ATTACHMENT 3: LABORATORY ANALYTICAL REPORTS (SUMMARY SHEETS)

This attachment contains the summary sheets from the laboratory analytical reports prepared by Applied Physics and Chemistry Laboratory (APCL) in Chino, California or Severn Trent Laboratory (STL) in Sacramento, California. Complete analytical reports are available upon request.

APCL

Applied Physics & Chemistry Laboratory

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

February 15, 2005

Battelle - US Navy
Attention : David Conner
3990 Old Town Ave.,Ste B104
San Diego CA 92110

Dear David,

This package contains samples in our Service ID 05-1303 and your project G486048 JPL-GW Mon-IQ05. Enclosed please find:

(1) Original report.
(2) Original Chain of Custody.
(3) One original of Level C Data Package Deliverable.
(4) One compact disk containing Level C of Data Package Deliverable.
(5) One diskette containing EDD deliverable.

If anything is missing or you have any questions, please feel free to contact me.

Respectfully submitted,

Regina Kirakozova
Associate QA/QC Director
Applied P & CH Laboratories

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

APCL Analytical Report

Submitted to:
Battelle - US Navy
Attention: David Conner
3990 Old Town Ave, Ste B104
San Diego CA 92110
Tel: (619)574-4821 Fax: (619)260-0882

Service ID #: 801-051303
Collected by:
Collected on: 01/25/05

Received: 01/25/05
Extracted: N/A
Tested: 01/25-31/05
Reported: 02/09/05

Sample Description: Water from 4800 Oak Grove Dr., Pasadena
Project Description: G486048 JPL-GW Mon-IQ05

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result EB-1-1/25/05 05-01303-1	MW-24-1 05-01303-2	MW-24-2 05-01303-3	MW-24-3 05-01303-4
Dilution Factor				1	20	1	1
PERCHLORATE	314.0	µg/L	4	<4	1,050	56.2	<4

Component Analyzed	Method	Unit	PQL	Analysis Result EB-1-1/25/05 05-01303-1	MW-24-1 05-01303-2	MW-24-2 05-01303-3
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01	<0.01
Dilution Factor				1	1	1
CHROMIUM	200.8	µg/L	0.1	0.13	12.0	8.8
VOLATILE ORGANIC COMPOUNDS						
Dilution Factor				1	1	1
BENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMODICHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOFORM	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
N-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
SEC-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TERT-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2-BUTANONE	524.2	µg/L	10	<10	<10	<10
CARBON TETRACHLORIDE	524.2	µg/L	0.5	<0.5	10	4.4
CHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLORODIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROFORM	524.2	µg/L	0.5	<0.5	3.9	1.3
CHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
4-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	524.2	µg/L	0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5

Applied P & CH Laboratories
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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result EB-1-1/25/05 05-01303-1	MW-24-1 05-01303-2	MW-24-2 05-01303-3
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
CIS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
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	0.5	<0.5	<0.5	<0.5
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	<1	<1	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	µg/L	10	<10	<10	<10
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	<0.5	0.9	<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	<0.5	1.8	0.6
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
112TRICHLORO-122TRIFLUOROETHANE	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

Applied P & CH Laboratories
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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-24-3 05-01303-4	MW-24-4 05-01303-5	TB-1-1/25/05 05-01303-6
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01	-
Dilution Factor				1	1	1
CHROMIUM	200.8	µg/L	0.1	8.2	7.3	-
VOLATILE ORGANIC COMPOUNDS						
Dilution Factor				1	1	1
BENZENE	524.2	µg/L	0.5	<0.5	-	<0.5
BROMOBENZENE	524.2	µg/L	0.5	<0.5	-	<0.5
BROMOCHLOROMETHANE	524.2	µg/L	0.5	<0.5	-	<0.5
BROMODICHLOROMETHANE	524.2	µg/L	0.5	<0.5	-	<0.5
BROMOFORM	524.2	µg/L	0.5	<0.5	-	<0.5
BROMOMETHANE	524.2	µg/L	0.5	<0.5	-	<0.5
N-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	-	<0.5
SEC-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	-	<0.5
TERT-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	-	<0.5
2-BUTANONE	524.2	µg/L	10	<10	-	<10
CARBON TETRACHLORIDE	524.2	µg/L	0.5	<0.5	-	<0.5
CHLOROBENZENE	524.2	µg/L	0.5	<0.5	-	<0.5
CHLORODIBROMOMETHANE	524.2	µg/L	0.5	<0.5	-	<0.5
CHLOROETHANE	524.2	µg/L	0.5	<0.5	-	<0.5
CHLOROFORM	524.2	µg/L	0.5	<0.5	-	<0.5
CHLOROMETHANE	524.2	µg/L	0.5	<0.5	-	<0.5
2-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	-	<0.5
4-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	-	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	µg/L	0.5	<0.5	-	<0.5
1,2-DIBROMOETHANE (EDB)	524.2	µg/L	0.5	<0.5	-	<0.5
DIBROMOMETHANE	524.2	µg/L	0.5	<0.5	-	<0.5
1,2-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	-	<0.5
1,3-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	-	<0.5
1,4-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	-	<0.5
DICHLORODIFLUOROMETHANE	524.2	µg/L	0.5	<0.5	-	<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
CIS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	-	<0.5
TRANS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	-	<0.5
1,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	-	<0.5
1,3-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	-	<0.5
2,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	-	<0.5
1,1-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	-	<0.5
CIS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	-	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	-	<0.5

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-24-3 05-01303-4	MW-24-4 05-01303-5	TB-1-1/25/05 05-01303-6
ETHYLBENZENE	524.2	µg/L	0.5	<0.5	-	<0.5
HEXACHLOROBUTADIENE	524.2	µg/L	0.5	<0.5	-	<0.5
ISOPROPYLBENZENE (CUMENE)	524.2	µg/L	0.5	<0.5	-	<0.5
P-ISOPROPYLTOLUENE	524.2	µg/L	0.5	<0.5	-	<0.5
METHYLENE CHLORIDE	524.2	µg/L	0.5	<0.5	-	1.6
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	<1	-	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	µg/L	10	<10	-	<10
NAPHTHALENE	524.2	µg/L	0.5	<0.5	-	<0.5
N-PROPYLBENZENE	524.2	µg/L	0.5	<0.5	-	<0.5
STYRENE	524.2	µg/L	0.5	<0.5	-	<0.5
1,1,1,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5	-	<0.5
1,1,2,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5	-	<0.5
TETRACHLOROETHENE	524.2	µg/L	0.5	<0.5	-	<0.5
TOLUENE	524.2	µg/L	0.5	<0.5	-	<0.5
1,2,3-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	-	<0.5
1,2,4-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	-	<0.5
1,1,1-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	-	<0.5
1,1,2-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	-	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	<0.5	-	<0.5
TRICHLOROFLUOROMETHANE	524.2	µg/L	0.5	<0.5	-	<0.5
1,2,3-TRICHLOROPROPANE	524.2	µg/L	0.5	<0.5	-	<0.5
112TRICHLORO-122TRIFLUOROETHANE	524.2	µg/L	0.5	<0.5	-	<0.5
1,2,4-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	-	<0.5
1,3,5-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	-	<0.5
VINYL CHLORIDE	524.2	µg/L	0.5	<0.5	-	<0.5
O-XYLENE	524.2	µg/L	0.5	<0.5	-	<0.5
M/P-XYLENE	524.2	µg/L	0.5	0.4J	-	<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 Laboratories

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

Case Narrative

Project: JPL-GW Oak Grove Dr., Pasadena./G486048

For Battelle - Columbus Operations

APCL Service No: 05-1303

1. Sample Identification

The sample identifications are listed in the following table:

Battelle - Columbus Operations Sample ID	APCL Sample ID
MW-24-4	05-01303-5
MW-24-3	05-01303-4
MW-24-2	05-01303-3
MW-24-1	05-01303-2
EB-1-1/25/05	05-01303-1
TB-1-1/25/05	05-01303-6

2. Analytical Methodology

Samples are analyzed by EPA methods

524.2 (Volatile Organic Compounds),
314.0 (Perchlorate, low level),
7196 (Chromium (VI)),
200.8 (Chromium, by ICPMS),

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

(1) 200.8:

Chromium result in Serial Dilution test was outside of 10% criteria. However, percent recovery in the Post Digest Spike test was within control limits.

"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,

Regina Kirakozova
Associate QA/QC Director
Applied P & CH Laboratories

APCL

Applied Physics & Chemistry Laboratory

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

February 16, 2005

Battelle - US Navy
Attention : David Conner
3990 Old Town Ave, Ste. B104
San Diego CA 92110

Dear David,

This package contains samples in our Service ID 05-1337 and your project JPL GW Mon-1Q05. Enclosed please find:

(1) Original report.
(2) Original Chain of Custody.
(3) One original and one compact disk of Level C Data Package Deliverable.
(4) One diskette containing EDD deliverable.

If anything is missing or you have any questions, please feel free to contact me.

Respectfully submitted,

Regina Kirakozova
Associate QA/QC Director
Applied P & CH Laboratories

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

APCL Analytical Report

Submitted to:
Battelle - US Navy
Attention: David Conner
3990 Old Town Ave, Ste. B104
San Diego CA 92110
Tel: (619)574-4821 Fax: (619)260-0882

Service ID #: 801-051337
Collected by:
Collected on: 01/27/05

Received: 01/27/05
Extracted: N/A
Tested: 01/27-02/02/05
Reported: 02/09/05

Sample Description: Water from 4800 Oak Grove Ave, Pasadena.
Project Description: G486048 JPL GW Mon-1Q05

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result DUPE-1-1Q05 05-01337-1	EB-2-1/27/05 05-01337-2	MW-21-1 05-01337-3	MW-21-2 05-01337-4
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01	<0.01	<0.01
Dilution Factor				1	1	1	1
PERCHLORATE	314.0	µg/L	4	<4	<4	<4	<4
Dilution Factor				1	1	1	1
CHROMIUM	200.8	µg/L	0.1	8.4	0.30	6.8	9.8
VOLATILE ORGANIC COMPOUNDS							
Dilution Factor				1	1	1	1
BENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMODICHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOFORM	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
N-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
SEC-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TERT-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
2-BUTANONE	524.2	µg/L	10	<10	<10	<10	<10
CARBON TETRACHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLORODIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLOROFORM	524.2	µg/L	0.5	3.4	<0.5	0.6	<0.5
CHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
2-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
4-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	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	0.9	<0.5
1,2-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CIS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	1.8	<0.5	<0.5	<0.5

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result DUPE-1-1Q05 05-01337-1	EB-2-1/27/05 05-01337-2	MW-21-1 05-01337-3	MW-21-2 05-01337-4
TRANS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
HEXACHLOROBUTADIENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
ISOPROPYLBENZENE (CUMENE)	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
P-ISOPROPYLTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	<1	<1	<1	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	µg/L	10	<10	<10	<10	<10
NAPHTHALENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
N-PROPYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
STYRENE	524.2	µg/L	0.5	<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	<0.5
1,1,2,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TETRACHLOROETHENE	524.2	µg/L	0.5	9.3	<0.5	0.5	2.4
TOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	0.6	<0.5	0.7	0.8
TRICHLOROFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
112TRICHLORO-122TRIFLUOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
VINYL CHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
O-XYLENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
M/P-XYLENE	524.2	µg/L	0.5	0.5	<0.5	0.6	<0.5

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-21-3 05-01337-5	MW-21-4 05-01337-6	MW-21-5 05-01337-7	TB-2-1/27/05 05-01337-8
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01	<0.01	-
Dilution Factor				1	1	1	1
PERCHLORATE	314.0	µg/L	4	<4	<4	<4	-
Dilution Factor				1	1	1	1
CHROMIUM	200.8	µg/L	0.1	8.8	7.2	5.6	-
VOLATILE ORGANIC COMPOUNDS							
Dilution Factor				1	1	1	1
BENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMODICHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOFORM	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
N-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
SEC-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TERT-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
2-BUTANONE	524.2	µg/L	10	<10	<10	<10	<10
CARBON TETRACHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLORODIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLOROFORM	524.2	µg/L	0.5	0.5	3.2	4.1	<0.5
CHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
2-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
4-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	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
CIS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	0.6	1.6	1.5	<0.5
TRANS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	0.3J	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	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-21-3 05-01337-5	MW-21-4 05-01337-6	MW-21-5 05-01337-7	TB-2-1/27/05 05-01337-8
CIS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	0.3J	<0.5
HEXACHLOROBUTADIENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
ISOPROPYLBENZENE (CUMENE)	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
P-ISOPROPYLTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	1.6
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	<1	<1	<1	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	µg/L	10	<10	<10	<10	<10
NAPHTHALENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
N-PROPYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
STYRENE	524.2	µg/L	0.5	<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	<0.5
1,1,2,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TETRACHLOROETHENE	524.2	µg/L	0.5	3.4	8.7	9.0	<0.5
TOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	1.7	0.6	0.6	<0.5
TRICHLOROFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
112TRICHLORO-122TRIFLUOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
VINYL CHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
O-XYLENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
M/P-XYLENE	524.2	µg/L	0.5	0.6	0.5J	1.0	<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 Laboratories

Applied P & CH Laboratories
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Case Narrative

Project: JPL GW Mon-1Q05/G486048

For Battelle - Columbus Operations

APCL Service No: 05-1337

1. Sample Identification

The sample identifications are listed in the following table:

Battelle - Columbus Operations Sample ID	APCL Sample ID
MW-21-5	05-01337-7
MW-21-4	05-01337-6
MW-21-3	05-01337-5
MW-21-2	05-01337-4
MW-21-1	05-01337-3
DUPE-1-1Q05	05-01337-1
EB-2-1/27/05	05-01337-2
TB-2-1/27/05	05-01337-8

2. Analytical Methodology

Samples are analyzed by EPA methods

524.2 (Volatile Organic Compounds),
314.0 (Perchlorate, low level),
7196 (Chromium (VI)),
200.8 (Target Analyte by ICPMS),

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,

Regina Kirakozova
Associate QA/QC Director
Applied P & CH Laboratories

APCL

Applied Physics & Chemistry Laboratory

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

February 17, 2005

Battelle - US Navy
Attention : David Conner
3990 Old Town Ave, Ste. B104
San Diego CA 92110

Dear David,

This package contains samples in our Service ID 05-1374 and your project G486048 JPL GW Mon-1Q05. Enclosed please find:

(1) Original report.
(2) Original Chain of Custody.
(3) One original and one compact disk of Level C Data Package Deliverable.
(4) One diskette containing EDD deliverable.

If anything is missing or you have any questions, please feel free to contact me.

Respectfully submitted,

Regina Kirakozova
Associate QA/QC Director
Applied P & CH Laboratories

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

APCL Analytical Report

Submitted to:
Battelle - US Navy
Attention: David Connner
3990 Old Tow Ave, Ste B104
San Diego CA 92110
Tel: (619)574-4821 Fax: (619)260-0882

Service ID #: 801-051374
Collected by:
Collected on: 01/31/05

Received: 01/31/05
Extracted: N/A
Tested: 01/31-02/04/05
Reported: 02/09/05

Sample Description: Water from 4800 Oak Grove Ave, Pasadena.
Project Description: G486048 JPL GW Mon-1Q05

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result EB-3-1/31/05 05-01374-1	MW-3-2 05-01374-2	MW-3-3 05-01374-3	MW-3-4 05-01374-4
Dilution Factor				1	3	1	1
PERCHLORATE	314.0	μg/L	4	<4	139	<4	<4
VOLATILE ORGANIC COMPOUNDS							
Dilution Factor				1	1	1	1
BENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMODICHLOROMETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOFORM	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOMETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
N-BUTYLBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
SEC-BUTYLBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
TERT-BUTYLBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
2-BUTANONE	524.2	μg/L	10	<10	<10	<10	<10
CARBON TETRACHLORIDE	524.2	μg/L	0.5	<0.5	4.3	<0.5	<0.5
CHLOROBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLORODIBROMOMETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLOROETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLOROFORM	524.2	μg/L	0.5	<0.5	1.4	<0.5	<0.5
CHLOROMETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
2-CHLOROTOLUENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
4-CHLOROTOLUENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	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
CIS-1,2-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 EB-3-1/31/05 05-01374-1	MW-3-2 05-01374-2	MW-3-3 05-01374-3	MW-3-4 05-01374-4
TRANS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
HEXACHLOROBUTADIENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
ISOPROPYLBENZENE (CUMENE)	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
P-ISOPROPYLTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	<1	<1	<1	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	µg/L	10	<10	<10	<10	<10
NAPHTHALENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
N-PROPYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
STYRENE	524.2	µg/L	0.5	<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	<0.5
1,1,2,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TETRACHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	<0.5	1.7	<0.5	<0.5
TRICHLOROFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
112TRICHLORO-122TRIFLUOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
VINYL CHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
O-XYLENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
M/P-XYLENE	524.2	µg/L	0.5	0.3J	<0.5	<0.5	0.5

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Component Analyzed	Method	Unit	PQL	Analysis Result MW-14-1 05-01374-5	MW-14-2 05-01374-6	MW-14-3 05-01374-7
Dilution Factor				1	1	1
PERCHLORATE	314.0	µg/L	4	<4	<4	<4
VOLATILE ORGANIC COMPOUNDS						
Dilution Factor				1	1	1
BENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMODICHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOFORM	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
N-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
SEC-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TERT-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2-BUTANONE	524.2	µg/L	10	<10	<10	<10
CARBON TETRACHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLORODIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROFORM	524.2	µg/L	0.5	<0.5	0.5J	0.4J
CHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
4-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	524.2	µg/L	0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	0.4J	<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
CIS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	0.3J	<0.5
1,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5

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Component Analyzed	Method	Unit	PQL	Analysis Result MW-14-1 05-01374-5	MW-14-2 05-01374-6	MW-14-3 05-01374-7
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	0.5	<0.5	<0.5	<0.5
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	<1	<1	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	µg/L	10	<10	<10	<10
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	0.5	0.8	0.7
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	2.1	10.4	1.6
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
112TRICHLORO-122TRIFLUOROETHANE	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	0.3J	<0.5

Component Analyzed	Method	Unit	PQL	Analysis Result MW-14-4 05-01374-8	MW-14-5 05-01374-9	TB-3-1/31/05 05-01374-10
Dilution Factor				1	1	1
PERCHLORATE	314.0	µg/L	4	<4	<4	-

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Component Analyzed	Method	Unit	PQL	Analysis Result MW-14-4 05-01374-8	MW-14-5 05-01374-9	TB-3-1/31/05 05-01374-10
VOLATILE ORGANIC COMPOUNDS						
Dilution Factor				1	1	1
BENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
BROMOBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
BROMODICHLOROMETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
BROMOFORM	524.2	μg/L	0.5	<0.5	<0.5	<0.5
BROMOMETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
N-BUTYLBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
SEC-BUTYLBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
TERT-BUTYLBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
2-BUTANONE	524.2	μg/L	10	<10	<10	<10
CARBON TETRACHLORIDE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
CHLOROBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
CHLORODIBROMOMETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
CHLOROETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
CHLOROFORM	524.2	μg/L	0.5	<0.5	<0.5	<0.5
CHLOROMETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
2-CHLOROTOLUENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
4-CHLOROTOLUENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	524.2	μg/L	0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	524.2	μg/L	0.5	<0.5	<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
CIS-1,2-DICHLOROETHENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	524.2	μg/L	0.5	<0.5	0.3J	<0.5
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

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Component Analyzed	Method	Unit	PQL	Analysis Result MW-14-4 05-01374-8	MW-14-5 05-01374-9	TB-3-1/31/05 05-01374-10
P-ISOPROPYLTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	<1	<1	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	µg/L	10	<10	<10	<10
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	<0.5	<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	<0.5	<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
112TRICHLORO-122TRIFLUOROETHANE	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	0.8	<0.5

Component Analyzed	Method	Unit	PQL	Analysis Result EB-3-1/31/05 05-01374-1	MW-3-2 05-01374-2	MW-3-3 05-01374-3
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01	<0.01
Dilution Factor				1	1	1
CHROMIUM	200.8	µg/L	0.1	0.37	8.7	5.7

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Component Analyzed	Method	Unit	PQL	Analysis Result MW-3-4 05-01374-4	MW-14-1 05-01374-5	MW-14-2 05-01374-6	MW-14-3 05-01374-7
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01	<0.01	<0.01
Dilution Factor				1	1	1	1
CHROMIUM	200.8	μg/L	0.1	8.6	12.0	10.7	8.6

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 Laboratories

Applied P & CH Laboratories
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Case Narrative

Project: JPL GW Mon-1Q05/G486048

For Battelle - Columbus Operations

APCL Service No: 05-1374

1. Sample Identification

The sample identifications are listed in the following table:

Battelle - Columbus Operations Sample ID	APCL Sample ID
MW-14-5	05-01374-9
MW-14-4	05-01374-8
MW-14-3	05-01374-7
MW-14-2	05-01374-6
MW-14-1	05-01374-5
MW-3-4	05-01374-4
MW-3-3	05-01374-3
MW-3-2	05-01374-2
EB-3-1/31/05	05-01374-1
TB-3-1/31/05	05-01374-10

2. Analytical Methodology

Samples are analyzed by EPA methods

524.2 (Volatile Organic Compounds),
314.0 (Perchlorate, low level),
7196 (Chromium (VI)),
200.8 (Chromium, by ICPMS),

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,

Regina Kirakozova
Associate QA/QC Director
Applied P & CH Laboratories

APCL

Applied Physics & Chemistry Laboratory

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

February 17, 2005

Battelle - US Navy
Attention : David Conner
3990 Old Town Ave, Ste. B104
San Diego CA 92110

Dear David,

This package contains samples in our Service ID 05-1391 and your project JPL GW Mon-1Q05. Enclosed please find:

(1) Original report.
(2) Original Chain of Custody.
(3) One original and one compact disk of Level C Data Package Deliverable.
(4) One diskette containing EDD deliverable.

If anything is missing or you have any questions, please feel free to contact me.

Respectfully submitted,

Regina Kirakozova
Associate QA/QC Director
Applied P & CH Laboratories

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

APCL Analytical Report

Submitted to:
Battelle - US Navy
Attention: David Conner
3990 Old Town Ave, Ste B104.
San Diego CA 92110
Tel: (619)574-4821 Fax: (619)260-0882

Service ID #: 801-051391
Collected by:
Collected on: 02/01/05

Received: 02/01/05
Extracted: N/A
Tested: 02/02-03/05
Reported: 02/09/05

Sample Description: Water from 4800 Oak Grove Ave., Pasadena.
Project Description: G486048 JPL GW Mon-1Q05

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result DUPE-2-1Q05 05-01391-1	EB-4-2/1/05 05-01391-2	MW-19-1 05-01391-3	MW-19-2 05-01391-4
Dilution Factor				1	1	1	1
PERCHLORATE	314.0	µg/L	4	<4	<4	<4	<4
VOLATILE ORGANIC COMPOUNDS							
Dilution Factor				1	1	1	1
BENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMODICHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	0.5
BROMOFORM	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
N-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
SEC-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TERT-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
2-BUTANONE	524.2	µg/L	10	<10	<10	<10	<10
CARBON TETRACHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLORODIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLOROETHANE	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	1.1
CHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
2-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
4-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	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
CIS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	0.6

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result DUPE-2-1Q05 05-01391-1	EB-4-2/1/05 05-01391-2	MW-19-1 05-01391-3	MW-19-2 05-01391-4
TRANS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
HEXACHLOROBUTADIENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
ISOPROPYLBENZENE (CUMENE)	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
P-ISOPROPYLTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	<1	<1	<1	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	µg/L	10	<10	<10	<10	<10
NAPHTHALENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
N-PROPYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
STYRENE	524.2	µg/L	0.5	<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	<0.5
1,1,2,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TETRACHLOROETHENE	524.2	µg/L	0.5	1.1	<0.5	<0.5	1.2
TOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	0.5J
TRICHLOROFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
112TRICHLORO-122TRIFLUOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
VINYL CHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
O-XYLENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
M/P-XYLENE	524.2	µg/L	0.5	0.6	0.8	<0.5	<0.5

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-19-3 05-01391-5	MW-19-4 05-01391-6	MW-19-5 05-01391-7	TB-4-2/1/05 05-01391-8
Dilution Factor				1	1	1	1
PERCHLORATE	314.0	µg/L	4	<4	<4	<4	-
VOLATILE ORGANIC COMPOUNDS							
Dilution Factor				1	1	1	1
BENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMODICHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOFORM	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
N-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
SEC-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TERT-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
2-BUTANONE	524.2	µg/L	10	<10	<10	<10	<10
CARBON TETRACHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLORODIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLOROFORM	524.2	µg/L	0.5	<0.5	0.5J	<0.5	<0.5
CHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
2-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
4-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	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
CIS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	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-19-3 05-01391-5	MW-19-4 05-01391-6	MW-19-5 05-01391-7	TB-4-2/1/05 05-01391-8
HEXACHLOROBUTADIENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
ISOPROPYLBENZENE (CUMENE)	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
P-ISOPROPYLTOLUENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
METHYL-T-BUTYL ETHER (MTBE)	524.2	μg/L	1	<1	<1	<1	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	μg/L	10	<10	<10	<10	<10
NAPHTHALENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
N-PROPYLBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
STYRENE	524.2	μg/L	0.5	<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	<0.5
1,1,2,2-TETRACHLOROETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
TETRACHLOROETHENE	524.2	μg/L	0.5	0.9	2.6	5.4	<0.5
TOLUENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRICHLOROETHENE	524.2	μg/L	0.5	<0.5	0.4J	0.5	<0.5
TRICHLOROFLUOROMETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
112TRICHLORO-122TRIFLUOROETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
VINYL CHLORIDE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
O-XYLENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
M/P-XYLENE	524.2	μg/L	0.5	0.6	<0.5	0.3J	<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 Laboratories

Applied P & CH Laboratories
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Case Narrative

Project: JPL GW Mon-1Q05/G486048

For Battelle - Columbus Operations

APCL Service No: 05-1391

1. Sample Identification

The sample identifications are listed in the following table:

Battelle - Columbus Operations Sample ID	APCL Sample ID
MW-19-5	05-01391-7
MW-19-4	05-01391-6
MW-19-3	05-01391-5
MW-19-2	05-01391-4
MW-19-1	05-01391-3
DUPE-2-1Q05	05-01391-1
EB-4-2/1/05	05-01391-2
TB-4-2/1/05	05-01391-8

2. Analytical Methodology

Samples are analyzed by EPA methods

524.2 (Volatile Organic Compounds),
314.0 (Perchlorate, low level),

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,

Regina Kirakozova
Associate QA/QC Director
Applied P & CH Laboratories

APCL

Applied Physics & Chemistry Laboratory

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

February 17, 2005

Battelle - US Navy
Attention : David Conner
3990 Old Town Ave, Ste. B104
San Diego CA 92110

Dear David,

This package contains samples in our Service ID 05-1412 and your project G486048 JPL GW Mon-1Q05. Enclosed please find:

(1) Original report.
(2) Original Chain of Custody.
(3) One original and one compact disk of Level C Data Package Deliverable.
(4) One diskette containing EDD deliverable.

If anything is missing or you have any questions, please feel free to contact me.

Respectfully submitted,

Regina Kirakozova
Associate QA/QC Director
Applied P & CH Laboratories

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

APCL Analytical Report

Submitted to:
Battelle - US Navy
Attention: David Conner
3990 Old Town Ave, Ste B104.
San Diego CA 92110
Tel: (619)574-4821 Fax: (619)260-0882

Service ID #: 801-051412
Collected by:
Collected on: 02/02/05

Received: 02/02/05
Extracted: N/A
Tested: 02/02-04/05
Reported: 02/09/05

Sample Description: Water from 4800 Oak Grove Ave., Pasadena.
Project Description: G486048 JPL-GW Mon-1Q05

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result DUPE-3-1Q05 05-01412-1	DUPE-4-1Q05 05-01412-2	EB-5-2/2/05 05-01412-3	MW-17-2 05-01412-4
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01	<0.01	<0.01
Dilution Factor				1	1	1	1
PERCHLORATE	314.0	μg/L	4	10.0	<4	<4	10.6
Dilution Factor				1	1	1	1
CHROMIUM	200.8	μg/L	0.1	8.1	6.9	0.26	7.6
VOLATILE ORGANIC COMPOUNDS							
Dilution Factor				1	1	1	1
BENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMODICHLOROMETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOFORM	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOMETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
N-BUTYLBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
SEC-BUTYLBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
TERT-BUTYLBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
2-BUTANONE	524.2	μg/L	10	<10	<10	<10	<10
CARBON TETRACHLORIDE	524.2	μg/L	0.5	1.6	<0.5	<0.5	1.5
CHLOROBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLORODIBROMOMETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLOROETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLOROFORM	524.2	μg/L	0.5	0.8	<0.5	<0.5	0.7
CHLOROMETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
2-CHLOROTOLUENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
4-CHLOROTOLUENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	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
CIS-1,2-DICHLOROETHENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5

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Component Analyzed	Method	Unit	PQL	Analysis Result DUPE-3-1Q05 05-01412-1	DUPE-4-1Q05 05-01412-2	EB-5-2/2/05 05-01412-3	MW-17-2 05-01412-4
TRANS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
HEXACHLOROBUTADIENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
ISOPROPYLBENZENE (CUMENE)	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
P-ISOPROPYLTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	<1	<1	<1	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	µg/L	10	<10	<10	<10	<10
NAPHTHALENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
N-PROPYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
STYRENE	524.2	µg/L	0.5	<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	<0.5
1,1,2,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TETRACHLOROETHENE	524.2	µg/L	0.5	1.0	<0.5	<0.5	0.8
TOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	5.1	<0.5	<0.5	4.4
TRICHLOROFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
112TRICHLORO-122TRIFLUOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
VINYL CHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
O-XYLENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
M/P-XYLENE	524.2	µg/L	0.5	<0.5	<0.5	0.5	<0.5

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Component Analyzed	Method	Unit	PQL	Analysis Result MW-17-3 05-01412-5	MW-17-4 05-01412-6	MW-18-2 05-01412-7	MW-18-3 05-01412-8
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01	<0.01	<0.01
Dilution Factor				1	1	1	1
CHROMIUM	200.8	µg/L	0.1	7.2	3.7	5.1	10.8
Dilution Factor				1	1	1	1
PERCHLORATE	314.0	µg/L	4	76.2	<4	<4	<4
VOLATILE ORGANIC COMPOUNDS							
Dilution Factor				1	1	1	1
BENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMODICHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOFORM	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
N-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
SEC-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TERT-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
2-BUTANONE	524.2	µg/L	10	<10	<10	<10	<10
CARBON TETRACHLORIDE	524.2	µg/L	0.5	9.4	<0.5	<0.5	2.2
CHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLORODIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLOROFORM	524.2	µg/L	0.5	2.3	<0.5	<0.5	0.9
CHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
2-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
4-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	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
CIS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	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-17-3 05-01412-5	MW-17-4 05-01412-6	MW-18-2 05-01412-7	MW-18-3 05-01412-8
CIS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
HEXACHLOROBUTADIENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
ISOPROPYLBENZENE (CUMENE)	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
P-ISOPROPYLTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	<1	<1	<1	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	µg/L	10	<10	<10	<10	<10
NAPHTHALENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
N-PROPYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
STYRENE	524.2	µg/L	0.5	<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	<0.5
1,1,2,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TETRACHLOROETHENE	524.2	µg/L	0.5	0.9	<0.5	<0.5	0.4J
TOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	3.8	1.7	<0.5	0.7
TRICHLOROFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
112TRICHLORO-122TRIFLUOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
VINYL CHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
O-XYLENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
M/P-XYLENE	524.2	µg/L	0.5	<0.5	0.3J	<0.5	<0.5

Component Analyzed	Method	Unit	PQL	Analysis Result MW-18-4 05-01412-9	MW-18-5 05-01412-10	TB-5-2/2/05 05-01412-11
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	-	-
Dilution Factor				1	1	1
CHROMIUM	200.8	µg/L	0.1	7.0	-	-
Dilution Factor				1	1	1
PERCHLORATE	314.0	µg/L	4	10.2	<4	-

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Component Analyzed	Method	Unit	PQL	Analysis Result MW-18-4 05-01412-9	MW-18-5 05-01412-10	TB-5-2/2/05 05-01412-11
VOLATILE ORGANIC COMPOUNDS						
Dilution Factor				1	1	1
BENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMODICHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOFORM	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
N-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
SEC-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TERT-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2-BUTANONE	524.2	µg/L	10	<10	<10	<10
CARBON TETRACHLORIDE	524.2	µg/L	0.5	8.3	<0.5	<0.5
CHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLORODIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROFORM	524.2	µg/L	0.5	1.3	<0.5	<0.5
CHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
4-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	524.2	µg/L	0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<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
CIS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	524.2	µg/L	0.5	<0.5	0.7	<0.5
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

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Component Analyzed	Method	Unit	PQL	Analysis Result MW-18-4 05-01412-9	MW-18-5 05-01412-10	TB-5-2/2/05 05-01412-11
P-ISOPROPYLTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	1.0
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	<1	<1	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	µg/L	10	<10	<10	<10
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	1.0	<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	2.1	<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
112TRICHLORO-122TRIFLUOROETHANE	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	0.9	<0.5
M/P-XYLENE	524.2	µg/L	0.5	<0.5	3.0	<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,

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Case Narrative

Project: JPL-GW Mon-1Q05/G486048

For Battelle - Columbus Operations

APCL Service No: 05-1412

1. Sample Identification

The sample identifications are listed in the following table:

Battelle - Columbus Operations Sample ID	APCL Sample ID
MW-17-4	05-01412-6
MW-17-3	05-01412-5
MW-17-2	05-01412-4
DUPE-3-1Q05	05-01412-1
EB-5-2/2/05	05-01412-3
TB-5-2/2/05	05-01412-11
MW-18-5	05-01412-10
MW-18-4	05-01412-9
MW-18-3	05-01412-8
MW-18-2	05-01412-7
DUPE-4-1Q05	05-01412-2

2. Analytical Methodology

Samples are analyzed by EPA methods

524.2 (Volatile Organic Compounds),
314.0 (Perchlorate, low level),
7196 (Chromium (VI)),
200.8 (Target Analyte by ICPMS),

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,

Regina Kirakozova
Associate QA/QC Director
Applied P & CH Laboratories

APCL

Applied Physics & Chemistry Laboratory

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

February 17, 2005

Battelle - US Navy
Attention : David Conner
3990 Old Town Ave.,Ste B104
San Diego CA 92110

Dear David,

This package contains samples in our Service ID 05-1429 and your project G486048 JPL-GW Mon-IQ05. Enclosed please find:

(1) Original report.
(2) Original Chain of Custody.
(3) One original of Level C Data Package Deliverable.
(4) One compact disk containing Level C of Data Package Deliverable.
(5) One diskette containing EDD deliverable.

If anything is missing or you have any questions, please feel free to contact me.

Respectfully submitted,

Regina Kirakozova
Associate QA/QC Director
Applied P & CH Laboratories

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

APCL Analytical Report

Submitted to:
Battelle - US Navy
Attention: David Connner
3990 Old Town Ave., Ste B104.
San Diego CA 92110
Tel: (619)574-4821 Fax: (619)260-0882

Service ID #: 801-051429
Collected by:
Collected on: 02/03/05

Received: 02/03/05
Extracted: N/A
Tested: 02/03-04/05
Reported: 02/09/05

Sample Description: Water from 4800 Oak Grove Dr., Pasadena.
Project Description: G486048 JPL-GW Mon-1Q05

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result EB-6-2/3/05 05-01429-1	MW-20-1 05-01429-2	MW-20-2 05-01429-3
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01	<0.01
Dilution Factor				1	1	1
CHROMIUM	200.8	μg/L	0.1	0.15	3.5	4.2
Dilution Factor				1	1	1
PERCHLORATE	314.0	μg/L	4	<4	<4	<4
VOLATILE ORGANIC COMPOUNDS						
Dilution Factor				1	1	1
BENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
BROMOBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
BROMODICHLOROMETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
BROMOFORM	524.2	μg/L	0.5	<0.5	<0.5	<0.5
BROMOMETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
N-BUTYLBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
SEC-BUTYLBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
TERT-BUTYLBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
2-BUTANONE	524.2	μg/L	10	<10	<10	<10
CARBON TETRACHLORIDE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
CHLOROBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
CHLORODIBROMOMETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
CHLOROETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
CHLOROFORM	524.2	μg/L	0.5	<0.5	<0.5	<0.5
CHLOROMETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
2-CHLOROTOLUENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
4-CHLOROTOLUENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	524.2	μg/L	0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	524.2	μg/L	0.5	<0.5	<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
CIS-1,2-DICHLOROETHENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5

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

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result EB-6-2/3/05 05-01429-1	MW-20-1 05-01429-2	MW-20-2 05-01429-3
TRANS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
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	0.5	<0.5	<0.5	<0.5
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	<1	<1	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	µg/L	10	<10	<10	<10
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	<0.5	<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	<0.5	<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
112TRICHLORO-122TRIFLUOROETHANE	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	0.3J	0.4J	0.4J

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

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-20-3 05-01429-4	MW-20-4 05-01429-5	MW-20-5 05-01429-6	TB-6-2/3/05 05-01429-7
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01	<0.01	-
Dilution Factor				1	1	1	1
CHROMIUM	200.8	µg/L	0.1	5.5	3.8	3.6	-
Dilution Factor				1	1	1	1
PERCHLORATE	314.0	µg/L	4	<4	<4	<4	-
VOLATILE ORGANIC COMPOUNDS							
Dilution Factor				1	1	1	1
BENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMODICHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOFORM	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
N-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
SEC-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TERT-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
2-BUTANONE	524.2	µg/L	10	<10	<10	<10	0.8J
CARBON TETRACHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLORODIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLOROETHANE	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
CHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
2-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
4-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	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
CIS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5

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

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-20-3 05-01429-4	MW-20-4 05-01429-5	MW-20-5 05-01429-6	TB-6-2/3/05 05-01429-7
CIS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
HEXACHLOROBUTADIENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
ISOPROPYLBENZENE (CUMENE)	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
P-ISOPROPYLTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	1.1
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	<1	<1	<1	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	µg/L	10	<10	<10	<10	<10
NAPHTHALENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
N-PROPYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
STYRENE	524.2	µg/L	0.5	<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	<0.5
1,1,2,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TETRACHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRICHLOROFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
112TRICHLORO-122TRIFLUOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
VINYL CHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
O-XYLENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
M/P-XYLENE	524.2	µg/L	0.5	0.3J	0.4J	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 Laboratories

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

Case Narrative

Project: JPL-GW Oak Grove Dr., Pasadena./G486048

For Battelle - Columbus Operations

APCL Service No: 05-1429

1. Sample Identification

The sample identifications are listed in the following table:

Battelle - Columbus Operations Sample ID	APCL Sample ID
MW-20-5	05-01429-6
MW-20-4	05-01429-5
MW-20-3	05-01429-4
MW-20-2	05-01429-3
MW-20-1	05-01429-2
EB-6-2/3/05	05-01429-1
TB-6-2/3/05	05-01429-7

2. Analytical Methodology

Samples are analyzed by EPA methods

524.2 (Volatile Organic Compounds),
314.0 (Perchlorate, low level),
7196 (Chromium (VI)),
200.8 (Target Analyte by ICPMS),

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,

Regina Kirakozova
Associate QA/QC Director
Applied P & CH Laboratories

APCL

Applied Physics & Chemistry Laboratory

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

February 22, 2005

Battelle - US Navy
Attention : David Conner
3990 Old Town Ave, Ste. B104
San Diego CA 92110

Dear David,

This package contains samples in our Service ID 05-1481 and your project G486048 JPL GW Mon-1Q05. Enclosed please find:

(1) Original report.
(2) Original Chain of Custody.
(3) One original and one compact disk of Level C Data Package Deliverable.
(4) One diskette containing EDD deliverable.

If anything is missing or you have any questions, please feel free to contact me.

Respectfully submitted,

Regina Kirakozova
Associate QA/QC Director
Applied P & CH Laboratories

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

APCL Analytical Report

Submitted to:
Battelle - U.S. Navy
Attention: David Conner
3990 Old Town Ave, Ste B104.
San Diego CA 92110
Tel: (619)574-4821 Fax: (619)260-0882

Service ID #: 801-051481
Collected by:
Collected on: 02/08/05

Received: 02/08/05
Extracted: N/A
Tested: 02/08-15/05
Reported: 02/15/05

Sample Description: Water from 4800 Oak Grove Dr.
Project Description: G486048 JPL-GW Mon-1Q05

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result EB-8-2/8/05 05-01481-1	MW-4-1 05-01481-2	MW-4-2 05-01481-3
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01	<0.01
Dilution Factor				1	1	1
PERCHLORATE	314.0	µg/L	4	<4	<4	<4
Dilution Factor				1	1.25	1
CHROMIUM	200.8	µg/L	0.1	<0.1	0.20	13.7
VOLATILE ORGANIC COMPOUNDS						
Dilution Factor				1	1	1
BENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMODICHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOFORM	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
N-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
SEC-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TERT-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2-BUTANONE	524.2	µg/L	10	<10	<10	<10
CARBON TETRACHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLORODIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROFORM	524.2	µg/L	0.5	<0.5	<0.5	0.4J
CHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
4-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	524.2	µg/L	0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	0.6
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
CIS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5

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Component Analyzed	Method	Unit	PQL	Analysis Result EB-8-2/8/05 05-01481-1	MW-4-1 05-01481-2	MW-4-2 05-01481-3
TRANS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	524.2	µg/L	0.5	<0.5	0.4J	<0.5
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	0.5	<0.5	<0.5	<0.5
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	<1	<1	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	µg/L	10	0.4J	<10	<10
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	<0.5	<0.5	1.1
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	<0.5	<0.5	1.4
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
112TRICHLORO-122TRIFLUOROETHANE	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	1.3	<0.5

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Component Analyzed	Method	Unit	PQL	Analysis Result MW-4-3 05-01481-4	MW-11-1 05-01481-5	MW-11-2 05-01481-6
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01	<0.01
Dilution Factor				1	1	1
PERCHLORATE	314.0	µg/L	4	<4	<4	<4
Dilution Factor				1.25	1	1
CHROMIUM	200.8	µg/L	0.1	0.12J	7.6	6.0
VOLATILE ORGANIC COMPOUNDS						
Dilution Factor				1	1	1
BENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMODICHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOFORM	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
N-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
SEC-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TERT-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2-BUTANONE	524.2	µg/L	10	<10	<10	<10
CARBON TETRACHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	1.0
CHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLORODIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROFORM	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
4-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	524.2	µg/L	0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<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
CIS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5

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Component Analyzed	Method	Unit	PQL	Analysis Result MW-4-3 05-01481-4	MW-11-1 05-01481-5	MW-11-2 05-01481-6
CIS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	524.2	µg/L	0.5	4.3	<0.5	<0.5
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	0.5	<0.5	<0.5	<0.5
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	<1	<1	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	µg/L	10	<10	<10	<10
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	0.7	<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	<0.5	<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	<0.5	<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
112TRICHLORO-122TRIFLUOROETHANE	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	0.5J	<0.5	0.4J

Component Analyzed	Method	Unit	PQL	Analysis Result MW-11-3 05-01481-7	MW-11-4 05-01481-8	TB-8-2/8/05 05-01481-9
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	-	-
Dilution Factor				1	1	1
PERCHLORATE	314.0	µg/L	4	<4	<4	-
Dilution Factor				1	1	1
CHROMIUM	200.8	µg/L	0.1	6.1	-	-

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Component Analyzed	Method	Unit	PQL	Analysis Result MW-11-3 05-01481-7	MW-11-4 05-01481-8	TB-8-2/8/05 05-01481-9
VOLATILE ORGANIC COMPOUNDS						
Dilution Factor				1	1	1
BENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMODICHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOFORM	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
N-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
SEC-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TERT-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2-BUTANONE	524.2	µg/L	10	<10	<10	<10
CARBON TETRACHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLORODIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROFORM	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
4-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	524.2	µg/L	0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<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
CIS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
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

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Component Analyzed	Method	Unit	PQL	Analysis Result MW-11-3 05-01481-7	MW-11-4 05-01481-8	TB-8-2/8/05 05-01481-9
P-ISOPROPYLTOLUENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
METHYL-T-BUTYL ETHER (MTBE)	524.2	μg/L	1	<1	<1	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	μg/L	10	<10	<10	<10
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	<0.5	<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	<0.5	<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
1,1,2-TRICHLORO-1,2,2-TRIFLUORO	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	0.4J	<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 Hau
Laboratory Director
Applied P & CH Laboratories

Applied P & CH Laboratories
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Tel: (909) 590-1828 Fax: (909) 590-1498

Case Narrative

Project: JPL-GW Mon-1Q05/G486048

For Battelle - Columbus Operations

APCL Service No: 05-1481

1. Sample Identification

The sample identifications are listed in the following table:

Battelle - Columbus Operations Sample ID	APCL Sample ID
MW-4-3	05-01481-4
MW-4-2	05-01481-3
MW-4-1	05-01481-2
MW-11-4	05-01481-8
MW-11-3	05-01481-7
MW-11-2	05-01481-6
MW-11-1	05-01481-5
EB-8-2/8/05	05-01481-1
TB-8-2/8/05	05-01481-9

2. Analytical Methodology

Samples are analyzed by EPA methods

524.2 (Volatile Organic Compounds),
314.0 (Perchlorate, low level),
7196A (Chromium (VI)),
200.8 (Chromium, by ICPMS),

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,

Regina Kirakozova
Associate QA/QC Director
Applied P & CH Laboratories

APCL

Applied Physics & Chemistry Laboratory

13760 Magnolia Ave. Chino CA 91710
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February 24, 2005

Battelle - US Navy
Attention : David Conner
3990 Old Town Ave, Ste. B104
San Diego CA 92110

Dear David,

This package contains samples in our Service ID 05-1469 and your project G486048 JPL GW Mon-1Q05. Enclosed please find:

(1) Original report.
(2) Original Chain of Custody.
(3) One original and one compact disk of Level C Data Package Deliverable.
(4) One diskette containing EDD deliverable.

If anything is missing or you have any questions, please feel free to contact me.

Respectfully submitted,

Regina Kirakozova
Associate QA/QC Director
Applied P & CH Laboratories

Applied P & CH Laboratories
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APCL Analytical Report

Submitted to:
Battelle - US Navy.
Attention: David Conner
3990 old Town Ave., Ste B104.
San Diego CA 92110
Tel: (619)574-4821 Fax: (619)260-0882

Service ID #: 801-051469
Collected by: MM
Collected on: 02/07/05

Received: 02/07/05
Extracted: 02/10-14/05
Tested: 02/08-15/05
Reported: 02/18/05

Sample Description: Water
Project Description: G486048 JPL-GW Mon-1Q05

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result EB-7-2/7/05 05-01469-1	MW-25-1 05-01469-2	MW-25-2 05-01469-3
ALKALINITY	310.1	mg/L	2	<2	153	133
BICARBONATE	SM2320B	mg/L	2	<2	153	89.8
CARBONATE	SM2320B	mg/L	2	<2	<2	42.8
PH	150.1	pH unit	0.01	6.48	7.10	9.00
SOLIDS, TOTAL DISSOLVED (TDS)	160.1	mg/L	10	8.0J	497	309
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01	<0.01
Dilution Factor				1	12.5	8
CHLORIDE	300.0	mg/L	0.2	0.12J	76.7	36.7
NITRATE AS N	300.0	mg/L	0.04	1.0	11.0	4.6
SULFATE	300.0	mg/L	0.5	<0.5	123	86.4
Dilution Factor				1	1	1
PERCHLORATE	314.0	μg/L	4	<4	<4	<4
Dilution Factor				1	1	1.25
CHROMIUM	200.8	μg/L	0.1	0.041J	4.4	0.96
LEAD	200.8	μg/L	0.12	<0.12	0.045J	0.090J
Dilution Factor				1	1	1
ARSENIC	200.9	μg/L	5	<5	<5	<5
Dilution Factor				1	1	1
CALCIUM	200.7	μg/L	200	<200	68,700	17,600
IRON	200.7	μg/L	50	9.0J	102	1,490
MAGNESIUM	200.7	μg/L	100	21.2J	23,200	17,900
POTASSIUM	200.7	μg/L	400	108J	2,290	3,310
SODIUM	200.7	μg/L	2000	411J	23,100	65,400
Dilution Factor				1.04	1	1.02
1,2,3-TRICHLOROPROPANE	504.1	μg/L	0.02	0.009J	0.01J	0.01J

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result EB-7-2/7/05 05-01469-1	MW-25-1 05-01469-2	MW-25-2 05-01469-3
VOLATILE ORGANIC COMPOUNDS						
Dilution Factor				1	1	1
BENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMODICHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOFORM	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
N-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
SEC-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TERT-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2-BUTANONE	524.2	µg/L	10	<10	<10	<10
CARBON TETRACHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLORODIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROFORM	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
4-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	524.2	µg/L	0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<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
CIS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
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

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result EB-7-2/7/05 05-01469-1	MW-25-1 05-01469-2	MW-25-2 05-01469-3
P-ISOPROPYLTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
4-METHYL-2-PENTANONE (MIBK)	524.2	µg/L	10	<10	<10	<10
METHYLENE CHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
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	<0.5	<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	<0.5	<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
112TRICHLORO-122TRIFLUOROETHANE	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	0.3J	0.5J
Dilution Factor				1	1	1
1,4-DIOXANE (P-DIOXANE)	8270-SIM	µg/L	1	<1	<1	<1
NITROAROMATICS AND NITROAMINES						
Dilution Factor				1	1	1
4-AMINO-2,6-DINITROTOLUENE	8330	µg/L	1	<1	<1	<1
2-AMINO-4,6-DINITROTOLUENE	8330	µg/L	1	<1	<1	<1
1,3-DINITROBENZENE	8330	µg/L	1	<1	<1	<1
2,4-DINITROTOLUENE	8330	µg/L	1	<1	<1	<1
2,6-DINITROTOLUENE	8330	µg/L	1	<1	<1	<1
HMX	8330	µg/L	1	<1	<1	<1
NITROBENZENE	8330	µg/L	1	<1	<1	<1
3-NITROTOLUENE	8330	µg/L	1	<1	<1	<1
RDX	8330	µg/L	1	<1	<1	<1
TETRYL	8330	µg/L	1	<1	<1	<1
1,3,5-TRINITROBENZENE	8330	µg/L	1	<1	<1	<1
2,4,6-TRINITROTOLUENE	8330	µg/L	1	<1	<1	<1
2/4-NITROTOLUENE	8330	µg/L	2	<2	<2	<2

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-25-3 05-01469-4	MW-25-4 05-01469-5	MW-25-5 05-01469-6	TB-7-2/7/05 05-01469-7
ALKALINITY	310.1	mg/L	2	177	210	153	-
BICARBONATE	SM2320B	mg/L	2	177	210	137	-
CARBONATE	SM2320B	mg/L	2	<2	<2	16.0	-
PH	150.1	pH unit	0.01	7.99	7.70	8.56	-
SOLIDS, TOTAL DISSOLVED (TDS)	160.1	mg/L	10	371	389	282	-
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01	<0.01	-
Dilution Factor				1	1	1	1
PERCHLORATE	314.0	µg/L	4	11.5	9.3	<4	-
Dilution Factor				8	8	2.5	1
CHLORIDE	300.0	mg/L	0.2	37.7	37.7	20.0	-
NITRATE N	300.0	mg/L	0.04	7.9	4.9	0.13	-
SULFATE	300.0	mg/L	0.5	64.1	66.0	70.4	-
Dilution Factor				1	1	1	1
CHROMIUM	200.8	µg/L	0.1	5.2	5.3	2.2	-
LEAD	200.8	µg/L	0.12	0.012J	0.026J	<0.12	-
Dilution Factor				1	1	1	1
ARSENIC	200.9	µg/L	5	<5	<5	<5	-
Dilution Factor				1	1	1	1
CALCIUM	200.7	µg/L	200	48,600	42,300	13,700	-
IRON	200.7	µg/L	50	371	179	620	-
MAGNESIUM	200.7	µg/L	100	21,600	14,300	5,230	-
POTASSIUM	200.7	µg/L	400	3,240	2,480	2,590	-
SODIUM	200.7	µg/L	2000	36,300	42,400	74,100	-
Dilution Factor				1.04	1.05	1	1
1,2,3-TRICHLOROPROPANE	504.1	µg/L	0.02	0.02J	0.01J	0.009J	-
VOLATILE ORGANIC COMPOUNDS							
Dilution Factor				1	1	1	1
BENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMODICHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOFORM	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
N-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
SEC-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TERT-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
2-BUTANONE	524.2	µg/L	10	<10	<10	<10	<10
CARBON TETRACHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLORODIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLOROETHANE	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
CHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
2-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
4-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	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-25-3 05-01469-4	MW-25-4 05-01469-5	MW-25-5 05-01469-6	TB-7-2/7/05 05-01469-7
1,2-DIBROMOETHANE (EDB)	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	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
CIS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	0.6	<0.5
HEXACHLOROBUTADIENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
ISOPROPYLBENZENE (CUMENE)	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
P-ISOPROPYLTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	<1	<1	<1	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	µg/L	10	<10	<10	<10	<10
NAPHTHALENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
N-PROPYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
STYRENE	524.2	µg/L	0.5	<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	<0.5
1,1,2,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TETRACHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TOLUENE	524.2	µg/L	0.5	<0.5	<0.5	0.4J	<0.5
1,2,3-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRICHLOROFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
112TRICHLORO-122TRIFLUOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
VINYL CHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
O-XYLENE	524.2	µg/L	0.5	<0.5	<0.5	0.4J	<0.5
M/P-XYLENE	524.2	µg/L	0.5	0.7	0.5	1.3	<0.5
Dilution Factor				1	1	1	1
1,4-DIOXANE (P-DIOXANE)	8270-SIM	µg/L	1	<1	<1	<1	-

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-25-3 05-01469-4	MW-25-4 05-01469-5	MW-25-5 05-01469-6	TB-7-2/7/05 05-01469-7
NITROAROMATICS AND NITROAMINES							
Dilution Factor				1	1	1	1
4-AMINO-2,6-DINITROTOLUENE	8330	μg/L	1	<1	<1	<1	-
2-AMINO-4,6-DINITROTOLUENE	8330	μg/L	1	<1	<1	<1	-
1,3-DINITROBENZENE	8330	μg/L	1	<1	<1	<1	-
2,4-DINITROTOLUENE	8330	μg/L	1	<1	<1	<1	-
2,6-DINITROTOLUENE	8330	μg/L	1	<1	<1	<1	-
HMX	8330	μg/L	1	<1	<1	<1	-
NITROBENZENE	8330	μg/L	1	<1	<1	<1	-
3-NITROTOLUENE	8330	μg/L	1	<1	<1	<1	-
RDX	8330	μg/L	1	<1	<1	<1	-
TETRYL	8330	μg/L	1	<1	<1	<1	-
1,3,5-TRINITROBENZENE	8330	μg/L	1	<1	<1	<1	-
2,4,6-TRINITROTOLUENE	8330	μg/L	1	<1	<1	<1	-
2/4-NITROTOLUENE	8330	μg/L	2	<2	<2	<2	-

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 Laboratories

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Case Narrative

Project: JPL-GW Mon-1Q05/G486048

For Battelle - Columbus Operations

APCL Service No: 05-1469

1. Sample Identification

The sample identifications are listed in the following table:

Battelle - Columbus Operations Sample ID	APCL Sample ID
MW-25-5	05-01469-6
MW-25-4	05-01469-5
MW-25-3	05-01469-4
MW-25-2	05-01469-3
MW-25-1	05-01469-2
EB-7-2/7/05	05-01469-1
TB-7-2/7/05	05-01469-7

2. Analytical Methodology

Samples are analyzed by EPA methods

524.2 (Volatile Organic Compounds),
314.0 (Perchlorate, low level),
300.0 (Anions, by IC),
7196A (Chromium (VI)),
150.1 (pH),
160.1 (Solids, Total Dissolved (TDS)),
310.1 (Alkalinity),
SM2320B (Bicarbonate),
504.1 (Fumigants, EDB/DBCP),
200.8 (Metals, by ICPMS),
200.7 (Metals, by ICP),
200.9 (Arsenic, As, by GFAA),
8270-SIM (1,4-Dioxane),
8330 (Nitroaromatics and Nitroamines),

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

(1) 200.8:

Chromium in the amount of -0.103 ug/L was detected in one of the CCBs associated with the samples. The values were outside of ±0.1 ug/L reporting limit. Chromium was not detected in the associated Method Blank. Chromium in the amount of 0.041 ug/L was also detected in the sample EB-7-2/7/05. Chromium was detected in other field samples in the amounts significantly exceeding the reporting limit.

Calcium, Magnesium, Potassium and Sodium recoveries in the MS and/or MSD spiked on the sample MW-25-4 were outside of control limits, due to high levels of spiking elements in the parent sample.

"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,

Regina Kirakozova
Associate QA/QC Director
Applied P & CH Laboratories

APCL

Applied Physics & Chemistry Laboratory

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

March 01, 2005

Battelle - US Navy
Attention : David Conner
3990 Old Town Ave, Ste. B104
San Diego CA 92110

Dear David,

This package contains samples in our Service ID 05-1490 and your project JPL GW Mon-1Q05. Enclosed please find:

(1) Original report.
(2) Original Chain of Custody.
(3) One original and one compact disk of Level C Data Package Deliverable.
(4) One diskette containing EDD deliverable.

If anything is missing or you have any questions, please feel free to contact me.

Respectfully submitted,

Regina Kirakozova
Associate QA/QC Director
Applied P & CH Laboratories

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

APCL Analytical Report

Submitted to:
Battelle - US Navy
Attention: David Conner
3990 Old Town Ave, Ste B104.
San Diego CA 92110
Tel: (619)574-4821 Fax: (619)260-0882

Service ID #: 801-051490
Collected by:
Collected on: 02/09/05

Received: 02/09/05
Extracted: N/A
Tested: 02/09-15/05
Reported: 02/17/05

Sample Description: Water from 4800 Oak Grove Dr.
Project Description: G486048 JPL-GW Mon-1Q05

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result EB-9-2/9/05 05-01490-1	MW-23-1 05-01490-2	MW-23-2 05-01490-3	MW-23-3 05-01490-4
Dilution Factor				1	1	1	1
PERCHLORATE	314.0	µg/L	4	<4	3.9J	5.6	<4

Component Analyzed	Method	Unit	PQL	Analysis Result EB-9-2/9/05 05-01490-1	MW-23-1 05-01490-2	MW-23-2 05-01490-3
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01	<0.01
Dilution Factor				1	1	1
CHROMIUM	200.8	µg/L	0.1	<0.1	6.5	5.0
VOLATILE ORGANIC COMPOUNDS						
Dilution Factor				1	1	1
BENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMODICHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOFORM	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
N-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
SEC-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TERT-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2-BUTANONE	524.2	µg/L	10	<10	<10	<10
CARBON TETRACHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLORODIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROFORM	524.2	µg/L	0.5	<0.5	0.4J	0.3J
CHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
4-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	524.2	µg/L	0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result EB-9-2/9/05 05-01490-1	MW-23-1 05-01490-2	MW-23-2 05-01490-3
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
CIS-1,2-DICHLOROETHENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5
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	0.5	<0.5	<0.5	<0.5
METHYL-T-BUTYL ETHER (MTBE)	524.2	μg/L	1	<1	<1	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	μg/L	10	<10	<10	<10
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	<0.5	0.7	0.4J
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	<0.5	1.1	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
112TRICHLORO-122TRIFLUOROETHANE	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	0.6	0.7	0.4J

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-23-3 05-01490-4	MW-23-4 05-01490-5	TB-9-2/9/05 05-01490-6
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01	-
Dilution Factor				1	1	1
CHROMIUM	200.8	µg/L	0.1	4.8	2.9	-
VOLATILE ORGANIC COMPOUNDS						
Dilution Factor				1	1	1
BENZENE	524.2	µg/L	0.5	<0.5	-	<0.5
BROMOBENZENE	524.2	µg/L	0.5	<0.5	-	<0.5
BROMOCHLOROMETHANE	524.2	µg/L	0.5	<0.5	-	<0.5
BROMODICHLOROMETHANE	524.2	µg/L	0.5	<0.5	-	<0.5
BROMOFORM	524.2	µg/L	0.5	<0.5	-	<0.5
BROMOMETHANE	524.2	µg/L	0.5	<0.5	-	<0.5
N-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	-	<0.5
SEC-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	-	<0.5
TERT-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	-	<0.5
2-BUTANONE	524.2	µg/L	10	<10	-	<10
CARBON TETRACHLORIDE	524.2	µg/L	0.5	<0.5	-	<0.5
CHLOROBENZENE	524.2	µg/L	0.5	<0.5	-	<0.5
CHLORODIBROMOMETHANE	524.2	µg/L	0.5	<0.5	-	<0.5
CHLOROETHANE	524.2	µg/L	0.5	<0.5	-	<0.5
CHLOROFORM	524.2	µg/L	0.5	<0.5	-	<0.5
CHLOROMETHANE	524.2	µg/L	0.5	<0.5	-	<0.5
2-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	-	<0.5
4-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	-	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	µg/L	0.5	<0.5	-	<0.5
1,2-DIBROMOETHANE (EDB)	524.2	µg/L	0.5	<0.5	-	<0.5
DIBROMOMETHANE	524.2	µg/L	0.5	<0.5	-	<0.5
1,2-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	-	<0.5
1,3-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	-	<0.5
1,4-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	-	<0.5
DICHLORODIFLUOROMETHANE	524.2	µg/L	0.5	<0.5	-	<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
CIS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	-	<0.5
TRANS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	-	<0.5
1,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	-	<0.5
1,3-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	-	<0.5
2,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	-	<0.5
1,1-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	-	<0.5
CIS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	-	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	-	<0.5

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-23-3 05-01490-4	MW-23-4 05-01490-5	TB-9-2/9/05 05-01490-6
ETHYLBENZENE	524.2	µg/L	0.5	<0.5	-	<0.5
HEXACHLOROBUTADIENE	524.2	µg/L	0.5	<0.5	-	<0.5
ISOPROPYLBENZENE (CUMENE)	524.2	µg/L	0.5	<0.5	-	<0.5
P-ISOPROPYLTOLUENE	524.2	µg/L	0.5	<0.5	-	<0.5
METHYLENE CHLORIDE	524.2	µg/L	0.5	<0.5	-	<0.5
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	<1	-	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	µg/L	10	<10	-	<10
NAPHTHALENE	524.2	µg/L	0.5	<0.5	-	<0.5
N-PROPYLBENZENE	524.2	µg/L	0.5	<0.5	-	<0.5
STYRENE	524.2	µg/L	0.5	<0.5	-	<0.5
1,1,1,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5	-	<0.5
1,1,2,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5	-	<0.5
TETRACHLOROETHENE	524.2	µg/L	0.5	<0.5	-	<0.5
TOLUENE	524.2	µg/L	0.5	<0.5	-	<0.5
1,2,3-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	-	<0.5
1,2,4-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	-	<0.5
1,1,1-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	-	<0.5
1,1,2-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	-	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	<0.5	-	<0.5
TRICHLOROFLUOROMETHANE	524.2	µg/L	0.5	<0.5	-	<0.5
1,2,3-TRICHLOROPROPANE	524.2	µg/L	0.5	<0.5	-	<0.5
112TRICHLORO-122TRIFLUOROETHANE	524.2	µg/L	0.5	<0.5	-	<0.5
1,2,4-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	-	<0.5
1,3,5-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	-	<0.5
VINYL CHLORIDE	524.2	µg/L	0.5	<0.5	-	<0.5
O-XYLENE	524.2	µg/L	0.5	<0.5	-	<0.5
M/P-XYLENE	524.2	µg/L	0.5	0.4J	-	<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
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Case Narrative

Project: JPL-GW Mon-1Q05/G486048

For Battelle - Columbus Operations

APCL Service No: 05-1490

1. Sample Identification

The sample identifications are listed in the following table:

Battelle - Columbus Operations Sample ID	APCL Sample ID
MW-23-4	05-01490-5
MW-23-3	05-01490-4
MW-23-2	05-01490-3
MW-23-1	05-01490-2
EB-9-2/9/05	05-01490-1
TB-9-2/9/05	05-01490-6

2. Analytical Methodology

Samples are analyzed by EPA methods

524.2 (Volatile Organic Compounds),
314.0 (Perchlorate, low level),
7196A (Chromium (VI)),
200.8 (Target Analyte by ICPMS),

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

(1) 200.8:

Chromium in the amounts ranging from -0.103 ug/L through -0.178 ug/L was detected in the CCBs associated with the samples. The absolute values were outside of 0.1 ug/L reporting limit. Chromium was not detected in the associated Method Blank. Chromium was detected in the associated field samples in the amounts significantly exceeding the reporting limit.

"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,

Regina Kirakozova
Associate QA/QC Director
Applied P & CH Laboratories

APCL

Applied Physics & Chemistry Laboratory

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

March 07, 2005

Battelle - US Navy
Attention : David Conner
3990 Old Town Ave, Ste. B104
San Diego CA 92110

Dear David,

This package contains samples in our Service ID 05-1580 and your project G486048 JPL GW Mon-1Q05. Enclosed please find:

(1) Original report.
(2) Original Chain of Custody.
(3) One original and one compact disk of Level C Data Package Deliverable.
(4) One diskette containing EDD deliverable.

If anything is missing or you have any questions, please feel free to contact me.

Respectfully submitted,

Regina Kirakozova
Associate QA/QC Director
Applied P & CH Laboratories

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

APCL Analytical Report

Submitted to:
Battelle - US Navy.
Attention: David Conner
3990 Old Town Ave., Ste B104
San Diego CA 92110
Tel: (619)574-4821 Fax: (619)260-0882

Service ID #: 801-051580
Collected by: MM
Collected on: 02/15/05

Received: 02/15/05
Extracted: N/A
Tested: 02/16-22/05
Reported: 02/25/05

Sample Description: Water from 4800 Oak Grove Dr.
Project Description: G486048 JPL-GW MON 1Q05

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result DUPE-6-1Q05 05-01580-1	MW-7 05-01580-2
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01
Dilution Factor				1	100
PERCHLORATE	314.0	µg/L	4	<4	4,680
Dilution Factor				1	1.25
CHROMIUM	200.8	µg/L	1	8.5	7.6
VOLATILE ORGANIC COMPOUNDS					
Dilution Factor				1	1
BENZENE	524.2	µg/L	0.5	<0.5	<0.5
BROMOBENZENE	524.2	µg/L	0.5	<0.5	<0.5
BROMOCHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5
BROMODICHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5
BROMOFORM	524.2	µg/L	0.5	<0.5	<0.5
BROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5
N-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5
SEC-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5
TERT-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5
2-BUTANONE	524.2	µg/L	10	<10	<10
CARBON TETRACHLORIDE	524.2	µg/L	0.5	<0.5	57.3
CHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5
CHLORODIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5
CHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5
CHLOROFORM	524.2	µg/L	0.5	<0.5	12.5
CHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5
2-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5
4-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	524.2	µg/L	0.5	<0.5	<0.5
DIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<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	7.6
CIS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5

Applied P & CH Laboratories
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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result DUPE-6-1Q05 05-01580-1	MW-7 05-01580-2
TRANS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5
ETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5
HEXACHLOROBUTADIENE	524.2	µg/L	0.5	<0.5	<0.5
ISOPROPYLBENZENE (CUMENE)	524.2	µg/L	0.5	<0.5	<0.5
P-ISOPROPYLTOLUENE	524.2	µg/L	0.5	<0.5	<0.5
METHYLENE CHLORIDE	524.2	µg/L	0.5	0.5	0.9
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	<1	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	µg/L	10	<10	<10
NAPHTHALENE	524.2	µg/L	0.5	<0.5	<0.5
N-PROPYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5
STYRENE	524.2	µg/L	0.5	<0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5
TETRACHLOROETHENE	524.2	µg/L	0.5	<0.5	15.8
TOLUENE	524.2	µg/L	0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	<0.5	9.3
TRICHLOROFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5
112TRICHLORO-122TRIFLUOROETHANE	524.2	µg/L	0.5	<0.5	6.0
1,2,4-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5
VINYL CHLORIDE	524.2	µg/L	0.5	<0.5	<0.5
O-XYLENE	524.2	µg/L	0.5	<0.5	<0.5
M/P-XYLENE	524.2	µg/L	0.5	<0.5	<0.5

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-8 05-01580-3	MW-13 05-01580-4	TB-12-2/15/05 05-01580-5
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	0.032	-
Dilution Factor				1	5	1
PERCHLORATE	314.0	µg/L	4	<4	222	-
Dilution Factor				1	1	1
CHROMIUM	200.8	µg/L	1	8.4	50.9	-
VOLATILE ORGANIC COMPOUNDS						
Dilution Factor				1	1	1
BENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMODICHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOFORM	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
N-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
SEC-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TERT-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2-BUTANONE	524.2	µg/L	10	<10	<10	<10
CARBON TETRACHLORIDE	524.2	µg/L	0.5	<0.5	2.2	<0.5
CHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLORODIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROFORM	524.2	µg/L	0.5	<0.5	1.1	<0.5
CHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
4-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	524.2	µg/L	0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	0.7	<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
CIS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5

Applied P & CH Laboratories
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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-8 05-01580-3	MW-13 05-01580-4	TB-12-2/15/05 05-01580-5
CIS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
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	0.5	0.5J	0.7	0.8
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	<1	<1	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	µg/L	10	<10	<10	<10
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	<0.5	1.1	<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	<0.5	5.0	<0.5
TRICHLOROFLUOROMETHANE	524.2	µg/L	0.5	<0.5	0.3J	<0.5
1,2,3-TRICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
112TRICHLORO-122TRIFLUOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
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 Laboratories

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

Case Narrative

Project: JPL-GW MON 1Q05/G486048

For Battelle - Columbus Operations

APCL Service No: 05-1580

1. Sample Identification

The sample identifications are listed in the following table:

Battelle - Columbus Operations Sample ID	APCL Sample ID
MW-7	05-01580-2
MW-8	05-01580-3
MW-13	05-01580-4
DUPE-6-1Q05	05-01580-1
TB-12-2/15/05	05-01580-5

2. Analytical Methodology

Samples are analyzed by EPA methods

524.2 (Volatile Organic Compounds),
314.0 (Perchlorate, low level),
7196A (Chromium (VI)),
200.8 (Chromium, by ICPMS),

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,

Regina Kirakozova
Associate QA/QC Director
Applied P & CH Laboratories

APCL

Applied Physics & Chemistry Laboratory

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

March 07, 2005

Battelle - US Navy
Attention : David Conner
3990 Old Town Ave, Ste. B104
San Diego CA 92110

Dear David,

This package contains samples in our Service ID 05-1599 and your project JPL GW Mon-1Q05. Enclosed please find:

(1) Original report.
(2) Original Chain of Custody.
(3) One original and one compact disk of Level C Data Package Deliverable.
(4) One diskette containing EDD deliverable.

If anything is missing or you have any questions, please feel free to contact me.

Respectfully submitted,

Regina Kirakozova
Associate QA/QC Director
Applied P & CH Laboratories

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

APCL Analytical Report

Submitted to:
Battelle - US Navy
Attention: David Conner
3990 Old Town Ave, Ste B104.
San Diego CA 92110
Tel: (619)574-4821 Fax: (619)260-0882

Service ID #: 801-051599
Collected by: MM
Collected on: 02/16/05

Received: 02/16/05
Extracted: N/A
Tested: 02/17-22/05
Reported: 02/25/05

Sample Description: Water from 4800 Oak Grove Dr.
Project Description: G486048 JPL-GW Mon 1Q05

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result DUPE-7-1Q05 05-01599-1	MW-6 05-01599-2
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01
Dilution Factor				50	1
PERCHLORATE	314.0	µg/L	4	2,110	4.3
Dilution Factor				1	1
CHROMIUM	200.8	µg/L	0.1	14.4	20.0
VOLATILE ORGANIC COMPOUNDS					
Dilution Factor				1	1
BENZENE	524.2	µg/L	0.5	<0.5	<0.5
BROMOBENZENE	524.2	µg/L	0.5	<0.5	<0.5
BROMOCHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5
BROMODICHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5
BROMOFORM	524.2	µg/L	0.5	<0.5	<0.5
BROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5
N-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5
SEC-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5
TERT-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5
2-BUTANONE	524.2	µg/L	10	<10	<10
CARBON TETRACHLORIDE	524.2	µg/L	0.5	3.4	<0.5
CHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5
CHLORODIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5
CHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5
CHLOROFORM	524.2	µg/L	0.5	3.2	0.5
CHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5
2-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5
4-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	524.2	µg/L	0.5	<0.5	<0.5
DIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5
1,1-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	1.1
1,2-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5
1,1-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	1.5
CIS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result DUPE-7-1Q05 05-01599-1	MW-6 05-01599-2
TRANS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5
ETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5
HEXACHLOROBUTADIENE	524.2	µg/L	0.5	<0.5	<0.5
ISOPROPYLBENZENE (CUMENE)	524.2	µg/L	0.5	<0.5	<0.5
P-ISOPROPYLTOLUENE	524.2	µg/L	0.5	<0.5	<0.5
METHYLENE CHLORIDE	524.2	µg/L	0.5	0.6	0.6
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	<1	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	µg/L	10	<10	<10
NAPHTHALENE	524.2	µg/L	0.5	<0.5	<0.5
N-PROPYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5
STYRENE	524.2	µg/L	0.5	<0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5
TETRACHLOROETHENE	524.2	µg/L	0.5	0.3J	3.4
TOLUENE	524.2	µg/L	0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	1.0	0.5
TRICHLOROFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5
112TRICHLORO-122TRIFLUOROETHANE	524.2	µg/L	0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5
VINYL CHLORIDE	524.2	µg/L	0.5	<0.5	<0.5
O-XYLENE	524.2	µg/L	0.5	<0.5	<0.5
M/P-XYLENE	524.2	µg/L	0.5	<0.5	<0.5

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Component Analyzed	Method	Unit	PQL	Analysis Result MW-10 05-01599-3	MW-16 05-01599-4	TB-13-2/16/05 05-01599-5
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01	-
Dilution Factor				1	50	1
PERCHLORATE	314.0	µg/L	4	71.6	2,100	-
Dilution Factor				1	1	1
CHROMIUM	200.8	µg/L	0.1	20.0	14.9	-
VOLATILE ORGANIC COMPOUNDS						
Dilution Factor				1	1	1
BENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMODICHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOFORM	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
N-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
SEC-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TERT-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2-BUTANONE	524.2	µg/L	10	<10	<10	<10
CARBON TETRACHLORIDE	524.2	µg/L	0.5	1.3	3.4	<0.5
CHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLORODIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROFORM	524.2	µg/L	0.5	1.4	3.2	<0.5
CHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
4-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	524.2	µg/L	0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHANE	524.2	µg/L	0.5	0.8	<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
CIS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5

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Component Analyzed	Method	Unit	PQL	Analysis Result MW-10 05-01599-3	MW-16 05-01599-4	TB-13-2/16/05 05-01599-5
CIS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
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	0.5	0.7	0.9	0.8
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	<1	<1	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	µg/L	10	<10	<10	<10
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	1.5	0.3J	<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	17.5	1.0	<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
112TRICHLORO-122TRIFLUOROETHANE	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 Laboratories

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Case Narrative

Project: JPL-GW Mon 1Q05/4800 Oak Grove Dr./G486048

For Battelle - Columbus Operations

APCL Service No: 05-1599

1. Sample Identification

The sample identifications are listed in the following table:

Battelle - Columbus Operations Sample ID	APCL Sample ID
MW-10	05-01599-3
MW-6	05-01599-2
MW-16	05-01599-4
DUPE-7-1Q05	05-01599-1
TB-13-2/16/05	05-01599-5

2. Analytical Methodology

Samples are analyzed by EPA methods

524.2 (Volatile Organic Compounds),
314.0 (Perchlorate, low level),
7196A (Chromium (VI)),
200.8 (Chromium, by ICPMS),

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,

Regina Kirakozova
Associate QA/QC Director
Applied P & CH Laboratories

APCL

Applied Physics & Chemistry Laboratory

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

March 08, 2005

Battelle - US Navy
Attention : David Conner
3990 Old Town Ave, Ste. B104
San Diego CA 92110

Dear David,

This package contains samples in our Service ID 05-1512 and your project G486048 JPL GW Mon-1Q05. Enclosed please find:

(1) Original report.
(2) Original Chain of Custody.
(3) One original and one compact disk of Level C Data Package Deliverable.

If anything is missing or you have any questions, please feel free to contact me.

Respectfully submitted,

Regina Kirakozova
Associate QA/QC Director
Applied P & CH Laboratories

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

APCL Analytical Report

Submitted to:
Battelle - US Navy.
Attention: David Conner
3990 Old Town Ave, Ste B104
San Diego CA 92110
Tel: (619)574-4821 Fax: (619)260-0882

Service ID #: 801-051512
Collected by: MM
Collected on: 02/10/05

Received: 02/10/05
Extracted: N/A
Tested: 02/10-18/05
Reported: 02/22/05

Sample Description: Water from 4800 Oak Grove Dr. Pasadena.
Project Description: G486048 JPL-GW Mon-1Q05

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result EB-10-2/10/05 05-01512-1	MW-12-1 05-01512-2	MW-12-2 05-01512-3	MW-12-3 05-01512-4
Dilution Factor				1	1	1	1
PERCHLORATE	314.0	µg/L	4	<4	<4	3.8J	<4
VOLATILE ORGANIC COMPOUNDS							
Dilution Factor				1	1	1	1
BENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMODICHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOFORM	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
2-BUTANONE	524.2	µg/L	10	<10	<10	<10	<10
N-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
SEC-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TERT-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CARBON TETRACHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	1.4	4.4
CHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLORODIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLOROETHANE	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	3.3
CHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
2-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
4-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	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
CIS-1,2-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 EB-10-2/10/05 05-01512-1	MW-12-1 05-01512-2	MW-12-2 05-01512-3	MW-12-3 05-01512-4
TRANS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
HEXACHLOROBUTADIENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
ISOPROPYLBENZENE (CUMENE)	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
P-ISOPROPYLTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	<1	<1	<1	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	µg/L	10	<10	<10	<10	<10
NAPHTHALENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
N-PROPYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
STYRENE	524.2	µg/L	0.5	<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	<0.5
1,1,2,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TETRACHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRICHLOROFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
112TRICHLORO-122TRIFLUOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
VINYL CHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
O-XYLENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
M/P-XYLENE	524.2	µg/L	0.5	0.3J	<0.5	0.3J	0.4J

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-12-4 05-01512-5	MW-12-5 05-01512-6	MW-22-1 05-01512-7	MW-22-2 05-01512-8
Dilution Factor				1	1	1	1
PERCHLORATE	314.0	µg/L	4	6.6	3.9J	5.0	<4
VOLATILE ORGANIC COMPOUNDS							
Dilution Factor				1	1	1	1
BENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMODICHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOFORM	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
N-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
SEC-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TERT-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
2-BUTANONE	524.2	µg/L	10	<10	<10	<10	<10
CARBON TETRACHLORIDE	524.2	µg/L	0.5	2.8	2.1	<0.5	<0.5
CHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLORODIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLOROFORM	524.2	µg/L	0.5	0.8	0.4J	0.3J	<0.5
CHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
2-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
4-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	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
CIS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5

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Component Analyzed	Method	Unit	PQL	Analysis Result MW-12-4 05-01512-5	MW-12-5 05-01512-6	MW-22-1 05-01512-7	MW-22-2 05-01512-8
HEXACHLOROBUTADIENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
ISOPROPYLBENZENE (CUMENE)	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
P-ISOPROPYLTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
4-METHYL-2-PENTANONE (MIBK)	524.2	µg/L	10	<10	<10	<10	<10
METHYLENE CHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	0.6
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	<1	<1	<1	<1
NAPHTHALENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
N-PROPYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
STYRENE	524.2	µg/L	0.5	<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	<0.5
1,1,2,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TETRACHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	0.9	<0.5
TOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	0.5	<0.5	0.4J	<0.5
TRICHLOROFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
112TRICHLORO-122TRIFLUOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
VINYL CHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
O-XYLENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
M/P-XYLENE	524.2	µg/L	0.5	0.5J	<0.5	<0.5	0.5

Component Analyzed	Method	Unit	PQL	Analysis Result MW-22-3 05-01512-9	SB-1-1Q05 05-01512-10	TB-10-2/10/05 05-01512-11
Dilution Factor				1	1	1
PERCHLORATE	314.0	µg/L	4	3.6J	<4	-

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Component Analyzed	Method	Unit	PQL	Analysis Result MW-22-3 05-01512-9	SB-1-1Q05 05-01512-10	TB-10-2/10/05 05-01512-11
VOLATILE ORGANIC COMPOUNDS						
Dilution Factor				1	1	1
BENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMODICHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOFORM	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
N-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
SEC-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TERT-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2-BUTANONE	524.2	µg/L	10	<10	<10	<10
CARBON TETRACHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLORODIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROFORM	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
4-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	524.2	µg/L	0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<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
CIS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
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

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Component Analyzed	Method	Unit	PQL	Analysis Result MW-22-3 05-01512-9	SB-1-1Q05 05-01512-10	TB-10-2/10/05 05-01512-11
P-ISOPROPYLTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	<1	<1	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	µg/L	10	<10	<10	<10
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	<0.5	<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	<0.5	<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
112TRICHLORO-122TRIFLUOROETHANE	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

Component Analyzed	Method	Unit	PQL	Analysis Result EB-10-2/10/05 05-01512-1	MW-12-1 05-01512-2	MW-12-2 05-01512-3	MW-12-3 05-01512-4
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01	<0.01	<0.01
Dilution Factor				1	1	1	1
CHROMIUM	200.8	µg/L	0.1	0.047J	7.1	7.1	5.1

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Component Analyzed	Method	Unit	PQL	Analysis Result MW-22-1 05-01512-7	MW-22-2 05-01512-8	MW-22-3 05-01512-9	SB-1-1Q05 05-01512-10
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01	<0.01	<0.01
Dilution Factor				1.25	1	1	1
CHROMIUM	200.8	μg/L	0.1	0.31	4.6	4.8	0.047J

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 Laboratories

Applied P & CH Laboratories
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Case Narrative

Project: JPL-GW Mon-1Q05/G486048

For Battelle - Columbus Operations

APCL Service No: 05-1512

1. Sample Identification

The sample identifications are listed in the following table:

Battelle - Columbus Operations Sample ID	APCL Sample ID
MW-22-3	05-01512-9
MW-22-2	05-01512-8
MW-22-1	05-01512-7
MW-12-5	05-01512-6
MW-12-4	05-01512-5
MW-12-3	05-01512-4
MW-12-2	05-01512-3
MW-12-1	05-01512-2
EB-10-2/10/05	05-01512-1
TB-10-2/10/05	05-01512-11
SB-1-1Q05	05-01512-10

2. Analytical Methodology

Samples are analyzed by EPA methods

524.2 (Volatile Organic Compounds),
314.0 (Perchlorate, low level),
7196A (Chromium (VI)),
200.8 (Chromium, by ICPMS),

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

(1) 200.8:

Chromium in the amounts ranging from -0.103 ug/L to -0.156 ug/L was detected in the CCBs associated with the samples. The values were outside of ±0.1 ug/L reporting limit. Chromium was not detected in the associated Method Blank. Chromium in the amount of 0.047 ug/L was also detected in the samples EB-10-2/10/05 and SB-1-1Q05. Chromium was detected in other field samples in the amounts significantly exceeding the reporting limit.

(2) Perchlorate, 314.0:

Perchlorate recovery in the MS spiked on the sample MW-22-2 was 71%, lower than 75-125% control limits. The recovery in the MSD was within control limits.

"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,

Regina Kirakozova
Associate QA/QC Director
Applied P & CH Laboratories

APCL

Applied Physics & Chemistry Laboratory

13760 Magnolia Ave. Chino CA 91710
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March 08, 2005

Battelle - US Navy
Attention : David Conner
3990 Old Town Ave, Ste. B104
San Diego CA 92110

Dear David,

This package contains samples in our Service ID 05-1614 and your project G486048 JPL GW Mon-1Q05. Enclosed please find:

(1) Original report.
(2) Original Chain of Custody.
(3) One original and one compact disk of Level C Data Package Deliverable.
(4) One diskette containing EDD deliverable.

If anything is missing or you have any questions, please feel free to contact me.

Respectfully submitted,

Regina Kirakozova
Associate QA/QC Director
Applied P & CH Laboratories

Applied P & CH Laboratories
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Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Submitted to:
Battelle - US Navy
Attention: David Conner
3990 Old Town Ave, Ste B104
San Diego CA 92110
Tel: (619)574-4821 Fax: (619)260-0882

Service ID #: 801-051614
Collected by: M. Menrons
Collected on: 02/17/05

Received: 02/17/05
Extracted: N/A
Tested: 02/18-22/05
Reported: 02/25/05

Sample Description: Water from 4800 Oak Grove Dr.
Project Description: G486048 JPL-GW Mon 1Q05

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result MW-15 05-01614-1
Dilution Factor				1
CHROMIUM (VI)	7196	mg/L	0.01	<0.01
Dilution Factor				1
CHROMIUM	200.8	μg/L	0.1	10.0

Component Analyzed	Method	Unit	PQL	Analysis Result TB-14-2/17/05 05-01614-2
VOLATILE ORGANIC COMPOUNDS				
Dilution Factor				1
BENZENE	524.2	μg/L	0.5	<0.5
BROMOBENZENE	524.2	μg/L	0.5	<0.5
BROMOCHLOROMETHANE	524.2	μg/L	0.5	<0.5
BROMODICHLOROMETHANE	524.2	μg/L	0.5	<0.5
BROMOFORM	524.2	μg/L	0.5	<0.5
BROMOMETHANE	524.2	μg/L	0.5	<0.5
N-BUTYLBENZENE	524.2	μg/L	0.5	<0.5
SEC-BUTYLBENZENE	524.2	μg/L	0.5	<0.5
TERT-BUTYLBENZENE	524.2	μg/L	0.5	<0.5
2-BUTANONE	524.2	μg/L	10	<10
CARBON TETRACHLORIDE	524.2	μg/L	0.5	<0.5
CHLOROBENZENE	524.2	μg/L	0.5	<0.5
CHLORODIBROMOMETHANE	524.2	μg/L	0.5	<0.5
CHLOROETHANE	524.2	μg/L	0.5	<0.5
CHLOROFORM	524.2	μg/L	0.5	<0.5
CHLOROMETHANE	524.2	μg/L	0.5	<0.5
2-CHLOROTOLUENE	524.2	μg/L	0.5	<0.5
4-CHLOROTOLUENE	524.2	μg/L	0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	μg/L	0.5	<0.5
1,2-DIBROMOETHANE (EDB)	524.2	μg/L	0.5	<0.5
DIBROMOMETHANE	524.2	μg/L	0.5	<0.5
1,2-DICHLOROBENZENE	524.2	μg/L	0.5	<0.5
1,3-DICHLOROBENZENE	524.2	μg/L	0.5	<0.5
1,4-DICHLOROBENZENE	524.2	μg/L	0.5	<0.5

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Component Analyzed	Method	Unit	PQL	Analysis Result TB-14-2/17/05 05-01614-2
DICHLORODIFLUOROMETHANE	524.2	µg/L	0.5	<0.5
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	<0.5
CIS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5
TRANS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5
1,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5
1,3-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5
2,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5
1,1-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5
CIS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5
ETHYLBENZENE	524.2	µg/L	0.5	<0.5
HEXACHLOROBUTADIENE	524.2	µg/L	0.5	<0.5
ISOPROPYLBENZENE (CUMENE)	524.2	µg/L	0.5	<0.5
P-ISOPROPYLTOLUENE	524.2	µg/L	0.5	<0.5
METHYLENE CHLORIDE	524.2	µg/L	0.5	0.5J
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	µg/L	10	<10
NAPHTHALENE	524.2	µg/L	0.5	<0.5
N-PROPYLBENZENE	524.2	µg/L	0.5	<0.5
STYRENE	524.2	µg/L	0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5
TETRACHLOROETHENE	524.2	µg/L	0.5	<0.5
TOLUENE	524.2	µg/L	0.5	<0.5
1,2,3-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5
1,2,4-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5
1,1,1-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5
1,1,2-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	<0.5
TRICHLOROFLUOROMETHANE	524.2	µg/L	0.5	<0.5
1,2,3-TRICHLOROPROPANE	524.2	µg/L	0.5	<0.5
112TRICHLORO-122TRIFLUOROETHANE	524.2	µg/L	0.5	<0.5
1,2,4-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5
1,3,5-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5
VINYL CHLORIDE	524.2	µg/L	0.5	<0.5
O-XYLENE	524.2	µg/L	0.5	<0.5
M/P-XYLENE	524.2	µg/L	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 Laboratories

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

Case Narrative

Project: JPL-GW Mon 1Q05/4800 Oak Grove Dr./G486048

For Battelle - Columbus Operations

APCL Service No: 05-1614

1. Sample Identification

The sample identifications are listed in the following table:

Battelle - Columbus Operations Sample ID	APCL Sample ID
MW-15	05-01614-1
TB-14-2/17/05	05-01614-2

2. Analytical Methodology

Samples are analyzed by EPA methods

524.2 (Volatile Organic Compounds),
7196A (Chromium (VI)),
200.8 (Chromium, by ICPMS),

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,

Regina Kirakozova
Associate QA/QC Director
Applied P & CH Laboratories

APCL

Applied Physics & Chemistry Laboratory

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

March 11, 2005

Battelle - US Navy
Attention : David Conner
3990 Old Town Ave, Ste. B104
San Diego CA 92110

Dear David,

This package contains samples in our Service ID 05-1559 and your project G486048 JPL GW Mon-1Q05. Enclosed please find:

(1) Original report.
(2) Original Chain of Custody.
(3) One original and one compact disk of Level C Data Package Deliverable.
(4) One diskette containing EDD deliverable.

If anything is missing or you have any questions, please feel free to contact me.

Respectfully submitted,

Regina Kirakozova
Associate QA/QC Director
Applied P & CH Laboratories

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

APCL Analytical Report

Submitted to:
Battelle - US Navy
Attention: David Conner
3990 Old Town Ave, Ste B104.
San Diego CA 92110
Tel: (619)574-4821 Fax: (619)260-0882

Service ID #: 801-051559
Collected by: MM
Collected on: 02/14/05

Received: 02/14/05
Extracted: N/A
Tested: 02/14-18/05
Reported: 02/22/05

Sample Description: Water from 4800 Oak Grove Dr. Pasadena.
Project Description: G486048 JPL-GW Mon-1Q05

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result DUPE-5-1Q05 05-01559-1	MW-5 05-01559-2
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01
Dilution Factor				1	1
PERCHLORATE	314.0	µg/L	4	<4	<4
Dilution Factor				1	1
CHROMIUM	200.8	µg/L	0.1	5.6	4.5

Component Analyzed	Method	Unit	PQL	Analysis Result DUPE-5-1Q05 05-01559-1	MW-5 05-01559-2	TB-11-2/14/05 05-01559-3
VOLATILE ORGANIC COMPOUNDS						
Dilution Factor				1	1	1
BENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMODICHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOFORM	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2-BUTANONE	524.2	µg/L	10	<10	<10	<10
N-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
SEC-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TERT-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2-BUTANONE	524.2	µg/L	10	<10	<10	<10
CARBON TETRACHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLORODIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROFORM	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
4-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	524.2	µg/L	0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5

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

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result DUPE-5-1Q05 05-01559-1	MW-5 05-01559-2	TB-11-2/14/05 05-01559-3
1,4-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<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
CIS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
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	0.5	0.7	0.8	0.8
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	<1	<1	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	µg/L	10	<10	<10	<10
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	<0.5	<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	<0.5	<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
112TRICHLORO-122TRIFLUOROETHANE	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 Laboratories

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

Case Narrative

Project: JPL-GW Mon-1Q05/G486048

For Battelle - Columbus Operations

APCL Service No: 05-1559

1. Sample Identification

The sample identifications are listed in the following table:

Battelle - Columbus Operations Sample ID	APCL Sample ID
MW-5	05-01559-2
DUPE-5-1Q05	05-01559-1
TB-11-2/14/05	05-01559-3

2. Analytical Methodology

Samples are analyzed by EPA methods

524.2 (Volatile Organic Compounds),
314.0 (Perchlorate, low level),
7196A (Chromium (VI)),
200.8 (Chromium, by ICPMS),

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

(1) 200.8:

Chromium in the amounts ranging from -0.156 ug/L to -0.178 ug/L was detected in the CCBs associated with the samples. The values were outside of ±0.1 ug/L reporting limit. Chromium was not detected in the associated Method Blank. Chromium was detected in the field samples in the amounts significantly exceeding the reporting limit.

"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,

Regina Kirakozova
Associate QA/QC Director
Applied P & CH Laboratories

APCL

Applied Physics & Chemistry Laboratory

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

April 04, 2005

Battelle
Attention: David Conner
3990 Old Town Ave, Ste B104
San Diego, CA 92110

Dear David,

This package contains samples in our Service ID 05-1470 and your project: JPL-GW Mon-1Q05
Enclosed please find:

(1) Original Analytical Report.
(2) One Original and One CD Containing Level C/D Data Package Deliverable.
(3) One diskette containing EDD deliverables.

If anything is missing or you have any questions, please feel free to contact me.

Respectfully submitted,

Hsin-Yi Lee
Project Manager
Applied P & CH Laboratories

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

APCL Analytical Report

Submitted to:
Battelle - Columbus Operations
Attention: David Conner
3990 Old Town Ave, Ste B104.
San Diego CA 92110
Tel: (619)574-4821 Fax: (760)385-4613

Service ID #: 801-051470
Collected by: MM
Collected on: 02/07/05

Received: 02/07/05
Extracted: N/A
Tested: N/A
Reported: 04/01/05

Sample Description: Water
Project Description: G486048 JPL-GW Mon-1Q05

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result EB-7-2/7/05 05-01470-1	MW-25-1 05-01470-2	MW-25-2 05-01470-3
NDMA [a]						

Component Analyzed	Method	Unit	PQL	Analysis Result MW-25-3 05-01470-4	MW-25-4 05-01470-5	MW-25-5 05-01470-6
NDMA [a]						

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] Subcontracted to Del Mar, Analytical Irvine. Please see attached.

Respectfully submitted,

Dominic Lau
Laboratory Director
Applied P & CH Laboratories

Del Mar Analytical

17461Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (949) 370-1046
9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9689
9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851
2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

LABORATORY REPORT

Prepared For: Applied Physics & Chemistry Laboratory
13760 Magnolia Avenue
Chino, CA 91710
Attention: Kenny Chan

Project:NDMA

Sampled: 02/07/05
Received: 02/11/05
Issued: 03/01/05 13:47

NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain of Custody, 1 page, is included and is an integral part of this report.
This entire report was reviewed and approved for release.

SAMPLE CROSS REFERENCE

LABORATORY ID	CLIENT ID	MATRIX
IOB1010-01	MW-25-5	Water
IOB1010-02	MW-25-4	Water
IOB1010-03	MW-25-3	Water
IOB1010-04	MW-25-2	Water
IOB1010-05	MW-25-1	Water
IOB1010-06	EB-7-2/7/05	Water

Reviewed By:

Del Mar Analytical, Irvine
Chris Roberts
Project Manager

Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (949) 370-1046
9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9689
9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851
2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Applied Physics & Chemistry Laboratory
13760 Magnolia Avenue
Chino, CA 91710
Attention: Kenny Chan

Project ID: NDMA

Report Number: IOB1010

Sampled: 02/07/05
Received: 02/11/05

SEMI-VOLATILE ORGANICS BY GC/MS (EPA 3520C/1625C MOD)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOB1010-01 (MW-25-5 - Water)				**Sampled: 02/07/05**				
Reporting Units: ug/l								
N-Nitrosodimethylamine	EPA 1625C Mod	5B12031	0.0020	ND	1	2/12/2005	2/14/2005	
Sample ID: IOB1010-02 (MW-25-4 - Water)				**Sampled: 02/07/05**				
Reporting Units: ug/l								
N-Nitrosodimethylamine	EPA 1625C Mod	5B12031	0.0020	ND	0.98	2/12/2005	2/14/2005	
Sample ID: IOB1010-03 (MW-25-3 - Water)				**Sampled: 02/07/05**				
Reporting Units: ug/l								
N-Nitrosodimethylamine	EPA 1625C Mod	5B12031	0.0020	ND	1	2/12/2005	2/14/2005	
Sample ID: IOB1010-04 (MW-25-2 - Water)				**Sampled: 02/07/05**				
Reporting Units: ug/l								
N-Nitrosodimethylamine	EPA 1625C Mod	5B12031	0.0020	ND	0.98	2/12/2005	2/14/2005	
Sample ID: IOB1010-05 (MW-25-1 - Water)				**Sampled: 02/07/05**				
Reporting Units: ug/l								
N-Nitrosodimethylamine	EPA 1625C Mod	5B12031	0.0020	ND	1	2/12/2005	2/14/2005	
Sample ID: IOB1010-06 (EB-7-2/7/05 - Water)				**Sampled: 02/07/05**				
Reporting Units: ug/l								
N-Nitrosodimethylamine	EPA 1625C Mod	5B12031	0.0020	ND	0.98	2/12/2005	2/14/2005	

Del Mar Analytical, Irvine
Chris Roberts
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.

SEVERN TRENT STL

STL Sacramento
880 Riverside Parkway
West Sacramento, CA 95605

Tel: 916 373 5600 Fax: 916 372 1059
www.stl-inc.com

February 28, 2005

STL SACRAMENTO PROJECT NUMBER: G5B210149
PO/CONTRACT: G486090

David Conner
Battelle
3990 Old Town Ave
Suite B104
San Diego, CA 92110

Dear Mr. Conner,

This report contains the analytical results for the samples received under chain of custody by STL Sacramento on February 19, 2005. These samples are associated with your JPL GW Mon. 1Q05, Calif. project.

The test results in this report meet all NELAC requirements for parameters that accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The case narrative is an integral part of this report.

If you have any questions, please feel free to call me at (916) 374-4381.

Sincerely,

Jon Gildersleeve
Project Manager

Sample Summary
G5B210149

WO#	Sample #	Client Sample ID	Sampling Date	Received Date
G4TVC	1	MW-7	2/15/05 09:46 AM	2/19/05 09:00 AM
G4TVH	2	MW-8	2/15/05 01:52 PM	2/19/05 09:00 AM
G4TVJ	3	MW-12-4	2/10/05 10:37 AM	2/19/05 09:00 AM
G4TVK	4	MW-13	2/15/05 11:56 AM	2/19/05 09:00 AM
G4TVL	5	MW-25-2	2/7/05 02:06 PM	2/19/05 09:00 AM
G4TVM	6	MW-25-3	2/7/05 12:25 PM	2/19/05 09:00 AM
G4TVN	7	DUPE-8-1Q05	2/10/05	2/19/05 09:00 AM

Notes(s):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity, pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Battelle

Client Sample ID: MW-7

Dissolved HPLC

Lot-Sample #...:	G5B210149-001	Work Order #...:	G4TVC1AA	Matrix.....:	WATER
Date Sampled...:	02/15/05	Date Received..:	02/19/05		
Prep Date.....:	02/24/05	Analysis Date..:	02/26/05		
Prep Batch #...:	5055243				
Dilution Factor:	1000	Method.....:	SW846 8321A		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Perchlorate	2000 RLA	500	ug/L

NOTE(S):

RLA The reporting limit for this analyte is elevated due to sample dilution.

Battelle

Client Sample ID: MW-8

Dissolved HPLC

Lot-Sample #...:	G5B210149-002	Work Order #...:	G4TVH1AA	Matrix.....:	WATER
Date Sampled...:	02/15/05	Date Received..:	02/19/05		
Prep Date.....:	02/24/05	Analysis Date..:	02/26/05		
Prep Batch #...:	5055243				
Dilution Factor:	1	Method.....:	SW846 8321A		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Perchlorate	1.3	0.50	ug/L

Battelle

Client Sample ID: MW-12-4

Dissolved HPLC

Lot-Sample #...:	G5B210149-003	Work Order #...:	G4TVJ1AA	Matrix.....:	WATER
Date Sampled...:	02/10/05	Date Received..:	02/19/05		
Prep Date.....:	02/24/05	Analysis Date..:	02/26/05		
Prep Batch #...:	5055243				
Dilution Factor:	2	Method.....:	SW846 8321A		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Perchlorate	4.6 RLA	1.0	ug/L

NOTE(S):

RLA The reporting limit for this analyte is elevated due to sample dilution.

Battelle

Client Sample ID: MW-13

Dissolved HPLC

Lot-Sample #...:	G5B210149-004	Work Order #...:	G4TVK1AA	Matrix.....:	WATER
Date Sampled...:	02/15/05	Date Received..:	02/19/05		
Prep Date.....:	02/24/05	Analysis Date..:	02/26/05		
Prep Batch #...:	5055243				
Dilution Factor:	10	Method.....:	SW846 8321A		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Perchlorate	130 RLA	5.0	ug/L

NOTE(S):

RLA The reporting limit for this analyte is elevated due to sample dilution.

Battelle

Client Sample ID: MW-25-2

Dissolved HPLC

Lot-Sample #...:	G5B210149-005	Work Order #...:	G4TVL1AA	Matrix.....:	WATER
Date Sampled...:	02/07/05	Date Received..:	02/19/05		
Prep Date.....:	02/24/05	Analysis Date..:	02/26/05		
Prep Batch #...:	5055243				
Dilution Factor:	5	Method.....:	SW846 8321A		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Perchlorate	12 RLA	2.5	ug/L

NOTE(S):

RLA The reporting limit for this analyte is elevated due to sample dilution.

Battelle

Client Sample ID: MW-25-3

Dissolved HPLC

Lot-Sample #...:	G5B210149-006	Work Order #...:	G4TVM1AA	Matrix.....:	WATER
Date Sampled...:	02/07/05	Date Received..:	02/19/05		
Prep Date.....:	02/24/05	Analysis Date..:	02/26/05		
Prep Batch #...:	5055243				
Dilution Factor:	5	Method.....:	SW846 8321A		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Perchlorate	10 RLA	2.5	ug/L

NOTE(S):

RLA The reporting limit for this analyte is elevated due to sample dilution.

Battelle

Client Sample ID: DUPE-8-1Q05

Dissolved HPLC

Lot-Sample #...:	G5B210149-007	Work Order #...:	G4TVN1AA	Matrix.....:	WATER
Date Sampled...:	02/10/05	Date Received..:	02/19/05		
Prep Date.....:	02/24/05	Analysis Date..:	02/26/05		
Prep Batch #...:	5055243				
Dilution Factor:	2	Method.....:	SW846 8321A		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Perchlorate	4.9 RLA	1.0	ug/L

NOTE(S):

RLA The reporting limit for this analyte is elevated due to sample dilution.