories
Lab Order: 052557
Project: JPL
Lab ID: 052557-010A

Client Sample ID: MW-12-3
Collection Date: 7/25/01 12:16:00 PM
Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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ICP-MS METALS				EPA 200.8		
RunID: ICP4_010816A	BatchID: 5433			PrepDate: 8/16/01		Analyst: NS
Chromium	ND	5.0		µg/L	1.0	8/16/01

Qualifiers:	ND - Not Detected at the Reporting Limit	S - Spike/Surrogate outside of limits due to matrix interference.
	J - Analyte detected below quantitation limits	H - Samples exceeding analytical holding time
	B - Analyte detected in the associated Method Blank	E - Value above quantitation range
	DO - Surrogate Diluted Out	M - Not Monitored. Highly Reactive

Initials: RA
11/22



Advanced Technology Laboratories

Print Date: 8/20/01

CLIENT: Applied P & Ch Laboratories
Lab Order: 052557
Project: JPL
Lab ID: 052557-011A

Client Sample ID: MW-12-2
Collection Date: 7/25/01 12:45:00 PM
Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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ICP-MS METALS		EPA 200.8				
RunID: ICP4_010816A	BatchID: 5433		PrepDate: 8/16/01		Analyst: NS	
Chromium	5.0	5.0	µg/L	1.0	8/16/01	

Qualifiers:	ND - Not Detected at the Reporting Limit	S - Spike/Surrogate outside of limits due to matrix interference.
	J - Analyte detected below quantitation limits	H - Samples exceeding analytical holding time
	B - Analyte detected in the associated Method Blank	E - Value above quantitation range
	DO - Surrogate Diluted Out	M - Not Monitored. Highly Reactive

Initials: RA



023

Advanced Technology Laboratories

Print Date: 8/20/01

CLIENT: Applied P & Ch Laboratories

Client Sample ID: MW-12-1

Lab Order: 052557

Project: JPL

Collection Date: 7/25/01 1:18:00 PM

Lab ID: 052557-012A

Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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ICP-MS METALS

EPA 200.8

RunID: ICP4_010816A

BatchID: 5433

PrepDate: 8/16/01

Analyst: NS

Chromium

8.8

5.0

µg/L

1.0

8/16/01

Qualifiers: ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interference.

H - Samples exceeding analytical holding time

E - Value above quantitation range

M - Not Monitored. Highly Reactive

Initials: RA

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Advanced Technology
Laboratories

3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Print Date: 8/20/01

CLIENT: Applied P & Ch Laboratories
 Lab Order: 052557
 Project: JPL
 Lab ID: 052557-013A

Client Sample ID: ER-24
 Collection Date: 7/26/01 11:25:00 AM
 Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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ICP-MS METALS		EPA 200.8				
RunID: ICP4_010816A	BatchID: 5433			PrepDate: 8/16/01		Analyst: NS
Chromium	ND	5.0		µg/L	1.0	8/16/01

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interference.
 H - Samples exceeding analytical holding time
 E - Value above quantitation range
 M - Not Monitored. Highly Reactive

Initials: RA



025

Advanced Technology Laboratories

Print Date: 8/20/01

CLIENT: Applied P & Ch Laboratories
 Lab Order: 052557
 Project: JPL
 Lab ID: 052557-014A

Client Sample ID: MW-24-4
 Collection Date: 7/26/01 11:50:00 AM
 Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP-MS METALS		EPA 200.8				
RunID: ICP4_010816A	BatchID: 5433			PrepDate: 8/16/01		Analyst: NS
Chromium	ND	5.0		µg/L	1.0	8/16/01

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 DO - Surrogate Diluted Out
 S - Spike/Surrogate outside of limits due to matrix interference.
 H - Samples exceeding analytical holding time
 E - Value above quantitation range
 M - Not Monitored. Highly Reactive

Initials: RA

