

Applied P & Ch Laboratories
Project: JPL GW Mon. 4-Q03, 04.4428.10
ATL Work Order: 065794

0001



Advanced Technology
Laboratories

3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

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0002



CLIENT: Applied P & Ch Laboratories
Project: JPL GW Mon. 4-Q03, 04-4428.10
Lab Order: 065794

CASE NARRATIVE

Results were J-Flag. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.

QC Batch R32644 (EPA 200.8)

Matrix Spike (MS) and /or Matrix Spike Duplicate (MSD) are outside recovery criteria; however, the analytical batch was validated by the Laboratory Control Sample (LCS).

QC Batch R32645 (EPA 200.8)

Matrix Spike (MS) and /or Matrix Spike Duplicate (MSD) are outside recovery criteria; however, the analytical batch was validated by the Laboratory Control Sample (LCS).



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

Subcontract Chain of Custody

Please Print in pen Page 1 of 3

Subcontract Lab: ATL Contact: Puri Tel #: (562) 989-4045 Fax #: (562) 989-4040
Address: 3275 Walnut Avenue City: Signal Hill State: CA Zip code: 90807
APCL Client#: 03-6063 APCL Contact: Kenny Chan
Project Name/Code: JPL GW Mon. 4-003 Job #: 04-4428-10
BILL TO APCL Sub Quotation #

Field Sample ID No.	Sample Description	Date Collected	Sample Matrix	Preservation	# of Containers	Analysis	Items	White - With report Yellow - Lab copy Pink - Originator	Remarks
MW-21-5		103003 0818	W	HNO ₃	1				
MW-21-4		103003 0843	W	HNO ₃	2				
MW-21-3		103003 0924	W	HNO ₃	1				Level 4 pkg
MW-21-2		103003 0945	W	HNO ₃	1				← NS/MSD and EDD
MW-21-1		103003 1011	W	HNO ₃	1				
EB-7-10-30-03		103003 1016	W	HNO ₃	1				
MW-3-5		110303 0805	W	HNO ₃	1				
MW-3-4		110303 0829	W	HNO ₃	1				
MW-3-3		110303 0849	W	HNO ₃	1				
EB-8-11-3-03		110303 0923	W	HNO ₃	1				
MW-17-5		110403 0958	W	HNO ₃	1				
MW-17-4		110403 1022	W	HNO ₃	1				
MW-17-3		110403 1046	W	HNO ₃	1				
MW-17-2		110403 1128	W	HNO ₃	1				
MW-17-1		110403 1148	W	HNO ₃	1				

QC Requirement: ☒ Regular; ☐ QA/QC Report; ☐ WIP; ☐ Raw Data; ☐ Extended Raw Data ☐ CLP; ☐ ACE ☐ AFCEE ☒ NTESSA D (E, C or D); ☐ Other 300 (Please specify)
Sample Disposal: ☐ Return ☐ Disposal by APCL ☐ Hold for days after receiving date.
Sample Conditions: ☐ Intact; ☐ Broken. Cooler Seal: ☒ Intact; ☐ Broken; ☐ None. Tag # Temperature: ☐ Room ☒ Cold (1.4 °C)
Relinquished by [Signature] Date/Time 11/13/1000 Received by MMW Date/Time 11/13/10
Relinquished by Date/Time Received by Date/Time
APCL USE ONLY Service #
Note:
Client 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 resources if the client fails to meet the terms of the contract.

Applied P & Ch Laboratory

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

Subcontract Chain of Custody

Please Print in pen Page 2 of 3

Subcontract Lab: ATL Contact: Puri Tel #: (562) 989-4045 Fax #: (562) 989-4040
Address: 3275 Walnut Avenue City: Signal Hill State: CA Zip code: 90807
APCL Client: #03-6063 APCL Contact: Kenny Chan
Project Name/Code: JPL GW Mon. 4-Q03 Job # 04-2428-00
BILL TO APCL

Field Sample ID No.	Sample Description	Date Collected	Sample Matrix	Preservation	# of Containers	Analysis Items	White - With report Yellow - Lab copy Pink - Originator	Remarks
	Dupe-5-A-Q03	110403	W	HND3	1			
	MW-14-5	110403	W	HND3	1			Level 4 pkg
	MW-14-4	110403	W	HND3	1			and EDD
	MW-14-3	110403	W	HND3	1			
	MW-14-2	110403	W	HND3	1			
	MW-14-1	110403	W	HND3	1			
	EB-9-11-4-03	110403	W	HND3	1			
	MW-10	110603	W	HND3	1			
	MW-5	110603	W	HND3	2			
	MW-8	110603	W	HND3	1			
	Dupe-7-4-Q03	110703	W	HND3	1			
	MW-13	110703	W	HND3	2			
	MW-6	110703	W	HND3	1			
	MW-15	110703	W	HND3	1			
	Dupe-2-4-Q03	110703	W	HND3	1			

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

Sample Disposal: ☐ Return ☐ Disposal by APCL ☐ Hold for _____ days after receiving date.

Sample Conditions: ☐ Intact; ☐ Broken. Cooler Seal: ☐ Intact; ☐ Broken; ☐ None. Tag # _____

Relinquished by _____ Date/Time 11/13/2000 Received by Ken Chan Date/Time 11/13/2000

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

APCL USE ONLY Service # _____

Note: _____

Client's 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.

Subcontract Chain of Custody

13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1495

Page 3 of 3

Subcontract Lab: ATL Contact: Puri
Address: 3275 Walnut Avenue City: Signal Hill Tel #: (562) 989-4045 Fax #: (562) 989-4040
APCOL Client: #103-6063 APCOL Contract: Kenny Chan State: CA Zip code: 90807

Project Name/Code		JPL GW Mon. 4-QQ3		Job # 04-4428-M6		Analysis Items	
BILL TO APCOL				09			
				White - With react			

Sub Quotation # _____

Due Date: ☒ Regular ☐ Rush: _____ days _____ hours

Sampled by: J. R.

White - With report

Yellow - Lab copy

[illegible]

QC Requirement:	☐ Regular;	☐ QA/QC Report;	☐ WIP;	☐ Raw Data;	☐ Extended Raw Data	☐ CLP;	☐ ACE	☐ AFCEE	☒ NIEESA	☐ (E, C or D);	☒ Other	<u>300</u>	(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	<u>11/13 / 0000</u>		Received by	<u>CRAMER</u>		Date/Time		<u>11/13 / 12:16</u>		
Relinquished by			Date/Time	<u>/</u>		Received by			Date/Time		<u>/</u>		
APCCL USE ONLY													Service #

Note:

NOTE: Clients understand that all terms described in the proposals, quotations for this project, and/or the general terms provided in the current APOL price schedules will be followed. APOL to terminate its service or withhold delivery of any amounts is a "NOT A CONTRACT".

Advanced Technology Laboratories

Date: 19-Nov-03

CLIENT: Applied P & Ch Laboratories
Project: JPL GW Mon. 4-Q03, 04-4428.10
Lab Order: 065794
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
065794-001A	MW-21-5	Water	10/30/2003	11/12/2003	11/19/2003
065794-002A	MW-21-4	Water	10/30/2003	11/12/2003	11/19/2003
065794-003A	MW-21-3	Water	10/30/2003	11/12/2003	11/19/2003
065794-004A	MW-21-2	Water	10/30/2003	11/12/2003	11/19/2003
065794-005A	MW-21-1	Water	10/30/2003	11/12/2003	11/19/2003
065794-006A	EB-7-10-30-03	Water	10/30/2003	11/12/2003	11/19/2003
065794-007A	MW-3-5	Water	11/3/2003	11/12/2003	11/19/2003
065794-008A	MW-3-4	Water	11/3/2003	11/12/2003	11/19/2003
065794-009A	MW-3-3	Water	11/3/2003	11/12/2003	11/19/2003
065794-010A	EB-8-11-3-03	Water	11/3/2003	11/12/2003	11/19/2003
065794-011A	MW-17-5	Water	11/4/2003	11/12/2003	11/19/2003
065794-012A	MW-17-4	Water	11/4/2003	11/12/2003	11/19/2003
065794-013A	MW-17-3	Water	11/4/2003	11/12/2003	11/19/2003
065794-014A	MW-17-2	Water	11/4/2003	11/12/2003	11/19/2003
065794-015A	MW-17-1	Water	11/4/2003	11/12/2003	11/19/2003
065794-016A	Dupe-5-4-Q03	Water	11/4/2003	11/12/2003	11/19/2003
065794-017A	MW-14-5	Water	11/4/2003	11/12/2003	11/19/2003
065794-018A	MW-14-4	Water	11/4/2003	11/12/2003	11/19/2003
065794-019A	MW-14-3	Water	11/4/2003	11/12/2003	11/19/2003
065794-020A	MW-14-2	Water	11/4/2003	11/12/2003	11/19/2003
065794-021A	MW-14-1	Water	11/4/2003	11/12/2003	11/19/2003
065794-022A	EB-9-11-4-03	Water	11/4/2003	11/12/2003	11/19/2003
065794-023A	MW-10	Water	11/6/2003	11/12/2003	11/19/2003
065794-024A	MW-5	Water	11/6/2003	11/12/2003	11/19/2003
065794-025A	MW-8	Water	11/6/2003	11/12/2003	11/19/2003
065794-026A	Dupe-7-4-Q03	Water	11/6/2003	11/12/2003	11/19/2003
065794-027A	MW-13	Water	11/7/2003	11/12/2003	11/19/2003
065794-028A	MW-6	Water	11/7/2003	11/12/2003	11/19/2003
065794-029A	MW-15	Water	11/7/2003	11/12/2003	11/19/2003



CLIENT: Applied P & Ch Laboratories
Project: JPL GW Mon. 4-Q03, 04-4428.10
Lab Order: 065794
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
065794-030A	Dupe-2-4-Q03	Water	11/7/2003	11/12/2003	11/19/2003
065794-031A	MW-16	Water	11/10/2003	11/12/2003	11/19/2003
065794-032A	MW-7	Water	11/10/2003	11/12/2003	11/19/2003
065794-033A	MW-1	Water	11/10/2003	11/12/2003	11/19/2003
065794-034A	MW-9	Water	11/5/2003	11/12/2003	11/19/2003
065794-035A	MW-3-2	Water	11/5/2003	11/12/2003	11/19/2003
065794-036A	MW-3-1	Water	11/5/2003	11/12/2003	11/19/2003



Advanced Technology Laboratories

Date: 19-Nov-03

CLIENT: Applied P & Ch Laboratories

Client Sample ID: MW-21-5

Lab Order: 065794

Project: JPL GW Mon. 4-Q03, 04-4428.10

Collection Date: 10/30/2003 8:18:00 AM

Lab ID: 065794-001A

Matrix: WATER

Analyte	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
ICP-MS METALS			EPA 200.8			Analyst: NS	
RunID: ICP4_031114A	QC Batch:	R32644	PrepDate:				
Chromium	4.0		0.11	1.0	µg/L	1	11/14/2003 10:40:24 A

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H-Samples exceed holding time

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Results are wet unless otherwise specified

0010



Advanced Technology
Laboratories

3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 19-Nov-03

CLIENT: Applied P & Ch Laboratories

Client Sample ID: MW-21-4

Lab Order: 065794

Project: JPL GW Mon. 4-Q03, 04-4428.10

Collection Date: 10/30/2003 8:43:00 AM

Lab ID: 065794-002A

Matrix: WATER

Analyte	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
ICP-MS METALS			EPA 200.8			Analyst: NS	
RunID: ICP4_031114A	QC Batch:	R32644	PrepDate:				
Chromium	4.3		0.11	1.0	µg/L	1	11/14/2003 10:42:53 A

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H-Samples exceed holding time

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Results are wet unless otherwise specified



Advanced Technology
Laboratories

3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

0011

Advanced Technology Laboratories

Date: 19-Nov-03

CLIENT: Applied P & Ch Laboratories

Client Sample ID: MW-21-3

Lab Order: 065794

Project: JPL GW Mon. 4-Q03, 04-4428.10

Collection Date: 10/30/2003 9:24:00 AM

Lab ID: 065794-003A

Matrix: WATER

Analyte	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
ICP-MS METALS			EPA 200.8			Analyst: NS	
RunID: ICP4_031114A	QC Batch: R32644	PrepDate:					
Chromium	4.1		0.11	1.0	µg/L	1	11/14/2003 10:47:53 A

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H-Samples exceed holding time

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Results are wet unless otherwise specified

0012



Advanced Technology
Laboratories

3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 19-Nov-03

CLIENT: Applied P & Ch Laboratories

Client Sample ID: MW-21-2

Lab Order: 065794

Project: JPL GW Mon. 4-Q03, 04-4428.10

Collection Date: 10/30/2003 9:45:00 AM

Lab ID: 065794-004A

Matrix: WATER

Analyte	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
ICP-MS METALS			EPA 200.8			Analyst: NS	
RunID: ICP4_031114A	QC Batch: R32644	PrepDate:					
Chromium	4.5		0.11	1.0	µg/L	1	11/14/2003 10:50:23 A

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H-Samples exceed holding time

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Results are wet unless otherwise specified



Advanced Technology
Laboratories

3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

0013

Advanced Technology Laboratories

Date: 19-Nov-03

CLIENT: Applied P & Ch Laboratories

Client Sample ID: MW-21-1

Lab Order: 065794

Project: JPL GW Mon. 4-Q03, 04-4428.10

Collection Date: 10/30/2003 10:11:00 AM

Lab ID: 065794-005A

Matrix: WATER

Analyte	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
ICP-MS METALS			EPA 200.8			Analyst: NS	
RunID: ICP4_031114A	QC Batch: R32644			PrepDate:			
Chromium	3.0		0.11	1.0	µg/L	1	11/14/2003 10:52:54 A

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H-Samples exceed holding time

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Results are wet unless otherwise specified

0014



Advanced Technology
Laboratories

3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 19-Nov-03

CLIENT: Applied P & Ch Laboratories

Client Sample ID: EB-7-10-30-03

Lab Order: 065794

Project: JPL GW Mon. 4-Q03, 04-4428.10

Collection Date: 10/30/2003 10:16:00 AM

Lab ID: 065794-006A

Matrix: WATER

Analyte	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
ICP-MS METALS			EPA 200.8			Analyst: NS	
RunID: ICP4_031114A	QC Batch: R32644		PrepDate:				
Chromium	ND		0.11	1.0	µg/L	1	11/14/2003 10:55:26 A

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

* - Value exceeds Maximum Contaminant Level

H-Samples exceed holding time

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Results are wet unless otherwise specified

0015



Advanced Technology
Laboratories

3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 19-Nov-03

CLIENT: Applied P & Ch Laboratories

Client Sample ID: MW-3-5

Lab Order: 065794

Project: JPL GW Mon. 4-Q03, 04-4428.10

Collection Date: 11/3/2003 8:05:00 AM

Lab ID: 065794-007A

Matrix: WATER

Analyte	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
ICP-MS METALS			EPA 200.8			Analyst: NS	
RunID: ICP4_031114A	QC Batch: R32644	PrepDate:					
Chromium	0.7	J	0.11	1.0	µg/L	1	11/14/2003 10:57:57 A

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

* - Value exceeds Maximum Contaminant Level

H-Samples exceed holding time

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Results are wet unless otherwise specified

0016



Advanced Technology
Laboratories

3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 19-Nov-03

CLIENT: Applied P & Ch Laboratories

Client Sample ID: MW-3-4

Lab Order: 065794

Project: JPL GW Mon. 4-Q03, 04-4428.10

Collection Date: 11/3/2003 8:29:00 AM

Lab ID: 065794-008A

Matrix: WATER

Analyte	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
ICP-MS METALS			EPA 200.8			Analyst: NS	
RunID: ICP4_031114A	QC Batch: R32644	PrepDate:					
Chromium	1.9		0.11	1.0	µg/L	1	11/14/2003 11:05:39 A

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H-Samples exceed holding time

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Results are wet unless otherwise specified

0017



Advanced Technology
Laboratories

3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 19-Nov-03

CLIENT: Applied P & Ch Laboratories

Client Sample ID: MW-3-3

Lab Order: 065794

Project: JPL GW Mon. 4-Q03, 04-4428.10

Collection Date: 11/3/2003 8:49:00 AM

Lab ID: 065794-009A

Matrix: WATER

Analyte	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
ICP-MS METALS			EPA 200.8			Analyst: NS	
RunID: ICP4_031114A	QC Batch:	R32644	PrepDate:				
Chromium	2.0		0.11	1.0	µg/L	1	11/14/2003 11:08:12 A

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H-Samples exceed holding time

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Results are wet unless otherwise specified



Advanced Technology
Laboratories

3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

0018

Advanced Technology Laboratories

Date: 19-Nov-03

CLIENT: Applied P & Ch Laboratories

Client Sample ID: EB-8-11-3-03

Lab Order: 065794

Project: JPL GW Mon. 4-Q03, 04-4428.10

Collection Date: 11/3/2003 9:33:00 AM

Lab ID: 065794-010A

Matrix: WATER

Analyte	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
ICP-MS METALS			EPA 200.8			Analyst: NS	
RunID: ICP4_031114A	QC Batch: R32644		PrepDate:				
Chromium	ND		0.11	1.0	µg/L	1	11/14/2003 11:10:45 A

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank E - Value above quantitation range
* - Value exceeds Maximum Contaminant Level H-Samples exceed holding time

Results are wet unless otherwise specified

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0019



Advanced Technology Laboratories

Date: 19-Nov-03

CLIENT: Applied P & Ch Laboratories

Client Sample ID: MW-17-5

Lab Order: 065794

Project: JPL GW Mon. 4-Q03, 04-4428.10

Collection Date: 11/4/2003 9:58:00 AM

Lab ID: 065794-011A

Matrix: WATER

Analyte	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
ICP-MS METALS			EPA 200.8			Analyst: NS	
RunID: ICP4_031114A	QC Batch: R32644	PrepDate:					
Chromium	1.7		0.11	1.0	µg/L	1	11/14/2003 11:13:19 A

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H-Samples exceed holding time

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Results are wet unless otherwise specified

0020



Advanced Technology
Laboratories

3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 19-Nov-03

CLIENT: Applied P & Ch Laboratories

Client Sample ID: MW-17-4

Lab Order: 065794

Project: JPL GW Mon. 4-Q03, 04-4428.10

Collection Date: 11/4/2003 10:22:00 AM

Lab ID: 065794-012A

Matrix: WATER

Analyte	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
---------	--------	------	-----	-----	-------	----	---------------

ICP-MS METALS

EPA 200.8

Analyst: NS

RunID: ICP4_031114A

QC Batch: R32644

PrepDate:

Chromium

1.5

0.11

1.0 µg/L

1 11/14/2003 11:15:53 A

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

* - Value exceeds Maximum Contaminant Level

H-Samples exceed holding time

Page 12 of 36

Results are wet unless otherwise specified

0021



Advanced Technology
Laboratories

3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 19-Nov-03

CLIENT: Applied P & Ch Laboratories

Client Sample ID: MW-17-3

Lab Order: 065794

Project: JPL GW Mon. 4-Q03, 04-4428.10

Collection Date: 11/4/2003 10:46:00 AM

Lab ID: 065794-013A

Matrix: WATER

Analyte	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
ICP-MS METALS			EPA 200.8			Analyst: NS	
RunID: ICP4_031114A	QC Batch:	R32644	PrepDate:				
Chromium	3.8		0.11	1.0	µg/L	1	11/14/2003 11:18:24 A

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H-Samples exceed holding time

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Results are wet unless otherwise specified

0022



Advanced Technology
Laboratories

3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 19-Nov-03

CLIENT: Applied P & Ch Laboratories

Client Sample ID: MW-17-2

Lab Order: 065794

Project: JPL GW Mon. 4-Q03, 04-4428.10

Collection Date: 11/4/2003 11:28:00 AM

Lab ID: 065794-014A

Matrix: WATER

Analyte	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
ICP-MS METALS			EPA 200.8			Analyst: NS	
RunID: ICP4_031114A	QC Batch: R32644	PrepDate:					
Chromium	2.8		0.11	1.0	µg/L	1	11/14/2003 11:20:51 A

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H-Samples exceed holding time

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Results are wet unless otherwise specified

0023



Advanced Technology
Laboratories

3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 19-Nov-03

CLIENT: Applied P & Ch Laboratories

Client Sample ID: MW-17-1

Lab Order: 065794

Project: JPL GW Mon. 4-Q03, 04-4428.10

Collection Date: 11/4/2003 11:48:00 AM

Lab ID: 065794-015A

Matrix: WATER

Analyte	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
ICP-MS METALS			EPA 200.8			Analyst: NS	
RunID: ICP4_031114A	QC Batch: R32644	PrepDate:					
Chromium	2.1		0.11	1.0	µg/L	1	11/14/2003 11:23:19 A

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H-Samples exceed holding time

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Results are wet unless otherwise specified

0024



Advanced Technology
Laboratories

3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 19-Nov-03

CLIENT: Applied P & Ch Laboratories

Client Sample ID: Dupe-5-4-Q03

Lab Order: 065794

Project: JPL GW Mon. 4-Q03, 04-4428.10

Collection Date: 11/4/2003 11:07:00 AM

Lab ID: 065794-016A

Matrix: WATER

Analyte	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
ICP-MS METALS			EPA 200.8			Analyst: NS	
RunID: ICP4_031114A	QC Batch:	R32644	PrepDate:				
Chromium	3.7		0.11	1.0	µg/L	1	11/14/2003 11:25:47 A

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

* - Value exceeds Maximum Contaminant Level

H-Samples exceed holding time

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Results are wet unless otherwise specified

0025



Advanced Technology Laboratories

Date: 19-Nov-03

CLIENT: Applied P & Ch Laboratories

Client Sample ID: MW-14-5

Lab Order: 065794

Project: JPL GW Mon. 4-Q03, 04-4428.10

Collection Date: 11/4/2003 7:19:00 AM

Lab ID: 065794-017A

Matrix: WATER

Analyte	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
ICP-MS METALS			EPA 200.8			Analyst: NS	
RunID: ICP4_031114A	QC Batch: R32644	PrepDate:					
Chromium	1.8		0.11	1.0	µg/L	1	11/14/2003 11:28:16 A

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H-Samples exceed holding time

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Results are wet unless otherwise specified

0026



Advanced Technology
Laboratories

3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 19-Nov-03

CLIENT: Applied P & Ch Laboratories

Client Sample ID: MW-14-4

Lab Order: 065794

Project: JPL GW Mon. 4-Q03, 04-4428.10

Collection Date: 11/4/2003 7:39:00 AM

Lab ID: 065794-018A

Matrix: WATER

Analyte	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
ICP-MS METALS			EPA 200.8			Analyst: NS	
RunID: ICP4_031114A	QC Batch: R32644	PrepDate:					
Chromium	3.7		0.11	1.0	µg/L	1	11/14/2003 11:35:55 A

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H-Samples exceed holding time

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Results are wet unless otherwise specified

0027



Advanced Technology
Laboratories

3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 19-Nov-03

CLIENT: Applied P & Ch Laboratories

Client Sample ID: MW-14-3

Lab Order: 065794

Project: JPL GW Mon. 4-Q03, 04-4428.10

Collection Date: 11/4/2003 8:00:00 AM

Lab ID: 065794-019A

Matrix: WATER

Analyte	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
ICP-MS METALS			EPA 200.8			Analyst: NS	
RunID: ICP4_031114A	QC Batch: R32644	PrepDate:					
Chromium	2.7		0.11	1.0	µg/L	1	11/14/2003 11:38:24 A

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

* - Value exceeds Maximum Contaminant Level

H-Samples exceed holding time

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Results are wet unless otherwise specified

0028



Advanced Technology
Laboratories

3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 19-Nov-03

CLIENT: Applied P & Ch Laboratories

Client Sample ID: MW-14-2

Lab Order: 065794

Project: JPL GW Mon. 4-Q03, 04-4428.10

Collection Date: 11/4/2003 8:19:00 AM

Lab ID: 065794-020A

Matrix: WATER

Analyte	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
ICP-MS METALS		EPA 200.8				Analyst: NS	
RunID: ICP4_031114B	QC Batch: R32645	PrepDate:					
Chromium	2.3		0.11	1.0	µg/L	1	11/14/2003 12:20:58 P

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H-Samples exceed holding time

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Results are wet unless otherwise specified

0029



Advanced Technology
Laboratories

3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 19-Nov-03

CLIENT: Applied P & Ch Laboratories

Client Sample ID: MW-14-1

Lab Order: 065794

Project: JPL GW Mon. 4-Q03, 04-4428.10

Collection Date: 11/4/2003 8:45:00 AM

Lab ID: 065794-021A

Matrix: WATER

Analyte	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
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ICP-MS METALS

EPA 200.8

Analyst: NS

RunID: ICP4_031114B

QC Batch: R32645

PrepDate:

Chromium

ND

1.1

10 µg/L

10 11/14/2003 2:19:06 P

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

* - Value exceeds Maximum Contaminant Level

H-Samples exceed holding time

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Results are wet unless otherwise specified

0030



Advanced Technology
Laboratories

3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 19-Nov-03

CLIENT: Applied P & Ch Laboratories

Client Sample ID: EB-9-11-4-03

Lab Order: 065794

Project: JPL GW Mon. 4-Q03, 04-4428.10

Collection Date: 11/4/2003 8:34:00 AM

Lab ID: 065794-022A

Matrix: WATER

Analyte	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
ICP-MS METALS			EPA 200.8			Analyst: NS	
RunID: ICP4_031114B	QC Batch:	R32645	PrepDate:				
Chromium	ND		0.11	1.0	µg/L	1	11/14/2003 12:25:55 P

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H-Samples exceed holding time

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Results are wet unless otherwise specified

0031



Advanced Technology
Laboratories

3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 19-Nov-03

CLIENT: Applied P & Ch Laboratories

Client Sample ID: MW-10

Lab Order: 065794

Project: JPL GW Mon. 4-Q03, 04-4428.10

Collection Date: 11/6/2003 7:28:00 AM

Lab ID: 065794-023A

Matrix: WATER

Analyte	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
ICP-MS METALS			EPA 200.8			Analyst: NS	
RunID: ICP4_031114B	QC Batch: R32645	PrepDate:					
Chromium	7.6		0.11	1.0	µg/L	1	11/14/2003 12:28:23 P

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H - Samples exceed holding time

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Results are wet unless otherwise specified

0032



Advanced Technology
Laboratories

3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 19-Nov-03

CLIENT: Applied P & Ch Laboratories

Client Sample ID: MW-5

Lab Order: 065794

Project: JPL GW Mon. 4-Q03, 04-4428.10

Collection Date: 11/6/2003 8:57:00 AM

Lab ID: 065794-024A

Matrix: WATER

Analyte	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
ICP-MS METALS			EPA 200.8			Analyst: NS	
RunID: ICP4_031114A	QC Batch:	R32644	PrepDate:				
Chromium	2.8		0.11	1.0	µg/L	1	11/14/2003 11:40:55 A

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H-Samples exceed holding time

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Results are wet unless otherwise specified

0033



Advanced Technology
Laboratories

3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 19-Nov-03

CLIENT: Applied P & Ch Laboratories

Client Sample ID: MW-8

Lab Order: 065794

Project: JPL GW Mon. 4-Q03, 04-4428.10

Collection Date: 11/6/2003 10:31:00 AM

Lab ID: 065794-025A

Matrix: WATER

Analyte	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
ICP-MS METALS			EPA 200.8			Analyst: NS	
RunID: ICP4_031114B	QC Batch: R32645	PrepDate:					
Chromium	1.5		0.11	1.0	µg/L	1	11/14/2003 12:30:51 P

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H-Samples exceed holding time

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Results are wet unless otherwise specified

0034



Advanced Technology
Laboratories

3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 19-Nov-03

CLIENT: Applied P & Ch Laboratories

Client Sample ID: Dupe-7-4-Q03

Lab Order: 065794

Project: JPL GW Mon. 4-Q03, 04-4428.10

Collection Date: 11/6/2003 10:37:00 AM

Lab ID: 065794-026A

Matrix: WATER

Analyte	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
ICP-MS METALS			EPA 200.8			Analyst: NS	
RunID: ICP4_031114B	QC Batch: R32645		PrepDate:				
Chromium	1.8		0.11	1.0	µg/L	1	11/14/2003 12:33:19 P

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H-Samples exceed holding time

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Results are wet unless otherwise specified

0035



Advanced Technology Laboratories

Date: 19-Nov-03

CLIENT: Applied P & Ch Laboratories

Client Sample ID: MW-13

Lab Order: 065794

Project: JPL GW Mon. 4-Q03, 04-4428.10

Collection Date: 11/7/2003 7:57:00 AM

Lab ID: 065794-027A

Matrix: WATER

Analyte	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
ICP-MS METALS			EPA 200.8			Analyst: NS	
RunID: ICP4_031114B	QC Batch: R32645	PrepDate:					
Chromium	18		0.11	1.0	µg/L	1	11/14/2003 12:35:48 P

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank E - Value above quantitation range
* - Value exceeds Maximum Contaminant Level H-Samples exceed holding time

Results are wet unless otherwise specified

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0036



Advanced Technology
Laboratories

3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 19-Nov-03

CLIENT: Applied P & Ch Laboratories

Client Sample ID: MW-6

Lab Order: 065794

Project: JPL GW Mon. 4-Q03, 04-4428.10

Collection Date: 11/7/2003 9:26:00 AM

Lab ID: 065794-028A

Matrix: WATER

Analyte	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
ICP-MS METALS			EPA 200.8			Analyst: NS	
RunID: ICP4_031114B	QC Batch: R32645	PrepDate:					
Chromium	9.9		0.44	4.0	µg/L	4	11/14/2003 2:21:37 P

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H-Samples exceed holding time

Results are wet unless otherwise specified

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0037



Advanced Technology
Laboratories

3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 19-Nov-03

CLIENT: Applied P & Ch Laboratories**Client Sample ID:** MW-15**Lab Order:** 065794**Project:** JPL GW Mon. 4-Q03, 04-4428.10**Collection Date:** 11/7/2003 10:03:00 AM**Lab ID:** 065794-029A**Matrix:** WATER

Analyte	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
ICP-MS METALS			EPA 200.8			Analyst: NS	
RunID: ICP4_031114B	QC Batch: R32645		PrepDate:				
Chromium	3.4		0.11	1.0	µg/L	1	11/14/2003 12:48:27 P

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H-Samples exceed holding time

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Results are wet unless otherwise specified

0038



Advanced Technology Laboratories

Date: 19-Nov-03

CLIENT: Applied P & Ch Laboratories**Client Sample ID:** Dupe-2-4-Q03**Lab Order:** 065794**Project:** JPL GW Mon. 4-Q03, 04-4428.10**Collection Date:** 11/7/2003 10:07:00 AM**Lab ID:** 065794-030A**Matrix:** WATER

Analyte	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
ICP-MS METALS			EPA 200.8			Analyst: NS	
RunID: ICP4_031114B	QC Batch: R32645		PrepDate:				
Chromium	3.4		0.11	1.0	µg/L	1	11/14/2003 12:50:58 P

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank E - Value above quantitation range
* - Value exceeds Maximum Contaminant Level H-Samples exceed holding time

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Results are wet unless otherwise specified

0039



Advanced Technology
Laboratories

3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 19-Nov-03

CLIENT: Applied P & Ch Laboratories

Client Sample ID: MW-16

Lab Order: 065794

Project: JPL GW Mon. 4-Q03, 04-4428.10

Collection Date: 11/10/2003 8:04:00 AM

Lab ID: 065794-031A

Matrix: WATER

Analyte	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
ICP-MS METALS			EPA 200.8			Analyst: NS	
RunID: ICP4_031114B	QC Batch:	R32645	PrepDate:				
Chromium	3.3		0.11	1.0	µg/L	1	11/14/2003 12:53:30 P

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H-Samples exceed holding time

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Results are wet unless otherwise specified

0040



Advanced Technology Laboratories

Date: 19-Nov-03

CLIENT: Applied P & Ch Laboratories

Client Sample ID: MW-7

Lab Order: 065794

Project: JPL GW Mon. 4-Q03, 04-4428.10

Collection Date: 11/10/2003 9:40:00 AM

Lab ID: 065794-032A

Matrix: WATER

Analyte	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
ICP-MS METALS			EPA 200.8			Analyst: NS	
RunID: ICP4_031114B	QC Batch:	R32645	PrepDate:				
Chromium	5.0		0.11	1.0	µg/L	1	11/14/2003 12:56:02 P

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H-Samples exceed holding time

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Results are wet unless otherwise specified

0041



Advanced Technology
Laboratories

3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 19-Nov-03

CLIENT: Applied P & Ch Laboratories

Client Sample ID: MW-1

Lab Order: 065794

Project: JPL GW Mon. 4-Q03, 04-4428.10

Collection Date: 11/10/2003 11:00:00 AM

Lab ID: 065794-033A

Matrix: WATER

Analyte	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
ICP-MS METALS			EPA 200.8			Analyst: NS	
RunID: ICP4_031114B	QC Batch:	R32645	PrepDate:				
Chromium	2.4		0.11	1.0	µg/L	1	11/14/2003 12:58:34 P

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H-Samples exceed holding time

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Results are wet unless otherwise specified

0042



Advanced Technology Laboratories

Date: 19-Nov-03

CLIENT: Applied P & Ch Laboratories

Client Sample ID: MW-9

Lab Order: 065794

Project: JPL GW Mon. 4-Q03, 04-4428.10

Collection Date: 11/5/2003 9:52:00 AM

Lab ID: 065794-034A

Matrix: WATER

Analyte	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
ICP-MS METALS			EPA 200.8			Analyst: NS	
RunID: ICP4_031114B	QC Batch: R32645	PrepDate:					
Chromium	5.5		0.11	1.0	µg/L	1	11/14/2003 1:01:07 P

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H-Samples exceed holding time

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Results are wet unless otherwise specified

0043



Advanced Technology
Laboratories

3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 19-Nov-03

CLIENT: Applied P & Ch Laboratories**Client Sample ID:** MW-3-2**Lab Order:** 065794**Project:** JPL GW Mon. 4-Q03, 04-4428.10**Collection Date:** 11/5/2003 7:29:00 AM**Lab ID:** 065794-035A**Matrix:** WATER

Analyte	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
ICP-MS METALS			EPA 200.8			Analyst: NS	
RunID: ICP4_031114B	QC Batch: R32645	PrepDate:					
Chromium	1.6		0.11	1.0	µg/L	1	11/14/2003 1:03:40 P

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank E - Value above quantitation range
* - Value exceeds Maximum Contaminant Level H-Samples exceed holding time

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Results are wet unless otherwise specified

0044



Advanced Technology
Laboratories

3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 19-Nov-03

CLIENT: Applied P & Ch Laboratories

Client Sample ID: MW-3-1

Lab Order: 065794

Project: JPL GW Mon. 4-Q03, 04-4428.10

Collection Date: 11/5/2003 7:51:00 AM

Lab ID: 065794-036A

Matrix: WATER

Analyte	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
ICP-MS METALS			EPA 200.8			Analyst: NS	
RunID: ICP4_031114B	QC Batch: R32645		PrepDate:				
Chromium	1.8		0.11	1.0	µg/L	1	11/14/2003 1:06:10 P

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H-Samples exceed holding time

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Results are wet unless otherwise specified

0045



Advanced Technology
Laboratories

3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040



Advanced Technology Laboratories

Advanced Technology
Laboratories

3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

Date: 19-Nov-03

CLIENT: Applied P & Ch Laboratories
Work Order: 065794
Project: JPL GW Mon. 4-Q03, 04-4428.10

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_W

Sample ID: MB-R32644	SampleType: MBLK	TestCode: 200.8_W	Units: µg/L	Prep Date:	Run ID: ICP4_031114A
Client ID: ZZZZZ	Batch ID: R32644	TestNo: EPA 200.8		Analysis Date: 11/14/2003	SeqNo: 485560
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chromium	0.235	1.0			J

Sample ID: MB-R32645	SampleType: MBLK	TestCode: 200.8_W	Units: µg/L	Prep Date:	Run ID: ICP4_031114B
Client ID: ZZZZZ	Batch ID: R32645	TestNo: EPA 200.8		Analysis Date: 11/14/2003	SeqNo: 485584
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chromium	0.174	1.0			J

Sample ID: LCS-R32644	SampleType: LCS	TestCode: 200.8_W	Units: µg/L	Prep Date:	Run ID: ICP4_031114A
Client ID: ZZZZZ	Batch ID: R32644	TestNo: EPA 200.8		Analysis Date: 11/14/2003	SeqNo: 485559
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chromium	9.961	1.0	10	0	99.6 85 115 0 0

Sample ID: LCS-R32645	SampleType: LCS	TestCode: 200.8_W	Units: µg/L	Prep Date:	Run ID: ICP4_031114B
Client ID: ZZZZZ	Batch ID: R32645	TestNo: EPA 200.8		Analysis Date: 11/14/2003	SeqNo: 485583
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chromium	9.996	1.0	10	0	99 85 115 0 0

Sample ID: 065794-002AMS	SampleType: MS	TestCode: 200.8_W	Units: µg/L	Prep Date:	Run ID: ICP4_031114A
Client ID: MW-21-4	Batch ID: R32644	TestNo: EPA 200.8		Analysis Date: 11/14/2003	SeqNo: 485537
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chromium	11.24	1.0	10	4.286	69.5 80 120 0 0 S

Qualifiers: ND - Not Detected at the Reporting Limit
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S - Spike Recovery outside accepted recovery limits
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO- Surrogate dilute out
H - Sample exceeded holding time

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CLIENT: Applied P & Ch Laboratories
Work Order: 065794
Project: JPL GW Mon. 4-Q03, 04-4428.10

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_W

Sample ID: 065794-024AMS	SampType: MS	TestCode: 200.8_W	Units: µg/L	Prep Date:	Run ID: ICP4_031114A						
Client ID: MW-5	Batch ID: R32644	TestNo: EPA 200.8		Analysis Date: 11/14/2003	SeqNo: 485557						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	10.59	1.0	10	2.842	77.5	80	120	0	0	0	S

Sample ID: 065794-027AMS	SampleType: MS	TestCode: 200.8_W	Units: µg/L	Prep Date:	Run ID: ICP4_031114B						
Client ID: MW-13	Batch ID: R32645	TestNo: EPA 200.8		Analysis Date: 11/14/2003	SeqNo: 485570						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	26.73	2.0	10	17.71	90.1	80	120	0	0	0	

Sample ID: 065794-036AMS		SampType: MS		TestCode: 200.8_W		Units: µg/L		Prep Date:		Run ID: ICP4_031114B	
Client ID: MW-3-1		Batch ID: R32645		TestNo: EPA 200.8				Analysis Date: 11/14/2003		SeqNo: 485581	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	9.595	1.0	10	1.78	78.2	80	120	0	0	0	S

Sample ID: 065794-002AMSD	SampleType: MSD	TestCode: 200.8_W	Units: µg/L	Prep Date:	Run ID: ICP4_031114A						
Client ID: MW-21-4	Batch ID: R32644	TestNo: EPA 200.8		Analysis Date: 11/14/2003	SeqNo: 485538						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	11.24	1.0	10	4.286	69.5	80	120	11.24	0.0267	20	S

Sample ID: 065794-024AMSD	Sample Type: MSD	TestCode: 200.8_W	Units: µg/L	Prep Date:	Run ID: ICP4_031114A						
Client ID: MW-5	Batch ID: R32644	TestNo: EPA 200.8		Analysis Date: 11/14/2003	SeqNo: 485558						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	10.7	1.0	10	2.842	78.6	80	120	10.59	1.05	20	S

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S - Spike Recovery outside accepted recovery limits
B - Analyte detected in the associated Method Blank
DO - Surrogate dilute out
H - Sample exceeded holding time
Calculations are based on raw values

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CLIENT: Applied P & Ch Laboratories
Work Order: 065794
Project: JPL GW Mon. 4-Q03, 04-4428.10

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8 W

Sample ID: 065794-027AMSD	SampleType: MSD	TestCode: 200.8_W	Units: µg/L	Prep Date:	Run ID: ICP4_031114B						
Client ID: MW-13	Batch ID: R32645	TestNo: EPA 200.8		Analysis Date: 11/14/2003	SeqNo: 485571						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	26.82	2.0	10	17.71	91.1	80	120	26.73	0.359	20	

Sample ID: 065794-036AMSD	SampleType: MSD	TestCode: 200.8_W	Units: µg/L	Prep Date:	Run ID: ICP4_031114B						
Client ID: MW-3-1	Batch ID: R32645	TestNo: EPA 200.8		Analysis Date: 11/14/2003	SeqNo: 485582						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	9.533	1.0	10	1.78	77.5	80	120	9.595	0.648	20	S

Sample ID: 065794-002ADUP	SampType: DUP	TestCode: 200.8_W	Units: µg/L	Prep Date:	Run ID: ICP4_031114A						
Client ID: MW-21-4	Batch ID: R32644	TestNo: EPA 200.8		Analysis Date: 11/14/2003	SeqNo: 485561						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	3.93	1.0	0	0	0	0	0	4.286	8.67	30	

Sample ID: 065794-024ADUP	SampType: DUP	TestCode: 200.8_W	Units: µg/L	Prep Date:	Run ID: ICP4_031114A						
Client ID: MW-5	Batch ID: R32644	TestNo: EPA 200.8		Analysis Date: 11/14/2003	SeqNo: 485562						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	2.779	1.0	0	0	0	0	0	2.842	2.24	30	

Sample ID: 065794-027ADUP	SampType: DUP	TestCode: 200.8_W	Units: µg/L	Prep Date:	Run ID: ICP4_031114B						
Client ID: MW-13	Batch ID: R32645	TestNo: EPA 200.8		Analysis Date: 11/14/2003	SeqNo: 485585						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	17.83	1.0	0	0	0	0	0	17.71	0.664	30	

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Calculations are based on raw values
DO- Surrogate dilute out
H - Sample exceeded holding time

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CLIENT: Applied P & Ch Laboratories
Work Order: 065794
Project: JPL GW Mon. 4-Q03, 04-4428.10

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_W

Sample ID: 065794-036ADUP	SampType: DUP	TestCode: 200.8_W	Units: µg/L	Prep Date:	Run ID: ICP4_031114B						
Client ID: MW-3-1	Batch ID: R32645	TestNo: EPA 200.8		Analysis Date: 11/14/2003	SeqNo: 485586						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	1.763	1.0	0	0	0	0	0	1.78	0.960	30	

Qualifiers: ND - Not Detected at the Reporting Limit
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R - RPD outside accepted recovery limits

S - Spike Recovery outside accepted recovery limits
B - Analyte detected in the associated Method Blank
Calculations are based on raw values

DO- Surrogate dilute out
H - Sample exceeded holding time

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