BHP

CERTIFIED MAIL NO. P-101-793-520
RETURN RECEIPT REQUESTED

BHP Hawaii

November 21, 1995

Mr. Mitch Kaplan
Hazardous Waste Division (H-3-1)
U.S. Environmental Protection Agency, Region IX
75 Hawthorne Street
San Francisco, California 94105

Dear Mr. Kaplan:

GMP Groundwater Analytical Results
HID 056786395

BHP Petroleum Americas Refining Inc., submits, for your review, the enclosed quarterly groundwater analytical results for groundwater samples collected at the Refinery in September 1995 under the approved Groundwater Monitoring Program (GMP, October 1993). Groundwater samples were collected from a total of 26 monitoring wells in the Refinery (MW-3 to 6, and CW-1 to CW-9). Duplicate samples were collected from MW-6 and CW-6A respectively (Sample No. MW-6-R and CW-6A-R in the report). Field blank samples were collected each sampling day and the analytical results were also enclosed.

The groundwater analytical results of this quarterly sampling still indicate that groundwater quality around the ponds area at BHP Refinery has not changed significantly since last quarterly sampling conducted in June 1995. Benzene concentration above 5 ug/L was found only in three wells (MW-3, MW-6, and CW-1A) with the highest concentration of 27 ug/L found in CW-1A.

This is the last quarterly groundwater sampling under the approved GMP plan (October 1993). The final GMP report will be prepared and submitted for your review later in March 1996 according to the GMP schedule. Since our surface impoundments (Pond Nos. 1, 2, and 2A) have been closed in September 1995, we will start our post pond-closure groundwater monitoring program in March 1996 according to the EPA approved Pond Closure Plan and the Post-closure Monitoring Plan.

Please contact Tony Shan at (808) 547-3804 should you have any questions regarding this report.

Sincerely,

Frank D. Clouse

Frank D. Clouse
BHP Refinery Manager

cc: Ms. Nicole Moutoux, US EPA (w/o Enclosure)
Mr. Steven Y. K. Chang, HDOH (w/ Enclosure)

BHP Hawaii Inc
733 Bishop Street Honolulu Hawaii 96813 USA
PO Box 3379 Honolulu Hawaii 96842 USA
Telephone 808 547 3111 Facsimile 808 547 3145

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The groundwater analytical results of this quarterly sampling still indicate that groundwater quality around the ponds area at BHP Refinery has not changed significantly since last quarterly sampling conducted in June 1995. Benzene concentration above 5 ug/L was found only in three wells (MW-3, MW-6, and CW-1A) with the highest concentration of 27 ug/L found in CW-1A.

This is the last quarterly groundwater sampling under the approved GMP plan (October 1993). The final GMP report will be prepared and submitted for your review later in March 1996 according to the GMP schedule. Since our surface impoundments (Pond Nos. 1, 2, and 2A) have been closed in September 1995, we will start our post pond-closure groundwater monitoring program in March 1996 according to the EPA approved Pond Closure Plan and the Post-closure Monitoring Plan.

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PO Box 3379 Honolulu Hawaii 96842 USA
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GROUNDWATER ANALYTICAL RESULTS

FOR SEPTEMBER 1995

BHP PETROLEUM AMERICAS REFINERY
91-325 KOMOHANA STREET,
KAPOLEI, HAWAII 96707

November 25, 1995

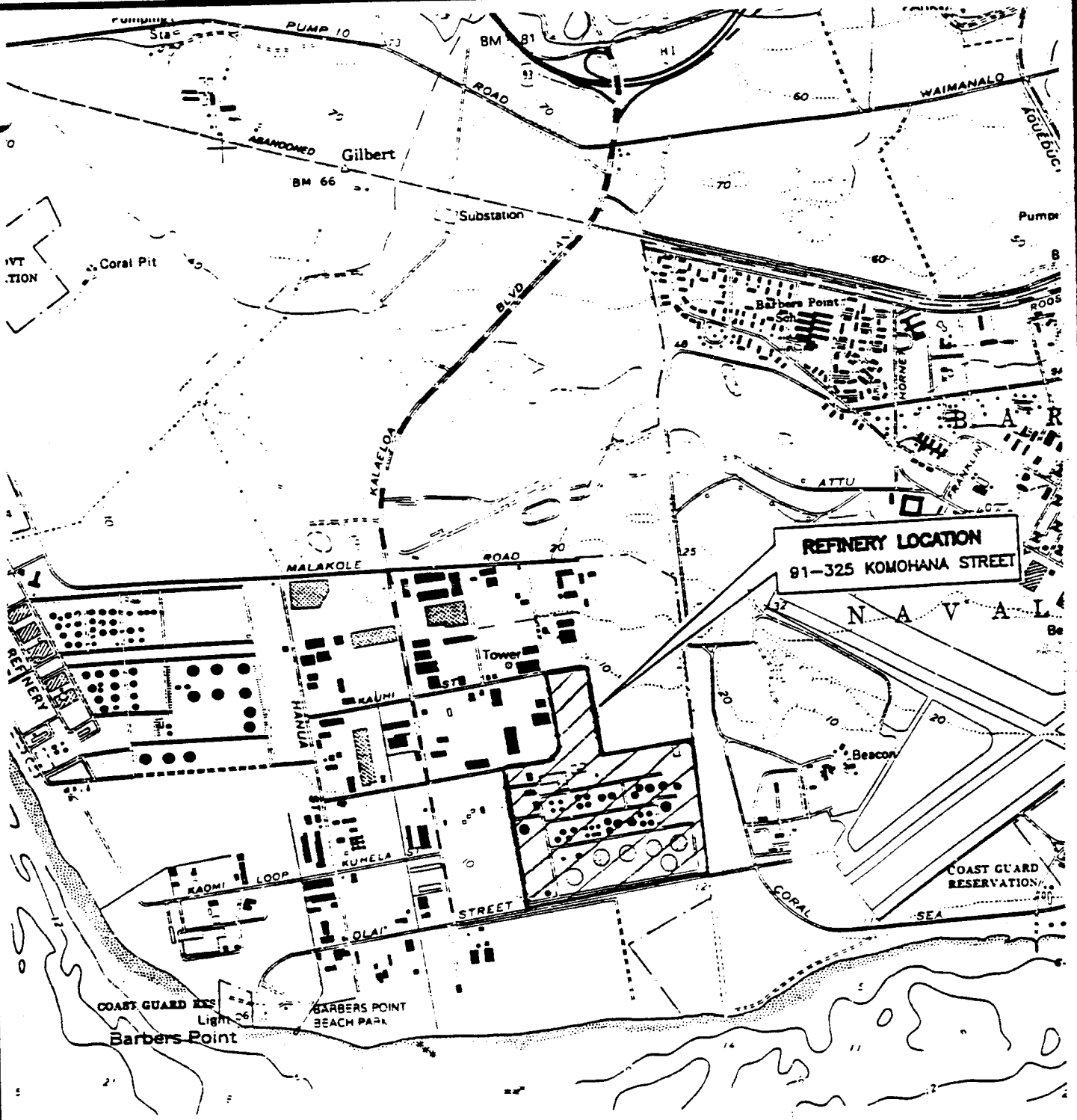
CONTENTS

1. Groundwater monitoring well location map.

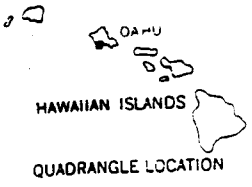
2. Analytical results of groundwater samples.

3. Groundwater well elevation data.

1. GROUNDWATER MONITORING WELL LOCATION MAP



GENERAL NOTES:
BASE MAP FROM U.S.G.S.
EWA, HAWAII QUADRANGLE
7.5 MINUTE TOPOGRAPHIC MAP
PHOTOREVISED 1983



QUADRANGLE LOCATION

N

0 2000 FT

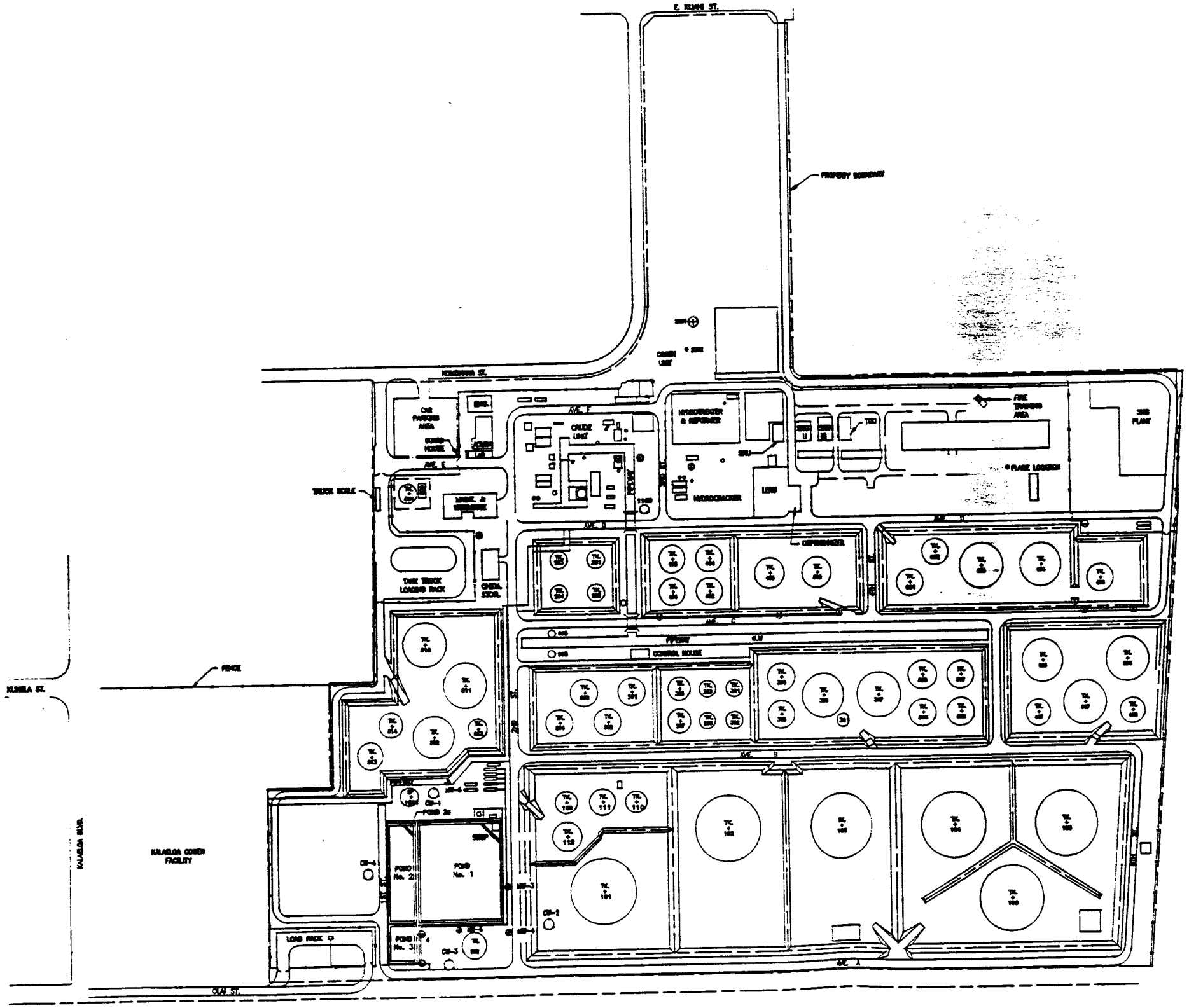
SCALE: 1 : 24,000

FIGURE 1

SITE LOCATION MAP
BHP PETROLEUM AMERICAS REFINING INC.
91-325 KOMOHANA STREET
KAPOLEI, HAWAII

PROJECT NO. 45-93-033	DRAWN BY G. ROSAS	
FILE NO. 3-033-02	PREPARED BY J. AMATO	
DATE 15 JUL 93 / REV. 0	REVIEWED BY	

Delta Environmental Consultants, Inc.

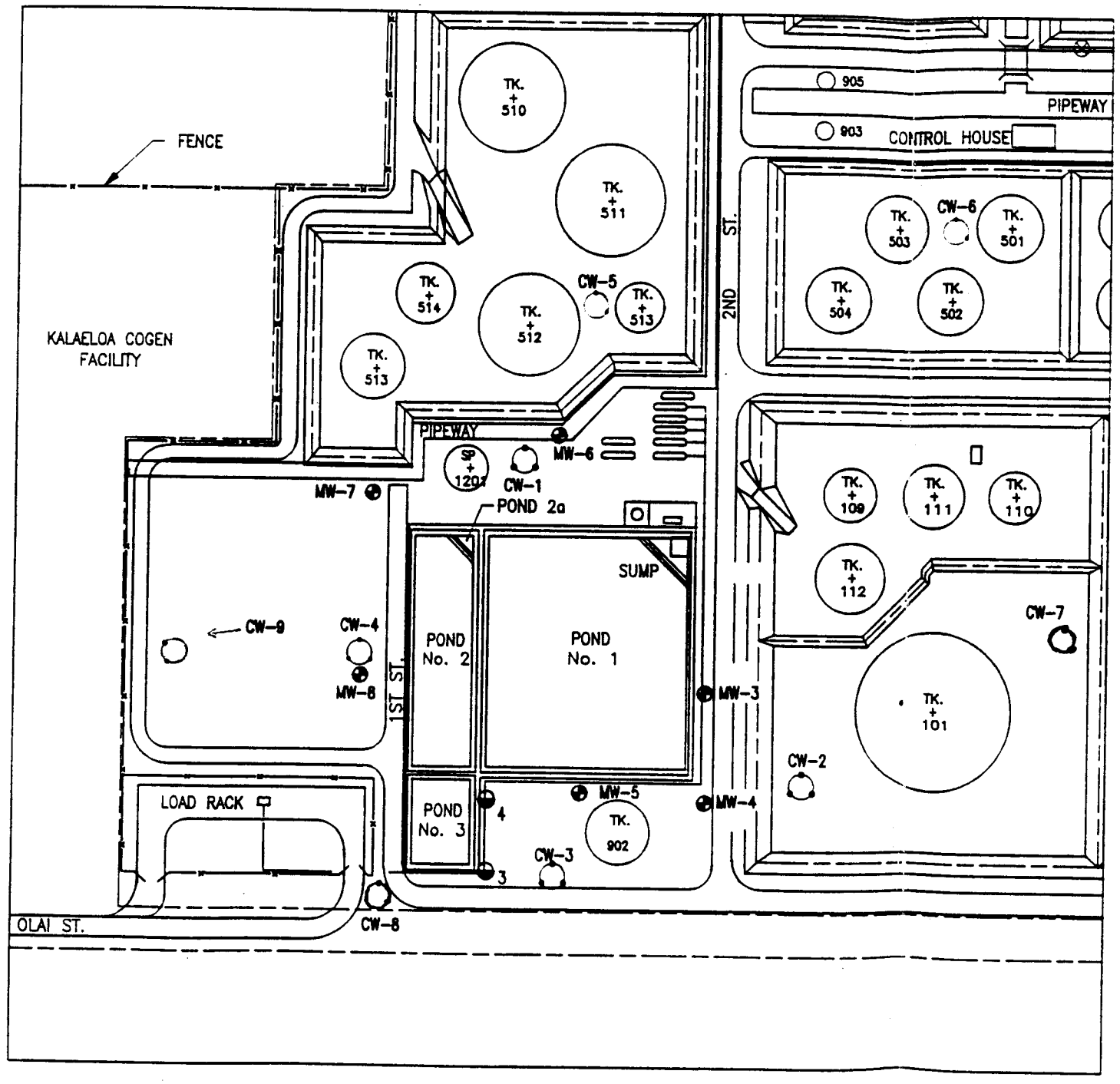


LEGEND

- MW-3 EXISTING GROUNDWATER MONITORING WELL LOCATION
- CW-4 EXISTING WELL CLUSTER LOCATION (SEE FIGURE 4 FOR DETAIL)
- 3 INJECTION WELL LOCATION

FIGURE 2
REFINERY SITE PLAN WITH EXISTING GROUNDWATER MONITORING WELL LOCATIONS
BHP PETROLEUM AMERICAS REFINING INC.
91-325 KOMOHANA STREET
KAPOLEI, HAWAII

PROJECT NO. 45-93-033	DRAWN BY GREG ROSAS	Delta Environmental Consultants, Inc.
FILE NO. 3-033-06	PREPARED BY JOHN AMATO	
DATE 3 AUG 93 / REV.	REVIEWED BY	



LEGEND

MW-5 EXISTING GROUNDWATER MONITORING WELL LOCATION

CW-4 EXISTING CLUSTER WELL LOCATION (SEE FIGURE 4 FOR DETAIL)

4 INJECTION WELL LOCATION

CW-9 PROPOSED CLUSTER WELL LOCATION

N

0 100 200

SCALE FEET

FIGURE 3

GROUNDWATER MONITORING WELL NETWORK WITH PROPOSED CLUSTER WELL LOCATIONS
BHP PETROLEUM AMERICAS REFINING INC.
91-325 KOMOHANA STREET
KAPOLEI, HAWAII

PROJECT NO. 45-93-033	DRAWN BY M. ENTERLINE	Delta Environmental Consultants, Inc.
FILE NO. 3-033-08	PREPARED BY J. AMATO	
DATE 18 OCT 93 / REV.	REVIEWED BY	

2. ANALYTICAL RESULTS OF GROUNDWATER SAMPLES

B C Analytical

801 Western Avenue
Glendale, CA 91201
818/247-5737
Fax: 818/247-9797

October 2,1995

BHP, Hawaii Refinery
91-325 Komohana St.
Kapolei, Hi 96707
Attn: Dr. Tony Shan

Dear Dr. Shan,

Enclosed is the analytical report for chemical testing for samples taken on 09/18/95. It includes the following:

1) Analytical Report of results

2) QC summary including LCS/LCSD, MS/MSD, duplicate samples, method blanks, and surrogates.

3) Cross reference sheet containing analyte, date analyzed, method, and batch number.

4) Case narrative explaining QC deficiencies and/or problems encountered in testing.

5) Electronic data in agreed upon format.

If you have any questions, please do not hesitate to call.

Very truly yours,

Brian Moore

Brian Moore
Program Specialist

BCA

B C Analytical

801 Western Avenue
Glendale, CA 91201
818/247-5737
Fax: 818/247-9797

Case Narrative

All quality objectives were met including holding times, LCS/LCSD, MS/MSD, Duplicate samples, and Method Blanks as applicable with the following exceptions:

Selenium method 7740 batch 951508:

LCS recovery greater than upper control limit. All project samples in this batch were less than the reporting limit.

Volatile organics method 8240 batch 95327:

1,1,1-Trichloroethane LCS/LCSD recovery less than lower control limit. Vinyl acetate LCSD recovery less than lower control limit.

Surrogate 1,2-Dichloroethane-d4 MSD recovery less than lower control limit.

Semivolatile organics method 8270 batch 95175:

Benzidine LCS/LCSD recovery outside criteria

Note: MS/MSD recoveries reported as "NC" for "Not Calculated" is due to the sample concentration being greater than two times the spike amount added.

No analytical difficulties were encountered with any project samples.

BCA

ANALYTICAL REPORT

B C Analytical

801 Western Avenue
Glendale, CA 91201
818/247-5737
Fax: 818/247-9797

LOG NO: G95-09-312

Received: 19 SEP 95

Mailed: OCT - 3

Dr. Tony Shan
BHP, Hawaii Refinery
91-325 Komohana St.
Kapolei, HI 96707

Project: GMP

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-312-1	CW-2A	18 SEP 95
09-312-2	CW-2B	18 SEP 95
09-312-3	CW-2C	18 SEP 95
09-312-4	CW-3A	18 SEP 95
09-312-5	CW-3B	18 SEP 95

PARAMETER	09-312-1	09-312-2	09-312-3	09-312-4	09-312-5
Digestion (3010), Date	09/27/95	09/27/95	09/27/95	09/27/95	09/27/95
Furnace Digestion (3020), Date	09/27/95	09/27/95	09/27/95	09/27/95	09/27/95
Chloride (300.0), mg/L	1800	8700	14000	1100	2800
Sulfate (300.0), mg/L	1400	1800	2300	1400	1700
Conductivity (120.1), umhos/cm	9500	27000	39000	7900	13000
pH (150.1), Units	7.8	7.4	7.4	7.9	7.7
Dissolved Solids (160.1), mg/L	6000	19000	29000	4800	8400
Antimony (6010), mg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (7060), mg/L	0.0022	<0.002	<0.002	0.0039	0.0031
Barium (6010), mg/L	0.012	0.026	0.021	0.086	0.091
Beryllium (6010), mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium (7131), mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium (6010), mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (6010), mg/L	<0.04	<0.04	<0.04	<0.04	<0.04
Iron (6010), mg/L	0.048	0.070	0.093	0.048	0.056
Lead (7421), mg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Manganese (6010), mg/L	0.023	0.040	0.19	0.021	0.016
Mercury (7470), mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Nickel (6010), mg/L	<0.04	<0.04	<0.04	<0.04	<0.04
Selenium (7740), mg/L	<0.004	<0.004	<0.004	<0.004	<0.004
Sodium (6010), mg/L	2100	6100	8800	1700	2700
Vanadium (6010), mg/L	<0.04	<0.04	<0.04	<0.04	<0.04

BCA

B C Analytical

801 Western Avenue
Glendale, CA 91201
818/247-5737
Fax: 818/247-9797

LOG NO: G95-09-312

Received: 19 SEP 95

Dr. Tony Shan
BHP, Hawaii Refinery
91-325 Komohana St.
Kapolei, HI 96707

Project: GMP

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09-312-2	CW-2B	18 SEP 95
09-312-3	CW-2C	18 SEP 95
09-312-4	CW-3A	18 SEP 95
09-312-5	CW-3B	18 SEP 95

PARAMETER	09-312-1	09-312-2	09-312-3	09-312-4	09-312-5
B/N,A Ext.Pri.Poll. (8270)					
Date Analyzed	09/27/95	09/27/95	09/27/95	09/27/95	09/27/95
Date Extracted	09/20/95	09/20/95	09/20/95	09/20/95	09/20/95
Dilution Factor, Times	5	1	1	5	5
1,2,4-Trichlorobenzene, ug/L	<30	<5	<5	<30	<30
1,2-Dichlorobenzene, ug/L	<30	<6	<6	<30	<30
1,2-Diphenylhydrazine, ug/L	<30	<5	<5	<30	<30
1,3-Dichlorobenzene, ug/L	<30	<5	<5	<30	<30
1,4-Dichlorobenzene, ug/L	<30	<5	<5	<30	<30
1-Methylnaphthalene, ug/L	<50	<10	<10	<50	<50
2,4,5-Trichlorophenol, ug/L	<30	<6	<6	<30	<30
2,4,6-Trichlorophenol, ug/L	<30	<5	<5	<30	<30
2,4-Dichlorophenol, ug/L	<30	<5	<5	<30	<30
2,4-Dimethylphenol, ug/L	<30	<5	<5	<30	<30
2,4-Dinitrophenol, ug/L	<50	<10	<10	<50	<50
2,4-Dinitrotoluene, ug/L	<30	<5	<5	<30	<30
2,6-Dinitrotoluene, ug/L	<30	<5	<5	<30	<30
2-Chloronaphthalene, ug/L	<30	<6	<6	<30	<30
2-Chlorophenol, ug/L	<30	<5	<5	<30	<30
2-Methyl-4,6-dinitrophenol, ug/L	<30	<5	<5	<30	<30
2-Methylnaphthalene, ug/L	<30	<5	<5	<30	<30
2-Methylphenol (o-Cresol), ug/L	<30	<5	<5	<30	<30
2-Nitroaniline, ug/L	<30	<5	<5	<30	<30

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09-312-5	CW-3B	18 SEP 95

PARAMETER	09-312-1	09-312-2	09-312-3	09-312-4	09-312-5
2-Nitrophenol, ug/L	<30	<5	<5	<30	<30
3,3'-Dichlorobenzidine, ug/L	<100	<20	<20	<100	<100
3-Methylphenol (m-Cresol), ug/L	<50	<10	<10	<50	<50
3-Nitroaniline, ug/L	<30	<5	<5	<30	<30
4-Bromophenylphenylether, ug/L	<30	<5	<5	<30	<30
4-Chloro-3-methylphenol, ug/L	<30	<5	<5	<30	<30
4-Chloroaniline, ug/L	<30	<5	<5	<30	<30
4-Chlorophenylphenylether, ug/L	<30	<5	<5	<30	<30
4-Methylphenol (p-Cresol), ug/L	<40	<8	<8	<40	<40
4-Nitroaniline, ug/L	<30	<6	<6	<30	<30
4-Nitrophenol, ug/L	<30	<5	<5	<30	<30
6-Methylchrysene, ug/L	<50	<10	<10	<50	<50
7,12-Dimethylbenz(a)anthracene, ug/L	<30	<5	<5	<30	<30
Acenaphthene, ug/L	<30	<5	<5	<30	<30
Acenaphthylene, ug/L	<30	<5	<5	<30	<30
Aniline, ug/L	<30	<5	<5	<30	<30
Anthracene, ug/L	<30	<5	<5	<30	<30
Benzidine, ug/L	<500	<100	<100	<500	<500
Benzo(a)anthracene, ug/L	<30	<5	<5	<30	<30
Benzo(a)pyrene, ug/L	<30	<5	<5	<30	<30
Benzo(b)fluoranthene, ug/L	<30	<5	<5	<30	<30
Benzo(g,h,i)perylene, ug/L	<30	<5	<5	<30	<30
Benzo(k)fluoranthene, ug/L	<30	<5	<5	<30	<30

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09-312-5	CW-3B	18 SEP 95

PARAMETER	09-312-1	09-312-2	09-312-3	09-312-4	09-312-5
Benzenethiol, ug/L	<100	<20	<20	<100	<100
Benzyl Alcohol, ug/L	<30	<5	<5	<30	<30
Benzoic acid, ug/L	<300	<50	<50	<300	<300
Butylbenzylphthalate, ug/L	<30	<5	<5	<30	<30
Chrysene, ug/L	<30	<5	<5	<30	<30
Di-n-octylphthalate, ug/L	<30	<5	<5	<30	<30
Dibenzo(a,h)anthracene, ug/L	<30	<5	<5	<30	<30
Dibenz(a,h)acridine, ug/L	<100	<20	<20	<100	<100
Dibenzofuran, ug/L	<30	<5	<5	<30	<30
Dibutylphthalate, ug/L	<30	<5	<5	<30	<30
Diethylphthalate, ug/L	<30	<5	<5	<30	<30
Dimethylphthalate, ug/L	<30	<5	<5	<30	<30
Fluoranthene, ug/L	<30	<5	<5	<30	<30
Fluorene, ug/L	<30	<5	<5	<30	<30
Hexachlorobenzene, ug/L	<30	<5	<5	<30	<30
Hexachlorobutadiene, ug/L	<30	<5	<5	<30	<30
Hexachlorocyclopentadiene, ug/L	<30	<5	<5	<30	<30
Hexachloroethane, ug/L	<30	<5	<5	<30	<30
Indeno(1,2,3-c,d)pyrene, ug/L	<40	<7	<7	<40	<40
Indene, ug/L	<50	<10	<10	<50	<50
Isophorone, ug/L	<30	<5	<5	<30	<30
N-Nitrosodimethylamine, ug/L	<30	<6	<6	<30	<30
N-Nitrosodiphenylamine, ug/L	<30	<5	<5	<30	<30

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09-312-5	CW-3B	18 SEP 95

PARAMETER	09-312-1	09-312-2	09-312-3	09-312-4	09-312-5
N-Nitrosodi-n-propylamine, ug/L	<30	<6	<6	<30	<30
Nitrobenzene, ug/L	<30	<5	<5	<30	<30
Naphthalene, ug/L	<30	<5	<5	<30	<30
Phenanthrene, ug/L	<30	<5	<5	<30	<30
Phenol, ug/L	<30	<5	<5	<30	<30
Pentachlorophenol, ug/L	<30	<5	<5	<30	<30
Pyrene, ug/L	<30	<5	<5	<30	<30
Pyridine, ug/L	<50	<10	<10	<50	<50
Quinoline, ug/L	<50	<10	<10	<50	<50
Bis(2-chloroethoxy)methane, ug/L	<30	<5	<5	<30	<30
Bis(2-chloroethyl)ether, ug/L	<30	<5	<5	<30	<30
Bis(2-chloroisopropyl)ether, ug/L	<30	<6	<6	<30	<30
Bis(2-ethylhexyl)phthalate, ug/L	<40	<7	<7	<40	<40
Surrogates **					
2-Fluorobiphenyl Reported, ug/L	49.3	43.0	52.3	47.0	47.0
2-Fluorobiphenyl Theo., ug/L	50.0	50.0	50.0	50.0	50.0
2-Fluorophenol Reported, ug/L	41.9	32.3	61.9	41.9	41.6
2-Fluorophenol Theoretical, ug/L	75.0	75.0	75.0	75.0	75.0
2,4,6-Tribromophenol Rep., ug/L	60.8	56.8	66.4	62.9	56.6
2,4,6-Tribromophenol Theo., ug/L	75.0	75.0	75.0	75.0	75.0
Nitrobenzene-d5 Reported, ug/L	47.8	39.9	48.5	47.1	46.4
Nitrobenzene-d5 Theoretical, ug/L	50.0	50.0	50.0	50.0	50.0
Phenol-d5 Reported, ug/L	28.1	23.1	49.3	27.1	27.4

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09-312-5	CW-3B	18 SEP 95

PARAMETER	09-312-1	09-312-2	09-312-3	09-312-4	09-312-5
Phenol-d5 Theoretical, ug/L	75.0	75.0	75.0	75.0	75.0
Terphenyl-d14 Reported, ug/L	46.5	41.3	44.2	46.1	44.8
Terphenyl-d14 Theoretical, ug/L	50.0	50.0	50.0	50.0	50.0

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09-312-4	CW-3A	18 SEP 95
09-312-5	CW-3B	18 SEP 95

PARAMETER	09-312-1	09-312-2	09-312-3	09-312-4	09-312-5
Vol.Pri.Poll. (8240)					
Date Analyzed	09/27/95	09/27/95	09/27/95	09/27/95	09/27/95
Dilution Factor, Times	1	1	1	1	1
1,1,1-Trichloroethane, ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane, ug/L	<1	<1	<1	<1	<1
1,1,2-Trichloroethane, ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane, ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene, ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane, ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene, ug/L	<1	<1	<1	<1	<1
1,2-Dichloropropane, ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene, ug/L	<1	<1	<1	<1	<1
1,4-Dichlorobenzene, ug/L	<1	<1	<1	<1	<1
1,4-Dioxane, ug/L	<500	<500	<500	<500	<500
2-Chloroethylvinylether, ug/L	<5	<5	<5	<5	<5
2-Hexanone, ug/L	<5	<5	<5	<5	<5
Acetone, ug/L	<20	<20	<20	<20	<20
Bromodichloromethane, ug/L	<1	<1	<1	<1	<1
Bromomethane, ug/L	<1	<1	<1	<1	<1
Benzene, ug/L	2.5	<1	<1	<1	1.5
Bromoform, ug/L	<1	<1	<1	<1	<1
Chlorobenzene, ug/L	<1	<1	<1	<1	<1
Carbon Tetrachloride, ug/L	<1	<1	<1	<1	<1

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801 Western Avenue
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818/247-5737
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LOG NO: G95-09-312

Received: 19 SEP 95

Dr. Tony Shan
BHP, Hawaii Refinery
91-325 Komohana St.
Kapolei, HI 96707

Project: GMP

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-312-1	CW-2A	18 SEP 95
09-312-2	CW-2B	18 SEP 95
09-312-3	CW-2C	18 SEP 95
09-312-4	CW-3A	18 SEP 95
09-312-5	CW-3B	18 SEP 95

PARAMETER	09-312-1	09-312-2	09-312-3	09-312-4	09-312-5
Chloroethane, ug/L	<1	<1	<1	<1	<1
Chloroform, ug/L	<1	<1	<1	<1	<1
Chloromethane, ug/L	<1	<1	<1	<1	<1
Carbon Disulfide, ug/L	<2	<2	<2	<2	<2
Cyclohexane, ug/L	<5	<5	<5	<5	<5
Dibromochloromethane, ug/L	<1	<1	<1	<1	<1
Ethylene Dibromide, ug/L	<5	<5	<5	<5	<5
Ethylbenzene, ug/L	<1	<1	<1	<1	<1
Freon 113, ug/L	<2	<2	<2	<2	<2
Methyl ethyl ketone, ug/L	<5	<5	<5	<5	<5
Methyl isobutyl ketone, ug/L	<5	<5	<5	<5	<5
Methylene chloride, ug/L	<2	<2	<2	<2	<2
Styrene, ug/L	<1	<1	<1	<1	<1
Trichloroethene, ug/L	<1	<1	<1	<1	<1
Trichlorofluoromethane, ug/L	<1	<1	<1	<1	<1
Toluene, ug/L	<1	<1	<1	1.5	1.2
Tetrachloroethene, ug/L	<1	<1	<1	<1	<1
Vinyl acetate, ug/L	<10	<10	<10	<10	<10
Vinyl chloride, ug/L	<1	<1	<1	<1	<1
Total Xylene Isomers, ug/L	<3	<3	<3	<3	<3
cis-1,2-Dichloroethene, ug/L	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene, ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene, ug/L	<1	<1	<1	<1	<1

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-312-1	CW-2A	18 SEP 95
09-312-2	CW-2B	18 SEP 95
09-312-3	CW-2C	18 SEP 95
09-312-4	CW-3A	18 SEP 95
09-312-5	CW-3B	18 SEP 95

PARAMETER	09-312-1	09-312-2	09-312-3	09-312-4	09-312-5
trans-1,3-Dichloropropene, ug/L	<1	<1	<1	<1	<1
Surrogates **					
1,2-Dichloroethane-d4 Rep., ug/L	47.7	48.6	47.6	48.4	48.4
1,2-Dichloroethane-d4 Theo., ug/L	50.0	50.0	50.0	50.0	50.0
4-Bromofluorobenzene Rep., ug/L	55.3	52.3	51.2	55.0	54.0
4-Bromofluorobenzene Theo., ug/L	50.0	50.0	50.0	50.0	50.0
Toluene-d8 Reported, ug/L	50.1	49.8	50.1	50.1	50.6
Toluene-d8 Theo., ug/L	50.0	50.0	50.0	50.0	50.0

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-312-6	CW-3C	18 SEP 95

PARAMETER	09-312-6
Digestion (3010), Date	09/27/95
Furnace Digestion (3020), Date	09/27/95
Chloride (300.0), mg/L	1200
Sulfate (300.0), mg/L	1700
Conductivity (120.1), umhos/cm	8900
pH (150.1), Units	7.9
Dissolved Solids (160.1), mg/L	5400
Antimony (6010), mg/L	<0.1
Arsenic (7060), mg/L	0.0053
Barium (6010), mg/L	0.080
Beryllium (6010), mg/L	<0.001
Cadmium (7131), mg/L	<0.001
Chromium (6010), mg/L	<0.01
Cobalt (6010), mg/L	<0.04
Iron (6010), mg/L	0.087
Lead (7421), mg/L	<0.002
Manganese (6010), mg/L	0.015
Mercury (7470), mg/L	<0.0002
Nickel (6010), mg/L	<0.04
Selenium (7740), mg/L	<0.004
Sodium (6010), mg/L	1900
Vanadium (6010), mg/L	<0.04

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-312-6	CW-3C	18 SEP 95

PARAMETER	09-312-6
B/N,A Ext.Pri.Poll. (8270)	
Date Analyzed	09/27/95
Date Extracted	09/20/95
Dilution Factor, Times	5
1,2,4-Trichlorobenzene, ug/L	<30
1,2-Dichlorobenzene, ug/L	<30
1,2-Diphenylhydrazine, ug/L	<30
1,3-Dichlorobenzene, ug/L	<30
1,4-Dichlorobenzene, ug/L	<30
1-Methylnaphthalene, ug/L	<50
2,4,5-Trichlorophenol, ug/L	<30
2,4,6-Trichlorophenol, ug/L	<30
2,4-Dichlorophenol, ug/L	<30
2,4-Dimethylphenol, ug/L	<30
2,4-Dinitrophenol, ug/L	<50
2,4-Dinitrotoluene, ug/L	<30
2,6-Dinitrotoluene, ug/L	<30
2-Chloronaphthalene, ug/L	<30
2-Chlorophenol, ug/L	<30
2-Methyl-4,6-dinitrophenol, ug/L	<30
2-Methylnaphthalene, ug/L	<30
2-Methylphenol (o-Cresol), ug/L	<30
2-Nitroaniline, ug/L	<30
2-Nitrophenol, ug/L	<30
3,3'-Dichlorobenzidine, ug/L	<100
3-Methylphenol (m-Cresol), ug/L	<50
3-Nitroaniline, ug/L	<30

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-312-6	CW-3C	18 SEP 95

PARAMETER	09-312-6
4-Bromophenylphenylether, ug/L	<30
4-Chloro-3-methylphenol, ug/L	<30
4-Chloroaniline, ug/L	<30
4-Chlorophenylphenylether, ug/L	<30
4-Methylphenol (p-Cresol), ug/L	<40
4-Nitroaniline, ug/L	<30
4-Nitrophenol, ug/L	<30
6-Methylchrysene, ug/L	<50
7,12-Dimethylbenz(a)anthracene, ug/L	<30
Acenaphthene, ug/L	<30
Acenaphthylene, ug/L	<30
Aniline, ug/L	<30
Anthracene, ug/L	<30
Benzidine, ug/L	<500
Benzo(a)anthracene, ug/L	<30
Benzo(a)pyrene, ug/L	<30
Benzo(b)fluoranthene, ug/L	<30
Benzo(g,h,i)perylene, ug/L	<30
Benzo(k)fluoranthene, ug/L	<30
Benzenethiol, ug/L	<100
Benzyl Alcohol, ug/L	<30
Benzoic acid, ug/L	<300
Butylbenzylphthalate, ug/L	<30
Chrysene, ug/L	<30
Di-n-octylphthalate, ug/L	<30
Dibenzo(a,h)anthracene, ug/L	<30
Dibenz(a,h)acridine, ug/L	<100

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-312-6	CW-3C	18 SEP 95

PARAMETER	09-312-6
Dibenzofuran, ug/L	<30
Dibutylphthalate, ug/L	<30
Diethylphthalate, ug/L	<30
Dimethylphthalate, ug/L	<30
Fluoranthene, ug/L	<30
Fluorene, ug/L	<30
Hexachlorobenzene, ug/L	<30
Hexachlorobutadiene, ug/L	<30
Hexachlorocyclopentadiene, ug/L	<30
Hexachloroethane, ug/L	<30
Indeno(1,2,3-c,d)pyrene, ug/L	<40
Indene, ug/L	<50
Isophorone, ug/L	<30
N-Nitrosodimethylamine, ug/L	<30
N-Nitrosodiphenylamine, ug/L	<30
N-Nitrosodi-n-propylamine, ug/L	<30
Nitrobenzene, ug/L	<30
Naphthalene, ug/L	<30
Phenanthrene, ug/L	<30
Phenol, ug/L	<30
Pentachlorophenol, ug/L	<30
Pyrene, ug/L	<30
Pyridine, ug/L	<50
Quinoline, ug/L	<50
Bis(2-chloroethoxy)methane, ug/L	<30
Bis(2-chloroethyl)ether, ug/L	<30
Bis(2-chloroisopropyl)ether, ug/L	<30

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-312-6	CW-3C	18 SEP 95

PARAMETER	09-312-6
Bis(2-ethylhexyl)phthalate, ug/L	<40
Surrogates **	
2-Fluorobiphenyl Reported, ug/L	48.0
2-Fluorobiphenyl Theo., ug/L	50.0
2-Fluorophenol Reported, ug/L	43.7
2-Fluorophenol Theoretical, ug/L	75.0
2,4,6-Tribromophenol Rep., ug/L	56.5
2,4,6-Tribromophenol Theo., ug/L	75.0
Nitrobenzene-d5 Reported, ug/L	45.0
Nitrobenzene-d5 Theoretical, ug/L	50.0
Phenol-d5 Reported, ug/L	29.2
Phenol-d5 Theoretical, ug/L	75.0
Terphenyl-d14 Reported, ug/L	41.8
Terphenyl-d14 Theoretical, ug/L	50.0

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-312-6	CW-3C	18 SEP 95

PARAMETER	09-312-6
Vol.Pri.Poll. (8240)	
Date Analyzed	09/27/95
Dilution Factor, Times	1
1,1,1-Trichloroethane, ug/L	<1
1,1,2,2-Tetrachloroethane, ug/L	<1
1,1,2-Trichloroethane, ug/L	<1
1,1-Dichloroethane, ug/L	<1
1,1-Dichloroethene, ug/L	<1
1,2-Dichloroethane, ug/L	<1
1,2-Dichlorobenzene, ug/L	<1
1,2-Dichloropropane, ug/L	<1
1,3-Dichlorobenzene, ug/L	<1
1,4-Dichlorobenzene, ug/L	<1
1,4-Dioxane, ug/L	<500
2-Chloroethylvinylether, ug/L	<5
2-Hexanone, ug/L	<5
Acetone, ug/L	<20
Bromodichloromethane, ug/L	<1
Bromomethane, ug/L	<1
Benzene, ug/L	1.1
Bromoform, ug/L	<1
Chlorobenzene, ug/L	<1
Carbon Tetrachloride, ug/L	<1
Chloroethane, ug/L	<1
Chloroform, ug/L	<1
Chloromethane, ug/L	<1
Carbon Disulfide, ug/L	<2

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-312-6	CW-3C	18 SEP 95

PARAMETER	09-312-6
Cyclohexane, ug/L	<5
Dibromochloromethane, ug/L	<1
Ethylene Dibromide, ug/L	<5
Ethylbenzene, ug/L	<1
Freon 113, ug/L	<2
Methyl ethyl ketone, ug/L	<5
Methyl isobutyl ketone, ug/L	<5
Methylene chloride, ug/L	<2
Styrene, ug/L	<1
Trichloroethene, ug/L	<1
Trichlorofluoromethane, ug/L	<1
Toluene, ug/L	1.5
Tetrachloroethene, ug/L	<1
Vinyl acetate, ug/L	<10
Vinyl chloride, ug/L	<1
Total Xylene Isomers, ug/L	<3
cis-1,2-Dichloroethene, ug/L	<1
cis-1,3-Dichloropropene, ug/L	<1
trans-1,2-Dichloroethene, ug/L	<1
trans-1,3-Dichloropropene, ug/L	<1
Surrogates **	
1,2-Dichloroethane-d4 Rep., ug/L	48.3
1,2-Dichloroethane-d4 Theo., ug/L	50.0
4-Bromofluorobenzene Rep., ug/L	53.3
4-Bromofluorobenzene Theo., ug/L	50.0
Toluene-d8 Reported, ug/L	50.7
Toluene-d8 Theo., ug/L	50.0

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-312-7	Trip Blank	18 SEP 95

PARAMETER	09-312-7
Vol.Pri.Poll. (8240)	
Date Analyzed	09/27/95
Dilution Factor, Times	1
1,1,1-Trichloroethane, ug/L	<1
1,1,2,2-Tetrachloroethane, ug/L	<1
1,1,2-Trichloroethane, ug/L	<1
1,1-Dichloroethane, ug/L	<1
1,1-Dichloroethene, ug/L	<1
1,2-Dichloroethane, ug/L	<1
1,2-Dichlorobenzene, ug/L	<1
1,2-Dichloropropane, ug/L	<1
1,3-Dichlorobenzene, ug/L	<1
1,4-Dichlorobenzene, ug/L	<1
1,4-Dioxane, ug/L	<500
2-Chloroethylvinylether, ug/L	<5
2-Hexanone, ug/L	<5
Acetone, ug/L	<20
Bromodichloromethane, ug/L	<1
Bromomethane, ug/L	<1
Benzene, ug/L	<1
Bromoform, ug/L	<1
Chlorobenzene, ug/L	<1
Carbon Tetrachloride, ug/L	<1
Chloroethane, ug/L	<1
Chloroform, ug/L	<1
Chloromethane, ug/L	<1
Carbon Disulfide, ug/L	<2

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-312-7	Trip Blank	18 SEP 95

PARAMETER	09-312-7
Cyclohexane, ug/L	<5
Dibromochloromethane, ug/L	<1
Ethylene Dibromide, ug/L	<5
Ethylbenzene, ug/L	<1
Freon 113, ug/L	<2
Methyl ethyl ketone, ug/L	<5
Methyl isobutyl ketone, ug/L	<5
Methylene chloride, ug/L	<2
Styrene, ug/L	<1
Trichloroethene, ug/L	<1
Trichlorofluoromethane, ug/L	<1
Toluene, ug/L	<1
Tetrachloroethene, ug/L	<1
Vinyl acetate, ug/L	<10
Vinyl chloride, ug/L	<1
Total Xylene Isomers, ug/L	<3
cis-1,2-Dichloroethene, ug/L	<1
cis-1,3-Dichloropropene, ug/L	<1
trans-1,2-Dichloroethene, ug/L	<1
trans-1,3-Dichloropropene, ug/L	<1
Surrogates **	
1,2-Dichloroethane-d4 Rep., ug/L	49.5
1,2-Dichloroethane-d4 Theo., ug/L	50.0
4-Bromofluorobenzene Rep., ug/L	53.3
4-Bromofluorobenzene Theo., ug/L	50.0
Toluene-d8 Reported, ug/L	49.4
Toluene-d8 Theo., ug/L	50.0

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REPORT OF ANALYTICAL RESULTS

Jane Freemyer, Program Manager

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: ORDER PLACED FOR CLIENT: BHP Hawaii Refinery 9509312 :
: BC ANALYTICAL : GLEN LAB : 09:58:13 03 OCT 1995 - P. 1 :

SAMPLES...	SAMPLE DESCRIPTION..	DETERM.....	DATE..... ANALYZED	METHOD.....	EQUIP.	BATCH..	ID.NO
9509312*1	CW-2A	DIG,AQ.HCL	09.27.95	3010		951511	7620
		DIG,AQ,GFA	09.27.95	3020		951508	7620
		ANIONS,CL	09.19.95	300.0	533-23	950919	8488
		ANIONS,SO4	09.19.95	300.0	533-23	950919	8488
		COND	09.22.95	120.1	533-11	9592	8604
		PH	09.19.95	150.1	533-21	95427	8651
		TDS	09.21.95	160.1		9589	
		SB	09.28.95	6010	535-03	951511	7396
		AS,GFA	09.28.95	7060	534-04	951508	8488
		BA	09.28.95	6010	535-03	951511	7396
		BE	09.28.95	6010	535-03	951511	7396
		CD,GFA	09.28.95	7131	534-04	951508	8488
		CR	09.28.95	6010	535-03	951511	7396
		CO	09.28.95	6010	535-03	951511	7396
		FE	09.28.95	6010	535-03	951511	7396
		PB,GFA	09.28.95	7421	534-04	951508	8488
		MN	09.28.95	6010	535-03	951511	7396
		HG	09.27.95	7470	534-06	951500	8488
		NI	09.28.95	6010	535-03	951511	7396
		SE,GFA	09.28.95	7740	534-04	951508	8488
		NA	09.28.95	6010	535-03	951511	7396
		V	09.28.95	6010	535-03	951511	7396
		BNA.8270.BHP	09.27.95	8270	537-14	95175	6763
		VOA.8240.BHP	09.27.95	8240	537-01	95327	7430
9509312*2	CW-2B	DIG,AQ.HCL	09.27.95	3010		951511	7620
		DIG,AQ,GFA	09.27.95	3020		951508	7620
		ANIONS,CL	09.19.95	300.0	533-23	950919	8488
		ANIONS,SO4	09.19.95	300.0	533-23	950919	8488
		COND	09.22.95	120.1	533-11	9592	8604
		PH	09.19.95	150.1	533-21	95427	8651
		TDS	09.21.95	160.1		9589	
		SB	09.28.95	6010	535-03	951511	7396
		AS,GFA	09.28.95	7060	534-04	951508	8488
		BA	09.28.95	6010	535-03	951511	7396
		BE	09.28.95	6010	535-03	951511	7396
		CD,GFA	09.28.95	7131	534-04	951508	8488
		CR	09.28.95	6010	535-03	951511	7396
		CO	09.28.95	6010	535-03	951511	7396
		FE	09.28.95	6010	535-03	951511	7396
		PB,GFA	09.28.95	7421	534-04	951508	8488
		MN	09.28.95	6010	535-03	951511	7396
		HG	09.27.95	7470	534-06	951500	8488
		NI	09.28.95	6010	535-03	951511	7396
		SE,GFA	09.28.95	7740	534-04	951508	8488

Notes: Equipment = BC Analytical identification number for a particular piece of analytical equipment.

ID.NO = BC Analytical employee identification number of analyst.

SAMPLES...	SAMPLE DESCRIPTION..	DETERM.....	DATE..... ANALYZED	METHOD.....	EQUIP.	BATCH..	ID.NO
		NA	09.28.95	6010	535-03	951511	7396
		V	09.28.95	6010	535-03	951511	7396
		BNA.8270.BHP	09.27.95	8270	537-14	95175	6763
		VOA.8240.BHP	09.27.95	8240	537-01	95327	7430
9509312*3	CW-2C	DIG,AQ.HCL	09.27.95	3010		951511	7620
		DIG,AQ,GFA	09.27.95	3020		951508	7620
		ANIONS,CL	09.19.95	300.0	533-23	950919	8488
		ANIONS,SO4	09.19.95	300.0	533-23	950919	8488
		COND	09.22.95	120.1	533-11	9592	8604
		PH	09.19.95	150.1	533-21	95427	8651
		TDS	09.21.95	160.1		9589	
		SB	09.28.95	6010	535-03	951511	7396
		AS,GFA	09.28.95	7060	534-04	951508	8488
		BA	09.28.95	6010	535-03	951511	7396
		BE	09.28.95	6010	535-03	951511	7396
		CD,GFA	09.28.95	7131	534-04	951508	8488
		CR	09.28.95	6010	535-03	951511	7396
		CO	09.28.95	6010	535-03	951511	7396
		FE	09.28.95	6010	535-03	951511	7396
		PB,GFA	09.28.95	7421	534-04	951508	8488
		MN	09.28.95	6010	535-03	951511	7396
		HG	09.27.95	7470	534-06	951500	8488
		NI	09.28.95	6010	535-03	951511	7396
		SE,GFA	09.28.95	7740	534-04	951508	8488
		NA	09.28.95	6010	535-03	951511	7396
		V	09.28.95	6010	535-03	951511	7396
		BNA.8270.BHP	09.27.95	8270	537-14	95175	6763
		VOA.8240.BHP	09.27.95	8240	537-01	95327	7430
9509312*4	CW-3A	DIG,AQ.HCL	09.27.95	3010		951511	7620
		DIG,AQ,GFA	09.27.95	3020		951508	7620
		ANIONS,CL	09.19.95	300.0	533-23	950919	8488
		ANIONS,SO4	09.19.95	300.0	533-23	950919	8488
		COND	09.22.95	120.1	533-11	9592	8604
		PH	09.19.95	150.1	533-21	95427	8651
		TDS	09.21.95	160.1		9589	
		SB	09.28.95	6010	535-03	951511	7396
		AS,GFA	09.28.95	7060	534-04	951508	8488
		BA	09.28.95	6010	535-03	951511	7396
		BE	09.28.95	6010	535-03	951511	7396
		CD,GFA	09.28.95	7131	534-04	951508	8488
		CR	09.28.95	6010	535-03	951511	7396
		CO	09.28.95	6010	535-03	951511	7396
		FE	09.28.95	6010	535-03	951511	7396
		PB,GFA	09.28.95	7421	534-04	951508	8488

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ID.NO = BC Analytical employee identification number of analyst.

SAMPLES...	SAMPLE DESCRIPTION..	DETERM.....	DATE..... ANALYZED	METHOD.....	EQUIP.	BATCH..	ID.NO
		MN	09.28.95	6010	535-03	951511	7396
		HG	09.27.95	7470	534-06	951500	8488
		NI	09.28.95	6010	535-03	951511	7396
		SE,GFA	09.28.95	7740	534-04	951508	8488
		NA	09.28.95	6010	535-03	951511	7396
		V	09.28.95	6010	535-03	951511	7396
		BNA.8270.BHP	09.27.95	8270	537-14	95175	6763
		VOA.8240.BHP	09.27.95	8240	537-01	95327	7430
9509312*5	CW-3B	DIG,AQ.HCL	09.27.95	3010		951511	7620
		DIG,AQ,GFA	09.27.95	3020		951508	7620
		ANIONS,CL	09.19.95	300.0	533-23	950919	8488
		ANIONS,SO4	09.19.95	300.0	533-23	950919	8488
		COND	09.22.95	120.1	533-11	9592	8604
		PH	09.19.95	150.1	533-21	95427	8651
		TDS	09.21.95	160.1		9589	
		SB	09.28.95	6010	535-03	951511	7396
		AS,GFA	09.28.95	7060	534-04	951508	8488
		BA	09.28.95	6010	535-03	951511	7396
		BE	09.28.95	6010	535-03	951511	7396
		CD,GFA	09.28.95	7131	534-04	951508	8488
		CR	09.28.95	6010	535-03	951511	7396
		CO	09.28.95	6010	535-03	951511	7396
		FE	09.28.95	6010	535-03	951511	7396
		PB,GFA	09.28.95	7421	534-04	951508	8488
		MN	09.28.95	6010	535-03	951511	7396
		HG	09.27.95	7470	534-06	951500	8488
		NI	09.28.95	6010	535-03	951511	7396
		SE,GFA	09.28.95	7740	534-04	951508	8488
		NA	09.28.95	6010	535-03	951511	7396
		V	09.28.95	6010	535-03	951511	7396
		BNA.8270.BHP	09.27.95	8270	537-14	95175	6763
		VOA.8240.BHP	09.27.95	8240	537-01	95327	7430
9509312*6	CW-3C	DIG,AQ.HCL	09.27.95	3010		951511	7620
		DIG,AQ,GFA	09.27.95	3020		951508	7620
		ANIONS,CL	09.19.95	300.0	533-23	950919	8488
		ANIONS,SO4	09.19.95	300.0	533-23	950919	8488
		COND	09.22.95	120.1	533-11	9592	8604
		PH	09.19.95	150.1	533-21	95427	8651
		TDS	09.21.95	160.1		9589	
		SB	09.28.95	6010	535-03	951511	7396
		AS,GFA	09.28.95	7060	534-04	951508	8488
		BA	09.28.95	6010	535-03	951511	7396
		BE	09.28.95	6010	535-03	951511	7396
		CD,GFA	09.28.95	7131	534-04	951508	8488

Notes: Equipment = BC Analytical identification number for a particular piece of analytical equipment.

ID.NO = BC Analytical employee identification number of analyst.

SAMPLES...	SAMPLE DESCRIPTION..	DETERM.....	DATE..... ANALYZED	METHOD.....	EQUIP.	BATCH..	ID.NO
		CR	09.28.95	6010	535-03	951511	7396
		CO	09.28.95	6010	535-03	951511	7396
		FE	09.28.95	6010	535-03	951511	7396
		PB,GFA	09.28.95	7421	534-04	951508	8488
		MN	09.28.95	6010	535-03	951511	7396
		HG	09.27.95	7470	534-06	951500	8488
		NI	09.28.95	6010	535-03	951511	7396
		SE,GFA	09.28.95	7740	534-04	951508	8488
		NA	09.28.95	6010	535-03	951511	7396
		V	09.28.95	6010	535-03	951511	7396
		BNA.8270.BHP	09.27.95	8270	537-14	95175	6763
		VOA.8240.BHP	09.27.95	8240	537-01	95327	7430
9509312*7	Trip Blank	VOA.8240.BHP	09.27.95	8240	537-01	95327	7430

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ID.NO = BC Analytical employee identification number of analyst.

BC ANA[illegible]CAL, GLENDALE
QC REP[illegible] FOR 9509312
DATE PRINTED: 02 OCT 1995

AQUEOUS SAMPLES		METHOD BLANK			LAB CONTROL									MATRIX QC								
					LCS		LCSD					RPD	RPD	MS		MSD					RPD	RPD
	UNITS	RESULT	RDL	FLG	%REC	FLG	%REC	FLG	LCL	UCL	RPD	UCL	FLG	%REC	FLG	%REC	FLG	LCL	UCL	RPD	UCL	FLG
Batch: TDS*9589 Method: 160.1 - Residue, Filterable, Gravimetric, Dried at 180 C																						
Dissolved Solids	mg/L	0	10	-	101	-	102	-	91	107	1	-	-	101	-	103	-	85	112	1	15	-
Batch: COND*9592 Method: 120.1 - Conductance, Specific Conductance																						
Conductivity	umhos/cm	-	-	-	99	-	100	-	95	105	1	15	-	9500	*	9600	*	-	-	1	15	-
Batch: PH*95427 Method: 150.1 - pH, Electrometric																						
pH	Units	-	-	-	100	-	100	-	99	101	0	20	-	7.2	*	7.2	*	-	-	-	20	-
Batch: 950919 Method: 300.0 - Inorganic anions in water, Ion chromatograph																						
Chloride	mg/L	0.31	0.5	-	106	-	98	-	90	110	8	-	-	97	-	97	-	63	125	0	15	-
Sulfate	mg/L	0	0.1	-	97	-	96	-	90	110	1	-	-	91	-	89	-	73	116	1	15	-
Batch: HG*951500 Method: 7470 - Mercury (Liquid), Cold Vapor AA, Manual																						
Mercury	mg/L	0	0.0002	-	108	-	108	-	71	123	0	-	-	100	-	100	-	53	143	0	20	-
Batch: AS,GFA*951508 Method: 7060 - Arsenic, AA, Furnace																						
Arsenic	mg/L	0	0.002	-	101	-	-	-	63	122	-	-	-	83	-	82	-	52	130	2	20	-
Batch: CD,GFA*951508 Method: 7131 - Cadmium, AA, Furnace																						
Cadmium	mg/L	0	0.0001	-	103	-	-	-	67	134	-	-	-	98	-	100	-	63	157	2	20	-
Batch: PB,GFA*951508 Method: 7421 - Lead, AA, Furnace																						
Lead	mg/L	0	0.002	-	86	-	-	-	85	112	-	-	-	85	-	87	-	54	144	2	20	-
Batch: SE,GFA*951508 Method: 7740 - Selenium, AA, Furnace																						
Selenium	mg/L	0	0.004	-	120	Q	-	-	74	114	-	-	-	41	-	45	-	4	140	9	20	-
Batch: 951511 Method: 6010 - ICAP Metals																						
Barium	mg/L	0	0.005	-	95	-	88	-	75	114	8	-	-	88	-	88	-	74	110	1	20	-
Beryllium	mg/L	0	0.001	-	94	-	87	-	79	110	8	-	-	87	-	87	-	71	113	0	20	-
Cobalt	mg/L	0	0.04	-	100	-	93	-	71	112	7	-	-	88	-	89	-	67	110	1	20	-
Chromium	mg/L	0.0025	0.01	-	102	-	95	-	76	110	8	-	-	93	-	91	-	68	111	2	20	-
Iron	mg/L	0.0089	0.04	-	100	-	93	-	80	110	7	-	-	88	-	88	-	68	129	0	20	-
Manganese	mg/L	0	0.01	-	94	-	88	-	76	113	7	-	-	85	-	84	-	70	124	1	20	-
Sodium	mg/L	0.064	0.5	-	98	-	90	-	83	112	9	-	-	-	NC	-	NC	77	118	-	20	NC
Nickel	mg/L	0	0.04	-	102	-	95	-	73	114	7	-	-	91	-	91	-	65	113	0	20	-
Antimony	mg/L	0	0.1	-	98	-	91	-	79	115	7	-	-	92	-	91	-	83	112	1	20	-
Vanadium	mg/L	0	0.04	-	96	-	90	-	80	110	7	-	-	84	-	84	-	72	110	0	20	-

AQUEOUS SAMPLES

		METHOD BLANK			LAB CONTROL									MATRIX QC								
					LCS		LCSD					RPD	RPD	MS		MSD					RPD	RPD
	UNITS	RESULT	RDL	FLG	%REC	FLG	%REC	FLG	LCL	UCL	RPD	UCL	FLG	%REC	FLG	%REC	FLG	LCL	UCL	RPD	UCL	FLG
Batch: VOA*95327 Method: 8240 - GC/MS for Volatile Organics																						
1,1,1-Trichloroethane	ug/L	0	1	-	69	Q	73	Q	78	119	6	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	ug/L	0	1	-	109	-	107	-	78	137	2	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	ug/L	0	1	-	99	-	97	-	83	127	2	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	ug/L	0	1	-	83	-	88	-	76	122	5	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	ug/L	0	1	-	79	-	80	-	69	126	2	-	-	74	-	77	-	48	127	5	27	-
1,2-Dichloroethane	ug/L	0	1	-	87	-	92	-	84	119	5	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	ug/L	0	1	-	97	-	94	-	85	118	3	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	ug/L	0	1	-	88	-	93	-	84	117	5	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	ug/L	0	1	-	94	-	94	-	84	118	0	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	ug/L	0	1	-	95	-	93	-	85	117	3	-	-	-	-	-	-	-	-	-	-	-
1,4-Dioxane	ug/L	0	500	-	140	-	121	-	-	-	15	-	-	-	-	-	-	-	-	-	-	-
2-Chloroethylvinylether	ug/L	0	5	-	76	-	91	-	35	174	18	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone	ug/L	0	5	-	129	-	132	-	58	158	2	-	-	-	-	-	-	-	-	-	-	-
Acetone	ug/L	3.9	20	-	98	-	96	-	16	170	1	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	ug/L	0	1	-	98	-	96	-	84	118	2	-	-	-	-	-	-	-	-	-	-	-
Bromomethane	ug/L	0	1	-	88	-	106	-	58	139	18	-	-	-	-	-	-	-	-	-	-	-
Benzene	ug/L	0	1	-	82	-	87	-	74	122	6	-	-	79	-	87	-	65	125	10	26	-
Bromoform	ug/L	0	1	-	105	-	101	-	80	131	4	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	ug/L	0	1	-	96	-	94	-	85	115	2	-	-	91	-	93	-	76	132	3	23	-
Carbon Tetrachloride	ug/L	0	1	-	80	-	84	-	72	122	4	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	ug/L	0	1	-	86	-	80	-	52	143	8	-	-	-	-	-	-	-	-	-	-	-
Chloroform	ug/L	0	1	-	85	-	90	-	81	120	5	-	-	-	-	-	-	-	-	-	-	-
Chloromethane	ug/L	0	1	-	89	-	87	-	62	127	2	-	-	-	-	-	-	-	-	-	-	-
Carbon Disulfide	ug/L	0.31	2	-	73	-	76	-	65	128	4	-	-	-	-	-	-	-	-	-	-	-
Cyclohexane	ug/L	0	5	-	66	-	72	-	-	-	9	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	ug/L	0	1	-	101	-	98	-	82	124	4	-	-	-	-	-	-	-	-	-	-	-
Ethylene Dibromide	ug/L	0	1	-	102	-	97	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	ug/L	0	1	-	99	-	99	-	84	117	0	-	-	-	-	-	-	-	-	-	-	-
Freon 113	ug/L	0	2	-	93	-	88	-	66	133	6	-	-	-	-	-	-	-	-	-	-	-
Methyl ethyl ketone	ug/L	0	5	-	110	-	128	-	46	161	15	-	-	-	-	-	-	-	-	-	-	-
Methyl isobutyl ketone	ug/L	0	5	-	112	-	116	-	66	156	3	-	-	-	-	-	-	-	-	-	-	-
Methylene chloride	ug/L	0	2	-	80	-	82	-	78	120	3	-	-	-	-	-	-	-	-	-	-	-
Styrene	ug/L	0	1	-	93	-	93	-	85	116	0	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	ug/L	0	1	-	83	-	85	-	78	119	3	-	-	78	-	82	-	63	122	5	21	-
Trichlorofluoromethane	ug/L	0	1	-	95	-	89	-	66	134	6	-	-	-	-	-	-	-	-	-	-	-
Toluene	ug/L	0	1	-	93	-	92	-	84	116	1	-	-	88	-	91	-	63	132	3	22	-
Tetrachloroethene	ug/L	0	1	-	94	-	89	-	83	117	5	-	-	-	-	-	-	-	-	-	-	-
Vinyl acetate	ug/L	0	10	-	98	-	72	Q	76	134	31	-	-	-	-	-	-	-	-	-	-	-

AQUEOUS SAMPLES

		METHOD BLANK			LAB CONTROL									MATRIX QC								
					LCS		LCSD				RPD	RPD		MS		MSD				RPD	RPD	
	UNITS	RESULT	RDL	FLG	%REC	FLG	%REC	FLG	LCL	UCL	RPD	UCL	FLG	%REC	FLG	%REC	FLG	LCL	UCL	RPD	UCL	FLG
Batch: VOA*95327 Method: 8240 - GC/MS for Volatile Organics, con't																						
Vinyl chloride	ug/L	0	1	-	82	-	82	-	66	132	0	-	-	-	-	-	-	-	-	-	-	-
Total Xylene Isomers	ug/L	0	3	-	103	-	104	-	86	114	1	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	ug/L	0	1	-	84	-	89	-	78	121	6	-	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	ug/L	0	1	-	95	-	96	-	81	123	1	-	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	ug/L	0	1	-	81	-	87	-	73	123	7	-	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene	ug/L	0	1	-	94	-	96	-	78	122	1	-	-	-	-	-	-	-	-	-	-	-
[1,2-Dichloroethane-d4]	Percent	99	-	-	96	-	102	-	87	125	-	-	-	101	-	82	Q	87	125	-	-	-
[4-Bromofluorobenzene]	Percent	102	-	-	103	-	102	-	85	111	-	-	-	107	-	104	-	85	111	-	-	-
[Toluene-d8]	Percent	101	-	-	100	-	102	-	94	113	-	-	-	103	-	102	-	94	113	-	-	-

AQUEOUS SAMPLES

		METHOD BLANK			LAB CONTROL									MATRIX QC								
					LCS		LCSD					RPD	RPD	MS		MSD					RPD	RPD
	UNITS	RESULT	RDL	FLG	%REC	FLG	%REC	FLG	LCL	UCL	RPD	UCL	FLG	%REC	FLG	%REC	FLG	LCL	UCL	RPD	UCL	FLG
Batch: BNA*95175 Method: 8270 - GC/MS for Semivolatile Organics, Capillary column																						
1,2,4-Trichlorobenzene	ug/L	0	5	-	78	-	79	-	44	116	2	-	-	71	-	75	-	44	120	6	39	-
1,2-Dichlorobenzene	ug/L	0	6	-	74	-	76	-	35	127	2	-	-	-	-	-	-	-	-	-	-	-
1,2-Diphenylhydrazine	ug/L	0	5	-	101	-	89	-	43	128	13	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	ug/L	0	5	-	73	-	76	-	32	110	4	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	ug/L	0	5	-	73	-	76	-	35	110	3	-	-	65	-	70	-	39	110	7	34	-
1-Methylnaphthalene	ug/L	0	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	ug/L	0	6	-	105	-	104	-	23	154	1	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	ug/L	0	5	-	76	-	76	-	37	144	1	-	-	-	-	-	-	-	-	-	-	-
2,4-Dichlorophenol	ug/L	0	5	-	82	-	84	-	39	129	2	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	ug/L	0	5	-	78	-	78	-	32	119	0	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	ug/L	0	10	-	71	-	62	-	1	191	14	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene	ug/L	0	5	-	96	-	94	-	39	139	2	-	-	84	-	89	-	48	139	6	25	-
2,6-Dinitrotoluene	ug/L	0	5	-	84	-	87	-	50	152	4	-	-	-	-	-	-	-	-	-	-	-
2-Chloronaphthalene	ug/L	0	6	-	60	-	61	-	32	110	2	-	-	-	-	-	-	-	-	-	-	-
2-Chlorophenol	ug/L	0	5	-	75	-	77	-	35	116	2	-	-	71	-	76	-	43	110	8	24	-
2-Methyl-4,6-dinitrophenol	ug/L	0	5	-	87	-	78	-	1	181	11	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	ug/L	0	5	-	83	-	83	-	5	165	1	-	-	-	-	-	-	-	-	-	-	-
2-Methylphenol (o-Cresol)	ug/L	0	5	-	85	-	80	-	36	114	5	-	-	-	-	-	-	-	-	-	-	-
2-Nitroaniline	ug/L	0	5	-	91	-	89	-	38	144	2	-	-	-	-	-	-	-	-	-	-	-
2-Nitrophenol	ug/L	0	5	-	80	-	83	-	32	130	4	-	-	-	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine	ug/L	0	20	-	125	-	125	-	1	262	0	-	-	-	-	-	-	-	-	-	-	-
3-Methylphenol (m-Cresol)	ug/L	0	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3-Nitroaniline	ug/L	0	5	-	95	-	93	-	30	152	3	-	-	-	-	-	-	-	-	-	-	-
4-Bromophenylphenylether	ug/L	0	5	-	87	-	83	-	56	127	4	-	-	-	-	-	-	-	-	-	-	-
4-Chloro-3-methylphenol	ug/L	0	5	-	90	-	89	-	35	130	1	-	-	86	-	91	-	48	127	6	31	-
4-Chloroaniline	ug/L	0	5	-	83	-	83	-	31	126	1	-	-	-	-	-	-	-	-	-	-	-
4-Chlorophenylphenylether	ug/L	0	5	-	86	-	86	-	48	132	0	-	-	-	-	-	-	-	-	-	-	-
4-Methylphenol (p-Cresol)	ug/L	0	8	-	73	-	71	-	25	124	3	-	-	-	-	-	-	-	-	-	-	-
4-Nitroaniline	ug/L	0	6	-	125	-	123	-	3	187	2	-	-	-	-	-	-	-	-	-	-	-
4-Nitrophenol	ug/L	0	5	-	56	-	52	-	1	132	6	-	-	58	-	56	-	1	132	3	34	-
6-Methylchrysene	ug/L	0	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7,12-Dimethylbenz(a)anthracene	ug/L	0	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	ug/L	0	5	-	96	-	97	-	47	132	1	-	-	78	-	85	-	52	131	9	26	-
Acenaphthylene	ug/L	0	5	-	89	-	91	-	35	132	2	-	-	-	-	-	-	-	-	-	-	-
Aniline	ug/L	0	5	-	75	-	77	-	1	164	2	-	-	-	-	-	-	-	-	-	-	-
Anthracene	ug/L	0	5	-	91	-	88	-	39	130	3	-	-	-	-	-	-	-	-	-	-	-
Benzidine	ug/L	0	100	-	1100	Q	0	Q	1	200	200	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)anthracene	ug/L	0	5	-	100	-	98	-	44	138	2	-	-	-	-	-	-	-	-	-	-	-

AQUEOUS SAMPLES		METHOD BLANK			LAB CONTROL									MATRIX QC								
	UNITS	RESULT	RDL	FLG	LCS %REC	FLG	LCSD %REC	FLG	LCL	UCL	RPD	RPD UCL	RPD FLG	MS %REC	FLG	MSD %REC	FLG	LCL	UCL	RPD	RPD UCL	RPD FLG
Batch: BNA*95175 Method: 8270 - GC/MS for Semivolatile Organics, Capillary column, con't																						
Benzo(a)pyrene	ug/L	0	5	-	82	-	78	-	36	128	4	-	-	-	-	-	-	-	-	-	-	-
Benzo(b)fluoranthene	ug/L	0	5	-	79	-	76	-	24	137	5	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)perylene	ug/L	0	5	-	80	-	71	-	25	157	12	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	ug/L	0	5	-	75	-	77	-	39	142	2	-	-	-	-	-	-	-	-	-	-	-
Benzenethiol	ug/L	0	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzyl Alcohol	ug/L	0	5	-	68	-	66	-	3	161	2	-	-	-	-	-	-	-	-	-	-	-
Benzoic acid	ug/L	0	50	-	24	-	20	-	1	183	19	-	-	-	-	-	-	-	-	-	-	-
Butylbenzylphthalate	ug/L	0	5	-	105	-	101	-	37	151	4	-	-	-	-	-	-	-	-	-	-	-
Chrysene	ug/L	0	5	-	102	-	101	-	43	147	1	-	-	-	-	-	-	-	-	-	-	-
Di-n-octylphthalate	ug/L	0	5	-	80	-	80	-	21	146	1	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,h)anthracene	ug/L	0	5	-	76	-	70	-	30	154	8	-	-	-	-	-	-	-	-	-	-	-
Dibenz(a,h)acridine	ug/L	0	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzofuran	ug/L	0	5	-	86	-	86	-	54	121	0	-	-	-	-	-	-	-	-	-	-	-
Dibutylphthalate	ug/L	0.85	5	-	93	-	88	-	53	125	6	-	-	-	-	-	-	-	-	-	-	-
Diethylphthalate	ug/L	0	5	-	91	-	90	-	47	142	1	-	-	-	-	-	-	-	-	-	-	-
Dimethylphthalate	ug/L	0	5	-	91	-	89	-	32	142	2	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	ug/L	0	5	-	91	-	91	-	39	137	0	-	-	-	-	-	-	-	-	-	-	-
Fluorene	ug/L	0	5	-	88	-	88	-	59	121	0	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene	ug/L	0	5	-	87	-	84	-	48	129	3	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	ug/L	0	5	-	73	-	76	-	29	116	3	-	-	-	-	-	-	-	-	-	-	-
Hexachlorocyclopentadiene	ug/L	0	5	-	120	-	121	-	18	143	1	-	-	-	-	-	-	-	-	-	-	-
Hexachloroethane	ug/L	0	5	-	74	-	75	-	40	113	2	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-c,d)pyrene	ug/L	0	7	-	70	-	62	-	25	162	12	-	-	-	-	-	-	-	-	-	-	-
Indene	ug/L	0	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isophorone	ug/L	0	5	-	87	-	88	-	27	134	0	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodimethylamine	ug/L	0	6	-	80	-	84	-	17	115	4	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodiphenylamine	ug/L	0	5	-	76	-	70	-	11	110	8	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodi-n-propylamine	ug/L	0	6	-	81	-	81	-	32	136	0	-	-	82	-	88	-	33	135	7	25	-
Nitrobenzene	ug/L	0	5	-	77	-	80	-	39	115	4	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	ug/L	0	5	-	77	-	79	-	39	114	3	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	ug/L	0	5	-	94	-	92	-	54	120	2	-	-	-	-	-	-	-	-	-	-	-
Phenol	ug/L	0	5	-	56	-	55	-	7	110	2	-	-	54	-	57	-	5	110	6	30	-
Pentachlorophenol	ug/L	0	5	-	76	-	73	-	14	163	4	-	-	83	-	88	-	14	176	5	39	-
Pyrene	ug/L	0	5	-	94	-	90	-	52	149	4	-	-	96	-	99	-	45	162	3	34	-
Pyridine	ug/L	0	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Quinoline	ug/L	0	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-chloroethoxy)methane	ug/L	0	5	-	97	-	96	-	37	130	0	-	-	-	-	-	-	-	-	-	-	-
Bis(2-chloroethyl)ether	ug/L	0	5	-	87	-	89	-	40	123	2	-	-	-	-	-	-	-	-	-	-	-

AQUEOUS SAMPLES		METHOD BLANK			LAB CONTROL									MATRIX QC								
					LCS		LCSD				RPD	RPD		MS		MSD				RPD	RPD	
	UNITS	RESULT	RDL	FLG	%REC	FLG	%REC	FLG	LCL	UCL	RPD	UCL	FLG	%REC	FLG	%REC	FLG	LCL	UCL	RPD	UCL	FLG
Batch: BNA*95175 Method: 8270 - GC/MS for Semivolatile Organics, Capillary column, con't																						
Bis(2-chloroisopropyl)ether	ug/L	0	6	-	99	-	100	-	36	140	1	-	-	-	-	-	-	-	-	-	-	-
Bis(2-ethylhexyl)phthalate	ug/L	2.8	7	-	107	-	105	-	41	147	2	-	-	-	-	-	-	-	-	-	-	-
[2-Fluorobiphenyl]	Percent	95	-	-	98	-	99	-	43	116	-	-	-	84	-	89	-	43	116	-	-	-
[2-Fluorophenol]	Percent	57	-	-	75	-	79	-	21	100	-	-	-	76	-	77	-	21	100	-	-	-
[2,4,6-Tribromophenol]	Percent	85	-	-	91	-	89	-	40	123	-	-	-	80	-	82	-	10	123	-	-	-
[Nitrobenzene-d5]	Percent	91	-	-	90	-	93	-	37	114	-	-	-	86	-	88	-	35	114	-	-	-
[Phenol-d5]	Percent	35	-	-	57	-	58	-	10	93	-	-	-	63	-	63	-	10	94	-	-	-
[Terphenyl-d14]	Percent	90	-	-	97	-	96	-	33	141	-	-	-	90	-	88	-	33	141	-	-	-

: SURROGATE RECOVERIES :
: BC ANALYTICAL : GLEN LAB : 09:57:44 03 OCT 1995 - P. 1 :

METHOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG	LCL	UCL
9509312*1									
8270	2-Fluorophenol	95175	09/27/95	41.9	75.0	56		21	100
	Phenol-d5	95175	09/27/95	28.1	75.0	37		10	94
	Nitrobenzene-d5	95175	09/27/95	47.8	50.0	96		35	114
	2-Fluorobiphenyl	95175	09/27/95	49.3	50.0	99		43	116
	2,4,6-Tribromophenol Rep.	95175	09/27/95	60.8	75.0	81		10	123
	Terphenyl-d14	95175	09/27/95	46.5	50.0	93		33	141
8240	1,2-Dichloroethane-d4 Rep	95327	09/27/95	47.7	50.0	95		87	125
	Toluene-d8	95327	09/27/95	50.1	50.0	100		94	113
	4-Bromofluorobenzene Rep.	95327	09/27/95	55.3	50.0	111		85	111
9509312*2									
8270	2-Fluorophenol	95175	09/27/95	32.3	75.0	43		21	100
	Phenol-d5	95175	09/27/95	23.1	75.0	31		10	94
	Nitrobenzene-d5	95175	09/27/95	39.9	50.0	80		35	114
	2-Fluorobiphenyl	95175	09/27/95	43.0	50.0	86		43	116
	2,4,6-Tribromophenol Rep.	95175	09/27/95	56.8	75.0	76		10	123
	Terphenyl-d14	95175	09/27/95	41.3	50.0	83		33	141
8240	1,2-Dichloroethane-d4 Rep	95327	09/27/95	48.6	50.0	97		87	125
	Toluene-d8	95327	09/27/95	49.8	50.0	100		94	113
	4-Bromofluorobenzene Rep.	95327	09/27/95	52.3	50.0	105		85	111
9509312*3									
8270	2-Fluorophenol	95175	09/27/95	61.9	75.0	83		21	100
	Phenol-d5	95175	09/27/95	49.3	75.0	66		10	94
	Nitrobenzene-d5	95175	09/27/95	48.5	50.0	97		35	114
	2-Fluorobiphenyl	95175	09/27/95	52.3	50.0	105		43	116
	2,4,6-Tribromophenol Rep.	95175	09/27/95	66.4	75.0	89		10	123
	Terphenyl-d14	95175	09/27/95	44.2	50.0	88		33	141
8240	1,2-Dichloroethane-d4 Rep	95327	09/27/95	47.6	50.0	95		87	125
	Toluene-d8	95327	09/27/95	50.1	50.0	100		94	113
	4-Bromofluorobenzene Rep.	95327	09/27/95	51.2	50.0	102		85	111
9509312*4									
8270	2-Fluorophenol	95175	09/27/95	41.9	75.0	56		21	100
	Phenol-d5	95175	09/27/95	27.1	75.0	36		10	94
	Nitrobenzene-d5	95175	09/27/95	47.1	50.0	94		35	114
	2-Fluorobiphenyl	95175	09/27/95	47.0	50.0	94		43	116
	2,4,6-Tribromophenol Rep.	95175	09/27/95	62.9	75.0	84		10	123
	Terphenyl-d14	95175	09/27/95	46.1	50.0	92		33	141
8240	1,2-Dichloroethane-d4 Rep	95327	09/27/95	48.4	50.0	97		87	125
	Toluene-d8	95327	09/27/95	50.1	50.0	100		94	113
	4-Bromofluorobenzene Rep.	95327	09/27/95	55.0	50.0	110		85	111
9509312*5									
	2-Fluorophenol	95175	09/27/95	41.6	75.0	55		21	100
	Phenol-d5	95175	09/27/95	27.4	75.0	37		10	94
	Nitrobenzene-d5	95175	09/27/95	46.4	50.0	93		35	114
	2-Fluorobiphenyl	95175	09/27/95	47.0	50.0	94		43	116
	2,4,6-Tribromophenol Rep.	95175	09/27/95	56.6	75.0	75		10	123
	Terphenyl-d14	95175	09/27/95	44.8	50.0	90		33	141

: SURROGATE RECOVERIES :
: BC ANALYTICAL : GLEN LAB : 09:57:57 03 OCT 1995 - P. 2 :

METHOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG	LCL	UCL
8240	1,2-Dichloroethane-d4 Rep	95327	09/27/95	48.4	50.0	97		87	125
	Toluene-d8	95327	09/27/95	50.6	50.0	101		94	113
	4-Bromofluorobenzene Rep.	95327	09/27/95	54.0	50.0	108		85	111
9509312*6									
8270	2-Fluorophenol	95175	09/27/95	43.7	75.0	58		21	100
	Phenol-d5	95175	09/27/95	29.2	75.0	39		10	94
	Nitrobenzene-d5	95175	09/27/95	45.0	50.0	90		35	114
	2-Fluorobiphenyl	95175	09/27/95	48.0	50.0	96		43	116
	2,4,6-Tribromophenol Rep.	95175	09/27/95	56.5	75.0	75		10	123
	Terphenyl-d14	95175	09/27/95	41.8	50.0	84		33	141
8240	1,2-Dichloroethane-d4 Rep	95327	09/27/95	48.3	50.0	97		87	125
	Toluene-d8	95327	09/27/95	50.7	50.0	101		94	113
	4-Bromofluorobenzene Rep.	95327	09/27/95	53.3	50.0	107		85	111
9509312*7									
8240	1,2-Dichloroethane-d4 Rep	95327	09/27/95	49.5	50.0	99		87	125
	Toluene-d8	95327	09/27/95	49.4	50.0	99		94	113
	4-Bromofluorobenzene Rep.	95327	09/27/95	53.3	50.0	107		85	111

BHP

CHAIN OF CUSTODY

G95-09-312

Environmental Technologies International, Inc.
Mauka Tower 737 Bishop Street, 22nd Floor
P.O. Box 3379 Honolulu, HI 96842
(808) 547-3600 Facsimile: (808) 547-3033

PROJECT NO: GMP
ET CLIENT:

SEND RESULTS TO
Name: Tony Shan
Company: BHP Hawaii Refinery
Address: 91-325 Komohana Street
City, State, Zip: Kapolei, HI, 96707

SEND INVOICE TO
Name: Henry Sung
Company: BHP Hawaii
Address: Same as left
City, State, Zip:

Sample No.	Lab No.	No. Containers	Date	Time	Sample Type/Description	Analysis Required	Sampled By
CW-2A		6	9/18/95	0900	Groundwater	8240, 8270, metals, TDS, pH, cond, Cl, SO4	Z. Shen
CW-2B		6	↓	1015	↓	↓	↓
CW-2C		6	↓	1120	↓	↓	↓
CW-3A		6	↓	1330	↓	↓	↓
CW-3B		6	↓	1430	↓	↓	↓
CW-3C		6	↓	1515	↓	↓	↓
Trip Blank 1		2	↓	1550	Trip Blank	8240	
Temp. Blank 1		1	↓	1555	Temperature Blank	Temperature Temp-3°C	SM

CUSTODY TRANSFERS

	RELINQUISHED BY: (NAME, SIGNATURE)	DATE	TIME	RECEIVED BY: (NAME, SIGNATURE)	DATE	TIME	COMMENTS
1	Zuyi Shen	9/18/95	1640	Sharon Malone	9/19/95	11:00	
2							
3							
4							

SHIPPING DETAILS

DELIVERED TO SHIPPER BY: DATE 9/18/95 TIME 1730
METHOD OF SHIPMENT: DHL AIRBILL # 7791968424
RECEIVED FOR LAB: SIGNED DATE TIME
SAMPLE CONDITION UPON RECEIPT:

WHITE - CUSTODY SHEET YELLOW - LAB PINK - ET

B C Analytical

801 Western Avenue
Glendale, CA 91201
818/247-5737
Fax: 818/247-9797

October 4,1995

BHP, Hawaii Refinery
91-325 Komohana St.
Kapolei, Hi 96707
Attn: Dr. Tony Shan

Dear Dr. Shan,

Enclosed is the analytical report for chemical testing for samples taken on 09/19/95. It includes the following:

1) Analytical Report of results

2) QC summary including LCS/LCSD, MS/MSD, duplicate samples, method blanks, and surrogates.

3) Cross reference sheet containing analyte, date analyzed, method, and batch number.

4) Case narrative explaining QC deficiencies and/or problems encountered in testing.

5) Electronic data in agreed upon format.

If you have any questions, please do not hesitate to call.

Very truly yours,

Brian Moore

Brian Moore
Program Specialist

BCA

B C Analytical

801 Western Avenue
Glendale, CA 91201
818/247-5737
Fax: 818/247-9797

Case Narrative

All quality objectives were met including holding times, LCS/LCSD, MS/MSD, Duplicate samples, and Method Blanks as applicable with the following exceptions:

Selenium method 7740 batch 951518:

LCS recovery greater than upper control limit, LCSD recovery within criteria. Selenium was not detected in any project samples in this batch.

Volatile organics method 8240 batch 95329:

1,1,1-Trichloroethane; Bromomethane; Methylene chloride; and Tetrachloroethene LCS recovery less than lower control limit.

Surrogate 4-Bromofluorobenzene MS recovery greater than upper control limit.

Semivolatile organics method 8270 batch 95176:

Benzidine LCS/LCSD recovery less than lower control limit.

Note: MS/MSD recoveries reported as "NC" for "Not Calculated" is due to the sample concentration being greater than two times the spike amount added.

No analytical difficulties were encountered with any project samples.

BCA

B C Analytical

801 Western Avenue
Glendale, CA 91201
818/247-5737
Fax: 818/247-9797

ANALYTICAL REPORT

LOG NO: G95-09-335

Received: 20 SEP 95

Mailed: OCT 4 1995

Dr. Tony Shan
BHP, Hawaii Refinery
91-325 Komohana St.
Kapolei, HI 96707

Project: GMP

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-335-1	CW-4A	19 SEP 95
09-335-2	CW-4B	19 SEP 95
09-335-3	CW-4C	19 SEP 95
09-335-4	MW-5	19 SEP 95
09-335-5	MW-4	19 SEP 95

PARAMETER	09-335-1	09-335-2	09-335-3	09-335-4	09-335-5
Digestion (3010), Date	09/29/95	09/29/95	09/29/95	09/29/95	09/29/95
Furnace Digestion (3020), Date	09/29/95	09/29/95	09/29/95	09/29/95	09/29/95
Chloride (300.0), mg/L	2100	11000	15000	1600	1200
Sulfate (300.0), mg/L	1500	2500	2800	1500	1400
Conductivity (120.1), umhos/cm	9800	31000	39000	9000	7600
pH (150.1), Units	7.9	7.4	7.5	7.8	7.9
Dissolved Solids (160.1), mg/L	6300	22000	30000	5400	4500
Antimony (6010), mg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (7060), mg/L	<0.002	<0.002	<0.002	0.0058	<0.002
Barium (6010), mg/L	0.0093	0.024	0.017	0.019	0.0094
Beryllium (6010), mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium (7131), mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium (6010), mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (6010), mg/L	<0.04	<0.04	<0.04	<0.04	<0.04
Iron (6010), mg/L	<0.04	0.084	0.11	<0.04	0.054
Lead (7421), mg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Manganese (6010), mg/L	0.018	0.14	0.12	0.023	0.022
Mercury (7470), mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Nickel (6010), mg/L	<0.04	<0.04	<0.04	<0.04	<0.04
Selenium (7740), mg/L	<0.004	<0.004	<0.004	<0.004	<0.004
Sodium (6010), mg/L	2400	6800	8900	2000	1700
Vanadium (6010), mg/L	<0.04	<0.04	<0.04	<0.04	<0.04

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Dr. Tony Shan
BHP, Hawaii Refinery
91-325 Komohana St.
Kapolei, HI 96707

Project: GMP

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09-335-2	CW-4B	19 SEP 95
09-335-3	CW-4C	19 SEP 95
09-335-4	MW-5	19 SEP 95
09-335-5	MW-4	19 SEP 95

PARAMETER	09-335-1	09-335-2	09-335-3	09-335-4	09-335-5
B/N,A Ext.Pri.Poll. (8270)					
Date Analyzed	10/02/95	10/02/95	10/02/95	10/02/95	10/02/95
Date Extracted	09/21/95	09/21/95	09/21/95	09/21/95	09/21/95
Dilution Factor, Times	5	1	1	5	1
1,2,4-Trichlorobenzene, ug/L	<30	<5	<5	<30	<5
1,2-Dichlorobenzene, ug/L	<30	<6	<6	<30	<6
1,2-Diphenylhydrazine, ug/L	<30	<5	<5	<30	<5
1,3-Dichlorobenzene, ug/L	<30	<5	<5	<30	<5
1,4-Dichlorobenzene, ug/L	<30	<5	<5	<30	<5
1-Methylnaphthalene, ug/L	<50	<10	<10	<50	<10
2,4,5-Trichlorophenol, ug/L	<30	<6	<6	<30	<6
2,4,6-Trichlorophenol, ug/L	<30	<5	<5	<30	<5
2,4-Dichlorophenol, ug/L	<30	<5	<5	<30	<5
2,4-Dimethylphenol, ug/L	<30	<5	<5	<30	<5
2,4-Dinitrophenol, ug/L	<50	<10	<10	<50	<10
2,4-Dinitrotoluene, ug/L	<30	<5	<5	<30	<5
2,6-Dinitrotoluene, ug/L	<30	<5	<5	<30	<5
2-Chloronaphthalene, ug/L	<30	<6	<6	<30	<6
2-Chlorophenol, ug/L	<30	<5	<5	<30	<5
2-Methyl-4,6-dinitrophenol, ug/L	<30	<5	<5	<30	<5
2-Methylnaphthalene, ug/L	<30	<5	<5	<30	<5
2-Methylphenol (o-Cresol), ug/L	<30	<5	<5	<30	<5
2-Nitroaniline, ug/L	<30	<5	<5	<30	<5

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09-335-1	CW-4A	19 SEP 95
09-335-2	CW-4B	19 SEP 95
09-335-3	CW-4C	19 SEP 95
09-335-4	MW-5	19 SEP 95
09-335-5	MW-4	19 SEP 95

PARAMETER	09-335-1	09-335-2	09-335-3	09-335-4	09-335-5
2-Nitrophenol, ug/L	<30	<5	<5	<30	<5
3,3'-Dichlorobenzidine, ug/L	<100	<20	<20	<100	<20
3-Methylphenol (m-Cresol), ug/L	<50	<10	<10	<50	<10
3-Nitroaniline, ug/L	<30	<5	<5	<30	<5
4-Bromophenylphenylether, ug/L	<30	<5	<5	<30	<5
4-Chloro-3-methylphenol, ug/L	<30	<5	<5	<30	<5
4-Chloroaniline, ug/L	<30	<5	<5	<30	<5
4-Chlorophenylphenylether, ug/L	<30	<5	<5	<30	<5
4-Methylphenol (p-Cresol), ug/L	<40	<8	<8	<40	<8
4-Nitroaniline, ug/L	<30	<6	<6	<30	<6
4-Nitrophenol, ug/L	<30	<5	<5	<30	<5
6-Methylchrysene, ug/L	<50	<10	<10	<50	<10
7,12-Dimethylbenz(a)anthracene, ug/L	<30	<5	<5	<30	<5
Acenaphthene, ug/L	<30	<5	<5	<30	<5
Acenaphthylene, ug/L	<30	<5	<5	<30	<5
Aniline, ug/L	<30	<5	<5	<30	<5
Anthracene, ug/L	<30	<5	<5	<30	<5
Benzidine, ug/L	<500	<100	<100	<500	<100
Benzo(a)anthracene, ug/L	<30	<5	<5	<30	<5
Benzo(a)pyrene, ug/L	<30	<5	<5	<30	<5
Benzo(b)fluoranthene, ug/L	<30	<5	<5	<30	<5
Benzo(g,h,i)perylene, ug/L	<30	<5	<5	<30	<5
Benzo(k)fluoranthene, ug/L	<30	<5	<5	<30	<5

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09-335-3	CW-4C	19 SEP 95
09-335-4	MW-5	19 SEP 95
09-335-5	MW-4	19 SEP 95

PARAMETER	09-335-1	09-335-2	09-335-3	09-335-4	09-335-5
Benzenethiol, ug/L	<100	<20	<20	<100	<20
Benzyl Alcohol, ug/L	<30	<5	<5	<30	<5
Benzoic acid, ug/L	<300	<50	<50	<300	<50
Butylbenzylphthalate, ug/L	<30	<5	<5	<30	<5
Chrysene, ug/L	<30	<5	<5	<30	<5
Di-n-octylphthalate, ug/L	<30	<5	<5	<30	<5
Dibenzo(a,h)anthracene, ug/L	<30	<5	<5	<30	<5
Dibenz(a,h)acridine, ug/L	<100	<20	<20	<100	<20
Dibenzofuran, ug/L	<30	<5	<5	<30	<5
Dibutylphthalate, ug/L	<30	<5	<5	<30	<5
Diethylphthalate, ug/L	<30	<5	<5	<30	<5
Dimethylphthalate, ug/L	<30	<5	<5	<30	<5
Fluoranthene, ug/L	<30	<5	<5	<30	<5
Fluorene, ug/L	<30	<5	<5	<30	<5
Hexachlorobenzene, ug/L	<30	<5	<5	<30	<5
Hexachlorobutadiene, ug/L	<30	<5	<5	<30	<5
Hexachlorocyclopentadiene, ug/L	<30	<5	<5	<30	<5
Hexachloroethane, ug/L	<30	<5	<5	<30	<5
Indeno(1,2,3-c,d)pyrene, ug/L	<40	<7	<7	<40	<7
Indene, ug/L	<50	<10	<10	<50	<10
Isophorone, ug/L	<30	<5	<5	<30	<5
N-Nitrosodimethylamine, ug/L	<30	<6	<6	<30	<6
N-Nitrosodiphenylamine, ug/L	<30	<5	<5	<30	<5

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09-335-3	CW-4C	19 SEP 95
09-335-4	MW-5	19 SEP 95
09-335-5	MW-4	19 SEP 95

PARAMETER	09-335-1	09-335-2	09-335-3	09-335-4	09-335-5
N-Nitrosodi-n-propylamine, ug/L	<30	<6	<6	<30	<6
Nitrobenzene, ug/L	<30	<5	<5	<30	<5
Naphthalene, ug/L	<30	<5	<5	<30	<5
Phenanthrene, ug/L	<30	<5	<5	<30	<5
Phenol, ug/L	<30	<5	<5	<30	<5
Pentachlorophenol, ug/L	<30	<5	<5	<30	<5
Pyrene, ug/L	<30	<5	<5	<30	<5
Pyridine, ug/L	<50	<10	<10	<50	<10
Quinoline, ug/L	<50	<10	<10	<50	<10
Bis(2-chloroethoxy)methane, ug/L	<30	<5	<5	<30	<5
Bis(2-chloroethyl)ether, ug/L	<30	<5	<5	<30	<5
Bis(2-chloroisopropyl)ether, ug/L	<30	<6	<6	<30	<6
Bis(2-ethylhexyl)phthalate, ug/L	<40	<7	<7	<40	<7
Surrogates **					
2-Fluorobiphenyl Reported, ug/L	54.6	42.2	49.0	38.7	55.5
2-Fluorobiphenyl Theo., ug/L	50.0	50.0	50.0	50.0	50.0
2-Fluorophenol Reported, ug/L	56.3	33.9	37.7	26.7	44.3
2-Fluorophenol Theoretical, ug/L	75.0	75.0	75.0	75.0	75.0
2,4,6-Tribromophenol Rep., ug/L	69.6	54.0	61.3	49.6	70.8
2,4,6-Tribromophenol Theo., ug/L	75.0	75.0	75.0	75.0	75.0
Nitrobenzene-d5 Reported, ug/L	46.7	39.4	45.8	37.2	54.4
Nitrobenzene-d5 Theoretical, ug/L	50.0	50.0	50.0	50.0	50.0
Phenol-d5 Reported, ug/L	41.7	23.7	27.1	16.7	29.6

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09-335-1	CW-4A	19 SEP 95
09-335-2	CW-4B	19 SEP 95
09-335-3	CW-4C	19 SEP 95
09-335-4	MW-5	19 SEP 95
09-335-5	MW-4	19 SEP 95

PARAMETER	09-335-1	09-335-2	09-335-3	09-335-4	09-335-5
Phenol-d5 Theoretical, ug/L	75.0	75.0	75.0	75.0	75.0
Terphenyl-d14 Reported, ug/L	55.4	41.0	51.3	40.9	53.1
Terphenyl-d14 Theoretical, ug/L	50.0	50.0	50.0	50.0	50.0

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09-335-2	CW-4B	19 SEP 95
09-335-3	CW-4C	19 SEP 95
09-335-4	MW-5	19 SEP 95
09-335-5	MW-4	19 SEP 95

PARAMETER	09-335-1	09-335-2	09-335-3	09-335-4	09-335-5
Vol.Pri.Poll. (8240)					
Date Analyzed	09/28/95	09/28/95	09/28/95	09/28/95	09/28/95
Dilution Factor, Times	1	1	1	1	1
1,1,1-Trichloroethane, ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane, ug/L	<1	<1	<1	<1	<1
1,1,2-Trichloroethane, ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane, ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene, ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane, ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene, ug/L	<1	<1	<1	<1	<1
1,2-Dichloropropane, ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene, ug/L	<1	<1	<1	<1	<1
1,4-Dichlorobenzene, ug/L	<1	<1	<1	<1	<1
1,4-Dioxane, ug/L	<500	<500	<500	<500	<500
2-Chloroethylvinylether, ug/L	<5	<5	<5	<5	<5
2-Hexanone, ug/L	<5	<5	<5	<5	<5
Acetone, ug/L	<20	<20	<20	<20	<20
Bromodichloromethane, ug/L	<1	<1	<1	<1	<1
Bromomethane, ug/L	<1	<1	<1	<1	<1
Benzene, ug/L	3.1	<1	<1	2.6	3.9
Bromoform, ug/L	<1	<1	<1	<1	<1
Chlorobenzene, ug/L	<1	<1	<1	<1	<1
Carbon Tetrachloride, ug/L	<1	<1	<1	<1	<1

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09-335-2	CW-4B	19 SEP 95
09-335-3	CW-4C	19 SEP 95
09-335-4	MW-5	19 SEP 95
09-335-5	MW-4	19 SEP 95

PARAMETER	09-335-1	09-335-2	09-335-3	09-335-4	09-335-5
Chloroethane, ug/L	<1	<1	<1	<1	<1
Chloroform, ug/L	<1	<1	<1	<1	<1
Chloromethane, ug/L	<1	<1	<1	<1	<1
Carbon Disulfide, ug/L	<2	<2	<2	<2	<2
Cyclohexane, ug/L	<5	<5	<5	<5	<5
Dibromochloromethane, ug/L	<1	<1	<1	<1	<1
Ethylene Dibromide, ug/L	<1	<1	<1	<1	<1
Ethylbenzene, ug/L	1.5	<1	<1	2.7	2.2
Freon 113, ug/L	<2	<2	<2	<2	<2
Methyl ethyl ketone, ug/L	<5	<5	<5	<5	<5
Methyl isobutyl ketone, ug/L	<5	<5	<5	<5	<5
Methylene chloride, ug/L	<2	<2	<2	<2	<2
Styrene, ug/L	<1	<1	<1	<1	<1
Trichloroethene, ug/L	<1	<1	<1	<1	<1
Trichlorofluoromethane, ug/L	<1	<1	<1	<1	<1
Toluene, ug/L	<1	<1	<1	<1	<1
Tetrachloroethene, ug/L	<1	<1	<1	<1	<1
Vinyl acetate, ug/L	<10	<10	<10	<10	<10
Vinyl chloride, ug/L	<1	<1	<1	<1	<1
Total Xylene Isomers, ug/L	<3	<3	<3	<3	<3
cis-1,2-Dichloroethene, ug/L	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene, ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene, ug/L	<1	<1	<1	<1	<1

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09-335-2	CW-4B	19 SEP 95
09-335-3	CW-4C	19 SEP 95
09-335-4	MW-5	19 SEP 95
09-335-5	MW-4	19 SEP 95

PARAMETER	09-335-1	09-335-2	09-335-3	09-335-4	09-335-5
trans-1,3-Dichloropropene, ug/L	<1	<1	<1	<1	<1
Surrogates **					
1,2-Dichloroethane-d4 Rep., ug/L	48.8	49.3	50.3	47.1	47.8
1,2-Dichloroethane-d4 Theo., ug/L	50.0	50.0	50.0	50.0	50.0
4-Bromofluorobenzene Rep., ug/L	54.8	52.9	52.3	52.6	52.3
4-Bromofluorobenzene Theo., ug/L	50.0	50.0	50.0	50.0	50.0
Toluene-d8 Reported, ug/L	50.3	50.5	49.8	50.4	50.6
Toluene-d8 Theo., ug/L	50.0	50.0	50.0	50.0	50.0

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-335-6	MW-3	19 SEP 95

PARAMETER	09-335-6
Digestion (3010), Date	09/29/95
Furnace Digestion (3020), Date	09/29/95
Chloride (300.0), mg/L	1200
Sulfate (300.0), mg/L	1300
Conductivity (120.1), umhos/cm	7900
pH (150.1), Units	7.9
Dissolved Solids (160.1), mg/L	4800
Antimony (6010), mg/L	<0.1
Arsenic (7060), mg/L	0.0035
Barium (6010), mg/L	0.012
Beryllium (6010), mg/L	<0.001
Cadmium (7131), mg/L	<0.001
Chromium (6010), mg/L	<0.01
Cobalt (6010), mg/L	<0.04
Iron (6010), mg/L	<0.04
Lead (7421), mg/L	<0.002
Manganese (6010), mg/L	0.025
Mercury (7470), mg/L	<0.0002
Nickel (6010), mg/L	<0.04
Selenium (7740), mg/L	<0.004
Sodium (6010), mg/L	1800
Vanadium (6010), mg/L	<0.04

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LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-335-6	MW-3	19 SEP 95

PARAMETER	09-335-6
B/N,A Ext.Pri.Poll. (8270)	
Date Analyzed	10/02/95
Date Extracted	09/21/95
Dilution Factor, Times	5
1,2,4-Trichlorobenzene, ug/L	<30
1,2-Dichlorobenzene, ug/L	<30
1,2-Diphenylhydrazine, ug/L	<30
1,3-Dichlorobenzene, ug/L	<30
1,4-Dichlorobenzene, ug/L	<30
1-Methylnaphthalene, ug/L	<50
2,4,5-Trichlorophenol, ug/L	<30
2,4,6-Trichlorophenol, ug/L	<30
2,4-Dichlorophenol, ug/L	<30
2,4-Dimethylphenol, ug/L	<30
2,4-Dinitrophenol, ug/L	<50
2,4-Dinitrotoluene, ug/L	<30
2,6-Dinitrotoluene, ug/L	<30
2-Chloronaphthalene, ug/L	<30
2-Chlorophenol, ug/L	<30
2-Methyl-4,6-dinitrophenol, ug/L	<30
2-Methylnaphthalene, ug/L	<30
2-Methylphenol (o-Cresol), ug/L	<30
2-Nitroaniline, ug/L	<30
2-Nitrophenol, ug/L	<30
3,3'-Dichlorobenzidine, ug/L	<100
3-Methylphenol (m-Cresol), ug/L	<50
3-Nitroaniline, ug/L	<30

BCA

B C Analytical

801 Western Avenue
Glendale, CA 91201
818/247-5737
Fax: 818/247-9797

LOG NO: G95-09-335

Received: 20 SEP 95

Dr. Tony Shan
BHP, Hawaii Refinery
91-325 Komohana St.
Kapolei, HI 96707

Project: GMP

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-335-6	MW-3	19 SEP 95

PARAMETER	09-335-6
4-Bromophenylphenylether, ug/L	<30
4-Chloro-3-methylphenol, ug/L	<30
4-Chloroaniline, ug/L	<30
4-Chlorophenylphenylether, ug/L	<30
4-Methylphenol (p-Cresol), ug/L	<40
4-Nitroaniline, ug/L	<30
4-Nitrophenol, ug/L	<30
6-Methylchrysene, ug/L	<50
7,12-Dimethylbenz(a)anthracene, ug/L	<30
Acenaphthene, ug/L	<30
Acenaphthylene, ug/L	<30
Aniline, ug/L	<30
Anthracene, ug/L	<30
Benzidine, ug/L	<500
Benzo(a)anthracene, ug/L	<30
Benzo(a)pyrene, ug/L	<30
Benzo(b)fluoranthene, ug/L	<30
Benzo(g,h,i)perylene, ug/L	<30
Benzo(k)fluoranthene, ug/L	<30
Benzenethiol, ug/L	<100
Benzyl Alcohol, ug/L	<30
Benzoic acid, ug/L	<300
Butylbenzylphthalate, ug/L	<30
Chrysene, ug/L	<30
Di-n-octylphthalate, ug/L	<30
Dibenzo(a,h)anthracene, ug/L	<30
Dibenz(a,h)acridine, ug/L	<100

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-335-6	MW-3	19 SEP 95

PARAMETER	09-335-6
Dibenzofuran, ug/L	<30
Dibutylphthalate, ug/L	<30
Diethylphthalate, ug/L	<30
Dimethylphthalate, ug/L	<30
Fluoranthene, ug/L	<30
Fluorene, ug/L	<30
Hexachlorobenzene, ug/L	<30
Hexachlorobutadiene, ug/L	<30
Hexachlorocyclopentadiene, ug/L	<30
Hexachloroethane, ug/L	<30
Indeno(1,2,3-c,d)pyrene, ug/L	<40
Indene, ug/L	<50
Isophorone, ug/L	<30
N-Nitrosodimethylamine, ug/L	<30
N-Nitrosodiphenylamine, ug/L	<30
N-Nitrosodi-n-propylamine, ug/L	<30
Nitrobenzene, ug/L	<30
Naphthalene, ug/L	<30
Phenanthrene, ug/L	<30
Phenol, ug/L	<30
Pentachlorophenol, ug/L	<30
Pyrene, ug/L	<30
Pyridine, ug/L	<50
Quinoline, ug/L	<50
Bis(2-chloroethoxy)methane, ug/L	<30
Bis(2-chloroethyl)ether, ug/L	<30
Bis(2-chloroisopropyl)ether, ug/L	<30

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-335-6	MW-3	19 SEP 95

PARAMETER	09-335-6
Bis(2-ethylhexyl)phthalate, ug/L	<40
Surrogates **	
2-Fluorobiphenyl Reported, ug/L	43.8
2-Fluorobiphenyl Theo., ug/L	50.0
2-Fluorophenol Reported, ug/L	31.7
2-Fluorophenol Theoretical, ug/L	75.0
2,4,6-Tribromophenol Rep., ug/L	55.8
2,4,6-Tribromophenol Theo., ug/L	75.0
Nitrobenzene-d5 Reported, ug/L	42.6
Nitrobenzene-d5 Theoretical, ug/L	50.0
Phenol-d5 Reported, ug/L	18.2
Phenol-d5 Theoretical, ug/L	75.0
Terphenyl-d14 Reported, ug/L	46.8
Terphenyl-d14 Theoretical, ug/L	50.0

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Project: GMP

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-335-6	MW-3	19 SEP 95

PARAMETER	09-335-6
Vol.Pri.Poll. (8240)	
Date Analyzed	09/28/95
Dilution Factor, Times	1
1,1,1-Trichloroethane, ug/L	<1
1,1,2,2-Tetrachloroethane, ug/L	<1
1,1,2-Trichloroethane, ug/L	<1
1,1-Dichloroethane, ug/L	<1
1,1-Dichloroethene, ug/L	<1
1,2-Dichloroethane, ug/L	<1
1,2-Dichlorobenzene, ug/L	<1
1,2-Dichloropropane, ug/L	<1
1,3-Dichlorobenzene, ug/L	<1
1,4-Dichlorobenzene, ug/L	<1
1,4-Dioxane, ug/L	<500
2-Chloroethylvinylether, ug/L	<5
2-Hexanone, ug/L	<5
Acetone, ug/L	<20
Bromodichloromethane, ug/L	<1
Bromomethane, ug/L	<1
Benzene, ug/L	11
Bromoform, ug/L	<1
Chlorobenzene, ug/L	<1
Carbon Tetrachloride, ug/L	<1
Chloroethane, ug/L	<1
Chloroform, ug/L	<1
Chloromethane, ug/L	<1
Carbon Disulfide, ug/L	<2

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-335-6	MW-3	19 SEP 95

PARAMETER	09-335-6
Cyclohexane, ug/L	<5
Dibromochloromethane, ug/L	<1
Ethylene Dibromide, ug/L	<1
Ethylbenzene, ug/L	5.7
Freon 113, ug/L	<2
Methyl ethyl ketone, ug/L	<5
Methyl isobutyl ketone, ug/L	<5
Methylene chloride, ug/L	<2
Styrene, ug/L	<1
Trichloroethene, ug/L	<1
Trichlorofluoromethane, ug/L	<1
Toluene, ug/L	1.5
Tetrachloroethene, ug/L	<1
Vinyl acetate, ug/L	<10
Vinyl chloride, ug/L	<1
Total Xylene Isomers, ug/L	<3
cis-1,2-Dichloroethene, ug/L	<1
cis-1,3-Dichloropropene, ug/L	<1
trans-1,2-Dichloroethene, ug/L	<1
trans-1,3-Dichloropropene, ug/L	<1
Surrogates **	
1,2-Dichloroethane-d4 Rep., ug/L	48.6
1,2-Dichloroethane-d4 Theo., ug/L	50.0
4-Bromofluorobenzene Rep., ug/L	51.4
4-Bromofluorobenzene Theo., ug/L	50.0
Toluene-d8 Reported, ug/L	49.6
Toluene-d8 Theo., ug/L	50.0

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Project: GMP

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-335-7	Field Blank	19 SEP 95
09-335-8	Trip Blank	19 SEP 95

PARAMETER	09-335-7	09-335-8
Vol.Pri.Poll. (8240)		
Date Analyzed	09/28/95	09/28/95
Dilution Factor, Times	1	1
1,1,1-Trichloroethane, ug/L	<1	<1
1,1,2,2-Tetrachloroethane, ug/L	<1	<1
1,1,2-Trichloroethane, ug/L	<1	<1
1,1-Dichloroethane, ug/L	<1	<1
1,1-Dichloroethene, ug/L	<1	<1
1,2-Dichloroethane, ug/L	<1	<1
1,2-Dichlorobenzene, ug/L	<1	<1
1,2-Dichloropropane, ug/L	<1	<1
1,3-Dichlorobenzene, ug/L	<1	<1
1,4-Dichlorobenzene, ug/L	<1	<1
1,4-Dioxane, ug/L	<500	<500
2-Chloroethylvinylether, ug/L	<5	<5
2-Hexanone, ug/L	<5	<5
Acetone, ug/L	<20	<20
Bromodichloromethane, ug/L	<1	<1
Bromomethane, ug/L	<1	<1
Benzene, ug/L	<1	<1
Bromoform, ug/L	<1	<1
Chlorobenzene, ug/L	<1	<1
Carbon Tetrachloride, ug/L	<1	<1
Chloroethane, ug/L	<1	<1
Chloroform, ug/L	<1	<1
Chloromethane, ug/L	<1	<1

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Project: GMP

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-335-7	Field Blank	19 SEP 95
09-335-8	Trip Blank	19 SEP 95

PARAMETER	09-335-7	09-335-8
Carbon Disulfide, ug/L	<2	<2
Cyclohexane, ug/L	<5	<5
Dibromochloromethane, ug/L	<1	<1
Ethylene Dibromide, ug/L	<1	<1
Ethylbenzene, ug/L	<1	<1
Freon 113, ug/L	<2	<2
Methyl ethyl ketone, ug/L	<5	<5
Methyl isobutyl ketone, ug/L	<5	<5
Methylene chloride, ug/L	<2	<2
Styrene, ug/L	<1	<1
Trichloroethene, ug/L	<1	<1
Trichlorofluoromethane, ug/L	<1	<1
Toluene, ug/L	<1	<1
Tetrachloroethene, ug/L	<1	<1
Vinyl acetate, ug/L	<10	<10
Vinyl chloride, ug/L	<1	<1
Total Xylene Isomers, ug/L	<3	<3
cis-1,2-Dichloroethene, ug/L	<1	<1
cis-1,3-Dichloropropene, ug/L	<1	<1
trans-1,2-Dichloroethene, ug/L	<1	<1
trans-1,3-Dichloropropene, ug/L	<1	<1
Surrogates **		
1,2-Dichloroethane-d4 Rep., ug/L	50.8	48.9
1,2-Dichloroethane-d4 Theo., ug/L	50.0	50.0
4-Bromofluorobenzene Rep., ug/L	52.9	52.6
4-Bromofluorobenzene Theo., ug/L	50.0	50.0

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LOG NO: G95-09-335

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BHP, Hawaii Refinery
91-325 Komohana St.
Kapolei, HI 96707

Project: GMP

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-335-7	Field Blank	19 SEP 95
09-335-8	Trip Blank	19 SEP 95

PARAMETER	09-335-7	09-335-8
Toluene-d8 Reported, ug/L	50.5	50.1
Toluene-d8 Theo., ug/L	50.0	50.0

Jane Freemyer, Program Manager

The analytical results within this report relate only to the specific compounds and samples investigated and may not necessarily reflect other apparently similar material from the same or a similar location.

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BCA

: ORDER PLACED FOR CLIENT: BHP Hawaii Refinery 9509335 :
: BC ANALYTICAL : GLEN LAB : 10:14:24 04 OCT 1995 - P. 1 :

SAMPLES...	SAMPLE DESCRIPTION..	DETERM.....	DATE..... ANALYZED	METHOD.....	EQUIP.	BATCH..	ID.NO
9509335*1	CW-4A	DIG,AQ.HCL	09.29.95	3010		951516	7093
		DIG,AQ,GFA	09.29.95	3020		951518	7093
		ANIONS,CL	09.20.95	300.0	533-23	950920	8488
		ANIONS,SO4	09.20.95	300.0	533-23	950920	8488
		COND	09.22.95	120.1	533-11	9592	8604
		PH	09.20.95	150.1	533-21	95429	8651
		TDS	09.21.95	160.1		9589	
		SB	09.29.95	6010	535-03	951516	7396
		AS,GFA	09.30.95	7060	534-04	951518	7396
		BA	09.29.95	6010	535-03	951516	7396
		BE	09.29.95	6010	535-03	951516	7396
		CD,GFA	09.30.95	7131	534-07	951518	7396
		CR	09.29.95	6010	535-03	951516	7396
		CO	09.29.95	6010	535-03	951516	7396
		FE	09.29.95	6010	535-03	951516	7396
		PB,GFA	09.30.95	7421	534-04	951518	7396
		MN	09.29.95	6010	535-03	951516	7396
		HG	10.02.95	7470	534-06	951560	8488
		NI	09.29.95	6010	535-03	951516	7396
		SE,GFA	09.30.95	7740	534-04	951518	7396
		NA	09.30.95	6010	535-02	951516	7396
		V	09.29.95	6010	535-03	951516	7396
		BNA.8270.BHP	10.02.95	8270	537-14	95176	6763
		VOA.8240.BHP	09.28.95	8240	537-01	95329	7430
9509335*2	CW-4B	DIG,AQ.HCL	09.29.95	3010		951516	7093
		DIG,AQ,GFA	09.29.95	3020		951518	7093
		ANIONS,CL	09.20.95	300.0	533-23	950920	8488
		ANIONS,SO4	09.20.95	300.0	533-23	950920	8488
		COND	09.22.95	120.1	533-11	9592	8604
		PH	09.20.95	150.1	533-21	95429	8651
		TDS	09.21.95	160.1		9589	
		SB	09.29.95	6010	535-03	951516	7396
		AS,GFA	09.30.95	7060	534-04	951518	7396
		BA	09.29.95	6010	535-03	951516	7396
		BE	09.29.95	6010	535-03	951516	7396
		CD,GFA	09.30.95	7131	534-07	951518	7396
		CR	09.29.95	6010	535-03	951516	7396
		CO	09.29.95	6010	535-03	951516	7396
		FE	09.29.95	6010	535-03	951516	7396
		PB,GFA	09.30.95	7421	534-04	951518	7396
		MN	09.29.95	6010	535-03	951516	7396
		HG	10.02.95	7470	534-06	951560	8488
		NI	09.29.95	6010	535-03	951516	7396
		SE,GFA	09.30.95	7740	534-04	951518	7396

Notes: Equipment = BC Analytical identification number for a particular piece of analytical equipment.

ID.NO = BC Analytical employee identification number of analyst.

SAMPLES...	SAMPLE DESCRIPTION..	DETERM.....	DATE..... ANALYZED	METHOD.....	EQUIP.	BATCH..	ID.NO
		NA	09.30.95	6010	535-02	951516	7396
		V	09.29.95	6010	535-03	951516	7396
		BNA.8270.BHP	10.02.95	8270	537-14	95176	6763
		VOA.8240.BHP	09.28.95	8240	537-01	95329	7430
9509335*3	CW-4C	DIG,AQ.HCL	09.29.95	3010		951516	7093
		DIG,AQ,GFA	09.29.95	3020		951518	7093
		ANIONS,CL	09.20.95	300.0	533-23	950920	8488
		ANIONS,SO4	09.20.95	300.0	533-23	950920	8488
		COND	09.22.95	120.1	533-11	9592	8604
		PH	09.20.95	150.1	533-21	95429	8651
		TDS	09.21.95	160.1		9589	
		SB	09.29.95	6010	535-03	951516	7396
		AS,GFA	09.30.95	7060	534-04	951518	7396
		BA	09.29.95	6010	535-03	951516	7396
		BE	09.29.95	6010	535-03	951516	7396
		CD,GFA	09.30.95	7131	534-07	951518	7396
		CR	09.29.95	6010	535-03	951516	7396
		CO	09.29.95	6010	535-03	951516	7396
		FE	09.29.95	6010	535-03	951516	7396
		PB,GFA	09.30.95	7421	534-04	951518	7396
		MN	09.29.95	6010	535-03	951516	7396
		HG	10.02.95	7470	534-06	951560	8488
		NI	09.29.95	6010	535-03	951516	7396
		SE,GFA	09.30.95	7740	534-04	951518	7396
		NA	09.30.95	6010	535-02	951516	7396
		V	09.29.95	6010	535-03	951516	7396
		BNA.8270.BHP	10.02.95	8270	537-14	95176	6763
		VOA.8240.BHP	09.28.95	8240	537-01	95329	7430
9509335*4	MW-5	DIG,AQ.HCL	09.29.95	3010		951516	7093
		DIG,AQ,GFA	09.29.95	3020		951518	7093
		ANIONS,CL	09.20.95	300.0	533-23	950920	8488
		ANIONS,SO4	09.20.95	300.0	533-23	950920	8488
		COND	09.22.95	120.1	533-11	9593	8604
		PH	09.20.95	150.1	533-21	95429	8651
		TDS	09.21.95	160.1		9589	
		SB	09.29.95	6010	535-03	951516	7396
		AS,GFA	09.30.95	7060	534-04	951518	7396
		BA	09.29.95	6010	535-03	951516	7396
		BE	09.29.95	6010	535-03	951516	7396
		CD,GFA	09.30.95	7131	534-07	951518	7396
		CR	09.29.95	6010	535-03	951516	7396
		CO	09.29.95	6010	535-03	951516	7396
		FE	09.29.95	6010	535-03	951516	7396
		PB,GFA	09.30.95	7421	534-04	951518	7396

Notes: Equipment = BC Analytical identification number for a particular piece of analytical equipment.

ID.NO = BC Analytical employee identification number of analyst.

SAMPLES...	SAMPLE DESCRIPTION..	DETERM.....	DATE..... ANALYZED	METHOD.....	EQUIP.	BATCH..	ID.NO
		MN	09.29.95	6010	535-03	951516	7396
		HG	10.02.95	7470	534-06	951560	8488
		NI	09.29.95	6010	535-03	951516	7396
		SE,GFA	09.30.95	7740	534-04	951518	7396
		NA	09.30.95	6010	535-02	951516	7396
		V	09.29.95	6010	535-03	951516	7396
		BNA.8270.BHP	10.02.95	8270	537-14	95176	6763
		VOA.8240.BHP	09.28.95	8240	537-01	95329	7430
9509335*5	MW-4	DIG,AQ.HCL	09.29.95	3010		951516	7093
		DIG,AQ,GFA	09.29.95	3020		951518	7093
		ANIONS,CL	09.20.95	300.0	533-23	950920	8488
		ANIONS,SO4	09.20.95	300.0	533-23	950920	8488
		COND	09.22.95	120.1	533-11	9593	8604
		PH	09.20.95	150.1	533-21	95429	8651
		TDS	09.21.95	160.1		9589	
		SB	09.29.95	6010	535-03	951516	7396
		AS,GFA	09.30.95	7060	534-04	951518	7396
		BA	09.29.95	6010	535-03	951516	7396
		BE	09.29.95	6010	535-03	951516	7396
		CD,GFA	09.30.95	7131	534-07	951518	7396
		CR	09.29.95	6010	535-03	951516	7396
		CO	09.29.95	6010	535-03	951516	7396
		FE	09.29.95	6010	535-03	951516	7396
		PB,GFA	09.30.95	7421	534-04	951518	7396
		MN	09.29.95	6010	535-03	951516	7396
		HG	10.02.95	7470	534-06	951560	8488
		NI	09.29.95	6010	535-03	951516	7396
		SE,GFA	09.30.95	7740	534-04	951518	7396
		NA	09.30.95	6010	535-02	951516	7396
		V	09.29.95	6010	535-03	951516	7396
		BNA.8270.BHP	10.02.95	8270	537-14	95176	6763
		VOA.8240.BHP	09.28.95	8240	537-01	95329	7430
9509335*6	MW-3	DIG,AQ.HCL	09.29.95	3010		951516	7093
		DIG,AQ,GFA	09.29.95	3020		951518	7093
		ANIONS,CL	09.20.95	300.0	533-23	950920	8488
		ANIONS,SO4	09.20.95	300.0	533-23	950920	8488
		COND	09.22.95	120.1	533-11	9593	8604
		PH	09.20.95	150.1	533-21	95429	8651
		TDS	09.21.95	160.1		9589	
		SB	09.29.95	6010	535-03	951516	7396
		AS,GFA	09.30.95	7060	534-04	951518	7396
		BA	09.29.95	6010	535-03	951516	7396
		BE	09.29.95	6010	535-03	951516	7396
		CD,GFA	09.30.95	7131	534-07	951518	7396

Notes: Equipment = BC Analytical identification number for a particular piece of analytical equipment.

ID.NO = BC Analytical employee identification number of analyst.

SAMPLES...	SAMPLE DESCRIPTION..	DETERM.....	DATE..... ANALYZED	METHOD.....	EQUIP.	BATCH..	ID.NO
		CR	09.29.95	6010	535-03	951516	7396
		CO	09.29.95	6010	535-03	951516	7396
		FE	09.29.95	6010	535-03	951516	7396
		PB,GFA	09.30.95	7421	534-04	951518	7396
		MN	09.29.95	6010	535-03	951516	7396
		HG	10.02.95	7470	534-06	951560	8488
		NI	09.29.95	6010	535-03	951516	7396
		SE,GFA	09.30.95	7740	534-04	951518	7396
		NA	09.30.95	6010	535-02	951516	7396
		V	09.29.95	6010	535-03	951516	7396
		BNA.8270.BHP	10.02.95	8270	537-14	95176	6763
		VOA.8240.BHP	09.28.95	8240	537-01	95329	7430
9509335*7	Field Blank	VOA.8240.BHP	09.28.95	8240	537-01	95329	7430
9509335*8	Trip Blank	VOA.8240.BHP	09.28.95	8240	537-01	95329	7430

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Notes: Equipment = BC Analytical identification number for a particular piece of analytical equipment.

ID.NO = BC Analytical employee identification number of analyst.

BC ANA[illegible]TICAL, GLENDALE
QC REP[illegible] FOR 9509335
DATE PRINTED: 04 OCT 1995

AQUEOUS SAMPLES

		METHOD BLANK			LAB CONTROL									MATRIX QC								
					LCS		LCSD					RPD	RPD	MS		MSD					RPD	RPD
	UNITS	RESULT	RDL	FLG	%REC	FLG	%REC	FLG	LCL	UCL	RPD	UCL	FLG	%REC	FLG	%REC	FLG	LCL	UCL	RPD	UCL	FLG
Batch: TDS*9589 Method: 160.1 - Residue, Filterable, Gravimetric, Dried at 180 C																						
Dissolved Solids	mg/L	0	10	-	101	-	102	-	91	107	1	-	-	101	-	103	-	85	112	1	15	-
Batch: COND*9592 Method: 120.1 - Conductance, Specific Conductance																						
Conductivity	umhos/cm	-	-	-	99	-	100	-	95	105	1	15	-	9500	*	9600	*	-	-	1	15	-
Batch: COND*9593 Method: 120.1 - Conductance, Specific Conductance																						
Conductivity	umhos/cm	-	-	-	99	-	100	-	95	105	1	15	-	9000	*	9000	*	-	-	0	15	-
Batch: PH*95429 Method: 150.1 - pH, Electrometric																						
pH	Units	-	-	-	99	-	99	-	99	101	0	20	-	9.9	*	9.9	*	-	-	-	20	-
Batch: 950920 Method: 300.0 - Inorganic anions in water, Ion chromatograph																						
Chloride	mg/L	0	0.5	-	95	-	97	-	90	110	2	-	-	95	-	92	-	63	125	2	15	-
Sulfate	mg/L	0	0.1	-	93	-	96	-	90	110	3	-	-	90	-	87	-	73	116	2	15	-
Batch: 951516 Method: 6010 - ICAP Metals																						
Barium	mg/L	0	0.005	-	97	-	96	-	75	114	1	-	-	91	-	93	-	74	110	2	20	-
Beryllium	mg/L	0	0.001	-	96	-	96	-	79	110	0	-	-	89	-	90	-	71	113	1	20	-
Cobalt	mg/L	0	0.04	-	101	-	100	-	71	112	1	-	-	91	-	94	-	67	110	2	20	-
Chromium	mg/L	0	0.01	-	104	-	102	-	76	110	2	-	-	94	-	96	-	68	111	2	20	-
Iron	mg/L	0.0046	0.04	-	104	-	103	-	80	110	1	-	-	97	-	99	-	68	129	2	20	-
Manganese	mg/L	0	0.01	-	96	-	94	-	76	113	1	-	-	90	-	92	-	70	124	2	20	-
Sodium	mg/L	0.053	0.5	-	99	-	98	-	83	112	2	-	-	-	NC	-	NC	77	118	-	20	NC
Nickel	mg/L	0	0.04	-	104	-	102	-	73	114	2	-	-	96	-	97	-	65	113	2	20	-
Antimony	mg/L	0.020	0.1	-	99	-	98	-	79	115	1	-	-	92	-	94	-	83	112	3	20	-
Vanadium	mg/L	0	0.04	-	100	-	98	-	80	110	2	-	-	86	-	88	-	72	110	2	20	-
Batch: AS,GFA*951518 Method: 7060 - Arsenic, AA, Furnace																						
Arsenic	mg/L	0	0.002	-	111	-	105	-	63	122	6	-	-	79	-	83	-	52	130	5	20	-
Batch: CD,GFA*951518 Method: 7131 - Cadmium, AA, Furnace																						
Cadmium	mg/L	0	0.001	-	107	-	107	-	67	134	0	-	-	104	-	102	-	63	157	2	20	-
Batch: PB,GFA*951518 Method: 7421 - Lead, AA, Furnace																						
Lead	mg/L	0	0.002	-	110	-	102	-	85	112	7	-	-	93	-	95	-	54	144	2	20	-
Batch: SE,GFA*951518 Method: 7740 - Selenium, AA, Furnace																						
Selenium	mg/L	0.0005	0.004	-	115	Q	107	-	74	114	7	-	-	72	-	74	-	4	140	2	20	-

BC ANA[illegible]CAL, GLENDALE
QC REP[illegible] FOR 9509335
DATE PRINTED: 04 OCT 1995

AQUEOUS SAMPLES

		------ METHOD BLANK ------			---------- LAB CONTROL ----------									---------- MATRIX QC ----------								
	UNITS	RESULT	RDL	FLG	LCS %REC	FLG	LCSD %REC	FLG	LCL	UCL	RPD	RPD UCL	RPD FLG	MS %REC	FLG	MSD %REC	FLG	LCL	UCL	RPD	RPD UCL	RPD FLG
Batch: HG*951560 Method: 7470 - Mercury (Liquid), Cold Vapor AA, Manual																						
Mercury	mg/L	0	0.0002	-	113	-	108	-	71	123	5	-	-	100	-	90	-	53	143	11	20	-

AQUEOUS SAMPLES

		METHOD BLANK			LAB CONTROL									MATRIX QC								
	UNITS	RESULT	RDL	FLG	LCS %REC	FLG	LCSD %REC	FLG	LCL	UCL	RPD	RPD UCL	RPD FLG	MS %REC	FLG	MSD %REC	FLG	LCL	UCL	RPD	RPD UCL	RPD FLG
Batch: VOA*95329 Method: 8240 - GC/MS for Volatile Organics																						
1,1,1-Trichloroethane	ug/L	0	1	-	69	Q	-	-	78	119	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	ug/L	0	1	-	114	-	-	-	78	137	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	ug/L	0	1	-	98	-	-	-	83	127	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	ug/L	0	1	-	83	-	-	-	76	122	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	ug/L	0	1	-	75	-	-	-	69	126	-	-	-	81	-	82	-	48	127	1	27	-
1,2-Dichloroethane	ug/L	0	1	-	90	-	-	-	84	119	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	ug/L	0	1	-	92	-	-	-	85	118	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	ug/L	0	1	-	88	-	-	-	84	117	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	ug/L	0	1	-	87	-	-	-	84	118	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	ug/L	0	1	-	90	-	-	-	85	117	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dioxane	ug/L	0	500	-	144	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chloroethylvinylether	ug/L	0	5	-	92	-	-	-	35	174	-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone	ug/L	0	5	-	143	-	-	-	58	158	-	-	-	-	-	-	-	-	-	-	-	-
Acetone	ug/L	13	20	-	107	-	-	-	16	170	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	ug/L	0	1	-	99	-	-	-	84	118	-	-	-	-	-	-	-	-	-	-	-	-
Bromomethane	ug/L	0	1	-	30	Q	-	-	58	139	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	ug/L	0	1	-	80	-	-	-	74	122	-	-	-	82	-	80	-	65	125	2	26	-
Bromoform	ug/L	0	1	-	109	-	-	-	80	131	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	ug/L	0	1	-	90	-	-	-	85	115	-	-	-	100	-	94	-	76	132	6	23	-
Carbon Tetrachloride	ug/L	0	1	-	80	-	-	-	72	122	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	ug/L	0	1	-	91	-	-	-	52	143	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	ug/L	0	1	-	85	-	-	-	81	120	-	-	-	-	-	-	-	-	-	-	-	-
Chloromethane	ug/L	0	1	-	73	-	-	-	62	127	-	-	-	-	-	-	-	-	-	-	-	-
Carbon Disulfide	ug/L	0.63	2	-	72	-	-	-	65	128	-	-	-	-	-	-	-	-	-	-	-	-
Cyclohexane	ug/L	0	5	-	52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	ug/L	0	1	-	103	-	-	-	82	124	-	-	-	-	-	-	-	-	-	-	-	-
Ethylene Dibromide	ug/L	0	1	-	101	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	ug/L	0	1	-	93	-	-	-	84	117	-	-	-	-	-	-	-	-	-	-	-	-
Freon 113	ug/L	0	2	-	74	-	-	-	66	133	-	-	-	-	-	-	-	-	-	-	-	-
Methyl ethyl ketone	ug/L	0	5	-	109	-	-	-	46	161	-	-	-	-	-	-	-	-	-	-	-	-
Methyl isobutyl ketone	ug/L	0	5	-	124	-	-	-	66	156	-	-	-	-	-	-	-	-	-	-	-	-
Methylene chloride	ug/L	0	2	-	75	Q	-	-	78	120	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	ug/L	0	1	-	87	-	-	-	85	116	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	ug/L	0	1	-	79	-	-	-	78	119	-	-	-	82	-	81	-	63	122	1	21	-
Trichlorofluoromethane	ug/L	0	1	-	82	-	-	-	66	134	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	ug/L	0	1	-	88	-	-	-	84	116	-	-	-	97	-	92	-	63	132	5	22	-
Tetrachloroethene	ug/L	0	1	-	82	Q	-	-	83	117	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl acetate	ug/L	0	10	-	100	-	-	-	76	134	-	-	-	-	-	-	-	-	-	-	-	-

AQUEOUS SAMPLES

		METHOD BLANK			LAB CONTROL									MATRIX QC								
	UNITS	RESULT	RDL	FLG	LCS %REC	FLG	LCSD %REC	FLG	LCL	UCL	RPD	RPD UCL	RPD FLG	MS %REC	FLG	MSD %REC	FLG	LCL	UCL	RPD	RPD UCL	RPD FLG
Batch: VOA*95329 Method: 8240 - GC/MS for Volatile Organics, con't																						
Vinyl chloride	ug/L	0	1	-	69	-	-	-	66	132	-	-	-	-	-	-	-	-	-	-	-	-
Total Xylene Isomers	ug/L	0	3	-	97	-	-	-	86	114	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	ug/L	0	1	-	82	-	-	-	78	121	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	ug/L	0	1	-	95	-	-	-	81	123	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	ug/L	0	1	-	78	-	-	-	73	123	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene	ug/L	0	1	-	96	-	-	-	78	122	-	-	-	-	-	-	-	-	-	-	-	-
[1,2-Dichloroethane-d4]	Percent	100	-	-	103	-	-	-	87	125	-	-	-	99	-	96	-	87	125	-	-	-
[4-Bromofluorobenzene]	Percent	106	-	-	107	-	-	-	85	111	-	-	-	112	Q	102	-	85	111	-	-	-
[Toluene-d8]	Percent	100	-	-	100	-	-	-	94	113	-	-	-	102	-	101	-	94	113	-	-	-

AQUEOUS SAMPLES		METHOD BLANK			LAB CONTROL									MATRIX QC								
	UNITS	RESULT	RDL	FLG	LCS %REC	FLG	LCSD %REC	FLG	LCL	UCL	RPD	RPD UCL	RPD FLG	MS %REC	FLG	MSD %REC	FLG	LCL	UCL	RPD	RPD UCL	FLG
Batch: BNA*95176 Method: 8270 - GC/MS for Semivolatile Organics, Capillary column																						
1,2,4-Trichlorobenzene	ug/L	0	5	-	79	-	74	-	44	116	6	-	-	79	-	84	-	44	120	7	39	-
1,2-Dichlorobenzene	ug/L	0	6	-	73	-	71	-	35	127	3	-	-	-	-	-	-	-	-	-	-	-
1,2-Diphenylhydrazine	ug/L	0	5	-	96	-	89	-	43	128	7	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	ug/L	0	5	-	73	-	70	-	32	110	4	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	ug/L	0	5	-	74	-	70	-	35	110	5	-	-	70	-	74	-	39	110	5	34	-
1-Methylnaphthalene	ug/L	0	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	ug/L	0	6	-	99	-	99	-	23	154	1	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	ug/L	0	5	-	73	-	73	-	37	144	1	-	-	-	-	-	-	-	-	-	-	-
2,4-Dichlorophenol	ug/L	0	5	-	79	-	78	-	39	129	1	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	ug/L	0	5	-	72	-	73	-	32	119	2	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	ug/L	0	10	-	56	-	58	-	1	191	3	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene	ug/L	0	5	-	92	-	84	-	39	139	9	-	-	89	-	92	-	48	139	4	25	-
2,6-Dinitrotoluene	ug/L	0	5	-	86	-	79	-	50	152	9	-	-	-	-	-	-	-	-	-	-	-
2-Chloronaphthalene	ug/L	0	6	-	61	-	58	-	32	110	5	-	-	-	-	-	-	-	-	-	-	-
2-Chlorophenol	ug/L	0	5	-	78	-	76	-	35	116	2	-	-	84	-	88	-	43	110	4	24	-
2-Methyl-4,6-dinitrophenol	ug/L	0	5	-	82	-	82	-	1	181	1	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	ug/L	0	5	-	83	-	79	-	5	165	5	-	-	-	-	-	-	-	-	-	-	-
2-Methylphenol (o-Cresol)	ug/L	0	5	-	81	-	81	-	36	114	1	-	-	-	-	-	-	-	-	-	-	-
2-Nitroaniline	ug/L	0	5	-	94	-	87	-	38	144	9	-	-	-	-	-	-	-	-	-	-	-
2-Nitrophenol	ug/L	0	5	-	80	-	79	-	32	130	1	-	-	-	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine	ug/L	0	20	-	111	-	115	-	1	262	3	-	-	-	-	-	-	-	-	-	-	-
3-Methylphenol (m-Cresol)	ug/L	0	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3-Nitroaniline	ug/L	0	5	-	97	-	90	-	30	152	7	-	-	-	-	-	-	-	-	-	-	-
4-Bromophenylphenylether	ug/L	0	5	-	85	-	78	-	56	127	9	-	-	-	-	-	-	-	-	-	-	-
4-Chloro-3-methylphenol	ug/L	0	5	-	86	-	86	-	35	130	1	-	-	107	-	117	-	48	127	10	31	-
4-Chloroaniline	ug/L	0	5	-	89	-	83	-	31	126	7	-	-	-	-	-	-	-	-	-	-	-
4-Chlorophenylphenylether	ug/L	0	5	-	84	-	78	-	48	132	7	-	-	-	-	-	-	-	-	-	-	-
4-Methylphenol (p-Cresol)	ug/L	0	8	-	69	-	67	-	25	124	3	-	-	-	-	-	-	-	-	-	-	-
4-Nitroaniline	ug/L	0	6	-	117	-	109	-	3	187	7	-	-	-	-	-	-	-	-	-	-	-
4-Nitrophenol	ug/L	0	5	-	43	-	41	-	1	132	5	-	-	84	-	95	-	1	132	12	34	-
6-Methylchrysene	ug/L	0	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7,12-Dimethylbenz(a)anthracene	ug/L	0	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	ug/L	0	5	-	99	-	93	-	47	132	6	-	-	96	-	101	-	52	131	5	26	-
Acenaphthylene	ug/L	0	5	-	93	-	88	-	35	132	5	-	-	-	-	-	-	-	-	-	-	-
Aniline	ug/L	0	5	-	80	-	76	-	1	164	5	-	-	-	-	-	-	-	-	-	-	-
Anthracene	ug/L	0	5	-	89	-	83	-	39	130	7	-	-	-	-	-	-	-	-	-	-	-
Benzidine	ug/L	0	100	-	0	Q	0	Q	1	200	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)anthracene	ug/L	0	5	-	97	-	91	-	44	138	6	-	-	-	-	-	-	-	-	-	-	-

AQUEOUS SAMPLES

		METHOD BLANK			LAB CONTROL									MATRIX QC								
	UNITS	RESULT	RDL	FLG	LCS %REC	FLG	LCSD %REC	FLG	LCL	UCL	RPD	RPD UCL	RPD FLG	MS %REC	FLG	MSD %REC	FLG	LCL	UCL	RPD	RPD UCL	RPD FLG
Batch: BNA*95176 Method: 8270 - GC/MS for Semivolatile Organics, Capillary column, con't																						
Benzo(a)pyrene	ug/L	0	5	-	85	-	77	-	36	128	10	-	-	-	-	-	-	-	-	-	-	-
Benzo(b)fluoranthene	ug/L	0	5	-	82	-	71	-	24	137	14	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)perylene	ug/L	0	5	-	65	-	65	-	25	157	0	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	ug/L	0	5	-	91	-	86	-	39	142	5	-	-	-	-	-	-	-	-	-	-	-
Benzenethiol	ug/L	0	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzyl Alcohol	ug/L	0	5	-	75	-	70	-	3	161	8	-	-	-	-	-	-	-	-	-	-	-
Benzoic acid	ug/L	0	50	-	19	-	16	-	1	183	18	-	-	-	-	-	-	-	-	-	-	-
Butylbenzylphthalate	ug/L	0	5	-	109	-	100	-	37	151	9	-	-	-	-	-	-	-	-	-	-	-
Chrysene	ug/L	0	5	-	100	-	96	-	43	147	4	-	-	-	-	-	-	-	-	-	-	-
Di-n-octylphthalate	ug/L	0	5	-	105	-	94	-	21	146	11	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,h)anthracene	ug/L	0	5	-	64	-	62	-	30	154	3	-	-	-	-	-	-	-	-	-	-	-
Dibenz(a,h)acridine	ug/L	0	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzofuran	ug/L	0	5	-	86	-	81	-	54	121	5	-	-	-	-	-	-	-	-	-	-	-
Dibutylphthalate	ug/L	0	5	-	91	-	84	-	53	125	8	-	-	-	-	-	-	-	-	-	-	-
Diethylphthalate	ug/L	0	5	-	89	-	82	-	47	142	9	-	-	-	-	-	-	-	-	-	-	-
Dimethylphthalate	ug/L	0	5	-	92	-	85	-	32	142	8	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	ug/L	0	5	-	90	-	83	-	39	137	8	-	-	-	-	-	-	-	-	-	-	-
Fluorene	ug/L	0	5	-	88	-	83	-	59	121	6	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene	ug/L	0	5	-	86	-	80	-	48	129	8	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	ug/L	0	5	-	71	-	69	-	29	116	4	-	-	-	-	-	-	-	-	-	-	-
Hexachlorocyclopentadiene	ug/L	0	5	-	102	-	101	-	18	143	1	-	-	-	-	-	-	-	-	-	-	-
Hexachloroethane	ug/L	0	5	-	74	-	71	-	40	113	3	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-c,d)pyrene	ug/L	0	7	-	55	-	57	-	25	162	4	-	-	-	-	-	-	-	-	-	-	-
Indene	ug/L	0	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isophorone	ug/L	0	5	-	91	-	86	-	27	134	6	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodimethylamine	ug/L	0	6	-	81	-	83	-	17	115	2	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodiphenylamine	ug/L	0	5	-	80	-	73	-	11	110	8	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodi-n-propylamine	ug/L	0	6	-	84	-	79	-	32	136	6	-	-	93	-	100	-	33	135	8	25	-
Nitrobenzene	ug/L	0	5	-	80	-	78	-	39	115	3	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	ug/L	0	5	-	78	-	74	-	39	114	6	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	ug/L	0	5	-	94	-	87	-	54	120	7	-	-	-	-	-	-	-	-	-	-	-
Phenol	ug/L	0	5	-	55	-	54	-	7	110	2	-	-	52	-	55	-	5	110	5	30	-
Pentachlorophenol	ug/L	0	5	-	65	-	63	-	14	163	2	-	-	100	-	104	-	14	176	4	39	-
Pyrene	ug/L	0	5	-	97	-	87	-	52	149	11	-	-	114	-	117	-	45	162	2	34	-
Pyridine	ug/L	0	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Quinoline	ug/L	0	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-chloroethoxy)methane	ug/L	0	5	-	102	-	96	-	37	130	6	-	-	-	-	-	-	-	-	-	-	-
Bis(2-chloroethyl)ether	ug/L	0	5	-	94	-	87	-	40	123	8	-	-	-	-	-	-	-	-	-	-	-

AQUEOUS SAMPLES

		------ METHOD BLANK ------			---------- LAB CONTROL ----------									---------- MATRIX QC ----------								
	UNITS	RESULT	RDL	FLG	LCS %REC	FLG	LCSD %REC	FLG	LCL	UCL	RPD	RPD UCL	RPD FLG	MS %REC	FLG	MSD %REC	FLG	LCL	UCL	RPD	RPD UCL	RPD FLG
Batch: BNA*95176 Method: 8270 - GC/MS for Semivolatile Organics, Capillary column, con't																						
Bis(2-chloroisopropyl)ether	ug/L	0	6	-	106	-	98	-	36	140	8	-	-	-	-	-	-	-	-	-	-	-
Bis(2-ethylhexyl)phthalate	ug/L	0.96	7	-	110	-	103	-	41	147	7	-	-	-	-	-	-	-	-	-	-	-
[2-Fluorobiphenyl]	Percent	80	-	-	99	-	100	-	43	116	-	-	-	102	-	105	-	43	116	-	-	-
[2-Fluorophenol]	Percent	41	-	-	78	-	76	-	21	100	-	-	-	70	-	75	-	21	100	-	-	-
[2,4,6-Tribromophenol]	Percent	50	-	-	78	-	76	-	40	123	-	-	-	86	-	85	-	10	123	-	-	-
[Nitrobenzene-d5]	Percent	77	-	-	95	-	94	-	37	114	-	-	-	94	-	96	-	35	114	-	-	-
[Phenol-d5]	Percent	24	-	-	59	-	57	-	10	93	-	-	-	55	-	57	-	10	94	-	-	-
[Terphenyl-d14]	Percent	76	-	-	95	-	90	-	33	141	-	-	-	104	-	103	-	33	141	-	-	-

: SURROGATE RECOVERIES :
: BC ANALYTICAL : GLEN LAB : 10:14:51 04 OCT 1995 - P. 1 :

METHOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG	LCL	UCL
9509335*1									
8270	2-Fluorophenol	95176	10/02/95	56.3	75.0	75		21	100
	Phenol-d5	95176	10/02/95	41.7	75.0	56		10	94
	Nitrobenzene-d5	95176	10/02/95	46.7	50.0	93		35	114
	2-Fluorobiphenyl	95176	10/02/95	54.6	50.0	109		43	116
	2,4,6-Tribromophenol Rep.	95176	10/02/95	69.6	75.0	93		10	123
	Terphenyl-d14	95176	10/02/95	55.4	50.0	111		33	141
8240	1,2-Dichloroethane-d4 Rep	95329	09/28/95	48.8	50.0	98		87	125
	Toluene-d8	95329	09/28/95	50.3	50.0	101		94	113
	4-Bromofluorobenzene Rep.	95329	09/28/95	54.8	50.0	110		85	111
9509335*2									
8270	2-Fluorophenol	95176	10/02/95	33.9	75.0	45		21	100
	Phenol-d5	95176	10/02/95	23.7	75.0	32		10	94
	Nitrobenzene-d5	95176	10/02/95	39.4	50.0	79		35	114
	2-Fluorobiphenyl	95176	10/02/95	42.2	50.0	84		43	116
	2,4,6-Tribromophenol Rep.	95176	10/02/95	54.0	75.0	72		10	123
	Terphenyl-d14	95176	10/02/95	41.0	50.0	82		33	141
8240	1,2-Dichloroethane-d4 Rep	95329	09/28/95	49.3	50.0	99		87	125
	Toluene-d8	95329	09/28/95	50.5	50.0	101		94	113
	4-Bromofluorobenzene Rep.	95329	09/28/95	52.9	50.0	106		85	111
9509335*3									
8270	2-Fluorophenol	95176	10/02/95	37.7	75.0	50		21	100
	Phenol-d5	95176	10/02/95	27.1	75.0	36		10	94
	Nitrobenzene-d5	95176	10/02/95	45.8	50.0	92		35	114
	2-Fluorobiphenyl	95176	10/02/95	49.0	50.0	98		43	116
	2,4,6-Tribromophenol Rep.	95176	10/02/95	61.3	75.0	82		10	123
	Terphenyl-d14	95176	10/02/95	51.3	50.0	103		33	141
8240	1,2-Dichloroethane-d4 Rep	95329	09/28/95	50.3	50.0	101		87	125
	Toluene-d8	95329	09/28/95	49.8	50.0	100		94	113
	4-Bromofluorobenzene Rep.	95329	09/28/95	52.3	50.0	105		85	111
9509335*4									
8270	2-Fluorophenol	95176	10/02/95	26.7	75.0	36		21	100
	Phenol-d5	95176	10/02/95	16.7	75.0	22		10	94
	Nitrobenzene-d5	95176	10/02/95	37.2	50.0	74		35	114
	2-Fluorobiphenyl	95176	10/02/95	38.7	50.0	77		43	116
	2,4,6-Tribromophenol Rep.	95176	10/02/95	49.6	75.0	66		10	123
	Terphenyl-d14	95176	10/02/95	40.9	50.0	82		33	141
8240	1,2-Dichloroethane-d4 Rep	95329	09/28/95	47.1	50.0	94		87	125
	Toluene-d8	95329	09/28/95	50.4	50.0	101		94	113
	4-Bromofluorobenzene Rep.	95329	09/28/95	52.6	50.0	105		85	111
9509335*5									
	2-Fluorophenol	95176	10/02/95	44.3	75.0	59		21	100
	Phenol-d5	95176	10/02/95	29.6	75.0	39		10	94
	Nitrobenzene-d5	95176	10/02/95	54.4	50.0	109		35	114
	2-Fluorobiphenyl	95176	10/02/95	55.5	50.0	111		43	116
	2,4,6-Tribromophenol Rep.	95176	10/02/95	70.8	75.0	94		10	123
	Terphenyl-d14	95176	10/02/95	53.1	50.0	106		33	141

: SURROGATE RECOVERIES :
: BC ANALYTICAL : GLEN LAB : 10:15:12 04 OCT 1995 - P. 2 :

METHOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG	LCL	UCL
8240	1,2-Dichloroethane-d4 Rep	95329	09/28/95	47.8	50.0	96		87	125
	Toluene-d8	95329	09/28/95	50.6	50.0	101		94	113
	4-Bromofluorobenzene Rep.	95329	09/28/95	52.3	50.0	105		85	111
9509335*6									
8270	2-Fluorophenol	95176	10/02/95	31.7	75.0	42		21	100
	Phenol-d5	95176	10/02/95	18.2	75.0	24		10	94
	Nitrobenzene-d5	95176	10/02/95	42.6	50.0	85		35	114
	2-Fluorobiphenyl	95176	10/02/95	43.8	50.0	88		43	116
	2,4,6-Tribromophenol Rep.	95176	10/02/95	55.8	75.0	74		10	123
	Terphenyl-d14	95176	10/02/95	46.8	50.0	94		33	141
8240	1,2-Dichloroethane-d4 Rep	95329	09/28/95	48.6	50.0	97		87	125
	Toluene-d8	95329	09/28/95	49.6	50.0	99		94	113
	4-Bromofluorobenzene Rep.	95329	09/28/95	51.4	50.0	103		85	111
9509335*7									
8240	1,2-Dichloroethane-d4 Rep	95329	09/28/95	50.8	50.0	102		87	125
	Toluene-d8	95329	09/28/95	50.5	50.0	101		94	113
	4-Bromofluorobenzene Rep.	95329	09/28/95	52.9	50.0	106		85	111
9509335*8									
8240	1,2-Dichloroethane-d4 Rep	95329	09/28/95	48.9	50.0	98		87	125
	Toluene-d8	95329	09/28/95	50.1	50.0	100		94	113
	4-Bromofluorobenzene Rep.	95329	09/28/95	52.6	50.0	105		85	111

BHP

CHAIN OF CUSTODY

G9509335

Environmental Technologies International, Inc.
Mauka Tower 737 Bishop Street, 22nd Floor
P.O. Box 3379 Honolulu, HI 96842
(808) 547-3600 Facsimile: (808) 547-3033

PROJECT NO: GMP
ET CLIENT:

SEND RESULTS TO
Name Tony Shan 808-547-3804
Company BHP Hawaii Refinery
Address 91-325 Komohana St.
City, State, Zip Kapolei, HI, 96707

SEND INVOICE TO
Name Same as left
Company
Address
City, State, Zip

Sample No.	Lab No.	No. Containers	Date	Time	Sample Type/Description	Analysis Required	Sampled By
CW-4A		6	9/19/95	1005	Groundwater	8240, 8270, metals, TDS, pH, cond, Cl, SO_4	Z. Shen
CW-4B		6		1105			
CW-4C		6		1145			
MW-5		6		1330			
MW-4		6		1515			
MW-3		6		1550			
Field Blank#1		2		1600	Field Blank	8240	
Trip Blank		2			Trip Blank	8240	
Temp. Blank		1			Temperature Blank	Temp 6°C	

CUSTODY TRANSFERS

	RELINQUISHED BY: (NAME, SIGNATURE)		DATE	TIME	RECEIVED BY: (NAME, SIGNATURE)		DATE	TIME	COMMENTS
1	Zuyi Shen	Zuyi Shen	9/19/95						
2									
3									
4									

SHIPPING DETAILS

DELIVERED TO SHIPPER BY: DATE 9/19/95 TIME 1800
METHOD OF SHIPMENT: DHL AIRBILL # 7791968391
RECEIVED FOR LAB: Susan Arrowsmith SIGNED S Arrowsmith DATE 9/20/95 TIME 10.30
SAMPLE CONDITION UPON RECEIPT: Good/Cold

WHITE - CUSTODY SHEET YELLOW - LAB PINK - ET

B C Analytical

801 Western Avenue
Glendale, CA 91201
818/247-5737
Fax: 818/247-9797

October 9, 1995

BHP, Hawaii Refinery
91-325 Komohana St.
Kapolei, Hi 96707
Attn: Dr. Tony Shan

Dear Dr. Shan,

Enclosed is the analytical report for chemical testing for samples taken on 09/20/95. It includes the following:

1) Analytical Report of results

2) QC summary including LCS/LCSD, MS/MSD, duplicate samples, method blanks, and surrogates.

3) Cross reference sheet containing analyte, date analyzed, method, and batch number.

4) Case narrative explaining QC deficiencies and/or problems encountered in testing.

5) Electronic data in agreed upon format.

If you have any questions, please do not hesitate to call.

Very truly yours,

Brian Moore

Brian Moore
Program Specialist

BCA

B C Analytical

801 Western Avenue
Glendale, CA 91201
818/247-5737
Fax: 818/247-9797

Case Narrative

All quality objectives were met including holding times, LCS/LCSD, MS/MSD, Duplicate samples, and Method Blanks as applicable except:

Selenium method 7740 batch 951518:

LCS recovery greater than upper control limit, LCSD recovery within criteria.

Volatile organics method 8240 batch 95500:

Ethylbenzene; Styrene; Toluene; and Xylene LCS recovery greater than upper control limit.

Semivolatile organics methdo 8270 batch 95177:

Benzidine LCS/LCSD recovery less than lower control limit.

Note: MS/MSD recovery reported as "NC" (Not Calculated) is due to the original sample concentration being greater than two times the spike amount added.

No analytical difficulties were encountered with any project samples.

BCA

B C Analytical

801 Western Avenue
Glendale, CA 91201
818/247-5737
Fax: 818/247-9797

ANALYTICAL REPORT

LOG NO: G95-09-349

Received: 21 SEP 95

Mailed: OCT - 9

Dr. Tony Shan
BHP, Hawaii Refinery
91-325 Komohana St.
Kapolei, HI 96707

Project: GMP

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-349-1	CW-7A	20 SEP 95
09-349-2	CW-7B	20 SEP 95
09-349-3	CW-6A	20 SEP 95
09-349-4	CW-6B	20 SEP 95
09-349-5	CW-8A	20 SEP 95

PARAMETER	09-349-1	09-349-2	09-349-3	09-349-4	09-349-5
Digestion (3010), Date	09/29/95	09/29/95	09/29/95	09/29/95	09/29/95
Furnace Digestion (3020), Date	09/29/95	09/29/95	09/29/95	09/29/95	09/29/95
Chloride (300.0), mg/L	2000	7800	890	7100	1900
Sulfate (300.0), mg/L	250	1000	200	2200	1500
Conductivity (120.1), umhos/cm	7600	23000	4300	26000	10000
pH (150.1), Units	6.9	7.1	7.0	8.1	7.8
Dissolved Solids (160.1), mg/L	4700	15000	2400	17000	6000
Antimony (6010), mg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (7060), mg/L	<0.002	<0.002	<0.002	0.0044	0.0061
Barium (6010), mg/L	0.066	0.065	0.035	0.014	0.037
Beryllium (6010), mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium (7131), mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium (6010), mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (6010), mg/L	<0.04	<0.04	<0.04	<0.04	<0.04
Iron (6010), mg/L	0.95	0.64	0.10	0.13	<0.04
Lead (7421), mg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Manganese (6010), mg/L	0.15	0.16	0.15	0.038	0.021
Mercury (7470), mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Nickel (6010), mg/L	<0.04	<0.04	<0.04	<0.04	<0.04
Selenium (7740), mg/L	<0.004	<0.004	<0.004	<0.004	<0.004
Sodium (6010), mg/L	1300	4400	590	5800	2000
Vanadium (6010), mg/L	<0.04	<0.04	<0.04	<0.04	<0.04

BCA

B C Analytical

801 Western Avenue
Glendale, CA 91201
818/247-5737
Fax: 818/247-9797

LOG NO: G95-09-349

Received: 21 SEP 95

Dr. Tony Shan
BHP, Hawaii Refinery
91-325 Komohana St.
Kapolei, HI 96707

Project: GMP

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-349-1	CW-7A	20 SEP 95
09-349-2	CW-7B	20 SEP 95
09-349-3	CW-6A	20 SEP 95
09-349-4	CW-6B	20 SEP 95
09-349-5	CW-8A	20 SEP 95

PARAMETER	09-349-1	09-349-2	09-349-3	09-349-4	09-349-5
B/N,A Ext.Pri.Poll. (8270)					
Date Analyzed	10/03/95	10/03/95	10/03/95	10/03/95	10/03/95
Date Extracted	09/22/95	09/22/95	09/22/95	09/22/95	09/22/95
Dilution Factor, Times	1	1	1	1	5
1,2,4-Trichlorobenzene, ug/L	<5	<5	<5	<5	<30
1,2-Dichlorobenzene, ug/L	<6	<6	<6	<6	<30
1,2-Diphenylhydrazine, ug/L	<5	<5	<5	<5	<30
1,3-Dichlorobenzene, ug/L	<5	<5	<5	<5	<30
1,4-Dichlorobenzene, ug/L	<5	<5	<5	<5	<30
1-Methylnaphthalene, ug/L	<10	<10	<10	<10	<50
2,4,5-Trichlorophenol, ug/L	<6	<6	<6	<6	<30
2,4,6-Trichlorophenol, ug/L	<5	<5	<5	<5	<30
2,4-Dichlorophenol, ug/L	<5	<5	<5	<5	<30
2,4-Dimethylphenol, ug/L	<5	<5	<5	<5	<30
2,4-Dinitrophenol, ug/L	<10	<10	<10	<10	<50
2,4-Dinitrotoluene, ug/L	<5	<5	<5	<5	<30
2,6-Dinitrotoluene, ug/L	<5	<5	<5	<5	<30
2-Chloronaphthalene, ug/L	<6	<6	<6	<6	<30
2-Chlorophenol, ug/L	<5	<5	<5	<5	<30
2-Methyl-4,6-dinitrophenol, ug/L	<5	<5	<5	<5	<30
2-Methylnaphthalene, ug/L	<5	<5	<5	<5	<30
2-Methylphenol (o-Cresol), ug/L	<5	<5	<5	<5	<30
2-Nitroaniline, ug/L	<5	<5	<5	<5	<30

BCA

B C Analytical

801 Western Avenue
Glendale, CA 91201
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Fax: 818/247-9797

LOG NO: G95-09-349

Received: 21 SEP 95

Dr. Tony Shan
BHP, Hawaii Refinery
91-325 Komohana St.
Kapolei, HI 96707

Project: GMP

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-349-1	CW-7A	20 SEP 95
09-349-2	CW-7B	20 SEP 95
09-349-3	CW-6A	20 SEP 95
09-349-4	CW-6B	20 SEP 95
09-349-5	CW-8A	20 SEP 95

PARAMETER	09-349-1	09-349-2	09-349-3	09-349-4	09-349-5
2-Nitrophenol, ug/L	<5	<5	<5	<5	<30
3,3'-Dichlorobenzidine, ug/L	<20	<20	<20	<20	<100
3-Methylphenol (m-Cresol), ug/L	<10	<10	<10	<10	<50
3-Nitroaniline, ug/L	<5	<5	<5	<5	<30
4-Bromophenylphenylether, ug/L	<5	<5	<5	<5	<30
4-Chloro-3-methylphenol, ug/L	<5	<5	<5	<5	<30
4-Chloroaniline, ug/L	<5	<5	<5	<5	<30
4-Chlorophenylphenylether, ug/L	<5	<5	<5	<5	<30
4-Methylphenol (p-Cresol), ug/L	<8	<8	<8	<8	<40
4-Nitroaniline, ug/L	<6	<6	<6	<6	<30
4-Nitrophenol, ug/L	<5	<5	<5	<5	<30
6-Methylchrysene, ug/L	<10	<10	<10	<10	<50
7,12-Dimethylbenz(a)anthracene, ug/L	<5	<5	<5	<5	<30
Acenaphthene, ug/L	<5	<5	<5	<5	<30
Acenaphthylene, ug/L	<5	<5	<5	<5	<30
Aniline, ug/L	<5	<5	<5	<5	<30
Anthracene, ug/L	<5	<5	<5	<5	<30
Benzidine, ug/L	<100	<100	<100	<100	<500
Benzo(a)anthracene, ug/L	<5	<5	<5	<5	<30
Benzo(a)pyrene, ug/L	<5	<5	<5	<5	<30
Benzo(b)fluoranthene, ug/L	<5	<5	<5	<5	<30
Benzo(g,h,i)perylene, ug/L	<5	<5	<5	<5	<30
Benzo(k)fluoranthene, ug/L	<5	<5	<5	<5	<30

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Project: GMP

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-349-1	CW-7A	20 SEP 95
09-349-2	CW-7B	20 SEP 95
09-349-3	CW-6A	20 SEP 95
09-349-4	CW-6B	20 SEP 95
09-349-5	CW-8A	20 SEP 95

PARAMETER	09-349-1	09-349-2	09-349-3	09-349-4	09-349-5
Benzenethiol, ug/L	<20	<20	<20	<20	<100
Benzyl Alcohol, ug/L	<5	<5	<5	<5	<30
Benzoic acid, ug/L	<50	<50	<50	<50	<300
Butylbenzylphthalate, ug/L	<5	<5	<5	<5	<30
Chrysene, ug/L	<5	<5	<5	<5	<30
Di-n-octylphthalate, ug/L	<5	<5	<5	<5	<30
Dibenzo(a,h)anthracene, ug/L	<5	<5	<5	<5	<30
Dibenz(a,h)acridine, ug/L	<20	<20	<20	<20	<100
Dibenzofuran, ug/L	<5	<5	<5	<5	<30
Dibutylphthalate, ug/L	<5	<5	<5	<5	<30
Diethylphthalate, ug/L	<5	<5	<5	<5	<30
Dimethylphthalate, ug/L	<5	<5	<5	<5	<30
Fluoranthene, ug/L	<5	<5	<5	<5	<30
Fluorene, ug/L	<5	<5	<5	<5	<30
Hexachlorobenzene, ug/L	<5	<5	<5	<5	<30
Hexachlorobutadiene, ug/L	<5	<5	<5	<5	<30
Hexachlorocyclopentadiene, ug/L	<5	<5	<5	<5	<30
Hexachloroethane, ug/L	<5	<5	<5	<5	<30
Indeno(1,2,3-c,d)pyrene, ug/L	<7	<7	<7	<7	<40
Indene, ug/L	<10	<10	<10	<10	<50
Isophorone, ug/L	<5	<5	<5	<5	<30
N-Nitrosodimethylamine, ug/L	<6	<6	<6	<6	<30
N-Nitrosodiphenylamine, ug/L	<5	<5	<5	<5	<30

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09-349-1	CW-7A	20 SEP 95
09-349-2	CW-7B	20 SEP 95
09-349-3	CW-6A	20 SEP 95
09-349-4	CW-6B	20 SEP 95
09-349-5	CW-8A	20 SEP 95

PARAMETER	09-349-1	09-349-2	09-349-3	09-349-4	09-349-5
N-Nitrosodi-n-propylamine, ug/L	<6	<6	<6	<6	<30
Nitrobenzene, ug/L	<5	<5	<5	<5	<30
Naphthalene, ug/L	<5	<5	<5	<5	<30
Phenanthrene, ug/L	<5	<5	<5	<5	<30
Phenol, ug/L	<5	<5	<5	<5	<30
Pentachlorophenol, ug/L	<5	<5	<5	<5	<30
Pyrene, ug/L	<5	<5	<5	<5	<30
Pyridine, ug/L	<10	<10	<10	<10	<50
Quinoline, ug/L	<10	<10	<10	<10	<50
Bis(2-chloroethoxy)methane, ug/L	<5	<5	<5	<5	<30
Bis(2-chloroethyl)ether, ug/L	<5	<5	<5	<5	<30
Bis(2-chloroisopropyl)ether, ug/L	<6	<6	<6	<6	<30
Bis(2-ethylhexyl)phthalate, ug/L	8.4	<7	<7	<7	<40
Surrogates **					
2-Fluorobiphenyl Reported, ug/L	51.2	26.4	40.1	32.1	30.7
2-Fluorobiphenyl Theo., ug/L	50.0	50.0	50.0	50.0	50.0
2-Fluorophenol Reported, ug/L	59.8	28.5	30.3	30.9	24.6
2-Fluorophenol Theoretical, ug/L	75.0	75.0	75.0	75.0	75.0
2,4,6-Tribromophenol Rep., ug/L	69.7	32.3	64.4	55.5	44.9
2,4,6-Tribromophenol Theo., ug/L	75.0	75.0	75.0	75.0	75.0
Nitrobenzene-d5 Reported, ug/L	46.8	21.9	44.7	39.6	35.4
Nitrobenzene-d5 Theoretical, ug/L	50.0	50.0	50.0	50.0	50.0
Phenol-d5 Reported, ug/L	43.3	20.5	19.2	20.1	12.4

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REPORT OF ANALYTICAL RESULTS

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09-349-1	CW-7A	20 SEP 95
09-349-2	CW-7B	20 SEP 95
09-349-3	CW-6A	20 SEP 95
09-349-4	CW-6B	20 SEP 95
09-349-5	CW-8A	20 SEP 95

PARAMETER	09-349-1	09-349-2	09-349-3	09-349-4	09-349-5
Phenol-d5 Theoretical, ug/L	75.0	75.0	75.0	75.0	75.0
Terphenyl-d14 Reported, ug/L	51.8	26.3	49.3	46.3	42.2
Terphenyl-d14 Theoretical, ug/L	50.0	50.0	50.0	50.0	50.0

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09-349-1	CW-7A	20 SEP 95
09-349-2	CW-7B	20 SEP 95
09-349-3	CW-6A	20 SEP 95
09-349-4	CW-6B	20 SEP 95
09-349-5	CW-8A	20 SEP 95

PARAMETER	09-349-1	09-349-2	09-349-3	09-349-4	09-349-5
Vol.Pri.Poll. (8240)					
Date Analyzed	10/04/95	09/29/95	09/29/95	10/04/95	10/04/95
Dilution Factor, Times	1	1	1	1	1
1,1,1-Trichloroethane, ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane, ug/L	<1	<1	<1	<1	<1
1,1,2-Trichloroethane, ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane, ug/L	<1	<1	<1	1.9	<1
1,1-Dichloroethene, ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane, ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene, ug/L	<1	<1	<1	<1	<1
1,2-Dichloropropane, ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene, ug/L	<1	<1	<1	<1	<1
1,4-Dichlorobenzene, ug/L	<1	<1	<1	<1	<1
1,4-Dioxane, ug/L	<500	<500	<500	<500	<500
2-Chloroethylvinylether, ug/L	<5	<5	<5	<5	<5
2-Hexanone, ug/L	<5	<5	<5	<5	<5
Acetone, ug/L	<20	<20	<20	<20	<20
Bromodichloromethane, ug/L	<1	<1	<1	<1	<1
Bromomethane, ug/L	<1	<1	<1	<1	<1
Benzene, ug/L	<1	<1	<1	2.4	2.6
Bromoform, ug/L	<1	<1	<1	<1	<1
Chlorobenzene, ug/L	<1	<1	<1	<1	<1
Carbon Tetrachloride, ug/L	<1	<1	<1	<1	<1

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REPORT OF ANALYTICAL RESULTS

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09-349-1	CW-7A	20 SEP 95
09-349-2	CW-7B	20 SEP 95
09-349-3	CW-6A	20 SEP 95
09-349-4	CW-6B	20 SEP 95
09-349-5	CW-8A	20 SEP 95

PARAMETER	09-349-1	09-349-2	09-349-3	09-349-4	09-349-5
Chloroethane, ug/L	<1	<1	<1	<1	<1
Chloroform, ug/L	<1	<1	<1	<1	<1
Chloromethane, ug/L	<1	<1	<1	<1	<1
Carbon Disulfide, ug/L	<2	<2	<2	2.2	3.2
Cyclohexane, ug/L	<5	<5	<5	<5	<5
Dibromochloromethane, ug/L	<1	<1	<1	<1	<1
Ethylene Dibromide, ug/L	<1	<5	<5	<1	<1
Ethylbenzene, ug/L	<1	<1	<1	<1	<1
Freon 113, ug/L	<2	<2	<2	<2	<2
Methyl ethyl ketone, ug/L	<5	<5	<5	<5	<5
Methyl isobutyl ketone, ug/L	<5	<5	<5	<5	<5
Methylene chloride, ug/L	<2	<2	<2	<2	<2
Styrene, ug/L	<1	<1	<1	<1	<1
Trichloroethene, ug/L	<1	<1	<1	<1	<1
Trichlorofluoromethane, ug/L	<1	<1	<1	<1	<1
Toluene, ug/L	<1	<1	<1	<1	<1
Tetrachloroethene, ug/L	<1	<1	<1	<1	<1
Vinyl acetate, ug/L	<10	<10	<10	<10	<10
Vinyl chloride, ug/L	<1	<1	<1	<1	<1
Total Xylene Isomers, ug/L	<3	<3	<3	<3	<3
cis-1,2-Dichloroethene, ug/L	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene, ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene, ug/L	<1	<1	<1	<1	<1

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-349-1	CW-7A	20 SEP 95
09-349-2	CW-7B	20 SEP 95
09-349-3	CW-6A	20 SEP 95
09-349-4	CW-6B	20 SEP 95
09-349-5	CW-8A	20 SEP 95

PARAMETER	09-349-1	09-349-2	09-349-3	09-349-4	09-349-5
trans-1,3-Dichloropropene, ug/L	<1	<1	<1	<1	<1
Surrogates **					
1,2-Dichloroethane-d4 Rep., ug/L	50.9	48.3	48.0	51.2	50.5
1,2-Dichloroethane-d4 Theo., ug/L	50.0	50.0	50.0	50.0	50.0
4-Bromofluorobenzene Rep., ug/L	50.1	48.7	49.3	49.2	50.3
4-Bromofluorobenzene Theo., ug/L	50.0	50.0	50.0	50.0	50.0
Toluene-d8 Reported, ug/L	50.8	51.5	51.1	50.5	50.9
Toluene-d8 Theo., ug/L	50.0	50.0	50.0	50.0	50.0

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-349-6	CW-8B	20 SEP 95
09-349-7	CW-6A-R	20 SEP 95

PARAMETER	09-349-6	09-349-7
Digestion (3010), Date	09/29/95	09/29/95
Furnace Digestion (3020), Date	09/29/95	09/29/95
Chloride (300.0), mg/L	8400	890
Sulfate (300.0), mg/L	1900	190
Conductivity (120.1), umhos/cm	29000	4200
pH (150.1), Units	7.4	7.0
Dissolved Solids (160.1), mg/L	19000	2400
Antimony (6010), mg/L	<0.1	<0.1
Arsenic (7060), mg/L	<0.002	<0.002
Barium (6010), mg/L	0.021	0.032
Beryllium (6010), mg/L	<0.001	<0.001
Cadmium (7131), mg/L	<0.001	<0.001
Chromium (6010), mg/L	<0.01	<0.01
Cobalt (6010), mg/L	<0.04	<0.04
Iron (6010), mg/L	0.18	0.10
Lead (7421), mg/L	<0.002	<0.002
Manganese (6010), mg/L	0.022	0.15
Mercury (7470), mg/L	<0.0002	<0.0002
Nickel (6010), mg/L	<0.04	<0.04
Selenium (7740), mg/L	<0.004	<0.004
Sodium (6010), mg/L	5300	540
Vanadium (6010), mg/L	<0.04	<0.04

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-349-6	CW-8B	20 SEP 95
09-349-7	CW-6A-R	20 SEP 95

PARAMETER	09-349-6	09-349-7
B/N,A Ext.Pri.Poll. (8270)		
Date Analyzed	10/03/95	10/03/95
Date Extracted	09/22/95	09/22/95
Dilution Factor, Times	1	1
1,2,4-Trichlorobenzene, ug/L	<5	<5
1,2-Dichlorobenzene, ug/L	<6	<6
1,2-Diphenylhydrazine, ug/L	<5	<5
1,3-Dichlorobenzene, ug/L	<5	<5
1,4-Dichlorobenzene, ug/L	<5	<5
1-Methylnaphthalene, ug/L	<10	<10
2,4,5-Trichlorophenol, ug/L	<6	<6
2,4,6-Trichlorophenol, ug/L	<5	<5
2,4-Dichlorophenol, ug/L	<5	<5
2,4-Dimethylphenol, ug/L	<5	<5
2,4-Dinitrophenol, ug/L	<10	<10
2,4-Dinitrotoluene, ug/L	<5	<5
2,6-Dinitrotoluene, ug/L	<5	<5
2-Chloronaphthalene, ug/L	<6	<6
2-Chlorophenol, ug/L	<5	<5
2-Methyl-4,6-dinitrophenol, ug/L	<5	<5
2-Methylnaphthalene, ug/L	<5	<5
2-Methylphenol (o-Cresol), ug/L	<5	<5
2-Nitroaniline, ug/L	<5	<5
2-Nitrophenol, ug/L	<5	<5
3,3'-Dichlorobenzidine, ug/L	<20	<20
3-Methylphenol (m-Cresol), ug/L	<10	<10

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-349-6	CW-8B	20 SEP 95
09-349-7	CW-6A-R	20 SEP 95

PARAMETER	09-349-6	09-349-7
3-Nitroaniline, ug/L	<5	<5
4-Bromophenylphenylether, ug/L	<5	<5
4-Chloro-3-methylphenol, ug/L	<5	<5
4-Chloroaniline, ug/L	<5	<5
4-Chlorophenylphenylether, ug/L	<5	<5
4-Methylphenol (p-Cresol), ug/L	<8	<8
4-Nitroaniline, ug/L	<6	<6
4-Nitrophenol, ug/L	<5	<5
6-Methylchrysene, ug/L	<10	<10
7,12-Dimethylbenz(a)anthracene, ug/L	<5	<5
Acenaphthene, ug/L	<5	<5
Acenaphthylene, ug/L	<5	<5
Aniline, ug/L	<5	<5
Anthracene, ug/L	<5	<5
Benzidine, ug/L	<100	<100
Benzo(a)anthracene, ug/L	<5	<5
Benzo(a)pyrene, ug/L	<5	<5
Benzo(b)fluoranthene, ug/L	<5	<5
Benzo(g,h,i)perylene, ug/L	<5	<5
Benzo(k)fluoranthene, ug/L	<5	<5
Benzenethiol, ug/L	<20	<20
Benzyl Alcohol, ug/L	<5	<5
Benzoic acid, ug/L	<50	<50
Butylbenzylphthalate, ug/L	<5	<5
Chrysene, ug/L	<5	<5
Di-n-octylphthalate, ug/L	<5	<5

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-349-6	CW-8B	20 SEP 95
09-349-7	CW-6A-R	20 SEP 95

PARAMETER	09-349-6	09-349-7
Dibenzo(a,h)anthracene, ug/L	<5	<5
Dibenz(a,h)acridine, ug/L	<20	<20
Dibenzofuran, ug/L	<5	<5
Dibutylphthalate, ug/L	<5	<5
Diethylphthalate, ug/L	<5	<5
Dimethylphthalate, ug/L	<5	<5
Fluoranthene, ug/L	<5	<5
Fluorene, ug/L	<5	<5
Hexachlorobenzene, ug/L	<5	<5
Hexachlorobutadiene, ug/L	<5	<5
Hexachlorocyclopentadiene, ug/L	<5	<5
Hexachloroethane, ug/L	<5	<5
Indeno(1,2,3-c,d)pyrene, ug/L	<7	<7
Indene, ug/L	<10	<10
Isophorone, ug/L	<5	<5
N-Nitrosodimethylamine, ug/L	<6	<6
N-Nitrosodiphenylamine, ug/L	<5	<5
N-Nitrosodi-n-propylamine, ug/L	<6	<6
Nitrobenzene, ug/L	<5	<5
Naphthalene, ug/L	<5	<5
Phenanthrene, ug/L	<5	<5
Phenol, ug/L	<5	<5
Pentachlorophenol, ug/L	<5	<5
Pyrene, ug/L	<5	<5
Pyridine, ug/L	<10	<10
Quinoline, ug/L	<10	<10

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LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-349-6	CW-8B	20 SEP 95
09-349-7	CW-6A-R	20 SEP 95

PARAMETER	09-349-6	09-349-7
Bis(2-chloroethoxy)methane, ug/L	<5	<5
Bis(2-chloroethyl)ether, ug/L	<5	<5
Bis(2-chloroisopropyl)ether, ug/L	<6	<6
Bis(2-ethylhexyl)phthalate, ug/L	<7	<7
Surrogates **		
2-Fluorobiphenyl Reported, ug/L	36.1	32.4
2-Fluorobiphenyl Theo., ug/L	50.0	50.0
2-Fluorophenol Reported, ug/L	31.0	25.2
2-Fluorophenol Theoretical, ug/L	75.0	75.0
2,4,6-Tribromophenol Rep., ug/L	51.6	52.6
2,4,6-Tribromophenol Theo., ug/L	75.0	75.0
Nitrobenzene-d5 Reported, ug/L	39.8	34.5
Nitrobenzene-d5 Theoretical, ug/L	50.0	50.0
Phenol-d5 Reported, ug/L	20.0	14.7
Phenol-d5 Theoretical, ug/L	75.0	75.0
Terphenyl-d14 Reported, ug/L	42.3	43.1
Terphenyl-d14 Theoretical, ug/L	50.0	50.0

BCA

B C Analytical

801 Western Avenue
Glendale, CA 91201
818/247-5737
Fax: 818/247-9797

LOG NO: G95-09-349

Received: 21 SEP 95

Dr. Tony Shan
BHP, Hawaii Refinery
91-325 Komohana St.
Kapolei, HI 96707

Project: GMP

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-349-6	CW-8B	20 SEP 95
09-349-7	CW-6A-R	20 SEP 95

PARAMETER	09-349-6	09-349-7
Vol.Pri.Poll. (8240)		
Date Analyzed	10/04/95	09/29/95
Dilution Factor, Times	1	1
1,1,1-Trichloroethane, ug/L	<1	<1
1,1,2,2-Tetrachloroethane, ug/L	<1	<1
1,1,2-Trichloroethane, ug/L	<1	<1
1,1-Dichloroethane, ug/L	<1	<1
1,1-Dichloroethene, ug/L	<1	<1
1,2-Dichloroethane, ug/L	<1	<1
1,2-Dichlorobenzene, ug/L	<1	<1
1,2-Dichloropropane, ug/L	<1	<1
1,3-Dichlorobenzene, ug/L	<1	<1
1,4-Dichlorobenzene, ug/L	<1	<1
1,4-Dioxane, ug/L	<500	<500
2-Chloroethylvinylether, ug/L	<5	<5
2-Hexanone, ug/L	<5	<5
Acetone, ug/L	<20	<20
Bromodichloromethane, ug/L	<1	<1
Bromomethane, ug/L	<1	<1
Benzene, ug/L	<1	<1
Bromoform, ug/L	<1	<1
Chlorobenzene, ug/L	<1	<1
Carbon Tetrachloride, ug/L	<1	<1
Chloroethane, ug/L	<1	<1
Chloroform, ug/L	<1	<1
Chloromethane, ug/L	<1	<1

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Project: GMP

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-349-6	CW-8B	20 SEP 95
09-349-7	CW-6A-R	20 SEP 95

PARAMETER	09-349-6	09-349-7
Carbon Disulfide, ug/L	<2	<2
Cyclohexane, ug/L	<5	<5
Dibromochloromethane, ug/L	<1	<1
Ethylene Dibromide, ug/L	<1	<5
Ethylbenzene, ug/L	<1	<1
Freon 113, ug/L	<2	<2
Methyl ethyl ketone, ug/L	<5	<5
Methyl isobutyl ketone, ug/L	<5	<5
Methylene chloride, ug/L	<2	<2
Styrene, ug/L	<1	<1
Trichloroethene, ug/L	<1	<1
Trichlorofluoromethane, ug/L	<1	<1
Toluene, ug/L	<1	<1
Tetrachloroethene, ug/L	<1	<1
Vinyl acetate, ug/L	<10	<10
Vinyl chloride, ug/L	<1	<1
Total Xylene Isomers, ug/L	<3	<3
cis-1,2-Dichloroethene, ug/L	<1	<1
cis-1,3-Dichloropropene, ug/L	<1	<1
trans-1,2-Dichloroethene, ug/L	<1	<1
trans-1,3-Dichloropropene, ug/L	<1	<1
Surrogates **		
1,2-Dichloroethane-d4 Rep., ug/L	50.8	47.6
1,2-Dichloroethane-d4 Theo., ug/L	50.0	50.0
4-Bromofluorobenzene Rep., ug/L	50.7	49.4
4-Bromofluorobenzene Theo., ug/L	50.0	50.0

BCA

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Project: GMP

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-349-6	CW-8B	20 SEP 95
09-349-7	CW-6A-R	20 SEP 95

PARAMETER	09-349-6	09-349-7
Toluene-d8 Reported, ug/L	51.8	52.1
Toluene-d8 Theo., ug/L	50.0	50.0

BCA

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Kapolei, HI 96707

Project: GMP

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-349-8	Trip Blank	20 SEP 95
09-349-9	Field Blank	20 SEP 95

PARAMETER	09-349-8	09-349-9
Vol.Pri.Poll. (8240)		
Date Analyzed	09/29/95	09/29/95
Dilution Factor, Times	1	1
1,1,1-Trichloroethane, ug/L	<1	<1
1,1,2,2-Tetrachloroethane, ug/L	<1	<1
1,1,2-Trichloroethane, ug/L	<1	<1
1,1-Dichloroethane, ug/L	<1	<1
1,1-Dichloroethene, ug/L	<1	<1
1,2-Dichloroethane, ug/L	<1	<1
1,2-Dichlorobenzene, ug/L	<1	<1
1,2-Dichloropropane, ug/L	<1	<1
1,3-Dichlorobenzene, ug/L	<1	<1
1,4-Dichlorobenzene, ug/L	<1	<1
1,4-Dioxane, ug/L	<500	<500
2-Chloroethylvinylether, ug/L	<5	<5
2-Hexanone, ug/L	<5	<5
Acetone, ug/L	<20	<20
Bromodichloromethane, ug/L	<1	<1
Bromomethane, ug/L	<1	<1
Benzene, ug/L	<1	<1
Bromoform, ug/L	<1	<1
Chlorobenzene, ug/L	<1	<1
Carbon Tetrachloride, ug/L	<1	<1
Chloroethane, ug/L	<1	<1
Chloroform, ug/L	<1	<1
Chloromethane, ug/L	<1	<1

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Project: GMP

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-349-8	Trip Blank	20 SEP 95
09-349-9	Field Blank	20 SEP 95

PARAMETER	09-349-8	09-349-9
Carbon Disulfide, ug/L	<2	<2
Cyclohexane, ug/L	<5	<5
Dibromochloromethane, ug/L	<1	<1
Ethylene Dibromide, ug/L	<5	<5
Ethylbenzene, ug/L	<1	<1
Freon 113, ug/L	<2	<2
Methyl ethyl ketone, ug/L	<5	<5
Methyl isobutyl ketone, ug/L	<5	<5
Methylene chloride, ug/L	<2	<2
Styrene, ug/L	<1	<1
Trichloroethene, ug/L	<1	<1
Trichlorofluoromethane, ug/L	<1	<1
Toluene, ug/L	<1	<1
Tetrachloroethene, ug/L	<1	<1
Vinyl acetate, ug/L	<10	<10
Vinyl chloride, ug/L	<1	<1
Total Xylene Isomers, ug/L	<3	<3
cis-1,2-Dichloroethene, ug/L	<1	<1
cis-1,3-Dichloropropene, ug/L	<1	<1
trans-1,2-Dichloroethene, ug/L	<1	<1
trans-1,3-Dichloropropene, ug/L	<1	<1
Surrogates **		
1,2-Dichloroethane-d4 Rep., ug/L	47.5	47.5
1,2-Dichloroethane-d4 Theo., ug/L	50.0	50.0
4-Bromofluorobenzene Rep., ug/L	48.3	47.3
4-Bromofluorobenzene Theo., ug/L	50.0	50.0

BCA

B C Analytical

801 Western Avenue
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818/247-5737
Fax: 818/247-9797

LOG NO: G95-09-349

Received: 21 SEP 95

Dr. Tony Shan
BHP, Hawaii Refinery
91-325 Komohana St.
Kapolei, HI 96707

Project: GMP

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-349-8	Trip Blank	20 SEP 95
09-349-9	Field Blank	20 SEP 95

PARAMETER	09-349-8	09-349-9
Toluene-d8 Reported, ug/L	49.4	50.4
Toluene-d8 Theo., ug/L	50.0	50.0

Jane Freemyer, Program Manager

The analytical results within this report relate only to the specific compounds and samples investigated and may not necessarily reflect other apparently similar material from the same or a similar location.

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BCA

: ORDER PLACED FOR CLIENT: BHP Hawaii Refinery 9509349 :
: BC ANALYTICAL : GLEN LAB : 13:30:51 06 OCT 1995 - P. 1 :

SAMPLES...	SAMPLE DESCRIPTION..	DETERM.....	DATE..... ANALYZED	METHOD.....	EQUIP.	BATCH..	ID.NO
9509349*1	CW-7A	DIG,AQ.HCL	09.29.95	3010		951517	7093
		DIG,AQ,GFA	09.29.95	3020		951518	7093
		ANIONS,CL	09.21.95	300.0	533-23	950921	8651
		ANIONS,SO4	09.21.95	300.0	533-23	950921	8651
		COND	09.22.95	120.1	533-11	9594	8604
		PH	09.21.95	150.1	533-21	95431	8651
		TDS	09.26.95	160.1		9590	
		SB	09.30.95	6010	535-03	951517	7396
		AS,GFA	09.30.95	7060	534-04	951518	7396
		BA	09.30.95	6010	535-03	951517	7396
		BE	09.30.95	6010	535-03	951517	7396
		CD,GFA	09.30.95	7131	534-07	951518	7396
		CR	09.30.95	6010	535-03	951517	7396
		CO	09.30.95	6010	535-03	951517	7396
		FE	09.30.95	6010	535-03	951517	7396
		PB,GFA	09.30.95	7421	534-04	951518	7396
		MN	09.30.95	6010	535-03	951517	7396
		HG	10.03.95	7470	534-06	951569	7093
		NI	09.30.95	6010	535-03	951517	7396
		SE,GFA	09.29.95	7740	534-04	951518	7396
		NA	09.30.95	6010	535-02	951517	7396
		V	09.30.95	6010	535-03	951517	7396
		BNA.8270.BHP	10.03.95	8270	537-14	95177	6763
		VOA.8240.BHP	10.04.95	8240	536-02	95500	7424
9509349*2	CW-7B	DIG,AQ.HCL	09.29.95	3010		951517	7093
		DIG,AQ,GFA	09.29.95	3020		951518	7093
		ANIONS,CL	09.22.95	300.0	533-23	950922	8651
		ANIONS,SO4	09.21.95	300.0	533-23	950921	8651
		COND	09.22.95	120.1	533-11	9594	8604
		PH	09.21.95	150.1	533-21	95431	8651
		TDS	09.26.95	160.1		9590	
		SB	09.30.95	6010	535-03	951517	7396
		AS,GFA	09.30.95	7060	534-04	951518	7396
		BA	09.30.95	6010	535-03	951517	7396
		BE	09.30.95	6010	535-03	951517	7396
		CD,GFA	09.30.95	7131	534-07	951518	7396
		CR	09.30.95	6010	535-03	951517	7396
		CO	09.30.95	6010	535-03	951517	7396
		FE	09.30.95	6010	535-03	951517	7396
		PB,GFA	09.30.95	7421	534-04	951518	7396
		MN	09.30.95	6010	535-03	951517	7396
		HG	10.03.95	7470	534-06	951569	7093
		NI	09.30.95	6010	535-03	951517	7396
		SE,GFA	09.30.95	7740	534-04	951518	7396

Notes: Equipment = BC Analytical identification number for a particular piece of analytical equipment.

ID.NO = BC Analytical employee identification number of analyst.

SAMPLES...	SAMPLE DESCRIPTION..	DETERM.....	DATE..... ANALYZED	METHOD.....	EQUIP.	BATCH..	ID.NO
		NA	09.30.95	6010	535-02	951517	7396
		V	09.30.95	6010	535-03	951517	7396
		BNA.8270.BHP	10.03.95	8270	537-14	95177	6763
		VOA.8240.BHP	09.29.95	8240	537-02	95494	7424
9509349*3	CW-6A	DIG,AQ.HCL	09.29.95	3010		951517	7093
		DIG,AQ,GFA	09.29.95	3020		951518	7093
		ANIONS,CL	09.21.95	300.0	533-23	950921	8651
		ANIONS,SO4	09.21.95	300.0	533-23	950921	8651
		COND	09.22.95	120.1	533-11	9594	8604
		PH	09.21.95	150.1	533-21	95431	8651
		TDS	09.26.95	160.1		9590	
		SB	09.30.95	6010	535-03	951517	7396
		AS,GFA	09.30.95	7060	534-04	951518	7396
		BA	09.30.95	6010	535-03	951517	7396
		BE	09.30.95	6010	535-03	951517	7396
		CD,GFA	09.30.95	7131	534-07	951518	7396
		CR	09.30.95	6010	535-03	951517	7396
		CO	09.30.95	6010	535-03	951517	7396
		FE	09.30.95	6010	535-03	951517	7396
		PB,GFA	09.30.95	7421	534-04	951518	7396
		MN	09.30.95	6010	535-03	951517	7396
		HG	10.03.95	7470	534-06	951569	7093
		NI	09.30.95	6010	535-03	951517	7396
		SE,GFA	09.30.95	7740	534-04	951518	7396
		NA	09.30.95	6010	535-02	951517	7396
		V	09.30.95	6010	535-03	951517	7396
		BNA.8270.BHP	10.03.95	8270	537-14	95177	6763
		VOA.8240.BHP	09.29.95	8240	537-02	95494	7424
9509349*4	CW-6B	DIG,AQ.HCL	09.29.95	3010		951517	7093
		DIG,AQ,GFA	09.29.95	3020		951518	7093
		ANIONS,CL	09.21.95	300.0	533-23	950921	8651
		ANIONS,SO4	09.21.95	300.0	533-23	950921	8651
		COND	09.22.95	120.1	533-11	9594	8604
		PH	09.21.95	150.1	533-21	95431	8651
		TDS	09.26.95	160.1		9590	
		SB	09.30.95	6010	535-03	951517	7396
		AS,GFA	09.30.95	7060	534-04	951518	7396
		BA	09.30.95	6010	535-03	951517	7396
		BE	09.30.95	6010	535-03	951517	7396
		CD,GFA	09.30.95	7131	534-07	951518	7396
		CR	09.30.95	6010	535-03	951517	7396
		CO	09.30.95	6010	535-03	951517	7396
		FE	09.30.95	6010	535-03	951517	7396
		PB,GFA	09.30.95	7421	534-04	951518	7396

Notes: Equipment = BC Analytical identification number for a particular piece of analytical equipment.

ID.NO = BC Analytical employee identification number of analyst.

SAMPLES...	SAMPLE DESCRIPTION..	DETERM.....	DATE..... ANALYZED	METHOD.....	EQUIP.	BATCH..	ID.NO
		MN	09.30.95	6010	535-03	951517	7396
		HG	10.03.95	7470	534-06	951569	7093
		NI	09.30.95	6010	535-03	951517	7396
		SE,GFA	09.30.95	7740	534-04	951518	7396
		NA	09.30.95	6010	535-02	951517	7396
		V	09.30.95	6010	535-03	951517	7396
		BNA.8270.BHP	10.03.95	8270	537-14	95177	6763
		VOA.8240.BHP	10.04.95	8240	536-02	95500	7424
9509349*5	CW-8A	DIG,AQ.HCL	09.29.95	3010		951517	7093
		DIG,AQ,GFA	09.29.95	3020		951518	7093
		ANIONS,CL	09.21.95	300.0	533-23	950921	8651
		ANIONS,SO4	09.21.95	300.0	533-23	950921	8651
		COND	09.22.95	120.1	533-11	9594	8604
		PH	09.21.95	150.1	533-21	95431	8651
		TDS	09.26.95	160.1		9590	
		SB	09.30.95	6010	535-03	951517	7396
		AS,GFA	09.30.95	7060	534-04	951518	7396
		BA	09.30.95	6010	535-03	951517	7396
		BE	09.30.95	6010	535-03	951517	7396
		CD,GFA	09.30.95	7131	534-07	951518	7396
		CR	09.30.95	6010	535-03	951517	7396
		CO	09.30.95	6010	535-03	951517	7396
		FE	09.30.95	6010	535-03	951517	7396
		PB,GFA	09.30.95	7421	534-04	951518	7396
		MN	09.30.95	6010	535-03	951517	7396
		HG	10.03.95	7470	534-06	951569	7093
		NI	09.30.95	6010	535-03	951517	7396
		SE,GFA	09.30.95	7740	534-04	951518	7396
		NA	09.30.95	6010	535-02	951517	7396
		V	09.30.95	6010	535-03	951517	7396
		BNA.8270.BHP	10.03.95	8270	537-14	95177	6763
		VOA.8240.BHP	10.04.95	8240	536-02	95500	7424
)509349*6	CW-8B	DIG,AQ.HCL	09.29.95	3010		951517	7093
		DIG,AQ,GFA	09.29.95	3020		951518	7093
		ANIONS,CL	09.21.95	300.0	533-23	950921	8651
		ANIONS,SO4	09.21.95	300.0	533-23	950921	8651
		COND	09.22.95	120.1	533-11	9594	8604
		PH	09.21.95	150.1	533-21	95431	8651
		TDS	09.26.95	160.1		9590	
		SB	09.30.95	6010	535-03	951517	7396
		AS,GFA	09.30.95	7060	534-04	951518	7396
		BA	09.30.95	6010	535-03	951517	7396
		BE	09.30.95	6010	535-03	951517	7396
		CD,GFA	09.30.95	7131	534-07	951518	7396

Notes: Equipment = BC Analytical identification number for a particular piece of analytical equipment.

ID.NO = BC Analytical employee identification number of analyst.

SAMPLES...	SAMPLE DESCRIPTION..	DETERM.....	DATE..... ANALYZED	METHOD.....	EQUIP.	BATCH..	ID.NO
		CR	09.30.95	6010	535-03	951517	7396
		CO	09.30.95	6010	535-03	951517	7396
		FE	09.30.95	6010	535-03	951517	7396
		PB,GFA	09.30.95	7421	534-04	951518	7396
		MN	09.30.95	6010	535-03	951517	7396
		HG	10.03.95	7470	534-06	951569	7093
		NI	09.30.95	6010	535-03	951517	7396
		SE,GFA	09.30.95	7740	534-04	951518	7396
		NA	09.30.95	6010	535-02	951517	7396
		V	09.30.95	6010	535-03	951517	7396
		BNA.8270.BHP	10.03.95	8270	537-14	95177	6763
		VOA.8240.BHP	10.04.95	8240	536-02	95500	7424
9509349*7	CW-6A-R	DIG,AQ.HCL	09.29.95	3010		951517	7093
		DIG,AQ,GFA	09.29.95	3020		951518	7093
		ANIONS,CL	09.21.95	300.0	533-23	950921	8651
		ANIONS,SO4	09.21.95	300.0	533-23	950921	8651
		COND	09.22.95	120.1	533-11	9594	8604
		PH	09.21.95	150.1	533-21	95431	8651
		TDS	09.26.95	160.1		9590	
		SB	09.30.95	6010	535-03	951517	7396
		AS,GFA	09.30.95	7060	534-04	951518	7396
		BA	09.30.95	6010	535-03	951517	7396
		BE	09.30.95	6010	535-03	951517	7396
		CD,GFA	09.30.95	7131	534-07	951518	7396
		CR	09.30.95	6010	535-03	951517	7396
		CO	09.30.95	6010	535-03	951517	7396
		FE	09.30.95	6010	535-03	951517	7396
		PB,GFA	09.30.95	7421	534-04	951518	7396
		MN	09.30.95	6010	535-03	951517	7396
		HG	10.03.95	7470	534-06	951569	7093
		NI	09.30.95	6010	535-03	951517	7396
		SE,GFA	09.30.95	7740	534-04	951518	7396
		NA	09.30.95	6010	535-02	951517	7396
		V	09.30.95	6010	535-03	951517	7396
		BNA.8270.BHP	10.03.95	8270	537-14	95177	6763
		VOA.8240.BHP	09.29.95	8240	537-02	95494	7424
9509349*8	Trip Blank	VOA.8240.BHP	09.29.95	8240	537-02	95494	7424
9509349*9	Field Blank	VOA.8240.BHP	09.29.95	8240	537-02	95494	7424

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Notes: Equipment = BC Analytical identification number for a particular piece of analytical equipment.

ID.NO = BC Analytical employee identification number of analyst.

BC ANALYTICAL, GLENDALE
QC REPORT 9509349
DATE PRINTED: 09 OCT 1995

AQUEOUS SAMPLES

		METHOD BLANK			LAB CONTROL									MATRIX QC								
	UNITS	RESULT	RDL	FLG	LCS %REC	FLG	LCSD %REC	FLG	LCL	UCL	RPD	RPD UCL	RPD FLG	MS %REC	FLG	MSD %REC	FLG	LCL	UCL	RPD	RPD UCL	RPD FLG
Batch: TDS*9590 Method: 160.1 - Residue, Filterable, Gravimetric, Dried at 180 C																						
Dissolved Solids	mg/L	0	10	-	103	-	103	-	91	107	0	-	-	107	-	105	-	85	112	1	15	-
Batch: COND*9594 Method: 120.1 - Conductance, Specific Conductance																						
Conductivity	umhos/cm	-	-	-	99	-	100	-	95	105	1	15	-	7600	*	7600	*	-	-	0	15	-
Batch: PH*95431 Method: 150.1 - pH, Electrometric																						
pH	Units	-	-	-	99	-	99	-	99	101	0	20	-	6.9	*	6.9	*	-	-	-	20	-
Batch: 950921 Method: 300.0 - Inorganic anions in water, Ion chromatograph																						
Chloride	mg/L	0	0.5	-	96	-	96	-	90	110	0	-	-	95	-	96	-	63	125	1	15	-
Sulfate	mg/L	0	0.1	-	95	-	94	-	90	110	1	-	-	-	NC	-	NC	73	116	-	15	NC
Batch: ANIONS,CL*950922 Method: 300.0 - Inorganic anions in water, Ion chromatograph																						
Chloride	mg/L	0	0.5	-	96	-	96	-	90	110	0	-	-	-	NC	-	NC	63	125	-	15	NC
Batch: 951517 Method: 6010 - ICAP Metals																						
Barium	mg/L	0	0.005	-	98	-	97	-	75	114	1	-	-	91	-	89	-	74	110	2	20	-
Beryllium	mg/L	0	0.001	-	97	-	96	-	79	110	1	-	-	89	-	88	-	71	113	0	20	-
Cobalt	mg/L	0	0.04	-	103	-	102	-	71	112	1	-	-	90	-	91	-	67	110	2	20	-
Chromium	mg/L	0	0.01	-	103	-	102	-	76	110	1	-	-	99	-	95	-	68	111	4	20	-
Iron	mg/L	0	0.04	-	103	-	102	-	80	110	0	-	-	98	-	95	-	68	129	2	20	-
Manganese	mg/L	0	0.01	-	97	-	96	-	76	113	1	-	-	95	-	94	-	70	124	0	20	-
Sodium	mg/L	0	0.5	-	101	-	99	-	83	112	2	-	-	-	NC	-	NC	77	118	-	20	NC
Nickel	mg/L	0	0.04	-	102	-	101	-	73	114	1	-	-	94	-	94	-	65	113	0	20	-
Antimony	mg/L	0.013	0.1	-	99	-	99	-	79	115	0	-	-	93	-	94	-	83	112	1	20	-
Vanadium	mg/L	0	0.04	-	100	-	100	-	80	110	1	-	-	86	-	85	-	72	110	0	20	-
Batch: AS,GFA*951518 Method: 7060 - Arsenic, AA, Furnace																						
Arsenic	mg/L	0	0.002	-	111	-	105	-	63	122	6	-	-	99	-	99	-	52	130	0	20	-
Batch: CD,GFA*951518 Method: 7131 - Cadmium, AA, Furnace																						
Cadmium	mg/L	0	0.001	-	107	-	107	-	67	134	0	-	-	128	-	129	-	63	157	1	20	-
Batch: PB,GFA*951518 Method: 7421 - Lead, AA, Furnace																						
Lead	mg/L	0	0.002	-	110	-	102	-	85	112	7	-	-	77	-	81	-	54	144	6	20	-
Batch: SE,GFA*951518 Method: 7740 - Selenium, AA, Furnace																						
Selenium	mg/L	0.0005	0.004	-	115	Q	107	-	74	114	7	-	-	84	-	86	-	4	140	3	20	-

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AQUEOUS SAMPLES

		METHOD BLANK			LAB CONTROL									MATRIX QC								
					LCS		LCSD				RPD	RPD		MS		MSD				RPD	RPD	
	UNITS	RESULT	RDL	FLG	%REC	FLG	%REC	FLG	LCL	UCL	RPD	UCL	FLG	%REC	FLG	%REC	FLG	LCL	UCL	RPD	UCL	FLG
Batch: HG*951569 Method: 7470 - Mercury (Liquid), Cold Vapor AA, Manual																						
Mercury	mg/L	0	0.0002	-	100	-	93	-	71	123	8	-	-	90	-	80	-	53	143	12	20	-

AQUEOUS SAMPLES		METHOD BLANK			LAB CONTROL									MATRIX QC								
					LCS		LCSD				RPD	RPD		MS		MSD				RPD	RPD	
	UNITS	RESULT	RDL	FLG	%REC	FLG	%REC	FLG	LCL	UCL	RPD	UCL	FLG	%REC	FLG	%REC	FLG	LCL	UCL	RPD	UCL	FLG
Batch: VOA*95494 Method: 8240 - GC/MS for Volatile Organics																						
1,1,1-Trichloroethane	ug/L	0	1	-	80	-	-	-	78	119	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	ug/L	0	1	-	104	-	-	-	78	137	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	ug/L	0	1	-	96	-	-	-	83	127	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	ug/L	0	1	-	82	-	-	-	76	122	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	ug/L	0	1	-	78	-	-	-	69	126	-	-	-	79	-	85	-	48	127	8	27	-
1,2-Dichloroethane	ug/L	0	1	-	86	-	-	-	84	119	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	ug/L	0	1	-	88	-	-	-	85	118	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	ug/L	0	1	-	88	-	-	-	84	117	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	ug/L	0	1	-	86	-	-	-	84	118	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	ug/L	0	1	-	87	-	-	-	85	117	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dioxane	ug/L	0	500	-	122	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chloroethylvinylether	ug/L	0	5	-	49	-	-	-	35	174	-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone	ug/L	0	5	-	116	-	-	-	58	158	-	-	-	-	-	-	-	-	-	-	-	-
Acetone	ug/L	7.9	20	-	91	-	-	-	16	170	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	ug/L	0	1	-	92	-	-	-	84	118	-	-	-	-	-	-	-	-	-	-	-	-
Bromomethane	ug/L	0	1	-	88	-	-	-	58	139	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	ug/L	0	1	-	84	-	-	-	74	122	-	-	-	83	-	92	-	65	125	10	26	-
Bromoform	ug/L	0	1	-	97	-	-	-	80	131	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	ug/L	0	1	-	88	-	-	-	85	115	-	-	-	93	-	100	-	76	132	8	23	-
Carbon Tetrachloride	ug/L	0	1	-	80	-	-	-	72	122	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	ug/L	0	1	-	78	-	-	-	52	143	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	ug/L	0	1	-	83	-	-	-	81	120	-	-	-	-	-	-	-	-	-	-	-	-
Chloromethane	ug/L	0.29	1	-	78	-	-	-	62	127	-	-	-	-	-	-	-	-	-	-	-	-
Carbon Disulfide	ug/L	0.35	2	-	76	-	-	-	65	128	-	-	-	-	-	-	-	-	-	-	-	-
Cyclohexane	ug/L	0	5	-	85	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	ug/L	0	1	-	94	-	-	-	82	124	-	-	-	-	-	-	-	-	-	-	-	-
Ethylene Dibromide	ug/L	0	1	-	97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	ug/L	0	1	-	95	-	-	-	84	117	-	-	-	-	-	-	-	-	-	-	-	-
Freon 113	ug/L	0	2	-	74	-	-	-	66	133	-	-	-	-	-	-	-	-	-	-	-	-
Methyl ethyl ketone	ug/L	0	5	-	117	-	-	-	46	161	-	-	-	-	-	-	-	-	-	-	-	-
Methyl isobutyl ketone	ug/L	0	5	-	98	-	-	-	66	156	-	-	-	-	-	-	-	-	-	-	-	-
Methylene chloride	ug/L	0	2	-	80	-	-	-	78	120	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	ug/L	0	1	-	90	-	-	-	85	116	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	ug/L	0	1	-	81	-	-	-	78	119	-	-	-	77	-	83	-	63	122	8	21	-
Trichlorofluoromethane	ug/L	0	1	-	81	-	-	-	66	134	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	ug/L	0.47	1	-	89	-	-	-	84	116	-	-	-	94	-	104	-	63	132	10	22	-
Tetrachloroethene	ug/L	0	1	-	84	-	-	-	83	117	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl acetate	ug/L	0	10	-	98	-	-	-	76	134	-	-	-	-	-	-	-	-	-	-	-	-

AQUEOUS SAMPLES

		METHOD BLANK			LAB CONTROL									MATRIX QC									
	UNITS	RESULT	RDL	FLG	LCS %REC	FLG	LCSD %REC	FLG	LCL	UCL	RPD	RPD UCL	RPD FLG	MS %REC	FLG	MSD %REC	FLG	LCL	UCL	RPD	RPD UCL	RPD FLG
Batch: VOA*95494 Method: 8240 - GC/MS for Volatile Organics, con't																							
Vinyl chloride	ug/L	0	1	-	74	-	-	-	66	132	-	-	-	-	-	-	-	-	-	-	-	-
Total Xylene Isomers	ug/L	0	3	-	104	-	-	-	86	114	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	ug/L	0	1	-	85	-	-	-	78	121	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	ug/L	0	1	-	92	-	-	-	81	123	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	ug/L	0	1	-	82	-	-	-	73	123	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene	ug/L	0	1	-	94	-	-	-	78	122	-	-	-	-	-	-	-	-	-	-	-	-
[1,2-Dichloroethane-d4]	Percent	97	-	-	100	-	-	-	87	125	-	-	-	97	-	97	-	87	125	-	-	-
[4-Bromofluorobenzene]	Percent	97	-	-	99	-	-	-	85	111	-	-	-	103	-	102	-	85	111	-	-	-
[Toluene-d8]	Percent	100	-	-	100	-	-	-	94	113	-	-	-	104	-	105	-	94	113	-	-	-

AQUEOUS SAMPLES

		METHOD BLANK			LAB CONTROL									MATRIX QC								
	UNITS	RESULT	RDL	FLG	LCS %REC	FLG	LCSD %REC	FLG	LCL	UCL	RPD	RPD UCL	RPD FLG	MS %REC	FLG	MSD %REC	FLG	LCL	UCL	RPD	RPD UCL	RPD FLG
Batch: VOA*95500 Method: 8240 - GC/MS for Volatile Organics																						
1,1,1-Trichloroethane	ug/L	0	1	-	78	-	-	-	78	119	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	ug/L	0	1	-	128	-	-	-	78	137	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	ug/L	0	1	-	119	-	-	-	83	127	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	ug/L	0	1	-	94	-	-	-	76	122	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	ug/L	0	1	-	107	-	-	-	69	126	-	-	-	97	-	104	-	48	127	7	27	-
1,2-Dichloroethane	ug/L	0	1	-	97	-	-	-	84	119	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	ug/L	0	1	-	105	-	-	-	85	118	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	ug/L	0	1	-	109	-	-	-	84	117	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	ug/L	0	1	-	105	-	-	-	84	118	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	ug/L	0	1	-	105	-	-	-	85	117	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dioxane	ug/L	0	500	-	125	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chloroethylvinylether	ug/L	0	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone	ug/L	0	5	-	145	-	-	-	58	158	-	-	-	-	-	-	-	-	-	-	-	-
Acetone	ug/L	6.7	20	-	124	-	-	-	16	170	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	ug/L	0	1	-	118	-	-	-	84	118	-	-	-	-	-	-	-	-	-	-	-	-
Bromomethane	ug/L	0	1	-	104	-	-	-	58	139	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	ug/L	0	1	-	102	-	-	-	74	122	-	-	-	91	-	97	-	65	125	7	26	-
Bromoform	ug/L	0	1	-	109	-	-	-	80	131	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	ug/L	0	1	-	114	-	-	-	85	115	-	-	-	102	-	100	-	76	132	2	23	-
Carbon Tetrachloride	ug/L	0	1	-	89	-	-	-	72	122	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	ug/L	0	1	-	92	-	-	-	52	143	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	ug/L	0	1	-	91	-	-	-	81	120	-	-	-	-	-	-	-	-	-	-	-	-
Chloromethane	ug/L	0	1	-	108	-	-	-	62	127	-	-	-	-	-	-	-	-	-	-	-	-
Carbon Disulfide	ug/L	0	2	-	99	-	-	-	65	128	-	-	-	-	-	-	-	-	-	-	-	-
Cyclohexane	ug/L	0	5	-	73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	ug/L	0	1	-	115	-	-	-	82	124	-	-	-	-	-	-	-	-	-	-	-	-
Ethylene Dibromide	ug/L	0	1	-	111	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	ug/L	0	1	-	118	Q	-	-	84	117	-	-	-	-	-	-	-	-	-	-	-	-
Freon 113	ug/L	0	2	-	79	-	-	-	66	133	-	-	-	-	-	-	-	-	-	-	-	-
Methyl ethyl ketone	ug/L	0	5	-	118	-	-	-	46	161	-	-	-	-	-	-	-	-	-	-	-	-
Methyl isobutyl ketone	ug/L	0	5	-	112	-	-	-	66	156	-	-	-	-	-	-	-	-	-	-	-	-
Methylene chloride	ug/L	0.71	2	-	93	-	-	-	78	120	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	ug/L	0	1	-	118	Q	-	-	85	116	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	ug/L	0	1	-	91	-	-	-	78	119	-	-	-	91	-	98	-	63	122	8	21	-
Trichlorofluoromethane	ug/L	0	1	-	91	-	-	-	66	134	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	ug/L	0	1	-	118	Q	-	-	84	116	-	-	-	101	-	106	-	63	132	5	22	-
Tetrachloroethene	ug/L	0	1	-	101	-	-	-	83	117	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl acetate	ug/L	0	10	-	107	-	-	-	76	134	-	-	-	-	-	-	-	-	-	-	-	-

AQUEOUS SAMPLES

		METHOD BLANK			LAB CONTROL									MATRIX QC									
					LCS		LCSD				RPD	RPD		MS		MSD				RPD	RPD		
	UNITS	RESULT	RDL	FLG	%REC	FLG	%REC	FLG	LCL	UCL	RPD	UCL	FLG	%REC	FLG	%REC	FLG	LCL	UCL	RPD	UCL	FLG	
Batch: VOA*95500 Method: 8240 - GC/MS for Volatile Organics, con't																							
Vinyl chloride	ug/L	0	1	-	100	-	-	-	66	132	-	-	-	-	-	-	-	-	-	-	-	-	
Total Xylene Isomers	ug/L	0	3	-	127	Q	-	-	86	114	-	-	-	-	-	-	-	-	-	-	-	-	
cis-1,2-Dichloroethene	ug/L	0	1	-	90	-	-	-	78	121	-	-	-	-	-	-	-	-	-	-	-	-	
cis-1,3-Dichloropropene	ug/L	0	1	-	116	-	-	-	81	123	-	-	-	-	-	-	-	-	-	-	-	-	
trans-1,2-Dichloroethene	ug/L	0	1	-	102	-	-	-	73	123	-	-	-	-	-	-	-	-	-	-	-	-	
trans-1,3-Dichloropropene	ug/L	0	1	-	104	-	-	-	78	122	-	-	-	-	-	-	-	-	-	-	-	-	
[1,2-Dichloroethane-d4]	Percent	92	-	-	92	-	-	-	87	125	-	-	-	102	-	103	-	87	125	-	-	-	
[4-Bromofluorobenzene]	Percent	96	-	-	103	-	-	-	85	111	-	-	-	103	-	100	-	85	111	-	-	-	
[Toluene-d8]	Percent	103	-	-	106	-	-	-	94	113	-	-	-	102	-	101	-	94	113	-	-	-	

AQUEOUS SAMPLES

		METHOD BLANK			LAB CONTROL									MATRIX QC								
	UNITS	RESULT	RDL	FLG	LCS %REC	FLG	LCSD %REC	FLG	LCL	UCL	RPD	RPD UCL	RPD FLG	MS %REC	FLG	MSD %REC	FLG	LCL	UCL	RPD	RPD UCL	RPD FLG
Batch: BNA*95177 Method: 8270 - GC/MS for Semivolatile Organics, Capillary column																						
1,2,4-Trichlorobenzene	ug/L	0	5	-	73	-	69	-	44	116	6	-	-	62	-	63	-	44	120	2	39	-
1,2-Dichlorobenzene	ug/L	0	5	-	71	-	64	-	35	127	10	-	-	-	-	-	-	-	-	-	-	-
1,2-Diphenylhydrazine	ug/L	0	5	-	89	-	98	-	43	128	10	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	ug/L	0	5	-	69	-	60	-	32	110	14	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	ug/L	0	5	-	70	-	62	-	35	110	11	-	-	54	-	56	-	39	110	5	34	-
1-Methylnaphthalene	ug/L	0	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	ug/L	0	5	-	96	-	108	-	23	154	11	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	ug/L	0	5	-	71	-	81	-	37	144	13	-	-	-	-	-	-	-	-	-	-	-
2,4-Dichlorophenol	ug/L	0	5	-	81	-	89	-	39	129	10	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	ug/L	0	5	-	67	-	79	-	32	119	16	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	ug/L	0	10	-	46	-	60	-	1	191	26	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene	ug/L	0	5	-	85	-	95	-	39	139	11	-	-	87	-	86	-	48	139	1	25	-
2,6-Dinitrotoluene	ug/L	0	5	-	82	-	88	-	50	152	7	-	-	-	-	-	-	-	-	-	-	-
2-Chloronaphthalene	ug/L	0	5	-	58	-	62	-	32	110	7	-	-	-	-	-	-	-	-	-	-	-
2-Chlorophenol	ug/L	0	5	-	79	-	87	-	35	116	10	-	-	86	-	90	-	43	110	5	24	-
2-Methyl-4,6-dinitrophenol	ug/L	0	5	-	69	-	85	-	1	181	21	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	ug/L	0	5	-	79	-	81	-	5	165	2	-	-	-	-	-	-	-	-	-	-	-
2-Methylphenol (o-Cresol)	ug/L	0	5	-	83	-	92	-	36	114	10	-	-	-	-	-	-	-	-	-	-	-
2-Nitroaniline	ug/L	0	5	-	86	-	95	-	38	144	10	-	-	-	-	-	-	-	-	-	-	-
2-Nitrophenol	ug/L	0	5	-	80	-	89	-	32	130	10	-	-	-	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine	ug/L	0	10	-	108	-	119	-	1	262	10	-	-	-	-	-	-	-	-	-	-	-
3-Methylphenol (m-Cresol)	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3-Nitroaniline	ug/L	0	5	-	89	-	100	-	30	152	12	-	-	-	-	-	-	-	-	-	-	-
4-Bromophenylphenylether	ug/L	0	5	-	78	-	89	-	56	127	12	-	-	-	-	-	-	-	-	-	-	-
4-Chloro-3-methylphenol	ug/L	0	5	-	85	-	94	-	35	130	10	-	-	97	-	102	-	48	127	5	31	-
4-Chloroaniline	ug/L	0	5	-	89	-	93	-	31	126	4	-	-	-	-	-	-	-	-	-	-	-
4-Chlorophenylphenylether	ug/L	0	5	-	79	-	86	-	48	132	8	-	-	-	-	-	-	-	-	-	-	-
4-Methylphenol (p-Cresol)	ug/L	0	10	-	70	-	79	-	25	124	13	-	-	-	-	-	-	-	-	-	-	-
4-Nitroaniline	ug/L	0	5	-	111	-	126	-	3	187	13	-	-	-	-	-	-	-	-	-	-	-
4-Nitrophenol	ug/L	0	5	-	31	-	45	-	1	132	37	-	-	38	-	51	-	1	132	30	34	-
6-Methylchrysene	ug/L	0	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7,12-Dimethylbenz(a)anthracene	ug/L	0	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	ug/L	0	5	-	92	-	101	-	47	132	10	-	-	83	-	85	-	52	131	3	26	-
Acenaphthylene	ug/L	0	5	-	87	-	96	-	35	132	9	-	-	-	-	-	-	-	-	-	-	-
Aniline	ug/L	0	5	-	84	-	85	-	1	164	1	-	-	-	-	-	-	-	-	-	-	-
Anthracene	ug/L	0	5	-	82	-	92	-	39	130	11	-	-	-	-	-	-	-	-	-	-	-
Benzidine	ug/L	0	100	-	0	Q	0	Q	1	200	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)anthracene	ug/L	0	5	-	90	-	101	-	44	138	12	-	-	-	-	-	-	-	-	-	-	-

AQUEOUS SAMPLES

		METHOD BLANK			LAB CONTROL									MATRIX QC								
	UNITS	RESULT	RDL	FLG	LCS %REC	FLG	LCSD %REC	FLG	LCL	UCL	RPD	RPD UCL	RPD FLG	MS %REC	FLG	MSD %REC	FLG	LCL	UCL	RPD	RPD UCL	RPD FLG
Batch: BNA*95177 Method: 8270 - GC/MS for Semivolatile Organics, Capillary column, con't																						
Benzo(a)pyrene	ug/L	0	5	-	76	-	85	-	36	128	11	-	-	-	-	-	-	-	-	-	-	-
Benzo(b)fluoranthene	ug/L	0	5	-	70	-	79	-	24	137	12	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)perylene	ug/L	0	5	-	60	-	64	-	25	157	6	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	ug/L	0	5	-	83	-	94	-	39	142	12	-	-	-	-	-	-	-	-	-	-	-
Benzenethiol	ug/L	0	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzyl Alcohol	ug/L	0	10	-	76	-	83	-	3	161	9	-	-	-	-	-	-	-	-	-	-	-
Benzoic acid	ug/L	0	50	-	11	-	17	-	1	183	45	-	-	-	-	-	-	-	-	-	-	-
Butylbenzylphthalate	ug/L	0	5	-	99	-	110	-	37	151	11	-	-	-	-	-	-	-	-	-	-	-
Chrysene	ug/L	0	5	-	92	-	104	-	43	147	12	-	-	-	-	-	-	-	-	-	-	-
Di-n-octylphthalate	ug/L	0	5	-	91	-	104	-	21	146	13	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,h)anthracene	ug/L	0	5	-	59	-	64	-	30	154	7	-	-	-	-	-	-	-	-	-	-	-
Dibenz(a,h)acridine	ug/L	0	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzofuran	ug/L	0	5	-	81	-	89	-	54	121	9	-	-	-	-	-	-	-	-	-	-	-
Dibutylphthalate	ug/L	0	5	-	84	-	94	-	53	125	12	-	-	-	-	-	-	-	-	-	-	-
Diethylphthalate	ug/L	0	5	-	83	-	91	-	47	142	9	-	-	-	-	-	-	-	-	-	-	-
Dimethylphthalate	ug/L	0	5	-	85	-	94	-	32	142	9	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	ug/L	0	5	-	82	-	97	-	39	137	17	-	-	-	-	-	-	-	-	-	-	-
Fluorene	ug/L	0	5	-	81	-	91	-	59	121	12	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene	ug/L	0	5	-	79	-	88	-	48	129	10	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	ug/L	0	5	-	63	-	56	-	29	116	12	-	-	-	-	-	-	-	-	-	-	-
Hexachlorocyclopentadiene	ug/L	0	5	-	88	-	89	-	18	143	1	-	-	-	-	-	-	-	-	-	-	-
Hexachloroethane	ug/L	0	5	-	68	-	56	-	40	113	18	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-c,d)pyrene	ug/L	0	5	-	51	-	56	-	25	162	10	-	-	-	-	-	-	-	-	-	-	-
Indene	ug/L	0	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isophorone	ug/L	0	5	-	89	-	100	-	27	134	12	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodimethylamine	ug/L	0	5	-	85	-	90	-	17	115	6	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodiphenylamine	ug/L	0	5	-	73	-	82	-	11	110	11	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodi-n-propylamine	ug/L	0	5	-	84	-	90	-	32	136	7	-	-	86	-	91	-	33	135	6	25	-
Nitrobenzene	ug/L	0	5	-	80	-	88	-	39	115	9	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	ug/L	0	5	-	74	-	75	-	39	114	1	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	ug/L	0	5	-	86	-	97	-	54	120	12	-	-	-	-	-	-	-	-	-	-	-
Phenol	ug/L	0	5	-	57	-	63	-	7	110	11	-	-	55	-	59	-	5	110	7	30	-
Pentachlorophenol	ug/L	0	5	-	58	-	66	-	14	163	13	-	-	94	-	97	-	14	176	3	39	-
Pyrene	ug/L	0	5	-	89	-	98	-	52	149	10	-	-	105	-	109	-	45	162	4	34	-
Pyridine	ug/L	0	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Quinoline	ug/L	0	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-chloroethoxy)methane	ug/L	0	5	-	101	-	112	-	37	130	10	-	-	-	-	-	-	-	-	-	-	-
Bis(2-chloroethyl)ether	ug/L	0	5	-	94	-	103	-	40	123	9	-	-	-	-	-	-	-	-	-	-	-

AQUEOUS SAMPLES

		METHOD BLANK			LAB CONTROL									MATRIX QC									
					LCS		LCSD				RPD	RPD		MS		MSD				RPD	RPD		
	UNITS	RESULT	RDL	FLG	%REC	FLG	%REC	FLG	LCL	UCL	RPD	UCL	FLG	%REC	FLG	%REC	FLG	LCL	UCL	RPD	UCL	FLG	
Batch: BNA*95177 Method: 8270 - GC/MS for Semivolatile Organics, Capillary column, con't																							
Bis(2-chloroisopropyl)ether	ug/L	0	5	-	103	-	112	-	36	140	8	-	-	-	-	-	-	-	-	-	-	-	
Bis(2-ethylhexyl)phthalate	ug/L	2.5	10	-	103	-	115	-	41	147	11	-	-	-	-	-	-	-	-	-	-	-	
[2-Fluorobiphenyl]	Percent	76	-	-	99	-	111	-	43	116	-	-	-	99	-	96	-	43	116	-	-	-	
[2-Fluorophenol]	Percent	44	-	-	79	-	88	-	21	100	-	-	-	80	-	85	-	21	100	-	-	-	
[2,4,6-Tribromophenol]	Percent	56	-	-	74	-	81	-	40	123	-	-	-	87	-	91	-	10	123	-	-	-	
[Nitrobenzene-d5]	Percent	79	-	-	96	-	104	-	37	114	-	-	-	93	-	99	-	35	114	-	-	-	
[Phenol-d5]	Percent	27	-	-	59	-	67	-	10	93	-	-	-	57	-	63	-	10	94	-	-	-	
[Terphenyl-d14]	Percent	76	-	-	85	-	94	-	33	141	-	-	-	97	-	101	-	33	141	-	-	-	

: SURROGATE RECOVERIES :
: BC ANALYTICAL : GLEN LAB : 13:31:23 06 OCT 1995 - P. 1 :

METHOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG	LCL	UCL
9509349*1									
8270	2-Fluorophenol	95177	10/03/95	59.8	75.0	80		21	100
	Phenol-d5	95177	10/03/95	43.3	75.0	58		10	94
	Nitrobenzene-d5	95177	10/03/95	46.8	50.0	94		35	114
	2-Fluorobiphenyl	95177	10/03/95	51.2	50.0	102		43	116
	2,4,6-Tribromophenol Rep.	95177	10/03/95	69.7	75.0	93		10	123
	Terphenyl-d14	95177	10/03/95	51.8	50.0	104		33	141
8240	1,2-Dichloroethane-d4 Rep	95500	10/04/95	50.9	50.0	102		87	125
	Toluene-d8	95500	10/04/95	50.8	50.0	102		94	113
	4-Bromofluorobenzene Rep.	95500	10/04/95	50.1	50.0	100		85	111
9509349*2									
8270	2-Fluorophenol	95177	10/03/95	28.5	75.0	38		21	100
	Phenol-d5	95177	10/03/95	20.5	75.0	27		10	94
	Nitrobenzene-d5	95177	10/03/95	21.9	50.0	44		35	114
	2-Fluorobiphenyl	95177	10/03/95	26.4	50.0	53		43	116
	2,4,6-Tribromophenol Rep.	95177	10/03/95	32.3	75.0	43		10	123
	Terphenyl-d14	95177	10/03/95	26.3	50.0	53		33	141
8240	1,2-Dichloroethane-d4 Rep	95494	09/29/95	48.3	50.0	97		87	125
	Toluene-d8	95494	09/29/95	51.5	50.0	103		94	113
	4-Bromofluorobenzene Rep.	95494	09/29/95	48.7	50.0	97		85	111
9509349*3									
8270	2-Fluorophenol	95177	10/03/95	30.3	75.0	40		21	100
	Phenol-d5	95177	10/03/95	19.2	75.0	26		10	94
	Nitrobenzene-d5	95177	10/03/95	44.7	50.0	89		35	114
	2-Fluorobiphenyl	95177	10/03/95	40.1	50.0	80		43	116
	2,4,6-Tribromophenol Rep.	95177	10/03/95	64.4	75.0	86		10	123
	Terphenyl-d14	95177	10/03/95	49.3	50.0	99		33	141
8240	1,2-Dichloroethane-d4 Rep	95494	09/29/95	48.0	50.0	96		87	125
	Toluene-d8	95494	09/29/95	51.1	50.0	102		94	113
	4-Bromofluorobenzene Rep.	95494	09/29/95	49.3	50.0	99		85	111
9509349*4									
8270	2-Fluorophenol	95177	10/03/95	30.9	75.0	41		21	100
	Phenol-d5	95177	10/03/95	20.1	75.0	27		10	94
	Nitrobenzene-d5	95177	10/03/95	39.6	50.0	79		35	114
	2-Fluorobiphenyl	95177	10/03/95	32.1	50.0	64		43	116
	2,4,6-Tribromophenol Rep.	95177	10/03/95	55.5	75.0	74		10	123
	Terphenyl-d14	95177	10/03/95	46.3	50.0	93		33	141
8240	1,2-Dichloroethane-d4 Rep	95500	10/04/95	51.2	50.0	102		87	125
	Toluene-d8	95500	10/04/95	50.5	50.0	101		94	113
	4-Bromofluorobenzene Rep.	95500	10/04/95	49.2	50.0	98		85	111
9509349*5									
82	2-Fluorophenol	95177	10/03/95	24.6	75.0	33		21	100
	Phenol-d5	95177	10/03/95	12.4	75.0	17		10	94
	Nitrobenzene-d5	95177	10/03/95	35.4	50.0	71		35	114
	2-Fluorobiphenyl	95177	10/03/95	30.7	50.0	61		43	116
	2,4,6-Tribromophenol Rep.	95177	10/03/95	44.9	75.0	60		10	123
	Terphenyl-d14	95177	10/03/95	42.2	50.0	84		33	141

: SURROGATE RECOVERIES :
: BC ANALYTICAL : GLEN LAB : 13:31:33 06 OCT 1995 - P. 2 :

MFTHOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG	LCL	UCL
8240	1,2-Dichloroethane-d4 Rep	95500	10/04/95	50.5	50.0	101		87	125
	Toluene-d8	95500	10/04/95	50.9	50.0	102		94	113
	4-Bromofluorobenzene Rep.	95500	10/04/95	50.3	50.0	101		85	111
9509349*6									
8270	2-Fluorophenol	95177	10/03/95	31.0	75.0	41		21	100
	Phenol-d5	95177	10/03/95	20.0	75.0	27		10	94
	Nitrobenzene-d5	95177	10/03/95	39.8	50.0	80		35	114
	2-Fluorobiphenyl	95177	10/03/95	36.1	50.0	72		43	116
	2,4,6-Tribromophenol Rep.	95177	10/03/95	51.6	75.0	69		10	123
	Terphenyl-d14	95177	10/03/95	42.3	50.0	85		33	141
8240	1,2-Dichloroethane-d4 Rep	95500	10/04/95	50.8	50.0	102		87	125
	Toluene-d8	95500	10/04/95	51.8	50.0	104		94	113
	4-Bromofluorobenzene Rep.	95500	10/04/95	50.7	50.0	101		85	111
9509349*7									
8270	2-Fluorophenol	95177	10/03/95	25.2	75.0	34		21	100
	Phenol-d5	95177	10/03/95	14.7	75.0	20		10	94
	Nitrobenzene-d5	95177	10/03/95	34.5	50.0	69		35	114
	2-Fluorobiphenyl	95177	10/03/95	32.4	50.0	65		43	116
	2,4,6-Tribromophenol Rep.	95177	10/03/95	52.6	75.0	70		10	123
	Terphenyl-d14	95177	10/03/95	43.1	50.0	86		33	141
8240	1,2-Dichloroethane-d4 Rep	95494	09/29/95	47.6	50.0	95		87	125
	Toluene-d8	95494	09/29/95	52.1	50.0	104		94	113
	4-Bromofluorobenzene Rep.	95494	09/29/95	49.4	50.0	99		85	111
9509349*8									
8240	1,2-Dichloroethane-d4 Rep	95494	09/29/95	47.5	50.0	95		87	125
	Toluene-d8	95494	09/29/95	49.4	50.0	99		94	113
	4-Bromofluorobenzene Rep.	95494	09/29/95	48.3	50.0	97		85	111
9509349*9									
8240	1,2-Dichloroethane-d4 Rep	95494	09/29/95	47.5	50.0	95		87	125
	Toluene-d8	95494	09/29/95	50.4	50.0	101		94	113
	4-Bromofluorobenzene Rep.	95494	09/29/95	47.3	50.0	95		85	111

BHP

CHAIN OF CUSTODY

G95-09-349 p. 1 of 2

Environmental Technologies International, Inc.
Mauka Tower 737 Bishop Street, 22nd Floor
P.O. Box 3379 Honolulu, HI 96842
(808) 547-3600 Facsimile: (808) 547-3033

PROJECT NO: GMP
ET CLIENT:

SEND RESULTS TO
Name: Tom Shan
Company: BHP Hawaii Refining
Address: 91-325 Komohana St.
City, State, Zip: Kapolei, HI 96707

SEND INVOICE TO
Name: Same as left.
Company:
Address:
City, State, Zip:

Sample No.	Lab No.	No. Containers	Date	Time	Sample Type/Description	Analysis Required	Sampled By
CW-7A		6	9/20/95	0845	Groundwater	8240, 8270, metals, pH, TDS, Cond, Cl, SO4	Z. Shen
CW-7B		6		0945			
CW-6A		6		1100			
CW-6B		6		1115			
CW-8A		6		1405			
CW-8B		6		1535			
CW-6A-R		6		1115			
Trip Blank #3		2		1630	Trip Blank	8240	
Field Blank #2		2		1455	Field Blank		

CUSTODY TRANSFERS

	RELINQUISHED BY: (NAME, SIGNATURE)		DATE	TIME	RECEIVED BY: (NAME, SIGNATURE)		DATE	TIME	COMMENTS
1	Zhiyi Shen	Zhiyi Shen	9/20/95	1630	Sharon Malone	Sharon Malone	9/21/95	10:15	Temp - 6°C
2									
3									
4									

SHIPPING DETAILS

DELIVERED TO SHIPPER BY:
METHOD OF SHIPMENT: DHL
DATE 9/20/95 TIME 1715
RECEIVED FOR LAB: SIGNED
AIRBILL # 7791968402
SAMPLE CONDITION UPON RECEIPT:
DATE TIME

WHITE - CUSTODY SHEET YELLOW - LAB PINK - ET

BHP

CHAIN OF CUSTODY

G95-09-349 p. 2 of 2

Environmental Technologies International, Inc.
Mauka Tower 737 Bishop Street, 22nd Floor
P.O. Box 3379 Honolulu, HI 96842
(808) 547-3600 Facsimile: (808) 547-3033

PROJECT NO:
ET CLIENT:

SEND RESULTS TO
Name: Tony Shan
Company: BHP Hawaii
Address:
City, State, Zip:

SEND INVOICE TO
Name:
Company:
Address:
City, State, Zip:

Sample No.	Lab No.	No. Containers	Date	Time	Sample Type/Description	Analysis Required	Sampled By
Temp. Blank #2			9/20/95		Temperature Blank	Temperature	

CUSTODY TRANSFERS

	RELINQUISHED BY: (NAME, SIGNATURE)		DATE	TIME	RECEIVED BY: (NAME, SIGNATURE)		DATE	TIME	COMMENTS
1	Zung Shan	Zung Shan	9/15/95	1630	Sharon Malone	Sharon Malone	9/21/95	10:15	Temp- 6°C
2									
3									
4									

SHIPPING DETAILS

DELIVERED TO SHIPPER BY:
METHOD OF SHIPMENT: DHL
DATE 9/20/95 TIME 1715
RECEIVED FOR LAB: SIGNED
AIRBILL # 7791968405
SAMPLE CONDITION UPON RECEIPT:
DATE TIME

WHITE - CUSTODY SHEET YELLOW - LAB PINK - ET

B C Analytical

801 Western Avenue
Glendale, CA 91201
818/247-5737
Fax: 818/247-9797

October 9, 1995

BHP, Hawaii Refinery
91-325 Komohana St.
Kapolei, Hi 96707
Attn: Dr. Tony Shan

Dear Dr. Shan,

Enclosed is the analytical report for chemical testing for samples taken on 09/21/95. It includes the following:

1) Analytical Report of results

2) QC summary including LCS/LCSD, MS/MSD, duplicate samples, method blanks, and surrogates.

3) Cross reference sheet containing analyte, date analyzed, method, and batch number.

4) Case narrative explaining QC deficiencies and/or problems encountered in testing.

5) Electronic data in agreed upon format.

If you have any questions, please do not hesitate to call.

Very truly yours,

Brian Moore

Brian Moore
Program Specialist

BCA

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Case Narrative

All quality objectives were met including holding times, LCS/LCSD, MS/MSD, Duplicate samples, and Method Blanks as applicable except:

Semivolatile organics methdo 8270 batch 95178:

Benzidine LCS/LCSD recovery outside of criteria.

Note: MS/MSD recovery reported as "NC" (Not Calculated) is due to the original sample concentration being greater than two times the spike amount added.

No analytical difficulties were encountered with any project samples.

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ANALYTICAL REPORT

LOG NO: G95-09-403

Received: 22 SEP 95

Mailed: OCT - 9 95

Dr. Tony Shan
BHP, Hawaii Refinery
91-325 Komohana St.
Kapolei, HI 96707

Project: GMP

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-403-1	CW-1A	21 SEP 95
09-403-2	CW-1B	21 SEP 95
09-403-3	CW-1C	21 SEP 95
09-403-4	MW-6	21 SEP 95
09-403-5	MW-6R	21 SEP 95

PARAMETER	09-403-1	09-403-2	09-403-3	09-403-4	09-403-5
Digestion (3010), Date	10/01/95	10/01/95	10/01/95	10/01/95	10/01/95
Furnace Digestion (3020), Date	10/01/95	10/01/95	10/01/95	10/01/95	10/01/95
Chloride (300.0), mg/L	1300	11000	13000	1400	1400
Sulfate (300.0), mg/L	710	2300	2400	470	470
Conductivity (120.1), umhos/cm	8100	35000	40000	7700	7600
pH (150.1), Units	7.7	7.4	7.5	7.5	7.4
Dissolved Solids (160.1), mg/L	4700	25000	28000	4400	4300
Antimony (6010), mg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (7060), mg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Barium (6010), mg/L	0.0068	0.030	0.026	0.0080	0.0078
Beryllium (6010), mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium (7131), mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium (6010), mg/L	<0.01	<0.01	<0.01	0.020	<0.01
Cobalt (6010), mg/L	<0.04	<0.04	<0.04	<0.04	<0.04
Iron (6010), mg/L	<0.04	0.045	0.33	0.20	0.12
Lead (7421), mg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Manganese (6010), mg/L	0.051	0.14	0.25	0.080	0.079
Mercury (7470), mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Nickel (6010), mg/L	<0.04	<0.04	<0.04	<0.04	<0.04
Selenium (7740), mg/L	<0.004	<0.004	<0.004	<0.004	<0.004
Sodium (6010), mg/L	1700	7000	7800	1600	1500
Vanadium (6010), mg/L	<0.04	<0.04	<0.04	<0.04	<0.04

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Dr. Tony Shan
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09-403-2	CW-1B	21 SEP 95
09-403-3	CW-1C	21 SEP 95
09-403-4	MW-6	21 SEP 95
09-403-5	MW-6R	21 SEP 95

PARAMETER	09-403-1	09-403-2	09-403-3	09-403-4	09-403-5
B/N,A Ext.Pri.Poll. (8270)					
Date Analyzed	10/03/95	10/03/95	10/03/95	10/03/95	10/05/95
Date Extracted	09/26/95	09/26/95	09/26/95	09/26/95	09/26/95
Dilution Factor, Times	5	1	1	5	5
1,2,4-Trichlorobenzene, ug/L	<30	<5	<5	<30	<30
1,2-Dichlorobenzene, ug/L	<30	<6	<6	<30	<30
1,2-Diphenylhydrazine, ug/L	<30	<5	<5	<30	<30
1,3-Dichlorobenzene, ug/L	<30	<5	<5	<30	<30
1,4-Dichlorobenzene, ug/L	<30	<5	<5	<30	<30
1-Methylnaphthalene, ug/L	220	<10	<10	92	89
2,4,5-Trichlorophenol, ug/L	<30	<6	<6	<30	<30
2,4,6-Trichlorophenol, ug/L	<30	<5	<5	<30	<30
2,4-Dichlorophenol, ug/L	<30	<5	<5	<30	<30
2,4-Dimethylphenol, ug/L	<30	<5	<5	<30	<30
2,4-Dinitrophenol, ug/L	<50	<10	<10	<50	<50
2,4-Dinitrotoluene, ug/L	<30	<5	<5	<30	<30
2,6-Dinitrotoluene, ug/L	<30	<5	<5	<30	<30
2-Chloronaphthalene, ug/L	<30	<6	<6	<30	<30
2-Chlorophenol, ug/L	<30	<5	<5	<30	<30
2-Methyl-4,6-dinitrophenol, ug/L	<30	<5	<5	<30	<30
2-Methylnaphthalene, ug/L	<30	<5	<5	<30	<30
2-Methylphenol (o-Cresol), ug/L	<30	<5	<5	<30	<30
2-Nitroaniline, ug/L	<30	<5	<5	<30	<30

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09-403-3	CW-1C	21 SEP 95
09-403-4	MW-6	21 SEP 95
09-403-5	MW-6R	21 SEP 95

PARAMETER	09-403-1	09-403-2	09-403-3	09-403-4	09-403-5
2-Nitrophenol, ug/L	<30	<5	<5	<30	<30
3,3'-Dichlorobenzidine, ug/L	<100	<20	<20	<100	<100
3-Methylphenol (m-Cresol), ug/L	<50	<10	<10	<50	<50
3-Nitroaniline, ug/L	<30	<5	<5	<30	<30
4-Bromophenylphenylether, ug/L	<30	<5	<5	<30	<30
4-Chloro-3-methylphenol, ug/L	<30	<5	<5	<30	<30
4-Chloroaniline, ug/L	<30	<5	<5	<30	<30
4-Chlorophenylphenylether, ug/L	<30	<5	<5	<30	<30
4-Methylphenol (p-Cresol), ug/L	<40	<8	<8	<40	<40
4-Nitroaniline, ug/L	<30	<6	<6	<30	<30
4-Nitrophenol, ug/L	<30	<5	<5	<30	<30
6-Methylchrysene, ug/L	<50	<10	<10	<50	<50
7,12-Dimethylbenz(a)anthracene, ug/L	<30	<5	<5	<30	<30
Acenaphthene, ug/L	<30	<5	<5	<30	<30
Acenaphthylene, ug/L	<30	<5	<5	<30	<30
Aniline, ug/L	<30	<5	<5	<30	<30
Anthracene, ug/L	<30	<5	<5	<30	<30
Benzidine, ug/L	<500	<100	<100	<500	<500
Benzo(a)anthracene, ug/L	<30	<5	<5	<30	<30
Benzo(a)pyrene, ug/L	<30	<5	<5	<30	<30
Benzo(b)fluoranthene, ug/L	<30	<5	<5	<30	<30
Benzo(g,h,i)perylene, ug/L	<30	<5	<5	<30	<30
Benzo(k)fluoranthene, ug/L	<30	<5	<5	<30	<30

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09-403-4	MW-6	21 SEP 95
09-403-5	MW-6R	21 SEP 95

PARAMETER	09-403-1	09-403-2	09-403-3	09-403-4	09-403-5
Benzenethiol, ug/L	<100	<20	<20	<100	<100
Benzyl Alcohol, ug/L	<30	<5	<5	<30	<30
Benzoic acid, ug/L	<300	<50	<50	<300	<300
Butylbenzylphthalate, ug/L	<30	<5	<5	<30	<30
Chrysene, ug/L	<30	<5	<5	<30	<30
Di-n-octylphthalate, ug/L	<30	<5	<5	<30	<30
Dibenzo(a,h)anthracene, ug/L	<30	<5	<5	<30	<30
Dibenz(a,h)acridine, ug/L	<100	<20	<20	<100	<100
Dibenzofuran, ug/L	<30	<5	<5	<30	<30
Dibutylphthalate, ug/L	<30	<5	<5	<30	<30
Diethylphthalate, ug/L	<30	<5	<5	<30	<30
Dimethylphthalate, ug/L	<30	<5	<5	<30	<30
Fluoranthene, ug/L	<30	<5	<5	<30	<30
Fluorene, ug/L	<30	<5	<5	<30	<30
Hexachlorobenzene, ug/L	<30	<5	<5	<30	<30
Hexachlorobutadiene, ug/L	<30	<5	<5	<30	<30
Hexachlorocyclopentadiene, ug/L	<30	<5	<5	<30	<30
Hexachloroethane, ug/L	<30	<5	<5	<30	<30
Indeno(1,2,3-c,d)pyrene, ug/L	<40	<7	<7	<40	<40
Indene, ug/L	<50	<10	<10	<50	<50
Isophorone, ug/L	<30	<5	<5	<30	<30
N-Nitrosodimethylamine, ug/L	<30	<6	<6	<30	<30
N-Nitrosodiphenylamine, ug/L	<30	<5	<5	<30	<30

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09-403-5	MW-6R	21 SEP 95

PARAMETER	09-403-1	09-403-2	09-403-3	09-403-4	09-403-5
N-Nitrosodi-n-propylamine, ug/L	<30	<6	<6	<30	<30
Nitrobenzene, ug/L	<30	<5	<5	<30	<30
Naphthalene, ug/L	<30	<5	<5	<30	<30
Phenanthrene, ug/L	<30	<5	<5	<30	<30
Phenol, ug/L	<30	<5	<5	<30	<30
Pentachlorophenol, ug/L	<30	<5	<5	<30	<30
Pyrene, ug/L	<30	<5	<5	<30	<30
Pyridine, ug/L	<50	<10	<10	<50	<50
Quinoline, ug/L	<50	<10	<10	<50	<50
Bis(2-chloroethoxy)methane, ug/L	<30	<5	<5	<30	<30
Bis(2-chloroethyl)ether, ug/L	<30	<5	<5	<30	<30
Bis(2-chloroisopropyl)ether, ug/L	<30	<6	<6	<30	<30
Bis(2-ethylhexyl)phthalate, ug/L	<40	<7	<7	<40	<40
Surrogates **					
2-Fluorobiphenyl Reported, ug/L	46.8	39.0	43.1	37.5	41.9
2-Fluorobiphenyl Theo., ug/L	50.0	50.0	50.0	50.0	50.0
2-Fluorophenol Reported, ug/L	53.3	30.8	32.8	24.0	24.9
2-Fluorophenol Theoretical, ug/L	75.0	75.0	75.0	75.0	75.0
2,4,6-Tribromophenol Rep., ug/L	55.9	56.4	54.7	43.4	49.5
2,4,6-Tribromophenol Theo., ug/L	75.0	75.0	75.0	75.0	75.0
Nitrobenzene-d5 Reported, ug/L	41.0	38.0	41.3	31.3	37.2
Nitrobenzene-d5 Theoretical, ug/L	50.0	50.0	50.0	50.0	50.0
Phenol-d5 Reported, ug/L	33.2	20.1	21.5	11.0	16.9

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09-403-3	CW-1C	21 SEP 95
09-403-4	MW-6	21 SEP 95
09-403-5	MW-6R	21 SEP 95

PARAMETER	09-403-1	09-403-2	09-403-3	09-403-4	09-403-5
Phenol-d5 Theoretical, ug/L	75.0	75.0	75.0	75.0	75.0
Terphenyl-d14 Reported, ug/L	47.0	44.0	47.3	40.5	37.7
Terphenyl-d14 Theoretical, ug/L	50.0	50.0	50.0	50.0	50.0

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09-403-2	CW-1B	21 SEP 95
09-403-3	CW-1C	21 SEP 95
09-403-4	MW-6	21 SEP 95
09-403-5	MW-6R	21 SEP 95

PARAMETER	09-403-1	09-403-2	09-403-3	09-403-4	09-403-5
Vol.Pri.Poll. (8240)					
Date Analyzed	10/05/95	10/05/95	10/05/95	10/05/95	10/05/95
Dilution Factor, Times	1	1	1	1	1
1,1,1-Trichloroethane, ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane, ug/L	<1	<1	<1	<1	<1
1,1,2-Trichloroethane, ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane, ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene, ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane, ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene, ug/L	<1	<1	<1	<1	<1
1,2-Dichloropropane, ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene, ug/L	<1	<1	<1	<1	<1
1,4-Dichlorobenzene, ug/L	<1	<1	<1	<1	<1
1,4-Dioxane, ug/L	1500	<500	<500	<500	<500
2-Chloroethylvinylether, ug/L	<5	<5	<5	<5	<5
2-Hexanone, ug/L	<5	<5	<5	<5	<5
Acetone, ug/L	<20	<20	<20	<20	<20
Bromodichloromethane, ug/L	<1	<1	<1	<1	<1
Bromomethane, ug/L	<1	<1	<1	<1	<1
Benzene, ug/L	27	<1	<1	16	15
Bromoform, ug/L	<1	<1	<1	<1	<1
Chlorobenzene, ug/L	<1	<1	<1	<1	<1
Carbon Tetrachloride, ug/L	<1	<1	<1	<1	<1

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09-403-3	CW-1C	21 SEP 95
09-403-4	MW-6	21 SEP 95
09-403-5	MW-6R	21 SEP 95

PARAMETER	09-403-1	09-403-2	09-403-3	09-403-4	09-403-5
Chloroethane, ug/L	<1	<1	<1	<1	<1
Chloroform, ug/L	<1	<1	<1	<1	<1
Chloromethane, ug/L	<1	<1	<1	<1	<1
Carbon Disulfide, ug/L	7.9	3.8	4.7	7.7	7.2
Cyclohexane, ug/L	<5	<5	<5	<5	<5
Dibromochloromethane, ug/L	<1	<1	<1	<1	<1
Ethylene Dibromide, ug/L	2.3	<1	<1	<1	<1
Ethylbenzene, ug/L	<1	<1	<1	<1	<1
Freon 113, ug/L	<2	<2	<2	<2	<2
Methyl ethyl ketone, ug/L	<5	<5	<5	<5	<5
Methyl isobutyl ketone, ug/L	<5	<5	<5	<5	<5
Methylene chloride, ug/L	<2	<2	<2	<2	<2
Styrene, ug/L	<1	<1	<1	<1	<1
Trichloroethene, ug/L	<1	<1	<1	<1	<1
Trichlorofluoromethane, ug/L	<1	<1	<1	<1	<1
Toluene, ug/L	1.7	<1	<1	<1	<1
Tetrachloroethene, ug/L	<1	<1	<1	<1	<1
Vinyl acetate, ug/L	<10	<10	<10	<10	<10
Vinyl chloride, ug/L	<1	<1	<1	<1	<1
Total Xylene Isomers, ug/L	<3	<3	<3	<3	<3
cis-1,2-Dichloroethene, ug/L	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene, ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene, ug/L	<1	<1	<1	<1	<1

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09-403-3	CW-1C	21 SEP 95
09-403-4	MW-6	21 SEP 95
09-403-5	MW-6R	21 SEP 95

PARAMETER	09-403-1	09-403-2	09-403-3	09-403-4	09-403-5
trans-1,3-Dichloropropene, ug/L	<1	<1	<1	<1	<1
Surrogates **					
1,2-Dichloroethane-d4 Rep., ug/L	49.9	51.3	52.2	51.2	50.7
1,2-Dichloroethane-d4 Theo., ug/L	50.0	50.0	50.0	50.0	50.0
4-Bromofluorobenzene Rep., ug/L	51.5	52.1	52.0	52.8	52.0
4-Bromofluorobenzene Theo., ug/L	50.0	50.0	50.0	50.0	50.0
Toluene-d8 Reported, ug/L	49.2	48.7	49.2	49.8	49.6
Toluene-d8 Theo., ug/L	50.0	50.0	50.0	50.0	50.0

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Project: GMP

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-403-6	Trip Blank	21 SEP 95
09-403-7	Field Blank	21 SEP 95

PARAMETER	09-403-6	09-403-7
Vol.Pri.Poll. (8240)		
Date Analyzed	10/05/95	10/05/95
Dilution Factor, Times	1	1
1,1,1-Trichloroethane, ug/L	<1	<1
1,1,2,2-Tetrachloroethane, ug/L	<1	<1
1,1,2-Trichloroethane, ug/L	<1	<1
1,1-Dichloroethane, ug/L	<1	<1
1,1-Dichloroethene, ug/L	<1	<1
1,2-Dichloroethane, ug/L	<1	<1
1,2-Dichlorobenzene, ug/L	<1	<1
1,2-Dichloropropane, ug/L	<1	<1
1,3-Dichlorobenzene, ug/L	<1	<1
1,4-Dichlorobenzene, ug/L	<1	<1
1,4-Dioxane, ug/L	<500	<500
2-Chloroethylvinylether, ug/L	<5	<5
2-Hexanone, ug/L	<5	<5
Acetone, ug/L	<20	<20
Bromodichloromethane, ug/L	<1	<1
Bromomethane, ug/L	<1	<1
Benzene, ug/L	<1	<1
Bromoform, ug/L	<1	<1
Chlorobenzene, ug/L	<1	<1
Carbon Tetrachloride, ug/L	<1	<1
Chloroethane, ug/L	<1	<1
Chloroform, ug/L	<1	<1
Chloromethane, ug/L	<1	<1

BCA

B C Analytical

801 Western Avenue
Glendale, CA 91201
818/247-5737
Fax: 818/247-9797

LOG NO: G95-09-403

Received: 22 SEP 95

Dr. Tony Shan
BHP, Hawaii Refinery
91-325 Komohana St.
Kapolei, HI 96707

Project: GMP

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-403-6	Trip Blank	21 SEP 95
09-403-7	Field Blank	21 SEP 95

PARAMETER	09-403-6	09-403-7
Carbon Disulfide, ug/L	<2	<2
Cyclohexane, ug/L	<5	<5
Dibromochloromethane, ug/L	<1	<1
Ethylene Dibromide, ug/L	<1	<1
Ethylbenzene, ug/L	<1	<1
Freon 113, ug/L	<2	<2
Methyl ethyl ketone, ug/L	<5	<5
Methyl isobutyl ketone, ug/L	<5	<5
Methylene chloride, ug/L	<2	<2
Styrene, ug/L	<1	<1
Trichloroethene, ug/L	<1	<1
Trichlorofluoromethane, ug/L	<1	<1
Toluene, ug/L	<1	<1
Tetrachloroethene, ug/L	<1	<1
Vinyl acetate, ug/L	<10	<10
Vinyl chloride, ug/L	<1	<1
Total Xylene Isomers, ug/L	<3	<3
cis-1,2-Dichloroethene, ug/L	<1	<1
cis-1,3-Dichloropropene, ug/L	<1	<1
trans-1,2-Dichloroethene, ug/L	<1	<1
trans-1,3-Dichloropropene, ug/L	<1	<1
Surrogates **		
1,2-Dichloroethane-d4 Rep., ug/L	51.4	51.1
1,2-Dichloroethane-d4 Theo., ug/L	50.0	50.0
4-Bromofluorobenzene Rep., ug/L	53.6	53.2
4-Bromofluorobenzene Theo., ug/L	50.0	50.0

BCA

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Project: GMP

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-403-6	Trip Blank	21 SEP 95
09-403-7	Field Blank	21 SEP 95

PARAMETER	09-403-6	09-403-7
Toluene-d8 Reported, ug/L	49.4	49.2
Toluene-d8 Theo., ug/L	50.0	50.0

Jane Freemyer, Program Manager

The analytical results within this report relate only to the specific compounds and samples investigated and may not necessarily reflect other apparently similar material from the same or a similar location.

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BCA

: ORDER PLACED FOR CLIENT: BHP Hawaii Refinery 9509403 :
: BC ANALYTICAL : GLEN LAB : 08:03:49 09 OCT 1995 - P. 1 :

SAMPLES...	SAMPLE DESCRIPTION..	DETERM.....	DATE..... ANALYZED	METHOD.....	EQUIP.	BATCH..	ID.NO
9509403*1	CW-1A	DIG,AQ.HCL	10.01.95	3010		951545	7093
		DIG,AQ,GFA	10.01.95	3020		951546	7093
		ANIONS,CL	09.23.95	300.0	533-23	950923	8488
		ANIONS,SO4	09.23.95	300.0	533-23	950923	8488
		COND	10.02.95	120.1	533-11	9595	8604
		PH	09.22.95	150.1	533-21	95435	
		TDS	09.27.95	160.1		9591	
		SB	10.02.95	6010	535-02	951545	8488
		AS,GFA	10.02.95	7060	534-07	951546	7396
		BA	10.02.95	6010	535-02	951545	8488
		BE	10.02.95	6010	535-02	951545	8488
		CD,GFA	10.03.95	7131	534-07	951546	7396
		CR	10.02.95	6010	535-02	951545	8488
		CO	10.02.95	6010	535-02	951545	8488
		FE	10.02.95	6010	535-02	951545	8488
		PB,GFA	10.02.95	7421	534-07	951546	7396
		MN	10.02.95	6010	535-02	951545	8488
		HG	10.03.95	7470	534-06	951570	7093
		NI	10.02.95	6010	535-02	951545	8488
		SE,GFA	10.02.95	7740	534-07	951546	7396
		NA	10.02.95	6010	535-02	951545	8488
		V	10.02.95	6010	535-02	951545	8488
		BNA.8270.BHP	10.03.95	8270	537-14	95178	6763
		VOA.8240.BHP	10.05.95	8240	537-01	95343	6750
9509403*2	CW-1B	DIG,AQ.HCL	10.01.95	3010		951545	7093
		DIG,AQ,GFA	10.01.95	3020		951546	7093
		ANIONS,CL	09.23.95	300.0	533-23	950923	8488
		ANIONS,SO4	09.23.95	300.0	533-23	950923	8488
		COND	10.02.95	120.1	533-11	9595	8604
		PH	09.22.95	150.1	533-21	95435	
		TDS	09.27.95	160.1		9591	
		SB	10.02.95	6010	535-02	951545	8488
		AS,GFA	10.02.95	7060	534-07	951546	7396
		BA	10.02.95	6010	535-02	951545	8488
		BE	10.02.95	6010	535-02	951545	8488
		CD,GFA	10.03.95	7131	534-07	951546	7396
		CR	10.02.95	6010	535-02	951545	8488
		CO	10.02.95	6010	535-02	951545	8488
		FE	10.02.95	6010	535-02	951545	8488
		PB,GFA	10.02.95	7421	534-07	951546	7396
		MN	10.02.95	6010	535-02	951545	8488
		HG	10.03.95	7470	534-06	951570	7093
		NI	10.02.95	6010	535-02	951545	8488
		SE,GFA	10.02.95	7740	534-07	951546	7396

Notes: Equipment = BC Analytical identification number for a particular piece of analytical equipment.

ID.NO = BC Analytical employee identification number of analyst.

SAMPLES...	SAMPLE DESCRIPTION..	DETERM.....	DATE..... ANALYZED	METHOD.....	EQUIP.	BATCH..	ID.NO
		NA	10.02.95	6010	535-02	951545	8488
		V	10.02.95	6010	535-02	951545	8488
		BNA.8270.BHP	10.03.95	8270	537-14	95178	6763
		VOA.8240.BHP	10.05.95	8240	537-01	95343	6750
)509403*3	CW-1C	DIG,AQ.HCL	10.01.95	3010		951545	7093
		DIG,AQ,GFA	10.01.95	3020		951546	7093
		ANIONS,CL	09.23.95	300.0	533-23	950923	8488
		ANIONS,SO4	09.23.95	300.0	533-23	950923	8488
		COND	10.02.95	120.1	533-11	9595	8604
		PH	09.22.95	150.1	533-21	95435	
		TDS	09.27.95	160.1		9591	
		SB	10.02.95	6010	535-02	951545	8488
		AS,GFA	10.02.95	7060	534-07	951546	7396
		BA	10.02.95	6010	535-02	951545	8488
		BE	10.02.95	6010	535-02	951545	8488
		CD,GFA	10.03.95	7131	534-07	951546	7396
		CR	10.02.95	6010	535-02	951545	8488
		CO	10.02.95	6010	535-02	951545	8488
		FE	10.02.95	6010	535-02	951545	8488
		PB,GFA	10.02.95	7421	534-07	951546	7396
		MN	10.02.95	6010	535-02	951545	8488
		HG	10.03.95	7470	534-06	951570	7093
		NI	10.02.95	6010	535-02	951545	8488
		SE,GFA	10.02.95	7740	534-07	951546	7396
		NA	10.02.95	6010	535-02	951545	8488
		V	10.02.95	6010	535-02	951545	8488
		BNA.8270.BHP	10.03.95	8270	537-14	95178	6763
		VOA.8240.BHP	10.05.95	8240	537-01	95343	6750
)509403*4	MW-6	DIG,AQ.HCL	10.01.95	3010		951545	7093
		DIG,AQ,GFA	10.01.95	3020		951546	7093
		ANIONS,CL	09.23.95	300.0	533-23	950923	8488
		ANIONS,SO4	09.23.95	300.0	533-23	950923	8488
		COND	10.02.95	120.1	533-11	9595	8604
		PH	09.22.95	150.1	533-21	95435	
		TDS	09.27.95	160.1		9591	
		SB	10.02.95	6010	535-02	951545	8488
		AS,GFA	10.02.95	7060	534-07	951546	7396
		BA	10.02.95	6010	535-02	951545	8488
		BE	10.02.95	6010	535-02	951545	8488
		CD,GFA	10.03.95	7131	534-07	951546	7396
		CR	10.02.95	6010	535-02	951545	8488
		CO	10.02.95	6010	535-02	951545	8488
		FE	10.02.95	6010	535-02	951545	8488
		PB,GFA	10.02.95	7421	534-07	951546	7396

Notes: Equipment = BC Analytical identification number for a particular piece of analytical equipment.

ID.NO = BC Analytical employee identification number of analyst.

SAMPLES...	SAMPLE DESCRIPTION..	DETERM.....	DATE..... ANALYZED	METHOD.....	EQUIP.	BATCH..	ID.NO
		MN	10.02.95	6010	535-02	951545	8488
		HG	10.03.95	7470	534-06	951570	7093
		NI	10.02.95	6010	535-02	951545	8488
		SE,GFA	10.02.95	7740	534-07	951546	7396
		NA	10.02.95	6010	535-02	951545	8488
		V	10.02.95	6010	535-02	951545	8488
		BNA.8270.BHP	10.03.95	8270	537-14	95178	6763
		VOA.8240.BHP	10.05.95	8240	537-01	95343	6750
9509403*5	MW-6R	DIG,AQ.HCL	10.01.95	3010		951545	7093
		DIG,AQ,GFA	10.01.95	3020		951546	7093
		ANIONS,CL	09.23.95	300.0	533-23	950923	8488
		ANIONS,SO4	09.23.95	300.0	533-23	950923	8488
		COND	10.02.95	120.1	533-11	9595	8604
		PH	09.22.95	150.1	533-21	95435	
		TDS	09.27.95	160.1		9591	
		SB	10.02.95	6010	535-02	951545	8488
		AS,GFA	10.02.95	7060	534-07	951546	7396
		BA	10.02.95	6010	535-02	951545	8488
		BE	10.02.95	6010	535-02	951545	8488
		CD,GFA	10.03.95	7131	534-07	951546	7396
		CR	10.02.95	6010	535-02	951545	8488
		CO	10.02.95	6010	535-02	951545	8488
		FE	10.02.95	6010	535-02	951545	8488
		PB,GFA	10.02.95	7421	534-07	951546	7396
		MN	10.02.95	6010	535-02	951545	8488
		HG	10.03.95	7470	534-06	951570	7093
		NI	10.02.95	6010	535-02	951545	8488
		SE,GFA	10.02.95	7740	534-07	951546	7396
		NA	10.02.95	6010	535-02	951545	8488
		V	10.02.95	6010	535-02	951545	8488
		BNA.8270.BHP	10.05.95	8270	537-14	95178	6763
		VOA.8240.BHP	10.05.95	8240	537-01	95343	6750
9509403*6	Trip Blank	VOA.8240.BHP	10.05.95	8240	537-01	95343	7430
9509403*7	Field Blank	VOA.8240.BHP	10.05.95	8240	537-01	95343	7430

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BC ANA(CAL, GLENDALE
QC REPO... FOR 9509403
DATE PRINTED: 09 OCT 1995

AQUEOUS SAMPLES

		METHOD BLANK			LAB CONTROL									MATRIX QC								
					LCS		LCSD					RPD	RPD	MS		MSD					RPD	RPD
	UNITS	RESULT	RDL	FLG	%REC	FLG	%REC	FLG	LCL	UCL	RPD	UCL	FLG	%REC	FLG	%REC	FLG	LCL	UCL	RPD	UCL	FLG
Batch: TDS*9591 Method: 160.1 - Residue, Filterable, Gravimetric, Dried at 180 C																						
Dissolved Solids	mg/L	0	10	-	100	-	99	-	91	107	1	-	-	104	-	104	-	85	112	0	15	-
Batch: COND*9595 Method: 120.1 - Conductance, Specific Conductance																						
Conductivity	umhos/cm	-	-	-	99	-	99	-	95	105	0	15	-	8100	*	8100	*	-	-	0	15	-
Batch: PH*95435 Method: 150.1 - pH, Electrometric																						
pH	Units	-	-	-	100	-	100	-	99	101	0	20	-	8.2	*	8.2	*	-	-	-	20	-
Batch: 950923 Method: 300.0 - Inorganic anions in water, Ion chromatograph																						
Chloride	mg/L	0	0.5	-	96	-	95	-	90	110	2	-	-	105	-	116	-	63	125	4	15	-
Sulfate	mg/L	0	0.1	-	97	-	93	-	90	110	4	-	-	89	-	89	-	73	116	0	15	-
Batch: 951545 Method: 6010 - ICAP Metals																						
Barium	mg/L	0	0.005	-	96	-	96	-	75	114	1	-	-	92	-	95	-	74	110	3	20	-
Beryllium	mg/L	0	0.001	-	97	-	96	-	79	110	1	-	-	93	-	97	-	71	113	3	20	-
Cobalt	mg/L	0	0.04	-	98	-	96	-	71	112	1	-	-	94	-	97	-	67	110	3	20	-
Chromium	mg/L	0	0.01	-	99	-	98	-	76	110	1	-	-	93	-	98	-	68	111	6	20	-
Iron	mg/L	0	0.04	-	100	-	99	-	80	110	1	-	-	97	-	101	-	68	129	4	20	-
Manganese	mg/L	0	0.01	-	98	-	97	-	76	113	1	-	-	93	-	100	-	70	124	5	20	-
Sodium	mg/L	0	0.5	-	97	-	96	-	83	112	1	-	-	103	-	102	-	77	118	0	20	-
Nickel	mg/L	0	0.04	-	100	-	97	-	73	114	3	-	-	96	-	101	-	65	113	5	20	-
Antimony	mg/L	0	0.1	-	95	-	95	-	79	115	0	-	-	95	-	97	-	83	112	1	20	-
Vanadium	mg/L	0	0.04	-	96	-	94	-	80	110	2	-	-	96	-	99	-	72	110	3	20	-
Batch: AS,GFA*951546 Method: 7060 - Arsenic, AA, Furnace																						
Arsenic	mg/L	0	0.002	-	99	-	101	-	63	122	2	-	-	114	-	104	-	52	130	9	20	-
Batch: CD,GFA*951546 Method: 7131 - Cadmium, AA, Furnace																						
Cadmium	mg/L	0	0.001	-	114	-	111	-	67	134	3	-	-	124	-	121	-	63	157	3	20	-
Batch: PB,GFA*951546 Method: 7421 - Lead, AA, Furnace																						
Lead	mg/L	0.0008	0.002	-	105	-	105	-	85	112	0	-	-	74	-	79	-	54	144	7	20	-
Batch: SE,GFA*951546 Method: 7740 - Selenium, AA, Furnace																						
Selenium	mg/L	0.0008	0.004	-	106	-	104	-	74	114	2	-	-	38	-	38	-	4	140	1	20	-
Batch: HG*951570 Method: 7470 - Mercury (Liquid), Cold Vapor AA, Manual																						
Mercury	mg/L	0	0.0002	-	88	-	98	-	71	123	11	-	-	80	-	85	-	53	143	6	20	-

AQUEOUS SAMPLES

		METHOD BLANK			LAB CONTROL									MATRIX QC								
	UNITS	RESULT	RDL	FLG	LCS %REC	FLG	LCSD %REC	FLG	LCL	UCL	RPD	RPD UCL	RPD FLG	MS %REC	FLG	MSD %REC	FLG	LCL	UCL	RPD	RPD UCL	RPD FLG
Batch: VOA*95343 Method: 8240 - GC/MS for Volatile Organics																						
1,1,1-Trichloroethane	ug/L	0	1	-	86	-	-	-	78	119	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	ug/L	0	1	-	108	-	-	-	78	137	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	ug/L	0	1	-	100	-	-	-	83	127	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	ug/L	0	1	-	97	-	-	-	76	122	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	ug/L	0	1	-	87	-	-	-	69	126	-	-	-	78	-	79	-	48	127	2	27	-
1,2-Dichloroethane	ug/L	0	1	-	104	-	-	-	84	119	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	ug/L	0	1	-	103	-	-	-	85	118	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	ug/L	0	1	-	96	-	-	-	84	117	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	ug/L	0	1	-	100	-	-	-	84	118	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	ug/L	0	1	-	103	-	-	-	85	117	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dioxane	ug/L	0	500	-	127	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chloroethylvinylether	ug/L	0	5	-	131	-	-	-	35	174	-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone	ug/L	0	5	-	118	-	-	-	58	158	-	-	-	-	-	-	-	-	-	-	-	-
Acetone	ug/L	0	20	-	106	-	-	-	16	170	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	ug/L	0	1	-	111	-	-	-	84	118	-	-	-	-	-	-	-	-	-	-	-	-
Bromomethane	ug/L	0	1	-	78	-	-	-	58	139	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	ug/L	0	1	-	94	-	-	-	74	122	-	-	-	76	-	74	-	65	125	2	26	-
Bromoform	ug/L	0	1	-	121	-	-	-	80	131	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	ug/L	0	1	-	96	-	-	-	85	115	-	-	-	91	-	92	-	76	132	1	23	-
Carbon Tetrachloride	ug/L	0	1	-	87	-	-	-	72	122	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	ug/L	0	1	-	119	-	-	-	52	143	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	ug/L	0	1	-	103	-	-	-	81	120	-	-	-	-	-	-	-	-	-	-	-	-
Chloromethane	ug/L	0	1	-	88	-	-	-	62	127	-	-	-	-	-	-	-	-	-	-	-	-
Carbon Disulfide	ug/L	0	2	-	89	-	-	-	65	128	-	-	-	-	-	-	-	-	-	-	-	-
Cyclohexane	ug/L	0	5	-	63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	ug/L	0	1	-	113	-	-	-	82	124	-	-	-	-	-	-	-	-	-	-	-	-
Ethylene Dibromide	ug/L	0	1	-	105	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	ug/L	0	1	-	90	-	-	-	84	117	-	-	-	-	-	-	-	-	-	-	-	-
Freon 113	ug/L	0	2	-	81	-	-	-	66	133	-	-	-	-	-	-	-	-	-	-	-	-
Methyl ethyl ketone	ug/L	0	5	-	109	-	-	-	46	161	-	-	-	-	-	-	-	-	-	-	-	-
Methyl isobutyl ketone	ug/L	0	5	-	119	-	-	-	66	156	-	-	-	-	-	-	-	-	-	-	-	-
Methylene chloride	ug/L	0	2	-	89	-	-	-	78	120	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	ug/L	0	1	-	93	-	-	-	85	116	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	ug/L	0	1	-	91	-	-	-	78	119	-	-	-	76	-	76	-	63	122	0	21	-
Trichlorofluoromethane	ug/L	0	1	-	90	-	-	-	66	134	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	ug/L	0	1	-	95	-	-	-	84	116	-	-	-	90	-	92	-	63	132	3	22	-
Tetrachloroethene	ug/L	0	1	-	88	-	-	-	83	117	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl acetate	ug/L	0	10	-	105	-	-	-	76	134	-	-	-	-	-	-	-	-	-	-	-	-

AQUEOUS SAMPLES

		METHOD BLANK			LAB CONTROL									MATRIX QC								
					LCS		LCSD				RPD	RPD		MS		MSD				RPD	RPD	
	UNITS	RESULT	RDL	FLG	%REC	FLG	%REC	FLG	LCL	UCL	RPD	UCL	FLG	%REC	FLG	%REC	FLG	LCL	UCL	RPD	UCL	FLG
Batch: VOA*95343 Method: 8240 - GC/MS for Volatile Organics, con't																						
Vinyl chloride	ug/L	0	1	-	95	-	-	-	66	132	-	-	-	-	-	-	-	-	-	-	-	-
Total Xylene Isomers	ug/L	0	3	-	96	-	-	-	86	114	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	ug/L	0	1	-	100	-	-	-	78	121	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	ug/L	0	1	-	102	-	-	-	81	123	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	ug/L	0	1	-	98	-	-	-	73	123	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene	ug/L	0	1	-	105	-	-	-	78	122	-	-	-	-	-	-	-	-	-	-	-	-
[1,2-Dichloroethane-d4]	Percent	107	-	-	106	-	-	-	87	125	-	-	-	100	-	103	-	87	125	-	-	-
[4-Bromofluorobenzene]	Percent	104	-	-	104	-	-	-	85	111	-	-	-	109	-	108	-	85	111	-	-	-
[Toluene-d8]	Percent	99	-	-	95	-	-	-	94	113	-	-	-	99	-	99	-	94	113	-	-	-

AQUEOUS SAMPLES

		METHOD BLANK			LAB CONTROL									MATRIX QC								
					LCS		LCSD					RPD	RPD	MS		MSD					RPD	RPD
	UNITS	RESULT	RDL	FLG	%REC	FLG	%REC	FLG	LCL	UCL	RPD	UCL	FLG	%REC	FLG	%REC	FLG	LCL	UCL	RPD	UCL	FLG
Batch: BNA*95178 Method: 8270 - GC/MS for Semivolatile Organics, Capillary column																						
1,2,4-Trichlorobenzene	ug/L	0	5	-	59	-	80	-	44	116	30	-	-	84	-	81	-	44	120	4	39	-
1,2-Dichlorobenzene	ug/L	0	5	-	56	-	74	-	35	127	27	-	-	-	-	-	-	-	-	-	-	-
1,2-Diphenylhydrazine	ug/L	0	5	-	69	-	91	-	43	128	27	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	ug/L	0	5	-	56	-	74	-	32	110	28	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	ug/L	0	5	-	55	-	74	-	35	110	28	-	-	82	-	76	-	39	110	8	34	-
1-Methylnaphthalene	ug/L	0	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	ug/L	0	5	-	78	-	98	-	23	154	23	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	ug/L	0	5	-	58	-	73	-	37	144	23	-	-	-	-	-	-	-	-	-	-	-
2,4-Dichlorophenol	ug/L	0	5	-	64	-	82	-	39	129	25	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	ug/L	0	5	-	57	-	72	-	32	119	23	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	ug/L	0	10	-	43	-	68	-	1	191	45	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene	ug/L	0	5	-	68	-	89	-	39	139	27	-	-	76	-	71	-	48	139	7	25	-
2,6-Dinitrotoluene	ug/L	0	5	-	66	-	86	-	50	152	26	-	-	-	-	-	-	-	-	-	-	-
2-Chloronaphthalene	ug/L	0	5	-	45	-	60	-	32	110	28	-	-	-	-	-	-	-	-	-	-	-
2-Chlorophenol	ug/L	0	5	-	61	-	77	-	35	116	23	-	-	86	-	80	-	43	110	8	24	-
2-Methyl-4,6-dinitrophenol	ug/L	0	5	-	59	-	84	-	1	181	35	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	ug/L	0	5	-	64	-	84	-	5	165	27	-	-	-	-	-	-	-	-	-	-	-
2-Methylphenol (o-Cresol)	ug/L	0	5	-	65	-	82	-	36	114	24	-	-	-	-	-	-	-	-	-	-	-
2-Nitroaniline	ug/L	0	5	-	64	-	82	-	38	144	25	-	-	-	-	-	-	-	-	-	-	-
2-Nitrophenol	ug/L	0	5	-	62	-	81	-	32	130	27	-	-	-	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine	ug/L	0	10	-	90	-	107	-	1	262	17	-	-	-	-	-	-	-	-	-	-	-
3-Methylphenol (m-Cresol)	ug/L	0	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3-Nitroaniline	ug/L	0	5	-	68	-	87	-	30	152	25	-	-	-	-	-	-	-	-	-	-	-
4-Bromophenylphenylether	ug/L	0	5	-	64	-	85	-	56	127	28	-	-	-	-	-	-	-	-	-	-	-
4-Chloro-3-methylphenol	ug/L	0	5	-	68	-	85	-	35	130	22	-	-	121	-	116	-	48	127	5	31	-
4-Chloroaniline	ug/L	0	5	-	74	-	89	-	31	126	18	-	-	-	-	-	-	-	-	-	-	-
4-Chlorophenylphenylether	ug/L	0	5	-	62	-	82	-	48	132	28	-	-	-	-	-	-	-	-	-	-	-
4-Methylphenol (p-Cresol)	ug/L	0	10	-	56	-	68	-	25	124	20	-	-	-	-	-	-	-	-	-	-	-
4-Nitroaniline	ug/L	0	5	-	83	-	98	-	3	187	17	-	-	-	-	-	-	-	-	-	-	-
4-Nitrophenol	ug/L	0	5	-	34	-	43	-	1	132	23	-	-	109	-	111	-	1	132	1	34	-
6-Methylchrysene	ug/L	0	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7,12-Dimethylbenz(a)anthracene	ug/L	0	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	ug/L	0	5	-	73	-	94	-	47	132	26	-	-	99	-	92	-	52	131	8	26	-
Acenaphthylene	ug/L	0	5	-	69	-	88	-	35	132	25	-	-	-	-	-	-	-	-	-	-	-
Aniline	ug/L	0	5	-	67	-	82	-	1	164	21	-	-	-	-	-	-	-	-	-	-	-
Anthracene	ug/L	0	5	-	64	-	84	-	39	130	27	-	-	-	-	-	-	-	-	-	-	-
Benzidine	ug/L	0	100	-	775	Q	0	Q	1	200	200	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)anthracene	ug/L	0	5	-	71	-	93	-	44	138	27	-	-	-	-	-	-	-	-	-	-	-

AQUEOUS SAMPLES

		METHOD BLANK			LAB CONTROL									MATRIX QC									
	UNITS	RESULT	RDL	FLG	LCS %REC	FLG	LCSD %REC	FLG	LCL	UCL	RPD	RPD UCL	RPD FLG	MS %REC	FLG	MSD %REC	FLG	LCL	UCL	RPD	RPD UCL	RPD FLG
Batch: BNA*95178 Method: 8270 - GC/MS for Semivolatile Organics, Capillary column, con't																						
Benzo(a)pyrene	ug/L	0	5	-	53	-	73	-	36	128	31	-	-	-	-	-	-	-	-	-	-	-
Benzo(b)fluoranthene	ug/L	0	5	-	46	-	68	-	24	137	39	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)perylene	ug/L	0	5	-	59	-	56	-	25	157	7	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	ug/L	0	5	-	57	-	89	-	39	142	44	-	-	-	-	-	-	-	-	-	-	-
Benzenethiol	ug/L	0	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzyl Alcohol	ug/L	0	10	-	52	-	71	-	3	161	32	-	-	-	-	-	-	-	-	-	-	-
Benzoic acid	ug/L	0	50	-	25	-	37	-	1	183	40	-	-	-	-	-	-	-	-	-	-	-
Butylbenzylphthalate	ug/L	0	5	-	82	-	120	-	37	151	38	-	-	-	-	-	-	-	-	-	-	-
Chrysene	ug/L	0	5	-	76	-	98	-	43	147	25	-	-	-	-	-	-	-	-	-	-	-
Di-n-octylphthalate	ug/L	0	5	-	54	-	111	-	21	146	70	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,h)anthracene	ug/L	0	5	-	55	-	52	-	30	154	6	-	-	-	-	-	-	-	-	-	-	-
Dibenz(a,h)acridine	ug/L	0	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzofuran	ug/L	0	5	-	63	-	81	-	54	121	26	-	-	-	-	-	-	-	-	-	-	-
Dibutylphthalate	ug/L	4.3	5	-	71	-	92	-	53	125	26	-	-	-	-	-	-	-	-	-	-	-
Diethylphthalate	ug/L	0	5	-	69	-	87	-	47	142	24	-	-	-	-	-	-	-	-	-	-	-
Dimethylphthalate	ug/L	0	5	-	67	-	87	-	32	142	26	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	ug/L	0	5	-	62	-	81	-	39	137	26	-	-	-	-	-	-	-	-	-	-	-
Fluorene	ug/L	0	5	-	65	-	83	-	59	121	24	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene	ug/L	0	5	-	65	-	85	-	48	129	26	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	ug/L	0	5	-	56	-	74	-	29	116	28	-	-	-	-	-	-	-	-	-	-	-
Hexachlorocyclopentadiene	ug/L	0	5	-	101	-	138	-	18	143	31	-	-	-	-	-	-	-	-	-	-	-
Hexachloroethane	ug/L	0	5	-	58	-	74	-	40	113	25	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-c,d)pyrene	ug/L	0	5	-	48	-	46	-	25	162	6	-	-	-	-	-	-	-	-	-	-	-
Indene	ug/L	0	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isophorone	ug/L	0	5	-	69	-	90	-	27	134	27	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodimethylamine	ug/L	0	5	-	66	-	86	-	17	115	26	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodiphenylamine	ug/L	0	5	-	57	-	73	-	11	110	26	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodi-n-propylamine	ug/L	0	5	-	62	-	76	-	32	136	20	-	-	92	-	88	-	33	135	4	25	-
Nitrobenzene	ug/L	0	5	-	60	-	80	-	39	115	29	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	ug/L	0	5	-	59	-	79	-	39	114	29	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	ug/L	0	5	-	67	-	89	-	54	120	28	-	-	-	-	-	-	-	-	-	-	-
Phenol	ug/L	0	5	-	45	-	57	-	7	110	24	-	-	50	-	47	-	5	110	5	30	-
Pentachlorophenol	ug/L	0	5	-	53	-	71	-	14	163	29	-	-	99	-	94	-	14	176	5	39	-
Pyrene	ug/L	0	5	-	76	-	111	-	52	149	37	-	-	117	-	107	-	45	162	9	34	-
Pyridine	ug/L	0	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Quinoline	ug/L	0	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-chloroethoxy)methane	ug/L	0	5	-	76	-	101	-	37	130	28	-	-	-	-	-	-	-	-	-	-	-
Bis(2-chloroethyl)ether	ug/L	0	5	-	70	-	90	-	40	123	26	-	-	-	-	-	-	-	-	-	-	-

AQUEOUS SAMPLES

		METHOD BLANK			LAB CONTROL									MATRIX QC								
	UNITS	RESULT	RDL	FLG	LCS %REC	FLG	LCSD %REC	FLG	LCL	UCL	RPD	RPD UCL	RPD FLG	MS %REC	FLG	MSD %REC	FLG	LCL	UCL	RPD	RPD UCL	RPD FLG
Batch: BNA*95178 Method: 8270 - GC/MS for Semivolatile Organics, Capillary column, con't																						
Bis(2-chloroisopropyl)ether	ug/L	0	5	-	77	-	101	-	36	140	27	-	-	-	-	-	-	-	-	-	-	-
Bis(2-ethylhexyl)phthalate	ug/L	5.7	10	-	84	-	120	-	41	147	36	-	-	-	-	-	-	-	-	-	-	-
[2-Fluorobiphenyl]	Percent	90	-	-	82	-	105	-	43	116	-	-	-	108	-	105	-	43	116	-	-	-
[2-Fluorophenol]	Percent	70	-	-	59	-	78	-	21	100	-	-	-	79	-	73	-	21	100	-	-	-
[2,4,6-Tribromophenol]	Percent	67	-	-	63	-	81	-	40	123	-	-	-	85	-	76	-	10	123	-	-	-
[Nitrobenzene-d5]	Percent	81	-	-	73	-	95	-	37	114	-	-	-	92	-	87	-	35	114	-	-	-
[Phenol-d5]	Percent	53	-	-	46	-	59	-	10	93	-	-	-	53	-	49	-	10	94	-	-	-
[Terphenyl-d14]	Percent	94	-	-	77	-	110	-	33	141	-	-	-	106	-	96	-	33	141	-	-	-

: SURROGATE RECOVERIES :
: BC ANALYTICAL : GLEN LAB : 08:04:21 09 OCT 1995 - P. 1 :

METHOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG	LCL	UCL
9509403*1									
3270	2-Fluorophenol	95178	10/03/95	53.3	75.0	71		21	100
	Phenol-d5	95178	10/03/95	33.2	75.0	44		10	94
	Nitrobenzene-d5	95178	10/03/95	41.0	50.0	82		35	114
	2-Fluorobiphenyl	95178	10/03/95	46.8	50.0	94		43	116
	2,4,6-Tribromophenol Rep.	95178	10/03/95	55.9	75.0	75		10	123
	Terphenyl-d14	95178	10/03/95	47.0	50.0	94		33	141
3240	1,2-Dichloroethane-d4 Rep	95343	10/05/95	49.9	50.0	100		87	125
	Toluene-d8	95343	10/05/95	49.2	50.0	98		94	113
	4-Bromofluorobenzene Rep.	95343	10/05/95	51.5	50.0	103		85	111
)509403*2									
3270	2-Fluorophenol	95178	10/03/95	30.8	75.0	41		21	100
	Phenol-d5	95178	10/03/95	20.1	75.0	27		10	94
	Nitrobenzene-d5	95178	10/03/95	38.0	50.0	76		35	114
	2-Fluorobiphenyl	95178	10/03/95	39.0	50.0	78		43	116
	2,4,6-Tribromophenol Rep.	95178	10/03/95	56.4	75.0	75		10	123
	Terphenyl-d14	95178	10/03/95	44.0	50.0	88		33	141
3240	1,2-Dichloroethane-d4 Rep	95343	10/05/95	51.3	50.0	103		87	125
	Toluene-d8	95343	10/05/95	48.7	50.0	97		94	113
	4-Bromofluorobenzene Rep.	95343	10/05/95	52.1	50.0	104		85	111
)509403*3									
3270	2-Fluorophenol	95178	10/03/95	32.8	75.0	44		21	100
	Phenol-d5	95178	10/03/95	21.5	75.0	29		10	94
	Nitrobenzene-d5	95178	10/03/95	41.3	50.0	83		35	114
	2-Fluorobiphenyl	95178	10/03/95	43.1	50.0	86		43	116
	2,4,6-Tribromophenol Rep.	95178	10/03/95	54.7	75.0	73		10	123
	Terphenyl-d14	95178	10/03/95	47.3	50.0	95		33	141
3240	1,2-Dichloroethane-d4 Rep	95343	10/05/95	52.2	50.0	104		87	125
	Toluene-d8	95343	10/05/95	49.2	50.0	98		94	113
	4-Bromofluorobenzene Rep.	95343	10/05/95	52.0	50.0	104		85	111
509403*4									
270	2-Fluorophenol	95178	10/03/95	24.0	75.0	32		21	100
	Phenol-d5	95178	10/03/95	11.0	75.0	15		10	94
	Nitrobenzene-d5	95178	10/03/95	31.3	50.0	63		35	114
	2-Fluorobiphenyl	95178	10/03/95	37.5	50.0	75		43	116
	2,4,6-Tribromophenol Rep.	95178	10/03/95	43.4	75.0	58		10	123
	Terphenyl-d14	95178	10/03/95	40.5	50.0	81		33	141
240	1,2-Dichloroethane-d4 Rep	95343	10/05/95	51.2	50.0	102		87	125
	Toluene-d8	95343	10/05/95	49.8	50.0	100		94	113
	4-Bromofluorobenzene Rep.	95343	10/05/95	52.8	50.0	106		85	111
509403*5									
2	2-Fluorophenol	95178	10/05/95	24.9	75.0	33		21	100
	Phenol-d5	95178	10/05/95	16.9	75.0	23		10	94
	Nitrobenzene-d5	95178	10/05/95	37.2	50.0	74		35	114
	2-Fluorobiphenyl	95178	10/05/95	41.9	50.0	84		43	116
	2,4,6-Tribromophenol Rep.	95178	10/05/95	49.5	75.0	66		10	123
	Terphenyl-d14	95178	10/05/95	37.7	50.0	75		33	141

: SURROGATE RECOVERIES :
: BC ANALYTICAL : GLEN LAB : 08:04:34 09 OCT 1995 - P. 2 :

METHOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG	LCL	UCL
8240	1,2-Dichloroethane-d4 Rep	95343	10/05/95	50.7	50.0	101		87	125
	Toluene-d8	95343	10/05/95	49.6	50.0	99		94	113
	4-Bromofluorobenzene Rep.	95343	10/05/95	52.0	50.0	104		85	111
9509403*6									
8240	1,2-Dichloroethane-d4 Rep	95343	10/05/95	51.4	50.0	103		87	125
	Toluene-d8	95343	10/05/95	49.4	50.0	99		94	113
	4-Bromofluorobenzene Rep.	95343	10/05/95	53.6	50.0	107		85	111
9509403*7									
8240	1,2-Dichloroethane-d4 Rep	95343	10/05/95	51.1	50.0	102		87	125
	Toluene-d8	95343	10/05/95	49.2	50.0	98		94	113
	4-Bromofluorobenzene Rep.	95343	10/05/95	53.2	50.0	106		85	111

CHAIN OF CUSTODY

BHP

Environmental Technologies International, Inc.

Mauka Tower 737 Bishop Street, 22nd Floor
P.O. Box 3379 Honolulu, HI 96842
(808) 547-3600 Facsimile: (808) 547-3033

G95-09-403

PROJECT NO: GMP

ET CLIENT:

SEND RESULTS TO

Name: Tony Shan
Company: BHP Hawaii Refining
Address: 91-325 Kamahana St.
City, State, Zip: Kapolei, HI 96707

SEND INVOICE TO

Name: Same as Left.
Company:
Address:
City, State, Zip:

Sample No.	Lab No.	No. Containers	Date	Time	Sample Type/Description	Analysis Required	Sampled By
CW-1A		6	9/21/95	0925	Groundwater	8240, 8270, Metals, Gen. Chem	Zuyi Shen
CW-1B		6		1030			
CW-1C		6		1110			
MW-6		6		1140			
MW-6R		6		1150			
Trip Blank #4		2		1340		8240	
Field Blank #3		2		1000		8240	
Temp Blank #4		1		1400		Temperature	

CUSTODY TRANSFERS

	RELINQUISHED BY: (NAME, SIGNATURE)	DATE	TIME	RECEIVED BY: (NAME, SIGNATURE)	DATE	TIME	COMMENTS
1	Zuyi Shen Zuyi Shen	9/21/95	1500	Sharon Malone Sharon Malone	9/22/95	11:00	Temp - 8°C
2							
3							
4							

SHIPPING DETAILS

DELIVERED TO SHIPPER BY: Zuyi Shen DATE 9/21/95 TIME 1545
METHOD OF SHIPMENT: DHL AIRBILL # 779 1968 413
RECEIVED FOR LAB: SIGNED DATE TIME
SAMPLE CONDITION UPON RECEIPT:

WHITE - CUSTODY SHEET YELLOW - LAB PINK - ET

B C Analytical

801 Western Avenue
Glendale, CA 91201
818/247-5737
Fax: 818/247-9797

October 9, 1995

BHP, Hawaii Refinery
91-325 Komohana St.
Kapolei, Hi 96707
Attn: Dr. Tony Shan

Dear Dr. Shan,

Enclosed is the analytical report for chemical testing for samples taken on 09/22/95. It includes the following:

1) Analytical Report of results

2) QC summary including LCS/LCSD, MS/MSD, duplicate samples, method blanks, and surrogates.

3) Cross reference sheet containing analyte, date analyzed, method, and batch number.

4) Case narrative explaining QC deficiencies and/or problems encountered in testing.

5) Electronic data in agreed upon format.

If you have any questions, please do not hesitate to call.

Very truly yours,

Brian Moore

Brian Moore
Program Specialist

BCA

B C Analytical

801 Western Avenue
Glendale, CA 91201
818/247-5737
Fax: 818/247-9797

Case Narrative

All quality objectives were met including holding times, LCS/LCSD, MS/MSD, Duplicate samples, and Method Blanks as applicable except:

Volatile organics method 8240 batch 95327:

1,1,1-Tirchloroethane LCS/LCSD recovery less than lower control limit.
Vinyl acetate LCSD recovery less than lower control limit.

Surrogate 1,2-Dichloroethane-d4 MSD recovery less than lower control limit.

Volatile organics method 8240 batch 95500:

Ethylbenzene; Styrene; Toluene; and Xylene LCS recovery greater than upper control limit.

Semivolatile organics methdo 8270 batch 95178:

Benzidine and Hexachlorocyclopentadiene LCS/LCSD recovery greater than upper control limit.

Note: MS/MSD recovery reported as "NC" (Not Calculated) is due to the original sample concentration being greater than two times the spike amount added.

No analytical difficulties were encountered with any project samples.

BCA

ANALYTICAL REPORT

B C Analytical

801 Western Avenue
Glendale, CA 91201
818/247-5737
Fax: 818/247-9797

LOG NO: G95-09-407

Received: 23 SEP 95

Mailed: OCT - 9

Dr. Tony Shan
BHP, Hawaii Refinery
91-325 Komohana St.
Kapolei, HI 96707

Project: GMP

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-407-1	CW-9A	22 SEP 95
09-407-2	CW-9B	22 SEP 95
09-407-3	CW-5A	22 SEP 95
09-407-4	CW-5B	22 SEP 95

PARAMETER	09-407-1	09-407-2	09-407-3	09-407-4
Digestion (3010), Date	10/01/95	10/01/95	10/01/95	10/01/95
Furnace Digestion (3020), Date	10/01/95	10/01/95	10/01/95	10/01/95
Chloride (300.0), mg/L	1800	12000	1000	10000
Sulfate (300.0), mg/L	1300	2300	200	1600
Conductivity (120.1), umhos/cm	9700	36000	4600	32000
pH (150.1), Units	8.1	7.5	7.1	7.3
Dissolved Solids (160.1), mg/L	5800	26000	2600	23000
Antimony (6010), mg/L	<0.1	<0.1	<0.1	<0.1
Arsenic (7060), mg/L	<0.002	<0.002	<0.002	<0.002
Barium (6010), mg/L	0.0074	0.035	0.046	0.035
Beryllium (6010), mg/L	<0.001	<0.001	<0.001	<0.001
Cadmium (7131), mg/L	<0.001	<0.001	<0.001	<0.001
Chromium (6010), mg/L	<0.01	<0.01	<0.01	<0.01
Cobalt (6010), mg/L	<0.04	<0.04	<0.04	<0.04
Iron (6010), mg/L	0.052	0.99	<0.04	0.15
Lead (7421), mg/L	<0.002	<0.002	<0.002	<0.002
Manganese (6010), mg/L	0.021	0.19	0.21	0.27
Mercury (7470), mg/L	<0.0002	<0.0002	<0.0002	<0.0002
Nickel (6010), mg/L	<0.04	<0.04	<0.04	0.096
Selenium (7740), mg/L	<0.004	<0.004	<0.004	<0.004
Sodium (6010), mg/L	2000	7600	720	6900
Vanadium (6010), mg/L	<0.04	<0.04	<0.04	<0.04

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09-407-2	CW-9B	22 SEP 95
09-407-3	CW-5A	22 SEP 95
09-407-4	CW-5B	22 SEP 95

PARAMETER	09-407-1	09-407-2	09-407-3	09-407-4
B/N,A Ext.Pri.Poll. (8270)				
Date Analyzed	10/05/95	10/05/95	10/05/95	10/05/95
Date Extracted	09/27/95	09/27/95	09/27/95	09/27/95
Dilution Factor, Times	2	1	1	1
1,2,4-Trichlorobenzene, ug/L	<10	<5	<5	<5
1,2-Dichlorobenzene, ug/L	<20	<5	<6	<6
1,2-Diphenylhydrazine, ug/L	<10	<5	<5	<5
1,3-Dichlorobenzene, ug/L	<10	<5	<5	<5
1,4-Dichlorobenzene, ug/L	<10	<5	<5	<5
1-Methylnaphthalene, ug/L	<20	<10	<10	<10
2,4,5-Trichlorophenol, ug/L	<20	<5	<6	<6
2,4,6-Trichlorophenol, ug/L	<10	<5	<5	<5
2,4-Dichlorophenol, ug/L	<10	<5	<5	<5
2,4-Dimethylphenol, ug/L	<10	<5	<5	<5
2,4-Dinitrophenol, ug/L	<20	<10	<10	<10
2,4-Dinitrotoluene, ug/L	<10	<5	<5	<5
2,6-Dinitrotoluene, ug/L	<10	<5	<5	<5
2-Chloronaphthalene, ug/L	<20	<5	<6	<6
2-Chlorophenol, ug/L	<10	<5	<5	<5
2-Methyl-4,6-dinitrophenol, ug/L	<10	<5	<5	<5
2-Methylnaphthalene, ug/L	<10	<5	<5	<5
2-Methylphenol (o-Cresol), ug/L	<10	<5	<5	<5
2-Nitroaniline, ug/L	<10	<5	<5	<5
2-Nitrophenol, ug/L	<10	<5	<5	<5

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09-407-2	CW-9B	22 SEP 95
09-407-3	CW-5A	22 SEP 95
09-407-4	CW-5B	22 SEP 95

PARAMETER	09-407-1	09-407-2	09-407-3	09-407-4
3,3'-Dichlorobenzidine, ug/L	<40	<10	<20	<20
3-Methylphenol (m-Cresol), ug/L	<20	<10	<10	<10
3-Nitroaniline, ug/L	<10	<5	<5	<5
4-Bromophenylphenylether, ug/L	<10	<5	<5	<5
4-Chloro-3-methylphenol, ug/L	<10	<5	<5	<5
4-Chloroaniline, ug/L	<10	<5	<5	<5
4-Chlorophenylphenylether, ug/L	<10	<5	<5	<5
4-Methylphenol (p-Cresol), ug/L	<20	<10	<8	<8
4-Nitroaniline, ug/L	<20	<5	<6	<6
4-Nitrophenol, ug/L	<10	<5	<5	<5
6-Methylchrysene, ug/L	<20	<10	<10	<10
7,12-Dimethylbenz(a)anthracene, ug/L	<10	<5	<5	<5
Acenaphthene, ug/L	<10	<5	<5	<5
Acenaphthylene, ug/L	<10	<5	<5	<5
Aniline, ug/L	<10	<5	<5	<5
Anthracene, ug/L	<10	<5	<5	<5
Benzidine, ug/L	<200	<100	<100	<100
Benzo(a)anthracene, ug/L	<10	<5	<5	<5
Benzo(a)pyrene, ug/L	<10	<5	<5	<5
Benzo(b)fluoranthene, ug/L	<10	<5	<5	<5
Benzo(g,h,i)perylene, ug/L	<10	<5	<5	<5
Benzo(k)fluoranthene, ug/L	<10	<5	<5	<5
Benzenethiol, ug/L	<40	<20	<20	<20
Benzyl Alcohol, ug/L	<10	<10	<5	<5

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09-407-2	CW-9B	22 SEP 95
09-407-3	CW-5A	22 SEP 95
09-407-4	CW-5B	22 SEP 95

PARAMETER	09-407-1	09-407-2	09-407-3	09-407-4
Benzoic acid, ug/L	<100	<50	<50	<50
Butylbenzylphthalate, ug/L	<10	<5	<5	<5
Chrysene, ug/L	<10	<5	<5	<5
Di-n-octylphthalate, ug/L	<10	<5	<5	<5
Dibenzo(a,h)anthracene, ug/L	<10	<5	<5	<5
Dibenz(a,h)acridine, ug/L	<40	<20	<20	<20
Dibenzofuran, ug/L	<10	<5	<5	<5
Dibutylphthalate, ug/L	<10	5.0	5.4	6.3
Diethylphthalate, ug/L	<10	<5	<5	<5
Dimethylphthalate, ug/L	<10	<5	<5	<5
Fluoranthene, ug/L	<10	<5	<5	<5
Fluorene, ug/L	<10	<5	<5	<5
Hexachlorobenzene, ug/L	<10	<5	<5	<5
Hexachlorobutadiene, ug/L	<10	<5	<5	<5
Hexachlorocyclopentadiene, ug/L	<10	<5	<5	<5
Hexachloroethane, ug/L	<10	<5	<5	<5
Indeno(1,2,3-c,d)pyrene, ug/L	<20	<5	<7	<7
Indene, ug/L	<20	<10	<10	<10
Isophorone, ug/L	<10	<5	<5	<5
N-Nitrosodimethylamine, ug/L	<20	<6	<6	<6
N-Nitrosodiphenylamine, ug/L	<10	<5	<5	<5
N-Nitrosodi-n-propylamine, ug/L	<20	<5	<6	<6
Nitrobenzene, ug/L	<10	<5	<5	<5
Naphthalene, ug/L	<10	<5	<5	<5

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09-407-2	CW-9B	22 SEP 95
09-407-3	CW-5A	22 SEP 95
09-407-4	CW-5B	22 SEP 95

PARAMETER	09-407-1	09-407-2	09-407-3	09-407-4
Phenanthrene, ug/L	<10	<5	<5	<5
Phenol, ug/L	<10	<5	<5	<5
Pentachlorophenol, ug/L	<10	<5	<5	<5
Pyrene, ug/L	<10	<5	<5	<5
Pyridine, ug/L	<20	<10	<10	<10
Quinoline, ug/L	<20	<10	<10	<10
Bis(2-chloroethoxy)methane, ug/L	<10	<5	<5	<5
Bis(2-chloroethyl)ether, ug/L	<10	<5	<5	<5
Bis(2-chloroisopropyl)ether, ug/L	<20	<5	<6	<6
Bis(2-ethylhexyl)phthalate, ug/L	26	18	19	24
Surrogates **				
2-Fluorobiphenyl Reported, ug/L	48.2	48.1	51.9	51.6
2-Fluorobiphenyl Theo., ug/L	50.0	50.0	50.0	50.0
2-Fluorophenol Reported, ug/L	55.1	36.7	39.2	46.1
2-Fluorophenol Theoretical, ug/L	75.0	75.0	75.0	75.0
2,4,6-Tribromophenol Rep., ug/L	56.8	62.7	60.6	60.6
2,4,6-Tribromophenol Theo., ug/L	75.0	75.0	75.0	75.0
Nitrobenzene-d5 Reported, ug/L	45.5	43.2	50.5	49.1
Nitrobenzene-d5 Theoretical, ug/L	50.0	50.0	50.0	50.0
Phenol-d5 Reported, ug/L	40.3	24.8	26.0	30.4
Phenol-d5 Theoretical, ug/L	75.0	75.0	75.0	75.0
Terphenyl-d14 Reported, ug/L	38.1	44.6	43.3	44.7
Terphenyl-d14 Theoretical, ug/L	50.0	50.0	50.0	50.0

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LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-407-1	CW-9A	22 SEP 95
09-407-2	CW-9B	22 SEP 95
09-407-3	CW-5A	22 SEP 95
09-407-4	CW-5B	22 SEP 95

PARAMETER	09-407-1	09-407-2	09-407-3	09-407-4
Vol.Pri.Poll. (8240)				
Date Analyzed	09/27/95	09/27/95	09/27/95	09/27/95
Dilution Factor, Times	1	1	1	1
1,1,1-Trichloroethane, ug/L	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane, ug/L	<1	<1	<1	<1
1,1,2-Trichloroethane, ug/L	<1	<1	<1	<1
1,1-Dichloroethane, ug/L	<1	<1	<1	<1
1,1-Dichloroethene, ug/L	<1	<1	<1	<1
1,2-Dichloroethane, ug/L	<1	<1	<1	<1
1,2-Dichlorobenzene, ug/L	<1	<1	<1	<1
1,2-Dichloropropane, ug/L	<1	<1	<1	<1
1,3-Dichlorobenzene, ug/L	<1	<1	<1	<1
1,4-Dichlorobenzene, ug/L	<1	<1	<1	<1
1,4-Dioxane, ug/L	<500	<500	<500	<500
2-Chloroethylvinylether, ug/L	<5	<5	<5	<5
2-Hexanone, ug/L	<5	<5	<5	<5
Acetone, ug/L	<20	<20	<20	<20
Bromodichloromethane, ug/L	<1	<1	<1	<1
Bromomethane, ug/L	<1	<1	<1	<1
Benzene, ug/L	1.7	<1	<1	<1
Bromoform, ug/L	<1	<1	<1	<1
Chlorobenzene, ug/L	<1	<1	<1	<1
Carbon Tetrachloride, ug/L	<1	<1	<1	<1
Chloroethane, ug/L	<1	<1	<1	<1

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09-407-1	CW-9A	22 SEP 95
09-407-2	CW-9B	22 SEP 95
09-407-3	CW-5A	22 SEP 95
09-407-4	CW-5B	22 SEP 95

PARAMETER	09-407-1	09-407-2	09-407-3	09-407-4
Chloroform, ug/L	<1	<1	<1	<1
Chloromethane, ug/L	<1	<1	<1	<1
Carbon Disulfide, ug/L	<2	<2	<2	<2
Cyclohexane, ug/L	<5	<5	<5	<5
Dibromochloromethane, ug/L	<1	<1	<1	<1
Ethylene Dibromide, ug/L	<5	<5	<5	<5
Ethylbenzene, ug/L	<1	<1	<1	<1
Freon 113, ug/L	<2	<2	<2	<2
Methyl ethyl ketone, ug/L	<5	<5	<5	<5
Methyl isobutyl ketone, ug/L	<5	<5	<5	<5
Methylene chloride, ug/L	<2	<2	<2	<2
Styrene, ug/L	<1	<1	<1	<1
Trichloroethene, ug/L	<1	<1	<1	<1
Trichlorofluoromethane, ug/L	<1	<1	<1	<1
Toluene, ug/L	<1	<1	<1	<1
Tetrachloroethene, ug/L	<1	<1	<1	<1
Vinyl acetate, ug/L	<10	<10	<10	<10
Vinyl chloride, ug/L	<1	<1	<1	<1
Total Xylene Isomers, ug/L	<3	<3	<3	<3
cis-1,2-Dichloroethene, ug/L	<1	<1	<1	<1
cis-1,3-Dichloropropene, ug/L	<1	<1	<1	<1
trans-1,2-Dichloroethene, ug/L	<1	<1	<1	<1
trans-1,3-Dichloropropene, ug/L	<1	<1	<1	<1
Surrogates **				

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LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-407-1	CW-9A	22 SEP 95
09-407-2	CW-9B	22 SEP 95
09-407-3	CW-5A	22 SEP 95
09-407-4	CW-5B	22 SEP 95

PARAMETER	09-407-1	09-407-2	09-407-3	09-407-4
1,2-Dichloroethane-d4 Rep., ug/L	48.5	49.0	48.9	48.2
1,2-Dichloroethane-d4 Theo., ug/L	50.0	50.0	50.0	50.0
4-Bromofluorobenzene Rep., ug/L	53.3	52.2	53.6	52.6
4-Bromofluorobenzene Theo., ug/L	50.0	50.0	50.0	50.0
Toluene-d8 Reported, ug/L	51.1	50.5	50.7	50.2
Toluene-d8 Theo., ug/L	50.0	50.0	50.0	50.0

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-407-5	Field Blank #4	22 SEP 95
09-407-6	Trip Blank #5	22 SEP 95

PARAMETER	09-407-5	09-407-6
Vol.Pri.Poll. (8240)		
Date Analyzed	10/05/95	10/05/95
Dilution Factor, Times	1	1
1,1,1-Trichloroethane, ug/L	<1	<1
1,1,2,2-Tetrachloroethane, ug/L	<1	<1
1,1,2-Trichloroethane, ug/L	<1	<1
1,1-Dichloroethane, ug/L	<1	<1
1,1-Dichloroethene, ug/L	<1	<1
1,2-Dichloroethane, ug/L	<1	<1
1,2-Dichlorobenzene, ug/L	<1	<1
1,2-Dichloropropane, ug/L	<1	<1
1,3-Dichlorobenzene, ug/L	<1	<1
1,4-Dichlorobenzene, ug/L	<1	<1
1,4-Dioxane, ug/L	<500	<500
2-Chloroethylvinylether, ug/L	<5	<5
2-Hexanone, ug/L	<5	<5
Acetone, ug/L	<20	<20
Bromodichloromethane, ug/L	<1	<1
Bromomethane, ug/L	<1	<1
Benzene, ug/L	<1	<1
Bromoform, ug/L	<1	<1
Chlorobenzene, ug/L	<1	<1
Carbon Tetrachloride, ug/L	<1	<1
Chloroethane, ug/L	<1	<1
Chloroform, ug/L	<1	<1
Chloromethane, ug/L	<1	<1

BCA

B C Analytical

801 Western Avenue
Glendale, CA 91201
818/247-5737
Fax: 818/247-9797

LOG NO: G95-09-407

Received: 23 SEP 95

Dr. Tony Shan
BHP, Hawaii Refinery
91-325 Komohana St.
Kapolei, HI 96707

Project: GMP

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-407-5	Field Blank #4	22 SEP 95
09-407-6	Trip Blank #5	22 SEP 95

PARAMETER	09-407-5	09-407-6
Carbon Disulfide, ug/L	<2	<2
Cyclohexane, ug/L	<5	<5
Dibromochloromethane, ug/L	<1	<1
Ethylene Dibromide, ug/L	<1	<1
Ethylbenzene, ug/L	<1	<1
Freon 113, ug/L	<2	<2
Methyl ethyl ketone, ug/L	<5	<5
Methyl isobutyl ketone, ug/L	<5	<5
Methylene chloride, ug/L	<2	<2
Styrene, ug/L	<1	<1
Trichloroethene, ug/L	<1	<1
Trichlorofluoromethane, ug/L	<1	<1
Toluene, ug/L	<1	<1
Tetrachloroethene, ug/L	<1	<1
Vinyl acetate, ug/L	<10	<10
Vinyl chloride, ug/L	<1	<1
Total Xylene Isomers, ug/L	<3	<3
cis-1,2-Dichloroethene, ug/L	<1	<1
cis-1,3-Dichloropropene, ug/L	<1	<1
trans-1,2-Dichloroethene, ug/L	<1	<1
trans-1,3-Dichloropropene, ug/L	<1	<1
Surrogates **		
1,2-Dichloroethane-d4 Rep., ug/L	51.3	50.7
1,2-Dichloroethane-d4 Theo., ug/L	50.0	50.0
4-Bromofluorobenzene Rep., ug/L	52.6	47.6
4-Bromofluorobenzene Theo., ug/L	50.0	50.0

BCA

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Kapolei, HI 96707

Project: GMP

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
09-407-5	Field Blank #4	22 SEP 95
09-407-6	Trip Blank #5	22 SEP 95

PARAMETER	09-407-5	09-407-6
Toluene-d8 Reported, ug/L	48.2	49.6
Toluene-d8 Theo., ug/L	50.0	50.0

Jane Freemyer, Program Manager

The analytical results within this report relate only to the specific compounds and samples investigated and may not necessarily reflect other apparently similar material from the same or a similar location.

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BCA

: ORDER PLACED FOR CLIENT: BHP Hawaii Refinery 9509407 :
: BC ANALYTICAL : GLEN LAB : 08:04:01 09 OCT 1995 - P. 1 :

SAMPLES...	SAMPLE DESCRIPTION..	DETERM.....	DATE..... ANALYZED	METHOD.....	EQUIP.	BATCH..	ID.NO
9509407*1	CW-9A	DIG,AQ.HCL	10.01.95	3010		951547	7093
		DIG,AQ,GFA	10.01.95	3020		951548	7093
		ANIONS,CL	09.26.95	300.0	533-23	950926	8651
		ANIONS,SO4	09.26.95	300.0	533-23	950926	8651
		COND	10.02.95	120.1	533-11	9595	8604
		PH	10.04.95	150.1	533-21	95437	8488
		TDS	09.29.95	160.1		9592	
		SB	10.03.95	6010	535-02	951547	7396
		AS,GFA	10.02.95	7060	534-04	951548	7725
		BA	10.03.95	6010	535-02	951547	7396
		BE	10.03.95	6010	535-02	951547	7396
		CD,GFA	10.03.95	7131	534-04	951548	7396
		CR	10.03.95	6010	535-02	951547	7396
		CO	10.03.95	6010	535-02	951547	7396
		FE	10.03.95	6010	535-02	951547	7396
		PB,GFA	10.02.95	7421	534-04	951548	7725
		MN	10.03.95	6010	535-02	951547	7396
		HG	10.03.95	7470	534-06	951570	7093
		NI	10.03.95	6010	535-02	951547	7396
		SE,GFA	10.02.95	7740	534-04	951548	7725
		NA	10.04.95	6010	535-03	951547	7396
		V	10.03.95	6010	535-02	951547	7396
		BNA.8270.BHP	10.05.95	8270	537-14	95179	6763
		VOA.8240.BHP	09.27.95	8240	537-01	95327	7430
9509407*2	CW-9B	DIG,AQ.HCL	10.01.95	3010		951547	7093
		DIG,AQ,GFA	10.01.95	3020		951548	7093
		ANIONS,CL	09.26.95	300.0	533-23	950926	8651
		ANIONS,SO4	09.26.95	300.0	533-23	950926	8651
		COND	10.02.95	120.1	533-11	9595	8604
		PH	09.23.95	150.1	533-21	95437	8488
		TDS	09.29.95	160.1		9592	
		SB	10.03.95	6010	535-02	951547	7396
		AS,GFA	10.02.95	7060	534-04	951548	7725
		BA	10.03.95	6010	535-02	951547	7396
		BE	10.03.95	6010	535-02	951547	7396
		CD,GFA	10.03.95	7131	534-04	951548	7396
		CR	10.03.95	6010	535-02	951547	7396
		CO	10.03.95	6010	535-02	951547	7396
		FE	10.03.95	6010	535-02	951547	7396
		PB,GFA	10.02.95	7421	534-04	951548	7725
		MN	10.03.95	6010	535-02	951547	7396
		HG	10.03.95	7470	534-06	951570	7093
		NI	10.03.95	6010	535-02	951547	7396
		SE,GFA	10.02.95	7740	534-04	951548	7725

Notes: Equipment = BC Analytical identification number for a particular piece of analytical equipment.

ID.NO = BC Analytical employee identification number of analyst.

SAMPLES...	SAMPLE DESCRIPTION..	DETERM.....	DATE..... ANALYZED	METHOD.....	EQUIP.	BATCH..	ID.NO
		NA	10.04.95	6010	535-03	951547	7396
		V	10.03.95	6010	535-02	951547	7396
		BNA.8270.BHP	10.05.95	8270	537-14	95179	6763
		VOA.8240.BHP	09.27.95	8240	537-01	95327	7430
)509407*3	CW-5A	DIG,AQ.HCL	10.01.95	3010		951547	7093
		DIG,AQ,GFA	10.01.95	3020		951548	7093
		ANIONS,CL	09.26.95	300.0	533-23	950926	8651
		ANIONS,SO4	09.26.95	300.0	533-23	950926	8651
		COND	10.02.95	120.1	533-11	9595	8604
		PH	09.23.95	150.1	533-21	95437	8488
		TDS	09.29.95	160.1		9592	
		SB	10.03.95	6010	535-02	951547	7396
		AS,GFA	10.02.95	7060	534-04	951548	7725
		BA	10.03.95	6010	535-02	951547	7396
		BE	10.03.95	6010	535-02	951547	7396
		CD,GFA	10.03.95	7131	534-04	951548	7396
		CR	10.03.95	6010	535-02	951547	7396
		CO	10.03.95	6010	535-02	951547	7396
		FE	10.03.95	6010	535-02	951547	7396
		PB,GFA	10.02.95	7421	534-04	951548	7725
		MN	10.03.95	6010	535-02	951547	7396
		HG	10.03.95	7470	534-06	951570	7093
		NI	10.03.95	6010	535-02	951547	7396
		SE,GFA	10.02.95	7740	534-04	951548	7725
		NA	10.04.95	6010	535-03	951547	7396
		V	10.03.95	6010	535-02	951547	7396
		BNA.8270.BHP	10.05.95	8270	537-14	95179	6763
		VOA.8240.BHP	09.27.95	8240	537-01	95327	7430
)509407*4	CW-5B	DIG,AQ.HCL	10.01.95	3010		951547	7093
		DIG,AQ,GFA	10.01.95	3020		951548	7093
		ANIONS,CL	09.26.95	300.0	533-23	950926	8651
		ANIONS,SO4	09.26.95	300.0	533-23	950926	8651
		COND	10.02.95	120.1	533-11	9595	8604
		PH	09.23.95	150.1	533-21	95437	8488
		TDS	09.29.95	160.1		9592	
		SB	10.03.95	6010	535-02	951547	7396
		AS,GFA	10.02.95	7060	534-04	951548	7725
		BA	10.03.95	6010	535-02	951547	7396
		BE	10.03.95	6010	535-02	951547	7396
		CD,GFA	10.03.95	7131	534-04	951548	7396
		CR	10.03.95	6010	535-02	951547	7396
		CO	10.03.95	6010	535-02	951547	7396
		FE	10.03.95	6010	535-02	951547	7396
		PB,GFA	10.02.95	7421	534-04	951548	7725

Notes: Equipment = BC Analytical identification number for a particular piece of analytical equipment.

ID.NO = BC Analytical employee identification number of analyst.

SAMPLES...	SAMPLE DESCRIPTION..	DETERM.....	DATE..... ANALYZED	METHOD.....	EQUIP.	BATCH..	ID.NO
		MN	10.03.95	6010	535-02	951547	7396
		HG	10.03.95	7470	534-06	951570	7093
		NI	10.03.95	6010	535-02	951547	7396
		SE,GFA	10.02.95	7740	534-04	951548	7725
		NA	10.04.95	6010	535-03	951547	7396
		V	10.03.95	6010	535-02	951547	7396
		BNA.8270.BHP	10.05.95	8270	537-14	95179	6763
		VOA.8240.BHP	09.27.95	8240	537-01	95327	7430
9509407*5	Field Blank #4	VOA.8240.BHP	10.05.95	8240	537-01	95343	6750
9509407*6	Trip Blank #5	VOA.8240.BHP	10.05.95	8240	536-02	95500	7424

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ID.NO = BC Analytical employee identification number of analyst.

BC ANALYTICAL, GLENDALE
QC REPORT FOR 9509407
DATE PRINTED: 09 OCT 1995

AQUEOUS SAMPLES

		METHOD BLANK			LAB CONTROL									MATRIX QC								
	UNITS	RESULT	RDL	FLG	LCS %REC	FLG	LCSD %REC	FLG	LCL	UCL	RPD	RPD UCL	RPD FLG	MS %REC	FLG	MSD %REC	FLG	LCL	UCL	RPD	RPD UCL	RPD FLG
Batch: TDS*9592 Method: 160.1 - Residue, Filterable, Gravimetric, Dried at 180 C																						
Dissolved Solids	mg/L	0	10	-	100	-	102	-	91	107	2	-	-	102	-	103	-	85	112	0	15	-
Batch: COND*9595 Method: 120.1 - Conductance, Specific Conductance																						
Conductivity	umhos/cm	-	-	-	99	-	99	-	95	105	0	15	-	8100	*	8100	*	-	-	0	15	-
Batch: PH*95437 Method: 150.1 - pH, Electrometric																						
pH	Units	-	-	-	100	-	100	-	99	101	0	20	-	12	*	12	*	-	-	-	20	-
Batch: 950926 Method: 300.0 - Inorganic anions in water, Ion chromatograph																						
Chloride	mg/L	0	0.5	-	95	-	96	-	90	110	2	-	-	96	-	96	-	63	125	0	15	-
Sulfate	mg/L	0	0.1	-	94	-	95	-	90	110	1	-	-	81	-	81	-	73	116	0	15	-
Batch: 951547 Method: 6010 - ICAP Metals																						
Barium	mg/L	0	0.005	-	97	-	98	-	75	114	1	-	-	87	-	88	-	74	110	1	20	-
Beryllium	mg/L	0	0.001	-	106	-	106	-	79	110	0	-	-	89	-	91	-	71	113	2	20	-
Cobalt	mg/L	0	0.04	-	109	-	102	-	71	112	7	-	-	96	-	99	-	67	110	3	20	-
Chromium	mg/L	0	0.01	-	110	-	101	-	76	110	9	-	-	91	-	99	-	68	111	8	20	-
Iron	mg/L	0	0.04	-	98	-	99	-	80	110	1	-	-	93	-	96	-	68	129	3	20	-
Manganese	mg/L	0	0.01	-	106	-	109	-	76	113	3	-	-	95	-	99	-	70	124	3	20	-
Sodium	mg/L	0	0.5	-	90	-	91	-	83	112	1	-	-	-	NC	-	NC	77	118	-	20	NC
Nickel	mg/L	0	0.04	-	107	-	102	-	73	114	5	-	-	96	-	102	-	65	113	6	20	-
Antimony	mg/L	0	0.1	-	102	-	102	-	79	115	0	-	-	98	-	98	-	83	112	0	20	-
Vanadium	mg/L	0	0.04	-	103	-	105	-	80	110	2	-	-	96	-	99	-	72	110	2	20	-
Batch: AS,GFA*951548 Method: 7060 - Arsenic, AA, Furnace																						
Arsenic	mg/L	0	0.002	-	92	-	98	-	63	122	7	-	-	102	-	102	-	52	130	0	20	-
Batch: CD,GFA*951548 Method: 7131 - Cadmium, AA, Furnace																						
Cadmium	mg/L	0	0.001	-	98	-	98	-	67	134	1	-	-	95	-	94	-	63	157	1	20	-
Batch: PB,GFA*951548 Method: 7421 - Lead, AA, Furnace																						
Lead	mg/L	0	0.002	-	101	-	103	-	85	112	2	-	-	77	-	83	-	54	144	7	20	-
Batch: SE,GFA*951548 Method: 7740 - Selenium, AA, Furnace																						
Selenium	mg/L	0.0014	0.004	-	100	-	104	-	74	114	4	-	-	36	-	37	-	4	140	3	20	-
Batch: HG*951570 Method: 7470 - Mercury (Liquid), Cold Vapor AA, Manual																						
Mercury	mg/L	0	0.0002	-	88	-	98	-	71	123	11	-	-	80	-	85	-	53	143	6	20	-

BC ANALYTICAL, GLENDALE
QC REPORT FOR 9509407
DATE PRINTED: 09 OCT 1995

AQUEOUS SAMPLES		METHOD BLANK			LAB CONTROL									MATRIX QC								
	UNITS	RESULT	RDL	FLG	LCS %REC	FLG	LCSD %REC	FLG	LCL	UCL	RPD	RPD UCL	RPD FLG	MS %REC	FLG	MSD %REC	FLG	LCL	UCL	RPD	RPD UCL	FLG
Batch: VOA*95327 Method: 8240 - GC/MS for Volatile Organics																						
1,1,1-Trichloroethane	ug/L	0	1	-	69	Q	73	Q	78	119	6	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	ug/L	0	1	-	109	-	107	-	78	137	2	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	ug/L	0	1	-	99	-	97	-	83	127	2	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	ug/L	0	1	-	83	-	88	-	76	122	5	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	ug/L	0	1	-	79	-	80	-	69	126	2	-	-	74	-	77	-	48	127	5	27	-
1,2-Dichloroethane	ug/L	0	1	-	87	-	92	-	84	119	5	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	ug/L	0	1	-	97	-	94	-	85	118	3	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	ug/L	0	1	-	88	-	93	-	84	117	5	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	ug/L	0	1	-	94	-	94	-	84	118	0	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	ug/L	0	1	-	95	-	93	-	85	117	3	-	-	-	-	-	-	-	-	-	-	-
1,4-Dioxane	ug/L	0	500	-	140	-	121	-	-	-	15	-	-	-	-	-	-	-	-	-	-	-
2-Chloroethylvinylether	ug/L	0	5	-	76	-	91	-	35	174	18	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone	ug/L	0	5	-	129	-	132	-	58	158	2	-	-	-	-	-	-	-	-	-	-	-
Acetone	ug/L	3.9	20	-	98	-	96	-	16	170	1	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	ug/L	0	1	-	98	-	96	-	84	118	2	-	-	-	-	-	-	-	-	-	-	-
Bromomethane	ug/L	0	1	-	88	-	106	-	58	139	18	-	-	-	-	-	-	-	-	-	-	-
Benzene	ug/L	0	1	-	82	-	87	-	74	122	6	-	-	79	-	87	-	65	125	10	26	-
Bromoform	ug/L	0	1	-	105	-	101	-	80	131	4	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	ug/L	0	1	-	96	-	94	-	85	115	2	-	-	91	-	93	-	76	132	3	23	-
Carbon Tetrachloride	ug/L	0	1	-	80	-	84	-	72	122	4	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	ug/L	0	1	-	86	-	80	-	52	143	8	-	-	-	-	-	-	-	-	-	-	-
Chloroform	ug/L	0	1	-	85	-	90	-	81	120	5	-	-	-	-	-	-	-	-	-	-	-
Chloromethane	ug/L	0	1	-	89	-	87	-	62	127	2	-	-	-	-	-	-	-	-	-	-	-
Carbon Disulfide	ug/L	0.31	2	-	73	-	76	-	65	128	4	-	-	-	-	-	-	-	-	-	-	-
Cyclohexane	ug/L	0	5	-	66	-	72	-	-	-	9	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	ug/L	0	1	-	101	-	98	-	82	124	4	-	-	-	-	-	-	-	-	-	-	-
Ethylene Dibromide	ug/L	0	1	-	102	-	97	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	ug/L	0	1	-	99	-	99	-	84	117	0	-	-	-	-	-	-	-	-	-	-	-
Freon 113	ug/L	0	2	-	93	-	88	-	66	133	6	-	-	-	-	-	-	-	-	-	-	-
Methyl ethyl ketone	ug/L	0	5	-	110	-	128	-	46	161	15	-	-	-	-	-	-	-	-	-	-	-
Methyl isobutyl ketone	ug/L	0	5	-	112	-	116	-	66	156	3	-	-	-	-	-	-	-	-	-	-	-
Methylene chloride	ug/L	0	2	-	80	-	82	-	78	120	3	-	-	-	-	-	-	-	-	-	-	-
Styrene	ug/L	0	1	-	93	-	93	-	85	116	0	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	ug/L	0	1	-	83	-	85	-	78	119	3	-	-	78	-	82	-	63	122	5	21	-
Trichlorofluoromethane	ug/L	0	1	-	95	-	89	-	66	134	6	-	-	-	-	-	-	-	-	-	-	-
Toluene	ug/L	0	1	-	93	-	92	-	84	116	1	-	-	88	-	91	-	63	132	3	22	-
Tetrachloroethene	ug/L	0	1	-	94	-	89	-	83	117	5	-	-	-	-	-	-	-	-	-	-	-
Vinyl acetate	ug/L	0	10	-	98	-	72	Q	76	134	31	-	-	-	-	-	-	-	-	-	-	-

AQUEOUS SAMPLES

		------ METHOD BLANK ------			---------- LAB CONTROL ----------									---------- MATRIX QC ----------								
					LCS		LCSD					RPD	RPD	MS		MSD					RPD	RPD
	UNITS	RESULT	RDL	FLG	%REC	FLG	%REC	FLG	LCL	UCL	RPD	UCL	FLG	%REC	FLG	%REC	FLG	LCL	UCL	RPD	UCL	FLG
Batch: VOA*95327 Method: 8240 - GC/MS for Volatile Organics, con't																						
Vinyl chloride	ug/L	0	1	-	82	-	82	-	66	132	0	-	-	-	-	-	-	-	-	-	-	-
Total Xylene Isomers	ug/L	0	3	-	103	-	104	-	86	114	1	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	ug/L	0	1	-	84	-	89	-	78	121	6	-	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	ug/L	0	1	-	95	-	96	-	81	123	1	-	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	ug/L	0	1	-	81	-	87	-	73	123	7	-	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene	ug/L	0	1	-	94	-	96	-	78	122	1	-	-	-	-	-	-	-	-	-	-	-
[1,2-Dichloroethane-d4]	Percent	99	-	-	96	-	102	-	87	125	-	-	-	101	-	82	Q	87	125	-	-	-
[4-Bromofluorobenzene]	Percent	102	-	-	103	-	102	-	85	111	-	-	-	107	-	104	-	85	111	-	-	-
[Toluene-d8]	Percent	101	-	-	100	-	102	-	94	113	-	-	-	103	-	102	-	94	113	-	-	-

BC ANALYTICAL, GLENDALE
QC REPORT FOR 9509407
DATE PRINTED: 09 OCT 1995

AQUEOUS SAMPLES

		METHOD BLANK			LAB CONTROL									MATRIX QC								
	UNITS	RESULT	RDL	FLG	LCS %REC	FLG	LCSD %REC	FLG	LCL	UCL	RPD	RPD UCL	RPD FLG	MS %REC	FLG	MSD %REC	FLG	LCL	UCL	RPD	RPD UCL	RPD FLG
Batch: VOA*95343 Method: 8240 - GC/MS for Volatile Organics																						
1,1,1-Trichloroethane	ug/L	0	1	-	86	-	-	-	78	119	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	ug/L	0	1	-	108	-	-	-	78	137	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	ug/L	0	1	-	100	-	-	-	83	127	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	ug/L	0	1	-	97	-	-	-	76	122	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	ug/L	0	1	-	87	-	-	-	69	126	-	-	-	78	-	79	-	48	127	2	27	-
1,2-Dichloroethane	ug/L	0	1	-	104	-	-	-	84	119	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	ug/L	0	1	-	103	-	-	-	85	118	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	ug/L	0	1	-	96	-	-	-	84	117	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	ug/L	0	1	-	100	-	-	-	84	118	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	ug/L	0	1	-	103	-	-	-	85	117	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dioxane	ug/L	0	500	-	127	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chloroethylvinylether	ug/L	0	5	-	131	-	-	-	35	174	-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone	ug/L	0	5	-	118	-	-	-	58	158	-	-	-	-	-	-	-	-	-	-	-	-
Acetone	ug/L	0	20	-	106	-	-	-	16	170	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	ug/L	0	1	-	111	-	-	-	84	118	-	-	-	-	-	-	-	-	-	-	-	-
Bromomethane	ug/L	0	1	-	78	-	-	-	58	139	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	ug/L	0	1	-	94	-	-	-	74	122	-	-	-	76	-	74	-	65	125	2	26	-
Bromoform	ug/L	0	1	-	121	-	-	-	80	131	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	ug/L	0	1	-	96	-	-	-	85	115	-	-	-	91	-	92	-	76	132	1	23	-
Carbon Tetrachloride	ug/L	0	1	-	87	-	-	-	72	122	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	ug/L	0	1	-	119	-	-	-	52	143	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	ug/L	0	1	-	103	-	-	-	81	120	-	-	-	-	-	-	-	-	-	-	-	-
Chloromethane	ug/L	0	1	-	88	-	-	-	62	127	-	-	-	-	-	-	-	-	-	-	-	-
Carbon Disulfide	ug/L	0	2	-	89	-	-	-	65	128	-	-	-	-	-	-	-	-	-	-	-	-
Cyclohexane	ug/L	0	5	-	63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	ug/L	0	1	-	113	-	-	-	82	124	-	-	-	-	-	-	-	-	-	-	-	-
Ethylene Dibromide	ug/L	0	1	-	105	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	ug/L	0	1	-	90	-	-	-	84	117	-	-	-	-	-	-	-	-	-	-	-	-
Freon 113	ug/L	0	2	-	81	-	-	-	66	133	-	-	-	-	-	-	-	-	-	-	-	-
Methyl ethyl ketone	ug/L	0	5	-	109	-	-	-	46	161	-	-	-	-	-	-	-	-	-	-	-	-
Methyl isobutyl ketone	ug/L	0	5	-	119	-	-	-	66	156	-	-	-	-	-	-	-	-	-	-	-	-
Methylene chloride	ug/L	0	2	-	89	-	-	-	78	120	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	ug/L	0	1	-	93	-	-	-	85	116	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	ug/L	0	1	-	91	-	-	-	78	119	-	-	-	76	-	76	-	63	122	0	21	-
Trichlorofluoromethane	ug/L	0	1	-	90	-	-	-	66	134	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	ug/L	0	1	-	95	-	-	-	84	116	-	-	-	90	-	92	-	63	132	3	22	-
Tetrachloroethene	ug/L	0	1	-	88	-	-	-	83	117	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl acetate	ug/L	0	10	-	105	-	-	-	76	134	-	-	-	-	-	-	-	-	-	-	-	-

AQUEOUS SAMPLES

		METHOD BLANK			LAB CONTROL									MATRIX QC								
	UNITS	RESULT	RDL	FLG	LCS %REC	FLG	LCSD %REC	FLG	LCL	UCL	RPD	RPD UCL	RPD FLG	MS %REC	FLG	MSD %REC	FLG	LCL	UCL	RPD	RPD UCL	RPD FLG
Batch: VOA*95343 Method: 8240 - GC/MS for Volatile Organics, con't																						
Vinyl chloride	ug/L	0	1	-	95	-	-	-	66	132	-	-	-	-	-	-	-	-	-	-	-	-
Total Xylene Isomers	ug/L	0	3	-	96	-	-	-	86	114	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	ug/L	0	1	-	100	-	-	-	78	121	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	ug/L	0	1	-	102	-	-	-	81	123	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	ug/L	0	1	-	98	-	-	-	73	123	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene	ug/L	0	1	-	105	-	-	-	78	122	-	-	-	-	-	-	-	-	-	-	-	-
[1,2-Dichloroethane-d4]	Percent	107	-	-	106	-	-	-	87	125	-	-	-	100	-	103	-	87	125	-	-	-
[4-Bromofluorobenzene]	Percent	104	-	-	104	-	-	-	85	111	-	-	-	109	-	108	-	85	111	-	-	-
[Toluene-d8]	Percent	99	-	-	95	-	-	-	94	113	-	-	-	99	-	99	-	94	113	-	-	-

AQUEOUS SAMPLES

		METHOD BLANK			LAB CONTROL									MATRIX QC								
	UNITS	RESULT	RDL	FLG	LCS %REC	FLG	LCSD %REC	FLG	LCL	UCL	RPD	RPD UCL	RPD FLG	MS %REC	FLG	MSD %REC	FLG	LCL	UCL	RPD	RPD UCL	RPD FLG
Batch: VOA*95500 Method: 8240 - GC/MS for Volatile Organics																						
1,1,1-Trichloroethane	ug/L	0	1	-	78	-	-	-	78	119	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	ug/L	0	1	-	128	-	-	-	78	137	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	ug/L	0	1	-	119	-	-	-	83	127	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	ug/L	0	1	-	94	-	-	-	76	122	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	ug/L	0	1	-	107	-	-	-	69	126	-	-	-	97	-	104	-	48	127	7	27	-
1,2-Dichloroethane	ug/L	0	1	-	97	-	-	-	84	119	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	ug/L	0	1	-	105	-	-	-	85	118	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	ug/L	0	1	-	109	-	-	-	84	117	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	ug/L	0	1	-	105	-	-	-	84	118	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	ug/L	0	1	-	105	-	-	-	85	117	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dioxane	ug/L	0	500	-	125	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chloroethylvinylether	ug/L	0	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone	ug/L	0	5	-	145	-	-	-	58	158	-	-	-	-	-	-	-	-	-	-	-	-
Acetone	ug/L	6.7	20	-	124	-	-	-	16	170	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	ug/L	0	1	-	118	-	-	-	84	118	-	-	-	-	-	-	-	-	-	-	-	-
Bromomethane	ug/L	0	1	-	104	-	-	-	58	139	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	ug/L	0	1	-	102	-	-	-	74	122	-	-	-	91	-	97	-	65	125	7	26	-
Bromoform	ug/L	0	1	-	109	-	-	-	80	131	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	ug/L	0	1	-	114	-	-	-	85	115	-	-	-	102	-	100	-	76	132	2	23	-
Carbon Tetrachloride	ug/L	0	1	-	89	-	-	-	72	122	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	ug/L	0	1	-	92	-	-	-	52	143	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	ug/L	0	1	-	91	-	-	-	81	120	-	-	-	-	-	-	-	-	-	-	-	-
Chloromethane	ug/L	0	1	-	108	-	-	-	62	127	-	-	-	-	-	-	-	-	-	-	-	-
Carbon Disulfide	ug/L	0	2	-	99	-	-	-	65	128	-	-	-	-	-	-	-	-	-	-	-	-
Cyclohexane	ug/L	0	5	-	73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	ug/L	0	1	-	115	-	-	-	82	124	-	-	-	-	-	-	-	-	-	-	-	-
Ethylene Dibromide	ug/L	0	1	-	111	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	ug/L	0	1	-	118	Q	-	-	84	117	-	-	-	-	-	-	-	-	-	-	-	-
Freon 113	ug/L	0	2	-	79	-	-	-	66	133	-	-	-	-	-	-	-	-	-	-	-	-
Methyl ethyl ketone	ug/L	0	5	-	118	-	-	-	46	161	-	-	-	-	-	-	-	-	-	-	-	-
Methyl isobutyl ketone	ug/L	0	5	-	112	-	-	-	66	156	-	-	-	-	-	-	-	-	-	-	-	-
Methylene chloride	ug/L	0.71	2	-	93	-	-	-	78	120	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	ug/L	0	1	-	118	Q	-	-	85	116	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	ug/L	0	1	-	91	-	-	-	78	119	-	-	-	91	-	98	-	63	122	8	21	-
Trichlorofluoromethane	ug/L	0	1	-	91	-	-	-	66	134	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	ug/L	0	1	-	118	Q	-	-	84	116	-	-	-	101	-	106	-	63	132	5	22	-
Tetrachloroethene	ug/L	0	1	-	101	-	-	-	83	117	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl acetate	ug/L	0	10	-	107	-	-	-	76	134	-	-	-	-	-	-	-	-	-	-	-	-

AQUEOUS SAMPLES

		METHOD BLANK			LAB CONTROL									MATRIX QC								
					LCS		LCSD					RPD	RPD	MS		MSD					RPD	RPD
	UNITS	RESULT	RDL	FLG	%REC	FLG	%REC	FLG	LCL	UCL	RPD	UCL	FLG	%REC	FLG	%REC	FLG	LCL	UCL	RPD	UCL	FLG
Batch: VOA*95500 Method: 8240 - GC/MS for Volatile Organics, con't																						
Vinyl chloride	ug/L	0	1	-	100	-	-	-	66	132	-	-	-	-	-	-	-	-	-	-	-	-
Total Xylene Isomers	ug/L	0	3	-	127	Q	-	-	86	114	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	ug/L	0	1	-	90	-	-	-	78	121	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	ug/L	0	1	-	116	-	-	-	81	123	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	ug/L	0	1	-	102	-	-	-	73	123	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene	ug/L	0	1	-	104	-	-	-	78	122	-	-	-	-	-	-	-	-	-	-	-	-
[1,2-Dichloroethane-d4]	Percent	92	-	-	92	-	-	-	87	125	-	-	-	102	-	103	-	87	125	-	-	-
[4-Bromofluorobenzene]	Percent	96	-	-	103	-	-	-	85	111	-	-	-	103	-	100	-	85	111	-	-	-
[Toluene-d8]	Percent	103	-	-	106	-	-	-	94	113	-	-	-	102	-	101	-	94	113	-	-	-

AQUEOUS SAMPLES

		METHOD BLANK			LAB CONTROL									MATRIX QC								
					LCS		LCSD					RPD	RPD	MS		MSD					RPD	RPD
	UNITS	RESULT	RDL	FLG	%REC	FLG	%REC	FLG	LCL	UCL	RPD	UCL	FLG	%REC	FLG	%REC	FLG	LCL	UCL	RPD	UCL	FLG
Batch: BNA*95179 Method: 8270 - GC/MS for Semivolatile Organics, Capillary column																						
1,2,4-Trichlorobenzene	ug/L	0	5	-	76	-	79	-	44	116	3	-	-	92	-	93	-	44	120	1	39	-
1,2-Dichlorobenzene	ug/L	0	5	-	71	-	72	-	35	127	1	-	-	-	-	-	-	-	-	-	-	-
1,2-Diphenylhydrazine	ug/L	0	5	-	95	-	88	-	43	128	8	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	ug/L	0	5	-	70	-	72	-	32	110	2	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	ug/L	0	5	-	71	-	72	-	35	110	2	-	-	83	-	84	-	39	110	1	34	-
1-Methylnaphthalene	ug/L	0	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	ug/L	0	5	-	91	-	106	-	23	154	15	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	ug/L	0	5	-	72	-	79	-	37	144	10	-	-	-	-	-	-	-	-	-	-	-
2,4-Dichlorophenol	ug/L	0	5	-	76	-	86	-	39	129	12	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	ug/L	0	5	-	70	-	80	-	32	119	13	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	ug/L	0	10	-	79	-	96	-	1	191	19	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene	ug/L	0	5	-	86	-	93	-	39	139	8	-	-	99	-	93	-	48	139	6	25	-
2,6-Dinitrotoluene	ug/L	0	5	-	73	-	87	-	50	152	18	-	-	-	-	-	-	-	-	-	-	-
2-Chloronaphthalene	ug/L	0	5	-	59	-	61	-	32	110	2	-	-	-	-	-	-	-	-	-	-	-
2-Chlorophenol	ug/L	0	5	-	71	-	78	-	35	116	10	-	-	91	-	94	-	43	110	3	24	-
2-Methyl-4,6-dinitrophenol	ug/L	0	5	-	81	-	105	-	1	181	26	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	ug/L	0	5	-	82	-	84	-	5	165	2	-	-	-	-	-	-	-	-	-	-	-
2-Methylphenol (o-Cresol)	ug/L	0	5	-	79	-	91	-	36	114	15	-	-	-	-	-	-	-	-	-	-	-
2-Nitroaniline	ug/L	0	5	-	85	-	88	-	38	144	3	-	-	-	-	-	-	-	-	-	-	-
2-Nitrophenol	ug/L	0	5	-	76	-	83	-	32	130	9	-	-	-	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine	ug/L	0	10	-	112	-	119	-	1	262	6	-	-	-	-	-	-	-	-	-	-	-
3-Methylphenol (m-Cresol)	ug/L	0	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3-Nitroaniline	ug/L	0	5	-	90	-	91	-	30	152	1	-	-	-	-	-	-	-	-	-	-	-
4-Bromophenylphenylether	ug/L	0	5	-	80	-	82	-	56	127	2	-	-	-	-	-	-	-	-	-	-	-
4-Chloro-3-methylphenol	ug/L	0	5	-	81	-	93	-	35	130	14	-	-	116	-	119	-	48	127	3	31	-
4-Chloroaniline	ug/L	0	5	-	86	-	84	-	31	126	3	-	-	-	-	-	-	-	-	-	-	-
4-Chlorophenylphenylether	ug/L	0	5	-	81	-	83	-	48	132	3	-	-	-	-	-	-	-	-	-	-	-
4-Methylphenol (p-Cresol)	ug/L	0	10	-	66	-	73	-	25	124	10	-	-	-	-	-	-	-	-	-	-	-
4-Nitroaniline	ug/L	0	5	-	96	-	102	-	3	187	6	-	-	-	-	-	-	-	-	-	-	-
4-Nitrophenol	ug/L	0	5	-	48	-	53	-	1	132	10	-	-	56	-	39	-	1	132	36	34	Q
6-Methylchrysene	ug/L	0	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7,12-Dimethylbenz(a)anthracene	ug/L	0	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	ug/L	0	5	-	94	-	96	-	47	132	3	-	-	101	-	102	-	52	131	1	26	-
Acenaphthylene	ug/L	0	5	-	89	-	90	-	35	132	1	-	-	-	-	-	-	-	-	-	-	-
Aniline	ug/L	0	5	-	78	-	76	-	1	164	3	-	-	-	-	-	-	-	-	-	-	-
Anthracene	ug/L	0	5	-	82	-	85	-	39	130	4	-	-	-	-	-	-	-	-	-	-	-
Benzidine	ug/L	0	100	-	910	Q	895	Q	1	200	2	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)anthracene	ug/L	0	5	-	89	-	91	-	44	138	2	-	-	-	-	-	-	-	-	-	-	-

AQUEOUS SAMPLES

		METHOD BLANK			LAB CONTROL									MATRIX QC								
	UNITS	RESULT	RDL	FLG	LCS %REC	FLG	LCSD %REC	FLG	LCL	UCL	RPD	RPD UCL	RPD FLG	MS %REC	FLG	MSD %REC	FLG	LCL	UCL	RPD	RPD UCL	RPD FLG
Batch: BNA*95179 Method: 8270 - GC/MS for Semivolatile Organics, Capillary column, con't																						
Benzo(a)pyrene	ug/L	0	5	-	73	-	79	-	36	128	8	-	-	-	-	-	-	-	-	-	-	-
Benzo(b)fluoranthene	ug/L	0	5	-	63	-	71	-	24	137	12	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)perylene	ug/L	0	5	-	92	-	71	-	25	157	25	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	ug/L	0	5	-	71	-	80	-	39	142	12	-	-	-	-	-	-	-	-	-	-	-
Benzenethiol	ug/L	0	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzyl Alcohol	ug/L	0	10	-	73	-	72	-	3	161	1	-	-	-	-	-	-	-	-	-	-	-
Benzoic acid	ug/L	0	50	-	38	-	46	-	1	183	18	-	-	-	-	-	-	-	-	-	-	-
Butylbenzylphthalate	ug/L	0	5	-	99	-	106	-	37	151	7	-	-	-	-	-	-	-	-	-	-	-
Chrysene	ug/L	0	5	-	92	-	100	-	43	147	8	-	-	-	-	-	-	-	-	-	-	-
Di-n-octylphthalate	ug/L	0	5	-	67	-	86	-	21	146	24	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,h)anthracene	ug/L	0	5	-	81	-	69	-	30	154	17	-	-	-	-	-	-	-	-	-	-	-
Dibenz(a,h)acridine	ug/L	0	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzofuran	ug/L	0	5	-	81	-	83	-	54	121	3	-	-	-	-	-	-	-	-	-	-	-
Dibutylphthalate	ug/L	1.2	5	-	85	-	92	-	53	125	8	-	-	-	-	-	-	-	-	-	-	-
Diethylphthalate	ug/L	0	5	-	85	-	91	-	47	142	8	-	-	-	-	-	-	-	-	-	-	-
Dimethylphthalate	ug/L	0	5	-	84	-	90	-	32	142	6	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	ug/L	0	5	-	80	-	84	-	39	137	5	-	-	-	-	-	-	-	-	-	-	-
Fluorene	ug/L	0	5	-	82	-	85	-	59	121	4	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene	ug/L	0	5	-	81	-	86	-	48	129	5	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	ug/L	0	5	-	70	-	72	-	29	116	3	-	-	-	-	-	-	-	-	-	-	-
Hexachlorocyclopentadiene	ug/L	0	5	-	151	Q	145	Q	18	143	4	-	-	-	-	-	-	-	-	-	-	-
Hexachloroethane	ug/L	0	5	-	71	-	73	-	40	113	3	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-c,d)pyrene	ug/L	0	5	-	79	-	61	-	25	162	27	-	-	-	-	-	-	-	-	-	-	-
Indene	ug/L	0	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isophorone	ug/L	0	5	-	72	-	93	-	27	134	25	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodimethylamine	ug/L	0	5	-	80	-	86	-	17	115	7	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodiphenylamine	ug/L	0	5	-	63	-	71	-	11	110	12	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodi-n-propylamine	ug/L	0	5	-	62	-	88	-	32	136	34	-	-	95	-	101	-	33	135	6	25	-
Nitrobenzene	ug/L	0	5	-	77	-	78	-	39	115	1	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	ug/L	0	5	-	76	-	77	-	39	114	1	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	ug/L	0	5	-	89	-	90	-	54	120	1	-	-	-	-	-	-	-	-	-	-	-
Phenol	ug/L	0	5	-	54	-	58	-	7	110	7	-	-	59	-	60	-	5	110	1	30	-
Pentachlorophenol	ug/L	0	5	-	70	-	80	-	14	163	14	-	-	103	-	103	-	14	176	0	39	-
Pyrene	ug/L	0	5	-	90	-	95	-	52	149	5	-	-	105	-	110	-	45	162	5	34	-
Pyridine	ug/L	0	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Quinoline	ug/L	0	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-chloroethoxy)methane	ug/L	0	5	-	82	-	100	-	37	130	20	-	-	-	-	-	-	-	-	-	-	-
Bis(2-chloroethyl)ether	ug/L	0	5	-	88	-	89	-	40	123	2	-	-	-	-	-	-	-	-	-	-	-

AQUEOUS SAMPLES

		METHOD BLANK			LAB CONTROL									MATRIX QC								
	UNITS	RESULT	RDL	FLG	LCS %REC	FLG	LCSD %REC	FLG	LCL	UCL	RPD	RPD UCL	RPD FLG	MS %REC	FLG	MSD %REC	FLG	LCL	UCL	RPD	RPD UCL	RPD FLG
Batch: BNA*95179 Method: 8270 - GC/MS for Semivolatile Organics, Capillary column, con't																						
Bis(2-chloroisopropyl)ether	ug/L	0	5	-	98	-	102	-	36	140	4	-	-	-	-	-	-	-	-	-	-	-
Bis(2-ethylhexyl)phthalate	ug/L	2.5	10	-	98	-	109	-	41	147	11	-	-	-	-	-	-	-	-	-	-	-
[2-Fluorobiphenyl]	Percent	88	-	-	100	-	106	-	43	116	-	-	-	106	-	106	-	43	116	-	-	-
[2-Fluorophenol]	Percent	52	-	-	71	-	77	-	21	100	-	-	-	84	-	81	-	21	100	-	-	-
[2,4,6-Tribromophenol]	Percent	69	-	-	76	-	87	-	40	123	-	-	-	87	-	85	-	10	123	-	-	-
[Nitrobenzene-d5]	Percent	80	-	-	89	-	95	-	37	114	-	-	-	105	-	104	-	35	114	-	-	-
[Phenol-d5]	Percent	34	-	-	57	-	60	-	10	93	-	-	-	63	-	64	-	10	94	-	-	-
[Terphenyl-d14]	Percent	90	-	-	88	-	95	-	33	141	-	-	-	89	-	93	-	33	141	-	-	-

: SURROGATE RECOVERIES :
: BC ANALYTICAL : GLEN LAB : 08:04:52 09 OCT 1995 - P. 1 :

METHOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG	LCL	UCL
9509407*1									
3270	2-Fluorophenol	95179	10/05/95	55.1	75.0	73		21	100
	Phenol-d5	95179	10/05/95	40.3	75.0	54		10	94
	Nitrobenzene-d5	95179	10/05/95	45.5	50.0	91		35	114
	2-Fluorobiphenyl	95179	10/05/95	48.2	50.0	96		43	116
	2,4,6-Tribromophenol Rep.	95179	10/05/95	56.8	75.0	76		10	123
	Terphenyl-d14	95179	10/05/95	38.1	50.0	76		33	141
3240	1,2-Dichloroethane-d4 Rep	95327	09/27/95	48.5	50.0	97		87	125
	Toluene-d8	95327	09/27/95	51.1	50.0	102		94	113
	4-Bromofluorobenzene Rep.	95327	09/27/95	53.3	50.0	107		85	111
9509407*2									
3270	2-Fluorophenol	95179	10/05/95	36.7	75.0	49		21	100
	Phenol-d5	95179	10/05/95	24.8	75.0	33		10	94
	Nitrobenzene-d5	95179	10/05/95	43.2	50.0	86		35	114
	2-Fluorobiphenyl	95179	10/05/95	48.1	50.0	96		43	116
	2,4,6-Tribromophenol Rep.	95179	10/05/95	62.7	75.0	84		10	123
	Terphenyl-d14	95179	10/05/95	44.6	50.0	89		33	141
3240	1,2-Dichloroethane-d4 Rep	95327	09/27/95	49.0	50.0	98		87	125
	Toluene-d8	95327	09/27/95	50.5	50.0	101		94	113
	4-Bromofluorobenzene Rep.	95327	09/27/95	52.2	50.0	104		85	111
9509407*3									
3270	2-Fluorophenol	95179	10/05/95	39.2	75.0	52		21	100
	Phenol-d5	95179	10/05/95	26.0	75.0	35		10	94
	Nitrobenzene-d5	95179	10/05/95	50.5	50.0	101		35	114
	2-Fluorobiphenyl	95179	10/05/95	51.9	50.0	104		43	116
	2,4,6-Tribromophenol Rep.	95179	10/05/95	60.6	75.0	81		10	123
	Terphenyl-d14	95179	10/05/95	43.3	50.0	87		33	141
3240	1,2-Dichloroethane-d4 Rep	95327	09/27/95	48.9	50.0	98		87	125
	Toluene-d8	95327	09/27/95	50.7	50.0	101		94	113
	4-Bromofluorobenzene Rep.	95327	09/27/95	53.6	50.0	107		85	111
9509407*4									
3270	2-Fluorophenol	95179	10/05/95	46.1	75.0	61		21	100
	Phenol-d5	95179	10/05/95	30.4	75.0	41		10	94
	Nitrobenzene-d5	95179	10/05/95	49.1	50.0	98		35	114
	2-Fluorobiphenyl	95179	10/05/95	51.6	50.0	103		43	116
	2,4,6-Tribromophenol Rep.	95179	10/05/95	60.6	75.0	81		10	123
	Terphenyl-d14	95179	10/05/95	44.7	50.0	89		33	141
3240	1,2-Dichloroethane-d4 Rep	95327	09/27/95	48.2	50.0	96		87	125
	Toluene-d8	95327	09/27/95	50.2	50.0	100		94	113
	4-Bromofluorobenzene Rep.	95327	09/27/95	52.6	50.0	105		85	111
9509407*5									
32	1,2-Dichloroethane-d4 Rep	95343	10/05/95	51.3	50.0	103		87	125
	Toluene-d8	95343	10/05/95	48.2	50.0	96		94	113
	4-Bromofluorobenzene Rep.	95343	10/05/95	52.6	50.0	105		85	111
9509407*6									

: SURROGATE RECOVERIES :
: BC ANALYTICAL : GLEN LAB : 08:05:03 09 OCT 1995 - P. 2 :

METHOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG	LCL	UCL
8240	1,2-Dichloroethane-d4 Rep	95500	10/05/95	50.7	50.0	101		87	125
	Toluene-d8	95500	10/05/95	49.6	50.0	99		94	113
	4-Bromofluorobenzene Rep.	95500	10/05/95	47.6	50.0	95		85	111

BHP

CHAIN OF CUSTODY

G9509407

Environmental Technologies International, Inc.
Mauka Tower 737 Bishop Street, 22nd Floor
P.O. Box 3379 Honolulu, HI 96842
(808) 547-3600 Facsimile: (808) 547-3033

PROJECT NO: GMP
ET CLIENT:

SEND RESULTS TO
Name: Tony Shan
Company: BHP Hawaii Refinery
Address: 91-325 Komohana St.
City, State, Zip: Kapolei, HI 96707

SEND INVOICE TO
Name: Same as left.
Company:
Address:
City, State, Zip:

Sample No.	Lab No.	No. Containers	Date	Time	Sample Type/Description	Analysis Required	Sampled By
CW-9A		6	9/22/95	0855	Groundwater	8240, 8270, metals, pH, TDS, cond, Cl, SO_4	Z. Shan
CW-9B		6	↓	0950	↓	↓	↓
CW-5A		6	↓	1045	↓	↓	↓
CW-5B		6	↓	1140	↓	↓	↓
Field Blank #4		2	↓	0910	Field Blank	8240	↓
Trip Blank #5		2	↓	1200	Trip Blank	↓	↓
Temp. Blank #5		1	↓	1210	Temperature Blank	↓ 9°C	↓

CUSTODY TRANSFERS

	RELINQUISHED BY: (NAME, SIGNATURE)	DATE	TIME	RECEIVED BY: (NAME, SIGNATURE)	DATE	TIME	COMMENTS
1	Zuyi Shan Zuyi Shan	9/22/95	1250	Susan Arrowsmith S. ARROWSMITH	9/22/95	11.30	
2							
3							
4							

SHIPPING DETAILS

DELIVERED TO SHIPPER BY:
METHOD OF SHIPMENT: DHL
DATE 9/22/95 TIME
AIRBILL # 8303663 75
RECEIVED FOR LAB: SIGNED
DATE TIME
SAMPLE CONDITION UPON RECEIPT:

WHITE - CUSTODY SHEET YELLOW - LAB PINK - ET

3. GROUNDWATER WELL ELEVATION DATA

BHP HAWAII REFINERY GROUNDWATER WELL ELEVATION DATA

Well I.D. No.	Date [a]	Time [a]	Top of Stainless Steel or PVC Case Elevation (ft,MSL)[b]	Top of Concrete Apron Elevation (ft,MSL) [c]	Ground Surface Elevation (ft,MSL) [c]	Depth to Oil (ft)	Depth to Water (ft)	Oil Thickness (ft)	Corrected Depth to Water (ft)[d]	GW Table Elevation (ft,MSL)[e]
MW-3	9/19/95	15:36pm	12.81	11.76	11.11	11.80	11.95	0.15	11.82	0.99
MW-4	9/19/95	13:55pm	13.29	12.15	11.75	12.24	12.43	0.19	12.26	1.03
MW-5	9/19/95	13:08pm	13.58	11.85	11.05	12.62	12.64	0.02	12.62	0.96
MW-6	9/21/95	7:59am	13.12	11.58	11.28	12.52	12.72	0.20	12.54	0.58
CW1A	9/21/95	7:52am	13.34	N/A	11.34	N/A	12.66	0.0	12.66	0.68
CW1B	9/21/95	7:54am	13.55	N/A	11.19	N/A	12.45	0.0	12.45	1.10
CW1C	9/21/95	7:56am	13.66	N/A	11.21	N/A	12.86	0.0	12.86	0.80
CW6A	9/20/95	10:15am	15.80	N/A	13.60	N/A	14.58	0.0	14.58	1.22
CW6B	9/20/95	10:17am	15.74	N/A	13.50	N/A	14.54	0.0	14.54	1.20
CW7A	9/20/95	7:52am	14.03	N/A	11.90	N/A	12.86	0.0	12.86	1.17
CW7B	9/20/95	7:54am	14.41	N/A	11.90	N/A	13.25	0.0	13.25	1.16
CW2A	9/18/95	8:18am	13.74	N/A	11.46	N/A	12.61	0.0	12.61	1.13
CW2B	9/18/95	8:19am	13.62	N/A	11.37	N/A	12.49	0.0	12.49	1.13
CW2C	9/18/95	8:20am	13.66	N/A	11.17	N/A	12.81	0.0	12.81	0.85

CW8A	9/20/95	13:19pm	11.48	N/A	12.00	N/A	9.84	0.0	9.84	1.64
CW8B	9/20/95	15:26pm	11.52	N/A	11.90	N/A	9.78	0.0	9.78	1.74
CW9A	9/22/95	8:14am	12.41	N/A	10.00	N/A	11.30	0.0	11.30	1.11
CW9B	9/22/95	8:16am	12.40	N/A	10.10	N/A	11.44	0.0	11.44	0.96
CW3A	9/18/95	12:40pm	13.65	N/A	11.16	N/A	11.52	0.0	11.52	2.13
CW3B	9/18/95	12:42pm	13.82	N/A	11.22	N/A	12.06	0.0	12.06	1.76
CW3C	9/18/95	12:43pm	13.85	N/A	11.27	N/A	10.83	0.0	10.83	3.02
CW5A	9/22/95	10:03am	15.71	N/A	13.20	N/A	14.61	0.0	14.41	1.30
CW5B	9/22/95	10:05am	15.51	N/A	13.10	N/A	14.46	0.0	14.46	1.05
CW4A	9/19/95	8:24am	12.24	N/A	10.07	N/A	11.33	0.0	11.33	0.91
CW4B	9/19/95	8:26am	12.01	N/A	9.68	N/A	11.19	0.0	11.19	0.82
CW4C	9/19/95	8:28am	12.13	N/A	9.74	N/A	11.33	0.0	11.33	0.80

(a) Date and time of water level measurements
(b) Survey conducted in 8/87 for MW-3, MW-4, MW-5, MW-6; in 6/92 for CW1-4ABC; and in 11/94 for CW5-9AB
(c) Survey conducted 9/17/91
(d) Corrected depth to water = depth to water-(oil thickness x specific gravity)
Note: Specific gravities of oils were measured by the laboratory to be 0.88 for MW-3, MW-4, and MW-5; and 0.87 for MW-6 in August 1994.
(e) Ground water table elevation = top of casing elevation - corrected depth to water

RECORDS SEPARATOR PAGE

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1A

BHP

CERTIFIED MAIL NO. P-101-793-296
RETURN RECEIPT REQUESTED

BHP Hawaii

August 4, 1995

Mr. Mitch Kaplan
Hazardous Waste Division (H-3-1)
U.S. Environmental Protection Agency, Region IX
75 Hawthorne Street
San Francisco, California 94105

Dear Mr. Kaplan:

Groundwater Analytical Results
HID 056786395

BHP Petroleum Americas Refining Inc., submits, for your review, the enclosed third quarterly groundwater analytical results for groundwater samples collected at the Refinery in June 1995 under the current Groundwater Monitoring Program. Groundwater samples were collected from a total of 26 monitoring wells in the Refinery (MW-3 to 6, and CW-1 to CW-9). Duplicate samples were collected from CW-1A and CW-6A respectively. According to the instructions given by you and Ms. Kathy Baylor of EPA - XI Office on site, the duplicate samples were sent to the same analytical laboratory (B C Analytical) along with the regular samples.

Pursuant to the requirements of the Groundwater Monitoring Plan (GMP, October 1993), samples of free product floating on the water table in the monitoring wells (MW-3 to 6) were also collected. However, only two of the four wells had enough amount of samples for GC characterization. The GC analytical results of the free product samples indicated that the product was basically in the range of dieseal and the laboratory report is also enclosed.

The groundwater analytical results indicate that groundwater quality around the ponds area has not changed significantly since last quarterly sampling conducted in March 1995. Detectable level of benzene was found at 12 of the 26 monitoring wells. However, all of them are below 5.8 ug/L except one sample with a concentration of 14 ug/L at CW-1A, but benzene is below detectable level in MW-6 which is only approximately 20 feet away from CW-1A.

The groundwater analytical results once again indicate that there is no significant dissolved phase contamination in the groundwater around the pond area at present time. In the original GMP plan, we proposed to conduct a groundwater flow modeling as well as a contaminant transport modeling. Due to the lack of a contaminant plume, we request to drop the part of contaminant transport modeling from the GMP and to continue the groundwater flow modeling as proposed. Also, to avoid any possible confusion, we would like to clarify here that the modeling schedule in the GMP is for

BHP Hawaii Inc
733 Bishop Street Honolulu Hawaii 96813 USA
PO Box 3379 Honolulu Hawaii 96842 USA
Telephone 808 547 3111 Facsimile 808 547 3145

model setup, model domain defining, and computer simulation by using existing data which includes the first round water level measurement result. Any model calibration work will be done later when the water level data from the second round GMP water level measurement is available (which is anticipated to be in September or October 1995). The modeling results will be incorporated into the final GMP report to be submitted to EPA in March 1996.

Please contact Tony Shan at (808) 547-3804 should you have any questions.

Sincerely,

Frank D. Clouse

Frank D. Clouse
Refinery Manager

cc: Ms. Nicole Moutoux, US EPA (w/o Enclosure)
Mr. Steven Y. K. Chang, HDOH (w/ Enclosure)

Concentration of benzene detected in groundwater samples
BHP Hawaii Refinery (June 1995)

Well Number	Benzene Concentration (ug/L)
MW-3	5.0
MW-4	4.3
MW-5	5.8
MW-6	<1
CW-1A	14
CW-1A Duplicate	17
CW-1B	<1
CW-1C	<1
CW-2A	2.3
CW-2B	<1
CW-2C	<1
CW-3A	2.7
CW-3B	5.5
CW-3C	4.2
CW-4A	1.4
CW-4B	<1
CW-4C	<1
CW-5A	<1
CW-5B	<1
CW-6A	<1
CW-6A Duplicate	<1
CW-6B	2.2
CW-7A	<1
CW-7B	<1
CW-8A	5.3
CW-8B	<1
CW-9A	1.3
CW-9B	<1

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GROUNDWATER ANALYTICAL RESULTS

FOR JUNE 1995

BHP PETROLEUM AMERICAS REFINERY
91-325 KOMOHANA STREET,
KAPOLEI, HAWAII 96707

August 4, 1995

CONTENTS

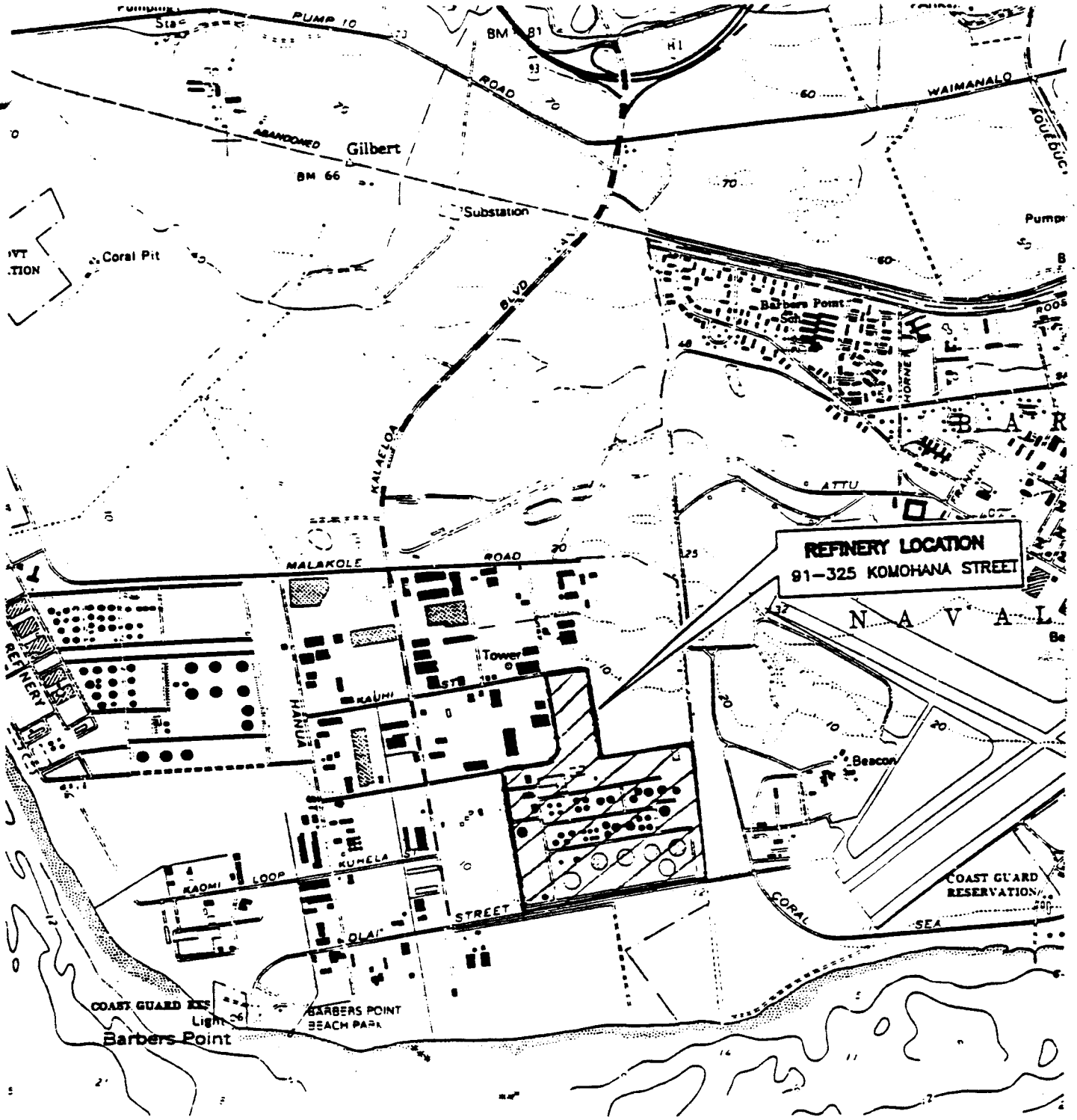
1. Groundwater monitoring well location map.

2. Analytical results of groundwater.

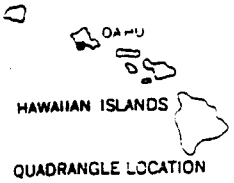
3. Analytical results of free product samples.

4. Groundwater elevation data.

1. GROUNDWATER MONITORING WELL LOCATION MAP



GENERAL NOTES:
BASE MAP FROM U.S.G.S.
EWA, HAWAII QUADRANGLE
7.5 MINUTE TOPOGRAPHIC MAP
PHOTOREVISED 1983



QUADRANGLE LOCATION

N

0 2000 FT

SCALE: 1 : 24,000

FIGURE 1

SITE LOCATION MAP
BHP PETROLEUM AMERICAS REFINING INC.
91-325 KOMOHANA STREET
KAPOLEI, HAWAII

PROJECT NO. 45-93-033	DRAWN BY G. ROSAS
FILE NO. 3-033-02	PREPARED BY J. AMATO
DATE 15 JUL 93 / REV. 0	REVIEWED BY

Delta Environmental Consultants, Inc.

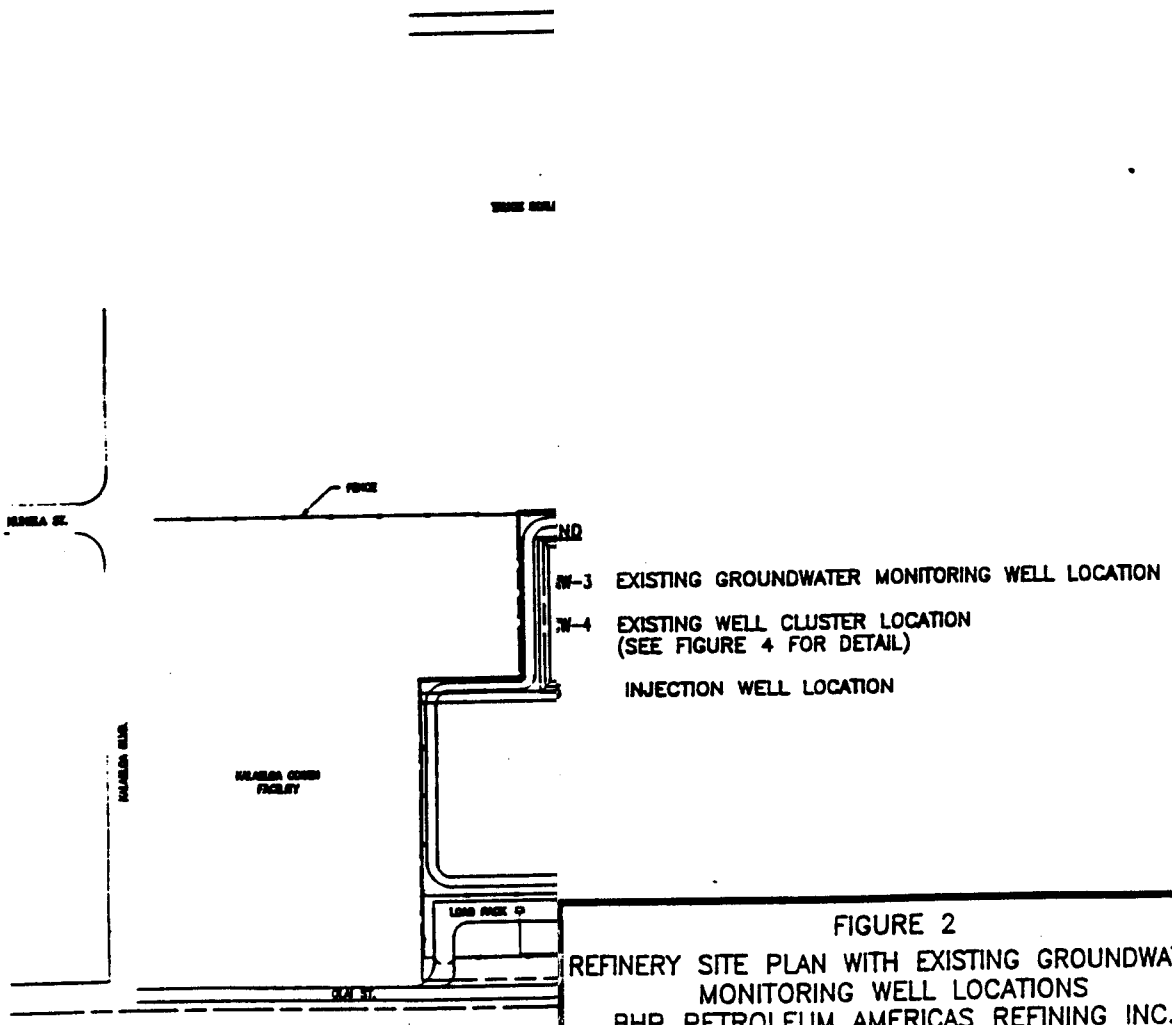


FIGURE 2

REFINERY SITE PLAN WITH EXISTING GROUNDWATER MONITORING WELL LOCATIONS
BHP PETROLEUM AMERICAS REFINING INC.
91-325 KOMOHANA STREET
KAPOLEI, HAWAII

PROJECT NO. 45-93-033	DRAWN BY GREG ROSAS	Delta Environmental Consultants, Inc.
FILE NO. 3-033-06	PREPARED BY JOHN AMATO	
DATE 3 AUG 93 / REV.	REVIEWED BY	

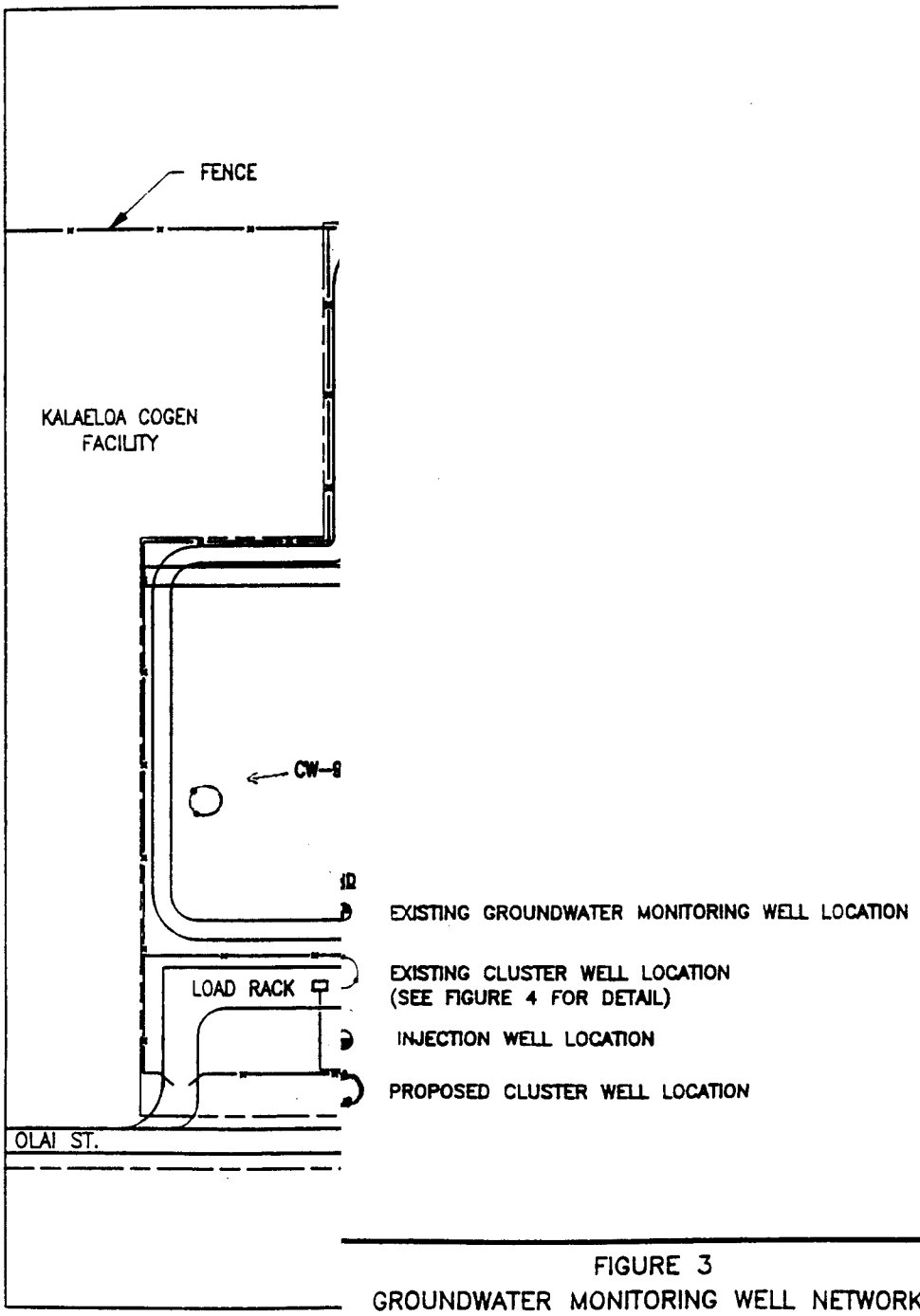
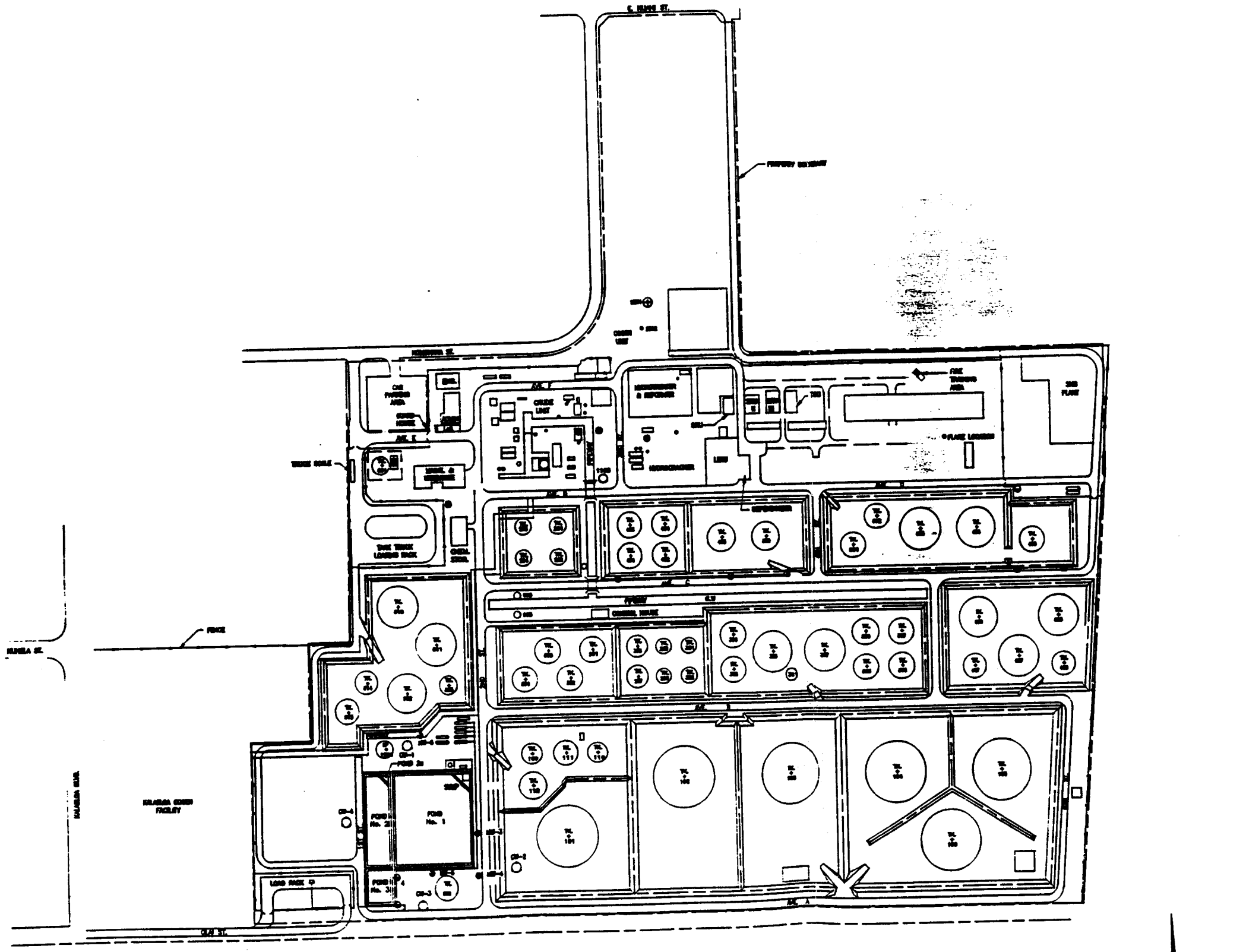


FIGURE 3

GROUNDWATER MONITORING WELL NETWORK WITH PROPOSED CLUSTER WELL LOCATIONS
BHP PETROLEUM AMERICAS REFINING INC.
91-325 KOMOHANA STREET
KAPOLEI, HAWAII

PROJECT NO. 45-93-033		DRAWN BY M. ENTERLINE
FILE NO. 3-033-08		PREPARED BY J. AMATO
DATE 18 OCT 93	REV.	REVIEWED BY

Delta Environmental Consultants, Inc.



LEGEND

- MW-3 EXISTING GROUNDWATER MONITORING WELL LOCATION
- CW-4 EXISTING WELL CLUSTER LOCATION (SEE FIGURE 4 FOR DETAIL)
- 3 INJECTION WELL LOCATION

N

0 200 400

SCALE FEET

FIGURE 2

REFINERY SITE PLAN WITH EXISTING GROUNDWATER MONITORING WELL LOCATIONS
BHP PETROLEUM AMERICAS REFINING INC.
91-325 KOMOHANA STREET
KAPOLEI, HAWAII

PROJECT NO. 45-93-033		DRAWN BY GREG ROSAS
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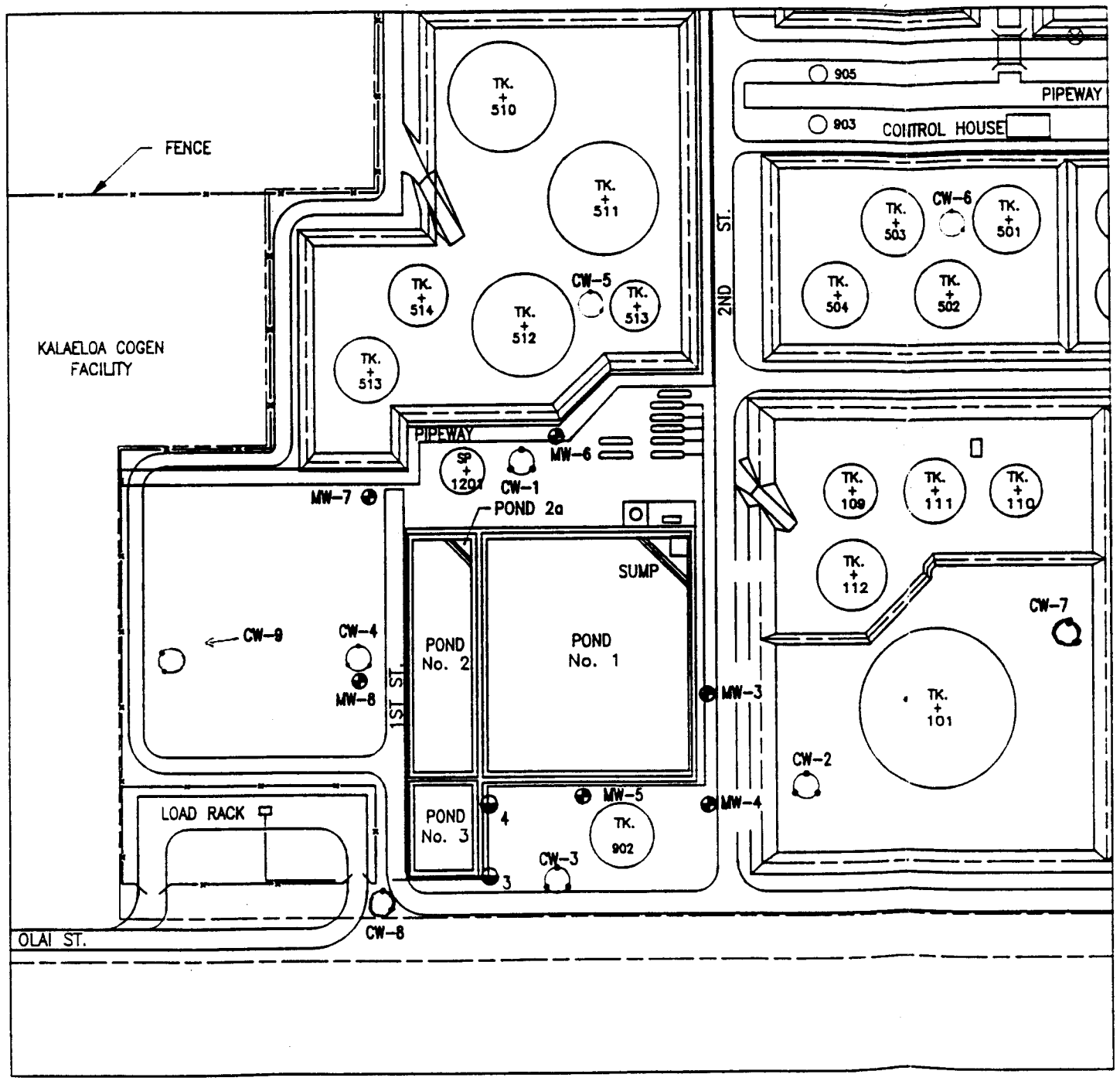

LEGEND

MW-5 EXISTING GROUNDWATER MONITORING WELL LOCATION

CW-4 EXISTING CLUSTER WELL LOCATION (SEE FIGURE 4 FOR DETAIL)

4 INJECTION WELL LOCATION

CW-9 PROPOSED CLUSTER WELL LOCATION

N

0 100 200

SCALE FEET

FIGURE 3

GROUNDWATER MONITORING WELL NETWORK WITH PROPOSED CLUSTER WELL LOCATIONS
BHP PETROLEUM AMERICAS REFINING INC.
91-325 KOMOHANA STREET
KAPOLEI, HAWAII

PROJECT NO. 45-93-033	DRAWN BY M. ENTERLINE	Delta Environmental Consultants, Inc.
FILE NO. 3-033-08	PREPARED BY J. AMATO	
DATE 18 OCT 93 / REV.	REVIEWED BY	

2. ANALYTICAL RESULTS OF GROUNDWATER

ANALYTICAL REPORT

B C Analytical

801 Western Avenue
Glendale, CA 91201
818/247-5737
Fax: 818/247-9797

LOG NO: G95-06-438

Received: 22 JUN 95

Mailed: JUL 7 1995

Dr. Tony Shan
BHP, Hawaii Refinery
91-325 Komohana St.
Kapolei, HI 96707

Project: GMP.3RD.QTR

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
06-438-1	CW-2A	20 JUN 95
06-438-2	CW-2B	20 JUN 95
06-438-3	CW-2C	20 JUN 95
06-438-4	CW-1A	20 JUN 95
06-438-5	CW-1B	20 JUN 95

PARAMETER	06-438-1	06-438-2	06-438-3	06-438-4	06-438-5
Digestion (3010), Date	06/27/95	06/27/95	06/27/95	06/27/95	06/27/95
Furnace Digestion (3020), Date	06/27/95	06/27/95	06/27/95	06/27/95	06/27/95
Chloride (300.0), mg/L	1600	9100	13000	1600	12000
Sulfate (300.0), mg/L	1500	2000	2500	560	2300
Quad. Conductivity (120.1)					
Sp. Cond., Average, umhos/cm	8500	27000	38000	8200	34000
Sp. Cond., 1st Replicate, umhos/cm	8500	27000	38000	8100	33000
Sp. Cond., 2nd Replicate, umhos/cm	8500	26000	38000	8100	34000
Sp. Cond., 3rd Replicate, umhos/cm	8600	27000	38000	8200	34000
Sp. Cond., 4th Replicate, umhos/cm	8500	27000	38000	8200	34000
Other Quad. Conductivity (120.1)	---	---	---	---	---
Quad. pH (150.1)					
pH, Average, Units	8.0	7.6	7.5	7.9	7.5
pH, 1st Replicate, Units	8.0	7.6	7.5	8.0	7.5
pH, 2nd Replicate, Units	8.0	7.6	7.5	7.9	7.5
pH, 3rd Replicate, Units	8.0	7.6	7.5	7.9	7.5
pH, 4th Replicate, Units	8.0	7.6	7.5	7.9	7.5
Other Quad. pH (150.1)	---	---	---	---	---
Dissolved Solids (160.1), mg/L	5700	20000	30000	5000	27000
Antimony (6010), mg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (7060), mg/L	<0.002	<0.002	<0.002	0.0028	<0.002
Barium (6010), mg/L	0.011	0.026	0.023	0.0081	0.031
Beryllium (6010), mg/L	<0.001	<0.001	0.0012	<0.001	<0.001
Cadmium (7131), mg/L	<0.001	<0.001	<0.001	<0.001	<0.001

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06-438-3	CW-2C	20 JUN 95
06-438-4	CW-1A	20 JUN 95
06-438-5	CW-1B	20 JUN 95

PARAMETER	06-438-1	06-438-2	06-438-3	06-438-4	06-438-5
Chromium (6010), mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (6010), mg/L	<0.04	<0.04	<0.04	<0.04	<0.04
Iron (6010), mg/L	0.071	<0.04	<0.04	0.080	<0.04
Lead (7421), mg/L	0.0060	0.0021	<0.002	0.0034	<0.002
Manganese (6010), mg/L	0.024	0.046	0.21	0.052	0.13
Mercury (7470), mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Nickel (6010), mg/L	0.043	0.042	0.081	0.043	0.078
Selenium (7740), mg/L	<0.004	<0.004	<0.004	<0.004	<0.004
Sodium (6010), mg/L	1800	5800	8300	1800	7300
Vanadium (6010), mg/L	<0.04	<0.04	<0.04	<0.04	<0.04

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06-438-3	CW-2C	20 JUN 95
06-438-4	CW-1A	20 JUN 95
06-438-5	CW-1B	20 JUN 95

PARAMETER	06-438-1	06-438-2	06-438-3	06-438-4	06-438-5
B/N,A Ext.Pri.Poll. (8270)					
Date Analyzed	06/29/95	06/29/95	06/29/95	06/30/95	06/30/95
Date Extracted	06/23/95	06/23/95	06/23/95	06/23/95	06/23/95
Dilution Factor, Times	1	1	1	10	1
1,2,4-Trichlorobenzene, ug/L	<5	<5	<5	<50	<5
1,2-Dichlorobenzene, ug/L	<6	<6	<6	<60	<6
1,2-Diphenylhydrazine, ug/L	<5	<5	<5	<50	<5
1,3-Dichlorobenzene, ug/L	<5	<5	<5	<50	<5
1,4-Dichlorobenzene, ug/L	<5	<5	<5	<50	<5
1-Methylnaphthalene, ug/L	<10	<10	<10	<100	<10
2,4,5-Trichlorophenol, ug/L	<6	<6	<6	<60	<6
2,4,6-Trichlorophenol, ug/L	<5	<5	<5	<50	<5
2,4-Dichlorophenol, ug/L	<5	<5	<5	<50	<5
2,4-Dimethylphenol, ug/L	<5	<5	<5	<50	<5
2,4-Dinitrophenol, ug/L	<10	<10	<10	<100	<10
2,4-Dinitrotoluene, ug/L	<5	<5	<5	<50	<5
2,6-Dinitrotoluene, ug/L	<5	<5	<5	<50	<5
2-Chloronaphthalene, ug/L	<6	<6	<6	<60	<6
2-Chlorophenol, ug/L	<5	<5	<5	<50	<5
2-Methyl-4,6-dinitrophenol, ug/L	<5	<5	<5	<50	<5
2-Methylnaphthalene, ug/L	<5	<5	<5	<50	<5
2-Methylphenol (o-Cresol), ug/L	<5	<5	<5	<50	<5
2-Nitroaniline, ug/L	<5	<5	<5	<50	<5

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06-438-4	CW-1A	20 JUN 95
06-438-5	CW-1B	20 JUN 95

PARAMETER	06-438-1	06-438-2	06-438-3	06-438-4	06-438-5
2-Nitrophenol, ug/L	<5	<5	<5	<50	<5
3,3'-Dichlorobenzidine, ug/L	<20	<20	<20	<200	<20
3-Methylphenol (m-Cresol), ug/L	<10	<10	<10	<100	<10
3-Nitroaniline, ug/L	5.3	<5	<5	<50	<5
4-Bromophenylphenylether, ug/L	<5	<5	<5	<50	<5
4-Chloro-3-methylphenol, ug/L	<5	<5	<5	<50	<5
4-Chloroaniline, ug/L	<5	<5	<5	<50	<5
4-Chlorophenylphenylether, ug/L	<5	<5	<5	<50	<5
4-Methylphenol (p-Cresol), ug/L	<8	<8	<8	<80	<8
4-Nitroaniline, ug/L	<6	<6	<6	<60	<6
4-Nitrophenol, ug/L	42	19	<5	<50	<5
6-Methylchrysene, ug/L	<10	<10	<10	<100	<10
7,12-Dimethylbenz(a)anthracene, ug/L	<5	<5	<5	<50	<5
Acenaphthene, ug/L	<5	<5	<5	<50	<5
Acenaphthylene, ug/L	<5	<5	<5	<50	<5
Aniline, ug/L	<5	<5	<5	<50	<5
Anthracene, ug/L	<5	<5	<5	<50	<5
Benzidine, ug/L	<100	<100	<100	<1000	<100
Benzo(a)anthracene, ug/L	<5	<5	<5	<50	<5
Benzo(a)pyrene, ug/L	<5	<5	<5	<50	<5
Benzo(b)fluoranthene, ug/L	<5	<5	<5	<50	<5
Benzo(g,h,i)perylene, ug/L	<5	<5	<5	<50	<5
Benzo(k)fluoranthene, ug/L	<5	<5	<5	<50	<5

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06-438-3	CW-2C	20 JUN 95
06-438-4	CW-1A	20 JUN 95
06-438-5	CW-1B	20 JUN 95

PARAMETER	06-438-1	06-438-2	06-438-3	06-438-4	06-438-5
Benzenethiol, ug/L	<20	<20	<20	<200	<20
Benzyl Alcohol, ug/L	<5	<5	<5	<50	<5
Benzoic acid, ug/L	<50	<50	<50	<500	<50
Butylbenzylphthalate, ug/L	<5	<5	<5	<50	<5
Chrysene, ug/L	<5	<5	<5	<50	<5
Di-n-octylphthalate, ug/L	<5	<5	<5	<50	<5
Dibenzo(a,h)anthracene, ug/L	<5	<5	<5	<50	<5
Dibenz(a,h)acridine, ug/L	<20	<20	<20	<200	<20
Dibenzofuran, ug/L	<5	<5	<5	<50	<5
Dibutylphthalate, ug/L	<5	<5	<5	<50	<5
Diethylphthalate, ug/L	<5	<5	<5	<50	<5
Dimethylphthalate, ug/L	<5	<5	<5	<50	<5
Fluoranthene, ug/L	<5	<5	<5	<50	<5
Fluorene, ug/L	<5	<5	<5	<50	<5
Hexachlorobenzene, ug/L	<5	<5	<5	<50	<5
Hexachlorobutadiene, ug/L	<5	<5	<5	<50	<5
Hexachlorocyclopentadiene, ug/L	<5	<5	<5	<50	<5
Hexachloroethane, ug/L	<5	<5	<5	<50	<5
Indeno(1,2,3-c,d)pyrene, ug/L	<7	<7	<7	<70	<7
Indene, ug/L	<10	<10	<10	<100	<10
Isophorone, ug/L	<5	<5	<5	<50	<5
N-Nitrosodimethylamine, ug/L	<6	<6	<6	<60	<6
N-Nitrosodiphenylamine, ug/L	<5	<5	<5	<50	<5

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06-438-4	CW-1A	20 JUN 95
06-438-5	CW-1B	20 JUN 95

PARAMETER	06-438-1	06-438-2	06-438-3	06-438-4	06-438-5
N-Nitrosodi-n-propylamine, ug/L	<6	<6	<6	<60	<6
Nitrobenzene, ug/L	<5	<5	<5	<50	<5
Naphthalene, ug/L	<5	<5	<5	<50	<5
Phenanthrene, ug/L	<5	<5	<5	<50	<5
Phenol, ug/L	<5	<5	<5	<50	<5
Pentachlorophenol, ug/L	<5	<5	<5	<50	<5
Pyrene, ug/L	<5	<5	<5	<50	<5
Pyridine, ug/L	<10	<10	<10	<100	<10
Quinoline, ug/L	<10	<10	<10	<100	<10
Bis(2-chloroethoxy)methane, ug/L	<5	<5	<5	<50	<5
Bis(2-chloroethyl)ether, ug/L	<5	<5	<5	<50	<5
Bis(2-chloroisopropyl)ether, ug/L	<6	<6	<6	<60	<6
Bis(2-ethylhexyl)phthalate, ug/L	<7	<7	<7	<70	<7

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06-438-4	CW-1A	20 JUN 95
06-438-5	CW-1B	20 JUN 95

PARAMETER	06-438-1	06-438-2	06-438-3	06-438-4	06-438-5
Vol.Pri.Poll. (8240)					
Date Analyzed	07/02/95	07/02/95	07/02/95	07/02/95	07/02/95
Dilution Factor, Times	1	1	1	1	1
1,1,1-Trichloroethane, ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane, ug/L	<1	<1	<1	<1	<1
1,1,2-Trichloroethane, ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane, ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene, ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane, ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene, ug/L	<1	<1	<1	<1	<1
1,2-Dichloropropane, ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene, ug/L	<1	<1	<1	<1	<1
1,4-Dichlorobenzene, ug/L	<1	<1	<1	<1	<1
1,4-Dioxane, ug/L	<500	<500	<500	<500	<500
2-Chloroethylvinylether, ug/L	<1	<1	<1	<1	<1
2-Hexanone, ug/L	<5	<5	<5	<5	<5
Acetone, ug/L	<20	<20	<20	<20	<20
Bromodichloromethane, ug/L	<1	<1	<1	<1	<1
Bromomethane, ug/L	<1	<1	<1	<1	<1
Benzene, ug/L	2.3	<1	<1	14	<1
Bromoform, ug/L	<1	<1	<1	<1	<1
Chlorobenzene, ug/L	<1	<1	<1	<1	<1
Carbon Tetrachloride, ug/L	<1	<1	<1	<1	<1

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06-438-4	CW-1A	20 JUN 95
06-438-5	CW-1B	20 JUN 95

PARAMETER	06-438-1	06-438-2	06-438-3	06-438-4	06-438-5
Chloroethane, ug/L	<1	<1	<1	<1	<1
Chloroform, ug/L	<1	<1	<1	<1	<1
Chloromethane, ug/L	<1	<1	<1	<1	<1
Carbon Disulfide, ug/L	<2	2.0	<2	7.5	5.7
Cyclohexane, ug/L	<5	<5	<5	<5	<5
Dibromochloromethane, ug/L	<1	<1	<1	<1	<1
Ethylene Dibromide, ug/L	<5	<5	<5	<5	<5
Ethylbenzene, ug/L	<1	<1	<1	<1	<1
Freon 113, ug/L	<2	<2	<2	<2	<2
Methyl ethyl ketone, ug/L	<5	<5	<5	5.9	<5
Methyl isobutyl ketone, ug/L	<5	<5	<5	<5	<5
Methylene chloride, ug/L	<1	<1	<1	<1	<1
Styrene, ug/L	<1	<1	<1	<1	<1
Trichloroethene, ug/L	<1	<1	<1	<1	<1
Trichlorofluoromethane, ug/L	<1	<1	<1	<1	<1
Toluene, ug/L	<1	<1	<1	3.3	<1
Tetrachloroethene, ug/L	<1	<1	<1	<1	<1
Vinyl acetate, ug/L	<10	<10	<10	<10	<10
Vinyl chloride, ug/L	<1	<1	<1	<1	<1
Total Xylene Isomers, ug/L	<3	<3	<3	<3	<3
cis-1,2-Dichloroethene, ug/L	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene, ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene, ug/L	<1	<1	<1	<1	<1

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B C Analytical

801 Western Avenue
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LOG NO: G95-06-438

Received: 22 JUN 95

Dr. Tony Shan
BHP, Hawaii Refinery
91-325 Komohana St.
Kapolei, HI 96707

Project: GMP.3RD.QTR

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
06-438-1	CW-2A	20 JUN 95
06-438-2	CW-2B	20 JUN 95
06-438-3	CW-2C	20 JUN 95
06-438-4	CW-1A	20 JUN 95
06-438-5	CW-1B	20 JUN 95

PARAMETER	06-438-1	06-438-2	06-438-3	06-438-4	06-438-5
trans-1,3-Dichloropropene, ug/L	<1	<1	<1	<1	<1

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
06-438-6	CW-1C	20 JUN 95
06-438-7	MW-3	21 JUN 95
06-438-8	MW-4	21 JUN 95
06-438-9	MW-5	21 JUN 95
06-438-10	MW-6	21 JUN 95

PARAMETER	06-438-6	06-438-7	06-438-8	06-438-9	06-438-10
Digestion (3010), Date	06/27/95	06/27/95	06/27/95	06/27/95	06/27/95
Furnace Digestion (3020), Date	06/27/95	06/27/95	06/27/95	06/27/95	06/27/95
Chloride (300.0), mg/L	13000	810	860	690	1500
Sulfate (300.0), mg/L	2600	1400	1500	1600	220
Quad. Conductivity (120.1)					
Sp. Cond., Average, umhos/cm	39000	6400	6700	6400	7000
Sp. Cond., 1st Replicate, umhos/cm	39000	6400	6600	6200	6900
Sp. Cond., 2nd Replicate, umhos/cm	39000	6300	6600	6400	7100
Sp. Cond., 3rd Replicate, umhos/cm	39000	6400	6700	6400	7100
Sp. Cond., 4th Replicate, umhos/cm	39000	6500	6700	6400	7000
Other Quad. Conductivity (120.1)	---	---	---	---	---
Quad. pH (150.1)					
pH, Average, Units	7.7	8.2	8.2	8.2	7.8
pH, 1st Replicate, Units	7.7	8.2	8.2	8.2	7.8
pH, 2nd Replicate, Units	7.7	8.2	8.2	8.2	7.8
pH, 3rd Replicate, Units	7.7	8.2	8.2	8.2	7.8
pH, 4th Replicate, Units	7.7	8.2	8.2	8.2	7.8
Other Quad. pH (150.1)	---	---	---	---	---
Dissolved Solids (160.1), mg/L	31000	4400	4400	4300	4400
Antimony (6010), mg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (7060), mg/L	<0.002	<0.002	<0.002	0.0027	<0.002
Barium (6010), mg/L	0.025	0.012	0.013	0.014	0.010
Beryllium (6010), mg/L	0.0016	<0.001	<0.001	<0.001	<0.001

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LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
06-438-6	CW-1C	20 JUN 95
06-438-7	MW-3	21 JUN 95
06-438-8	MW-4	21 JUN 95
06-438-9	MW-5	21 JUN 95
06-438-10	MW-6	21 JUN 95

PARAMETER	06-438-6	06-438-7	06-438-8	06-438-9	06-438-10
Cadmium (7131), mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium (6010), mg/L	<0.01	<0.01	<0.01	<0.01	0.015
Cobalt (6010), mg/L	<0.04	<0.04	<0.04	<0.04	<0.04
Iron (6010), mg/L	0.26	0.060	0.10	<0.04	0.14
Lead (7421), mg/L	<0.002	0.023	0.0025	0.0028	0.0023
Manganese (6010), mg/L	0.21	0.026	0.023	0.020	0.075
Mercury (7470), mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Nickel (6010), mg/L	0.11	0.092	0.073	0.079	<0.04
Selenium (7740), mg/L	<0.004	<0.004	<0.004	<0.004	<0.004
Sodium (6010), mg/L	8500	1500	1600	1500	1700
Vanadium (6010), mg/L	<0.04	<0.04	<0.04	<0.04	<0.04

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LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
06-438-6	CW-1C	20 JUN 95
06-438-7	MW-3	21 JUN 95
06-438-8	MW-4	21 JUN 95
06-438-9	MW-5	21 JUN 95
06-438-10	MW-6	21 JUN 95

PARAMETER	06-438-6	06-438-7	06-438-8	06-438-9	06-438-10
B/N,A Ext.Pri.Poll. (8270)					
Date Analyzed	06/30/95	06/30/95	06/30/95	06/30/95	07/01/95
Date Extracted	06/23/95	06/23/95	06/23/95	06/23/95	06/23/95
Dilution Factor, Times	1	5	5	1	5
1,2,4-Trichlorobenzene, ug/L	<5	<30	<30	<5	<30
1,2-Dichlorobenzene, ug/L	<6	<30	<30	<6	<30
1,2-Diphenylhydrazine, ug/L	<5	<30	<30	<5	<30
1,3-Dichlorobenzene, ug/L	<5	<30	<30	<5	<30
1,4-Dichlorobenzene, ug/L	<5	<30	<30	<5	<30
1-Methylnaphthalene, ug/L	<10	<50	<50	<10	<50
2,4,5-Trichlorophenol, ug/L	<6	<30	<30	<6	<30
2,4,6-Trichlorophenol, ug/L	<5	<30	<30	<5	<30
2,4-Dichlorophenol, ug/L	<5	<30	<30	<5	<30
2,4-Dimethylphenol, ug/L	<5	<30	<30	<5	<30
2,4-Dinitrophenol, ug/L	<10	<50	<50	<10	<50
2,4-Dinitrotoluene, ug/L	<5	<30	<30	<5	<30
2,6-Dinitrotoluene, ug/L	<5	<30	<30	<5	<30
2-Chloronaphthalene, ug/L	<6	<30	<30	<6	<30
2-Chlorophenol, ug/L	<5	<30	<30	<5	<30
2-Methyl-4,6-dinitrophenol, ug/L	<5	<30	<30	<5	<30
2-Methylnaphthalene, ug/L	<5	<30	<30	16	<30
2-Methylphenol (o-Cresol), ug/L	<5	<30	<30	<5	<30
2-Nitroaniline, ug/L	<5	<30	<30	<5	<30

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06-438-6	CW-1C	20 JUN 95
06-438-7	MW-3	21 JUN 95
06-438-8	MW-4	21 JUN 95
06-438-9	MW-5	21 JUN 95
06-438-10	MW-6	21 JUN 95

PARAMETER	06-438-6	06-438-7	06-438-8	06-438-9	06-438-10
2-Nitrophenol, ug/L	<5	<30	<30	<5	<30
3,3'-Dichlorobenzidine, ug/L	<20	<100	<100	<20	<100
3-Methylphenol (m-Cresol), ug/L	<10	<50	<50	<10	<50
3-Nitroaniline, ug/L	<5	<30	<30	<5	<30
4-Bromophenylphenylether, ug/L	<5	<30	<30	<5	<30
4-Chloro-3-methylphenol, ug/L	<5	<30	<30	<5	<30
4-Chloroaniline, ug/L	<5	<30	<30	<5	<30
4-Chlorophenylphenylether, ug/L	<5	<30	<30	<5	<30
4-Methylphenol (p-Cresol), ug/L	<8	<40	<40	<8	<40
4-Nitroaniline, ug/L	<6	<30	<30	<6	<30
4-Nitrophenol, ug/L	<5	<30	<30	<5	<30
6-Methylchrysene, ug/L	<10	<50	<50	<10	<50
7,12-Dimethylbenz(a)anthracene, ug/L	<5	<30	<30	<5	<30
Acenaphthene, ug/L	<5	<30	<30	<5	<30
Acenaphthylene, ug/L	<5	<30	<30	<5	<30
Aniline, ug/L	<5	<30	<30	<5	<30
Anthracene, ug/L	<5	<30	<30	<5	<30
Benzidine, ug/L	<100	<500	<500	<100	<500
Benzo(a)anthracene, ug/L	<5	<30	<30	<5	<30
Benzo(a)pyrene, ug/L	<5	<30	<30	<5	<30
Benzo(b)fluoranthene, ug/L	<5	<30	<30	<5	<30
Benzo(g,h,i)perylene, ug/L	<5	<30	<30	<5	<30
Benzo(k)fluoranthene, ug/L	<5	<30	<30	<5	<30

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LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
06-438-6	CW-1C	20 JUN 95
06-438-7	MW-3	21 JUN 95
06-438-8	MW-4	21 JUN 95
06-438-9	MW-5	21 JUN 95
06-438-10	MW-6	21 JUN 95

PARAMETER	06-438-6	06-438-7	06-438-8	06-438-9	06-438-10
Benzenethiol, ug/L	<20	<100	<100	<20	<100
Benzyl Alcohol, ug/L	<5	<30	<30	<5	<30
Benzoic acid, ug/L	<50	<300	<300	<50	<300
Butylbenzylphthalate, ug/L	<5	<30	<30	<5	<30
Chrysene, ug/L	<5	<30	<30	<5	<30
Di-n-octylphthalate, ug/L	<5	<30	<30	<5	<30
Dibenzo(a,h)anthracene, ug/L	<5	<30	<30	<5	<30
Dibenz(a,h)acridine, ug/L	<20	<100	<100	<20	<100
Dibenzofuran, ug/L	<5	<30	<30	<5	<30
Dibutylphthalate, ug/L	<5	<30	<30	<5	<30
Diethylphthalate, ug/L	<5	<30	<30	<5	<30
Dimethylphthalate, ug/L	<5	<30	<30	<5	<30
Fluoranthene, ug/L	<5	<30	<30	<5	<30
Fluorene, ug/L	<5	<30	<30	<5	<30
Hexachlorobenzene, ug/L	<5	<30	<30	<5	<30
Hexachlorobutadiene, ug/L	<5	<30	<30	<5	<30
Hexachlorocyclopentadiene, ug/L	<5	<30	<30	<5	<30
Hexachloroethane, ug/L	<5	<30	<30	<5	<30
Indeno(1,2,3-c,d)pyrene, ug/L	<7	<40	<40	<7	<40
Indene, ug/L	<10	<50	<50	<10	<50
Isophorone, ug/L	<5	<30	<30	<5	<30
N-Nitrosodimethylamine, ug/L	<6	<30	<30	<6	<30
N-Nitrosodiphenylamine, ug/L	<5	<30	<30	<5	<30

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06-438-6	CW-1C	20 JUN 95
06-438-7	MW-3	21 JUN 95
06-438-8	MW-4	21 JUN 95
06-438-9	MW-5	21 JUN 95
06-438-10	MW-6	21 JUN 95

PARAMETER	06-438-6	06-438-7	06-438-8	06-438-9	06-438-10
N-Nitrosodi-n-propylamine, ug/L	<6	<30	<30	<6	<30
Nitrobenzene, ug/L	<5	<30	<30	<5	<30
Naphthalene, ug/L	<5	<30	<30	<5	<30
Phenanthrene, ug/L	<5	<30	<30	<5	<30
Phenol, ug/L	<5	<30	<30	<5	<30
Pentachlorophenol, ug/L	<5	<30	<30	<5	<30
Pyrene, ug/L	<5	<30	<30	<5	<30
Pyridine, ug/L	<10	<50	<50	<10	<50
Quinoline, ug/L	<10	<50	<50	<10	<50
Bis(2-chloroethoxy)methane, ug/L	<5	<30	<30	<5	<30
Bis(2-chloroethyl)ether, ug/L	<5	<30	<30	<5	<30
Bis(2-chloroisopropyl)ether, ug/L	<6	<30	<30	<6	<30
Bis(2-ethylhexyl)phthalate, ug/L	<7	<40	<40	<7	<40

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06-438-7	MW-3	21 JUN 95
06-438-8	MW-4	21 JUN 95
06-438-9	MW-5	21 JUN 95
06-438-10	MW-6	21 JUN 95

PARAMETER	06-438-6	06-438-7	06-438-8	06-438-9	06-438-10
Vol.Pri.Poll. (8240)					
Date Analyzed	07/02/95	07/02/95	07/02/95	07/02/95	07/02/95
Dilution Factor, Times	1	1	1	1	1
1,1,1-Trichloroethane, ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane, ug/L	<1	<1	<1	<1	<1
1,1,2-Trichloroethane, ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane, ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene, ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane, ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene, ug/L	<1	<1	<1	<1	<1
1,2-Dichloropropane, ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene, ug/L	<1	<1	<1	<1	<1
1,4-Dichlorobenzene, ug/L	<1	<1	<1	<1	<1
1,4-Dioxane, ug/L	<500	<500	<500	<500	<500
2-Chloroethylvinylether, ug/L	<1	<1	<1	<1	<1
2-Hexanone, ug/L	<5	<5	<5	<5	<5
Acetone, ug/L	<20	<20	<20	21	<20
Bromodichloromethane, ug/L	<1	<1	<1	<1	<1
Bromomethane, ug/L	<1	<1	<1	<1	<1
Benzene, ug/L	<1	5.0	4.3	5.8	<1
Bromoform, ug/L	<1	<1	<1	<1	<1
Chlorobenzene, ug/L	<1	<1	<1	<1	<1
Carbon Tetrachloride, ug/L	<1	<1	<1	<1	<1

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06-438-7	MW-3	21 JUN 95
06-438-8	MW-4	21 JUN 95
06-438-9	MW-5	21 JUN 95
06-438-10	MW-6	21 JUN 95

PARAMETER	06-438-6	06-438-7	06-438-8	06-438-9	06-438-10
Chloroethane, ug/L	<1	<1	<1	<1	<1
Chloroform, ug/L	<1	<1	<1	<1	<1
Chloromethane, ug/L	<1	<1	<1	<1	<1
Carbon Disulfide, ug/L	2.3	4.4	5.2	7.7	8
Cyclohexane, ug/L	<5	<5	<5	<5	<5
Dibromochloromethane, ug/L	<1	<1	<1	<1	<1
Ethylene Dibromide, ug/L	<5	<5	<5	<5	<5
Ethylbenzene, ug/L	<1	2.2	1.7	5.3	1.6
Freon 113, ug/L	<2	<2	<2	<2	<2
Methyl ethyl ketone, ug/L	<5	<5	<5	6.1	5.6
Methyl isobutyl ketone, ug/L	<5	<5	<5	<5	<5
Methylene chloride, ug/L	<1	<1	<1	<1	<1
Styrene, ug/L	<1	<1	<1	<1	<1
Trichloroethene, ug/L	<1	<1	<1	<1	<1
Trichlorofluoromethane, ug/L	<1	<1	<1	<1	<1
Toluene, ug/L	<1	1.1	<1	1.5	<1
Tetrachloroethene, ug/L	<1	<1	<1	<1	<1
Vinyl acetate, ug/L	<10	<10	<10	<10	<10
Vinyl chloride, ug/L	<1	<1	<1	<1	<1
Total Xylene Isomers, ug/L	<3	<3	<3	<3	<3
cis-1,2-Dichloroethene, ug/L	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene, ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene, ug/L	<1	<1	<1	<1	<1

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06-438-7	MW-3	21 JUN 95
06-438-8	MW-4	21 JUN 95
06-438-9	MW-5	21 JUN 95
06-438-10	MW-6	21 JUN 95

PARAMETER	06-438-6	06-438-7	06-438-8	06-438-9	06-438-10
trans-1,3-Dichloropropene, ug/L	<1	<1	<1	<1	<1

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LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
06-438-11	CW-4A	20 JUN 95
06-438-12	CW-4B	20 JUN 95
06-438-13	CW-4C	20 JUN 95
06-438-14	CW-3A	20 JUN 95
06-438-15	CW-3B	20 JUN 95

PARAMETER	06-438-11	06-438-12	06-438-13	06-438-14	06-438-15
Digestion (3010), Date	06/27/95	06/27/95	06/27/95	06/27/95	06/27/95
Furnace Digestion (3020), Date	06/27/95	06/27/95	06/27/95	06/27/95	06/27/95
Chloride (300.0), mg/L	2100	13000	13000	690	1600
Sulfate (300.0), mg/L	1400	2500	2700	1700	1800
Quad. Conductivity (120.1)					
Sp. Cond., Average, umhos/cm	9800	35000	39000	6400	8900
Sp. Cond., 1st Replicate, umhos/cm	9600	35000	39000	6400	8900
Sp. Cond., 2nd Replicate, umhos/cm	9800	35000	39000	6400	8900
Sp. Cond., 3rd Replicate, umhos/cm	9900	35000	39000	6400	8900
Sp. Cond., 4th Replicate, umhos/cm	9900	36000	40000	6400	9000
Other Quad. Conductivity (120.1)	---	---	---	---	---
Quad. pH (150.1)					
pH, Average, Units	8.3	7.7	7.8	8.6	8.3
pH, 1st Replicate, Units	8.2	7.7	7.8	8.6	8.3
pH, 2nd Replicate, Units	8.3	7.7	7.8	8.6	8.3
pH, 3rd Replicate, Units	8.3	7.7	7.8	8.6	8.3
pH, 4th Replicate, Units	8.3	7.7	7.8	8.6	8.3
Other Quad. pH (150.1)	---	---	---	---	---
Dissolved Solids (160.1), mg/L	6400	28000	32000	4400	6100
Antimony (6010), mg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (7060), mg/L	<0.002	<0.002	<0.002	0.0060	<0.002
Barium (6010), mg/L	0.012	0.030	0.017	0.099	0.10
Beryllium (6010), mg/L	<0.001	<0.001	0.0012	<0.001	<0.001

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LOG NO: G95-06-438

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Dr. Tony Shan
BHP, Hawaii Refinery
91-325 Komohana St.
Kapolei, HI 96707

Project: GMP.3RD.QTR

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
06-438-11	CW-4A	20 JUN 95
06-438-12	CW-4B	20 JUN 95
06-438-13	CW-4C	20 JUN 95
06-438-14	CW-3A	20 JUN 95
06-438-15	CW-3B	20 JUN 95

PARAMETER	06-438-11	06-438-12	06-438-13	06-438-14	06-438-15
Cadmium (7131), mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium (6010), mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (6010), mg/L	<0.04	<0.04	<0.04	<0.04	<0.04
Iron (6010), mg/L	0.15	<0.04	<0.04	0.21	0.055
Lead (7421), mg/L	<0.002	<0.002	<0.002	<0.002	0.0022
Manganese (6010), mg/L	0.019	0.19	0.11	0.020	0.015
Mercury (7470), mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Nickel (6010), mg/L	<0.04	0.041	<0.04	<0.04	<0.04
Selenium (7740), mg/L	<0.004	<0.004	<0.004	<0.004	<0.004
Sodium (6010), mg/L	2300	8000	8900	1500	2000
Vanadium (6010), mg/L	<0.04	<0.04	<0.04	<0.04	<0.04

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06-438-13	CW-4C	20 JUN 95
06-438-14	CW-3A	20 JUN 95
06-438-15	CW-3B	20 JUN 95

PARAMETER	06-438-11	06-438-12	06-438-13	06-438-14	06-438-15
B/N,A Ext.Pri.Poll. (8270)					
Date Analyzed	06/30/95	06/30/95	07/06/95	06/30/95	06/30/95
Date Extracted	06/23/95	06/23/95	07/03/95	06/23/95	06/23/95
Dilution Factor, Times	1	1	1	1	1
1,2,4-Trichlorobenzene, ug/L	<5	<5	<5	<5	<5
1,2-Dichlorobenzene, ug/L	<6	<6	<6	<6	<6
1,2-Diphenylhydrazine, ug/L	<5	<5	<5	<5	<5
1,3-Dichlorobenzene, ug/L	<5	<5	<5	<5	<5
1,4-Dichlorobenzene, ug/L	<5	<5	<5	<5	<5
1-Methylnaphthalene, ug/L	<10	<10	<10	<10	<10
2,4,5-Trichlorophenol, ug/L	<6	<6	<6	<6	<6
2,4,6-Trichlorophenol, ug/L	<5	<5	<5	<5	<5
2,4-Dichlorophenol, ug/L	<5	<5	<5	<5	<5
2,4-Dimethylphenol, ug/L	<5	<5	<5	<5	<5
2,4-Dinitrophenol, ug/L	<10	<10	<10	<10	<10
2,4-Dinitrotoluene, ug/L	<5	<5	<5	<5	<5
2,6-Dinitrotoluene, ug/L	<5	<5	<5	<5	<5
2-Chloronaphthalene, ug/L	<6	<6	<6	<6	<6
2-Chlorophenol, ug/L	<5	<5	<5	<5	<5
2-Methyl-4,6-dinitrophenol, ug/L	<5	<5	<5	<5	<5
2-Methylnaphthalene, ug/L	<5	<5	<5	<5	<5
2-Methylphenol (o-Cresol), ug/L	<5	<5	<5	<5	<5
2-Nitroaniline, ug/L	<5	<5	<5	<5	<5

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06-438-12	CW-4B	20 JUN 95
06-438-13	CW-4C	20 JUN 95
06-438-14	CW-3A	20 JUN 95
06-438-15	CW-3B	20 JUN 95

PARAMETER	06-438-11	06-438-12	06-438-13	06-438-14	06-438-15
2-Nitrophenol, ug/L	<5	<5	<5	<5	<5
3,3'-Dichlorobenzidine, ug/L	<20	<20	<20	<20	<20
3-Methylphenol (m-Cresol), ug/L	<10	<10	<10	<10	<10
3-Nitroaniline, ug/L	<5	<5	<5	<5	<5
4-Bromophenylphenylether, ug/L	<5	<5	<5	<5	<5
4-Chloro-3-methylphenol, ug/L	<5	<5	<5	<5	<5
4-Chloroaniline, ug/L	<5	<5	<5	<5	<5
4-Chlorophenylphenylether, ug/L	<5	<5	<5	<5	<5
4-Methylphenol (p-Cresol), ug/L	<8	<8	<8	<8	<8
4-Nitroaniline, ug/L	<6	<6	<6	<6	<6
4-Nitrophenol, ug/L	<5	<5	<5	<5	<5
6-Methylchrysene, ug/L	<10	<10	<10	<10	<10
7,12-Dimethylbenz(a)anthracene, ug/L	<5	<5	<5	<5	<5
Acenaphthene, ug/L	<5	<5	<5	<5	<5
Acenaphthylene, ug/L	<5	<5	<5	<5	<5
Aniline, ug/L	<5	<5	<5	<5	<5
Anthracene, ug/L	<5	<5	<5	<5	<5
Benzidine, ug/L	<100	<100	<100	<100	<100
Benzo(a)anthracene, ug/L	<5	<5	<5	<5	<5
Benzo(a)pyrene, ug/L	<5	<5	<5	<5	<5
Benzo(b)fluoranthene, ug/L	<5	<5	<5	<5	<5
Benzo(g,h,i)perylene, ug/L	<5	<5	<5	<5	<5
Benzo(k)fluoranthene, ug/L	<5	<5	<5	<5	<5

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06-438-13	CW-4C	20 JUN 95
06-438-14	CW-3A	20 JUN 95
06-438-15	CW-3B	20 JUN 95

PARAMETER	06-438-11	06-438-12	06-438-13	06-438-14	06-438-15
Benzenethiol, ug/L	<20	<20	<20	<20	<20
Benzyl Alcohol, ug/L	<5	<5	<5	<5	<5
Benzoic acid, ug/L	<50	<50	<50	<50	<50
Butylbenzylphthalate, ug/L	<5	<5	<5	<5	<5
Chrysene, ug/L	<5	<5	<5	<5	<5
Di-n-octylphthalate, ug/L	<5	<5	<5	<5	<5
Dibenzo(a,h)anthracene, ug/L	<5	<5	<5	<5	<5
Dibenz(a,h)acridine, ug/L	<20	<20	<20	<20	<20
Dibenzofuran, ug/L	<5	<5	<5	<5	<5
Dibutylphthalate, ug/L	<5	<5	<5	<5	<5
Diethylphthalate, ug/L	<5	<5	<5	<5	<5
Dimethylphthalate, ug/L	<5	<5	<5	<5	<5
Fluoranthene, ug/L	<5	<5	<5	<5	<5
Fluorene, ug/L	<5	<5	<5	<5	<5
Hexachlorobenzene, ug/L	<5	<5	<5	<5	<5
Hexachlorobutadiene, ug/L	<5	<5	<5	<5	<5
Hexachlorocyclopentadiene, ug/L	<5	<5	<5	<5	<5
Hexachloroethane, ug/L	<5	<5	<5	<5	<5
Indeno(1,2,3-c,d)pyrene, ug/L	<7	<7	<7	<7	<7
Indene, ug/L	<10	<10	<10	<10	<10
Isophorone, ug/L	<5	<5	<5	<5	<5
N-Nitrosodimethylamine, ug/L	<6	<6	<6	<6	<6
N-Nitrosodiphenylamine, ug/L	<5	<5	<5	<5	<5

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06-438-13	CW-4C	20 JUN 95
06-438-14	CW-3A	20 JUN 95
06-438-15	CW-3B	20 JUN 95

PARAMETER	06-438-11	06-438-12	06-438-13	06-438-14	06-438-15
N-Nitrosodi-n-propylamine, ug/L	<6	<6	<6	<6	<6
Nitrobenzene, ug/L	<5	<5	<5	<5	<5
Naphthalene, ug/L	<5	<5	<5	<5	<5
Phenanthrene, ug/L	<5	<5	<5	<5	<5
Phenol, ug/L	<5	<5	<5	<5	<5
Pentachlorophenol, ug/L	<5	<5	<5	<5	<5
Pyrene, ug/L	<5	<5	<5	<5	<5
Pyridine, ug/L	<10	<10	<10	<10	<10
Quinoline, ug/L	<10	<10	<10	<10	<10
Bis(2-chloroethoxy)methane, ug/L	<5	<5	<5	<5	<5
Bis(2-chloroethyl)ether, ug/L	<5	<5	<5	<5	<5
Bis(2-chloroisopropyl)ether, ug/L	<6	<6	<6	<6	<6
Bis(2-ethylhexyl)phthalate, ug/L	<7	<7	<7	<7	<7

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06-438-13	CW-4C	20 JUN 95
06-438-14	CW-3A	20 JUN 95
06-438-15	CW-3B	20 JUN 95

PARAMETER	06-438-11	06-438-12	06-438-13	06-438-14	06-438-15
Vol.Pri.Poll. (8240)					
Date Analyzed	07/02/95	07/02/95	07/02/95	07/03/95	07/03/95
Dilution Factor, Times	1	1	1	1	1
1,1,1-Trichloroethane, ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane, ug/L	<1	<1	<1	<1	<1
1,1,2-Trichloroethane, ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane, ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene, ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane, ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene, ug/L	<1	<1	<1	<1	<1
1,2-Dichloropropane, ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene, ug/L	<1	<1	<1	<1	<1
1,4-Dichlorobenzene, ug/L	<1	<1	<1	<1	<1
1,4-Dioxane, ug/L	<500	<500	<500	<500	<500
2-Chloroethylvinylether, ug/L	<1	<1	<1	<1	<1
2-Hexanone, ug/L	<5	<5	<5	<5	<5
Acetone, ug/L	<20	41	<20	<20	<20
Bromodichloromethane, ug/L	<1	<1	<1	<1	<1
Bromomethane, ug/L	<1	<1	<1	<1	<1
Benzene, ug/L	1.4	<1	<1	2.7	5.5
Bromoform, ug/L	<1	<1	<1	<1	<1
Chlorobenzene, ug/L	<1	<1	<1	<1	<1
Carbon Tetrachloride, ug/L	<1	<1	<1	<1	<1

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06-438-13	CW-4C	20 JUN 95
06-438-14	CW-3A	20 JUN 95
06-438-15	CW-3B	20 JUN 95

PARAMETER	06-438-11	06-438-12	06-438-13	06-438-14	06-438-15
Chloroethane, ug/L	<1	31	<1	<1	<1
Chloroform, ug/L	<1	<1	<1	<1	<1
Chloromethane, ug/L	<1	<1	<1	<1	<1
Carbon Disulfide, ug/L	9.5	5.8	2.6	<2	<2
Cyclohexane, ug/L	<5	<5	<5	<5	<5
Dibromochloromethane, ug/L	<1	<1	<1	<1	<1
Ethylene Dibromide, ug/L	<5	<5	<5	<5	<5
Ethylbenzene, ug/L	2.1	<1	<1	<1	<1
Freon 113, ug/L	<2	<2	<2	<2	<2
Methyl ethyl ketone, ug/L	<5	7.7	<5	<5	<5
Methyl isobutyl ketone, ug/L	<5	<5	<5	<5	<5
Methylene chloride, ug/L	<1	<1	<1	<1	<1
Styrene, ug/L	<1	<1	<1	<1	<1
Trichloroethene, ug/L	<1	<1	<1	<1	<1
Trichlorofluoromethane, ug/L	<1	<1	<1	<1	<1
Toluene, ug/L	<1	<1	<1	1.0	1.3
Tetrachloroethene, ug/L	<1	<1	<1	<1	<1
Vinyl acetate, ug/L	<10	<10	<10	<10	<10
Vinyl chloride, ug/L	<1	<1	<1	<1	<1
Total Xylene Isomers, ug/L	<3	<3	<3	3.8	3.2
cis-1,2-Dichloroethene, ug/L	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene, ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene, ug/L	<1	<1	<1	<1	<1

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06-438-13	CW-4C	20 JUN 95
06-438-14	CW-3A	20 JUN 95
06-438-15	CW-3B	20 JUN 95

PARAMETER	06-438-11	06-438-12	06-438-13	06-438-14	06-438-15
trans-1,3-Dichloropropene, ug/L	<1	<1	<1	<1	<1

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
06-438-16	CW-3C	20 JUN 95

PARAMETER	06-438-16
Digestion (3010), Date	06/27/95
Furnace Digestion (3020), Date	06/27/95
Chloride (300.0), mg/L	770
Sulfate (300.0), mg/L	1700
Quad. Conductivity (120.1)	
Sp. Cond., Average, umhos/cm	6700
Sp. Cond., 1st Replicate, umhos/cm	6700
Sp. Cond., 2nd Replicate, umhos/cm	6700
Sp. Cond., 3rd Replicate, umhos/cm	6700
Sp. Cond., 4th Replicate, umhos/cm	6700
Other Quad. Conductivity (120.1)	---
Quad. pH (150.1)	
pH, Average, Units	8.4
pH, 1st Replicate, Units	8.4
pH, 2nd Replicate, Units	8.4
pH, 3rd Replicate, Units	8.4
pH, 4th Replicate, Units	8.4
Other Quad. pH (150.1)	---
Dissolved Solids (160.1), mg/L	4200
Antimony (6010), mg/L	<0.1
Arsenic (7060), mg/L	0.0022
Barium (6010), mg/L	0.078
Beryllium (6010), mg/L	<0.001
Cadmium (7131), mg/L	<0.001
Chromium (6010), mg/L	<0.01
Cobalt (6010), mg/L	<0.04
Iron (6010), mg/L	0.075

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LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
06-438-16	CW-3C	20 JUN 95

PARAMETER	06-438-16
Lead (7421), mg/L	0.022
Manganese (6010), mg/L	0.011
Mercury (7470), mg/L	<0.0002
Nickel (6010), mg/L	0.043
Selenium (7740), mg/L	<0.004
Sodium (6010), mg/L	1500
Vanadium (6010), mg/L	<0.04

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06-438-16	CW-3C	20 JUN 95

PARAMETER	06-438-16
B/N,A Ext.Pri.Poll. (8270)	
Date Analyzed	06/30/95
Date Extracted	06/23/95
Dilution Factor, Times	1
1,2,4-Trichlorobenzene, ug/L	<5
1,2-Dichlorobenzene, ug/L	<6
1,2-Diphenylhydrazine, ug/L	<5
1,3-Dichlorobenzene, ug/L	<5
1,4-Dichlorobenzene, ug/L	<5
1-Methylnaphthalene, ug/L	<10
2,4,5-Trichlorophenol, ug/L	<6
2,4,6-Trichlorophenol, ug/L	<5
2,4-Dichlorophenol, ug/L	<5
2,4-Dimethylphenol, ug/L	<5
2,4-Dinitrophenol, ug/L	<10
2,4-Dinitrotoluene, ug/L	<5
2,6-Dinitrotoluene, ug/L	<5
2-Chloronaphthalene, ug/L	<6
2-Chlorophenol, ug/L	<5
2-Methyl-4,6-dinitrophenol, ug/L	<5
2-Methylnaphthalene, ug/L	<5
2-Methylphenol (o-Cresol), ug/L	<5
2-Nitroaniline, ug/L	<5
2-Nitrophenol, ug/L	<5
3,3'-Dichlorobenzidine, ug/L	<20
3-Methylphenol (m-Cresol), ug/L	<10
3-Nitroaniline, ug/L	<5

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Fax: 818/247-9797

LOG NO: G95-06-438

Received: 22 JUN 95

Dr. Tony Shan
BHP, Hawaii Refinery
91-325 Komohana St.
Kapolei, HI 96707

Project: GMP.3RD.QTR

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
06-438-16	CW-3C	20 JUN 95

PARAMETER	06-438-16
4-Bromophenylphenylether, ug/L	<5
4-Chloro-3-methylphenol, ug/L	<5
4-Chloroaniline, ug/L	<5
4-Chlorophenylphenylether, ug/L	<5
4-Methylphenol (p-Cresol), ug/L	<8
4-Nitroaniline, ug/L	<6
4-Nitrophenol, ug/L	<5
6-Methylchrysene, ug/L	<10
7,12-Dimethylbenz(a)anthracene, ug/L	<5
Acenaphthene, ug/L	<5
Acenaphthylene, ug/L	<5
Aniline, ug/L	<5
Anthracene, ug/L	<5
Benzidine, ug/L	<100
Benzo(a)anthracene, ug/L	<5
Benzo(a)pyrene, ug/L	<5
Benzo(b)fluoranthene, ug/L	<5
Benzo(g,h,i)perylene, ug/L	<5
Benzo(k)fluoranthene, ug/L	<5
Benzenethiol, ug/L	<20
Benzyl Alcohol, ug/L	<5
Benzoic acid, ug/L	<50
Butylbenzylphthalate, ug/L	<5
Chrysene, ug/L	<5
Di-n-octylphthalate, ug/L	<5
Dibenzo(a,h)anthracene, ug/L	<5
Dibenz(a,h)acridine, ug/L	<20

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
06-438-16	CW-3C	20 JUN 95

PARAMETER	06-438-16
Dibenzofuran, ug/L	<5
Dibutylphthalate, ug/L	<5
Diethylphthalate, ug/L	<5
Dimethylphthalate, ug/L	<5
Fluoranthene, ug/L	<5
Fluorene, ug/L	<5
Hexachlorobenzene, ug/L	<5
Hexachlorobutadiene, ug/L	<5
Hexachlorocyclopentadiene, ug/L	<5
Hexachloroethane, ug/L	<5
Indeno(1,2,3-c,d)pyrene, ug/L	<7
Indene, ug/L	<10
Isophorone, ug/L	<5
N-Nitrosodimethylamine, ug/L	<6
N-Nitrosodiphenylamine, ug/L	<5
N-Nitrosodi-n-propylamine, ug/L	<6
Nitrobenzene, ug/L	<5
Naphthalene, ug/L	<5
Phenanthrene, ug/L	<5
Phenol, ug/L	<5
Pentachlorophenol, ug/L	<5
Pyrene, ug/L	<5
Pyridine, ug/L	<10
Quinoline, ug/L	<10
Bis(2-chloroethoxy)methane, ug/L	<5
Bis(2-chloroethyl)ether, ug/L	<5
Bis(2-chloroisopropyl)ether, ug/L	<6

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LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
06-438-16	CW-3C	20 JUN 95

PARAMETER	06-438-16
Bis(2-ethylhexyl)phthalate, ug/L	<7

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
06-438-16	CW-3C	20 JUN 95

PARAMETER	06-438-16
Vol.Pri.Poll. (8240)	
Date Analyzed	07/03/95
Dilution Factor, Times	1
1,1,1-Trichloroethane, ug/L	<1
1,1,2,2-Tetrachloroethane, ug/L	<1
1,1,2-Trichloroethane, ug/L	<1
1,1-Dichloroethane, ug/L	<1
1,1-Dichloroethene, ug/L	<1
1,2-Dichloroethane, ug/L	<1
1,2-Dichlorobenzene, ug/L	<1
1,2-Dichloropropane, ug/L	<1
1,3-Dichlorobenzene, ug/L	<1
1,4-Dichlorobenzene, ug/L	<1
1,4-Dioxane, ug/L	<500
2-Chloroethylvinylether, ug/L	<1
2-Hexanone, ug/L	<5
Acetone, ug/L	<20
Bromodichloromethane, ug/L	<1
Bromomethane, ug/L	<1
Benzene, ug/L	4.2
Bromoform, ug/L	<1
Chlorobenzene, ug/L	<1
Carbon Tetrachloride, ug/L	<1
Chloroethane, ug/L	<1
Chloroform, ug/L	<1
Chloromethane, ug/L	<1
Carbon Disulfide, ug/L	<2

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
06-438-16	CW-3C	20 JUN 95

PARAMETER	06-438-16
Cyclohexane, ug/L	<5
Dibromochloromethane, ug/L	<1
Ethylene Dibromide, ug/L	<5
Ethylbenzene, ug/L	<1
Freon 113, ug/L	<2
Methyl ethyl ketone, ug/L	<5
Methyl isobutyl ketone, ug/L	<5
Methylene chloride, ug/L	<1
Styrene, ug/L	<1
Trichloroethene, ug/L	<1
Trichlorofluoromethane, ug/L	<1
Toluene, ug/L	1.5
Tetrachloroethene, ug/L	<1
Vinyl acetate, ug/L	<10
Vinyl chloride, ug/L	<1
Total Xylene Isomers, ug/L	<3
cis-1,2-Dichloroethene, ug/L	<1
cis-1,3-Dichloropropene, ug/L	<1
trans-1,2-Dichloroethene, ug/L	<1
trans-1,3-Dichloropropene, ug/L	<1

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
06-438-17	CW-1A-D	20 JUN 95

PARAMETER	06-438-17
Digestion (3010), Date	06/27/95
Furnace Digestion (3020), Date	06/27/95
Antimony (6010), mg/L	<0.1
Arsenic (7060), mg/L	<0.002
Barium (6010), mg/L	0.0061
Beryllium (6010), mg/L	<0.001
Cadmium (7131), mg/L	<0.001
Chromium (6010), mg/L	<0.01
Cobalt (6010), mg/L	<0.04
Iron (6010), mg/L	0.047
Lead (7421), mg/L	<0.002
Manganese (6010), mg/L	0.042
Mercury (7470), mg/L	<0.0002
Nickel (6010), mg/L	<0.04
Selenium (7740), mg/L	<0.004
Sodium (6010), mg/L	1900
Vanadium (6010), mg/L	<0.04

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
06-438-17	CW-1A-D	20 JUN 95

PARAMETER	06-438-17
B/N,A Ext.Pri.Poll. (8270)	
Date Analyzed	07/01/95
Date Extracted	06/23/95
Dilution Factor, Times	5
1,2,4-Trichlorobenzene, ug/L	<30
1,2-Dichlorobenzene, ug/L	<30
1,2-Diphenylhydrazine, ug/L	<30
1,3-Dichlorobenzene, ug/L	<30
1,4-Dichlorobenzene, ug/L	<30
1-Methylnaphthalene, ug/L	<50
2,4,5-Trichlorophenol, ug/L	<30
2,4,6-Trichlorophenol, ug/L	<30
2,4-Dichlorophenol, ug/L	<30
2,4-Dimethylphenol, ug/L	<30
2,4-Dinitrophenol, ug/L	<50
2,4-Dinitrotoluene, ug/L	<30
2,6-Dinitrotoluene, ug/L	<30
2-Chloronaphthalene, ug/L	<30
2-Chlorophenol, ug/L	<30
2-Methyl-4,6-dinitrophenol, ug/L	<30
2-Methylnaphthalene, ug/L	<30
2-Methylphenol (o-Cresol), ug/L	<30
2-Nitroaniline, ug/L	<30
2-Nitrophenol, ug/L	<30
3,3'-Dichlorobenzidine, ug/L	<100
3-Methylphenol (m-Cresol), ug/L	<50
3-Nitroaniline, ug/L	<30

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
06-438-17	CW-1A-D	20 JUN 95

PARAMETER	06-438-17
4-Bromophenylphenylether, ug/L	<30
4-Chloro-3-methylphenol, ug/L	<30
4-Chloroaniline, ug/L	<30
4-Chlorophenylphenylether, ug/L	<30
4-Methylphenol (p-Cresol), ug/L	<40
4-Nitroaniline, ug/L	<30
4-Nitrophenol, ug/L	<30
6-Methylchrysene, ug/L	<50
7,12-Dimethylbenz(a)anthracene, ug/L	<30
Acenaphthene, ug/L	<30
Acenaphthylene, ug/L	<30
Aniline, ug/L	<30
Anthracene, ug/L	<30
Benzidine, ug/L	<500
Benzo(a)anthracene, ug/L	<30
Benzo(a)pyrene, ug/L	<30
Benzo(b)fluoranthene, ug/L	<30
Benzo(g,h,i)perylene, ug/L	<30
Benzo(k)fluoranthene, ug/L	<30
Benzenethiol, ug/L	<100
Benzyl Alcohol, ug/L	<30
Benzoic acid, ug/L	<300
Butylbenzylphthalate, ug/L	<30
Chrysene, ug/L	<30
Di-n-octylphthalate, ug/L	<30
Dibenzo(a,h)anthracene, ug/L	<30
Dibenz(a,h)acridine, ug/L	<100

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
06-438-17	CW-1A-D	20 JUN 95

PARAMETER	06-438-17
Dibenzofuran, ug/L	<30
Dibutylphthalate, ug/L	<30
Diethylphthalate, ug/L	<30
Dimethylphthalate, ug/L	<30
Fluoranthene, ug/L	<30
Fluorene, ug/L	<30
Hexachlorobenzene, ug/L	<30
Hexachlorobutadiene, ug/L	<30
Hexachlorocyclopentadiene, ug/L	<30
Hexachloroethane, ug/L	<30
Indeno(1,2,3-c,d)pyrene, ug/L	<40
Indene, ug/L	<50
Isophorone, ug/L	<30
N-Nitrosodimethylamine, ug/L	<30
N-Nitrosodiphenylamine, ug/L	<30
N-Nitrosodi-n-propylamine, ug/L	<30
Nitrobenzene, ug/L	<30
Naphthalene, ug/L	<30
Phenanthrene, ug/L	<30
Phenol, ug/L	<30
Pentachlorophenol, ug/L	<30
Pyrene, ug/L	<30
Pyridine, ug/L	<50
Quinoline, ug/L	<50
Bis(2-chloroethoxy)methane, ug/L	<30
Bis(2-chloroethyl)ether, ug/L	<30
Bis(2-chloroisopropyl)ether, ug/L	<30

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
06-438-17	CW-1A-D	20 JUN 95

PARAMETER	06-438-17
Bis(2-ethylhexyl)phthalate, ug/L	<40

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
06-438-17	CW-1A-D	20 JUN 95

PARAMETER	06-438-17
Vol.Pri.Poll. (8240)	
Date Analyzed	07/03/95
Dilution Factor, Times	1
1,1,1-Trichloroethane, ug/L	<1
1,1,2,2-Tetrachloroethane, ug/L	<1
1,1,2-Trichloroethane, ug/L	<1
1,1-Dichloroethane, ug/L	<1
1,1-Dichloroethene, ug/L	<1
1,2-Dichloroethane, ug/L	<1
1,2-Dichlorobenzene, ug/L	<1
1,2-Dichloropropane, ug/L	<1
1,3-Dichlorobenzene, ug/L	<1
1,4-Dichlorobenzene, ug/L	<1
1,4-Dioxane, ug/L	<500
2-Chloroethylvinylether, ug/L	<1
2-Hexanone, ug/L	<5
Acetone, ug/L	<20
Bromodichloromethane, ug/L	<1
Bromomethane, ug/L	<1
Benzene, ug/L	17
Bromoform, ug/L	<1
Chlorobenzene, ug/L	<1
Carbon Tetrachloride, ug/L	<1
Chloroethane, ug/L	<1
Chloroform, ug/L	<1
Chloromethane, ug/L	<1
Carbon Disulfide, ug/L	4.4

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
06-438-17	CW-1A-D	20 JUN 95

PARAMETER	06-438-17
Cyclohexane, ug/L	<5
Dibromochloromethane, ug/L	<1
Ethylene Dibromide, ug/L	<5
Ethylbenzene, ug/L	<1
Freon 113, ug/L	<2
Methyl ethyl ketone, ug/L	<5
Methyl isobutyl ketone, ug/L	<5
Methylene chloride, ug/L	<1
Styrene, ug/L	<1
Trichloroethene, ug/L	<1
Trichlorofluoromethane, ug/L	<1
Toluene, ug/L	<1
Tetrachloroethene, ug/L	<1
Vinyl acetate, ug/L	<10
Vinyl chloride, ug/L	<1
Total Xylene Isomers, ug/L	3.7
cis-1,2-Dichloroethene, ug/L	<1
cis-1,3-Dichloropropene, ug/L	<1
trans-1,2-Dichloroethene, ug/L	<1
trans-1,3-Dichloropropene, ug/L	<1

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, BLANK WATER SAMPLES	DATE SAMPLED
06-438-18	FB-2	20 JUN 95
06-438-19	FB-3	21 JUN 95

PARAMETER	06-438-18	06-438-19
Vol.Pri.Poll. (8240)		
Date Analyzed	07/03/95	07/03/95
Dilution Factor, Times	1	1
1,1,1-Trichloroethane, ug/L	<1	<1
1,1,2,2-Tetrachloroethane, ug/L	<1	<1
1,1,2-Trichloroethane, ug/L	<1	<1
1,1-Dichloroethane, ug/L	<1	<1
1,1-Dichloroethene, ug/L	<1	<1
1,2-Dichloroethane, ug/L	<1	<1
1,2-Dichlorobenzene, ug/L	<1	<1
1,2-Dichloropropane, ug/L	<1	<1
1,3-Dichlorobenzene, ug/L	<1	<1
1,4-Dichlorobenzene, ug/L	<1	<1
1,4-Dioxane, ug/L	<500	<500
2-Chloroethylvinylether, ug/L	<1	<1
2-Hexanone, ug/L	<5	<5
Acetone, ug/L	<20	<20
Bromodichloromethane, ug/L	<1	<1
Bromomethane, ug/L	<1	<1
Benzene, ug/L	<1	<1
Bromoform, ug/L	<1	<1
Chlorobenzene, ug/L	<1	<1
Carbon Tetrachloride, ug/L	<1	<1
Chloroethane, ug/L	<1	<1
Chloroform, ug/L	<1	<1
Chloromethane, ug/L	<1	<1

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LOG NO	SAMPLE DESCRIPTION, BLANK WATER SAMPLES	DATE SAMPLED
06-438-18	FB-2	20 JUN 95
06-438-19	FB-3	21 JUN 95

PARAMETER	06-438-18	06-438-19
Carbon Disulfide, ug/L	2.5	<2
Cyclohexane, ug/L	<5	<5
Dibromochloromethane, ug/L	<1	<1
Ethylene Dibromide, ug/L	<5	<5
Ethylbenzene, ug/L	<1	<1
Freon 113, ug/L	<2	<2
Methyl ethyl ketone, ug/L	<5	<5
Methyl isobutyl ketone, ug/L	<5	<5
Methylene chloride, ug/L	<1	<1
Styrene, ug/L	<1	<1
Trichloroethene, ug/L	<1	<1
Trichlorofluoromethane, ug/L	<1	<1
Toluene, ug/L	<1	<1
Tetrachloroethene, ug/L	<1	<1
Vinyl acetate, ug/L	<10	<10
Vinyl chloride, ug/L	<1	<1
Total Xylene Isomers, ug/L	<3	<3
cis-1,2-Dichloroethene, ug/L	<1	<1
cis-1,3-Dichloropropene, ug/L	<1	<1
trans-1,2-Dichloroethene, ug/L	<1	<1
trans-1,3-Dichloropropene, ug/L	<1	<1

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, BLANK WATER SAMPLES	DATE SAMPLED
06-438-20	TB-2	20 JUN 95
06-438-21	TB-3	21 JUN 95

PARAMETER	06-438-20	06-438-21
Vol.Pri.Poll. (8240)		
Date Analyzed	07/03/95	07/03/95
Dilution Factor, Times	1	1
1,1,1-Trichloroethane, ug/L	<1	<1
1,1,2,2-Tetrachloroethane, ug/L	<1	<1
1,1,2-Trichloroethane, ug/L	<1	<1
1,1-Dichloroethane, ug/L	<1	<1
1,1-Dichloroethene, ug/L	<1	<1
1,2-Dichloroethane, ug/L	<1	<1
1,2-Dichlorobenzene, ug/L	<1	<1
1,2-Dichloropropane, ug/L	<1	<1
1,3-Dichlorobenzene, ug/L	<1	<1
1,4-Dichlorobenzene, ug/L	<1	<1
1,4-Dioxane, ug/L	<500	<500
2-Chloroethylvinylether, ug/L	<1	<1
2-Hexanone, ug/L	<5	<5
Acetone, ug/L	<20	<20
Bromodichloromethane, ug/L	<1	<1
Bromomethane, ug/L	<1	<1
Benzene, ug/L	<1	<1
Bromoform, ug/L	<1	<1
Chlorobenzene, ug/L	<1	<1
Carbon Tetrachloride, ug/L	<1	<1
Chloroethane, ug/L	<1	<1
Chloroform, ug/L	<1	<1
Chloromethane, ug/L	<1	<1

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, BLANK WATER SAMPLES	DATE SAMPLED
06-438-20	TB-2	20 JUN 95
06-438-21	TB-3	21 JUN 95

PARAMETER	06-438-20	06-438-21
Carbon Disulfide, ug/L	<2	<2
Cyclohexane, ug/L	<5	<5
Dibromochloromethane, ug/L	<1	<1
Ethylene Dibromide, ug/L	<5	<5
Ethylbenzene, ug/L	<1	<1
Freon 113, ug/L	<2	<2
Methyl ethyl ketone, ug/L	<5	<5
Methyl isobutyl ketone, ug/L	<5	<5
Methylene chloride, ug/L	<1	<1
Styrene, ug/L	<1	<1
Trichloroethene, ug/L	<1	<1
Trichlorofluoromethane, ug/L	<1	<1
Toluene, ug/L	<1	<1
Tetrachloroethene, ug/L	<1	<1
Vinyl acetate, ug/L	<10	<10
Vinyl chloride, ug/L	<1	<1
Total Xylene Isomers, ug/L	<3	<3
cis-1,2-Dichloroethene, ug/L	<1	<1
cis-1,3-Dichloropropene, ug/L	<1	<1
trans-1,2-Dichloroethene, ug/L	<1	<1
trans-1,3-Dichloropropene, ug/L	<1	<1

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B C Analytical

801 Western Avenue
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LOG NO: G95-06-438

Received: 22 JUN 95

Dr. Tony Shan
BHP, Hawaii Refinery
91-325 Komohana St.
Kapolei, HI 96707

Project: GMP.3RD.QTR

REPORT OF ANALYTICAL RESULTS

Samples taken on 06/20/95 were received past holding time for pH. Samples analyzed anyway per Zuyi Shen of Dames & Moore. 06/23/95 BM

Jane Freemyer

Jane Freemyer, Program Manager

BCA

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801 Western Avenue
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Case Narrative

All quality objectives were met including holding times, LCS/LCSD, MS/MSD, Duplicate samples, and Method Blanks as applicable with the following exceptions:

Semivolatiles method 8270 batch 95114:

Hexachlorocyclopentadiene LCS recovery greater than upper control limit. Benzo(a)pyrene and Hexachlorocyclopentadiene LCSD recovery greater than upper control limit. Benzidine LCS/LCSD RPD greater than the control limit.

Semivolatiles method 8270 batch 95121:

Hexachlorocyclopentadiene LCS/LCSD recovery greater than upper control limit. Benzoic acid LCS/LCSD RPD greater than the control limit. Bis(2-ethylhexyl)phthalate method blank concentration greater than the reporting limit.

Volatiles method 8240 batch 95390:

All LCS compounds recovery within criteria. 2-Chloroethylvinylether and Methylethylketone LCSD recovery less than lower control limit. Vinylchloride LCSD recovery greater than upper control limit. 2-Hexanone and Methylisobutylketone LCS/LCSD RPD greater than the control limit.

Volatiles method 8240 batch 95793:

All LCS compounds recovery within criteria. 1,1-Dichloroethene LCSD recovery greater than upper control limit. 1,1-Dichloroethene MSD recovery greater than upper control limit.

Note: MS/MSD recovery reported a "NC" is due to sample concentrations greater than two times the spike amount added.

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No analytical difficulties were encountered with any project samples with the following exceptions:

Sample 9506438*4 was diluted at least 1:10 for method 8270. Therefore surrogate concentrations were reported as 0 and flagged with a "NC" for "Not Calculated".

Sample 9506438*7 failed one acid surrogate for method 8270. This meets method guidelines and data was reported.

Sample 9506438*8 failed two acid surrogates for method 8270, data was reported.

Sample 9506438*10 failed one acid surrogate for method 8270. This meets method guidelines and data was reported.

Sample 9506438*13 was originally extracted within holding time for method 8270. However, the sample extract vial cracked and the sample was lost before analysis. The sample was re-extracted on the 13th day of holding time and reported.

G95-06-438

0012

CHAIN-OF-CUSTODY RECORD

WHITE COPY - Original (Accompanies Samples) YELLOW COPY - Collector PINK COPY - Project Manager

Sample Number	Depth	Time	Sample Type	Container Type	ANALYSES: HVOCs 601/8010	BTE Only 602/8020	VOCs 624/8240	SVOCs 625/8270	TRPH 418.1	TPH 8015(M)-G	TPH 8015(M)-D	PCBs 8080	Total Pb/Cd 6010	PAHs 8100	TCLP	Metals	TDS	Cond.	SO_4				FIELD NOTES:	Total Number Of Containers	Laboratory Note Number
CW-2A		1015	Water	1l glass amber				X																2	
↓		↓		1l plastic											X								HNO_3-preserved	1	
↓		↓		↓												X	X	X	X	X				1	
CW-2B		0930		1l glass amber				X																2	
↓		↓		1l plastic											X								HNO_3-preserved	1	
↓		↓		↓												X	X	X	X	X				1	
CW-2C		0840		1l glass amber				X																2	
↓		↓		1l plastic											X								HNO_3-preserved.	1	
↓		↓		↓												X	X	X	X	X				1	
CW-1A		~~1000~~ 0835 23		1l glass amber				X																2	
↓		↓		1l plastic											X								preserved HNO_3	1	
↓		↓		↓												X	X	X	X	X				1	
CW-1B		~~0835~~ 1000 23		1l glass amber				X																2	
↓		↓		1l plastic											X								HNO_3 preserved	1	
↓		↓		↓												X	X	X	X	X				1	
CW-1C		11:00		1l glass amber				X								~~X~~ 72								2	
↓		↓		1l plastic											X								HNO_3 preserved	1	
↓		↓		↓												X	X	X	X	X				1	

RELINQUISHED BY: (Signature) [signature] DATE/TIME 6-20-95/1745 RECEIVED BY: (Signature) DHL# 7449793330

RELINQUISHED BY: (Signature) DATE/TIME 6-22-95/1030 RECEIVED BY: (Signature) Sharon Malone

RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

ANALYTICAL LABORATORY: BC Analytical

LABORATORY CONTACT: Brian Moore

D&M CONTACT: PHONE: 808-593-1116

LABORATORY NOTES:

JOB NO.: SHEET ____ OF ____

PROJECT

LOCATION

COLLECTOR DATE OF COLLECTION

DAMES & MOORE
1050 QUEEN STREET, SUITE 204
HONOLULU, HAWAII 96814
(808) 593-1116 FAX: (808) 593-1198

G95-06-438
C 13

CHAIN-OF-CUSTODY RECORD

WHITE COPY - Original (Accompanies Samples) YELLOW COPY - Collector PINK COPY - Project Manager

Sample Number	Depth	Time	Sample Type	Container Type	HVOCs 601/8010	BTE Only 602/8020	VOCs 624/8240	SVOCs 625/8270	TRPH 418.1	TPH 8015(M)-G	TPH 8015(M)-D	PCBs 8080	Total Pb/Cd 6010	PAHs 8100	TCLP	Metals	TDS	pH	Conductivity	SO4				FIELD NOTES:	Total Number Of Containers	Laboratory Note Number
MW-3		1210	Water	1l glass				X																	2	
		↓		1l plastic											X										1	
		↓		1l plastic												X	X	X	X	X					1	
MW-4		1125		1l glass				X																	2	
		"		1l plastic											X										1	
		"		1L plastic												X	X	X	X	X					1	
MW-5		1000		1L glass				X																	2	
		"		1L plastic											X										1	
		"		1L plastic												X	X	X	X	X					1	
MW-6		900		1l plastic											X										1	
		"		1l plastic												X	X	X	X	X					1	
		25"		1l glass				X																	2	
MW-3		1210		40ml vial			X																		2	
MW-4		1125		↓			X																		2	
MW-5		1000		↓			X																		2	
MW-6		900		↓			X																		2	
TB-3				↓																					2	
FB-3				↓			X																		1	

RELINQUISHED BY: (Signature) Zuyi Shan DATE/TIME 6-21-95/1700 RECEIVED BY: (Signature) DHL # 7449793371

RELINQUISHED BY: (Signature) DATE/TIME 6/22/95 10:30 RECEIVED BY: (Signature) Sharon Malone

RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

LABORATORY NOTES: Report goes to Tony Shan of BHP.

ANALYTICAL LABORATORY B.C. Analytical

LABORATORY CONTACT Brian Moore

D&M CONTACT Zuyi Shan PHONE: 808-593-1116

JOB NO.: _____ SHEET ____ OF ____

PROJECT _____

LOCATION _____

COLLECTOR _____ DATE OF COLLECTION _____

DAMES & MOORE
1050 QUEEN STREET, SUITE 204
HONOLULU, HAWAII 96814
(808) 593-1116 FAX: (808) 593-1198

G95-06-438
0014

CHAIN-OF-CUSTODY RECORD

WHITE COPY - Original (Accompanies Samples) YELLOW COPY - Collector PINK COPY - Project Manager

Sample Number	Depth	Time	Sample Type	Container Type	HVOCs 601/8010	BTE Only 602/8020	VOCs 624/8240	SVOCs 625/8270	TRPH 418.1	TPH 8015(M)-G	TPH 8015(M)-D	PCBs 8080	Total Pb/Cd 6010	PAHs 8100	TCLP	Metals	TDS	pH	Cond	Cl				FIELD NOTES:	Total Number Of Containers	Laboratory Note Number
CW-4A		1340	water	1l amber glass				X																	2	
↓		↓	↓	1l plastic												X								HNO_3 preserved	1	
				↓													X	X	X	X	X				1	
CW-4B		1455		1l glass amber				X																	2	
↓		↓		1l plastic												X								HNO_3 preserved	1	
				↓													X	X	X	X	X				1	
CW-4C		1615		1l glass amber				X																	2	
↓		↓		1l plastic												X								HNO_3 preserved.	1	
				↓													X	X	X	X	X				1	
CW-3A		~~1330~~ 1415		1l glass amber				X																	2	
↓		↓		1l plastic												X								HNO_3 preserved	1	
				↓													X	X	X	X	X				1	
CW-3B		1325		1l glass amber				X																	2	
↓		↓		1l plastic												X								HNO_3 preserved	1	
				↓													X	X	X	X	X				1	
CW-3C		~~1435~~ 1515		1l glass amber				X																	2	
↓		↓	↓	1l plastic												X								HNO_3 preserved.	1	
				↓													X	X	X	X	X				1	

RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)
Zuyi Sh / DChng 6-20-95 / 1745 DHL# 7449793330

RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)
6/22/95 10:30 Sharon Malone

RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

ANALYTICAL LABORATORY B. C. Analytical

LABORATORY CONTACT Brian Moore

D&M CONTACT Zuyi Sh PHONE: 808-593-1116

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1050 QUEEN STREET, SUITE 204
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LABORATORY NOTES:

JOB NO.: SHEET ____ OF ____

PROJECT

LOCATION

COLLECTOR DATE OF COLLECTION

G95-06-478
C15

CHAIN-OF-CUSTODY RECORD

WHITE COPY - Original (Accompanies Samples) YELLOW COPY - Collector PINK COPY - Project Manager

Sample Number	Depth	Time	Sample Type	Container Type	HVOCs 601/8010	BTE Only 602/8020	VOCs 624/8240	SVOCs 625/8270	TRPH 418.1	TPH 8015(M)-G	TPH 8015(M)-D	PCBs 8080	Total Pb/Cd 6010	PAHs 8100	TCLP Metals									FIELD NOTES:	Total Number Of Containers	Laboratory Note Number
FB-2		1240	Water	40 ml glass			X																	HCl preserved	1	
1A-D		0845					X																		2	
CW-2A		1015					X																		2	
CW-2B		0930					X																		2	
CW-2C		0840					X																		2	
CW-1A		1000					X																		2	
CW-1B		0835					X																		2	
CW-1C		1100					X																		2	
CW-3A		1415					X																		2	
CW-3B		1325					X																		2	
CW-3C		1515					X																		2	
CW-4A		1340					X																		2	
CW-4B		1455					X																		2	
CW-4C		1615					X																		2	
1A-D		0845		1 glass amber				X																	1	
1A-D		0845		125ml plastic											X									HNO3 preserved	3	
TB-2		1730																								

RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)
Zuyi Shen 6/20/95-1745 DHL # 7449793330

RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)
6/22/95 10:30 Sharon Malone

RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

LABORATORY NOTES:

ANALYTICAL LABORATORY: B. C. Analytical

LABORATORY CONTACT: Brien Moore

D&M CONTACT: Zuyi Shen PHONE: 808-593-1116

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(808) 593-1116 FAX: (808) 593-1198

JOB NO.: _____ SHEET ____ OF ____

PROJECT _____

LOCATION _____

COLLECTOR _____ DATE OF COLLECTION _____

ANALYTICAL REPORT

B C Analytical

801 Western Avenue
Glendale, CA 91201
818/247-5737
Fax: 818/247-9797

LOG NO: G95-06-367

Received: 20 JUN 95

Mailed: JUL 7 1995

Dr. Tony Shan
BHP, Hawaii Refinery
91-325 Komohana St.
Kapolei, HI 96707

Project: GMP.3RD.QTR

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
06-367-1	CW-7A	19 JUN 95
06-367-2	CW-7B	19 JUN 95
06-367-3	CW-6A	19 JUN 95
06-367-4	CW-9A	19 JUN 95
06-367-5	CW-6B	19 JUN 95

PARAMETER	06-367-1	06-367-2	06-367-3	06-367-4	06-367-5
Digestion (3010), Date	06/27/95	06/27/95	06/27/95	06/27/95	06/27/95
Furnace Digestion (3020), Date	06/27/95	06/27/95	06/27/95	06/27/95	06/27/95
Chloride (300.0), mg/L	2000	6500	960	1700	6700
Sulfate (300.0), mg/L	200	1000	96	1200	2100
Quad. Conductivity (120.1)					
Sp. Cond., Average, umhos/cm	7600	21000	4100	9200	23000
Sp. Cond., 1st Replicate, umhos/cm	7600	21000	4100	9200	23000
Sp. Cond., 2nd Replicate, umhos/cm	7600	21000	4100	9200	23000
Sp. Cond., 3rd Replicate, umhos/cm	7700	21000	4100	9300	23000
Sp. Cond., 4th Replicate, umhos/cm	7700	21000	4100	9200	23000
Other Quad. Conductivity (120.1)	---	---	---	---	---
Quad. pH (150.1)					
pH, Average, Units	7.0	7.1	7.1	8.2	7.9
pH, 1st Replicate, Units	7.0	7.1	7.1	8.2	7.9
pH, 2nd Replicate, Units	7.0	7.1	7.1	8.2	7.9
pH, 3rd Replicate, Units	7.0	7.1	7.1	8.1	7.9
pH, 4th Replicate, Units	7.0	7.1	7.1	8.2	7.9
Other Quad. pH (150.1)	---	---	---	---	---
Dissolved Solids (160.1), mg/L	4400	14000	2200	5500	14000
Antimony (6010), mg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (7060), mg/L	<0.002	<0.002	<0.002	<0.002	0.0043
Barium (6010), mg/L	0.072	0.070	0.036	0.0075	0.019
Beryllium (6010), mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium (7131), mg/L	<0.001	<0.001	<0.001	<0.001	<0.001

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B C Analytical

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
06-367-1	CW-7A	19 JUN 95
06-367-2	CW-7B	19 JUN 95
06-367-3	CW-6A	19 JUN 95
06-367-4	CW-9A	19 JUN 95
06-367-5	CW-6B	19 JUN 95

PARAMETER	06-367-1	06-367-2	06-367-3	06-367-4	06-367-5
Chromium (6010), mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (6010), mg/L	<0.04	<0.04	<0.04	<0.04	<0.04
Iron (6010), mg/L	1.0	0.69	0.10	<0.04	0.19
Lead (7421), mg/L	0.026	0.0082	<0.002	<0.002	<0.002
Manganese (6010), mg/L	0.16	0.18	0.15	0.025	0.057
Mercury (7470), mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Nickel (6010), mg/L	<0.04	0.048	<0.04	<0.04	<0.04
Selenium (7740), mg/L	<0.004	<0.004	<0.004	<0.004	<0.004
Sodium (6010), mg/L	1300	4300	590	1900	5200
Vanadium (6010), mg/L	<0.04	<0.04	<0.04	<0.04	<0.04

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06-367-1	CW-7A	19 JUN 95
06-367-2	CW-7B	19 JUN 95
06-367-3	CW-6A	19 JUN 95
06-367-4	CW-9A	19 JUN 95
06-367-5	CW-6B	19 JUN 95

PARAMETER	06-367-1	06-367-2	06-367-3	06-367-4	06-367-5
B/N,A Ext.Pri.Poll. (8270)					
Date Analyzed	06/27/95	06/27/95	06/27/95	06/28/95	06/27/95
Date Extracted	06/21/95	06/21/95	06/21/95	06/21/95	06/21/95
Dilution Factor, Times	1	1	1	1	1
1,2,4-Trichlorobenzene, ug/L	<5	<5	<5	<5	<5
1,2-Dichlorobenzene, ug/L	<6	<6	<6	<6	<6
1,2-Diphenylhydrazine, ug/L	<5	<5	<5	<5	<5
1,3-Dichlorobenzene, ug/L	<5	<5	<5	<5	<5
1,4-Dichlorobenzene, ug/L	<5	<5	<5	<5	<5
1-Methylnaphthalene, ug/L	<10	<10	<10	<10	<10
2,4,5-Trichlorophenol, ug/L	<6	<6	<6	<6	<6
2,4,6-Trichlorophenol, ug/L	<5	<5	<5	<5	<5
2,4-Dichlorophenol, ug/L	<5	<5	<5	<5	<5
2,4-Dimethylphenol, ug/L	<5	<5	<5	<5	<5
2,4-Dinitrophenol, ug/L	<10	<10	<10	<10	<10
2,4-Dinitrotoluene, ug/L	<5	<5	<5	<5	<5
2,6-Dinitrotoluene, ug/L	<5	<5	<5	<5	<5
2-Chloronaphthalene, ug/L	<6	<6	<6	<6	<6
2-Chlorophenol, ug/L	<5	<5	<5	<5	<5
2-Methyl-4,6-dinitrophenol, ug/L	<5	<5	<5	<5	<5
2-Methylnaphthalene, ug/L	<5	<5	<5	<5	<5
2-Methylphenol (o-Cresol), ug/L	<5	<5	<5	<5	<5
2-Nitroaniline, ug/L	<5	<5	<5	<5	<5

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Project: GMP.3RD.QTR

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
06-367-1	CW-7A	19 JUN 95
06-367-2	CW-7B	19 JUN 95
06-367-3	CW-6A	19 JUN 95
06-367-4	CW-9A	19 JUN 95
06-367-5	CW-6B	19 JUN 95

PARAMETER	06-367-1	06-367-2	06-367-3	06-367-4	06-367-5
2-Nitrophenol, ug/L	<5	<5	<5	<5	<5
3,3'-Dichlorobenzidine, ug/L	<20	<20	<20	<20	<20
3-Methylphenol (m-Cresol), ug/L	<10	<10	<10	<10	<10
3-Nitroaniline, ug/L	<5	<5	<5	<5	<5
4-Bromophenylphenylether, ug/L	<5	<5	<5	<5	<5
4-Chloro-3-methylphenol, ug/L	<5	<5	<5	<5	<5
4-Chloroaniline, ug/L	<5	<5	<5	<5	<5
4-Chlorophenylphenylether, ug/L	<5	<5	<5	<5	<5
4-Methylphenol (p-Cresol), ug/L	<8	<8	<8	<8	<8
4-Nitroaniline, ug/L	<6	<6	<6	<6	<6
4-Nitrophenol, ug/L	<5	<5	<5	<5	<5
6-Methylchrysene, ug/L	<10	<10	<10	<10	<10
7,12-Dimethylbenz(a)anthracene, ug/L	<5	<5	<5	<5	<5
Acenaphthene, ug/L	<5	<5	6.1	<5	<5
Acenaphthylene, ug/L	<5	<5	<5	<5	<5
Aniline, ug/L	<5	<5	<5	<5	<5
Anthracene, ug/L	<5	<5	<5	<5	<5
Benzidine, ug/L	<100	<100	<100	<100	<100
Benzo(a)anthracene, ug/L	<5	<5	<5	<5	<5
Benzo(a)pyrene, ug/L	<5	<5	<5	<5	<5
Benzo(b)fluoranthene, ug/L	<5	<5	<5	<5	<5
Benzo(g,h,i)perylene, ug/L	<5	<5	<5	<5	<5
Benzo(k)fluoranthene, ug/L	<5	<5	<5	<5	<5

BCA

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
06-367-1	CW-7A	19 JUN 95
06-367-2	CW-7B	19 JUN 95
06-367-3	CW-6A	19 JUN 95
06-367-4	CW-9A	19 JUN 95
06-367-5	CW-6B	19 JUN 95

PARAMETER	06-367-1	06-367-2	06-367-3	06-367-4	06-367-5
Benzenethiol, ug/L	<20	<20	<20	<20	<20
Benzyl Alcohol, ug/L	<5	<5	<5	<5	<5
Benzoic acid, ug/L	<50	<50	<50	<50	<50
Butylbenzylphthalate, ug/L	<5	<5	<5	<5	<5
Chrysene, ug/L	<5	<5	<5	<5	<5
Di-n-octylphthalate, ug/L	<5	<5	<5	<5	<5
Dibenzo(a,h)anthracene, ug/L	<5	<5	<5	<5	<5
Dibenz(a,h)acridine, ug/L	<20	<20	<20	<20	<20
Dibenzofuran, ug/L	<5	<5	<5	<5	<5
Dibutylphthalate, ug/L	<5	<5	26	<5	<5
Diethylphthalate, ug/L	<5	<5	<5	<5	<5
Dimethylphthalate, ug/L	<5	<5	<5	<5	<5
Fluoranthene, ug/L	<5	<5	<5	<5	<5
Fluorene, ug/L	<5	<5	<5	<5	<5
Hexachlorobenzene, ug/L	<5	<5	<5	<5	<5
Hexachlorobutadiene, ug/L	<5	<5	<5	<5	<5
Hexachlorocyclopentadiene, ug/L	<5	<5	<5	<5	<5
Hexachloroethane, ug/L	<5	<5	<5	<5	<5
Indeno(1,2,3-c,d)pyrene, ug/L	<7	<7	<7	<7	<7
Indene, ug/L	<10	<10	<10	<10	<10
Isophorone, ug/L	<5	<5	<5	<5	<5
N-Nitrosodimethylamine, ug/L	<6	<6	<6	<6	<6
N-Nitrosodiphenylamine, ug/L	<5	<5	<5	<5	<5

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B C Analytical

801 Western Avenue
Glendale, CA 91201
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LOG NO: G95-06-367

Received: 20 JUN 95

Dr. Tony Shan
BHP, Hawaii Refinery
91-325 Komohana St.
Kapolei, HI 96707

Project: GMP.3RD.QTR

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
06-367-1	CW-7A	19 JUN 95
06-367-2	CW-7B	19 JUN 95
06-367-3	CW-6A	19 JUN 95
06-367-4	CW-9A	19 JUN 95
06-367-5	CW-6B	19 JUN 95

PARAMETER	06-367-1	06-367-2	06-367-3	06-367-4	06-367-5
N-Nitrosodi-n-propylamine, ug/L	<6	<6	<6	<6	<6
Nitrobenzene, ug/L	<5	<5	<5	<5	<5
Naphthalene, ug/L	<5	<5	<5	<5	<5
Phenanthrene, ug/L	<5	<5	<5	<5	<5
Phenol, ug/L	<5	<5	<5	<5	<5
Pentachlorophenol, ug/L	<5	<5	<5	<5	<5
Pyrene, ug/L	<5	<5	<5	<5	<5
Pyridine, ug/L	<10	<10	<10	<10	<10
Quinoline, ug/L	<10	<10	<10	<10	<10
Bis(2-chloroethoxy)methane, ug/L	<5	<5	<5	<5	<5
Bis(2-chloroethyl)ether, ug/L	<5	<5	<5	<5	<5
Bis(2-chloroisopropyl)ether, ug/L	<6	<6	<6	<6	<6
Bis(2-ethylhexyl)phthalate, ug/L	<7	<7	<7	<7	<7

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
06-367-1	CW-7A	19 JUN 95
06-367-2	CW-7B	19 JUN 95
06-367-3	CW-6A	19 JUN 95
06-367-4	CW-9A	19 JUN 95
06-367-5	CW-6B	19 JUN 95

PARAMETER	06-367-1	06-367-2	06-367-3	06-367-4	06-367-5
Vol.Pri.Poll. (8240)					
Date Analyzed	06/25/95	06/25/95	06/25/95	06/25/95	06/25/95
Dilution Factor, Times	1	1	1	1	1
1,1,1-Trichloroethane, ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane, ug/L	<1	<1	<1	<1	<1
1,1,2-Trichloroethane, ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane, ug/L	<1	<1	<1	<1	2.1
1,1-Dichloroethene, ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane, ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene, ug/L	<1	<1	<1	<1	<1
1,2-Dichloropropane, ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene, ug/L	<1	<1	<1	<1	<1
1,4-Dichlorobenzene, ug/L	<1	<1	<1	<1	<1
1,4-Dioxane, ug/L	<500	<500	<500	<500	<500
2-Chloroethylvinylether, ug/L	<1	<1	<1	<1	<1
2-Hexanone, ug/L	<5	<5	<5	<5	<5
Acetone, ug/L	<20	<20	<20	<20	<20
Bromodichloromethane, ug/L	<1	<1	<1	<1	<1
Bromomethane, ug/L	<1	<1	<1	<1	<1
Benzene, ug/L	<1	<1	<1	1.3	2.2
Bromoform, ug/L	<1	<1	<1	<1	<1
Chlorobenzene, ug/L	<1	<1	<1	<1	<1
Carbon Tetrachloride, ug/L	<1	<1	<1	<1	<1

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
06-367-1	CW-7A	19 JUN 95
06-367-2	CW-7B	19 JUN 95
06-367-3	CW-6A	19 JUN 95
06-367-4	CW-9A	19 JUN 95
06-367-5	CW-6B	19 JUN 95

PARAMETER	06-367-1	06-367-2	06-367-3	06-367-4	06-367-5
Chloroethane, ug/L	<1	<1	<1	<1	<1
Chloroform, ug/L	<1	<1	<1	<1	<1
Chloromethane, ug/L	<1	<1	<1	<1	<1
Carbon Disulfide, ug/L	<2	<2	2.4	<2	<2
Cyclohexane, ug/L	<5	<5	<5	<5	<5
Dibromochloromethane, ug/L	<1	<1	<1	<1	<1
Ethylene Dibromide, ug/L	<5	<5	<5	<5	<5
Ethylbenzene, ug/L	<1	<1	<1	<1	<1
Freon 113, ug/L	<2	<2	<2	<2	<2
Methyl ethyl ketone, ug/L	<5	<5	<5	<5	<5
Methyl isobutyl ketone, ug/L	<5	<5	<5	<5	<5
Methylene chloride, ug/L	<1	<1	<1	<1	<1
Styrene, ug/L	<1	<1	<1	<1	<1
Trichloroethene, ug/L	<1	<1	<1	<1	<1
Trichlorofluoromethane, ug/L	<1	<1	<1	<1	<1
Toluene, ug/L	<1	<1	<1	<1	<1
Tetrachloroethene, ug/L	<1	<1	<1	<1	<1
Vinyl acetate, ug/L	<10	<10	<10	<10	<10
Vinyl chloride, ug/L	<1	<1	<1	<1	<1
Total Xylene Isomers, ug/L	<3	<3	<3	<3	<3
cis-1,2-Dichloroethene, ug/L	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene, ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene, ug/L	<1	<1	<1	<1	<1

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LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
06-367-1	CW-7A	19 JUN 95
06-367-2	CW-7B	19 JUN 95
06-367-3	CW-6A	19 JUN 95
06-367-4	CW-9A	19 JUN 95
06-367-5	CW-6B	19 JUN 95

PARAMETER	06-367-1	06-367-2	06-367-3	06-367-4	06-367-5
trans-1,3-Dichloropropene, ug/L	<1	<1	<1	<1	<1

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
06-367-6	CW-5A	19 JUN 95
06-367-7	CW-5B	19 JUN 95
06-367-8	CW-9B	19 JUN 95
06-367-9	CW-8A	19 JUN 95
06-367-10	CW-8B	19 JUN 95

PARAMETER	06-367-6	06-367-7	06-367-8	06-367-9	06-367-10
Digestion (3010), Date	06/27/95	06/27/95	06/27/95	06/27/95	06/27/95
Furnace Digestion (3020), Date	06/27/95	06/27/95	06/27/95	06/27/95	06/27/95
Chloride (300.0), mg/L	1100	10000	16000	900	12000
Sulfate (300.0), mg/L	100	1800	3400	1600	2800
Quad. Conductivity (120.1)					
Sp. Cond., Average, umhos/cm	4600	31000	36000	7300	30000
Sp. Cond., 1st Replicate, umhos/cm	4600	31000	36000	7300	30000
Sp. Cond., 2nd Replicate, umhos/cm	4600	31000	36000	7300	30000
Sp. Cond., 3rd Replicate, umhos/cm	4600	31000	36000	7300	30000
Sp. Cond., 4th Replicate, umhos/cm	4600	31000	36000	7300	30000
Other Quad. Conductivity (120.1)	---	---	---	---	---
Quad. pH (150.1)					
pH, Average, Units	7.1	7.3	7.4	8.1	7.4
pH, 1st Replicate, Units	7.1	7.3	7.4	8.1	7.4
pH, 2nd Replicate, Units	7.1	7.3	7.4	8.1	7.4
pH, 3rd Replicate, Units	7.1	7.3	7.4	8.1	7.4
pH, 4th Replicate, Units	7.1	7.3	7.4	8.0	7.4
Other Quad. pH (150.1)	---	---	---	---	---
Dissolved Solids (160.1), mg/L	2400	21000	26000	4600	20000
Antimony (6010), mg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (7060), mg/L	<0.002	<0.002	<0.002	0.0027	<0.002
Barium (6010), mg/L	0.044	0.034	0.035	0.024	0.024
Beryllium (6010), mg/L	<0.001	<0.001	<0.001	<0.001	<0.001

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06-367-6	CW-5A	19 JUN 95
06-367-7	CW-5B	19 JUN 95
06-367-8	CW-9B	19 JUN 95
06-367-9	CW-8A	19 JUN 95
06-367-10	CW-8B	19 JUN 95

PARAMETER	06-367-6	06-367-7	06-367-8	06-367-9	06-367-10
Cadmium (7131), mg/L	<0.001	0.0088	<0.001	<0.001	<0.001
Chromium (6010), mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (6010), mg/L	<0.04	<0.04	<0.04	<0.04	<0.04
Iron (6010), mg/L	<0.04	0.15	0.76	<0.04	<0.04
Lead (7421), mg/L	0.019	<0.002	<0.002	0.0052	<0.002
Manganese (6010), mg/L	0.16	0.19	0.18	0.019	0.029
Mercury (7470), mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Nickel (6010), mg/L	<0.04	0.11	0.066	<0.04	0.063
Selenium (7740), mg/L	<0.004	<0.004	<0.004	<0.004	<0.004
Sodium (6010), mg/L	720	6400	7900	1600	6300
Vanadium (6010), mg/L	<0.04	<0.04	<0.04	<0.04	<0.04

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Project: GMP.3RD.QTR

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
06-367-6	CW-5A	19 JUN 95
06-367-7	CW-5B	19 JUN 95
06-367-8	CW-9B	19 JUN 95
06-367-9	CW-8A	19 JUN 95
06-367-10	CW-8B	19 JUN 95

PARAMETER	06-367-6	06-367-7	06-367-8	06-367-9	06-367-10
B/N,A Ext.Pri.Poll. (8270)					
Date Analyzed	06/28/95	06/28/95	06/28/95	06/28/95	06/28/95
Date Extracted	06/21/95	06/21/95	06/21/95	06/21/95	06/21/95
Dilution Factor, Times	1	1	1	1	1
1,2,4-Trichlorobenzene, ug/L	<5	<5	<5	<5	<5
1,2-Dichlorobenzene, ug/L	<6	<6	<6	<6	<6
1,2-Diphenylhydrazine, ug/L	<5	<5	<5	<5	<5
1,3-Dichlorobenzene, ug/L	<5	<5	<5	<5	<5
1,4-Dichlorobenzene, ug/L	<5	<5	<5	<5	<5
1-Methylnaphthalene, ug/L	<10	<10	<10	<10	<10
2,4,5-Trichlorophenol, ug/L	<6	<6	<6	<6	<6
2,4,6-Trichlorophenol, ug/L	<5	<5	<5	<5	<5
2,4-Dichlorophenol, ug/L	<5	<5	<5	<5	<5
2,4-Dimethylphenol, ug/L	<5	<5	<5	<5	<5
2,4-Dinitrophenol, ug/L	<10	<10	<10	<10	<10
2,4-Dinitrotoluene, ug/L	<5	<5	<5	<5	<5
2,6-Dinitrotoluene, ug/L	<5	<5	<5	<5	<5
2-Chloronaphthalene, ug/L	<6	<6	<6	<6	<6
2-Chlorophenol, ug/L	<5	<5	<5	<5	<5
2-Methyl-4,6-dinitrophenol, ug/L	<5	<5	<5	<5	<5
2-Methylnaphthalene, ug/L	<5	<5	<5	<5	<5
2-Methylphenol (o-Cresol), ug/L	<5	<5	<5	<5	<5
2-Nitroaniline, ug/L	<5	<5	<5	<5	<5

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LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
06-367-6	CW-5A	19 JUN 95
06-367-7	CW-5B	19 JUN 95
06-367-8	CW-9B	19 JUN 95
06-367-9	CW-8A	19 JUN 95
06-367-10	CW-8B	19 JUN 95

PARAMETER	06-367-6	06-367-7	06-367-8	06-367-9	06-367-10
2-Nitrophenol, ug/L	<5	<5	<5	<5	<5
3,3'-Dichlorobenzidine, ug/L	<20	<20	<20	<20	<20
3-Methylphenol (m-Cresol), ug/L	<10	<10	<10	<10	<10
3-Nitroaniline, ug/L	<5	<5	<5	<5	<5
4-Bromophenylphenylether, ug/L	<5	<5	<5	<5	<5
4-Chloro-3-methylphenol, ug/L	<5	<5	<5	<5	<5
4-Chloroaniline, ug/L	<5	<5	<5	<5	<5
4-Chlorophenylphenylether, ug/L	<5	<5	<5	<5	<5
4-Methylphenol (p-Cresol), ug/L	<8	<8	<8	<8	<8
4-Nitroaniline, ug/L	<6	<6	<6	<6	<6
4-Nitrophenol, ug/L	<5	<5	<5	<5	<5
6-Methylchrysene, ug/L	<10	<10	<10	<10	<10
7,12-Dimethylbenz(a)anthracene, ug/L	<5	<5	<5	<5	<5
Acenaphthene, ug/L	<5	<5	<5	<5	<5
Acenaphthylene, ug/L	<5	<5	<5	<5	<5
Aniline, ug/L	<5	<5	<5	<5	<5
Anthracene, ug/L	<5	<5	<5	<5	<5
Benzidine, ug/L	<100	<100	<100	<100	<100
Benzo(a)anthracene, ug/L	<5	<5	<5	<5	<5
Benzo(a)pyrene, ug/L	<5	<5	<5	<5	<5
Benzo(b)fluoranthene, ug/L	<5	<5	<5	<5	<5
Benzo(g,h,i)perylene, ug/L	<5	<5	<5	<5	<5
Benzo(k)fluoranthene, ug/L	<5	<5	<5	<5	<5

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06-367-7	CW-5B	19 JUN 95
06-367-8	CW-9B	19 JUN 95
06-367-9	CW-8A	19 JUN 95
06-367-10	CW-8B	19 JUN 95

PARAMETER	06-367-6	06-367-7	06-367-8	06-367-9	06-367-10
Benzenethiol, ug/L	<20	<20	<20	43	<20
Benzyl Alcohol, ug/L	<5	<5	<5	<5	<5
Benzoic acid, ug/L	<50	<50	<50	<50	<50
Butylbenzylphthalate, ug/L	<5	<5	<5	<5	<5
Chrysene, ug/L	<5	<5	<5	<5	<5
Di-n-octylphthalate, ug/L	<5	<5	<5	<5	<5
Dibenzo(a,h)anthracene, ug/L	<5	<5	<5	<5	<5
Dibenz(a,h)acridine, ug/L	<20	<20	<20	<20	<20
Dibenzofuran, ug/L	<5	<5	<5	<5	<5
Dibutylphthalate, ug/L	<5	<5	<5	<5	<5
Diethylphthalate, ug/L	<5	<5	<5	<5	<5
Dimethylphthalate, ug/L	<5	<5	<5	<5	<5
Fluoranthene, ug/L	<5	<5	<5	<5	<5
Fluorene, ug/L	<5	<5	<5	<5	<5
Hexachlorobenzene, ug/L	<5	<5	<5	<5	<5
Hexachlorobutadiene, ug/L	<5	<5	<5	<5	<5
Hexachlorocyclopentadiene, ug/L	<5	<5	<5	<5	<5
Hexachloroethane, ug/L	<5	<5	<5	<5	<5
Indeno(1,2,3-c,d)pyrene, ug/L	<7	<7	<7	<7	<7
Indene, ug/L	<10	<10	<10	<10	<10
Isophorone, ug/L	<5	<5	<5	<5	<5
N-Nitrosodimethylamine, ug/L	<6	<6	<6	<6	<6
N-Nitrosodiphenylamine, ug/L	<5	<5	<5	<5	<5

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06-367-6	CW-5A	19 JUN 95
06-367-7	CW-5B	19 JUN 95
06-367-8	CW-9B	19 JUN 95
06-367-9	CW-8A	19 JUN 95
06-367-10	CW-8B	19 JUN 95

PARAMETER	06-367-6	06-367-7	06-367-8	06-367-9	06-367-10
N-Nitrosodi-n-propylamine, ug/L	<6	<6	<6	<6	<6
Nitrobenzene, ug/L	<5	<5	<5	<5	<5
Naphthalene, ug/L	<5	<5	<5	<5	<5
Phenanthrene, ug/L	<5	<5	<5	<5	<5
Phenol, ug/L	<5	<5	<5	<5	<5
Pentachlorophenol, ug/L	<5	<5	<5	<5	<5
Pyrene, ug/L	<5	<5	<5	<5	<5
Pyridine, ug/L	<10	<10	<10	<10	<10
Quinoline, ug/L	<10	<10	<10	<10	<10
Bis(2-chloroethoxy)methane, ug/L	<5	<5	<5	<5	<5
Bis(2-chloroethyl)ether, ug/L	<5	<5	<5	<5	<5
Bis(2-chloroisopropyl)ether, ug/L	<6	<6	<6	<6	<6
Bis(2-ethylhexyl)phthalate, ug/L	<7	<7	<7	<7	<7

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Dr. Tony Shan
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91-325 Komohana St.
Kapolei, HI 96707

Project: GMP.3RD.QTR

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
06-367-6	CW-5A	19 JUN 95
06-367-7	CW-5B	19 JUN 95
06-367-8	CW-9B	19 JUN 95
06-367-9	CW-8A	19 JUN 95
06-367-10	CW-8B	19 JUN 95

PARAMETER	06-367-6	06-367-7	06-367-8	06-367-9	06-367-10
Vol.Pri.Poll. (8240)					
Date Analyzed	06/25/95	06/25/95	06/25/95	06/25/95	06/25/95
Dilution Factor, Times	1	1	1	1	1
1,1,1-Trichloroethane, ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane, ug/L	<1	<1	<1	<1	<1
1,1,2-Trichloroethane, ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane, ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene, ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane, ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene, ug/L	<1	<1	<1	<1	<1
1,2-Dichloropropane, ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene, ug/L	<1	<1	<1	<1	<1
1,4-Dichlorobenzene, ug/L	<1	<1	<1	<1	<1
1,4-Dioxane, ug/L	<500	<500	<500	<500	<500
2-Chloroethylvinylether, ug/L	<1	<1	<1	<1	<1
2-Hexanone, ug/L	<5	<5	<5	<5	<5
Acetone, ug/L	<20	<20	<20	<20	<20
Bromodichloromethane, ug/L	<1	<1	<1	<1	<1
Bromomethane, ug/L	<1	<1	<1	<1	<1
Benzene, ug/L	<1	<1	<1	5.3	<1
Bromoform, ug/L	<1	<1	<1	<1	<1
Chlorobenzene, ug/L	<1	<1	<1	<1	<1
Carbon Tetrachloride, ug/L	<1	<1	<1	<1	<1

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LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
06-367-6	CW-5A	19 JUN 95
06-367-7	CW-5B	19 JUN 95
06-367-8	CW-9B	19 JUN 95
06-367-9	CW-8A	19 JUN 95
06-367-10	CW-8B	19 JUN 95

PARAMETER	06-367-6	06-367-7	06-367-8	06-367-9	06-367-10
Chloroethane, ug/L	<1	<1	<1	<1	<1
Chloroform, ug/L	<1	<1	<1	<1	<1
Chloromethane, ug/L	<1	<1	<1	<1	<1
Carbon Disulfide, ug/L	4.1	<2	<2	6.7	7.5
Cyclohexane, ug/L	<5	<5	<5	<5	<5
Dibromochloromethane, ug/L	<1	<1	<1	<1	<1
Ethylene Dibromide, ug/L	<5	<5	<5	<5	<5
Ethylbenzene, ug/L	<1	<1	<1	<1	<1
Freon 113, ug/L	<2	<2	<2	<2	<2
Methyl ethyl ketone, ug/L	<5	<5	<5	<5	<5
Methyl isobutyl ketone, ug/L	<5	<5	<5	<5	<5
Methylene chloride, ug/L	<1	<1	<1	<1	<1
Styrene, ug/L	<1	<1	<1	<1	<1
Trichloroethene, ug/L	<1	<1	<1	<1	<1
Trichlorofluoromethane, ug/L	<1	<1	<1	<1	<1
Toluene, ug/L	<1	<1	<1	<1	<1
Tetrachloroethene, ug/L	<1	<1	<1	<1	<1
Vinyl acetate, ug/L	<10	<10	<10	<10	<10
Vinyl chloride, ug/L	<1	<1	<1	<1	<1
Total Xylene Isomers, ug/L	<3	<3	<3	<3	<3
cis-1,2-Dichloroethene, ug/L	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene, ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene, ug/L	<1	<1	<1	<1	<1

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LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
06-367-6	CW-5A	19 JUN 95
06-367-7	CW-5B	19 JUN 95
06-367-8	CW-9B	19 JUN 95
06-367-9	CW-8A	19 JUN 95
06-367-10	CW-8B	19 JUN 95

PARAMETER	06-367-6	06-367-7	06-367-8	06-367-9	06-367-10
trans-1,3-Dichloropropene, ug/L	<1	<1	<1	<1	<1

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, BLANK WATER SAMPLES	DATE SAMPLED
06-367-11	FB-1	19 JUN 95

PARAMETER	06-367-11
Vol.Pri.Poll. (8240)	
Date Analyzed	06/25/95
Dilution Factor, Times	1
1,1,1-Trichloroethane, ug/L	<1
1,1,2,2-Tetrachloroethane, ug/L	<1
1,1,2-Trichloroethane, ug/L	<1
1,1-Dichloroethane, ug/L	<1
1,1-Dichloroethene, ug/L	<1
1,2-Dichloroethane, ug/L	<1
1,2-Dichlorobenzene, ug/L	<1
1,2-Dichloropropane, ug/L	<1
1,3-Dichlorobenzene, ug/L	<1
1,4-Dichlorobenzene, ug/L	<1
1,4-Dioxane, ug/L	<500
2-Chloroethylvinylether, ug/L	<1
2-Hexanone, ug/L	<5
Acetone, ug/L	<20
Bromodichloromethane, ug/L	<1
Bromomethane, ug/L	<1
Benzene, ug/L	<1
Bromoform, ug/L	<1
Chlorobenzene, ug/L	<1
Carbon Tetrachloride, ug/L	<1
Chloroethane, ug/L	<1
Chloroform, ug/L	<1
Chloromethane, ug/L	<1
Carbon Disulfide, ug/L	2.9

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Project: GMP.3RD.QTR

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, BLANK WATER SAMPLES	DATE SAMPLED
06-367-11	FB-1	19 JUN 95

PARAMETER	06-367-11
Cyclohexane, ug/L	<5
Dibromochloromethane, ug/L	<1
Ethylene Dibromide, ug/L	<5
Ethylbenzene, ug/L	<1
Freon 113, ug/L	<2
Methyl ethyl ketone, ug/L	<5
Methyl isobutyl ketone, ug/L	<5
Methylene chloride, ug/L	<1
Styrene, ug/L	<1
Trichloroethene, ug/L	<1
Trichlorofluoromethane, ug/L	<1
Toluene, ug/L	<1
Tetrachloroethene, ug/L	<1
Vinyl acetate, ug/L	<10
Vinyl chloride, ug/L	<1
Total Xylene Isomers, ug/L	<3
cis-1,2-Dichloroethene, ug/L	<1
cis-1,3-Dichloropropene, ug/L	<1
trans-1,2-Dichloroethene, ug/L	<1
trans-1,3-Dichloropropene, ug/L	<1

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, BLANK WATER SAMPLES	DATE SAMPLED
06-367-12	TB-1	19 JUN 95

PARAMETER	06-367-12
Vol.Pri.Poll. (8240)	
Date Analyzed	06/25/95
Dilution Factor, Times	1
1,1,1-Trichloroethane, ug/L	<1
1,1,2,2-Tetrachloroethane, ug/L	<1
1,1,2-Trichloroethane, ug/L	<1
1,1-Dichloroethane, ug/L	<1
1,1-Dichloroethene, ug/L	<1
1,2-Dichloroethane, ug/L	<1
1,2-Dichlorobenzene, ug/L	<1
1,2-Dichloropropane, ug/L	<1
1,3-Dichlorobenzene, ug/L	<1
1,4-Dichlorobenzene, ug/L	<1
1,4-Dioxane, ug/L	<500
2-Chloroethylvinylether, ug/L	<1
2-Hexanone, ug/L	9.3
Acetone, ug/L	<20
Bromodichloromethane, ug/L	<1
Bromomethane, ug/L	<1
Benzene, ug/L	1.1
Bromoform, ug/L	<1
Chlorobenzene, ug/L	<1
Carbon Tetrachloride, ug/L	<1
Chloroethane, ug/L	36
Chloroform, ug/L	<1
Chloromethane, ug/L	<1
Carbon Disulfide, ug/L	2.6

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, BLANK WATER SAMPLES	DATE SAMPLED
06-367-12	TB-1	19 JUN 95

PARAMETER	06-367-12
Cyclohexane, ug/L	<5
Dibromochloromethane, ug/L	<1
Ethylene Dibromide, ug/L	<5
Ethylbenzene, ug/L	<1
Freon 113, ug/L	<2
Methyl ethyl ketone, ug/L	<5
Methyl isobutyl ketone, ug/L	<5
Methylene chloride, ug/L	<1
Styrene, ug/L	<1
Trichloroethene, ug/L	<1
Trichlorofluoromethane, ug/L	<1
Toluene, ug/L	<1
Tetrachloroethene, ug/L	<1
Vinyl acetate, ug/L	<10
Vinyl chloride, ug/L	<1
Total Xylene Isomers, ug/L	<3
cis-1,2-Dichloroethene, ug/L	<1
cis-1,3-Dichloropropene, ug/L	<1
trans-1,2-Dichloroethene, ug/L	<1
trans-1,3-Dichloropropene, ug/L	<1

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
06-367-13	CW-6A-D	19 JUN 95

PARAMETER	06-367-13
Digestion (3010), Date	06/27/95
Furnace Digestion (3020), Date	06/27/95
Antimony (6010), mg/L	<0.1
Arsenic (7060), mg/L	<0.002
Barium (6010), mg/L	0.034
Beryllium (6010), mg/L	<0.001
Cadmium (7131), mg/L	<0.001
Chromium (6010), mg/L	<0.01
Cobalt (6010), mg/L	<0.04
Iron (6010), mg/L	0.15
Lead (7421), mg/L	0.0074
Manganese (6010), mg/L	0.14
Mercury (7470), mg/L	<0.0002
Nickel (6010), mg/L	0.062
Selenium (7740), mg/L	<0.004
Sodium (6010), mg/L	560
Vanadium (6010), mg/L	<0.04

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
06-367-13	CW-6A-D	19 JUN 95

PARAMETER	06-367-13
B/N,A Ext.Pri.Poll. (8270)	
Date Analyzed	06/28/95
Date Extracted	06/21/95
Dilution Factor, Times	1
1,2,4-Trichlorobenzene, ug/L	<5
1,2-Dichlorobenzene, ug/L	<6
1,2-Diphenylhydrazine, ug/L	<5
1,3-Dichlorobenzene, ug/L	<5
1,4-Dichlorobenzene, ug/L	<5
1-Methylnaphthalene, ug/L	<10
2,4,5-Trichlorophenol, ug/L	<6
2,4,6-Trichlorophenol, ug/L	<5
2,4-Dichlorophenol, ug/L	<5
2,4-Dimethylphenol, ug/L	<5
2,4-Dinitrophenol, ug/L	<10
2,4-Dinitrotoluene, ug/L	<5
2,6-Dinitrotoluene, ug/L	<5
2-Chloronaphthalene, ug/L	<6
2-Chlorophenol, ug/L	<5
2-Methyl-4,6-dinitrophenol, ug/L	<5
2-Methylnaphthalene, ug/L	<5
2-Methylphenol (o-Cresol), ug/L	<5
2-Nitroaniline, ug/L	<5
2-Nitrophenol, ug/L	<5
3,3'-Dichlorobenzidine, ug/L	<20
3-Methylphenol (m-Cresol), ug/L	<10
3-Nitroaniline, ug/L	<5

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
06-367-13	CW-6A-D	19 JUN 95

PARAMETER	06-367-13
4-Bromophenylphenylether, ug/L	<5
4-Chloro-3-methylphenol, ug/L	<5
4-Chloroaniline, ug/L	<5
4-Chlorophenylphenylether, ug/L	<5
4-Methylphenol (p-Cresol), ug/L	<8
4-Nitroaniline, ug/L	<6
4-Nitrophenol, ug/L	<5
6-Methylchrysene, ug/L	<10
7,12-Dimethylbenz(a)anthracene, ug/L	<5
Acenaphthene, ug/L	<5
Acenaphthylene, ug/L	<5
Aniline, ug/L	<5
Anthracene, ug/L	<5
Benzidine, ug/L	<100
Benzo(a)anthracene, ug/L	<5
Benzo(a)pyrene, ug/L	<5
Benzo(b)fluoranthene, ug/L	<5
Benzo(g,h,i)perylene, ug/L	<5
Benzo(k)fluoranthene, ug/L	<5
Benzenethiol, ug/L	<20
Benzyl Alcohol, ug/L	<5
Benzoic acid, ug/L	<50
Butylbenzylphthalate, ug/L	<5
Chrysene, ug/L	<5
Di-n-octylphthalate, ug/L	<5
Dibenzo(a,h)anthracene, ug/L	<5
Dibenz(a,h)acridine, ug/L	<20

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LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
06-367-13	CW-6A-D	19 JUN 95

PARAMETER	06-367-13
Dibenzofuran, ug/L	<5
Dibutylphthalate, ug/L	<5
Diethylphthalate, ug/L	<5
Dimethylphthalate, ug/L	<5
Fluoranthene, ug/L	<5
Fluorene, ug/L	<5
Hexachlorobenzene, ug/L	<5
Hexachlorobutadiene, ug/L	<5
Hexachlorocyclopentadiene, ug/L	<5
Hexachloroethane, ug/L	<5
Indeno(1,2,3-c,d)pyrene, ug/L	<7
Indene, ug/L	<10
Isophorone, ug/L	<5
N-Nitrosodimethylamine, ug/L	<6
N-Nitrosodiphenylamine, ug/L	<5
N-Nitrosodi-n-propylamine, ug/L	<6
Nitrobenzene, ug/L	<5
Naphthalene, ug/L	<5
Phenanthrene, ug/L	<5
Phenol, ug/L	<5
Pentachlorophenol, ug/L	<5
Pyrene, ug/L	<5
Pyridine, ug/L	<10
Quinoline, ug/L	<10
Bis(2-chloroethoxy)methane, ug/L	<5
Bis(2-chloroethyl)ether, ug/L	<5
Bis(2-chloroisopropyl)ether, ug/L	<6

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
06-367-13	CW-6A-D	19 JUN 95

PARAMETER	06-367-13
Bis(2-ethylhexyl)phthalate, ug/L	<7

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LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
06-367-13	CW-6A-D	19 JUN 95

PARAMETER	06-367-13
Vol.Pri.Poll. (8240)	
Date Analyzed	06/25/95
Dilution Factor, Times	1
1,1,1-Trichloroethane, ug/L	<1
1,1,2,2-Tetrachloroethane, ug/L	<1
1,1,2-Trichloroethane, ug/L	<1
1,1-Dichloroethane, ug/L	<1
1,1-Dichloroethene, ug/L	<1
1,2-Dichloroethane, ug/L	<1
1,2-Dichlorobenzene, ug/L	<1
1,2-Dichloropropane, ug/L	<1
1,3-Dichlorobenzene, ug/L	<1
1,4-Dichlorobenzene, ug/L	<1
1,4-Dioxane, ug/L	<500
2-Chloroethylvinylether, ug/L	<1
2-Hexanone, ug/L	<5
Acetone, ug/L	<20
Bromodichloromethane, ug/L	<1
Bromomethane, ug/L	<1
Benzene, ug/L	<1
Bromoform, ug/L	<1
Chlorobenzene, ug/L	<1
Carbon Tetrachloride, ug/L	<1
Chloroethane, ug/L	<1
Chloroform, ug/L	<1
Chloromethane, ug/L	<1
Carbon Disulfide, ug/L	<2

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
06-367-13	CW-6A-D	19 JUN 95

PARAMETER	06-367-13
Cyclohexane, ug/L	<5
Dibromochloromethane, ug/L	<1
Ethylene Dibromide, ug/L	<5
Ethylbenzene, ug/L	<1
Freon 113, ug/L	<2
Methyl ethyl ketone, ug/L	<5
Methyl isobutyl ketone, ug/L	<5
Methylene chloride, ug/L	<1
Styrene, ug/L	<1
Trichloroethene, ug/L	<1
Trichlorofluoromethane, ug/L	<1
Toluene, ug/L	<1
Tetrachloroethene, ug/L	<1
Vinyl acetate, ug/L	<10
Vinyl chloride, ug/L	<1
Total Xylene Isomers, ug/L	<3
cis-1,2-Dichloroethene, ug/L	<1
cis-1,3-Dichloropropene, ug/L	<1
trans-1,2-Dichloroethene, ug/L	<1
trans-1,3-Dichloropropene, ug/L	<1

Jane Freemyer

Jane Freemyer, Program Manager

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Case Narrative

All quality objectives were met including holding times, LCS/LCSD, MS/MSD, Duplicate samples, and Method Blanks as applicable with the following exceptions:

Semivolatiles method 625 batch 95111:

All LCS compounds recovery within criteria. Hexachlorocyclopentadiene LCSD recovery greater than upper control limit. 2,4-Dichlorophenol; Aniline; and N-Nitrosodi-n-propylamine LCS/LCSD RPD greater than control limit.

Volatiles method 8240 batch 95376:

Chloromethane LCS recovery greater than upper control limit.
Bromodichloromethane LCSD recovery less than lower control limit.
Trichlorofluoromethane LCS/LCSD RPD greater than control limit.

Lead method 7421 batch 95938:

MS/MSD did not recover, and was reported as 0% recovery on the basis of good LCS/LCSD recovery.

Note: MS/MSD recovery reported a "NC" is due to sample conncentrations greater than two times the spike amount added.

No analytical difficulties were encountered with any project samples with the following exceptions:

Sample 9506367*9 failed one acid surrogate and one base surrogate for method 8270. This meets the method guidelines and the data was reported.

BCA

CHAIN-OF-CUSTODY RECORD

WHITE COPY - Original (Accompanies Samples) YELLOW COPY - Collector PINK COPY - Project Manager

Sample Number	Depth	Time	Sample Type	Container Type	HVOCs 601/8010	BTE Only 602/8020	VOCs 624/8240	SVOCs 625/8270	TRPH 418.1	TPH 8015(M)-G	TPH 8015(M)-D	PCBs 8080	Total Pb/Cd 6010	PAHs 8100	TCLP	Metals	TDS	pH	Cond.	Cl	SO4				FIELD NOTES: 95-06-367	Total Number Of Containers	Laboratory Note Number
CW-7A		9:55	Water	2 - 1l glass amber				X																		2	
CW-7A		↓		1l plastic											X										HNO_3 - preserv.	1	
CW-7A		↓		1l plastic												X	X	X	X	X						1	
CW-7B		11:40		1l plastic											X										HNO_3	1	
CW-7B		↓		1l glass				X																		2	
CW-7B		↓		1l plastic												X	X	X	X	X						1	
CW-6A		10:15		1l glass				X																	~~HNO_3~~	2	
CW-6A		↓		1l plastic											X										HNO_3	1	
CW-6A		↓		1l plastic												X	X	X	X	X						1	
6A-D		10:30		1l glass amber				X																		1	
6A-D				125 ml. plastic											X										HNO_3	1	
CW-9A		13:45		1l glass amber				X																		2	
CW-6B		11:30		1l glass amber				X																		2	
↓		↓		1l plastic											X										HNO_3	1	
↓		↓		1l plastic												X	X	X	X	X						1	
CW-5A		16:35		1l glass amber				X																		2	
↓		↓	↓	1l plastic											X										HNO_3	1	
↓		↓	↓	1l plastic												X	X	X	X	X						1	

RELINQUISHED BY: (Signature) Zuyi Shen DATE/TIME 6-19-95/1830 RECEIVED BY: (Signature) DHL # 7449793326

RELINQUISHED BY: (Signature) DHL DATE/TIME 6-20-95 0830 RECEIVED BY: (Signature) Sharon Malone

RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

LABORATORY NOTES:

ANALYTICAL LABORATORY: BC Analytical

LABORATORY CONTACT: Brian Moore

D&M CONTACT: Zuyi Shen PHONE: 808-593-1116

DAMES & MOORE
1050 QUEEN STREET, SUITE 204
HONOLULU, HAWAII 96814
(808) 593-1116 FAX: (808) 593-1198

JOB NO.: _____ SHEET ____ OF ____

PROJECT _____

LOCATION _____

COLLECTOR _____ DATE OF COLLECTION _____

CHAIN-OF-CUSTODY RECORD

WHITE COPY - Original (Accompanies Samples) YELLOW COPY - Collector PINK COPY - Project Manager

G95-06-367

Sample Number	Depth	Time	Sample Type	Container Type	HVOCs 601/8010	BTE Only 602/8020	VOCs 624/8240	SVOCs 625/8270	TRPH 418.1	TPH 8015(M)-G	TPH 8015(M)-D	PCBs 8080	Total Pb/Cd 6010	PAHs 8100	TCLP	Metals	TDS	pH	COND	Cl	SO4	FIELD NOTES:	Total Number Of Containers	Laboratory Note Number
CW-5B		16:30	water	1 l plastic				X															2	
↓		↓		1 l plastic											X							HNO3-preserved	1	
				1 l plastic												X	X	X	X	X			1	
CW-9B		14:45		1 l glass				X															2	
CW-8A		13:50		1 l glass				X															2	
↓		↓		1 l plastic											X							HNO3-preserved	1	
				1 l plastic												X	X	X	X	X			1	
CW-8B		15:10		1 l glass				X															2	
↓		↓		1 l plastic											X							HNO3-preserv.	1	
				1 l plastic												X	X	X	X	X			1	
CW-9B		14:45		1 l plastic												X	X	X	X	X				
↓		↓		1 l plastic											X							HNO3-preserv.	1	
CW-9A		13:45		1 l plastic											X								1	
↓		↓		1 l plastic												X	X	X	X	X			1	
TB-1		18:00		40 ml glass			X															HCl-preserv	2	
CW-7B		11:40		↓			X															↓	2	
CW-6B		11:30	↓	↓			X																2	
CW8B		15:10					X																2	

RELINQUISHED BY: (Signature) Zuyi Shen DATE/TIME 6/19/95-1830 RECEIVED BY: (Signature) DHL # 7449793326

RELINQUISHED BY: (Signature) DHL DATE/TIME 6-20-95 0830 RECEIVED BY: (Signature) Sharon Malone

RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

LABORATORY NOTES:

ANALYTICAL LABORATORY: B. C. Analytical

LABORATORY CONTACT: Brian Moore

D&M CONTACT: Zuyi Shen PHONE: 808-593-1116

DAMES & MOORE
1050 QUEEN STREET, SUITE 204
HONOLULU, HAWAII 96814
(808) 593-1116 FAX: (808) 593-1198

JOB NO.: _____ SHEET ____ OF ____

PROJECT _____

LOCATION _____

COLLECTOR _____ DATE OF COLLECTION _____

CHAIN-OF-CUSTODY RECORD

d 11

WHITE COPY - Original (Accompanies Samples) YELLOW COPY - Collector PINK COPY - Project Manager

Sample Number	Depth	Time	Sample Type	Container Type	HVOCs 601/8010	BTE Only 602/8020	VOCs 624/8240	SVOCs 625/8270	TRPH 418.1	TPH 8015(M)-G	TPH 8015(M)-D	PCBs 8080	Total Pb/Cd 6010	PAHs 8100	TCLP	G95-06-367 FIELD NOTES:	Total Number Of Containers	Laboratory Note Number
CW-9B		14:45	water	40ml glass			X									HCl-preservative	2	
CW-5A		16:35					X											
CW-6A		10:15					X											
CW-7A		9:55					X											
CW-9A		13:45					X											
CW-5B		16:30					X											
CW-8A		13:50					X											
6A-D		10:30					X											
FB-1		11:40					X											

RELINQUISHED BY: (Signature) Zuyi Shen DATE/TIME 6-19-95/1830 RECEIVED BY: (Signature) DHL # 7449793326

RELINQUISHED BY: (Signature) DHL DATE/TIME 6/20/95 0830 RECEIVED BY: (Signature) Sharon Malone

RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

ANALYTICAL LABORATORY: B. C. Analytical

LABORATORY CONTACT: Brian Moore

D&M CONTACT: Zuyi Shen PHONE: 808-593-1116

DAMES & MOORE
1050 QUEEN STREET, SUITE 204
HONOLULU, HAWAII 96814
(808) 593-1116 FAX: (808) 593-1198

LABORATORY NOTES:

JOB NO.: _____ SHEET ____ OF ____

PROJECT _____

LOCATION _____

COLLECTOR _____ DATE OF COLLECTION _____

B C Analytical

301 Western Avenue
Glendale, CA 91201
818/247-5737
Fax: 818/247-9797

July 11,1995

BHP, Hawaii Refinery
91-325 Komohana St.
Kapolei, Hi 96707
Attn: Dr. Tony Shan

Dear Dr. Shan,

Enclosed is the analytical report for chemical testing for samples taken on 06/21/95. It includes the following:

1) Analytical Report of results

2) QC summary including LCS/LCSD, MS/MSD, duplicate samples, method blanks, and surrogates.

3) Cross reference sheet containing analyte, date analyzed, method, and batch number.

4) Case narrative explaining QC deficiencies and/or problems encountered in testing.

5) Electronic data in agreed upon format.

If you have any questions, please do not hesitate to call.

Very truly yours,

Brian Moore

Brian Moore
Program Specialist

BCA

3. ANALYTICAL RESULTS OF FREE PRODUCT SAMPLES

B C Analytical

ANALYTICAL REPORT

801 Western Avenue
Glendale, CA 91201
818/247-5737
Fax: 818/247-9797

LOG NO: G95-06-510

Received: 26 JUN 95

Mailed: JUL 11

Dr. Tony Shan
BHP, Hawaii Refinery
91-325 Komohana St.
Kapolei, HI 96707

Project: GMP.3RD.QTR

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, PETROLEUM SAMPLES	DATE SAMPLED
06-510-1	MW-4	21 JUN 95
06-510-2	MW-5	21 JUN 95

PARAMETER	06-510-1	06-510-2
TPH (8015M)		
Date Analyzed	07/06/95	07/06/95
Date Extracted	06/29/95	06/29/95
Dilution Factor, Times	2000	2000
TPH (gasoline), mg/L	<10000	<10000
TPH (diesel), mg/L	160000	95000
TPH (total), mg/L	160000	95000

Jane Freemyer, Program Manager

BCA

B C Analytical

801 Western Avenue
Glendale, CA 91201
818/247-5737
Fax: 818/247-9797

Case Narrative

All quality objectives were met including holding times, LCS/LCSD, MS/MSD, Duplicate samples, and Method Blanks as applicable.

No analytical difficulties were encountered with any project samples.

BCA

CHAIN OF CUSTODY RECORD

BCA Log Number G95[illegible]-510

Client name: BHP Hawaii Refinery	Project or PO#: GMP (6/95)
Address: 91-325 Komohana St.	Phone #: 808-547-3804
City, State, Zip: Kapolei, HI, 96707	Report attention: Tony Shan

Sampled by: Dame & Moore / Tony Shan

Analyses required

Lab Sample number	Date sampled	Time sampled	Type* See key below	Sample description	Number of containers	EPA 8015B (GC)							Hazardous sample Special handling required	Remarks
MW-4	6/21/95		PE	Free product floating on water	1	X								Oil phase only
MW-5	6/21/95		PE	"	1	X								Reports & invoice to T. Sh[illegible]

ANALYZE for 8015 M - DIESEL RANGE per Tony Shan 6/26/95 (BM)

	Signature	Print Name	Company	Date	Time
Relinquished by	Tony Shan	Tony Shan	BHP Refinery	6/22/95	1:30pm
Received by	Dan DeSario	DAN DESARIO	BHP Engineering	6/22/95	1:30pm
Relinquished by	Dan DeSario	DAN DeSario	BHP Engineering	6/22/95	3:30pm
Received by	Brian Moore	BRIAN Moore	BCA	6/24/95	10:00 A
Relinquished by					
Received by Laboratory					

B C ANALYTICAL

- ☐ 1085 Shary Circle, Concord, CA 94518 (510) 825-3894
- ☒ 801 Western Avenue, Glendale, CA 91201 (818) 247-5737
- ☐ 1200 Gene Autry Way, Anaheim, CA 92805 (714) 978-0113

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client's expense.

Disposal arrangements: _____

*KEY: AG—Aqueous NA—Nonaqueous SL—Sludge GW—Groundwater SO—Soil PE—Petroleum

: ORDER PLACED FOR CLIENT: BHP Hawaii Refinery 9506510 :
: BC ANALYTICAL : GLEN LAB : 15:51:36 07 JUL 1995 - P. 1 :

SAMPLES...	SAMPLE DESCRIPTION..	DETERM.....	DATE..... ANALYZED	METHOD.....	EQUIP.	BATCH..
9506510*1	MW-4	FUEL.TOT.GD	07.06.95	8015M	536-25	9541
9506510*2	MW-5	FUEL.TOT.GD	07.06.95	8015M	536-25	9541

***

Notes: Equipment = BC Analytical identification number for a particular piece of analytical equipment.

ID.NO = BC Analytical employee identification number of analyst.

BC ANALYTICAL

ORDER QC REPORT FOR G9506510

DATE REPORTED : 07/07/95

LABORATORY CONTROL STANDARDS
FOR BATCHES WHICH INCLUDE THIS ORDER

PARAMETER		DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
1. TPH	C507331*1						
Date Analyzed		07.02.95	9541	07/02/95	07/02/95	Date	N/A
Date Extracted		07.02.95	9541	06/29/95	06/29/95	Date	N/A
TPH (gasoline)		07.02.95	9541	11.8	10.0	mg/L	118
TPH (diesel)		07.02.95	9541	21.8	20.0	mg/L	109
TPH (total)		07.02.95	9541	33.6	30.0	mg/L	112
2. TPH	C507332*1						
Date Analyzed		07.02.95	9541	07/02/95	07/02/95	Date	N/A
Date Extracted		07.02.95	9541	06/29/95	06/29/95	Date	N/A
TPH (gasoline)		07.02.95	9541	11.1	10.0	mg/L	111
TPH (diesel)		07.02.95	9541	21.8	20.0	mg/L	109
TPH (total)		07.02.95	9541	32.9	30.0	mg/L	110

BC ANALYTICAL

ORDER QC REPORT FOR G9506510

DATE REPORTED : 07/07/95

ADDITIONAL LCS PRECISION (DUPLICATES)
FOR SAMPLES ON THIS ORDER

PARAMETER	SAMPLE NUMBER	DATE ANALYZED	BATCH NUMBER	LC1 RESULT	LC2 RESULT	UNIT	RELATIVE % DIFF
1. TPH							
Date Analyzed		07.02.95	9541	07/02/95	07/02/95	Date	N/A
Date Extracted		07.02.95	9541	06/29/95	06/29/95	Date	N/A
TPH (gasoline)		07.02.95	9541	11.8	11.1	mg/L	6
TPH (diesel)		07.02.95	9541	21.8	21.8	mg/L	0
TPH (total)		07.02.95	9541	33.6	32.9	mg/L	2

BC ANALYTICAL

ORDER QC REPORT FOR G9506510

DATE REPORTED : 07/07/95

METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)
FOR BATCHES WHICH INCLUDE THIS ORDER

PARAMETER		DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT	METHOD
1. TPH	B507158*1						
Date Analyzed		07.01.95	9541	07/01/95	NA	Date	8015M
Date Extracted		07.01.95	9541	06/29/95	NA	Date	8015M
TPH (gasoline)		07.01.95	9541	0	5	mg/L	8015M
TPH (diesel)		07.01.95	9541	0	10	mg/L	8015M
TPH (total)		07.01.95	9541	0	10	mg/L	8015M

: SURROGATE RECOVERIES :
: BC ANALYTICAL : GLEN LAB : 15:51:35 07 JUL 1995 - P. 1 :

METHOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG
9506510*1							
8015M	Naphthalene	9541	07/06/95	0 NC	2.00	0	
9506510*2							
8015M	Naphthalene	9541	07/06/95	0 NC	2.00	0	

: SURROGATE RECOVERIES :
: BC ANALYTICAL : GLEN LAB : 15:51:35 07 JUL 1995 - P. 1 :

METHOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG
B507158*1*MB							
8015M	Naphthalene	9541	07/01/95	1.66	2.00	83	
C507331*1*LC							
8015M	Naphthalene	9541	07/02/95	2.48	2.00	124	
C507331*1*LT							
8015M	Naphthalene	9541	07/02/95	2.00	2.00	100	
C507332*1*LC							
8015M	Naphthalene	9541	07/02/95	2.14	2.00	107	
C507332*1*LT							
8015M	Naphthalene	9541	07/02/95	2.00	2.00	100	

Tony Shaw

S A M P L E W O R K S H E E T

ID No : 121578
Gen. On: 22-JUN-1995
Vessel : None

Sample : POND_1 SLOP
Sample Date : 21-JUN-1995 10:44
Test Date : 22-JUN-1995 10:44

Description : MW-3

Analysis ID	Component name	Spec	Type	Result	Units
API-D/1	API Gravity	None	N	30.0	API
FLASH_PMCC/1	Flash Point, PMCC	None	N	* 182	Deg.F

* INSUFFICIENT SAMPLE AMOUNT RCVD.
RAN FLS. PT. ON SAMPLE RCVD.

End of test list for sample no. 121578

SAMPLE WORKSHEET

ID No : 121579
Gen. On: 22-JUN-1995
Vessel : None

Sample : POND_1 SLOP
Sample Date : 21-JUN-1995 10:44
Test Date : 22-JUN-1995 10:44

Description : MW-4

Analysis ID	Component name	Spec	Type	Result	Units
API-D/1	API Gravity	None	N	*	API
FLASH_PMCC/1	Flash Point, PMCC	None	N	*	Deg.F

* unable to run flash or api
did not enough sample, most
of sample was H_2O

End of test list for sample no. 121579

S A M P L E W O R K S H E E T

ID No : 121580
Gen. On: 22-JUN-1995
Vessel : None

Sample : POND_1 SLOP
Sample Date : 21-JUN-1995 10:44
Test Date : 22-JUN-1995 10:44

Description : MW-5

Analysis ID	Component name	Spec	Type	Result	Units
API-D/1	API Gravity	None	N	28.1	API
FLASH_PMCC/1	Flash Point, PMCC	None	N	*	Deg.F

* unable to run flash.
Not enough sample.

End of test list for sample no. 121580

SAMPLE WORKSHEET

ID No : 121581
Gen. On: 22-JUN-1995
Vessel : None

Sample : POND_1 SLOP
Sample Date : 21-JUN-1995 10:44
Test Date : 22-JUN-1995 10:44

Description : MW-6

Analysis ID	Component name	Spec	Type	Result	Units
API-D/1	API Gravity	None	N	29.7	API
FLASH_PMCC/1	Flash Point, PMCC	None	N	*	Deg.F

* Unable to run flash. Not enough sample.

End of test list for sample no. 121581

4. GROUNDWATER ELEVATION DATA

BHP HAWAII REFINERY GROUNDWATER ELEVATION DATA

Well I.D. No.	Date [a]	Time [a]	Top of Stainless Steel or PVC Case Elevation (ft,MSL)[b]	Top of Concrete Apron Elevation (ft,MSL) [c]	Ground Surface Elevation (ft,MSL) [c]	Depth to Oil (ft)	Depth to Water (ft)	Oil Thickness (ft)	Corrected Depth to Water (ft)[d]	Correcte Water Tal Elevatio (ft,MSL)
MW-3	6/21/95	11:35am	12.81	11.76	11.11	12.11	12.30	0.19	12.13	0.68
MW-4	6/21/95	10:25am	13.29	12.15	11.75	12.68	12.86	0.18	12.70	0.59
MW-5	6/21/95	9:25am	13.58	11.85	11.05	13.05	13.20	0.15	13.07	0.51
MW-6	6/21/95	7:55am	13.12	11.58	11.28	12.74	12.86	0.12	12.75	0.37
CW1A	6/20/95	7:54am	13.34	N/A	11.34	N/A	12.84	0.0	12.84	0.50
CW1B	6/20/95	9:05am	13.55	N/A	11.19	N/A	12.60	0.0	12.60	0.95
CW1C	6/20/95	10:50am	13.66	N/A	11.21	N/A	12.87	0.0	12.87	0.79
CW6A	6/19/95	8:50am	15.80	N/A	13.60	N/A	14.60	0.0	14.60	1.20
CW6B	6/19/95	10:38am	15.74	N/A	13.50	N/A	14.46	0.0	14.46	1.28
CW7A	6/19/95	8:52am	14.03	N/A	11.90	N/A	13.82	0.0	12.82	1.21
CW7B	6/19/95	10:40am	14.41	N/A	11.90	N/A	13.11	0.0	13.11	1.30
CW2A	6/20/95	9:45am	13.74	N/A	11.46	N/A	12.58	0.0	12.58	1.16
CW2B	6/20/95	8:50am	13.62	N/A	11.37	N/A	12.53	0.0	12.53	1.09
CW2C	6/20/95	7:20am	13.66	N/A	11.17	N/A	12.94	0.0	12.94	0.72

CW8A	6/19/95	13:20pm	11.48	N/A	12.00	N/A	9.92	0.0	9.92	1.56
CW8B	6/19/95	14:10pm	11.52	N/A	11.90	N/A	10.01	0.0	10.01	1.51
CW9A	6/19/95	13:02pm	12.41	N/A	10.00	N/A	11.07	0.0	11.07	1.34
CW9B	6/19/95	13:59pm	12.40	N/A	10.10	N/A	11.21	0.0	11.21	1.19
CW3A	6/20/95	13:30pm	13.65	N/A	11.16	N/A	12.02	0.0	12.02	1.63
CW3B	6/20/95	12:40pm	13.82	N/A	11.22	N/A	12.29	0.0	12.29	1.53
CW3C	6/20/95	14:35pm	13.85	N/A	11.27	N/A	12.25	0.0	12.25	1.60
CW5A	6/19/95	15:30pm	15.71	N/A	13.20	N/A	14.39	0.0	14.39	1.32
CW5B	6/19/95	15:44pm	15.51	N/A	13.10	N/A	14.22	0.0	14.22	1.29
CW4A	6/20/95	12:46pm	12.24	N/A	10.07	N/A	11.29	0.0	11.29	0.95
CW4B	6/20/95	14:04pm	12.01	N/A	9.68	N/A	10.74	0.0	10.74	1.27
CW4C	6/20/95	15:45pm	12.13	N/A	9.74	N/A	11.02	0.0	11.02	1.11

(a) Date and time of water level measurements
(b) Survey conducted in 8/87 for MW-3, MW-4, MW-5, MW-6; in 6/92 for CW1-4ABC; and in 11/94 for CW5-9AB
(c) Survey conducted 9/17/91
(d) Corrected depth to water = depth to water-(oil thickness x specific gravity)
Note: Specific gravities of oils were measured by the laboratory to be 0.88 for MW-3, MW-4, and MW-5; and 0.87 for MW-6 in August 1994.
(e) Corrected water table elevation = top of casing elevation - corrected depth to water

RECORDS SEPARATOR PAGE

RECORDS SEPARATOR PAGE

RECORDS SEPARATOR PAGE

RECORDS SEPARATOR PAGE

RECORDS SEPARATOR PAGE

RECORDS SEPARATOR PAGE

RECORDS SEPARATOR PAGE

RECORDS SEPARATOR PAGE

BHP

CERTIFIED MAIL NO. P-101-726-996
RETURN RECEIPT REQUESTED

BHP Hawaii

May 10, 1995

Mr. Mitch Kaplan
Hazardous Waste Division (H-3-1)
U.S. Environmental Protection Agency, Region IX
75 Hawthorne Street
San Francisco, California 94105

Dear Mr. Kaplan:

Groundwater Analytical Results
HID 056786395

BHP Petroleum Americas Refining Inc., submits, for your review, the enclosed second quarterly groundwater analytical results for groundwater samples collected at the Refinery in March 1994 under the current Groundwater Monitoring Program (GMP).

A tabled form of the analytical results was also enclosed. The analytical results indicate that groundwater quality around the ponds area is continuously improving, and benzene was found only at 3 of the 26 monitoring wells with a maximum concentration of 4 ug/L (CW-1A).

Please contact Tony Shan at (808) 547-3804 should you have any questions.

Sincerely,

Frank D. Clouse

Frank D. Clouse
Refinery Manager

cc: Ms. Paula Bisson, EPA (w/o Enclosure)
Mr. Steven Y. K. Chang, HDOH (w/ Enclosure)

BHP Hawaii Inc
733 Bishop Street Honolulu Hawaii 96813 USA
PO Box 3379 Honolulu Hawaii 96842 USA
Telephone 808 547 3111 Facsimile 808 547 3145

BHP

PO Box 3379 Honolulu Hawaii 96842-0001

GROUNDWATER ANALYTICAL RESULTS

FOR THE QUARTER OF MARCH1995

GROUNDWATER ANALYTICAL RESULTS

FOR THE QUARTER OF MARCH 1995

BHP HAWAII REFINERY
91-325 KOMOHANA STREET, KAPOLEI, HAWAII 96707

May 10, 1995

CONTENTS

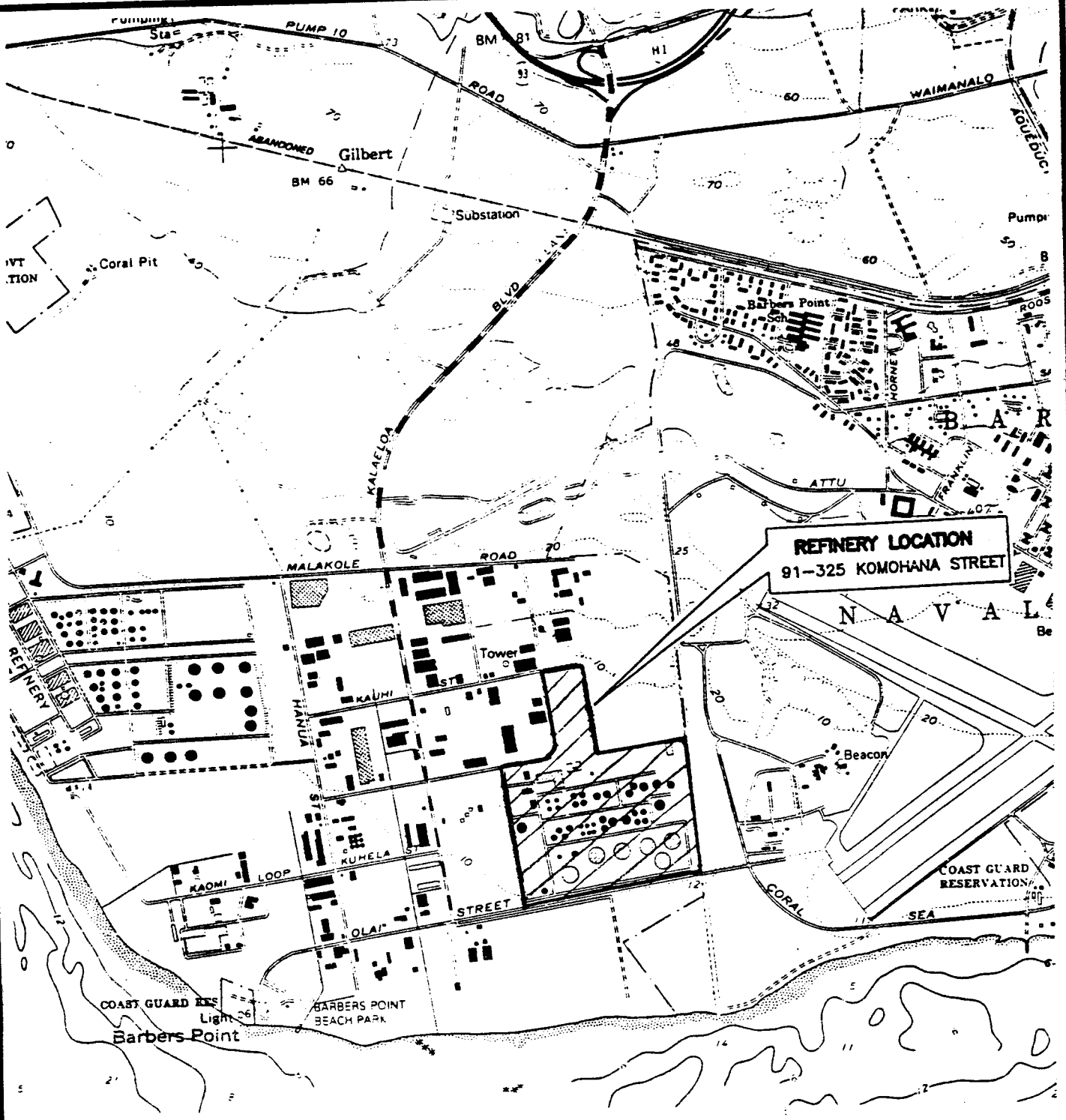
1. Groundwater monitoring well locations.

2. Analytical results of groundwater.

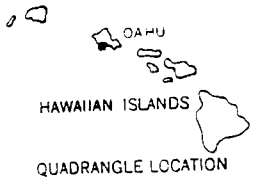
3. Analytical results of duplicate groundwater samples.

4. Groundwater elevation data.

1. GROUNDWATER MONITORING WELL LOCATIONS



GENERAL NOTES:
BASE MAP FROM U.S.G.S.
EWA, HAWAII QUADRANGLE
7.5 MINUTE TOPOGRAPHIC MAP
PHOTOREVISED 1983



N

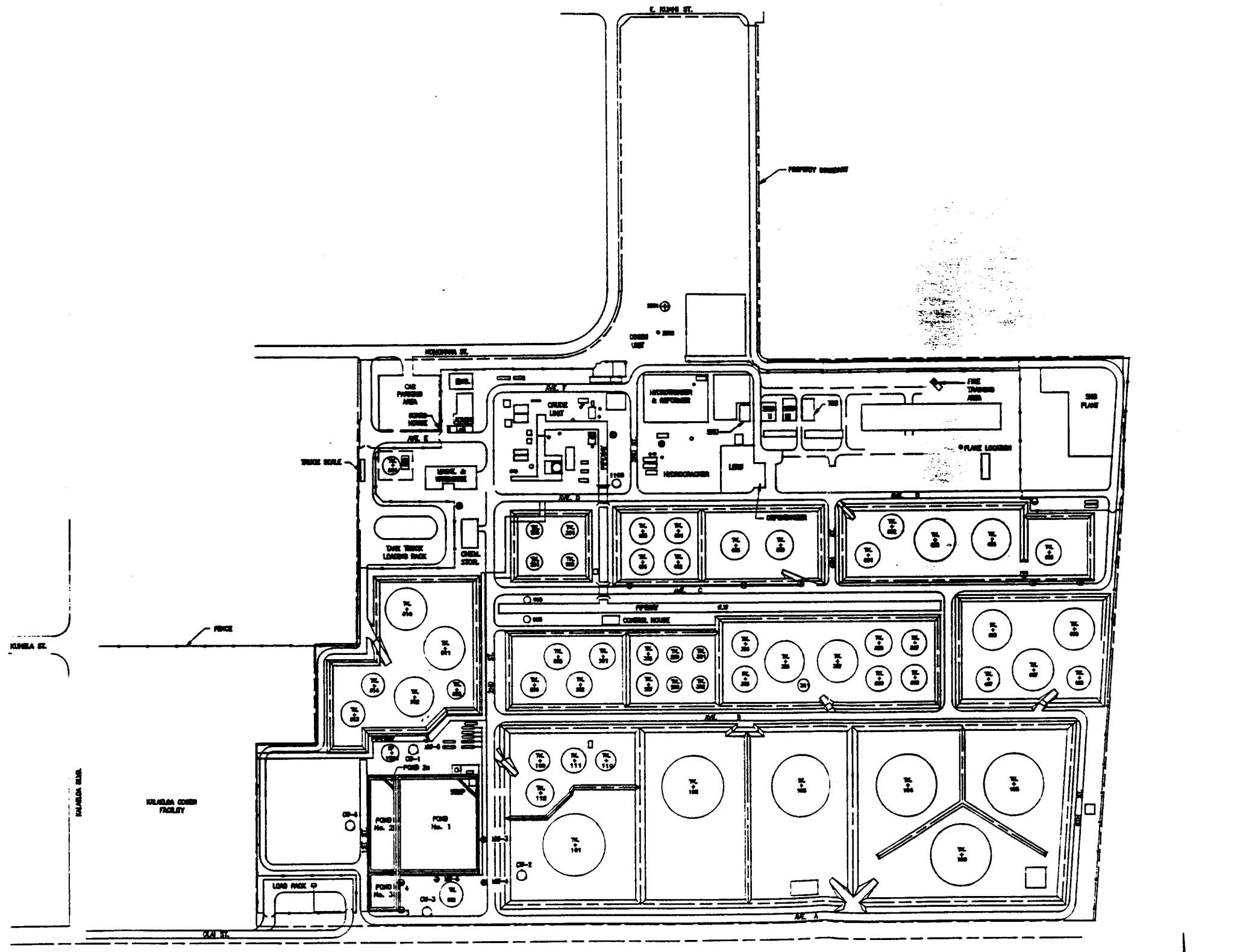
0 2000 FT

SCALE: 1 : 24,000

FIGURE 1

SITE LOCATION MAP
BHP PETROLEUM AMERICAS REFINING INC.
91-325 KOMOHANA STREET
KAPOLEI, HAWAII

PROJECT NO. 45-93-033	DRAWN BY G. ROSAS	Delta Environmental Consultants, Inc.
FILE NO. 3-033-02	PREPARED BY J. AMATO	
DATE 15 JUL 93 / REV. 0	REVIEWED BY	

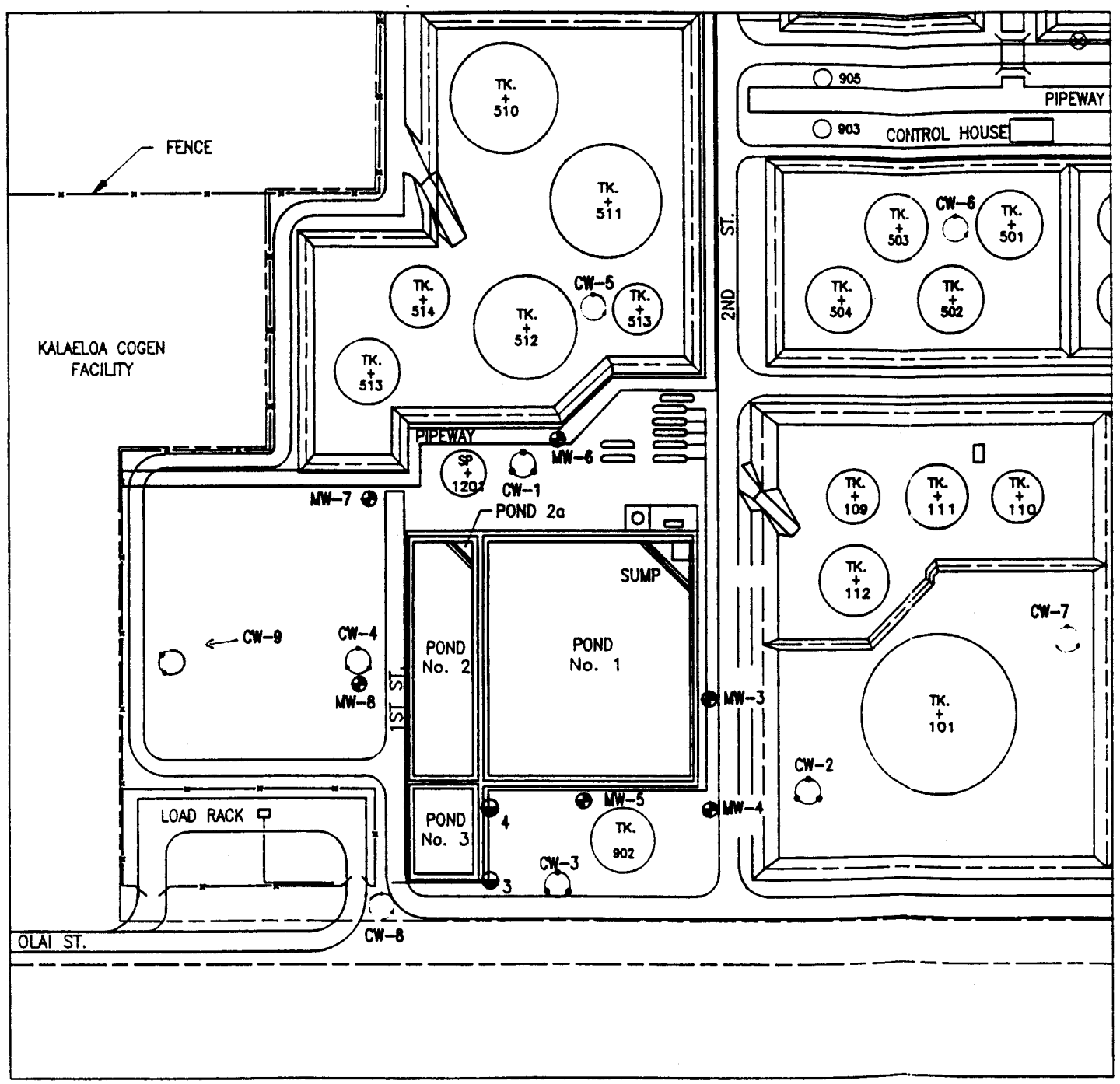


LEGEND

- MW-3 EXISTING GROUNDWATER MONITORING WELL LOCATION
- CW-4 EXISTING WELL CLUSTER LOCATION (SEE FIGURE 4 FOR DETAIL)
- 3 INJECTION WELL LOCATION

FIGURE 2
REFINERY SITE PLAN WITH EXISTING GROUNDWATER MONITORING WELL LOCATIONS
BHP PETROLEUM AMERICAS REFINING INC.
91-325 KOMOHANA STREET
KAPOLEI, HAWAII

PROJECT NO. 45-93-033	DRAWN BY GREG ROSAS	Delta Environmental Consultants, Inc.
FILE NO. 3-033-06	PREPARED BY JOHN AMATO	
DATE 3 AUG 93 / REV.	REVIEWED BY	



LEGEND

MW-5 EXISTING GROUNDWATER MONITORING WELL LOCATION

CW-4 EXISTING CLUSTER WELL LOCATION (SEE FIGURE 4 FOR DETAIL)

4 INJECTION WELL LOCATION

CW-9 PROPOSED CLUSTER WELL LOCATION

N

0 100 200

SCALE FEET

FIGURE 3

GROUNDWATER MONITORING WELL NETWORK WITH PROPOSED CLUSTER WELL LOCATIONS
BHP PETROLEUM AMERICAS REFINING INC.
91-325 KOMOHANA STREET
KAPOLEI, HAWAII

PROJECT NO. 45-93-033	DRAWN BY M. ENTERLINE	Delta Environmental Consultants, Inc.
FILE NO. 3-033-08	PREPARED BY J. AMATO	
DATE 18 OCT 93 / REV.	REVIEWED BY	

2. ANALYTICAL RESULTS OF GROUNDWATER

ANALYTICAL REPORT

B C Analytical

801 Western Avenue
Glendale, CA 91201
818/247-5737
Fax: 818/247-9797

LOG NO: G95-03-368

Received: 21 MAR 95

Mailed: APR - 6 1995

Dr. Tony Shan
BHP, Hawaii Refinery
91-325 Komohana St.
Kapolei, HI 96707

Project: GMP.2ND.QTR

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
03-368-1	MW-4	20 MAR 95
03-368-2	CW-1A	20 MAR 95

PARAMETER	03-368-1	03-368-2
Digestion (3010), Date	03/30/95	03/30/95
Furnace Digestion (3020), Date	03/29/95	03/29/95
Ammonia (350.1), mg/L	25	66
COD (410.4), mg/L	110	530
Nitrate+Nitrite		
Nitrate+Nitrite (as NO3), mg/L	<0.2	<0.2
Nitrate+Nitrite (as N), mg/L	<0.05	<0.05
Ortho Phosphate (365.3)		
Orthophosphorous (as P), mg/L	0.13	0.27
Ortho Phosphate (as PO4), mg/L	0.39	0.84
BOD5 (405.1), mg/L	30	220
Quad. Conductivity (9050)		
Sp. Cond., Average, umhos/cm	7100	8500
Sp. Cond., Std. Deviation, umhos/cm	0	0
Sp. Cond., 1st Replicate, umhos/cm	7100	8500
Sp. Cond., 2nd Replicate, umhos/cm	7100	8500
Sp. Cond., 3rd Replicate, umhos/cm	7100	8500
Sp. Cond., 4th Replicate, umhos/cm	7100	8500

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
03-368-1	MW-4	20 MAR 95
03-368-2	CW-1A	20 MAR 95

PARAMETER	03-368-1	03-368-2
Quad. pH (9040)		
pH, Average, Units	7.8	7.5
pH, Standard Deviation, Units	0.05	0
pH, 1st Replicate, Units	7.8	7.5
pH, 2nd Replicate, Units	7.7	7.5
pH, 3rd Replicate, Units	7.8	7.5
pH, 4th Replicate, Units	7.8	7.5
Sulfate, mg/L	1700	600
Dissolved Solids (160.1), mg/L	4300	4600
Alkalinity (310.1)		
Carbonate Alk (as CaCO3), mg/L	<1	<5
Bicarbonate Alk (as CaCO3), mg/L	380	1300
Hydroxide Alk (as CaCO3), mg/L	<1	<5
Total Alkalinity (as CaCO3), mg/L	380	1300
Chloride, mg/L	900	1700
TOC (9060/415.1), mg/L	18	68
Antimony (6010/200.7), mg/L	<0.1	<0.1
Arsenic (7060/206.2), mg/L	<0.004	<0.004
Barium (6010/200.7), mg/L	0.0077	0.0061
Beryllium (6010/200.7), mg/L	<0.001	<0.001
Cadmium (7131/213.2), mg/L	<0.001	<0.001
Chromium (6010/200.7), mg/L	<0.01	<0.01
Cobalt (6010/200.7), mg/L	<0.04	<0.04
Iron (6010/200.7), mg/L	<0.04	<0.04
Lead (7421/239.2), mg/L	<0.002	<0.002
Manganese (6010/200.7), mg/L	0.020	0.061

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03-368-1	MW-4	20 MAR 95
03-368-2	CW-1A	20 MAR 95

PARAMETER	03-368-1	03-368-2
Mercury (7470/245.1), mg/L	0.0004	<0.0002
Nickel (6010/200.7), mg/L	<0.04	<0.04
Selenium (7740/270.2), mg/L	<0.008	<0.008
Sodium (6010/200.7), mg/L	1600	1900
Vanadium (6010/200.7), mg/L	<0.04	<0.04

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03-368-1	MW-4	20 MAR 95
03-368-2	CW-1A	20 MAR 95

PARAMETER	03-368-1	03-368-2
B/N,A Ext.Pri.Poll. (EPA 8270)		
Date Analyzed	03/27/95	03/28/95
Date Extracted	03/23/95	03/23/95
Dilution Factor, Times	1	5
1,2,4-Trichlorobenzene, ug/L	<5	<30
1,2-Dichlorobenzene, ug/L	<6	<30
1,2-Diphenylhydrazine, ug/L	<5	<30
1,3-Dichlorobenzene, ug/L	<5	<30
1,4-Dichlorobenzene, ug/L	<5	<30
1-Methylnaphthalene, ug/L	39	230
2,4,5-Trichlorophenol, ug/L	<6	<30
2,4,6-Trichlorophenol, ug/L	<5	<30
2,4-Dichlorophenol, ug/L	<5	<30
2,4-Dimethylphenol, ug/L	<5	<30
2,4-Dinitrophenol, ug/L	<10	<50
2,4-Dinitrotoluene, ug/L	<5	<30
2,6-Dinitrotoluene, ug/L	<5	<30
2-Chloronaphthalene, ug/L	<6	<30
2-Chlorophenol, ug/L	<5	<30
2-Methyl-4,6-dinitrophenol, ug/L	<5	<30
2-Methylnaphthalene, ug/L	<5	<30
2-Methylphenol (o-Cresol), ug/L	<5	<30
2-Nitroaniline, ug/L	<5	<30
2-Nitrophenol, ug/L	<5	<30
3,3'-Dichlorobenzidine, ug/L	<20	<100
3-Methylphenol (m-Cresol), ug/L	<10	<50

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03-368-1	MW-4	20 MAR 95
03-368-2	CW-1A	20 MAR 95

PARAMETER	03-368-1	03-368-2
3-Nitroaniline, ug/L	<5	<30
4-Bromophenylphenylether, ug/L	<5	<30
4-Chloro-3-methylphenol, ug/L	<5	<30
4-Chloroaniline, ug/L	<5	<30
4-Chlorophenylphenylether, ug/L	<5	<30
4-Methylphenol (p-Cresol), ug/L	<8	<40
4-Nitroaniline, ug/L	<6	<30
4-Nitrophenol, ug/L	<5	<30
6-Methylchrysene, ug/L	<10	<50
7,12-Dimethylbenz(a)anthracene, ug/L	<5	<30
Acenaphthene, ug/L	<5	<30
Acenaphthylene, ug/L	<5	<30
Aniline, ug/L	<5	<30
Anthracene, ug/L	<5	<30
Benzidine, ug/L	<100	<500
Benzo(a)anthracene, ug/L	<5	<30
Benzo(a)pyrene, ug/L	<5	<30
Benzo(b)fluoranthene, ug/L	<5	<30
Benzo(g,h,i)perylene, ug/L	<5	<30
Benzo(k)fluoranthene, ug/L	<5	<30
Benzenethiol, ug/L	<20	<100
Benzyl Alcohol, ug/L	<5	<30
Benzoic acid, ug/L	<50	<300
Butylbenzylphthalate, ug/L	<5	<30
Chrysene, ug/L	<5	<30
Di-n-octylphthalate, ug/L	<5	<30

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03-368-2	CW-1A	20 MAR 95

PARAMETER	03-368-1	03-368-2
Dibenzo(a,h)anthracene, ug/L	<5	<30
Dibenz(a,h)acridine, ug/L	<20	<100
Dibenzofuran, ug/L	<5	<30
Dibutylphthalate, ug/L	<5	<30
Diethylphthalate, ug/L	<5	<30
Dimethylphthalate, ug/L	<5	<30
Fluoranthene, ug/L	<5	<30
Fluorene, ug/L	<5	<30
Hexachlorobenzene, ug/L	<5	<30
Hexachlorobutadiene, ug/L	<5	<30
Hexachlorocyclopentadiene, ug/L	<5	<30
Hexachloroethane, ug/L	<5	<30
Indeno(1,2,3-c,d)pyrene, ug/L	<7	<40
Indene, ug/L	<10	<50
Isophorone, ug/L	<5	<30
N-Nitrosodimethylamine, ug/L	<6	<30
N-Nitrosodiphenylamine, ug/L	<5	<30
N-Nitrosodi-n-propylamine, ug/L	<6	<30
Nitrobenzene, ug/L	<5	<30
Naphthalene, ug/L	<5	<30
Phenanthrene, ug/L	<5	<30
Phenol, ug/L	<5	<30
Pentachlorophenol, ug/L	<5	<30
Pyrene, ug/L	<5	<30
Pyridine, ug/L	<10	<50
Quinoline, ug/L	<10	<50

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03-368-1	MW-4	20 MAR 95
03-368-2	CW-1A	20 MAR 95

PARAMETER	03-368-1	03-368-2
Bis(2-chloroethoxy)methane, ug/L	<5	<30
Bis(2-chloroethyl)ether, ug/L	<5	<30
Bis(2-chloroisopropyl)ether, ug/L	<6	<30
Bis(2-ethylhexyl)phthalate, ug/L	<7	<40

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03-368-1	MW-4	20 MAR 95
03-368-2	CW-1A	20 MAR 95

PARAMETER	03-368-1	03-368-2
Vol.Pri.Poll. (EPA-8240)		
Date Analyzed	03/29/95	03/29/95
Dilution Factor, Times	1	1
1,1,1-Trichloroethane, ug/L	<1	<1
1,1,2,2-Tetrachloroethane, ug/L	<1	<1
1,1,2-Trichloroethane, ug/L	<1	<1
1,1-Dichloroethane, ug/L	<1	<1
1,1-Dichloroethene, ug/L	<1	<1
1,2-Dichloroethane, ug/L	<1	<1
1,2-Dichlorobenzene, ug/L	<1	<1
1,2-Dichloropropane, ug/L	<1	<1
1,3-Dichlorobenzene, ug/L	<1	<1
1,4-Dichlorobenzene, ug/L	<1	<1
1,4-Dioxane, ug/L	<500	<500
2-Chloroethylvinylether, ug/L	<1	<1
2-Hexanone, ug/L	<5	<5
Acetone, ug/L	<20	<20
Bromodichloromethane, ug/L	<1	<1
Bromomethane, ug/L	<1	<1
Benzene, ug/L	<1	4.0
Bromoform, ug/L	<1	<1
Chlorobenzene, ug/L	<1	<1
Carbon Tetrachloride, ug/L	<1	<1
Chloroethane, ug/L	<1	<1
Chloroform, ug/L	<1	<1
Chloromethane, ug/L	<1	<1

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03-368-1	MW-4	20 MAR 95
03-368-2	CW-1A	20 MAR 95

PARAMETER	03-368-1	03-368-2
Carbon Disulfide, ug/L	<2	<2
Cyclohexane, ug/L	<5	<5
Dibromochloromethane, ug/L	<1	<1
Ethylene Dibromide, ug/L	<5	<5
Ethylbenzene, ug/L	1.0	2.5
Freon 113, ug/L	<2	<2
Methyl ethyl ketone, ug/L	<5	<5
Methyl isobutyl ketone, ug/L	<5	<5
Methylene chloride, ug/L	<1	<1
Styrene, ug/L	<1	<1
Trichloroethene, ug/L	<1	<1
Trichlorofluoromethane, ug/L	<1	<1
Toluene, ug/L	<1	<1
Tetrachloroethene, ug/L	<1	<1
Vinyl acetate, ug/L	<10	<10
Vinyl chloride, ug/L	<1	<1
Total Xylene Isomers, ug/L	<3	<3
cis-1,2-Dichloroethene, ug/L	<1	<1
cis-1,3-Dichloropropene, ug/L	<1	<1
trans-1,2-Dichloroethene, ug/L	<1	<1
trans-1,3-Dichloropropene, ug/L	<1	<1

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LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
03-368-3	MW-6	20 MAR 95
03-368-4	MW-5	20 MAR 95
03-368-5	MW-3	20 MAR 95
03-368-6	CW-1B	20 MAR 95
03-368-7	CW-1C	20 MAR 95

PARAMETER	03-368-3	03-368-4	03-368-5	03-368-6	03-368-7
Digestion (3010), Date	03/30/95	03/30/95	03/30/95	03/30/95	03/30/95
Furnace Digestion (3020), Date	03/29/95	03/29/95	03/29/95	03/29/95	03/29/95
Quad. Conductivity (9050)					
Sp. Cond., Average, umhos/cm	7900	6600	7100	36000	37000
Sp. Cond., Std. Deviation, umhos/cm	0	50	0	580	0
Sp. Cond., 1st Replicate, umhos/cm	7900	6600	7100	36000	37000
Sp. Cond., 2nd Replicate, umhos/cm	7900	6500	7100	37000	37000
Sp. Cond., 3rd Replicate, umhos/cm	7900	6600	7100	37000	37000
Sp. Cond., 4th Replicate, umhos/cm	7900	6600	7100	36000	37000
Quad. pH (9040)					
pH, Average, Units	7.3	7.8	7.8	7.4	7.5
pH, Standard Deviation, Units	0.05	0	0	0	0.05
pH, 1st Replicate, Units	7.2	7.8	7.8	7.4	7.4
pH, 2nd Replicate, Units	7.3	7.8	7.8	7.4	7.5
pH, 3rd Replicate, Units	7.3	7.8	7.8	7.4	7.5
pH, 4th Replicate, Units	7.3	7.8	7.8	7.4	7.5
Sulfate, mg/L	220	1800	1500	2200	2500
Dissolved Solids (160.1), mg/L	4100	4100	4100	23000	27000
Chloride, mg/L	1700	650	930	12000	14000
Antimony (6010/200.7), mg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (7060/206.2), mg/L	<0.004	<0.004	<0.004	<0.004	<0.004
Barium (6010/200.7), mg/L	0.010	0.0095	0.0078	0.030	0.030
Beryllium (6010/200.7), mg/L	<0.001	<0.001	<0.001	<0.001	<0.001

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REPORT OF ANALYTICAL RESULTS

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03-368-3	MW-6	20 MAR 95
03-368-4	MW-5	20 MAR 95
03-368-5	MW-3	20 MAR 95
03-368-6	CW-1B	20 MAR 95
03-368-7	CW-1C	20 MAR 95

PARAMETER	03-368-3	03-368-4	03-368-5	03-368-6	03-368-7
Cadmium (7131/213.2), mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium (6010/200.7), mg/L	0.052	<0.01	<0.01	<0.01	<0.01
Cobalt (6010/200.7), mg/L	<0.04	<0.04	<0.04	<0.04	<0.04
Iron (6010/200.7), mg/L	0.44	<0.04	<0.04	0.046	0.32
Lead (7421/239.2), mg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Manganese (6010/200.7), mg/L	0.11	0.019	0.031	0.13	0.23
Mercury (7470/245.1), mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Nickel (6010/200.7), mg/L	0.064	<0.04	<0.04	0.060	0.064
Selenium (7740/270.2), mg/L	<0.008	<0.008	<0.008	<0.008	<0.008
Sodium (6010/200.7), mg/L	1700	1500	1600	7800	8800
Vanadium (6010/200.7), mg/L	<0.04	<0.04	<0.04	<0.04	<0.04

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03-368-5	MW-3	20 MAR 95
03-368-6	CW-1B	20 MAR 95
03-368-7	CW-1C	20 MAR 95

PARAMETER	03-368-3	03-368-4	03-368-5	03-368-6	03-368-7
B/N,A Ext.Pri.Poll. (EPA 8270)					
Date Analyzed	03/27/95	03/27/95	03/27/95	03/27/95	03/27/95
Date Extracted	03/23/95	03/23/95	03/23/95	03/23/95	03/23/95
Dilution Factor, Times	1	1	1	1	1
1,2,4-Trichlorobenzene, ug/L	<5	<5	<5	<5	<5
1,2-Dichlorobenzene, ug/L	<6	<6	<6	<6	<6
1,2-Diphenylhydrazine, ug/L	<5	<5	<5	<5	<5
1,3-Dichlorobenzene, ug/L	<5	<5	<5	<5	<5
1,4-Dichlorobenzene, ug/L	<5	<5	<5	<5	<5
1-Methylnaphthalene, ug/L	90	41	60	<10	<10
2,4,5-Trichlorophenol, ug/L	<6	<6	<6	<6	<6
2,4,6-Trichlorophenol, ug/L	<5	<5	<5	<5	<5
2,4-Dichlorophenol, ug/L	<5	<5	<5	<5	<5
2,4-Dimethylphenol, ug/L	<5	<5	<5	<5	<5
2,4-Dinitrophenol, ug/L	<10	<10	<10	<10	<10
2,4-Dinitrotoluene, ug/L	<5	<5	<5	<5	<5
2,6-Dinitrotoluene, ug/L	<5	<5	<5	<5	<5
2-Chloronaphthalene, ug/L	<6	<6	<6	<6	<6
2-Chlorophenol, ug/L	<5	<5	<5	<5	<5
2-Methyl-4,6-dinitrophenol, ug/L	<5	<5	<5	<5	<5
2-Methylnaphthalene, ug/L	<5	<5	<5	<5	<5
2-Methylphenol (o-Cresol), ug/L	<5	<5	<5	<5	<5
2-Nitroaniline, ug/L	<5	<5	<5	<5	<5

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LOG NO: G95-03-368

Received: 21 MAR 95

Dr. Tony Shan
BHP, Hawaii Refinery
91-325 Komohana St.
Kapolei, HI 96707

Project: GMP.2ND.QTR

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
03-368-3	MW-6	20 MAR 95
03-368-4	MW-5	20 MAR 95
03-368-5	MW-3	20 MAR 95
03-368-6	CW-1B	20 MAR 95
03-368-7	CW-1C	20 MAR 95

PARAMETER	03-368-3	03-368-4	03-368-5	03-368-6	03-368-7
2-Nitrophenol, ug/L	<5	<5	<5	<5	<5
3,3'-Dichlorobenzidine, ug/L	<20	<20	<20	<20	<20
3-Methylphenol (m-Cresol), ug/L	<10	<10	<10	<10	<10
3-Nitroaniline, ug/L	<5	<5	<5	<5	<5
4-Bromophenylphenylether, ug/L	<5	<5	<5	<5	<5
4-Chloro-3-methylphenol, ug/L	<5	<5	<5	<5	<5
4-Chloroaniline, ug/L	<5	<5	<5	<5	<5
4-Chlorophenylphenylether, ug/L	<5	<5	<5	<5	<5
4-Methylphenol (p-Cresol), ug/L	<8	<8	<8	<8	<8
4-Nitroaniline, ug/L	<6	<6	<6	<6	<6
4-Nitrophenol, ug/L	<5	<5	<5	<5	<5
6-Methylchrysene, ug/L	<10	<10	<10	<10	<10
7,12-Dimethylbenz(a)anthracene, ug/L	<5	<5	<5	<5	<5
Acenaphthene, ug/L	<5	<5	<5	<5	<5
Acenaphthylene, ug/L	<5	<5	<5	<5	<5
Aniline, ug/L	<5	<5	<5	<5	<5
Anthracene, ug/L	<5	<5	<5	<5	<5
Benzidine, ug/L	<100	<100	<100	<100	<100
Benzo(a)anthracene, ug/L	<5	<5	<5	<5	<5
Benzo(a)pyrene, ug/L	<5	<5	<5	<5	<5
Benzo(b)fluoranthene, ug/L	<5	<5	<5	<5	<5
Benzo(g,h,i)perylene, ug/L	<5	<5	<5	<5	<5
Benzo(k)fluoranthene, ug/L	<5	<5	<5	<5	<5

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
03-368-3	MW-6	20 MAR 95
03-368-4	MW-5	20 MAR 95
03-368-5	MW-3	20 MAR 95
03-368-6	CW-1B	20 MAR 95
03-368-7	CW-1C	20 MAR 95

PARAMETER	03-368-3	03-368-4	03-368-5	03-368-6	03-368-7
Benzenethiol, ug/L	<20	<20	<20	<20	<20
Benzyl Alcohol, ug/L	<5	<5	<5	<5	<5
Benzoic acid, ug/L	<50	<50	<50	<50	<50
Butylbenzylphthalate, ug/L	<5	<5	<5	<5	<5
Chrysene, ug/L	<5	<5	<5	<5	<5
Di-n-octylphthalate, ug/L	<5	<5	<5	<5	<5
Dibenzo(a,h)anthracene, ug/L	<5	<5	<5	<5	<5
Dibenz(a,h)acridine, ug/L	<20	<20	<20	<20	<20
Dibenzofuran, ug/L	<5	<5	<5	<5	<5
Dibutylphthalate, ug/L	<5	<5	<5	<5	<5
Diethylphthalate, ug/L	<5	<5	<5	<5	<5
Dimethylphthalate, ug/L	<5	<5	<5	<5	<5
Fluoranthene, ug/L	<5	<5	<5	<5	<5
Fluorene, ug/L	<5	<5	<5	<5	<5
Hexachlorobenzene, ug/L	<5	<5	<5	<5	<5
Hexachlorobutadiene, ug/L	<5	<5	<5	<5	<5
Hexachlorocyclopentadiene, ug/L	<5	<5	<5	<5	<5
Hexachloroethane, ug/L	<5	<5	<5	<5	<5
Indeno(1,2,3-c,d)pyrene, ug/L	<7	<7	<7	<7	<7
Indene, ug/L	<10	<10	<10	<10	<10
Isophorone, ug/L	<5	<5	<5	<5	<5
N-Nitrosodimethylamine, ug/L	<6	<6	<6	<6	<6
N-Nitrosodiphenylamine, ug/L	<5	<5	<5	<5	<5

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
03-368-3	MW-6	20 MAR 95
03-368-4	MW-5	20 MAR 95
03-368-5	MW-3	20 MAR 95
03-368-6	CW-1B	20 MAR 95
03-368-7	CW-1C	20 MAR 95

PARAMETER	03-368-3	03-368-4	03-368-5	03-368-6	03-368-7
N-Nitrosodi-n-propylamine, ug/L	<6	<6	<6	<6	<6
Nitrobenzene, ug/L	<5	<5	<5	<5	<5
Naphthalene, ug/L	9.3	<5	30	<5	<5
Phenanthrene, ug/L	<5	<5	<5	<5	<5
Phenol, ug/L	<5	<5	<5	<5	<5
Pentachlorophenol, ug/L	<5	<5	<5	<5	<5
Pyrene, ug/L	<5	<5	<5	<5	<5
Pyridine, ug/L	<10	<10	<10	<10	<10
Quinoline, ug/L	<10	<10	<10	<10	<10
Bis(2-chloroethoxy)methane, ug/L	<5	<5	<5	<5	<5
Bis(2-chloroethyl)ether, ug/L	<5	<5	<5	<5	<5
Bis(2-chloroisopropyl)ether, ug/L	<6	<6	<6	<6	<6
Bis(2-ethylhexyl)phthalate, ug/L	<7	<7	<7	15	<7

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REPORT OF ANALYTICAL RESULTS

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03-368-3	MW-6	20 MAR 95
03-368-4	MW-5	20 MAR 95
03-368-5	MW-3	20 MAR 95
03-368-6	CW-1B	20 MAR 95
03-368-7	CW-1C	20 MAR 95

PARAMETER	03-368-3	03-368-4	03-368-5	03-368-6	03-368-7
Vol.Pri.Poll. (EPA-8240)					
Date Analyzed	03/29/95	03/29/95	03/29/95	03/29/95	03/29/95
Dilution Factor, Times	1	1	1	1	1
1,1,1-Trichloroethane, ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane, ug/L	<1	<1	<1	<1	<1
1,1,2-Trichloroethane, ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane, ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene, ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane, ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene, ug/L	<1	<1	<1	<1	<1
1,2-Dichloropropane, ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene, ug/L	<1	<1	<1	<1	<1
1,4-Dichlorobenzene, ug/L	<1	<1	<1	<1	<1
1,4-Dioxane, ug/L	<500	<500	<500	<500	<500
2-Chloroethylvinylether, ug/L	<1	<1	<1	<1	<1
2-Hexanone, ug/L	<5	<5	<5	<5	<5
Acetone, ug/L	<20	<20	<20	<20	<20
Bromodichloromethane, ug/L	<1	<1	<1	<1	<1
Bromomethane, ug/L	<1	<1	<1	<1	<1
Benzene, ug/L	<1	<1	2.2	<1	<1
Bromoform, ug/L	<1	<1	<1	<1	<1
Chlorobenzene, ug/L	<1	<1	<1	<1	<1
Carbon Tetrachloride, ug/L	<1	<1	<1	<1	<1

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
03-368-3	MW-6	20 MAR 95
03-368-4	MW-5	20 MAR 95
03-368-5	MW-3	20 MAR 95
03-368-6	CW-1B	20 MAR 95
03-368-7	CW-1C	20 MAR 95

PARAMETER	03-368-3	03-368-4	03-368-5	03-368-6	03-368-7
Chloroethane, ug/L	<1	<1	<1	<1	<1
Chloroform, ug/L	<1	<1	<1	<1	<1
Chloromethane, ug/L	<1	<1	<1	<1	<1
Carbon Disulfide, ug/L	<2	2.3	<2	<2	<2
Cyclohexane, ug/L	<5	<5	<5	<5	<5
Dibromochloromethane, ug/L	<1	<1	<1	<1	<1
Ethylene Dibromide, ug/L	<5	<5	<5	<5	<5
Ethylbenzene, ug/L	<1	5.5	2.3	<1	<1
Freon 113, ug/L	<2	<2	<2	<2	<2
Methyl ethyl ketone, ug/L	<5	<5	<5	<5	<5
Methyl isobutyl ketone, ug/L	<5	<5	<5	<5	<5
Methylene chloride, ug/L	<1	<1	<1	<1	<1
Styrene, ug/L	<1	<1	<1	<1	<1
Trichloroethene, ug/L	<1	<1	<1	<1	<1
Trichlorofluoromethane, ug/L	<1	<1	<1	<1	<1
Toluene, ug/L	<1	<1	<1	<1	<1
Tetrachloroethene, ug/L	<1	<1	<1	<1	<1
Vinyl acetate, ug/L	<10	<10	<10	<10	<10
Vinyl chloride, ug/L	<1	<1	<1	<1	<1
Total Xylene Isomers, ug/L	<3	3.1	<3	<3	<3
cis-1,2-Dichloroethene, ug/L	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene, ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene, ug/L	<1	<1	<1	<1	<1

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
03-368-3	MW-6	20 MAR 95
03-368-4	MW-5	20 MAR 95
03-368-5	MW-3	20 MAR 95
03-368-6	CW-1B	20 MAR 95
03-368-7	CW-1C	20 MAR 95

PARAMETER	03-368-3	03-368-4	03-368-5	03-368-6	03-368-7
trans-1,3-Dichloropropene, ug/L	<1	<1	<1	<1	<1

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
03-368-8	CW-5A	20 MAR 95
03-368-9	CW-5B	20 MAR 95

PARAMETER	03-368-8	03-368-9
Digestion (3010), Date	03/30/95	03/30/95
Furnace Digestion (3020), Date	03/29/95	03/29/95
Quad. Conductivity (9050)		
Sp. Cond., Average, umhos/cm	5200	33000
Sp. Cond., Std. Deviation, umhos/cm	50	0
Sp. Cond., 1st Replicate, umhos/cm	5300	33000
Sp. Cond., 2nd Replicate, umhos/cm	5200	33000
Sp. Cond., 3rd Replicate, umhos/cm	5200	33000
Sp. Cond., 4th Replicate, umhos/cm	5200	33000
Quad. pH (9040)		
pH, Average, Units	7.1	7.2
pH, Standard Deviation, Units	0	0
pH, 1st Replicate, Units	7.1	7.2
pH, 2nd Replicate, Units	7.1	7.2
pH, 3rd Replicate, Units	7.1	7.2
pH, 4th Replicate, Units	7.1	7.2
Sulfate, mg/L	110	1800
Dissolved Solids (160.1), mg/L	2400	20000
Chloride, mg/L	1200	10000
Antimony (6010/200.7), mg/L	<0.1	<0.1
Arsenic (7060/206.2), mg/L	<0.004	<0.004
Barium (6010/200.7), mg/L	0.045	0.033
Beryllium (6010/200.7), mg/L	<0.001	<0.001
Cadmium (7131/213.2), mg/L	<0.001	<0.001
Chromium (6010/200.7), mg/L	<0.01	<0.01
Cobalt (6010/200.7), mg/L	<0.04	<0.04

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
03-368-8	CW-5A	20 MAR 95
03-368-9	CW-5B	20 MAR 95

PARAMETER	03-368-8	03-368-9
Iron (6010/200.7), mg/L	<0.04	0.15
Lead (7421/239.2), mg/L	<0.002	<0.002
Manganese (6010/200.7), mg/L	0.16	0.22
Mercury (7470/245.1), mg/L	<0.0002	<0.0002
Nickel (6010/200.7), mg/L	<0.04	0.11
Selenium (7740/270.2), mg/L	<0.008	<0.008
Sodium (6010/200.7), mg/L	880	6300
Vanadium (6010/200.7), mg/L	<0.04	<0.04

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
03-368-8	CW-5A	20 MAR 95
03-368-9	CW-5B	20 MAR 95

PARAMETER	03-368-8	03-368-9
B/N,A Ext.Pri.Poll. (EPA 8270)		
Date Analyzed	03/27/95	03/27/95
Date Extracted	03/23/95	03/23/95
Dilution Factor, Times	1	1
1,2,4-Trichlorobenzene, ug/L	<5	<5
1,2-Dichlorobenzene, ug/L	<6	<6
1,2-Diphenylhydrazine, ug/L	<5	<5
1,3-Dichlorobenzene, ug/L	<5	<5
1,4-Dichlorobenzene, ug/L	<5	<5
1-Methylnaphthalene, ug/L	<10	<10
2,4,5-Trichlorophenol, ug/L	<6	<6
2,4,6-Trichlorophenol, ug/L	<5	<5
2,4-Dichlorophenol, ug/L	<5	<5
2,4-Dimethylphenol, ug/L	<5	<5
2,4-Dinitrophenol, ug/L	<10	<10
2,4-Dinitrotoluene, ug/L	<5	<5
2,6-Dinitrotoluene, ug/L	<5	<5
2-Chloronaphthalene, ug/L	<6	<6
2-Chlorophenol, ug/L	<5	<5
2-Methyl-4,6-dinitrophenol, ug/L	<5	<5
2-Methylnaphthalene, ug/L	<5	<5
2-Methylphenol (o-Cresol), ug/L	<5	<5
2-Nitroaniline, ug/L	<5	<5
2-Nitrophenol, ug/L	<5	<5
3,3'-Dichlorobenzidine, ug/L	<20	<20
3-Methylphenol (m-Cresol), ug/L	<10	<10

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
03-368-8	CW-5A	20 MAR 95
03-368-9	CW-5B	20 MAR 95

PARAMETER	03-368-8	03-368-9
3-Nitroaniline, ug/L	<5	<5
4-Bromophenylphenylether, ug/L	<5	<5
4-Chloro-3-methylphenol, ug/L	<5	<5
4-Chloroaniline, ug/L	<5	<5
4-Chlorophenylphenylether, ug/L	<5	<5
4-Methylphenol (p-Cresol), ug/L	<8	<8
4-Nitroaniline, ug/L	<6	<6
4-Nitrophenol, ug/L	<5	<5
6-Methylchrysene, ug/L	<10	<10
7,12-Dimethylbenz(a)anthracene, ug/L	<5	<5
Acenaphthene, ug/L	<5	<5
Acenaphthylene, ug/L	<5	<5
Aniline, ug/L	<5	<5
Anthracene, ug/L	<5	<5
Benzidine, ug/L	<100	<100
Benzo(a)anthracene, ug/L	<5	<5
Benzo(a)pyrene, ug/L	<5	<5
Benzo(b)fluoranthene, ug/L	<5	<5
Benzo(g,h,i)perylene, ug/L	<5	<5
Benzo(k)fluoranthene, ug/L	<5	<5
Benzenethiol, ug/L	<20	<20
Benzyl Alcohol, ug/L	<5	<5
Benzoic acid, ug/L	<50	<50
Butylbenzylphthalate, ug/L	<5	<5
Chrysene, ug/L	<5	<5
Di-n-octylphthalate, ug/L	<5	<5

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
03-368-8	CW-5A	20 MAR 95
03-368-9	CW-5B	20 MAR 95

PARAMETER	03-368-8	03-368-9
Dibenzo(a,h)anthracene, ug/L	<5	<5
Dibenz(a,h)acridine, ug/L	<20	<20
Dibenzofuran, ug/L	<5	<5
Dibutylphthalate, ug/L	<5	<5
Diethylphthalate, ug/L	<5	<5
Dimethylphthalate, ug/L	<5	<5
Fluoranthene, ug/L	<5	<5
Fluorene, ug/L	<5	<5
Hexachlorobenzene, ug/L	<5	<5
Hexachlorobutadiene, ug/L	<5	<5
Hexachlorocyclopentadiene, ug/L	<5	<5
Hexachloroethane, ug/L	<5	<5
Indeno(1,2,3-c,d)pyrene, ug/L	<7	<7
Indene, ug/L	<10	<10
Isophorone, ug/L	<5	<5
N-Nitrosodimethylamine, ug/L	<6	<6
N-Nitrosodiphenylamine, ug/L	<5	<5
N-Nitrosodi-n-propylamine, ug/L	<6	<6
Nitrobenzene, ug/L	<5	<5
Naphthalene, ug/L	<5	<5
Phenanthrene, ug/L	<5	<5
Phenol, ug/L	<5	<5
Pentachlorophenol, ug/L	<5	<5
Pyrene, ug/L	<5	<5
Pyridine, ug/L	<10	<10
Quinoline, ug/L	<10	<10

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801 Western Avenue
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LOG NO: G95-03-368

Received: 21 MAR 95

Dr. Tony Shan
BHP, Hawaii Refinery
91-325 Komohana St.
Kapolei, HI 96707

Project: GMP.2ND.QTR

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
03-368-8	CW-5A	20 MAR 95
03-368-9	CW-5B	20 MAR 95

PARAMETER	03-368-8	03-368-9
Bis(2-chloroethoxy)methane, ug/L	<5	<5
Bis(2-chloroethyl)ether, ug/L	<5	<5
Bis(2-chloroisopropyl)ether, ug/L	<6	<6
Bis(2-ethylhexyl)phthalate, ug/L	<7	<7

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
03-368-8	CW-5A	20 MAR 95
03-368-9	CW-5B	20 MAR 95

PARAMETER	03-368-8	03-368-9
Vol.Pri.Poll. (EPA-8240)		
Date Analyzed	03/29/95	03/29/95
Dilution Factor, Times	1	1
1,1,1-Trichloroethane, ug/L	<1	<1
1,1,2,2-Tetrachloroethane, ug/L	<1	<1
1,1,2-Trichloroethane, ug/L	<1	<1
1,1-Dichloroethane, ug/L	<1	<1
1,1-Dichloroethene, ug/L	<1	<1
1,2-Dichloroethane, ug/L	<1	<1
1,2-Dichlorobenzene, ug/L	<1	<1
1,2-Dichloropropane, ug/L	<1	<1
1,3-Dichlorobenzene, ug/L	<1	<1
1,4-Dichlorobenzene, ug/L	<1	<1
1,4-Dioxane, ug/L	<500	<500
2-Chloroethylvinylether, ug/L	<1	<1
2-Hexanone, ug/L	<5	<5
Acetone, ug/L	<20	<20
Bromodichloromethane, ug/L	<1	<1
Bromomethane, ug/L	<1	<1
Benzene, ug/L	<1	<1
Bromoform, ug/L	<1	<1
Chlorobenzene, ug/L	<1	<1
Carbon Tetrachloride, ug/L	<1	<1
Chloroethane, ug/L	<1	<1
Chloroform, ug/L	<1	<1
Chloromethane, ug/L	<1	1.1

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
03-368-8	CW-5A	20 MAR 95
03-368-9	CW-5B	20 MAR 95

PARAMETER	03-368-8	03-368-9
Carbon Disulfide, ug/L	<2	<2
Cyclohexane, ug/L	<5	<5
Dibromochloromethane, ug/L	<1	<1
Ethylene Dibromide, ug/L	<5	<5
Ethylbenzene, ug/L	<1	<1
Freon 113, ug/L	<2	<2
Methyl ethyl ketone, ug/L	<5	<5
Methyl isobutyl ketone, ug/L	<5	<5
Methylene chloride, ug/L	<1	<1
Styrene, ug/L	<1	<1
Trichloroethene, ug/L	<1	<1
Trichlorofluoromethane, ug/L	<1	<1
Toluene, ug/L	<1	<1
Tetrachloroethene, ug/L	<1	<1
Vinyl acetate, ug/L	<10	<10
Vinyl chloride, ug/L	<1	<1
Total Xylene Isomers, ug/L	<3	<3
cis-1,2-Dichloroethene, ug/L	<1	<1
cis-1,3-Dichloropropene, ug/L	<1	<1
trans-1,2-Dichloroethene, ug/L	<1	<1
trans-1,3-Dichloropropene, ug/L	<1	<1

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, BLANK WATER SAMPLES	DATE SAMPLED
03-368-10	Field Blank #1	20 MAR 95

PARAMETER	03-368-10
Vol.Pri.Poll. (EPA-8240)	
Date Analyzed	03/29/95
Dilution Factor, Times	1
1,1,1-Trichloroethane, ug/L	<1
1,1,2,2-Tetrachloroethane, ug/L	<1
1,1,2-Trichloroethane, ug/L	<1
1,1-Dichloroethane, ug/L	<1
1,1-Dichloroethene, ug/L	<1
1,2-Dichloroethane, ug/L	<1
1,2-Dichlorobenzene, ug/L	<1
1,2-Dichloropropane, ug/L	<1
1,3-Dichlorobenzene, ug/L	<1
1,4-Dichlorobenzene, ug/L	<1
1,4-Dioxane, ug/L	<500
2-Chloroethylvinylether, ug/L	<1
2-Hexanone, ug/L	<5
Acetone, ug/L	<20
Bromodichloromethane, ug/L	<1
Bromomethane, ug/L	<1
Benzene, ug/L	<1
Bromoform, ug/L	<1
Chlorobenzene, ug/L	<1
Carbon Tetrachloride, ug/L	<1
Chloroethane, ug/L	<1
Chloroform, ug/L	<1
Chloromethane, ug/L	<1
Carbon Disulfide, ug/L	<2

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, BLANK WATER SAMPLES	DATE SAMPLED
03-368-10	Field Blank #1	20 MAR 95

PARAMETER	03-368-10
Cyclohexane, ug/L	<5
Dibromochloromethane, ug/L	<1
Ethylene Dibromide, ug/L	<5
Ethylbenzene, ug/L	<1
Freon 113, ug/L	<2
Methyl ethyl ketone, ug/L	<5
Methyl isobutyl ketone, ug/L	<5
Methylene chloride, ug/L	<1
Styrene, ug/L	<1
Trichloroethene, ug/L	<1
Trichlorofluoromethane, ug/L	<1
Toluene, ug/L	<1
Tetrachloroethene, ug/L	<1
Vinyl acetate, ug/L	<10
Vinyl chloride, ug/L	<1
Total Xylene Isomers, ug/L	<3
cis-1,2-Dichloroethene, ug/L	<1
cis-1,3-Dichloropropene, ug/L	<1
trans-1,2-Dichloroethene, ug/L	<1
trans-1,3-Dichloropropene, ug/L	<1

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, BLANK WATER SAMPLES	DATE SAMPLED
03-368-11	Trip Blank #1	20 MAR 95
03-368-12	Trip Blank #2	20 MAR 95

PARAMETER	03-368-11	03-368-12
Vol.Pri.Poll. (EPA-8240)		
Date Analyzed	03/30/95	03/30/95
Dilution Factor, Times	1	1
1,1,1-Trichloroethane, ug/L	<1	<1
1,1,2,2-Tetrachloroethane, ug/L	<1	<1
1,1,2-Trichloroethane, ug/L	<1	<1
1,1-Dichloroethane, ug/L	<1	<1
1,1-Dichloroethene, ug/L	<1	<1
1,2-Dichloroethane, ug/L	<1	<1
1,2-Dichlorobenzene, ug/L	<1	<1
1,2-Dichloropropane, ug/L	<1	<1
1,3-Dichlorobenzene, ug/L	<1	<1
1,4-Dichlorobenzene, ug/L	<1	<1
1,4-Dioxane, ug/L	<500	<500
2-Chloroethylvinylether, ug/L	<1	<1
2-Hexanone, ug/L	<5	<5
Acetone, ug/L	<20	<20
Bromodichloromethane, ug/L	<1	<1
Bromomethane, ug/L	<1	<1
Benzene, ug/L	<1	<1
Bromoform, ug/L	<1	<1
Chlorobenzene, ug/L	<1	<1
Carbon Tetrachloride, ug/L	<1	<1
Chloroethane, ug/L	<1	<1
Chloroform, ug/L	<1	<1
Chloromethane, ug/L	<1	<1

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, BLANK WATER SAMPLES	DATE SAMPLED
03-368-11	Trip Blank #1	20 MAR 95
03-368-12	Trip Blank #2	20 MAR 95

PARAMETER	03-368-11	03-368-12
Carbon Disulfide, ug/L	<2	<2
Cyclohexane, ug/L	<5	<5
Dibromochloromethane, ug/L	<1	<1
Ethylene Dibromide, ug/L	<5	<5
Ethylbenzene, ug/L	<1	<1
Freon 113, ug/L	<2	<2
Methyl ethyl ketone, ug/L	<5	<5
Methyl isobutyl ketone, ug/L	<5	<5
Methylene chloride, ug/L	<1	<1
Styrene, ug/L	<1	<1
Trichloroethene, ug/L	<1	<1
Trichlorofluoromethane, ug/L	<1	<1
Toluene, ug/L	<1	<1
Tetrachloroethene, ug/L	<1	<1
Vinyl acetate, ug/L	<10	<10
Vinyl chloride, ug/L	<1	<1
Total Xylene Isomers, ug/L	<3	<3
cis-1,2-Dichloroethene, ug/L	<1	<1
cis-1,3-Dichloropropene, ug/L	<1	<1
trans-1,2-Dichloroethene, ug/L	<1	<1
trans-1,3-Dichloropropene, ug/L	<1	<1

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ANALYTICAL REPORT

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LOG NO: G95-03-401

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Project: GMP.2ND.QTR

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
03-401-1	CW-7A	21 MAR 95
03-401-2	CW-6A	21 MAR 95

PARAMETER	03-401-1	03-401-2
Digestion (3010), Date	03/30/95	03/30/95
Furnace Digestion (3020), Date	03/29/95	03/29/95
Ammonia (350.1), mg/L	2.7	9.4
COD (410.4), mg/L	35	29
Nitrate+Nitrite		
Nitrate+Nitrite (as NO3), mg/L	<0.2	<0.2
Nitrate+Nitrite (as N), mg/L	<0.05	<0.05
Ortho Phosphate (365.3)		
Orthophosphorous (as P), mg/L	0.07	<0.07
Ortho Phosphate (as PO4), mg/L	0.22	<0.2
BOD5 (405.1), mg/L	<7	7.5
Quad. Conductivity (9050)		
Sp. Cond., Average, umhos/cm	8000	3900
Sp. Cond., Std. Deviation, umhos/cm	58	0
Sp. Cond., 1st Replicate, umhos/cm	8100	3900
Sp. Cond., 2nd Replicate, umhos/cm	8000	3900
Sp. Cond., 3rd Replicate, umhos/cm	8100	3900
Sp. Cond., 4th Replicate, umhos/cm	8000	3900

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
03-401-1	CW-7A	21 MAR 95
03-401-2	CW-6A	21 MAR 95

PARAMETER	03-401-1	03-401-2
Quad. pH (9040)		
pH, Average, Units	7.0	7.1
pH, Standard Deviation, Units	0.06	0.06
pH, 1st Replicate, Units	6.9	7.0
pH, 2nd Replicate, Units	6.9	7.0
pH, 3rd Replicate, Units	7.0	7.1
pH, 4th Replicate, Units	7.0	7.1
Sulfate, mg/L	300	97
Dissolved Solids (160.1), mg/L	5000	2900
Alkalinity (310.1)		
Carbonate Alk (as CaCO3), mg/L	<1	<1
Bicarbonate Alk (as CaCO3), mg/L	540	450
Hydroxide Alk (as CaCO3), mg/L	<1	<1
Total Alkalinity (as CaCO3), mg/L	540	450
Chloride, mg/L	2100	1000
TOC (9060/415.1), mg/L	4.4	4.1
Antimony (6010/200.7), mg/L	<0.1	<0.1
Arsenic (7060/206.2), mg/L	<0.004	<0.004
Barium (6010/200.7), mg/L	0.080	0.036
Beryllium (6010/200.7), mg/L	<0.001	<0.001
Cadmium (7131/213.2), mg/L	<0.001	<0.001
Chromium (6010/200.7), mg/L	<0.01	<0.01
Cobalt (6010/200.7), mg/L	<0.04	<0.04
Iron (6010/200.7), mg/L	1.3	0.081
Lead (7421/239.2), mg/L	<0.002	<0.002
Manganese (6010/200.7), mg/L	0.20	0.15

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
03-401-1	CW-7A	21 MAR 95
03-401-2	CW-6A	21 MAR 95

PARAMETER	03-401-1	03-401-2
Mercury (7470/245.1), mg/L	<0.0002	<0.0002
Nickel (6010/200.7), mg/L	0.044	0.045
Selenium (7740/270.2), mg/L	<0.008	<0.008
Sodium (6010/200.7), mg/L	1400	710
Vanadium (6010/200.7), mg/L	<0.04	<0.04

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LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
03-401-1	CW-7A	21 MAR 95
03-401-2	CW-6A	21 MAR 95

PARAMETER	03-401-1	03-401-2
B/N,A Ext.Pri.Poll. (EPA 8270)		
Date Analyzed	03/27/95	03/30/95
Date Extracted	03/23/95	03/23/95
Dilution Factor, Times	1	1
1,2,4-Trichlorobenzene, ug/L	<5	<5
1,2-Dichlorobenzene, ug/L	<6	<6
1,2-Diphenylhydrazine, ug/L	<5	<5
1,3-Dichlorobenzene, ug/L	<5	<5
1,4-Dichlorobenzene, ug/L	<5	<5
1-Methylnaphthalene, ug/L	<10	<10
2,4,5-Trichlorophenol, ug/L	<6	<6
2,4,6-Trichlorophenol, ug/L	<5	<5
2,4-Dichlorophenol, ug/L	<5	<5
2,4-Dimethylphenol, ug/L	<5	<5
2,4-Dinitrophenol, ug/L	<10	<10
2,4-Dinitrotoluene, ug/L	<5	<5
2,6-Dinitrotoluene, ug/L	<5	<5
2-Chloronaphthalene, ug/L	<6	<6
2-Chlorophenol, ug/L	<5	<5
2-Methyl-4,6-dinitrophenol, ug/L	<5	<5
2-Methylnaphthalene, ug/L	<5	<5
2-Methylphenol (o-Cresol), ug/L	<5	<5
2-Nitroaniline, ug/L	<5	<5
2-Nitrophenol, ug/L	<5	<5
3,3'-Dichlorobenzidine, ug/L	<20	<20
3-Methylphenol (m-Cresol), ug/L	<10	<10

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LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
03-401-1	CW-7A	21 MAR 95
03-401-2	CW-6A	21 MAR 95

PARAMETER	03-401-1	03-401-2
3-Nitroaniline, ug/L	<5	<5
4-Bromophenylphenylether, ug/L	<5	<5
4-Chloro-3-methylphenol, ug/L	<5	<5
4-Chloroaniline, ug/L	<5	<5
4-Chlorophenylphenylether, ug/L	<5	<5
4-Methylphenol (p-Cresol), ug/L	<8	<8
4-Nitroaniline, ug/L	<6	<6
4-Nitrophenol, ug/L	<5	<5
6-Methylchrysene, ug/L	<10	<10
7,12-Dimethylbenz(a)anthracene, ug/L	<5	<5
Acenaphthene, ug/L	<5	<5
Acenaphthylene, ug/L	<5	<5
Aniline, ug/L	<5	<5
Anthracene, ug/L	<5	<5
Benzidine, ug/L	<100	<100
Benzo(a)anthracene, ug/L	<5	<5
Benzo(a)pyrene, ug/L	<5	<5
Benzo(b)fluoranthene, ug/L	<5	<5
Benzo(g,h,i)perylene, ug/L	<5	<5
Benzo(k)fluoranthene, ug/L	<5	<5
Benzenethiol, ug/L	<20	<20
Benzyl Alcohol, ug/L	<5	<5
Benzoic acid, ug/L	<50	<50
Butylbenzylphthalate, ug/L	<5	<5
Chrysene, ug/L	<5	<5
Di-n-octylphthalate, ug/L	<5	<5

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
03-401-1	CW-7A	21 MAR 95
03-401-2	CW-6A	21 MAR 95

PARAMETER	03-401-1	03-401-2
Dibenzo(a,h)anthracene, ug/L	<5	<5
Dibenz(a,h)acridine, ug/L	<20	<20
Dibenzofuran, ug/L	<5	<5
Dibutylphthalate, ug/L	<5	26
Diethylphthalate, ug/L	<5	<5
Dimethylphthalate, ug/L	<5	<5
Fluoranthene, ug/L	<5	<5
Fluorene, ug/L	<5	<5
Hexachlorobenzene, ug/L	<5	<5
Hexachlorobutadiene, ug/L	<5	<5
Hexachlorocyclopentadiene, ug/L	<5	<5
Hexachloroethane, ug/L	<5	<5
Indeno(1,2,3-c,d)pyrene, ug/L	<7	<7
Indene, ug/L	<10	<10
Isophorone, ug/L	<5	<5
N-Nitrosodimethylamine, ug/L	<6	<6
N-Nitrosodiphenylamine, ug/L	<5	<5
N-Nitrosodi-n-propylamine, ug/L	<6	<6
Nitrobenzene, ug/L	<5	<5
Naphthalene, ug/L	<5	<5
Phenanthrene, ug/L	<5	<5
Phenol, ug/L	<5	<5
Pentachlorophenol, ug/L	<5	<5
Pyrene, ug/L	<5	<5
Pyridine, ug/L	<10	<10
Quinoline, ug/L	<10	<10

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
03-401-1	CW-7A	21 MAR 95
03-401-2	CW-6A	21 MAR 95

PARAMETER	03-401-1	03-401-2
Bis(2-chloroethoxy)methane, ug/L	<5	<5
Bis(2-chloroethyl)ether, ug/L	<5	<5
Bis(2-chloroisopropyl)ether, ug/L	<6	<6
Bis(2-ethylhexyl)phthalate, ug/L	<7	<7

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
03-401-1	CW-7A	21 MAR 95
03-401-2	CW-6A	21 MAR 95

PARAMETER	03-401-1	03-401-2
Vol.Pri.Poll. (EPA-8240)		
Date Analyzed	03/30/95	03/30/95
Dilution Factor, Times	1	1
1,1,1-Trichloroethane, ug/L	<1	<1
1,1,2,2-Tetrachloroethane, ug/L	<1	<1
1,1,2-Trichloroethane, ug/L	<1	<1
1,1-Dichloroethane, ug/L	<1	<1
1,1-Dichloroethene, ug/L	<1	<1
1,2-Dichloroethane, ug/L	<1	<1
1,2-Dichlorobenzene, ug/L	<1	<1
1,2-Dichloropropane, ug/L	<1	<1
1,3-Dichlorobenzene, ug/L	<1	<1
1,4-Dichlorobenzene, ug/L	<1	<1
1,4-Dioxane, ug/L	<500	<500
2-Chloroethylvinylether, ug/L	<1	<1
2-Hexanone, ug/L	<5	<5
Acetone, ug/L	<20	<20
Bromodichloromethane, ug/L	<1	<1
Bromomethane, ug/L	<1	<1
Benzene, ug/L	<1	1.0
Bromoform, ug/L	<1	<1
Chlorobenzene, ug/L	<1	<1
Carbon Tetrachloride, ug/L	<1	<1
Chloroethane, ug/L	<1	<1
Chloroform, ug/L	<1	<1
Chloromethane, ug/L	<1	<1

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LOG NO: G95-03-401

Received: 22 MAR 95

Dr. Tony Shan
BHP, Hawaii Refinery
91-325 Komohana St.
Kapolei, HI 96707

Project: GMP.2ND.QTR

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
03-401-1	CW-7A	21 MAR 95
03-401-2	CW-6A	21 MAR 95

PARAMETER	03-401-1	03-401-2
Carbon Disulfide, ug/L	<2	<2
Cyclohexane, ug/L	<5	<5
Dibromochloromethane, ug/L	<1	<1
Ethylene Dibromide, ug/L	<5	<5
Ethylbenzene, ug/L	<1	<1
Freon 113, ug/L	<2	<2
Methyl ethyl ketone, ug/L	<5	<5
Methyl isobutyl ketone, ug/L	<5	<5
Methylene chloride, ug/L	<1	<1
Styrene, ug/L	<1	<1
Trichloroethene, ug/L	<1	<1
Trichlorofluoromethane, ug/L	<1	<1
Toluene, ug/L	<1	<1
Tetrachloroethene, ug/L	<1	<1
Vinyl acetate, ug/L	<10	<10
Vinyl chloride, ug/L	<1	<1
Total Xylene Isomers, ug/L	<3	<3
cis-1,2-Dichloroethene, ug/L	<1	<1
cis-1,3-Dichloropropene, ug/L	<1	<1
trans-1,2-Dichloroethene, ug/L	<1	<1
trans-1,3-Dichloropropene, ug/L	<1	<1

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
03-401-3	CW-4A	21 MAR 95
03-401-4	CW-4B	21 MAR 95
03-401-5	CW-4C	21 MAR 95
03-401-6	CW-7B	21 MAR 95
03-401-7	CW-8A	21 MAR 95

PARAMETER	03-401-3	03-401-4	03-401-5	03-401-6	03-401-7
Digestion (3010), Date	03/30/95	03/30/95	03/30/95	03/30/95	03/30/95
Furnace Digestion (3020), Date	03/29/95	03/29/95	03/29/95	03/29/95	03/29/95
Quad. Conductivity (9050)					
Sp. Cond., Average, umhos/cm	10000	38000	42000	21000	30000
Sp. Cond., Std. Deviation, umhos/cm	0	0	0	500	0
Sp. Cond., 1st Replicate, umhos/cm	10000	38000	42000	21000	30000
Sp. Cond., 2nd Replicate, umhos/cm	10000	38000	42000	22000	30000
Sp. Cond., 3rd Replicate, umhos/cm	10000	38000	42000	21000	30000
Sp. Cond., 4th Replicate, umhos/cm	10000	38000	42000	21000	30000
Quad. pH (9040)					
pH, Average, Units	7.9	7.3	7.5	7.1	7.4
pH, Standard Deviation, Units	0	0.05	0	0	0
pH, 1st Replicate, Units	7.9	7.2	7.5	7.1	7.4
pH, 2nd Replicate, Units	7.9	7.3	7.5	7.1	7.4
pH, 3rd Replicate, Units	7.9	7.3	7.5	7.1	7.4
pH, 4th Replicate, Units	7.9	7.3	7.5	7.1	7.4
Sulfate, mg/L	1700	2600	3000	810	2000
Dissolved Solids (160.1), mg/L	6700	25000	28000	13000	20000
Chloride, mg/L	2000	12000	14000	6400	9500
Antimony (6010/200.7), mg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (7060/206.2), mg/L	<0.004	<0.004	<0.004	<0.004	<0.004
Barium (6010/200.7), mg/L	0.0092	0.031	0.020	0.078	0.022
Beryllium (6010/200.7), mg/L	<0.001	<0.001	<0.001	<0.001	<0.001

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REPORT OF ANALYTICAL RESULTS

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03-401-3	CW-4A	21 MAR 95
03-401-4	CW-4B	21 MAR 95
03-401-5	CW-4C	21 MAR 95
03-401-6	CW-7B	21 MAR 95
03-401-7	CW-8A	21 MAR 95

PARAMETER	03-401-3	03-401-4	03-401-5	03-401-6	03-401-7
Cadmium (7131/213.2), mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium (6010/200.7), mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (6010/200.7), mg/L	<0.04	<0.04	<0.04	<0.04	<0.04
Iron (6010/200.7), mg/L	<0.04	<0.04	0.053	0.76	<0.04
Lead (7421/239.2), mg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Manganese (6010/200.7), mg/L	0.022	0.19	0.22	0.20	0.028
Mercury (7470/245.1), mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Nickel (6010/200.7), mg/L	<0.04	0.097	0.062	0.076	0.066
Selenium (7740/270.2), mg/L	<0.008	<0.008	<0.008	<0.008	<0.008
Sodium (6010/200.7), mg/L	2100	7900	8600	4200	6300
Vanadium (6010/200.7), mg/L	<0.04	<0.04	<0.04	<0.04	<0.04

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03-401-3	CW-4A	21 MAR 95
03-401-4	CW-4B	21 MAR 95
03-401-5	CW-4C	21 MAR 95
03-401-6	CW-7B	21 MAR 95
03-401-7	CW-8A	21 MAR 95

PARAMETER	03-401-3	03-401-4	03-401-5	03-401-6	03-401-7
B/N,A Ext.Pri.Poll. (EPA 8270)					
Date Analyzed	03/28/95	03/28/95	03/28/95	03/28/95	03/28/95
Date Extracted	03/23/95	03/23/95	03/23/95	03/23/95	03/23/95
Dilution Factor, Times	1	1	1	1	1
1,2,4-Trichlorobenzene, ug/L	<5	<5	<5	<5	<5
1,2-Dichlorobenzene, ug/L	<6	<6	<6	<6	<6
1,2-Diphenylhydrazine, ug/L	<5	<5	<5	<5	<5
1,3-Dichlorobenzene, ug/L	<5	<5	<5	<5	<5
1,4-Dichlorobenzene, ug/L	<5	<5	<5	<5	<5
1-Methylnaphthalene, ug/L	22	<10	<10	<10	<10
2,4,5-Trichlorophenol, ug/L	<6	<6	<6	<6	<6
2,4,6-Trichlorophenol, ug/L	<5	<5	<5	<5	<5
2,4-Dichlorophenol, ug/L	<5	<5	<5	<5	<5
2,4-Dimethylphenol, ug/L	<5	<5	<5	<5	<5
2,4-Dinitrophenol, ug/L	<10	<10	<10	<10	<10
2,4-Dinitrotoluene, ug/L	<5	<5	<5	<5	<5
2,6-Dinitrotoluene, ug/L	<5	<5	<5	<5	<5
2-Chloronaphthalene, ug/L	<6	<6	<6	<6	<6
2-Chlorophenol, ug/L	<5	<5	<5	<5	<5
2-Methyl-4,6-dinitrophenol, ug/L	<5	<5	<5	<5	<5
2-Methylnaphthalene, ug/L	<5	<5	<5	<5	<5
2-Methylphenol (o-Cresol), ug/L	<5	<5	<5	<5	<5
2-Nitroaniline, ug/L	<5	<5	<5	<5	<5

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03-401-3	CW-4A	21 MAR 95
03-401-4	CW-4B	21 MAR 95
03-401-5	CW-4C	21 MAR 95
03-401-6	CW-7B	21 MAR 95
03-401-7	CW-8A	21 MAR 95

PARAMETER	03-401-3	03-401-4	03-401-5	03-401-6	03-401-7
2-Nitrophenol, ug/L	<5	<5	<5	<5	<5
3,3'-Dichlorobenzidine, ug/L	<20	<20	<20	<20	<20
3-Methylphenol (m-Cresol), ug/L	<10	<10	<10	<10	<10
3-Nitroaniline, ug/L	<5	<5	<5	<5	<5
4-Bromophenylphenylether, ug/L	<5	<5	<5	<5	<5
4-Chloro-3-methylphenol, ug/L	<5	<5	<5	<5	<5
4-Chloroaniline, ug/L	<5	<5	<5	<5	<5
4-Chlorophenylphenylether, ug/L	<5	<5	<5	<5	<5
4-Methylphenol (p-Cresol), ug/L	<8	<8	<8	<8	<8
4-Nitroaniline, ug/L	<6	<6	<6	<6	<6
4-Nitrophenol, ug/L	<5	<5	<5	<5	<5
6-Methylchrysene, ug/L	<10	<10	<10	<10	<10
7,12-Dimethylbenz(a)anthracene, ug/L	<5	<5	<5	<5	<5
Acenaphthene, ug/L	<5	<5	<5	<5	<5
Acenaphthylene, ug/L	<5	<5	<5	<5	<5
Aniline, ug/L	<5	<5	<5	<5	<5
Anthracene, ug/L	<5	<5	<5	<5	<5
Benzidine, ug/L	<100	<100	<100	<100	<100
Benzo(a)anthracene, ug/L	<5	<5	<5	<5	<5
Benzo(a)pyrene, ug/L	<5	<5	<5	<5	<5
Benzo(b)fluoranthene, ug/L	<5	<5	<5	<5	<5
Benzo(g,h,i)perylene, ug/L	<5	<5	<5	<5	<5
Benzo(k)fluoranthene, ug/L	<5	<5	<5	<5	<5

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03-401-3	CW-4A	21 MAR 95
03-401-4	CW-4B	21 MAR 95
03-401-5	CW-4C	21 MAR 95
03-401-6	CW-7B	21 MAR 95
03-401-7	CW-8A	21 MAR 95

PARAMETER	03-401-3	03-401-4	03-401-5	03-401-6	03-401-7
Benzenethiol, ug/L	<20	<20	<20	<20	<20
Benzyl Alcohol, ug/L	<5	<5	<5	<5	<5
Benzoic acid, ug/L	<50	<50	<50	<50	<50
Butylbenzylphthalate, ug/L	<5	<5	<5	<5	<5
Chrysene, ug/L	<5	<5	<5	<5	<5
Di-n-octylphthalate, ug/L	<5	<5	<5	<5	<5
Dibenzo(a,h)anthracene, ug/L	<5	<5	<5	<5	<5
Dibenz(a,h)acridine, ug/L	<20	<20	<20	<20	<20
Dibenzofuran, ug/L	<5	<5	<5	<5	<5
Dibutylphthalate, ug/L	<5	<5	<5	<5	<5
Diethylphthalate, ug/L	<5	<5	<5	<5	<5
Dimethylphthalate, ug/L	<5	<5	<5	<5	<5
Fluoranthene, ug/L	<5	<5	<5	<5	<5
Fluorene, ug/L	<5	<5	<5	<5	<5
Hexachlorobenzene, ug/L	<5	<5	<5	<5	<5
Hexachlorobutadiene, ug/L	<5	<5	<5	<5	<5
Hexachlorocyclopentadiene, ug/L	<5	<5	<5	<5	<5
Hexachloroethane, ug/L	<5	<5	<5	<5	<5
Indeno(1,2,3-c,d)pyrene, ug/L	<7	<7	<7	<7	<7
Indene, ug/L	<10	<10	<10	<10	<10
Isophorone, ug/L	<5	<5	<5	<5	<5
N-Nitrosodimethylamine, ug/L	<6	<6	<6	<6	<6
N-Nitrosodiphenylamine, ug/L	<5	<5	<5	<5	<5

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03-401-4	CW-4B	21 MAR 95
03-401-5	CW-4C	21 MAR 95
03-401-6	CW-7B	21 MAR 95
03-401-7	CW-8A	21 MAR 95

PARAMETER	03-401-3	03-401-4	03-401-5	03-401-6	03-401-7
N-Nitrosodi-n-propylamine, ug/L	<6	<6	<6	<6	<6
Nitrobenzene, ug/L	<5	<5	<5	<5	<5
Naphthalene, ug/L	<5	<5	<5	<5	<5
Phenanthrene, ug/L	<5	<5	<5	<5	<5
Phenol, ug/L	<5	<5	<5	<5	<5
Pentachlorophenol, ug/L	<5	<5	<5	<5	<5
Pyrene, ug/L	<5	<5	<5	<5	<5
Pyridine, ug/L	<10	<10	<10	<10	<10
Quinoline, ug/L	<10	<10	<10	<10	<10
Bis(2-chloroethoxy)methane, ug/L	<5	<5	<5	<5	<5
Bis(2-chloroethyl)ether, ug/L	<5	<5	<5	<5	<5
Bis(2-chloroisopropyl)ether, ug/L	<6	<6	<6	<6	<6
Bis(2-ethylhexyl)phthalate, ug/L	<7	<7	<7	<7	<7

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03-401-4	CW-4B	21 MAR 95
03-401-5	CW-4C	21 MAR 95
03-401-6	CW-7B	21 MAR 95
03-401-7	CW-8A	21 MAR 95

PARAMETER	03-401-3	03-401-4	03-401-5	03-401-6	03-401-7
Vol.Pri.Poll. (EPA-8240)					
Date Analyzed	03/30/95	03/30/95	03/30/95	03/30/95	03/30/95
Dilution Factor, Times	1	1	1	1	1
1,1,1-Trichloroethane, ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane, ug/L	<1	<1	<1	<1	<1
1,1,2-Trichloroethane, ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane, ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene, ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane, ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene, ug/L	<1	<1	<1	<1	<1
1,2-Dichloropropane, ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene, ug/L	<1	<1	<1	<1	<1
1,4-Dichlorobenzene, ug/L	<1	<1	<1	<1	<1
1,4-Dioxane, ug/L	<500	<500	<500	<500	<500
2-Chloroethylvinylether, ug/L	<1	<1	<1	<1	<1
2-Hexanone, ug/L	<5	<5	<5	<5	<5
Acetone, ug/L	<20	<20	<20	<20	<20
Bromodichloromethane, ug/L	<1	<1	<1	<1	<1
Bromomethane, ug/L	<1	<1	<1	<1	<1
Benzene, ug/L	<1	<1	<1	<1	<1
Bromoform, ug/L	<1	<1	<1	<1	<1
Chlorobenzene, ug/L	<1	<1	<1	<1	<1
Carbon Tetrachloride, ug/L	<1	<1	<1	<1	<1

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03-401-4	CW-4B	21 MAR 95
03-401-5	CW-4C	21 MAR 95
03-401-6	CW-7B	21 MAR 95
03-401-7	CW-8A	21 MAR 95

PARAMETER	03-401-3	03-401-4	03-401-5	03-401-6	03-401-7
Chloroethane, ug/L	<1	<1	<1	<1	<1
Chloroform, ug/L	<1	<1	<1	<1	<1
Chloromethane, ug/L	<1	<1	<1	<1	<1
Carbon Disulfide, ug/L	<2	<2	<2	<2	<2
Cyclohexane, ug/L	<5	<5	<5	<5	<5
Dibromochloromethane, ug/L	<1	<1	<1	<1	<1
Ethylene Dibromide, ug/L	<5	<5	<5	<5	<5
Ethylbenzene, ug/L	1.2	<1	<1	<1	<1
Freon 113, ug/L	<2	<2	<2	<2	<2
Methyl ethyl ketone, ug/L	<5	<5	<5	<5	<5
Methyl isobutyl ketone, ug/L	<5	<5	<5	<5	<5
Methylene chloride, ug/L	<1	<1	<1	<1	<1
Styrene, ug/L	<1	<1	<1	<1	<1
Trichloroethene, ug/L	<1	<1	<1	<1	<1
Trichlorofluoromethane, ug/L	<1	<1	<1	<1	<1
Toluene, ug/L	<1	<1	<1	<1	<1
Tetrachloroethene, ug/L	<1	<1	<1	<1	<1
Vinyl acetate, ug/L	<10	<10	<10	<10	<10
Vinyl chloride, ug/L	<1	<1	<1	<1	<1
Total Xylene Isomers, ug/L	<3	<3	<3	<3	<3
cis-1,2-Dichloroethene, ug/L	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene, ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene, ug/L	<1	<1	<1	<1	<1

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03-401-3	CW-4A	21 MAR 95
03-401-4	CW-4B	21 MAR 95
03-401-5	CW-4C	21 MAR 95
03-401-6	CW-7B	21 MAR 95
03-401-7	CW-8A	21 MAR 95

PARAMETER	03-401-3	03-401-4	03-401-5	03-401-6	03-401-7
trans-1,3-Dichloropropene, ug/L	<1	<1	<1	<1	<1

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
03-401-8	CW-3A	21 MAR 95
03-401-9	CW-3C	21 MAR 95
03-401-10	CW-3B	21 MAR 95
03-401-11	CW-6B	21 MAR 95
03-401-12	CW-8B	21 MAR 95

PARAMETER	03-401-8	03-401-9	03-401-10	03-401-11	03-401-12
Digestion (3010), Date	03/30/95	03/30/95	03/30/95	03/30/95	03/30/95
Furnace Digestion (3020), Date	03/29/95	03/29/95	03/29/95	03/29/95	03/30/95
Quad. Conductivity (9050)					
Sp. Cond., Average, umhos/cm	6900	6100	6000	25000	7700
Sp. Cond., Std. Deviation, umhos/cm	0	0	0	0	82
Sp. Cond., 1st Replicate, umhos/cm	6900	6100	6000	25000	7800
Sp. Cond., 2nd Replicate, umhos/cm	6900	6100	6000	25000	7700
Sp. Cond., 3rd Replicate, umhos/cm	6900	6100	6000	25000	7700
Sp. Cond., 4th Replicate, umhos/cm	6900	6100	6000	25000	7600
Quad. pH (9040)					
pH, Average, Units	8.1	8.1	8.1	8.2	8.2
pH, Standard Deviation, Units	0	0	0	0	0
pH, 1st Replicate, Units	8.1	8.1	8.1	8.2	8.2
pH, 2nd Replicate, Units	8.1	8.1	8.1	8.2	8.2
pH, 3rd Replicate, Units	8.1	8.1	8.1	8.2	8.2
pH, 4th Replicate, Units	8.1	8.1	8.1	8.2	8.2
Sulfate, mg/L	1500	1400	1600	2400	2400
Dissolved Solids (160.1), mg/L	5700	5000	4400	16000	5000
Chloride, mg/L	840	640	580	7000	1000
Antimony (6010/200.7), mg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (7060/206.2), mg/L	0.0098	0.011	0.014	<0.004	<0.002
Barium (6010/200.7), mg/L	0.094	0.077	0.052	0.016	0.018
Beryllium (6010/200.7), mg/L	<0.001	<0.001	<0.001	<0.001	<0.001

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
03-401-8	CW-3A	21 MAR 95
03-401-9	CW-3C	21 MAR 95
03-401-10	CW-3B	21 MAR 95
03-401-11	CW-6B	21 MAR 95
03-401-12	CW-8B	21 MAR 95

PARAMETER	03-401-8	03-401-9	03-401-10	03-401-11	03-401-12
Cadmium (7131/213.2), mg/L	<0.001	0.0028	<0.001	<0.001	0.0012
Chromium (6010/200.7), mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (6010/200.7), mg/L	<0.04	<0.04	<0.04	<0.04	<0.04
Iron (6010/200.7), mg/L	<0.04	<0.04	0.10	0.081	0.057
Lead (7421/239.2), mg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Manganese (6010/200.7), mg/L	0.023	0.017	0.012	0.036	0.021
Mercury (7470/245.1), mg/L	0.0003	<0.0002	<0.0002	<0.0002	<0.0002
Nickel (6010/200.7), mg/L	0.047	0.086	0.069	0.072	<0.04
Selenium (7740/270.2), mg/L	<0.008	<0.008	<0.008	<0.008	<0.004
Sodium (6010/200.7), mg/L	1500	1300	1300	5700	1600
Vanadium (6010/200.7), mg/L	<0.04	0.085	0.044	<0.04	<0.04

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03-401-10	CW-3B	21 MAR 95
03-401-11	CW-6B	21 MAR 95
03-401-12	CW-8B	21 MAR 95

PARAMETER	03-401-8	03-401-9	03-401-10	03-401-11	03-401-12
B/N,A Ext.Pri.Poll. (EPA 8270)					
Date Analyzed	03/28/95	03/28/95	03/29/95	03/29/95	03/29/95
Date Extracted	03/23/95	03/23/95	03/27/95	03/27/95	03/27/95
Dilution Factor, Times	1	1	1	1	1
1,2,4-Trichlorobenzene, ug/L	<5	<5	<5	<5	<5
1,2-Dichlorobenzene, ug/L	<6	<6	<6	<6	<6
1,2-Diphenylhydrazine, ug/L	<5	<5	<5	<5	<5
1,3-Dichlorobenzene, ug/L	<5	<5	<5	<5	<5
1,4-Dichlorobenzene, ug/L	<5	<5	<5	<5	<5
1-Methylnaphthalene, ug/L	<10	<10	<10	<10	<10
2,4,5-Trichlorophenol, ug/L	<6	<6	<6	<6	<6
2,4,6-Trichlorophenol, ug/L	<5	<5	<5	<5	<5
2,4-Dichlorophenol, ug/L	<5	<5	<5	<5	<5
2,4-Dimethylphenol, ug/L	<5	<5	<5	<5	<5
2,4-Dinitrophenol, ug/L	<10	<10	<10	<10	<10
2,4-Dinitrotoluene, ug/L	<5	<5	<5	<5	<5
2,6-Dinitrotoluene, ug/L	<5	<5	<5	<5	<5
2-Chloronaphthalene, ug/L	<6	<6	<6	<6	<6
2-Chlorophenol, ug/L	<5	<5	<5	<5	<5
2-Methyl-4,6-dinitrophenol, ug/L	<5	<5	<5	<5	<5
2-Methylnaphthalene, ug/L	<5	<5	<5	<5	<5
2-Methylphenol (o-Cresol), ug/L	<5	<5	<5	<5	<5
2-Nitroaniline, ug/L	<5	<5	<5	<5	<5

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03-401-8	CW-3A	21 MAR 95
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03-401-10	CW-3B	21 MAR 95
03-401-11	CW-6B	21 MAR 95
03-401-12	CW-8B	21 MAR 95

PARAMETER	03-401-8	03-401-9	03-401-10	03-401-11	03-401-12
2-Nitrophenol, ug/L	<5	<5	<5	<5	<5
3,3'-Dichlorobenzidine, ug/L	<20	<20	<20	<20	<20
3-Methylphenol (m-Cresol), ug/L	<10	<10	<10	<10	<10
3-Nitroaniline, ug/L	<5	<5	<5	<5	<5
4-Bromophenylphenylether, ug/L	<5	<5	<5	<5	<5
4-Chloro-3-methylphenol, ug/L	<5	<5	<5	<5	<5
4-Chloroaniline, ug/L	<5	<5	<5	<5	<5
4-Chlorophenylphenylether, ug/L	<5	<5	<5	<5	<5
4-Methylphenol (p-Cresol), ug/L	<8	<8	<8	<8	<8
4-Nitroaniline, ug/L	<6	<6	<6	<6	<6
4-Nitrophenol, ug/L	<5	<5	<5	<5	<5
6-Methylchrysene, ug/L	<10	<10	<10	<10	<10
7,12-Dimethylbenz(a)anthracene, ug/L	<5	<5	<5	<5	<5
Acenaphthene, ug/L	<5	<5	<5	<5	<5
Acenaphthylene, ug/L	<5	<5	<5	<5	<5
Aniline, ug/L	<5	<5	<5	<5	<5
Anthracene, ug/L	<5	<5	<5	<5	<5
Benzidine, ug/L	<100	<100	<100	<100	<100
Benzo(a)anthracene, ug/L	<5	<5	<5	<5	<5
Benzo(a)pyrene, ug/L	<5	<5	<5	<5	<5
Benzo(b)fluoranthene, ug/L	<5	<5	<5	<5	<5
Benzo(g,h,i)perylene, ug/L	<5	<5	<5	<5	<5
Benzo(k)fluoranthene, ug/L	<5	<5	<5	<5	<5

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03-401-12	CW-8B	21 MAR 95

PARAMETER	03-401-8	03-401-9	03-401-10	03-401-11	03-401-12
Benzenethiol, ug/L	<20	<20	<20	<20	<20
Benzyl Alcohol, ug/L	<5	<5	<5	<5	<5
Benzoic acid, ug/L	<50	<50	<50	<50	<50
Butylbenzylphthalate, ug/L	<5	<5	<5	<5	<5
Chrysene, ug/L	<5	<5	<5	<5	<5
Di-n-octylphthalate, ug/L	<5	<5	<5	<5	<5
Dibenzo(a,h)anthracene, ug/L	<5	<5	<5	<5	<5
Dibenz(a,h)acridine, ug/L	<20	<20	<20	<20	<20
Dibenzofuran, ug/L	<5	<5	<5	<5	<5
Dibutylphthalate, ug/L	<5	<5	<5	<5	<5
Diethylphthalate, ug/L	<5	<5	<5	<5	<5
Dimethylphthalate, ug/L	<5	<5	<5	<5	<5
Fluoranthene, ug/L	<5	<5	<5	<5	<5
Fluorene, ug/L	<5	<5	<5	<5	<5
Hexachlorobenzene, ug/L	<5	<5	<5	<5	<5
Hexachlorobutadiene, ug/L	<5	<5	<5	<5	<5
Hexachlorocyclopentadiene, ug/L	<5	<5	<5	<5	<5
Hexachloroethane, ug/L	<5	<5	<5	<5	<5
Indeno(1,2,3-c,d)pyrene, ug/L	<7	<7	<7	<7	<7
Indene, ug/L	<10	<10	<10	<10	<10
Isophorone, ug/L	<5	<5	<5	<5	<5
N-Nitrosodimethylamine, ug/L	<6	<6	<6	<6	<6
N-Nitrosodiphenylamine, ug/L	<5	<5	<5	<5	<5

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03-401-10	CW-3B	21 MAR 95
03-401-11	CW-6B	21 MAR 95
03-401-12	CW-8B	21 MAR 95

PARAMETER	03-401-8	03-401-9	03-401-10	03-401-11	03-401-12
N-Nitrosodi-n-propylamine, ug/L	<6	<6	<6	<6	<6
Nitrobenzene, ug/L	<5	<5	<5	<5	<5
Naphthalene, ug/L	<5	<5	<5	<5	<5
Phenanthrene, ug/L	<5	<5	<5	<5	<5
Phenol, ug/L	<5	<5	<5	<5	<5
Pentachlorophenol, ug/L	<5	<5	<5	<5	<5
Pyrene, ug/L	<5	<5	<5	<5	<5
Pyridine, ug/L	<10	<10	<10	<10	<10
Quinoline, ug/L	<10	<10	<10	<10	<10
Bis(2-chloroethoxy)methane, ug/L	<5	<5	<5	<5	<5
Bis(2-chloroethyl)ether, ug/L	<5	<5	<5	<5	<5
Bis(2-chloroisopropyl)ether, ug/L	<6	<6	<6	<6	<6
Bis(2-ethylhexyl)phthalate, ug/L	<7	<7	<7	<7	<7

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03-401-9	CW-3C	21 MAR 95
03-401-10	CW-3B	21 MAR 95
03-401-11	CW-6B	21 MAR 95
03-401-12	CW-8B	21 MAR 95

PARAMETER	03-401-8	03-401-9	03-401-10	03-401-11	03-401-12
Vol.Pri.Poll. (EPA-8240)					
Date Analyzed	03/30/95	03/30/95	03/30/95	03/30/95	03/30/95
Dilution Factor, Times	1	1	1	1	1
1,1,1-Trichloroethane, ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane, ug/L	<1	<1	<1	<1	<1
1,1,2-Trichloroethane, ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane, ug/L	<1	<1	<1	1.7	<1
1,1-Dichloroethene, ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane, ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene, ug/L	<1	<1	<1	<1	<1
1,2-Dichloropropane, ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene, ug/L	<1	<1	<1	<1	<1
1,4-Dichlorobenzene, ug/L	<1	<1	<1	<1	<1
1,4-Dioxane, ug/L	<500	<500	<500	<500	<500
2-Chloroethylvinylether, ug/L	<1	<1	<1	<1	<1
2-Hexanone, ug/L	<5	<5	<5	<5	<5
Acetone, ug/L	<20	<20	<20	<20	<20
Bromodichloromethane, ug/L	<1	<1	<1	<1	<1
Bromomethane, ug/L	<1	<1	<1	<1	<1
Benzene, ug/L	<1	<1	<1	3.1	<1
Bromoform, ug/L	<1	<1	<1	<1	<1
Chlorobenzene, ug/L	<1	<1	<1	<1	<1
Carbon Tetrachloride, ug/L	<1	<1	<1	<1	<1

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03-401-9	CW-3C	21 MAR 95
03-401-10	CW-3B	21 MAR 95
03-401-11	CW-6B	21 MAR 95
03-401-12	CW-8B	21 MAR 95

PARAMETER	03-401-8	03-401-9	03-401-10	03-401-11	03-401-12
Chloroethane, ug/L	<1	<1	<1	<1	<1
Chloroform, ug/L	<1	<1	<1	<1	<1
Chloromethane, ug/L	<1	<1	<1	<1	<1
Carbon Disulfide, ug/L	<2	<2	<2	<2	<2
Cyclohexane, ug/L	<5	<5	<5	<5	<5
Dibromochloromethane, ug/L	<1	<1	<1	<1	<1
Ethylene Dibromide, ug/L	<5	<5	<5	<5	<5
Ethylbenzene, ug/L	<1	<1	<1	<1	<1
Freon 113, ug/L	<2	<2	<2	<2	<2
Methyl ethyl ketone, ug/L	<5	<5	<5	<5	<5
Methyl isobutyl ketone, ug/L	<5	<5	<5	<5	<5
Methylene chloride, ug/L	<1	<1	<1	<1	<1
Styrene, ug/L	<1	<1	<1	<1	<1
Trichloroethene, ug/L	<1	<1	<1	<1	<1
Trichlorofluoromethane, ug/L	<1	<1	<1	<1	<1
Toluene, ug/L	<1	<1	<1	<1	<1
Tetrachloroethene, ug/L	<1	<1	<1	<1	<1
Vinyl acetate, ug/L	<10	<10	<10	<10	<10
Vinyl chloride, ug/L	<1	<1	<1	<1	<1
Total Xylene Isomers, ug/L	<3	<3	<3	<3	<3
cis-1,2-Dichloroethene, ug/L	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene, ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene, ug/L	<1	<1	<1	<1	<1

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03-401-9	CW-3C	21 MAR 95
03-401-10	CW-3B	21 MAR 95
03-401-11	CW-6B	21 MAR 95
03-401-12	CW-8B	21 MAR 95

PARAMETER	03-401-8	03-401-9	03-401-10	03-401-11	03-401-12
trans-1,3-Dichloropropene, ug/L	<1	<1	<1	<1	<1

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, BLANK WATER SAMPLES	DATE SAMPLED
03-401-13	Field Blank #2	21 MAR 95

PARAMETER	03-401-13
Vol.Pri.Poll. (EPA-8240)	
Date Analyzed	03/30/95
Dilution Factor, Times	1
1,1,1-Trichloroethane, ug/L	<1
1,1,2,2-Tetrachloroethane, ug/L	<1
1,1,2-Trichloroethane, ug/L	<1
1,1-Dichloroethane, ug/L	<1
1,1-Dichloroethene, ug/L	<1
1,2-Dichloroethane, ug/L	<1
1,2-Dichlorobenzene, ug/L	<1
1,2-Dichloropropane, ug/L	<1
1,3-Dichlorobenzene, ug/L	<1
1,4-Dichlorobenzene, ug/L	<1
1,4-Dioxane, ug/L	<500
2-Chloroethylvinylether, ug/L	<1
2-Hexanone, ug/L	<5
Acetone, ug/L	<20
Bromodichloromethane, ug/L	<1
Bromomethane, ug/L	<1
Benzene, ug/L	<1
Bromoform, ug/L	<1
Chlorobenzene, ug/L	<1
Carbon Tetrachloride, ug/L	<1
Chloroethane, ug/L	<1
Chloroform, ug/L	<1
Chloromethane, ug/L	<1
Carbon Disulfide, ug/L	<2

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, BLANK WATER SAMPLES	DATE SAMPLED
03-401-13	Field Blank #2	21 MAR 95

PARAMETER	03-401-13
Cyclohexane, ug/L	<5
Dibromochloromethane, ug/L	<1
Ethylene Dibromide, ug/L	<5
Ethylbenzene, ug/L	<1
Freon 113, ug/L	<2
Methyl ethyl ketone, ug/L	<5
Methyl isobutyl ketone, ug/L	<5
Methylene chloride, ug/L	<1
Styrene, ug/L	<1
Trichloroethene, ug/L	<1
Trichlorofluoromethane, ug/L	<1
Toluene, ug/L	<1
Tetrachloroethene, ug/L	<1
Vinyl acetate, ug/L	<10
Vinyl chloride, ug/L	<1
Total Xylene Isomers, ug/L	<3
cis-1,2-Dichloroethene, ug/L	<1
cis-1,3-Dichloropropene, ug/L	<1
trans-1,2-Dichloroethene, ug/L	<1
trans-1,3-Dichloropropene, ug/L	<1

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, BLANK WATER SAMPLES	DATE SAMPLED
03-401-14	Trip Blank #3	21 MAR 95

PARAMETER	03-401-14
Vol.Pri.Poll. (EPA-8240)	
Date Analyzed	03/30/95
Dilution Factor, Times	1
1,1,1-Trichloroethane, ug/L	<1
1,1,2,2-Tetrachloroethane, ug/L	<1
1,1,2-Trichloroethane, ug/L	<1
1,1-Dichloroethane, ug/L	<1
1,1-Dichloroethene, ug/L	<1
1,2-Dichloroethane, ug/L	<1
1,2-Dichlorobenzene, ug/L	<1
1,2-Dichloropropane, ug/L	<1
1,3-Dichlorobenzene, ug/L	<1
1,4-Dichlorobenzene, ug/L	<1
1,4-Dioxane, ug/L	<500
2-Chloroethylvinylether, ug/L	<1
2-Hexanone, ug/L	<5
Acetone, ug/L	<20
Bromodichloromethane, ug/L	<1
Bromomethane, ug/L	<1
Benzene, ug/L	<1
Bromoform, ug/L	<1
Chlorobenzene, ug/L	<1
Carbon Tetrachloride, ug/L	<1
Chloroethane, ug/L	<1
Chloroform, ug/L	<1
Chloromethane, ug/L	<1
Carbon Disulfide, ug/L	<2

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LOG NO: G95-03-401

Received: 22 MAR 95

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91-325 Komohana St.
Kapolei, HI 96707

Project: GMP.2ND.QTR

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, BLANK WATER SAMPLES	DATE SAMPLED
03-401-14	Trip Blank #3	21 MAR 95

PARAMETER	03-401-14
Cyclohexane, ug/L	<5
Dibromochloromethane, ug/L	<1
Ethylene Dibromide, ug/L	<5
Ethylbenzene, ug/L	<1
Freon 113, ug/L	<2
Methyl ethyl ketone, ug/L	<5
Methyl isobutyl ketone, ug/L	<5
Methylene chloride, ug/L	<1
Styrene, ug/L	<1
Trichloroethene, ug/L	<1
Trichlorofluoromethane, ug/L	<1
Toluene, ug/L	<1
Tetrachloroethene, ug/L	<1
Vinyl acetate, ug/L	<10
Vinyl chloride, ug/L	<1
Total Xylene Isomers, ug/L	<3
cis-1,2-Dichloroethene, ug/L	<1
cis-1,3-Dichloropropene, ug/L	<1
trans-1,2-Dichloroethene, ug/L	<1
trans-1,3-Dichloropropene, ug/L	<1

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
03-401-15	CW-6A Re-Extraction	21 MAR 95

PARAMETER	03-401-15
B/N,A Ext.Pri.Poll. (EPA 8270)	
Date Analyzed	03/30/95
Date Extracted	03/30/95
Dilution Factor, Times	1
1,2,4-Trichlorobenzene, ug/L	<5
1,2-Dichlorobenzene, ug/L	<6
1,2-Diphenylhydrazine, ug/L	<5
1,3-Dichlorobenzene, ug/L	<5
1,4-Dichlorobenzene, ug/L	<5
1-Methylnaphthalene, ug/L	<10
2,4,5-Trichlorophenol, ug/L	<6
2,4,6-Trichlorophenol, ug/L	<5
2,4-Dichlorophenol, ug/L	<5
2,4-Dimethylphenol, ug/L	<5
2,4-Dinitrophenol, ug/L	<10
2,4-Dinitrotoluene, ug/L	<5
2,6-Dinitrotoluene, ug/L	<5
2-Chloronaphthalene, ug/L	<6
2-Chlorophenol, ug/L	<5
2-Methyl-4,6-dinitrophenol, ug/L	<5
2-Methylnaphthalene, ug/L	<5
2-Methylphenol (o-Cresol), ug/L	<5
2-Nitroaniline, ug/L	<5
2-Nitrophenol, ug/L	<5
3,3'-Dichlorobenzidine, ug/L	<20
3-Methylphenol (m-Cresol), ug/L	<10
3-Nitroaniline, ug/L	<5

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
03-401-15	CW-6A Re-Extraction	21 MAR 95

PARAMETER	03-401-15
4-Bromophenylphenylether, ug/L	<5
4-Chloro-3-methylphenol, ug/L	<5
4-Chloroaniline, ug/L	<5
4-Chlorophenylphenylether, ug/L	<5
4-Methylphenol (p-Cresol), ug/L	<8
4-Nitroaniline, ug/L	<6
4-Nitrophenol, ug/L	<5
6-Methylchrysene, ug/L	<10
7,12-Dimethylbenz(a)anthracene, ug/L	<5
Acenaphthene, ug/L	<5
Acenaphthylene, ug/L	<5
Aniline, ug/L	<5
Anthracene, ug/L	<5
Benzidine, ug/L	<100
Benzo(a)anthracene, ug/L	<5
Benzo(a)pyrene, ug/L	<5
Benzo(b)fluoranthene, ug/L	<5
Benzo(g,h,i)perylene, ug/L	<5
Benzo(k)fluoranthene, ug/L	<5
Benzenethiol, ug/L	<20
Benzyl Alcohol, ug/L	<5
Benzoic acid, ug/L	<50
Butylbenzylphthalate, ug/L	<5
Chrysene, ug/L	<5
Di-n-octylphthalate, ug/L	<5
Dibenzo(a,h)anthracene, ug/L	<5
Dibenz(a,h)acridine, ug/L	<20

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
03-401-15	CW-6A Re-Extraction	21 MAR 95

PARAMETER	03-401-15
Dibenzofuran, ug/L	<5
Dibutylphthalate, ug/L	<5
Diethylphthalate, ug/L	<5
Dimethylphthalate, ug/L	<5
Fluoranthene, ug/L	<5
Fluorene, ug/L	<5
Hexachlorobenzene, ug/L	<5
Hexachlorobutadiene, ug/L	<5
Hexachlorocyclopentadiene, ug/L	<5
Hexachloroethane, ug/L	<5
Indeno(1,2,3-c,d)pyrene, ug/L	<7
Indene, ug/L	<10
Isophorone, ug/L	<5
N-Nitrosodimethylamine, ug/L	<6
N-Nitrosodiphenylamine, ug/L	<5
N-Nitrosodi-n-propylamine, ug/L	<6
Nitrobenzene, ug/L	<5
Naphthalene, ug/L	<5
Phenanthrene, ug/L	<5
Phenol, ug/L	<5
Pentachlorophenol, ug/L	<5
Pyrene, ug/L	<5
Pyridine, ug/L	<10
Quinoline, ug/L	<10
Bis(2-chloroethoxy)methane, ug/L	<5
Bis(2-chloroethyl)ether, ug/L	<5
Bis(2-chloroisopropyl)ether, ug/L	<6

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
03-401-15	CW-6A Re-Extraction	21 MAR 95

PARAMETER	03-401-15
Bis(2-ethylhexyl)phthalate, ug/L	12

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LOG NO: G95-03-435

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
03-435-1	CW-2A	22 MAR 95
03-435-2	CW-2B	22 MAR 95
03-435-3	CW-2C	22 MAR 95
03-435-4	CW-9A	22 MAR 95
03-435-5	CW-9B	22 MAR 95

PARAMETER	03-435-1	03-435-2	03-435-3	03-435-4	03-435-5
Digestion (3010), Date	03/30/95	03/30/95	03/30/95	03/30/95	03/30/95
Furnace Digestion (3020), Date	03/30/95	03/30/95	03/30/95	03/30/95	03/30/95
Quad. Conductivity (9050)					
Sp. Cond., Average, umhos/cm	28000	11000	37000	9800	39000
Sp. Cond., Std. Deviation, umhos/cm	0	0	0	58	0
Sp. Cond., 1st Replicate, umhos/cm	28000	11000	37000	9800	39000
Sp. Cond., 2nd Replicate, umhos/cm	28000	11000	37000	9800	39000
Sp. Cond., 3rd Replicate, umhos/cm	28000	11000	37000	9700	39000
Sp. Cond., 4th Replicate, umhos/cm	28000	11000	37000	9700	39000
Quad. pH (9040)					
pH, Average, Units	7.4	7.9	7.2	8.2	7.4
pH, Standard Deviation, Units	0	0	0.05	0.06	0
pH, 1st Replicate, Units	7.4	7.9	7.2	8.1	7.4
pH, 2nd Replicate, Units	7.4	7.9	7.2	8.1	7.4
pH, 3rd Replicate, Units	7.4	7.9	7.2	8.2	7.4
pH, 4th Replicate, Units	7.4	7.9	7.3	8.2	7.4
Sulfate, mg/L	1900	1700	2800	1300	2700
Dissolved Solids (160.1), mg/L	16000	6200	27000	5700	24000
Chloride, mg/L	7900	2300	13000	2000	12000
Antimony (6010/200.7), mg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (7060/206.2), mg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Barium (6010/200.7), mg/L	0.026	0.012	0.022	0.0063	0.038
Beryllium (6010/200.7), mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium (7131/213.2), mg/L	<0.001	<0.001	<0.001	<0.001	<0.001

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REPORT OF ANALYTICAL RESULTS

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03-435-1	CW-2A	22 MAR 95
03-435-2	CW-2B	22 MAR 95
03-435-3	CW-2C	22 MAR 95
03-435-4	CW-9A	22 MAR 95
03-435-5	CW-9B	22 MAR 95

PARAMETER	03-435-1	03-435-2	03-435-3	03-435-4	03-435-5
Chromium (6010/200.7), mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (6010/200.7), mg/L	<0.04	<0.04	<0.04	<0.04	<0.04
Iron (6010/200.7), mg/L	<0.04	<0.04	<0.04	<0.04	0.89
Lead (7421/239.2), mg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Manganese (6010/200.7), mg/L	0.038	0.026	0.21	0.055	0.15
Mercury (7470/245.1), mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Nickel (6010/200.7), mg/L	<0.04	<0.04	<0.04	<0.04	<0.04
Selenium (7740/270.2), mg/L	<0.004	<0.004	<0.004	<0.004	<0.004
Sodium (6010/200.7), mg/L	5300	2300	8800	2100	8400
Vanadium (6010/200.7), mg/L	<0.04	<0.04	<0.04	<0.04	<0.04

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
03-435-1	CW-2A	22 MAR 95
03-435-2	CW-2B	22 MAR 95
03-435-3	CW-2C	22 MAR 95
03-435-4	CW-9A	22 MAR 95
03-435-5	CW-9B	22 MAR 95

PARAMETER	03-435-1	03-435-2	03-435-3	03-435-4	03-435-5
B/N,A Ext.Pri.Poll. (EPA 8270)					
Date Analyzed	03/30/95	03/30/95	03/30/95	03/30/95	03/30/95
Date Extracted	03/28/95	03/28/95	03/28/95	03/28/95	03/28/95
Dilution Factor, Times	1	1	1	1	1
1,2,4-Trichlorobenzene, ug/L	<5	<5	<5	<5	<5
1,2-Dichlorobenzene, ug/L	<6	<6	<6	<6	<6
1,2-Diphenylhydrazine, ug/L	<5	<5	<5	<5	<5
1,3-Dichlorobenzene, ug/L	<5	<5	<5	<5	<5
1,4-Dichlorobenzene, ug/L	<5	<5	<5	<5	<5
1-Methylnaphthalene, ug/L	<10	11	<10	<10	<10
2,4,5-Trichlorophenol, ug/L	<6	<6	<6	<6	<6
2,4,6-Trichlorophenol, ug/L	<5	<5	<5	<5	<5
2,4-Dichlorophenol, ug/L	<5	<5	<5	<5	<5
2,4-Dimethylphenol, ug/L	<5	<5	<5	<5	<5
2,4-Dinitrophenol, ug/L	<10	<10	<10	<10	<10
2,4-Dinitrotoluene, ug/L	<5	<5	<5	<5	<5
2,6-Dinitrotoluene, ug/L	<5	<5	<5	<5	<5
2-Chloronaphthalene, ug/L	<6	<6	<6	<6	<6
2-Chlorophenol, ug/L	<5	<5	<5	<5	<5
2-Methyl-4,6-dinitrophenol, ug/L	<5	<5	<5	<5	<5
2-Methylnaphthalene, ug/L	<5	<5	<5	<5	<5
2-Methylphenol (o-Cresol), ug/L	<5	<5	<5	<5	<5
2-Nitroaniline, ug/L	<5	<5	<5	<5	<5

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
03-435-1	CW-2A	22 MAR 95
03-435-2	CW-2B	22 MAR 95
03-435-3	CW-2C	22 MAR 95
03-435-4	CW-9A	22 MAR 95
03-435-5	CW-9B	22 MAR 95

PARAMETER	03-435-1	03-435-2	03-435-3	03-435-4	03-435-5
2-Nitrophenol, ug/L	<5	<5	<5	<5	<5
3,3'-Dichlorobenzidine, ug/L	<20	<20	<20	<20	<20
3-Methylphenol (m-Cresol), ug/L	<10	<10	<10	<10	<10
3-Nitroaniline, ug/L	<5	<5	<5	<5	<5
4-Bromophenylphenylether, ug/L	<5	<5	<5	<5	<5
4-Chloro-3-methylphenol, ug/L	<5	<5	<5	<5	<5
4-Chloroaniline, ug/L	<5	<5	<5	<5	<5
4-Chlorophenylphenylether, ug/L	<5	<5	<5	<5	<5
4-Methylphenol (p-Cresol), ug/L	<8	<8	<8	<8	<8
4-Nitroaniline, ug/L	<6	<6	<6	<6	<6
4-Nitrophenol, ug/L	<5	<5	<5	<5	<5
6-Methylchrysene, ug/L	<10	<10	<10	<10	<10
7,12-Dimethylbenz(a)anthracene, ug/L	<5	<5	<5	<5	<5
Acenaphthene, ug/L	<5	<5	<5	<5	<5
Acenaphthylene, ug/L	<5	<5	<5	<5	<5
Aniline, ug/L	<5	<5	<5	<5	<5
Anthracene, ug/L	<5	<5	<5	<5	<5
Benzidine, ug/L	<100	<100	<100	<100	<100
Benzo(a)anthracene, ug/L	<5	<5	<5	<5	<5
Benzo(a)pyrene, ug/L	<5	<5	<5	<5	<5
Benzo(b)fluoranthene, ug/L	<5	<5	<5	<5	<5
Benzo(g,h,i)perylene, ug/L	<5	<5	<5	<5	<5
Benzo(k)fluoranthene, ug/L	<5	<5	<5	<5	<5

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
03-435-1	CW-2A	22 MAR 95
03-435-2	CW-2B	22 MAR 95
03-435-3	CW-2C	22 MAR 95
03-435-4	CW-9A	22 MAR 95
03-435-5	CW-9B	22 MAR 95

PARAMETER	03-435-1	03-435-2	03-435-3	03-435-4	03-435-5
Benzenethiol, ug/L	<20	<20	<20	<20	<20
Benzyl Alcohol, ug/L	<5	<5	<5	<5	<5
Benzoic acid, ug/L	<50	<50	<50	<50	<50
Butylbenzylphthalate, ug/L	<5	<5	<5	<5	<5
Chrysene, ug/L	<5	<5	<5	<5	<5
Di-n-octylphthalate, ug/L	<5	<5	<5	<5	<5
Dibenzo(a,h)anthracene, ug/L	<5	<5	<5	<5	<5
Dibenz(a,h)acridine, ug/L	<20	<20	<20	<20	<20
Dibenzofuran, ug/L	<5	<5	<5	<5	<5
Dibutylphthalate, ug/L	<5	<5	<5	<5	<5
Diethylphthalate, ug/L	<5	<5	<5	<5	<5
Dimethylphthalate, ug/L	<5	<5	<5	<5	<5
Fluoranthene, ug/L	<5	<5	<5	<5	<5
Fluorene, ug/L	<5	<5	<5	<5	<5
Hexachlorobenzene, ug/L	<5	<5	<5	<5	<5
Hexachlorobutadiene, ug/L	<5	<5	<5	<5	<5
Hexachlorocyclopentadiene, ug/L	<5	<5	<5	<5	<5
Hexachloroethane, ug/L	<5	<5	<5	<5	<5
Indeno(1,2,3-c,d)pyrene, ug/L	<7	<7	<7	<7	<7
Indene, ug/L	<10	<10	<10	<10	<10
Isophorone, ug/L	<5	<5	<5	<5	<5
N-Nitrosodimethylamine, ug/L	<6	<6	<6	<6	<6
N-Nitrosodiphenylamine, ug/L	<5	<5	<5	<5	<5

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
03-435-1	CW-2A	22 MAR 95
03-435-2	CW-2B	22 MAR 95
03-435-3	CW-2C	22 MAR 95
03-435-4	CW-9A	22 MAR 95
03-435-5	CW-9B	22 MAR 95

PARAMETER	03-435-1	03-435-2	03-435-3	03-435-4	03-435-5
N-Nitrosodi-n-propylamine, ug/L	<6	<6	<6	<6	<6
Nitrobenzene, ug/L	<5	<5	<5	<5	<5
Naphthalene, ug/L	<5	<5	<5	<5	<5
Phenanthrene, ug/L	<5	<5	<5	<5	<5
Phenol, ug/L	<5	<5	<5	<5	<5
Pentachlorophenol, ug/L	<5	<5	<5	<5	<5
Pyrene, ug/L	<5	<5	<5	<5	<5
Pyridine, ug/L	<10	<10	<10	<10	<10
Quinoline, ug/L	<10	<10	<10	<10	<10
Bis(2-chloroethoxy)methane, ug/L	<5	<5	<5	<5	<5
Bis(2-chloroethyl)ether, ug/L	<5	<5	<5	<5	<5
Bis(2-chloroisopropyl)ether, ug/L	<6	<6	<6	<6	<6
Bis(2-ethylhexyl)phthalate, ug/L	<7	<7	<7	<7	<7

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
03-435-1	CW-2A	22 MAR 95
03-435-2	CW-2B	22 MAR 95
03-435-3	CW-2C	22 MAR 95
03-435-4	CW-9A	22 MAR 95
03-435-5	CW-9B	22 MAR 95

PARAMETER	03-435-1	03-435-2	03-435-3	03-435-4	03-435-5
Vol.Pri.Poll. (EPA-8240)					
Date Analyzed	03/31/95	03/31/95	03/31/95	03/31/95	03/31/95
Dilution Factor, Times	1	1	1	1	1
1,1,1-Trichloroethane, ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane, ug/L	<1	<1	<1	<1	<1
1,1,2-Trichloroethane, ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane, ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene, ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane, ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene, ug/L	<1	<1	<1	<1	<1
1,2-Dichloropropane, ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene, ug/L	<1	<1	<1	<1	<1
1,4-Dichlorobenzene, ug/L	<1	<1	<1	<1	<1
1,4-Dioxane, ug/L	<500	<500	<500	<500	<500
2-Chloroethylvinylether, ug/L	<1	<1	<1	<1	<1
2-Hexanone, ug/L	<5	<5	<5	<5	<5
Acetone, ug/L	<20	<20	<20	<20	<20
Bromodichloromethane, ug/L	<1	<1	<1	<1	<1
Bromomethane, ug/L	<1	<1	<1	<1	<1
Benzene, ug/L	<1	<1	<1	<1	<1
Bromoform, ug/L	<1	<1	<1	<1	<1
Chlorobenzene, ug/L	<1	<1	<1	<1	<1
Carbon Tetrachloride, ug/L	<1	<1	<1	<1	<1

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LOG NO: G95-03-435

Received: 23 MAR 95

Dr. Tony Shan
BHP, Hawaii Refinery
91-325 Komohana St.
Kapolei, HI 96707

Project: GMP.2ND.QTR

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
03-435-1	CW-2A	22 MAR 95
03-435-2	CW-2B	22 MAR 95
03-435-3	CW-2C	22 MAR 95
03-435-4	CW-9A	22 MAR 95
03-435-5	CW-9B	22 MAR 95

PARAMETER	03-435-1	03-435-2	03-435-3	03-435-4	03-435-5
Chloroethane, ug/L	<1	<1	<1	<1	<1
Chloroform, ug/L	<1	<1	<1	<1	<1
Chloromethane, ug/L	<1	<1	<1	<1	<1
Carbon Disulfide, ug/L	<2	<2	<2	<2	<2
Cyclohexane, ug/L	<5	<5	<5	<5	<5
Dibromochloromethane, ug/L	<1	<1	<1	<1	<1
Ethylene Dibromide, ug/L	<5	<5	<5	<5	<5
Ethylbenzene, ug/L	<1	<1	<1	<1	<1
Freon 113, ug/L	<2	<2	<2	<2	<2
Methyl ethyl ketone, ug/L	<5	<5	<5	<5	<5
Methyl isobutyl ketone, ug/L	<5	<5	<5	<5	<5
Methylene chloride, ug/L	<1	<1	<1	<1	<1
Styrene, ug/L	<1	<1	<1	<1	<1
Trichloroethene, ug/L	<1	<1	<1	<1	<1
Trichlorofluoromethane, ug/L	<1	<1	<1	<1	<1
Toluene, ug/L	<1	<1	<1	<1	<1
Tetrachloroethene, ug/L	<1	<1	<1	<1	<1
Vinyl acetate, ug/L	<10	<10	<10	<10	<10
Vinyl chloride, ug/L	<1	<1	<1	<1	<1
Total Xylene Isomers, ug/L	<3	<3	<3	<3	<3
cis-1,2-Dichloroethene, ug/L	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene, ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene, ug/L	<1	<1	<1	<1	<1

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
03-435-1	CW-2A	22 MAR 95
03-435-2	CW-2B	22 MAR 95
03-435-3	CW-2C	22 MAR 95
03-435-4	CW-9A	22 MAR 95
03-435-5	CW-9B	22 MAR 95

PARAMETER	03-435-1	03-435-2	03-435-3	03-435-4	03-435-5
trans-1,3-Dichloropropene, ug/L	<1	<1	<1	<1	<1

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Project: GMP.2ND.QTR

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, BLANK WATER SAMPLES	DATE SAMPLED
03-435-6	Field Blank #3	22 MAR 95

PARAMETER	03-435-6
Vol.Pri.Poll. (EPA-8240)	
Date Analyzed	03/31/95
Dilution Factor, Times	1
1,1,1-Trichloroethane, ug/L	<1
1,1,2,2-Tetrachloroethane, ug/L	<1
1,1,2-Trichloroethane, ug/L	<1
1,1-Dichloroethane, ug/L	<1
1,1-Dichloroethene, ug/L	<1
1,2-Dichloroethane, ug/L	<1
1,2-Dichlorobenzene, ug/L	<1
1,2-Dichloropropane, ug/L	<1
1,3-Dichlorobenzene, ug/L	<1
1,4-Dichlorobenzene, ug/L	<1
1,4-Dioxane, ug/L	<500
2-Chloroethylvinylether, ug/L	<1
2-Hexanone, ug/L	<5
Acetone, ug/L	<20
Bromodichloromethane, ug/L	<1
Bromomethane, ug/L	<1
Benzene, ug/L	<1
Bromoform, ug/L	<1
Chlorobenzene, ug/L	<1
Carbon Tetrachloride, ug/L	<1
Chloroethane, ug/L	<1
Chloroform, ug/L	<1
Chloromethane, ug/L	<1
Carbon Disulfide, ug/L	<2

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Project: GMP.2ND.QTR

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, BLANK WATER SAMPLES	DATE SAMPLED
03-435-6	Field Blank #3	22 MAR 95

PARAMETER	03-435-6
Cyclohexane, ug/L	<5
Dibromochloromethane, ug/L	<1
Ethylene Dibromide, ug/L	<5
Ethylbenzene, ug/L	<1
Freon 113, ug/L	<2
Methyl ethyl ketone, ug/L	<5
Methyl isobutyl ketone, ug/L	<5
Methylene chloride, ug/L	<1
Styrene, ug/L	<1
Trichloroethene, ug/L	<1
Trichlorofluoromethane, ug/L	<1
Toluene, ug/L	<1
Tetrachloroethene, ug/L	<1
Vinyl acetate, ug/L	<10
Vinyl chloride, ug/L	<1
Total Xylene Isomers, ug/L	<3
cis-1,2-Dichloroethene, ug/L	<1
cis-1,3-Dichloropropene, ug/L	<1
trans-1,2-Dichloroethene, ug/L	<1
trans-1,3-Dichloropropene, ug/L	<1

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Project: GMP.2ND.QTR

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, BLANK WATER SAMPLES	DATE SAMPLED
03-435-7	Trip Blank #4	22 MAR 95

PARAMETER	03-435-7
Vol.Pri.Poll. (EPA-8240)	
Date Analyzed	03/31/95
Dilution Factor, Times	1
1,1,1-Trichloroethane, ug/L	<1
1,1,2,2-Tetrachloroethane, ug/L	<1
1,1,2-Trichloroethane, ug/L	<1
1,1-Dichloroethane, ug/L	<1
1,1-Dichloroethene, ug/L	<1
1,2-Dichloroethane, ug/L	<1
1,2-Dichlorobenzene, ug/L	<1
1,2-Dichloropropane, ug/L	<1
1,3-Dichlorobenzene, ug/L	<1
1,4-Dichlorobenzene, ug/L	<1
1,4-Dioxane, ug/L	<500
2-Chloroethylvinylether, ug/L	<1
2-Hexanone, ug/L	<5
Acetone, ug/L	<20
Bromodichloromethane, ug/L	<1
Bromomethane, ug/L	<1
Benzene, ug/L	<1
Bromoform, ug/L	<1
Chlorobenzene, ug/L	<1
Carbon Tetrachloride, ug/L	<1
Chloroethane, ug/L	<1
Chloroform, ug/L	<1
Chloromethane, ug/L	<1
Carbon Disulfide, ug/L	<2

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Kapolei, HI 96707

Project: GMP.2ND.QTR

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, BLANK WATER SAMPLES	DATE SAMPLED
03-435-7	Trip Blank #4	22 MAR 95

PARAMETER	03-435-7
Cyclohexane, ug/L	<5
Dibromochloromethane, ug/L	<1
Ethylene Dibromide, ug/L	<5
Ethylbenzene, ug/L	<1
Freon 113, ug/L	<2
Methyl ethyl ketone, ug/L	<5
Methyl isobutyl ketone, ug/L	<5
Methylene chloride, ug/L	<1
Styrene, ug/L	<1
Trichloroethene, ug/L	<1
Trichlorofluoromethane, ug/L	<1
Toluene, ug/L	<1
Tetrachloroethene, ug/L	<1
Vinyl acetate, ug/L	<10
Vinyl chloride, ug/L	<1
Total Xylene Isomers, ug/L	<3
cis-1,2-Dichloroethene, ug/L	<1
cis-1,3-Dichloropropene, ug/L	<1
trans-1,2-Dichloroethene, ug/L	<1
trans-1,3-Dichloropropene, ug/L	<1

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Project: GMP.2ND.QTR

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
03-435-8	CW-9A Re-Extraction	22 MAR 95

PARAMETER	03-435-8
B/N,A Ext.Pri.Poll. (EPA 8270)	
Date Analyzed	04/03/95
Date Extracted	03/31/95
Dilution Factor, Times	1
1,2,4-Trichlorobenzene, ug/L	<5
1,2-Dichlorobenzene, ug/L	<6
1,2-Diphenylhydrazine, ug/L	<5
1,3-Dichlorobenzene, ug/L	<5
1,4-Dichlorobenzene, ug/L	<5
1-Methylnaphthalene, ug/L	<10
2,4,5-Trichlorophenol, ug/L	<6
2,4,6-Trichlorophenol, ug/L	<5
2,4-Dichlorophenol, ug/L	<5
2,4-Dimethylphenol, ug/L	<5
2,4-Dinitrophenol, ug/L	<10
2,4-Dinitrotoluene, ug/L	<5
2,6-Dinitrotoluene, ug/L	<5
2-Chloronaphthalene, ug/L	<6
2-Chlorophenol, ug/L	<5
2-Methyl-4,6-dinitrophenol, ug/L	<5
2-Methylnaphthalene, ug/L	<5
2-Methylphenol (o-Cresol), ug/L	<5
2-Nitroaniline, ug/L	<5
2-Nitrophenol, ug/L	<5
3,3'-Dichlorobenzidine, ug/L	<20
3-Methylphenol (m-Cresol), ug/L	<10
3-Nitroaniline, ug/L	<5

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
03-435-8	CW-9A Re-Extraction	22 MAR 95

PARAMETER	03-435-8
4-Bromophenylphenylether, ug/L	<5
4-Chloro-3-methylphenol, ug/L	<5
4-Chloroaniline, ug/L	<5
4-Chlorophenylphenylether, ug/L	<5
4-Methylphenol (p-Cresol), ug/L	<8
4-Nitroaniline, ug/L	<6
4-Nitrophenol, ug/L	<5
6-Methylchrysene, ug/L	<10
7,12-Dimethylbenz(a)anthracene, ug/L	<5
Acenaphthene, ug/L	<5
Acenaphthylene, ug/L	<5
Aniline, ug/L	<5
Anthracene, ug/L	<5
Benzidine, ug/L	<100
Benzo(a)anthracene, ug/L	<5
Benzo(a)pyrene, ug/L	<5
Benzo(b)fluoranthene, ug/L	<5
Benzo(g,h,i)perylene, ug/L	<5
Benzo(k)fluoranthene, ug/L	<5
Benzenethiol, ug/L	<20
Benzyl Alcohol, ug/L	<5
Benzoic acid, ug/L	<50
Butylbenzylphthalate, ug/L	<5
Chrysene, ug/L	<5
Di-n-octylphthalate, ug/L	<5
Dibenzo(a,h)anthracene, ug/L	<5
Dibenz(a,h)acridine, ug/L	<20

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Project: GMP.2ND.QTR

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
03-435-8	CW-9A Re-Extraction	22 MAR 95

PARAMETER	03-435-8
Dibenzofuran, ug/L	<5
Dibutylphthalate, ug/L	<5
Diethylphthalate, ug/L	<5
Dimethylphthalate, ug/L	<5
Fluoranthene, ug/L	<5
Fluorene, ug/L	<5
Hexachlorobenzene, ug/L	<5
Hexachlorobutadiene, ug/L	<5
Hexachlorocyclopentadiene, ug/L	<5
Hexachloroethane, ug/L	<5
Indeno(1,2,3-c,d)pyrene, ug/L	<7
Indene, ug/L	<10
Isophorone, ug/L	<5
N-Nitrosodimethylamine, ug/L	<6
N-Nitrosodiphenylamine, ug/L	<5
N-Nitrosodi-n-propylamine, ug/L	<6
Nitrobenzene, ug/L	<5
Naphthalene, ug/L	<5
Phenanthrene, ug/L	<5
Phenol, ug/L	<5
Pentachlorophenol, ug/L	<5
Pyrene, ug/L	<5
Pyridine, ug/L	<10
Quinoline, ug/L	<10
Bis(2-chloroethoxy)methane, ug/L	<5
Bis(2-chloroethyl)ether, ug/L	<5
Bis(2-chloroisopropyl)ether, ug/L	<6

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Project: GMP.2ND.QTR

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
03-435-8	CW-9A Re-Extraction	22 MAR 95

PARAMETER	03-435-8
Bis(2-ethylhexyl)phthalate, ug/L	<7

Mark A. Valentini, PhD, Laboratory Director

BCA

BC ANALYTICAL

ORDER QC REPORT FOR G9503435

DATE REPORTED : 04/06/95

LABORATORY CONTROL STANDARDS
FOR BATCHES WHICH INCLUDE THIS ORDER

PARAMETER		DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
1. Ammonia (350.1)	C5032040*1	03.24.95	9538	10.0	10.0	mg/L	100
2. Ammonia (350.1)	C5032041*1	03.24.95	9538	9.74	10.0	mg/L	97
3. COD (410.4)	C5032686*1	03.28.95	9532	101	100	mg/L	101
4. COD (410.4)	C5032687*1	03.28.95	9532	103	100	mg/L	103
5. Nitrate+Nitrite	C5031735*1						
Nitrate+Nitrite (as NO3)		03.21.95	9560	20.2	20.0	mg/L	101
Nitrate+Nitrite (as N)		03.21.95	9560	4.56	4.51	mg/L	101
6. Nitrate+Nitrite	C5031736*1						
Nitrate+Nitrite (as NO3)		03.21.95	9560	20.6	20.0	mg/L	103
Nitrate+Nitrite (as N)		03.21.95	9560	4.65	4.51	mg/L	103
7. Ortho Phosphate (3	C5031896*1	03.22.95	9539	3.32	3.26	mg/L	102
7. Ortho Phosphate (3	C5031896*1	03.22.95	9539	10.2	10.0	mg/L	102
8. Ortho Phosphate (3	C5031897*1	03.22.95	9539	3.33	3.26	mg/L	102
8. Ortho Phosphate (3	C5031897*1	03.22.95	9539	10.2	10.0	mg/L	102
9. BOD5 (405.1)	C5032253*1	03.23.95	9550	204	200	mg/L	102
10. BOD5 (405.1)	C5032254*1	03.23.95	9550	181	200	mg/L	91
11. Quad. pH (9040)	C5031987*1						
pH, Average		03.21.95	95131	5.99	6.00	Units	100
pH, 1st Replicate		03.21.95	95131	5.99	6.00	Units	100
12. Quad. pH (9040)	C5031988*1						
pH, Average		03.21.95	95131	5.98	6.00	Units	100
pH, 1st Replicate		03.21.95	95131	5.98	6.00	Units	100
13. Sulfate	C5032192*1	03.27.95	951	19.6	20.0	mg/L	98
14. Sulfate	C5032193*1	03.27.95	951	19.6	20.0	mg/L	98
15. Dissolved Solids (	C5032042*1	03.23.95	9525	1020	1000	mg/L	102
16. Dissolved Solids (	C5032043*1	03.23.95	9525	1010	1000	mg/L	101
17. Alkalinity (310.1)	C5032679*1						
Bicarbonate Alk (as CaCO3)		03.31.95	9518	580	596	mg/L	97
Total Alkalinity (as CaCO3)		03.31.95	9518	580	596	mg/L	97
18. Alkalinity (310.1)	C5032680*1						
Bicarbonate Alk (as CaCO3)		03.31.95	9518	578	596	mg/L	97
Total Alkalinity (as CaCO3)		03.31.95	9518	578	596	mg/L	97
19. Chloride	C5032141*1	03.27.95	957	20.0	20.0	mg/L	100
20. Chloride	C5032142*1	03.27.95	957	20.4	20.0	mg/L	102
21. TOC (9060/415.1)	C5031908*1	03.21.95	9528	5.50	5.00	mg/L	110
22. TOC (9060/415.1)	C5031909*1	03.21.95	9528	5.04	5.00	mg/L	101
23. Antimony (6010/200	C5032483*1	03.30.95	95370	2.69	3.00	mg/L	90
24. Antimony (6010/200	C5032484*1	03.30.95	95370	2.85	3.00	mg/L	95
25. Arsenic (7060/206.	C5032361*1	03.30.95	95366	0.0493	0.0500	mg/L	99
26. Arsenic (7060/206.	C5032362*1	03.30.95	95366	0.0489	0.0500	mg/L	98
27. Barium (6010/200.7	C5032467*1	03.30.95	95370	1.12	1.00	mg/L	112
28. Barium (6010/200.7	C5032468*1	03.30.95	95370	1.06	1.00	mg/L	106
29. Beryllium (6010/20	C5032469*1	03.30.95	95370	0.495	0.500	mg/L	99
30. Beryllium (6010/20	C5032470*1	03.30.95	95370	0.508	0.500	mg/L	102
31. Cadmium (7131/213.	C5032363*1	03.30.95	95366	0.0225	0.0200	mg/L	113

BC ANALYTICAL

ORDER QC REPORT FOR G9503435

DATE REPORTED : 04/06/95

LABORATORY CONTROL STANDARDS
FOR BATCHES WHICH INCLUDE THIS ORDER

PARAMETER		DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
32. Cadmium (7131/213.	C5032364*1	03.30.95	95366	0.0225	0.0200	mg/L	113
33. Chromium (6010/200	C5032473*1	03.30.95	95370	0.974	1.00	mg/L	97
34. Chromium (6010/200	C5032474*1	03.30.95	95370	1.00	1.00	mg/L	100
35. Cobalt (6010/200.7	C5032471*1	03.30.95	95370	0.986	1.00	mg/L	99
36. Cobalt (6010/200.7	C5032472*1	03.30.95	95370	1.02	1.00	mg/L	102
37. Iron (6010/200.7)	C5032475*1	03.30.95	95370	5.08	5.00	mg/L	102
38. Iron (6010/200.7)	C5032476*1	03.30.95	95370	5.28	5.00	mg/L	106
39. Lead (7421/239.2)	C5032365*1	03.29.95	95366	0.0500	0.0500	mg/L	100
40. Lead (7421/239.2)	C5032366*1	03.29.95	95366	0.0515	0.0500	mg/L	103
41. Manganese (6010/20	C5032477*1	03.30.95	95370	0.953	1.00	mg/L	95
42. Manganese (6010/20	C5032478*1	03.30.95	95370	0.986	1.00	mg/L	99
43. Mercury (7470/245.	C5032184*1	03.27.95	95357	0.0040	0.0040	mg/L	100
44. Mercury (7470/245.	C5032185*1	03.27.95	95357	0.0037	0.0040	mg/L	93
45. Nickel (6010/200.7	C5032481*1	03.30.95	95370	1.01	1.00	mg/L	101
46. Nickel (6010/200.7	C5032482*1	03.30.95	95370	1.03	1.00	mg/L	103
47. Selenium (7740/270	C5032367*1	03.30.95	95366	0.101	0.100	mg/L	101
48. Selenium (7740/270	C5032368*1	03.30.95	95366	0.101	0.100	mg/L	101
49. Sodium (6010/200.7	C5032479*1	03.31.95	95370	48.5	50.0	mg/L	97
50. Sodium (6010/200.7	C5032480*1	03.31.95	95370	48.8	50.0	mg/L	98
51. Vanadium (6010/200	C5032485*1	03.30.95	95370	0.989	1.00	mg/L	99
52. Vanadium (6010/200	C5032486*1	03.30.95	95370	1.02	1.00	mg/L	102
53. Vol.Pri.Poll. (EPA-824	C5032648*1						
Date Analyzed		03.29.95	95922	03/29/95	03/29/95	Date	N/A
1,1,1-Trichloroethane		03.29.95	95922	47.0	50.0	ug/L	94
1,1,2,2-Tetrachloroethane		03.29.95	95922	56.6	50.0	ug/L	113
1,1,2-Trichloroethane		03.29.95	95922	53.1	50.0	ug/L	106
1,1-Dichloroethane		03.29.95	95922	46.2	50.0	ug/L	92
1,1-Dichloroethene		03.29.95	95922	41.4	50.0	ug/L	83
1,2-Dichloroethane		03.29.95	95922	46.2	50.0	ug/L	92
1,2-Dichlorobenzene		03.29.95	95922	53.3	50.0	ug/L	107
1,2-Dichloropropane		03.29.95	95922	49.6	50.0	ug/L	99
1,3-Dichlorobenzene		03.29.95	95922	53.9	50.0	ug/L	108
1,4-Dichlorobenzene		03.29.95	95922	53.2	50.0	ug/L	106
2-Chloroethylvinylether		03.29.95	95922	56.9	50.0	ug/L	114
2-Hexanone		03.29.95	95922	49.4	50.0	ug/L	99
Acetone		03.29.95	95922	41.7	50.0	ug/L	83
Acrolein		03.29.95	95922	512	500	ug/L	102
Acrylonitrile		03.29.95	95922	500	500	ug/L	100
Bromodichloromethane		03.29.95	95922	50.8	50.0	ug/L	102
Bromomethane		03.29.95	95922	40.2	50.0	ug/L	80
Benzene		03.29.95	95922	46.9	50.0	ug/L	94
Bromoform		03.29.95	95922	48.6	50.0	ug/L	97
Chlorobenzene		03.29.95	95922	50.0	50.0	ug/L	100
Carbon Tetrachloride		03.29.95	95922	43.7	50.0	ug/L	87
Chloroethane		03.29.95	95922	32.8	50.0	ug/L	66

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PARAMETER	DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
Chloroform	03.29.95	95922	47.1	50.0	ug/L	94
Chloromethane	03.29.95	95922	45.0	50.0	ug/L	90
Carbon Disulfide	03.29.95	95922	36.8	50.0	ug/L	74
Dibromochloromethane	03.29.95	95922	50.2	50.0	ug/L	100
Ethylbenzene	03.29.95	95922	51.7	50.0	ug/L	103
Freon 113	03.29.95	95922	44.4	50.0	ug/L	89
Methyl ethyl ketone	03.29.95	95922	44.3	50.0	ug/L	89
Methyl isobutyl ketone	03.29.95	95922	57.4	50.0	ug/L	115
Methylene chloride	03.29.95	95922	45.4	50.0	ug/L	91
Styrene	03.29.95	95922	50.6	50.0	ug/L	101
Trichloroethene	03.29.95	95922	47.9	50.0	ug/L	96
Trichlorofluoromethane	03.29.95	95922	58.0	50.0	ug/L	116
Toluene	03.29.95	95922	50.4	50.0	ug/L	101
Tetrachloroethene	03.29.95	95922	50.4	50.0	ug/L	101
Vinyl acetate	03.29.95	95922	49.8	50.0	ug/L	100
Vinyl chloride	03.29.95	95922	59.9	50.0	ug/L	120
Total Xylene Isomers	03.29.95	95922	150	150	ug/L	100
cis-1,2-Dichloroethene	03.29.95	95922	44.1	50.0	ug/L	88
cis-1,3-Dichloropropene	03.29.95	95922	51.1	50.0	ug/L	102
trans-1,2-Dichloroethene	03.29.95	95922	42.7	50.0	ug/L	85
trans-1,3-Dichloropropene	03.29.95	95922	51.5	50.0	ug/L	103
54. Quad. Conductivity (90 C504005*1						
Sp. Cond., Average	03.29.95	9529	1360	1410	umhos/cm	96
Sp. Cond., 1st Replicate	03.29.95	9529	1360	1410	umhos/cm	96
55. Quad. Conductivity (90 C504006*1						
Sp. Cond., Average	03.29.95	9529	1380	1410	umhos/cm	98
Sp. Cond., 1st Replicate	03.29.95	9529	1380	1410	umhos/cm	98
56. B/N,A Ext.Pri.Poll. (6 C5031977*1						
Date Analyzed	03.23.95	9546	03/23/95	03/23/95	Date	N/A
Date Extracted	03.23.95	9546	03/23/95	03/23/95	Date	N/A
1,2,4-Trichlorobenzene	03.23.95	9546	58.2	100	ug/L	58
1,2-Diphenylhydrazine	03.23.95	9546	55.6	100	ug/L	56
2,4,6-Trichlorophenol	03.23.95	9546	75.9	100	ug/L	76
2,4-Dichlorophenol	03.23.95	9546	71.1	100	ug/L	71
2,4-Dimethylphenol	03.23.95	9546	63.6	100	ug/L	64
2,4-Dinitrophenol	03.23.95	9546	99.7	100	ug/L	100
2,4-Dinitrotoluene	03.23.95	9546	91.7	100	ug/L	92
2,6-Dinitrotoluene	03.23.95	9546	89.1	100	ug/L	89
2-Chloronaphthalene	03.23.95	9546	53.7	100	ug/L	54
2-Chlorophenol	03.23.95	9546	76.1	100	ug/L	76
2-Methyl-4,6-dinitrophenol	03.23.95	9546	92.2	100	ug/L	92
2-Nitrophenol	03.23.95	9546	64.8	100	ug/L	65
3,3'-Dichlorobenzidine	03.23.95	9546	84.5	100	ug/L	85
4-Bromophenylphenylether	03.23.95	9546	65.6	100	ug/L	66
4-Chloro-3-methylphenol	03.23.95	9546	72.4	100	ug/L	72

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4-Chlorophenylphenylether	03.23.95	9546	74.8	100	ug/L	75
4-Nitrophenol	03.23.95	9546	65.9	100	ug/L	66
Acenaphthene	03.23.95	9546	69.5	100	ug/L	70
Acenaphthylene	03.23.95	9546	74.0	100	ug/L	74
Anthracene	03.23.95	9546	77.8	100	ug/L	78
Benzidine	03.23.95	9546	347	100	ug/L	347 Q
Benzo(a)anthracene	03.23.95	9546	73.4	100	ug/L	73
Benzo(a)pyrene	03.23.95	9546	90.1	100	ug/L	90
Benzo(b)fluoranthene	03.23.95	9546	82.8	100	ug/L	83
Benzo(g,h,i)perylene	03.23.95	9546	56.8	100	ug/L	57
Benzo(k)fluoranthene	03.23.95	9546	95.6	100	ug/L	96
Butylbenzylphthalate	03.23.95	9546	65.7	100	ug/L	66
Chrysene	03.23.95	9546	77.7	100	ug/L	78
Di-n-butylphthalate	03.23.95	9546	69.9	100	ug/L	70
Di-n-octylphthalate	03.23.95	9546	70.3	100	ug/L	70
Dibenzo(a,h)anthracene	03.23.95	9546	62.8	100	ug/L	63
Diethylphthalate	03.23.95	9546	75.2	100	ug/L	75
Dimethylphthalate	03.23.95	9546	92.1	100	ug/L	92
Fluoranthene	03.23.95	9546	81.7	100	ug/L	82
Fluorene	03.23.95	9546	82.6	100	ug/L	83
Hexachlorobenzene	03.23.95	9546	69.6	100	ug/L	70
Hexachlorobutadiene	03.23.95	9546	53.0	100	ug/L	53
Hexachlorocyclopentadiene	03.23.95	9546	67.0	100	ug/L	67
Hexachloroethane	03.23.95	9546	59.2	100	ug/L	59
Indeno(1,2,3-c,d)pyrene	03.23.95	9546	75.0	100	ug/L	75
Isophorone	03.23.95	9546	56.5	100	ug/L	57
N-Nitrosodimethylamine	03.23.95	9546	63.4	100	ug/L	63
N-Nitrosodiphenylamine	03.23.95	9546	52.4	100	ug/L	52
N-Nitrosodi-n-propylamine	03.23.95	9546	70.6	100	ug/L	71
Nitrobenzene	03.23.95	9546	65.0	100	ug/L	65
Naphthalene	03.23.95	9546	59.6	100	ug/L	60
Phenanthrene	03.23.95	9546	77.8	100	ug/L	78
Phenol	03.23.95	9546	53.6	100	ug/L	54
Pentachlorophenol	03.23.95	9546	84.0	100	ug/L	84
Pyrene	03.23.95	9546	68.6	100	ug/L	69
Bis(2-chloroethoxy)methane	03.23.95	9546	69.8	100	ug/L	70
Bis(2-chloroethyl)ether	03.23.95	9546	63.6	100	ug/L	64
Bis(2-chloroisopropyl)ether	03.23.95	9546	69.2	100	ug/L	69
Bis(2-ethylhexyl)phthalate	03.23.95	9546	63.7	100	ug/L	64
57. B/N,A Ext.Pri.Poll. (6 C5031978*1						
Date Analyzed	03.23.95	9546	03/23/95	03/23/95	Date	N/A
Date Extracted	03.23.95	9546	03/23/95	03/23/95	Date	N/A
1,2,4-Trichlorobenzene	03.23.95	9546	61.4	100	ug/L	61
1,2-Diphenylhydrazine	03.23.95	9546	60.4	100	ug/L	60
2,4,6-Trichlorophenol	03.23.95	9546	77.7	100	ug/L	78

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2,4-Dichlorophenol	03.23.95	9546	72.6	100	ug/L	73
2,4-Dimethylphenol	03.23.95	9546	64.0	100	ug/L	64
2,4-Dinitrophenol	03.23.95	9546	111	100	ug/L	111
2,4-Dinitrotoluene	03.23.95	9546	91.5	100	ug/L	92
2,6-Dinitrotoluene	03.23.95	9546	86.8	100	ug/L	87
2-Chloronaphthalene	03.23.95	9546	54.6	100	ug/L	55
2-Chlorophenol	03.23.95	9546	78.1	100	ug/L	78
2-Methyl-4,6-dinitrophenol	03.23.95	9546	93.9	100	ug/L	94
2-Nitrophenol	03.23.95	9546	66.7	100	ug/L	67
3,3'-Dichlorobenzidine	03.23.95	9546	87.7	100	ug/L	88
4-Bromophenylphenylether	03.23.95	9546	63.4	100	ug/L	63
4-Chloro-3-methylphenol	03.23.95	9546	72.5	100	ug/L	73
4-Chlorophenylphenylether	03.23.95	9546	74.2	100	ug/L	74
4-Nitrophenol	03.23.95	9546	72.9	100	ug/L	73
Acenaphthene	03.23.95	9546	68.3	100	ug/L	68
Acenaphthylene	03.23.95	9546	72.7	100	ug/L	73
Anthracene	03.23.95	9546	75.1	100	ug/L	75
Benzidine	03.23.95	9546	362	100	ug/L	362 Q
Benzo(a)anthracene	03.23.95	9546	70.3	100	ug/L	70
Benzo(a)pyrene	03.23.95	9546	89.2	100	ug/L	89
Benzo(b)fluoranthene	03.23.95	9546	81.4	100	ug/L	81
Benzo(g,h,i)perylene	03.23.95	9546	55.8	100	ug/L	56
Benzo(k)fluoranthene	03.23.95	9546	95.4	100	ug/L	95
Butylbenzylphthalate	03.23.95	9546	60.3	100	ug/L	60
Chrysene	03.23.95	9546	76.3	100	ug/L	76
Di-n-butylphthalate	03.23.95	9546	66.6	100	ug/L	67
Di-n-octylphthalate	03.23.95	9546	66.4	100	ug/L	66
Dibenzo(a,h)anthracene	03.23.95	9546	63.1	100	ug/L	63
Diethylphthalate	03.23.95	9546	69.4	100	ug/L	69
Dimethylphthalate	03.23.95	9546	90.0	100	ug/L	90
Fluoranthene	03.23.95	9546	79.2	100	ug/L	79
Fluorene	03.23.95	9546	81.4	100	ug/L	81
Hexachlorobenzene	03.23.95	9546	67.0	100	ug/L	67
Hexachlorobutadiene	03.23.95	9546	58.1	100	ug/L	58
Hexachlorocyclopentadiene	03.23.95	9546	73.4	100	ug/L	73
Hexachloroethane	03.23.95	9546	63.4	100	ug/L	63
Indeno(1,2,3-c,d)pyrene	03.23.95	9546	73.9	100	ug/L	74
Isophorone	03.23.95	9546	54.2	100	ug/L	54
N-Nitrosodimethylamine	03.23.95	9546	62.9	100	ug/L	63
N-Nitrosodiphenylamine	03.23.95	9546	50.6	100	ug/L	51
N-Nitrosodi-n-propylamine	03.23.95	9546	67.2	100	ug/L	67
Nitrobenzene	03.23.95	9546	64.8	100	ug/L	65
Naphthalene	03.23.95	9546	61.0	100	ug/L	61
Phenanthrene	03.23.95	9546	75.0	100	ug/L	75
Phenol	03.23.95	9546	60.9	100	ug/L	61

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Pentachlorophenol		03.23.95	9546	87.5	100	ug/L	88
Pyrene		03.23.95	9546	64.1	100	ug/L	64
Bis(2-chloroethoxy)methane		03.23.95	9546	64.3	100	ug/L	64
Bis(2-chloroethyl)ether		03.23.95	9546	63.0	100	ug/L	63
Bis(2-chloroisopropyl)ether		03.23.95	9546	67.9	100	ug/L	68
Bis(2-ethylhexyl)phthalate		03.23.95	9546	57.4	100	ug/L	57
58. COD (410.4)	C5032684*1	03.28.95	9531	498	500	mg/L	100
59. COD (410.4)	C5032685*1	03.28.95	9531	502	500	mg/L	100
60. TDS (EPA 160.1)	C5032236*1						
Date Analyzed		03.27.95	9526	03/27/95	03/27/95	Date	N/A
Dissolved Solids (160.1)		03.27.95	9526	1010	1000	mg/L	101
61. TDS (EPA 160.1)	C5032237*1						
Date Analyzed		03.27.95	9526	03/27/95	03/27/95	Date	N/A
Dissolved Solids (160.1)		03.27.95	9526	1010	1000	mg/L	101
62. Nitrate+Nitrite	C5032022*1						
Nitrate+Nitrite (as NO3)		03.24.95	9564	20.4	20.0	mg/L	102
Nitrate+Nitrite (as N)		03.24.95	9564	4.60	4.51	mg/L	102
63. Nitrate+Nitrite	C5032023*1						
Nitrate+Nitrite (as NO3)		03.24.95	9564	20.0	20.0	mg/L	100
Nitrate+Nitrite (as N)		03.24.95	9564	4.51	4.51	mg/L	100
64. Quad. pH (9040)	C5031989*1						
pH, Average		03.22.95	95137	6.02	6.00	Units	100
pH, 1st Replicate		03.22.95	95137	6.02	6.00	Units	100
65. Quad. pH (9040)	C5031990*1						
pH, Average		03.22.95	95137	6.01	6.00	Units	100
pH, 1st Replicate		03.22.95	95137	6.01	6.00	Units	100
66. Sulfate	C5032393*1	03.27.95	952	19.9	20.0	mg/L	100
67. Sulfate	C5032394*1	03.27.95	952	19.9	20.0	mg/L	100
68. Dissolved Solids (	C5032407*1	03.28.95	9527	1070	1000	mg/L	107
69. Dissolved Solids (	C5032408*1	03.28.95	9527	1070	1000	mg/L	107
70. TOC (9060/415.1)	C5032546*1	03.29.95	9532	5.50	5.00	mg/L	110
71. TOC (9060/415.1)	C5032547*1	03.29.95	9532	5.43	5.00	mg/L	109
72. Mercury (7470/245.	C5032699*1	03.31.95	95382	0.0045	0.0040	mg/L	113
73. Mercury (7470/245.	C5032700*1	03.31.95	95382	0.0045	0.0040	mg/L	113
74. Vol.Pri.Poll. (EPA-824	C5032695*1						
Date Analyzed		03.30.95	95923	03/30/95	03/30/95	Date	N/A
1,1,1-Trichloroethane		03.30.95	95923	48.7	50.0	ug/L	97
1,1,2,2-Tetrachloroethane		03.30.95	95923	53.3	50.0	ug/L	107
1,1,2-Trichloroethane		03.30.95	95923	52.8	50.0	ug/L	106
1,1-Dichloroethane		03.30.95	95923	48.5	50.0	ug/L	97
1,1-Dichloroethene		03.30.95	95923	48.6	50.0	ug/L	97
1,2-Dichloroethane		03.30.95	95923	51.0	50.0	ug/L	102
1,2-Dichlorobenzene		03.30.95	95923	50.6	50.0	ug/L	101
1,2-Dichloropropane		03.30.95	95923	48.1	50.0	ug/L	96
1,3-Dichlorobenzene		03.30.95	95923	49.9	50.0	ug/L	100

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1,4-Dichlorobenzene	03.30.95	95923	50.1	50.0	ug/L	100
2-Chloroethylvinylether	03.30.95	95923	57.1	50.0	ug/L	114
2-Hexanone	03.30.95	95923	55.4	50.0	ug/L	111
Acetone	03.30.95	95923	51.6	50.0	ug/L	103
Bromodichloromethane	03.30.95	95923	50.8	50.0	ug/L	102
Bromomethane	03.30.95	95923	44.0	50.0	ug/L	88
Benzene	03.30.95	95923	48.7	50.0	ug/L	97
Bromoform	03.30.95	95923	54.5	50.0	ug/L	109
Chlorobenzene	03.30.95	95923	49.4	50.0	ug/L	99
Carbon Tetrachloride	03.30.95	95923	48.8	50.0	ug/L	98
Chloroethane	03.30.95	95923	34.3	50.0	ug/L	69
Chloroform	03.30.95	95923	48.9	50.0	ug/L	98
Chloromethane	03.30.95	95923	50.7	50.0	ug/L	101
Carbon Disulfide	03.30.95	95923	39.2	50.0	ug/L	78
Dibromochloromethane	03.30.95	95923	52.2	50.0	ug/L	104
Ethylbenzene	03.30.95	95923	49.5	50.0	ug/L	99
Freon 113	03.30.95	95923	48.3	50.0	ug/L	97
Methyl ethyl ketone	03.30.95	95923	53.8	50.0	ug/L	108
Methyl isobutyl ketone	03.30.95	95923	54.6	50.0	ug/L	109
Methylene chloride	03.30.95	95923	48.0	50.0	ug/L	96
Styrene	03.30.95	95923	50.1	50.0	ug/L	100
Trichloroethene	03.30.95	95923	49.1	50.0	ug/L	98
Trichlorofluoromethane	03.30.95	95923	47.7	50.0	ug/L	95
Toluene	03.30.95	95923	50.1	50.0	ug/L	100
Tetrachloroethene	03.30.95	95923	49.5	50.0	ug/L	99
Vinyl acetate	03.30.95	95923	52.6	50.0	ug/L	105
Vinyl chloride	03.30.95	95923	40.7	50.0	ug/L	81
Total Xylene Isomers	03.30.95	95923	151	150	ug/L	101
cis-1,2-Dichloroethene	03.30.95	95923	48.5	50.0	ug/L	97
cis-1,3-Dichloropropene	03.30.95	95923	52.2	50.0	ug/L	104
trans-1,2-Dichloroethene	03.30.95	95923	48.5	50.0	ug/L	97
trans-1,3-Dichloropropene	03.30.95	95923	50.5	50.0	ug/L	101
75. Vol.Pri.Poll. (EPA-824 C5032696*1						
Date Analyzed	03.30.95	95923	03/30/95	03/30/95	Date	N/A
1,1,1-Trichloroethane	03.30.95	95923	48.9	50.0	ug/L	98
1,1,2,2-Tetrachloroethane	03.30.95	95923	53.9	50.0	ug/L	108
1,1,2-Trichloroethane	03.30.95	95923	54.2	50.0	ug/L	108
1,1-Dichloroethane	03.30.95	95923	48.3	50.0	ug/L	97
1,1-Dichloroethene	03.30.95	95923	47.9	50.0	ug/L	96
1,2-Dichloroethane	03.30.95	95923	51.7	50.0	ug/L	103
1,2-Dichlorobenzene	03.30.95	95923	50.1	50.0	ug/L	100
1,2-Dichloropropane	03.30.95	95923	49.4	50.0	ug/L	99
1,3-Dichlorobenzene	03.30.95	95923	48.9	50.0	ug/L	98
1,4-Dichlorobenzene	03.30.95	95923	49.4	50.0	ug/L	99
2-Chloroethylvinylether	03.30.95	95923	58.5	50.0	ug/L	117

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LABORATORY CONTROL STANDARDS
FOR BATCHES WHICH INCLUDE THIS ORDER

PARAMETER	DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
2-Hexanone	03.30.95	95923	55.2	50.0	ug/L	110
Acetone	03.30.95	95923	52.1	50.0	ug/L	104
Bromodichloromethane	03.30.95	95923	51.7	50.0	ug/L	103
Bromomethane	03.30.95	95923	45.3	50.0	ug/L	91
Benzene	03.30.95	95923	49.2	50.0	ug/L	98
Bromoform	03.30.95	95923	57.1	50.0	ug/L	114
Chlorobenzene	03.30.95	95923	49.8	50.0	ug/L	100
Carbon Tetrachloride	03.30.95	95923	49.6	50.0	ug/L	99
Chloroethane	03.30.95	95923	30.3	50.0	ug/L	61
Chloroform	03.30.95	95923	49.2	50.0	ug/L	98
Chloromethane	03.30.95	95923	50.3	50.0	ug/L	101
Carbon Disulfide	03.30.95	95923	38.9	50.0	ug/L	78
Dibromochloromethane	03.30.95	95923	54.0	50.0	ug/L	108
Ethylbenzene	03.30.95	95923	50.1	50.0	ug/L	100
Freon 113	03.30.95	95923	47.6	50.0	ug/L	95
Methyl ethyl ketone	03.30.95	95923	55.9	50.0	ug/L	112
Methyl isobutyl ketone	03.30.95	95923	55.9	50.0	ug/L	112
Methylene chloride	03.30.95	95923	48.3	50.0	ug/L	97
Styrene	03.30.95	95923	50.7	50.0	ug/L	101
Trichloroethene	03.30.95	95923	49.0	50.0	ug/L	98
Trichlorofluoromethane	03.30.95	95923	48.6	50.0	ug/L	97
Toluene	03.30.95	95923	49.7	50.0	ug/L	99
Tetrachloroethene	03.30.95	95923	49.7	50.0	ug/L	99
Vinyl acetate	03.30.95	95923	53.4	50.0	ug/L	107
Vinyl chloride	03.30.95	95923	40.5	50.0	ug/L	81
Total Xylene Isomers	03.30.95	95923	150	150	ug/L	100
cis-1,2-Dichloroethene	03.30.95	95923	48.4	50.0	ug/L	97
cis-1,3-Dichloropropene	03.30.95	95923	53.8	50.0	ug/L	108
trans-1,2-Dichloroethene	03.30.95	95923	48.6	50.0	ug/L	97
trans-1,3-Dichloropropene	03.30.95	95923	51.3	50.0	ug/L	103
76. B/N,A Ext.Pri.Poll. (E C504052*1						
Date Analyzed	03.29.95	9548	03/29/95	03/29/95	Date	N/A
Date Extracted	03.29.95	9548	03/27/95	03/27/95	Date	N/A
1,2,4-Trichlorobenzene	03.29.95	9548	69.2	100	ug/L	69
1,2-Dichlorobenzene	03.29.95	9548	67.9	100	ug/L	68
1,2-Diphenylhydrazine	03.29.95	9548	91.8	100	ug/L	92
1,3-Dichlorobenzene	03.29.95	9548	63.0	100	ug/L	63
1,4-Dichlorobenzene	03.29.95	9548	63.9	100	ug/L	64
2,4,5-Trichlorophenol	03.29.95	9548	87.0	100	ug/L	87
2,4,6-Trichlorophenol	03.29.95	9548	87.9	100	ug/L	88
2,4-Dichlorophenol	03.29.95	9548	75.3	100	ug/L	75
2,4-Dimethylphenol	03.29.95	9548	71.0	100	ug/L	71
2,4-Dinitrophenol	03.29.95	9548	115	100	ug/L	115
2,4-Dinitrotoluene	03.29.95	9548	103	100	ug/L	103
2,6-Dinitrotoluene	03.29.95	9548	97.8	100	ug/L	98

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FOR BATCHES WHICH INCLUDE THIS ORDER

PARAMETER	DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
2-Chloronaphthalene	03.29.95	9548	72.5	100	ug/L	73
2-Chlorophenol	03.29.95	9548	76.5	100	ug/L	77
2-Methyl-4,6-dinitrophenol	03.29.95	9548	93.4	100	ug/L	93
2-Methylnaphthalene	03.29.95	9548	76.4	100	ug/L	76
2-Methylphenol (o-Cresol)	03.29.95	9548	66.4	100	ug/L	66
2-Nitroaniline	03.29.95	9548	102	100	ug/L	102
2-Nitrophenol	03.29.95	9548	77.4	100	ug/L	77
3,3'-Dichlorobenzidine	03.29.95	9548	88.6	100	ug/L	89
3-Nitroaniline	03.29.95	9548	102	100	ug/L	102
4-Bromophenylphenylether	03.29.95	9548	95.3	100	ug/L	95
4-Chloro-3-methylphenol	03.29.95	9548	85.7	100	ug/L	86
4-Chloroaniline	03.29.95	9548	86.1	100	ug/L	86
4-Chlorophenylphenylether	03.29.95	9548	92.8	100	ug/L	93
4-Methylphenol (p-Cresol)	03.29.95	9548	71.0	100	ug/L	71
4-Nitroaniline	03.29.95	9548	115	100	ug/L	115
4-Nitrophenol	03.29.95	9548	77.5	100	ug/L	78
Acenaphthene	03.29.95	9548	89.5	100	ug/L	90
Acenaphthylene	03.29.95	9548	97.7	100	ug/L	98
Aniline	03.29.95	9548	70.8	100	ug/L	71
Anthracene	03.29.95	9548	92.3	100	ug/L	92
Benzidine	03.29.95	9548	302	100	ug/L	302 Q
Benzo(a)anthracene	03.29.95	9548	101	100	ug/L	101
Benzo(a)pyrene	03.29.95	9548	95.0	100	ug/L	95
Benzo(b)fluoranthene	03.29.95	9548	88.4	100	ug/L	88
Benzo(g,h,i)perylene	03.29.95	9548	98.1	100	ug/L	98
Benzo(k)fluoranthene	03.29.95	9548	94.0	100	ug/L	94
Benzyl Alcohol	03.29.95	9548	81.6	100	ug/L	82
Benzoic acid	03.29.95	9548	45.7	100	ug/L	46
Butylbenzylphthalate	03.29.95	9548	96.7	100	ug/L	97
Chrysene	03.29.95	9548	101	100	ug/L	101
Di-n-octylphthalate	03.29.95	9548	88.6	100	ug/L	89
Dibenzo(a,h)anthracene	03.29.95	9548	93.6	100	ug/L	94
Dibenzofuran	03.29.95	9548	96.7	100	ug/L	97
Dibutylphthalate	03.29.95	9548	88.8	100	ug/L	89
Diethylphthalate	03.29.95	9548	87.7	100	ug/L	88
Dimethylphthalate	03.29.95	9548	85.3	100	ug/L	85
Fluoranthene	03.29.95	9548	92.9	100	ug/L	93
Fluorene	03.29.95	9548	98.4	100	ug/L	98
Hexachlorobenzene	03.29.95	9548	90.3	100	ug/L	90
Hexachlorobutadiene	03.29.95	9548	67.4	100	ug/L	67
Hexachlorocyclopentadiene	03.29.95	9548	86.5	100	ug/L	87
Hexachloroethane	03.29.95	9548	60.8	100	ug/L	61
Indeno(1,2,3-c,d)pyrene	03.29.95	9548	116	100	ug/L	116
Isophorone	03.29.95	9548	84.4	100	ug/L	84
N-Nitrosodimethylamine	03.29.95	9548	75.9	100	ug/L	76

LABORATORY CONTROL STANDARDS
FOR BATCHES WHICH INCLUDE THIS ORDER

PARAMETER	DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
N-Nitrosodiphenylamine	03.29.95	9548	74.4	100	ug/L	74
N-Nitrosodi-n-propylamine	03.29.95	9548	76.2	100	ug/L	76
Nitrobenzene	03.29.95	9548	81.5	100	ug/L	82
Naphthalene	03.29.95	9548	74.1	100	ug/L	74
Phenanthrene	03.29.95	9548	98.4	100	ug/L	98
Phenol	03.29.95	9548	58.2	100	ug/L	58
Pentachlorophenol	03.29.95	9548	77.3	100	ug/L	77
Pyrene	03.29.95	9548	97.9	100	ug/L	98
Bis(2-chloroethoxy)methane	03.29.95	9548	81.3	100	ug/L	81
Bis(2-chloroethyl)ether	03.29.95	9548	76.4	100	ug/L	76
Bis(2-chloroisopropyl)ether	03.29.95	9548	113	100	ug/L	113
Bis(2-ethylhexyl)phthalate	03.29.95	9548	96.2	100	ug/L	96
77. B/N,A Ext.Pri.Poll. (E C504053*1						
Date Analyzed	03.29.95	9548	03/29/95	03/29/95	Date	N/A
Date Extracted	03.29.95	9548	03/27/95	03/27/95	Date	N/A
1,2,4-Trichlorobenzene	03.29.95	9548	62.8	100	ug/L	63
1,2-Dichlorobenzene	03.29.95	9548	62.3	100	ug/L	62
1,2-Diphenylhydrazine	03.29.95	9548	88.5	100	ug/L	89
1,3-Dichlorobenzene	03.29.95	9548	57.9	100	ug/L	58
1,4-Dichlorobenzene	03.29.95	9548	59.0	100	ug/L	59
2,4,5-Trichlorophenol	03.29.95	9548	88.8	100	ug/L	89
2,4,6-Trichlorophenol	03.29.95	9548	87.0	100	ug/L	87
2,4-Dichlorophenol	03.29.95	9548	73.1	100	ug/L	73
2,4-Dimethylphenol	03.29.95	9548	71.7	100	ug/L	72
2,4-Dinitrophenol	03.29.95	9548	120	100	ug/L	120
2,4-Dinitrotoluene	03.29.95	9548	101	100	ug/L	101
2,6-Dinitrotoluene	03.29.95	9548	98.8	100	ug/L	99
2-Chloronaphthalene	03.29.95	9548	66.0	100	ug/L	66
2-Chlorophenol	03.29.95	9548	77.3	100	ug/L	77
2-Methyl-4,6-dinitrophenol	03.29.95	9548	96.9	100	ug/L	97
2-Methylnaphthalene	03.29.95	9548	69.7	100	ug/L	70
2-Methylphenol (o-Cresol)	03.29.95	9548	67.0	100	ug/L	67
2-Nitroaniline	03.29.95	9548	95.0	100	ug/L	95
2-Nitrophenol	03.29.95	9548	78.5	100	ug/L	79
3,3'-Dichlorobenzidine	03.29.95	9548	83.8	100	ug/L	84
3-Nitroaniline	03.29.95	9548	94.8	100	ug/L	95
4-Bromophenylphenylether	03.29.95	9548	92.6	100	ug/L	93
4-Chloro-3-methylphenol	03.29.95	9548	85.5	100	ug/L	86
4-Chloroaniline	03.29.95	9548	78.4	100	ug/L	78
4-Chlorophenylphenylether	03.29.95	9548	90.9	100	ug/L	91
4-Methylphenol (p-Cresol)	03.29.95	9548	70.7	100	ug/L	71
4-Nitroaniline	03.29.95	9548	110	100	ug/L	110
4-Nitrophenol	03.29.95	9548	76.1	100	ug/L	76
Acenaphthene	03.29.95	9548	82.7	100	ug/L	83
Acenaphthylene	03.29.95	9548	89.7	100	ug/L	90

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FOR BATCHES WHICH INCLUDE THIS ORDER

PARAMETER	DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
Aniline	03.29.95	9548	64.7	100	ug/L	65
Anthracene	03.29.95	9548	81.9	100	ug/L	82
Benzidine	03.29.95	9548	278	100	ug/L	278 Q
Benzo(a)anthracene	03.29.95	9548	94.3	100	ug/L	94
Benzo(a)pyrene	03.29.95	9548	87.5	100	ug/L	88
Benzo(b)fluoranthene	03.29.95	9548	72.7	100	ug/L	73
Benzo(g,h,i)perylene	03.29.95	9548	85.1	100	ug/L	85
Benzo(k)fluoranthene	03.29.95	9548	91.7	100	ug/L	92
Benzyl Alcohol	03.29.95	9548	75.8	100	ug/L	76
Benzoic acid	03.29.95	9548	39.5	100	ug/L	40
Butylbenzylphthalate	03.29.95	9548	91.6	100	ug/L	92
Chrysene	03.29.95	9548	97.0	100	ug/L	97
Di-n-octylphthalate	03.29.95	9548	85.7	100	ug/L	86
Dibenzo(a,h)anthracene	03.29.95	9548	82.1	100	ug/L	82
Dibenzofuran	03.29.95	9548	88.9	100	ug/L	89
Dibutylphthalate	03.29.95	9548	84.2	100	ug/L	84
Diethylphthalate	03.29.95	9548	88.0	100	ug/L	88
Dimethylphthalate	03.29.95	9548	80.7	100	ug/L	81
Fluoranthene	03.29.95	9548	85.9	100	ug/L	86
Fluorene	03.29.95	9548	90.4	100	ug/L	90
Hexachlorobenzene	03.29.95	9548	84.3	100	ug/L	84
Hexachlorobutadiene	03.29.95	9548	61.1	100	ug/L	61
Hexachlorocyclopentadiene	03.29.95	9548	77.3	100	ug/L	77
Hexachloroethane	03.29.95	9548	54.9	100	ug/L	55
Indeno(1,2,3-c,d)pyrene	03.29.95	9548	87.3	100	ug/L	87
Isophorone	03.29.95	9548	78.5	100	ug/L	79
N-Nitrosodimethylamine	03.29.95	9548	69.4	100	ug/L	69
N-Nitrosodiphenylamine	03.29.95	9548	74.0	100	ug/L	74
N-Nitrosodi-n-propylamine	03.29.95	9548	82.8	100	ug/L	83
Nitrobenzene	03.29.95	9548	75.6	100	ug/L	76
Naphthalene	03.29.95	9548	68.0	100	ug/L	68
Phenanthrene	03.29.95	9548	90.8	100	ug/L	91
Phenol	03.29.95	9548	56.8	100	ug/L	57
Pentachlorophenol	03.29.95	9548	80.0	100	ug/L	80
Pyrene	03.29.95	9548	92.1	100	ug/L	92
Bis(2-chloroethoxy)methane	03.29.95	9548	75.7	100	ug/L	76
Bis(2-chloroethyl)ether	03.29.95	9548	70.0	100	ug/L	70
Bis(2-chloroisopropyl)ether	03.29.95	9548	103	100	ug/L	103
Bis(2-ethylhexyl)phthalate	03.29.95	9548	93.3	100	ug/L	93
78. Chloride C5032143*1	03.27.95	958	20.0	20.0	mg/L	100
79. Chloride C5032144*1	03.27.95	958	20.0	20.0	mg/L	100
80. Antimony (6010/200 C5032510*1	03.30.95	95371	2.86	3.00	mg/L	95
1. Antimony (6010/200 C5032511*1	03.30.95	95371	2.91	3.00	mg/L	97
82. Arsenic (7060/206. C5032524*1	03.30.95	95372	0.0488	0.0500	mg/L	98
83. Arsenic (7060/206. C5032525*1	03.30.95	95372	0.0488	0.0500	mg/L	98

LABORATORY CONTROL STANDARDS
FOR BATCHES WHICH INCLUDE THIS ORDER

PARAMETER	DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
84. Barium (6010/200.7 C5032494*1	03.30.95	95371	1.10	1.00	mg/L	110
85. Barium (6010/200.7 C5032495*1	03.30.95	95371	1.14	1.00	mg/L	114
86. Beryllium (6010/20 C5032496*1	03.30.95	95371	0.486	0.500	mg/L	97
87. Beryllium (6010/20 C5032497*1	03.30.95	95371	0.502	0.500	mg/L	100
88. Cadmium (7131/213. C5032526*1	03.31.95	95372	0.0254	0.0200	mg/L	127
89. Cadmium (7131/213. C5032527*1	03.31.95	95372	0.0255	0.0200	mg/L	128
90. Chromium (6010/200 C5032500*1	03.30.95	95371	0.940	1.00	mg/L	94
91. Chromium (6010/200 C5032501*1	03.30.95	95371	0.987	1.00	mg/L	99
92. Cobalt (6010/200.7 C5032498*1	03.30.95	95371	0.965	1.00	mg/L	97
93. Cobalt (6010/200.7 C5032499*1	03.30.95	95371	1.00	1.00	mg/L	100
94. Iron (6010/200.7) C5032502*1	03.30.95	95371	4.99	5.00	mg/L	100
95. Iron (6010/200.7) C5032503*1	03.30.95	95371	5.25	5.00	mg/L	105
96. Lead (7421/239.2) C5032528*1	03.30.95	95372	0.0481	0.0500	mg/L	96
97. Lead (7421/239.2) C5032529*1	03.30.95	95372	0.0483	0.0500	mg/L	97
98. Manganese (6010/20 C5032504*1	03.30.95	95371	0.935	1.00	mg/L	94
99. Manganese (6010/20 C5032505*1	03.30.95	95371	0.967	1.00	mg/L	97
100. Nickel (6010/200.7 C5032508*1	03.30.95	95371	0.948	1.00	mg/L	95
101. Nickel (6010/200.7 C5032509*1	03.30.95	95371	0.974	1.00	mg/L	97
102. Selenium (7740/270 C5032530*1	03.30.95	95372	0.0949	0.100	mg/L	95
103. Selenium (7740/270 C5032531*1	03.30.95	95372	0.0995	0.100	mg/L	100
104. Sodium (6010/200.7 C5032506*1	03.31.95	95371	50.7	50.0	mg/L	101
105. Sodium (6010/200.7 C5032507*1	03.31.95	95371	51.3	50.0	mg/L	103
106. Vanadium (6010/200 C5032512*1	03.30.95	95371	0.971	1.00	mg/L	97
107. Vanadium (6010/200 C5032513*1	03.30.95	95371	1.01	1.00	mg/L	101
108. Quad. Conductivity (90 C504007*1						
Sp. Cond., Average	03.31.95	9530	1430	1410	umhos/cm	101
Sp. Cond., 1st Replicate	03.31.95	9530	1430	1410	umhos/cm	101
109. Quad. Conductivity (90 C504008*1						
Sp. Cond., Average	03.31.95	9530	1390	1410	umhos/cm	99
Sp. Cond., 1st Replicate	03.31.95	9530	1390	1410	umhos/cm	99
110. Quad. pH (9040) C5031991*1						
pH, Average	03.23.95	95143	6.00	6.00	Units	100
pH, 1st Replicate	03.23.95	95143	6.00	6.00	Units	100
111. Quad. pH (9040) C5031992*1						
pH, Average	03.23.95	95143	5.99	6.00	Units	100
pH, 1st Replicate	03.23.95	95143	5.99	6.00	Units	100
112. B/N,A Ext.Pri.Poll. (E C5032626*1						
Date Analyzed	03.30.95	9550	03/30/95	03/30/95	Date	N/A
Date Extracted	03.30.95	9550	03/28/95	03/28/95	Date	N/A
1,2,4-Trichlorobenzene	03.30.95	9550	61.9	100	ug/L	62
1,2-Dichlorobenzene	03.30.95	9550	65.3	100	ug/L	65
1,2-Diphenylhydrazine	03.30.95	9550	76.9	100	ug/L	77
1,3-Dichlorobenzene	03.30.95	9550	59.7	100	ug/L	60
1,4-Dichlorobenzene	03.30.95	9550	60.9	100	ug/L	61
2,4,5-Trichlorophenol	03.30.95	9550	83.5	100	ug/L	84

BC ANALYTICAL

ORDER QC REPORT FOR G9503435

DATE REPORTED : 04/06/95

LABORATORY CONTROL STANDARDS
FOR BATCHES WHICH INCLUDE THIS ORDER

PARAMETER	DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
2,4,6-Trichlorophenol	03.30.95	9550	86.1	100	ug/L	86
2,4-Dichlorophenol	03.30.95	9550	80.1	100	ug/L	80
2,4-Dimethylphenol	03.30.95	9550	75.3	100	ug/L	75
2,4-Dinitrophenol	03.30.95	9550	102	100	ug/L	102
2,4-Dinitrotoluene	03.30.95	9550	86.7	100	ug/L	87
2,6-Dinitrotoluene	03.30.95	9550	82.4	100	ug/L	82
2-Chloronaphthalene	03.30.95	9550	64.8	100	ug/L	65
2-Chlorophenol	03.30.95	9550	86.8	100	ug/L	87
2-Methyl-4,6-dinitrophenol	03.30.95	9550	86.4	100	ug/L	86
2-Methylnaphthalene	03.30.95	9550	69.0	100	ug/L	69
2-Methylphenol (o-Cresol)	03.30.95	9550	73.5	100	ug/L	74
2-Nitroaniline	03.30.95	9550	87.5	100	ug/L	88
2-Nitrophenol	03.30.95	9550	82.6	100	ug/L	83
3,3'-Dichlorobenzidine	03.30.95	9550	73.2	100	ug/L	73
3-Nitroaniline	03.30.95	9550	85.6	100	ug/L	86
4-Bromophenylphenylether	03.30.95	9550	73.7	100	ug/L	74
4-Chloro-3-methylphenol	03.30.95	9550	85.1	100	ug/L	85
4-Chloroaniline	03.30.95	9550	84.0	100	ug/L	84
4-Chlorophenylphenylether	03.30.95	9550	80.0	100	ug/L	80
4-Methylphenol (p-Cresol)	03.30.95	9550	79.3	100	ug/L	79
4-Nitroaniline	03.30.95	9550	97.0	100	ug/L	97
4-Nitrophenol	03.30.95	9550	72.1	100	ug/L	72
Acenaphthene	03.30.95	9550	76.8	100	ug/L	77
Acenaphthylene	03.30.95	9550	87.1	100	ug/L	87
Aniline	03.30.95	9550	73.9	100	ug/L	74
Anthracene	03.30.95	9550	71.7	100	ug/L	72
Benzidine	03.30.95	9550	311	100	ug/L	311 Q
Benzo(a)anthracene	03.30.95	9550	80.0	100	ug/L	80
Benzo(a)pyrene	03.30.95	9550	74.6	100	ug/L	75
Benzo(b)fluoranthene	03.30.95	9550	73.3	100	ug/L	73
Benzo(g,h,i)perylene	03.30.95	9550	83.9	100	ug/L	84
Benzo(k)fluoranthene	03.30.95	9550	76.8	100	ug/L	77
Benzyl Alcohol	03.30.95	9550	81.2	100	ug/L	81
Benzoic acid	03.30.95	9550	22.1	100	ug/L	22
Butylbenzylphthalate	03.30.95	9550	77.0	100	ug/L	77
Chrysene	03.30.95	9550	83.3	100	ug/L	83
Di-n-octylphthalate	03.30.95	9550	72.1	100	ug/L	72
Dibenzo(a,h)anthracene	03.30.95	9550	80.1	100	ug/L	80
Dibenzofuran	03.30.95	9550	84.0	100	ug/L	84
Dibutylphthalate	03.30.95	9550	74.0	100	ug/L	74
Diethylphthalate	03.30.95	9550	83.1	100	ug/L	83
Dimethylphthalate	03.30.95	9550	85.7	100	ug/L	86
Fluoranthene	03.30.95	9550	77.2	100	ug/L	77
Fluorene	03.30.95	9550	83.3	100	ug/L	83
Hexachlorobenzene	03.30.95	9550	74.7	100	ug/L	75

LABORATORY CONTROL STANDARDS
FOR BATCHES WHICH INCLUDE THIS ORDER

PARAMETER	DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
Hexachlorobutadiene	03.30.95	9550	58.8	100	ug/L	59
Hexachlorocyclopentadiene	03.30.95	9550	77.5	100	ug/L	78
Hexachloroethane	03.30.95	9550	56.7	100	ug/L	57
Indeno(1,2,3-c,d)pyrene	03.30.95	9550	82.2	100	ug/L	82
Isophorone	03.30.95	9550	73.3	100	ug/L	73
N-Nitrosodimethylamine	03.30.95	9550	79.1	100	ug/L	79
N-Nitrosodiphenylamine	03.30.95	9550	60.4	100	ug/L	60
N-Nitrosodi-n-propylamine	03.30.95	9550	70.0	100	ug/L	70
Nitrobenzene	03.30.95	9550	77.9	100	ug/L	78
Naphthalene	03.30.95	9550	68.8	100	ug/L	69
Phenanthrene	03.30.95	9550	76.2	100	ug/L	76
Phenol	03.30.95	9550	64.4	100	ug/L	64
Pentachlorophenol	03.30.95	9550	74.2	100	ug/L	74
Pyrene	03.30.95	9550	78.0	100	ug/L	78
Bis(2-chloroethoxy)methane	03.30.95	9550	75.5	100	ug/L	76
Bis(2-chloroethyl)ether	03.30.95	9550	78.0	100	ug/L	78
Bis(2-chloroisopropyl)ether	03.30.95	9550	148	100	ug/L	148 Q
Bis(2-ethylhexyl)phthalate	03.30.95	9550	80.2	100	ug/L	80
113. B/N,A Ext.Pri.Poll. (E C5032627*1						
Date Analyzed	03.30.95	9550	03/30/95	03/30/95	Date	N/A
Date Extracted	03.30.95	9550	03/28/95	03/28/95	Date	N/A
1,2,4-Trichlorobenzene	03.30.95	9550	53.5	100	ug/L	54
1,2-Dichlorobenzene	03.30.95	9550	54.4	100	ug/L	54
1,2-Diphenylhydrazine	03.30.95	9550	72.3	100	ug/L	72
1,3-Dichlorobenzene	03.30.95	9550	49.1	100	ug/L	49
1,4-Dichlorobenzene	03.30.95	9550	50.2	100	ug/L	50
2,4,5-Trichlorophenol	03.30.95	9550	73.3	100	ug/L	73
2,4,6-Trichlorophenol	03.30.95	9550	75.6	100	ug/L	76
2,4-Dichlorophenol	03.30.95	9550	70.4	100	ug/L	70
2,4-Dimethylphenol	03.30.95	9550	66.8	100	ug/L	67
2,4-Dinitrophenol	03.30.95	9550	87.8	100	ug/L	88
2,4-Dinitrotoluene	03.30.95	9550	81.2	100	ug/L	81
2,6-Dinitrotoluene	03.30.95	9550	77.2	100	ug/L	77
2-Chloronaphthalene	03.30.95	9550	59.8	100	ug/L	60
2-Chlorophenol	03.30.95	9550	76.1	100	ug/L	76
2-Methyl-4,6-dinitrophenol	03.30.95	9550	75.3	100	ug/L	75
2-Methylnaphthalene	03.30.95	9550	62.1	100	ug/L	62
2-Methylphenol (o-Cresol)	03.30.95	9550	64.0	100	ug/L	64
2-Nitroaniline	03.30.95	9550	81.6	100	ug/L	82
2-Nitrophenol	03.30.95	9550	74.1	100	ug/L	74
3,3'-Dichlorobenzidine	03.30.95	9550	64.8	100	ug/L	65
3-Nitroaniline	03.30.95	9550	79.8	100	ug/L	80
4-Bromophenylphenylether	03.30.95	9550	69.0	100	ug/L	69
4-Chloro-3-methylphenol	03.30.95	9550	74.8	100	ug/L	75
4-Chloroaniline	03.30.95	9550	74.8	100	ug/L	75

BC ANALYTICAL

ORDER QC REPORT FOR G9503435

DATE REPORTED : 04/06/95

LABORATORY CONTROL STANDARDS
FOR BATCHES WHICH INCLUDE THIS ORDER

PARAMETER	DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
4-Chlorophenylphenylether	03.30.95	9550	74.2	100	ug/L	74
4-Methylphenol (p-Cresol)	03.30.95	9550	67.9	100	ug/L	68
4-Nitroaniline	03.30.95	9550	89.2	100	ug/L	89
4-Nitrophenol	03.30.95	9550	59.7	100	ug/L	60
Acenaphthene	03.30.95	9550	71.5	100	ug/L	72
Acenaphthylene	03.30.95	9550	81.2	100	ug/L	81
Aniline	03.30.95	9550	64.5	100	ug/L	65
Anthracene	03.30.95	9550	67.5	100	ug/L	68
Benzidine	03.30.95	9550	269	100	ug/L	269 Q
Benzo(a)anthracene	03.30.95	9550	74.4	100	ug/L	74
Benzo(a)pyrene	03.30.95	9550	71.0	100	ug/L	71
Benzo(b)fluoranthene	03.30.95	9550	66.1	100	ug/L	66
Benzo(g,h,i)perylene	03.30.95	9550	74.3	100	ug/L	74
Benzo(k)fluoranthene	03.30.95	9550	70.1	100	ug/L	70
Benzyl Alcohol	03.30.95	9550	72.7	100	ug/L	73
Benzoic acid	03.30.95	9550	15.2	100	ug/L	15
Butylbenzylphthalate	03.30.95	9550	72.4	100	ug/L	72
Chrysene	03.30.95	9550	77.3	100	ug/L	77
Di-n-octylphthalate	03.30.95	9550	66.0	100	ug/L	66
Dibenzo(a,h)anthracene	03.30.95	9550	70.8	100	ug/L	71
Dibenzofuran	03.30.95	9550	77.7	100	ug/L	78
Dibutylphthalate	03.30.95	9550	68.8	100	ug/L	69
Diethylphthalate	03.30.95	9550	77.9	100	ug/L	78
Dimethylphthalate	03.30.95	9550	79.6	100	ug/L	80
Fluoranthene	03.30.95	9550	72.3	100	ug/L	72
Fluorene	03.30.95	9550	77.8	100	ug/L	78
Hexachlorobenzene	03.30.95	9550	70.7	100	ug/L	71
Hexachlorobutadiene	03.30.95	9550	49.6	100	ug/L	50
Hexachlorocyclopentadiene	03.30.95	9550	67.1	100	ug/L	67
Hexachloroethane	03.30.95	9550	45.0	100	ug/L	45
Indeno(1,2,3-c,d)pyrene	03.30.95	9550	74.1	100	ug/L	74
Isophorone	03.30.95	9550	71.0	100	ug/L	71
N-Nitrosodimethylamine	03.30.95	9550	69.2	100	ug/L	69
N-Nitrosodiphenylamine	03.30.95	9550	56.8	100	ug/L	57
N-Nitrosodi-n-propylamine	03.30.95	9550	72.6	100	ug/L	73
Nitrobenzene	03.30.95	9550	72.6	100	ug/L	73
Naphthalene	03.30.95	9550	60.8	100	ug/L	61
Phenanthrene	03.30.95	9550	71.2	100	ug/L	71
Phenol	03.30.95	9550	53.5	100	ug/L	54
Pentachlorophenol	03.30.95	9550	64.5	100	ug/L	65
Pyrene	03.30.95	9550	72.7	100	ug/L	73
Bis(2-chloroethoxy)methane	03.30.95	9550	70.1	100	ug/L	70
Bis(2-chloroethyl)ether	03.30.95	9550	70.5	100	ug/L	71
Bis(2-chloroisopropyl)ether	03.30.95	9550	134	100	ug/L	134
Bis(2-ethylhexyl)phthalate	03.30.95	9550	69.5	100	ug/L	70

BC ANALYTICAL

ORDER QC REPORT FOR G9503435

DATE REPORTED : 04/06/95

LABORATORY CONTROL STANDARDS
FOR BATCHES WHICH INCLUDE THIS ORDER

PARAMETER	DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
114. Vol.Pri.Poll. (EPA-824 C504026*1						
Date Analyzed	03.31.95	95924	03/31/95	03/31/95	Date	N/A
1,1,1-Trichloroethane	03.31.95	95924	45.2	50.0	ug/L	90
1,1,2,2-Tetrachloroethane	03.31.95	95924	53.9	50.0	ug/L	108
1,1,2-Trichloroethane	03.31.95	95924	53.2	50.0	ug/L	106
1,1-Dichloroethane	03.31.95	95924	46.1	50.0	ug/L	92
1,1-Dichloroethene	03.31.95	95924	45.7	50.0	ug/L	91
1,2-Dichloroethane	03.31.95	95924	47.7	50.0	ug/L	95
1,2-Dichlorobenzene	03.31.95	95924	50.6	50.0	ug/L	101
1,2-Dichloropropane	03.31.95	95924	46.1	50.0	ug/L	92
1,3-Dichlorobenzene	03.31.95	95924	49.6	50.0	ug/L	99
1,4-Dichlorobenzene	03.31.95	95924	50.2	50.0	ug/L	100
2-Chloroethylvinylether	03.31.95	95924	53.2	50.0	ug/L	106
2-Hexanone	03.31.95	95924	56.1	50.0	ug/L	112
Acetone	03.31.95	95924	50.0	50.0	ug/L	100
Bromodichloromethane	03.31.95	95924	50.6	50.0	ug/L	101
Bromomethane	03.31.95	95924	44.1	50.0	ug/L	88
Benzene	03.31.95	95924	45.5	50.0	ug/L	91
Bromoform	03.31.95	95924	53.9	50.0	ug/L	108
Chlorobenzene	03.31.95	95924	50.0	50.0	ug/L	100
Carbon Tetrachloride	03.31.95	95924	46.5	50.0	ug/L	93
Chloroethane	03.31.95	95924	35.6	50.0	ug/L	71
Chloroform	03.31.95	95924	47.3	50.0	ug/L	95
Chloromethane	03.31.95	95924	39.6	50.0	ug/L	79
Carbon Disulfide	03.31.95	95924	42.9	50.0	ug/L	86
Dibromochloromethane	03.31.95	95924	51.9	50.0	ug/L	104
Ethylbenzene	03.31.95	95924	49.9	50.0	ug/L	100
Freon 113	03.31.95	95924	44.0	50.0	ug/L	88
Methyl ethyl ketone	03.31.95	95924	53.0	50.0	ug/L	106
Methyl isobutyl ketone	03.31.95	95924	55.3	50.0	ug/L	111
Methylene chloride	03.31.95	95924	45.6	50.0	ug/L	91
Styrene	03.31.95	95924	51.2	50.0	ug/L	102
Trichloroethene	03.31.95	95924	45.5	50.0	ug/L	91
Trichlorofluoromethane	03.31.95	95924	45.0	50.0	ug/L	90
Toluene	03.31.95	95924	49.9	50.0	ug/L	100
Tetrachloroethene	03.31.95	95924	49.6	50.0	ug/L	99
Vinyl acetate	03.31.95	95924	50.3	50.0	ug/L	101
Vinyl chloride	03.31.95	95924	43.7	50.0	ug/L	87
Total Xylene Isomers	03.31.95	95924	149	150	ug/L	99
cis-1,2-Dichloroethene	03.31.95	95924	47.2	50.0	ug/L	94
cis-1,3-Dichloropropene	03.31.95	95924	52.2	50.0	ug/L	104
trans-1,2-Dichloroethene	03.31.95	95924	45.0	50.0	ug/L	90
trans-1,3-Dichloropropene	03.31.95	95924	50.4	50.0	ug/L	101
115. Vol.Pri.Poll. (EPA-824 C504027*1						
Date Analyzed	03.31.95	95924	03/31/95	03/31/95	Date	N/A

BC ANALYTICAL

ORDER QC REPORT FOR G9503435

DATE REPORTED : 04/06/95

LABORATORY CONTROL STANDARDS
FOR BATCHES WHICH INCLUDE THIS ORDER

PARAMETER	DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
1,1,1-Trichloroethane	03.31.95	95924	46.3	50.0	ug/L	93
1,1,2,2-Tetrachloroethane	03.31.95	95924	55.9	50.0	ug/L	112
1,1,2-Trichloroethane	03.31.95	95924	55.0	50.0	ug/L	110
1,1-Dichloroethane	03.31.95	95924	46.5	50.0	ug/L	93
1,1-Dichloroethene	03.31.95	95924	45.1	50.0	ug/L	90
1,2-Dichloroethane	03.31.95	95924	48.4	50.0	ug/L	97
1,2-Dichlorobenzene	03.31.95	95924	51.2	50.0	ug/L	102
1,2-Dichloropropane	03.31.95	95924	46.0	50.0	ug/L	92
1,3-Dichlorobenzene	03.31.95	95924	50.3	50.0	ug/L	101
1,4-Dichlorobenzene	03.31.95	95924	50.7	50.0	ug/L	101
2-Chloroethylvinylether	03.31.95	95924	54.6	50.0	ug/L	109
2-Hexanone	03.31.95	95924	59.7	50.0	ug/L	119
Acetone	03.31.95	95924	51.5	50.0	ug/L	103
Bromodichloromethane	03.31.95	95924	51.5	50.0	ug/L	103
Bromomethane	03.31.95	95924	45.0	50.0	ug/L	90
Benzene	03.31.95	95924	45.1	50.0	ug/L	90
Bromoform	03.31.95	95924	57.6	50.0	ug/L	115
Chlorobenzene	03.31.95	95924	50.9	50.0	ug/L	102
Carbon Tetrachloride	03.31.95	95924	46.4	50.0	ug/L	93
Chloroethane	03.31.95	95924	35.7	50.0	ug/L	71
Chloroform	03.31.95	95924	46.9	50.0	ug/L	94
Chloromethane	03.31.95	95924	40.2	50.0	ug/L	80
Carbon Disulfide	03.31.95	95924	42.5	50.0	ug/L	85
Dibromochloromethane	03.31.95	95924	53.8	50.0	ug/L	108
Ethylbenzene	03.31.95	95924	50.4	50.0	ug/L	101
Freon 113	03.31.95	95924	44.9	50.0	ug/L	90
Methyl ethyl ketone	03.31.95	95924	56.7	50.0	ug/L	113
Methyl isobutyl ketone	03.31.95	95924	57.3	50.0	ug/L	115
Methylene chloride	03.31.95	95924	46.0	50.0	ug/L	92
Styrene	03.31.95	95924	51.0	50.0	ug/L	102
Trichloroethene	03.31.95	95924	44.9	50.0	ug/L	90
Trichlorofluoromethane	03.31.95	95924	45.7	50.0	ug/L	91
Toluene	03.31.95	95924	50.8	50.0	ug/L	102
Tetrachloroethene	03.31.95	95924	50.2	50.0	ug/L	100
Vinyl acetate	03.31.95	95924	51.8	50.0	ug/L	104
Vinyl chloride	03.31.95	95924	42.5	50.0	ug/L	85
Total Xylene Isomers	03.31.95	95924	152	150	ug/L	101
cis-1,2-Dichloroethene	03.31.95	95924	47.0	50.0	ug/L	94
cis-1,3-Dichloropropene	03.31.95	95924	53.3	50.0	ug/L	107
trans-1,2-Dichloroethene	03.31.95	95924	45.0	50.0	ug/L	90
trans-1,3-Dichloropropene	03.31.95	95924	51.3	50.0	ug/L	103

BC ANALYTICAL

ORDER QC REPORT FOR G9503435

DATE REPORTED : 04/06/95

ADDITIONAL LCS PRECISION (DUPLICATES)
BATCH QC REPORT

PARAMETER	SAMPLE NUMBER	DATE ANALYZED	BATCH NUMBER	LC1 RESULT	LC2 RESULT	UNIT	RELATIVE % DIFF
1. Ammonia (350.1)		03.24.95	9538	10.0	9.74	mg/L	3
2. COD (410.4)		03.28.95	9532	101	103	mg/L	2
3. Nitrate+Nitrite							
Nitrate+Nitrite (as NO3)		03.21.95	9560	20.2	20.6	mg/L	2
Nitrate+Nitrite (as N)		03.21.95	9560	4.56	4.65	mg/L	2
4. Ortho Phosphate (3		03.22.95	9539	3.32	3.33	mg/L	0
4. Ortho Phosphate (3		03.22.95	9539	10.2	10.2	mg/L	0
5. BOD5 (405.1)		03.23.95	9550	204	181	mg/L	12
6. Quad. pH (9040)							
pH, Average		03.21.95	95131	5.99	5.98	Units	0
pH, 1st Replicate		03.21.95	95131	5.99	5.98	Units	0
7. Sulfate		03.27.95	951	19.6	19.6	mg/L	0
8. Dissolved Solids (		03.23.95	9525	1020	1010	mg/L	1
9. Alkalinity (310.1)							
Carbonate Alk (as CaCO3)		03.31.95	9518	<1	<1	mg/L	NA
Bicarbonate Alk (as CaCO3)		03.31.95	9518	580	578	mg/L	0
Hydroxide Alk (as CaCO3)		03.31.95	9518	<1	<1	mg/L	NA
Total Alkalinity (as CaCO3)		03.31.95	9518	580	578	mg/L	0
10. Chloride		03.27.95	957	20.0	20.4	mg/L	2
11. TOC (9060/415.1)		03.21.95	9528	5.50	5.04	mg/L	9
12. Antimony (6010/200		03.30.95	95370	2.69	2.85	mg/L	6
13. Arsenic (7060/206.		03.30.95	95366	0.0493	0.0489	mg/L	1
14. Barium (6010/200.7		03.30.95	95370	1.12	1.06	mg/L	6
15. Beryllium (6010/20		03.30.95	95370	0.495	0.508	mg/L	3
16. Cadmium (7131/213.		03.30.95	95366	0.0225	0.0225	mg/L	0
17. Chromium (6010/200		03.30.95	95370	0.974	1.00	mg/L	3
18. Cobalt (6010/200.7		03.30.95	95370	0.986	1.02	mg/L	3
19. Iron (6010/200.7)		03.30.95	95370	5.08	5.28	mg/L	4
20. Lead (7421/239.2)		03.29.95	95366	0.0500	0.0515	mg/L	3
21. Manganese (6010/20		03.30.95	95370	0.953	0.986	mg/L	3
22. Mercury (7470/245.		03.27.95	95357	0.0040	0.0037	mg/L	8
23. Nickel (6010/200.7		03.30.95	95370	1.01	1.03	mg/L	2
24. Selenium (7740/270		03.30.95	95366	0.101	0.101	mg/L	0
25. Sodium (6010/200.7		03.31.95	95370	48.5	48.8	mg/L	1
26. Vanadium (6010/200		03.30.95	95370	0.989	1.02	mg/L	3
27. Quad. Conductivity (90							
Sp. Cond., Average		03.29.95	9529	1360	1380	umhos/cm	1
Sp. Cond., 1st Replicate		03.29.95	9529	1360	1380	umhos/cm	1
28. B/N,A Ext.Pri.Poll. (6							
Date Analyzed		03.23.95	9546	03/23/95	03/23/95	Date	N/A
Date Extracted		03.23.95	9546	03/23/95	03/23/95	Date	N/A
1,2,4-Trichlorobenzene		03.23.95	9546	58.2	61.4	ug/L	5
1,2-Diphenylhydrazine		03.23.95	9546	55.6	60.4	ug/L	8
2,4,6-Trichlorophenol		03.23.95	9546	75.9	77.7	ug/L	2
2,4-Dichlorophenol		03.23.95	9546	71.1	72.6	ug/L	2

BC ANALYTICAL

ORDER QC REPORT FOR G9503435

DATE REPORTED : 04/06/95

ADDITIONAL LCS PRECISION (DUPLICATES)
BATCH QC REPORT

PARAMETER	SAMPLE NUMBER	DATE ANALYZED	BATCH NUMBER	LC1 RESULT	LC2 RESULT	UNIT	RELATIVE % DIFF
2,4-Dimethylphenol		03.23.95	9546	63.6	64.0	ug/L	1
2,4-Dinitrophenol		03.23.95	9546	99.7	111	ug/L	11
2,4-Dinitrotoluene		03.23.95	9546	91.7	91.5	ug/L	0
2,6-Dinitrotoluene		03.23.95	9546	89.1	86.8	ug/L	3
2-Chloronaphthalene		03.23.95	9546	53.7	54.6	ug/L	2
2-Chlorophenol		03.23.95	9546	76.1	78.1	ug/L	3
2-Methyl-4,6-dinitrophenol		03.23.95	9546	92.2	93.9	ug/L	2
2-Nitrophenol		03.23.95	9546	64.8	66.7	ug/L	3
3,3'-Dichlorobenzidine		03.23.95	9546	84.5	87.7	ug/L	4
4-Bromophenylphenylether		03.23.95	9546	65.6	63.4	ug/L	3
4-Chloro-3-methylphenol		03.23.95	9546	72.4	72.5	ug/L	0
4-Chlorophenylphenylether		03.23.95	9546	74.8	74.2	ug/L	1
4-Nitrophenol		03.23.95	9546	65.9	72.9	ug/L	10
Acenaphthene		03.23.95	9546	69.5	68.3	ug/L	2
Acenaphthylene		03.23.95	9546	74.0	72.7	ug/L	2
Anthracene		03.23.95	9546	77.8	75.1	ug/L	4
Benzidine		03.23.95	9546	347	362	ug/L	4
Benzo(a)anthracene		03.23.95	9546	73.4	70.3	ug/L	4
Benzo(a)pyrene		03.23.95	9546	90.1	89.2	ug/L	1
Benzo(b)fluoranthene		03.23.95	9546	82.8	81.4	ug/L	2
Benzo(g,h,i)perylene		03.23.95	9546	56.8	55.8	ug/L	2
Benzo(k)fluoranthene		03.23.95	9546	95.6	95.4	ug/L	0
Butylbenzylphthalate		03.23.95	9546	65.7	60.3	ug/L	9
Chrysene		03.23.95	9546	77.7	76.3	ug/L	2
Di-n-butylphthalate		03.23.95	9546	69.9	66.6	ug/L	5
Di-n-octylphthalate		03.23.95	9546	70.3	66.4	ug/L	6
Dibenzo(a,h)anthracene		03.23.95	9546	62.8	63.1	ug/L	0
Diethylphthalate		03.23.95	9546	75.2	69.4	ug/L	8
Dimethylphthalate		03.23.95	9546	92.1	90.0	ug/L	2
Fluoranthene		03.23.95	9546	81.7	79.2	ug/L	3
Fluorene		03.23.95	9546	82.6	81.4	ug/L	1
Hexachlorobenzene		03.23.95	9546	69.6	67.0	ug/L	4
Hexachlorobutadiene		03.23.95	9546	53.0	58.1	ug/L	9
Hexachlorocyclopentadiene		03.23.95	9546	67.0	73.4	ug/L	9
Hexachloroethane		03.23.95	9546	59.2	63.4	ug/L	7
Indeno(1,2,3-c,d)pyrene		03.23.95	9546	75.0	73.9	ug/L	1
Isophorone		03.23.95	9546	56.5	54.2	ug/L	4
N-Nitrosodimethylamine		03.23.95	9546	63.4	62.9	ug/L	1
N-Nitrosodiphenylamine		03.23.95	9546	52.4	50.6	ug/L	3
N-Nitrosodi-n-propylamine		03.23.95	9546	70.6	67.2	ug/L	5
Nitrobenzene		03.23.95	9546	65.0	64.8	ug/L	0
Naphthalene		03.23.95	9546	59.6	61.0	ug/L	2
Phenanthrene		03.23.95	9546	77.8	75.0	ug/L	4
Phenol		03.23.95	9546	53.6	60.9	ug/L	13
Pentachlorophenol		03.23.95	9546	84.0	87.5	ug/L	4

BC ANALYTICAL

ORDER QC REPORT FOR G9503435

DATE REPORTED : 04/06/95

ADDITIONAL LCS PRECISION (DUPLICATES)
BATCH QC REPORT

PARAMETER	SAMPLE NUMBER	DATE ANALYZED	BATCH NUMBER	LC1 RESULT	LC2 RESULT	UNIT	RELATIVE % DIFF
Pyrene		03.23.95	9546	68.6	64.1	ug/L	7
Bis(2-chloroethoxy)methane		03.23.95	9546	69.8	64.3	ug/L	8
Bis(2-chloroethyl)ether		03.23.95	9546	63.6	63.0	ug/L	1
Bis(2-chloroisopropyl)ether		03.23.95	9546	69.2	67.9	ug/L	2
Bis(2-ethylhexyl)phthalate		03.23.95	9546	63.7	57.4	ug/L	10
29. COD (410.4)		03.28.95	9531	498	502	mg/L	1
30. TDS (EPA 160.1)							
Date Analyzed		03.27.95	9526	03/27/95	03/27/95	Date	N/A
Dissolved Solids (160.1)		03.27.95	9526	1010	1010	mg/L	0
31. Nitrate+Nitrite							
Nitrate+Nitrite (as NO3)		03.24.95	9564	20.4	20.0	mg/L	2
Nitrate+Nitrite (as N)		03.24.95	9564	4.60	4.51	mg/L	2
32. Quad. pH (9040)							
pH, Average		03.22.95	95137	6.02	6.01	Units	0
pH, 1st Replicate		03.22.95	95137	6.02	6.01	Units	0
33. Sulfate		03.27.95	952	19.9	19.9	mg/L	0
34. Dissolved Solids (		03.28.95	9527	1070	1070	mg/L	0
35. TOC (9060/415.1)		03.29.95	9532	5.50	5.43	mg/L	1
36. Mercury (7470/245.		03.31.95	95382	0.0045	0.0045	mg/L	0
37. Vol.Pri.Poll. (EPA-824							
Date Analyzed		03.30.95	95923	03/30/95	03/30/95	Date	N/A
1,1,1-Trichloroethane		03.30.95	95923	48.7	48.9	ug/L	0
1,1,2,2-Tetrachloroethane		03.30.95	95923	53.3	53.9	ug/L	1
1,1,2-Trichloroethane		03.30.95	95923	52.8	54.2	ug/L	3
1,1-Dichloroethane		03.30.95	95923	48.5	48.3	ug/L	0
1,1-Dichloroethene		03.30.95	95923	48.6	47.9	ug/L	1
1,2-Dichloroethane		03.30.95	95923	51.0	51.7	ug/L	1
1,2-Dichlorobenzene		03.30.95	95923	50.6	50.1	ug/L	1
1,2-Dichloropropane		03.30.95	95923	48.1	49.4	ug/L	3
1,3-Dichlorobenzene		03.30.95	95923	49.9	48.9	ug/L	2
1,4-Dichlorobenzene		03.30.95	95923	50.1	49.4	ug/L	1
2-Chloroethylvinylether		03.30.95	95923	57.1	58.5	ug/L	2
2-Hexanone		03.30.95	95923	55.4	55.2	ug/L	0
Acetone		03.30.95	95923	51.6	52.1	ug/L	1
Bromodichloromethane		03.30.95	95923	50.8	51.7	ug/L	2
Bromomethane		03.30.95	95923	44.0	45.3	ug/L	3
Benzene		03.30.95	95923	48.7	49.2	ug/L	1
Bromoform		03.30.95	95923	54.5	57.1	ug/L	5
Chlorobenzene		03.30.95	95923	49.4	49.8	ug/L	1
Carbon Tetrachloride		03.30.95	95923	48.8	49.6	ug/L	2
Chloroethane		03.30.95	95923	34.3	30.3	ug/L	12
Chloroform		03.30.95	95923	48.9	49.2	ug/L	1
Chloromethane		03.30.95	95923	50.7	50.3	ug/L	1
Carbon Disulfide		03.30.95	95923	39.2	38.9	ug/L	1
Dibromochloromethane		03.30.95	95923	52.2	54.0	ug/L	3

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DATE REPORTED : 04/06/95

ADDITIONAL LCS PRECISION (DUPLICATES)
BATCH QC REPORT

PARAMETER	SAMPLE NUMBER	DATE ANALYZED	BATCH NUMBER	LC1 RESULT	LC2 RESULT	UNIT	RELATIVE % DIFF
Ethylbenzene		03.30.95	95923	49.5	50.1	ug/L	1
Freon 113		03.30.95	95923	48.3	47.6	ug/L	1
Methyl ethyl ketone		03.30.95	95923	53.8	55.9	ug/L	4
Methyl isobutyl ketone		03.30.95	95923	54.6	55.9	ug/L	2
Methylene chloride		03.30.95	95923	48.0	48.3	ug/L	1
Styrene		03.30.95	95923	50.1	50.7	ug/L	1
Trichloroethene		03.30.95	95923	49.1	49.0	ug/L	0
Trichlorofluoromethane		03.30.95	95923	47.7	48.6	ug/L	2
Toluene		03.30.95	95923	50.1	49.7	ug/L	1
Tetrachloroethene		03.30.95	95923	49.5	49.7	ug/L	0
Vinyl acetate		03.30.95	95923	52.6	53.4	ug/L	2
Vinyl chloride		03.30.95	95923	40.7	40.5	ug/L	0
Total Xylene Isomers		03.30.95	95923	151	150	ug/L	1
cis-1,2-Dichloroethene		03.30.95	95923	48.5	48.4	ug/L	0
cis-1,3-Dichloropropene		03.30.95	95923	52.2	53.8	ug/L	3
trans-1,2-Dichloroethene		03.30.95	95923	48.5	48.6	ug/L	0
trans-1,3-Dichloropropene		03.30.95	95923	50.5	51.3	ug/L	2
8. B/N,A Ext.Pri.Poll. (E							
Date Analyzed		03.29.95	9548	03/29/95	03/29/95	Date	N/A
Date Extracted		03.29.95	9548	03/27/95	03/27/95	Date	N/A
1,2,4-Trichlorobenzene		03.29.95	9548	69.2	62.8	ug/L	10
1,2-Dichlorobenzene		03.29.95	9548	67.9	62.3	ug/L	9
1,2-Diphenylhydrazine		03.29.95	9548	91.8	88.5	ug/L	4
1,3-Dichlorobenzene		03.29.95	9548	63.0	57.9	ug/L	8
1,4-Dichlorobenzene		03.29.95	9548	63.9	59.0	ug/L	8
2,4,5-Trichlorophenol		03.29.95	9548	87.0	88.8	ug/L	2
2,4,6-Trichlorophenol		03.29.95	9548	87.9	87.0	ug/L	1
2,4-Dichlorophenol		03.29.95	9548	75.3	73.1	ug/L	3
2,4-Dimethylphenol		03.29.95	9548	71.0	71.7	ug/L	1
2,4-Dinitrophenol		03.29.95	9548	115	120	ug/L	4
2,4-Dinitrotoluene		03.29.95	9548	103	101	ug/L	2
2,6-Dinitrotoluene		03.29.95	9548	97.8	98.8	ug/L	1
2-Chloronaphthalene		03.29.95	9548	72.5	66.0	ug/L	9
2-Chlorophenol		03.29.95	9548	76.5	77.3	ug/L	1
2-Methyl-4,6-dinitrophenol		03.29.95	9548	93.4	96.9	ug/L	4
2-Methylnaphthalene		03.29.95	9548	76.4	69.7	ug/L	9
2-Methylphenol (o-Cresol)		03.29.95	9548	66.4	67.0	ug/L	1
2-Nitroaniline		03.29.95	9548	102	95.0	ug/L	7
2-Nitrophenol		03.29.95	9548	77.4	78.5	ug/L	1
3,3'-Dichlorobenzidine		03.29.95	9548	88.6	83.8	ug/L	6
3-Nitroaniline		03.29.95	9548	102	94.8	ug/L	7
4-Bromophenylphenylether		03.29.95	9548	95.3	92.6	ug/L	3
4-Chloro-3-methylphenol		03.29.95	9548	85.7	85.5	ug/L	0
4-Chloroaniline		03.29.95	9548	86.1	78.4	ug/L	9
4-Chlorophenylphenylether		03.29.95	9548	92.8	90.9	ug/L	2

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ADDITIONAL LCS PRECISION (DUPLICATES)
BATCH QC REPORT

PARAMETER	SAMPLE NUMBER	DATE ANALYZED	BATCH NUMBER	LC1 RESULT	LC2 RESULT	UNIT	RELATIVE % DIFF
4-Methylphenol (p-Cresol)		03.29.95	9548	71.0	70.7	ug/L	0
4-Nitroaniline		03.29.95	9548	115	110	ug/L	4
4-Nitrophenol		03.29.95	9548	77.5	76.1	ug/L	2
Acenaphthene		03.29.95	9548	89.5	82.7	ug/L	8
Acenaphthylene		03.29.95	9548	97.7	89.7	ug/L	9
Aniline		03.29.95	9548	70.8	64.7	ug/L	9
Anthracene		03.29.95	9548	92.3	81.9	ug/L	12
Benzidine		03.29.95	9548	302	278	ug/L	8
Benzo(a)anthracene		03.29.95	9548	101	94.3	ug/L	7
Benzo(a)pyrene		03.29.95	9548	95.0	87.5	ug/L	8
Benzo(b)fluoranthene		03.29.95	9548	88.4	72.7	ug/L	19
Benzo(g,h,i)perylene		03.29.95	9548	98.1	85.1	ug/L	14
Benzo(k)fluoranthene		03.29.95	9548	94.0	91.7	ug/L	2
Benzyl Alcohol		03.29.95	9548	81.6	75.8	ug/L	7
Benzoic acid		03.29.95	9548	45.7	39.5	ug/L	15
Butylbenzylphthalate		03.29.95	9548	96.7	91.6	ug/L	5
Chrysene		03.29.95	9548	101	97.0	ug/L	4
Di-n-octylphthalate		03.29.95	9548	88.6	85.7	ug/L	3
Dibenzo(a,h)anthracene		03.29.95	9548	93.6	82.1	ug/L	13
Dibenzofuran		03.29.95	9548	96.7	88.9	ug/L	8
Dibutylphthalate		03.29.95	9548	88.8	84.2	ug/L	5
Diethylphthalate		03.29.95	9548	87.7	88.0	ug/L	0
Dimethylphthalate		03.29.95	9548	85.3	80.7	ug/L	6
Fluoranthene		03.29.95	9548	92.9	85.9	ug/L	8
Fluorene		03.29.95	9548	98.4	90.4	ug/L	8
Hexachlorobenzene		03.29.95	9548	90.3	84.3	ug/L	7
Hexachlorobutadiene		03.29.95	9548	67.4	61.1	ug/L	10
Hexachlorocyclopentadiene		03.29.95	9548	86.5	77.3	ug/L	11
Hexachloroethane		03.29.95	9548	60.8	54.9	ug/L	10
Indeno(1,2,3-c,d)pyrene		03.29.95	9548	116	87.3	ug/L	28
Isophorone		03.29.95	9548	84.4	78.5	ug/L	7
N-Nitrosodimethylamine		03.29.95	9548	75.9	69.4	ug/L	9
N-Nitrosodiphenylamine		03.29.95	9548	74.4	74.0	ug/L	1
N-Nitrosodi-n-propylamine		03.29.95	9548	76.2	82.8	ug/L	8
Nitrobenzene		03.29.95	9548	81.5	75.6	ug/L	8
Naphthalene		03.29.95	9548	74.1	68.0	ug/L	9
Phenanthrene		03.29.95	9548	98.4	90.8	ug/L	8
Phenol		03.29.95	9548	58.2	56.8	ug/L	2
Pentachlorophenol		03.29.95	9548	77.3	80.0	ug/L	3
Pyrene		03.29.95	9548	97.9	92.1	ug/L	6
Bis(2-chloroethoxy)methane		03.29.95	9548	81.3	75.7	ug/L	7
Bis(2-chloroethyl)ether		03.29.95	9548	76.4	70.0	ug/L	9
Bis(2-chloroisopropyl)ether		03.29.95	9548	113	103	ug/L	9
Bis(2-ethylhexyl)phthalate		03.29.95	9548	96.2	93.3	ug/L	3
39. Chloride		03.27.95	958	20.0	20.0	mg/L	0

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BATCH QC REPORT

PARAMETER	SAMPLE NUMBER	DATE ANALYZED	BATCH NUMBER	LC1 RESULT	LC2 RESULT	UNIT	RELATIVE % DIFF
40. Antimony (6010/200		03.30.95	95371	2.86	2.91	mg/L	2
41. Arsenic (7060/206.		03.30.95	95372	0.0488	0.0488	mg/L	0
42. Barium (6010/200.7		03.30.95	95371	1.10	1.14	mg/L	4
43. Beryllium (6010/20		03.30.95	95371	0.486	0.502	mg/L	3
44. Cadmium (7131/213.		03.31.95	95372	0.0254	0.0255	mg/L	0
45. Chromium (6010/200		03.30.95	95371	0.940	0.987	mg/L	5
46. Cobalt (6010/200.7		03.30.95	95371	0.965	1.00	mg/L	4
47. Iron (6010/200.7)		03.30.95	95371	4.99	5.25	mg/L	5
48. Lead (7421/239.2)		03.30.95	95372	0.0481	0.0483	mg/L	0
49. Manganese (6010/20		03.30.95	95371	0.935	0.967	mg/L	3
50. Nickel (6010/200.7		03.30.95	95371	0.948	0.974	mg/L	3
51. Selenium (7740/270		03.30.95	95372	0.0949	0.0995	mg/L	5
52. Sodium (6010/200.7		03.31.95	95371	50.7	51.3	mg/L	1
53. Vanadium (6010/200		03.30.95	95371	0.971	1.01	mg/L	4
54. Quad. Conductivity (90							
Sp. Cond., Average		03.31.95	9530	1430	1390	umhos/cm	3
Sp. Cond., 1st Replicate		03.31.95	9530	1430	1390	umhos/cm	3
5. Quad. pH (9040)							
pH, Average		03.23.95	95143	6.00	5.99	Units	0
pH, 1st Replicate		03.23.95	95143	6.00	5.99	Units	0
56. B/N,A Ext.Pri.Poll. (E							
Date Analyzed		03.30.95	9550	03/30/95	03/30/95	Date	N/A
Date Extracted		03.30.95	9550	03/28/95	03/28/95	Date	N/A
1,2,4-Trichlorobenzene		03.30.95	9550	61.9	53.5	ug/L	15
1,2-Dichlorobenzene		03.30.95	9550	65.3	54.4	ug/L	18
1,2-Diphenylhydrazine		03.30.95	9550	76.9	72.3	ug/L	6
1,3-Dichlorobenzene		03.30.95	9550	59.7	49.1	ug/L	19
1,4-Dichlorobenzene		03.30.95	9550	60.9	50.2	ug/L	19
2,4,5-Trichlorophenol		03.30.95	9550	83.5	73.3	ug/L	13
2,4,6-Trichlorophenol		03.30.95	9550	86.1	75.6	ug/L	13
2,4-Dichlorophenol		03.30.95	9550	80.1	70.4	ug/L	13
2,4-Dimethylphenol		03.30.95	9550	75.3	66.8	ug/L	12
2,4-Dinitrophenol		03.30.95	9550	102	87.8	ug/L	15
2,4-Dinitrotoluene		03.30.95	9550	86.7	81.2	ug/L	7
2,6-Dinitrotoluene		03.30.95	9550	82.4	77.2	ug/L	7
2-Chloronaphthalene		03.30.95	9550	64.8	59.8	ug/L	8
2-Chlorophenol		03.30.95	9550	86.8	76.1	ug/L	13
2-Methyl-4,6-dinitrophenol		03.30.95	9550	86.4	75.3	ug/L	14
2-Methylnaphthalene		03.30.95	9550	69.0	62.1	ug/L	11
2-Methylphenol (o-Cresol)		03.30.95	9550	73.5	64.0	ug/L	14
2-Nitroaniline		03.30.95	9550	87.5	81.6	ug/L	7
2-Nitrophenol		03.30.95	9550	82.6	74.1	ug/L	11
3,3'-Dichlorobenzidine		03.30.95	9550	73.2	64.8	ug/L	12
3-Nitroaniline		03.30.95	9550	85.6	79.8	ug/L	7
4-Bromophenylphenylether		03.30.95	9550	73.7	69.0	ug/L	7

BC ANALYTICAL

ORDER QC REPORT FOR G9503435

DATE REPORTED : 04/06/95

ADDITIONAL LCS PRECISION (DUPLICATES)
BATCH QC REPORT

PARAMETER	SAMPLE NUMBER	DATE ANALYZED	BATCH NUMBER	LC1 RESULT	LC2 RESULT	UNIT	RELATIVE % DIFF
4-Chloro-3-methylphenol		03.30.95	9550	85.1	74.8	ug/L	13
4-Chloroaniline		03.30.95	9550	84.0	74.8	ug/L	12
4-Chlorophenylphenylether		03.30.95	9550	80.0	74.2	ug/L	8
4-Methylphenol (p-Cresol)		03.30.95	9550	79.3	67.9	ug/L	15
4-Nitroaniline		03.30.95	9550	97.0	89.2	ug/L	8
4-Nitrophenol		03.30.95	9550	72.1	59.7	ug/L	19
Acenaphthene		03.30.95	9550	76.8	71.5	ug/L	7
Acenaphthylene		03.30.95	9550	87.1	81.2	ug/L	7
Aniline		03.30.95	9550	73.9	64.5	ug/L	14
Anthracene		03.30.95	9550	71.7	67.5	ug/L	6
Benzidine		03.30.95	9550	311	269	ug/L	14
Benzo(a)anthracene		03.30.95	9550	80.0	74.4	ug/L	7
Benzo(a)pyrene		03.30.95	9550	74.6	71.0	ug/L	5
Benzo(b)fluoranthene		03.30.95	9550	73.3	66.1	ug/L	10
Benzo(g,h,i)perylene		03.30.95	9550	83.9	74.3	ug/L	12
Benzo(k)fluoranthene		03.30.95	9550	76.8	70.1	ug/L	9
Benzyl Alcohol		03.30.95	9550	81.2	72.7	ug/L	11
Benzoic acid		03.30.95	9550	22.1	15.2	ug/L	37
Butylbenzylphthalate		03.30.95	9550	77.0	72.4	ug/L	6
Chrysene		03.30.95	9550	83.3	77.3	ug/L	7
Di-n-octylphthalate		03.30.95	9550	72.1	66.0	ug/L	9
Dibenzo(a,h)anthracene		03.30.95	9550	80.1	70.8	ug/L	12
Dibenzofuran		03.30.95	9550	84.0	77.7	ug/L	8
Dibutylphthalate		03.30.95	9550	74.0	68.8	ug/L	7
Diethylphthalate		03.30.95	9550	83.1	77.9	ug/L	6
Dimethylphthalate		03.30.95	9550	85.7	79.6	ug/L	7
Fluoranthene		03.30.95	9550	77.2	72.3	ug/L	7
Fluorene		03.30.95	9550	83.3	77.8	ug/L	7
Hexachlorobenzene		03.30.95	9550	74.7	70.7	ug/L	6
Hexachlorobutadiene		03.30.95	9550	58.8	49.6	ug/L	17
Hexachlorocyclopentadiene		03.30.95	9550	77.5	67.1	ug/L	14
Hexachloroethane		03.30.95	9550	56.7	45.0	ug/L	23
Indeno(1,2,3-c,d)pyrene		03.30.95	9550	82.2	74.1	ug/L	10
Isophorone		03.30.95	9550	73.3	71.0	ug/L	3
N-Nitrosodimethylamine		03.30.95	9550	79.1	69.2	ug/L	13
N-Nitrosodiphenylamine		03.30.95	9550	60.4	56.8	ug/L	6
N-Nitrosodi-n-propylamine		03.30.95	9550	70.0	72.6	ug/L	4
Nitrobenzene		03.30.95	9550	77.9	72.6	ug/L	7
Naphthalene		03.30.95	9550	68.8	60.8	ug/L	12
Phenanthrene		03.30.95	9550	76.2	71.2	ug/L	7
Phenol		03.30.95	9550	64.4	53.5	ug/L	18
Pentachlorophenol		03.30.95	9550	74.2	64.5	ug/L	14
Pyrene		03.30.95	9550	78.0	72.7	ug/L	7
Bis(2-chloroethoxy)methane		03.30.95	9550	75.5	70.1	ug/L	7
Bis(2-chloroethyl)ether		03.30.95	9550	78.0	70.5	ug/L	10

BC ANALYTICAL

ORDER QC REPORT FOR G9503435

DATE REPORTED : 04/06/95

ADDITIONAL LCS PRECISION (DUPLICATES)
BATCH QC REPORT

PARAMETER	SAMPLE NUMBER	DATE ANALYZED	BATCH NUMBER	LC1 RESULT	LC2 RESULT	UNIT	RELATIVE % DIFF
Bis(2-chloroisopropyl)ether		03.30.95	9550	148	134	ug/L	10
Bis(2-ethylhexyl)phthalate		03.30.95	9550	80.2	69.5	ug/L	14
57. Vol.Pri.Poll. (EPA-824							
Date Analyzed		03.31.95	95924	03/31/95	03/31/95	Date	N/A
1,1,1-Trichloroethane		03.31.95	95924	45.2	46.3	ug/L	2
1,1,2,2-Tetrachloroethane		03.31.95	95924	53.9	55.9	ug/L	4
1,1,2-Trichloroethane		03.31.95	95924	53.2	55.0	ug/L	3
1,1-Dichloroethane		03.31.95	95924	46.1	46.5	ug/L	1
1,1-Dichloroethene		03.31.95	95924	45.7	45.1	ug/L	1
1,2-Dichloroethane		03.31.95	95924	47.7	48.4	ug/L	1
1,2-Dichlorobenzene		03.31.95	95924	50.6	51.2	ug/L	1
1,2-Dichloropropane		03.31.95	95924	46.1	46.0	ug/L	0
1,3-Dichlorobenzene		03.31.95	95924	49.6	50.3	ug/L	1
1,4-Dichlorobenzene		03.31.95	95924	50.2	50.7	ug/L	1
2-Chloroethylvinylether		03.31.95	95924	53.2	54.6	ug/L	3
2-Hexanone		03.31.95	95924	56.1	59.7	ug/L	6
Acetone		03.31.95	95924	50.0	51.5	ug/L	3
Bromodichloromethane		03.31.95	95924	50.6	51.5	ug/L	2
Bromomethane		03.31.95	95924	44.1	45.0	ug/L	2
Benzene		03.31.95	95924	45.5	45.1	ug/L	1
Bromoform		03.31.95	95924	53.9	57.6	ug/L	7
Chlorobenzene		03.31.95	95924	50.0	50.9	ug/L	2
Carbon Tetrachloride		03.31.95	95924	46.5	46.4	ug/L	0
Chloroethane		03.31.95	95924	35.6	35.7	ug/L	0
Chloroform		03.31.95	95924	47.3	46.9	ug/L	1
Chloromethane		03.31.95	95924	39.6	40.2	ug/L	2
Carbon Disulfide		03.31.95	95924	42.9	42.5	ug/L	1
Dibromochloromethane		03.31.95	95924	51.9	53.8	ug/L	4
Ethylbenzene		03.31.95	95924	49.9	50.4	ug/L	1
Freon 113		03.31.95	95924	44.0	44.9	ug/L	2
Methyl ethyl ketone		03.31.95	95924	53.0	56.7	ug/L	7
Methyl isobutyl ketone		03.31.95	95924	55.3	57.3	ug/L	4
Methylene chloride		03.31.95	95924	45.6	46.0	ug/L	1
Styrene		03.31.95	95924	51.2	51.0	ug/L	0
Trichloroethene		03.31.95	95924	45.5	44.9	ug/L	1
Trichlorofluoromethane		03.31.95	95924	45.0	45.7	ug/L	2
Toluene		03.31.95	95924	49.9	50.8	ug/L	2
Tetrachloroethene		03.31.95	95924	49.6	50.2	ug/L	1
Vinyl acetate		03.31.95	95924	50.3	51.8	ug/L	3
Vinyl chloride		03.31.95	95924	43.7	42.5	ug/L	3
Total Xylene Isomers		03.31.95	95924	149	152	ug/L	2
cis-1,2-Dichloroethene		03.31.95	95924	47.2	47.0	ug/L	0
cis-1,3-Dichloropropene		03.31.95	95924	52.2	53.3	ug/L	2
trans-1,2-Dichloroethene		03.31.95	95924	45.0	45.0	ug/L	0
trans-1,3-Dichloropropene		03.31.95	95924	50.4	51.3	ug/L	2

BC ANALYTICAL

ORDER QC REPORT FOR G9503435

DATE REPORTED : 04/06/95

MATRIX QC PRECISION (DUPLICATE SPIKES)
BATCH QC REPORT

PARAMETER	SAMPLE NUMBER	DATE ANALYZED	BATCH NUMBER	MS RESULT	MSD RESULT	UNIT	RELATIVE % DIFF
1. Ammonia (350.1)	9503401*1	03.24.95	9538	7.77	8.06	mg/L	4
2. COD (410.4)	9503368*1	03.28.95	9532	252	257	mg/L	2
3. Nitrate+Nitrite	9503277*1						
Nitrate+Nitrite (as NO3)		03.21.95	9560	34.3	34.4	mg/L	0
Nitrate+Nitrite (as N)		03.21.95	9560	7.74	7.76	mg/L	0
4. Nitrate+Nitrite	9503348*1						
Nitrate+Nitrite (as NO3)		03.21.95	9560	5.87	5.98	mg/L	2
Nitrate+Nitrite (as N)		03.21.95	9560	1.33	1.35	mg/L	1
5. Nitrate+Nitrite	9503348*9						
Nitrate+Nitrite (as NO3)		03.21.95	9560	3.35	3.37	mg/L	1
Nitrate+Nitrite (as N)		03.21.95	9560	0.756	0.761	mg/L	1
6. Nitrate+Nitrite	9503368*1						
Nitrate+Nitrite (as NO3)		03.21.95	9560	4.25	4.26	mg/L	0
Nitrate+Nitrite (as N)		03.21.95	9560	0.959	0.960	mg/L	0
7. Ortho Phosphate (3	9503401*1	03.22.95	9539	3.26	3.26	mg/L	0
7. Ortho Phosphate (3	9503401*1	03.22.95	9539	10.0	9.98	mg/L	0
8. BOD5 (405.1)	9503401*2	03.23.95	9550	161	164	mg/L	2
. Sulfate	9503368*1	03.27.95	951	2840	2810	mg/L	1
10. Dissolved Solids (	9503348*1	03.23.95	9525	1090	1080	mg/L	1
11. Alkalinity (310.1)	9503368*1						
Bicarbonate Alk (as CaCO3)		03.31.95	9518	864	862	mg/L	0
Total Alkalinity (as CaCO3)		03.31.95	9518	864	862	mg/L	0
12. Alkalinity (E310.1)	9503509*1						
Date Analyzed		03.31.95	9518	03/31/95	03/31/95	Date	N/A
Bicarbonate Alk (as CaCO3)		03.31.95	9518	810	812	mg/L	0
Total Alkalinity (as CaCO3)		03.31.95	9518	810	812	mg/L	0
13. Chloride	9503401*8	03.27.95	957	1040	1040	mg/L	0
14. TOC (9060/415.1)	9503253*1	03.21.95	9528	12.5	12.7	mg/L	2
15. Antimony (6010/200	9503401*1	03.30.95	95370	2.74	2.76	mg/L	1
16. Arsenic (7060/206.	9503368*1	03.30.95	95366	0.0248	0.0254	mg/L	2
17. Barium (6010/200.7	9503401*1	03.30.95	95370	0.564	0.575	mg/L	2
18. Beryllium (6010/20	9503401*1	03.30.95	95370	0.0940	0.0961	mg/L	2
19. Cadmium (7131/213.	9503368*1	03.30.95	95366	0.0272	0.0267	mg/L	2
20. Chromium (6010/200	9503401*1	03.30.95	95370	0.187	0.190	mg/L	2
21. Cobalt (6010/200.7	9503401*1	03.30.95	95370	0.459	0.467	mg/L	2
22. Iron (6010/200.7)	9503401*1	03.30.95	95370	1.54	1.58	mg/L	3
23. Lead (7421/239.2)	9503368*1	03.29.95	95366	0.0162	0.0155	mg/L	4
24. Manganese (6010/20	9503401*1	03.30.95	95370	0.241	0.243	mg/L	1
25. Mercury (7470/245.	9503368*9	03.27.95	95357	0.0011	0.0011	mg/L	0
26. Nickel (6010/200.7	9503401*1	03.30.95	95370	0.530	0.529	mg/L	0
27. Selenium (7740/270	9503368*1	03.30.95	95366	0.0140	0.0155	mg/L	10
28. Sodium (6010/200.7	9503401*1	03.31.95	95370	1400	1490	mg/L	6
29. Vanadium (6010/200	9503401*1	03.30.95	95370	0.478	0.484	mg/L	1
30. Vol.Pri.Poll. (EPA-824	9503368*8						
Date Analyzed		03.30.95	95922	03/30/95	03/30/95	Date	N/A

BC ANALYTICAL

ORDER QC REPORT FOR G9503435

DATE REPORTED : 04/06/95

MATRIX QC PRECISION (DUPLICATE SPIKES)
BATCH QC REPORT

PARAMETER	SAMPLE NUMBER	DATE ANALYZED	BATCH NUMBER	MS RESULT	MSD RESULT	UNIT	RELATIVE % DIFF
1,1-Dichloroethene		03.30.95	95922	30.6	30.6	ug/L	0
Benzene		03.30.95	95922	40.5	41.2	ug/L	2
Chlorobenzene		03.30.95	95922	43.7	44.7	ug/L	2
Trichloroethene		03.30.95	95922	41.7	41.6	ug/L	0
Toluene		03.30.95	95922	45.0	46.1	ug/L	2
31. B/N,A Ext.Pri.Poll. (E	9503368*1						
Date Analyzed		03.27.95	9546	03/27/95	03/27/95	Date	N/A
Date Extracted		03.27.95	9546	03/23/95	03/23/95	Date	N/A
1,2,4-Trichlorobenzene		03.27.95	9546	39.3	49.2	ug/L	22
1,4-Dichlorobenzene		03.27.95	9546	38.1	48.4	ug/L	24
2,4-Dinitrotoluene		03.27.95	9546	40.6	49.4	ug/L	20
2-Chlorophenol		03.27.95	9546	64.6	74.5	ug/L	14
4-Chloro-3-methylphenol		03.27.95	9546	72.9	85.2	ug/L	16
4-Nitrophenol		03.27.95	9546	29.4	24.1	ug/L	20
Acenaphthene		03.27.95	9546	44.3	51.8	ug/L	16
N-Nitrosodi-n-propylamine		03.27.95	9546	55.0	62.8	ug/L	13
Phenol		03.27.95	9546	46.2	53.2	ug/L	14
Pentachlorophenol		03.27.95	9546	68.7	81.5	ug/L	17
Pyrene		03.27.95	9546	46.7	51.4	ug/L	10
32. COD (410.4)	9503368*2	03.28.95	9531	998	998	mg/L	0
33. Dissolved Solids (	9503368*8	03.27.95	9526	12700	12700	mg/L	0
34. TDS (EPA 160.1)	9503407*7						
Date Analyzed		03.27.95	9526	03/27/95	03/27/95	Date	N/A
Dissolved Solids (160.1)		03.27.95	9526	3320	3320	mg/L	0
35. Nitrate+Nitrite	9503401*1						
Nitrate+Nitrite (as NO3)		03.24.95	9564	3.70	3.69	mg/L	0
Nitrate+Nitrite (as N)		03.24.95	9564	0.835	0.833	mg/L	0
36. Nitrate+Nitrite	9503420*1						
Nitrate+Nitrite (as NO3)		03.24.95	9564	8.42	8.30	mg/L	1
Nitrate+Nitrite (as N)		03.24.95	9564	1.90	1.87	mg/L	2
37. Sulfate	9503435*1	03.27.95	952	3030	3000	mg/L	1
38. Dissolved Solids (	9503401*1	03.28.95	9527	15000	15100	mg/L	1
39. Dissolved Solids (	9503464*21	03.28.95	9527	2760	2770	mg/L	0
40. TOC (9060/415.1)	9503401*1	03.29.95	9532	14.6	14.7	mg/L	1
41. Mercury (7470/245.	9503435*1	03.31.95	95382	0.0020	0.0019	mg/L	5
42. Vol.Pri.Poll. (EPA-824	9503401*1						
Date Analyzed		03.30.95	95923	03/30/95	03/30/95	Date	N/A
1,1-Dichloroethene		03.30.95	95923	48.5	49.1	ug/L	1
Benzene		03.30.95	95923	46.9	48.7	ug/L	4
Chlorobenzene		03.30.95	95923	49.5	51.7	ug/L	4
Trichloroethene		03.30.95	95923	46.8	48.6	ug/L	4
Toluene		03.30.95	95923	50.0	52.2	ug/L	4
3. EPA Method 8270	9503377*3						
Date Analyzed		03.29.95	9548	03/29/95	03/29/95	Date	N/A
Date Extracted		03.29.95	9548	03/27/95	03/27/95	Date	N/A

BC ANALYTICAL

ORDER QC REPORT FOR G9503435

DATE REPORTED : 04/06/95

MATRIX QC PRECISION (DUPLICATE SPIKES)
BATCH QC REPORT

PARAMETER	SAMPLE NUMBER	DATE ANALYZED	BATCH NUMBER	MS RESULT	MSD RESULT	UNIT	RELATIVE % DIFF
1,2,4-Trichlorobenzene		03.29.95	9548	24.4	32.4	ug/L	28
1,4-Dichlorobenzene		03.29.95	9548	23.1	31.8	ug/L	32
2,4-Dinitrotoluene		03.29.95	9548	51.4	63.9	ug/L	22
2-Chlorophenol		03.29.95	9548	61.4	67.8	ug/L	10
4-Chloro-3-methylphenol		03.29.95	9548	69.1	76.3	ug/L	10
4-Nitrophenol		03.29.95	9548	52.8	77.4	ug/L	38 Q
Acenaphthene		03.29.95	9548	37.7	46.1	ug/L	20
N-Nitrosodi-n-propylamine		03.29.95	9548	55.1	62.2	ug/L	12
Phenol		03.29.95	9548	47.7	54.6	ug/L	13
Pentachlorophenol		03.29.95	9548	83.3	105	ug/L	23
Pyrene		03.29.95	9548	57.3	66.5	ug/L	15
2-Fluorobiphenyl Reported		03.29.95	9548	33.5	38.4	ug/L	14
2-Fluorobiphenyl Theo.		03.29.95	9548	50.0	50.0	ug/L	0
2-Fluorophenol Reported		03.29.95	9548	46.4	51.5	ug/L	10
2-Fluorophenol Theoretical		03.29.95	9548	75.0	75.0	ug/L	0
2,4,6-Tribromophenol Rep.		03.29.95	9548	57.6	72.4	ug/L	23
2,4,6-Tribromophenol Theo.		03.29.95	9548	75.0	75.0	ug/L	0
Nitrobenzene-d5 Reported		03.29.95	9548	35.3	37.7	ug/L	7
Nitrobenzene-d5 Theoretical		03.29.95	9548	50.0	50.0	ug/L	0
Phenol-d5 Reported		03.29.95	9548	50.9	58.0	ug/L	13
Phenol-d5 Theoretical		03.29.95	9548	75.0	75.0	ug/L	0
Terphenyl-d14 Reported		03.29.95	9548	38.5	41.5	ug/L	8
Terphenyl-d14 Theoretical		03.29.95	9548	50.0	50.0	ug/L	0
44. Chloride	9503435*2	03.27.95	958	3270	3290	mg/L	1
45. Antimony (6010/200	9503435*1	03.30.95	95371	2.75	2.68	mg/L	3
46. Arsenic (7060/206.	9503435*1	03.30.95	95372	0.0227	0.0231	mg/L	2
47. Barium (6010/200.7	9503435*1	03.30.95	95371	0.472	0.469	mg/L	1
48. Beryllium (6010/20	9503435*1	03.30.95	95371	0.0870	0.0859	mg/L	1
49. Cadmium (7131/213.	9503435*1	03.31.95	95372	0.0300	0.0321	mg/L	7
50. Chromium (6010/200	9503435*1	03.30.95	95371	0.162	0.166	mg/L	2
51. Cobalt (6010/200.7	9503435*1	03.30.95	95371	0.427	0.419	mg/L	2
52. Iron (6010/200.7)	9503435*1	03.30.95	95371	0.313	0.292	mg/L	7
53. Lead (7421/239.2)	9503435*1	03.30.95	95372	0.0114	0.0121	mg/L	6
54. Manganese (6010/20	9503435*1	03.30.95	95371	0.0815	0.0803	mg/L	1
55. Nickel (6010/200.7	9503435*1	03.30.95	95371	0.458	0.436	mg/L	5
56. Selenium (7740/270	9503435*1	03.30.95	95372	0.0606	0.0617	mg/L	2
57. Sodium (6010/200.7	9503435*1	03.31.95	95371	5410	5490	mg/L	1
58. Vanadium (6010/200	9503435*1	03.30.95	95371	0.451	0.451	mg/L	0
59. B/N,A Ext.Pri.Poll. (E	9503435*1						
Date Analyzed		03.30.95	9550	03/30/95	03/30/95	Date	N/A
Date Extracted		03.30.95	9550	03/28/95	03/28/95	Date	N/A
1,2,4-Trichlorobenzene		03.30.95	9550	48.4	46.1	ug/L	5
1,4-Dichlorobenzene		03.30.95	9550	48.4	46.0	ug/L	5
2,4-Dinitrotoluene		03.30.95	9550	59.9	54.6	ug/L	9
2-Chlorophenol		03.30.95	9550	77.7	73.2	ug/L	6

BC ANALYTICAL

ORDER QC REPORT FOR G9503435

DATE REPORTED : 04/06/95

MATRIX QC PRECISION (DUPLICATE SPIKES)
BATCH QC REPORT

PARAMETER	SAMPLE NUMBER	DATE ANALYZED	BATCH NUMBER	MS RESULT	MSD RESULT	UNIT	RELATIVE % DIFF
4-Chloro-3-methylphenol		03.30.95	9550	84.3	80.0	ug/L	5
4-Nitrophenol		03.30.95	9550	63.5	66.0	ug/L	4
Acenaphthene		03.30.95	9550	56.0	50.5	ug/L	10
N-Nitrosodi-n-propylamine		03.30.95	9550	64.8	61.1	ug/L	6
Phenol		03.30.95	9550	54.4	54.5	ug/L	0
Pentachlorophenol		03.30.95	9550	92.5	90.0	ug/L	3
Pyrene		03.30.95	9550	48.7	47.8	ug/L	2
60. Vol.Pri.Poll. (EPA-824	9503435*5						
Date Analyzed		03.31.95	95924	03/31/95	03/31/95	Date	N/A
1,1-Dichloroethene		03.31.95	95924	45.8	44.7	ug/L	2
Benzene		03.31.95	95924	44.3	43.3	ug/L	2
Chlorobenzene		03.31.95	95924	52.7	50.1	ug/L	5
Trichloroethene		03.31.95	95924	44.0	43.2	ug/L	2
Toluene		03.31.95	95924	52.1	49.8	ug/L	5

BC ANALYTICAL

ORDER QC REPORT FOR G9503435

DATE REPORTED : 04/06/95

MATRIX QC ACCURACY (SPIKES)
BATCH QC REPORT

PARAMETER	SAMPLE NUMBER	DATE ANALYZED	BATCH NUMBER	MS %	MSD %	TRUE RESULT	UNIT	
1. Ammonia (350.1)	9503401*1	03.24.95	9538	101	107	7.70	mg/L	
2. COD (410.4)	9503368*1	03.28.95	9532	95	98	260	mg/L	
3. Nitrate+Nitrite	9503277*1							
Nitrate+Nitrite (as NO3)		03.21.95	9560	97	97	34.8	mg/L	
Nitrate+Nitrite (as N)		03.21.95	9560	97	97	7.86	mg/L	
4. Nitrate+Nitrite	9503348*1							
Nitrate+Nitrite (as NO3)		03.21.95	9560	102	105	5.79	mg/L	
Nitrate+Nitrite (as N)		03.21.95	9560	103	106	1.30	mg/L	
5. Nitrate+Nitrite	9503348*9							
Nitrate+Nitrite (as NO3)		03.21.95	9560	84	84	4.00	mg/L	
Nitrate+Nitrite (as N)		03.21.95	9560	84	84	0.903	mg/L	
6. Nitrate+Nitrite	9503368*1							
Nitrate+Nitrite (as NO3)		03.21.95	9560	106	107	4.00	mg/L	
Nitrate+Nitrite (as N)		03.21.95	9560	106	106	0.903	mg/L	
7. Ortho Phosphate (3	9503401*1	03.22.95	9539	98	98	3.33	mg/L	
7. Ortho Phosphate (3	9503401*1	03.22.95	9539	98	98	10.2	mg/L	
8. BOD5 (405.1)	9503401*2	03.23.95	9550	80	81	200	mg/L	
. Sulfate	9503368*1	03.27.95	951	109	106	2750	mg/L	
10. Dissolved Solids (	9503348*1	03.23.95	9525	102	101	1070	mg/L	
11. Alkalinity (310.1)	9503368*1							
Bicarbonate Alk (as CaCO3)		03.31.95	9518	103	102	852	mg/L	
Total Alkalinity (as CaCO3)		03.31.95	9518	103	102	852	mg/L	
12. Alkalinity (310.1)	9503509*1							
Bicarbonate Alk (as CaCO3)		03.31.95	9518	102	103	799	mg/L	
Total Alkalinity (as CaCO3)		03.31.95	9518	102	103	799	mg/L	
13. Chloride	9503401*8	03.27.95	957	NC	NC	1040	mg/L	NC
14. TOC (9060/415.1)	9503253*1	03.21.95	9528	100	102	12.5	mg/L	
15. Antimony (6010/200	9503401*1	03.30.95	95370	91	92	3.00	mg/L	
16. Arsenic (7060/206.	9503368*1	03.30.95	95366	99	102	0.0250	mg/L	
17. Barium (6010/200.7	9503401*1	03.30.95	95370	97	99	0.580	mg/L	
18. Beryllium (6010/20	9503401*1	03.30.95	95370	94	96	0.100	mg/L	
19. Cadmium (7131/213.	9503368*1	03.30.95	95366	109	107	0.0250	mg/L	
20. Chromium (6010/200	9503401*1	03.30.95	95370	94	95	0.200	mg/L	
21. Cobalt (6010/200.7	9503401*1	03.30.95	95370	92	93	0.500	mg/L	
22. Iron (6010/200.7)	9503401*1	03.30.95	95370	NC	NC	1.60	mg/L	NC
23. Lead (7421/239.2)	9503368*1	03.29.95	95366	81	78	0.0200	mg/L	
24. Manganese (6010/20	9503401*1	03.30.95	95370	NC	NC	0.250	mg/L	NC
25. Mercury (7470/245.	9503368*9	03.27.95	95357	55	55	0.0020	mg/L	
26. Nickel (6010/200.7	9503401*1	03.30.95	95370	97	97	0.544	mg/L	
27. Selenium (7740/270	9503368*1	03.30.95	95366	14	16	0.100	mg/L	
28. Sodium (6010/200.7	9503401*1	03.31.95	95370	NC	NC	1450	mg/L	NC
29. Vanadium (6010/200	9503401*1	03.30.95	95370	96	97	0.500	mg/L	
0. Vol.Pri.Poll. (EPA-824	9503368*8							
1,1-Dichloroethene		03.29.95	95922	61	61	50.0	ug/L	
Benzene		03.29.95	95922	81	82	50.0	ug/L	

BC ANALYTICAL

ORDER QC REPORT FOR G9503435

DATE REPORTED : 04/06/95

MATRIX QC ACCURACY (SPIKES)
BATCH QC REPORT

PARAMETER	SAMPLE NUMBER	DATE ANALYZED	BATCH NUMBER	MS %	MSD %	TRUE RESULT	UNIT
Chlorobenzene		03.29.95	95922	87	89	50.0	ug/L
Trichloroethene		03.29.95	95922	83	83	50.0	ug/L
Toluene		03.29.95	95922	90	92	50.0	ug/L
31. B/N,A Ext.Pri.Poll. (E	9503368*1						
1,2,4-Trichlorobenzene		03.27.95	9546	79	98	50.0	ug/L
1,4-Dichlorobenzene		03.27.95	9546	76	97	50.0	ug/L
2,4-Dinitrotoluene		03.27.95	9546	81	99	50.0	ug/L
2-Chlorophenol		03.27.95	9546	86	99	75.0	ug/L
4-Chloro-3-methylphenol		03.27.95	9546	97	114	75.0	ug/L
4-Nitrophenol		03.27.95	9546	39	32	75.0	ug/L
Acenaphthene		03.27.95	9546	89	104	50.0	ug/L
N-Nitrosodi-n-propylamine		03.27.95	9546	110	126	50.0	ug/L
Phenol		03.27.95	9546	62	71	75.0	ug/L
Pentachlorophenol		03.27.95	9546	92	109	75.0	ug/L
Pyrene		03.27.95	9546	93	103	50.0	ug/L
32. COD (410.4)	9503368*2	03.28.95	9531	94	94	1030	mg/L
33. Dissolved Solids (	9503368*8	03.27.95	9526	103	103	12400	mg/L
34. Dissolved Solids (	9503407*7	03.27.95	9526	106	106	3208	mg/L
35. Nitrate+Nitrite	9503401*1						
Nitrate+Nitrite (as NO3)		03.24.95	9564	93	92	4.00	mg/L
Nitrate+Nitrite (as N)		03.24.95	9564	92	92	0.903	mg/L
36. Nitrate+Nitrite	9503420*1						
Nitrate+Nitrite (as NO3)		03.24.95	9564	98	95	8.50	mg/L
Nitrate+Nitrite (as N)		03.24.95	9564	98	95	1.92	mg/L
37. Sulfate	9503435*1	03.27.95	952	109	106	2940	mg/L
38. Dissolved Solids (	9503401*1	03.28.95	9527	100	101	15000	mg/L
39. Dissolved Solids (	9503464*21	03.28.95	9527	102	103	2714	mg/L
40. TOC (9060/415.1)	9503401*1	03.29.95	9532	102	103	14.4	mg/L
41. Mercury (7470/245.	9503435*1	03.31.95	95382	100	95	0.0020	mg/L
42. Vol.Pri.Poll. (EPA-824	9503401*1						
1,1-Dichloroethene		03.30.95	95923	97	98	50.0	ug/L
Benzene		03.30.95	95923	94	97	50.0	ug/L
Chlorobenzene		03.30.95	95923	99	103	50.0	ug/L
Trichloroethene		03.30.95	95923	94	97	50.0	ug/L
Toluene		03.30.95	95923	100	104	50.0	ug/L
43. B/N,A Ext.Pri.Poll. (E	9503377*3						
1,2,4-Trichlorobenzene		03.29.95	9548	49	65	50.0	ug/L
1,4-Dichlorobenzene		03.29.95	9548	46	64	50.0	ug/L
2,4-Dinitrotoluene		03.29.95	9548	103	128	50.0	ug/L
2-Chlorophenol		03.29.95	9548	82	90	75.0	ug/L
4-Chloro-3-methylphenol		03.29.95	9548	92	102	75.0	ug/L
4-Nitrophenol		03.29.95	9548	70	103	75.0	ug/L
Acenaphthene		03.29.95	9548	75	92	50.0	ug/L
N-Nitrosodi-n-propylamine		03.29.95	9548	110	124	50.0	ug/L
Phenol		03.29.95	9548	64	73	75.0	ug/L

BC ANALYTICAL

ORDER QC REPORT FOR G9503435

DATE REPORTED : 04/06/95

MATRIX QC ACCURACY (SPIKES)
BATCH QC REPORT

PARAMETER	SAMPLE NUMBER	DATE ANALYZED	BATCH NUMBER	MS %	MSD %	TRUE RESULT	UNIT	
Pentachlorophenol		03.29.95	9548	111	140	75.0	ug/L	
Pyrene		03.29.95	9548	115	133	50.0	ug/L	
2-Fluorobiphenyl Reported		03.29.95	9548	67	77	50.0	ug/L	
2-Fluorobiphenyl Theo.		03.29.95	9548	100	100	50.0	ug/L	
2-Fluorophenol Reported		03.29.95	9548	62	69	75.0	ug/L	
2-Fluorophenol Theoretical		03.29.95	9548	100	100	75.0	ug/L	
2,4,6-Tribromophenol Rep.		03.29.95	9548	77	97	75.0	ug/L	
2,4,6-Tribromophenol Theo.		03.29.95	9548	100	100	75.0	ug/L	
Nitrobenzene-d5 Reported		03.29.95	9548	71	75	50.0	ug/L	
Nitrobenzene-d5 Theoretical		03.29.95	9548	100	100	50.0	ug/L	
Phenol-d5 Reported		03.29.95	9548	68	77	75.0	ug/L	
Phenol-d5 Theoretical		03.29.95	9548	100	100	75.0	ug/L	
Terphenyl-d14 Reported		03.29.95	9548	77	83	50.0	ug/L	
Terphenyl-d14 Theoretical		03.29.95	9548	100	100	50.0	ug/L	
44. Chloride	9503435*2	03.27.95	958	NC	NC	3300	mg/L	NC
45. Antimony (6010/200	9503435*1	03.30.95	95371	92	89	3.00	mg/L	
46. Arsenic (7060/206.	9503435*1	03.30.95	95372	91	92	0.0250	mg/L	
47. Barium (6010/200.7	9503435*1	03.30.95	95371	89	89	0.526	mg/L	
48. Beryllium (6010/20	9503435*1	03.30.95	95371	87	86	0.100	mg/L	
49. Cadmium (7131/213.	9503435*1	03.31.95	95372	120	128	0.0250	mg/L	
50. Chromium (6010/200	9503435*1	03.30.95	95371	81	83	0.200	mg/L	
51. Cobalt (6010/200.7	9503435*1	03.30.95	95371	85	84	0.500	mg/L	
52. Iron (6010/200.7)	9503435*1	03.30.95	95371	104	97	0.300	mg/L	
53. Lead (7421/239.2)	9503435*1	03.30.95	95372	57	61	0.0200	mg/L	
54. Manganese (6010/20	9503435*1	03.30.95	95371	87	85	0.0880	mg/L	
55. Nickel (6010/200.7	9503435*1	03.30.95	95371	92	87	0.500	mg/L	
56. Selenium (7740/270	9503435*1	03.30.95	95372	61	62	0.100	mg/L	
57. Sodium (6010/200.7	9503435*1	03.31.95	95371	NC	NC	5350	mg/L	NC
58. Vanadium (6010/200	9503435*1	03.30.95	95371	90	90	0.500	mg/L	
59. B/N,A Ext.Pri.Poll. (E	9503435*1							
1,2,4-Trichlorobenzene		03.30.95	9550	97	92	50.0	ug/L	
1,4-Dichlorobenzene		03.30.95	9550	97	92	50.0	ug/L	
2,4-Dinitrotoluene		03.30.95	9550	120	109	50.0	ug/L	
2-Chlorophenol		03.30.95	9550	104	98	75.0	ug/L	
4-Chloro-3-methylphenol		03.30.95	9550	112	107	75.0	ug/L	
4-Nitrophenol		03.30.95	9550	85	88	75.0	ug/L	
Acenaphthene		03.30.95	9550	112	101	50.0	ug/L	
N-Nitrosodi-n-propylamine		03.30.95	9550	130	122	50.0	ug/L	
Phenol		03.30.95	9550	73	73	75.0	ug/L	
Pentachlorophenol		03.30.95	9550	123	120	75.0	ug/L	
Pyrene		03.30.95	9550	97	96	50.0	ug/L	
60. Vol.Pri.Poll. (EPA-824	9503435*5							
1,1-Dichloroethene		03.31.95	95924	92	89	50.0	ug/L	
Benzene		03.31.95	95924	89	87	50.0	ug/L	
Chlorobenzene		03.31.95	95924	105	100	50.0	ug/L	

BC ANALYTICAL

ORDER QC REPORT FOR G9503435

DATE REPORTED : 04/06/95

MATRIX QC ACCURACY (SPIKES)
BATCH QC REPORT

PARAMETER	SAMPLE NUMBER	DATE ANALYZED	BATCH NUMBER	MS %	MSD %	TRUE RESULT	UNIT
Trichloroethene		03.31.95	95924	88	86	50.0	ug/L
Toluene		03.31.95	95924	104	100	50.0	ug/L

BC ANALYTICAL

ORDER QC REPORT FOR G9503435

DATE REPORTED : 04/06/95

METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)
FOR BATCHES WHICH INCLUDE THIS ORDER

PARAMETER		DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT	METHOD
1. Ammonia (350.1)	B5031057*1	03.24.95	9538	0.01	0.1	mg/L	350.1
2. COD (410.4)	B5031400*1	03.28.95	9532	0	6	mg/L	410.4
3. Nitrate+Nitrite	B503914*1						
Nitrate+Nitrite (as NO3)		03.21.95	9560	0	0.2	mg/L	353.2
Nitrate+Nitrite (as N)		03.21.95	9560	0	0.05	mg/L	353.2
4. Ortho Phosphate (3	B503995*1	03.22.95	9539	0	0.03	mg/L	365.3
4. Ortho Phosphate (3	B503995*1	03.22.95	9539	0	0.1	mg/L	365.3
5. BOD5 (405.1)	B5031166*1	03.23.95	9550	0.01	7	mg/L	405.1
6. Sulfate	B5031134*1	03.27.95	951	0	2	mg/L	375.4
7. Dissolved Solids (	B5031058*1	03.23.95	9525	0	10	mg/L	160.1
8. Alkalinity (E310.1)	B5031397*1						
Date Analyzed		03.31.95	9518	03/31/95	NA	Date	310.1
Carbonate Alk (as CaCO3)		03.31.95	9518	0	10	mg/L	310.1
Bicarbonate Alk (as CaCO3)		03.31.95	9518	0	10	mg/L	310.1
Hydroxide Alk (as CaCO3)		03.31.95	9518	0	10	mg/L	310.1
Total Alkalinity (as CaCO3)		03.31.95	9518	0	10	mg/L	310.1
9. Chloride	B5031107*1	03.27.95	957	0	0.5	mg/L	325.3
10. TOC (9060/415.1)	B5031001*1	03.21.95	9528	0	0.5	mg/L	415.1
11. Antimony (6010/200	B5031291*1	03.30.95	95370	0	0.1	mg/L	6010
12. Arsenic (7060/206.	B5031233*1	03.30.95	95366	0	0.002	mg/L	7060
13. Barium (6010/200.7	B5031283*1	03.30.95	95370	0	0.005	mg/L	6010
14. Beryllium (6010/20	B5031284*1	03.30.95	95370	0	0.001	mg/L	6010
15. Cadmium (7131/213.	B5031234*1	03.30.95	95366	0	0.0001	mg/L	7131
16. Chromium (6010/200	B5031286*1	03.30.95	95370	0.0034	0.01	mg/L	6010
17. Cobalt (6010/200.7	B5031285*1	03.30.95	95370	0	0.04	mg/L	6010
18. Iron (6010/200.7)	B5031287*1	03.30.95	95370	0	0.04	mg/L	6010
19. Lead (7421/239.2)	B5031235*1	03.29.95	95366	0	0.002	mg/L	7421
20. Manganese (6010/20	B5031288*1	03.30.95	95370	0.0037	0.01	mg/L	6010
21. Mercury (7470/245.	B5031130*1	03.27.95	95357	0	0.0002	mg/L	7470
22. Nickel (6010/200.7	B5031290*1	03.30.95	95370	0.0092	0.04	mg/L	6010
23. Selenium (7740/270	B5031236*1	03.30.95	95366	0	0.004	mg/L	7740
24. Sodium (6010/200.7	B5031289*1	03.31.95	95370	0.224	0.5	mg/L	6010
25. Vanadium (6010/200	B5031292*1	03.30.95	95370	0	0.04	mg/L	6010
26. Vol.Pri.Poll. (EPA-824	B5031381*1						
Date Analyzed		03.29.95	95922	03/29/95	NA	Date	8240
1,1,1-Trichloroethane		03.29.95	95922	0	1	ug/L	8240
1,1,2,2-Tetrachloroethane		03.29.95	95922	0	1	ug/L	8240
1,1,2-Trichloroethane		03.29.95	95922	0	1	ug/L	8240
1,1-Dichloroethane		03.29.95	95922	0	1	ug/L	8240
1,1-Dichloroethene		03.29.95	95922	0	1	ug/L	8240
1,2-Dichloroethane		03.29.95	95922	0	1	ug/L	8240
1,2-Dichlorobenzene		03.29.95	95922	0	1	ug/L	8240
1,2-Dichloropropane		03.29.95	95922	0	1	ug/L	8240
1,3-Dichlorobenzene		03.29.95	95922	0	1	ug/L	8240
1,4-Dichlorobenzene		03.29.95	95922	0	1	ug/L	8240

BC ANALYTICAL

ORDER QC REPORT FOR G9503435

DATE REPORTED : 04/06/95

METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)
FOR BATCHES WHICH INCLUDE THIS ORDER

PARAMETER	DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT	METHOD
2-Chloroethylvinylether	03.29.95	95922	0	1	ug/L	8240
2-Hexanone	03.29.95	95922	0	5	ug/L	8240
Acetone	03.29.95	95922	0	20	ug/L	8240
Acrolein	03.29.95	95922	0	50	ug/L	8240
Acrylonitrile	03.29.95	95922	0	50	ug/L	8240
Bromodichloromethane	03.29.95	95922	0	1	ug/L	8240
Bromomethane	03.29.95	95922	0	1	ug/L	8240
Benzene	03.29.95	95922	0	1	ug/L	8240
Bromoform	03.29.95	95922	0	1	ug/L	8240
Chlorobenzene	03.29.95	95922	0	1	ug/L	8240
Carbon Tetrachloride	03.29.95	95922	0	1	ug/L	8240
Chloroethane	03.29.95	95922	0	1	ug/L	8240
Chloroform	03.29.95	95922	0	1	ug/L	8240
Chloromethane	03.29.95	95922	0	1	ug/L	8240
Carbon Disulfide	03.29.95	95922	0	2	ug/L	8240
Dibromochloromethane	03.29.95	95922	0	1	ug/L	8240
Ethylbenzene	03.29.95	95922	0	1	ug/L	8240
Freon 113	03.29.95	95922	0	2	ug/L	8240
Methyl ethyl ketone	03.29.95	95922	0	5	ug/L	8240
Methyl isobutyl ketone	03.29.95	95922	0	5	ug/L	8240
Methylene chloride	03.29.95	95922	0	1	ug/L	8240
Styrene	03.29.95	95922	0	1	ug/L	8240
Trichloroethene	03.29.95	95922	0	1	ug/L	8240
Trichlorofluoromethane	03.29.95	95922	0	1	ug/L	8240
Toluene	03.29.95	95922	0	1	ug/L	8240
Tetrachloroethene	03.29.95	95922	0	1	ug/L	8240
Vinyl acetate	03.29.95	95922	0	10	ug/L	8240
Vinyl chloride	03.29.95	95922	0	1	ug/L	8240
Total Xylene Isomers	03.29.95	95922	0	3	ug/L	8240
cis-1,2-Dichloroethene	03.29.95	95922	0	1	ug/L	8240
cis-1,3-Dichloropropene	03.29.95	95922	0	1	ug/L	8240
trans-1,2-Dichloroethene	03.29.95	95922	0	1	ug/L	8240
trans-1,3-Dichloropropene	03.29.95	95922	0	1	ug/L	8240
27. COD (410.4) B5031399*1	03.28.95	9531	0	6	mg/L	410.4
28. TDS (EPA 160.1) B5031157*1						
Date Analyzed	03.27.95	9526	03/27/95	10	Date	160.1
Dissolved Solids (160.1)	03.27.95	9526	0	10	mg/L	160.1
29. Nitrate+Nitrite B5031048*1						
Nitrate+Nitrite (as NO3)	03.24.95	9564	0	0.2	mg/L	353.2
Nitrate+Nitrite (as N)	03.24.95	9564	0	0.05	mg/L	353.2
30. Sulfate B5031243*1	03.27.95	952	0	2	mg/L	375.4
31. Dissolved Solids (B5031250*1	03.28.95	9527	0	10	mg/L	160.1
32. TOC (9060/415.1) B5031322*1	03.29.95	9532	0.024	0.5	mg/L	415.1
33. Mercury (7470/245. B5031407*1	03.31.95	95382	0	0.0002	mg/L	7470
34. Vol.Pri.Poll. (EPA-824 B5031405*1						
Date Analyzed	03.30.95	95923	03/30/95	NA	Date	8240

BC ANALYTICAL

ORDER QC REPORT FOR G9503435

DATE REPORTED : 04/06/95

METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)
FOR BATCHES WHICH INCLUDE THIS ORDER

PARAMETER	DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT	METHOD
1,1,1-Trichloroethane	03.30.95	95923	0	1	ug/L	8240
1,1,2,2-Tetrachloroethane	03.30.95	95923	0	1	ug/L	8240
1,1,2-Trichloroethane	03.30.95	95923	0	1	ug/L	8240
1,1-Dichloroethane	03.30.95	95923	0	1	ug/L	8240
1,1-Dichloroethene	03.30.95	95923	0	1	ug/L	8240
1,2-Dichloroethane	03.30.95	95923	0	1	ug/L	8240
1,2-Dichlorobenzene	03.30.95	95923	0	1	ug/L	8240
1,2-Dichloropropane	03.30.95	95923	0	1	ug/L	8240
1,3-Dichlorobenzene	03.30.95	95923	0	1	ug/L	8240
1,4-Dichlorobenzene	03.30.95	95923	0	1	ug/L	8240
1,4-Dioxane	03.30.95	95923	0	500	ug/L	8240
2-Chloroethylvinylether	03.30.95	95923	0	1	ug/L	8240
2-Hexanone	03.30.95	95923	0	5	ug/L	8240
Acetone	03.30.95	95923	7.1	20	ug/L	8240
Bromodichloromethane	03.30.95	95923	0	1	ug/L	8240
Bromomethane	03.30.95	95923	0	1	ug/L	8240
Benzene	03.30.95	95923	0	1	ug/L	8240
Bromoform	03.30.95	95923	0	1	ug/L	8240
Chlorobenzene	03.30.95	95923	0	1	ug/L	8240
Carbon Tetrachloride	03.30.95	95923	0	1	ug/L	8240
Chloroethane	03.30.95	95923	0	1	ug/L	8240
Chloroform	03.30.95	95923	0	1	ug/L	8240
Chloromethane	03.30.95	95923	0	1	ug/L	8240
Carbon Disulfide	03.30.95	95923	0	2	ug/L	8240
Cyclohexane	03.30.95	95923	0	5	ug/L	8240
Dibromochloromethane	03.30.95	95923	0	1	ug/L	8240
Ethylene Dibromide	03.30.95	95923	0	5	ug/L	8240
Ethylbenzene	03.30.95	95923	0	1	ug/L	8240
Freon 113	03.30.95	95923	0	2	ug/L	8240
Methyl ethyl ketone	03.30.95	95923	0	5	ug/L	8240
Methyl isobutyl ketone	03.30.95	95923	0	5	ug/L	8240
Methylene chloride	03.30.95	95923	0	1	ug/L	8240
Styrene	03.30.95	95923	0	1	ug/L	8240
Trichloroethene	03.30.95	95923	0	1	ug/L	8240
Trichlorofluoromethane	03.30.95	95923	0	1	ug/L	8240
Toluene	03.30.95	95923	0	1	ug/L	8240
Tetrachloroethene	03.30.95	95923	0	1	ug/L	8240
Vinyl acetate	03.30.95	95923	0	10	ug/L	8240
Vinyl chloride	03.30.95	95923	0	1	ug/L	8240
Total Xylene Isomers	03.30.95	95923	0	3	ug/L	8240
cis-1,2-Dichloroethene	03.30.95	95923	0	1	ug/L	8240
cis-1,3-Dichloropropene	03.30.95	95923	0	1	ug/L	8240
trans-1,2-Dichloroethene	03.30.95	95923	0	1	ug/L	8240
trans-1,3-Dichloropropene	03.30.95	95923	0	1	ug/L	8240
35. B/N,A Ext.Pri.Poll. (E B504023*1						
Date Analyzed	03.29.95	9548	03/29/95	NA	Date	8270

BC ANALYTICAL

ORDER QC REPORT FOR G9503435

DATE REPORTED : 04/06/95

METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)
FOR BATCHES WHICH INCLUDE THIS ORDER

PARAMETER	DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT	METHOD
Date Extracted	03.29.95	9548	03/27/95	NA	Date	8270
1,2,4-Trichlorobenzene	03.29.95	9548	0	5	ug/L	8270
1,2-Dichlorobenzene	03.29.95	9548	0	6	ug/L	8270
1,2-Diphenylhydrazine	03.29.95	9548	0	5	ug/L	8270
1,3-Dichlorobenzene	03.29.95	9548	0	5	ug/L	8270
1,4-Dichlorobenzene	03.29.95	9548	0	5	ug/L	8270
1-Methylnaphthalene	03.29.95	9548	0	10	ug/L	8270
2,4,5-Trichlorophenol	03.29.95	9548	0	6	ug/L	8270
2,4,6-Trichlorophenol	03.29.95	9548	0	5	ug/L	8270
2,4-Dichlorophenol	03.29.95	9548	0	5	ug/L	8270
2,4-Dimethylphenol	03.29.95	9548	0	5	ug/L	8270
2,4-Dinitrophenol	03.29.95	9548	0	10	ug/L	8270
2,4-Dinitrotoluene	03.29.95	9548	0	5	ug/L	8270
2,6-Dinitrotoluene	03.29.95	9548	0	5	ug/L	8270
2-Chloronaphthalene	03.29.95	9548	0	6	ug/L	8270
2-Chlorophenol	03.29.95	9548	0	5	ug/L	8270
2-Methyl-4,6-dinitrophenol	03.29.95	9548	0	5	ug/L	8270
2-Methylnaphthalene	03.29.95	9548	0	5	ug/L	8270
2-Methylphenol (o-Cresol)	03.29.95	9548	0	5	ug/L	8270
2-Nitroaniline	03.29.95	9548	0	5	ug/L	8270
2-Nitrophenol	03.29.95	9548	0	5	ug/L	8270
3,3'-Dichlorobenzidine	03.29.95	9548	0	20	ug/L	8270
3-Methylphenol (m-Cresol)	03.29.95	9548	0	10	ug/L	8270
3-Nitroaniline	03.29.95	9548	0	5	ug/L	8270
4-Bromophenylphenylether	03.29.95	9548	0	5	ug/L	8270
4-Chloro-3-methylphenol	03.29.95	9548	0	5	ug/L	8270
4-Chloroaniline	03.29.95	9548	0	5	ug/L	8270
4-Chlorophenylphenylether	03.29.95	9548	0	5	ug/L	8270
4-Methylphenol (p-Cresol)	03.29.95	9548	0	8	ug/L	8270
4-Nitroaniline	03.29.95	9548	0	6	ug/L	8270
4-Nitrophenol	03.29.95	9548	0	5	ug/L	8270
6-Methylchrysene	03.29.95	9548	0	10	ug/L	8270
7,12-Dimethylbenz(a)anthracene	03.29.95	9548	0	5	ug/L	8270
Acenaphthene	03.29.95	9548	0	5	ug/L	8270
Acenaphthylene	03.29.95	9548	0	5	ug/L	8270
Aniline	03.29.95	9548	0	5	ug/L	8270
Anthracene	03.29.95	9548	0	5	ug/L	8270
Benzidine	03.29.95	9548	0	100	ug/L	8270
Benzo(a)anthracene	03.29.95	9548	0	5	ug/L	8270
Benzo(a)pyrene	03.29.95	9548	0	5	ug/L	8270
Benzo(b)fluoranthene	03.29.95	9548	0	5	ug/L	8270
Benzo(g,h,i)perylene	03.29.95	9548	0	5	ug/L	8270
Benzo(k)fluoranthene	03.29.95	9548	0	5	ug/L	8270
Benzenethiol	03.29.95	9548	0	20	ug/L	8270
Benzyl Alcohol	03.29.95	9548	0	5	ug/L	8270

BC ANALYTICAL

ORDER QC REPORT FOR G9503435

DATE REPORTED : 04/06/95

METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)
FOR BATCHES WHICH INCLUDE THIS ORDER

PARAMETER	DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT	METHOD
Benzoic acid	03.29.95	9548	0	50	ug/L	8270
Butylbenzylphthalate	03.29.95	9548	0	5	ug/L	8270
Chrysene	03.29.95	9548	0	5	ug/L	8270
Di-n-octylphthalate	03.29.95	9548	0	5	ug/L	8270
Dibenzo(a,h)anthracene	03.29.95	9548	0	5	ug/L	8270
Dibenz(a,h)acridine	03.29.95	9548	0	20	ug/L	8270
Dibenzofuran	03.29.95	9548	0	5	ug/L	8270
Dibutylphthalate	03.29.95	9548	0	5	ug/L	8270
Diethylphthalate	03.29.95	9548	0	5	ug/L	8270
Dimethylphthalate	03.29.95	9548	0	5	ug/L	8270
Fluoranthene	03.29.95	9548	0	5	ug/L	8270
Fluorene	03.29.95	9548	0	5	ug/L	8270
Hexachlorobenzene	03.29.95	9548	0	5	ug/L	8270
Hexachlorobutadiene	03.29.95	9548	0	5	ug/L	8270
Hexachlorocyclopentadiene	03.29.95	9548	0	5	ug/L	8270
Hexachloroethane	03.29.95	9548	0	5	ug/L	8270
Indeno(1,2,3-c,d)pyrene	03.29.95	9548	0	7	ug/L	8270
Indene	03.29.95	9548	0	10	ug/L	8270
Isophorone	03.29.95	9548	0	5	ug/L	8270
N-Nitrosodimethylamine	03.29.95	9548	0	6	ug/L	8270
N-Nitrosodiphenylamine	03.29.95	9548	0	5	ug/L	8270
N-Nitrosodi-n-propylamine	03.29.95	9548	0	6	ug/L	8270
Nitrobenzene	03.29.95	9548	0	5	ug/L	8270
Naphthalene	03.29.95	9548	0	5	ug/L	8270
Phenanthrene	03.29.95	9548	0	5	ug/L	8270
Phenol	03.29.95	9548	0	5	ug/L	8270
Pentachlorophenol	03.29.95	9548	0	5	ug/L	8270
Pyrene	03.29.95	9548	0	5	ug/L	8270
Pyridine	03.29.95	9548	0	10	ug/L	8270
Quinoline	03.29.95	9548	0	10	ug/L	8270
Bis(2-chloroethoxy)methane	03.29.95	9548	0	5	ug/L	8270
Bis(2-chloroethyl)ether	03.29.95	9548	0	5	ug/L	8270
Bis(2-chloroisopropyl)ether	03.29.95	9548	0	6	ug/L	8270
Bis(2-ethylhexyl)phthalate	03.29.95	9548	0	7	ug/L	8270
36. EPA Method 8270 B504028*1						
Date Analyzed	03.29.95	9548	03/29/95	NA	Date	8270
Date Extracted	03.29.95	9548	03/27/95	NA	Date	8270
1,2,4-Trichlorobenzene	03.29.95	9548	0	5	ug/L	8270
1,2-Dichlorobenzene	03.29.95	9548	0	6	ug/L	8270
1,2-Diphenylhydrazine	03.29.95	9548	0	5	ug/L	8270
1,3-Dichlorobenzene	03.29.95	9548	0	5	ug/L	8270
1,4-Dichlorobenzene	03.29.95	9548	0	5	ug/L	8270
2,4,5-Trichlorophenol	03.29.95	9548	0	6	ug/L	8270
2,4,6-Trichlorophenol	03.29.95	9548	0	5	ug/L	8270
2,4-Dichlorophenol	03.29.95	9548	0	5	ug/L	8270

BC ANALYTICAL

ORDER QC REPORT FOR G9503435

DATE REPORTED : 04/06/95

METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)
FOR BATCHES WHICH INCLUDE THIS ORDER

PARAMETER	DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT	METHOD
2,4-Dimethylphenol	03.29.95	9548	0	5	ug/L	8270
2,4-Dinitrophenol	03.29.95	9548	0	10	ug/L	8270
2,4-Dinitrotoluene	03.29.95	9548	0	5	ug/L	8270
2,6-Dinitrotoluene	03.29.95	9548	0	5	ug/L	8270
2-Chloronaphthalene	03.29.95	9548	0	6	ug/L	8270
2-Chlorophenol	03.29.95	9548	0	5	ug/L	8270
2-Methyl-4,6-dinitrophenol	03.29.95	9548	0	5	ug/L	8270
2-Methylnaphthalene	03.29.95	9548	0	5	ug/L	8270
2-Methylphenol (o-Cresol)	03.29.95	9548	0	5	ug/L	8270
2-Nitroaniline	03.29.95	9548	0	5	ug/L	8270
2-Nitrophenol	03.29.95	9548	0	5	ug/L	8270
3,3'-Dichlorobenzidine	03.29.95	9548	0	20	ug/L	8270
3-Nitroaniline	03.29.95	9548	0	5	ug/L	8270
4-Bromophenylphenylether	03.29.95	9548	0	5	ug/L	8270
4-Chloro-3-methylphenol	03.29.95	9548	0	5	ug/L	8270
4-Chloroaniline	03.29.95	9548	0	5	ug/L	8270
4-Chlorophenylphenylether	03.29.95	9548	0	5	ug/L	8270
4-Methylphenol (p-Cresol)	03.29.95	9548	0	8	ug/L	8270
4-Nitroaniline	03.29.95	9548	0	6	ug/L	8270
4-Nitrophenol	03.29.95	9548	0	5	ug/L	8270
Acenaphthene	03.29.95	9548	0	5	ug/L	8270
Acenaphthylene	03.29.95	9548	0	5	ug/L	8270
Aniline	03.29.95	9548	0	5	ug/L	8270
Anthracene	03.29.95	9548	0	5	ug/L	8270
Benzo(a)anthracene	03.29.95	9548	0	5	ug/L	8270
Benzo(a)pyrene	03.29.95	9548	0	5	ug/L	8270
Benzo(b)fluoranthene	03.29.95	9548	0	5	ug/L	8270
Benzo(g,h,i)perylene	03.29.95	9548	0	5	ug/L	8270
Benzo(k)fluoranthene	03.29.95	9548	0	5	ug/L	8270
Benzyl Alcohol	03.29.95	9548	0	5	ug/L	8270
Benzoic acid	03.29.95	9548	0	50	ug/L	8270
Butylbenzylphthalate	03.29.95	9548	0	5	ug/L	8270
Chrysene	03.29.95	9548	0	5	ug/L	8270
Di-n-octylphthalate	03.29.95	9548	0	5	ug/L	8270
Dibenzo(a,h)anthracene	03.29.95	9548	0	5	ug/L	8270
Dibenzofuran	03.29.95	9548	0	5	ug/L	8270
Dibutylphthalate	03.29.95	9548	0	5	ug/L	8270
Diethylphthalate	03.29.95	9548	0	5	ug/L	8270
Dimethylphthalate	03.29.95	9548	0	5	ug/L	8270
Fluoranthene	03.29.95	9548	0	5	ug/L	8270
Fluorene	03.29.95	9548	0	5	ug/L	8270
Hexachlorobenzene	03.29.95	9548	0	5	ug/L	8270
Hexachlorobutadiene	03.29.95	9548	0	5	ug/L	8270
Hexachlorocyclopentadiene	03.29.95	9548	0	5	ug/L	8270
Hexachloroethane	03.29.95	9548	0	5	ug/L	8270

BC ANALYTICAL

ORDER QC REPORT FOR G9503435

DATE REPORTED : 04/06/95

METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)
FOR BATCHES WHICH INCLUDE THIS ORDER

PARAMETER		DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT	METHOD
Indeno(1,2,3-c,d)pyrene		03.29.95	9548	0	7	ug/L	8270
Isophorone		03.29.95	9548	0	5	ug/L	8270
N-Nitrosodimethylamine		03.29.95	9548	0	6	ug/L	8270
N-Nitrosodiphenylamine		03.29.95	9548	0	5	ug/L	8270
N-Nitrosodi-n-propylamine		03.29.95	9548	0	6	ug/L	8270
Nitrobenzene		03.29.95	9548	0	5	ug/L	8270
Naphthalene		03.29.95	9548	0	5	ug/L	8270
Phenanthrene		03.29.95	9548	0	5	ug/L	8270
Phenol		03.29.95	9548	0	5	ug/L	8270
Pentachlorophenol		03.29.95	9548	0	5	ug/L	8270
Pyrene		03.29.95	9548	0	5	ug/L	8270
Bis(2-chloroethoxy)methane		03.29.95	9548	0	5	ug/L	8270
Bis(2-chloroethyl)ether		03.29.95	9548	0	5	ug/L	8270
Bis(2-chloroisopropyl)ether		03.29.95	9548	0	6	ug/L	8270
Bis(2-ethylhexyl)phthalate		03.29.95	9548	0	7	ug/L	8270
2-Fluorobiphenyl Reported		03.29.95	9548	34.8	5	ug/L	8270
2-Fluorobiphenyl Theo.		03.29.95	9548	50.0	NA	ug/L	8270
2-Fluorophenol Reported		03.29.95	9548	38.5	5	ug/L	8270
2-Fluorophenol Theoretical		03.29.95	9548	75.0	NA	ug/L	8270
2,4,6-Tribromophenol Rep.		03.29.95	9548	56.8	5	ug/L	8270
2,4,6-Tribromophenol Theo.		03.29.95	9548	75.0	NA	ug/L	8270
Nitrobenzene-d5 Reported		03.29.95	9548	38.4	5	ug/L	8270
Nitrobenzene-d5 Theoretical		03.29.95	9548	50.0	NA	ug/L	8270
Phenol-d5 Reported		03.29.95	9548	34.1	5	ug/L	8270
Phenol-d5 Theoretical		03.29.95	9548	75.0	NA	ug/L	8270
Terphenyl-d14 Reported		03.29.95	9548	45.1	5	ug/L	8270
Terphenyl-d14 Theoretical		03.29.95	9548	50.0	NA	ug/L	8270
37. Chloride	B5031108*1	03.27.95	958	0	0.5	mg/L	325.3
38. Antimony (6010/200	B5031304*1	03.30.95	95371	0.018	0.1	mg/L	6010
39. Arsenic (7060/206.	B5031311*1	03.30.95	95372	0	0.002	mg/L	7060
40. Barium (6010/200.7	B5031296*1	03.30.95	95371	0	0.005	mg/L	6010
41. Beryllium (6010/20	B5031297*1	03.30.95	95371	0	0.001	mg/L	6010
42. Cadmium (7131/213.	B5031312*1	03.31.95	95372	0	0.0001	mg/L	7131
43. Chromium (6010/200	B5031299*1	03.30.95	95371	0	0.01	mg/L	6010
44. Cobalt (6010/200.7	B5031298*1	03.30.95	95371	0	0.04	mg/L	6010
45. Iron (6010/200.7)	B5031300*1	03.30.95	95371	0.0123	0.04	mg/L	6010
46. Lead (7421/239.2)	B5031313*1	03.30.95	95372	0	0.002	mg/L	7421
47. Manganese (6010/20	B5031301*1	03.30.95	95371	0.0023	0.01	mg/L	6010
48. Nickel (6010/200.7	B5031303*1	03.30.95	95371	0	0.04	mg/L	6010
49. Selenium (7740/270	B5031314*1	03.30.95	95372	0	0.004	mg/L	7740
50. Sodium (6010/200.7	B5031302*1	03.31.95	95371	0.201	0.5	mg/L	6010
51. Vanadium (6010/200	B5031305*1	03.30.95	95371	0	0.04	mg/L	6010
52. B/N,A Ext.Pri.Poll. (E	B5031363*1						
Date Analyzed		03.30.95	9550	03/30/95	NA	Date	8270
Date Extracted		03.30.95	9550	03/28/95	NA	Date	8270

BC ANALYTICAL

ORDER QC REPORT FOR G9503435

DATE REPORTED : 04/06/95

METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)
FOR BATCHES WHICH INCLUDE THIS ORDER

PARAMETER	DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT	METHOD
1,2,4-Trichlorobenzene	03.30.95	9550	0	5	ug/L	8270
1,2-Dichlorobenzene	03.30.95	9550	0	6	ug/L	8270
1,2-Diphenylhydrazine	03.30.95	9550	0	5	ug/L	8270
1,3-Dichlorobenzene	03.30.95	9550	0	5	ug/L	8270
1,4-Dichlorobenzene	03.30.95	9550	0	5	ug/L	8270
1-Methylnaphthalene	03.30.95	9550	0	10	ug/L	8270
2,4,5-Trichlorophenol	03.30.95	9550	0	6	ug/L	8270
2,4,6-Trichlorophenol	03.30.95	9550	0	5	ug/L	8270
2,4-Dichlorophenol	03.30.95	9550	0	5	ug/L	8270
2,4-Dimethylphenol	03.30.95	9550	0	5	ug/L	8270
2,4-Dinitrophenol	03.30.95	9550	0	10	ug/L	8270
2,4-Dinitrotoluene	03.30.95	9550	0	5	ug/L	8270
2,6-Dinitrotoluene	03.30.95	9550	0	5	ug/L	8270
2-Chloronaphthalene	03.30.95	9550	0	6	ug/L	8270
2-Chlorophenol	03.30.95	9550	0	5	ug/L	8270
2-Methyl-4,6-dinitrophenol	03.30.95	9550	0	5	ug/L	8270
2-Methylnaphthalene	03.30.95	9550	0	5	ug/L	8270
2-Methylphenol (o-Cresol)	03.30.95	9550	0	5	ug/L	8270
2-Nitroaniline	03.30.95	9550	0	5	ug/L	8270
2-Nitrophenol	03.30.95	9550	0	5	ug/L	8270
3,3'-Dichlorobenzidine	03.30.95	9550	0	20	ug/L	8270
3-Methylphenol (m-Cresol)	03.30.95	9550	0	10	ug/L	8270
3-Nitroaniline	03.30.95	9550	0	5	ug/L	8270
4-Bromophenylphenylether	03.30.95	9550	0	5	ug/L	8270
4-Chloro-3-methylphenol	03.30.95	9550	0	5	ug/L	8270
4-Chloroaniline	03.30.95	9550	0	5	ug/L	8270
4-Chlorophenylphenylether	03.30.95	9550	0	5	ug/L	8270
4-Methylphenol (p-Cresol)	03.30.95	9550	0	8	ug/L	8270
4-Nitroaniline	03.30.95	9550	0	6	ug/L	8270
4-Nitrophenol	03.30.95	9550	0	5	ug/L	8270
6-Methylchrysene	03.30.95	9550	0	10	ug/L	8270
7,12-Dimethylbenz(a)anthracene	03.30.95	9550	0	5	ug/L	8270
Acenaphthene	03.30.95	9550	0	5	ug/L	8270
Acenaphthylene	03.30.95	9550	0	5	ug/L	8270
Aniline	03.30.95	9550	0	5	ug/L	8270
Anthracene	03.30.95	9550	0	5	ug/L	8270
Benzidine	03.30.95	9550	0	100	ug/L	8270
Benzo(a)anthracene	03.30.95	9550	0	5	ug/L	8270
Benzo(a)pyrene	03.30.95	9550	0	5	ug/L	8270
Benzo(b)fluoranthene	03.30.95	9550	0	5	ug/L	8270
Benzo(g,h,i)perylene	03.30.95	9550	0	5	ug/L	8270
Benzo(k)fluoranthene	03.30.95	9550	0	5	ug/L	8270
Benzenethiol	03.30.95	9550	0	20	ug/L	8270
Benzyl Alcohol	03.30.95	9550	0	5	ug/L	8270
Benzoic acid	03.30.95	9550	0	50	ug/L	8270

BC ANALYTICAL

ORDER QC REPORT FOR G9503435

DATE REPORTED : 04/06/95

METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)
FOR BATCHES WHICH INCLUDE THIS ORDER

PARAMETER	DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT	METHOD
Butylbenzylphthalate	03.30.95	9550	0	5	ug/L	8270
Chrysene	03.30.95	9550	0	5	ug/L	8270
Di-n-octylphthalate	03.30.95	9550	0	5	ug/L	8270
Dibenzo(a,h)anthracene	03.30.95	9550	0	5	ug/L	8270
Dibenz(a,h)acridine	03.30.95	9550	0	20	ug/L	8270
Dibenzofuran	03.30.95	9550	0	5	ug/L	8270
Dibutylphthalate	03.30.95	9550	0	5	ug/L	8270
Diethylphthalate	03.30.95	9550	0	5	ug/L	8270
Dimethylphthalate	03.30.95	9550	0	5	ug/L	8270
Fluoranthene	03.30.95	9550	0	5	ug/L	8270
Fluorene	03.30.95	9550	0	5	ug/L	8270
Hexachlorobenzene	03.30.95	9550	0	5	ug/L	8270
Hexachlorobutadiene	03.30.95	9550	0	5	ug/L	8270
Hexachlorocyclopentadiene	03.30.95	9550	0	5	ug/L	8270
Hexachloroethane	03.30.95	9550	0	5	ug/L	8270
Indeno(1,2,3-c,d)pyrene	03.30.95	9550	0	7	ug/L	8270
Indene	03.30.95	9550	0	10	ug/L	8270
Isophorone	03.30.95	9550	0	5	ug/L	8270
N-Nitrosodimethylamine	03.30.95	9550	0	6	ug/L	8270
N-Nitrosodiphenylamine	03.30.95	9550	0	5	ug/L	8270
N-Nitrosodi-n-propylamine	03.30.95	9550	0	6	ug/L	8270
Nitrobenzene	03.30.95	9550	0	5	ug/L	8270
Naphthalene	03.30.95	9550	0	5	ug/L	8270
Phenanthrene	03.30.95	9550	0	5	ug/L	8270
Phenol	03.30.95	9550	0	5	ug/L	8270
Pentachlorophenol	03.30.95	9550	0	5	ug/L	8270
Pyrene	03.30.95	9550	0	5	ug/L	8270
Pyridine	03.30.95	9550	0	10	ug/L	8270
Quinoline	03.30.95	9550	0	10	ug/L	8270
Bis(2-chloroethoxy)methane	03.30.95	9550	0	5	ug/L	8270
Bis(2-chloroethyl)ether	03.30.95	9550	0	5	ug/L	8270
Bis(2-chloroisopropyl)ether	03.30.95	9550	0	6	ug/L	8270
Bis(2-ethylhexyl)phthalate	03.30.95	9550	8.7	7	ug/L	8270
53. Vol.Pri.Poll. (EPA-824 B504014*1						
Date Analyzed	03.31.95	95924	03/31/95	NA	Date	8240
1,1,1-Trichloroethane	03.31.95	95924	0	1	ug/L	8240
1,1,2,2-Tetrachloroethane	03.31.95	95924	0	1	ug/L	8240
1,1,2-Trichloroethane	03.31.95	95924	0	1	ug/L	8240
1,1-Dichloroethane	03.31.95	95924	0	1	ug/L	8240
1,1-Dichloroethene	03.31.95	95924	0	1	ug/L	8240
1,2-Dichloroethane	03.31.95	95924	0	1	ug/L	8240
1,2-Dichlorobenzene	03.31.95	95924	0	1	ug/L	8240
1,2-Dichloropropane	03.31.95	95924	0	1	ug/L	8240
1,3-Dichlorobenzene	03.31.95	95924	0	1	ug/L	8240
1,4-Dichlorobenzene	03.31.95	95924	0	1	ug/L	8240

BC ANALYTICAL

ORDER QC REPORT FOR G9503435

DATE REPORTED : 04/06/95

METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)
FOR BATCHES WHICH INCLUDE THIS ORDER

PARAMETER	DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT	METHOD
1,4-Dioxane	03.31.95	95924	0	500	ug/L	8240
2-Chloroethylvinylether	03.31.95	95924	0	1	ug/L	8240
2-Hexanone	03.31.95	95924	0	5	ug/L	8240
Acetone	03.31.95	95924	0	20	ug/L	8240
Bromodichloromethane	03.31.95	95924	0	1	ug/L	8240
Bromomethane	03.31.95	95924	0	1	ug/L	8240
Benzene	03.31.95	95924	0	1	ug/L	8240
Bromoform	03.31.95	95924	0	1	ug/L	8240
Chlorobenzene	03.31.95	95924	0	1	ug/L	8240
Carbon Tetrachloride	03.31.95	95924	0	1	ug/L	8240
Chloroethane	03.31.95	95924	0	1	ug/L	8240
Chloroform	03.31.95	95924	0	1	ug/L	8240
Chloromethane	03.31.95	95924	0	1	ug/L	8240
Carbon Disulfide	03.31.95	95924	0	2	ug/L	8240
Cyclohexane	03.31.95	95924	0	5	ug/L	8240
Dibromochloromethane	03.31.95	95924	0	1	ug/L	8240
Ethylene Dibromide	03.31.95	95924	0	5	ug/L	8240
Ethylbenzene	03.31.95	95924	0	1	ug/L	8240
Freon 113	03.31.95	95924	0	2	ug/L	8240
Methyl ethyl ketone	03.31.95	95924	0	5	ug/L	8240
Methyl isobutyl ketone	03.31.95	95924	0	5	ug/L	8240
Methylene chloride	03.31.95	95924	0	1	ug/L	8240
Styrene	03.31.95	95924	0	1	ug/L	8240
Trichloroethene	03.31.95	95924	0	1	ug/L	8240
Trichlorofluoromethane	03.31.95	95924	0	1	ug/L	8240
Toluene	03.31.95	95924	0	1	ug/L	8240
Tetrachloroethene	03.31.95	95924	0	1	ug/L	8240
Vinyl acetate	03.31.95	95924	0	10	ug/L	8240
Vinyl chloride	03.31.95	95924	0	1	ug/L	8240
Total Xylene Isomers	03.31.95	95924	0	3	ug/L	8240
cis-1,2-Dichloroethene	03.31.95	95924	0	1	ug/L	8240
cis-1,3-Dichloropropene	03.31.95	95924	0	1	ug/L	8240
trans-1,2-Dichloroethene	03.31.95	95924	0	1	ug/L	8240
trans-1,3-Dichloropropene	03.31.95	95924	0	1	ug/L	8240

: SURROGATE RECOVERIES :
: BC ANALYTICAL : GLEN LAB : 11:29:07 06 APR 1995 - P. 1 :

METHOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG
9503368*1							
8240	1,2-Dichloroethane-d4	95922	03/29/95	46.3	50.0	93	
	Toluene-d8	95922	03/29/95	49.9	50.0	100	
	4-Bromofluorobenzene	95922	03/29/95	51.3	50.0	103	
8270	2-Fluorophenol	9546	03/27/95	54.4	75.0	73	
	Phenol-d5	9546	03/27/95	59.4	75.0	79	
	Nitrobenzene-d5	9546	03/27/95	40.0	50.0	80	
	2-Fluorobiphenyl	9546	03/27/95	38.6	50.0	77	
	2,4,6-Tribromophenol	9546	03/27/95	55.0	75.0	73	
	Terphenyl-d14	9546	03/27/95	47.0	50.0	94	
9503368*2							
8240	1,2-Dichloroethane-d4	95922	03/29/95	41.9	50.0	84	Q
	Toluene-d8	95922	03/29/95	51.8	50.0	104	
	4-Bromofluorobenzene	95922	03/29/95	50.3	50.0	101	
8270	2-Fluorophenol	9546	03/28/95	61.6	75.0	82	
	Phenol-d5	9546	03/28/95	65.4	75.0	87	
	Nitrobenzene-d5	9546	03/28/95	45.6	50.0	91	
	2-Fluorobiphenyl	9546	03/28/95	48.1	50.0	96	
	2,4,6-Tribromophenol	9546	03/28/95	54.0	75.0	72	
	Terphenyl-d14	9546	03/28/95	51.4	50.0	103	
9503368*3							
8240	1,2-Dichloroethane-d4	95922	03/29/95	40.9	50.0	82	Q
	Toluene-d8	95922	03/29/95	53.7	50.0	107	
	4-Bromofluorobenzene	95922	03/29/95	49.5	50.0	99	
8270	2-Fluorophenol	9546	03/27/95	48.2	75.0	64	
	Phenol-d5	9546	03/27/95	51.5	75.0	69	
	Nitrobenzene-d5	9546	03/27/95	35.8	50.0	72	
	2-Fluorobiphenyl	9546	03/27/95	40.1	50.0	80	
	2,4,6-Tribromophenol	9546	03/27/95	34.5	75.0	46	
	Terphenyl-d14	9546	03/27/95	40.8	50.0	82	
9503368*4							
8240	1,2-Dichloroethane-d4	95922	03/29/95	41.1	50.0	82	Q
	Toluene-d8	95922	03/29/95	52.9	50.0	106	
	4-Bromofluorobenzene	95922	03/29/95	49.8	50.0	100	
8270	2-Fluorophenol	9546	03/27/95	48.8	75.0	65	
	Phenol-d5	9546	03/27/95	53.9	75.0	72	
	Nitrobenzene-d5	9546	03/27/95	36.2	50.0	72	
	2-Fluorobiphenyl	9546	03/27/95	37.4	50.0	75	
	2,4,6-Tribromophenol	9546	03/27/95	48.1	75.0	64	
	Terphenyl-d14	9546	03/27/95	42.6	50.0	85	
9503368*5							
8240	1,2-Dichloroethane-d4	95922	03/29/95	40.5	50.0	81	Q
	Toluene-d8	95922	03/29/95	53.1	50.0	106	
	4-Bromofluorobenzene	95922	03/29/95	50.0	50.0	100	
8270	2-Fluorophenol	9546	03/27/95	47.9	75.0	64	
	Phenol-d5	9546	03/27/95	50.4	75.0	67	
	Nitrobenzene-d5	9546	03/27/95	35.3	50.0	71	

METHOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG
	2-Fluorobiphenyl	9546	03/27/95	38.1	50.0	76	
	2,4,6-Tribromophenol	9546	03/27/95	56.1	75.0	75	
	Terphenyl-d14	9546	03/27/95	38.9	50.0	78	
9503368*6							
8240	1,2-Dichloroethane-d4	95922	03/29/95	39.5	50.0	79	Q
	Toluene-d8	95922	03/29/95	52.6	50.0	105	
	4-Bromofluorobenzene	95922	03/29/95	49.1	50.0	98	
8270	2-Fluorophenol	9546	03/27/95	52.2	75.0	70	
	Phenol-d5	9546	03/27/95	57.3	75.0	76	
	Nitrobenzene-d5	9546	03/27/95	38.3	50.0	77	
	2-Fluorobiphenyl	9546	03/27/95	41.7	50.0	83	
	2,4,6-Tribromophenol	9546	03/27/95	62.7	75.0	84	
	Terphenyl-d14	9546	03/27/95	42.7	50.0	85	
9503368*7							
8240	1,2-Dichloroethane-d4	95922	03/29/95	39.6	50.0	79	Q
	Toluene-d8	95922	03/29/95	52.4	50.0	105	
	4-Bromofluorobenzene	95922	03/29/95	50.5	50.0	101	
8270	2-Fluorophenol	9546	03/27/95	50.7	75.0	68	
	Phenol-d5	9546	03/27/95	59.2	75.0	79	
	Nitrobenzene-d5	9546	03/27/95	36.1	50.0	72	
	2-Fluorobiphenyl	9546	03/27/95	36.8	50.0	74	
	2,4,6-Tribromophenol	9546	03/27/95	55.0	75.0	73	
	Terphenyl-d14	9546	03/27/95	42.5	50.0	85	
9503368*8							
8240	1,2-Dichloroethane-d4	95922	03/29/95	40.2	50.0	80	Q
	Toluene-d8	95922	03/29/95	52.5	50.0	105	
	4-Bromofluorobenzene	95922	03/29/95	49.4	50.0	99	
8270	2-Fluorophenol	9546	03/27/95	36.5	75.0	49	
	Phenol-d5	9546	03/27/95	28.3	75.0	38	
	Nitrobenzene-d5	9546	03/27/95	35.0	50.0	70	
	2-Fluorobiphenyl	9546	03/27/95	36.5	50.0	73	
	2,4,6-Tribromophenol	9546	03/27/95	51.2	75.0	68	
	Terphenyl-d14	9546	03/27/95	38.1	50.0	76	
9503368*9							
8240	1,2-Dichloroethane-d4	95922	03/29/95	40.2	50.0	80	Q
	Toluene-d8	95922	03/29/95	51.1	50.0	102	
	4-Bromofluorobenzene	95922	03/29/95	49.9	50.0	100	
8270	2-Fluorophenol	9546	03/27/95	49.4	75.0	66	
	Phenol-d5	9546	03/27/95	51.4	75.0	69	
	Nitrobenzene-d5	9546	03/27/95	37.1	50.0	74	
	2-Fluorobiphenyl	9546	03/27/95	37.5	50.0	75	
	2,4,6-Tribromophenol	9546	03/27/95	55.4	75.0	74	
	Terphenyl-d14	9546	03/27/95	41.6	50.0	83	
9503368*10							
8240	1,2-Dichloroethane-d4	95922	03/29/95	39.3	50.0	79	Q
	Toluene-d8	95922	03/29/95	52.1	50.0	104	

METHOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG
	4-Bromofluorobenzene	95922	03/29/95	49.2	50.0	98	
9503368*11							
8240	1,2-Dichloroethane-d4	95922	03/30/95	40.7	50.0	81	Q
	Toluene-d8	95922	03/30/95	52.8	50.0	106	
	4-Bromofluorobenzene	95922	03/30/95	48.9	50.0	98	
9503368*12							
8240	1,2-Dichloroethane-d4	95922	03/30/95	39.9	50.0	80	Q
	Toluene-d8	95922	03/30/95	52.3	50.0	105	
	4-Bromofluorobenzene	95922	03/30/95	49.0	50.0	98	
9503401*1							
8270	2-Fluorophenol	9546	03/28/95	36.0	75.0	48	
	Phenol-d5	9546	03/28/95	29.3	75.0	39	
	Nitrobenzene-d5	9546	03/28/95	32.8	50.0	66	
	2-Fluorobiphenyl	9546	03/28/95	32.5	50.0	65	
	2,4,6-Tribromophenol	9546	03/28/95	48.3	75.0	64	
	Terphenyl-d14	9546	03/28/95	36.0	50.0	72	
8240	1,2-Dichloroethane-d4	95923	03/30/95	48.9	50.0	98	
	Toluene-d8	95923	03/30/95	51.6	50.0	103	
	4-Bromofluorobenzene	95923	03/30/95	50.2	50.0	100	
9503401*2							
8270	2-Fluorophenol	9546	03/30/95	9.53	75.0	13	Q
	Phenol-d5	9546	03/30/95	8.51	75.0	11	
	Nitrobenzene-d5	9546	03/30/95	8.41	50.0	17	Q
	2-Fluorobiphenyl	9546	03/30/95	9.44	50.0	19	Q
	2,4,6-Tribromophenol	9546	03/30/95	12.8	75.0	17	
	Terphenyl-d14	9546	03/30/95	9.95	50.0	20	Q
8240	1,2-Dichloroethane-d4	95923	03/30/95	48.7	50.0	97	
	Toluene-d8	95923	03/30/95	50.1	50.0	100	
	4-Bromofluorobenzene	95923	03/30/95	49.3	50.0	99	
9503401*3							
8270	2-Fluorophenol	9546	03/28/95	35.7	75.0	48	
	Phenol-d5	9546	03/28/95	28.3	75.0	38	
	Nitrobenzene-d5	9546	03/28/95	32.9	50.0	66	
	2-Fluorobiphenyl	9546	03/28/95	32.2	50.0	64	
	2,4,6-Tribromophenol	9546	03/28/95	41.9	75.0	56	
	Terphenyl-d14	9546	03/28/95	32.4	50.0	65	
8240	1,2-Dichloroethane-d4	95923	03/30/95	47.8	50.0	96	
	Toluene-d8	95923	03/30/95	51.0	50.0	102	
	4-Bromofluorobenzene	95923	03/30/95	49.7	50.0	99	
9503401*4							
8270	2-Fluorophenol	9546	03/28/95	36.7	75.0	49	
	Phenol-d5	9546	03/28/95	33.1	75.0	44	
	Nitrobenzene-d5	9546	03/28/95	35.0	50.0	70	
	2-Fluorobiphenyl	9546	03/28/95	36.3	50.0	73	

METHOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG
	2,4,6-Tribromophenol	9546	03/28/95	48.7	75.0	65	
	Terphenyl-d14	9546	03/28/95	38.0	50.0	76	
8240	1,2-Dichloroethane-d4	95923	03/30/95	47.6	50.0	95	
	Toluene-d8	95923	03/30/95	49.6	50.0	99	
	4-Bromofluorobenzene	95923	03/30/95	49.3	50.0	99	
9503401*5							
8270	2-Fluorophenol	9546	03/28/95	43.5	75.0	58	
	Phenol-d5	9546	03/28/95	40.4	75.0	54	
	Nitrobenzene-d5	9546	03/28/95	40.9	50.0	82	
	2-Fluorobiphenyl	9546	03/28/95	43.0	50.0	86	
	2,4,6-Tribromophenol	9546	03/28/95	59.4	75.0	79	
	Terphenyl-d14	9546	03/28/95	45.4	50.0	91	
8240	1,2-Dichloroethane-d4	95923	03/30/95	46.5	50.0	93	
	Toluene-d8	95923	03/30/95	51.4	50.0	103	
	4-Bromofluorobenzene	95923	03/30/95	49.3	50.0	99	
9503401*6							
8270	2-Fluorophenol	9546	03/28/95	39.0	75.0	52	
	Phenol-d5	9546	03/28/95	34.5	75.0	46	
	Nitrobenzene-d5	9546	03/28/95	36.6	50.0	73	
	2-Fluorobiphenyl	9546	03/28/95	38.6	50.0	77	
	2,4,6-Tribromophenol	9546	03/28/95	53.4	75.0	71	
	Terphenyl-d14	9546	03/28/95	38.8	50.0	78	
8240	1,2-Dichloroethane-d4	95923	03/30/95	48.5	50.0	97	
	Toluene-d8	95923	03/30/95	51.0	50.0	102	
	4-Bromofluorobenzene	95923	03/30/95	49.9	50.0	100	
9503401*7							
8270	2-Fluorophenol	9546	03/28/95	38.9	75.0	52	
	Phenol-d5	9546	03/28/95	35.7	75.0	48	
	Nitrobenzene-d5	9546	03/28/95	35.6	50.0	71	
	2-Fluorobiphenyl	9546	03/28/95	38.7	50.0	77	
	2,4,6-Tribromophenol	9546	03/28/95	52.4	75.0	70	
	Terphenyl-d14	9546	03/28/95	37.1	50.0	74	
8240	1,2-Dichloroethane-d4	95923	03/30/95	48.4	50.0	97	
	Toluene-d8	95923	03/30/95	50.3	50.0	101	
	4-Bromofluorobenzene	95923	03/30/95	49.4	50.0	99	
9503401*8							
8270	2-Fluorophenol	9546	03/28/95	38.6	75.0	51	
	Phenol-d5	9546	03/28/95	33.8	75.0	45	
	Nitrobenzene-d5	9546	03/28/95	36.8	50.0	74	
	2-Fluorobiphenyl	9546	03/28/95	38.8	50.0	78	
	2,4,6-Tribromophenol	9546	03/28/95	52.5	75.0	70	
	Terphenyl-d14	9546	03/28/95	38.4	50.0	77	
8240	1,2-Dichloroethane-d4	95923	03/30/95	48.0	50.0	96	
	Toluene-d8	95923	03/30/95	52.3	50.0	105	
	4-Bromofluorobenzene	95923	03/30/95	50.3	50.0	101	
9503401*9							

METHOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG
8270	2-Fluorophenol	9546	03/28/95	49.6	75.0	66	
	Phenol-d5	9546	03/28/95	45.6	75.0	61	
	Nitrobenzene-d5	9546	03/28/95	46.2	50.0	92	
	2-Fluorobiphenyl	9546	03/28/95	48.8	50.0	98	
	2,4,6-Tribromophenol	9546	03/28/95	66.4	75.0	89	
	Terphenyl-d14	9546	03/28/95	46.7	50.0	93	
8240	1,2-Dichloroethane-d4	95923	03/30/95	47.5	50.0	95	
	Toluene-d8	95923	03/30/95	51.9	50.0	104	
	4-Bromofluorobenzene	95923	03/30/95	50.1	50.0	100	
9503401*10							
8270	2-Fluorophenol	9548	03/29/95	36.1	75.0	48	
	Phenol-d5	9548	03/29/95	32.0	75.0	43	
	Nitrobenzene-d5	9548	03/29/95	36.5	50.0	73	
	2-Fluorobiphenyl	9548	03/29/95	35.2	50.0	70	
	2,4,6-Tribromophenol	9548	03/29/95	58.7	75.0	78	
	Terphenyl-d14	9548	03/29/95	36.9	50.0	74	
8240	1,2-Dichloroethane-d4	95923	03/30/95	48.7	50.0	97	
	Toluene-d8	95923	03/30/95	51.1	50.0	102	
	4-Bromofluorobenzene	95923	03/30/95	49.5	50.0	99	
9503401*11							
270	2-Fluorophenol	9548	03/29/95	35.3	75.0	47	
	Phenol-d5	9548	03/29/95	32.3	75.0	43	
	Nitrobenzene-d5	9548	03/29/95	33.3	50.0	67	
	2-Fluorobiphenyl	9548	03/29/95	31.8	50.0	64	
	2,4,6-Tribromophenol	9548	03/29/95	53.9	75.0	72	
	Terphenyl-d14	9548	03/29/95	39.0	50.0	78	
8240	1,2-Dichloroethane-d4	95923	03/30/95	47.1	50.0	94	
	Toluene-d8	95923	03/30/95	51.0	50.0	102	
	4-Bromofluorobenzene	95923	03/30/95	49.5	50.0	99	
9503401*12							
8270	2-Fluorophenol	9548	03/29/95	34.4	75.0	46	
	Phenol-d5	9548	03/29/95	31.3	75.0	42	
	Nitrobenzene-d5	9548	03/29/95	34.1	50.0	68	
	2-Fluorobiphenyl	9548	03/29/95	32.1	50.0	64	
	2,4,6-Tribromophenol	9548	03/29/95	53.6	75.0	71	
	Terphenyl-d14	9548	03/29/95	36.6	50.0	73	
8240	1,2-Dichloroethane-d4	95923	03/30/95	47.3	50.0	95	
	Toluene-d8	95923	03/30/95	51.9	50.0	104	
	4-Bromofluorobenzene	95923	03/30/95	50.0	50.0	100	
9503401*13							
8240	1,2-Dichloroethane-d4	95923	03/30/95	44.0	50.0	88	
	Toluene-d8	95923	03/30/95	50.9	50.0	102	
	4-Bromofluorobenzene	95923	03/30/95	49.6	50.0	99	
9503401*14							
8240	1,2-Dichloroethane-d4	95923	03/30/95	48.2	50.0	96	
	Toluene-d8	95923	03/30/95	51.4	50.0	103	

METHOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG
	4-Bromofluorobenzene	95923	03/30/95	49.5	50.0	99	
9503401*15							
8270	2-Fluorophenol	9546	03/30/95	44.0	75.0	59	
	Phenol-d5	9546	03/30/95	53.2	75.0	71	
	Nitrobenzene-d5	9546	03/30/95	37.3	50.0	75	
	2-Fluorobiphenyl	9546	03/30/95	40.9	50.0	82	
	2,4,6-Tribromophenol	9546	03/30/95	65.1	75.0	87	
	Terphenyl-d14	9546	03/30/95	40.7	50.0	81	
9503435*1							
8270	2-Fluorophenol	9550	03/30/95	54.7	75.0	73	
	Phenol-d5	9550	03/30/95	59.6	75.0	79	
	Nitrobenzene-d5	9550	03/30/95	40.1	50.0	80	
	2-Fluorobiphenyl	9550	03/30/95	39.3	50.0	79	
	2,4,6-Tribromophenol	9550	03/30/95	58.6	75.0	78	
	Terphenyl-d14	9550	03/30/95	39.8	50.0	80	
8240	1,2-Dichloroethane-d4	95924	03/31/95	50.0	50.0	100	
	Toluene-d8	95924	03/31/95	49.8	50.0	100	
	4-Bromofluorobenzene	95924	03/31/95	50.0	50.0	100	
9503435*2							
8270	2-Fluorophenol	9550	03/30/95	31.8	75.0	42	
	Phenol-d5	9550	03/30/95	29.0	75.0	39	
	Nitrobenzene-d5	9550	03/30/95	32.5	50.0	65	
	2-Fluorobiphenyl	9550	03/30/95	29.4	50.0	59	
	2,4,6-Tribromophenol	9550	03/30/95	43.0	75.0	57	
	Terphenyl-d14	9550	03/30/95	27.9	50.0	56	
8240	1,2-Dichloroethane-d4	95924	03/31/95	48.8	50.0	98	
	Toluene-d8	95924	03/31/95	49.6	50.0	99	
	4-Bromofluorobenzene	95924	03/31/95	50.8	50.0	102	
9503435*3							
8270	2-Fluorophenol	9550	03/30/95	40.7	75.0	54	
	Phenol-d5	9550	03/30/95	37.6	75.0	50	
	Nitrobenzene-d5	9550	03/30/95	37.6	50.0	75	
	2-Fluorobiphenyl	9550	03/30/95	38.1	50.0	76	
	2,4,6-Tribromophenol	9550	03/30/95	55.8	75.0	74	
	Terphenyl-d14	9550	03/30/95	36.6	50.0	73	
8240	1,2-Dichloroethane-d4	95924	03/31/95	48.0	50.0	96	
	Toluene-d8	95924	03/31/95	49.9	50.0	100	
	4-Bromofluorobenzene	95924	03/31/95	51.5	50.0	103	
9503435*4							
8270	2-Fluorophenol	9550	03/30/95	0	75.0	0	
	2-Fluorobiphenyl	9550	03/30/95	0	50.0	0	
	2,4,6-Tribromophenol	9550	03/30/95	0	75.0	0	
	Terphenyl-d14	9550	03/30/95	0	50.0	0	
	Phenol-d5	9550	03/30/95	0	75.0	0	
	Nitrobenzene-d5	9550	03/30/95	0	50.0	0	
8240	1,2-Dichloroethane-d4	95924	03/31/95	48.0	50.0	96	

METHOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG
	Toluene-d8	95924	03/31/95	50.6	50.0	101	
	4-Bromofluorobenzene	95924	03/31/95	50.7	50.0	101	
9503435*5							
8270	2-Fluorophenol	9550	03/30/95	31.2	75.0	42	
	Phenol-d5	9550	03/30/95	34.1	75.0	45	
	Nitrobenzene-d5	9550	03/30/95	30.0	50.0	60	
	2-Fluorobiphenyl	9550	03/30/95	28.9	50.0	58	
	2,4,6-Tribromophenol	9550	03/30/95	49.2	75.0	66	
	Terphenyl-d14	9550	03/30/95	30.1	50.0	60	
8240	1,2-Dichloroethane-d4	95924	03/31/95	47.4	50.0	95	
	Toluene-d8	95924	03/31/95	50.6	50.0	101	
	4-Bromofluorobenzene	95924	03/31/95	50.9	50.0	102	
9503435*6							
8240	1,2-Dichloroethane-d4	95924	03/31/95	47.0	50.0	94	
	Toluene-d8	95924	03/31/95	49.3	50.0	99	
	4-Bromofluorobenzene	95924	03/31/95	49.8	50.0	100	
9503435*7							
8240	1,2-Dichloroethane-d4	95924	03/31/95	46.9	50.0	94	
	Toluene-d8	95924	03/31/95	51.0	50.0	102	
	4-Bromofluorobenzene	95924	03/31/95	50.0	50.0	100	
9503435*8							
8270	2-Fluorophenol	9550	04/03/95	21.7	75.0	29	
	Phenol-d5	9550	04/03/95	26.7	75.0	36	
	Nitrobenzene-d5	9550	04/03/95	19.0	50.0	38	
	2-Fluorobiphenyl	9550	04/03/95	19.0	50.0	38	Q
	2,4,6-Tribromophenol	9550	04/03/95	24.1	75.0	32	
	Terphenyl-d14	9550	04/03/95	19.7	50.0	39	

: SURROGATE RECOVERIES :
: BC ANALYTICAL : GLEN LAB : 11:33:33 06 APR 1995 - P. 1 :

METHOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG
9503368*1*R1							
8270	2-Fluorophenol	9546	03/27/95	54.4	75.0	73	
	Phenol-d5	9546	03/27/95	59.4	75.0	79	
	Nitrobenzene-d5	9546	03/27/95	40.0	50.0	80	
	2-Fluorobiphenyl	9546	03/27/95	38.6	50.0	77	
	2,4,6-Tribromophenol	9546	03/27/95	55.0	75.0	73	
	Terphenyl-d14	9546	03/27/95	47.0	50.0	94	
9503368*1*S1							
8270	2-Fluorophenol	9546	03/27/95	49.9	75.0	67	
	Phenol-d5	9546	03/27/95	53.9	75.0	72	
	Nitrobenzene-d5	9546	03/27/95	37.2	50.0	74	
	2-Fluorobiphenyl	9546	03/27/95	35.4	50.0	71	
	2,4,6-Tribromophenol	9546	03/27/95	52.5	75.0	70	
	Terphenyl-d14	9546	03/27/95	40.7	50.0	81	
9503368*1*S2							
8270	2-Fluorophenol	9546	03/27/95	55.3	75.0	74	
	Phenol-d5	9546	03/27/95	58.8	75.0	78	
	Nitrobenzene-d5	9546	03/27/95	41.1	50.0	82	
	2-Fluorobiphenyl	9546	03/27/95	38.6	50.0	77	
	2,4,6-Tribromophenol	9546	03/27/95	57.9	75.0	77	
	Terphenyl-d14	9546	03/27/95	43.0	50.0	86	
9503368*1*T							
8270	2-Fluorophenol	9546	03/27/95	75.0	75.0	100	
	Phenol-d5	9546	03/27/95	75.0	75.0	100	
	Nitrobenzene-d5	9546	03/27/95	50.0	50.0	100	
	2-Fluorobiphenyl	9546	03/27/95	50.0	50.0	100	
	2,4,6-Tribromophenol	9546	03/27/95	75.0	75.0	100	
	Terphenyl-d14	9546	03/27/95	50.0	50.0	100	
9503368*8*R1							
8240	1,2-Dichloroethane-d4	95922	03/29/95	40.2	50.0	80	Q
	Toluene-d8	95922	03/29/95	52.5	50.0	105	
	4-Bromofluorobenzene	95922	03/29/95	49.4	50.0	99	
9503368*8*S1							
8240	1,2-Dichloroethane-d4	95922	03/30/95	42.8	50.0	86	Q
	Toluene-d8	95922	03/30/95	51.1	50.0	102	
	4-Bromofluorobenzene	95922	03/30/95	50.7	50.0	101	
9503368*8*S2							
8240	1,2-Dichloroethane-d4	95922	03/30/95	42.1	50.0	84	Q
	Toluene-d8	95922	03/30/95	50.7	50.0	101	
	4-Bromofluorobenzene	95922	03/30/95	49.9	50.0	100	
9503368*8*T							

: SURROGATE RECOVERIES :
: BC ANALYTICAL : GLEN LAB : 11:33:34 06 APR 1995 - P. 2 :

METHOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG
8240	1,2-Dichloroethane-d4	95922	03/29/95	50.0	50.0	100	
	Toluene-d8	95922	03/29/95	50.0	50.0	100	
	4-Bromofluorobenzene	95922	03/29/95	50.0	50.0	100	
9503377*3*R1							
8270	2-Fluorophenol	9548	03/29/95	49.3	75.0	66	
	Phenol-d5	9548	03/29/95	56.6	75.0	75	
	Nitrobenzene-d5	9548	03/29/95	37.9	50.0	76	
	2-Fluorobiphenyl	9548	03/29/95	35.1	50.0	70	
	2,4,6-Tribromophenol Rep.	9548	03/29/95	61.0	75.0	81	
	Terphenyl-d14	9548	03/29/95	45.6	50.0	91	
9503377*3*S1							
8270	2-Fluorophenol	9548	03/29/95	46.4	75.0	62	
	Phenol-d5	9548	03/29/95	50.9	75.0	68	
	Nitrobenzene-d5	9548	03/29/95	35.3	50.0	71	
	2-Fluorobiphenyl	9548	03/29/95	33.5	50.0	67	
	2,4,6-Tribromophenol Rep.	9548	03/29/95	57.6	75.0	77	
	Terphenyl-d14	9548	03/29/95	38.5	50.0	77	
9503377*3*S2							
270	2-Fluorophenol	9548	03/29/95	51.5	75.0	69	
	Phenol-d5	9548	03/29/95	58.0	75.0	77	
	Nitrobenzene-d5	9548	03/29/95	37.7	50.0	75	
	2-Fluorobiphenyl	9548	03/29/95	38.4	50.0	77	
	2,4,6-Tribromophenol Rep.	9548	03/29/95	72.4	75.0	97	
	Terphenyl-d14	9548	03/29/95	41.5	50.0	83	
9503377*3*T							
8270	2-Fluorophenol	9548	03/29/95	75.0	75.0	100	
	Phenol-d5	9548	03/29/95	75.0	75.0	100	
	Nitrobenzene-d5	9548	03/29/95	50.0	50.0	100	
	2-Fluorobiphenyl	9548	03/29/95	50.0	50.0	100	
	2,4,6-Tribromophenol Rep.	9548	03/29/95	75.0	75.0	100	
	Terphenyl-d14	9548	03/29/95	50.0	50.0	100	
9503401*1*R1							
8240	1,2-Dichloroethane-d4	95923	03/30/95	48.9	50.0	98	
	Toluene-d8	95923	03/30/95	51.6	50.0	103	
	4-Bromofluorobenzene	95923	03/30/95	50.2	50.0	100	
9503401*1*S1							
8240	1,2-Dichloroethane-d4	95923	03/30/95	51.8	50.0	104	
	Toluene-d8	95923	03/30/95	49.9	50.0	100	
	4-Bromofluorobenzene	95923	03/30/95	51.8	50.0	104	
9503401*1*S2							
8240	1,2-Dichloroethane-d4	95923	03/30/95	50.4	50.0	101	
	Toluene-d8	95923	03/30/95	50.2	50.0	100	

METHOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG
	4-Bromofluorobenzene	95923	03/30/95	52.1	50.0	104	
9503401*1*T							
8240	1,2-Dichloroethane-d4	95923	03/30/95	50.0	50.0	100	
	Toluene-d8	95923	03/30/95	50.0	50.0	100	
	4-Bromofluorobenzene	95923	03/30/95	50.0	50.0	100	
9503435*1*R1							
8270	2-Fluorophenol	9550	03/30/95	54.7	75.0	73	
	Phenol-d5	9550	03/30/95	59.6	75.0	79	
	Nitrobenzene-d5	9550	03/30/95	40.1	50.0	80	
	2-Fluorobiphenyl	9550	03/30/95	39.3	50.0	79	
	2,4,6-Tribromophenol	9550	03/30/95	58.6	75.0	78	
	Terphenyl-d14	9550	03/30/95	39.8	50.0	80	
9503435*1*S1							
8270	2-Fluorophenol	9550	03/30/95	56.4	75.0	75	
	Phenol-d5	9550	03/30/95	60.2	75.0	80	
	Nitrobenzene-d5	9550	03/30/95	42.8	50.0	86	
	2-Fluorobiphenyl	9550	03/30/95	39.9	50.0	80	
	2,4,6-Tribromophenol	9550	03/30/95	55.4	75.0	74	
	Terphenyl-d14	9550	03/30/95	42.0	50.0	84	
9503435*1*S2							
8270	2-Fluorophenol	9550	03/30/95	54.5	75.0	73	
	Phenol-d5	9550	03/30/95	59.9	75.0	80	
	Nitrobenzene-d5	9550	03/30/95	39.4	50.0	79	
	2-Fluorobiphenyl	9550	03/30/95	39.1	50.0	78	
	2,4,6-Tribromophenol	9550	03/30/95	59.5	75.0	79	
	Terphenyl-d14	9550	03/30/95	40.0	50.0	80	
9503435*1*T							
8270	2-Fluorophenol	9550	03/30/95	75.0	75.0	100	
	Phenol-d5	9550	03/30/95	75.0	75.0	100	
	Nitrobenzene-d5	9550	03/30/95	50.0	50.0	100	
	2-Fluorobiphenyl	9550	03/30/95	50.0	50.0	100	
	2,4,6-Tribromophenol	9550	03/30/95	75.0	75.0	100	
	Terphenyl-d14	9550	03/30/95	50.0	50.0	100	
9503435*5*R1							
8240	1,2-Dichloroethane-d4	95924	03/31/95	47.4	50.0	95	
	Toluene-d8	95924	03/31/95	50.6	50.0	101	
	4-Bromofluorobenzene	95924	03/31/95	50.9	50.0	102	
9503435*5*S1							
8240	1,2-Dichloroethane-d4	95924	03/31/95	53.4	50.0	107	
	Toluene-d8	95924	03/31/95	48.1	50.0	96	
	4-Bromofluorobenzene	95924	03/31/95	53.2	50.0	106	

METHOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG
9503435*5*S2							
8240	1,2-Dichloroethane-d4	95924	03/31/95	52.5	50.0	105	
	Toluene-d8	95924	03/31/95	49.0	50.0	98	
	4-Bromofluorobenzene	95924	03/31/95	52.4	50.0	105	
9503435*5*T							
8240	1,2-Dichloroethane-d4	95924	03/31/95	50.0	50.0	100	
	Toluene-d8	95924	03/31/95	50.0	50.0	100	
	4-Bromofluorobenzene	95924	03/31/95	50.0	50.0	100	
B5031363*1*MB							
8270	2-Fluorophenol	9550	03/30/95	55.5	75.0	74	
	Phenol-d5	9550	03/30/95	63.8	75.0	85	
	Nitrobenzene-d5	9550	03/30/95	37.0	50.0	74	
	2-Fluorobiphenyl	9550	03/30/95	36.4	50.0	73	
	2,4,6-Tribromophenol	9550	03/30/95	52.5	75.0	70	
	Terphenyl-d14	9550	03/30/95	37.0	50.0	74	
B5031381*1*MB							
8240	1,2-Dichloroethane-d4	95922	03/29/95	47.4	50.0	95	
	Toluene-d8	95922	03/29/95	53.5	50.0	107	
	4-Bromofluorobenzene	95922	03/29/95	49.5	50.0	99	
B5031405*1*MB							
8240	1,2-Dichloroethane-d4	95923	03/30/95	48.4	50.0	97	
	Toluene-d8	95923	03/30/95	51.9	50.0	104	
	4-Bromofluorobenzene	95923	03/30/95	49.1	50.0	98	
B504014*1*MB							
8240	1,2-Dichloroethane-d4	95924	03/31/95	49.9	50.0	100	
	Toluene-d8	95924	03/31/95	51.1	50.0	102	
	4-Bromofluorobenzene	95924	03/31/95	51.0	50.0	102	
B504023*1*MB							
8270	2-Fluorophenol	9548	03/29/95	38.5	75.0	51	
	Phenol-d5	9548	03/29/95	34.1	75.0	45	
	Nitrobenzene-d5	9548	03/29/95	38.4	50.0	77	
	2-Fluorobiphenyl	9548	03/29/95	34.8	50.0	70	
	2,4,6-Tribromophenol	9548	03/29/95	56.8	75.0	76	
	Terphenyl-d14	9548	03/29/95	45.1	50.0	90	
B504028*1*MB							
8270	2-Fluorophenol	9548	03/29/95	38.5	75.0	51	
	Phenol-d5	9548	03/29/95	34.1	75.0	45	
	Nitrobenzene-d5	9548	03/29/95	38.4	50.0	77	
	2-Fluorobiphenyl	9548	03/29/95	34.8	50.0	70	
	2,4,6-Tribromophenol Rep.	9548	03/29/95	56.8	75.0	76	
	Terphenyl-d14	9548	03/29/95	45.1	50.0	90	

METHOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG
C5031977*1*LC							
625	2-Fluorophenol	9546	03/23/95	52.6	75.0	70	
	Phenol-d5	9546	03/23/95	54.6	75.0	73	
	Nitrobenzene-d5	9546	03/23/95	32.8	50.0	66	
	2-Fluorobiphenyl	9546	03/23/95	32.4	50.0	65	
	2,4,6-Tribromophenol	9546	03/23/95	63.2	75.0	84	
	Terphenyl-d14	9546	03/23/95	36.0	50.0	72	
C5031977*1*LT							
625	2-Fluorophenol	9546	03/23/95	75.0	75.0	100	
	Phenol-d5	9546	03/23/95	75.0	75.0	100	
	Nitrobenzene-d5	9546	03/23/95	50.0	50.0	100	
	2-Fluorobiphenyl	9546	03/23/95	50.0	50.0	100	
	2,4,6-Tribromophenol	9546	03/23/95	75.0	75.0	100	
	Terphenyl-d14	9546	03/23/95	50.0	50.0	100	
C5031978*1*LC							
625	2-Fluorophenol	9546	03/23/95	53.4	75.0	71	
	Phenol-d5	9546	03/23/95	55.4	75.0	74	
	Nitrobenzene-d5	9546	03/23/95	33.7	50.0	67	
	2-Fluorobiphenyl	9546	03/23/95	31.9	50.0	64	
	2,4,6-Tribromophenol	9546	03/23/95	65.4	75.0	87	
	Terphenyl-d14	9546	03/23/95	34.3	50.0	69	
C5031978*1*LT							
625	2-Fluorophenol	9546	03/23/95	75.0	75.0	100	
	Phenol-d5	9546	03/23/95	75.0	75.0	100	
	Nitrobenzene-d5	9546	03/23/95	50.0	50.0	100	
	2-Fluorobiphenyl	9546	03/23/95	50.0	50.0	100	
	2,4,6-Tribromophenol	9546	03/23/95	75.0	75.0	100	
	Terphenyl-d14	9546	03/23/95	50.0	50.0	100	
C5032626*1*LC							
8270	2-Fluorophenol	9550	03/30/95	56.5	75.0	75	
	Phenol-d5	9550	03/30/95	55.1	75.0	73	
	Nitrobenzene-d5	9550	03/30/95	40.1	50.0	80	
	2-Fluorobiphenyl	9550	03/30/95	39.7	50.0	79	
	2,4,6-Tribromophenol	9550	03/30/95	61.0	75.0	81	
	Terphenyl-d14	9550	03/30/95	43.8	50.0	88	
C5032626*1*LT							
8270	2-Fluorophenol	9550	03/30/95	75.0	75.0	100	
	Phenol-d5	9550	03/30/95	75.0	75.0	100	
	Nitrobenzene-d5	9550	03/30/95	50.0	50.0	100	
	2-Fluorobiphenyl	9550	03/30/95	50.0	50.0	100	
	2,4,6-Tribromophenol	9550	03/30/95	75.0	75.0	100	
	Terphenyl-d14	9550	03/30/95	50.0	50.0	100	
C5032627*1*LC							

METHOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG
8270	2-Fluorophenol	9550	03/30/95	48.2	75.0	64	
	Phenol-d5	9550	03/30/95	46.0	75.0	61	
	Nitrobenzene-d5	9550	03/30/95	35.8	50.0	72	
	2-Fluorobiphenyl	9550	03/30/95	34.8	50.0	70	
	2,4,6-Tribromophenol	9550	03/30/95	55.4	75.0	74	
	Terphenyl-d14	9550	03/30/95	39.1	50.0	78	
C5032627*1*LT							
8270	2-Fluorophenol	9550	03/30/95	75.0	75.0	100	
	Phenol-d5	9550	03/30/95	75.0	75.0	100	
	Nitrobenzene-d5	9550	03/30/95	50.0	50.0	100	
	2-Fluorobiphenyl	9550	03/30/95	50.0	50.0	100	
	2,4,6-Tribromophenol	9550	03/30/95	75.0	75.0	100	
	Terphenyl-d14	9550	03/30/95	50.0	50.0	100	
C5032648*1*LC							
8240	1,2-Dichloroethane-d4	95922	03/29/95	46.9	50.0	94	
	Toluene-d8	95922	03/29/95	49.7	50.0	99	
	4-Bromofluorobenzene	95922	03/29/95	50.3	50.0	101	
C5032648*1*LT							
8240	1,2-Dichloroethane-d4	95922	03/29/95	50.0	50.0	100	
	Toluene-d8	95922	03/29/95	50.0	50.0	100	
	4-Bromofluorobenzene	95922	03/29/95	50.0	50.0	100	
C5032695*1*LC							
8240	1,2-Dichloroethane-d4	95923	03/30/95	51.6	50.0	103	
	Toluene-d8	95923	03/30/95	49.0	50.0	98	
	4-Bromofluorobenzene	95923	03/30/95	49.9	50.0	100	
C5032695*1*LT							
8240	1,2-Dichloroethane-d4	95923	03/30/95	50.0	50.0	100	
	Toluene-d8	95923	03/30/95	50.0	50.0	100	
	4-Bromofluorobenzene	95923	03/30/95	50.0	50.0	100	
C5032696*1*LC							
8240	1,2-Dichloroethane-d4	95923	03/30/95	52.1	50.0	104	
	Toluene-d8	95923	03/30/95	48.7	50.0	97	
	4-Bromofluorobenzene	95923	03/30/95	49.3	50.0	99	
C5032696*1*LT							
8240	1,2-Dichloroethane-d4	95923	03/30/95	50.0	50.0	100	
	Toluene-d8	95923	03/30/95	50.0	50.0	100	
	4-Bromofluorobenzene	95923	03/30/95	50.0	50.0	100	
C504026*1*LC							
8240	1,2-Dichloroethane-d4	95924	03/31/95	48.8	50.0	98	

METHOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG
	Toluene-d8	95924	03/31/95	48.9	50.0	98	
	4-Bromofluorobenzene	95924	03/31/95	50.8	50.0	102	
C504026*1*LT							
8240	1,2-Dichloroethane-d4	95924	03/31/95	50.0	50.0	100	
	Toluene-d8	95924	03/31/95	50.0	50.0	100	
	4-Bromofluorobenzene	95924	03/31/95	50.0	50.0	100	
C504027*1*LC							
8240	1,2-Dichloroethane-d4	95924	03/31/95	50.4	50.0	101	
	Toluene-d8	95924	03/31/95	48.7	50.0	97	
	4-Bromofluorobenzene	95924	03/31/95	49.8	50.0	100	
C504027*1*LT							
8240	1,2-Dichloroethane-d4	95924	03/31/95	50.0	50.0	100	
	Toluene-d8	95924	03/31/95	50.0	50.0	100	
	4-Bromofluorobenzene	95924	03/31/95	50.0	50.0	100	
C504052*1*LC							
8270	2-Fluorophenol	9548	03/29/95	51.0	75.0	68	
	Phenol-d5	9548	03/29/95	52.5	75.0	70	
	Nitrobenzene-d5	9548	03/29/95	39.4	50.0	79	
	2-Fluorobiphenyl	9548	03/29/95	42.4	50.0	85	
	2,4,6-Tribromophenol	9548	03/29/95	67.9	75.0	91	
	Terphenyl-d14	9548	03/29/95	53.1	50.0	106	
C504052*1*LT							
8270	2-Fluorophenol	9548	03/29/95	75.0	75.0	100	
	Phenol-d5	9548	03/29/95	75.0	75.0	100	
	Nitrobenzene-d5	9548	03/29/95	50.0	50.0	100	
	2-Fluorobiphenyl	9548	03/29/95	50.0	50.0	100	
	2,4,6-Tribromophenol	9548	03/29/95	75.0	75.0	100	
	Terphenyl-d14	9548	03/29/95	50.0	50.0	100	
C504053*1*LC							
8270	2-Fluorophenol	9548	03/29/95	48.6	75.0	65	
	Phenol-d5	9548	03/29/95	49.9	75.0	67	
	Nitrobenzene-d5	9548	03/29/95	38.0	50.0	76	
	2-Fluorobiphenyl	9548	03/29/95	40.3	50.0	81	
	2,4,6-Tribromophenol	9548	03/29/95	68.2	75.0	91	
	Terphenyl-d14	9548	03/29/95	52.6	50.0	105	
C504053*1*LT							
8270	2-Fluorophenol	9548	03/29/95	75.0	75.0	100	
	Phenol-d5	9548	03/29/95	75.0	75.0	100	
	Nitrobenzene-d5	9548	03/29/95	50.0	50.0	100	
	2-Fluorobiphenyl	9548	03/29/95	50.0	50.0	100	
	2,4,6-Tribromophenol	9548	03/29/95	75.0	75.0	100	
	Terphenyl-d14	9548	03/29/95	50.0	50.0	100	

Case Narrative

All quality control objectives were met except:

Method 8270 batch 9546 - Benzidine was greater than the upper control limit in both the LCS and LCSD (LCS: 347%, LCSD: 362%). Benzidine was not detected in any project samples in this batch. Benzidine is not a target compound.

Method 8270 batch 9548 - Benzidine was greater than the upper control limit in both the LCS and LCSD (LCS: 302%, LCSD: 278%). Benzidine was not detected in any project samples in this batch. Benzidine is not a target compound. 4-Nitrophenol RPD greater than control limit for the MS/MSD (RPD: 38%). The recovery for 4-Nitrophenol was in control for both the MS and MSD (MS: 71%, MSD: 103%).

Method 8270 batch 9550 - Benzidine was greater than the upper control limit in both the LCS and LCSD (LCS: 311%, LCSD: 269%). Benzidine was not detected in any project samples in this batch. Benzidine is not a target compound.
Bis(2-chloroisopropyl)ether was within control in the LCS but greater than the upper control limit in the LCSD (LCS: 134%, LCSD: 148%). Bis(2-ethylhexyl)phthalate was detected in the MB above the RDL (MB: 8.7 ug/L, RDL: 7 ug/L).
Bis(2-ethylhexyl)phthalate was not detected in any project samples in this batch.

The following samples failed one surrogate for method 8240, this meets BCA criteria and all data was reported:

BCA sample #	Surrogate	Recovery	Control Limits
9503368*2	1,2-Dichloroethane-d4	84%	87-125%
9503368*3	1,2-Dichloroethane-d4	82%	87-125%
9503368*4	1,2-Dichloroethane-d4	82%	87-125%
9503368*5	1,2-Dichloroethane-d4	81%	87-125%
9503368*6	1,2-Dichloroethane-d4	79%	87-125%
9503368*7	1,2-Dichloroethane-d4	79%	87-125%
9503368*8	1,2-Dichloroethane-d4	80%	87-125%
9503368*8MS	1,2-Dichloroethane-d4	86%	87-125%
9503368*8MSD	1,2-Dichloroethane-d4	84%	87-125%
9503368*9	1,2-Dichloroethane-d4	80%	87-125%
9503368*10	1,2-Dichloroethane-d4	79%	87-125%
9503368*11	1,2-Dichloroethane-d4	81%	87-125%
9503368*12	1,2-Dichloroethane-d4	80%	87-125%

No analytical difficulties were encountered with any project samples except:

Arsenic method 7060 and Selenium method 7740 - The first 20 samples were diluted 1:2 because the matrix was interfering with the continuing calibration. BCA used the lowest possible dilution of 1:2 to avoid this problem.

Sample 9503401*2 failed more than one acid and one base surrogate for method 8270. This sample was re-extracted on the 9th day of holding time and reported under sample number 9503401*15. Both sets of sample data were reported.

Sample 9503435*4 failed more than one acid and one base surrogate for method 8270 (surrogates were not added to the sample and all recoveries were 0%). This sample was re-extracted on the 9th day of holding time and reported under sample number 9503435*8. The re-extracted sample failed one surrogate which is within method criteria. Both sets of sample data were reported.

The four project samples analyzed for BOD caused erratic readings on the dissolved oxygen probe for all dilutions due to the sample matrix. It took an unusual amount of time for the readings to stabilize. BCA will determine both the initial dissolved oxygen and final dissolved oxygen by Winkler titration on all future project samples with this same matrix type.

CHAIN OF CUSTODY RECORD

BCA Log Number G95 73-368

Client name: BHP Petroleum Americas
Project or PO#: GMP 2nd Q
Address: 91-325 Komohana St.
Phone #: 808-547-3804
City, State, Zip: Kapolei, HI 96707-1713
Report attention: Tony Shan

Sampled by: CM/RS/FC/28

Lab Sample number	Date sampled	Time sampled	Type* See key below	Sample description	Number of containers	8240	8270	Metals	General Chemistry	Biodegradation			Hazardous sample Special handling required	Remarks
	3/20/95	1032	GW	MW-6	7	✓	✓	✓	✓					Gen. Chem, and
		1200		MW-5	7	✓	✓	✓	✓					Biodegradation
		1435		MW-4	13	✓	✓	✓	✓	✓				analyses should
		1515		MW-3	7	✓	✓	✓	✓					be performed
		1040		CW-1A	13	✓	✓	✓	✓	✓				according the
		1150		CW-1B	7	✓	✓	✓	✓					fax I sent you
		1400		CW-1C	7	✓	✓	✓	✓					before.
		1545		CW-5A	7	✓	✓	✓	✓					
		1635		CW-5B	6	✓	✓	✓	✓					
		1530		Field Blank	2	✓								
				Trip Blank	2	✓								

	Signature	Print Name	Company	Date	Time
Relinquished by	[illegible]	~~Eian Sheehy~~ Zuyi Shen	Dames & Moore Honolulu	3/20/95	1815
Received by	Susan Arrowsmith	SARROWSMITH	BC Analytical	3/21/95	11.55
Relinquished by					
Received by					
Relinquished by					
Received by Laboratory					

B C ANALYTICAL

- ☐ 1085 Shary Circle, Concord, CA 94518 (510) 825-3894
- ☐ 801 Western Avenue, Glendale, CA 91201 (818) 247-5737
- ☐ 1200 Gene Autry Way, Anaheim, CA 92805 (714) 978-0113

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client's expense.

Disposal arrangements: _____

*KEY: AG—Aqueous NA—Nonaqueous SL—Sludge GW—Groundwater SO—Soil PE—Petroleum

CHAIN OF CUSTODY RECORD

BCA Log Number ~~G95~~ ~~04~~ G95-03-40

Client name: BHP Hawaii Refinery	Project or PO#: GMP 2nd Qrt.
Address: 91-325 Komohana St.	Phone #: 808-547-3804
City, State, Zip: Kapolei, HI 96707	Report attention: Mr. Tony Shan

Sampled by: Zuyi Shen / Ryan Sueyoshi

Lab Sample number	Date sampled	Time sampled	Type* See key below	Sample description	Number of containers	8240	8270	Metals	General Chemistry	Biodegradation			Hazardous sample Special handling required	Remarks
	3/21/95	10:30a	GW	CW-4A	7	✓	✓	✓	✓					
		9:30a		CW-4B	7	✓	✓	✓	✓					
		11:30a		CW-4C	7	✓	✓	✓	✓					
		3:30p		CW-7A	13	✓	✓	✓	✓	✓				
		2:30p		CW-7B	7	✓	✓	✓	✓					
		4:35p		CW-8A	7	✓	✓	✓	✓					
		950		CW-3A	7	✓	✓	✓	✓					
		1050		CW-3C	7	✓	✓	✓	✓					
		1140		CW-3B	7	✓	✓	✓	✓					
		1420		CW-6A	13	✓	✓	✓	✓	✓				
		1520		CW-6B	7	✓	✓	✓	✓					
		1700		CW-8B	7	✓	✓	✓	✓					

	Signature	Print Name	Company	Date	Time
Relinquished by	Zuyi Shen / Ryan Sueyoshi	Zuyi Shen / Ryan Sueyoshi	Dames & Moore Honolulu	3/21/95	1810
Received by	Susan Arrowsmith	S. ARROWSMITH	BC Analytical	3/22/95	10:30
Relinquished by					
Received by					
Relinquished by					
Received by Laboratory					

B C ANALYTICAL

☐ 1085 Shary Circle, Concord, CA 94518 (510) 825-3894
☐ 801 Western Avenue, Glendale, CA 91201 (818) 247-5737
☐ 1200 Gene Autry Way, Anaheim, CA 92805 (714) 978-0113

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client's expense.

Disposal arrangements: _____

*KEY: AG—Aqueous NA—Nonaqueous SL—Sludge GW—Groundwater SO—Soil PE—Petroleum

CHAIN OF CUSTODY RECORD

BCA Log Number ~~G95-04~~ G95-03-40

Client name: BHP Hawaii Refinery	Project or PO#: GMP 2nd Qrt.
Address: 91-325 Komohana	Phone #: 808-547-3804
City, State, Zip: Kapolei, HI 96707	Report attention: Mr. Tony Shen

Sampled by: ZS/CM/RS/FC

Analyses required: 8240

Hazardous sample Special handling required

Lab Sample number	Date sampled	Time sampled	Type* See key below	Sample description	Number of containers	8240								Remarks
	3/21/95	1800	AG	Trip Blank 3	2	✓								
	3/21/95	1440	AG	Field Blank 2	3	✓								

	Signature	Print Name	Company	Date	Time
Relinquished by	Zuyi Shen/Ryan Sueyoshi	Zuyi Shen/Ryan Sueyoshi	Dames & Moore Honolulu	3/21/95	1810
Received by	Susan Arrowsmith	S. ARROWSMITH	BC Analytical	3/22/95	10.30
Relinquished by					
Received by					
Relinquished by					
Received by Laboratory					

B C ANALYTICAL

- ☐ 1085 Shary Circle, Concord, CA 94518 (510) 825-3894
- ☐ 801 Western Avenue, Glendale, CA 91201 (818) 247-5737
- ☐ 1200 Gene Autry Way, Anaheim, CA 92805 (714) 978-0113

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client's expense.

Disposal arrangements: _____

*KEY: AG—Aqueous NA—Nonaqueous SL—Sludge GW—Groundwater SO—Soil PE—Petroleum

CHAIN OF CUSTODY RECORD

BCA Log Number G95 23-435

Client name: BHP - Hawaii Refinery
Project or PO#: GMP 2nd Quarter
Address: 91-325 Komohana St
Phone #: 808-374-3804
City, State, Zip: EWA Beach, HI 96707-1713
Report attention: Tony Shan

Sampled by: CM/RS/ZS

Lab Sample number	Date sampled	Time sampled	Type* See key below	Sample description	Number of containers	8240	8270	Metals	General Chemistry	Biodegradation			Hazardous sample Special handling required	Remarks
	3/22/95	0900	GW	CW-2A	7	✓	✓	✓	✓					
		0910		Field Blank #3	3	✓								
		1015		CW-2B	7	✓	✓	✓	✓					1L amber marked 3B assumed to be 2B
		1105		CW-2C	7	✓	✓	✓	✓					
		1325		CW-9A	7	✓	✓	✓	✓					
		1415		CW-9B	7	✓	✓	✓	✓					
		1500		Trip Blank 4	2	✓								Added per Tony Shan 3/23/95 (Bm)

	Signature	Print Name	Company	Date	Time
Relinquished by	Zuyi Shen	Zuyi Shen	Dames & Moore Honolulu	3/22/95	1500
Received by	Susan Arrowsmith	S. ARROWSMITH	BC Analytical	3/23/95	11.00
Relinquished by					
Received by					
Relinquished by					
Received by Laboratory					

B C ANALYTICAL

- ☐ 1085 Shary Circle, Concord, CA 94518 (510) 825-3894
- ☐ 801 Western Avenue, Glendale, CA 91201 (818) 247-5737
- ☐ 1200 Gene Autry Way, Anaheim, CA 92805 (714) 978-0113

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client's expense.

Disposal arrangements: _____

*KEY: AG—Aqueous NA—Nonaqueous SL—Sludge GW—Groundwater SO—Soil PE—Petroleum

3. ANALYTICAL RESULTS OF DUPLICATE GROUNDWATER SAMPLES

WCAS
WEST COAST
ANALYTICAL
SERVICE, INC.
ANALYTICAL CHEMISTS

March 30, 1995

BHP PETROLEUM
91-325 Komohana Street
Kapolei, HI 96707

Attn: Tony Shan

JOB NO. 28997 S

LABORATORY REPORT

Samples Received: Three (3) Waters in Fourteen (14) Containers
Date Received: 3-22-95
Project: #95-3/GMP

The samples were analyzed as follows:

Samples Analyzed	Analysis	Page
Two (2) samples	Selected Metals by ICPMS	2 - 3
Three (3) samples	Volatile Organics by EPA 624	4 - 9
Two (2) samples	Semi-Volatile Organics by EPA 625	10 - 16

Michael Shelton
Technical Director

D. J. Northington, Ph.D.
President

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9849 Alburtis Avenue • Santa Fe Springs, California 90670 • 310/948-9225 • FAX 310/948-5252

WEST COAST ANALYTICAL SERVICE, INC.

BHP PETROLEUM
Mr. Tony Shan

Job # 28997
March 30, 1995

LABORATORY REPORT

Selected Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry

Parts Per Billion (ug/l)

	CW-3A	CW-7A	Blank DL
Beryllium	ND<0.4	ND<0.4	0.4
Vanadium	47	ND<7	7
Chromium	6.5	14.8	0.4
Cobalt	1.44	0.46	0.1
Nickel	13	ND<3	3
Arsenic	14.7	4	3
Selenium	36	19	3
Cadmium	ND<0.1	ND<0.1	0.1
Antimony	2	ND<0.2	0.2
Barium	101	76.2	0.1
Mercury	0.8	ND<0.3	0.3
Lead	ND<0.1	ND<0.1	0.1

Date Analyzed: 3-27-95

WEST COAST ANALYTICAL SERVICE, INC.

BHP PETROLEUM
Mr. Tony Shan

Job # 28997
March 30, 1995

LABORATORY REPORT

Sample: Batch QC
Matrix: Water

Parts Per Billion (ug/l)

	Sample	Duplicate	RPD %	Spike Conc ppb	Spk Rslt	% Recovery	Blank Detect. Limit
Antimony	ND<0.2	ND<0.2		100	92.7	92.7	0.2
Arsenic	ND<0.1	ND<0.1		100	90.8	90.8	0.1
Barium	ND<0.1	ND<0.1		100	97.4	97.4	0.1
Beryllium	ND<0.4	ND<0.4		100	107	107	0.4
Cadmium	ND<0.1	ND<0.1		100	102	102	0.2
Chromium	ND<0.8	ND<0.8		100	105	105	0.8
Cobalt	ND<0.1	ND<0.1		100	108	108	0.1
Lead	ND<0.1	ND<0.1		100	106	106	0.1
Mercury	ND<0.5	ND<0.5		10	9.7	97	0.5
Nickel	ND<0.2	ND<0.2		100	109	109	0.3
Selenium	ND<3	ND<3		1000	927	92.7	3
Vanadium	ND<0.2	ND<0.2		100	111	111	0.1

Date Analyzed: 3-27-95

CLIENT: BHP PETROLEUM SAMPLE: CW-3A
WCAS JOB #: 28997

VOLATILE ORGANICS BY EPA 624/8260

DATE RECEIVED: 03/22/95 MATRIX: WATER
DATE EXTRACTED: 03/27/95 SAMPLE AMOUNT: 5ML
DATE ANALYZED: 03/28/95 RUN NUMBER: 28997B2
INSTRUMENT ID: 4500 UNITS: UG/L (PPB)

CAS NO.	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	10.	5.
71-43-2	BENZENE	ND	1.
75-27-4	BROMODICHLOROMETHANE	ND	1.
75-25-2	BROMOFORM	ND	1.
74-83-9	BROMOMETHANE	ND	5.
78-93-3	2-BUTANONE (MEK)	ND	5.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	1.
108-90-7	CHLOROBENZENE	ND	1.
75-00-3	CHLOROETHANE	ND	5.
67-66-3	CHLOROFORM	ND	1.
74-87-3	CHLOROMETHANE	ND	5.
108-41-8	CHLOROTOLUENE	ND	1.
124-48-1	DIBROMOCHLOROMETHANE	ND	1.
95-50-1	1,2-DICHLOROBENZENE	ND	1.
541-73-1	1,3-DICHLOROBENZENE	ND	1.
106-46-7	1,4-DICHLOROBENZENE	ND	1.
75-34-3	1,1-DICHLOROETHANE	ND	1.
107-06-2	1,2-DICHLOROETHANE	ND	1.
75-35-4	1,1-DICHLOROETHYLENE	ND	1.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	1.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	1.
78-87-5	1,2-DICHLOROPROPANE	ND	1.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	1.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	1.
100-41-4	ETHYLBENZENE	ND	1.
106-93-4	ETHYLENE DIBROMIDE	ND	1.
76-13-1	FREON-TF	ND	1.
119-78-6	2-HEXANONE	ND	5.
75-09-2	METHYLENE CHLORIDE	ND	5.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	5.
100-42-5	STYRENE	ND	1.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	1.
127-18-4	TETRACHLOROETHYLENE	ND	1.
109-99-9	TETRAHYDROFURAN	ND	5.
108-88-3	TOLUENE	ND	1.
71-55-6	1,1,1-TRICHLOROETHANE	ND	1.
79-00-5	1,1,2-TRICHLOROETHANE	ND	1.
79-01-6	TRICHLOROETHYLENE	ND	1.
75-69-4	TRICHLOROFLUOROMETHANE	ND	1.
108-05-4	VINYL ACETATE	ND	5.
75-01-4	VINYL CHLORIDE	ND	5.
1330-20-7	TOTAL XYLENES	ND	1.

SURROGATE	1,2-DCA-d4	TOL-d8	BFB
PERCENT RECOVERY	100	100	104
CONTROL LIMITS	86-121	84-115	83-112

CLIENT: BHP PETROLEUM
WCAS JOB #: 28997

SAMPLE: CW-7A

VOLATILE ORGANICS BY EPA 624/8260

DATE RECEIVED: 03/22/95
DATE EXTRACTED: 03/27/95
DATE ANALYZED: 03/28/95
INSTRUMENT ID: 4500

MATRIX: WATER
SAMPLE AMOUNT: 5ML
RUN NUMBER: 28997B3
UNITS: UG/L (PPB)

CAS NO.	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	5.
71-43-2	BENZENE	ND	1.
75-27-4	BROMODICHLOROMETHANE	ND	1.
75-25-2	BROMOFORM	ND	1.
74-83-9	BROMOMETHANE	ND	5.
78-93-3	2-BUTANONE (MEK)	ND	5.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	1.
108-90-7	CHLOROBENZENE	ND	1.
75-00-3	CHLOROETHANE	ND	5.
67-66-3	CHLOROFORM	ND	1.
74-87-3	CHLOROMETHANE	ND	5.
108-41-8	CHLOROTOLUENE	ND	1.
124-48-1	DIBROMOCHLOROMETHANE	ND	1.
95-50-1	1,2-DICHLOROBENZENE	ND	1.
541-73-1	1,3-DICHLOROBENZENE	ND	1.
106-46-7	1,4-DICHLOROBENZENE	ND	1.
75-34-3	1,1-DICHLOROETHANE	ND	1.
107-06-2	1,2-DICHLOROETHANE	ND	1.
75-35-4	1,1-DICHLOROETHYLENE	ND	1.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	1.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	1.
78-87-5	1,2-DICHLOROPROPANE	ND	1.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	1.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	1.
100-41-4	ETHYLBENZENE	ND	1.
106-93-4	ETHYLENE DIBROMIDE	ND	1.
76-13-1	FREON-TF	ND	1.
119-78-6	2-HEXANONE	ND	5.
75-09-2	METHYLENE CHLORIDE	ND	5.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	5.
100-42-5	STYRENE	ND	1.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	1.
127-18-4	TETRACHLOROETHYLENE	ND	1.
109-99-9	TETRAHYDROFURAN	ND	5.
108-88-3	TOLUENE	ND	1.
71-55-6	1,1,1-TRICHLOROETHANE	ND	1.
79-00-5	1,1,2-TRICHLOROETHANE	ND	1.
79-01-6	TRICHLOROETHYLENE	ND	1.
75-69-4	TRICHLOROFLUOROMETHANE	ND	1.
108-05-4	VINYL ACETATE	ND	5.
75-01-4	VINYL CHLORIDE	ND	5.
1330-20-7	TOTAL XYLENES	ND	1.

SURROGATE	1,2-DCA-d4	TOL-d8	BFB
PERCENT RECOVERY	99	102	104
CONTROL LIMITS	86-121	84-115	83-112

CLIENT: BHP PETROLEUM
WCAS JOB #: 28997

SAMPLE: TRIP BLANK 2

VOLATILE ORGANICS BY EPA 624/8260

DATE RECEIVED: 03/22/95
DATE EXTRACTED: 03/28/95
DATE ANALYZED: 03/28/95
INSTRUMENT ID: 4500

MATRIX: WATER
SAMPLE AMOUNT: 5ML
RUN NUMBER: 28997B4
UNITS: UG/L (PPB)

AS NO.	COMPOUND	CONCENTRATION	DET LIMIT
7-64-1	ACETONE	ND	5.
1-43-2	BENZENE	ND	1.
5-27-4	BROMODICHLOROMETHANE	ND	1.
5-25-2	BROMOFORM	ND	1.
4-83-9	BROMOMETHANE	ND	5.
8-93-3	2-BUTANONE (MEK)	ND	5.
5-15-0	CARBON DISULFIDE	ND	5.
6-23-5	CARBON TETRACHLORIDE	ND	1.
08-90-7	CHLOROBENZENE	ND	1.
5-00-3	CHLOROETHANE	ND	5.
7-66-3	CHLOROFORM	ND	1.
4-87-3	CHLOROMETHANE	ND	5.
08-41-8	CHLOROTOLUENE	ND	1.
24-48-1	DIBROMOCHLOROMETHANE	ND	1.
5-50-1	1,2-DICHLOROBENZENE	ND	1.
41-73-1	1,3-DICHLOROBENZENE	ND	1.
06-46-7	1,4-DICHLOROBENZENE	ND	1.
5-34-3	1,1-DICHLOROETHANE	ND	1.
07-06-2	1,2-DICHLOROETHANE	ND	1.
5-35-4	1,1-DICHLOROETHYLENE	ND	1.
56-59-4	CIS-1,2-DICHLOROETHYLENE	ND	1.
56-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	1.
8-87-5	1,2-DICHLOROPROPANE	ND	1.
0061-01-5	CIS-1,3-DICHLOROPROPENE	ND	1.
0061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	1.
00-41-4	ETHYLBENZENE	ND	1.
06-93-4	ETHYLENE DIBROMIDE	ND	1.
6-13-1	FREON-TF	ND	5.
19-78-6	2-HEXANONE	ND	5.
5-09-2	METHYLENE CHLORIDE	ND	5.
08-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	1.
00-42-5	STYRENE	ND	1.
9-34-5	1,1,2,2-TETRACHLOROETHANE	ND	1.
27-18-4	TETRACHLOROETHYLENE	ND	5.
09-99-9	TETRAHYDROFURAN	ND	1.
08-88-3	TOLUENE	ND	1.
1-55-6	1,1,1-TRICHLOROETHANE	ND	1.
9-00-5	1,1,2-TRICHLOROETHANE	ND	1.
9-01-6	TRICHLOROETHYLENE	ND	1.
5-69-4	TRICHLOROFLUOROMETHANE	ND	5.
08-05-4	VINYL ACETATE	ND	5.
5-01-4	VINYL CHLORIDE	ND	1.
330-20-7	TOTAL XYLENES	ND	

SURROGATE	1,2-DCA-d4	TOL-d8	BFB
PERCENT RECOVERY	95	98	100
CONTROL LIMITS	86-121	84-115	83-112

CLIENT: BHP PETROLEUM SAMPLE: LAB BLANK
WCAS JOB #: 28997

VOLATILE ORGANICS BY EPA 624/8260

DATE RECEIVED: 03/27/95
DATE EXTRACTED: 03/27/95
DATE ANALYZED: 03/27/95
INSTRUMENT ID: 4500

MATRIX: WATER
SAMPLE AMOUNT: 5ML
RUN NUMBER: VBLK1034
UNITS: UG/L (PPB)

CAS NO.	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	5.
71-43-2	BENZENE	ND	1.
75-27-4	BROMODICHLOROMETHANE	ND	1.
75-25-2	BROMOFORM	ND	1.
74-83-9	BROMOMETHANE	ND	5.
78-93-3	2-BUTANONE (MEK)	ND	5.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	1.
108-90-7	CHLOROBENZENE	ND	1.
75-00-3	CHLOROETHANE	ND	5.
67-66-3	CHLOROFORM	ND	1.
74-87-3	CHLOROMETHANE	ND	5.
108-41-8	CHLOROTOLUENE	ND	1.
124-48-1	DIBROMOCHLOROMETHANE	ND	1.
95-50-1	1,2-DICHLOROBENZENE	ND	1.
541-73-1	1,3-DICHLOROBENZENE	ND	1.
106-46-7	1,4-DICHLOROBENZENE	ND	1.
75-34-3	1,1-DICHLOROETHANE	ND	1.
107-06-2	1,2-DICHLOROETHANE	ND	1.
75-35-4	1,1-DICHLOROETHYLENE	ND	1.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	1.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	1.
78-87-5	1,2-DICHLOROPROPANE	ND	1.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	1.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	1.
100-41-4	ETHYLBENZENE	ND	1.
106-93-4	ETHYLENE DIBROMIDE	ND	1.
76-13-1	FREON-TF	ND	1.
119-78-6	2-HEXANONE	ND	5.
75-09-2	METHYLENE CHLORIDE	ND	5.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	5.
100-42-5	STYRENE	ND	1.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	1.
127-18-4	TETRACHLOROETHYLENE	ND	1.
109-99-9	TETRAHYDROFURAN	ND	5.
108-88-3	TOLUENE	ND	1.
71-55-6	1,1,1-TRICHLOROETHANE	ND	1.
79-00-5	1,1,2-TRICHLOROETHANE	ND	1.
79-01-6	TRICHLOROETHYLENE	ND	1.
75-69-4	TRICHLOROFLUOROMETHANE	ND	1.
108-05-4	VINYL ACETATE	ND	5.
75-01-4	VINYL CHLORIDE	ND	5.
1330-20-7	TOTAL XYLENES	ND	1.

SURROGATE	1,2-DCA-d4	TOL-d8	BFB
PERCENT RECOVERY	99	99	104
CONTROL LIMITS	86-121	84-115	83-112

CLIENT: BHP PETROLEUM SAMPLE: LAB BLANK
WCAS JOB #: 28997

VOLATILE ORGANICS BY EPA 624/8260

DATE RECEIVED: 03/28/95 MATRIX: WATER
DATE EXTRACTED: 03/28/95 SAMPLE AMOUNT: 5ML
DATE ANALYZED: 03/28/95 RUN NUMBER: VBLK1036
INSTRUMENT ID: 4500 UNITS: UG/L (PPB)

CAS NO.	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	6.	5.
71-43-2	BENZENE	ND	1.
75-27-4	BROMODICHLOROMETHANE	ND	1.
75-25-2	BROMOFORM	ND	1.
74-83-9	BROMOMETHANE	ND	5.
78-93-3	2-BUTANONE (MEK)	ND	5.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	1.
108-90-7	CHLOROBENZENE	ND	1.
75-00-3	CHLOROETHANE	ND	5.
67-66-3	CHLOROFORM	ND	1.
74-87-3	CHLOROMETHANE	ND	5.
108-41-8	CHLOROTOLUENE	ND	1.
124-48-1	DIBROMOCHLOROMETHANE	ND	1.
95-50-1	1,2-DICHLOROBENZENE	ND	1.
541-73-1	1,3-DICHLOROBENZENE	ND	1.
106-46-7	1,4-DICHLOROBENZENE	ND	1.
75-34-3	1,1-DICHLOROETHANE	ND	1.
107-06-2	1,2-DICHLOROETHANE	ND	1.
75-35-4	1,1-DICHLOROETHYLENE	ND	1.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	1.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	1.
78-87-5	1,2-DICHLOROPROPANE	ND	1.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	1.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	1.
100-41-4	ETHYLBENZENE	ND	1.
106-93-4	ETHYLENE DIBROMIDE	ND	1.
76-13-1	FREON-TF	ND	1.
591-78-6	2-HEXANONE	ND	5.
75-09-2	METHYLENE CHLORIDE	ND	5.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	5.
100-42-5	STYRENE	ND	1.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	1.
127-18-4	TETRACHLOROETHYLENE	ND	1.
109-99-9	TETRAHYDROFURAN	ND	5.
108-88-3	TOLUENE	ND	1.
71-55-6	1,1,1-TRICHLOROETHANE	ND	1.
79-00-5	1,1,2-TRICHLOROETHANE	ND	1.
79-01-6	TRICHLOROETHYLENE	ND	1.
75-69-4	TRICHLOROFLUOROMETHANE	ND	1.
108-05-4	VINYL ACETATE	ND	5.
75-01-4	VINYL CHLORIDE	ND	5.
1330-20-7	TOTAL XYLENES	ND	1.

SURROGATE	1,2-DCA-d4	TOL-d8	BFB
PERCENT RECOVERY	97	99	101
CONTROL LIMITS	86-121	84-115	83-112

WEST COAST ANALYTICAL SERVICE

MATRIX SPIKE/MATRIX SPIKE DUPLICATE
PERCENT RECOVERY AND RPD SUMMARY

CLIENT:	BHP PETROLEUM	QC BATCH:	032795W
DATE ANALYZED:	03/27/95	MATRIX:	WATER
WCAS JOB #:	28997	UNITS:	UG/L (PPB)

VOLATILE COMPOUNDS

COMPOUND	CONC SPIKED	CONC SAMPLE	CONC MS	% REC MS	CONC MSD	% REC MSD	RPD
1,1-DICHLOROETHYLENE	49.9	ND	48.7	98	47.1	94	3
TRICHLOROETHYLENE	50.3	ND	56.4	112	54.9	109	3
CHLOROBENZENE	50.4	ND	56.9	113*	55.6	110*	2
TOLUENE	49.9	ND	55.1	110	54.0	108	2
BENZENE	49.8	ND	53.5	107	60.6	122	-12

* - ASTERISKED VALUES ARE OUTSIDE WARNING LIMITS

WATER QUALITY CONTROL LIMITS

ANALYTE	% RECOVERY WARNING	% RECOVERY CONTROL	RPD WARNING	RPD CONTROL
1,1-DICHLOROETHYLENE	52-155	25-182	24	36
TRICHLOROETHYLENE	59-120	44-135	13	18
CHLOROBENZENE	82-109	75-115	10	14
TOLUENE	80-116	71-125	13	19
BENZENE	73-125	60-138	14	19

CLIENT: BHP PETROLEUM
WCAS JOB #: 28997

SAMPLE: CW-3A

SEMI-VOLATILE ORGANICS (EPA 625/8270)

DATE RECEIVED: 03/22/95
DATE EXTRACTED: 03/23/95
DATE ANALYZED: 03/24/95
INSTRUMENT ID: TRIO1000

MATRIX: WATER
SAMPLE AMOUNT: 1L:1ML
RUN NUMBER: 28997A2
UNITS: UG/L (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
83-32-9	ACENAPHTHENE	ND	1.
208-96-8	ACENAPHTHYLENE	ND	1.
120-12-7	ANTHRACENE	ND	1.
56-55-3	BENZO(A)ANTHRACENE	ND	1.
205-99-2	BENZO(B & K)FLUORANTHENES	ND	1.
191-24-2	BENZO(G,H,I)PERYLENE	ND	1.
50-32-8	BENZO(A)PYRENE	ND	1.
65-85-0	BENZOIC ACID	ND	5.
100-51-6	BENZYL ALCOHOL	ND	5.
111-91-1	BIS(2-CHLOROETHOXY)METHANE	ND	1.
11-44-1	BIS(2-CHLOROETHYL)ETHER	ND	1.
39638-32-9	BIS(2-CHLOROISOPROPYL)ETHER	ND	1.
117-81-7	BIS(2-ETHYLHEXYL)PHTHALATE	ND	1.
101-55-3	4-BROMOPHENYL PHENYL ETHER	ND	1.
85-68-7	BUTYL BENZYL PHTHALATE	ND	1.
106-47-8	4-CHLOROANILINE	ND	1.
59-50-7	4-CHLORO-3-METHYLPHENOL	ND	1.
91-58-71	2-CHLORONAPHTHALENE	ND	1.
95-57-8	2-CHLOROPHENOL	ND	1.
7005-72-3	4-CHLOROPHENYL PHENYL ETHER	ND	1.
218-01-9	CHRYSENE	ND	1.
53-70-3	DIBENZO(A,H)ANTHRACENE	ND	1.
132-64-9	DIBENZOFURAN	ND	1.
84-74-2	DI-N-BUTYL PHTHALATE	ND	1.
95-50-1	1,2-DICHLOROBENZENE	ND	1.
541-73-1	1,3-DICHLOROBENZENE	ND	1.
106-46-7	1,4-DICHLOROBENZENE	ND	1.
91-94-1	3,3'-DICHLOROBENZIDINE	ND	1.
120-33-2	2,4-DICHLOROPHENOL	ND	1.
84-66-2	DIETHYL PHTHALATE	ND	1.
105-67-9	2,4-DIMETHYLPHENOL	ND	1.
131-11-3	DIMETHYL PHTHALATE	ND	1.
534-52-1	4,6-DINITRO-2-METHYLPHENOL	ND	5.
51-28-5	2,4-DINITROPHENOL	ND	5.
121-14-2	2,4-DINITROTOLUENE	ND	1.
606-20-2	2,6-DINITROTOLUENE	ND	1.
117-84-0	DI-N-OCTYL PHTHALATE	ND	1.
204-44-0	FLUORANTHENE	ND	1.
86-73-7	FLUORENE	ND	1.
118-74-1	HEXACHLOROBENZENE	ND	1.
87-68-3	HEXACHLOROBUTADIENE	ND	1.

CLIENT: BHP PETROLEUM
WCAS JOB #: 28997

SAMPLE: CW-3A

SEMI-VOLATILE ORGANICS (EPA 625/8270)

DATE RECEIVED: 03/22/95
DATE EXTRACTED: 03/23/95
DATE ANALYZED: 03/24/95
INSTRUMENT ID: TRIO1000

MATRIX: WATER
SAMPLE AMOUNT: 1L:1ML
RUN NUMBER: 28997A2
UNITS: UG/L (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
77-47-4	HEXACHLOROCYCLOPENTADIENE	ND	1.
67-72-1	HEXACHLOROETHANE	ND	1.
193-39-5	INDENO(1,2,3-CD)PYRENE	ND	1.
78-59-1	ISOPHORONE	ND	1.
91-57-6	2-METHYLNAPHTHALENE	ND	1.
95-48-7	2-METHYLPHENOL	ND	1.
106-44-5	4-METHYLPHENOL	ND	1.
91-20-3	NAPHTHALENE	ND	1.
88-74-4	2-NITROANILINE	ND	5.
99-09-2	3-NITROANILINE	ND	5.
100-01-6	4-NITROANILINE	ND	5.
98-95-3	NITROBENZENE	ND	1.
88-75-5	2-NITROPHENOL	ND	1.
100-02-7	4-NITROPHENOL	ND	5.
86-30-6	N-NITROSODIPHENYLAMINE **	ND	1.
621-64-7	N-NITROSODIPROPYLAMINE	ND	1.
87-86-5	PENTACHLOROPHENOL	ND	5.
85-01-8	PHENANTHRENE	ND	1.
108-95-2	PHENOL	ND	1.
129-00-0	PYRENE	ND	1.
120-82-1	1,2,4-TRICHLOROBENZENE	ND	1.
95-95-4	2,4,5-TRICHLOROPHENOL	ND	5.
88-06-2	2,4,6-TRICHLOROPHENOL	ND	1.

** - Cannot be separated from diphenylamine

SURROGATE	PERCENT RECOVERY	CONTROL LIMIT
PHENOL-d5	110	19-139
2-FLUOROPHENOL	103	21-154
NITROBENZENE-d5	95	35-114
2-FLUOROBIPHENYL	79	43-116
2,4,6-TRIBROMOPHENOL	115	10-123
TERPHENYL-d14	98	44-141

CLIENT: BHP PETROLEUM
WCAS JOB #: 28997

SAMPLE: CW-7A

SEMI-VOLATILE ORGANICS (EPA 625/8270)

DATE RECEIVED: 03/22/95
DATE EXTRACTED: 03/23/95
DATE ANALYZED: 03/24/95
INSTRUMENT ID: TRIO1000

MATRIX: WATER
SAMPLE AMOUNT: 1L:1ML
RUN NUMBER: 28997A3
UNITS: UG/L (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
83-32-9	ACENAPHTHENE	ND	1.
208-96-8	ACENAPHTHYLENE	ND	1.
120-12-7	ANTHRACENE	ND	1.
56-55-3	BENZO(A)ANTHRACENE	ND	1.
205-99-2	BENZO(B & K)FLUORANTHENES	ND	1.
191-24-2	BENZO(G,H,I)PERYLENE	ND	1.
50-32-8	BENZO(A)PYRENE	ND	1.
65-85-0	BENZOIC ACID	ND	5.
100-51-6	BENZYL ALCOHOL	ND	5.
111-91-1	BIS(2-CHLOROETHOXY)METHANE	ND	1.
11-44-1	BIS(2-CHLOROETHYL)ETHER	ND	1.
39638-32-9	BIS(2-CHLOROISOPROPYL)ETHER	ND	1.
117-81-7	BIS(2-ETHYLHEXYL)PHTHALATE	ND	1.
101-55-3	4-BROMOPHENYL PHENYL ETHER	ND	1.
85-68-7	BUTYL BENZYL PHTHALATE	ND	1.
106-47-8	4-CHLOROANILINE	ND	1.
59-50-7	4-CHLORO-3-METHYLPHENOL	ND	1.
91-58-71	2-CHLORONAPHTHALENE	ND	1.
95-57-8	2-CHLOROPHENOL	ND	1.
7005-72-3	4-CHLOROPHENYL PHENYL ETHER	ND	1.
218-01-9	CHRYSENE	ND	1.
53-70-3	DIBENZO(A,H)ANTHRACENE	ND	1.
132-64-9	DIBENZOFURAN	ND	1.
84-74-2	DI-N-BUTYL PHTHALATE	ND	1.
95-50-1	1,2-DICHLOROBENZENE	ND	1.
541-73-1	1,3-DICHLOROBENZENE	ND	1.
106-46-7	1,4-DICHLOROBENZENE	ND	1.
91-94-1	3,3'-DICHLOROBENZIDINE	ND	1.
120-33-2	2,4-DICHLOROPHENOL	ND	1.
84-66-2	DIETHYL PHTHALATE	ND	1.
105-67-9	2,4-DIMETHYLPHENOL	ND	1.
131-11-3	DIMETHYL PHTHALATE	ND	1.
534-52-1	4,6-DINITRO-2-METHYLPHENOL	ND	5.
51-28-5	2,4-DINITROPHENOL	ND	5.
121-14-2	2,4-DINITROTOLUENE	ND	1.
606-20-2	2,6-DINITROTOLUENE	ND	1.
117-84-0	DI-N-OCTYL PHTHALATE	ND	1.
204-44-0	FLUORANTHENE	ND	1.
86-73-7	FLUORENE	ND	1.
118-74-1	HEXACHLOROBENZENE	ND	1.
87-68-3	HEXACHLOROBUTADIENE	ND	1.

CLIENT: BHP PETROLEUM SAMPLE: CW-7A
WCAS JOB #: 28997

SEMI-VOLATILE ORGANICS (EPA 625/8270)

DATE RECEIVED:	03/22/95	MATRIX:	WATER
DATE EXTRACTED:	03/23/95	SAMPLE AMOUNT:	1L:1ML
DATE ANALYZED:	03/24/95	RUN NUMBER:	28997A3
INSTRUMENT ID:	TRIO1000	UNITS:	UG/L (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
77-47-4	HEXACHLOROCYCLOPENTADIENE	ND	1.
67-72-1	HEXACHLOROETHANE	ND	1.
193-39-5	INDENO(1,2,3-CD)PYRENE	ND	1.
78-59-1	ISOPHORONE	ND	1.
91-57-6	2-METHYLNAPHTHALENE	ND	1.
95-48-7	2-METHYLPHENOL	ND	1.
106-44-5	4-METHYLPHENOL	ND	1.
91-20-3	NAPHTHALENE	ND	1.
88-74-4	2-NITROANILINE	ND	5.
99-09-2	3-NITROANILINE	ND	5.
100-01-6	4-NITROANILINE	ND	5.
98-95-3	NITROBENZENE	ND	1.
88-75-5	2-NITROPHENOL	ND	1.
100-02-7	4-NITROPHENOL	ND	5.
86-30-6	N-NITROSODIPHENYLAMINE **	ND	1.
621-64-7	N-NITROSODIPROPYLAMINE	ND	1.
87-86-5	PENTACHLOROPHENOL	ND	5.
85-01-8	PHENANTHRENE	ND	1.
108-95-2	PHENOL	ND	1.
129-00-0	PYRENE	ND	1.
120-82-1	1,2,4-TRICHLOROBENZENE	ND	1.
95-95-4	2,4,5-TRICHLOROPHENOL	ND	5.
88-06-2	2,4,6-TRICHLOROPHENOL	ND	1.

** - Cannot be separated from diphenylamine

SURROGATE	PERCENT RECOVERY	CONTROL LIMIT
PHENOL-d5	109	19-139
2-FLUOROPHENOL	105	21-154
NITROBENZENE-d5	95	35-114
2-FLUOROBIPHENYL	85	43-116
2,4,6-TRIBROMOPHENOL	121	10-123
TERPHENYL-d14	94	44-141

CLIENT: BHP PETROLEUM
WCAS JOB #: 28997

SAMPLE: METHOD BLANK

SEMI-VOLATILE ORGANICS (EPA 625/8270)

DATE RECEIVED: 03/23/95
DATE EXTRACTED: 03/23/95
DATE ANALYZED: 03/24/95
INSTRUMENT ID: TRIO1000

MATRIX: WATER
SAMPLE AMOUNT: 1L:1ML
RUN NUMBER: 28997AA1
UNITS: UG/L (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
83-32-9	ACENAPHTHENE	ND	1.
208-96-8	ACENAPHTHYLENE	ND	1.
120-12-7	ANTHRACENE	ND	1.
56-55-3	BENZO(A)ANTHRACENE	ND	1.
205-99-2	BENZO(B & K)FLUORANTHENES	ND	1.
191-24-2	BENZO(G,H,I)PERYLENE	ND	1.
50-32-8	BENZO(A)PYRENE	ND	1.
65-85-0	BENZOIC ACID	ND	5.
100-51-6	BENZYL ALCOHOL	ND	5.
111-91-1	BIS(2-CHLOROETHOXY)METHANE	ND	1.
11-44-1	BIS(2-CHLOROETHYL)ETHER	ND	1.
39638-32-9	BIS(2-CHLOROISOPROPYL)ETHER	ND	1.
117-81-7	BIS(2-ETHYLHEXYL)PHTHALATE	ND	1.
101-55-3	4-BROMOPHENYL PHENYL ETHER	ND	1.
85-68-7	BUTYL BENZYL PHTHALATE	ND	1.
106-47-8	4-CHLOROANILINE	ND	1.
59-50-7	4-CHLORO-3-METHYLPHENOL	ND	1.
91-58-71	2-CHLORONAPHTHALENE	ND	1.
95-57-8	2-CHLOROPHENOL	ND	1.
7005-72-3	4-CHLOROPHENYL PHENYL ETHER	ND	1.
218-01-9	CHRYSENE	ND	1.
53-70-3	DIBENZO(A,H)ANTHRACENE	ND	1.
132-64-9	DIBENZOFURAN	ND	1.
84-74-2	DI-N-BUTYL PHTHALATE	ND	1.
95-50-1	1,2-DICHLOROBENZENE	ND	1.
541-73-1	1,3-DICHLOROBENZENE	ND	1.
106-46-7	1,4-DICHLOROBENZENE	ND	1.
91-94-1	3,3'-DICHLOROBENZIDINE	ND	1.
120-33-2	2,4-DICHLOROPHENOL	ND	1.
84-66-2	DIETHYL PHTHALATE	ND	1.
105-67-9	2,4-DIMETHYLPHENOL	ND	1.
131-11-3	DIMETHYL PHTHALATE	ND	1.
534-52-1	4,6-DINITRO-2-METHYLPHENOL	ND	5.
51-28-5	2,4-DINITROPHENOL	ND	5.
121-14-2	2,4-DINITROTOLUENE	ND	1.
606-20-2	2,6-DINITROTOLUENE	ND	1.
117-84-0	DI-N-OCTYL PHTHALATE	ND	1.
204-44-0	FLUORANTHENE	ND	1.
86-73-7	FLUORENE	ND	1.
118-74-1	HEXACHLOROBENZENE	ND	1.
87-68-3	HEXACHLOROBUTADIENE	ND	1.

CLIENT: BHP PETROLEUM
WCAS JOB #: 28997

SAMPLE: METHOD BLANK

SEMI-VOLATILE ORGANICS (EPA 625/8270)

DATE RECEIVED:	03/23/95	MATRIX:	WATER
DATE EXTRACTED:	03/23/95	SAMPLE AMOUNT:	1L:1ML
DATE ANALYZED:	03/24/95	RUN NUMBER:	28997AA1
INSTRUMENT ID:	TRIO1000	UNITS:	UG/L (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
77-47-4	HEXACHLOROCYCLOPENTADIENE	ND	1.
67-72-1	HEXACHLOROETHANE	ND	1.
193-39-5	INDENO(1,2,3-CD)PYRENE	ND	1.
78-59-1	ISOPHORONE	ND	1.
91-57-6	2-METHYLNAPHTHALENE	ND	1.
95-48-7	2-METHYLPHENOL	ND	1.
106-44-5	4-METHYLPHENOL	ND	1.
91-20-3	NAPHTHALENE	ND	1.
88-74-4	2-NITROANILINE	ND	5.
99-09-2	3-NITROANILINE	ND	5.
100-01-6	4-NITROANILINE	ND	5.
98-95-3	NITROBENZENE	ND	1.
88-75-5	2-NITROPHENOL	ND	1.
100-02-7	4-NITROPHENOL	ND	5.
86-30-6	N-NITROSODIPHENYLAMINE **	ND	1.
621-64-7	N-NITROSODIPROPYLAMINE	ND	1.
87-86-5	PENTACHLOROPHENOL	ND	5.
85-01-8	PHENANTHRENE	ND	1.
108-95-2	PHENOL	ND	1.
129-00-0	PYRENE	ND	1.
120-82-1	1,2,4-TRICHLOROBENZENE	ND	1.
95-95-4	2,4,5-TRICHLOROPHENOL	ND	5.
88-06-2	2,4,6-TRICHLOROPHENOL	ND	1.

** - Cannot be separated from diphenylamine

SURROGATE	PERCENT RECOVERY	CONTROL LIMIT
PHENOL-d5	106	19-139
2-FLUOROPHENOL	101	21-154
NITROBENZENE-d5	90	35-114
2-FLUOROBIPHENYL	69	43-116
2,4,6-TRIBROMOPHENOL	115	10-123
TERPHENYL-d14	108	44-141

WEST COAST ANALYTICAL SERVICE

MATRIX SPIKE (MS AND MSD)
% RECOVERY AND RPD SUMMARY

CLIENT : BHP PETROLEUM
DATE ANALYZED: 03/21/95
WCAS JOB # : 28997

QC BATCH #: 032095W
MATRIX : WATER
UNITS : UG/L (PPB)

SEMI-VOLATILE COMPOUNDS

COMPOUND	CONC SPIKED	CONC SAMPLE	CONC MS	%REC MS	CONC MSD	%REC MSD	RPD
1,2,4-TRICHLOROBENZE	50.	ND	33.	66	33.	66	0
ACENAPHTHENE	50.	ND	45.	90	45.	90	0
2,4-DINITROTOLUENE	50.	ND	40.	80	39.	78	3
PYRENE	50.	ND	48.	96	49.	98	-2
NITROSOPROPYLAMINE	50.	ND	45.	90	46.	92	-2
1,4-DICHLOROBENZENE	50.	ND	32.	64	32.	64	0
PENTACHLOROPHENOL	75.	ND	49.	65	54.	72	-10
PHENOL	75.	ND	64.	85	70.	93	-9
2-CHLOROPHENOL	75.	ND	65.	87	71.	95	-9
P-CHLORO-M-CRESOL	75.	ND	68.	91	67.	89	1
4-NITROPHENOL	75.	ND	64.	85	66.	88	-3

WATER QUALITY CONTROL LIMITS

	% RECOVERY		RPD	
	WARNING	CONTROL	WARNING	CONTROL
1,2,4-TRICHLOROBENZENE	43- 87	32- 98	21	31
ACENAPHTHENE	54-114	39-129	10	17
2,4-DINITROTOLUENE	51-109	36-124	11	18
PYRENE	56-144	34-166	19	29
NITROSOPROPYLAMINE	47- 96	35-108	14	24
1,4-DICHLOROBENZENE	41- 75	32- 84	23	34
PENTACHLOROPHENOL	20-176	0-215	24	36
PHENOL	55-100	42-113	13	21
2-CHLOROPHENOL	60-114	46-128	10	17
P-CHLORO-M-CRESOL	51- 96	38-110	12	20
4-NITROPHENOL	25-103	6-123	25	38

Abbreviations Summary

General Reporting Abbreviations:

B — Blank - Indicates that the compound was found in both the sample and the blank. The sample value is reported without blank subtraction. If the sample value is less than 10X the blank value times the sample dilution factor, the compound may be present as a laboratory contaminant.

D — Indicates that the sample was diluted, and consequently the surrogates were too dilute to accurately measure.

DL — Detection Limit - Is the minimum value which we believe can be detected in the sample with a high degree of confidence, taking into account dilution factors and interferences. The reported detection limits are equal to or greater than Method Detection Limits (MDL) to allow for day to day and instrument to instrument variations in sensitivity.

J — Indicates that the value is an estimate.

ND — Not Detected - Indicates that the compound was not found in the sample at or above the detection limit.

ppm, ppb — parts per million (billion) in liquids is usually equivalent to mg/l (ug/l), or in solids to mg/kg (ug/kg). In the gas phase it is equivalent to ul/l (ul/m^3).

TR — Trace - Indicates that the compound was observed at a value less than our normal reported Detection Limit (DL), but we feel its presence may be important to you. These values are subject to large errors and low degrees of confidence.

kg kilogram	mg milligram	l liter	m meter
g gram	ug microgram	ul microliter	

QC Abbreviations:

Control — Control Limits are determined from historical data for a QC parameter. The test value must be within this acceptable range for the test to be considered in control. Usually this range corresponds to the 99% confidence interval for the historical data.

% Error — Percent Error - This is a measure of accuracy based on the analysis of a Laboratory Control Standard (LCS). An LCS is a reference sample of known value such as an NIST Standard Reference Material (SRM). The % Error is expressed in percent as the difference between the known value and the experimental value, divided by the known value. The LCS may simply be a solution based standard which confirms calibration (ICV or CCV - initial or continuing calibration verification), or it may be a reference sample taken through preparation and analysis.

QC Abbreviations (continued):

MS(D)	Matrix Spike (Duplicate) - This refers to a quality control sample. It may be a real sample or blank sample spiked with representative target analytes.
% Rec	Percent Recovery - This is a measure of the accuracy of the analysis. It is expressed in percent as the difference between the result of an MS sample and the unspiked sample, divided by the amount spiked.
RPD	Relative Percent Difference - This is a measure of the precision of the analysis. It is the difference between duplicate results divided by the mean of the duplicates.
Warning	Warning limits are determined from historical data, usually representing a 95% confidence interval. This serves to alert the analyst to problems before reaching the control limits. Data "Out of Warning" is still considered in control.

Environmental Abbreviations:

BNA	Base-Neutral/Acid Fraction - Also called the Extractable Semivolatile fraction, represents the pollutants which can be extracted from a sample, but which boil higher than 120 C and still pass through a gas chromatography column.
CAM	California Assessment Manual - The original draft containing the CA hazardous waste rules, one of which was a list of 17 toxic metals. "CAM Metals" is used to refer to this list.
STLC	Soluble Threshold Limit Concentration - According to California's hazardous waste regulations, a waste is considered hazardous if the concentration in the leachate from the Waste Extraction Test (WET) exceeds this limit.
TCLP	Toxicity Characteristic Leaching Procedure - According to EPA regulations, a waste is considered hazardous if the leachate from the TCLP extraction exceeds certain limits.
TTLC	Total Threshold Limit Concentration - According to California's hazardous waste regulations, a waste exceeding this concentration is considered a hazardous waste.
VOA	Volatile Organics Analysis - Represents a group of volatile organic solvents with a boiling range from below room temperature to approximately 150 C.
WET	Waste Extraction Test - See STLC.

CHAIN OF CUSTODY RECORD

COMPANY BHP Hawaii Refinery
ADDRESS 91-325 Komohana St
Kapolei, HI 96707
PHONE NO. 808-547-38 FAX
MAIL REPORT TO: Tony Shan

PROJECT MANAGER Tony Shan
PROJECT NAME GMP
PROJECT NO. 95-3
PURCHASE ORDER NO.

WEST COAST ANALYTICAL SERVICE, INC.
9840 Alburtis Avenue
Santa Fe Springs, CA 90670
(310) 948-2225 Fax (310) 948-5850

COMMENTS:

If sample is liquid & has sediment or particulate should we:
- ____ test filtrate only?
- ____ mix sample by shaking?
- ____ test particulate only?

If sample is multi-phased, should we:
- ____ test each phase separately?
- ____ test only ONE phase? Which phase?
- ____ mix all phases by shaking, if possible?

Sample I.D. #	Date Sampled	Time Sampled	Preservative	MATRIX soil	water	air	other	# of containers	8015 Modified Gas Diesel	Total Petroleum Hydrocarbons 418.1	Halo. Volatiles 601/8010	Aromatic Volatiles 602/8020	Volatile Organics 624/8260	Semi-Volatile Org 625/8270	Chlor Pest/PCB 608/8080	Herbicides 615/8150	CAM (17) Metals	TCLP Metals	STLC Metals	Hex Chrome EPA 218.6	CARB 425/Total & Hex Chrome	CARB 436 Multi-metals	Metals*				RUSH	Remarks
CW-7A	3/21	3:30			✓			6					✓	✓									✓					* Will fax you the analyte list.
CW-3A	3/21	950			✓			6					✓	✓									✓					
Trip Blank 2	3/21	1740			✓			2					✓															

№ 28997

Relinquished by:	Company	Date/Time	Received by:	Company	Date/Time
Zuyi Shen	Dallies A. Moore	3/21 - 1815	Jennifer Holmes	WCAS	3/22/95 11:10
Relinquished by:	Company	Date/Time	Received by:	Company	Date/Time
Relinquished by:	Company	Date/Time	Received by:	Company	Date/Time

WCAS Job No. № 28997

4. GROUNDWATER ELEVATION DATA

BHP HAWAII REFINERY GROUNDWATER ELEVATION DATA

Well I.D. No.	Date [a]	Time [a]	Top of Stainless Steel or PVC Case Elevation (ft,MSL)[b]	Top of Concrete Apron Elevation (ft,MSL) [c]	Ground Surface Elevation (ft,MSL) [c]	Depth to Oil (ft)	Depth to Water (ft)	Oil Thickness (ft)	Corrected Depth to Water (ft)[d]	Corrected Water Table Elevation (ft,MSL)[e]
MW-3	3/20/95	14:50pm	12.81	11.76	11.11	12.49	12.76	0.27	12.52	0.29
MW-4	3/20/95	14:10pm	13.29	12.15	11.75	12.92	13.20	0.28	12.95	0.34
MW-5	3/20/95	11:25am	13.58	11.85	11.05	13.08	13.23	0.15	13.10	0.48
MW-6	3/20/95	9:25am	13.12	11.58	11.28	12.52	12.57	0.05	12.53	0.59
CW1A	3/20/95	9:33am	13.34	N/A	11.34	N/A	12.66	0.0	12.66	0.68
CW1B	3/20/95	9:38am	13.55	N/A	11.19	N/A	12.48	0.0	12.48	1.07
CW1C	3/20/95	9:42am	13.66	N/A	11.21	N/A	12.87	0.0	12.87	0.79
CW6A	3/21/95	13:19pm	15.80	N/A	13.60	14.71	14.72	0.01	14.72	1.08
CW6B	3/21/95	13:24pm	15.74	N/A	13.50	N/A	14.66	0.0	14.66	1.08
CW7A	3/21/95	13:25pm	14.03	N/A	11.90	N/A	13.21	0.0	13.21	0.82
CW7B	3/21/95	13:25pm	14.41	N/A	11.90	N/A	13.42	0.0	13.42	0.99
CW2A	3/22/95	8:12am	13.74	N/A	11.46	N/A	12.38	0.0	12.38	1.36
CW2B	3/22/95	9:15am	13.62	N/A	11.37	N/A	12.49	0.0	12.49	1.13
CW2C	3/22/95	8:08am	13.66	N/A	11.17	N/A	12.74	0.0	12.74	0.92

CW8A	3/21/95	15:50pm	11.48	N/A	12.00	N/A	10.58	0.0	10.58	0.90
CW8B	3/21/95	15:50pm	11.52	N/A	11.90	N/A	10.42	0.0	10.42	1.10
CW9A	3/22/95	12:55pm	12.41	N/A	10.00	N/A	11.34	0.0	11.34	1.07
CW9B	3/22/95	12:58pm	12.40	N/A	10.10	N/A	11.51	0.0	11.51	0.89
CW3A	3/21/95	8:30am	13.65	N/A	11.16	N/A	10.39	0.0	10.39	3.26
CW3B	3/21/95	8:34am	13.82	N/A	11.22	N/A	12.27	0.0	12.27	1.55
CW3C	3/21/951	8:32am	13.85	N/A	11.27	N/A	9.88	0.0	9.88	3.91
CW5A	3/20/95	15:02pm	15.71	N/A	13.20	N/A	14.80	0.0	14.80	0.22
CW5B	3/20/95	15:04pm	15.51	N/A	13.10	N/A	14.55	0.0	14.55	0.96
CW4A	3/21/95	8:25am	12.24	N/A	10.07	N/A	11.04	0.0	11.04	1.20
CW4B	3/21/95	8:20am	12.01	N/A	9.68	N/A	10.94	0.0	10.94	1.07
CW4C	3/21/95	8:23am	12.13	N/A	9.74	N/A	11.31	0.0	11.31	0.82

(a) Date and time of water level measurements
(b) Survey conducted in 8/87 for MW-3, MW-4, MW-5, MW-6; in 6/92 for CW1-4ABC; and in 11/94 for CW5-9AB
(c) Survey conducted 9/17/91
(d) Corrected depth to water = depth to water-(oil thickness x specific gravity)
Note: Specific gravities of oils were measured by the laboratory to be 0.88 for MW-3, MW-4, and MW-5; and 0.87 for MW-6 in August 1994.
(e) Corrected water table elevation = top of casing elevation - corrected depth to water

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BHP Hawaii GMP Results (March 1995)

Sample ID			MW-4		CW-1A		CW-7A		CW-6A		MW-6		MW-5		MW-3		CW-1B
BCA Log Number			9503368*1		9503368*2		9503401*1		9503401*2		9503368*3		9503368*4		9503368*5		9503368*6
Method 8240																	
Chloromethane	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Vinyl chloride	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Bromomethane	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Chloroethane	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Trichlorofluoromethane	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
1,1-Dichloroethene	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Freon 113	ug/L	<	2	<	2	<	2	<	2	<	2	<	2	<	2	<	2
Acetone	ug/L	<	20	<	20	<	20	<	20	<	20	<	20	<	20	<	20
Carbon Disulfide	ug/L	<	2	<	2	<	2	<	2	<	2		2.3	<	2	<	2
Methylene chloride	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
trans-1,2-Dichloroethene	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
1,1-Dichloroethane	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Vinyl acetate	ug/L	<	10	<	10	<	10	<	10	<	10	<	10	<	10	<	10
cis-1,2-Dichloroethene	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Methyl ethyl ketone	ug/L	<	5	<	5	<	5	<	5	<	5	<	5	<	5	<	5
Chloroform	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
1,1,1-Trichloroethane	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Cyclohexane	ug/L	<	5	<	5	<	5	<	5	<	5	<	5	<	5	<	5
Carbon Tetrachloride	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Benzene	ug/L	<	1		4	<	1		1	<	1	<	1		2.2	<	1
1,2-Dichloroethane	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Trichloroethene	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
1,2-Dichloropropane	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Bromodichloromethane	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
1,4-Dioxane	ug/L	<	500	<	500	<	500	<	500	<	500	<	500	<	500	<	500
2-Chloroethylvinylether	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
trans-1,3-Dichloropropene	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Methyl isobutyl ketone	ug/L	<	5	<	5	<	5	<	5	<	5	<	5	<	5	<	5
Toluene	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
cis-1,3-Dichloropropene	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
1,1,2-Trichloroethane	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Tetrachloroethene	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Ethylene Dibromide	ug/L	<	5	<	5	<	5	<	5	<	5	<	5	<	5	<	5
2-Hexanone	ug/L	<	5	<	5	<	5	<	5	<	5	<	5	<	5	<	5
Dibromochloromethane	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Chlorobenzene	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Ethylbenzene	ug/L		1		2.5	<	1	<	1	<	1		5.5		2.3	<	1
Total Xylene Isomers	ug/L	<	3	<	3	<	3	<	3	<	3		3.1	<	3	<	3
Styrene	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Bromoform	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
1,1,2,2-Tetrachloroethane	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
1,3-Dichlorobenzene	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
1,4-Dichlorobenzene	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
1,2-Dichlorobenzene	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1

Sample ID			CW-1C		CW-5A		CW-5B		CW-4A		CW-4B		CW-4C		CW-7B		CW-8A
BCA Log Number			9503368*7		9503368*8		9503368*9		9503401*3		9503401*4		9503401*5		9503401*6		9503401*7
Method 8240																	
Chloromethane	ug/L	<	1	<	1		1.1	<	1	<	1	<	1	<	1	<	1
Vinyl chloride	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Bromomethane	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Chloroethane	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Trichlorofluoromethane	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
1,1-Dichloroethene	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Freon 113	ug/L	<	2	<	2	<	2	<	2	<	2	<	2	<	2	<	2
Acetone	ug/L	<	20	<	20	<	20	<	20	<	20	<	20	<	20	<	20
Carbon Disulfide	ug/L	<	2	<	2	<	2	<	2	<	2	<	2	<	2	<	2
Methylene chloride	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
trans-1,2-Dichloroethene	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
1,1-Dichloroethane	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Vinyl acetate	ug/L	<	10	<	10	<	10	<	10	<	10	<	10	<	10	<	10
cis-1,2-Dichloroethene	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Methyl ethyl ketone	ug/L	<	5	<	5	<	5	<	5	<	5	<	5	<	5	<	5
Chloroform	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
1,1,1-Trichloroethane	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Cyclohexane	ug/L	<	5	<	5	<	5	<	5	<	5	<	5	<	5	<	5
Carbon Tetrachloride	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Benzene	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
1,2-Dichloroethane	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Trichloroethene	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
1,2-Dichloropropane	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Bromodichloromethane	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
1,4-Dioxane	ug/L	<	500	<	500	<	500	<	500	<	500	<	500	<	500	<	500
2-Chloroethylvinylether	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
trans-1,3-Dichloropropene	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Methyl isobutyl ketone	ug/L	<	5	<	5	<	5	<	5	<	5	<	5	<	5	<	5
Toluene	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
cis-1,3-Dichloropropene	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
1,1,2-Trichloroethane	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Tetrachloroethene	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Ethylene Dibromide	ug/L	<	5	<	5	<	5	<	5	<	5	<	5	<	5	<	5
2-Hexanone	ug/L	<	5	<	5	<	5	<	5	<	5	<	5	<	5	<	5
Dibromochloromethane	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Chlorobenzene	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Ethylbenzene	ug/L	<	1	<	1	<	1		1.2	<	1	<	1	<	1	<	1
Total Xylene Isomers	ug/L	<	3	<	3	<	3	<	3	<	3	<	3	<	3	<	3
Styrene	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Bromoform	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
1,1,2,2-Tetrachloroethane	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
1,3-Dichlorobenzene	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
1,4-Dichlorobenzene	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
1,2-Dichlorobenzene	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1

Sample ID			CW-3A		CW-3C		CW-3B		CW-6B		CW-8B		CW-2A		CW-2B		CW-2C
BCA Log Number			9503401*8		9503401*9		9503401*10		9503401*11		9503401*12		9503435*1		9503435*2		9503435*3
Method 8240																	
Chloromethane	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Vinyl chloride	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Bromomethane	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Chloroethane	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Trichlorofluoromethane	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
1,1-Dichloroethene	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Freon 113	ug/L	<	2	<	2	<	2	<	2	<	2	<	2	<	2	<	2
Acetone	ug/L	<	20	<	20	<	20	<	20	<	20	<	20	<	20	<	20
Carbon Disulfide	ug/L	<	2	<	2	<	2	<	2	<	2	<	2	<	2	<	2
Methylene chloride	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
trans-1,2-Dichloroethene	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
1,1-Dichloroethane	ug/L	<	1	<	1	<	1		1.7	<	1	<	1	<	1	<	1
Vinyl acetate	ug/L	<	10	<	10	<	10	<	10	<	10	<	10	<	10	<	10
cis-1,2-Dichloroethene	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Methyl ethyl ketone	ug/L	<	5	<	5	<	5	<	5	<	5	<	5	<	5	<	5
Chloroform	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
1,1,1-Trichloroethane	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Cyclohexane	ug/L	<	5	<	5	<	5	<	5	<	5	<	5	<	5	<	5
Carbon Tetrachloride	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Benzene	ug/L	<	1	<	1	<	1		3.1	<	1	<	1	<	1	<	1
1,2-Dichloroethane	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Trichloroethene	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
1,2-Dichloropropane	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Bromodichloromethane	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
1,4-Dioxane	ug/L	<	500	<	500	<	500	<	500	<	500	<	500	<	500	<	500
2-Chloroethylvinylether	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
trans-1,3-Dichloropropene	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Methyl isobutyl ketone	ug/L	<	5	<	5	<	5	<	5	<	5	<	5	<	5	<	5
Toluene	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
cis-1,3-Dichloropropene	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
1,1,2-Trichloroethane	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Tetrachloroethene	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Ethylene Dibromide	ug/L	<	5	<	5	<	5	<	5	<	5	<	5	<	5	<	5
2-Hexanone	ug/L	<	5	<	5	<	5	<	5	<	5	<	5	<	5	<	5
Dibromochloromethane	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Chlorobenzene	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Ethylbenzene	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Total Xylene Isomers	ug/L	<	3	<	3	<	3	<	3	<	3	<	3	<	3	<	3
Styrene	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Bromoform	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
1,1,2,2-Tetrachloroethane	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
1,3-Dichlorobenzene	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
1,4-Dichlorobenzene	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
1,2-Dichlorobenzene	ug/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1

Sample ID			CW-9A		CW-9B		CW-6A		CW-9A		FB #1		FB #2		FB #3		TB #1
BCA Log Number			9503435*4		9503435*5		9503401*15		9503435*8		9503368*10		9503401*13		9503435*6		9503368*11
Method 8240																	
Chloromethane	ug/L	<	1	<	1					<	1	<	1	<	1	<	1
Vinyl chloride	ug/L	<	1	<	1					<	1	<	1	<	1	<	1
Bromomethane	ug/L	<	1	<	1					<	1	<	1	<	1	<	1
Chloroethane	ug/L	<	1	<	1					<	1	<	1	<	1	<	1
Trichlorofluoromethane	ug/L	<	1	<	1					<	1	<	1	<	1	<	1
1,1-Dichloroethene	ug/L	<	1	<	1					<	1	<	1	<	1	<	1
Freon 113	ug/L	<	2	<	2					<	2	<	2	<	2	<	2
Acetone	ug/L	<	20	<	20					<	20	<	20	<	20	<	20
Carbon Disulfide	ug/L	<	2	<	2					<	2	<	2	<	2	<	2
Methylene chloride	ug/L	<	1	<	1					<	1	<	1	<	1	<	1
trans-1,2-Dichloroethene	ug/L	<	1	<	1					<	1	<	1	<	1	<	1
1,1-Dichloroethane	ug/L	<	1	<	1					<	1	<	1	<	1	<	1
Vinyl acetate	ug/L	<	10	<	10					<	10	<	10	<	10	<	10
cis-1,2-Dichloroethene	ug/L	<	1	<	1					<	1	<	1	<	1	<	1
Methyl ethyl ketone	ug/L	<	5	<	5					<	5	<	5	<	5	<	5
Chloroform	ug/L	<	1	<	1					<	1	<	1	<	1	<	1
1,1,1-Trichloroethane	ug/L	<	1	<	1					<	1	<	1	<	1	<	1
Cyclohexane	ug/L	<	5	<	5					<	5	<	5	<	5	<	5
Carbon Tetrachloride	ug/L	<	1	<	1					<	1	<	1	<	1	<	1
Benzene	ug/L	<	1	<	1					<	1	<	1	<	1	<	1
1,2-Dichloroethane	ug/L	<	1	<	1					<	1	<	1	<	1	<	1
Trichloroethene	ug/L	<	1	<	1					<	1	<	1	<	1	<	1
1,2-Dichloropropane	ug/L	<	1	<	1					<	1	<	1	<	1	<	1
Bromodichloromethane	ug/L	<	1	<	1					<	1	<	1	<	1	<	1
1,4-Dioxane	ug/L	<	500	<	500					<	500	<	500	<	500	<	500
2-Chloroethylvinylether	ug/L	<	1	<	1					<	1	<	1	<	1	<	1
trans-1,3-Dichloropropene	ug/L	<	1	<	1					<	1	<	1	<	1	<	1
Methyl isobutyl ketone	ug/L	<	5	<	5					<	5	<	5	<	5	<	5
Toluene	ug/L	<	1	<	1					<	1	<	1	<	1	<	1
cis-1,3-Dichloropropene	ug/L	<	1	<	1					<	1	<	1	<	1	<	1
1,1,2-Trichloroethane	ug/L	<	1	<	1					<	1	<	1	<	1	<	1
Tetrachloroethene	ug/L	<	1	<	1					<	1	<	1	<	1	<	1
Ethylene Dibromide	ug/L	<	5	<	5					<	5	<	5	<	5	<	5
2-Hexanone	ug/L	<	5	<	5					<	5	<	5	<	5	<	5
Dibromochloromethane	ug/L	<	1	<	1					<	1	<	1	<	1	<	1
Chlorobenzene	ug/L	<	1	<	1					<	1	<	1	<	1	<	1
Ethylbenzene	ug/L	<	1	<	1					<	1	<	1	<	1	<	1
Total Xylene Isomers	ug/L	<	3	<	3					<	3	<	3	<	3	<	3
Styrene	ug/L	<	1	<	1					<	1	<	1	<	1	<	1
Bromoform	ug/L	<	1	<	1					<	1	<	1	<	1	<	1
1,1,2,2-Tetrachloroethane	ug/L	<	1	<	1					<	1	<	1	<	1	<	1
1,3-Dichlorobenzene	ug/L	<	1	<	1					<	1	<	1	<	1	<	1
1,4-Dichlorobenzene	ug/L	<	1	<	1					<	1	<	1	<	1	<	1
1,2-Dichlorobenzene	ug/L	<	1	<	1					<	1	<	1	<	1	<	1

Sample ID			TB #2		TB #3		TB #4
BCA Log Number			9503368*12		9503401*14		9503435*7
Method 8240							
Chloromethane	ug/L	<	1	<	1	<	1
Vinyl chloride	ug/L	<	1	<	1	<	1
Bromomethane	ug/L	<	1	<	1	<	1
Chloroethane	ug/L	<	1	<	1	<	1
Trichlorofluoromethane	ug/L	<	1	<	1	<	1
1,1-Dichloroethene	ug/L	<	1	<	1	<	1
Freon 113	ug/L	<	2	<	2	<	2
Acetone	ug/L	<	20	<	20	<	20
Carbon Disulfide	ug/L	<	2	<	2	<	2
Methylene chloride	ug/L	<	1	<	1	<	1
trans-1,2-Dichloroethene	ug/L	<	1	<	1	<	1
1,1-Dichloroethane	ug/L	<	1	<	1	<	1
Vinyl acetate	ug/L	<	10	<	10	<	10
cis-1,2-Dichloroethene	ug/L	<	1	<	1	<	1
Methyl ethyl ketone	ug/L	<	5	<	5	<	5
Chloroform	ug/L	<	1	<	1	<	1
1,1,1-Trichloroethane	ug/L	<	1	<	1	<	1
Cyclohexane	ug/L	<	5	<	5	<	5
Carbon Tetrachloride	ug/L	<	1	<	1	<	1
Benzene	ug/L	<	1	<	1	<	1
1,2-Dichloroethane	ug/L	<	1	<	1	<	1
Trichloroethene	ug/L	<	1	<	1	<	1
1,2-Dichloropropane	ug/L	<	1	<	1	<	1
Bromodichloromethane	ug/L	<	1	<	1	<	1
1,4-Dioxane	ug/L	<	500	<	500	<	500
2-Chloroethylvinylether	ug/L	<	1	<	1	<	1
trans-1,3-Dichloropropene	ug/L	<	1	<	1	<	1
Methyl isobutyl ketone	ug/L	<	5	<	5	<	5
Toluene	ug/L	<	1	<	1	<	1
cis-1,3-Dichloropropene	ug/L	<	1	<	1	<	1
1,1,2-Trichloroethane	ug/L	<	1	<	1	<	1
Tetrachloroethene	ug/L	<	1	<	1	<	1
Ethylene Dibromide	ug/L	<	5	<	5	<	5
2-Hexanone	ug/L	<	5	<	5	<	5
Dibromochloromethane	ug/L	<	1	<	1	<	1
Chlorobenzene	ug/L	<	1	<	1	<	1
Ethylbenzene	ug/L	<	1	<	1	<	1
Total Xylene Isomers	ug/L	<	3	<	3	<	3
Styrene	ug/L	<	1	<	1	<	1
Bromoform	ug/L	<	1	<	1	<	1
1,1,2,2-Tetrachloroethane	ug/L	<	1	<	1	<	1
1,3-Dichlorobenzene	ug/L	<	1	<	1	<	1
1,4-Dichlorobenzene	ug/L	<	1	<	1	<	1
1,2-Dichlorobenzene	ug/L	<	1	<	1	<	1

Sample ID		MW-4	CW-1A	CW-7A	CW-6A	MW-6	MW-5	MW-3	CW-1B	CW-1C	CW-5A	CW-5B	CW-4A	CW-4B	CW-4C	CW-7B	CW-8A
BCA Log Number		9503368*1	9503368*2	9503401*1	9503401*2	9503368*3	9503368*4	9503368*5	9503368*6	9503368*7	9503368*8	9503368*9	9503401*3	9503401*4	9503401*5	9503401*6	9503401*7
Method 8270																	
N-Nitrosodimethylamine	ug/L	< 6	< 30	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6
Aniline	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Phenol	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Bis(2-chloroethyl)ether	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2-Chlorophenol	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
1,3-Dichlorobenzene	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
1,4-Dichlorobenzene	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Benzyl Alcohol	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
1,2-Dichlorobenzene	ug/L	< 6	< 30	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6
2-Methylphenol (o-Cresol)	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Bis(2-chloroisopropyl)ether	ug/L	< 6	< 30	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6
3-Methylphenol (m-Cresol)	ug/L	< 10	< 50	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-Methylphenol (p-Cresol)	ug/L	< 8	< 40	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8
N-Nitrosodi-n-propylamine	ug/L	< 6	< 30	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6
Hexachloroethane	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Nitrobenzene	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Isophorone	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2-Nitrophenol	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2,4-Dimethylphenol	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Benzoic acid	ug/L	< 50	< 300	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Bis(2-chloroethoxy)methane	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2,4-Dichlorophenol	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
1,2,4-Trichlorobenzene	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Naphthalene	ug/L	< 5	< 30	< 5	< 5	9.3	< 5	30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
4-Chloroaniline	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Hexachlorobutadiene	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
4-Chloro-3-methylphenol	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2-Methylnaphthalene	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Hexachlorocyclopentadiene	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2,4,6-Trichlorophenol	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2,4,5-Trichlorophenol	ug/L	< 6	< 30	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6
2-Chloronaphthalene	ug/L	< 6	< 30	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6
2-Nitroaniline	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Dimethylphthalate	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Acenaphthylene	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
3-Nitroaniline	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Acenaphthene	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2,4-Dinitrophenol	ug/L	< 10	< 50	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-Nitrophenol	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Dibenzofuran	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2,4-Dinitrotoluene	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2,6-Dinitrotoluene	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Diethylphthalate	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
4-Chlorophenylphenylether	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Fluorene	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
4-Nitroaniline	ug/L	< 6	< 30	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6
2-Methyl-4,6-dinitrophenol	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
1,2-Diphenylhydrazine	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
N-Nitrosodiphenylamine	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
4-Bromophenylphenylether	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Hexachlorobenzene	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Pentachlorophenol	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Phenanthrene	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Anthracene	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Dibutylphthalate	ug/L	< 5	< 30	< 5	26	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Fluoranthene	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Pyrene	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Benzidine	ug/L	< 100	< 500	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Butylbenzylphthalate	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
3,3'-Dichlorobenzidine	ug/L	< 20	< 100	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Benzo(a)anthracene	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Bis(2-ethylhexyl)phthalate	ug/L	< 7	< 40	< 7	< 7	< 7	< 7	< 7	15	< 7	< 7	< 7	< 7	< 7	< 7	< 7	< 7
Chrysene	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Di-n-octylphthalate	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Benzo(b)fluoranthene	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Benzo(k)fluoranthene	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Benzo(a)pyrene	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Indeno(1,2,3-c,d)pyrene	ug/L	< 7	< 40	< 7	< 7	< 7	< 7	< 7	< 7	< 7	< 7	< 7	< 7	< 7	< 7	< 7	< 7
Dibenzo(a,h)anthracene	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Benzo(g,h,i)perylene	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Dibenz(a,h)acridine	ug/L	< 20	< 100	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
7,12-Dimethylbenz(a)anthracene	ug/L	< 5	< 30	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Indene	ug/L	< 10	< 50	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
6-Methylchrysene	ug/L	< 10	< 50	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1-Methylnaphthalene	ug/L	39	230	< 10	< 10	90	41	60	< 10	< 10	< 10	< 10	22	< 10	< 10	< 10	< 10
Quinoline	ug/L	< 10	< 50	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Benzenethiol	ug/L	< 20	< 100	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Pyridine	ug/L	< 10	< 50	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10

Sample ID		CW-3A	CW-3C	CW-3B	CW-6B	CW-8B	CW-2A	CW-2B	CW-2C	CW-9A	CW-9B	CW-6A	CW-9A
BCA Log Number		9503401*8	9503401*9	9503401*10	9503401*11	9503401*12	9503435*1	9503435*2	9503435*3	9503435*4	9503435*5	9503401*15	9503435*8
												Re-extract	Re-extract
Method 8270													
N-Nitrosodimethylamine	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Aniline	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Phenol	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Bis(2-chloroethyl)ether	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2-Chlorophenol	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
1,3-Dichlorobenzene	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
1,4-Dichlorobenzene	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Benzyl Alcohol	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
1,2-Dichlorobenzene	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2-Methylphenol (o-Cresol)	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Bis(2-chloroisopropyl)ether	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
3-Methylphenol (m-Cresol)	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-Methylphenol (p-Cresol)	ug/L	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8
N-Nitrosodi-n-propylamine	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Hexachloroethane	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Nitrobenzene	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Isophorone	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2-Nitrophenol	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2,4-Dimethylphenol	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Benzoic acid	ug/L	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Bis(2-chloroethoxy)methane	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2,4-Dichlorophenol	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
1,2,4-Trichlorobenzene	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Naphthalene	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
4-Chloroaniline	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Hexachlorobutadiene	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
4-Chloro-3-methylphenol	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2-Methylnaphthalene	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Hexachlorocyclopentadiene	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2,4,6-Trichlorophenol	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2,4,5-Trichlorophenol	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2-Chloronap::thalene	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2-Nitroaniline	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Dimethylphthalate	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Acenaphthylene	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
3-Nitroaniline	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Acenaphthene	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2,4-Dinitrophenol	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-Nitrophenol	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Dibenzofuran	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2,4-Dinitrotoluene	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2,6-Dinitrotoluene	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Diethylphthalate	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
4-Chlorophenylphenylether	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Fluorene	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
4-Nitroaniline	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2-Methyl-4,6-dinitrophenol	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
1,2-Diphenylhydrazine	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
N-Nitrosodiphenylamine	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
4-Bromophenylphenylether	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Hexachlorobenzene	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Pentachlorophenol	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Phenanthrene	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Anthracene	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Dibutylphthalate	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Fluoranthene	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Pyrene	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Benzidine	ug/L	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Butylbenzylphthalate	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
3,3'-Dichlorobenzidine	ug/L	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Benzo(a)anthracene	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Bis(2-ethylhexyl)phthalate	ug/L	< 7	< 7	< 7	< 7	< 7	< 7	< 7	< 7	< 7	< 7	12	< 7
Chrysene	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Di-n-octylphthalate	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Benzo(b)fluoranthene	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Benzo(k)fluoranthene	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Benzo(a)pyrene	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Indeno(1,2,3-c,d)pyrene	ug/L	< 7	< 7	< 7	< 7	< 7	< 7	< 7	< 7	< 7	< 7	< 7	< 7
Dibenzo(a,h)anthracene	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Benzo(g,h,i)perylene	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Dibenz(a,h)acridine	ug/L	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
7,12-Dimethylbenz(a)anthracene	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Indene	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
6-Methylchrysene	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1-Methylnaphthalene	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	11	< 10	< 10	< 10	< 10	< 10
Quinoline	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Benzenethiol	ug/L	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Pyridine	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10

Sample ID			MW-4		CW-1A		CW-7A		CW-6A		MW-6		MW-5		MW-3
BCA Log Number			9503368*1		9503368*2		9503401*1		9503401*2		9503368*3		9503368*4		9503368*5
Ammonia (350.1)	mg/L		25		66		2.7		9.4						
COD (410.4)	mg/L		110		530		35		29						
Nitrate+Nitrite (as NO3)	mg/L	<	0.2	<	0.2	<	0.2	<	0.2						
Nitrate+Nitrite (as N)	mg/L	<	0.05	<	0.05	<	0.05	<	0.05						
Ortho Phosphate	mg/L		0.13		0.27		0.07	<	0.07						
Ortho Phosphate (as PO4)	mg/L		0.39		0.84		0.22	<	0.2						
BOD5 (405.1)	mg/L		30		220	<	7		7.5						
Hydroxide Alk (as CaCO3)	mg/L	<	1	<	5	<	1	<	1						
Bicarbonate Alk (as CaCO3)	mg/L		380		1300		540		450						
Carbonate Alk (as CaCO3)	mg/L	<	1	<	5	<	1	<	1						
Total Alkalinity (as CaCO3)	mg/L		380		1300		540		450						
TOC (9060/415.1)	mg/L		18		68		4.4		4.1						
Sp. Cond., 1st Replicate	umhos/cm		7100		8500		8100		3900		7900		6600		7100
Sp. Cond., 2nd Replicate	umhos/cm		7100		8500		8000		3900		7900		6500		7100
Sp. Cond., 3rd Replicate	umhos/cm		7100		8500		8100		3900		7900		6600		7100
Sp. Cond., 4th Replicate	umhos/cm		7100		8500		8000		3900		7900		6600		7100
Sp. Cond., Average	umhos/cm		7100		8500		8000		3900		7900		6600		7100
Sp. Cond., Std. Deviation	umhos/cm		0		0		58		0		0		50		0
pH, 1st Replicate	Units		7.8		7.5		6.9		7		7.2		7.8		7.8
pH, 2nd Replicate	Units		7.7		7.5		6.9		7		7.3		7.8		7.8
pH, 3rd Replicate	Units		7.8		7.5		7		7.1		7.3		7.8		7.8
pH, 4th Replicate	Units		7.8		7.5		7		7.1		7.3		7.8		7.8
pH, Average	Units		7.8		7.5		7		7.1		7.3		7.8		7.8
pH, Standard Deviation	Units		0.05		0		0.06		0.06		0.05		0		0
Sulfate	mg/L		1700		600		300		97		220		1800		1500
Dissolved Solids (160.1)	mg/L		4300		4600		5000		2900		4100		4100		4100
Chloride	mg/L		900		1700		2100		1000		1700		650		930
Antimony (6010/200.7)	mg/L	<	0.1	<	0.1	<	0.1	<	0.1	<	0.1	<	0.1	<	0.1
Arsenic (7060/206.2)	mg/L	<	0.004	<	0.004	<	0.004	<	0.004	<	0.004	<	0.004	<	0.004
Barium (6010/200.7)	mg/L		0.0077		0.0061		0.08		0.036		0.01		0.0095		0.0078
Beryllium (6010/200.7)	mg/L	<	0.001	<	0.001	<	0.001	<	0.001	<	0.001	<	0.001	<	0.001
Cadmium (7131/213.2)	mg/L	<	0.001	<	0.001	<	0.001	<	0.001	<	0.001	<	0.001	<	0.001
Chromium (6010/200.7)	mg/L	<	0.01	<	0.01	<	0.01	<	0.01		0.052	<	0.01	<	0.01
Cobalt (6010/200.7)	mg/L	<	0.04	<	0.04	<	0.04	<	0.04	<	0.04	<	0.04	<	0.04
Iron (6010/200.7)	mg/L	<	0.04	<	0.04		1.3		0.081		0.44	<	0.04	<	0.04
Lead (7421/239.2)	mg/L	<	0.002	<	0.002	<	0.002	<	0.002	<	0.002	<	0.002	<	0.002
Manganese (6010/200.7)	mg/L		0.02		0.061		0.2		0.15		0.11		0.019		0.031
Mercury (7470/245.1)	mg/L		0.0004	<	0.0002	<	0.0002	<	0.0002	<	0.0002	<	0.0002	<	0.0002
Nickel (6010/200.7)	mg/L	<	0.04	<	0.04		0.044		0.045		0.064	<	0.04	<	0.04
Selenium (7740/270.2)	mg/L	<	0.008	<	0.008	<	0.008	<	0.008	<	0.008	<	0.008	<	0.008
Sodium (6010/200.7)	mg/L		1600		1900		1400		710		1700		1500		1600
Vanadium (6010/200.7)	mg/L	<	0.04	<	0.04	<	0.04	<	0.04	<	0.04	<	0.04	<	0.04

Sample ID			CW-1B		CW-1C		CW-5A		CW-5B		CW-4A		CW-4B		CW-4C
BCA Log Number			9503368*6		9503368*7		9503368*8		9503368*9		9503401*3		9503401*4		9503401*5
Ammonia (350.1)	mg/L														
COD (410.4)	mg/L														
Nitrate+Nitrite (as NO3)	mg/L														
Nitrate+Nitrite (as N)	mg/L														
Ortho Phosphate	mg/L														
Ortho Phosphate (as PO4)	mg/L														
BOD5 (405.1)	mg/L														
Hydroxide Alk (as CaCO3)	mg/L														
Bicarbonate Alk (as CaCO3)	mg/L														
Carbonate Alk (as CaCO3)	mg/L														
Total Alkalinity (as CaCO3)	mg/L														
TOC (9060/415.1)	mg/L														
Sp. Cond., 1st Replicate	umhos/cm		36000		37000		5300		33000		10000		38000		42000
Sp. Cond., 2nd Replicate	umhos/cm		37000		37000		5200		33000		10000		38000		42000
Sp. Cond., 3rd Replicate	umhos/cm		37000		37000		5200		33000		10000		38000		42000
Sp. Cond., 4th Replicate	umhos/cm		36000		37000		5200		33000		10000		38000		42000
Sp. Cond., Average	umhos/cm		36000		37000		5200		33000		10000		38000		42000
Sp. Cond., Std. Deviation	umhos/cm		580		0		50		0		0		0		0
pH, 1st Replicate	Units		7.4		7.4		7.1		7.2		7.9		7.2		7.5
pH, 2nd Replicate	Units		7.4		7.5		7.1		7.2		7.9		7.3		7.5
pH, 3rd Replicate	Units		7.4		7.5		7.1		7.2		7.9		7.3		7.5
pH, 4th Replicate	Units		7.4		7.5		7.1		7.2		7.9		7.3		7.5
pH, Average	Units		7.4		7.5		7.1		7.2		7.9		7.3		7.5
pH, Standard Deviation	Units		0		0.05		0		0		0		0.05		0
Sulfate	mg/L		2200		2500		110		1800		1700		2600		3000
Dissolved Solids (160.1)	mg/L		23000		27000		2400		20000		6700		25000		28000
Chloride	mg/L		12000		14000		1200		10000		2000		12000		14000
Antimony (6010/200.7)	mg/L	<	0.1	<	0.1	<	0.1	<	0.1	<	0.1	<	0.1	<	0.1
Arsenic (7060/206.2)	mg/L	<	0.004	<	0.004	<	0.004	<	0.004	<	0.004	<	0.004	<	0.004
Barium (6010/200.7)	mg/L		0.03		0.03		0.045		0.033		0.0092		0.031		0.02
Beryllium (6010/200.7)	mg/L	<	0.001	<	0.001	<	0.001	<	0.001	<	0.001	<	0.001	<	0.001
Cadmium (7131/213.2)	mg/L	<	0.001	<	0.001	<	0.001	<	0.001	<	0.001	<	0.001	<	0.001
Chromium (6010/200.7)	mg/L	<	0.01	<	0.01	<	0.01	<	0.01	<	0.01	<	0.01	<	0.01
Cobalt (6010/200.7)	mg/L	<	0.04	<	0.04	<	0.04	<	0.04	<	0.04	<	0.04	<	0.04
Iron (6010/200.7)	mg/L		0.046		0.32	<	0.04		0.15	<	0.04	<	0.04		0.053
Lead (7421/239.2)	mg/L	<	0.002	<	0.002	<	0.002	<	0.002	<	0.002	<	0.002	<	0.002
Manganese (6010/200.7)	mg/L		0.13		0.23		0.16		0.22		0.022		0.19		0.22
Mercury (7470/245.1)	mg/L	<	0.0002	<	0.0002	<	0.0002	<	0.0002	<	0.0002	<	0.0002	<	0.0002
Nickel (6010/200.7)	mg/L		0.06		0.064	<	0.04		0.11	<	0.04		0.097		0.062
Selenium (7740/270.2)	mg/L	<	0.008	<	0.008	<	0.008	<	0.008	<	0.008	<	0.008	<	0.008
Sodium (6010/200.7)	mg/L		7800		8800		880		6300		2100		7900		8600
Vanadium (6010/200.7)	mg/L	<	0.04	<	0.04	<	0.04	<	0.04	<	0.04	<	0.04	<	0.04

Sample ID			CW-7B		CW-8A		CW-3A		CW-3C		CW-3B		CW-6B		CW-8B
BCA Log Number			9503401*6		9503401*7		9503401*8		9503401*9		9503401*10		9503401*11		9503401*12
Ammonia (350.1)	mg/L														
COD (410.4)	mg/L														
Nitrate+Nitrite (as NO3)	mg/L														
Nitrate+Nitrite (as N)	mg/L														
Ortho Phosphate	mg/L														
Ortho Phosphate (as PO4)	mg/L														
BOD5 (405.1)	mg/L														
Hydroxide Alk (as CaCO3)	mg/L														
Bicarbonate Alk (as CaCO3)	mg/L														
Carbonate Alk (as CaCO3)	mg/L														
Total Alkalinity (as CaCO3)	mg/L														
TOC (9060/415.1)	mg/L														
Sp. Cond., 1st Replicate	umhos/cm		21000		30000		6900		6100		6000		25000		7800
Sp. Cond., 2nd Replicate	umhos/cm		22000		30000		6900		6100		6000		25000		7700
Sp. Cond., 3rd Replicate	umhos/cm		21000		30000		6900		6100		6000		25000		7700
Sp. Cond., 4th Replicate	umhos/cm		21000		30000		6900		6100		6000		25000		7600
Sp. Cond., Average	umhos/cm		21000		30000		6900		6100		6000		25000		7700
Sp. Cond., Std. Deviation	umhos/cm		500		0		0		0		0		0		82
pH, 1st Replicate	Units		7.1		7.4		8.1		8.1		8.1		8.2		8.2
pH, 2nd Replicate	Units		7.1		7.4		8.1		8.1		8.1		8.2		8.2
pH, 3rd Replicate	Units		7.1		7.4		8.1		8.1		8.1		8.2		8.2
pH, 4th Replicate	Units		7.1		7.4		8.1		8.1		8.1		8.2		8.2
pH, Average	Units		7.1		7.4		8.1		8.1		8.1		8.2		8.2
pH, Standard Deviation	Units		0		0		0		0		0		0		0
Sulfate	mg/L		810		2000		1500		1400		1600		2400		2400
Dissolved Solids (160.1)	mg/L		13000		20000		5700		5000		4400		16000		5000
Chloride	mg/L		6400		9500		840		640		580		7000		1000
Antimony (6010/200.7)	mg/L	<	0.1	<	0.1	<	0.1	<	0.1	<	0.1	<	0.1	<	0.1
Arsenic (7060/206.2)	mg/L	<	0.004	<	0.004		0.0098		0.011		0.014	<	0.004	<	0.002
Barium (6010/200.7)	mg/L		0.078		0.022		0.094		0.077		0.052		0.016		0.018
Beryllium (6010/200.7)	mg/L	<	0.001	<	0.001	<	0.001	<	0.001	<	0.001	<	0.001	<	0.001
Cadmium (7131/213.2)	mg/L	<	0.001	<	0.001	<	0.001		0.0028	<	0.001	<	0.001		0.0012
Chromium (6010/200.7)	mg/L	<	0.01	<	0.01	<	0.01	<	0.01	<	0.01	<	0.01	<	0.01
Cobalt (6010/200.7)	mg/L	<	0.04	<	0.04	<	0.04	<	0.04	<	0.04	<	0.04	<	0.04
Iron (6010/200.7)	mg/L		0.76	<	0.04	<	0.04	<	0.04		0.1		0.081		0.057
Lead (7421/239.2)	mg/L	<	0.002	<	0.002	<	0.002	<	0.002	<	0.002	<	0.002	<	0.002
Manganese (6010/200.7)	mg/L		0.2		0.028		0.023		0.017		0.012		0.036		0.021
Mercury (7470/245.1)	mg/L	<	0.0002	<	0.0002		0.0003	<	0.0002	<	0.0002	<	0.0002	<	0.0002
Nickel (6010/200.7)	mg/L		0.076		0.066		0.047		0.086		0.069		0.072	<	0.04
Selenium (7740/270.2)	mg/L	<	0.008	<	0.008	<	0.008	<	0.008	<	0.008	<	0.008	<	0.004
Sodium (6010/200.7)	mg/L		4200		6300		1500		1300		1300		5700		1600
Vanadium (6010/200.7)	mg/L	<	0.04	<	0.04	<	0.04		0.085		0.044	<	0.04	<	0.04

Sample ID			CW-2A		CW-2B		CW-2C		CW-9A		CW-9B
BCA Log Number			9503435*1		9503435*2		9503435*3		9503435*4		9503435*5
Ammonia (350.1)	mg/L										
COD (410.4)	mg/L										
Nitrate+Nitrite (as NO3)	mg/L										
Nitrate+Nitrite (as N)	mg/L										
Ortho Phosphate	mg/L										
Ortho Phosphate (as PO4)	mg/L										
BOD5 (405.1)	mg/L										
Hydroxide Alk (as CaCO3)	mg/L										
Bicarbonate Alk (as CaCO3)	mg/L										
Carbonate Alk (as CaCO3)	mg/L										
Total Alkalinity (as CaCO3)	mg/L										
TOC (9060/415.1)	mg/L										
Sp. Cond., 1st Replicate	umhos/cm		28000		11000		37000		9800		39000
Sp. Cond., 2nd Replicate	umhos/cm		28000		11000		37000		9800		39000
Sp. Cond., 3rd Replicate	umhos/cm		28000		11000		37000		9700		39000
Sp. Cond., 4th Replicate	umhos/cm		28000		11000		37000		9700		39000
Sp. Cond., Average	umhos/cm		28000		11000		37000		9800		39000
Sp. Cond., Std. Deviation	umhos/cm		0		0		0		58		0
pH, 1st Replicate	Units		7.4		7.9		7.2		8.1		7.4
pH, 2nd Replicate	Units		7.4		7.9		7.2		8.1		7.4
pH, 3rd Replicate	Units		7.4		7.9		7.2		8.2		7.4
pH, 4th Replicate	Units		7.4		7.9		7.3		8.2		7.4
pH, Average	Units		7.4		7.9		7.2		8.2		7.4
pH, Standard Deviation	Units		0		0		0.05		0.06		0
Sulfate	mg/L		1900		1700		2800		1300		2700
Dissolved Solids (160.1)	mg/L		16000		6200		27000		5700		24000
Chloride	mg/L		7900		2300		13000		2000		12000
Antimony (6010/200.7)	mg/L	<	0.1	<	0.1	<	0.1	<	0.1	<	0.1
Arsenic (7060/206.2)	mg/L	<	0.002	<	0.002	<	0.002	<	0.002	<	0.002
Barium (6010/200.7)	mg/L		0.026		0.012		0.022		0.0063		0.038
Beryllium (6010/200.7)	mg/L	<	0.001	<	0.001	<	0.001	<	0.001	<	0.001
Cadmium (7131/213.2)	mg/L	<	0.001	<	0.001	<	0.001	<	0.001	<	0.001
Chromium (6010/200.7)	mg/L	<	0.01	<	0.01	<	0.01	<	0.01	<	0.01
Cobalt (6010/200.7)	mg/L	<	0.04	<	0.04	<	0.04	<	0.04	<	0.04
Iron (6010/200.7)	mg/L	<	0.04	<	0.04	<	0.04	<	0.04		0.89
Lead (7421/239.2)	mg/L	<	0.002	<	0.002	<	0.002	<	0.002	<	0.002
Manganese (6010/200.7)	mg/L		0.038		0.026		0.21		0.055		0.15
Mercury (7470/245.1)	mg/L	<	0.0002	<	0.0002	<	0.0002	<	0.0002	<	0.0002
Nickel (6010/200.7)	mg/L	<	0.04	<	0.04	<	0.04	<	0.04	<	0.04
Selenium (7740/270.2)	mg/L	<	0.004	<	0.004	<	0.004	<	0.004	<	0.004
Sodium (6010/200.7)	mg/L		5300		2300		8800		2100		8400
Vanadium (6010/200.7)	mg/L	<	0.04	<	0.04	<	0.04	<	0.04	<	0.04