



# FOSTER WHEELER ENVIRONMENTAL CORPORATION

## Groundwater Sampling Field Data Sheet for Multi-Port Well

Project: JPL Location: MW-22 Depth: 329 Date: 2/4/98  
 Well Name: MW-22 Sampling Zone No.: 2 Starting Time: 1450 Finishing Time: 1625  
 Technicians: J. BRANNEN, D. DIECKIN, L. DARZAGH  
 Water Level Inside MP Casing (Beginning of Session) 34.91 (P.S.A) (End of Session) 34.90 (P.S.A)

Run No.	Surface Function Checks					Position Sampler	Surface Collection Checks						Comments	
	Activate	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed		Deactivate Set Arm Locate Port	Water Level in MP (ft)	Activate	Valve Open Time	Valve Closed Time	Deactivate		Water Level in MP (ft) Remove Tape
1	✓	✓	✓	✓	✓	✓	34.91	✓	1450	1501	✓	34.89	1.0	1ST R/N, INITIAL PARAMETERS, NTU'S = 50.8
2	✓	✓	✓	✓	✓	✓	34.89	✓	1517	1521	✓	34.80	1.0	2ND R/N, ATTEMPTING TO REDUCE TURBIDITY, NTU'S = 21.4
3	✓	✓	✓	✓	✓	✓	34.90	✓	1537	1540	✓	34.91	1.0	3RD R/N, ATTEMPTING TO REDUCE TURBIDITY, NTU'S = 15.9
4	✓	✓	✓	✓	✓	✓	34.86	✓	1557	1600	✓	34.89	1.0	4TH R/N, NTU'S = 4.15, COLLECT MW-951-014 2 VOLS, METALS ALIQUOTS
5	✓	✓	✓	✓	✓	✓	34.91	✓	1616	1619	✓	34.90	1.0	5TH R/N, HX C., PERCHLORATE, FINAL PARAMETERS
6														
7														
8														
9														
10														
11														
12														

Comments: \_\_\_\_\_

Total Volume: 5.0L<sup>F2</sup>



# FOSTER WHEELER ENVIRONMENTAL CORPORATION

## Groundwater Sampling Field Data Sheet for Multi-Port Well

Project: JPL Location: MW-22 Depth: 389 Date: 2/4/98  
 Well Name: MW-22 Sampling Zone No.: 3 Starting Time: 1350 Finishing Time: 1445  
 Technicians: J. BRENNER, L. DARRAGH, D. PARKIN  
 Water Level Inside MP Casing (Beginning of Session) 61.02 (PSIA) (End of Session) 60.98 (PSIA)

Run No.	Surface Function Checks					Position Sampler	Surface Collection Checks						Comments	
	Activate	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed		Deactivate Set Arm Locate Port	Water Level in MP (ft)	Activate	Valve Open Time	Valve Closed Time	Deactivate		Water Level in MP (ft) Remove Tape
1	✓	✓	✓	✓	✓	✓	61.02	✓	1357	1400	✓	60.98	1.0	1st run; initial parameters; NTU's
2	✓	✓	✓	✓	✓	✓	61.03	✓	1416	1419	✓	60.99	1.0	2nd run; collect MW-901-013 2000 METALS, ANIONS, H.C.G.
3	✓	✓	✓	✓	✓	✓	60.97	✓	1437	1440	✓	60.98	1.0	3rd run; perchlorate; final parameters
4														
5														
6														
7														
8														
9														
10														
11														
12														

Comments: \_\_\_\_\_  
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Total Volume: 3.00 <sup>F2</sup>



# FOSTER WHEELER ENVIRONMENTAL CORPORATION

## Groundwater Sampling Field Data Sheet for Multi-Port Well

Project: JPL Location: MW-22 Depth: 538 Date: 2/4/98  
 Well Name: MW-22 Sampling Zone No.: 5 Starting Time: 1110 Finishing Time: 1235  
 Technicians: J. BRENNER, L. DARRAGH, D. DIRKIN  
 Water Level Inside MP Casing (Beginning of Session) 147.60 (PSIA) (End of Session) 147.57 (PSIA)

Run No.	Surface Function Checks					Position Sampler	Surface Collection Checks						Comments	
	Activate	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed		Deactivate Set Arm Locate Port	Water Level in MP (ft)	Activate	Valve Open Time	Valve Closed Time	Deactivate		Water Level in MP (ft) Remove Tape
1	✓	✓	✓	✓	✓	✓	147.60	✓	1126	1128	✓	147.63	1.0	1ST RUN TO SCREEN #5, INITIAL PARAMETERS. NTU'S = 2.81
2	✓	✓	✓	✓	✓	✓	147.60	✓	1153	1155	✓	147.59	1.0	COLLECT MW-981-011: 6 VOAS METALS, 1/2 ANIONS (VOL. MEMO MW'S)
3	✓	✓	✓	✓	✓	✓	147.57	✓	1219	1222	✓	147.57	1.0	3RD RUN; 1/2 ANIONS, HEX. CH PERCHLORATE, FINAL PARAMETERS
4														
5														
6														
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10														
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12														

Comments: \_\_\_\_\_  
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Total Volume: 30L <sup>F-2</sup>



# FOSTER WHEELER ENVIRONMENTAL CORPORATION

## Groundwater Sampling Field Data Sheet for Multi-Port Well

Project: JPL Location: MW-22 Depth: 467 Date: 2/4/98  
 Well Name: MW-22 Sampling Zone No.: 4 Starting Time: 1240 Finishing Time: 1345  
 Technicians: J. BRENNER, D. DIRICIN, L. DARRAGH  
 Water Level Inside MP Casing (Beginning of Session) 94.97 (P.S.I.A) (End of Session) 94.91 (P.S.I.A)

Run No.	Surface Function Checks					Position Sampler	Surface Collection Checks						Comments	
	Activate	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed		Deactivate Set Arm Locate Port	Water Level In MP (ft)	Activate	Valve Open Time	Valve Closed Time	Deactivate		Water Level In MP (ft) Remove Tape
1	✓	✓	✓	✓	✓	✓	94.89	✓	1247	1250	✓	94.93	1.0	1ST RUN; INITIAL PARAMETERS; NTJS = 3.69
2	✓	✓	✓	✓	✓	✓	94.90	✓	1310	1313	✓	94.91	1.0	2ND RUN; COLLECT MW-981-012, ZVOS, METAL, ANIONS, HEX CH
3	✓	✓	✓	✓	✓	✓	94.93	✓	1334	1336	✓	94.91	1.0	3RD RUN; PERMUTATE; FINAL PARAMETERS
4														
5														
6														
7														
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9														
10														
11														
12														

Comments: \_\_\_\_\_

Total Volume: 3.0 <sup>±</sup> Liters





# FOSTER WHEELER ENVIRONMENTAL CORPORATION

## Groundwater Sampling Field Data Sheet for Multi-Port Well

Project: JPL Location: MW-23 Depth: 174 Date: 2/9/98

Well Name: MW-23 Sampling Zone No.: 1 Starting Time: 1305 Finishing Time: 1400

Technicians: J. BRANNER; D. DIRKIN

Water Level Inside MP Casing (Beginning of Session) 14.24 (PS.A) (End of Session) 14.23 (PS.A)

Run No.	Surface Function Checks					Position Sampler	Surface Collection Checks						Comments	
	Activate	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed		Deactivate Set Arm Locate Port	Water Level in MP (ft)	Activate	Valve Open Time	Valve Closed Time	Deactivate		Water Level in MP (ft) Remove Tape
1	✓	✓	✓	✓	✓	✓	14.24	✓	1309	134	✓	14.29	1.0	1ST RIN, INITIAL PARAMETERS; NTU'S = 4.11
2	✓	✓	✓	✓	✓	✓	14.20	✓	1328	1333	✓	14.25	1.0	2ND RIN, COLLECT MW-901-010 2V GAS METALS, ANIONS, HRT, CT
3	✓	✓	✓	✓	✓	✓	14.20	✓	1349	1354	✓	14.23	1.0	3RD RIN, PERCHLORATE, PERCHLORATE SPLIT, FINAL PARAMETERS
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10														
11														
12														

Comments: \_\_\_\_\_  
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Total Volume: 3.0L<sup>F2</sup>



# FOSTER WHEELER ENVIRONMENTAL CORPORATION

## Groundwater Sampling Field Data Sheet for Multi-Port Well

Project: JPL Location: MW-23 Depth: 254 Date: 2/9/98  
 Well Name: MW-23 Sampling Zone No.: 2 Starting Time: 1205 Finishing Time: 1300  
 Technicians: J. BRENNER, D. DIRKIN  
 Water Level Inside MP Casing (Beginning of Session) 16.02 (P.S.A) (End of Session) 16.00 (P.S.A)

Run No.	Surface Function Checks					Position Sampler	Surface Collection Checks						Comments	
	Activate	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed		Deactivate Set Arm Locate Port	Water Level in MP (ft)	Activate	Valve Open Time	Valve Closed Time	Deactivate		Water Level in MP (ft) Remove Tape
1	✓	✓	✓	✓	✓	✓	16.02	✓	1212	1216	✓	16.01	1.0	1st R/N, INITIAL PARAMETERS; NTU'S = 4.89
2	✓	✓	✓	✓	✓	✓	15.98	✓	1230	1235	✓	16.01	1.0	2ND R/N, COLLECT MW-98-009 2-VOLAS METALS ANIONS, HEX.C
3	✓	✓	✓	✓	✓	✓	15.98	✓	1251	1254	✓	16.00	1.0	3RD R/N, POLYCHLORATE, PERCHLORATE SPLIT, FINAL PARAMETERS
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8														
9														
10														
11														
12														

Comments: \_\_\_\_\_  
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Total Volume: 3.0L <sup>F-2</sup>



# FOSTER WHEELER ENVIRONMENTAL CORPORATION

## Groundwater Sampling Field Data Sheet for Multi-Port Well

Project: JPL Location: MW-23 Depth: 319 Date: 2/9/98  
 Well Name: MW-23 Sampling Zone No.: 3 Starting Time: 1105 (1525) Finishing Time: 1200 (1615)  
 Technicians: J. BRENNER, D. DIRKIN  
 Water Level Inside MP Casing (Beginning of Session) 44.31 (P.S.A) (End of Session) 68.96 (P.S.A)

Run No.	Surface Function Checks					Position Sampler	Surface Collection Checks						Comments	
	Activate	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed		Deactivate Set Arm Locate Port	Water Level in MP (ft)	Activate	Valve Open Time	Valve Closed Time	Deactivate		Water Level in MP (ft) Remove Tape
1	✓	✓	✓	✓	✓	✓	44.31	✓	1111	1114	✓	44.29	1.0	1ST RUN, INITIAL PARAMETERS NTU'S = 16.3
2	✓	✓	✓	✓	✓	✓	44.29	✓	1130	1133	✓	44.33	1.0	2ND RUN, ATTEMPTING TO REDUCE TURBIDITY = 80.1 NTU'S
3	✓	✓	✓	✓	✓	✓	44.29	✓	1150	1153	✓	44.30	1.0	3RD RUN, STILL ATTEMPTING TO REDUCE TURBIDITY. NTU'S = 48.6
4														*WILL RETURN AFTER TUBING
5	✓	✓	✓	✓	✓	✓	68.98	✓	1534	1537	✓	68.96	1.0	1ST RUN AFTER TUBING, NTU'S = 4.60
6	✓	✓	✓	✓	✓	✓	68.97	✓	1558	1602	✓	68.96	1.0	2ND RUN AFTER TUBING, ANALYSIS FOR CR, PERCHLORATE, FINAL PARAMETERS
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8														
9														
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12														

Comments: \_\_\_\_\_  
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Total Volume: 5.0L<sup>F2</sup>



# FOSTER WHEELER ENVIRONMENTAL CORPORATION

## Groundwater Sampling Field Data Sheet for Multi-Port Well

Project: JL Location: MW-23 Depth: 445 Date: 2/9/98  
 Well Name: MW-23 Sampling Zone No.: 4 Starting Time: 0935 Finishing Time: 1100  
 Technicians: J. BRENNER, D. DIRKIN  
 Water Level Inside MP Casing (Beginning of Session) 99.21 (PSIA) (End of Session) 99.12 (PSIA)

Run No.	Surface Function Checks					Position Sampler	Surface Collection Checks						Comments	
	Activate	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed	Deactivate Set Arm Locate Port	Water Level in MP (ft)	Activate	Valve Open Time	Valve Closed Time	Deactivate	Water Level in MP (ft) Remove Tape		Volume Retrieved (liters)
1	✓	✓	✓	✓	✓	✓	99.21	✓	0948	0952	✓	99.18	1.0	1ST RIN: INITIAL PARAMETERS NTU'S = 4.51
2	✓	✓	✓	✓	✓	✓	99.17	✓	1016	1019	✓	99.18	1.0	2ND RIN: COLLECT MW-98-017 2 VIALS METALS AND GAS H <sub>2</sub> O <sub>2</sub>
3	✓	✓	✓	✓	✓	✓	99.08	✓	1048	1052	✓	99.12	1.0	3RD RIN: TEMPERATURE; FINAL PARAMETERS
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10														
11														
12														

Comments: \_\_\_\_\_  
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Total Volume: 3.06<sup>F2</sup>



# FOSTER WHEELER ENVIRONMENTAL CORPORATION

## Groundwater Sampling Field Data Sheet for Multi-Port Well

Project: JPL Location: MW.23 Depth: 542 Date: 2/9/98

Well Name: MW.23 Sampling Zone No.: 5 Starting Time: 0815 Finishing Time: 0930

Technicians J. BRAINER, D. DIRKIN

Water Level Inside MP Casing (Beginning of Session) 141.21 (FS.A) (End of Session) 141.23 (FS.A)

Run No.	Surface Function Checks					Position Sampler	Surface Collection Checks						Comments	
	Activate	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed		Deactivate Set Arm Locate Port	Water Level in MP (ft)	Activate	Valve Open Time	Valve Closed Time	Deactivate		Water Level in MP (ft) Remove Tape
1	✓	✓	✓	✓	✓	✓	141.24	✓	0827	0830	✓	141.23	1.0	1ST RJN; INITIAL PARAMETERS; NTU'S = 1.75
2	✓	✓	✓	✓	✓	✓	141.22	✓	0854	0857	✓	141.24	1.0	2ND RJN; COLLECT MW-981-006 GYDAS, METALS, 1/2 ANIONS (MG/MSD)
3	✓	✓	✓	✓	✓	✓	141.24	✓	0920	0923	✓	141.23	1.0	3RD RJN; 1/2 ANIONS, HEX Cr. PERCHLORATE; FINAL PARAMETERS
4														
5														
6														
7														
8														
9														
10														
11														
12														

Comments: \_\_\_\_\_  
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Total Volume: 3.0L <sup>F2</sup>



# FOSTER WHEELER ENVIRONMENTAL CORPORATION

## Groundwater Sampling Field Data Sheet for Multi-Port Well

Project: JPL Location: MW-24 Depth: 279 Date: 2/2/05  
 Well Name: MW-24 Sampling Zone No.: 1 Starting Time: 1424 Finishing Time: 1525  
 Technicians: L. DARRCO, J. BROWNER  
 Water Level Inside MP Casing (Beginning of Session) 14.14 (PSIA) (End of Session) 14.15 (PSIA)

Run No.	Surface Function Checks					Position Sampler	Surface Collection Checks						Comments	
	Activate	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed		Deactivate Set Arm Locate Port	Water Level in MP (ft)	Activate	Valve Open Time	Valve Closed Time	Deactivate		Water Level in MP (ft) Remove Tape
1	✓	✓	✓	✓	✓	✓	14.14	✓	1428	1432	✓	14.17	1	1st Run to vacuum at 1.7m Reamed NTU's = 3.82
2	✓	✓	✓	✓	✓	✓	14.12	✓	1452	1457	✓	14.17	1	Collect MW-24-005, 2 VSA's, 11m 1/2 hr
3	✓	✓	✓	✓	✓	✓	14.11	✓	1512	1518	✓	14.15	1	Collect MW-24-006, 2 VSA's, 11m 1/2 hr
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8														
9														
10														
11														
12														

Comments: \_\_\_\_\_  
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Total Volume: 3 F-2



# FOSTER WHEELER ENVIRONMENTAL CORPORATION

## Groundwater Sampling Field Data Sheet for Multi-Port Well

Project: JPL Location: MW-24 Depth: 373 Date: 2/3/99

Well Name: MW-24 Sampling Zone No.: 2 Starting Time: 1050 Finishing Time: 1220

Technicians: D. DIRICIN, J. BRENNER

Water Level Inside MP Casing (Beginning of Session) 43.25 (P.S.A) (End of Session) 43.22 (P.S.A)

Run No.	Surface Function Checks					Position Sampler	Surface Collection Checks						Comments	
	Activate	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed		Deactivate Set Arm Locate Port	Water Level in MP (ft)	Activate	Valve Open Time	Valve Closed Time	Deactivate		Water Level in MP (ft) Remove Tape
1	✓	✓	✓	✓	✓	✓	43.25	✓	1058	1101	✓	43.24	1.0	1st run, initial parameters NTU = 17.1
2	✓	✓	✓	✓	✓	✓	43.25	✓	1122	1125	✓	43.25	1.0	2nd run attempting to reduce turbidity NTU = 4.81
3	✓	✓	✓	✓	✓	✓	43.21	✓	1148	1151	✓	43.26	1.0	3rd run; collect MW 981-004 2 VIALS METALS ANIONS
4	✓	✓	✓	✓	✓	✓	43.23	✓	1207	1210	✓	43.22	1.0	4th run; PARTICULATES: PARTICULATE SPLIT; FINAL PARAMETERS
5														
6														
7														
8														
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10														
11														
12														

Comments: \_\_\_\_\_

Total Volume: 4.0L<sup>F2</sup>

100.49



# FOSTER WHEELER ENVIRONMENTAL CORPORATION

## Groundwater Sampling Field Data Sheet for Multi-Port Well

Project: JPL Location: MW 24 Depth: 435' Date: 2295  
 Well Name: MW 24 Sampling Zone No.: 3 Starting Time: 1310 (1530) Finishing Time: 1420 (1555)  
 Technicians: L. Darrat J. Brown

Water Level Inside MP Casing (Beginning of Session) 70.55 (7510) (End of Session) 70.57 (7520)

Run No.	Surface Function Checks					Position Sampler	Surface Collection Checks						Comments	
	Activate	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed		Deactivate Set Arm Locate Port	Water Level in MP (ft)	Activate	Valve Open Time	Valve Closed Time	Deactivate		Water Level in MP (ft) Remove Tape
1	✓	✓	✓	✓	✓	✓	70.55	✓	1316	1319	✓	70.54	1.0	1st Run INITIAL PARAMETERS, NTU'S = 93.1
2	✓	✓	✓	✓	✓	✓	70.54	✓	1333	1336	✓	70.57	1.0	2nd Run ATTEMPTING TO RELOCATE TUBING TO DEPTHS:
3	✓	✓	✓	✓	✓	✓	70.50	✓	1404	1407	✓	70.55	1.0	3rd Run, Attempting to relocate tubing to depth = 57.3 - will return to surface later
4														
5	✓	✓	✓	✓	✓	✓	70.50	✓	1541	1544	✓	70.57	1.0	4th Run to screen 3 to check tubing. NTU'S = 42.2
6														
7														
8														
9														
10														
11														
12														

Comments: \_\_\_\_\_  
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Total Volume: 4.0 <sup>liters</sup>





# FOSTER WHEELER ENVIRONMENTAL CORPORATION

## Groundwater Sampling Field Data Sheet for Multi-Port Well

Project: JR Location: MW-24 Depth: 435 Date: 2/13/98

Well Name: MW-24 Sampling Zone No.: 3 Starting Time: 0915 Finishing Time: 1045

Technicians: D. DIRKIN, J. BRENNAN, L. DARRAGH

Water Level Inside MP Casing (Beginning of Session) 70.24 (P.S.A) (End of Session) 70.24<sup>UP</sup> (P.S.A)  
86.08

Run No.	Surface Function Checks					Position Sampler	Water Level in MP (ft)	Surface Collection Checks					Volume Retrieved (liters)	Comments
	Activate	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed			Deactivate Set Arm Locate Port	Activate	Valve Open Time	Valve Closed Time	Deactivate		
1	✓	✓	✓	✓	✓	✓	70.24	✓	933	937	✓	70.25	1.0	1st run, check for parameters NTU's = 20.6
2	✓	✓	✓	✓	✓	✓	70.24	✓	1002	1005	✓	70.26	1.0	2nd run, check parameters NTU's = 24.3
3	✓	✓	✓	✓	✓	✓	70.21	✓	1030	1034	✓	70.24	1.0	3rd run, attempting to lower turbidity. NTU's = 33.7 *
4														*WILL RETURN LATER
5	✓	✓	✓	✓	✓	✓	71.99	✓	1424	1427	✓	71.93	1.0	RETURN TO SCREEN #3, CHECK PARAMETERS AFTER PURGING 4 GALS; NTU'S = 37.2
6														* WILL RETURN 2/4/98
7	✓	✓	✓	✓	✓	✓	86.06	✓	1536	1539	✓	86.03	1.0	RETURN TO SCREEN #3, CHECK PARAMETERS AFTER PURGING 3 GALS; NTU'S =
8														
9														
10														
11														
12														

Comments: \_\_\_\_\_

Total Volume: 5.0 <sup>F2</sup>

1102.07



# FOSTER WHEELER ENVIRONMENTAL CORPORATION

## Groundwater Sampling Field Data Sheet for Multi-Port Well

Project: JPL Location: MW-24 Depth: 435 Date: 2.5.98  
 Well Name: MW-24 Sampling Zone No.: 3 Starting Time: 0745 Finishing Time: 0905  
 Technicians: L. Doreau, J. Brenner  
 Water Level Inside MP Casing (Beginning of Session) 86.15 (PSIA) (End of Session) 86.15 (PSIA)

Run No.	Surface Function Checks					Position Sampler	Surface Collection Checks						Comments	
	Activate	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed		Deactivate Set Arm Locate Port	Water Level in MP (ft)	Activate	Valve Open Time	Valve Closed Time	Deactivate		Water Level in MP (ft) Remove Tape
1	✓	✓	✓	✓	✓	✓	86.15	✓	0802	0805	✓	86.16	1	1st Run to screen #3, initial parameters, NTA = 19.5
2	✓	✓	✓	✓	✓	✓	86.19	✓	0826	0829	✓	86.18	1	Collect MW-981-003, 2 VOA's, metals, anions, 1/2 hex cy
3	✓	✓	✓	✓	✓	✓	86.16	✓	0851	0853	✓	86.15	1	3rd Run to screen #3, 2nd 1/2 hex cy, CLO4, final parameters.
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11														
12														

Comments: \_\_\_\_\_  
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Total Volume: 36.15

151.74



**FOSTER WHEELER ENVIRONMENTAL CORPORATION**

**Groundwater Sampling**  
Field Data Sheet for Multi-Port Well

Project: JPL Location: MW-24 Depth: 524' Date: 2-2-15

Well Name: MW-24 Sampling Zone No.: 4 Starting Time: 0910 Finishing Time: 1300

Technicians: L. D'Amico, T. Brewer

Water Level Inside MP Casing (Beginning of Session) 109.70 (End of Session) 122.30

Run No.	Surface Function Checks					Position Sampler	Surface Collection Checks						Comments	
	Activate	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed		Deactivate Set Arm Locate Port	Water Level in MP (ft)	Activate	Valve Open Time	Valve Closed Time	Deactivate		Water Level in MP (ft) Remove Tape
1	✓	✓	✓	✓	✓	✓	109.70	✓	0920	0928	✓	109.70	1	2nd Run, col out 109.70
2	✓	✓	✓	✓	✓	✓	109.72	✓	0947	0949	✓	109.73	1	2nd Run, col out 109.73
3	✓	✓	✓	✓	✓	✓	109.74	✓	1021	1024	✓	109.77	1	3rd Run, col out 109.77
4	✓	✓	✓	✓	✓	✓	109.74	✓	1052	1054	✓	109.78	1	4th Run, col out 109.78
5	✓	✓	✓	✓	✓	✓	122.36	✓	1217	1220	✓	122.37	1	5th Run, col out 122.37
6	✓	✓	✓	✓	✓	✓	122.33	✓	1247	1249	✓	122.36	1	6th Run, col out 122.36
7														
8														
9														
10														
11														
12														

Comments: \_\_\_\_\_

Total Volume: 6 F2



# FOSTER WHEELER ENVIRONMENTAL CORPORATION

## Groundwater Sampling Field Data Sheet for Multi-Port Well

Project: JPL Location: MW-24 Depth: 678 Date: 1/31/98  
 Well Name: MW-24 Sampling Zone No.: 5 Starting Time: 1215 Finishing Time: 1450  
 Technicians: J. BRANNER, L. DARRAGH  
 Water Level Inside MP Casing (Beginning of Session) 163.79 (PSIA) (End of Session) 163.63 (PSIA)

Run No.	Surface Function Checks					Position Sampler	Surface Collection Checks						Comments	
	Activate	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed		Deactivate Set Arm Locate Port	Water Level in MP (ft)	Activate	Valve Open Time	Valve Closed Time	Deactivate		Water Level in MP (ft) Remove Tape
1	✓	✓	✓	✓	✓	✓	163.79	✓	1229	1232	✓	163.81	1	1st Run - Initial Parameters NTU = 20.5
2	✓	✓	✓	✓	✓	✓	163.76	✓	1300	1303	✓	163.78	1	2nd Run - Attempting to Reduce Turbidity
3	✓	✓	✓	✓	✓	✓	163.75	✓	1331	1334	✓	163.79	1	3rd Run - Ready to Sample NTU = 4.76
4	✓	✓	✓	✓	✓	✓	163.76	✓	1359	1401	✓	163.77	1	4th Run - Collect MW-24-001 2 UAs, Metals, Anions
5	✓	✓	✓	✓	✓	✓	163.59	✓	1431	1434	✓	163.63	1	5th Run - Collect Hexer, ClO4 Final Parameters
6														
7														
8														
9														
10														
11														
12														

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Total Volume: 56 Liters<sup>F2</sup>

**APPENDIX C**  
**FIELD INSTRUMENT CALIBRATION FORMS**

# TURBIDIMETER FIELD STANDARDIZATION FORM

Project Name: JPL  
Standardization by: J. BRENNER Date: 1/14/98  
Instrument Manufacturer: HE SCIENTIFIC Model: DZT-15C  
Serial Number: 5337 Calibration Date: 1/14/98

## STANDARDIZATION

Time: 0950 Scale: 20 Zero: YES Stray Light: N/A  
Standard NTU: 0.02 Reading: 0.02  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: 1630 Scale: 20 Zero: YES Stray Light: N/A  
Standard NTU: 0.02 Reading: 0.02  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# TURBIDIMETER FIELD STANDARDIZATION FORM

Project Name: JPL  
Standardization by: J. BRUNNER Date: 1/15/98  
Instrument Manufacturer: HF SCIENTIFIC Model: DRT-18C  
Serial Number: 5337 Calibration Date: 1/15/98

## STANDARDIZATION

Time: 0915 Scale: 20 Zero: YES Stray Light: N/A  
Standard NTU: 0.02 Reading: 0.02  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: 1530 Scale: 20 Zero: YES Stray Light: N/A  
Standard NTU: 0.02 Reading: 0.02  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# TURBIDIMETER FIELD STANDARDIZATION FORM

Project Name: JPL  
Standardization by: J. BRENNER Date: 1/16/98  
Instrument Manufacturer: HF SCIENTIFIC Model: D2T-15C  
Serial Number: 5337 Calibration Date: 1/16/98

## STANDARDIZATION

Time: 0800 Scale: 20 Zero: YES Stray Light: N/A  
Standard NTU: 0.02 Reading: 0.02  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: 1430 Scale: 20 Zero: YES Stray Light: N/A  
Standard NTU: 0.02 Reading: 0.02  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



# TURBIDIMETER FIELD STANDARDIZATION FORM

Project Name: JPL  
Standardization by: J. BRANNON Date: 1/20/98  
Instrument Manufacturer: HF SCIENTIFIC Model: DR-15C  
Serial Number: 5337 Calibration Date: 1/20/98

## STANDARDIZATION

Time: 0805 Scale: 20 Zero: YES Stray Light: N/A  
Standard NTU: 0.02 Reading: 0.02  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: 1445 Scale: 20 Zero: YES Stray Light: N/A  
Standard NTU: 0.02 Reading: 0.02  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# TURBIDIMETER FIELD STANDARDIZATION FORM

Project Name: JPL  
Standardization by: T. Blawie Date: 1/21/98  
Instrument Manufacturer: HF Scientific Model: DRT-15CE  
Serial Number: 5337 Calibration Date: 1/21/98

## STANDARDIZATION

Time: 0800 Scale: 20 Zero: 0 Stray Light: N/A  
Standard NTU: 0.02 Reading: 0.02  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: 1400 Scale: 20 Zero: 0 Stray Light: N/A  
Standard NTU: 0.02 Reading: 0.02  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# TURBIDIMETER FIELD STANDARDIZATION FORM

Project Name: JPL  
Standardization by: T. Bunnely Date: 1/22/98  
Instrument Manufacturer: HF Scientific Model: DCT-15CE  
Serial Number: 5337 Calibration Date: 1/22/98

## STANDARDIZATION

Time: 0750 Scale: 20 Zero: 0 Stray Light: N/A  
Standard NTU: 0.02 Reading: 0.02  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: 1400 Scale: 20 Zero: 0 Stray Light: N/A  
Standard NTU: 0.02 Reading: 0.02  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

# TURBIDIMETER FIELD STANDARDIZATION FORM

Project Name: JPL  
Standardization by: D. Duzgin Date: 1/23/98  
Instrument Manufacturer: HF Scientific Model: DET-1SC  
Serial Number: 5337 Calibration Date: 1/23/98

## STANDARDIZATION

Time: 0815 Scale: 20 Zero: YES Stray Light: N/A  
Standard NTU: 0.02 Reading: 0.02  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: 1505 Scale: 20 Zero: YES Stray Light: N/A  
Standard NTU: 0.02 Reading: 0.02  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# TURBIDIMETER FIELD STANDARDIZATION FORM

Project Name: JPL  
Standardization by: D. DIRKIN Date: 1/26/98  
Instrument Manufacturer: HF SCIENTAL Model: DRT-15C  
Serial Number: 5337 Calibration Date: 1/26/98

## STANDARDIZATION

Time: 0800 Scale: 20 Zero: YES Stray Light: N/A  
Standard NTU: 0.02 Reading: 0.02  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: 1505 Scale: 20 Zero: YES Stray Light: N/A  
Standard NTU: 0.02 Reading: 0.02  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# TURBIDIMETER FIELD STANDARDIZATION FORM

Project Name: JPL  
Standardization by: D. Dirksin Date: 1/27/98  
Instrument Manufacturer: H F Scientific Model: DRT-150  
Serial Number: 5337 Calibration Date: 1/27/98

## STANDARDIZATION

Time: 0730 Scale: 20 Zero: YES Stray Light: None  
Standard NTU: 0.02 Reading: 0.02  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: 1445 Scale: 20 Zero: YES Stray Light: None  
Standard NTU: 0.02 Reading: 0.02  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# TURBIDIMETER FIELD STANDARDIZATION FORM

Project Name: JPL  
Standardization by: T. BLANKY Date: 1/28/98  
Instrument Manufacturer: HF Scientific Model: DRT-15CE  
Serial Number: 5337 Calibration Date: 1/28/98

## STANDARDIZATION

Time: 0800 Scale: 20 Zero: 0 Stray Light: N/A  
Standard NTU: 0.02 Reading: 0.02  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: 1445 Scale: 20 Zero: 0 Stray Light: N/A  
Standard NTU: 0.02 Reading: 0.02  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# TURBIDIMETER FIELD STANDARDIZATION FORM

Project Name: JPL  
Standardization by: D. DIRKIN Date: 1/29/98  
Instrument Manufacturer: HE SCIENTIFIC Model: DRT-15C  
Serial Number: 5337 Calibration Date: 1/29/98

## STANDARDIZATION

Time: 0830 Scale: 20 Zero: YES Stray Light: NONE  
Standard NTU: 0.02 Reading: 0.02  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: 1540 Scale: 20 Zero: YES Stray Light: NONE  
Standard NTU: 0.02 Reading: 0.02  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



# TURBIDIMETER FIELD STANDARDIZATION FORM

Project Name: JPL  
Standardization by: L. DARRAGH Date: 1/30/90  
Instrument Manufacturer: HF SCIENTAL Model: DRT-15C  
Serial Number: 5337 Calibration Date: 1/30/90

## STANDARDIZATION

Time: 0755 Scale: 20 Zero: YES Stray Light: N/A  
Standard NTU: 0.02 Reading: 0.02  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: 1500 Scale: 20 Zero: YES Stray Light: N/A  
Standard NTU: 0.02 Reading: 0.02  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
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# TURBIDIMETER FIELD STANDARDIZATION FORM

Project Name: JPL  
Standardization by: L. DARRIGH Date: 2/2/98  
Instrument Manufacturer: HF SCIENTAL Model: 725-15C  
Serial Number: 5337 Calibration Date: 2/2/98

## STANDARDIZATION

Time: 0845 Scale: 20 Zero: YES Stray Light: N/A  
Standard NTU: 0.02 Reading: 0.02  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: 1600 Scale: 20 Zero: YES Stray Light: N/A  
Standard NTU: 0.02 Reading: 0.02  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Comments: \_\_\_\_\_  
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# TURBIDIMETER FIELD STANDARDIZATION FORM

Project Name: JPL  
Standardization by: L. DARZAGH Date: 2/3/98  
Instrument Manufacturer: H F SCIENTIFIC Model: DIRT-15C  
Serial Number: 5337 Calibration Date: 2/3/98

## STANDARDIZATION

Time: 0745 Scale: 20 Zero: YES Stray Light: N/A  
Standard NTU: 0.02 Reading: 0.02  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: 1540 Scale: 20 Zero: YES Stray Light: N/A  
Standard NTU: 0.02 Reading: 0.02  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Comments: \_\_\_\_\_  
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# TURBIDIMETER FIELD STANDARDIZATION FORM

Project Name: JPL  
Standardization by: L. DARRAGH Date: 2/4/98  
Instrument Manufacturer: HF SCIENTIFIC Model: DET-15C  
Serial Number: 5337 Calibration Date: 2/4/98

## STANDARDIZATION

Time: 0815 Scale: 20 Zero: YES Stray Light: N/A  
Standard NTU: 0.02 Reading: 0.02  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: 1630 Scale: 20 Zero: YES Stray Light: N/A  
Standard NTU: 0.02 Reading: 0.02  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Comments: \_\_\_\_\_  
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# TURBIDIMETER FIELD STANDARDIZATION FORM

Project Name: JPL  
Standardization by: J. SPANER Date: 2/5/98  
Instrument Manufacturer: HF SCIENTIFIC Model: D21-1SC  
Serial Number: 5337 Calibration Date: 2/5/98

## STANDARDIZATION

Time: 0750 Scale: 20 Zero: YES Stray Light: N/A  
Standard NTU: 0.02 Reading: 0.02  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: 1630 Scale: 20 Zero: YES Stray Light: N/A  
Standard NTU: 0.02 Reading: 0.02  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Comments: \_\_\_\_\_  
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# TURBIDIMETER FIELD STANDARDIZATION FORM

Project Name: JPL  
Standardization by: L. DAZZAGU Date: 2/6/98  
Instrument Manufacturer: HF SCIENTIFIC Model: D24-15C  
Serial Number: 5337 Calibration Date: 2/6/98

## STANDARDIZATION

Time: 0845 Scale: 20 Zero: YES Stray Light: N/A  
Standard NTU: 0.02 Reading: 0.02  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: 1315 Scale: 20 Zero: YES Stray Light: N/A  
Standard NTU: 0.02 Reading: 0.02  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
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# TURBIDIMETER FIELD STANDARDIZATION FORM

Project Name: JPL  
Standardization by: J. BRENNER Date: 2/19/98  
Instrument Manufacturer: HF SCIENTIFIC Model: DRT-1SC  
Serial Number: 5337 Calibration Date: 2/9/98

## STANDARDIZATION

Time: 0900 Scale: 20 Zero: YES Stray Light: N/A  
Standard NTU: 0.02 Reading: 0.02  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: 1620 Scale: 20 Zero: YES Stray Light: N/A  
Standard NTU: 0.02 Reading: 0.02  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
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# TURBIDIMETER FIELD STANDARDIZATION FORM

Project Name: JPL  
Standardization by: D. DIRKIN Date: 2/10/98  
Instrument Manufacturer: HF SCIENTIFIC Model: D25-15C  
Serial Number: 5337 Calibration Date: 2/10/98

## STANDARDIZATION

Time: 0800 Scale: 20 Zero: YES Stray Light: N/A  
Standard NTU: 0.02 Reading: 0.02  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: 1400 Scale: 20 Zero: YES Stray Light: N/A  
Standard NTU: 0.02 Reading: 0.02  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
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# TURBIDIMETER FIELD STANDARDIZATION FORM

Project Name: JPL  
Standardization by: D. DIRKIN Date: 2/11/98  
Instrument Manufacturer: HF SCIENTIAL Model: D25-15C  
Serial Number: 5337 Calibration Date: 2/11/98

## STANDARDIZATION

Time: 0745 Scale: 20 Zero: YES Stray Light: N/A  
Standard NTU: 0.02 Reading: 0.02  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: 1520 Scale: 20 Zero: YES Stray Light: N/A  
Standard NTU: 0.02 Reading: 0.02  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Time: \_\_\_\_\_ Scale: \_\_\_\_\_ Zero: \_\_\_\_\_ Stray Light: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_  
Standard NTU: \_\_\_\_\_ Reading: \_\_\_\_\_

Comments: \_\_\_\_\_  
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# pH/TEMPERATURE METER FIELD CALIBRATION FORM

Project Name: JPL  
Calibration by: J. BRENNER Date: 1/14/98  
Instrument Manufacturer: YSI Model: 3500  
Serial Number: 92641039  
pH Probe Manufacturer: YSI Model: 3530  
Serial Number: 97F811405  
ATC Probe Manufacturer: YSI Model: 3510  
Serial Number: 92F03003  
Buffer Solution Manufacturer: CALITECH  
Expiration Dates of Buffer Solutions pH 4.01: — pH 7.00: 2/98 pH 10.01: 3/98

## INSTRUMENTATION CHECK-OUT

Time: 0950 Battery Condition: GOOD  
Instrument Readings with Shorting Plug in, mV: — Temperature: 16.0 pH: 4.69 ISO: —  
Reference Chamber Solution Changed?:   
pH Probe Condition: GOOD

## FIELD CALIBRATION

Time: 0950 Slope: N/A Temperature: 13.9  
Response to Low Buffer: 7.00 Response to High Buffer: 10.0  
Time: 1630 Slope: N/A Temperature: 21.4  
Response to Low Buffer: 7.00 Response to High Buffer: 10.0  
Time: \_\_\_\_\_ Slope: \_\_\_\_\_ Temperature: \_\_\_\_\_  
Response to Low Buffer: \_\_\_\_\_ Response to High Buffer: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Calibrate to Accuracy of  $\pm 0.05$  pH Units  
Slope Must Be Between 80 - 110%

# pH/TEMPERATURE METER FIELD CALIBRATION FORM

Project Name: JPL  
Calibration by: J. BRENNER Date: 1/10/98  
Instrument Manufacturer: YSI Model: 3500  
Serial Number: 92641039  
pH Probe Manufacturer: YSI Model: 3530  
Serial Number: 97F811405  
ATC Probe Manufacturer: YSI Model: 3510  
Serial Number: 95FO 3003  
Buffer Solution Manufacturer: CALITECH  
Expiration Dates of Buffer Solutions pH 4.01: — pH 7.00: 8/98 pH 10.01: 3/98

## INSTRUMENTATION CHECK-OUT

Time: 0915 Battery Condition: GOOD  
Instrument Readings with Shorting Plug in, mV: — Temperature: 14.3 pH: 4.50 ISO: —  
Reference Chamber Solution Changed?: —  
pH Probe Condition: GOOD

## FIELD CALIBRATION

Time: 0915 Slope: N/A Temperature: 11.8  
Response to Low Buffer: 7.00 Response to High Buffer: 10.0  
Time: 1550 Slope: N/A Temperature: 14.1  
Response to Low Buffer: 7.00 Response to High Buffer: 10.0  
Time: — Slope: — Temperature: —  
Response to Low Buffer: — Response to High Buffer: —

Comments: —  
—  
—

Calibrate to Accuracy of  $\pm 0.05$  pH Units  
Slope Must Be Between 80 - 110%

# pH/TEMPERATURE METER FIELD CALIBRATION FORM

Project Name: JPL  
Calibration by: J. BRAUER Date: 1/16/98  
Instrument Manufacturer: YSI Model: 3500  
Serial Number: 92641039  
pH Probe Manufacturer: YSI Model: 3530  
Serial Number: 97F811405  
ATC Probe Manufacturer: YSI Model: 3510  
Serial Number: 99FD3003  
Buffer Solution Manufacturer: CALITECH  
Expiration Dates of Buffer Solutions pH 4.01: — pH 7.00: 8/98 pH 10.01: 3/98

## INSTRUMENTATION CHECK-OUT

Time: 0800 Battery Condition: GOOD  
Instrument Readings with Shorting Plug in, mV: — Temperature: 13.3 pH: 6.98 ISO: —  
Reference Chamber Solution Changed?:   
pH Probe Condition: GOOD

## FIELD CALIBRATION

Time: 0800 Slope: N/A Temperature: 11.4  
Response to Low Buffer: 7.00 Response to High Buffer: 10.0  
Time: 1430 Slope: N/A Temperature: 21.4  
Response to Low Buffer: 7.00 Response to High Buffer: 10.0  
Time: \_\_\_\_\_ Slope: \_\_\_\_\_ Temperature: \_\_\_\_\_  
Response to Low Buffer: \_\_\_\_\_ Response to High Buffer: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Calibrate to Accuracy of  $\pm 0.05$  pH Units  
Slope Must Be Between 80 - 110%

# pH/TEMPERATURE METER FIELD CALIBRATION FORM

Project Name: JPL  
Calibration by: J. BRENNER Date: 1/20/98  
Instrument Manufacturer: YSI Model: 3500  
Serial Number: 92641039  
pH Probe Manufacturer: YSI Model: 3530  
Serial Number: 97F811405  
ATC Probe Manufacturer: YSI Model: 3510  
Serial Number: 95F03003  
Buffer Solution Manufacturer: CALITECH  
Expiration Dates of Buffer Solutions pH 4.01: — pH 7.00: 2/98 pH 10.01: 3/98

## INSTRUMENTATION CHECK-OUT

Time: 0805 Battery Condition: GOOD  
Instrument Readings with Shorting Plug in, mV: — Temperature: 7.5 pH: 8.40 ISO: —  
Reference Chamber Solution Changed?:   
pH Probe Condition: GOOD

## FIELD CALIBRATION

Time: 0805 Slope: N/A Temperature: 5.3  
Response to Low Buffer: 7.00 Response to High Buffer: 10.0  
Time: 1445 Slope: N/A Temperature: 16.1  
Response to Low Buffer: 7.00 Response to High Buffer: 10.0  
Time: \_\_\_\_\_ Slope: \_\_\_\_\_ Temperature: \_\_\_\_\_  
Response to Low Buffer: \_\_\_\_\_ Response to High Buffer: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Calibrate to Accuracy of  $\pm 0.05$  pH Units  
Slope Must Be Between 80 - 110%

# pH/TEMPERATURE METER FIELD CALIBRATION FORM

Project Name: JPL  
Calibration by: T. BLANEY Date: 1/21/98  
Instrument Manufacturer: YSI Model: 3500  
Serial Number: 92641039  
pH Probe Manufacturer: YSI Model: 3530  
Serial Number: 97F811405  
ATC Probe Manufacturer: YSI Model: 3510  
Serial Number: 95F03003  
Buffer Solution Manufacturer: CALITECH  
Expiration Dates of Buffer Solutions pH 4.01: — pH 7.00: 8/98 pH 10.01: 3/98

## INSTRUMENTATION CHECK-OUT

Time: 0755 Battery Condition: Good  
Instrument Readings with Shorting Plug in, mV: — Temperature: 5.0 pH: 7.00 ISO: —  
Reference Chamber Solution Changed?: —  
pH Probe Condition: Good

## FIELD CALIBRATION

Time: 0800 Slope: N/A Temperature: 5.0  
Response to Low Buffer: 7.00 Response to High Buffer: 10.0  
Time: 1400 Slope: N/A Temperature: 15.5  
Response to Low Buffer: 7.00 Response to High Buffer: 10.0  
Time: \_\_\_\_\_ Slope: \_\_\_\_\_ Temperature: \_\_\_\_\_  
Response to Low Buffer: \_\_\_\_\_ Response to High Buffer: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Calibrate to Accuracy of  $\pm 0.05$  pH Units  
Slope Must Be Between 80 - 110%

# pH/TEMPERATURE METER FIELD CALIBRATION FORM

Project Name: JPL  
Calibration by: T. BLANEY Date: 1/22/98  
Instrument Manufacturer: YSI Model: 3500  
Serial Number: 92641039  
pH Probe Manufacturer: YSI Model: 3530  
Serial Number: 97F811405  
ATC Probe Manufacturer: YSI Model: 3510  
Serial Number: 95F03003  
Buffer Solution Manufacturer: CALITECH  
Expiration Dates of Buffer Solutions pH 4.01: — pH 7.00: 8/98 pH 10.01: 3/98

## INSTRUMENTATION CHECK-OUT

Time: 0750 Battery Condition: GOOD  
Instrument Readings with Shorting Plug in, mV: — Temperature: 5.5 pH: 7.00 ISO: —  
Reference Chamber Solution Changed?: —  
pH Probe Condition: GOOD

## FIELD CALIBRATION

Time: 0750 Slope: N/A Temperature: 5.5  
Response to Low Buffer: 7.00 Response to High Buffer: 10.0  
Time: 1400 Slope: N/A Temperature: 15.0  
Response to Low Buffer: 7.00 Response to High Buffer: 10.0  
Time: \_\_\_\_\_ Slope: \_\_\_\_\_ Temperature: \_\_\_\_\_  
Response to Low Buffer: \_\_\_\_\_ Response to High Buffer: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Calibrate to Accuracy of  $\pm 0.05$  pH Units  
Slope Must Be Between 80 - 110%

# pH/TEMPERATURE METER FIELD CALIBRATION FORM

Project Name: JPL  
Calibration by: D. DIRKIN Date: 1/23/98  
Instrument Manufacturer: YSI Model: 3500  
Serial Number: 92641039  
pH Probe Manufacturer: YSI Model: 3530  
Serial Number: 97F811405  
ATC Probe Manufacturer: YSI Model: 3510  
Serial Number: 97C0653  
Buffer Solution Manufacturer: CALITEZH  
Expiration Dates of Buffer Solutions pH 4.01: — pH 7.00: 8/98 pH 10.01: 3/98

## INSTRUMENTATION CHECK-OUT

Time: 0815 Battery Condition: GOOD  
Instrument Readings with Shorting Plug in, mV: — Temperature: 10.5 pH: 7.01 ISO: —  
Reference Chamber Solution Changed?:   
pH Probe Condition: GOOD

## FIELD CALIBRATION

Time: 0815 Slope: N/A Temperature: 6.1  
Response to Low Buffer: 7.00 Response to High Buffer: 10.0  
Time: 1505 Slope: N/A Temperature: 23.9  
Response to Low Buffer: 7.00 Response to High Buffer: 10.0  
Time: \_\_\_\_\_ Slope: \_\_\_\_\_ Temperature: \_\_\_\_\_  
Response to Low Buffer: \_\_\_\_\_ Response to High Buffer: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Calibrate to Accuracy of  $\pm 0.05$  pH Units  
Slope Must Be Between 80 - 110%



# pH/TEMPERATURE METER FIELD CALIBRATION FORM

Project Name: JPL  
Calibration by: D. DIRKIN Date: 1/26/98  
Instrument Manufacturer: YSI Model: 3500  
Serial Number: 92641039  
pH Probe Manufacturer: YSI Model: 3530  
Serial Number: 97F811405  
ATC Probe Manufacturer: YSI Model: 3510  
Serial Number: 97C0653  
Buffer Solution Manufacturer: CALIFECH  
Expiration Dates of Buffer Solutions pH 4.01: — pH 7.00: 2/98 pH 10.01: 3/98

## INSTRUMENTATION CHECK-OUT

Time: 0755 Battery Condition: GOOD  
Instrument Readings with Shorting Plug in, mV: — Temperature: 7.5 pH: 7.00 ISO: —  
Reference Chamber Solution Changed?:   
pH Probe Condition: GOOD

## FIELD CALIBRATION

Time: 0800 Slope: N/A Temperature: 7.2  
Response to Low Buffer: 7.00 Response to High Buffer: 10.0  
Time: 1505 Slope: N/A Temperature: 22.5  
Response to Low Buffer: 7.00 Response to High Buffer: 10.0  
Time: \_\_\_\_\_ Slope: \_\_\_\_\_ Temperature: \_\_\_\_\_  
Response to Low Buffer: \_\_\_\_\_ Response to High Buffer: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Calibrate to Accuracy of  $\pm 0.05$  pH Units  
Slope Must Be Between 80 - 110%

# pH/TEMPERATURE METER FIELD CALIBRATION FORM

Project Name: JPL  
Calibration by: D. DIRKIN Date: 1/27/98  
Instrument Manufacturer: YSI Model: 3500  
Serial Number: 92641039  
pH Probe Manufacturer: YSI Model: 3530  
Serial Number: 97F811405  
ATC Probe Manufacturer: YSI Model: 3510  
Serial Number: 97C0653  
Buffer Solution Manufacturer: CALITECH  
Expiration Dates of Buffer Solutions pH 4.01: — pH 7.00: 8/98 pH 10.01: 3/98

## INSTRUMENTATION CHECK-OUT

Time: 0730 Battery Condition: GOOD  
Instrument Readings with Shorting Plug in, mV: — Temperature: 8.4 pH: 7.00 ISO: —  
Reference Chamber Solution Changed?:   
pH Probe Condition: GOOD

## FIELD CALIBRATION

Time: 0730 Slope: N/A Temperature: 6.5  
Response to Low Buffer: 7.00 Response to High Buffer: 10.0  
Time: 1445 Slope: N/A Temperature: 23.6  
Response to Low Buffer: 7.00 Response to High Buffer: 10.0  
Time: — Slope: — Temperature: —  
Response to Low Buffer: — Response to High Buffer: —

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Calibrate to Accuracy of  $\pm 0.05$  pH Units  
Slope Must Be Between 80 - 110%

# pH/TEMPERATURE METER FIELD CALIBRATION FORM

Project Name: JPL  
Calibration by: T. BLANEY Date: 1/28/98  
Instrument Manufacturer: YSI Model: 3500  
Serial Number: 92641039  
pH Probe Manufacturer: YSI Model: 3530  
Serial Number: 97F81140S  
ATC Probe Manufacturer: YSI Model: 3510  
Serial Number: 97C0653  
Buffer Solution Manufacturer: CALITECH  
Expiration Dates of Buffer Solutions pH 4.01: — pH 7.00: 8/98 pH 10.01: 3/98

## INSTRUMENTATION CHECK-OUT

Time: 0800 Battery Condition: GOOD  
Instrument Readings with Shorting Plug in, mV: — Temperature: 6.5 pH: 7.00 ISO: —  
Reference Chamber Solution Changed?:   
pH Probe Condition: GOOD

## FIELD CALIBRATION

Time: 0800 Slope: N/A Temperature: 5.3  
Response to Low Buffer: 7.00 Response to High Buffer: 10.0  
Time: 1450 Slope: N/A Temperature: 26.1  
Response to Low Buffer: 7.00 Response to High Buffer: 10.0  
Time: \_\_\_\_\_ Slope: \_\_\_\_\_ Temperature: \_\_\_\_\_  
Response to Low Buffer: \_\_\_\_\_ Response to High Buffer: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Calibrate to Accuracy of  $\pm 0.05$  pH Units  
Slope Must Be Between 80 - 110%

# pH/TEMPERATURE METER FIELD CALIBRATION FORM

Project Name: JPL  
Calibration by: D. DIRKIN Date: 1/29/98  
Instrument Manufacturer: YSI Model: 3500  
Serial Number: 92641039  
pH Probe Manufacturer: YSI Model: 3530  
Serial Number: 97F811405  
ATC Probe Manufacturer: YSI Model: 3510  
Serial Number: 97C0653  
Buffer Solution Manufacturer: CALITECH  
Expiration Dates of Buffer Solutions pH 4.01: — pH 7.00: 8/98 pH 10.01: 3/98

## INSTRUMENTATION CHECK-OUT

Time: 0830 Battery Condition: GOOD  
Instrument Readings with Shorting Plug in, mV: — Temperature: 15.6 pH: 7.00 ISO: —  
Reference Chamber Solution Changed?:   
pH Probe Condition: GOOD

## FIELD CALIBRATION

Time: 0830 Slope: N/A Temperature: 11.8  
Response to Low Buffer: 7.00 Response to High Buffer: 10.0  
Time: 1540 Slope: N/A Temperature: 18.2  
Response to Low Buffer: 7.00 Response to High Buffer: 10.0  
Time: \_\_\_\_\_ Slope: \_\_\_\_\_ Temperature: \_\_\_\_\_  
Response to Low Buffer: \_\_\_\_\_ Response to High Buffer: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Calibrate to Accuracy of  $\pm 0.05$  pH Units  
Slope Must Be Between 80 - 110%

# pH/TEMPERATURE METER FIELD CALIBRATION FORM

Project Name: JPL  
Calibration by: L. DABAGH Date: 1/30/98  
Instrument Manufacturer: YSI Model: 3500  
Serial Number: 92641039  
pH Probe Manufacturer: YSI Model: 3530  
Serial Number: 97F811405  
ATC Probe Manufacturer: YSI Model: 3510  
Serial Number: 97C0653  
Buffer Solution Manufacturer: CALITECH  
Expiration Dates of Buffer Solutions pH 4.01: — pH 7.00: 8/98 pH 10.01: 3/98

## INSTRUMENTATION CHECK-OUT

Time: 0755 Battery Condition: GOOD  
Instrument Readings with Shorting Plug in, mV: — Temperature: 4.1 pH: 6.50 ISO: —  
Reference Chamber Solution Changed?:   
pH Probe Condition: GOOD

## FIELD CALIBRATION

Time: 0755 Slope: N/A Temperature: 4.4  
Response to Low Buffer: 7.00 Response to High Buffer: 10.0  
Time: 1500 Slope: N/A Temperature: 22.6  
Response to Low Buffer: 7.00 Response to High Buffer: 10.0  
Time: \_\_\_\_\_ Slope: \_\_\_\_\_ Temperature: \_\_\_\_\_  
Response to Low Buffer: \_\_\_\_\_ Response to High Buffer: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Calibrate to Accuracy of  $\pm 0.05$  pH Units  
Slope Must Be Between 80 - 110%

# pH/TEMPERATURE METER FIELD CALIBRATION FORM

Project Name: JPL  
Calibration by: L. DARRAGH Date: 2/2/98  
Instrument Manufacturer: YSI Model: 3500  
Serial Number: 92641039  
pH Probe Manufacturer: YSI Model: 3530  
Serial Number: 97F811405  
ATC Probe Manufacturer: YSI Model: 3510  
Serial Number: 97C0653  
Buffer Solution Manufacturer: CALITECH  
Expiration Dates of Buffer Solutions pH 4.01: — pH 7.00: 8/98 pH 10.01: 3/98

## INSTRUMENTATION CHECK-OUT

Time: 0845 Battery Condition: GOOD  
Instrument Readings with Shorting Plug in, mV: — Temperature: 11.0 pH: 4.61 ISO: —  
Reference Chamber Solution Changed?:   
pH Probe Condition: GOOD

## FIELD CALIBRATION

Time: 0845 Slope: N/A Temperature: 10.9  
Response to Low Buffer: 7.00 Response to High Buffer: 10.0  
Time: 1600 Slope: N/A Temperature: 14.3  
Response to Low Buffer: 7.00 Response to High Buffer: 10.0  
Time: \_\_\_\_\_ Slope: \_\_\_\_\_ Temperature: \_\_\_\_\_  
Response to Low Buffer: \_\_\_\_\_ Response to High Buffer: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Calibrate to Accuracy of  $\pm 0.05$  pH Units  
Slope Must Be Between 80 - 110%

# pH/TEMPERATURE METER FIELD CALIBRATION FORM

Project Name: JPL  
Calibration by: L. DARRAGH Date: 2/3/98  
Instrument Manufacturer: YSI Model: 3500  
Serial Number: 92041039  
pH Probe Manufacturer: YSI Model: 3530  
Serial Number: 97F811405  
ATC Probe Manufacturer: YSI Model: 3510  
Serial Number: 9706653  
Buffer Solution Manufacturer: CALITECH  
Expiration Dates of Buffer Solutions pH 4.01: - pH 7.00: 8/98 pH 10.01: 3/98

## INSTRUMENTATION CHECK-OUT

Time: 0745 Battery Condition: GOOD  
Instrument Readings with Shorting Plug in, mV: - Temperature: 16.6 pH: 7.00 ISO: -  
Reference Chamber Solution Changed?:   
pH Probe Condition: GOOD

## FIELD CALIBRATION

Time: 0745 Slope: N/A Temperature: 12.3  
Response to Low Buffer: 7.00 Response to High Buffer: 10.0  
Time: 1540 Slope: N/A Temperature: 13.5  
Response to Low Buffer: 7.00 Response to High Buffer: 10.0  
Time: \_\_\_\_\_ Slope: \_\_\_\_\_ Temperature: \_\_\_\_\_  
Response to Low Buffer: \_\_\_\_\_ Response to High Buffer: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Calibrate to Accuracy of  $\pm 0.05$  pH Units  
Slope Must Be Between 80 - 110%

# pH/TEMPERATURE METER FIELD CALIBRATION FORM

Project Name: JPL  
Calibration by: L. DARRAQ Date: 2.4.98  
Instrument Manufacturer: YSI Model: 3500  
Serial Number: 92641039  
pH Probe Manufacturer: YSI Model: 3630  
Serial Number: 97F811406  
ATC Probe Manufacturer: YSI Model: 3510  
Serial Number: 97C0653  
Buffer Solution Manufacturer: Calitech  
Expiration Dates of Buffer Solutions pH 4.01: \_\_\_\_\_ pH 7.00: 8/98 pH 10.01: 3/98

## INSTRUMENTATION CHECK-OUT

Time: 0815 Battery Condition: GOOD  
Instrument Readings with Shorting Plug in, mV: - Temperature: 9.7 pH: \_\_\_\_\_ ISO: \_\_\_\_\_  
Reference Chamber Solution Changed?: -  
pH Probe Condition: GOOD

## FIELD CALIBRATION

Time: 0815 Slope: NA Temperature: 6.1  
Response to Low Buffer: 7.00 Response to High Buffer: 10.00  
Time: 1630 Slope: N/A Temperature: 16.7  
Response to Low Buffer: 7.00 Response to High Buffer: 7.00  
Time: \_\_\_\_\_ Slope: \_\_\_\_\_ Temperature: \_\_\_\_\_  
Response to Low Buffer: \_\_\_\_\_ Response to High Buffer: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Calibrate to Accuracy of  $\pm 0.05$  pH Units  
Slope Must Be Between 80 - 110%



# pH/TEMPERATURE METER FIELD CALIBRATION FORM

Project Name: JPL  
Calibration by: J. BRENNER Date: 2/5/98  
Instrument Manufacturer: YSI Model: 3500  
Serial Number: 92641039  
pH Probe Manufacturer: YSI Model: 3530  
Serial Number: 97F811406  
ATC Probe Manufacturer: YSI Model: 3510  
Serial Number: 97C0653  
Buffer Solution Manufacturer: CALIFELTA  
Expiration Dates of Buffer Solutions pH 4.01: — pH 7.00: 8/98 pH 10.01: 3/98

## INSTRUMENTATION CHECK-OUT

Time: 0750 Battery Condition: GOOD  
Instrument Readings with Shorting Plug in, mV: — Temperature: 12.1 pH: 7.57 ISO: —  
Reference Chamber Solution Changed?:   
pH Probe Condition: GOOD

## FIELD CALIBRATION

Time: 0750 Slope: N/A Temperature: 6.4  
Response to Low Buffer: 7.0 Response to High Buffer: 10.0  
Time: 1630 Slope: N/A Temperature: 15.2  
Response to Low Buffer: 7.0 Response to High Buffer: 10.0  
Time: \_\_\_\_\_ Slope: \_\_\_\_\_ Temperature: \_\_\_\_\_  
Response to Low Buffer: \_\_\_\_\_ Response to High Buffer: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Calibrate to Accuracy of  $\pm 0.05$  pH Units  
Slope Must Be Between 80 - 110%

# pH/TEMPERATURE METER FIELD CALIBRATION FORM

Project Name: JPL  
Calibration by: L. PARRAGH Date: 2/6/98  
Instrument Manufacturer: YSI Model: 3500  
Serial Number: 92641039  
pH Probe Manufacturer: YSI Model: 3530  
Serial Number: 97F811405  
ATC Probe Manufacturer: YSI Model: 3510  
Serial Number: 97C0653  
Buffer Solution Manufacturer: CALIFORNIA  
Expiration Dates of Buffer Solutions pH 4.01: - pH 7.00: 8/98 pH 10.01: 3/98

## INSTRUMENTATION CHECK-OUT

Time: 0845 Battery Condition: GOOD  
Instrument Readings with Shorting Plug in, mV: - Temperature: 11.3 pH: 6.87 ISO: -  
Reference Chamber Solution Changed?:   
pH Probe Condition: GOOD

## FIELD CALIBRATION

Time: 0845 Slope: N/A Temperature: 11.2  
Response to Low Buffer: 7.00 Response to High Buffer: 10.0  
Time: 1315 Slope: N/A Temperature: 14.1  
Response to Low Buffer: 7.00 Response to High Buffer: 10.0  
Time: \_\_\_\_\_ Slope: \_\_\_\_\_ Temperature: \_\_\_\_\_  
Response to Low Buffer: \_\_\_\_\_ Response to High Buffer: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Calibrate to Accuracy of  $\pm 0.05$  pH Units  
Slope Must Be Between 80 - 110%

# pH/TEMPERATURE METER FIELD CALIBRATION FORM

Project Name: JPL  
Calibration by: J. BANNER Date: 2/9/98  
Instrument Manufacturer: YSI Model: 3500  
Serial Number: 92641039  
pH Probe Manufacturer: YSI Model: 3530  
Serial Number: 97F81140S  
ATC Probe Manufacturer: YSI Model: 3510  
Serial Number: 97C068  
Buffer Solution Manufacturer: CALITECH  
Expiration Dates of Buffer Solutions pH 4.01: — pH 7.00: 2/98 pH 10.01: 3/98

## INSTRUMENTATION CHECK-OUT

Time: 0900 Battery Condition: GOOD  
Instrument Readings with Shorting Plug in, mV: ✓ Temperature: 8.9 pH: 7.8 ISO: —  
Reference Chamber Solution Changed?: ✓  
pH Probe Condition: GOOD

## FIELD CALIBRATION

Time: 0900 Slope: N/A Temperature: 8.1  
Response to Low Buffer: 7.00 Response to High Buffer: 10.0  
Time: 1020 Slope: N/A Temperature: 15.4  
Response to Low Buffer: 7.00 Response to High Buffer: 10.0  
Time: \_\_\_\_\_ Slope: \_\_\_\_\_ Temperature: \_\_\_\_\_  
Response to Low Buffer: \_\_\_\_\_ Response to High Buffer: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Calibrate to Accuracy of  $\pm 0.05$  pH Units  
Slope Must Be Between 80 - 110%

# pH/TEMPERATURE METER FIELD CALIBRATION FORM

Project Name: JPL  
Calibration by: D. DIRKIN Date: 2/10/98  
Instrument Manufacturer: YSI Model: 3500  
Serial Number: 92641039  
pH Probe Manufacturer: YSI Model: 3530  
Serial Number: 97F811405  
ATC Probe Manufacturer: YSI Model: 3510  
Serial Number: 9700653  
Buffer Solution Manufacturer: CALTECH  
Expiration Dates of Buffer Solutions pH 4.01: — pH 7.00: 8/98 pH 10.01: 3/98

## INSTRUMENTATION CHECK-OUT

Time: 0800 Battery Condition: GOOD  
Instrument Readings with Shorting Plug in, mV: — Temperature: 12.1 pH: 7.00 ISO: —  
Reference Chamber Solution Changed?:   
pH Probe Condition: GOOD

## FIELD CALIBRATION

Time: 0800 Slope: N/A Temperature: 6.9  
Response to Low Buffer: 7.00 Response to High Buffer: 10.0  
Time: 1400 Slope: N/A Temperature: 17.2  
Response to Low Buffer: 7.00 Response to High Buffer: 10.0  
Time: \_\_\_\_\_ Slope: \_\_\_\_\_ Temperature: \_\_\_\_\_  
Response to Low Buffer: \_\_\_\_\_ Response to High Buffer: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Calibrate to Accuracy of  $\pm 0.05$  pH Units  
Slope Must Be Between 80 - 110%

# pH/TEMPERATURE METER FIELD CALIBRATION FORM

Project Name: JPL  
Calibration by: D. DZKIN Date: 2/11/98  
Instrument Manufacturer: YSI Model: 3500  
Serial Number: 92641039  
pH Probe Manufacturer: YSI Model: 3530  
Serial Number: 97F811405  
ATC Probe Manufacturer: YSI Model: 3510  
Serial Number: 97C0653  
Buffer Solution Manufacturer: CALITECH  
Expiration Dates of Buffer Solutions pH 4.01: — pH 7.00: 8/98 pH 10.01: 3/98

## INSTRUMENTATION CHECK-OUT

Time: 0745 Battery Condition: GOOD  
Instrument Readings with Shorting Plug in, mV: — Temperature: 6.8 pH: 7.00 ISO: —  
Reference Chamber Solution Changed?:   
pH Probe Condition: GOOD

## FIELD CALIBRATION

Time: 0745 Slope: N/A Temperature: 7.2  
Response to Low Buffer: 7.00 Response to High Buffer: 10.0  
Time: 1520 Slope: N/A Temperature: 18.2  
Response to Low Buffer: 7.00 Response to High Buffer: 10.0  
Time: \_\_\_\_\_ Slope: \_\_\_\_\_ Temperature: \_\_\_\_\_  
Response to Low Buffer: \_\_\_\_\_ Response to High Buffer: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Calibrate to Accuracy of  $\pm 0.05$  pH Units  
Slope Must Be Between 80 - 110%

# CONDUCTIVITY/SALINITY/TEMPERATURE METER FIELD CALIBRATION FORM

Project Name: JPL  
 Calibration by: J. BRAUNER Date: 1/14/98  
 Instrument Manufacturer: YSI Model: 3500  
 Serial Number: 92641039  
 Probe Manufacturer: YSI Model: 3520  
 Serial Number: 97B0560  
 Calibration Solution Manufacturer: YSI  
 Solution Conductivity: 1,000  $\mu$ S/cm Solution Expiration Date: 12/98

## FIELD CALIBRATION

Time: 0950 Temperature of Solution: 14.0  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* 791  
 Instrument Response to Calibration Solution: 813  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

Time: 1630 Temperature of Solution: 21.3  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* 929  
 Instrument Response to Calibration Solution: 967  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

Time: \_\_\_\_\_ Temperature of Solution: \_\_\_\_\_  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* \_\_\_\_\_  
 Instrument Response to Calibration Solution: \_\_\_\_\_  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

\*The Temperature Compensated Solution Conductivity May Be Computed Using Following Equation:

$$\text{Conductivity } (\mu \text{ S/cm}) = (\text{Conductivity at } 25^\circ\text{C}) (A + BT + CT^2)$$

Where T = Temperature in  $^\circ\text{C}$

And	Conductivity @ 25 $^\circ\text{C}$ ( $\mu$ S/cm)	A	B	C
	1,000	0.5407	0.0173	0.000043
	10,000	0.5538	0.0168	0.000042
	100,000	0.5825	0.0157	0.000040

\*\*

**Instrument is Calibrated if Response is:**

$\pm 6\%$  of calibration solution if reading is  $\leq 150$   $\mu\text{mhos/cm}$  on 500 scale;  $\leq 1500$   $\mu\text{mhos/cm}$  on 5000 scale; or  $\leq 15,000$   $\mu\text{mhos/cm}$  on 50,000 scale.

$\pm 4.5\%$  to  $6\%$  of calibration solution if reading is  $> 150$  and  $< 300$   $\mu\text{mhos/cm}$  on 500 scale;  $> 1500$  and  $< 3000$   $\mu\text{mhos/cm}$  on 5000 scale; and  $> 15,000$  and  $< 30,000$   $\mu\text{mhos/cm}$  on 50,000 scale.

$\pm 4.5\%$  of calibration solution if reading is  $\geq 300$   $\mu\text{mhos/cm}$  on 500 scale;  $\geq 3000$   $\mu\text{mhos/cm}$  on 5000 scale; and  $\geq 30,000$   $\mu\text{mhos/cm}$  on 50,000 scale.

# CONDUCTIVITY/SALINITY/TEMPERATURE METER FIELD CALIBRATION FORM

Project Name: JPL  
 Calibration by: J. BRUNER Date: 1/15/98  
 Instrument Manufacturer: YSI Model: 3500  
 Serial Number: 92641039  
 Probe Manufacturer: YSI Model: 3520  
 Serial Number: 9730566  
 Calibration Solution Manufacturer: YSI  
 Solution Conductivity: 1,000  $\mu$ S/cm Solution Expiration Date: 12/98

## FIELD CALIBRATION

Time: 0915 Temperature of Solution: 11.5  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* 745  
 Instrument Response to Calibration Solution: 776  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

Time: 1550 Temperature of Solution: 13.8  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* 788  
 Instrument Response to Calibration Solution: 804  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

Time: \_\_\_\_\_ Temperature of Solution: \_\_\_\_\_  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* \_\_\_\_\_  
 Instrument Response to Calibration Solution: \_\_\_\_\_  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes: \_\_\_\_\_ No: \_\_\_\_\_

\*The Temperature Compensated Solution Conductivity May Be Computed Using Following Equation:

$$\text{Conductivity } (\mu \text{ S/cm}) = (\text{Conductivity at } 25^\circ\text{C}) (A + BT + CT^2)$$

Where T = Temperature in  $^\circ\text{C}$

And	Conductivity @ 25 $^\circ\text{C}$ ( $\mu$ S/cm)	A	B	C
	1,000	0.5407	0.0173	0.000043
	10,000	0.5538	0.0168	0.000042
	100,000	0.5825	0.0157	0.000040

\*\*

**Instrument is Calibrated if Response is:**

- $\pm 6\%$  of calibration solution if reading is  $\leq 150$   $\mu\text{mhos/cm}$  on 500 scale;  $\leq 1500$   $\mu\text{mhos/cm}$  on 5000 scale; or  $\leq 15,000$   $\mu\text{mhos/cm}$  on 50,000 scale.
- $\pm 4.5\%$  to  $6\%$  of calibration solution if reading is  $> 150$  and  $< 300$   $\mu\text{mhos/cm}$  on 500 scale;  $> 1500$  and  $< 3000$   $\mu\text{mhos/cm}$  on 5000 scale; and  $> 15,000$  and  $< 30,000$   $\mu\text{mhos/cm}$  on 50,000 scale.
- $\pm 4.5\%$  of calibration solution if reading is  $\geq 300$   $\mu\text{mhos/cm}$  on 500 scale;  $\geq 3000$   $\mu\text{mhos/cm}$  on 5000 scale; and  $\geq 30,000$   $\mu\text{mhos/cm}$  on 50,000 scale.

# CONDUCTIVITY/SALINITY/TEMPERATURE METER FIELD CALIBRATION FORM

Project Name: JPL  
 Calibration by: J. BRENNAN Date: 1/16/98  
 Instrument Manufacturer: YSI Model: 3500  
 Serial Number: 92641039  
 Probe Manufacturer: YSI Model: 3520  
 Serial Number: 9730560  
 Calibration Solution Manufacturer: YSI  
 Solution Conductivity: 1,000  $\mu$ S/cm Solution Expiration Date: 12/98

## FIELD CALIBRATION

Time: 0800 Temperature of Solution: 11.2  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* 739  
 Instrument Response to Calibration Solution: 772  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

Time: 1430 Temperature of Solution: 22.3  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* 948  
 Instrument Response to Calibration Solution: 991  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

Time: \_\_\_\_\_ Temperature of Solution: \_\_\_\_\_  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* \_\_\_\_\_  
 Instrument Response to Calibration Solution: \_\_\_\_\_  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

\*The Temperature Compensated Solution Conductivity May Be Computed Using Following Equation:

Conductivity ( $\mu$  S/cm) = (Conductivity at 25°C) (A + BT + CT<sup>2</sup>)  
 Where T = Temperature in °C

And

Conductivity @ 25°C ( $\mu$ S/cm)	A	B	C
1,000	0.5407	0.0173	0.000043
10,000	0.5538	0.0168	0.000042
100,000	0.5825	0.0157	0.000040

\*\* Instrument is Calibrated if Response is:  
 ±6% of calibration solution if reading is ≤ 150  $\mu$ hos/cm on 500 scale; ≤1500  $\mu$ hos/cm on 5000 scale; or ≤15,000  $\mu$ hos/cm on 50,000 scale.  
 ±4.5% to 6% of calibration solution if reading is > 150 and < 300  $\mu$ hos/cm on 500 scale; > 1500 and < 3000  $\mu$ hos/cm and 5000 scale; and > 15,000 and < 30,000  $\mu$ hos/cm on 50,000 scale.  
 ± 4.5% of calibration solution if reading is ≥ 300  $\mu$ hos/cm on 500 scale; ≥ 3000  $\mu$ hos/cm on 5000 scale; and ≥ 30,000  $\mu$ hos/cm on 50,000 scale.



# CONDUCTIVITY/SALINITY/TEMPERATURE METER FIELD CALIBRATION FORM

Project Name: JPL  
 Calibration by: J. BRENNER Date: 1/20/98  
 Instrument Manufacturer: YSI Model: 3500  
 Serial Number: 92641039  
 Probe Manufacturer: YSI Model: 3520  
 Serial Number: 97B0560  
 Calibration Solution Manufacturer: YSI  
 Solution Conductivity: 1,000  $\mu$ S/cm Solution Expiration Date: 12/98

## FIELD CALIBRATION

Time: 0805 Temperature of Solution: 5.4  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* 635  
 Instrument Response to Calibration Solution: 602  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

Time: 1445 Temperature of Solution: 15.6  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* 821  
 Instrument Response to Calibration Solution: 851  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

Time: \_\_\_\_\_ Temperature of Solution: \_\_\_\_\_  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* \_\_\_\_\_  
 Instrument Response to Calibration Solution: \_\_\_\_\_  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

\*The Temperature Compensated Solution Conductivity May Be Computed Using Following Equation:

$$\text{Conductivity } (\mu \text{ S/cm}) = (\text{Conductivity at } 25^\circ\text{C}) (A + BT + CT^2)$$

Where T = Temperature in  $^\circ\text{C}$

And	Conductivity @ 25°C ( $\mu$ S/cm)	A	B	C
	1,000	0.5407	0.0173	0.000043
	10,000	0.5538	0.0168	0.000042
	100,000	0.5825	0.0157	0.000040

\*\*

**Instrument is Calibrated if Response is:**

- $\pm 6\%$  of calibration solution if reading is  $\leq 150$   $\mu$ hos/cm on 500 scale;  $\leq 1500$   $\mu$ hos/cm on 5000 scale; or  $\leq 15,000$   $\mu$ hos/cm on 50,000 scale.
- $\pm 4.5\%$  to  $6\%$  of calibration solution if reading is  $> 150$  and  $< 300$   $\mu$ hos/cm on 500 scale;  $> 1500$  and  $< 3000$   $\mu$ hos/cm on 5000 scale; and  $> 15,000$  and  $< 30,000$   $\mu$ hos/cm on 50,000 scale.
- $\pm 4.5\%$  of calibration solution if reading is  $\geq 300$   $\mu$ hos/cm on 500 scale;  $\geq 3000$   $\mu$ hos/cm on 5000 scale; and  $\geq 30,000$   $\mu$ hos/cm on 50,000 scale.

# CONDUCTIVITY/SALINITY/TEMPERATURE METER FIELD CALIBRATION FORM

Project Name: JPL  
 Calibration by: T. Blaney Date: 1/21/98  
 Instrument Manufacturer: YSI Model: 3500  
 Serial Number: 3799  
 Probe Manufacturer: YSI Model: 3520  
 Serial Number: 97B 0560  
 Calibration Solution Manufacturer: YSI  
 Solution Conductivity: 1,000  $\mu$ S/cm Solution Expiration Date: 12/98

## FIELD CALIBRATION

Time: 0800 Temperature of Solution: 5.0  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* 628  
 Instrument Response to Calibration Solution: 662  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

Time: 1400 Temperature of Solution: 15.3  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* 815  
 Instrument Response to Calibration Solution: 842  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

Time: \_\_\_\_\_ Temperature of Solution: \_\_\_\_\_  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* \_\_\_\_\_  
 Instrument Response to Calibration Solution: \_\_\_\_\_  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

\*The Temperature Compensated Solution Conductivity May Be Computed Using Following Equation:  
 Conductivity ( $\mu$  S/cm) = (Conductivity at 25°C) (A + BT + CT<sup>2</sup>)  
 Where T = Temperature in °C

And	Conductivity @ 25°C ( $\mu$ S/cm)	A	B	C
	1,000	0.5407	0.0173	0.000043
	10,000	0.5538	0.0168	0.000042
	100,000	0.5825	0.0157	0.000040

\*\* **Instrument is Calibrated if Response is:**  
 +6% of calibration solution if reading is  $\leq$  150  $\mu$ mhos/cm on 500 scale;  $\leq$ 1500  $\mu$ mhos/cm on 5000 scale;  
 or  $\leq$ 15,000  $\mu$ mhos/cm on 50,000 scale.  
 +4.5% to 6% of calibration solution if reading is  $>$  150 and  $<$  300  $\mu$ mhos/cm on 500 scale;  $>$  1500 and  
 $<$  3000  $\mu$ mhos/cm and 5000 scale; and  $>$  15,000 and  $<$  30,000  $\mu$ mhos/cm on 50,000 scale.  
 + 4.5% of calibration solution if reading is  $\geq$  300  $\mu$ mhos/cm on 500 scale;  $\geq$  3000  $\mu$ mhos/cm on 5000  
 scale; and  $\geq$  30,000  $\mu$ mhos/cm on 50,000 scale.

# CONDUCTIVITY/SALINITY/TEMPERATURE METER FIELD CALIBRATION FORM

Project Name: JPL  
 Calibration by: T. BLANKY Date: 11/22/98  
 Instrument Manufacturer: YSI Model: 3500  
 Serial Number: 3799  
 Probe Manufacturer: YSI Model: 3520  
 Serial Number: 97B0560  
 Calibration Solution Manufacturer: YSI  
 Solution Conductivity: 1,000  $\mu$ S/cm Solution Expiration Date: 12/98

## FIELD CALIBRATION

Time: 0750 Temperature of Solution: 4.9  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* 627  
 Instrument Response to Calibration Solution: 660  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

Time: 1400 Temperature of Solution: 13.5  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* 882  
 Instrument Response to Calibration Solution: 861  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

Time: \_\_\_\_\_ Temperature of Solution: \_\_\_\_\_  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* \_\_\_\_\_  
 Instrument Response to Calibration Solution: \_\_\_\_\_  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

\*The Temperature Compensated Solution Conductivity May Be Computed Using Following Equation:

$$\text{Conductivity } (\mu \text{ S/cm}) = (\text{Conductivity at } 25^\circ\text{C}) (A + BT + CT^2)$$

Where T = Temperature in  $^\circ\text{C}$

And	Conductivity @ 25 $^\circ\text{C}$ ( $\mu$ S/cm)	A	B	C
	1,000	0.5407	0.0173	0.000043
	10,000	0.5538	0.0168	0.000042
	100,000	0.5825	0.0157	0.000040

\*\*

**Instrument is Calibrated if Response is:**

- $\pm 6\%$  of calibration solution if reading is  $\leq 150$   $\mu\text{mhos/cm}$  on 500 scale;  $\leq 1500$   $\mu\text{mhos/cm}$  on 5000 scale; or  $\leq 15,000$   $\mu\text{mhos/cm}$  on 50,000 scale.
- $\pm 4.5\%$  to  $6\%$  of calibration solution if reading is  $> 150$  and  $< 300$   $\mu\text{mhos/cm}$  on 500 scale;  $> 1500$  and  $< 3000$   $\mu\text{mhos/cm}$  on 5000 scale; and  $> 15,000$  and  $< 30,000$   $\mu\text{mhos/cm}$  on 50,000 scale.
- $\pm 4.5\%$  of calibration solution if reading is  $\geq 300$   $\mu\text{mhos/cm}$  on 500 scale;  $\geq 3000$   $\mu\text{mhos/cm}$  on 5000 scale; and  $\geq 30,000$   $\mu\text{mhos/cm}$  on 50,000 scale.

# CONDUCTIVITY/SALINITY/TEMPERATURE METER FIELD CALIBRATION FORM

Project Name: JPL  
 Calibration by: D. DIRKIN Date: 1/23/98  
 Instrument Manufacturer: YSI Model: 3500  
 Serial Number: 92641039  
 Probe Manufacturer: YSI Model: 3520  
 Serial Number: 9780560  
 Calibration Solution Manufacturer: YSI  
 Solution Conductivity: 1,000  $\mu$ S/cm Solution Expiration Date: 12/98

## FIELD CALIBRATION

Time: 0815 Temperature of Solution: 6.5  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* 656  
 Instrument Response to Calibration Solution: 679  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

Time: 1505 Temperature of Solution: 17.6  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* 858  
 Instrument Response to Calibration Solution: 896  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

Time: \_\_\_\_\_ Temperature of Solution: \_\_\_\_\_  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* \_\_\_\_\_  
 Instrument Response to Calibration Solution: \_\_\_\_\_  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes: \_\_\_\_\_ No: \_\_\_\_\_

\*The Temperature Compensated Solution Conductivity May Be Computed Using Following Equation:  
 Conductivity ( $\mu$  S/cm) = (Conductivity at 25°C) (A + BT + CT<sup>2</sup>)  
 Where T = Temperature in °C

And	Conductivity @ 25°C ( $\mu$ S/cm)	A	B	C
	1,000	0.5407	0.0173	0.000043
	10,000	0.5538	0.0168	0.000042
	100,000	0.5825	0.0157	0.000040

\*\* Instrument is Calibrated if Response is:  
 ±6% of calibration solution if reading is ≤ 150  $\mu$ mhos/cm on 500 scale; ≤1500  $\mu$ mhos/cm on 5000 scale; or ≤15,000  $\mu$ mhos/cm on 50,000 scale.  
 ±4.5% to 6% of calibration solution if reading is > 150 and < 300  $\mu$ mhos/cm on 500 scale; > 1500 and < 3000  $\mu$ mhos/cm on 5000 scale; and > 15,000 and < 30,000  $\mu$ mhos/cm on 50,000 scale.  
 ± 4.5% of calibration solution if reading is ≥ 300  $\mu$ mhos/cm on 500 scale; ≥ 3000  $\mu$ mhos/cm on 5000 scale; and ≥ 30,000  $\mu$ mhos/cm on 50,000 scale.

# CONDUCTIVITY/SALINITY/TEMPERATURE METER FIELD CALIBRATION FORM

Project Name: JPL  
 Calibration by: D. Dierkin Date: 1/26/98  
 Instrument Manufacturer: YSI Model: 3500  
 Serial Number: 97041039  
 Probe Manufacturer: YSI Model: 3520  
 Serial Number: 97B0560  
 Calibration Solution Manufacturer: YSI  
 Solution Conductivity: 1,000  $\mu\text{S}/\text{cm}$  Solution Expiration Date: 12/98

## FIELD CALIBRATION

Time: 0800 Temperature of Solution: 7.7°C  
 Temperature Compensated Solution Conductivity ( $\mu\text{S}/\text{cm}$ )\* 929  
 Instrument Response to Calibration Solution: 923  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

Time: 1505 Temperature of Solution: 22.3  
 Temperature Compensated Solution Conductivity ( $\mu\text{S}/\text{cm}$ )\* 947  
 Instrument Response to Calibration Solution: 948  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

Time: \_\_\_\_\_ Temperature of Solution: \_\_\_\_\_  
 Temperature Compensated Solution Conductivity ( $\mu\text{S}/\text{cm}$ )\* \_\_\_\_\_  
 Instrument Response to Calibration Solution: \_\_\_\_\_  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes: \_\_\_\_\_ No: \_\_\_\_\_

\*The Temperature Compensated Solution Conductivity May Be Computed Using Following Equation:  

$$\text{Conductivity } (\mu\text{S}/\text{cm}) = (\text{Conductivity at } 25^\circ\text{C}) (A + BT + CT^2)$$
 Where T = Temperature in °C

And

Conductivity @ 25°C ( $\mu\text{S}/\text{cm}$ )	A	B	C
1,000	0.5407	0.0173	0.000043
10,000	0.5538	0.0168	0.000042
100,000	0.5825	0.0157	0.000040

\*\*

**Instrument is Calibrated if Response is:**

±6% of calibration solution if reading is  $\leq 150 \mu\text{mhos}/\text{cm}$  on 500 scale;  $\leq 1500 \mu\text{mhos}/\text{cm}$  on 5000 scale; or  $\leq 15,000 \mu\text{mhos}/\text{cm}$  on 50,000 scale.  
 ±4.5% to 6% of calibration solution if reading is  $> 150$  and  $< 300 \mu\text{mhos}/\text{cm}$  on 500 scale;  $> 1500$  and  $< 3000 \mu\text{mhos}/\text{cm}$  on 5000 scale; and  $> 15,000$  and  $< 30,000 \mu\text{mhos}/\text{cm}$  on 50,000 scale.  
 ± 4.5% of calibration solution if reading is  $\geq 300 \mu\text{mhos}/\text{cm}$  on 500 scale;  $\geq 3000 \mu\text{mhos}/\text{cm}$  on 5000 scale; and  $\geq 30,000 \mu\text{mhos}/\text{cm}$  on 50,000 scale.

# CONDUCTIVITY/SALINITY/TEMPERATURE METER FIELD CALIBRATION FORM

Project Name: JPL  
 Calibration by: D. DIRKIN Date: 1/27/98  
 Instrument Manufacturer: YSI Model: 3500  
 Serial Number: 92641039  
 Probe Manufacturer: YSI Model: 3520  
 Serial Number: 9730560  
 Calibration Solution Manufacturer: YSI  
 Solution Conductivity: 1,000  $\mu$ S/cm Solution Expiration Date: 12/98

## FIELD CALIBRATION

Time: 0730 Temperature of Solution: 7.0  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* 664  
 Instrument Response to Calibration Solution: 657  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

Time: 1445 Temperature of Solution: 23.6  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* 973  
 Instrument Response to Calibration Solution: 951  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

Time: \_\_\_\_\_ Temperature of Solution: \_\_\_\_\_  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* \_\_\_\_\_  
 Instrument Response to Calibration Solution: \_\_\_\_\_  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes: \_\_\_\_\_ No: \_\_\_\_\_

\*The Temperature Compensated Solution Conductivity May Be Computed Using Following Equation:

$$\text{Conductivity } (\mu \text{ S/cm}) = (\text{Conductivity at } 25^\circ\text{C}) (A + BT + CT^2)$$

Where T = Temperature in  $^\circ\text{C}$

And	Conductivity @ 25 $^\circ\text{C}$ ( $\mu$ S/cm)	A	B	C
	1,000	0.5407	0.0173	0.000043
	10,000	0.5538	0.0168	0.000042
	100,000	0.5825	0.0157	0.000040

\*\*

**Instrument is Calibrated if Response is:**

$\pm 6\%$  of calibration solution if reading is  $\leq 150$   $\mu$ mhos/cm on 500 scale;  $\leq 1500$   $\mu$ mhos/cm on 5000 scale; or  $\leq 15,000$   $\mu$ mhos/cm on 50,000 scale.

$\pm 4.5\%$  to  $6\%$  of calibration solution if reading is  $> 150$  and  $< 300$   $\mu$ mhos/cm on 500 scale;  $> 1500$  and  $< 3000$   $\mu$ mhos/cm on 5000 scale; and  $> 15,000$  and  $< 30,000$   $\mu$ mhos/cm on 50,000 scale.

$\pm 4.5\%$  of calibration solution if reading is  $\geq 300$   $\mu$ mhos/cm on 500 scale;  $\geq 3000$   $\mu$ mhos/cm on 5000 scale; and  $\geq 30,000$   $\mu$ mhos/cm on 50,000 scale.

# CONDUCTIVITY/SALINITY/TEMPERATURE METER FIELD CALIBRATION FORM

Project Name: JPL  
 Calibration by: T. BLANN Date: 1/20/98  
 Instrument Manufacturer: YSI Model: 3500  
 Serial Number: 92641039  
 Probe Manufacturer: YSI Model: 3520  
 Serial Number: 9780560  
 Calibration Solution Manufacturer: YSI  
 Solution Conductivity: 1,000  $\mu$ S/cm Solution Expiration Date: 12/98

## FIELD CALIBRATION

Time: 0800 Temperature of Solution: 5.4  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* 635  
 Instrument Response to Calibration Solution: 636  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

Time: 1445 Temperature of Solution: 23.1  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* 963  
 Instrument Response to Calibration Solution: 973  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

Time: \_\_\_\_\_ Temperature of Solution: \_\_\_\_\_  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* \_\_\_\_\_  
 Instrument Response to Calibration Solution: \_\_\_\_\_  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

\*The Temperature Compensated Solution Conductivity May Be Computed Using Following Equation:

$$\text{Conductivity } (\mu \text{ S/cm}) = (\text{Conductivity at } 25^\circ\text{C}) (A + BT + CT^2)$$

Where T = Temperature in  $^\circ\text{C}$

And	Conductivity @ 25 $^\circ\text{C}$ ( $\mu$ S/cm)	A	B	C
	1,000	0.5407	0.0173	0.000043
	10,000	0.5538	0.0168	0.000042
	100,000	0.5825	0.0157	0.000040

\*\*

**Instrument is Calibrated if Response is:**

- +6% of calibration solution if reading is  $\leq 150$   $\mu\text{mhos/cm}$  on 500 scale;  $\leq 1500$   $\mu\text{mhos/cm}$  on 5000 scale; or  $\leq 15,000$   $\mu\text{mhos/cm}$  on 50,000 scale.
- +4.5% to 6% of calibration solution if reading is  $> 150$  and  $< 300$   $\mu\text{mhos/cm}$  on 500 scale;  $> 1500$  and  $< 3000$   $\mu\text{mhos/cm}$  on 5000 scale; and  $> 15,000$  and  $< 30,000$   $\mu\text{mhos/cm}$  on 50,000 scale.
- $\pm 4.5\%$  of calibration solution if reading is  $\geq 300$   $\mu\text{mhos/cm}$  on 500 scale;  $\geq 3000$   $\mu\text{mhos/cm}$  on 5000 scale; and  $\geq 30,000$   $\mu\text{mhos/cm}$  on 50,000 scale.

# CONDUCTIVITY/SALINITY/TEMPERATURE METER FIELD CALIBRATION FORM

Project Name: JPL  
 Calibration by: D. DIRKIN Date: 1/29/98  
 Instrument Manufacturer: YSI Model: 3500  
 Serial Number: 92641039  
 Probe Manufacturer: YSI Model: 3520  
 Serial Number: 9730560  
 Calibration Solution Manufacturer: YSI  
 Solution Conductivity: 1,000  $\mu$ S/cm Solution Expiration Date: 12/98

## FIELD CALIBRATION

Time: 0830 Temperature of Solution: 11.6  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* 747  
 Instrument Response to Calibration Solution: 767  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

Time: 1540 Temperature of Solution: 18.6  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* 876  
 Instrument Response to Calibration Solution: 870  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

Time: \_\_\_\_\_ Temperature of Solution: \_\_\_\_\_  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* \_\_\_\_\_  
 Instrument Response to Calibration Solution: \_\_\_\_\_  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

\*The Temperature Compensated Solution Conductivity May Be Computed Using Following Equation:

$$\text{Conductivity } (\mu \text{ S/cm}) = (\text{Conductivity at } 25^\circ\text{C}) (A + BT + CT^2)$$

Where T = Temperature in  $^\circ\text{C}$

And	Conductivity @ 25 $^\circ\text{C}$ ( $\mu$ S/cm)	A	B	C
	1,000	0.5407	0.0173	0.000043
	10,000	0.5538	0.0168	0.000042
	100,000	0.5825	0.0157	0.000040

\*\*

**Instrument is Calibrated if Response is:**

$\pm 6\%$  of calibration solution if reading is  $\leq 150$   $\mu$ hos/cm on 500 scale;  $\leq 1500$   $\mu$ hos/cm on 5000 scale; or  $\leq 15,000$   $\mu$ hos/cm on 50,000 scale.

$\pm 4.5\%$  to  $6\%$  of calibration solution if reading is  $> 150$  and  $< 300$   $\mu$ hos/cm on 500 scale;  $> 1500$  and  $< 3000$   $\mu$ hos/cm on 5000 scale; and  $> 15,000$  and  $< 30,000$   $\mu$ hos/cm on 50,000 scale.

$\pm 4.5\%$  of calibration solution if reading is  $\geq 300$   $\mu$ hos/cm on 500 scale;  $\geq 3000$   $\mu$ hos/cm on 5000 scale; and  $\geq 30,000$   $\mu$ hos/cm on 50,000 scale.



# CONDUCTIVITY/SALINITY/TEMPERATURE METER FIELD CALIBRATION FORM

Project Name: JPL  
 Calibration by: L. DARRAGH Date: 1/30/98  
 Instrument Manufacturer: YSI Model: 3500  
 Serial Number: 92641039  
 Probe Manufacturer: YSI Model: 3520  
 Serial Number: 97130560  
 Calibration Solution Manufacturer: YSI  
 Solution Conductivity: 1,000  $\mu$ S/cm Solution Expiration Date: 12/98

## FIELD CALIBRATION

Time: 0800 Temperature of Solution: 5.1  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* 630  
 Instrument Response to Calibration Solution: 645  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

Time: 1500 Temperature of Solution: 22.3  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* 947  
 Instrument Response to Calibration Solution: 951  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

Time: \_\_\_\_\_ Temperature of Solution: \_\_\_\_\_  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* \_\_\_\_\_  
 Instrument Response to Calibration Solution: \_\_\_\_\_  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

\*The Temperature Compensated Solution Conductivity May Be Computed Using Following Equation:  
 Conductivity ( $\mu$  S/cm) = (Conductivity at 25°C) (A + BT + CT<sup>2</sup>)  
 Where T = Temperature in °C

And

Conductivity @ 25°C ( $\mu$ S/cm)	A	B	C
1,000	0.5407	0.0173	0.000043
10,000	0.5538	0.0168	0.000042
100,000	0.5825	0.0157	0.000040

\*\* **Instrument is Calibrated if Response is:**  
 ±6% of calibration solution if reading is ≤ 150  $\mu$ mhos/cm on 500 scale; ≤1500  $\mu$ mhos/cm on 5000 scale; or ≤15,000  $\mu$ mhos/cm on 50,000 scale.  
 ±4.5% to 6% of calibration solution if reading is > 150 and < 300  $\mu$ mhos/cm on 500 scale; > 1500 and < 3000  $\mu$ mhos/cm on 5000 scale; and > 15,000 and < 30,000  $\mu$ mhos/cm on 50,000 scale.  
 ± 4.5% of calibration solution if reading is ≥ 300  $\mu$ mhos/cm on 500 scale; ≥ 3000  $\mu$ mhos/cm on 5000 scale; and ≥ 30,000  $\mu$ mhos/cm on 50,000 scale.

# CONDUCTIVITY/SALINITY/TEMPERATURE METER FIELD CALIBRATION FORM

Project Name: JPL  
 Calibration by: L. DARZAGH Date: 2/2/98  
 Instrument Manufacturer: YSI Model: 3500  
 Serial Number: 92641039  
 Probe Manufacturer: YSI Model: 3520  
 Serial Number: 97B0560  
 Calibration Solution Manufacturer: YSI  
 Solution Conductivity: 1,000  $\mu$ S/cm Solution Expiration Date: 12/98

## FIELD CALIBRATION

Time: 0905 Temperature of Solution: 11.1  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* 730  
 Instrument Response to Calibration Solution: 764  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

Time: 1600 Temperature of Solution: 14.3  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* 796  
 Instrument Response to Calibration Solution: 812  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

Time: \_\_\_\_\_ Temperature of Solution: \_\_\_\_\_  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* \_\_\_\_\_  
 Instrument Response to Calibration Solution: \_\_\_\_\_  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

\*The Temperature Compensated Solution Conductivity May Be Computed Using Following Equation:

$$\text{Conductivity } (\mu \text{ S/cm}) = (\text{Conductivity at } 25^\circ\text{C}) (A + BT + CT^2)$$

Where T = Temperature in  $^\circ\text{C}$

And	Conductivity @ 25°C ( $\mu$ S/cm)	A	B	C
	1,000	0.5407	0.0173	0.000043
	10,000	0.5538	0.0168	0.000042
	100,000	0.5825	0.0157	0.000040

**\*\* Instrument is Calibrated if Response is:**

- $\pm 6\%$  of calibration solution if reading is  $\leq 150$   $\mu\text{mhos/cm}$  on 500 scale;  $\leq 1500$   $\mu\text{mhos/cm}$  on 5000 scale; or  $\leq 15,000$   $\mu\text{mhos/cm}$  on 50,000 scale.
- $\pm 4.5\%$  to  $6\%$  of calibration solution if reading is  $> 150$  and  $< 300$   $\mu\text{mhos/cm}$  on 500 scale;  $> 1500$  and  $< 3000$   $\mu\text{mhos/cm}$  on 5000 scale; and  $> 15,000$  and  $< 30,000$   $\mu\text{mhos/cm}$  on 50,000 scale.
- $\pm 4.5\%$  of calibration solution if reading is  $\geq 300$   $\mu\text{mhos/cm}$  on 500 scale;  $\geq 3000$   $\mu\text{mhos/cm}$  on 5000 scale; and  $\geq 30,000$   $\mu\text{mhos/cm}$  on 50,000 scale.

# CONDUCTIVITY/SALINITY/TEMPERATURE METER FIELD CALIBRATION FORM

Project Name: JPL  
 Calibration by: L. DARRON Date: 2.3.98  
 Instrument Manufacturer: YSZ Model: 3500  
 Serial Number: 92641039  
 Probe Manufacturer: YSZ Model: 3520  
 Serial Number: 9750560  
 Calibration Solution Manufacturer: YSZ  
 Solution Conductivity: 1,000 ms/cm Solution Expiration Date: 12/98

## FIELD CALIBRATION

Time: 0745 Temperature of Solution: 12.3  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* 700  
 Instrument Response to Calibration Solution: 490  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

Time: 1540 Temperature of Solution: 13.2  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* 777  
 Instrument Response to Calibration Solution: 800  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

Time: \_\_\_\_\_ Temperature of Solution: \_\_\_\_\_  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* \_\_\_\_\_  
 Instrument Response to Calibration Solution: \_\_\_\_\_  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

\*The Temperature Compensated Solution Conductivity May Be Computed Using Following Equation:

$$\text{Conductivity } (\mu \text{ S/cm}) = (\text{Conductivity at } 25^\circ\text{C}) (A + BT + CT^2)$$

Where T = Temperature in  $^\circ\text{C}$

And	Conductivity @ 25°C ( $\mu$ S/cm)	A	B	C
	1,000	0.5407	0.0173	0.000043
	10,000	0.5538	0.0168	0.000042
	100,000	0.5825	0.0157	0.000040

\*\*

**Instrument is Calibrated if Response is:**

$\pm 6\%$  of calibration solution if reading is  $\leq 150$   $\mu\text{mhos/cm}$  on 500 scale;  $\leq 1500$   $\mu\text{mhos/cm}$  on 5000 scale; or  $\leq 15,000$   $\mu\text{mhos/cm}$  on 50,000 scale.

$\pm 4.5\%$  to  $6\%$  of calibration solution if reading is  $> 150$  and  $< 300$   $\mu\text{mhos/cm}$  on 500 scale;  $> 1500$  and  $< 3000$   $\mu\text{mhos/cm}$  on 5000 scale; and  $> 15,000$  and  $< 30,000$   $\mu\text{mhos/cm}$  on 50,000 scale.

$\pm 4.5\%$  of calibration solution if reading is  $\geq 300$   $\mu\text{mhos/cm}$  on 500 scale;  $\geq 3000$   $\mu\text{mhos/cm}$  on 5000 scale; and  $\geq 30,000$   $\mu\text{mhos/cm}$  on 50,000 scale.

# CONDUCTIVITY/SALINITY/TEMPERATURE METER FIELD CALIBRATION FORM

Project Name: JPL  
 Calibration by: L. D'Anna Date: 2.4.98  
 Instrument Manufacturer: YSI Model: 3500  
 Serial Number: 92641039  
 Probe Manufacturer: YSI Model: 3520  
 Serial Number: 97B0560  
 Calibration Solution Manufacturer: YSI  
 Solution Conductivity: 1,000  $\mu\text{S/cm}^2$  Solution Expiration Date: 12/98

## FIELD CALIBRATION

Time: 0815 Temperature of Solution: 6.1  
 Temperature Compensated Solution Conductivity ( $\mu\text{S/cm}$ )\* 648  
 Instrument Response to Calibration Solution: 687  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

Time: 1630 Temperature of Solution: 17.2  
 Temperature Compensated Solution Conductivity ( $\mu\text{S/cm}$ )\* 851  
 Instrument Response to Calibration Solution: 869  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

Time: \_\_\_\_\_ Temperature of Solution: \_\_\_\_\_  
 Temperature Compensated Solution Conductivity ( $\mu\text{S/cm}$ )\* \_\_\_\_\_  
 Instrument Response to Calibration Solution: \_\_\_\_\_  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

\*The Temperature Compensated Solution Conductivity May Be Computed Using Following Equation:  
 $\text{Conductivity } (\mu\text{S/cm}) = (\text{Conductivity at } 25^\circ\text{C}) (A + BT + CT^2)$   
 Where T = Temperature in  $^\circ\text{C}$

And

Conductivity @ 25°C ( $\mu\text{S/cm}$ )	A	B	C
1,000	0.5407	0.0173	0.000043
10,000	0.5538	0.0168	0.000042
100,000	0.5825	0.0157	0.000040

\*\* Instrument is Calibrated if Response is:  
 ±6% of calibration solution if reading is  $\leq 150 \mu\text{mhos/cm}$  on 500 scale;  $\leq 1500 \mu\text{mhos/cm}$  on 5000 scale; or  $\leq 15,000 \mu\text{mhos/cm}$  on 50,000 scale.  
 ±4.5% to 6% of calibration solution if reading is  $> 150$  and  $< 300 \mu\text{mhos/cm}$  on 500 scale;  $> 1500$  and  $< 3000 \mu\text{mhos/cm}$  on 5000 scale; and  $> 15,000$  and  $< 30,000 \mu\text{mhos/cm}$  on 50,000 scale.  
 ± 4.5% of calibration solution if reading is  $\geq 300 \mu\text{mhos/cm}$  on 500 scale;  $\geq 3000 \mu\text{mhos/cm}$  on 5000 scale; and  $\geq 30,000 \mu\text{mhos/cm}$  on 50,000 scale.

# CONDUCTIVITY/SALINITY/TEMPERATURE METER FIELD CALIBRATION FORM

Project Name: JPL  
 Calibration by: J. BRENNER Date: 2/5/98  
 Instrument Manufacturer: YSI Model: 3500  
 Serial Number: 92G41039  
 Probe Manufacturer: YSI Model: 3520  
 Serial Number: 97B0560  
 Calibration Solution Manufacturer: YSI  
 Solution Conductivity: 1,000  $\mu$ S/cm Solution Expiration Date: 12/98

## FIELD CALIBRATION

Time: 0750 Temperature of Solution: 6.7  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* 657  
 Instrument Response to Calibration Solution: 699  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

Time: 1630 Temperature of Solution: 15.3  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* 816  
 Instrument Response to Calibration Solution: 818  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

Time: \_\_\_\_\_ Temperature of Solution: \_\_\_\_\_  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* \_\_\_\_\_  
 Instrument Response to Calibration Solution: \_\_\_\_\_  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes: \_\_\_\_\_ No: \_\_\_\_\_

\*The Temperature Compensated Solution Conductivity May Be Computed Using Following Equation:  

$$\text{Conductivity } (\mu \text{ S/cm}) = (\text{Conductivity at } 25^\circ\text{C}) (A + BT + CT^2)$$
 Where T = Temperature in  $^\circ\text{C}$

And

Conductivity @ 25 $^\circ\text{C}$ ( $\mu$ S/cm)	A	B	C
1,000	0.5407	0.0173	0.000043
10,000	0.5538	0.0168	0.000042
100,000	0.5825	0.0157	0.000040

\*\*

**Instrument is Calibrated if Response is:**

$\pm 6\%$  of calibration solution if reading is  $\leq 150$   $\mu\text{hos/cm}$  on 500 scale;  $\leq 1500$   $\mu\text{hos/cm}$  on 5000 scale; or  $\leq 15,000$   $\mu\text{hos/cm}$  on 50,000 scale.  
 $\pm 4.5\%$  to  $6\%$  of calibration solution if reading is  $> 150$  and  $< 300$   $\mu\text{hos/cm}$  on 500 scale;  $> 1500$  and  $< 3000$   $\mu\text{hos/cm}$  on 5000 scale; and  $> 15,000$  and  $< 30,000$   $\mu\text{hos/cm}$  on 50,000 scale.  
 $\pm 4.5\%$  of calibration solution if reading is  $\geq 300$   $\mu\text{hos/cm}$  on 500 scale;  $\geq 3000$   $\mu\text{hos/cm}$  on 5000 scale; and  $\geq 30,000$   $\mu\text{hos/cm}$  on 50,000 scale.

# CONDUCTIVITY/SALINITY/TEMPERATURE METER FIELD CALIBRATION FORM

Project Name: JPL  
 Calibration by: L. Darragh Date: 2.6.98  
 Instrument Manufacturer: YSI Model: 3500  
 Serial Number: 92641039  
 Probe Manufacturer: YSI Model: 3520  
 Serial Number: 97B0560  
 Calibration Solution Manufacturer: YSI  
 Solution Conductivity: 1000 µS/cm Solution Expiration Date: 12/98

## FIELD CALIBRATION

Time: 0845 Temperature of Solution: 11.1  
 Temperature Compensated Solution Conductivity (µ S/cm)\* 738  
 Instrument Response to Calibration Solution: 773  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

Time: 1315 Temperature of Solution: 13.8  
 Temperature Compensated Solution Conductivity (µ S/cm)\* 788  
 Instrument Response to Calibration Solution: 823  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

Time: \_\_\_\_\_ Temperature of Solution: \_\_\_\_\_  
 Temperature Compensated Solution Conductivity (µ S/cm)\* \_\_\_\_\_  
 Instrument Response to Calibration Solution: \_\_\_\_\_  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes: \_\_\_\_\_ No: \_\_\_\_\_

\*The Temperature Compensated Solution Conductivity May Be Computed Using Following Equation:

$$\text{Conductivity } (\mu \text{ S/cm}) = (\text{Conductivity at } 25^\circ\text{C}) (A + BT + CT^2)$$

Where T = Temperature in °C

And	Conductivity @ 25°C (µ S/cm)	A	B	C
	1,000	0.5407	0.0173	0.000043
	10,000	0.5538	0.0168	0.000042
	100,000	0.5825	0.0157	0.000040

\*\*

**Instrument is Calibrated if Response is:**

- ±6% of calibration solution if reading is ≤ 150 µmhos/cm on 500 scale; ≤1500 µmhos/cm on 5000 scale; or ≤15,000 µmhos/cm on 50,000 scale.
- ±4.5% to 6% of calibration solution if reading is > 150 and < 300 µmhos/cm on 500 scale; > 1500 and < 3000 µmhos/cm and 5000 scale; and > 15,000 and < 30,000 µmhos/cm on 50,000 scale.
- ± 4.5% of calibration solution if reading is ≥ 300 µmhos/cm on 500 scale; ≥ 3000 µmhos/cm on 5000 scale; and ≥ 30,000 µmhos/cm on 50,000 scale.

# CONDUCTIVITY/SALINITY/TEMPERATURE METER FIELD CALIBRATION FORM

Project Name: JPL  
 Calibration by: J. BIRNER Date: 2/9/98  
 Instrument Manufacturer: YSI Model: 3500  
 Serial Number: 92641039  
 Probe Manufacturer: YSI Model: 3520  
 Serial Number: 9730560  
 Calibration Solution Manufacturer: YSI  
 Solution Conductivity: 1,000  $\mu$ S/cm Solution Expiration Date: 12/98

## FIELD CALIBRATION

Time: 0800 Temperature of Solution: 5.1  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* 630  
 Instrument Response to Calibration Solution: 669  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

Time: 1620 Temperature of Solution: 16.3  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* 834  
 Instrument Response to Calibration Solution: 875  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

Time: \_\_\_\_\_ Temperature of Solution: \_\_\_\_\_  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* \_\_\_\_\_  
 Instrument Response to Calibration Solution: \_\_\_\_\_  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes: \_\_\_\_\_ No: \_\_\_\_\_

\*The Temperature Compensated Solution Conductivity May Be Computed Using Following Equation:

$$\text{Conductivity } (\mu \text{ S/cm}) = (\text{Conductivity at } 25^\circ\text{C}) (A + BT + CT^2)$$

Where T = Temperature in  $^\circ\text{C}$

And	Conductivity @ 25°C ( $\mu$ S/cm)	A	B	C
	1,000	0.5407	0.0173	0.000043
	10,000	0.5538	0.0168	0.000042
	100,000	0.5825	0.0157	0.000040

\*\*

**Instrument is Calibrated if Response is:**

$\pm 6\%$  of calibration solution if reading is  $\leq 150$   $\mu$ hos/cm on 500 scale;  $\leq 1500$   $\mu$ hos/cm on 5000 scale; or  $\leq 15,000$   $\mu$ hos/cm on 50,000 scale.

$\pm 4.5\%$  to  $6\%$  of calibration solution if reading is  $> 150$  and  $< 300$   $\mu$ hos/cm on 500 scale;  $> 1500$  and  $< 3000$   $\mu$ hos/cm on 5000 scale; and  $> 15,000$  and  $< 30,000$   $\mu$ hos/cm on 50,000 scale.

$\pm 4.5\%$  of calibration solution if reading is  $\geq 300$   $\mu$ hos/cm on 500 scale;  $\geq 3000$   $\mu$ hos/cm on 5000 scale; and  $\geq 30,000$   $\mu$ hos/cm on 50,000 scale.

# CONDUCTIVITY/SALINITY/TEMPERATURE METER FIELD CALIBRATION FORM

Project Name: JPL  
 Calibration by: D. DIRKIN Date: 2/10/98  
 Instrument Manufacturer: YSI Model: 3500  
 Serial Number: 92041039  
 Probe Manufacturer: YSI Model: 3520  
 Serial Number: 9730560  
 Calibration Solution Manufacturer: YSI  
 Solution Conductivity: 1,000  $\mu$ S/cm Solution Expiration Date: 12/98

## FIELD CALIBRATION

Time: 0800 Temperature of Solution: 6.6  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* 657  
 Instrument Response to Calibration Solution: 693  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

Time: 1400 Temperature of Solution: 17.2  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* 850  
 Instrument Response to Calibration Solution: 895  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

Time: \_\_\_\_\_ Temperature of Solution: \_\_\_\_\_  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* \_\_\_\_\_  
 Instrument Response to Calibration Solution: \_\_\_\_\_  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes: \_\_\_\_\_ No: \_\_\_\_\_

\*The Temperature Compensated Solution Conductivity May Be Computed Using Following Equation:  
 Conductivity ( $\mu$  S/cm) = (Conductivity at 25°C) (A + BT + CT<sup>2</sup>)  
 Where T = Temperature in °C

And

Conductivity @ 25°C ( $\mu$ S/cm)	A	B	C
1,000	0.5407	0.0173	0.000043
10,000	0.5538	0.0168	0.000042
100,000	0.5825	0.0157	0.000040

**\*\* Instrument is Calibrated if Response is:**

±6% of calibration solution if reading is ≤ 150  $\mu$ mhos/cm on 500 scale; ≤1500  $\mu$ mhos/cm on 5000 scale;  
 or ≤15,000  $\mu$ mhos/cm on 50,000 scale.  
 ±4.5% to 6% of calibration solution if reading is > 150 and < 300  $\mu$ mhos/cm on 500 scale; > 1500 and  
 < 3000  $\mu$ mhos/cm and 5000 scale; and > 15,000 and < 30,000  $\mu$ mhos/cm on 50,000 scale.  
 ± 4.5% of calibration solution if reading is ≥ 300  $\mu$ mhos/cm on 500 scale; ≥ 3000  $\mu$ mhos/cm on 5000  
 scale; and ≥ 30,000  $\mu$ mhos/cm on 50,000 scale.



# CONDUCTIVITY/SALINITY/TEMPERATURE METER FIELD CALIBRATION FORM

Project Name: JPL  
 Calibration by: D. DIRKIN Date 2/11/98  
 Instrument Manufacturer: YSI Model: 3500  
 Serial Number: 92641039  
 Probe Manufacturer: YSI Model: 3520  
 Serial Number: 9780650  
 Calibration Solution Manufacturer: YSI  
 Solution Conductivity: 1,000  $\mu$ S/cm Solution Expiration Date: 12/98

## FIELD CALIBRATION

Time: 0745 Temperature of Solution: 6.8  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* 660  
 Instrument Response to Calibration Solution: 699  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

Time: 1520 Temperature of Solution: 18.1  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* 868  
 Instrument Response to Calibration Solution: 918  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

Time: \_\_\_\_\_ Temperature of Solution: \_\_\_\_\_  
 Temperature Compensated Solution Conductivity ( $\mu$  S/cm)\* \_\_\_\_\_  
 Instrument Response to Calibration Solution: \_\_\_\_\_  
 Instrument Response within Instrument and Probe Limits of Error: \*\* Yes:  No:

\*The Temperature Compensated Solution Conductivity May Be Computed Using Following Equation:  

$$\text{Conductivity } (\mu \text{ S/cm}) = (\text{Conductivity at } 25^\circ\text{C}) (A + BT + CT^2)$$
 Where T = Temperature in  $^\circ\text{C}$

And	Conductivity @ 25°C ( $\mu$ S/cm)	A	B	C
	1,000	0.5407	0.0173	0.000043
	10,000	0.5538	0.0168	0.000042
	100,000	0.5825	0.0157	0.000040

**\*\* Instrument is Calibrated if Response is:**

- $\pm 6\%$  of calibration solution if reading is  $\leq 150$   $\mu\text{mhos/cm}$  on 500 scale;  $\leq 1500$   $\mu\text{mhos/cm}$  on 5000 scale; or  $\leq 15,000$   $\mu\text{mhos/cm}$  on 50,000 scale.
- $\pm 4.5\%$  to  $6\%$  of calibration solution if reading is  $> 150$  and  $< 300$   $\mu\text{mhos/cm}$  on 500 scale;  $> 1500$  and  $< 3000$   $\mu\text{mhos/cm}$  on 5000 scale; and  $> 15,000$  and  $< 30,000$   $\mu\text{mhos/cm}$  on 50,000 scale.
- $\pm 4.5\%$  of calibration solution if reading is  $\geq 300$   $\mu\text{mhos/cm}$  on 500 scale;  $\geq 3000$   $\mu\text{mhos/cm}$  on 5000 scale; and  $\geq 30,000$   $\mu\text{mhos/cm}$  on 50,000 scale.

**APPENDIX D**  
**LABORATORY ANALYTICAL REPORTS**  
**AND**  
**CHAIN-OF-CUSTODY FORMS**

# ANALYTICAL RESULTS INDEX

## GROUNDWATER SAMPLES

Well Number	Report Number	Sample Number	Tab Number	Date Sampled
MW-1	40523	MW-981-079	19	2/10/98
MW-3-1	40277	MW-981-078	9	1/27/98
MW-3-2	40277	MW-981-077	9	1/27/98
MW-3-3	40227	MW-981-076	9	1/27/98
MW-3-3 MS	40227	MW-981-076 MS	9	1/27/98
MW-3-3 MSD	40227	MW-981-076 MSD	9	1/27/98
MW-3-4	40194	MW-981-075	8	1/26/98
MW-3-5	40194	MW-981-074	8	1/26/98
MW-4-1	40255	MW-981-073	10	1/28/98
MW-4-2	40255	MW-981-072	10	1/28/98
MW-4-2 Dup	40255	MW-981-071	10	1/28/98
MW-4-3	40255	MW-981-070	10	1/28/98
MW-4-4	40277	MW-981-069	9	1/27/98
MW-4-4 MS	40277	MW-981-069 MS	9	1/27/98
MW-4-4 MSD	40277	MW-981-069 MSD	9	1/27/98
MW-4-5	40277	MW-981-068	9	1/27/98
MW-5	40523	MW-981-067	19	2/10/98
MW-6	40523	MW-981-066	19	2/10/98
MW-6 MS	40523	MW-981-066 MS	19	2/10/98
MW-6 MSD	40523	MW-981-066 MSD	19	2/10/98
MW-7	40550	MW-981-065	20	2/11/98
MW-7 MS	40550	MW-981-065 MS	20	2/11/98
MW-7 MSD	40550	MW-981-065 MSD	20	2/11/98
MW-8	40550	MW-981-064	20	2/11/98
MW-9	40523	MW-981-063	19	2/10/98
MW-10	40523	MW-981-062	19	2/10/98
MW-10 Dup	40523	MW-981-061	19	2/10/98
MW-11-1	40289	MW-981-060	11	1/29/98
MW-11-2	40289	MW-981-059	11	1/29/98
MW-11-3	40289	MW-981-058	11	1/29/98
MW-11-3 MS	40289	MW-981-058 MS	11	1/29/98
MW-11-3 MSD	40289	MW-981-058 MSD	11	1/29/98
MW-11-4	40255	MW-981-057	10	1/28/98
MW-11-5	40255	MW-981-056	10	1/28/98
MW-11-5 MS	40255	MW-981-056 MS	10	1/28/98
MW-11-5 MSD	40255	MW-981-056 MSD	10	1/28/98
MW-12-1	40314	MW-981-055	12	1/30/98
MW-12-1 MS	40314	MW-981-055 MS	12	1/30/98
MW-12-1 MSD	40314	MW-981-055 MSD	12	1/30/98
MW-12-2	40314	MW-981-054	12	1/30/98
MW-12-2 MS	40314	MW-981-054 MS	12	1/30/98
MW-12-2 MSD	40314	MW-981-054 MSD	12	1/30/98
MW-12-2 Dup	40314	MW-981-053	12	1/30/98
MW-12-3	40314	MW-981-052	12	1/30/98
MW-12-4	40289	MW-981-051	11	1/29/98

# ANALYTICAL RESULTS INDEX

## GROUNDWATER SAMPLES

Well Number	Report Number	Sample Number	Tab Number	Date Sampled
MW-12-5	40289	MW-981-050	11	1/29/98
MW-13	40194	MW-981-049	8	1/26/98
MW-13 MS	40194	MW-981-049 MS	8	1/26/98
MW-13 MSD	40194	MW-981-049 MSD	8	1/26/98
MW-13 Dup	40194	MW-981-048	8	1/26/98
MW-14-1	40170	MW-981-047	7	1/23/98
MW-14-2	40170	MW-981-046	7	1/23/98
MW-14-3	40170	MW-981-045	7	1/23/98
MW-14-4	40170	MW-981-044	7	1/23/98
MW-14-5	40170	MW-981-043	7	1/23/98
MW-15	40523	MW-981-042	19	2/10/98
MW-16	40550	MW-981-041	20	2/11/98
MW-17-1	40007	MW-981-040	3	1/16/98
MW-17-2	39973	MW-981-039	2	1/15/98
MW-17-3	40007	MW-981-038	3	1/16/98
MW-17-3 MS	40007	MW-981-038 MS	3	1/16/98
MW-17-3 MSD	40007	MW-981-038 MSD	3	1/16/98
MW-17-4	40007	MW-981-037	3	1/16/98
MW-17-5	40007	MW-981-036	3	1/16/98
MW-17-5 MS	40007	MW-981-036 MS	3	1/16/98
MW-17-5 MSD	40007	MW-981-036 MSD	3	1/16/98
MW-18-1	ns	MW-981-035	n/a	n/a
MW-18-2	39973	MW-981-034	2	1/15/98
MW-18-3	39941	MW-981-033	1	1/14/98
MW-18-4	39941	MW-981-032	1	1/14/98
MW-18-5	39941	MW-981-031	1	1/14/98
MW-18-5 MS	39941	MW-981-031 MS	1	1/14/98
MW-18-5 MSD	39941	MW-981-031 MSD	1	1/14/98
MW-19-1	40054	MW-981-030	5	1/21/98
MW-19-2	40054	MW-981-029	5	1/21/98
MW-19-3	40054	MW-981-028	5	1/21/98
MW-19-4	40054	MW-981-027	5	1/21/98
MW-19-5	40054	MW-981-026	5	1/21/98
MW-19-5 MS	40054	MW-981-026 MS	5	1/21/98
MW-19-5 MSD	40054	MW-981-026 MSD	5	1/21/98
MW-20-1	40037	MW-981-025	4	1/20/98
MW-20-2	40037	MW-981-024	4	1/20/98
MW-20-3	40037	MW-981-023	4	1/20/98
MW-20-4	40037	MW-981-022	4	1/20/98
MW-20-5	40037	MW-981-021	4	1/20/98
MW-21-1	40550	MW-981-020	20	2/11/98
MW-21-2	40122	MW-981-019	6	1/22/98
MW-21-2 MS	40122	MW-981-019 MS	6	1/22/98
MW-21-2 MSD	40122	MW-981-019 MSD	6	1/22/98
MW-21-3	40122	MW-981-018	6	1/22/98

# ANALYTICAL RESULTS INDEX

## GROUNDWATER SAMPLES

Well Number	Report Number	Sample Number	Tab Number	Date Sampled
MW-21-4	40122	MW-981-017	6	1/22/98
MW-21-5	40122	MW-981-016	6	1/22/98
MW-22-1	40463	MW-981-015	17	2/6/98
MW-22-2	40406	MW-981-014	15	2/4/98
MW-22-3	40406	MW-981-013	15	2/4/98
MW-22-4	40406	MW-981-012	15	2/4/98
MW-22-5	40406	MW-981-011	15	2/4/98
MW-22-5 MS	40406	MW-981-011 MS	15	2/4/98
MW-22-5 MSD	40406	MW-981-011 MSD	15	2/4/98
MW-23-1	40488	MW-981-010	18	2/9/98
MW-23-2	40488	MW-981-009	18	2/9/98
MW-23-3	40488	MW-981-008	18	2/9/98
MW-23-4	40488	MW-981-007	18	2/9/98
MW-23-5	40488	MW-981-006	18	2/9/98
MW-23-5 MS	40488	MW-981-006 MS	18	2/9/98
MW-23-5 MSD	40488	MW-981-006 MSD	18	2/9/98
MW-24-1	40331	MW-981-005	13	2/2/98
MW-24-2	40363	MW-981-004	14	2/3/98
MW-24-3	40441	MW-981-003	16	2/5/98
MW-24-4	40331	MW-981-002	13	2/2/98
MW-24-5	40314	MW-981-001	12	1/30/98

ns = not sampled, no water over screened interval

n/a = not applicable

# ANALYTICAL RESULTS INDEX

## QA/QC SAMPLE BLANKS

Sample Type	Report Number	Sample Number	Tab Number	Date Sampled
TB	39941	MW-973-80	1	1/14/98
EB	39941	MW-973-81	1	1/14/98
TB	39973	MW-973-82	2	1/15/98
EB	39973	MW-973-83	2	1/15/98
TB	40007	MW-973-84	3	1/16/98
EB	40007	MW-973-85	3	1/16/98
TB	40037	MW-973-86	4	1/20/98
EB	40037	MW-973-87	4	1/20/98
TB	40054	MW-973-88	5	1/21/98
EB	40054	MW-973-89	5	1/21/98
TB	40122	MW-973-90	6	1/22/98
EB	40122	MW-973-91	6	1/22/98
TB	40170	MW-973-92	7	1/23/98
EB	40170	MW-973-93	7	1/23/98
TB	40194	MW-973-94	8	1/26/98
EB	40194	MW-973-95	8	1/26/98
TB	40227	MW-973-96	9	1/27/98
EB	40227	MW-973-97	9	1/27/98
EB	40255	MW-973-99	10	1/28/98
TB	40255	MW-973-100	10	1/28/98
TB	40289	MW-973-101	11	1/29/98
EB	40289	MW-973-102	11	1/29/98
EB	40314	MW-973-103	12	1/30/98
TB	40331	MW-973-104	13	2/2/98
EB	40331	MW-973-105	13	2/2/98
TB	40363	MW-973-106	14	2/3/98
EB	40363	MW-973-107	14	2/3/98
TB	40406	MW-973-108	15	2/4/98
EB	40406	MW-973-109	15	2/4/98
TB	40441	MW-973-110	16	2/5/98
EB	40441	MW-973-111	16	2/5/98
TB	40463	MW-973-112	17	2/6/98
EB	40463	MW-973-113	17	2/6/98
TB	40488	MW-973-114	18	2/9/98
EB	40488	MW-973-115	18	2/9/98
TB	40523	MW-973-116	19	2/10/98
TB	40550	MW-973-117	20	2/11/98
EB	40550	MW-973-118	20	2/11/98
TB	40314	MW-973-119	12	1/30/98
FB	40550	MW-973-200	20	2/11/98

EB = Equipment Blank

TB= Trip Blank

FB = Field Blank

# Table of Contents

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**MONTGOMERY WATSON LABORATORIES**

February 17, 1998

Foster Wheeler Environmental  
611 Anton Blvd Suite 800  
Costa Mesa, CA.92626

Attention: Mark Cutler

Re: Report # 39941 (MW-981-080, -081, -031, -031MS, -  
031MSD, -032, -033)

Dear Mark,

Enclosed please find data deliverables for the recent JPL project. A detailed quality control (QC) summary follows:

**Non-conformance (LCS,MS/MSD, Surrogates, and Holding Times):**

The MSD for Iron associated with this set had high recovery. FWEN sample ID MW-981-036MSD was used. High recovery for iron may be due to contamination from the wire holding the tag which occurred during the prep of the MSD.

**Samples requiring dilution (with increased MRL's):**

NONE

**Method blanks with compounds detected:**

NONE

**Other Comments:**

Extra volume for MW-981-031 metals and VOC's was submitted for MS/MSD QC batching, for use as needed by the laboratory. This sample volume was not used for QC batching for the metals analysis. 980114213, MW-981-031 MS was not spiked. It was analyzed for As, Cr, Pb. data was reported for Duplicate comparison only. 980114214, MW-981-031 MSD was spiked and analyzed for As, Cr, and Pb. It was used for analytical QC requirement of MS every 10<sup>th</sup> sample analyzed. This sample is not used for QC batching. Data reported is the recovered concentration of analyte less the original sample. These samples are deleted from the disk deliverable because they are not used for QC batching.

Carbon Tetrachloride was detected in sample ID: MW-981-032

Chloroform was detected in sample ID: MW-981-032, -033

Tetrachloroethylene was detected in sample ID: MW-981-032, -033

Trichloroethylene was detected in sample ID: MW-981-033

Perchlorate was detected in sample ID: MW-981-032

**TICs**

An unknown volatile compound (RT 4.33) was detected in sample ID: MW-981-033

**Method Variance:**

MWlabs was experiencing difficulty in achieving the required Detection limit for Calcium by Flame AA analysis, EPA 215.1. Permission was granted by Mark Cutler 2/3/98 to analyze by ICP, EPA 200.7

Sincerely,

Debbie Frank  
Project Manager

cc: Judy Novelly (JPL)

a Division of Montgomery Watson Americas, Inc.  
555 East Walnut Street  
Pasadena, California 91101  
Tel: 626 568 6400  
Fax: 626 568 6324

Quality Environmental Analysis



ACKNOWLEDGMENT OF SAMPLES RECEIVED

Foster Wheeler Environmental, Inc  
 611 Anton Boulevard  
 Suite 800  
 Costa Mesa, CA 92626  
 Attn: Mark Cutler

Customer Code: ENSERCH  
 PO#: Sub PO#007618  
 Group#: 39941  
 Project#: JPL  
 Proj Mgr: Debbie Frank  
 Phone: (714) 444-5526

The following samples were received from you on 01/14/98. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using Montgomery Watson Laboratories.

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
980114210	MW-981-080	@EBASVOA	Water	01/14/98
980114211	MW-981-081	@EBASVOA CR-MS CLO4	Water AS-GF PB-MS CR-VI	01/14/98
980114212	MW-981-031	@EBASVOA CR-MS CATION ANION1 ALK NO3 NA-FL MG-FL	Water AS-GF PB-MS PH EC SO4 CL CA-FL CR-VI	01/14/98
980114213	MW-981-031 MS	@EBASVOA CR-MS	Water AS-GF PB-MS	01/14/98
980114214	MW-981-031 MSD	@EBASVOA CR-MS	Water AS-GF PB-MS	01/14/98
980114215	MW-981-032	@EBASVOA CR-MS CATION ANION1 ALK NO3 NA-FL MG-FL	Water AS-GF PB-MS PH EC SO4 CL CA-FL CR-VI	01/14/98
980114216	MW-981-033	@EBASVOA CLO4 NA-FL K-FL ALK CO3 CATION TDS	Water CR-VI CA-FL MG-FL FE-MS CL HCO3 EC PB-MS AS-GF	01/14/98

Test Acronym Description

Test Acronym	Description
@EBASVOA	Regulated VOCs plus Lists 1&3
ALK	Alkalinity
ANION1	Anion Sum
AS-GF	Arsenic, Total, GF

Foster Wheeler Environmental, Inc  
611 Anton Boulevard  
Suite 800  
Costa Mesa, CA 92626  
Attn: Mark Cutler

Customer Code: ENSERCH  
PO#: Sub PO#007618  
Group#: 39941  
Project#: JPL  
Proj Mgr: Debbie Frank  
Phone: (714) 444-5526

---

Test Acronym Description

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Test Acronym	Description
CA-FL	Calcium, Flame AA
CATION	Cation Sum
CL	Chloride
CLO4	Perchlorate
CO3	Carbonate as CO3, Calculated
CR-MS	Chromium, Total, ICAP/MS
CR-VI	Hexavalent chromium (Cr VI)
EC	Specific Conductance
FE-MS	Iron, Total, ICAP/MS
HCO3	Bicarbonate as HCO3, calculated
K-FL	Potassium, Flame AA
MG-FL	Magnesium, Flame AA
NA-FL	Sodium, Flame AA
NO3	Nitrate-N by IC
PB-MS	Lead, Total, ICAP/MS
PH	Lab pH
SO4	Sulfate
TDS	Total Dissolved Solid (TDS)



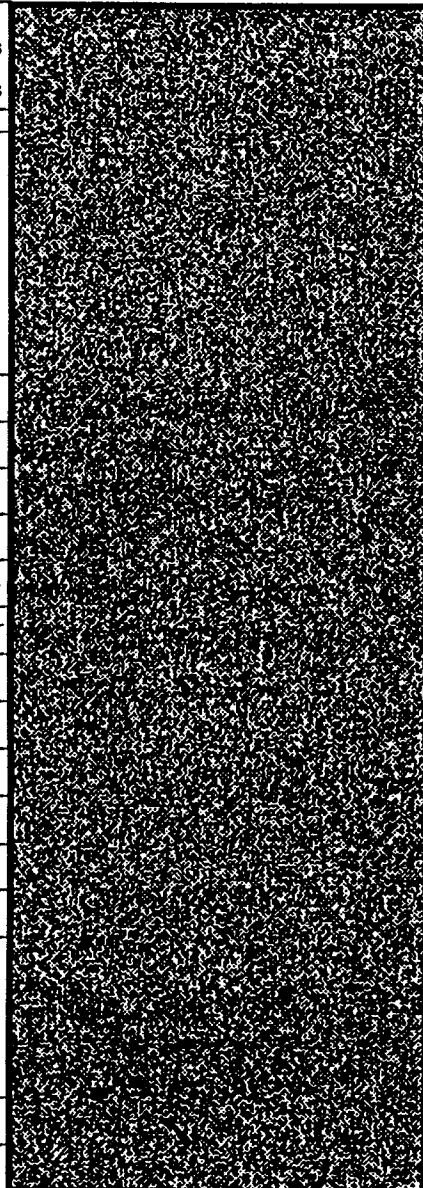
39941

NO 1021

# FOSTER WHEELER ENVIRONMENTAL CORPORATION CHAIN OF CUSTODY FORM REQUEST FOR ANALYSIS

Page 1 of 1

Project: <u>JPL</u>		OFS No. <u>1572.0233</u>		HAZARD IDENTIFICATION:		Time Required												
Project Address: <u>4800 OAK GROVE DR PASADENA CA</u>		Sampler (Name): <u>J. BRAINER</u>		Sampler (Signature): <u>[Signature]</u>		Nonhazard <input checked="" type="checkbox"/> Reactive <input type="checkbox"/> Flammable <input type="checkbox"/> Toxic <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Infectious <input type="checkbox"/>												
Laboratory: <u>MONTGOMERY LABS</u>		Reports to Be Sent to: <u>MR. MARK CUTLER</u>		ANALYSES REQUIRED														
SAMPLE NUMBER	TIME COLLECTED	DATE COLLECTED	NUMBER OF CONTAINERS	CONTAINER SIZE(S)	SAMPLE MATERIAL			VOCs (52+2)	TOTAL Cr, As, Pb	MAJOR ANIONS	HEX. CR.	PERCHLORATE	MS VOCs	MSD VOCs				
					WATER	SOIL	OTHER (Describe)											
MW-981-080	1100	1/14/93	2	2x40ml	X			X						9801	4210			
MW-981-081	1350	↓	5	2x40ml 1x25ml 2x125ml	X			X	X		X	X					11	
MW-981-031	1225		6	2x40ml 1x25ml 1x125ml 1x50ml	X			X	X	X	X	X						12
MW-981-031MS	1225		3	2x40ml 1x250ml	X			X					X					13
MW-981-031MSD	1225		3	2x40ml 1x250ml	X			X						X				14
MW-981-032	1430		6	2x40ml 1x250ml 2x125ml 1x50ml	X			X	X	X	X	X						15
MW-981-033	1550		6	2x40ml 1x25ml 2x125ml 1x50ml	X			X	X	X	X	X						16
LABORATORY INSTRUCTIONS/COMMENTS:  <p style="text-align: center;">LEVEL IV QA/QC</p>																		
Relinquished by: (Signature) <u>[Signature]</u>		Date: <u>1/14/93</u>		Received by: (Signature) <u>[Signature]</u>		Date: <u>1/14/93</u>		Relinquished by: (Signature)		Date: <u>1/14/93</u>		Received by: (Signature)		Company: <u>FWR</u>		Time: <u>1700</u>		
Company: <u>FWR</u>		Time: <u>1700</u>		Company: <u>MW</u>		Time: <u>17:00</u>		Company:		Time:		Company:						



MONTGOMERY LABORATORIES COOLER RECEIPT FORM

PROJECT: JPL Date Received: 1/14/98  
Use other side of this form to note further details concerning check-in problems and to describe any action(s) regarding the resolution(s) of problems.

A. PRELIMINARY EXAMINATION: Date cooler opened: 1/14/98  
by (print) \_\_\_\_\_ (sign) \_\_\_\_\_

1. Did cooler come with shipping slip (air bill, etc.)? Yes  No  
If YES, attach & enter carrier and air bill # here: \_\_\_\_\_

2. Were custody seals on outside of cooler? Yes  No  
If YES, how many & where: \_\_\_\_\_  
If Yes, enter the following: seal date: \_\_\_\_\_, seal name: \_\_\_\_\_

3. Were custody seals unbroken & intact at delivery?  Yes No  
*FOR BOTTLES*

4. Were custody papers sealed in bag & taped to lid? Yes  No

5. Were custody papers filled out properly (ink, etc.)  Yes No

6. Did you sign custody papers in appropriate place?  Yes No

7. Was project identifiable from custody papers?  Yes No

8. Have designated person(s) initial to acknowledge receipt: Wt (date) 1/14/98

B. LOG-IN PHASE: Date samples were logged-in: 1-14-98 by:  
(print) M. DE MESA (sign) \_\_\_\_\_

9. Describe packing: \_\_\_\_\_

10. If required, was enough ice used?  Yes No

11. Were all bottles sealed in separate plastic bags?  Yes No

12. Did all bottles arrive unbroken/in good condition?  Yes No

13. Were all bottle labels complete (ID,date,sign,pres)?  Yes No

14. Did all bottle labels agree with custody papers?  
If NO, indicate discrepancies on back.  Yes No

15. Were correct containers used for the analytes?  Yes No

16. Were correct preservatives used when required?  Yes No

17. Was sufficient amount of sample sent for tests?  Yes No

18. Bubbles absent in VOA vials?  
If NO, list by sample id on back.  Yes No

19. Was Client Services informed of problems?  Yes No  
*new 981 022 TAG 7537 -> NO heads pacc - ok  
to analyze  
the samples  
this is.*

Report Summary of positive results, PR39941

			Result	MDL	UNITS
Analyzed	980114210	MW-981-080			
Analyzed	980114211	MW-981-081			
Analyzed	980114212	MW-981-031			
01/28/98	Alkalinity		135	2.000	MGL
02/04/98	Anion Sum		3.11	.001	MEQL
02/04/98	Bicarbonate as HCO3,calculated		159	.001	MGL
02/03/98	Calcium, Flame AA		8.5	1.000	MGL
02/04/98	Carbonate as CO3, Calculated		13.0	.001	MGL
02/04/98	Cation Sum		3.35	.001	MEQL
01/15/98	Chloride		10	1.000	MGL
01/17/98	Lab pH		9.1	.001	UNIT
02/04/98	Magnesium, Flame AA		4.9	1.000	MGL
01/15/98	Nitrate-N by IC		0.11	.100	MGL
02/04/98	Potassium, Flame AA		1.8	1.000	MGL
02/04/98	Sodium, Flame AA		57	1.000	MGL
01/16/98	Specific Conductance		325	4.000	UMHO
01/15/98	Sulfate		5.9	2.000	MGL
01/20/98	Total Dissolved Solid (TDS)		180	10.000	MGL
Analyzed	980114213	MW-981-031 MS			
01/20/98	1,1-Dichloroethylene		4.20	.500	UGL
01/20/98	1,2,4-Trichlorobenzene		4.86	.500	UGL
01/20/98	Benzene		4.56	.500	UGL
01/20/98	Chlorobenzene		4.64	.500	UGL
01/20/98	Chloroform (Trichloromethane)		4.75	.500	UGL
01/20/98	Toluene		4.61	.500	UGL
01/20/98	Trichloroethylene (TCE)		4.62	.500	UGL
01/20/98	p-Chlorotoluene		4.13	.500	UGL
01/20/98	p-Dichlorobenzene (1,4-DCB)		4.15	.500	UGL
Analyzed	980114214	MW-981-031 MSD			
01/20/98	1,1-Dichloroethylene		4.17	.500	UGL
01/20/98	1,2,4-Trichlorobenzene		3.95	.500	UGL
01/20/98	Benzene		4.39	.500	UGL
01/20/98	Chlorobenzene		4.21	.500	UGL
01/20/98	Chloroform (Trichloromethane)		4.33	.500	UGL
01/20/98	Toluene		4.61	.500	UGL
01/20/98	Trichloroethylene (TCE)		4.22	.500	UGL
01/20/98	p-Chlorotoluene		3.81	.500	UGL
01/20/98	p-Dichlorobenzene (1,4-DCB)		4.04	.500	UGL
01/26/98	Arsenic, Total, GF		0.0221	.005	MGL
01/28/98	Chromium, Total, ICAP/MS		104	10.000	UGL
01/28/98	Lead, Total, ICAP/MS		20.1	2.000	UGL
Analyzed	980114215	MW-981-032			
01/20/98	Carbon Tetrachloride		2.6	.500	UGL
01/20/98	Chloroform (Trichloromethane)		0.5	.500	UGL
01/20/98	Tetrachloroethylene (PCE)		1.0	.500	UGL

01/28/98	Alkalinity	160	2.000	MGL
02/04/98	Anion Sum	3.98	.001	MEQL
02/04/98	Bicarbonate as HCO3,calculated	195	.001	MGL
02/03/98	Calcium, Flame AA	41	1.000	MGL
02/04/98	Carbonate as CO3, Calculated	1.60	.001	MGL
02/04/98	Cation Sum	4.39	.001	MEQL
01/15/98	Chloride	8.8	1.000	MGL
01/28/98	Iron, Total, ICAP/MS	260	*****	UGL
01/17/98	Lab pH	8.1	.001	UNIT
02/04/98	Magnesium, Flame AA	10	1.000	MGL
01/15/98	Nitrate-N by IC	0.74	.100	MGL
01/28/98	Perchlorate	11	4.000	UGL
02/04/98	Potassium, Flame AA	1.6	1.000	MGL
02/04/98	Sodium, Flame AA	34	1.000	MGL
01/16/98	Specific Conductance	410	4.000	UMHO
01/15/98	Sulfate	23	2.000	MGL
01/20/98	Total Dissolved Solid (TDS)	240	10.000	MGL

Analyzed 980114216 MW-981-033

01/20/98	Chloroform (Trichloromethane)	6.6	.500	UGL
01/20/98	Tetrachloroethylene (PCE)	1.7	.500	UGL
01/20/98	Trichloroethylene (TCE)	1.9	.500	UGL
01/28/98	Alkalinity	190	2.000	MGL
02/04/98	Anion Sum	5.01	.001	MEQL
02/04/98	Bicarbonate as HCO3,calculated	231	.001	MGL
02/03/98	Calcium, Flame AA	57	1.000	MGL
02/04/98	Carbonate as CO3, Calculated	1.50	.001	MGL
02/04/98	Cation Sum	5.50	.001	MEQL
01/15/98	Chloride	15	1.000	MGL
01/28/98	Iron, Total, ICAP/MS	160	*****	UGL
01/17/98	Lab pH	8.0	.001	UNIT
02/04/98	Magnesium, Flame AA	19	1.000	MGL
01/15/98	Nitrate-N by IC	0.74	.100	MGL
02/04/98	Potassium, Flame AA	3.3	1.000	MGL
02/04/98	Sodium, Flame AA	23	1.000	MGL
01/16/98	Specific Conductance	510	4.000	UMHO
01/15/98	Sulfate	35	2.000	MGL
01/20/98	Total Dissolved Solid (TDS)	290	10.000	MGL



**MONTGOMERY WATSON LABORATORIES**

555 East Walnut Street  
Pasadena, California 91101  
818 568 6400; Fax: 818 568 6324;  
1 800 566 LABS (1 800 566 5227)

**Laboratory Report**

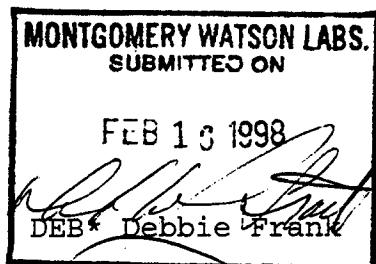
for

Foster Wheeler Environmental, Inc  
611 Anton Boulevard

Suite 800

Costa Mesa , CA 92626

Attention: Mark Cutler  
Fax: (714)444-5560



Report#: 39941  
JPL



**MONTGOMERY WATSON LABORATORIES**

555 East Walnut Street  
Pasadena, California 91101  
818 568 6400; Fax: 818 568 6324;  
1 800 566 LABS (1 800 566 5227)

Laboratory  
Report  
#39941

Foster Wheeler Environmental, Inc  
Mark Cutler  
611 Anton Boulevard  
Suite 800  
Costa Mesa , CA 92626

Samples Received  
14-jan-1998 18:09:02

Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
MW-981-080 (980114210)				Sampled on 01/14/98				
<b>Regulated VOCs plus Lists 1&amp;3</b>								
01/21/98	72174	( ML/EPA 524.2 )	1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,1,1-Trichloroethane	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,1,2-Trichloroethane	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,1-Dichloroethane	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,1-Dichloroethylene	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,1-Dichloropropene	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,2,3-Trichlorobenzene	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,2,3-Trichloropropane	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,2,4-Trichlorobenzene	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,2,4-Trimethylbenzene	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,2-Dichloroethane	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,2-Dichloropropane	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,3,5-Trimethylbenzene	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,3-Dichloropropane	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	p-Dichlorobenzene (1,4-DCB)	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	2,2-Dichloropropane	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	2-Butanone (MEK)	ND	ug/l	5.0	1	
01/21/98	72174	( ML/EPA 524.2 )	o-Chlorotoluene	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	p-Chlorotoluene	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	4-Methyl-2-Pentanone (MIBK)	ND	ug/l	5.0	1	
01/21/98	72174	( ML/EPA 524.2 )	Benzene	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	Bromobenzene	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	Bromomethane (Methyl Bromide)	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	cis-1,2-Dichloroethylene	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	Chlorobenzene	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	Carbon Tetrachloride	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	cis-1,3-Dichloropropene	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	Bromoform	ND	ug/l	0.50	1	





**MONTGOMERY WATSON LABORATORIES**

555 East Walnut Street  
Pasadena, California 91101  
818 568 6400; Fax: 818 568 6324;  
1 800 566 LABS (1 800 566 5227)

**Laboratory  
Report  
#39941**

Foster Wheeler Environmental, Inc  
(continued)

Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
	01/21/98	72174	( ML/EPA 524.2 )	Chloroform (Trichloromethane)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromochloromethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chloromethane (Methyl Chloride)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chlorodibromomethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Dibromomethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromodichloromethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Dichloromethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Ethyl benzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Dichlorodifluoromethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Fluorotrichloromethane-Freon11	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Hexachlorobutadiene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Isopropylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	m-Dichlorobenzene (1,3-DCB)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	m,p-Xylenes	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Naphthalene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	n-Butylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	n-Propylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	o-Xylene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	o-Dichlorobenzene (1,2-DCB)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Tetrachloroethylene (PCE)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	p-Isopropyltoluene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	sec-Butylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Styrene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	trans-1,2-Dichloroethylene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	tert-Butylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Trichloroethylene (TCE)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Trichlorotrifluoroethane (Freon	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	trans-1,3-Dichloropropene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Toluene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Vinyl chloride (VC)	ND	ug/l	0.30	1
			( EPA 524.2 )	None detected	ND			1
			( Surrogate )	1,2-Dichloroethane-d4	100	‡ Rec		
			( Surrogate )	4-Bromofluorobenzene	84	‡ Rec		
			( Surrogate )	Toluene-d8	101	‡ Rec		



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Laboratory  
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Foster Wheeler Environmental, Inc  
(continued)

Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
<b>MW-981-081 (980114211)</b>				<b>Sampled on 01/14/98</b>				
01/23/98	01/26/98	72207	( S3113B/E200.9 )	Arsenic, Total, GF	ND	mg/l	0.005	1
	01/28/98	72167	( MOD/EPA 300 )	Perchlorate	ND	ug/l	4.0	1
01/23/98	01/28/98	72277	( EPA/ML 200.8 )	Chromium, Total, ICAP/MS	ND	ug/l	10	1
	01/14/98	71549	( ML/SW 7196 )	Hexavalent chromium (Cr VI)	ND	mg/l	0.005	1
01/23/98	01/28/98	72279	( EPA/ML 200.8 )	Lead, Total, ICAP/MS	ND	ug/l	2.0	1
<b>Regulated VOCs plus Lists 1&amp;3</b>								
	01/20/98	72089	( ML/EPA 524.2 )	1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,1,1-Trichloroethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,1,2-Trichloroethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,1-Dichloroethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,1-Dichloroethylene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,1-Dichloropropene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,2,3-Trichlorobenzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,2,3-Trichloropropane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,2,4-Trichlorobenzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,2,4-Trimethylbenzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,2-Dichloroethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,2-Dichloropropane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,3,5-Trimethylbenzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,3-Dichloropropane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	p-Dichlorobenzene (1,4-DCB)	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	2,2-Dichloropropane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	2-Butanone (MEK)	ND	ug/l	5.0	1
	01/20/98	72089	( ML/EPA 524.2 )	o-Chlorotoluene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	p-Chlorotoluene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	4-Methyl-2-Pentanone (MIBK)	ND	ug/l	5.0	1
	01/20/98	72089	( ML/EPA 524.2 )	Benzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Bromobenzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Bromomethane (Methyl Bromide)	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	cis-1,2-Dichloroethylene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Chlorobenzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Carbon Tetrachloride	ND	ug/l	0.50	1



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Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
	01/20/98	72089	( ML/EPA 524.2 )	cis-1,3-Dichloropropene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Bromoform	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Chloroform (Trichloromethane)	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Bromochloromethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Chloroethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Chloromethane (Methyl Chloride)	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Chlorodibromomethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Dibromomethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Bromodichloromethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Dichloromethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Ethyl benzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Dichlorodifluoromethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Fluorotrichloromethane-Freon11	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Hexachlorobutadiene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Isopropylbenzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	m-Dichlorobenzene (1,3-DCB)	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	m,p-Xylenes	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Naphthalene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	n-Butylbenzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	n-Propylbenzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	o-Xylene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	o-Dichlorobenzene (1,2-DCB)	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Tetrachloroethylene (PCE)	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	p-Isopropyltoluene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	sec-Butylbenzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Styrene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	trans-1,2-Dichloroethylene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	tert-Butylbenzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Trichloroethylene (TCE)	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Trichlorotrifluoroethane (Freon	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	trans-1,3-Dichloropropene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Toluene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Vinyl chloride (VC)	ND	ug/l	0.30	1
			( EPA 524.2 )	None Detected	ND			1
			( Surrogate )	1,2-Dichloroethane-d4	96	‡ Rec		
			( Surrogate )	4-Bromofluorobenzene	94	‡ Rec		



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Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
			( Surrogate )	Toluene-d8	99	% Rec		
<b>MW-981-031 (980114212)</b>				<b>Sampled on 01/14/98</b>				
	01/28/98	72432	( ML/S2320B )	Alkalinity	135	mg/l	2.0	1
	02/04/98		( ML/SM1040 )	Anion Sum	3.11	meq/l	0.0010	1
01/23/98	01/26/98	72207	( S3113B/E200.9 )	Arsenic, Total, GF	ND	mg/l	0.005	1
	02/03/98	72509	( ML/S3111B )	Calcium, Flame AA	8.5	mg/l	1.0	1
	02/04/98		( ML/SM1040 )	Cation Sum	3.35	meq/l	0.0010	1
	01/15/98	71672	( ML/EPA 300 )	Chloride	10	mg/l	1.0	1
	01/28/98	72167	( MOD/EPA 300 )	Perchlorate	ND	ug/l	4.0	1
	02/04/98		( ML/S2320-B )	Carbonate as CO3, Calculated	13.0	mg/l	0.0010	1
01/23/98	01/28/98	72277	( EPA/ML 200.8 )	Chromium, Total, ICAP/MS	ND	ug/l	10	1
	01/14/98	71549	( ML/SW 7196 )	Hexavalent chromium (Cr VI)	ND	mg/l	0.005	1
	01/16/98		( ML/S2510B )	Specific Conductance	325	umho/cm	4.0	1
01/23/98	01/28/98	72278	( EPA/ML 200.8 )	Iron, Total, ICAP/MS	ND	ug/l	100	1
	02/04/98		( ML/S2320B )	Bicarbonate as HCO3,calculated	159	mg/l	0.0010	1
	02/04/98	72522	( ML/S3111B )	Potassium, Flame AA	1.8	mg/l	1.0	1
	02/04/98	72526	( ML/S3111B )	Magnesium, Flame AA	4.9	mg/l	1.0	1
	02/04/98	72524	( ML/S3111B )	Sodium, Flame AA	57	mg/l	1.0	1
	01/15/98	71674	( ML/EPA 300.0 )	Nitrate-N by IC	0.11	mg/l	0.10	1
01/23/98	01/28/98	72279	( EPA/ML 200.8 )	Lead, Total, ICAP/MS	ND	ug/l	2.0	1
	01/17/98		( ML/SM 4500H )	Lab pH	9.1	Units	0.0010	1
	01/15/98	71675	( ML/EPA 300.0 )	Sulfate	5.9	mg/l	2.0	1
	01/20/98	72001	( ML/S2540C )	Total Dissolved Solid (TDS)	180	mg/l	10	1
<b>Regulated VOCs plus Lists 1&amp;3</b>								
	01/20/98	72089	( ML/EPA 524.2 )	1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,1,1-Trichloroethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,1,2-Trichloroethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,1-Dichloroethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,1-Dichloroethylene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,1-Dichloropropene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,2,3-Trichlorobenzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,2,3-Trichloropropane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,2,4-Trichlorobenzene	ND	ug/l	0.50	1

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Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
	01/20/98	72089	( ML/EPA 524.2 )	1,2,4-Trimethylbenzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,2-Dichloroethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,2-Dichloropropane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,3,5-Trimethylbenzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,3-Dichloropropane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	p-Dichlorobenzene (1,4-DCB)	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	2,2-Dichloropropane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	2-Butanone (MEK)	ND	ug/l	5.0	1
	01/20/98	72089	( ML/EPA 524.2 )	o-Chlorotoluene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	p-Chlorotoluene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	4-Methyl-2-Pentanone (MIBK)	ND	ug/l	5.0	1
	01/20/98	72089	( ML/EPA 524.2 )	Benzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Bromobenzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Bromomethane (Methyl Bromide)	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	cis-1,2-Dichloroethylene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Chlorobenzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Carbon Tetrachloride	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	cis-1,3-Dichloropropene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Bromoform	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Chloroform (Trichloromethane)	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Bromochloromethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Chloroethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Chloromethane (Methyl Chloride)	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Chlorodibromomethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Dibromomethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Bromodichloromethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Dichloromethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Ethyl benzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Dichlorodifluoromethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Fluorotrichloromethane-Freon11	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Hexachlorobutadiene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Isopropylbenzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	m-Dichlorobenzene (1,3-DCB)	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	m,p-Xylenes	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Naphthalene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	n-Butylbenzene	ND	ug/l	0.50	1



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Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
	01/20/98	72089	( ML/EPA 524.2 )	n-Propylbenzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	o-Xylene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	o-Dichlorobenzene (1,2-DCB)	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Tetrachloroethylene (PCE)	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	p-Isopropyltoluene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	sec-Butylbenzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Styrene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	trans-1,2-Dichloroethylene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	tert-Butylbenzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Trichloroethylene (TCE)	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Trichlorotrifluoroethane (Freon	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	trans-1,3-Dichloropropene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Toluene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Vinyl chloride (VC)	ND	ug/l	0.30	1
			( EPA 524.2 )	None Detected	ND			1
			( Surrogate )	1,2-Dichloroethane-d4	104	‰ Rec		
			( Surrogate )	4-Bromofluorobenzene	89	‰ Rec		
			( Surrogate )	Toluene-d8	99	‰ Rec		

**MW-981-031 MS (980114213) Sampled on 01/14/98**

01/23/98	01/26/98	72207	( S3113B/E200.9 )	Arsenic, Total, GF	ND	mg/l	0.005	1
01/23/98	01/28/98	72277	( EPA/ML 200.8 )	Chromium, Total, ICAP/MS	ND	ug/l	10	1
01/23/98	01/28/98	72279	( EPA/ML 200.8 )	Lead, Total, ICAP/MS	ND	ug/l	2.0	1

**Regulated VOCs plus Lists 1&3**

01/20/98	72089	( ML/EPA 524.2 )	1,1,1,2-Tetrachloroethane	NA	ug/l	0.50	1
01/20/98	72089	( ML/EPA 524.2 )	1,1,1-Trichloroethane	NA	ug/l	0.50	1
01/20/98	72089	( ML/EPA 524.2 )	1,1,2,2-Tetrachloroethane	NA	ug/l	0.50	1
01/20/98	72089	( ML/EPA 524.2 )	1,1,2-Trichloroethane	NA	ug/l	0.50	1
01/20/98	72089	( ML/EPA 524.2 )	1,1-Dichloroethane	NA	ug/l	0.50	1
01/20/98	72089	( ML/EPA 524.2 )	1,1-Dichloroethylene	4.20	ug/l	0.50	1
01/20/98	72089	( ML/EPA 524.2 )	1,1-Dichloropropene	NA	ug/l	0.50	1
01/20/98	72089	( ML/EPA 524.2 )	1,2,3-Trichlorobenzene	NA	ug/l	0.50	1
01/20/98	72089	( ML/EPA 524.2 )	1,2,3-Trichloropropane	NA	ug/l	0.50	1
01/20/98	72089	( ML/EPA 524.2 )	1,2,4-Trichlorobenzene	4.86	ug/l	0.50	1
01/20/98	72089	( ML/EPA 524.2 )	1,2,4-Trimethylbenzene	NA	ug/l	0.50	1

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Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
	01/20/98	72089	( ML/EPA 524.2 )	1,2-Dichloroethane	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,2-Dichloropropane	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,3,5-Trimethylbenzene	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,3-Dichloropropane	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	p-Dichlorobenzene (1,4-DCB)	4.15	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	2,2-Dichloropropane	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	2-Butanone (MEK)	NA	ug/l	5.0	1
	01/20/98	72089	( ML/EPA 524.2 )	o-Chlorotoluene	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	p-Chlorotoluene	4.13	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	4-Methyl-2-Pentanone (MIBK)	NA	ug/l	5.0	1
	01/20/98	72089	( ML/EPA 524.2 )	Benzene	4.56	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Bromobenzene	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Bromomethane (Methyl Bromide)	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	cis-1,2-Dichloroethylene	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Chlorobenzene	4.64	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Carbon Tetrachloride	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	cis-1,3-Dichloropropene	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Bromoform	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Chloroform (Trichloromethane)	4.75	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Bromochloromethane	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Chloroethane	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Chloromethane (Methyl Chloride)	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Chlorodibromomethane	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Dibromomethane	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Bromodichloromethane	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Dichloromethane	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Ethyl benzene	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Dichlorodifluoromethane	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Fluorotrichloromethane-Freon11	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Hexachlorobutadiene	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Isopropylbenzene	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	m-Dichlorobenzene (1,3-DCB)	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	m,p-Xylenes	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Naphthalene	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	n-Butylbenzene	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	n-Propylbenzene	NA	ug/l	0.50	1



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Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
	01/20/98	72089	( ML/EPA 524.2 )	o-Xylene	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	o-Dichlorobenzene (1,2-DCB)	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Tetrachloroethylene (PCE)	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	p-Isopropyltoluene	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	sec-Butylbenzene	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Styrene	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	trans-1,2-Dichloroethylene	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	tert-Butylbenzene	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Trichloroethylene (TCE)	4.62	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Trichlorotrifluoroethane (Freon	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	trans-1,3-Dichloropropene	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Toluene	4.61	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Vinyl chloride (VC)	NA	ug/l	0.30	1
			( Surrogate )	1,2-Dichloroethane-d4	105	% Rec		
			( Surrogate )	4-Bromofluorobenzene	91	% Rec		
			( Surrogate )	Toluene-d8	99	% Rec		

**MW-981-031 MSD (980114214)      Sampled on 01/14/98**

01/23/98	01/26/98	72207	( S3113B/E200.9 )	Arsenic, Total, GF	0.0221	mg/l	0.005	1
01/23/98	01/28/98	72277	( EPA/ML 200.8 )	Chromium, Total, ICAP/MS	104	ug/l	10	1
01/23/98	01/28/98	72279	( EPA/ML 200.8 )	Lead, Total, ICAP/MS	20.1	ug/l	2.0	1

**Regulated VOCs plus Lists 1&3**

01/20/98	72089	( ML/EPA 524.2 )	1,1,1,2-Tetrachloroethane	NA	ug/l	0.50	1
01/20/98	72089	( ML/EPA 524.2 )	1,1,1-Trichloroethane	NA	ug/l	0.50	1
01/20/98	72089	( ML/EPA 524.2 )	1,1,2,2-Tetrachloroethane	NA	ug/l	0.50	1
01/20/98	72089	( ML/EPA 524.2 )	1,1,2-Trichloroethane	NA	ug/l	0.50	1
01/20/98	72089	( ML/EPA 524.2 )	1,1-Dichloroethane	NA	ug/l	0.50	1
01/20/98	72089	( ML/EPA 524.2 )	1,1-Dichloroethylene	4.17	ug/l	0.50	1
01/20/98	72089	( ML/EPA 524.2 )	1,1-Dichloropropene	NA	ug/l	0.50	1
01/20/98	72089	( ML/EPA 524.2 )	1,2,3-Trichlorobenzene	NA	ug/l	0.50	1
01/20/98	72089	( ML/EPA 524.2 )	1,2,3-Trichloropropane	NA	ug/l	0.50	1
01/20/98	72089	( ML/EPA 524.2 )	1,2,4-Trichlorobenzene	3.95	ug/l	0.50	1
01/20/98	72089	( ML/EPA 524.2 )	1,2,4-Trimethylbenzene	NA	ug/l	0.50	1
01/20/98	72089	( ML/EPA 524.2 )	1,2-Dichloroethane	NA	ug/l	0.50	1
01/20/98	72089	( ML/EPA 524.2 )	1,2-Dichloropropane	NA	ug/l	0.50	1



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Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
	01/20/98	72089	( ML/EPA 524.2 )	1,3,5-Trimethylbenzene	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,3-Dichloropropane	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	p-Dichlorobenzene (1,4-DCB)	4.04	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	2,2-Dichloropropane	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	2-Butanone (MEK)	NA	ug/l	5.0	1
	01/20/98	72089	( ML/EPA 524.2 )	o-Chlorotoluene	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	p-Chlorotoluene	3.81	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	4-Methyl-2-Pentanone (MIBK)	NA	ug/l	5.0	1
	01/20/98	72089	( ML/EPA 524.2 )	Benzene	4.39	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Bromobenzene	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Bromomethane (Methyl Bromide)	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	cis-1,2-Dichloroethylene	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Chlorobenzene	4.21	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Carbon Tetrachloride	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	cis-1,3-Dichloropropene	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Bromoform	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Chloroform (Trichloromethane)	4.33	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Bromochloromethane	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Chloroethane	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Chloromethane (Methyl Chloride)	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Chlorodibromomethane	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Dibromomethane	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Bromodichloromethane	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Dichloromethane	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Ethyl benzene	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Dichlorodifluoromethane	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Fluorotrichloromethane-Freon11	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Hexachlorobutadiene	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Isopropylbenzene	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	m-Dichlorobenzene (1,3-DCB)	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	m,p-Xylenes	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Naphthalene	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	n-Butylbenzene	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	n-Propylbenzene	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	o-Xylene	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	o-Dichlorobenzene (1,2-DCB)	NA	ug/l	0.50	1



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Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
	01/20/98	72089	( ML/EPA 524.2 )	Tetrachloroethylene (PCE)	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	p-Isopropyltoluene	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	sec-Butylbenzene	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Styrene	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	trans-1,2-Dichloroethylene	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	tert-Butylbenzene	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Trichloroethylene (TCE)	4.22	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Trichlorotrifluoroethane (Freon	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	trans-1,3-Dichloropropene	NA	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Toluene	4.61	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Vinyl chloride (VC)	NA	ug/l	0.30	1
			( Surrogate )	1,2-Dichloroethane-d4	104	‡ Rec		
			( Surrogate )	4-Bromofluorobenzene	97	‡ Rec		
			( Surrogate )	Toluene-d8	100	‡ Rec		

**MW-981-032 (980114215)      Sampled on 01/14/98**

	01/28/98	72432	( ML/S2320B )	Alkalinity	160	mg/l	2.0	1
	02/04/98		( ML/SM1040 )	Anion Sum	3.98	meq/l	0.0010	1
01/23/98	01/26/98	72207	( S3113B/E200.9 )	Arsenic, Total, GF	ND	mg/l	0.005	1
	02/03/98	72509	( ML/S3111B )	Calcium, Flame AA	41	mg/l	1.0	1
	02/04/98		( ML/SM1040 )	Cation Sum	4.39	meq/l	0.0010	1
	01/15/98	71672	( ML/EPA 300 )	Chloride	8.8	mg/l	1.0	1
	01/28/98	72167	( MOD/EPA 300 )	Perchlorate	11	ug/l	4.0	1
	02/04/98		( ML/S2320-B )	Carbonate as CO3, Calculated	1.60	mg/l	0.0010	1
01/23/98	01/28/98	72277	( EPA/ML 200.8 )	Chromium, Total, ICAP/MS	ND	ug/l	10	1
	01/14/98	71549	( ML/SW 7196 )	Hexavalent chromium (Cr VI)	ND	mg/l	0.005	1
	01/16/98		( ML/S2510B )	Specific Conductance	410	umho/cm	4.0	1
01/23/98	01/28/98	72278	( EPA/ML 200.8 )	Iron, Total, ICAP/MS	260	ug/l	100	1
	02/04/98		( ML/S2320B )	Bicarbonate as HCO3,calculated	195	mg/l	0.0010	1
	02/04/98	72522	( ML/S3111B )	Potassium, Flame AA	1.6	mg/l	1.0	1
	02/04/98	72526	( ML/S3111B )	Magnesium, Flame AA	10	mg/l	1.0	1
	02/04/98	72524	( ML/S3111B )	Sodium, Flame AA	34	mg/l	1.0	1
	01/15/98	71674	( ML/EPA 300.0 )	Nitrate-N by IC	0.74	mg/l	0.10	1
01/23/98	01/28/98	72279	( EPA/ML 200.8 )	Lead, Total, ICAP/MS	ND	ug/l	2.0	1
	01/17/98		( ML/SM 4500H )	Lab pH	8.1	Units	0.0010	1
	01/15/98	71675	( ML/EPA 300.0 )	Sulfate	23	mg/l	2.0	1



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Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
	01/20/98	72001	( ML/S2540C )	Total Dissolved Solid (TDS)	240	mg/l	10	1
<b>Regulated VOCs plus Lists 1&amp;3</b>								
	01/20/98	72089	( ML/EPA 524.2 )	1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,1,1-Trichloroethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,1,2-Trichloroethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,1-Dichloroethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,1-Dichloroethylene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,1-Dichloropropene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,2,3-Trichlorobenzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,2,3-Trichloropropane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,2,4-Trichlorobenzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,2,4-Trimethylbenzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,2-Dichloroethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,2-Dichloropropane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,3,5-Trimethylbenzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,3-Dichloropropane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	p-Dichlorobenzene (1,4-DCB)	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	2,2-Dichloropropane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	2-Butanone (MEK)	ND	ug/l	5.0	1
	01/20/98	72089	( ML/EPA 524.2 )	o-Chlorotoluene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	p-Chlorotoluene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	4-Methyl-2-Pentanone (MIBK)	ND	ug/l	5.0	1
	01/20/98	72089	( ML/EPA 524.2 )	Benzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Bromobenzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Bromomethane (Methyl Bromide)	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	cis-1,2-Dichloroethylene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Chlorobenzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Carbon Tetrachloride	2.6	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	cis-1,3-Dichloropropene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Bromoform	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Chloroform (Trichloromethane)	0.5	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Bromochloromethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Chloroethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Chloromethane (Methyl Chloride)	ND	ug/l	0.50	1



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Foster Wheeler Environmental, Inc  
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Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
	01/20/98	72089	( ML/EPA 524.2 )	Chlorodibromomethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Dibromomethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Bromodichloromethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Dichloromethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Ethyl benzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Dichlorodifluoromethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Fluorotrchloromethane-Freon11	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Hexachlorobutadiene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Isopropylbenzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	m-Dichlorobenzene (1,3-DCB)	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	m,p-Xylenes	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Naphthalene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	n-Butylbenzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	n-Propylbenzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	o-Xylene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	o-Dichlorobenzene (1,2-DCB)	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Tetrachloroethylene (PCE)	1.0	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	p-Isopropyltoluene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	sec-Butylbenzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Styrene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	trans-1,2-Dichloroethylene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	tert-Butylbenzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Trichloroethylene (TCE)	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Trichlorotrifluoroethane (Freon	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	trans-1,3-Dichloropropene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Toluene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Vinyl chloride (VC)	ND	ug/l	0.30	1
			( EPA 524.2 )	None Detected	ND			1
			( Surrogate )	1,2-Dichloroethane-d4	100	% Rec		
			( Surrogate )	4-Bromofluorobenzene	91	% Rec		
			( Surrogate )	Toluene-d8	101	% Rec		



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Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
<b>MW-981-033 (980114216)</b>				<b>Sampled on 01/14/98</b>				
	01/28/98	72432	( ML/S2320B )	Alkalinity	190	mg/l	2.0	1
	02/04/98		( ML/SM1040 )	Anion Sum	5.01	meq/l	0.0010	1
01/23/98	01/26/98	72207	( S3113B/E200.9 )	Arsenic, Total, GF	ND	mg/l	0.005	1
	02/03/98	72509	( ML/S3111B )	Calcium, Flame AA	57	mg/l	1.0	1
	02/04/98		( ML/SM1040 )	Cation Sum	5.50	meq/l	0.0010	1
	01/15/98	71672	( ML/EPA 300 )	Chloride	15	mg/l	1.0	1
	01/28/98	72167	( MOD/EPA 300 )	Perchlorate	ND	ug/l	4.0	1
	02/04/98		( ML/S2320-B )	Carbonate as CO3, Calculated	1.50	mg/l	0.0010	1
01/23/98	01/28/98	72277	( EPA/ML 200.8 )	Chromium, Total, ICAP/MS	ND	ug/l	10	1
	01/14/98	71549	( ML/SW 7196 )	Hexavalent chromium (Cr VI)	ND	mg/l	0.005	1
	01/16/98		( ML/S2510B )	Specific Conductance	510	umho/cm	4.0	1
01/23/98	01/28/98	72278	( EPA/ML 200.8 )	Iron, Total, ICAP/MS	160	ug/l	100	1
	02/04/98		( ML/S2320B )	Bicarbonate as HCO3,calculated	231	mg/l	0.0010	1
	02/04/98	72522	( ML/S3111B )	Potassium, Flame AA	3.3	mg/l	1.0	1
	02/04/98	72526	( ML/S3111B )	Magnesium, Flame AA	19	mg/l	1.0	1
	02/04/98	72524	( ML/S3111B )	Sodium, Flame AA	23	mg/l	1.0	1
	01/15/98	71674	( ML/EPA 300.0 )	Nitrate-N by IC	0.74	mg/l	0.10	1
01/23/98	01/28/98	72279	( EPA/ML 200.8 )	Lead, Total, ICAP/MS	ND	ug/l	2.0	1
	01/17/98		( ML/SM 4500H )	Lab pH	8.0	Units	0.0010	1
	01/15/98	71675	( ML/EPA 300.0 )	Sulfate	35	mg/l	2.0	1
	01/20/98	72001	( ML/S2540C )	Total Dissolved Solid (TDS)	290	mg/l	10	1

**Regulated VOCs plus Lists 1&3**

	01/20/98	72089	( ML/EPA 524.2 )	1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,1,1-Trichloroethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,1,2-Trichloroethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,1-Dichloroethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,1-Dichloroethylene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,1-Dichloropropene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,2,3-Trichlorobenzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,2,3-Trichloropropane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,2,4-Trichlorobenzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,2,4-Trimethylbenzene	ND	ug/l	0.50	1

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	01/20/98	72089	( ML/EPA 524.2 )	1,2-Dichloroethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,2-Dichloropropane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,3,5-Trimethylbenzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	1,3-Dichloropropane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	p-Dichlorobenzene (1,4-DCB)	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	2,2-Dichloropropane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	2-Butanone (MEK)	ND	ug/l	5.0	1
	01/20/98	72089	( ML/EPA 524.2 )	o-Chlorotoluene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	p-Chlorotoluene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	4-Methyl-2-Pentanone (MIBK)	ND	ug/l	5.0	1
	01/20/98	72089	( ML/EPA 524.2 )	Benzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Bromobenzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Bromomethane (Methyl Bromide)	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	cis-1,2-Dichloroethylene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Chlorobenzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Carbon Tetrachloride	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	cis-1,3-Dichloropropene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Bromoform	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Chloroform (Trichloromethane)	6.6	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Bromochloromethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Chloroethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Chloromethane (Methyl Chloride)	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Chlorodibromomethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Dibromomethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Bromodichloromethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Dichloromethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Ethyl benzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Dichlorodifluoromethane	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Fluorotrichloromethane-Freon11	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Hexachlorobutadiene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Isopropylbenzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	m-Dichlorobenzene (1,3-DCB)	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	m,p-Xylenes	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Naphthalene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	n-Butylbenzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	n-Propylbenzene	ND	ug/l	0.50	1

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Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
	01/20/98	72089	( ML/EPA 524.2 )	o-Xylene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	o-Dichlorobenzene (1,2-DCB)	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Tetrachloroethylene (PCE)	1.7	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	p-Isopropyltoluene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	sec-Butylbenzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Styrene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	trans-1,2-Dichloroethylene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	tert-Butylbenzene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Trichloroethylene (TCE)	1.9	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Trichlorotrifluoroethane (Freon	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	trans-1,3-Dichloropropene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Toluene	ND	ug/l	0.50	1
	01/20/98	72089	( ML/EPA 524.2 )	Vinyl chloride (VC)	ND	ug/l	0.30	1
			( EPA 524.2 )	Unknown RT=4.33	4.1	ug/l		1
			( Surrogate )	1,2-Dichloroethane-d4	98	µ Rec		
			( Surrogate )	4-Bromofluorobenzene	81	µ Rec		
			( Surrogate )	Toluene-d8	98	µ Rec		



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**Group Comments**

(Metals) Sample MW981036 was used for the MS/MSD the Iron MSD recovery was high bias. All other associated QC's passed Sample MW i.d. 980114213 is reported as sample duplicate. Sample 980114213 was spiked but not linked to other groups. Calcium is reported from ICP run.





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**QC Batch #71549**

**Hexavalent chromium (Cr VI)**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Hexavalent chromium (Cr VI)	0.050	0.051	102.0	( 78.00 - 118.00 )	
LCS2	Hexavalent chromium (Cr VI)	0.050	0.050	100.0	( 78.00 - 118.00 )	2.0
MBLK	Hexavalent chromium (Cr VI)	ND				
MS	Hexavalent chromium (Cr VI)	0.050	0.052	104.0	( 80.00 - 120.00 )	
MSD	Hexavalent chromium (Cr VI)	0.050	0.053	106.0	( 80.00 - 120.00 )	1.9

**QC Batch #71672**

**Chloride**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Chloride	25	26	104.0	( 90.00 - 110.00 )	
LCS2	Chloride	25	26	104.0	( 90.00 - 110.00 )	0.00
MBLK	Chloride	ND				
MS	Chloride	25	26	104.0	( 80.00 - 120.00 )	
MSD	Chloride	25	26	104.0	( 80.00 - 120.00 )	0.00

**QC Batch #71674**

**Nitrate-N by IC**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Nitrate-N by IC	2.5	2.5	100.0	( 90.00 - 110.00 )	
LCS2	Nitrate-N by IC	2.5	2.4	96.0	( 90.00 - 110.00 )	4.1
MBLK	Nitrate-N by IC	ND				
MS	Nitrate-N by IC	2.5	2.6	104.0	( 80.00 - 120.00 )	
MSD	Nitrate-N by IC	2.5	2.6	104.0	( 80.00 - 120.00 )	0.00

**QC Batch #71675**

**Sulfate**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Sulfate	50	50	100.0	( 90.00 - 110.00 )	
LCS2	Sulfate	50	50	100.0	( 90.00 - 110.00 )	0.00
MBLK	Sulfate	ND				
MS	Sulfate	50	53	106.0	( 80.00 - 120.00 )	
MSD	Sulfate	50	53	106.0	( 80.00 - 120.00 )	0.00

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.  
Criteria for MS and DUP are not applicable for ICR monitoring.



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**QC Batch #72001**

**Total Dissolved Solid (TDS)**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Total Dissolved Solid (TDS)	175	178	101.7	( 85.00 - 115.00 )	
LCS2	Total Dissolved Solid (TDS)	700	668	95.4	( 85.00 - 115.00 )	
MBLK	Total Dissolved Solid (TDS)	ND				

**QC Batch #72089**

**Regulated VOCs plus Lists 1&3**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
MBLK	1,1,1,2-Tetrachloroethane	ND				
LCS1	1,1,1-Trichloroethane	4	4.10	102.5	( 70.00 - 130.00 )	
MBLK	1,1,1-Trichloroethane	ND				
LCS1	1,1,2,2-Tetrachloroethane	4	4.50	112.5	( 70.00 - 130.00 )	
MBLK	1,1,2,2-Tetrachloroethane	ND				
LCS1	1,1,2-Trichloroethane	4	4.20	105.0	( 70.00 - 130.00 )	
MBLK	1,1,2-Trichloroethane	ND				
LCS1	1,1-Dichloroethane	4	4.09	102.2	( 70.00 - 130.00 )	
MBLK	1,1-Dichloroethane	ND				
LCS1	1,1-Dichloroethylene	4	3.99	99.8	( 70.00 - 130.00 )	
MBLK	1,1-Dichloroethylene	ND				
MBLK	1,1-Dichloropropene	ND				
MBLK	1,2,3-Trichlorobenzene	ND				
MBLK	1,2,3-Trichloropropane	ND				
LCS1	1,2,4-Trichlorobenzene	4	3.76	94.0	( 70.00 - 130.00 )	
MBLK	1,2,4-Trichlorobenzene	ND				
MBLK	1,2,4-Trimethylbenzene	ND				
LCS1	1,2-Dichloroethane	4	4.07	101.8	( 70.00 - 130.00 )	
MBLK	1,2-Dichloroethane	ND				
LCS1	1,2-Dichloropropane	4	4.24	106.0	( 70.00 - 130.00 )	
MBLK	1,2-Dichloropropane	ND				
MBLK	1,3,5-Trimethylbenzene	ND				
LCS1	1,3-Dichloropropane	8	8.37	104.6	( 70.00 - 130.00 )	
MBLK	1,3-Dichloropropane	ND				

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.  
Criteria for MS and DUP are not applicable for ICR monitoring.



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MBLK	2,2-Dichloropropane	ND			
MBLK	2-Butanone (MEK)	ND			
MBLK	2-Chloroethylvinylether	ND			
MBLK	4-Methyl-2-Pentanone (MIBK)	ND			
LCS1	Benzene	4	4.20	105.0	( 70.00 - 130.00 )
MBLK	Benzene	ND			
MBLK	Bromobenzene	ND			
MBLK	Bromochloromethane	ND			
LCS1	Bromodichloromethane	4	4.34	108.5	( 70.00 - 130.00 )
MBLK	Bromodichloromethane	ND			
LCS1	Bromoform	4	4.54	113.5	( 70.00 - 130.00 )
MBLK	Bromoform	ND			
MBLK	Bromomethane (Methyl Bromide)	ND			
LCS1	Carbon Tetrachloride	4	3.99	99.8	( 70.00 - 130.00 )
MBLK	Carbon Tetrachloride	ND			
LCS1	Chlorobenzene	4	4.36	109.0	( 70.00 - 130.00 )
MBLK	Chlorobenzene	ND			
LCS1	Chlorodibromomethane	4	4.32	108.0	( 70.00 - 130.00 )
MBLK	Chlorodibromomethane	ND			
MBLK	Chloroethane	ND			
LCS1	Chloroform (Trichloromethane)	4	4.15	103.8	( 70.00 - 130.00 )
MBLK	Chloroform (Trichloromethane)	ND			
MBLK	Chloromethane (Methyl Chloride)	ND			
MBLK	Dibromomethane	ND			
MBLK	Dichlorodifluoromethane	ND			
LCS1	Dichloromethane	4	4.14	103.5	( 70.00 - 130.00 )
MBLK	Dichloromethane	ND			
LCS1	Ethyl benzene	4	4.14	103.5	( 70.00 - 130.00 )
MBLK	Ethyl benzene	ND			
LCS1	Fluorotrichloromethane-Freon11	2	2.49	124.5	( 70.00 - 130.00 )
MBLK	Fluorotrichloromethane-Freon11	ND			
MBLK	Hexachlorobutadiene	ND			
MBLK	Isopropylbenzene	ND			
MBLK	Naphthalene	ND			
LCS1	Styrene	4	4.39	109.7	( 70.00 - 130.00 )
MBLK	Styrene	ND			
LCS1	Tetrachloroethylene (PCE)	4	3.98	99.5	( 70.00 - 130.00 )

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.  
Criteria for MS and DUP are not applicable for ICR monitoring.



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Foster Wheeler Environmental, Inc  
(continued)

MBLK	Tetrachloroethylene (PCE)	ND			
LCS1	Toluene	4	4.28	107.0	( 70.00 - 130.00 )
MBLK	Toluene	ND			
LCS1	Trichloroethylene (TCE)	4	4.13	103.2	( 70.00 - 130.00 )
MBLK	Trichloroethylene (TCE)	ND			
LCS1	Trichlorotrifluoroethane (Freon	2	1.87	93.5	( 70.00 - 130.00 )
MBLK	Trichlorotrifluoroethane (Freon	ND			
LCS1	Vinyl chloride (VC)	2	2.03	101.5	( 70.00 - 130.00 )
MBLK	Vinyl chloride (VC)	ND			
LCS1	cis-1,2-Dichloroethylene	4	4.29	107.2	( 70.00 - 130.00 )
MBLK	cis-1,2-Dichloroethylene	ND			
MBLK	cis-1,3-Dichloropropene	ND			
LCS1	m,p-Xylenes	8	8.29	103.6	( 70.00 - 130.00 )
MBLK	m,p-Xylenes	ND			
MBLK	m-Dichlorobenzene (1,3-DCB)	ND			
MBLK	n-Butylbenzene	ND			
MBLK	n-Propylbenzene	ND			
MBLK	o-Chlorotoluene	ND			
LCS1	o-Dichlorobenzene (1,2-DCB)	4	3.75	93.8	( 70.00 - 130.00 )
MBLK	o-Dichlorobenzene (1,2-DCB)	ND			
LCS1	o-Xylene	4	4.39	109.7	( 70.00 - 130.00 )
MBLK	o-Xylene	ND			
MBLK	p-Chlorotoluene	ND			
LCS1	p-Dichlorobenzene (1,4-DCB)	4	3.91	97.8	( 70.00 - 130.00 )
MBLK	p-Dichlorobenzene (1,4-DCB)	ND			
MBLK	p-Isopropyltoluene	ND			
MBLK	sec-Butylbenzene	ND			
MBLK	tert-Butylbenzene	ND			
LCS1	trans-1,2-Dichloroethylene	4	3.96	99.0	( 70.00 - 130.00 )
MBLK	trans-1,2-Dichloroethylene	ND			
MBLK	trans-1,3-Dichloropropene	ND			

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Foster Wheeler Environmental, Inc  
(continued)

**QC Batch #72167**

**Perchlorate**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Perchlorate	20.0	18.4	92.0	( 90.00 - 110.00 )	
LCS2	Perchlorate	20.0	21.1	105.5	( 90.00 - 110.00 )	14
MBLK	Perchlorate	ND				
MS	Perchlorate	20.0	18.6	93.0	( 75.00 - 125.00 )	
MSD	Perchlorate	20.0	18.1	90.5	( 75.00 - 125.00 )	2.7

**QC Batch #72174**

**Regulated VOCs plus Lists 1&3**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
MBLK	1,1,1,2-Tetrachloroethane	ND				
LCS1	1,1,1-Trichloroethane	4	3.88	97.0	( 70.00 - 130.00 )	
MBLK	1,1,1-Trichloroethane	ND				
LCS1	1,1,2,2-Tetrachloroethane	4	4.73	118.3	( 70.00 - 130.00 )	
MBLK	1,1,2,2-Tetrachloroethane	ND				
LCS1	1,1,2-Trichloroethane	4	5.10	127.5	( 70.00 - 130.00 )	
MBLK	1,1,2-Trichloroethane	ND				
LCS1	1,1-Dichloroethane	4	4.22	105.5	( 70.00 - 130.00 )	
MBLK	1,1-Dichloroethane	ND				
LCS1	1,1-Dichloroethylene	4	3.88	97.0	( 70.00 - 130.00 )	
MBLK	1,1-Dichloroethylene	ND				
MBLK	1,1-Dichloropropene	ND				
MBLK	1,2,3-Trichlorobenzene	ND				
MBLK	1,2,3-Trichloropropane	ND				
LCS1	1,2,4-Trichlorobenzene	4	4.32	108.0	( 70.00 - 130.00 )	
MBLK	1,2,4-Trichlorobenzene	ND				
MBLK	1,2,4-Trimethylbenzene	ND				
LCS1	1,2-Dichloroethane	4	4.17	104.2	( 70.00 - 130.00 )	
MBLK	1,2-Dichloroethane	ND				
LCS1	1,2-Dichloropropane	4	4.17	104.2	( 70.00 - 130.00 )	
MBLK	1,2-Dichloropropane	ND				
MBLK	1,3,5-Trimethylbenzene	ND				

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Laboratory  
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Foster Wheeler Environmental, Inc  
(continued)

LCS1	1,3-Dichloropropane	8	8.65	108.1	( 70.00 - 130.00 )
MBLK	1,3-Dichloropropane	ND			
MBLK	2,2-Dichloropropane	ND			
MBLK	2-Butanone (MEK)	ND			
MBLK	2-Chloroethylvinylether	ND			
MBLK	4-Methyl-2-Pentanone (MIBK)	ND			
LCS1	Benzene	4	4.15	103.8	( 70.00 - 130.00 )
MBLK	Benzene	ND			
MBLK	Bromobenzene	ND			
MBLK	Bromochloromethane	ND			
LCS1	Bromodichloromethane	4	4.69	117.3	( 70.00 - 130.00 )
MBLK	Bromodichloromethane	ND			
LCS1	Bromoform	4	5.10	127.5	( 70.00 - 130.00 )
MBLK	Bromoform	ND			
MBLK	Bromomethane (Methyl Bromide)	ND			
LCS1	Carbon Tetrachloride	4	4.20	105.0	( 70.00 - 130.00 )
MBLK	Carbon Tetrachloride	ND			
LCS1	Chlorobenzene	4	4.39	109.7	( 70.00 - 130.00 )
MBLK	Chlorobenzene	ND			
LCS1	Chlorodibromomethane	4	4.63	115.8	( 70.00 - 130.00 )
MBLK	Chlorodibromomethane	ND			
MBLK	Chloroethane	ND			
LCS1	Chloroform (Trichloromethane)	4	4.12	103.0	( 70.00 - 130.00 )
MBLK	Chloroform (Trichloromethane)	ND			
MBLK	Chloromethane (Methyl Chloride)	ND			
MBLK	Dibromomethane	ND			
MBLK	Dichlorodifluoromethane	ND			
LCS1	Dichloromethane	4	4.49	112.2	( 70.00 - 130.00 )
MBLK	Dichloromethane	ND			
LCS1	Ethyl benzene	4	4.27	106.7	( 70.00 - 130.00 )
MBLK	Ethyl benzene	ND			
LCS1	Fluorotrichloromethane-Freon11	2	2.51	125.5	( 70.00 - 130.00 )
MBLK	Fluorotrichloromethane-Freon11	ND			
MBLK	Hexachlorobutadiene	ND			
MBLK	Isopropylbenzene	ND			
MBLK	Naphthalene	ND			
LCS1	Styrene	4	4.66	116.5	( 70.00 - 130.00 )

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.  
Criteria for MS and DUP are not applicable for ICR monitoring.



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Foster Wheeler Environmental, Inc  
(continued)

MBLK	Styrene	ND				
LCS1	Tetrachloroethylene (PCE)	4	4.12	103.0	( 70.00 - 130.00 )	
MBLK	Tetrachloroethylene (PCE)	ND				
LCS1	Toluene	4	4.31	107.7	( 70.00 - 130.00 )	
MBLK	Toluene	ND				
LCS1	Trichloroethylene (TCE)	4	4.09	102.2	( 70.00 - 130.00 )	
MBLK	Trichloroethylene (TCE)	ND				
LCS1	Trichlorotrifluoroethane (Freon)	2	2.04	102.0	( 70.00 - 130.00 )	
MBLK	Trichlorotrifluoroethane (Freon)	ND				
LCS1	Vinyl chloride (VC)	2	1.71	85.5	( 70.00 - 130.00 )	
MBLK	Vinyl chloride (VC)	ND				
LCS1	cis-1,2-Dichloroethylene	4	4.13	103.2	( 70.00 - 130.00 )	
MBLK	cis-1,2-Dichloroethylene	ND				
MBLK	cis-1,3-Dichloropropene	ND				
LCS1	m,p-Xylenes	8	7.99	99.9	( 70.00 - 130.00 )	
MBLK	m,p-Xylenes	ND				
MBLK	m-Dichlorobenzene (1,3-DCB)	ND				
MBLK	n-Butylbenzene	ND				
MBLK	n-Propylbenzene	ND				
MBLK	o-Chlorotoluene	ND				
LCS1	o-Dichlorobenzene (1,2-DCB)	4	4.36	109.0	( 70.00 - 130.00 )	
MBLK	o-Dichlorobenzene (1,2-DCB)	ND				
LCS1	o-Xylene	4	4.30	107.5	( 70.00 - 130.00 )	
MBLK	o-Xylene	ND				
MBLK	p-Chlorotoluene	ND				
LCS1	p-Dichlorobenzene (1,4-DCB)	4	4.03	100.8	( 70.00 - 130.00 )	
MBLK	p-Dichlorobenzene (1,4-DCB)	ND				
MBLK	p-Isopropyltoluene	ND				
MBLK	sec-Butylbenzene	ND				
MBLK	tert-Butylbenzene	ND				
LCS1	trans-1,2-Dichloroethylene	4	4.37	109.2	( 70.00 - 130.00 )	
MBLK	trans-1,2-Dichloroethylene	ND				
MBLK	trans-1,3-Dichloropropene	ND				

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Criteria for MS and DUP are not applicable for ICR monitoring.



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Foster Wheeler Environmental, Inc  
(continued)

**QC Batch #72207**

**Arsenic, Total, GF**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Arsenic, Total, GF	0.020	0.0210	105.0	( 85.00 - 115.00 )	
LCS2	Arsenic, Total, GF	0.020	0.0206	103.0	( 85.00 - 115.00 )	1.9
MBLK	Arsenic, Total, GF	ND				
MS	Arsenic, Total, GF	0.020	0.0207	103.5	( 85.00 - 115.00 )	
MSD	Arsenic, Total, GF	0.020	0.0215	107.5	( 85.00 - 115.00 )	3.8

**QC Batch #72277**

**Chromium, Total, ICAP/MS**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Chromium, Total, ICAP/MS	100	103	103.0	( 85.00 - 115.00 )	
LCS2	Chromium, Total, ICAP/MS	100	107	107.0	( 85.00 - 115.00 )	3.8
MBLK	Chromium, Total, ICAP/MS	ND		0.0		
MS	Chromium, Total, ICAP/MS	100	106.	106.0	( 70.00 - 130.00 )	
MSD	Chromium, Total, ICAP/MS	100	107.	107.0	( 70.00 - 130.00 )	0.94

**QC Batch #72278**

**Iron, Total, ICAP/MS**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Iron, Total, ICAP/MS	500	563	112.6	( 85.00 - 115.00 )	
LCS2	Iron, Total, ICAP/MS	500	565	113.0	( 85.00 - 115.00 )	0.35
MBLK	Iron, Total, ICAP/MS	ND		0.0		
MS	Iron, Total, ICAP/MS	500	549.	110.0	( 70.00 - 130.00 )	
MSD	Iron, Total, ICAP/MS	500	699	<u>140.0</u>	( 70.00 - 130.00 )	24

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.  
Criteria for MS and DUP are not applicable for ICR monitoring.





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Foster Wheeler Environmental, Inc  
(continued)

**QC Batch #72279**

**Lead, Total, ICAP/MS**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Lead, Total, ICAP/MS	20	20.4	102.0	( 85.00 - 115.00 )	
LCS2	Lead, Total, ICAP/MS	20	21.3	106.5	( 85.00 - 115.00 )	4.3
MBLK	Lead, Total, ICAP/MS	ND		0.0		
MS	Lead, Total, ICAP/MS	20	20	100.0	( 70.00 - 130.00 )	
MSD	Lead, Total, ICAP/MS	20	20.3	101.5	( 70.00 - 130.00 )	1.5

**QC Batch #72432**

**Alkalinity**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Alkalinity	96.2	97.1	100.9	( 90.00 - 110.00 )	
LCS2	Alkalinity	96.2	96.9	100.7	( 90.00 - 110.00 )	0.21
MBLK	Alkalinity	ND				
MS	Alkalinity	96.2	100	104.0	( 80.00 - 120.00 )	
MSD	Alkalinity	96.2	98.6	102.5	( 80.00 - 120.00 )	1.4

**QC Batch #72509**

**Calcium, Flame AA**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Calcium, Flame AA	50	52.4	104.8	( 90.00 - 110.00 )	
LCS2	Calcium, Flame AA	50	51.9	103.8	( 90.00 - 110.00 )	0.96
MBLK	Calcium, Flame AA	ND				
MS	Calcium, Flame AA	50	51.3	102.6	( 85.00 - 115.00 )	
MSD	Calcium, Flame AA	50	49.5	99.0	( 85.00 - 115.00 )	3.6

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.  
Criteria for MS and DUP are not applicable for ICR monitoring.



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Foster Wheeler Environmental, Inc  
(continued)

**QC Batch #72522**

**Potassium, Flame AA**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Potassium, Flame AA	20	19.9	99.5	( 80.00 - 120.00 )	
LCS2	Potassium, Flame AA	20	19.9	99.5	( 80.00 - 120.00 )	0.00
MBLK	Potassium, Flame AA	ND				
MS	Potassium, Flame AA	20	20.1	100.5	( 85.00 - 115.00 )	
MSD	Potassium, Flame AA	20	21.8	109.0	( 85.00 - 115.00 )	8.1

**QC Batch #72524**

**Sodium, Flame AA**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Sodium, Flame AA	50	47.6	95.2	( 90.00 - 110.00 )	
LCS2	Sodium, Flame AA	50	47.3	94.6	( 90.00 - 110.00 )	0.63
MBLK	Sodium, Flame AA	ND				
MS	Sodium, Flame AA	50	46.4	92.8	( 85.00 - 115.00 )	
MSD	Sodium, Flame AA	50	50.9	101.8	( 85.00 - 115.00 )	9.2

**QC Batch #72526**

**Magnesium, Flame AA**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Magnesium, Flame AA	20	18.1	90.5	( 90.00 - 110.00 )	
LCS2	Magnesium, Flame AA	20	19.1	95.5	( 90.00 - 110.00 )	5.4
MBLK	Magnesium, Flame AA	ND				
MS	Magnesium, Flame AA	20	18.1	90.5	( 85.00 - 115.00 )	
MSD	Magnesium, Flame AA	20	19.7	98.5	( 85.00 - 115.00 )	8.5

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.  
Criteria for MS and DUP are not applicable for ICR monitoring.



**MONTGOMERY WATSON LABORATORIES**

February 17, 1998

Foster Wheeler Environmental  
611 Anton Blvd Suite 800  
Costa Mesa, CA.92626

Attention: Mark Cutler

Re: Report # 39973 (MW-981-082, -083, -034, -039)

Dear Mark,

Enclosed please find data deliverables for the recent JPL project. A detailed quality control (QC) summary follows:

**Non-conformance (LCS,MS/MSD, Surrogates, and Holding Times):**

The MSD for Iron associated with this set had high recovery. FWEN sample ID MW-981-036MSD was used, High recovery for iron may be due to contamination from the wire holding the tag which occurred during the prep of the MSD.

MS/MSD recoveries for Nitrate analysis were above the internal control limits due to matrix interference. Another clients sample was used for MS/MSD. No affect on any other sample included with this batch. All other QC for Nitrate is acceptable.

**Samples requiring dilution (with increased MRL's):**

NONE

**Method blanks with compounds detected:**

NONE

**Other Comments:**

Extra volume for MW-981-034 metals was submitted for MS/MSD QC batching, for use as needed by the laboratory.

Chloroform was detected in sample ID: MW-981-034, -039

Bromodichloromethane was detected in sample ID: MW-981-034

**TICs**

NONE

**Method Variance:**

MWlabs was experiencing difficulty in achieving the required Detection limit for Calcium by Flame AA analysis, EPA 215.1. Permission was granted by Mark Cutler 2/3/98 to analyze by ICP, EPA 200.7

Sincerely,

Debbie Frank  
Project Manager

cc: Judy Novelly (JPL)

a Division of Montgomery Watson Americas, Inc.  
555 East Walnut Street  
Pasadena, California 91101  
Tel: 626 568 6400  
Fax: 626 568 6324

Quality Environmental Analysis

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Foster Wheeler Environmental, Inc 611 Anton Boulevard Suite 800 Costa Mesa, CA 92626 Attn: Mark Cutler	Customer Code: ENSERCH PO#: Sub PO#007618 Group#: 39973 Project#: JPL Proj Mgr: Debbie Frank Phone: (714) 444-5526
--	---

The following samples were received from you on 01/15/98. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using Montgomery Watson Laboratories.

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
980115085	MW-981-082	@EBASVOA	Water	01/15/98
980115086	MW-981-083	@EBASVOA AS-GF CLO4	Water CR-MS PB-MS CR-VI	01/15/98
980115087	MW-981-034	@EBASVOA AS-GF CATION ANION1 ALK NO3 NA-FL MG-FL	Water CR-MS PB-MS TDS PH EC HCO3 SO4 CL FE-MS CA-FL CR-VI CLO4	01/15/98 CO3 K-FL
980115088	MW-981-039	@EBASVOA CLO4 NA-FL K-FL ALK CO3 CATION TDS	Water CR-VI CA-FL MG-FL FE-MS CL SO4 HCO3 EC PH PB-MS CR-MS AS-GF	01/15/98 NO3 ANION

Test Acronym Description

Test Acronym	Description
@EBASVOA	Regulated VOCs plus Lists 1&3
ALK	Alkalinity
ANION1	Anion Sum
AS-GF	Arsenic, Total, GF
CA-FL	Calcium, Flame AA
CATION	Cation Sum
CL	Chloride
CLO4	Perchlorate
CO3	Carbonate as CO3, Calculated
CR-MS	Chromium, Total, ICAP/MS
CR-VI	Hexavalent chromium (Cr VI)
EC	Specific Conductance
FE-MS	Iron, Total, ICAP/MS

Foster Wheeler Environmental, Inc  
611 Anton Boulevard  
Suite 800  
Costa Mesa, CA 92626  
Attn: Mark Cutler

Customer Code: ENSERCH  
PO#: Sub PO#007618  
Group#: 39973  
Project#: JPL  
Proj Mgr: Debbie Frank  
Phone: (714) 444-5526

Test Acronym Description

Test Acronym	Description
HCO3	Bicarbonate as HCO3, calculated
K-FL	Potassium, Flame AA
MG-FL	Magnesium, Flame AA
NA-FL	Sodium, Flame AA
NO3	Nitrate-N by IC
PB-MS	Lead, Total, ICAP/MS
PH	Lab pH
SO4	Sulfate
TDS	Total Dissolved Solid (TDS)



39973

ICE FROZEN  
Temp 11-14

FOSTER WHEELER ENVIRONMENTAL CORPORATION

02 022

CHAIN OF CUSTODY FORM REQUEST FOR ANALYSIS

Project: JPL OFS No. 1572.0233

Project Address: 4200 OAK GROVE DR. PASADENA CA

Sampler (Name): J. BRENNIKER Sampler (Signature): [Signature]

Laboratory: MONTGOMERY LABS

Reports to Be Sent to: M.R. MARK CUTLER

HAZARD IDENTIFICATION: Nonhazard  Reactive   
 Flammable  Toxic   
 Skin Irritant  Infectious

Time Required: NORMAL  DAYS  
 RUSH  DAYS

ANALYSES REQUIRED

SAMPLE NUMBER	TIME COLLECTED	DATE COLLECTED	NUMBER OF CONTAINERS	CONTAINER SIZE(S)	SAMPLE MATERIAL			VOCs (524.2)	TOTAL AS, Cr, Pb	MAJOR ANIONS, TDS	Hex. Cr.	Pesticides	ANALYSES REQUIRED		
					WATER	SOIL	OTHER (Describe)								
MW. 981-082	0830	1/15/10	2	2x40ml	X			X					980	15	085
MW. 981-083	0905	↓	5	2x40ml 1x25ml 2x125ml	X			X	X	X	X				80
MW. 981-034	1000	↓	6	2x40ml 1x25ml 2x125ml 1x500ml	X			X	X	X	X		QC Sample		85
MW. 981-089	1510	↓	6	2x40ml 1x25ml 2x125ml 1x500ml	X			X	X	X	X				80

LABORATORY INSTRUCTIONS/COMMENTS:

LEVEL IV QA/QC

Relinquished by: (Signature) <u>[Signature]</u>	Date: <u>1/15/10</u>	Received by: (Signature) <u>[Signature]</u>	Relinquished by: (Signature)	Date: <u>1/15/10</u>	Received by: (Signature)
Company: <u>FWENC</u>	Time: <u>1700</u>	Company: <u>[Signature]</u>	Company:	Time: <u>1700</u>	Company:

MONTGOMERY LABORATORIES COOLER RECEIPT FORM

PROJECT: JPL Date Received: 1/15/98  
Use other side of this form to note further details concerning check-in problems and to describe any action(s) regarding the resolution(s) of problems.

A. PRELIMINARY EXAMINATION: Date cooler opened: 1/15/98  
by (print) W JAH (sign) W JAH

1. Did cooler come with shipping slip (air bill, etc.)? Yes  No   
If YES, attach & enter carrier and air bill # here: \_\_\_\_\_

2. Were custody seals on outside of cooler? Yes  No   
If YES, how many & where: \_\_\_\_\_  
If Yes, enter the following: seal date: \_\_\_\_\_, seal name: \_\_\_\_\_

3. Were custody seals unbroken & intact at delivery?  Yes  No

4. Were custody papers sealed in bag & taped to lid?  Yes  No  
FOR ALL BOTTLES

5. Were custody papers filled out properly (ink, etc.)  Yes  No

6. Did you sign custody papers in appropriate place?  Yes  No

7. Was project identifiable from custody papers?  Yes  No

8. Have designated person(s) initial to acknowledge receipt: WJH (date) 1/15/98

B. LOG-IN PHASE: Date samples were logged-in: 1/15/98 by:  
(print) MARTIN DE VRIES (sign) [Signature]

9. Describe packing: \_\_\_\_\_

10. If required, was enough ice used?  Yes  No

11. Were all bottles sealed in separate plastic bags?  Yes  No

12. Did all bottles arrive unbroken/in good condition?  Yes  No

13. Were all bottle labels complete (ID,date,sign,pres)?  Yes  No

14. Did all bottle labels agree with custody papers?  
If NO, indicate discrepancies on back.  Yes  No

15. Were correct containers used for the analytes?  Yes  No

16. Were correct preservatives used when required?  Yes  No

17. Was sufficient amount of sample sent for tests?  Yes  No

18. Bubbles absent in VOA vials?  
If NO, list by sample id on back.  Yes  No

19. Was Client Services informed of problems? Yes  No

Report Summary of positive results, PR39973

			Result	MDL	UNITS
Analyzed	980115085	MW-981-082			
Analyzed	980115086	MW-981-083			
Analyzed	980115087	MW-981-034			
01/21/98	Bromodichloromethane		0.8	.500	UGL
01/21/98	Chloroform (Trichloromethane)		2.9	.500	UGL
01/28/98	Alkalinity		170	2.000	MGL
02/04/98	Anion Sum		4.60	.001	MEQL
02/04/98	Bicarbonate as HCO3,calculated		207	.001	MGL
02/03/98	Calcium, Flame AA		53	1.000	MGL
02/04/98	Carbonate as CO3, Calculated		1.07	.001	MGL
02/04/98	Cation Sum		5.00	.001	MEQL
01/23/98	Chloride		12	1.000	MGL
01/28/98	Iron, Total, ICAP/MS		310	*****	UGL
01/17/98	Lab pH		7.9	.001	UNIT
02/04/98	Magnesium, Flame AA		17	1.000	MGL
01/16/98	Nitrate-N by IC		1.2	.100	MGL
02/04/98	Potassium, Flame AA		3.1	1.000	MGL
02/04/98	Sodium, Flame AA		20	1.000	MGL
01/16/98	Specific Conductance		490	4.000	UMHO
01/23/98	Sulfate		37	2.000	MGL
01/20/98	Total Dissolved Solid (TDS)		270	10.000	MGL
Analyzed	980115088	MW-981-039			
01/21/98	Chloroform (Trichloromethane)		5.4	.500	UGL
01/28/98	Alkalinity		110	2.000	MGL
02/04/98	Anion Sum		2.94	.001	MEQL
02/04/98	Bicarbonate as HCO3,calculated		130	.001	MGL
02/03/98	Calcium, Flame AA		16	1.000	MGL
02/04/98	Carbonate as CO3, Calculated		10.6	.001	MGL
02/04/98	Cation Sum		3.06	.001	MEQL
01/23/98	Chloride		7.7	1.000	MGL
01/28/98	Iron, Total, ICAP/MS		650	*****	UGL
01/17/98	Lab pH		9.1	.001	UNIT
02/04/98	Magnesium, Flame AA		18	1.000	MGL
02/04/98	Potassium, Flame AA		3.1	1.000	MGL
02/04/98	Sodium, Flame AA		16	1.000	MGL
01/16/98	Specific Conductance		295	4.000	UMHO
01/23/98	Sulfate		25	2.000	MGL
01/20/98	Total Dissolved Solid (TDS)		170	10.000	MGL





**MONTGOMERY WATSON LABORATORIES**

555 East Walnut Street  
Pasadena, California 91101  
818 568 6400; Fax: 818 568 6324;  
1 800 566 LABS (1 800 566 5227)

**Laboratory Report**

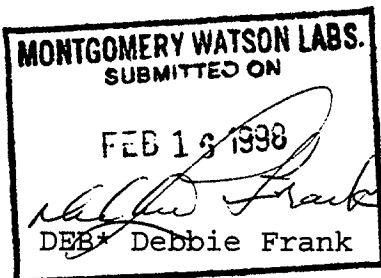
for

Foster Wheeler Environmental, Inc  
611 Anton Boulevard

Suite 800

Costa Mesa , CA 92626

Attention: Mark Cutler  
Fax: (714)444-5560



Report#: 39973  
JPL



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**Laboratory  
Report  
#39973**

Foster Wheeler Environmental, Inc  
Mark Cutler  
611 Anton Boulevard  
Suite 800  
Costa Mesa , CA 92626

Samples Received  
15-jan-1998 17:12:10

Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
<b>MW-981-082 (980115085)</b>				<b>Sampled on 01/15/98</b>				
<b>Regulated VOCs plus Lists 1&amp;3</b>								
01/21/98	72174	( ML/EPA 524.2 )	1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,1,1-Trichloroethane	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,1,2-Trichloroethane	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,1-Dichloroethane	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,1-Dichloroethylene	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,1-Dichloropropene	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,2,3-Trichlorobenzene	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,2,4-Trichlorobenzene	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,2,4-Trimethylbenzene	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,2-Dichloroethane	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,2-Dichloropropane	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,3,5-Trimethylbenzene	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,3-Dichloropropane	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	p-Dichlorobenzene (1,4-DCB)	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	2,2-Dichloropropane	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	2-Butanone (MEK)	ND	ug/l	5.0	1	
01/21/98	72174	( ML/EPA 524.2 )	o-Chlorotoluene	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	p-Chlorotoluene	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	4-Methyl-2-Pentanone (MIBK)	ND	ug/l	5.0	1	
01/21/98	72174	( ML/EPA 524.2 )	Benzene	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	Bromobenzene	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	Bromomethane (Methyl Bromide)	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	cis-1,2-Dichloroethylene	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	Chlorobenzene	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	Carbon Tetrachloride	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	cis-1,3-Dichloropropene	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	Bromoform	ND	ug/l	0.50	1	



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**Laboratory  
Report  
#39973**

Foster Wheeler Environmental, Inc  
(continued)

Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
	01/21/98	72174	( ML/EPA 524.2 )	Chloroform (Trichloromethane)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromochloromethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chloromethane(Methyl Chloride)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chlorodibromomethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Dibromomethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromodichloromethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Dichloromethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Ethyl benzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Dichlorodifluoromethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Fluorotrichloromethane-Freon11	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Hexachlorobutadiene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Isopropylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	m-Dichlorobenzene (1,3-DCB)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	m,p-Xylenes	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Naphthalene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	n-Butylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	n-Propylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	o-Xylene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	o-Dichlorobenzene (1,2-DCB)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Tetrachloroethylene (PCE)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	p-Isopropyltoluene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	sec-Butylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Styrene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	trans-1,2-Dichloroethylene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	tert-Butylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Trichloroethylene (TCE)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Trichlorotrifluoroethane (Freon	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	trans-1,3-Dichloropropene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Toluene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Vinyl chloride (VC)	ND	ug/l	0.30	1
			( EPA 524.2 )	None detected	ND			1
			( Surrogate )	1,2-Dichloroethane-d4	91	‡ Rec		
			( Surrogate )	4-Bromofluorobenzene	93	‡ Rec		
			( Surrogate )	Toluene-d8	102	‡ Rec		



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Laboratory  
Report  
#39973

Foster Wheeler Environmental, Inc  
(continued)

Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
<b>MW-981-083 (980115086)</b>				<b>Sampled on 01/15/98</b>				
01/23/98	01/26/98	72207	( S3113B/E200.9 )	Arsenic, Total, GF	ND	mg/l	0.005	1
	01/28/98	72167	( MOD/EPA 300 )	Perchlorate	ND	ug/l	4.0	1
01/23/98	01/28/98	72277	( EPA/ML 200.8 )	Chromium, Total, ICAP/MS	ND	ug/l	10	1
	01/15/98	71626	( ML/SW 7196 )	Hexavalent chromium (Cr VI)	ND	mg/l	0.005	1
01/23/98	01/28/98	72279	( EPA/ML 200.8 )	Lead, Total, ICAP/MS	ND	ug/l	2.0	1
<b>Regulated VOCs plus Lists 1&amp;3</b>								
	01/21/98	72174	( ML/EPA 524.2 )	1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1,1-Trichloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1,2-Trichloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1-Dichloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1-Dichloroethylene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1-Dichloropropene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,2,3-Trichlorobenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,2,3-Trichloropropane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,2,4-Trichlorobenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,2,4-Trimethylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,2-Dichloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,2-Dichloropropane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,3,5-Trimethylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,3-Dichloropropane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	p-Dichlorobenzene (1,4-DCB)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	2,2-Dichloropropane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	2-Butanone (MEK)	ND	ug/l	5.0	1
	01/21/98	72174	( ML/EPA 524.2 )	o-Chlorotoluene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	p-Chlorotoluene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	4-Methyl-2-Pentanone (MIBK)	ND	ug/l	5.0	1
	01/21/98	72174	( ML/EPA 524.2 )	Benzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromobenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromomethane (Methyl Bromide)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	cis-1,2-Dichloroethylene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chlorobenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Carbon Tetrachloride	ND	ug/l	0.50	1



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Laboratory  
Report  
#39973

Foster Wheeler Environmental, Inc  
(continued)

Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
	01/21/98	72174	( ML/EPA 524.2 )	cis-1,3-Dichloropropene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromoform	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chloroform (Trichloromethane)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromochloromethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chloromethane (Methyl Chloride)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chlorodibromomethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Dibromomethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromodichloromethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Dichloromethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Ethyl benzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Dichlorodifluoromethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Fluorotrichloromethane-Freon11	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Hexachlorobutadiene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Isopropylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	m-Dichlorobenzene (1,3-DCB)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	m,p-Xylenes	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Naphthalene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	n-Butylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	n-Propylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	o-Xylene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	o-Dichlorobenzene (1,2-DCB)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Tetrachloroethylene (PCE)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	p-Isopropyltoluene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	sec-Butylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Styrene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	trans-1,2-Dichloroethylene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	tert-Butylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Trichloroethylene (TCE)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Trichlorotrifluoroethane (Freon	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	trans-1,3-Dichloropropene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Toluene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Vinyl chloride (VC)	ND	ug/l	0.30	1
			( EPA 524.2 )	None detected	ND			1
			( Surrogate )	1,2-Dichloroethane-d4	103	% Rec		
			( Surrogate )	4-Bromofluorobenzene	98	% Rec		



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**Laboratory  
Report  
#39973**

Foster Wheeler Environmental, Inc  
(continued)

Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
			( Surrogate )	Toluene-d8	103	% Rec		
<b>MW-981-034 (980115087)</b>				<b>Sampled on 01/15/98</b>				
	01/28/98	72432	( ML/S2320B )	Alkalinity	170	mg/l	2.0	1
	02/04/98		( ML/SM1040 )	Anion Sum	4.60	meq/l	0.0010	1
01/23/98	01/26/98	72207	( S3113B/E200.9 )	Arsenic, Total, GF	ND	mg/l	0.005	1
	02/03/98	72509	( ML/S3111B )	Calcium, Flame AA	53	mg/l	1.0	1
	02/04/98		( ML/SM1040 )	Cation Sum	5.00	meq/l	0.0010	1
	01/23/98	72102	( ML/EPA 300 )	Chloride	12	mg/l	1.0	1
	01/28/98	72167	( MOD/EPA 300 )	Perchlorate	ND	ug/l	4.0	1
	02/04/98		( ML/S2320-B )	Carbonate as CO3, Calculated	1.07	mg/l	0.0010	1
01/23/98	01/28/98	72277	( EPA/ML 200.8 )	Chromium, Total, ICAP/MS	ND	ug/l	10	1
	01/15/98	71626	( ML/SW 7196 )	Hexavalent chromium (Cr VI)	ND	mg/l	0.005	1
	01/16/98		( ML/S2510B )	Specific Conductance	490	umho/cm	4.0	1
01/23/98	01/28/98	72278	( EPA/ML 200.8 )	Iron, Total, ICAP/MS	310	ug/l	100	1
	02/04/98		( ML/S2320B )	Bicarbonate as HCO3,calculated	207	mg/l	0.0010	1
	02/04/98	72522	( ML/S3111B )	Potassium, Flame AA	3.1	mg/l	1.0	1
	02/04/98	72526	( ML/S3111B )	Magnesium, Flame AA	17	mg/l	1.0	1
	02/04/98	72524	( ML/S3111B )	Sodium, Flame AA	20	mg/l	1.0	1
	01/16/98	71788	( ML/EPA 300.0 )	Nitrate-N by IC	1.2	mg/l	0.10	1
01/23/98	01/28/98	72279	( EPA/ML 200.8 )	Lead, Total, ICAP/MS	ND	ug/l	2.0	1
	01/17/98		( ML/SM 4500H )	Lab pH	7.9	Units	0.0010	1
	01/23/98	72107	( ML/EPA 300.0 )	Sulfate	37	mg/l	2.0	1
	01/20/98	72001	( ML/S2540C )	Total Dissolved Solid (TDS)	270	mg/l	10	1
				<b>Regulated VOCs plus Lists 1&amp;3</b>				
	01/21/98	72174	( ML/EPA 524.2 )	1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1,1-Trichloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1,2-Trichloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1-Dichloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1-Dichloroethylene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1-Dichloropropene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,2,3-Trichlorobenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,2,3-Trichloropropane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,2,4-Trichlorobenzene	ND	ug/l	0.50	1

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Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
	01/21/98	72174	( ML/EPA 524.2 )	1,2,4-Trimethylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,2-Dichloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,2-Dichloropropane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,3,5-Trimethylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,3-Dichloropropane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	p-Dichlorobenzene (1,4-DCB)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	2,2-Dichloropropane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	2-Butanone (MEK)	ND	ug/l	5.0	1
	01/21/98	72174	( ML/EPA 524.2 )	o-Chlorotoluene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	p-Chlorotoluene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	4-Methyl-2-Pentanone (MIBK)	ND	ug/l	5.0	1
	01/21/98	72174	( ML/EPA 524.2 )	Benzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromobenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromomethane (Methyl Bromide)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	cis-1,2-Dichloroethylene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chlorobenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Carbon Tetrachloride	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	cis-1,3-Dichloropropene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromoform	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chloroform (Trichloromethane)	2.9	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromochloromethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chloromethane (Methyl Chloride)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chlorodibromomethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Dibromomethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromodichloromethane	0.8	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Dichloromethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Ethyl benzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Dichlorodifluoromethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Fluorotrichloromethane-Freon11	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Hexachlorobutadiene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Isopropylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	m-Dichlorobenzene (1,3-DCB)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	m,p-Xylenes	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Naphthalene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	n-Butylbenzene	ND	ug/l	0.50	1



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Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
	01/21/98	72174	( ML/EPA 524.2 )	n-Propylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	o-Xylene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	o-Dichlorobenzene (1,2-DCB)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Tetrachloroethylene (PCE)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	p-Isopropyltoluene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	sec-Butylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Styrene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	trans-1,2-Dichloroethylene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	tert-Butylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Trichloroethylene (TCE)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Trichlorotrifluoroethane (Freon	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	trans-1,3-Dichloropropene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Toluene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Vinyl chloride (VC)	ND	ug/l	0.30	1
			( EPA 524.2 )	None detected	ND			1
			( Surrogate )	1,2-Dichloroethane-d4	106	% Rec		
			( Surrogate )	4-Bromofluorobenzene	85	% Rec		
			( Surrogate )	Toluene-d8	102	% Rec		

**MW-981-039 (980115088)      Sampled on 01/15/98**

	01/28/98	72432	( ML/S2320B )	Alkalinity	110	mg/l	2.0	1
	02/04/98		( ML/SM1040 )	Anion Sum	2.94	meq/l	0.0010	1
01/23/98	01/26/98	72207	( S3113B/E200.9 )	Arsenic, Total, GF	ND	mg/l	0.005	1
	02/03/98	72509	( ML/S3111B )	Calcium, Flame AA	16	mg/l	1.0	1
	02/04/98		( ML/SM1040 )	Cation Sum	3.06	meq/l	0.0010	1
	01/23/98	72102	( ML/EPA 300 )	Chloride	7.7	mg/l	1.0	1
	01/28/98	72167	( MOD/EPA 300 )	Perchlorate	ND	ug/l	4.0	1
	02/04/98		( ML/S2320-B )	Carbonate as CO3, Calculated	10.6	mg/l	0.0010	1
01/23/98	01/28/98	72277	( EPA/ML 200.8 )	Chromium, Total, ICAP/MS	ND	ug/l	10	1
	01/15/98	71626	( ML/SW 7196 )	Hexavalent chromium (Cr VI)	ND	mg/l	0.005	1
	01/16/98		( ML/S2510B )	Specific Conductance	295	umho/cm	4.0	1
01/23/98	01/28/98	72278	( EPA/ML 200.8 )	Iron, Total, ICAP/MS	650	ug/l	100	1
	02/04/98		( ML/S2320B )	Bicarbonate as HCO3,calculated	130	mg/l	0.0010	1
	02/04/98	72522	( ML/S3111B )	Potassium, Flame AA	3.1	mg/l	1.0	1
	02/04/98	72526	( ML/S3111B )	Magnesium, Flame AA	18	mg/l	1.0	1
	02/04/98	72524	( ML/S3111B )	Sodium, Flame AA	16	mg/l	1.0	1





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Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
	01/16/98	71788	( ML/EPA 300.0 )	Nitrate-N by IC	ND	mg/l	0.10	1
01/23/98	01/28/98	72279	( EPA/ML 200.8 )	Lead, Total, ICAP/MS	ND	ug/l	2.0	1
	01/17/98		( ML/SM 4500H )	Lab pH	9.1	Units	0.0010	1
	01/23/98	72107	( ML/EPA 300.0 )	Sulfate	25	mg/l	2.0	1
	01/20/98	72001	( ML/S2540C )	Total Dissolved Solid (TDS)	170	mg/l	10	1
<b>Regulated VOCs plus Lists 1&amp;3</b>								
	01/21/98	72174	( ML/EPA 524.2 )	1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1,1-Trichloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1,2-Trichloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1-Dichloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1-Dichloroethylene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1-Dichloropropene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,2,3-Trichlorobenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,2,3-Trichloropropane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,2,4-Trichlorobenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,2,4-Trimethylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,2-Dichloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,2-Dichloropropane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,3,5-Trimethylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,3-Dichloropropane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	p-Dichlorobenzene (1,4-DCB)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	2,2-Dichloropropane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	2-Butanone (MEK)	ND	ug/l	5.0	1
	01/21/98	72174	( ML/EPA 524.2 )	o-Chlorotoluene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	p-Chlorotoluene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	4-Methyl-2-Pentanone (MIBK)	ND	ug/l	5.0	1
	01/21/98	72174	( ML/EPA 524.2 )	Benzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromobenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromomethane (Methyl Bromide)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	cis-1,2-Dichloroethylene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chlorobenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Carbon Tetrachloride	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	cis-1,3-Dichloropropene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromoform	ND	ug/l	0.50	1



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Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
	01/21/98	72174	( ML/EPA 524.2 )	Chloroform (Trichloromethane)	5.4	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromochloromethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chloromethane (Methyl Chloride)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chlorodibromomethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Dibromomethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromodichloromethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Dichloromethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Ethyl benzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Dichlorodifluoromethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Fluorotrichloromethane-Freon11	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Hexachlorobutadiene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Isopropylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	m-Dichlorobenzene (1,3-DCB)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	m,p-Xylenes	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Naphthalene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	n-Butylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	n-Propylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	o-Xylene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	o-Dichlorobenzene (1,2-DCB)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Tetrachloroethylene (PCE)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	p-Isopropyltoluene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	sec-Butylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Styrene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	trans-1,2-Dichloroethylene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	tert-Butylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Trichloroethylene (TCE)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Trichlorotrifluoroethane (Freon)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	trans-1,3-Dichloropropene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Toluene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Vinyl chloride (VC)	ND	ug/l	0.30	1
			( EPA 524.2 )	None detected	ND			1
			( Surrogate )	1,2-Dichloroethane-d4	113	µg Rec		
			( Surrogate )	4-Bromofluorobenzene	88	µg Rec		
			( Surrogate )	Toluene-d8	100	µg Rec		



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**Group Comments**

(NO3-N) No MS/MSD result is available.  
(Metals) Sample MW981036 was used for MS/MSD. Iron recovery for MSD is high bias. All other associated QC's passed. Calcium is reported from ICP run.

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**QC Batch #71626****Hexavalent chromium (Cr VI)**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Hexavalent chromium (Cr VI)	0.050	0.050	100.0	( 78.00 - 118.00 )	
LCS2	Hexavalent chromium (Cr VI)	0.050	0.051	102.0	( 78.00 - 118.00 )	2.0
MBLK	Hexavalent chromium (Cr VI)	ND				
MS	Hexavalent chromium (Cr VI)	0.050	0.052	104.0	( 80.00 - 120.00 )	
MSD	Hexavalent chromium (Cr VI)	0.050	0.051	102.0	( 80.00 - 120.00 )	1.9

**QC Batch #71788****Nitrate-N by IC**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Nitrate-N by IC	2.5	2.6	104.0	( 90.00 - 110.00 )	
LCS2	Nitrate-N by IC	2.5	2.6	104.0	( 90.00 - 110.00 )	0.00
MBLK	Nitrate-N by IC	ND				

**QC Batch #72001****Total Dissolved Solid (TDS)**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Total Dissolved Solid (TDS)	175	178	101.7	( 85.00 - 115.00 )	
LCS2	Total Dissolved Solid (TDS)	700	668	95.4	( 85.00 - 115.00 )	
MBLK	Total Dissolved Solid (TDS)	ND				

**QC Batch #72102****Chloride**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Chloride	25	27	108.0	( 90.00 - 110.00 )	
LCS2	Chloride	25	27	108.0	( 90.00 - 110.00 )	0.00
MBLK	Chloride	ND				
MS	Chloride	25	26	104.0	( 80.00 - 120.00 )	
MSD	Chloride	25	26	104.0	( 80.00 - 120.00 )	0.00

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.  
 Criteria for MS and DUP are not applicable for ICR monitoring.



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Laboratory  
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Foster Wheeler Environmental, Inc  
(continued)

**QC Batch #72107**

**Sulfate**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Sulfate	50	54	108.0	( 90.00 - 110.00 )	
LCS2	Sulfate	50	54	108.0	( 90.00 - 110.00 )	0.00
MBLK	Sulfate	ND				
MS	Sulfate	50	53	106.0	( 80.00 - 120.00 )	
MSD	Sulfate	50	53	106.0	( 80.00 - 120.00 )	0.00

**QC Batch #72167**

**Perchlorate**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Perchlorate	20.0	18.4	92.0	( 90.00 - 110.00 )	
LCS2	Perchlorate	20.0	21.1	105.5	( 90.00 - 110.00 )	14
MBLK	Perchlorate	ND				
MS	Perchlorate	20.0	18.6	93.0	( 75.00 - 125.00 )	
MSD	Perchlorate	20.0	18.1	90.5	( 75.00 - 125.00 )	2.7

**QC Batch #72174**

**Regulated VOCs plus Lists 1&3**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
MBLK	1,1,1,2-Tetrachloroethane	ND				
LCS1	1,1,1-Trichloroethane	4	3.88	97.0	( 70.00 - 130.00 )	
MBLK	1,1,1-Trichloroethane	ND				
LCS1	1,1,2,2-Tetrachloroethane	4	4.73	118.3	( 70.00 - 130.00 )	
MBLK	1,1,2,2-Tetrachloroethane	ND				
LCS1	1,1,2-Trichloroethane	4	5.10	127.5	( 70.00 - 130.00 )	
MBLK	1,1,2-Trichloroethane	ND				
LCS1	1,1-Dichloroethane	4	4.22	105.5	( 70.00 - 130.00 )	
MBLK	1,1-Dichloroethane	ND				
LCS1	1,1-Dichloroethylene	4	3.88	97.0	( 70.00 - 130.00 )	
MBLK	1,1-Dichloroethylene	ND				
MBLK	1,1-Dichloropropene	ND				

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Foster Wheeler Environmental, Inc  
(continued)

MBLK	1,2,3-Trichlorobenzene	ND			
MBLK	1,2,3-Trichloropropane	ND			
LCS1	1,2,4-Trichlorobenzene	4	4.32	108.0	( 70.00 - 130.00 )
MBLK	1,2,4-Trichlorobenzene	ND			
MBLK	1,2,4-Trimethylbenzene	ND			
LCS1	1,2-Dichloroethane	4	4.17	104.2	( 70.00 - 130.00 )
MBLK	1,2-Dichloroethane	ND			
LCS1	1,2-Dichloropropane	4	4.17	104.2	( 70.00 - 130.00 )
MBLK	1,2-Dichloropropane	ND			
MBLK	1,3,5-Trimethylbenzene	ND			
LCS1	1,3-Dichloropropane	8	8.65	108.1	( 70.00 - 130.00 )
MBLK	1,3-Dichloropropane	ND			
MBLK	2,2-Dichloropropane	ND			
MBLK	2-Butanone (MEK)	ND			
MBLK	2-Chloroethylvinylether	ND			
MBLK	4-Methyl-2-Pentanone (MIBK)	ND			
LCS1	Benzene	4	4.15	103.8	( 70.00 - 130.00 )
MBLK	Benzene	ND			
MBLK	Bromobenzene	ND			
MBLK	Bromochloromethane	ND			
LCS1	Bromodichloromethane	4	4.69	117.3	( 70.00 - 130.00 )
MBLK	Bromodichloromethane	ND			
LCS1	Bromoform	4	5.10	127.5	( 70.00 - 130.00 )
MBLK	Bromoform	ND			
MBLK	Bromomethane (Methyl Bromide)	ND			
LCS1	Carbon Tetrachloride	4	4.20	105.0	( 70.00 - 130.00 )
MBLK	Carbon Tetrachloride	ND			
LCS1	Chlorobenzene	4	4.39	109.7	( 70.00 - 130.00 )
MBLK	Chlorobenzene	ND			
LCS1	Chlorodibromomethane	4	4.63	115.8	( 70.00 - 130.00 )
MBLK	Chlorodibromomethane	ND			
MBLK	Chloroethane	ND			
LCS1	Chloroform (Trichloromethane)	4	4.12	103.0	( 70.00 - 130.00 )
MBLK	Chloroform (Trichloromethane)	ND			
MBLK	Chloromethane (Methyl Chloride)	ND			
MBLK	Dibromomethane	ND			
MBLK	Dichlorodifluoromethane	ND			

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Criteria for MS and DUP are not applicable for ICR monitoring.

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(continued)

LCS1	Dichloromethane	4	4.49	112.2	( 70.00 - 130.00 )
MBLK	Dichloromethane	ND			
LCS1	Ethyl benzene	4	4.27	106.7	( 70.00 - 130.00 )
MBLK	Ethyl benzene	ND			
LCS1	Fluorotrichloromethane-Freon11	2	2.51	125.5	( 70.00 - 130.00 )
MBLK	Fluorotrichloromethane-Freon11	ND			
MBLK	Hexachlorobutadiene	ND			
MBLK	Isopropylbenzene	ND			
MBLK	Naphthalene	ND			
LCS1	Styrene	4	4.66	116.5	( 70.00 - 130.00 )
MBLK	Styrene	ND			
LCS1	Tetrachloroethylene (PCE)	4	4.12	103.0	( 70.00 - 130.00 )
MBLK	Tetrachloroethylene (PCE)	ND			
LCS1	Toluene	4	4.31	107.7	( 70.00 - 130.00 )
MBLK	Toluene	ND			
LCS1	Trichloroethylene (TCE)	4	4.09	102.2	( 70.00 - 130.00 )
MBLK	Trichloroethylene (TCE)	ND			
LCS1	Trichlorotrifluoroethane (Freon)	2	2.04	102.0	( 70.00 - 130.00 )
MBLK	Trichlorotrifluoroethane (Freon)	ND			
LCS1	Vinyl chloride (VC)	2	1.71	85.5	( 70.00 - 130.00 )
MBLK	Vinyl chloride (VC)	ND			
LCS1	cis-1,2-Dichloroethylene	4	4.13	103.2	( 70.00 - 130.00 )
MBLK	cis-1,2-Dichloroethylene	ND			
MBLK	cis-1,3-Dichloropropene	ND			
LCS1	m,p-Xylenes	8	7.99	99.9	( 70.00 - 130.00 )
MBLK	m,p-Xylenes	ND			
MBLK	m-Dichlorobenzene (1,3-DCB)	ND			
MBLK	n-Butylbenzene	ND			
MBLK	n-Propylbenzene	ND			
MBLK	o-Chlorotoluene	ND			
LCS1	o-Dichlorobenzene (1,2-DCB)	4	4.36	109.0	( 70.00 - 130.00 )
MBLK	o-Dichlorobenzene (1,2-DCB)	ND			
LCS1	o-Xylene	4	4.30	107.5	( 70.00 - 130.00 )
MBLK	o-Xylene	ND			
MBLK	p-Chlorotoluene	ND			
LCS1	p-Dichlorobenzene (1,4-DCB)	4	4.03	100.8	( 70.00 - 130.00 )
MBLK	p-Dichlorobenzene (1,4-DCB)	ND			

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Criteria for MS and DUP are not applicable for ICR monitoring.



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Foster Wheeler Environmental, Inc  
(continued)

MBLK	p-Isopropyltoluene	ND				
MBLK	sec-Butylbenzene	ND				
MBLK	tert-Butylbenzene	ND				
LCS1	trans-1,2-Dichloroethylene	4	4.37	109.2	( 70.00 - 130.00 )	
MBLK	trans-1,2-Dichloroethylene	ND				
MBLK	trans-1,3-Dichloropropene	ND				

**QC Batch #72207**

**Arsenic, Total, GF**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Arsenic, Total, GF	0.020	0.0210	105.0	( 85.00 - 115.00 )	
LCS2	Arsenic, Total, GF	0.020	0.0206	103.0	( 85.00 - 115.00 )	1.9
MBLK	Arsenic, Total, GF	ND				
MS	Arsenic, Total, GF	0.020	0.0207	103.5	( 85.00 - 115.00 )	
MSD	Arsenic, Total, GF	0.020	0.0215	107.5	( 85.00 - 115.00 )	3.8

**QC Batch #72277**

**Chromium, Total, ICAP/MS**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Chromium, Total, ICAP/MS	100	103	103.0	( 85.00 - 115.00 )	
LCS2	Chromium, Total, ICAP/MS	100	107	107.0	( 85.00 - 115.00 )	3.8
MBLK	Chromium, Total, ICAP/MS	ND		0.0		
MS	Chromium, Total, ICAP/MS	100	106.	106.0	( 70.00 - 130.00 )	
MSD	Chromium, Total, ICAP/MS	100	107.	107.0	( 70.00 - 130.00 )	0.94

**QC Batch #72278**

**Iron, Total, ICAP/MS**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Iron, Total, ICAP/MS	500	563	112.6	( 85.00 - 115.00 )	
LCS2	Iron, Total, ICAP/MS	500	565	113.0	( 85.00 - 115.00 )	0.35
MBLK	Iron, Total, ICAP/MS	ND		0.0		
MS	Iron, Total, ICAP/MS	500	549.	110.0	( 70.00 - 130.00 )	
MSD	Iron, Total, ICAP/MS	500	699	<u>140.0</u>	( 70.00 - 130.00 )	24

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.  
Criteria for MS and DUP are not applicable for ICR monitoring.





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Laboratory  
QC Report  
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Foster Wheeler Environmental, Inc  
(continued)

**QC Batch #72279**

**Lead, Total, ICAP/MS**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Lead, Total, ICAP/MS	20	20.4	102.0	( 85.00 - 115.00 )	
LCS2	Lead, Total, ICAP/MS	20	21.3	106.5	( 85.00 - 115.00 )	4.3
MBLK	Lead, Total, ICAP/MS	ND		0.0		
MS	Lead, Total, ICAP/MS	20	20	100.0	( 70.00 - 130.00 )	
MSD	Lead, Total, ICAP/MS	20	20.3	101.5	( 70.00 - 130.00 )	1.5

**QC Batch #72432**

**Alkalinity**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Alkalinity	96.2	97.1	100.9	( 90.00 - 110.00 )	
LCS2	Alkalinity	96.2	96.9	100.7	( 90.00 - 110.00 )	0.21
MBLK	Alkalinity	ND				
MS	Alkalinity	96.2	100	104.0	( 80.00 - 120.00 )	
MSD	Alkalinity	96.2	98.6	102.5	( 80.00 - 120.00 )	1.4

**QC Batch #72509**

**Calcium, Flame AA**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Calcium, Flame AA	50	52.4	104.8	( 90.00 - 110.00 )	
LCS2	Calcium, Flame AA	50	51.9	103.8	( 90.00 - 110.00 )	0.96
MBLK	Calcium, Flame AA	ND				
MS	Calcium, Flame AA	50	51.3	102.6	( 85.00 - 115.00 )	
MSD	Calcium, Flame AA	50	49.5	99.0	( 85.00 - 115.00 )	3.6

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.  
Criteria for MS and DUP are not applicable for ICR monitoring.



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QC Report  
#39973

Foster Wheeler Environmental, Inc  
(continued)

**QC Batch #72522**

**Potassium, Flame AA**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Potassium, Flame AA	20	19.9	99.5	( 80.00 - 120.00 )	
LCS2	Potassium, Flame AA	20	19.9	99.5	( 80.00 - 120.00 )	0.00
MBLK	Potassium, Flame AA	ND				
MS	Potassium, Flame AA	20	20.1	100.5	( 85.00 - 115.00 )	
MSD	Potassium, Flame AA	20	21.8	109.0	( 85.00 - 115.00 )	8.1

**QC Batch #72524**

**Sodium, Flame AA**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Sodium, Flame AA	50	47.6	95.2	( 90.00 - 110.00 )	
LCS2	Sodium, Flame AA	50	47.3	94.6	( 90.00 - 110.00 )	0.63
MBLK	Sodium, Flame AA	ND				
MS	Sodium, Flame AA	50	46.4	92.8	( 85.00 - 115.00 )	
MSD	Sodium, Flame AA	50	50.9	101.8	( 85.00 - 115.00 )	9.2

**QC Batch #72526**

**Magnesium, Flame AA**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Magnesium, Flame AA	20	18.1	90.5	( 90.00 - 110.00 )	
LCS2	Magnesium, Flame AA	20	19.1	95.5	( 90.00 - 110.00 )	5.4
MBLK	Magnesium, Flame AA	ND				
MS	Magnesium, Flame AA	20	18.1	90.5	( 85.00 - 115.00 )	
MSD	Magnesium, Flame AA	20	19.7	98.5	( 85.00 - 115.00 )	8.5

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.  
Criteria for MS and DUP are not applicable for ICR monitoring.



**MONTGOMERY WATSON LABORATORIES**

February 17, 1998

Foster Wheeler Environmental  
611 Anton Blvd Suite 800  
Costa Mesa, CA.92626

Attention: Mark Cutler

Re: Report # 40007 (MW-981-084, -085, -037, -038, -038MS,  
MW-981-038MSD, -040, -036, -036MS, -036MSD)

Dear Mark,

This letter is revised to reflect a method variation for Calcium. Enclosed please find data deliverables for the recent JPL project. A detailed quality control (QC) summary follows:

**Non-conformance (LCS,MS/MSD, Surrogates, and Holding Times):**

MW-981-036MSD, High recovery for iron may be due to contamination from the wire holding the tag which occurred during the prep of the MSD.

MS/MSD recoveries for Nitrate analysis were above the internal control limits due to matrix interference. Another clients sample was used for MS/MSD. No affect on any other sample included with this batch. All other QC for Nitrate is acceptable.

**Samples requiring dilution (with increased MRL's):**

None

**Method blanks with compounds detected:**

None

**Other Comments:**

Extra volume for MW-981-038 VOC's, MW-981-036 Metals were submitted for MS/MSD QC batching, as needed by the laboratory.

Chloroform was detected in sample ID: MW-981-037, -038, -040, -036

Tetrachloroethylene was detected in sample ID: MW-981-037

Trichloroethylene was detected in sample ID: MW-981-037, -038,  
MW-981-036

Carbon Tetrachloride was detected in sample ID: MW-981-038

Bromodichloromethane was detected in sample ID: MW-981-038, -040

Perchlorate was detected in sample ID: MW-981-037, -038, -036

**TICs**

None detected

**Method Variance:**

MWlabs was experiencing difficulty in achieving the required Detection limit for Calcium by Flame AA analysis, EPA 215.1. Permission was granted by Mark Cutler 2/3/98 to analyze by ICP, EPA 200.7

Sincerely,

Debbie Frank  
Project Manager

cc: Judy Novelly (JPL)

a Division of Montgomery Watson Americas, Inc.

555 East Walnut Street  
Pasadena, California 91101  
Tel: 626 568 6400  
Fax: 626 568 6324

*Quality Environmental Analysis*



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**Laboratory Report**

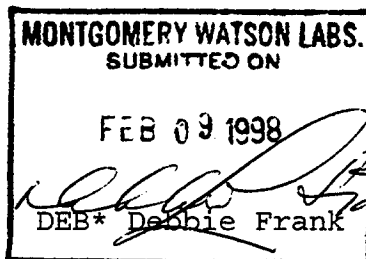
for

Foster Wheeler Environmental, Inc  
611 Anton Boulevard

Suite 800

Costa Mesa , CA 92626

Attention: Mark Cutler  
Fax: (714)444-5560



Report#: 40007  
JPL



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**Laboratory  
Report  
#40007**

Foster Wheeler Environmental, Inc  
Mark Cutler  
611 Anton Boulevard  
Suite 800  
Costa Mesa , CA 92626

Samples Received  
16-jan-1998 16:02:31

Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
MW-981-084 (980116102)				Sampled on 01/16/98				
<b>Regulated VOCs plus Lists 1&amp;3</b>								
01/21/98	72174	( ML/EPA 524.2 )	1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,1,1-Trichloroethane	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,1,2-Trichloroethane	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,1-Dichloroethane	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,1-Dichloroethylene	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,1-Dichloropropene	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,2,3-Trichlorobenzene	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,2,3-Trichloropropane	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,2,4-Trichlorobenzene	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,2,4-Trimethylbenzene	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,2-Dichloroethane	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,2-Dichloropropane	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,3,5-Trimethylbenzene	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,3-Dichloropropane	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	p-Dichlorobenzene (1,4-DCB)	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	2,2-Dichloropropane	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	2-Butanone (MEK)	ND	ug/l	5.0	1	
01/21/98	72174	( ML/EPA 524.2 )	o-Chlorotoluene	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	p-Chlorotoluene	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	4-Methyl-2-Pentanone (MIBK)	ND	ug/l	5.0	1	
01/21/98	72174	( ML/EPA 524.2 )	Benzene	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	Bromobenzene	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	Bromomethane (Methyl Bromide)	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	cis-1,2-Dichloroethylene	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	Chlorobenzene	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	Carbon Tetrachloride	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	cis-1,3-Dichloropropene	ND	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	Bromoform	ND	ug/l	0.50	1	



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**Laboratory  
Report  
#40007**

Foster Wheeler Environmental, Inc  
(continued)

Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
	01/21/98	72174	( ML/EPA 524.2 )	Chloroform (Trichloromethane)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromochloromethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chloromethane (Methyl Chloride)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chlorodibromomethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Dibromomethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromodichloromethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Dichloromethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Ethyl benzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Dichlorodifluoromethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Fluorotrichloromethane-Freon11	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Hexachlorobutadiene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Isopropylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	m-Dichlorobenzene (1,3-DCB)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	m,p-Xylenes	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Naphthalene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	n-Butylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	n-Propylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	o-Xylene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	o-Dichlorobenzene (1,2-DCB)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Tetrachloroethylene (PCE)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	p-Isopropyltoluene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	sec-Butylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Styrene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	trans-1,2-Dichloroethylene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	tert-Butylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Trichloroethylene (TCE)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Trichlorotrifluoroethane (Freon	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	trans-1,3-Dichloropropene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Toluene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Vinyl chloride (VC)	ND	ug/l	0.30	1
			( EPA 524.2 )	None detected	ND			1
			( Surrogate )	1,2-Dichloroethane-d4	105	% Rec		
			( Surrogate )	4-Bromofluorobenzene	86	% Rec		
			( Surrogate )	Toluene-d8	102	% Rec		



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Foster Wheeler Environmental, Inc  
(continued)

Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
<b>MW-981-085 (980116103)                      Sampled on 01/16/98</b>								
01/23/98	01/26/98	72207	( S3113B/E200.9 )	Arsenic, Total, GF	ND	mg/l	0.005	1
	01/28/98	72167	( MOD/EPA 300 )	Perchlorate	ND	ug/l	4.0	1
01/23/98	01/28/98	72277	( EPA/ML 200.8 )	Chromium, Total, ICAP/MS	ND	ug/l	10	1
	01/16/98	71625	( ML/SW 7196 )	Hexavalent chromium (Cr VI)	ND	mg/l	0.005	1
01/23/98	01/28/98	72279	( EPA/ML 200.8 )	Lead, Total, ICAP/MS	ND	ug/l	2.0	1
<b>Regulated VOCs plus Lists 1&amp;3</b>								
	01/21/98	72174	( ML/EPA 524.2 )	1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1,1-Trichloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1,2-Trichloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1-Dichloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1-Dichloroethylene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1-Dichloropropene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,2,3-Trichlorobenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,2,3-Trichloropropane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,2,4-Trichlorobenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,2,4-Trimethylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,2-Dichloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,2-Dichloropropane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,3,5-Trimethylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,3-Dichloropropane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	p-Dichlorobenzene (1,4-DCB)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	2,2-Dichloropropane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	2-Butanone (MEK)	ND	ug/l	5.0	1
	01/21/98	72174	( ML/EPA 524.2 )	o-Chlorotoluene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	p-Chlorotoluene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	4-Methyl-2-Pentanone (MIBK)	ND	ug/l	5.0	1
	01/21/98	72174	( ML/EPA 524.2 )	Benzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromobenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromomethane (Methyl Bromide)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	cis-1,2-Dichloroethylene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chlorobenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Carbon Tetrachloride	ND	ug/l	0.50	1



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Foster Wheeler Environmental, Inc  
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Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
	01/21/98	72174	( ML/EPA 524.2 )	cis-1,3-Dichloropropene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromoform	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chloroform (Trichloromethane)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromochloromethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chloromethane (Methyl Chloride)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chlorodibromomethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Dibromomethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromodichloromethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Dichloromethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Ethyl benzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Dichlorodifluoromethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Fluorotrichloromethane-Freon11	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Hexachlorobutadiene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Isopropylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	m-Dichlorobenzene (1,3-DCB)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	m,p-Xylenes	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Naphthalene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	n-Butylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	n-Propylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	o-Xylene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	o-Dichlorobenzene (1,2-DCB)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Tetrachloroethylene (PCE)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	p-Isopropyltoluene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	sec-Butylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Styrene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	trans-1,2-Dichloroethylene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	tert-Butylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Trichloroethylene (TCE)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Trichlorotrifluoroethane (Freon	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	trans-1,3-Dichloropropene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Toluene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Vinyl chloride (VC)	ND	ug/l	0.30	1
			( EPA 524.2 )	None detected	ND			1
			( Surrogate )	1,2-Dichloroethane-d4	112	‡ Rec		
			( Surrogate )	4-Bromofluorobenzene	90	‡ Rec		





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Foster Wheeler Environmental, Inc  
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Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
			( Surrogate )	Toluene-d8	101	µ Rec		
<b>MW-981-037 (980116104)                      Sampled on 01/16/98</b>								
	01/28/98	72432	( ML/S2320B )	Alkalinity	170	mg/l	2.0	1
	02/04/98		( ML/SM1040 )	Anion Sum	4.51	meq/l	0.0010	1
01/23/98	01/26/98	72207	( S3113B/E200.9 )	Arsenic, Total, GF	ND	mg/l	0.005	1
	02/03/98	72509	( ML/S3111B )	Calcium, Flame AA	49	mg/l	1.0	1
	02/04/98		( ML/SM1040 )	Cation Sum	5.00	meq/l	0.0010	1
	01/23/98	72102	( ML/EPA 300 )	Chloride	12	mg/l	1.0	1
	01/28/98	72167	( MOD/EPA 300 )	Perchlorate	16	ug/l	4.0	1
	02/04/98		( ML/S2320-B )	Carbonate as CO3, Calculated	1.07	mg/l	0.0010	1
01/23/98	01/28/98	72277	( EPA/ML 200.8 )	Chromium, Total, ICAP/MS	ND	ug/l	10	1
	01/16/98	71625	( ML/SW 7196 )	Hexavalent chromium (Cr VI)	ND	mg/l	0.005	1
	01/23/98		( ML/S2510B )	Specific Conductance	415	umho/cm	4.0	1
01/23/98	01/28/98	72278	( EPA/ML 200.8 )	Iron, Total, ICAP/MS	260	ug/l	100	1
	02/04/98		( ML/S2320B )	Bicarbonate as HCO3,calculated	207	mg/l	0.0010	1
	02/04/98	72522	( ML/S3111B )	Potassium, Flame AA	1.8	mg/l	1.0	1
	02/04/98	72526	( ML/S3111B )	Magnesium, Flame AA	13	mg/l	1.0	1
	02/04/98	72524	( ML/S3111B )	Sodium, Flame AA	33	mg/l	1.0	1
	01/16/98	71788	( ML/EPA 300.0 )	Nitrate-N by IC	2.3	mg/l	0.10	1
01/23/98	01/28/98	72279	( EPA/ML 200.8 )	Lead, Total, ICAP/MS	ND	ug/l	2.0	1
	01/17/98		( ML/SM 4500H )	Lab pH	7.9	Units	0.0010	1
	01/23/98	72107	( ML/EPA 300.0 )	Sulfate	29	mg/l	2.0	1
	01/23/98	72076	( ML/S2540C )	Total Dissolved Solid (TDS)	240	mg/l	10	1
<b>Regulated VOCs plus Lists 1&amp;3</b>								
	01/21/98	72174	( ML/EPA 524.2 )	1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1,1-Trichloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1,2-Trichloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1-Dichloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1-Dichloroethylene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1-Dichloropropene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,2,3-Trichlorobenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,2,3-Trichloropropane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,2,4-Trichlorobenzene	ND	ug/l	0.50	1

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Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
	01/21/98	72174	( ML/EPA 524.2 )	1,2,4-Trimethylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,2-Dichloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,2-Dichloropropane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,3,5-Trimethylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,3-Dichloropropane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	p-Dichlorobenzene (1,4-DCB)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	2,2-Dichloropropane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	2-Butanone (MEK)	ND	ug/l	5.0	1
	01/21/98	72174	( ML/EPA 524.2 )	o-Chlorotoluene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	p-Chlorotoluene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	4-Methyl-2-Pentanone (MIBK)	ND	ug/l	5.0	1
	01/21/98	72174	( ML/EPA 524.2 )	Benzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromobenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromomethane (Methyl Bromide)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	cis-1,2-Dichloroethylene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chlorobenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Carbon Tetrachloride	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	cis-1,3-Dichloropropene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromoform	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chloroform (Trichloromethane)	1.2	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromochloromethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chloromethane (Methyl Chloride)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chlorodibromomethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Dibromomethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromodichloromethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Dichloromethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Ethyl benzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Dichlorodifluoromethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Fluorotrichloromethane-Freon11	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Hexachlorobutadiene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Isopropylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	m-Dichlorobenzene (1,3-DCB)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	m,p-Xylenes	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Naphthalene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	n-Butylbenzene	ND	ug/l	0.50	1

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Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
	01/21/98	72174	( ML/EPA 524.2 )	n-Propylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	o-Xylene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	o-Dichlorobenzene (1,2-DCB)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Tetrachloroethylene (PCE)	0.6	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	p-Isopropyltoluene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	sec-Butylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Styrene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	trans-1,2-Dichloroethylene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	tert-Butylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Trichloroethylene (TCE)	7.3	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Trichlorotrifluoroethane (Freon	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	trans-1,3-Dichloropropene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Toluene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Vinyl chloride (VC)	ND	ug/l	0.30	1
			( EPA 524.2 )	None detected	ND			1
			( Surrogate )	1,2-Dichloroethane-d4	102	‡ Rec		
			( Surrogate )	4-Bromofluorobenzene	84	‡ Rec		
			( Surrogate )	Toluene-d8	103	‡ Rec		

**MW-981-038 (980116105)****Sampled on 01/16/98**

	01/28/98	72432	( ML/S2320B )	Alkalinity	160	mg/l	2.0	1
	02/04/98		( ML/SM1040 )	Anion Sum	4.38	meq/l	0.0010	1
01/23/98	01/26/98	72207	( S3113B/E200.9 )	Arsenic, Total, GF	ND	mg/l	0.005	1
	02/03/98	72509	( ML/S3111B )	Calcium, Flame AA	46	mg/l	1.0	1
	02/04/98		( ML/SM1040 )	Cation Sum	4.71	meq/l	0.0010	1
	01/23/98	72102	( ML/EPA 300 )	Chloride	14	mg/l	1.0	1
	01/28/98	72167	( MOD/EPA 300 )	Perchlorate	25	ug/l	4.0	1
	02/04/98		( ML/S2320-B )	Carbonate as CO3, Calculated	0.80	mg/l	0.0010	1
01/23/98	01/28/98	72277	( EPA/ML 200.8 )	Chromium, Total, ICAF/MS	ND	ug/l	10	1
	01/16/98	71625	( ML/SW 7196 )	Hexavalent chromium (Cr VI)	ND	mg/l	0.005	1
	01/23/98		( ML/S2510B )	Specific Conductance	395	umho/cm	4.0	1
01/23/98	01/28/98	72278	( EPA/ML 200.8 )	Iron, Total, ICAF/MS	210	ug/l	100	1
	02/04/98		( ML/S2320B )	Bicarbonate as HCO3,calculated	195	mg/l	0.0010	1
	02/04/98	72522	( ML/S3111B )	Potassium, Flame AA	2.1	mg/l	1.0	1
	02/04/98	72526	( ML/S3111B )	Magnesium, Flame AA	16	mg/l	1.0	1
	02/04/98	72524	( ML/S3111B )	Sodium, Flame AA	24	mg/l	1.0	1



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Foster Wheeler Environmental, Inc  
(continued)

Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
	01/16/98	71788	( ML/EPA 300.0 )	Nitrate-N by IC	1.6	mg/l	0.10	1
01/23/98	01/28/98	72279	( EPA/ML 200.8 )	Lead, Total, ICAP/MS	ND	ug/l	2.0	1
	01/17/98		( ML/SM 4500H )	Lab pH	7.8	Units	0.0010	1
	01/23/98	72107	( ML/EPA 300.0 )	Sulfate	32	mg/l	2.0	1
	01/23/98	72076	( ML/S2540C )	Total Dissolved Solid (TDS)	250	mg/l	10	1
<b>Regulated VOCs plus Lists 1&amp;3</b>								
	01/21/98	72174	( ML/EPA 524.2 )	1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1,1-Trichloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1,2-Trichloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1-Dichloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1-Dichloroethylene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1-Dichloropropene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,2,3-Trichlorobenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,2,3-Trichloropropane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,2,4-Trichlorobenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,2,4-Trimethylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,2-Dichloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,2-Dichloropropane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,3,5-Trimethylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,3-Dichloropropane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	p-Dichlorobenzene (1,4-DCB)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	2,2-Dichloropropane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	2-Butanone (MEK)	ND	ug/l	5.0	1
	01/21/98	72174	( ML/EPA 524.2 )	o-Chlorotoluene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	p-Chlorotoluene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	4-Methyl-2-Pentanone (MIBK)	ND	ug/l	5.0	1
	01/21/98	72174	( ML/EPA 524.2 )	Benzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromobenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromomethane (Methyl Bromide)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	cis-1,2-Dichloroethylene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chlorobenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Carbon Tetrachloride	3.3	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	cis-1,3-Dichloropropene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromoform	ND	ug/l	0.50	1

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Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
	01/21/98	72174	( ML/EPA 524.2 )	Chloroform (Trichloromethane)	6.0	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromochloromethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chloromethane (Methyl Chloride)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chlorodibromomethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Dibromomethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromodichloromethane	0.8	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Dichloromethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Ethyl benzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Dichlorodifluoromethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Fluorotrichloromethane-Freon11	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Hexachlorobutadiene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Isopropylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	m-Dichlorobenzene (1,3-DCB)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	m,p-Xylenes	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Naphthalene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	n-Butylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	n-Propylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	o-Xylene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	o-Dichlorobenzene (1,2-DCB)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Tetrachloroethylene (PCE)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	p-Isopropyltoluene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	sec-Butylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Styrene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	trans-1,2-Dichloroethylene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	tert-Butylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Trichloroethylene (TCE)	8.7	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Trichlorotrifluoroethane (Freon	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	trans-1,3-Dichloropropene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Toluene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Vinyl chloride (VC)	ND	ug/l	0.30	1
			( EPA 524.2 )	None detected	ND			1
			( Surrogate )	1,2-Dichloroethane-d4	100	‡ Rec		
			( Surrogate )	4-Bromofluorobenzene	92	‡ Rec		
			( Surrogate )	Toluene-d8	103	‡ Rec		



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Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
<b>MW-981-038 MS (980116106)</b>				<b>Sampled on 01/16/98</b>				
<b>Regulated VOCs plus Lists 1&amp;3</b>								
01/21/98	72174	( ML/EPA 524.2 )	1,1,1,2-Tetrachloroethane	NA	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,1,1-Trichloroethane	NA	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,1,2,2-Tetrachloroethane	NA	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,1,2-Trichloroethane	NA	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,1-Dichloroethane	NA	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,1-Dichloroethylene	4.08	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,1-Dichloropropene	NA	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,2,3-Trichlorobenzene	NA	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,2,3-Trichloropropane	NA	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,2,4-Trichlorobenzene	3.67	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,2,4-Trimethylbenzene	NA	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,2-Dichloroethane	NA	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,2-Dichloropropane	NA	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,3,5-Trimethylbenzene	NA	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,3-Dichloropropane	NA	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	p-Dichlorobenzene (1,4-DCB)	4.05	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	2,2-Dichloropropane	NA	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	2-Butanone (MEK)	NA	ug/l	5.0	1	
01/21/98	72174	( ML/EPA 524.2 )	o-Chlorotoluene	NA	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	p-Chlorotoluene	4.03	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	4-Methyl-2-Pentanone (MIBK)	NA	ug/l	5.0	1	
01/21/98	72174	( ML/EPA 524.2 )	Benzene	4.38	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	Bromobenzene	NA	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	Bromomethane (Methyl Bromide)	NA	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	cis-1,2-Dichloroethylene	NA	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	Chlorobenzene	4.23	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	Carbon Tetrachloride	NA	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	cis-1,3-Dichloropropene	NA	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	Bromoform	NA	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	Chloroform (Trichloromethane)	3.56	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	Bromochloromethane	NA	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	Chloroethane	NA	ug/l	0.50	1	



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Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
	01/21/98	72174	( ML/EPA 524.2 )	Chloromethane (Methyl Chloride)	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chlorodibromomethane	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Dibromomethane	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromodichloromethane	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Dichloromethane	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Ethyl benzene	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Dichlorodifluoromethane	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Fluorotrichloromethane-Freon11	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Hexachlorobutadiene	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Isopropylbenzene	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	m-Dichlorobenzene (1,3-DCB)	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	m,p-Xylenes	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Naphthalene	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	n-Butylbenzene	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	n-Propylbenzene	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	o-Xylene	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	o-Dichlorobenzene (1,2-DCB)	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Tetrachloroethylene (PCE)	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	p-Isopropyltoluene	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	sec-Butylbenzene	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Styrene	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	trans-1,2-Dichloroethylene	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	tert-Butylbenzene	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Trichloroethylene (TCE)	2.87	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Trichlorotrifluoroethane (Freon	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	trans-1,3-Dichloropropene	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Toluene	4.31	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Vinyl chloride (VC)	NA	ug/l	0.30	1
			( Surrogate )	1,2-Dichloroethane-d4	96	‡ Rec		
			( Surrogate )	4-Bromofluorobenzene	91	‡ Rec		
			( Surrogate )	Toluene-d8	92	‡ Rec		



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Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
<b>MW-981-038 MSD (980116107)</b>				<b>Sampled on 01/16/98</b>				
<b>Regulated VOCs plus Lists 1&amp;3</b>								
01/21/98	72174	( ML/EPA 524.2 )	1,1,1,2-Tetrachloroethane	NA	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,1,1-Trichloroethane	NA	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,1,2,2-Tetrachloroethane	NA	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,1,2-Trichloroethane	NA	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,1-Dichloroethane	NA	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,1-Dichloroethylene	3.88	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,1-Dichloropropene	NA	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,2,3-Trichlorobenzene	NA	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,2,3-Trichloropropane	NA	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,2,4-Trichlorobenzene	4.38	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,2,4-Trimethylbenzene	NA	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,2-Dichloroethane	NA	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,2-Dichloropropane	NA	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,3,5-Trimethylbenzene	NA	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	1,3-Dichloropropane	NA	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	p-Dichlorobenzene (1,4-DCB)	3.96	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	2,2-Dichloropropane	NA	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	2-Butanone (MEK)	NA	ug/l	5.0	1	
01/21/98	72174	( ML/EPA 524.2 )	o-Chlorotoluene	NA	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	p-Chlorotoluene	3.61	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	4-Methyl-2-Pentanone (MIBK)	NA	ug/l	5.0	1	
01/21/98	72174	( ML/EPA 524.2 )	Benzene	4.57	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	Bromobenzene	NA	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	Bromomethane (Methyl Bromide)	NA	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	cis-1,2-Dichloroethylene	NA	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	Chlorobenzene	4.41	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	Carbon Tetrachloride	NA	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	cis-1,3-Dichloropropene	NA	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	Bromoform	NA	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	Chloroform (Trichloromethane)	3.88	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	Bromochloromethane	NA	ug/l	0.50	1	
01/21/98	72174	( ML/EPA 524.2 )	Chloroethane	NA	ug/l	0.50	1	





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Foster Wheeler Environmental, Inc  
(continued)

Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
	01/21/98	72174	( ML/EPA 524.2 )	Chloromethane (Methyl Chloride)	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chlorodibromomethane	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Dibromomethane	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromodichloromethane	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Dichloromethane	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Ethyl benzene	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Dichlorodifluoromethane	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Fluorotrichloromethane-Freon11	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Hexachlorobutadiene	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Isopropylbenzene	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	m-Dichlorobenzene (1,3-DCB)	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	m,p-Xylenes	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Naphthalene	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	n-Butylbenzene	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	n-Propylbenzene	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	o-Xylene	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	o-Dichlorobenzene (1,2-DCB)	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Tetrachloroethylene (PCE)	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	p-Isopropyltoluene	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	sec-Butylbenzene	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Styrene	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	trans-1,2-Dichloroethylene	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	tert-Butylbenzene	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Trichloroethylene (TCE)	3.96	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Trichlorotrifluoroethane (Freon	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	trans-1,3-Dichloropropene	NA	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Toluene	4.48	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Vinyl chloride (VC)	NA	ug/l	0.30	1
			( Surrogate )	1,2-Dichloroethane-d4	98	‡ Rec		
			( Surrogate )	4-Bromofluorobenzene	87	‡ Rec		
			( Surrogate )	Toluene-d8	97	‡ Rec		



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Foster Wheeler Environmental, Inc  
(continued)

Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
<b>MW-981-040 (980116108)                      Sampled on 01/16/98</b>								
	01/28/98	72432	( ML/S2320B )	Alkalinity	135	mg/l	2.0	1
	02/04/98		( ML/SM1040 )	Anion Sum	3.42	meq/l	0.0010	1
01/23/98	01/26/98	72207	( S3113B/E200.9 )	Arsenic, Total, GF	ND	mg/l	0.005	1
	02/03/98	72509	( ML/S3111B )	Calcium, Flame AA	39	mg/l	1.0	1
	02/04/98		( ML/SM1040 )	Cation Sum	3.74	meq/l	0.0010	1
	01/23/98	72102	( ML/EPA 300 )	Chloride	6.6	mg/l	1.0	1
	01/28/98	72167	( MOD/EPA 300 )	Perchlorate	ND	ug/l	4.0	1
	02/04/98		( ML/S2320-B )	Carbonate as CO3, Calculated	0.67	mg/l	0.0010	1
01/23/98	01/28/98	72277	( EPA/ML 200.8 )	Chromium, Total, ICAP/MS	ND	ug/l	10	1
	01/16/98	71625	( ML/SW 7196 )	Hexavalent chromium (Cr VI)	ND	mg/l	0.005	1
	01/23/98		( ML/S2510B )	Specific Conductance	315	umho/cm	4.0	1
01/23/98	01/28/98	72278	( EPA/ML 200.8 )	Iron, Total, ICAP/MS	270	ug/l	100	1
	02/04/98		( ML/S2320B )	Bicarbonate as HCO3,calculated	164	mg/l	0.0010	1
	02/04/98	72522	( ML/S3111B )	Potassium, Flame AA	2.6	mg/l	1.0	1
	02/04/98	72526	( ML/S3111B )	Magnesium, Flame AA	13	mg/l	1.0	1
	02/04/98	72524	( ML/S3111B )	Sodium, Flame AA	15	mg/l	1.0	1
	01/16/98	71788	( ML/EPA 300.0 )	Nitrate-N by IC	0.41	mg/l	0.10	1
01/23/98	01/28/98	72279	( EPA/ML 200.8 )	Lead, Total, ICAP/MS	ND	ug/l	2.0	1
	01/17/98		( ML/SM 4500H )	Lab pH	7.8	Units	0.0010	1
	01/23/98	72107	( ML/EPA 300.0 )	Sulfate	24	mg/l	2.0	1
	01/23/98	72076	( ML/S2540C )	Total Dissolved Solid (TDS)	190	mg/l	10	1
<b>Regulated VOCs plus Lists 1&amp;3</b>								
	01/21/98	72174	( ML/EPA 524.2 )	1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1,1-Trichloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1,2-Trichloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1-Dichloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1-Dichloroethylene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1-Dichloropropene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,2,3-Trichlorobenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,2,3-Trichloropropane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,2,4-Trichlorobenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,2,4-Trimethylbenzene	ND	ug/l	0.50	1

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Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
	01/21/98	72174	( ML/EPA 524.2 )	1,2-Dichloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,2-Dichloropropane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,3,5-Trimethylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,3-Dichloropropane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	p-Dichlorobenzene (1,4-DCB)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	2,2-Dichloropropane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	2-Butanone (MEK)	ND	ug/l	5.0	1
	01/21/98	72174	( ML/EPA 524.2 )	o-Chlorotoluene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	p-Chlorotoluene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	4-Methyl-2-Pentanone (MIBK)	ND	ug/l	5.0	1
	01/21/98	72174	( ML/EPA 524.2 )	Benzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromobenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromomethane (Methyl Bromide)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	cis-1,2-Dichloroethylene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chlorobenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Carbon Tetrachloride	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	cis-1,3-Dichloropropene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromoform	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chloroform (Trichloromethane)	2.4	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromochloromethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chloromethane (Methyl Chloride)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chlorodibromomethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Dibromomethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromodichloromethane	0.5	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Dichloromethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Ethyl benzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Dichlorodifluoromethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Fluorotrichloromethane-Freon11	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Hexachlorobutadiene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Isopropylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	m-Dichlorobenzene (1,3-DCB)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	m,p-Xylenes	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Naphthalene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	n-Butylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	n-Propylbenzene	ND	ug/l	0.50	1



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Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
	01/21/98	72174	( ML/EPA 524.2 )	o-Xylene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	o-Dichlorobenzene (1,2-DCB)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Tetrachloroethylene (PCE)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	p-Isopropyltoluene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	sec-Butylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Styrene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	trans-1,2-Dichloroethylene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	tert-Butylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Trichloroethylene (TCE)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Trichlorotrifluoroethane (Freon	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	trans-1,3-Dichloropropene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Toluene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Vinyl chloride (VC)	ND	ug/l	0.30	1
			( EPA 524.2 )	None detected	ND			1
			( Surrogate )	1,2-Dichloroethane-d4	98	‡ Rec		
			( Surrogate )	4-Bromofluorobenzene	90	‡ Rec		
			( Surrogate )	Toluene-d8	98	‡ Rec		

**MW-981-036 (980116109)**

**Sampled on 01/16/98**

	01/28/98	72432	( ML/S2320B )	Alkalinity	170	mg/l	2.0	1
	02/04/98		( ML/SM1040 )	Anion Sum	4.53	meq/l	0.0010	1
01/23/98	01/26/98	72207	( S3113B/E200.9 )	Arsenic, Total, GF	ND	mg/l	0.005	1
	02/03/98	72509	( ML/S3111B )	Calcium, Flame AA	48	mg/l	1.0	1
	02/04/98		( ML/SM1040 )	Cation Sum	4.99	meq/l	0.0010	1
	01/23/98	72102	( ML/EPA 300 )	Chloride	13	mg/l	1.0	1
	01/28/98	72167	( MOD/EPA 300 )	Perchlorate	15	ug/l	4.0	1
	02/04/98		( ML/S2320-B )	Carbonate as CO3, Calculated	1.69	mg/l	0.0010	1
01/23/98	01/28/98	72277	( EPA/ML 200.8 )	Chromium, Total, ICAP/MS	ND	ug/l	10	1
	01/16/98	71625	( ML/SW 7196 )	Hexavalent chromium (Cr VI)	ND	mg/l	0.005	1
	01/23/98		( ML/S2510B )	Specific Conductance	410	umho/cm	4.0	1
01/23/98	01/28/98	72278	( EPA/ML 200.8 )	Iron, Total, ICAP/MS	650	ug/l	100	1
	02/04/98		( ML/S2320B )	Bicarbonate as HCO3,calculated	207	mg/l	0.0010	1
	02/04/98	72522	( ML/S3111B )	Potassium, Flame AA	1.8	mg/l	1.0	1
	02/04/98	72526	( ML/S3111B )	Magnesium, Flame AA	13	mg/l	1.0	1
	02/04/98	72524	( ML/S3111B )	Sodium, Flame AA	34	mg/l	1.0	1
	01/16/98	71788	( ML/EPA 300.0 )	Nitrate-N by IC	2.2	mg/l	0.10	1



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Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
01/23/98	01/28/98	72279	( EPA/ML 200.8 )	Lead, Total, ICAP/MS	ND	ug/l	2.0	1
	01/17/98		( ML/SM 4500H )	Lab pH	8.1	Units	0.0010	1
	01/23/98	72107	( ML/EPA 300.0 )	Sulfate	29	mg/l	2.0	1
	01/23/98	72076	( ML/S2540C )	Total Dissolved Solid (TDS)	260	mg/l	10	1
<b>Regulated VOCs plus Lists 1&amp;3</b>								
	01/21/98	72174	( ML/EPA 524.2 )	1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1,1-Trichloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1,2-Trichloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1-Dichloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1-Dichloroethylene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,1-Dichloropropene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,2,3-Trichlorobenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,2,3-Trichloropropane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,2,4-Trichlorobenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,2,4-Trimethylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,2-Dichloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,2-Dichloropropane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,3,5-Trimethylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	1,3-Dichloropropane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	p-Dichlorobenzene (1,4-DCB)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	2,2-Dichloropropane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	2-Butanone (MEK)	ND	ug/l	5.0	1
	01/21/98	72174	( ML/EPA 524.2 )	o-Chlorotoluene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	p-Chlorotoluene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	4-Methyl-2-Pentanone (MIBK)	ND	ug/l	5.0	1
	01/21/98	72174	( ML/EPA 524.2 )	Benzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromobenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromomethane (Methyl Bromide)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	cis-1,2-Dichloroethylene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chlorobenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Carbon Tetrachloride	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	cis-1,3-Dichloropropene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromoform	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chloroform (Trichloromethane)	1.5	ug/l	0.50	1

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Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
	01/21/98	72174	( ML/EPA 524.2 )	Bromochloromethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chloroethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chloromethane (Methyl Chloride)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Chlorodibromomethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Dibromomethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Bromodichloromethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Dichloromethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Ethyl benzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Dichlorodifluoromethane	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Fluorotrichloromethane-Freon11	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Hexachlorobutadiene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Isopropylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	m-Dichlorobenzene (1,3-DCB)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	m,p-Xylenes	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Naphthalene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	n-Butylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	n-Propylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	o-Xylene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	o-Dichlorobenzene (1,2-DCB)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Tetrachloroethylene (PCE)	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	p-Isopropyltoluene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	sec-Butylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Styrene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	trans-1,2-Dichloroethylene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	tert-Butylbenzene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Trichloroethylene (TCE)	7.9	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Trichlorotrifluoroethane (Freon	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	trans-1,3-Dichloropropene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Toluene	ND	ug/l	0.50	1
	01/21/98	72174	( ML/EPA 524.2 )	Vinyl chloride (VC)	ND	ug/l	0.30	1
			( EPA 524.2 )	None detected	ND			1
			( Surrogate )	1,2-Dichloroethane-d4	94	‡ Rec		
			( Surrogate )	4-Bromofluorobenzene	91	‡ Rec		
			( Surrogate )	Toluene-d8	100	‡ Rec		



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(continued)

Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
<b>MW-981-036 MS (980116110)</b>				<b>Sampled on 01/16/98</b>				
01/23/98	01/26/98	72207	( S3113B/E200.9 )	Arsenic, Total, GF	0.0207	mg/l	0.005	1
01/23/98	01/28/98	72277	( EPA/ML 200.8 )	Chromium, Total, ICAP/MS	106	ug/l	10	1
01/23/98	01/28/98	72279	( EPA/ML 200.8 )	Lead, Total, ICAP/MS	19.9	ug/l	2.0	1
<b>MW-981-036 MSD (980116111)</b>				<b>Sampled on 01/16/98</b>				
01/23/98	01/26/98	72207	( S3113B/E200.9 )	Arsenic, Total, GF	0.0215	mg/l	0.005	1
01/23/98	01/28/98	72277	( EPA/ML 200.8 )	Chromium, Total, ICAP/MS	107	ug/l	10	1
01/23/98	01/28/98	72279	( EPA/ML 200.8 )	Lead, Total, ICAP/MS	20.3	ug/l	2.0	1



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**Group Comments**

(Nitrate) No MS/MSD result available. QIR-MET-98-01  
(Metals) Sample MW981036 was spiked for MS/MSD. Iron recovery was high bias for MSD. All other QC's passed.





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**QC Batch #71625**

**Hexavalent chromium (Cr VI)**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Hexavalent chromium (Cr VI)	0.050	0.051	102.0	( 78.00 - 118.00 )	
LCS2	Hexavalent chromium (Cr VI)	0.050	0.052	104.0	( 78.00 - 118.00 )	1.9
MBLK	Hexavalent chromium (Cr VI)	ND				
MS	Hexavalent chromium (Cr VI)	0.050	0.052	104.0	( 80.00 - 120.00 )	
MSD	Hexavalent chromium (Cr VI)	0.050	0.051	102.0	( 80.00 - 120.00 )	1.9

**QC Batch #71788**

**Nitrate-N by IC**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Nitrate-N by IC	2.5	2.6	104.0	( 90.00 - 110.00 )	
LCS2	Nitrate-N by IC	2.5	2.6	104.0	( 90.00 - 110.00 )	0.00
MBLK	Nitrate-N by IC	ND				

**QC Batch #72076**

**Total Dissolved Solid (TDS)**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Total Dissolved Solid (TDS)	175	176	100.6	( 85.00 - 115.00 )	
LCS2	Total Dissolved Solid (TDS)	700	676	96.6	( 85.00 - 115.00 )	
MBLK	Total Dissolved Solid (TDS)	ND				

**QC Batch #72102**

**Chloride**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Chloride	25	27	108.0	( 90.00 - 110.00 )	
LCS2	Chloride	25	27	108.0	( 90.00 - 110.00 )	0.00
MBLK	Chloride	ND				
MS	Chloride	25	26	104.0	( 80.00 - 120.00 )	
MSD	Chloride	25	26	104.0	( 80.00 - 120.00 )	0.00

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.  
Criteria for MS and DUP are not applicable for ICR monitoring.



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Foster Wheeler Environmental, Inc  
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**QC Batch #72107**

**Sulfate**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Sulfate	50	54	108.0	( 90.00 - 110.00 )	
LCS2	Sulfate	50	54	108.0	( 90.00 - 110.00 )	0.00
MBLK	Sulfate	ND				
MS	Sulfate	50	53	106.0	( 80.00 - 120.00 )	
MSD	Sulfate	50	53	106.0	( 80.00 - 120.00 )	0.00

**QC Batch #72167**

**Perchlorate**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Perchlorate	20.0	18.4	92.0	( 90.00 - 110.00 )	
LCS2	Perchlorate	20.0	21.1	105.5	( 90.00 - 110.00 )	14
MBLK	Perchlorate	ND				
MS	Perchlorate	20.0	18.6	93.0	( 75.00 - 125.00 )	
MSD	Perchlorate	20.0	18.1	90.5	( 75.00 - 125.00 )	2.7

**QC Batch #72174**

**Regulated VOCs plus Lists 1&3**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
MBLK	1,1,1,2-Tetrachloroethane	ND				
LCS1	1,1,1-Trichloroethane	4	3.88	97.0	( 70.00 - 130.00 )	
MBLK	1,1,1-Trichloroethane	ND				
LCS1	1,1,2,2-Tetrachloroethane	4	4.73	118.3	( 70.00 - 130.00 )	
MBLK	1,1,2,2-Tetrachloroethane	ND				
LCS1	1,1,2-Trichloroethane	4	5.10	127.5	( 70.00 - 130.00 )	
MBLK	1,1,2-Trichloroethane	ND				
LCS1	1,1-Dichloroethane	4	4.22	105.5	( 70.00 - 130.00 )	
MBLK	1,1-Dichloroethane	ND				
LCS1	1,1-Dichloroethylene	4	3.88	97.0	( 70.00 - 130.00 )	
MBLK	1,1-Dichloroethylene	ND				
MBLK	1,1-Dichloropropene	ND				

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Criteria for MS and DUP are not applicable for ICR monitoring.



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MBLK	1,2,3-Trichlorobenzene	ND			
MBLK	1,2,3-Trichloropropane	ND			
LCS1	1,2,4-Trichlorobenzene	4	4.32	108.0	( 70.00 - 130.00 )
MBLK	1,2,4-Trichlorobenzene	ND			
MBLK	1,2,4-Trimethylbenzene	ND			
LCS1	1,2-Dichloroethane	4	4.17	104.2	( 70.00 - 130.00 )
MBLK	1,2-Dichloroethane	ND			
LCS1	1,2-Dichloropropane	4	4.17	104.2	( 70.00 - 130.00 )
MBLK	1,2-Dichloropropane	ND			
MBLK	1,3,5-Trimethylbenzene	ND			
LCS1	1,3-Dichloropropane	8	8.65	108.1	( 70.00 - 130.00 )
MBLK	1,3-Dichloropropane	ND			
MBLK	2,2-Dichloropropane	ND			
MBLK	2-Butanone (MEK)	ND			
MBLK	2-Chloroethylvinylether	ND			
MBLK	4-Methyl-2-Pentanone (MIBK)	ND			
LCS1	Benzene	4	4.15	103.8	( 70.00 - 130.00 )
MBLK	Benzene	ND			
MBLK	Bromobenzene	ND			
MBLK	Bromochloromethane	ND			
LCS1	Bromodichloromethane	4	4.69	117.3	( 70.00 - 130.00 )
MBLK	Bromodichloromethane	ND			
LCS1	Bromoform	4	5.10	127.5	( 70.00 - 130.00 )
MBLK	Bromoform	ND			
MBLK	Bromomethane (Methyl Bromide)	ND			
LCS1	Carbon Tetrachloride	4	4.20	105.0	( 70.00 - 130.00 )
MBLK	Carbon Tetrachloride	ND			
LCS1	Chlorobenzene	4	4.39	109.7	( 70.00 - 130.00 )
MBLK	Chlorobenzene	ND			
LCS1	Chlorodibromomethane	4	4.63	115.8	( 70.00 - 130.00 )
MBLK	Chlorodibromomethane	ND			
MBLK	Chloroethane	ND			
LCS1	Chloroform (Trichloromethane)	4	4.12	103.0	( 70.00 - 130.00 )
MBLK	Chloroform (Trichloromethane)	ND			
MBLK	Chloromethane (Methyl Chloride)	ND			
MBLK	Dibromomethane	ND			
MBLK	Dichlorodifluoromethane	ND			

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Criteria for MS and DUP are not applicable for ICR monitoring.

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LCS1	Dichloromethane	4	4.49	112.2	( 70.00 - 130.00 )
MBLK	Dichloromethane	ND			
LCS1	Ethyl benzene	4	4.27	106.7	( 70.00 - 130.00 )
MBLK	Ethyl benzene	ND			
LCS1	Fluorotrichloromethane-Freon11	2	2.51	125.5	( 70.00 - 130.00 )
MBLK	Fluorotrichloromethane-Freon11	ND			
MBLK	Hexachlorobutadiene	ND			
MBLK	Isopropylbenzene	ND			
MBLK	Naphthalene	ND			
LCS1	Styrene	4	4.66	116.5	( 70.00 - 130.00 )
MBLK	Styrene	ND			
LCS1	Tetrachloroethylene (PCE)	4	4.12	103.0	( 70.00 - 130.00 )
MBLK	Tetrachloroethylene (PCE)	ND			
LCS1	Toluene	4	4.31	107.7	( 70.00 - 130.00 )
MBLK	Toluene	ND			
LCS1	Trichloroethylene (TCE)	4	4.09	102.2	( 70.00 - 130.00 )
MBLK	Trichloroethylene (TCE)	ND			
LCS1	Trichlorotrifluoroethane (Freon	2	2.04	102.0	( 70.00 - 130.00 )
MBLK	Trichlorotrifluoroethane (Freon	ND			
LCS1	Vinyl chloride (VC)	2	1.71	85.5	( 70.00 - 130.00 )
MBLK	Vinyl chloride (VC)	ND			
LCS1	cis-1,2-Dichloroethylene	4	4.13	103.2	( 70.00 - 130.00 )
MBLK	cis-1,2-Dichloroethylene	ND			
MBLK	cis-1,3-Dichloropropene	ND			
LCS1	m,p-Xylenes	8	7.99	99.9	( 70.00 - 130.00 )
MBLK	m,p-Xylenes	ND			
MBLK	m-Dichlorobenzene (1,3-DCB)	ND			
MBLK	n-Butylbenzene	ND			
MBLK	n-Propylbenzene	ND			
MBLK	o-Chlorotoluene	ND			
LCS1	o-Dichlorobenzene (1,2-DCB)	4	4.36	109.0	( 70.00 - 130.00 )
MBLK	o-Dichlorobenzene (1,2-DCB)	ND			
LCS1	o-Xylene	4	4.30	107.5	( 70.00 - 130.00 )
MBLK	o-Xylene	ND			
MBLK	p-Chlorotoluene	ND			
LCS1	p-Dichlorobenzene (1,4-DCB)	4	4.03	100.8	( 70.00 - 130.00 )
MBLK	p-Dichlorobenzene (1,4-DCB)	ND			

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.  
Criteria for MS and DUP are not applicable for ICR monitoring.



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MBLK	p-Isopropyltoluene	ND				
MBLK	sec-Butylbenzene	ND				
MBLK	tert-Butylbenzene	ND				
LCS1	trans-1,2-Dichloroethylene	4	4.37	109.2	( 70.00 - 130.00 )	
MBLK	trans-1,2-Dichloroethylene	ND				
MBLK	trans-1,3-Dichloropropene	ND				

**QC Batch #72207**

**Arsenic, Total, GF**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Arsenic, Total, GF	0.020	0.0210	105.0	( 85.00 - 115.00 )	
LCS2	Arsenic, Total, GF	0.020	0.0206	103.0	( 85.00 - 115.00 )	1.9
MBLK	Arsenic, Total, GF	ND				
MS	Arsenic, Total, GF	0.020	0.0207	103.5	( 85.00 - 115.00 )	
MSD	Arsenic, Total, GF	0.020	0.0215	107.5	( 85.00 - 115.00 )	3.8

**QC Batch #72277**

**Chromium, Total, ICAP/MS**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Chromium, Total, ICAP/MS	100	103	103.0	( 85.00 - 115.00 )	
LCS2	Chromium, Total, ICAP/MS	100	107	107.0	( 85.00 - 115.00 )	3.8
MBLK	Chromium, Total, ICAP/MS	ND		0.0		
MS	Chromium, Total, ICAP/MS	100	106.	106.0	( 70.00 - 130.00 )	
MSD	Chromium, Total, ICAP/MS	100	107.	107.0	( 70.00 - 130.00 )	0.94

**QC Batch #72278**

**Iron, Total, ICAP/MS**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Iron, Total, ICAP/MS	500	563	112.6	( 85.00 - 115.00 )	
LCS2	Iron, Total, ICAP/MS	500	565	113.0	( 85.00 - 115.00 )	0.35
MBLK	Iron, Total, ICAP/MS	ND		0.0		
MS	Iron, Total, ICAP/MS	500	549.	110.0	( 70.00 - 130.00 )	
MSD	Iron, Total, ICAP/MS	500	699	<u>140.0</u>	( 70.00 - 130.00 )	24

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.  
Criteria for MS and DUP are not applicable for ICR monitoring.



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**QC Batch #72279**

**Lead, Total, ICAP/MS**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Lead, Total, ICAP/MS	20	20.4	102.0	( 85.00 - 115.00 )	
LCS2	Lead, Total, ICAP/MS	20	21.3	106.5	( 85.00 - 115.00 )	4.3
MBLK	Lead, Total, ICAP/MS	ND		0.0		
MS	Lead, Total, ICAP/MS	20	20	100.0	( 70.00 - 130.00 )	
MSD	Lead, Total, ICAP/MS	20	20.3	101.5	( 70.00 - 130.00 )	1.5

**QC Batch #72432**

**Alkalinity**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Alkalinity	96.2	97.1	100.9	( 90.00 - 110.00 )	
LCS2	Alkalinity	96.2	96.9	100.7	( 90.00 - 110.00 )	0.21
MBLK	Alkalinity	ND				
MS	Alkalinity	96.2	100	104.0	( 80.00 - 120.00 )	
MSD	Alkalinity	96.2	98.6	102.5	( 80.00 - 120.00 )	1.4

**QC Batch #72509**

**Calcium, Flame AA**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Calcium, Flame AA	50	52.4	104.8	( 90.00 - 110.00 )	
LCS2	Calcium, Flame AA	50	51.9	103.8	( 90.00 - 110.00 )	0.96
MBLK	Calcium, Flame AA	ND				
MS	Calcium, Flame AA	50	51.3	102.6	( 85.00 - 115.00 )	
MSD	Calcium, Flame AA	50	49.5	99.0	( 85.00 - 115.00 )	3.6

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.  
Criteria for MS and DUP are not applicable for ICR monitoring.



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**QC Batch #72522**

**Potassium, Flame AA**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Potassium, Flame AA	20	19.9	99.5	( 80.00 - 120.00 )	
LCS2	Potassium, Flame AA	20	19.9	99.5	( 80.00 - 120.00 )	0.00
MBLK	Potassium, Flame AA	ND				
MS	Potassium, Flame AA	20	20.1	100.5	( 85.00 - 115.00 )	
MSD	Potassium, Flame AA	20	21.8	109.0	( 85.00 - 115.00 )	8.1

**QC Batch #72524**

**Sodium, Flame AA**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Sodium, Flame AA	50	47.6	95.2	( 90.00 - 110.00 )	
LCS2	Sodium, Flame AA	50	47.3	94.6	( 90.00 - 110.00 )	0.63
MBLK	Sodium, Flame AA	ND				
MS	Sodium, Flame AA	50	46.4	92.8	( 85.00 - 115.00 )	
MSD	Sodium, Flame AA	50	50.9	101.8	( 85.00 - 115.00 )	9.2

**QC Batch #72526**

**Magnesium, Flame AA**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Magnesium, Flame AA	20	18.1	90.5	( 90.00 - 110.00 )	
LCS2	Magnesium, Flame AA	20	19.1	95.5	( 90.00 - 110.00 )	5.4
MBLK	Magnesium, Flame AA	ND				
MS	Magnesium, Flame AA	20	18.1	90.5	( 85.00 - 115.00 )	
MSD	Magnesium, Flame AA	20	19.7	98.5	( 85.00 - 115.00 )	8.5

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.  
Criteria for MS and DUP are not applicable for ICR monitoring.



**MONTGOMERY WATSON LABORATORIES**

February 10, 1998

Foster Wheeler Environmental  
611 Anton Blvd Suite 800  
Costa Mesa, CA.92626

Attention: Mark Cutler

Re: Report # 40007 (MW-981-084, -085, -037, -038, -038MS,  
MW-981-038MSD, -040, -036, -036MS, -036MSD)

Dear Mark,

Enclosed please find data deliverables for the recent JPL project. A detailed quality control (QC) summary follows:

**Non-conformance (LCS,MS/MSD, Surrogates, and Holding Times):**

MW-981-036MSD, High recovery for iron may be due to contamination from the wire holding the tag which occurred during the prep of the MSD.

MS/MSD recoveries for Nitrate analysis were above the internal control limits due to matrix interference. Another clients sample was used for MS/MSD. No affect on any other sample included with this batch. All other QC for Nitrate is acceptable.

**Samples requiring dilution (with increased MRL's):**

None

**Method blanks with compounds detected:**

None

**Other Comments:**

Extra volume for MW-981-038 VOC's, MW-981-036 Metals were submitted for MS/MSD QC batching, as needed by the laboratory.

Chloroform was detected in sample ID: MW-981-037, -038, -040, -036

Tetrachloroethylene was detected in sample ID: MW-981-037

Trichloroethylene was detected in sample ID: MW-981-037, -038,  
MW-981-036

Carbon Tetrachloride was detected in sample ID: MW-981-038

Bromodichloromethane was detected in sample ID: MW-981-038, -040

Perchlorate was detected in sample ID: MW-981-037, -038, -036

**TICs**

None detected

Sincerely,

Debbie Frank  
Project Manager

cc: Judy Novelly (JPL)

a Division of Montgomery Watson Americas, Inc.

555 East Walnut Street  
Pasadena, California 91101  
Tel: 626 568 6400  
Fax: 626 568 6324

Quality Environmental Analysis



ACKNOWLEDGMENT OF SAMPLES RECEIVED

Foster Wheeler Environmental, Inc  
 611 Anton Boulevard  
 Suite 800  
 Costa Mesa, CA 92626  
 Attn: Mark Cutler

Customer Code: ENSERCH  
 PO#: Sub PO#007618  
 Group#: 40007  
 Project#: JPL  
 Proj Mgr: Debbie Frank  
 Phone: (714) 444-5526

The following samples were received from you on 01/16/98. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using Montgomery Watson Laboratories.

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
980116102	MW-981-084	@EBASVOA	Water	01/16/98
980116103	MW-981-085	@EBASVOA AS-GF CLO4	Water PB-MS CR-MS CR-VI	01/16/98
980116104	MW-981-037	@EBASVOA AS-GF CATION ANION1 ALK NO3 NA-FL MG-FL	Water PB-MS PH EC SO4 CL CA-FL CR-VI	01/16/98
980116105	MW-981-038	@EBASVOA CLO4 NA-FL K-FL ALK CO3 CATION TDS	Water CR-VI CA-FL MG-FL CL SO4 EC HCO3 PB-MS AS-GF	01/16/98
980116106	MW-981-038 MS	@EBASVOA	Water	01/16/98
980116107	MW-981-038 MSD	@EBASVOA	Water	01/16/98
980116108	MW-981-040	@EBASVOA AS-GF CATION ANION1 ALK NO3 NA-FL MG-FL	Water PB-MS PH EC SO4 CL CA-FL CR-VI	01/16/98
980116109	MW-981-036	@EBASVOA CLO4 NA-FL K-FL ALK CO3 CATION TDS	Water CR-VI CA-FL MG-FL CL SO4 EC HCO3 PB-MS AS-GF	01/16/98

Foster Wheeler Environmental, Inc  
 611 Anton Boulevard  
 Suite 800  
 Costa Mesa, CA 92626  
 Attn: Mark Cutler

Customer Code: ENSERCH  
 PO#: Sub PO#007618  
 Group#: 40007  
 Project#: JPL  
 Proj Mgr: Debbie Frank  
 Phone: (714) 444-5526

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
980116110	MW-981-036 MS	AS-GF PB-MS	Water CR-MS	01/16/98
980116111	MW-981-036 MSD	CR-MS PB-MS	Water AS-GF	01/16/98

Test Acronym Description

Test Acronym	Description
@EBASVOA	Regulated VOCs plus Lists 1&3
ALK	Alkalinity
ANION1	Anion Sum
AS-GF	Arsenic, Total, GF
CA-FL	Calcium, Flame AA
CATION	Cation Sum
CL	Chloride
CLO4	Perchlorate
CO3	Carbonate as CO3, Calculated
CR-MS	Chromium, Total, ICAP/MS
CR-VI	Hexavalent chromium (Cr VI)
EC	Specific Conductance
FE-MS	Iron, Total, ICAP/MS
HCO3	Bicarbonate as HCO3,calculated
K-FL	Potassium, Flame AA
MG-FL	Magnesium, Flame AA
NA-FL	Sodium, Flame AA
NO3	Nitrate-N by IC
PB-MS	Lead, Total, ICAP/MS
PH	Lab pH
SO4	Sulfate
TDS	Total Dissolved Solid (TDS)



Temp 11-18  
ICE FROZEN

40007

No. 0023

FOSTER WHEELER ENVIRONMENTAL CORPORATION

CHAIN OF CUSTODY FORM REQUEST FOR ANALYSIS

Project: JPL		OFS No. 1572.0233		HAZARD IDENTIFICATION:		Time Required									
Project Address: 4800 OAK GROVE DR PASADENA, CA		Sampler (Name): J. BRENNEL		Sampler (Signature): [Signature]		Nonhazard <input checked="" type="checkbox"/> Reactive <input type="checkbox"/> Flammable <input type="checkbox"/> Toxic <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Infectious <input type="checkbox"/>									
Laboratory: MONTGOMERY WATSON LABS		Reports to Be Sent to: MR. MARK COYNE		ANALYSES REQUIRED											
SAMPLE NUMBER	TIME COLLECTED	DATE COLLECTED	NUMBER OF CONTAINERS	CONTAINER SIZE(S)	SAMPLE MATERIAL			VOCs (SZA2)	TOTAL A, P, B, C	MASS CALIBRATED	HEX. CR.	POLYCHLORINATED	VOCs (MS)	VOCs (MSD)	
					WATER	SOIL	OTHER (Describe)								
MW-931-034	0820	1/16/93	2	2x40ml	X			X							102
MW-931-035	0830		5	2x40ml 1x25ml 2x125ml	X			X	X		X	X			103
MW-931-037	0925		6	2x40ml 8x25ml 2x125ml 1x500ml	X			X	X	X	X	X			104
MW-931-038	1040		6		X			X	X	X	X	X			105
MW-931-038MS	1040		2	2x40ml	X								X		106
MW-931-038MS	1040		2	2x40ml	X									X	107
MW-931-040	1150		6	2x40ml 1x25ml 2x125ml 1x500ml	X			X	X	X	X	X			108
MW-931-036*	1335		8*	2x40ml 3x25ml 2x125ml 1x500ml	X			X	X	X	X	X			109
MW-931-036 <sup>S</sup>	1335		1						X						110
MW-931-036 <sup>MS</sup>	1335		1					X							111
NOTE received 2 extra metal bottles: #1 in 931-036MS & #2 in 931-036MSA <del>not tested with</del>															
LABORATORY INSTRUCTIONS/COMMENTS: LEVEL IV QA/QC * EXTRA BOTTLES FOR MS/MSD FOR METALS															
Relinquished by: (Signature) [Signature]		Date: 1/15/93		Received by: (Signature) [Signature]		Date:		Relinquished by: (Signature)		Date:		Received by: (Signature)			
Company: FWENC		Time: 01/16/93		Company: MW				Company:				Company:			

MONTGOMERY LABORATORIES COOLER RECEIPT FORM

PROJECT: JPL Date Received: 1/16/98  
 Use other side of this form to note further details concerning check-in problems and to describe any action(s) regarding the resolution(s) of problems.

A. PRELIMINARY EXAMINATION: Date cooler opened: 1/16/98  
 by (print) \_\_\_\_\_ (sign) \_\_\_\_\_

1. Did cooler come with shipping slip (air bill, etc.)? Yes  No   
 If YES, attach & enter carrier and air bill # here: \_\_\_\_\_
2. Were custody seals on outside of cooler? Yes  No   
 If YES, how many & where: TWO ON LID  
 If Yes, enter the following: seal date: 1/16/98, seal name: Z
3. Were custody seals unbroken & intact at delivery? Yes  No
4. Were custody papers FOR BOTTLES sealed in bag & taped to lid? Yes  No
5. Were custody papers filled out properly (ink, etc.) Yes  No
6. Did you sign custody papers in appropriate place? Yes  No
7. Was project identifiable from custody papers? Yes  No
8. Have designated person(s) initial to acknowledge receipt: WFF (date) 1/16/98

B. LOG-IN PHASE: Date samples were logged-in: 1-16-98 by:  
 (print) IA DE WESA (sign) \_\_\_\_\_

9. Describe packing: \_\_\_\_\_
10. If required, was enough ice used? Yes  No
11. Were all bottles sealed in separate plastic bags? Yes  No
12. Did all bottles arrive unbroken/in good condition? Yes  No
13. Were all bottle labels complete (ID,date,sign,pres)? Yes  No
14. Did all bottle labels agree with custody papers? Yes  No   
 If NO, indicate discrepancies on back.
15. Were correct containers used for the analytes? Yes  No   
 NOTE: MW-981-3641 & 036 MSA FOR METALS, NOT LISTED I CHAIN OF CUSTODY WFF
16. Were correct preservatives used when required? Yes  No
17. Was sufficient amount of sample sent for tests? Yes  No
18. Bubbles absent in VOA vials? Yes  No   
 If NO, list by sample id on back.
19. Was Client Services informed of problems? Yes  No

Report Summary of positive results, PR40007

			Result	MDL	UNITS
Analyzed	980116102	MW-981-084			
Analyzed	980116103	MW-981-085			
Analyzed	980116104	MW-981-037			
01/21/98	Chloroform (Trichloromethane)		1.2	.500	UGL
01/21/98	Tetrachloroethylene (PCE)		0.6	.500	UGL
01/21/98	Trichloroethylene (TCE)		7.3	.500	UGL
01/28/98	Alkalinity		170	2.000	MGL
02/04/98	Anion Sum		4.51	.001	MEQL
02/04/98	Bicarbonate as HCO3,calculated		207	.001	MGL
02/03/98	Calcium, Flame AA		49	1.000	MGL
02/04/98	Carbonate as CO3, Calculated		1.07	.001	MGL
02/04/98	Cation Sum		5.00	.001	MEQL
01/23/98	Chloride		12	1.000	MGL
01/28/98	Iron, Total, ICAP/MS		260	*****	UGL
01/17/98	Lab pH		7.9	.001	UNIT
02/04/98	Magnesium, Flame AA		13	1.000	MGL
01/16/98	Nitrate-N by IC		2.3	.100	MGL
01/28/98	Perchlorate		16	4.000	UGL
02/04/98	Potassium, Flame AA		1.8	1.000	MGL
02/04/98	Sodium, Flame AA		33	1.000	MGL
01/23/98	Specific Conductance		415	4.000	UMHO
01/23/98	Sulfate		29	2.000	MGL
01/23/98	Total Dissolved Solid (TDS)		240	10.000	MGL
Analyzed	980116105	MW-981-038			
01/21/98	Bromodichloromethane		0.8	.500	UGL
01/21/98	Carbon Tetrachloride		3.3	.500	UGL
01/21/98	Chloroform (Trichloromethane)		6.0	.500	UGL
01/21/98	Trichloroethylene (TCE)		8.7	.500	UGL
01/28/98	Alkalinity		160	2.000	MGL
02/04/98	Anion Sum		4.38	.001	MEQL
02/04/98	Bicarbonate as HCO3,calculated		195	.001	MGL
02/03/98	Calcium, Flame AA		46	1.000	MGL
02/04/98	Carbonate as CO3, Calculated		0.80	.001	MGL
02/04/98	Cation Sum		4.71	.001	MEQL
01/23/98	Chloride		14	1.000	MGL
01/28/98	Iron, Total, ICAP/MS		210	*****	UGL
01/17/98	Lab pH		7.8	.001	UNIT
02/04/98	Magnesium, Flame AA		16	1.000	MGL
01/16/98	Nitrate-N by IC		1.6	.100	MGL
01/28/98	Perchlorate		25	4.000	UGL
02/04/98	Potassium, Flame AA		2.1	1.000	MGL
02/04/98	Sodium, Flame AA		24	1.000	MGL
01/23/98	Specific Conductance		395	4.000	UMHO
01/23/98	Sulfate		32	2.000	MGL
01/23/98	Total Dissolved Solid (TDS)		250	10.000	MGL
Analyzed	980116106	MW-981-038 MS			
01/21/98	1,1-Dichloroethylene		4.08	.500	UGL

01/21/98	1,2,4-Trichlorobenzene	3.67	.500	UGL
01/21/98	Benzene	4.38	.500	UGL
01/21/98	Chlorobenzene	4.23	.500	UGL
01/21/98	Chloroform (Trichloromethane)	3.56	.500	UGL
01/21/98	Toluene	4.31	.500	UGL
01/21/98	Trichloroethylene (TCE)	2.87	.500	UGL
01/21/98	p-Chlorotoluene	4.03	.500	UGL
01/21/98	p-Dichlorobenzene (1,4-DCB)	4.05	.500	UGL

Analyzed 980116107 MW-981-038 MSD

01/21/98	1,1-Dichloroethylene	3.88	.500	UGL
01/21/98	1,2,4-Trichlorobenzene	4.38	.500	UGL
01/21/98	Benzene	4.57	.500	UGL
01/21/98	Chlorobenzene	4.41	.500	UGL
01/21/98	Chloroform (Trichloromethane)	3.88	.500	UGL
01/21/98	Toluene	4.48	.500	UGL
01/21/98	Trichloroethylene (TCE)	3.96	.500	UGL
01/21/98	p-Chlorotoluene	3.61	.500	UGL
01/21/98	p-Dichlorobenzene (1,4-DCB)	3.96	.500	UGL

Analyzed 980116108 MW-981-040

01/21/98	Bromodichloromethane	0.5	.500	UGL
01/21/98	Chloroform (Trichloromethane)	2.4	.500	UGL
01/28/98	Alkalinity	135	2.000	MGL
02/04/98	Anion Sum	3.42	.001	MEQL
02/04/98	Bicarbonate as HCO3,calculated	164	.001	MGL
02/03/98	Calcium, Flame AA	39	1.000	MGL
02/04/98	Carbonate as CO3, Calculated	0.67	.001	MGL
02/04/98	Cation Sum	3.74	.001	MEQL
01/23/98	Chloride	6.6	1.000	MGL
01/28/98	Iron, Total, ICAP/MS	270	*****	UGL
01/17/98	Lab pH	7.8	.001	UNIT
02/04/98	Magnesium, Flame AA	13	1.000	MGL
01/16/98	Nitrate-N by IC	0.41	.100	MGL
02/04/98	Potassium, Flame AA	2.6	1.000	MGL
02/04/98	Sodium, Flame AA	15	1.000	MGL
01/23/98	Specific Conductance	315	4.000	UMHO
01/23/98	Sulfate	24	2.000	MGL
01/23/98	Total Dissolved Solid (TDS)	190	10.000	MGL

Analyzed 980116109 MW-981-036

01/21/98	Chloroform (Trichloromethane)	1.5	.500	UGL
01/21/98	Trichloroethylene (TCE)	7.9	.500	UGL
01/28/98	Alkalinity	170	2.000	MGL
02/04/98	Anion Sum	4.53	.001	MEQL
02/04/98	Bicarbonate as HCO3,calculated	207	.001	MGL
02/03/98	Calcium, Flame AA	48	1.000	MGL
02/04/98	Carbonate as CO3, Calculated	1.69	.001	MGL
02/04/98	Cation Sum	4.99	.001	MEQL
01/23/98	Chloride	13	1.000	MGL
01/28/98	Iron, Total, ICAP/MS	650	*****	UGL
01/17/98	Lab pH	8.1	.001	UNIT
02/04/98	Magnesium, Flame AA	13	1.000	MGL
01/16/98	Nitrate-N by IC	2.2	.100	MGL
01/28/98	Perchlorate	15	4.000	UGL
02/04/98	Potassium, Flame AA	1.8	1.000	MGL
02/04/98	Sodium, Flame AA	34	1.000	MGL

01/23/98	Specific Conductance	410	4.000	UMHO
01/23/98	Sulfate	29	2.000	MGL
01/23/98	Total Dissolved Solid (TDS)	260	10.000	MGL

Analyzed 980116110 MW-981-036 MS

01/26/98	Arsenic, Total, GF	0.0207	.005	MGL
01/28/98	Chromium, Total, ICAP/MS	106	10.000	UGL
01/28/98	Lead, Total, ICAP/MS	19.9	2.000	UGL

Analyzed 980116111 MW-981-036 MSD

01/26/98	Arsenic, Total, GF	0.0215	.005	MGL
01/28/98	Chromium, Total, ICAP/MS	107	10.000	UGL
01/28/98	Lead, Total, ICAP/MS	20.3	2.000	UGL



**MONTGOMERY WATSON LABORATORIES**

February 24, 1998

Foster Wheeler Environmental  
611 Anton Blvd Suite 800  
Costa Mesa, CA.92626

Attention: Mark Cutler

Re: Report # 40037 (MW-981-086, 087, 021, 022, 023, 024,  
025)

Dear Mark,

Enclosed please find data deliverables for the recent JPL project. A detailed quality control (QC) summary follows:

**Non-conformance (LCS,MS/MSD, Surrogates, and Holding Times):**

One MSD for iron had high recovery (sample 981-036 was the spiked sample) however the MS was acceptable and all LCS results were acceptable for iron.

**Samples requiring dilution (with increased MRL's):**

None

**Method blanks with compounds detected:**

None

**Other Comments:**

Volatiles were detected in samples 087, 024, and 025.

**TICs**

Alkyl benzenes and some unknowns were detected in sample 087, along with BTX compounds as target analytes. An unknown TIC was also detected in sample 023.

**Method Variance:**

MWlabs was experiencing difficulty in achieving the required Detection limit for Calcium by Flame AA analysis, EPA 215.1. Permission was granted by Mark Cutler 2/3/98 to analyze by ICP, EPA 200.7. The Calcium for this set of samples was analyzed by ICP.

Sincerely,

Andrew Eaton, Ph.D.  
Laboratory Director

cc: Judy Novelly (JPL)





**MONTGOMERY WATSON LABORATORIES**

555 East Walnut Street  
Pasadena, California 91101  
818 568 6400; Fax: 818 568 6324;  
1 800 566 LABS (1 800 566 5227)

**Laboratory Report**

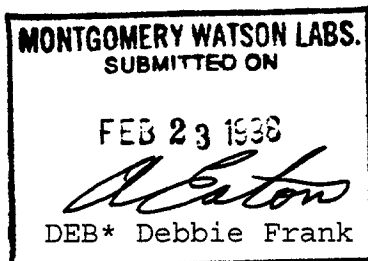
for

Foster Wheeler Environmental, Inc  
611 Anton Boulevard

Suite 800

Costa Mesa , CA 92626

Attention: Mark Cutler  
Fax: (714)444-5560



Report#: 40037  
JPL

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Laboratory  
Report  
#40037

Foster Wheeler Environmental, Inc  
Mark Cutler  
611 Anton Boulevard  
Suite 800  
Costa Mesa , CA 92626

Samples Received  
20-Jan-1998 16:15:27

Anal	Method	Analyte	Result	Units	MDL
MW-981-086 (980120096)			Sampled on 01/20/98		
Regulated VOCs plus Lists 1&3					
01/22/98 ( ML/EPA 524.2 )		1,1,1,2-Tetrachloroethane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,1,1-Trichloroethane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,1,2,2-Tetrachloroethane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,1,2-Trichloroethane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,1-Dichloroethane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,1-Dichloroethylene	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,1-Dichloropropene	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,2,3-Trichlorobenzene	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,2,3-Trichloropropane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,2,4-Trichlorobenzene	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,2,4-Trimethylbenzene	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,2-Dichloroethane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,2-Dichloropropane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,3,5-Trimethylbenzene	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,3-Dichloropropane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		p-Dichlorobenzene (1,4-DCB)	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		2,2-Dichloropropane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		2-Butanone (MEK)	ND	ug/l	5.0
01/22/98 ( ML/EPA 524.2 )		o-Chlorotoluene	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		p-Chlorotoluene	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		4-Methyl-2-Pentanone (MIBK)	ND	ug/l	5.0
01/22/98 ( ML/EPA 524.2 )		Benzene	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		Bromobenzene	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		Bromomethane (Methyl Bromide)	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		cis-1,2-Dichloroethylene	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		Chlorobenzene	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		Carbon Tetrachloride	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		cis-1,3-Dichloropropene	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		Bromoform	ND	ug/l	0.50



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**Laboratory  
Report  
#40037**

Foster Wheeler Environmental, Inc  
(continued)

Anal	Method	Analyte	Result	Units	MDL
01/22/98	( ML/EPA 524.2 )	Chloroform (Trichloromethane)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromochloromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloromethane (Methyl Chloride)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chlorodibromomethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dibromomethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromodichloromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dichloromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Ethyl benzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dichlorodifluoromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Fluorotrichloromethane-Freon11	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Hexachlorobutadiene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Isopropylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	m-Dichlorobenzene (1,3-DCB)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	m,p-Xylenes	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Naphthalene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	n-Butylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	n-Propylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	o-Xylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	o-Dichlorobenzene (1,2-DCB)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Tetrachloroethylene (PCE)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	p-Isopropyltoluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	sec-Butylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Styrene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	trans-1,2-Dichloroethylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	tert-Butylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Trichloroethylene (TCE)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Trichlorotrifluoroethane (Freon	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	trans-1,3-Dichloropropene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Toluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Vinyl chloride (VC)	ND	ug/l	0.30
	( EPA 524.2 )	None Detected	ND	ug/l	
	( Surrogate )	1,2-Dichloroethane-d4	101	% Rec	
	( Surrogate )	4-Bromofluorobenzene	100	% Rec	
	( Surrogate )	Toluene-d8	97	% Rec	



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Foster Wheeler Environmental, Inc  
(continued)

Anal	Method	Analyte	Result	Units	MDL
<b>MW-981-087 (980120097)      Sampled on 01/20/98</b>					
01/26/98	( S3113B/E200.9 )	Arsenic, Total, GF	ND	mg/l	0.005
01/28/98	( MOD/EPA 300 )	Perchlorate	ND	ug/l	4.0
01/28/98	( EPA/ML 200.8 )	Chromium, Total, ICAP/MS	ND	ug/l	10
01/20/98	( ML/SW 7196 )	Hexavalent chromium (Cr VI)	ND	mg/l	0.005
01/28/98	( EPA/ML 200.8 )	Lead, Total, ICAP/MS	ND	ug/l	2.0
<b>Regulated VOCs plus Lists 1&amp;3</b>					
01/22/98	( ML/EPA 524.2 )	1,1,1,2-Tetrachloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1,1-Trichloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1,2,2-Tetrachloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1,2-Trichloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1-Dichloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1-Dichloroethylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1-Dichloropropene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,3-Trichlorobenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,3-Trichloropropane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,4-Trichlorobenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,4-Trimethylbenzene	1.4	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2-Dichloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2-Dichloropropane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,3,5-Trimethylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,3-Dichloropropane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	p-Dichlorobenzene (1,4-DCB)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	2,2-Dichloropropane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	2-Butanone (MEK)	ND	ug/l	5.0
01/22/98	( ML/EPA 524.2 )	o-Chlorotoluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	p-Chlorotoluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	4-Methyl-2-Pentanone (MIBK)	ND	ug/l	5.0
01/22/98	( ML/EPA 524.2 )	Benzene	3.5	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromobenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromomethane (Methyl Bromide)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	cis-1,2-Dichloroethylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chlorobenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Carbon Tetrachloride	ND	ug/l	0.50

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Anal	Method	Analyte	Result	Units	MDL
01/22/98	( ML/EPA 524.2 )	cis-1,3-Dichloropropene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromoform	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloroform (Trichloromethane)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromochloromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloromethane (Methyl Chloride)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chlorodibromomethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dibromomethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromodichloromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dichloromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Ethyl benzene	2.7	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dichlorodifluoromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Fluorotrichloromethane-Freon11	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Hexachlorobutadiene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Isopropylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	m-Dichlorobenzene (1,3-DCB)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	m,p-Xylenes	9.3	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Naphthalene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	n-Butylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	n-Propylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	o-Xylene	3.5	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	o-Dichlorobenzene (1,2-DCB)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Tetrachloroethylene (PCE)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	p-Isopropyltoluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	sec-Butylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Styrene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	trans-1,2-Dichloroethylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	tert-Butylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Trichloroethylene (TCE)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Trichlorotrifluoroethane (Freon	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	trans-1,3-Dichloropropene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Toluene	20	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Vinyl chloride (VC)	ND	ug/l	0.30
	( EPA 524.2 )	Alkyl benzene RT-15.65	7.7	ug/l	
	( EPA 524.2 )	Alkyl benzene RT-15.80	2.4	ug/l	
	( EPA 524.2 )	Unknown RT-3.40	2.1	ug/l	



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Anal	Method	Analyte	Result	Units	MDL
( EPA 524.2	)	Unknown RT-4.04	1.1	ug/l	
( EPA 524.2	)	Unknown RT-5.81	1.1	ug/l	
( EPA 524.2	)	Unknown RT-6.98	1.6	ug/l	
( Surrogate	)	1,2-Dichloroethane-d4	97	% Rec	
( Surrogate	)	4-Bromofluorobenzene	87	% Rec	
( Surrogate	)	Toluene-d8	99	% Rec	
<b>MW-981-021 (980120098)      Sampled on 01/20/98</b>					
01/28/98 ( ML/S2320B	)	Alkalinity	155	mg/l	2.0
02/04/98 ( ML/SM1040	)	Anion Sum	3.79	meq/l	0.0010
01/26/98 ( S3113B/E200.9	)	Arsenic, Total, GF	ND	mg/l	0.005
02/03/98 ( ML/S3111B	)	Calcium, Flame AA	7.1	mg/l	1.0
02/04/98 ( ML/SM1040	)	Cation Sum	4.13	meq/l	0.0010
01/22/98 ( ML/EPA 300	)	Chloride	8.9	mg/l	1.0
01/28/98 ( MOD/EPA 300	)	Perchlorate	ND	ug/l	4.0
02/04/98 ( ML/S2320-B	)	Carbonate as CO3, Calculated	23.2	mg/l	0.0010
01/28/98 ( EPA/ML 200.8	)	Chromium, Total, ICAP/MS	ND	ug/l	10
01/20/98 ( ML/SW 7196	)	Hexavalent chromium (Cr VI)	ND	mg/l	0.005
01/26/98 ( ML/S2510B	)	Specific Conductance	370	umho/cm	4.0
01/28/98 ( EPA/ML 200.8	)	Iron, Total, ICAP/MS	ND	ug/l	100
02/04/98 ( ML/S2320B	)	Bicarbonate as HCO3,calculated	179	mg/l	0.0010
02/04/98 ( ML/S3111B	)	Potassium, Flame AA	1.5	mg/l	1.0
02/04/98 ( ML/S3111B	)	Magnesium, Flame AA	1.6	mg/l	1.0
02/04/98 ( ML/S3111B	)	Sodium, Flame AA	83	mg/l	1.0
01/22/98 ( ML/EPA 300.0	)	Nitrate-N by IC	ND	mg/l	0.10
01/28/98 ( EPA/ML 200.8	)	Lead, Total, ICAP/MS	ND	ug/l	2.0
01/21/98 ( ML/SM 4500H	)	Lab pH	9.3	Units	0.0010
01/22/98 ( ML/EPA 300.0	)	Sulfate	21	mg/l	2.0
01/23/98 ( ML/S2540C	)	Total Dissolved Solid (TDS)	230	mg/l	10
<b>Regulated VOCs plus Lists 1&amp;3</b>					
01/22/98 ( ML/EPA 524.2	)	1,1,1,2-Tetrachloroethane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2	)	1,1,1-Trichloroethane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2	)	1,1,2,2-Tetrachloroethane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2	)	1,1,2-Trichloroethane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2	)	1,1-Dichloroethane	ND	ug/l	0.50

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Anal	Method	Analyte	Result	Units	MDL
01/22/98	( ML/EPA 524.2 )	1,1-Dichloroethylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1-Dichloropropene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,3-Trichlorobenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,3-Trichloropropane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,4-Trichlorobenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,4-Trimethylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2-Dichloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2-Dichloropropane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,3,5-Trimethylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,3-Dichloropropane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	p-Dichlorobenzene (1,4-DCB)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	2,2-Dichloropropane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	2-Butanone (MEK)	ND	ug/l	5.0
01/22/98	( ML/EPA 524.2 )	o-Chlorotoluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	p-Chlorotoluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	4-Methyl-2-Pentanone (MIBK)	ND	ug/l	5.0
01/22/98	( ML/EPA 524.2 )	Benzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromobenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromomethane (Methyl Bromide)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	cis-1,2-Dichloroethylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chlorobenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Carbon Tetrachloride	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	cis-1,3-Dichloropropene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromoform	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloroform (Trichloromethane)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromochloromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloromethane (Methyl Chloride)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chlorodibromomethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dibromomethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromodichloromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dichloromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Ethyl benzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dichlorodifluoromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Fluorotrichloromethane-Freon11	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Hexachlorobutadiene	ND	ug/l	0.50



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Anal	Method	Analyte	Result	Units	MDL
01/22/98	( ML/EPA 524.2 )	Isopropylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	m-Dichlorobenzene (1,3-DCB)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	m,p-Xylenes	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Naphthalene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	n-Butylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	n-Propylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	o-Xylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	o-Dichlorobenzene (1,2-DCB)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Tetrachloroethylene (PCE)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	p-Isopropyltoluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	sec-Butylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Styrene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	trans-1,2-Dichloroethylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	tert-Butylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Trichloroethylene (TCE)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Trichlorotrifluoroethane (Freon	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	trans-1,3-Dichloropropene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Toluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Vinyl chloride (VC)	ND	ug/l	0.30
	( EPA 524.2 )	None Detected	ND	ug/l	
	( Surrogate	1,2-Dichloroethane-d4	105	% Rec	
	( Surrogate	4-Bromofluorobenzene	91	% Rec	
	( Surrogate	Toluene-d8	98	% Rec	
<b>MW-981-022 (980120099)      Sampled on 01/20/98</b>					
01/28/98	( ML/S2320B )	Alkalinity	130	mg/l	2.0
02/04/98	( ML/SM1040 )	Anion Sum	3.37	meq/l	0.0010
01/26/98	( S3113B/E200.9 )	Arsenic, Total, GF	ND	mg/l	0.005
02/03/98	( ML/S3111B )	Calcium, Flame AA	11	mg/l	1.0
02/04/98	( ML/SM1040 )	Cation Sum	3.66	meq/l	0.0010
01/22/98	( ML/EPA 300 )	Chloride	10	mg/l	1.0
01/28/98	( MOD/EPA 300 )	Perchlorate	ND	ug/l	4.0
02/04/98	( ML/S2320-B )	Carbonate as CO3, Calculated	2.58	mg/l	0.0010
01/28/98	( EPA/ML 200.8 )	Chromium, Total, ICAP/MS	ND	ug/l	10
01/20/98	( ML/SW 7196 )	Hexavalent chromium (Cr VI)	ND	mg/l	0.005
01/23/98	( ML/S2510B )	Specific Conductance	320	umho/cm	4.0



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Anal	Method	Analyte	Result	Units	MDL
01/28/98 ( EPA/ML 200.8 )		Iron, Total, ICAP/MS	180	ug/l	100
02/04/98 ( ML/S2320B )		Bicarbonate as HCO <sub>3</sub> , calculated	158	mg/l	0.0010
02/04/98 ( ML/S3111B )		Potassium, Flame AA	1.0	mg/l	1.0
02/04/98 ( ML/S3111B )		Magnesium, Flame AA	3.1	mg/l	1.0
02/04/98 ( ML/S3111B )		Sodium, Flame AA	65	mg/l	1.0
01/22/98 ( ML/EPA 300.0 )		Nitrate-N by IC	0.10	mg/l	0.10
01/28/98 ( EPA/ML 200.8 )		Lead, Total, ICAP/MS	ND	ug/l	2.0
01/21/98 ( ML/SM 4500H )		Lab pH	8.4	Units	0.0010
01/22/98 ( ML/EPA 300.0 )		Sulfate	23	mg/l	2.0
01/23/98 ( ML/S2540C )		Total Dissolved Solid (TDS)	210	mg/l	10
<b>Regulated VOCs plus Lists 1&amp;3</b>					
01/22/98 ( ML/EPA 524.2 )		1,1,1,2-Tetrachloroethane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,1,1-Trichloroethane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,1,2,2-Tetrachloroethane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,1,2-Trichloroethane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,1-Dichloroethane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,1-Dichloroethylene	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,1-Dichloropropene	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,2,3-Trichlorobenzene	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,2,3-Trichloropropane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,2,4-Trichlorobenzene	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,2,4-Trimethylbenzene	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,2-Dichloroethane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,2-Dichloropropane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,3,5-Trimethylbenzene	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,3-Dichloropropane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		p-Dichlorobenzene (1,4-DCB)	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		2,2-Dichloropropane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		2-Butanone (MEK)	ND	ug/l	5.0
01/22/98 ( ML/EPA 524.2 )		o-Chlorotoluene	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		p-Chlorotoluene	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		4-Methyl-2-Pentanone (MIBK)	ND	ug/l	5.0
01/22/98 ( ML/EPA 524.2 )		Benzene	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		Bromobenzene	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		Bromomethane (Methyl Bromide)	ND	ug/l	0.50

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Anal	Method	Analyte	Result	Units	MDL
01/22/98	( ML/EPA 524.2 )	cis-1,2-Dichloroethylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chlorobenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Carbon Tetrachloride	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	cis-1,3-Dichloropropene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromoform	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloroform (Trichloromethane)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromochloromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloromethane (Methyl Chloride)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chlorodibromomethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dibromomethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromodichloromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dichloromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Ethyl benzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dichlorodifluoromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Fluorotrichloromethane-Freon11	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Hexachlorobutadiene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Isopropylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	m-Dichlorobenzene (1,3-DCB)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	m,p-Xylenes	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Naphthalene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	n-Butylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	n-Propylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	o-Xylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	o-Dichlorobenzene (1,2-DCB)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Tetrachloroethylene (PCE)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	p-Isopropyltoluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	sec-Butylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Styrene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	trans-1,2-Dichloroethylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	tert-Butylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Trichloroethylene (TCE)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Trichlorotrifluoroethane (Freon	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	trans-1,3-Dichloropropene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Toluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Vinyl chloride (VC)	ND	ug/l	0.30



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Anal	Method	Analyte	Result	Units	MDL
( EPA 524.2	)	None Detected	ND	ug/l	
( Surrogate	)	1,2-Dichloroethane-d4	112	% Rec	
( Surrogate	)	4-Bromofluorobenzene	89	% Rec	
( Surrogate	)	Toluene-d8	93	% Rec	
<b>MW-981-023 (980120100)      Sampled on 01/20/98</b>					
01/28/98 ( ML/S2320B	)	Alkalinity	185	mg/l	2.0
02/04/98 ( ML/SM1040	)	Anion Sum	5.22	meq/l	0.0010
01/27/98 ( S3113B/E200.9	)	Arsenic, Total, GF	ND	mg/l	0.005
02/03/98 ( ML/S3111B	)	Calcium, Flame AA	39	mg/l	1.0
02/04/98 ( ML/SM1040	)	Cation Sum	5.69	meq/l	0.0010
01/22/98 ( ML/EPA 300	)	Chloride	30	mg/l	1.0
01/28/98 ( MOD/EPA 300	)	Perchlorate	ND	ug/l	4.0
02/04/98 ( ML/S2320-B	)	Carbonate as CO3, Calculated	1.84	mg/l	0.0010
01/28/98 ( EPA/ML 200.8	)	Chromium, Total, ICAP/MS	ND	ug/l	10
01/20/98 ( ML/SW 7196	)	Hexavalent chromium (Cr VI)	ND	mg/l	0.005
01/23/98 ( ML/S2510B	)	Specific Conductance	580	umho/cm	4.0
01/28/98 ( EPA/ML 200.8	)	Iron, Total, ICAP/MS	ND	ug/l	100
02/04/98 ( ML/S2320B	)	Bicarbonate as HCO3,calculated	225	mg/l	0.0010
02/04/98 ( ML/S3111B	)	Potassium, Flame AA	2.4	mg/l	1.0
02/04/98 ( ML/S3111B	)	Magnesium, Flame AA	13	mg/l	1.0
02/04/98 ( ML/S3111B	)	Sodium, Flame AA	60	mg/l	1.0
01/22/98 ( ML/EPA 300.0	)	Nitrate-N by IC	2.7	mg/l	0.10
01/28/98 ( EPA/ML 200.8	)	Lead, Total, ICAP/MS	ND	ug/l	2.0
01/21/98 ( ML/SM 4500H	)	Lab pH	8.1	Units	0.0010
01/22/98 ( ML/EPA 300.0	)	Sulfate	23	mg/l	2.0
01/23/98 ( ML/S2540C	)	Total Dissolved Solid (TDS)	330	mg/l	10
<b>Regulated VOCs plus Lists 1&amp;3</b>					
01/22/98 ( ML/EPA 524.2	)	1,1,1,2-Tetrachloroethane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2	)	1,1,1-Trichloroethane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2	)	1,1,2,2-Tetrachloroethane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2	)	1,1,2-Trichloroethane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2	)	1,1-Dichloroethane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2	)	1,1-Dichloroethylene	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2	)	1,1-Dichloropropene	ND	ug/l	0.50

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Anal	Method	Analyte	Result	Units	MDL
01/22/98	( ML/EPA 524.2 )	1,2,3-Trichlorobenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,3-Trichloropropane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,4-Trichlorobenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,4-Trimethylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2-Dichloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2-Dichloropropane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,3,5-Trimethylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,3-Dichloropropane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	p-Dichlorobenzene (1,4-DCB)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	2,2-Dichloropropane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	2-Butanone (MEK)	ND	ug/l	5.0
01/22/98	( ML/EPA 524.2 )	o-Chlorotoluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	p-Chlorotoluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	4-Methyl-2-Pentanone (MIBK)	ND	ug/l	5.0
01/22/98	( ML/EPA 524.2 )	Benzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromobenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromomethane (Methyl Bromide)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	cis-1,2-Dichloroethylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chlorobenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Carbon Tetrachloride	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	cis-1,3-Dichloropropene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromoform	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloroform (Trichloromethane)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromochloromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloromethane (Methyl Chloride)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chlorodibromomethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dibromomethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromodichloromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dichloromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Ethyl benzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dichlorodifluoromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Fluorotrichloromethane-Freon11	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Hexachlorobutadiene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Isopropylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	m-Dichlorobenzene (1,3-DCB)	ND	ug/l	0.50



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Anal	Method	Analyte	Result	Units	MDL
01/22/98	( ML/EPA 524.2 )	m, p-Xylenes	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Naphthalene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	n-Butylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	n-Propylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	o-Xylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	o-Dichlorobenzene (1,2-DCB)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Tetrachloroethylene (PCE)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	p-Isopropyltoluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	sec-Butylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Styrene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	trans-1,2-Dichloroethylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	tert-Butylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Trichloroethylene (TCE)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Trichlorotrifluoroethane (Freon	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	trans-1,3-Dichloropropene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Toluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Vinyl chloride (VC)	ND	ug/l	0.30
	( EPA 524.2 )	Unknown RT-6.20	3.4	ug/l	
	( Surrogate )	1,2-Dichloroethane-d4	119	% Rec	
	( Surrogate )	4-Bromofluorobenzene	98	% Rec	
	( Surrogate )	Toluene-d8	101	% Rec	
<b>MW-981-024 (980120101)      Sampled on 01/20/98</b>					
01/28/98	( ML/S2320B )	Alkalinity	110	mg/l	2.0
02/04/98	( ML/SH1040 )	Anion Sum	3.23	meq/l	0.0010
01/29/98	( S3113B/E200.9 )	Arsenic, Total, GF	ND	mg/l	0.005
02/03/98	( ML/S3111B )	Calcium, Flame AA	13	mg/l	1.0
02/04/98	( ML/SH1040 )	Cation Sum	3.48	meq/l	0.0010
01/22/98	( ML/EPA 300 )	Chloride	14	mg/l	1.0
01/28/98	( MOD/EPA 300 )	Perchlorate	ND	ug/l	4.0
02/04/98	( ML/S2320-B )	Carbonate as CO3, Calculated	8.45	mg/l	0.0010
01/28/98	( EPA/ML 200.8 )	Chromium, Total, ICAP/MS	ND	ug/l	10
01/20/98	( ML/SW 7196 )	Hexavalent chromium (Cr VI)	ND	mg/l	0.005
01/23/98	( ML/S2510B )	Specific Conductance	380	umho/cm	4.0
01/28/98	( EPA/ML 200.8 )	Iron, Total, ICAP/MS	140	ug/l	100
02/04/98	( ML/S2320B )	Bicarbonate as HCO3,calculated	130	mg/l	0.0010

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Anal	Method	Analyte	Result	Units	MDL
02/04/98	( ML/S3111B )	Potassium, Flame AA	2.2	mg/l	1.0
02/04/98	( ML/S3111B )	Magnesium, Flame AA	12	mg/l	1.0
02/04/98	( ML/S3111B )	Sodium, Flame AA	41	mg/l	1.0
01/22/98	( ML/EPA 300.0 )	Nitrate-N by IC	0.14	mg/l	0.10
01/28/98	( EPA/ML 200.8 )	Lead, Total, ICAP/MS	ND	ug/l	2.0
01/21/98	( ML/SM 4500H )	Lab pH	9.0	Units	0.0010
01/22/98	( ML/EPA 300.0 )	Sulfate	30	mg/l	2.0
01/23/98	( ML/S2540C )	Total Dissolved Solid (TDS)	220	mg/l	10
<b>Regulated VOCs plus Lists 1&amp;3</b>					
01/22/98	( ML/EPA 524.2 )	1,1,1,2-Tetrachloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1,1-Trichloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1,2,2-Tetrachloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1,2-Trichloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1-Dichloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1-Dichloroethylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1-Dichloropropene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,3-Trichlorobenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,3-Trichloropropane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,4-Trichlorobenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,4-Trimethylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2-Dichloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2-Dichloropropane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,3,5-Trimethylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,3-Dichloropropane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	p-Dichlorobenzene (1,4-DCB)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	2,2-Dichloropropane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	2-Butanone (MEK)	ND	ug/l	5.0
01/22/98	( ML/EPA 524.2 )	o-Chlorotoluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	p-Chlorotoluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	4-Methyl-2-Pentanone (MIBK)	ND	ug/l	5.0
01/22/98	( ML/EPA 524.2 )	Benzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromobenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromomethane (Methyl Bromide)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	cis-1,2-Dichloroethylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chlorobenzene	ND	ug/l	0.50

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Anal	Method	Analyte	Result	Units	MDL
01/22/98	( ML/EPA 524.2 )	Carbon Tetrachloride	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	cis-1,3-Dichloropropene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromoform	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloroform (Trichloromethane)	2.7	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromochloromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloromethane (Methyl Chloride)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chlorodibromomethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dibromomethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromodichloromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dichloromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Ethyl benzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dichlorodifluoromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Fluorotrichloromethane-Freon11	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Hexachlorobutadiene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Isopropylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	m-Dichlorobenzene (1,3-DCB)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	m,p-Xylenes	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Naphthalene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	n-Butylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	n-Propylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	o-Xylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	o-Dichlorobenzene (1,2-DCB)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Tetrachloroethylene (PCE)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	p-Isopropyltoluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	sec-Butylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Styrene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	trans-1,2-Dichloroethylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	tert-Butylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Trichloroethylene (TCE)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Trichlorotrifluoroethane (Freon	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	trans-1,3-Dichloropropene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Toluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Vinyl chloride (VC)	ND	ug/l	0.30
	( EPA 524.2 )	None Detected	ND	ug/l	
	( Surrogate )	1,2-Dichloroethane-d4	115	% Rec	



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Anal	Method	Analyte	Result	Units	MDL
( Surrogate	)	4-Bromofluorobenzene	93	% Rec	
( Surrogate	)	Toluene-d8	104	% Rec	
<b>MW-981-025 (980120102)                      Sampled on    01/20/98</b>					
01/28/98 ( ML/S2320B	)	Alkalinity	165	mg/l	2.0
02/04/98 ( ML/SM1040	)	Anion Sum	8.39	meq/l	0.0010
01/29/98 ( S3113B/E200.9	)	Arsenic, Total, GF	ND	mg/l	0.005
02/03/98 ( ML/S3111B	)	Calcium, Flame AA	103	mg/l	1.0
02/04/98 ( ML/SM1040	)	Cation Sum	9.02	meq/l	0.0010
01/22/98 ( ML/EPA 300	)	Chloride	54	mg/l	1.0
01/28/98 ( MOD/EPA 300	)	Perchlorate	6.3	ug/l	4.0
02/04/98 ( ML/S2320-B	)	Carbonate as CO3, Calculated	1.04	mg/l	0.0010
01/28/98 ( EPA/ML 200.8	)	Chromium, Total, ICAP/MS	ND	ug/l	10
01/20/98 ( ML/SW 7196	)	Hexavalent chromium (Cr VI)	ND	mg/l	0.005
01/23/98 ( ML/S2510B	)	Specific Conductance	940	umho/cm	4.0
01/28/98 ( EPA/ML 200.8	)	Iron, Total, ICAP/MS	190	ug/l	100
02/04/98 ( ML/S2320B	)	Bicarbonate as HCO3,calculated	201	mg/l	0.0010
02/04/98 ( ML/S3111B	)	Potassium, Flame AA	4.1	mg/l	1.0
02/04/98 ( ML/S3111B	)	Magnesium, Flame AA	32	mg/l	1.0
02/04/98 ( ML/S3111B	)	Sodium, Flame AA	26	mg/l	1.0
01/22/98 ( ML/EPA 300.0	)	Nitrate-N by IC	12	mg/l	0.10
01/28/98 ( EPA/ML 200.8	)	Lead, Total, ICAP/MS	ND	ug/l	2.0
01/21/98 ( ML/SM 4500H	)	Lab pH	7.9	Units	0.0010
01/22/98 ( ML/EPA 300.0	)	Sulfate	130	mg/l	2.0
01/23/98 ( ML/S2540C	)	Total Dissolved Solid (TDS)	570	mg/l	10
<b>Regulated VOCs plus Lists 1&amp;3</b>					
01/22/98 ( ML/EPA 524.2	)	1,1,1,2-Tetrachloroethane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2	)	1,1,1-Trichloroethane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2	)	1,1,2,2-Tetrachloroethane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2	)	1,1,2-Trichloroethane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2	)	1,1-Dichloroethane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2	)	1,1-Dichloroethylene	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2	)	1,1-Dichloropropene	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2	)	1,2,3-Trichlorobenzene	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2	)	1,2,3-Trichloropropane	ND	ug/l	0.50



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Anal	Method	Analyte	Result	Units	MDL
01/22/98	( ML/EPA 524.2 )	1,2,4-Trichlorobenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,4-Trimethylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2-Dichloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2-Dichloropropane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,3,5-Trimethylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,3-Dichloropropane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	p-Dichlorobenzene (1,4-DCB)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	2,2-Dichloropropane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	2-Butanone (MEK)	ND	ug/l	5.0
01/22/98	( ML/EPA 524.2 )	o-Chlorotoluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	p-Chlorotoluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	4-Methyl-2-Pentanone (MIBK)	ND	ug/l	5.0
01/22/98	( ML/EPA 524.2 )	Benzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromobenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromomethane (Methyl Bromide)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	cis-1,2-Dichloroethylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chlorobenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Carbon Tetrachloride	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	cis-1,3-Dichloropropene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromoform	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloroform (Trichloromethane)	1.4	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromochloromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloromethane (Methyl Chloride)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chlorodibromomethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dibromomethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromodichloromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dichloromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Ethyl benzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dichlorodifluoromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Fluorotrichloromethane-Freon11	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Hexachlorobutadiene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Isopropylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	m-Dichlorobenzene (1,3-DCB)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	m,p-Xylenes	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Naphthalene	ND	ug/l	0.50

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Anal	Method	Analyte	Result	Units	MDL
01/22/98	( ML/EPA 524.2 )	n-Butylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	n-Propylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	o-Xylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	o-Dichlorobenzene (1,2-DCB)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Tetrachloroethylene (PCE)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	p-Isopropyltoluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	sec-Butylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Styrene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	trans-1,2-Dichloroethylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	tert-Butylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Trichloroethylene (TCE)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Trichlorotrifluoroethane (Freon	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	trans-1,3-Dichloropropene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Toluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Vinyl chloride (VC)	ND	ug/l	0.30
	( EPA 524.2 )	None Detected	ND	ug/l	
	( Surrogate )	1,2-Dichloroethane-d4	105	% Rec	
	( Surrogate )	4-Bromofluorobenzene	88	% Rec	
	( Surrogate )	Toluene-d8	99	% Rec	



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**Group Comments**

(Metals) Sample MW981036 was spiked for MS/MSD. Iron recovery for MSD was high bias. All other associated QC's passed. Calcium is reported from ICP run.



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**QC Batch #71704**

**Hexavalent chromium (Cr VI)**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Hexavalent chromium (Cr VI)	0.050	0.051	102.0	( 78.00 - 118.00 )	
LCS2	Hexavalent chromium (Cr VI)	0.050	0.052	104.0	( 78.00 - 118.00 )	1.9
MBLK	Hexavalent chromium (Cr VI)	ND				
MS	Hexavalent chromium (Cr VI)	0.050	0.050	100.0	( 80.00 - 120.00 )	
MSD	Hexavalent chromium (Cr VI)	0.050	0.051	102.0	( 80.00 - 120.00 )	2.0

**QC Batch #72076**

**Total Dissolved Solid (TDS)**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Total Dissolved Solid (TDS)	175	176	100.6	( 85.00 - 115.00 )	
LCS2	Total Dissolved Solid (TDS)	700	676	96.6	( 85.00 - 115.00 )	
MBLK	Total Dissolved Solid (TDS)	ND				

**QC Batch #72101**

**Chloride**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Chloride	25	27	108.0	( 90.00 - 110.00 )	
LCS2	Chloride	25	27	108.0	( 90.00 - 110.00 )	0.00
MBLK	Chloride	ND				
MS	Chloride	25	27	108.0	( 80.00 - 120.00 )	
MSD	Chloride	25	27	108.0	( 80.00 - 120.00 )	0.00

**QC Batch #72104**

**Nitrate-N by IC**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Nitrate-N by IC	2.5	2.7	108.0	( 90.00 - 110.00 )	
LCS2	Nitrate-N by IC	2.5	2.7	108.0	( 90.00 - 110.00 )	0.00
MBLK	Nitrate-N by IC	ND				
MS	Nitrate-N by IC	2.5	2.7	108.0	( 80.00 - 120.00 )	
MSD	Nitrate-N by IC	2.5	2.7	108.0	( 80.00 - 120.00 )	0.00

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.  
Criteria for MS and DUP are not applicable for ICR monitoring.

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**QC Batch #72106****Sulfate**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Sulfate	50	54	108.0	( 90.00 - 110.00 )	
LCS2	Sulfate	50	54	108.0	( 90.00 - 110.00 )	0.00
MBLK	Sulfate	ND				
MS	Sulfate	50	54	108.0	( 80.00 - 120.00 )	
MSD	Sulfate	50	54	108.0	( 80.00 - 120.00 )	0.00

**QC Batch #72167****Perchlorate**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Perchlorate	20.0	18.4	92.0	( 90.00 - 110.00 )	
LCS2	Perchlorate	20.0	21.1	105.5	( 90.00 - 110.00 )	14
MBLK	Perchlorate	ND				
MS	Perchlorate	20.0	18.6	93.0	( 75.00 - 125.00 )	
MSD	Perchlorate	20.0	18.1	90.5	( 75.00 - 125.00 )	2.7

**QC Batch #72207****Arsenic, Total, GF**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Arsenic, Total, GF	0.020	0.0210	105.0	( 85.00 - 115.00 )	
LCS2	Arsenic, Total, GF	0.020	0.0206	103.0	( 85.00 - 115.00 )	1.9
MBLK	Arsenic, Total, GF	ND				
MS	Arsenic, Total, GF	0.020	0.0207	103.5	( 85.00 - 115.00 )	
MSD	Arsenic, Total, GF	0.020	0.0215	107.5	( 85.00 - 115.00 )	3.8

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**QC Batch #72277**

**Chromium, Total, ICAP/MS**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Chromium, Total, ICAP/MS	100	103	103.0	( 85.00 - 115.00 )	
LCS2	Chromium, Total, ICAP/MS	100	107	107.0	( 85.00 - 115.00 )	3.8
MBLK	Chromium, Total, ICAP/MS	ND		0.0		
MS	Chromium, Total, ICAP/MS	100	106.	106.0	( 70.00 - 130.00 )	
MSD	Chromium, Total, ICAP/MS	100	107.	107.0	( 70.00 - 130.00 )	0.94

**QC Batch #72278**

**Iron, Total, ICAP/MS**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Iron, Total, ICAP/MS	500	563	112.6	( 85.00 - 115.00 )	
LCS2	Iron, Total, ICAP/MS	500	565	113.0	( 85.00 - 115.00 )	0.35
MBLK	Iron, Total, ICAP/MS	ND		0.0		
MS	Iron, Total, ICAP/MS	500	549.	110.0	( 70.00 - 130.00 )	
MSD	Iron, Total, ICAP/MS	500	699	<u>140.0</u>	( 70.00 - 130.00 )	24

**QC Batch #72279**

**Lead, Total, ICAP/MS**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Lead, Total, ICAP/MS	20	20.4	102.0	( 85.00 - 115.00 )	
LCS2	Lead, Total, ICAP/MS	20	21.3	106.5	( 85.00 - 115.00 )	4.3
MBLK	Lead, Total, ICAP/MS	ND		0.0		
MS	Lead, Total, ICAP/MS	20	20	100.0	( 70.00 - 130.00 )	
MSD	Lead, Total, ICAP/MS	20	20.3	101.5	( 70.00 - 130.00 )	1.5

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.  
Criteria for MS and DUP are not applicable for ICR monitoring.

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**QC Batch #72378****Regulated VOCs plus Lists 1&3**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
MBLK	1,1,1,2-Tetrachloroethane	ND				
LCS1	1,1,1-Trichloroethane	4	4.06	101.5	( 70.00 - 130.00 )	
MBLK	1,1,1-Trichloroethane	ND				
LCS1	1,1,2,2-Tetrachloroethane	4	4.11	102.8	( 70.00 - 130.00 )	
MBLK	1,1,2,2-Tetrachloroethane	ND				
LCS1	1,1,2-Trichloroethane	4	4.52	113.0	( 70.00 - 130.00 )	
MBLK	1,1,2-Trichloroethane	ND				
LCS1	1,1-Dichloroethane	4	4.14	103.5	( 70.00 - 130.00 )	
MBLK	1,1-Dichloroethane	ND				
LCS1	1,1-Dichloroethylene	4	3.89	97.2	( 70.00 - 130.00 )	
MBLK	1,1-Dichloroethylene	ND				
MBLK	1,1-Dichloropropene	ND				
MBLK	1,2,3-Trichlorobenzene	ND				
MBLK	1,2,3-Trichloropropane	ND				
LCS1	1,2,4-Trichlorobenzene	4	4.12	103.0	( 70.00 - 130.00 )	
MBLK	1,2,4-Trichlorobenzene	ND				
MBLK	1,2,4-Trimethylbenzene	ND				
LCS1	1,2-Dichloroethane	4	4.03	100.8	( 70.00 - 130.00 )	
MBLK	1,2-Dichloroethane	ND				
LCS1	1,2-Dichloropropane	4	4.23	105.8	( 70.00 - 130.00 )	
MBLK	1,2-Dichloropropane	ND				
MBLK	1,3,5-Trimethylbenzene	ND				
LCS1	1,3-Dichloropropane	8	8.06	100.8	( 70.00 - 130.00 )	
MBLK	1,3-Dichloropropane	ND				
MBLK	2,2-Dichloropropane	ND				
MBLK	2-Butanone (MEK)	ND				
MBLK	2-Chloroethylvinylether	ND				
MBLK	4-Methyl-2-Pentanone (MIBK)	ND				
LCS1	Benzene	4	4.11	102.8	( 70.00 - 130.00 )	
MBLK	Benzene	ND				
MBLK	Bromobenzene	ND				
MBLK	Bromochloromethane	ND				

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LCS1	Bromodichloromethane	4	4.13	103.2	( 70.00 - 130.00 )
MBLK	Bromodichloromethane	ND			
LCS1	Bromoform	4	3.93	98.2	( 70.00 - 130.00 )
MBLK	Bromoform	ND			
MBLK	Bromomethane (Methyl Bromide)	ND			
LCS1	Carbon Tetrachloride	4	4.20	105.0	( 70.00 - 130.00 )
MBLK	Carbon Tetrachloride	ND			
LCS1	Chlorobenzene	4	4.32	108.0	( 70.00 - 130.00 )
MBLK	Chlorobenzene	ND			
LCS1	Chlorodibromomethane	4	3.99	99.8	( 70.00 - 130.00 )
MBLK	Chlorodibromomethane	ND			
MBLK	Chloroethane	ND			
LCS1	Chloroform (Trichloromethane)	4	4.13	103.2	( 70.00 - 130.00 )
MBLK	Chloroform (Trichloromethane)	ND			
MBLK	Chloromethane (Methyl Chloride)	ND			
MBLK	Dibromomethane	ND			
MBLK	Dichlorodifluoromethane	ND			
LCS1	Dichloromethane	4	4.24	106.0	( 70.00 - 130.00 )
MBLK	Dichloromethane	ND			
LCS1	Ethyl benzene	4	4.25	106.2	( 70.00 - 130.00 )
MBLK	Ethyl benzene	ND			
LCS1	Fluorotrichloromethane-Freon11	2	2.59	129.5	( 70.00 - 130.00 )
MBLK	Fluorotrichloromethane-Freon11	ND			
MBLK	Hexachlorobutadiene	ND			
MBLK	Isopropylbenzene	ND			
MBLK	Naphthalene	ND			
LCS1	Styrene	4	4.46	111.5	( 70.00 - 130.00 )
MBLK	Styrene	ND			
LCS1	Tetrachloroethylene (PCE)	4	4.29	107.2	( 70.00 - 130.00 )
MBLK	Tetrachloroethylene (PCE)	ND			
LCS1	Toluene	4	4.55	113.8	( 70.00 - 130.00 )
MBLK	Toluene	ND			
LCS1	Trichloroethylene (TCE)	4	4.21	105.2	( 70.00 - 130.00 )
MBLK	Trichloroethylene (TCE)	ND			
LCS1	Trichlorotrifluoroethane (Freon	2	2.23	111.5	( 70.00 - 130.00 )
MBLK	Trichlorotrifluoroethane (Freon	ND			
LCS1	Vinyl chloride (VC)	2	1.60	80.0	( 70.00 - 130.00 )

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MBLK	Vinyl chloride (VC)	ND				
LCS1	cis-1,2-Dichloroethylene	4	4.33	108.2	( 70.00 - 130.00 )	
MBLK	cis-1,2-Dichloroethylene	ND				
MBLK	cis-1,3-Dichloropropene	ND				
LCS1	m,p-Xylenes	8	8.51	106.4	( 70.00 - 130.00 )	
MBLK	m,p-Xylenes	ND				
MBLK	m-Dichlorobenzene (1,3-DCB)	ND				
MBLK	n-Butylbenzene	ND				
MBLK	n-Propylbenzene	ND				
MBLK	o-Chlorotoluene	ND				
LCS1	o-Dichlorobenzene (1,2-DCB)	4	4.53	113.2	( 70.00 - 130.00 )	
MBLK	o-Dichlorobenzene (1,2-DCB)	ND				
LCS1	o-Xylene	4	4.48	112.0	( 70.00 - 130.00 )	
MBLK	o-Xylene	ND				
MBLK	p-Chlorotoluene	ND				
LCS1	p-Dichlorobenzene (1,4-DCB)	4	4.87	121.8	( 70.00 - 130.00 )	
MBLK	p-Dichlorobenzene (1,4-DCB)	ND				
MBLK	p-Isopropyltoluene	ND				
MBLK	sec-Butylbenzene	ND				
MBLK	tert-Butylbenzene	ND				
LCS1	trans-1,2-Dichloroethylene	4	4.12	103.0	( 70.00 - 130.00 )	
MBLK	trans-1,2-Dichloroethylene	ND				
MBLK	trans-1,3-Dichloropropene	ND				

**QC Batch #72416**

**Arsenic, Total, GF**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Arsenic, Total, GF	0.020	0.0201	100.5	( 85.00 - 115.00 )	
LCS2	Arsenic, Total, GF	0.020	0.0208	104.0	( 85.00 - 115.00 )	3.4
MBLK	Arsenic, Total, GF	ND				
MS	Arsenic, Total, GF	0.020	0.0200	100.0	( 85.00 - 115.00 )	
MSD	Arsenic, Total, GF	0.020	0.0205	102.5	( 85.00 - 115.00 )	2.5

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.  
Criteria for MS and DUP are not applicable for ICR monitoring.

**MONTGOMERY WATSON LABORATORIES**

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Laboratory  
 QC Report  
 #40037

Foster Wheeler Environmental, Inc  
 (continued)

**QC Batch #72432****Alkalinity**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Alkalinity	96.2	97.1	100.9	( 90.00 - 110.00 )	
LCS2	Alkalinity	96.2	96.9	100.7	( 90.00 - 110.00 )	0.21
MBLK	Alkalinity	ND				
MS	Alkalinity	96.2	100	104.0	( 80.00 - 120.00 )	
MSD	Alkalinity	96.2	98.6	102.5	( 80.00 - 120.00 )	1.4

**QC Batch #72509****Calcium, Flame AA**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Calcium, Flame AA	50	52.4	104.8	( 90.00 - 110.00 )	
LCS2	Calcium, Flame AA	50	51.9	103.8	( 90.00 - 110.00 )	0.96
MBLK	Calcium, Flame AA	ND				
MS	Calcium, Flame AA	50	51.3	102.6	( 85.00 - 115.00 )	
MSD	Calcium, Flame AA	50	49.5	99.0	( 85.00 - 115.00 )	3.6

**QC Batch #72522****Potassium, Flame AA**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Potassium, Flame AA	20	19.9	99.5	( 80.00 - 120.00 )	
LCS2	Potassium, Flame AA	20	19.9	99.5	( 80.00 - 120.00 )	0.00
MBLK	Potassium, Flame AA	ND				
MS	Potassium, Flame AA	20	20.1	100.5	( 85.00 - 115.00 )	
MSD	Potassium, Flame AA	20	21.8	109.0	( 85.00 - 115.00 )	8.1

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.  
 Criteria for MS and DUP are not applicable for ICR monitoring.



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Foster Wheeler Environmental, Inc  
(continued)

**QC Batch #72524**

**Sodium, Flame AA**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Sodium, Flame AA	50	47.6	95.2	( 90.00 - 110.00 )	
LCS2	Sodium, Flame AA	50	47.3	94.6	( 90.00 - 110.00 )	0.63
MBLK	Sodium, Flame AA	ND				
MS	Sodium, Flame AA	50	46.4	92.8	( 85.00 - 115.00 )	
MSD	Sodium, Flame AA	50	50.9	101.8	( 85.00 - 115.00 )	9.2

**QC Batch #72526**

**Magnesium, Flame AA**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Magnesium, Flame AA	20	18.1	90.5	( 90.00 - 110.00 )	
LCS2	Magnesium, Flame AA	20	19.1	95.5	( 90.00 - 110.00 )	5.4
MBLK	Magnesium, Flame AA	ND				
MS	Magnesium, Flame AA	20	18.1	90.5	( 85.00 - 115.00 )	
MSD	Magnesium, Flame AA	20	19.7	98.5	( 85.00 - 115.00 )	8.5

**QC Batch #73250**

**Chromium, Total, ICAP/MS**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Chromium, Total, ICAP/MS	100	103	103.0	( 85.00 - 115.00 )	
LCS2	Chromium, Total, ICAP/MS	100	109	109.0	( 85.00 - 115.00 )	5.7
MBLK	Chromium, Total, ICAP/MS	ND		0.0		
MS	Chromium, Total, ICAP/MS	100	103.	103.0	( 70.00 - 130.00 )	
MSD	Chromium, Total, ICAP/MS	100	106.	106.0	( 70.00 - 130.00 )	2.9

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.  
Criteria for MS and DUP are not applicable for ICR monitoring.



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QC Report  
#40037

Foster Wheeler Environmental, Inc  
(continued)

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**QC Batch #73255**

**Iron, Total, ICAP/MS**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Iron, Total, ICAP/MS	500	503	100.6	( 85.00 - 115.00 )	
LCS2	Iron, Total, ICAP/MS	500	567	113.4	( 85.00 - 115.00 )	12
MBLK	Iron, Total, ICAP/MS	ND		0.0		
MS	Iron, Total, ICAP/MS	500	393.	78.6	( 70.00 - 130.00 )	
MSD	Iron, Total, ICAP/MS	500	495.	99.0	( 70.00 - 130.00 )	23

**QC Batch #73260**

**Lead, Total, ICAP/MS**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Lead, Total, ICAP/MS	20	20.0	100.0	( 85.00 - 115.00 )	
LCS2	Lead, Total, ICAP/MS	20	21.0	105.0	( 85.00 - 115.00 )	4.9
MBLK	Lead, Total, ICAP/MS	ND		0.0		
MS	Lead, Total, ICAP/MS	20	22.9	114.5	( 70.00 - 130.00 )	
MSD	Lead, Total, ICAP/MS	20	21.5	107.5	( 70.00 - 130.00 )	6.3

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.  
Criteria for MS and DUP are not applicable for ICR monitoring.

Report Summary of positive results, PR40037

			Result	MDL	UNITS
Analyzed	980120096	MW-981-086			
Analyzed	980120097	MW-981-087			
01/22/98	1,2,4-Trimethylbenzene		1.4	.500	UGL
01/22/98	Benzene		3.5	.500	UGL
01/22/98	Ethyl benzene		2.7	.500	UGL
01/22/98	Toluene		20	.500	UGL
01/22/98	m,p-Xylenes		9.3	.500	UGL
01/22/98	o-Xylene		3.5	.500	UGL
Analyzed	980120098	MW-981-021			
01/28/98	Alkalinity		155	2.000	MGL
02/04/98	Anion Sum		3.79	.001	MEQL
02/04/98	Bicarbonate as HCO3,calculated		179	.001	MGL
02/03/98	Calcium, Flame AA		7.1	1.000	MGL
02/04/98	Carbonate as CO3, Calculated		23.2	.001	MGL
02/04/98	Cation Sum		4.13	.001	MEQL
01/22/98	Chloride		8.9	1.000	MGL
01/21/98	Lab pH		9.3	.001	UNIT
02/04/98	Magnesium, Flame AA		1.6	1.000	MGL
02/04/98	Potassium, Flame AA		1.5	1.000	MGL
02/04/98	Sodium, Flame AA		83	1.000	MGL
01/26/98	Specific Conductance		370	4.000	UMHO
01/22/98	Sulfate		21	2.000	MGL
01/23/98	Total Dissolved Solid (TDS)		230	10.000	MGL
Analyzed	980120099	MW-981-022			
01/28/98	Alkalinity		130	2.000	MGL
02/04/98	Anion Sum		3.37	.001	MEQL
02/04/98	Bicarbonate as HCO3,calculated		158	.001	MGL
02/03/98	Calcium, Flame AA		11	1.000	MGL
02/04/98	Carbonate as CO3, Calculated		2.58	.001	MGL
02/04/98	Cation Sum		3.66	.001	MEQL
01/22/98	Chloride		10	1.000	MGL
01/28/98	Iron, Total, ICAP/MS		180	*****	UGL
01/21/98	Lab pH		8.4	.001	UNIT
02/04/98	Magnesium, Flame AA		3.1	1.000	MGL
01/22/98	Nitrate-N by IC		0.10	.100	MGL
02/04/98	Potassium, Flame AA		1.0	1.000	MGL
02/04/98	Sodium, Flame AA		65	1.000	MGL
01/23/98	Specific Conductance		320	4.000	UMHO
01/22/98	Sulfate		23	2.000	MGL
01/23/98	Total Dissolved Solid (TDS)		210	10.000	MGL
Analyzed	980120100	MW-981-023			
01/28/98	Alkalinity		185	2.000	MGL
02/04/98	Anion Sum		5.22	.001	MEQL
02/04/98	Bicarbonate as HCO3,calculated		225	.001	MGL
02/03/98	Calcium, Flame AA		39	1.000	MGL
02/04/98	Carbonate as CO3, Calculated		1.84	.001	MGL
02/04/98	Cation Sum		5.69	.001	MEQL

01/22/98	Chloride	30	1.000	MGL
01/21/98	Lab pH	8.1	.001	UNIT
02/04/98	Magnesium, Flame AA	13	1.000	MGL
01/22/98	Nitrate-N by IC	2.7	.100	MGL
02/04/98	Potassium, Flame AA	2.4	1.000	MGL
02/04/98	Sodium, Flame AA	60	1.000	MGL
01/23/98	Specific Conductance	580	4.000	UMHO
01/22/98	Sulfate	23	2.000	MGL
01/23/98	Total Dissolved Solid (TDS)	330	10.000	MGL

Analyzed 980120101 MW-981-024

01/22/98	Chloroform (Trichloromethane)	2.7	.500	UGL
01/28/98	Alkalinity	110	2.000	MGL
02/04/98	Anion Sum	3.23	.001	MEQL
02/04/98	Bicarbonate as HCO3,calculated	130	.001	MGL
02/03/98	Calcium, Flame AA	13	1.000	MGL
02/04/98	Carbonate as CO3, Calculated	8.45	.001	MGL
02/04/98	Cation Sum	3.48	.001	MEQL
01/22/98	Chloride	14	1.000	MGL
01/28/98	Iron, Total, ICAP/MS	140	50.000	UGL
01/21/98	Lab pH	9.0	.001	UNIT
02/04/98	Magnesium, Flame AA	12	1.000	MGL
01/22/98	Nitrate-N by IC	0.14	.100	MGL
02/04/98	Potassium, Flame AA	2.2	1.000	MGL
02/04/98	Sodium, Flame AA	41	1.000	MGL
01/23/98	Specific Conductance	380	4.000	UMHO
01/22/98	Sulfate	30	2.000	MGL
01/23/98	Total Dissolved Solid (TDS)	220	10.000	MGL

Analyzed 980120102 MW-981-025

01/22/98	Chloroform (Trichloromethane)	1.4	.500	UGL
01/28/98	Alkalinity	165	2.000	MGL
02/04/98	Anion Sum	8.39	.001	MEQL
02/04/98	Bicarbonate as HCO3,calculated	201	.001	MGL
02/03/98	Calcium, Flame AA	103	1.000	MGL
02/04/98	Carbonate as CO3, Calculated	1.04	.001	MGL
02/04/98	Cation Sum	9.02	.001	MEQL
01/22/98	Chloride	54	1.000	MGL
01/28/98	Iron, Total, ICAP/MS	190	50.000	UGL
01/21/98	Lab pH	7.9	.001	UNIT
02/04/98	Magnesium, Flame AA	32	1.000	MGL
01/22/98	Nitrate-N by IC	12	.100	MGL
01/28/98	Perchlorate	6.3	4.000	UGL
02/04/98	Potassium, Flame AA	4.1	1.000	MGL
02/04/98	Sodium, Flame AA	26	1.000	MGL
01/23/98	Specific Conductance	940	4.000	UMHO
01/22/98	Sulfate	130	2.000	MGL
01/23/98	Total Dissolved Solid (TDS)	570	10.000	MGL



**MONTGOMERY WATSON LABORATORIES**

February 23, 1998

Foster Wheeler Environmental  
611 Anton Blvd Suite 800  
Costa Mesa, CA.92626

Attention: Mark Cutler

Re: Report # 40054 (MW-981-026, 026 MS, 026 MSD, 088, 089,  
027, 028, 029, 030)

Dear Mark,

Enclosed please find data deliverables for the recent JPL project. A detailed quality control (QC) summary follows:

**Non-conformance (LCS,MS/MSD, Surrogates, and Holding Times):**

None

**Samples requiring dilution (with increased MRL's):**

MW-981-027 and 028 and 029 - anions

MW-981-026 perchlorate plus anions

**Method blanks with compounds detected:**

None

**Other Comments:**

Extra volume for MW-981-026 VOC's was submitted for MS/MSD QC batching, for use as needed by the laboratory.

Volatiles were detected in samples 027, 028, 029, and 030

**TICs**

No TICs were detected in these samples.

**Method Variance:**

MWlabs was experiencing difficulty in achieving the required Detection limit for Calcium by Flame AA analysis, EPA 215.1. Permission was granted by Mark Cutler 2/3/98 to analyze by ICP, EPA 200.7. The Calcium for this set of samples was analyzed by ICP.

Sincerely,

Andrew Eaton, Ph.D.  
Laboratory Director

cc: Judy Novelly (JPL)



**MONTGOMERY WATSON LABORATORIES**

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**Laboratory Report**

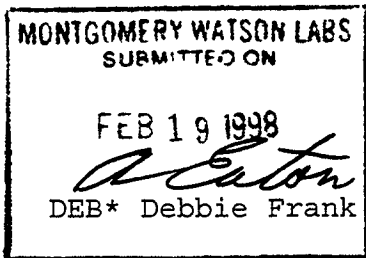
for

Foster Wheeler Environmental, Inc  
611 Anton Boulevard

Suite 800

Costa Mesa , CA 92626

Attention: Mark Cutler  
Fax: (714)444-5560



Report#: 40054  
JPL



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**Laboratory  
 Report  
 #40054**

Foster Wheeler Environmental, Inc  
 Mark Cutler  
 611 Anton Boulevard  
 Suite 800  
 Costa Mesa , CA 92626

Samples Received  
 21-jan-1998 15:58:23

Anal	Method	Analyte	Result	Units	MDL
<b>MW-981-026 (980121023)</b>			<b>Sampled on 01/21/98</b>		
02/03/98 ( ML/S2320B )		Alkalinity	220	mg/l	2.0
02/09/98 ( ML/SM1040 )		Anion Sum	8.49	meq/l	0.0010
02/05/98 ( S3113B/E200.9 )		Arsenic, Total, GF	ND	mg/l	0.005
02/03/98 ( ML/S3111B )		Calcium, Flame AA	102	mg/l	1.0
02/04/98 ( ML/SM1040 )		Cation Sum	9.24	meq/l	0.0010
01/22/98 ( ML/EPA 300 )		Chloride	72	mg/l	2.0
01/28/98 ( MOD/EPA 300 )		Perchlorate	ND	ug/l	4.0
02/09/98 ( ML/S2320-B )		Carbonate as CO3, Calculated	0.437	mg/l	0.0010
02/17/98 ( EPA/ML 200.8 )		Chromium, Total, ICAP/MS	ND	ug/l	10
01/21/98 ( ML/SW 7196 )		Hexavalent chromium (Cr VI)	ND	mg/l	0.005
01/23/98 ( ML/S2510B )		Specific Conductance	955	umho/cm	4.0
02/17/98 ( EPA/ML 200.8 )		Iron, Total, ICAP/MS	400	ug/l	50
02/09/98 ( ML/S2320B )		Bicarbonate as HCO3,calculated	268	mg/l	0.0010
02/04/98 ( ML/S3111B )		Potassium, Flame AA	2.8	mg/l	1.0
02/04/98 ( ML/S3111B )		Magnesium, Flame AA	32	mg/l	1.0
02/04/98 ( ML/S3111B )		Sodium, Flame AA	33	mg/l	1.0
01/22/98 ( ML/EPA 300.0 )		Nitrate-N by IC	8.7	mg/l	0.20
02/17/98 ( EPA/ML 200.8 )		Lead, Total, ICAP/MS	ND	ug/l	2.0
01/22/98 ( ML/SM 4500H )		Lab pH	7.4	Units	0.0010
01/22/98 ( ML/EPA 300.0 )		Sulfate	69	mg/l	4.0
01/28/98 ( ML/S2540C )		Total Dissolved Solid (TDS)	520	mg/l	10
<b>Regulated VOCs plus Lists 1&amp;3</b>					
01/22/98 ( ML/EPA 524.2 )		1,1,1,2-Tetrachloroethane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,1,1-Trichloroethane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,1,2,2-Tetrachloroethane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,1,2-Trichloroethane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,1-Dichloroethane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,1-Dichloroethylene	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,1-Dichloropropene	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,2,3-Trichlorobenzene	ND	ug/l	0.50

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Laboratory  
Report  
#40054

Foster Wheeler Environmental, Inc  
(continued)

Anal	Method	Analyte	Result	Units	MDL
01/22/98	( ML/EPA 524.2 )	1,2,3-Trichloropropane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,4-Trichlorobenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,4-Trimethylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2-Dichloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2-Dichloropropane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,3,5-Trimethylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,3-Dichloropropane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	p-Dichlorobenzene (1,4-DCB)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	2,2-Dichloropropane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	2-Butanone (MEK)	ND	ug/l	5.0
01/22/98	( ML/EPA 524.2 )	o-Chlorotoluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	p-Chlorotoluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	4-Methyl-2-Pentanone (MIBK)	ND	ug/l	5.0
01/22/98	( ML/EPA 524.2 )	Benzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromobenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromomethane (Methyl Bromide)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	cis-1,2-Dichloroethylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chlorobenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Carbon Tetrachloride	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	cis-1,3-Dichloropropene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromoform	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloroform (Trichloromethane)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromochloromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloromethane (Methyl Chloride)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chlorodibromomethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dibromomethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromodichloromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dichloromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Ethyl benzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dichlorodifluoromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Fluorotrichloromethane-Freon11	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Hexachlorobutadiene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Isopropylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	m-Dichlorobenzene (1,3-DCB)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	m,p-Xylenes	ND	ug/l	0.50

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Laboratory  
 Report  
 #40054

Foster Wheeler Environmental, Inc  
 (continued)

Anal	Method	Analyte	Result	Units	MDL
01/22/98	( ML/EPA 524.2 )	Naphthalene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	n-Butylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	n-Propylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	o-Xylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	o-Dichlorobenzene (1,2-DCB)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Tetrachloroethylene (PCE)	1.4	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	p-Isopropyltoluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	sec-Butylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Styrene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	trans-1,2-Dichloroethylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	tert-Butylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Trichloroethylene (TCE)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Trichlorotrifluoroethane (Freon	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	trans-1,3-Dichloropropene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Toluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Vinyl chloride (VC)	ND	ug/l	0.30
	( EPA 524.2 )	None Detected	ND	ug/l	
	( Surrogate )	1,2-Dichloroethane-d4	101	% Rec	
	( Surrogate )	4-Bromofluorobenzene	92	% Rec	
	( Surrogate )	Toluene-d8	101	% Rec	

MW-981-026 MS (980121024)      Sampled on 01/21/98

**Regulated VOCs plus Lists 1&3**

01/22/98	( ML/EPA 524.2 )	1,1,1,2-Tetrachloroethane	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1,1-Trichloroethane	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1,2,2-Tetrachloroethane	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1,2-Trichloroethane	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1-Dichloroethane	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1-Dichloroethylene	4.0	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1-Dichloropropene	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,3-Trichlorobenzene	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,3-Trichloropropane	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,4-Trichlorobenzene	3.9	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,4-Trimethylbenzene	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2-Dichloroethane	NA	ug/l	0.50

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Anal	Method	Analyte	Result	Units	MDL
01/22/98	( ML/EPA 524.2 )	1,2-Dichloropropane	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,3,5-Trimethylbenzene	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,3-Dichloropropane	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	p-Dichlorobenzene (1,4-DCB)	3.8	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	2,2-Dichloropropane	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	2-Butanone (MEK)	NA	ug/l	5.0
01/22/98	( ML/EPA 524.2 )	o-Chlorotoluene	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	p-Chlorotoluene	3.6	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	4-Methyl-2-Pentanone (MIBK)	NA	ug/l	5.0
01/22/98	( ML/EPA 524.2 )	Benzene	4.3	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromobenzene	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromomethane (Methyl Bromide)	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	cis-1,2-Dichloroethylene	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chlorobenzene	4.2	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Carbon Tetrachloride	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	cis-1,3-Dichloropropene	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromoform	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloroform (Trichloromethane)	4.8	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromochloromethane	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloroethane	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloromethane (Methyl Chloride)	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chlorodibromomethane	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dibromomethane	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromodichloromethane	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dichloromethane	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Ethyl benzene	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dichlorodifluoromethane	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Fluorotrichloromethane-Freon11	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Hexachlorobutadiene	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Isopropylbenzene	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	m-Dichlorobenzene (1,3-DCB)	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	m,p-Xylenes	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Naphthalene	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	n-Butylbenzene	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	n-Propylbenzene	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	o-Xylene	NA	ug/l	0.50



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Anal	Method	Analyte	Result	Units	MDL
01/22/98	( ML/EPA 524.2 )	o-Dichlorobenzene (1,2-DCB)	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Tetrachloroethylene (PCE)	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	p-Isopropyltoluene	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	sec-Butylbenzene	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Styrene	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	trans-1,2-Dichloroethylene	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	tert-Butylbenzene	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Trichloroethylene (TCE)	4.7	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Trichlorotrifluoroethane (Freon	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	trans-1,3-Dichloropropene	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Toluene	4.5	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Vinyl chloride (VC)	NA	ug/l	0.30
	( Surrogate )	1,2-Dichloroethane-d4	98	% Rec	
	( Surrogate )	4-Bromofluorobenzene	86	% Rec	
	( Surrogate )	Toluene-d8	93	% Rec	

MW-981-026 MSD (980121025)      Sampled on 01/21/98

**Regulated VOCs plus Lists 1&3**

01/22/98	( ML/EPA 524.2 )	1,1,1,2-Tetrachloroethane	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1,1-Trichloroethane	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1,2,2-Tetrachloroethane	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1,2-Trichloroethane	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1-Dichloroethane	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1-Dichloroethylene	4.5	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1-Dichloropropene	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,3-Trichlorobenzene	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,3-Trichloropropane	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,4-Trichlorobenzene	4.5	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,4-Trimethylbenzene	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2-Dichloroethane	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2-Dichloropropane	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,3,5-Trimethylbenzene	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,3-Dichloropropane	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	p-Dichlorobenzene (1,4-DCB)	4.5	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	2,2-Dichloropropane	NA	ug/l	0.50

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Anal	Method	Analyte	Result	Units	MDL
01/22/98	( ML/EPA 524.2 )	2-Butanone (MEK)	NA	ug/l	5.0
01/22/98	( ML/EPA 524.2 )	o-Chlorotoluene	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	p-Chlorotoluene	4.4	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	4-Methyl-2-Pentanone (MIBK)	NA	ug/l	5.0
01/22/98	( ML/EPA 524.2 )	Benzene	4.7	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromobenzene	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromomethane (Methyl Bromide)	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	cis-1,2-Dichloroethylene	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chlorobenzene	4.4	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Carbon Tetrachloride	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	cis-1,3-Dichloropropene	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromoform	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloroform (Trichloromethane)	5.1	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromochloromethane	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloroethane	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloromethane (Methyl Chloride)	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chlorodibromomethane	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dibromomethane	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromodichloromethane	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dichloromethane	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Ethyl benzene	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dichlorodifluoromethane	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Fluorotrichloromethane-Freon11	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Hexachlorobutadiene	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Isopropylbenzene	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	m-Dichlorobenzene (1,3-DCB)	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	m,p-Xylenes	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Naphthalene	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	n-Butylbenzene	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	n-Propylbenzene	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	o-Xylene	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	o-Dichlorobenzene (1,2-DCB)	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Tetrachloroethylene (PCE)	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	p-Isopropyltoluene	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	sec-Butylbenzene	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Styrene	NA	ug/l	0.50

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Anal	Method	Analyte	Result	Units	MDL
01/22/98	( ML/EPA 524.2 )	trans-1,2-Dichloroethylene	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	tert-Butylbenzene	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Trichloroethylene (TCE)	4.9	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Trichlorotrifluoroethane (Freon	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	trans-1,3-Dichloropropene	NA	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Toluene	4.4	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Vinyl chloride (VC)	NA	ug/l	0.30
	( Surrogate )	1,2-Dichloroethane-d4	103	% Rec	
	( Surrogate )	4-Bromofluorobenzene	103	% Rec	
	( Surrogate )	Toluene-d8	100	% Rec	

MW-981-088 (980121026)      Sampled on 01/21/98

**Regulated VOCs plus Lists 1&3**

01/22/98	( ML/EPA 524.2 )	1,1,1,2-Tetrachloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1,1-Trichloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1,2,2-Tetrachloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1,2-Trichloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1-Dichloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1-Dichloroethylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1-Dichloropropene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,3-Trichlorobenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,3-Trichloropropane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,4-Trichlorobenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,4-Trimethylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2-Dichloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2-Dichloropropane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,3,5-Trimethylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,3-Dichloropropane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	p-Dichlorobenzene (1,4-DCB)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	2,2-Dichloropropane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	2-Butanone (MEK)	ND	ug/l	5.0
01/22/98	( ML/EPA 524.2 )	o-Chlorotoluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	p-Chlorotoluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	4-Methyl-2-Pentanone (MIBK)	ND	ug/l	5.0
01/22/98	( ML/EPA 524.2 )	Benzene	ND	ug/l	0.50

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Anal	Method	Analyte	Result	Units	MDL
01/22/98	( ML/EPA 524.2 )	Bromobenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromomethane (Methyl Bromide)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	cis-1,2-Dichloroethylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chlorobenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Carbon Tetrachloride	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	cis-1,3-Dichloropropene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromoform	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloroform (Trichloromethane)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromochloromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloromethane (Methyl Chloride)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chlorodibromomethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dibromomethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromodichloromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dichloromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Ethyl benzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dichlorodifluoromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Fluorotrichloromethane-Freon11	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Hexachlorobutadiene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Isopropylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	m-Dichlorobenzene (1,3-DCB)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	m,p-Xylenes	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Naphthalene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	n-Butylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	n-Propylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	o-Xylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	o-Dichlorobenzene (1,2-DCB)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Tetrachloroethylene (PCE)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	p-Isopropyltoluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	sec-Butylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Styrene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	trans-1,2-Dichloroethylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	tert-Butylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Trichloroethylene (TCE)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Trichlorotrifluoroethane (Freon	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	trans-1,3-Dichloropropene	ND	ug/l	0.50





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(continued)

Anal	Method	Analyte	Result	Units	MDL
01/22/98	( ML/EPA 524.2 )	Toluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Vinyl chloride (VC)	ND	ug/l	0.30
	( EPA 524.2 )	None Detected	ND	ug/l	
	( Surrogate )	1,2-Dichloroethane-d4	100	% Rec	
	( Surrogate )	4-Bromofluorobenzene	99	% Rec	
	( Surrogate )	Toluene-d8	99	% Rec	
<b>MW-981-089 (980121027)                      Sampled on 01/21/98</b>					
02/05/98	( S3113B/E200.9 )	Arsenic, Total, GF	ND	mg/l	0.005
01/28/98	( MOD/EPA 300 )	Perchlorate	ND	ug/l	4.0
02/17/98	( EPA/ML 200.8 )	Chromium, Total, ICAP/MS	ND	ug/l	10
01/21/98	( ML/SW 7196 )	Hexavalent chromium (Cr VI)	ND	mg/l	0.005
02/17/98	( EPA/ML 200.8 )	Lead, Total, ICAP/MS	ND	ug/l	2.0
<b>Regulated VOCs plus Lists 1&amp;3</b>					
01/22/98	( ML/EPA 524.2 )	1,1,1,2-Tetrachloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1,1-Trichloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1,2,2-Tetrachloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1,2-Trichloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1-Dichloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1-Dichloroethylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1-Dichloropropene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,3-Trichlorobenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,3-Trichloropropane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,4-Trichlorobenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,4-Trimethylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2-Dichloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2-Dichloropropane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,3,5-Trimethylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,3-Dichloropropane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	p-Dichlorobenzene (1,4-DCB)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	2,2-Dichloropropane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	2-Butanone (MEK)	ND	ug/l	5.0
01/22/98	( ML/EPA 524.2 )	o-Chlorotoluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	p-Chlorotoluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	4-Methyl-2-Pentanone (MIBK)	ND	ug/l	5.0

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Anal	Method	Analyte	Result	Units	MDL
01/22/98	( ML/EPA 524.2 )	Benzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromobenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromomethane (Methyl Bromide)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	cis-1,2-Dichloroethylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chlorobenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Carbon Tetrachloride	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	cis-1,3-Dichloropropene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromoform	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloroform (Trichloromethane)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromochloromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloromethane (Methyl Chloride)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chlorodibromomethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dibromomethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromodichloromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dichloromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Ethyl benzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dichlorodifluoromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Fluorotrichloromethane-Freon11	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Hexachlorobutadiene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Isopropylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	m-Dichlorobenzene (1,3-DCB)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	m,p-Xylenes	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Naphthalene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	n-Butylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	n-Propylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	o-Xylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	o-Dichlorobenzene (1,2-DCB)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Tetrachloroethylene (PCE)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	p-Isopropyltoluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	sec-Butylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Styrene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	trans-1,2-Dichloroethylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	tert-Butylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Trichloroethylene (TCE)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Trichlorotrifluoroethane (Freon	ND	ug/l	0.50



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Anal	Method	Analyte	Result	Units	MDL
01/22/98	( ML/EPA 524.2 )	trans-1,3-Dichloropropene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Toluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Vinyl chloride (VC)	ND	ug/l	0.30
	( EPA 524.2 )	None Detected	ND	ug/l	
	( Surrogate )	1,2-Dichloroethane-d4	105	% Rec	
	( Surrogate )	4-Bromofluorobenzene	96	% Rec	
	( Surrogate )	Toluene-d8	104	% Rec	
<b>MW-981-027 (980121028)      Sampled on 01/21/98</b>					
02/03/98	( ML/S2320B )	Alkalinity	200	mg/l	2.0
02/09/98	( ML/SM1040 )	Anion Sum	6.70	meq/l	0.0010
02/05/98	( S3113B/E200.9 )	Arsenic, Total, GF	ND	mg/l	0.005
02/03/98	( ML/S3111B )	Calcium, Flame AA	80	mg/l	1.0
02/04/98	( ML/SM1040 )	Cation Sum	7.38	meq/l	0.0010
01/22/98	( ML/EPA 300 )	Chloride	42	mg/l	2.0
01/28/98	( MOD/EPA 300 )	Perchlorate	ND	ug/l	4.0
02/09/98	( ML/S2320-B )	Carbonate as CO3, Calculated	0.398	mg/l	0.0010
02/17/98	( EPA/ML 200.8 )	Chromium, Total, ICAP/MS	ND	ug/l	10
01/21/98	( ML/SW 7196 )	Hexavalent chromium (Cr VI)	ND	mg/l	0.005
01/28/98	( ML/S2510B )	Specific Conductance	695	umho/cm	4.0
02/17/98	( EPA/ML 200.8 )	Iron, Total, ICAP/MS	500	ug/l	50
02/09/98	( ML/S2320B )	Bicarbonate as HCO3,calculated	244	mg/l	0.0010
02/04/98	( ML/S3111B )	Potassium, Flame AA	2.5	mg/l	1.0
02/04/98	( ML/S3111B )	Magnesium, Flame AA	26	mg/l	1.0
02/04/98	( ML/S3111B )	Sodium, Flame AA	27	mg/l	1.0
01/22/98	( ML/EPA 300.0 )	Nitrate-N by IC	5.2	mg/l	0.20
02/17/98	( EPA/ML 200.8 )	Lead, Total, ICAP/MS	ND	ug/l	2.0
01/22/98	( ML/SM 4500H )	Lab pH	7.4	Units	0.0010
01/22/98	( ML/EPA 300.0 )	Sulfate	55	mg/l	4.0
01/28/98	( ML/S2540C )	Total Dissolved Solid (TDS)	420	mg/l	10
<b>Regulated VOCs plus Lists 1&amp;3</b>					
01/22/98	( ML/EPA 524.2 )	1,1,1,2-Tetrachloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1,1-Trichloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1,2,2-Tetrachloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1,2-Trichloroethane	ND	ug/l	0.50

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Anal	Method	Analyte	Result	Units	MDL
01/22/98	( ML/EPA 524.2 )	1,1-Dichloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1-Dichloroethylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1-Dichloropropene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,3-Trichlorobenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,3-Trichloropropane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,4-Trichlorobenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,4-Trimethylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2-Dichloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2-Dichloropropane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,3,5-Trimethylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,3-Dichloropropane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	p-Dichlorobenzene (1,4-DCB)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	2,2-Dichloropropane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	2-Butanone (MEK)	ND	ug/l	5.0
01/22/98	( ML/EPA 524.2 )	o-Chlorotoluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	p-Chlorotoluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	4-Methyl-2-Pentanone (MIBK)	ND	ug/l	5.0
01/22/98	( ML/EPA 524.2 )	Benzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromobenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromomethane (Methyl Bromide)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	cis-1,2-Dichloroethylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chlorobenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Carbon Tetrachloride	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	cis-1,3-Dichloropropene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromoform	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloroform (Trichloromethane)	1.3	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromochloromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloromethane (Methyl Chloride)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chlorodibromomethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dibromomethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromodichloromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dichloromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Ethyl benzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dichlorodifluoromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Fluorotrichloromethane-Freon11	ND	ug/l	0.50



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Anal	Method	Analyte	Result	Units	MDL
01/22/98	( ML/EPA 524.2 )	Hexachlorobutadiene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Isopropylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	m-Dichlorobenzene (1,3-DCB)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	m,p-Xylenes	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Naphthalene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	n-Butylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	n-Propylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	o-Xylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	o-Dichlorobenzene (1,2-DCB)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Tetrachloroethylene (PCE)	0.6	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	p-Isopropyltoluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	sec-Butylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Styrene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	trans-1,2-Dichloroethylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	tert-Butylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Trichloroethylene (TCE)	0.5	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Trichlorotrifluoroethane (Freon	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	trans-1,3-Dichloropropene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Toluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Vinyl chloride (VC)	ND	ug/l	0.30
	( EPA 524.2 )	None Detected	ND	ug/l	
	( Surrogate )	1,2-Dichloroethane-d4	109	% Rec	
	( Surrogate )	4-Bromofluorobenzene	94	% Rec	
	( Surrogate )	Toluene-d8	99	% Rec	
<b>MW-981-028 (980121029)      Sampled on 01/21/98</b>					
02/03/98	( ML/S23208 )	Alkalinity	200	mg/l	2.0
02/09/98	( ML/SM1040 )	Anion Sum	8.32	meq/l	0.0010
01/29/98	( S3113B/E200.9 )	Arsenic, Total, GF	ND	mg/l	0.005
02/03/98	( ML/S3111B )	Calcium, Flame AA	98	mg/l	1.0
02/04/98	( ML/SM1040 )	Cation Sum	9.00	meq/l	0.0010
01/22/98	( ML/EPA 300 )	Chloride	77	mg/l	2.0
01/28/98	( MOD/EPA 300 )	Perchlorate	ND	ug/l	4.0
02/09/98	( ML/S2320-B )	Carbonate as CO3, Calculated	0.251	mg/l	0.0010
01/28/98	( EPA/ML 200.8 )	Chromium, Total, ICAP/MS	ND	ug/l	10
01/21/98	( ML/SW 7196 )	Hexavalent chromium (Cr VI)	ND	mg/l	0.005

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Anal	Method	Analyte	Result	Units	MDL
01/28/98	( ML/S2510B )	Specific Conductance	865	umho/cm	4.0
01/28/98	( EPA/ML 200.8 )	Iron, Total, ICAP/MS	220	ug/l	50
02/09/98	( ML/S2320B )	Bicarbonate as HCO <sub>3</sub> , calculated	244	mg/l	0.0010
02/04/98	( ML/S3111B )	Potassium, Flame AA	3.0	mg/l	1.0
02/04/98	( ML/S3111B )	Magnesium, Flame AA	32	mg/l	1.0
02/04/98	( ML/S3111B )	Sodium, Flame AA	32	mg/l	1.0
01/22/98	( ML/EPA 300.0 )	Nitrate-N by IC	9.6	mg/l	0.20
01/28/98	( EPA/ML 200.8 )	Lead, Total, ICAP/MS	ND	ug/l	2.0
01/22/98	( ML/SM 4500H )	Lab pH	7.2	Units	0.0010
01/22/98	( ML/EPA 300.0 )	Sulfate	70	mg/l	4.0
01/28/98	( ML/S2540C )	Total Dissolved Solid (TDS)	510	mg/l	10

**Regulated VOCs plus Lists 1&3**

01/22/98	( ML/EPA 524.2 )	1,1,1,2-Tetrachloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1,1-Trichloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1,2,2-Tetrachloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1,2-Trichloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1-Dichloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1-Dichloroethylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1-Dichloropropene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,3-Trichlorobenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,3-Trichloropropane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,4-Trichlorobenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,4-Trimethylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2-Dichloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2-Dichloropropane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,3,5-Trimethylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,3-Dichloropropane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	p-Dichlorobenzene (1,4-DCB)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	2,2-Dichloropropane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	2-Butanone (MEK)	ND	ug/l	5.0
01/22/98	( ML/EPA 524.2 )	o-Chlorotoluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	p-Chlorotoluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	4-Methyl-2-Pentanone (MIBK)	ND	ug/l	5.0
01/22/98	( ML/EPA 524.2 )	Benzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromobenzene	ND	ug/l	0.50

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Anal	Method	Analyte	Result	Units	MDL
01/22/98	( ML/EPA 524.2 )	Bromomethane (Methyl Bromide)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	cis-1,2-Dichloroethylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chlorobenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Carbon Tetrachloride	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	cis-1,3-Dichloropropene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromoform	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloroform (Trichloromethane)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromochloromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloromethane (Methyl Chloride)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chlorodibromomethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dibromomethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromodichloromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dichloromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Ethyl benzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dichlorodifluoromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Fluorotrichloromethane-Freon11	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Hexachlorobutadiene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Isopropylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	m-Dichlorobenzene (1,3-DCB)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	m,p-Xylenes	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Naphthalene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	n-Butylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	n-Propylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	o-Xylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	o-Dichlorobenzene (1,2-DCB)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Tetrachloroethylene (PCE)	2.1	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	p-Isopropyltoluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	sec-Butylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Styrene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	trans-1,2-Dichloroethylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	tert-Butylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Trichloroethylene (TCE)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Trichlorotrifluoroethane (Freon	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	trans-1,3-Dichloropropene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Toluene	ND	ug/l	0.50



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Anal	Method	Analyte	Result	Units	MDL
01/22/98	( ML/EPA 524.2 )	Vinyl chloride (VC)	ND	ug/l	0.30
	( EPA 524.2 )	None Detected	ND	ug/l	
	( Surrogate )	1,2-Dichloroethane-d4	112	% Rec	
	( Surrogate )	4-Bromofluorobenzene	91	% Rec	
	( Surrogate )	Toluene-d8	100	% Rec	
<b>MW-981-029 (980121030)                      Sampled on 01/21/98</b>					
02/03/98	( ML/S2320B )	Alkalinity	185	mg/l	2.0
02/09/98	( ML/SM1040 )	Anion Sum	8.03	meq/l	0.0010
02/05/98	( S3113B/E200.9 )	Arsenic, Total, GF	ND	mg/l	0.005
02/03/98	( ML/S3111B )	Calcium, Flame AA	100	mg/l	1.0
02/04/98	( ML/SM1040 )	Cation Sum	8.71	meq/l	0.0010
01/23/98	( ML/EPA 300 )	Chloride	67	mg/l	2.0
01/28/98	( MOD/EPA 300 )	Perchlorate	ND	ug/l	4.0
02/09/98	( ML/S2320-B )	Carbonate as CO3, Calculated	0.074	mg/l	0.0010
02/17/98	( EPA/ML 200.8 )	Chromium, Total, ICAP/MS	ND	ug/l	10
01/21/98	( ML/SW 7196 )	Hexavalent chromium (Cr VI)	ND	mg/l	0.005
01/28/98	( ML/S2510B )	Specific Conductance	825	umho/cm	4.0
02/17/98	( EPA/ML 200.8 )	Iron, Total, ICAP/MS	1600	ug/l	50
02/09/98	( ML/S2320B )	Bicarbonate as HCO3,calculated	226	mg/l	0.0010
02/04/98	( ML/S3111B )	Potassium, Flame AA	3.2	mg/l	1.0
02/04/98	( ML/S3111B )	Magnesium, Flame AA	34	mg/l	1.0
02/04/98	( ML/S3111B )	Sodium, Flame AA	19	mg/l	1.0
01/23/98	( ML/EPA 300.0 )	Nitrate-N by IC	7.3	mg/l	0.20
02/17/98	( EPA/ML 200.8 )	Lead, Total, ICAP/MS	ND	ug/l	2.0
01/22/98	( ML/SM 4500H )	Lab pH	6.7	Units	0.0010
01/23/98	( ML/EPA 300.0 )	Sulfate	92	mg/l	4.0
01/28/98	( ML/S2540C )	Total Dissolved Solid (TDS)	490	mg/l	10
<b>Regulated VOCs plus Lists 1&amp;3</b>					
01/22/98	( ML/EPA 524.2 )	1,1,1,2-Tetrachloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1,1-Trichloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1,2,2-Tetrachloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1,2-Trichloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1-Dichloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,1-Dichloroethylene	ND	ug/l	0.50



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Anal	Method	Analyte	Result	Units	MDL
01/22/98	( ML/EPA 524.2 )	1,1-Dichloropropene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,3-Trichlorobenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,3-Trichloropropane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,4-Trichlorobenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2,4-Trimethylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2-Dichloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,2-Dichloropropane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,3,5-Trimethylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	1,3-Dichloropropane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	p-Dichlorobenzene (1,4-DCB)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	2,2-Dichloropropane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	2-Butanone (MEK)	ND	ug/l	5.0
01/22/98	( ML/EPA 524.2 )	o-Chlorotoluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	p-Chlorotoluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	4-Methyl-2-Pentanone (MIBK)	ND	ug/l	5.0
01/22/98	( ML/EPA 524.2 )	Benzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromobenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromomethane (Methyl Bromide)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	cis-1,2-Dichloroethylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chlorobenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Carbon Tetrachloride	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	cis-1,3-Dichloropropene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromoform	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloroform (Trichloromethane)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromochloromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloromethane (Methyl Chloride)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chlorodibromomethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dibromomethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromodichloromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dichloromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Ethyl benzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dichlorodifluoromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Fluorotrichloromethane-Freon11	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Hexachlorobutadiene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Isopropylbenzene	ND	ug/l	0.50

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Anal	Method	Analyte	Result	Units	MDL
01/22/98	( ML/EPA 524.2 )	m-Dichlorobenzene (1,3-DCB)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	m,p-Xylenes	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Naphthalene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	n-Butylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	n-Propylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	o-Xylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	o-Dichlorobenzene (1,2-DCB)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Tetrachloroethylene (PCE)	0.9	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	p-Isopropyltoluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	sec-Butylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Styrene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	trans-1,2-Dichloroethylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	tert-Butylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Trichloroethylene (TCE)	0.6	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Trichlorotrifluoroethane (Freon)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	trans-1,3-Dichloropropene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Toluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Vinyl chloride (VC)	ND	ug/l	0.30
	( EPA 524.2 )	None Detected	ND	ug/l	
	( Surrogate )	1,2-Dichloroethane-d4	106	% Rec	
	( Surrogate )	4-Bromofluorobenzene	97	% Rec	
	( Surrogate )	Toluene-d8	95	% Rec	
<b>MW-981-030 (980121031)      Sampled on 01/21/98</b>					
02/03/98	( ML/S2320B )	Alkalinity	130	mg/l	2.0
02/09/98	( ML/SM1040 )	Anion Sum	3.30	meq/l	0.0010
02/05/98	( S3113B/E200.9 )	Arsenic, Total, GF	ND	mg/l	0.005
02/03/98	( ML/S3111B )	Calcium, Flame AA	39	mg/l	1.0
02/04/98	( ML/SM1040 )	Cation Sum	3.71	meq/l	0.0010
01/23/98	( ML/EPA 300 )	Chloride	6.0	mg/l	1.0
01/28/98	( MOD/EPA 300 )	Perchlorate	ND	ug/l	4.0
02/09/98	( ML/S2320-B )	Carbonate as CO3, Calculated	0.515	mg/l	0.0010
02/17/98	( EPA/ML 200.8 )	Chromium, Total, ICAP/MS	ND	ug/l	10
01/21/98	( ML/SW 7196 )	Hexavalent chromium (Cr VI)	ND	mg/l	0.005
01/28/98	( ML/S2510B )	Specific Conductance	345	umho/cm	4.0
02/17/98	( EPA/ML 200.8 )	Iron, Total, ICAP/MS	190	ug/l	50



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Anal	Method	Analyte	Result	Units	MDL
02/09/98 ( ML/S2320B )		Bicarbonate as HCO <sub>3</sub> ,calculated	158	mg/l	0.0010
02/04/98 ( ML/S3111B )		Potassium, Flame AA	3.2	mg/l	1.0
02/04/98 ( ML/S3111B )		Magnesium, Flame AA	13	mg/l	1.0
02/04/98 ( ML/S3111B )		Sodium, Flame AA	14	mg/l	1.0
01/23/98 ( ML/EPA 300.0 )		Nitrate-N by IC	0.66	mg/l	0.10
02/17/98 ( EPA/ML 200.8 )		Lead, Total, ICAP/MS	ND	ug/l	2.0
01/22/98 ( ML/SM 4500H )		Lab pH	7.7	Units	0.0010
01/23/98 ( ML/EPA 300.0 )		Sulfate	23	mg/l	2.0
01/28/98 ( ML/S2540C )		Total Dissolved Solid (TDS)	200	mg/l	10
<b>Regulated VOCs plus Lists 1&amp;3</b>					
01/22/98 ( ML/EPA 524.2 )		1,1,1,2-Tetrachloroethane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,1,1-Trichloroethane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,1,2,2-Tetrachloroethane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,1,2-Trichloroethane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,1-Dichloroethane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,1-Dichloroethylene	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,1-Dichloropropene	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,2,3-Trichlorobenzene	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,2,3-Trichloropropane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,2,4-Trichlorobenzene	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,2,4-Trimethylbenzene	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,2-Dichloroethane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,2-Dichloropropane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,3,5-Trimethylbenzene	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,3-Dichloropropane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		p-Dichlorobenzene (1,4-DCB)	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		2,2-Dichloropropane	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		2-Butanone (MEK)	ND	ug/l	5.0
01/22/98 ( ML/EPA 524.2 )		o-Chlorotoluene	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		p-Chlorotoluene	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		4-Methyl-2-Pentanone (MIBK)	ND	ug/l	5.0
01/22/98 ( ML/EPA 524.2 )		Benzene	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		Bromobenzene	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		Bromomethane (Methyl Bromide)	ND	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		cis-1,2-Dichloroethylene	ND	ug/l	0.50

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Anal	Method	Analyte	Result	Units	MDL
01/22/98	( ML/EPA 524.2 )	Chlorobenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Carbon Tetrachloride	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	cis-1,3-Dichloropropene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromoform	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloroform (Trichloromethane)	0.8	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromochloromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloroethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chloromethane (Methyl Chloride)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Chlorodibromomethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dibromomethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Bromodichloromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dichloromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Ethyl benzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Dichlorodifluoromethane	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Fluorotrichloromethane-Freon11	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Hexachlorobutadiene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Isopropylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	m-Dichlorobenzene (1,3-DCB)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	m,p-Xylenes	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Naphthalene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	n-Butylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	n-Propylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	o-Xylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	o-Dichlorobenzene (1,2-DCB)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Tetrachloroethylene (PCE)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	p-Isopropyltoluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	sec-Butylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Styrene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	trans-1,2-Dichloroethylene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	tert-Butylbenzene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Trichloroethylene (TCE)	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Trichlorotrifluoroethane (Freon	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	trans-1,3-Dichloropropene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Toluene	ND	ug/l	0.50
01/22/98	( ML/EPA 524.2 )	Vinyl chloride (VC)	ND	ug/l	0.30
	( EPA 524.2 )	None Detected	ND	ug/l	



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Anal	Method	Analyte	Result	Units	MDL
( Surrogate	)	1,2-Dichloroethane-d4	105	% Rec	
( Surrogate	)	4-Bromofluorobenzene	81	% Rec	
( Surrogate	)	Toluene-d8	97	% Rec	

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QC Report  
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Foster Wheeler Environmental, Inc

**QC Batch #71742**

**Hexavalent chromium (Cr VI)**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Hexavalent chromium (Cr VI)	0.050	0.051	102.0	( 78.00 - 118.00 )	
LCS2	Hexavalent chromium (Cr VI)	0.050	0.050	100.0	( 78.00 - 118.00 )	2.0
MBLK	Hexavalent chromium (Cr VI)	ND				
MS	Hexavalent chromium (Cr VI)	0.050	0.050	100.0	( 80.00 - 120.00 )	
MSD	Hexavalent chromium (Cr VI)	0.050	0.050	100.0	( 80.00 - 120.00 )	0.00

**QC Batch #72101**

**Chloride**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Chloride	25	27	108.0	( 90.00 - 110.00 )	
LCS2	Chloride	25	27	108.0	( 90.00 - 110.00 )	0.00
MBLK	Chloride	ND				
MS	Chloride	25	27	108.0	( 80.00 - 120.00 )	
MSD	Chloride	25	27	108.0	( 80.00 - 120.00 )	0.00

**QC Batch #72102**

**Chloride**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Chloride	25	27	108.0	( 90.00 - 110.00 )	
LCS2	Chloride	25	27	108.0	( 90.00 - 110.00 )	0.00
MBLK	Chloride	ND				
MS	Chloride	25	26	104.0	( 80.00 - 120.00 )	
MSD	Chloride	25	26	104.0	( 80.00 - 120.00 )	0.00

**QC Batch #72104**

**Nitrate-N by IC**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Nitrate-N by IC	2.5	2.7	108.0	( 90.00 - 110.00 )	
LCS2	Nitrate-N by IC	2.5	2.7	108.0	( 90.00 - 110.00 )	0.00
MBLK	Nitrate-N by IC	ND				
MS	Nitrate-N by IC	2.5	2.7	108.0	( 80.00 - 120.00 )	
MSD	Nitrate-N by IC	2.5	2.7	108.0	( 80.00 - 120.00 )	0.00

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.  
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Foster Wheeler Environmental, Inc  
(continued)

**QC Batch #72105**

**Nitrate-N by IC**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Nitrate-N by IC	2.5	2.7	108.0	( 90.00 - 110.00 )	
LCS2	Nitrate-N by IC	2.5	2.7	108.0	( 90.00 - 110.00 )	0.00
MBLK	Nitrate-N by IC	ND				
MS	Nitrate-N by IC	2.5	2.5	100.0	( 80.00 - 120.00 )	
MSD	Nitrate-N by IC	2.5	2.5	100.0	( 80.00 - 120.00 )	0.00

**QC Batch #72106**

**Sulfate**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Sulfate	50	54	108.0	( 90.00 - 110.00 )	
LCS2	Sulfate	50	54	108.0	( 90.00 - 110.00 )	0.00
MBLK	Sulfate	ND				
MS	Sulfate	50	54	108.0	( 80.00 - 120.00 )	
MSD	Sulfate	50	54	108.0	( 80.00 - 120.00 )	0.00

**QC Batch #72107**

**Sulfate**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Sulfate	50	54	108.0	( 90.00 - 110.00 )	
LCS2	Sulfate	50	54	108.0	( 90.00 - 110.00 )	0.00
MBLK	Sulfate	ND				
MS	Sulfate	50	53	106.0	( 80.00 - 120.00 )	
MSD	Sulfate	50	53	106.0	( 80.00 - 120.00 )	0.00

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**QC Batch #72167**

**Perchlorate**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Perchlorate	20.0	18.4	92.0	( 90.00 - 110.00 )	
LCS2	Perchlorate	20.0	21.1	105.5	( 90.00 - 110.00 )	14
MBLK	Perchlorate	ND				
MS	Perchlorate	20.0	18.6	93.0	( 75.00 - 125.00 )	
MSD	Perchlorate	20.0	18.1	90.5	( 75.00 - 125.00 )	2.7

**QC Batch #72168**

**Perchlorate**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Perchlorate	20.0	19.7	98.5	( 90.00 - 110.00 )	
LCS2	Perchlorate	20.0	20.1	100.5	( 90.00 - 110.00 )	2.0
MBLK	Perchlorate	ND				
MS	Perchlorate	20.0	18.9	94.5	( 75.00 - 125.00 )	
MSD	Perchlorate	20.0	19.6	98.0	( 75.00 - 125.00 )	3.6

**QC Batch #72312**

**Total Dissolved Solid (TDS)**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Total Dissolved Solid (TDS)	175	176	100.6	( 85.00 - 115.00 )	
LCS2	Total Dissolved Solid (TDS)	700	672	96.0	( 85.00 - 115.00 )	
MBLK	Total Dissolved Solid (TDS)	ND				

**QC Batch #72348**

**Total Dissolved Solid (TDS)**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Total Dissolved Solid (TDS)	175	176	100.6	( 85.00 - 115.00 )	
LCS2	Total Dissolved Solid (TDS)	700	672	96.0	( 85.00 - 115.00 )	
MBLK	Total Dissolved Solid (TDS)	ND				

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.  
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**QC Batch #72378****Regulated VOCs plus Lists 1&3**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
MBLK	1,1,1,2-Tetrachloroethane	ND				
LCS1	1,1,1-Trichloroethane	4	4.06	101.5	( 70.00 - 130.00 )	
MBLK	1,1,1-Trichloroethane	ND				
LCS1	1,1,2,2-Tetrachloroethane	4	4.11	102.8	( 70.00 - 130.00 )	
MBLK	1,1,2,2-Tetrachloroethane	ND				
LCS1	1,1,2-Trichloroethane	4	4.52	113.0	( 70.00 - 130.00 )	
MBLK	1,1,2-Trichloroethane	ND				
LCS1	1,1-Dichloroethane	4	4.14	103.5	( 70.00 - 130.00 )	
MBLK	1,1-Dichloroethane	ND				
LCS1	1,1-Dichloroethylene	4	3.89	97.2	( 70.00 - 130.00 )	
MBLK	1,1-Dichloroethylene	ND				
MBLK	1,1-Dichloropropene	ND				
MBLK	1,2,3-Trichlorobenzene	ND				
MBLK	1,2,3-Trichloropropane	ND				
LCS1	1,2,4-Trichlorobenzene	4	4.12	103.0	( 70.00 - 130.00 )	
MBLK	1,2,4-Trichlorobenzene	ND				
MBLK	1,2,4-Trimethylbenzene	ND				
LCS1	1,2-Dichloroethane	4	4.03	100.8	( 70.00 - 130.00 )	
MBLK	1,2-Dichloroethane	ND				
LCS1	1,2-Dichloropropane	4	4.23	105.8	( 70.00 - 130.00 )	
MBLK	1,2-Dichloropropane	ND				
MBLK	1,3,5-Trimethylbenzene	ND				
LCS1	1,3-Dichloropropane	8	8.06	100.8	( 70.00 - 130.00 )	
MBLK	1,3-Dichloropropane	ND				
MBLK	2,2-Dichloropropane	ND				
MBLK	2-Butanone (MEK)	ND				
MBLK	2-Chloroethylvinylether	ND				
MBLK	4-Methyl-2-Pentanone (MIBK)	ND				
LCS1	Benzene	4	4.11	102.8	( 70.00 - 130.00 )	
MBLK	Benzene	ND				
MBLK	Bromobenzene	ND				
MBLK	Bromochloromethane	ND				

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LCS1	Bromodichloromethane	4	4.13	103.2	( 70.00 - 130.00 )
MBLK	Bromodichloromethane	ND			
LCS1	Bromoform	4	3.93	98.2	( 70.00 - 130.00 )
MBLK	Bromoform	ND			
MBLK	Bromomethane (Methyl Bromide)	ND			
LCS1	Carbon Tetrachloride	4	4.20	105.0	( 70.00 - 130.00 )
MBLK	Carbon Tetrachloride	ND			
LCS1	Chlorobenzene	4	4.32	108.0	( 70.00 - 130.00 )
MBLK	Chlorobenzene	ND			
LCS1	Chlorodibromomethane	4	3.99	99.8	( 70.00 - 130.00 )
MBLK	Chlorodibromomethane	ND			
MBLK	Chloroethane	ND			
LCS1	Chloroform (Trichloromethane)	4	4.13	103.2	( 70.00 - 130.00 )
MBLK	Chloroform (Trichloromethane)	ND			
MBLK	Chloromethane (Methyl Chloride)	ND			
MBLK	Dibromomethane	ND			
MBLK	Dichlorodifluoromethane	ND			
LCS1	Dichloromethane	4	4.24	106.0	( 70.00 - 130.00 )
MBLK	Dichloromethane	ND			
LCS1	Ethyl benzene	4	4.25	106.2	( 70.00 - 130.00 )
MBLK	Ethyl benzene	ND			
LCS1	Fluorotrichloromethane-Freon11	2	2.59	129.5	( 70.00 - 130.00 )
MBLK	Fluorotrichloromethane-Freon11	ND			
MBLK	Hexachlorobutadiene	ND			
MBLK	Isopropylbenzene	ND			
MBLK	Naphthalene	ND			
LCS1	Styrene	4	4.46	111.5	( 70.00 - 130.00 )
MBLK	Styrene	ND			
LCS1	Tetrachloroethylene (PCE)	4	4.29	107.2	( 70.00 - 130.00 )
MBLK	Tetrachloroethylene (PCE)	ND			
LCS1	Toluene	4	4.55	113.8	( 70.00 - 130.00 )
MBLK	Toluene	ND			
LCS1	Trichloroethylene (TCE)	4	4.21	105.2	( 70.00 - 130.00 )
MBLK	Trichloroethylene (TCE)	ND			
LCS1	Trichlorotrifluoroethane (Freon)	2	2.23	111.5	( 70.00 - 130.00 )
MBLK	Trichlorotrifluoroethane (Freon)	ND			
LCS1	Vinyl chloride (VC)	2	1.60	80.0	( 70.00 - 130.00 )

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MBLK	Vinyl chloride (VC)	ND				
LCS1	cis-1,2-Dichloroethylene	4	4.33	108.2	( 70.00 - 130.00 )	
MBLK	cis-1,2-Dichloroethylene	ND				
MBLK	cis-1,3-Dichloropropene	ND				
LCS1	m,p-Xylenes	8	8.51	106.4	( 70.00 - 130.00 )	
MBLK	m,p-Xylenes	ND				
MBLK	m-Dichlorobenzene (1,3-DCB)	ND				
MBLK	n-Butylbenzene	ND				
MBLK	n-Propylbenzene	ND				
MBLK	o-Chlorotoluene	ND				
LCS1	o-Dichlorobenzene (1,2-DCB)	4	4.53	113.2	( 70.00 - 130.00 )	
MBLK	o-Dichlorobenzene (1,2-DCB)	ND				
LCS1	o-Xylene	4	4.48	112.0	( 70.00 - 130.00 )	
MBLK	o-Xylene	ND				
MBLK	p-Chlorotoluene	ND				
LCS1	p-Dichlorobenzene (1,4-DCB)	4	4.87	121.8	( 70.00 - 130.00 )	
MBLK	p-Dichlorobenzene (1,4-DCB)	ND				
MBLK	p-Isopropyltoluene	ND				
MBLK	sec-Butylbenzene	ND				
MBLK	tert-Butylbenzene	ND				
LCS1	trans-1,2-Dichloroethylene	4	4.12	103.0	( 70.00 - 130.00 )	
MBLK	trans-1,2-Dichloroethylene	ND				
MBLK	trans-1,3-Dichloropropene	ND				

**QC Batch #72416**

**Arsenic, Total, GF**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Arsenic, Total, GF	0.020	0.0201	100.5	( 85.00 - 115.00 )	
LCS2	Arsenic, Total, GF	0.020	0.0208	104.0	( 85.00 - 115.00 )	3.4
MBLK	Arsenic, Total, GF	ND				
MS	Arsenic, Total, GF	0.020	0.0200	100.0	( 85.00 - 115.00 )	
MSD	Arsenic, Total, GF	0.020	0.0205	102.5	( 85.00 - 115.00 )	2.5

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**QC Batch #72509**

**Calcium, Flame AA**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Calcium, Flame AA	50	52.4	104.8	( 90.00 - 110.00 )	
LCS2	Calcium, Flame AA	50	51.9	103.8	( 90.00 - 110.00 )	0.96
MBLK	Calcium, Flame AA	ND				
MS	Calcium, Flame AA	50	51.3	102.6	( 85.00 - 115.00 )	
MSD	Calcium, Flame AA	50	49.5	99.0	( 85.00 - 115.00 )	3.6

**QC Batch #72510**

**Calcium, Flame AA**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Calcium, Flame AA	50	53.9	107.8	( 90.00 - 110.00 )	
LCS2	Calcium, Flame AA	50	51.7	103.4	( 90.00 - 110.00 )	4.2
MBLK	Calcium, Flame AA	ND				
MS	Calcium, Flame AA	50	53.1	106.2	( 85.00 - 115.00 )	
MSD	Calcium, Flame AA	50	53.4	106.8	( 85.00 - 115.00 )	0.56

**QC Batch #72522**

**Potassium, Flame AA**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Potassium, Flame AA	20	19.9	99.5	( 80.00 - 120.00 )	
LCS2	Potassium, Flame AA	20	19.9	99.5	( 80.00 - 120.00 )	0.00
MBLK	Potassium, Flame AA	ND				
MS	Potassium, Flame AA	20	20.1	100.5	( 85.00 - 115.00 )	
MSD	Potassium, Flame AA	20	21.8	109.0	( 85.00 - 115.00 )	8.1

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**QC Batch #72523**

**Potassium, Flame AA**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Potassium, Flame AA	20	19.6	98.0	( 80.00 - 120.00 )	
LCS2	Potassium, Flame AA	20	20.2	101.0	( 80.00 - 120.00 )	3.0
MBLK	Potassium, Flame AA	ND				
MS	Potassium, Flame AA	20	21.9	109.5	( 85.00 - 115.00 )	
MSD	Potassium, Flame AA	20	21.6	108.0	( 85.00 - 115.00 )	1.4

**QC Batch #72524**

**Sodium, Flame AA**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Sodium, Flame AA	50	47.6	95.2	( 90.00 - 110.00 )	
LCS2	Sodium, Flame AA	50	47.3	94.6	( 90.00 - 110.00 )	0.63
MBLK	Sodium, Flame AA	ND				
MS	Sodium, Flame AA	50	46.4	92.8	( 85.00 - 115.00 )	
MSD	Sodium, Flame AA	50	50.9	101.8	( 85.00 - 115.00 )	9.2

**QC Batch #72525**

**Sodium, Flame AA**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Sodium, Flame AA	50	46.1	92.2	( 90.00 - 110.00 )	
LCS2	Sodium, Flame AA	50	47.4	94.8	( 90.00 - 110.00 )	2.8
MBLK	Sodium, Flame AA	ND				
MS	Sodium, Flame AA	50	52.3	104.6	( 85.00 - 115.00 )	
MSD	Sodium, Flame AA	50	51.4	102.8	( 85.00 - 115.00 )	1.7

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**QC Batch #72526**

**Magnesium, Flame AA**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Magnesium, Flame AA	20	18.1	90.5	( 90.00 - 110.00 )	
LCS2	Magnesium, Flame AA	20	19.1	95.5	( 90.00 - 110.00 )	5.4
MBLK	Magnesium, Flame AA	ND				
MS	Magnesium, Flame AA	20	18.1	90.5	( 85.00 - 115.00 )	
MSD	Magnesium, Flame AA	20	19.7	98.5	( 85.00 - 115.00 )	8.5

**QC Batch #72527**

**Magnesium, Flame AA**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Magnesium, Flame AA	20	18.5	92.5	( 90.00 - 110.00 )	
LCS2	Magnesium, Flame AA	20	18.8	94.0	( 90.00 - 110.00 )	1.6
MBLK	Magnesium, Flame AA	ND				
MS	Magnesium, Flame AA	20	20.6	103.0	( 85.00 - 115.00 )	
MSD	Magnesium, Flame AA	20	20.3	101.5	( 85.00 - 115.00 )	1.5

**QC Batch #72694**

**Alkalinity**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Alkalinity	96.2	102	106.0	( 90.00 - 110.00 )	
LCS2	Alkalinity	96.2	94.4	98.1	( 90.00 - 110.00 )	7.7
MBLK	Alkalinity	ND				
MS	Alkalinity	96.2	96.6	100.4	( 80.00 - 120.00 )	
MSD	Alkalinity	96.2	94.9	98.6	( 80.00 - 120.00 )	1.8

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**QC Batch #72948**

**Arsenic, Total, GF**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Arsenic, Total, GF	0.020	0.0209	104.5	( 85.00 - 115.00 )	
LCS2	Arsenic, Total, GF	0.020	0.0212	106.0	( 85.00 - 115.00 )	1.4
MBLK	Arsenic, Total, GF	ND				
MS	Arsenic, Total, GF	0.020	0.0204	102.0	( 85.00 - 115.00 )	
MSD	Arsenic, Total, GF	0.020	0.0212	106.0	( 85.00 - 115.00 )	3.8

**QC Batch #73211**

**Chromium, Total, ICAP/MS**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Chromium, Total, ICAP/MS	100	103	103.0	( 85.00 - 115.00 )	
LCS2	Chromium, Total, ICAP/MS	100	109	109.0	( 85.00 - 115.00 )	5.7
MBLK	Chromium, Total, ICAP/MS	ND		0.0		
MS	Chromium, Total, ICAP/MS	100	103.	103.0	( 70.00 - 130.00 )	
MSD	Chromium, Total, ICAP/MS	100	106.	106.0	( 70.00 - 130.00 )	2.9

**QC Batch #73212**

**Chromium, Total, ICAP/MS**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Chromium, Total, ICAP/MS	100	102	102.0	( 85.00 - 115.00 )	
LCS2	Chromium, Total, ICAP/MS	100	97.9	97.9	( 85.00 - 115.00 )	4.1
MBLK	Chromium, Total, ICAP/MS	ND		0.0		
MS	Chromium, Total, ICAP/MS	100	98.2	98.2	( 70.00 - 130.00 )	
MSD	Chromium, Total, ICAP/MS	100	98.8	98.8	( 70.00 - 130.00 )	0.61

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Criteria for MS and DUP are not applicable for ICR monitoring.



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**QC Batch #73216**

**Iron, Total, ICAP/MS**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Iron, Total, ICAP/MS	500	503	100.6	( 85.00 - 115.00 )	
LCS2	Iron, Total, ICAP/MS	500	567	113.4	( 85.00 - 115.00 )	12
MBLK	Iron, Total, ICAP/MS	ND		0.0		
MS	Iron, Total, ICAP/MS	500	393.	78.6	( 70.00 - 130.00 )	
MSD	Iron, Total, ICAP/MS	500	495.	99.0	( 70.00 - 130.00 )	23

**QC Batch #73217**

**Iron, Total, ICAP/MS**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Iron, Total, ICAP/MS	500	538	107.6	( 85.00 - 115.00 )	
LCS2	Iron, Total, ICAP/MS	500	478	95.6	( 85.00 - 115.00 )	12
MBLK	Iron, Total, ICAP/MS	ND		0.0		
MS	Iron, Total, ICAP/MS	500	439.	87.8	( 70.00 - 130.00 )	
MSD	Iron, Total, ICAP/MS	500	418.	83.6	( 70.00 - 130.00 )	4.9

**QC Batch #73221**

**Lead, Total, ICAP/MS**

QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Lead, Total, ICAP/MS	20	20.0	100.0	( 85.00 - 115.00 )	
LCS2	Lead, Total, ICAP/MS	20	21.0	105.0	( 85.00 - 115.00 )	4.9
MBLK	Lead, Total, ICAP/MS	ND		0.0		
MS	Lead, Total, ICAP/MS	20	22.9	114.5	( 70.00 - 130.00 )	
MSD	Lead, Total, ICAP/MS	20	21.5	107.5	( 70.00 - 130.00 )	6.3

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(continued)

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QC Batch #73222		Lead, Total, ICAP/MS				
QC	Analyte	Spiked	Recovered	Yield (%)	Limits (%)	RPD (%)
LCS1	Lead, Total, ICAP/MS	20	21.3	106.5	( 85.00 - 115.00 )	
LCS2	Lead, Total, ICAP/MS	20	20.6	103.0	( 85.00 - 115.00 )	3.3
MBLK	Lead, Total, ICAP/MS	ND		0.0		
MS	Lead, Total, ICAP/MS	20	20.6	103.0	( 70.00 - 130.00 )	
MSD	Lead, Total, ICAP/MS	20	19.9	99.5	( 70.00 - 130.00 )	3.5

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.  
Criteria for MS and DUP are not applicable for ICR monitoring.



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**Laboratory  
Report  
#40054**

Foster Wheeler Environmental, Inc  
Mark Cutler  
611 Anton Boulevard  
Suite 800  
Costa Mesa , CA 92626

Samples Received  
21-jan-1998 15:58:23

This report only shows results above the Reporting Limit

Anal	Method	Analyte	Result	Units	MDL
<b>MW-981-026 (980121023)      Sampled on 01/21/98</b>					
02/03/98	( ML/S2320B )	Alkalinity	220	mg/l	2.0
02/09/98	( ML/SM1040 )	Anion Sum	8.49	meq/l	0.0010
02/03/98	( ML/S3111B )	Calcium, Flame AA	102	mg/l	1.0
02/04/98	( ML/SM1040 )	Cation Sum	9.24	meq/l	0.0010
01/22/98	( ML/EPA 300 )	Chloride	72	mg/l	2.0
02/09/98	( ML/S2320-B )	Carbonate as CO3, Calculated	0.437	mg/l	0.0010
01/23/98	( ML/S2510B )	Specific Conductance	955	umho/cm	4.0
02/17/98	( EPA/ML 200.8 )	Iron, Total, ICAP/MS	400	ug/l	50
02/09/98	( ML/S2320B )	Bicarbonate as HCO3,calculated	268	mg/l	0.0010
02/04/98	( ML/S3111B )	Potassium, Flame AA	2.8	mg/l	1.0
02/04/98	( ML/S3111B )	Magnesium, Flame AA	32	mg/l	1.0
02/04/98	( ML/S3111B )	Sodium, Flame AA	33	mg/l	1.0
01/22/98	( ML/EPA 300.0 )	Nitrate-N by IC	8.7	mg/l	0.20
01/22/98	( ML/SM 4500H )	Lab pH	7.4	Units	0.0010
01/22/98	( ML/EPA 300.0 )	Sulfate	69	mg/l	4.0
01/28/98	( ML/S2540C )	Total Dissolved Solid (TDS)	520	mg/l	10
<b>Regulated VOCs plus Lists 1&amp;3</b>					
01/22/98	( ML/EPA 524.2 )	Tetrachloroethylene (PCE)	1.4	ug/l	0.50
	( Surrogate )	1,2-Dichloroethane-d4	101	% Rec	
	( Surrogate )	4-Bromofluorobenzene	92	% Rec	
	( Surrogate )	Toluene-d8	101	% Rec	

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Laboratory  
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 #40054

Foster Wheeler Environmental, Inc  
 (continued)

Anal	Method	Analyte	Result	Units	MDL
<b>MW-981-026 MS (980121024)      Sampled on 01/21/98</b>					
<b>Regulated VOCs plus Lists 1&amp;3</b>					
01/22/98 ( ML/EPA 524.2 )		1,1-Dichloroethylene	4.0	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,2,4-Trichlorobenzene	3.9	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		p-Dichlorobenzene (1,4-DCB)	3.8	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		p-Chlorotoluene	3.6	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		Benzene	4.3	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		Chlorobenzene	4.2	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		Chloroform (Trichloromethane)	4.8	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		Trichloroethylene (TCE)	4.7	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		Toluene	4.5	ug/l	0.50
	( Surrogate )	1,2-Dichloroethane-d4	98	% Rec	
	( Surrogate )	4-Bromofluorobenzene	86	% Rec	
	( Surrogate )	Toluene-d8	93	% Rec	
<b>MW-981-026 MSD (980121025)      Sampled on 01/21/98</b>					
<b>Regulated VOCs plus Lists 1&amp;3</b>					
01/22/98 ( ML/EPA 524.2 )		1,1-Dichloroethylene	4.5	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		1,2,4-Trichlorobenzene	4.5	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		p-Dichlorobenzene (1,4-DCB)	4.5	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		p-Chlorotoluene	4.4	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		Benzene	4.7	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		Chlorobenzene	4.4	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		Chloroform (Trichloromethane)	5.1	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		Trichloroethylene (TCE)	4.9	ug/l	0.50
01/22/98 ( ML/EPA 524.2 )		Toluene	4.4	ug/l	0.50
	( Surrogate )	1,2-Dichloroethane-d4	103	% Rec	
	( Surrogate )	4-Bromofluorobenzene	103	% Rec	
	( Surrogate )	Toluene-d8	100	% Rec	



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**Laboratory  
Report  
#40054**

Foster Wheeler Environmental, Inc  
(continued)

Anal	Method	Analyte	Result	Units	MDL
<b>MW-981-088 (980121026)      Sampled on 01/21/98</b>					
<b>Regulated VOCs plus Lists 1&amp;3</b>					
( Surrogate	)	1,2-Dichloroethane-d4	100	% Rec	
( Surrogate	)	4-Bromofluorobenzene	99	% Rec	
( Surrogate	)	Toluene-d8	99	% Rec	
<b>MW-981-089 (980121027)      Sampled on 01/21/98</b>					
<b>Regulated VOCs plus Lists 1&amp;3</b>					
( Surrogate	)	1,2-Dichloroethane-d4	105	% Rec	
( Surrogate	)	4-Bromofluorobenzene	96	% Rec	
( Surrogate	)	Toluene-d8	104	% Rec	
<b>MW-981-027 (980121028)      Sampled on 01/21/98</b>					
02/03/98 ( ML/S2320B	)	Alkalinity	200	mg/l	2.0
02/09/98 ( ML/SM1040	)	Anion Sum	6.70	meq/l	0.0010
02/03/98 ( ML/S3111B	)	Calcium, Flame AA	80	mg/l	1.0
02/04/98 ( ML/SM1040	)	Cation Sum	7.38	meq/l	0.0010
01/22/98 ( ML/EPA 300	)	Chloride	42	mg/l	2.0
02/09/98 ( ML/S2320-B	)	Carbonate as CO3, Calculated	0.398	mg/l	0.0010
01/28/98 ( ML/S2510B	)	Specific Conductance	695	umho/cm	4.0
02/17/98 ( EPA/ML 200.8	)	Iron, Total, ICAP/MS	500	ug/l	50
02/09/98 ( ML/S2320B	)	Bicarbonate as HCO3,calculated	244	mg/l	0.0010
02/04/98 ( ML/S3111B	)	Potassium, Flame AA	2.5	mg/l	1.0
02/04/98 ( ML/S3111B	)	Magnesium, Flame AA	26	mg/l	1.0
02/04/98 ( ML/S3111B	)	Sodium, Flame AA	27	mg/l	1.0
01/22/98 ( ML/EPA 300.0	)	Nitrate-N by IC	5.2	mg/l	0.20
01/22/98 ( ML/SM 4500H	)	Lab pH	7.4	Units	0.0010
01/22/98 ( ML/EPA 300.0	)	Sulfate	55	mg/l	4.0
01/28/98 ( ML/S2540C	)	Total Dissolved Solid (TDS)	420	mg/l	10
<b>Regulated VOCs plus Lists 1&amp;3</b>					
01/22/98 ( ML/EPA 524.2	)	Chloroform (Trichloromethane)	1.3	ug/l	0.50
01/22/98 ( ML/EPA 524.2	)	Tetrachloroethylene (PCE)	0.6	ug/l	0.50

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**Laboratory  
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 #40054**

Foster Wheeler Environmental, Inc  
 (continued)

Anal	Method	Analyte	Result	Units	MDL
01/22/98	( ML/EPA 524.2 )	Trichloroethylene (TCE)	0.5	ug/l	0.50
	( Surrogate )	1,2-Dichloroethane-d4	109	% Rec	
	( Surrogate )	4-Bromofluorobenzene	94	% Rec	
	( Surrogate )	Toluene-d8	99	% Rec	
<b>MW-981-028 (980121029)      Sampled on 01/21/98</b>					
02/03/98	( ML/S2320B )	Alkalinity	200	mg/l	2.0
02/09/98	( ML/SM1040 )	Anion Sum	8.32	meq/l	0.0010
02/03/98	( ML/S3111B )	Calcium, Flame AA	98	mg/l	1.0
02/04/98	( ML/SM1040 )	Cation Sum	9.00	meq/l	0.0010
01/22/98	( ML/EPA 300 )	Chloride	77	mg/l	2.0
02/09/98	( ML/S2320-B )	Carbonate as CO3, Calculated	0.251	mg/l	0.0010
01/28/98	( ML/S2510B )	Specific Conductance	865	umho/cm	4.0
01/28/98	( EPA/ML 200.8 )	Iron, Total, ICAP/MS	220	ug/l	50
02/09/98	( ML/S2320B )	Bicarbonate as HCO3,calculated	244	mg/l	0.0010
02/04/98	( ML/S3111B )	Potassium, Flame AA	3.0	mg/l	1.0
02/04/98	( ML/S3111B )	Magnesium, Flame AA	32	mg/l	1.0
02/04/98	( ML/S3111B )	Sodium, Flame AA	32	mg/l	1.0
01/22/98	( ML/EPA 300.0 )	Nitrate-N by IC	9.6	mg/l	0.20
01/22/98	( ML/SM 4500H )	Lab pH	7.2	Units	0.0010
01/22/98	( ML/EPA 300.0 )	Sulfate	70	mg/l	4.0
01/28/98	( ML/S2540C )	Total Dissolved Solid (TDS)	510	mg/l	10
<b>Regulated VOCs plus Lists 1&amp;3</b>					
01/22/98	( ML/EPA 524.2 )	Tetrachloroethylene (PCE)	2.1	ug/l	0.50
	( Surrogate )	1,2-Dichloroethane-d4	112	% Rec	
	( Surrogate )	4-Bromofluorobenzene	91	% Rec	
	( Surrogate )	Toluene-d8	100	% Rec	
<b>MW-981-029 (980121030)      Sampled on 01/21/98</b>					
02/03/98	( ML/S2320B )	Alkalinity	185	mg/l	2.0
02/09/98	( ML/SM1040 )	Anion Sum	8.03	meq/l	0.0010
02/03/98	( ML/S3111B )	Calcium, Flame AA	100	mg/l	1.0
02/04/98	( ML/SM1040 )	Cation Sum	8.71	meq/l	0.0010
01/23/98	( ML/EPA 300 )	Chloride	67	mg/l	2.0
02/09/98	( ML/S2320-B )	Carbonate as CO3, Calculated	0.074	mg/l	0.0010



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**Laboratory  
Report  
#40054**

Foster Wheeler Environmental, Inc  
(continued)

Anal	Method	Analyte	Result	Units	MDL
01/28/98	( ML/S2510B	) Specific Conductance	825	umho/cm	4.0
02/17/98	( EPA/ML 200.8	) Iron, Total, ICAP/MS	1600	ug/l	50
02/09/98	( ML/S2320B	) Bicarbonate as HCO3,calculated	226	mg/l	0.0010
02/04/98	( ML/S3111B	) Potassium, Flame AA	3.2	mg/l	1.0
02/04/98	( ML/S3111B	) Magnesium, Flame AA	34	mg/l	1.0
02/04/98	( ML/S3111B	) Sodium, Flame AA	19	mg/l	1.0
01/23/98	( ML/EPA 300.0	) Nitrate-N by IC	7.3	mg/l	0.20
01/22/98	( ML/SM 4500H	) Lab pH	6.7	Units	0.0010
01/23/98	( ML/EPA 300.0	) Sulfate	92	mg/l	4.0
01/28/98	( ML/S2540C	) Total Dissolved Solid (TDS)	490	mg/l	10
<b>Regulated VOCs plus Lists 1&amp;3</b>					
01/22/98	( ML/EPA 524.2	) Tetrachloroethylene (PCE)	0.9	ug/l	0.50
01/22/98	( ML/EPA 524.2	) Trichloroethylene (TCE)	0.6	ug/l	0.50
	( Surrogate	) 1,2-Dichloroethane-d4	106	% Rec	
	( Surrogate	) 4-Bromofluorobenzene	97	% Rec	
	( Surrogate	) Toluene-d8	95	% Rec	
<b>MW-981-030 (980121031)      Sampled on 01/21/98</b>					
02/03/98	( ML/S2320B	) Alkalinity	130	mg/l	2.0
02/09/98	( ML/SM1040	) Anion Sum	3.30	meq/l	0.0010
02/03/98	( ML/S3111B	) Calcium, Flame AA	39	mg/l	1.0
02/04/98	( ML/SM1040	) Cation Sum	3.71	meq/l	0.0010
01/23/98	( ML/EPA 300	) Chloride	6.0	mg/l	1.0
02/09/98	( ML/S2320-B	) Carbonate as CO3, Calculated	0.515	mg/l	0.0010
01/28/98	( ML/S2510B	) Specific Conductance	345	umho/cm	4.0
02/17/98	( EPA/ML 200.8	) Iron, Total, ICAP/MS	190	ug/l	50
02/09/98	( ML/S2320B	) Bicarbonate as HCO3,calculated	158	mg/l	0.0010
02/04/98	( ML/S3111B	) Potassium, Flame AA	3.2	mg/l	1.0
02/04/98	( ML/S3111B	) Magnesium, Flame AA	13	mg/l	1.0
02/04/98	( ML/S3111B	) Sodium, Flame AA	14	mg/l	1.0
01/23/98	( ML/EPA 300.0	) Nitrate-N by IC	0.66	mg/l	0.10
01/22/98	( ML/SM 4500H	) Lab pH	7.7	Units	0.0010
01/23/98	( ML/EPA 300.0	) Sulfate	23	mg/l	2.0
01/28/98	( ML/S2540C	) Total Dissolved Solid (TDS)	200	mg/l	10



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Laboratory  
Report  
#40054

Foster Wheeler Environmental, Inc  
(continued)

Anal	Method	Analyte	Result	Units	MDL
		<b>Regulated VOCs plus Lists 1&amp;3</b>			
01/22/98 ( ML/EPA 524.2 )		Chloroform (Trichloromethane)	0.8	ug/l	0.50
( Surrogate )		1,2-Dichloroethane-d4	105	% Rec	
( Surrogate )		4-Bromofluorobenzene	81	% Rec	
( Surrogate )		Toluene-d8	97	% Rec	



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**Laboratory Report**

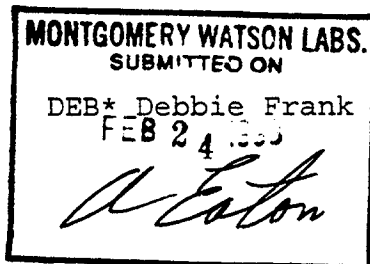
for

Foster Wheeler Environmental, Inc  
611 Anton Boulevard

Suite 800

Costa Mesa , CA 92626

Attention: Mark Cutler  
Fax: (714)444-5560



*Revised*  
Report#: 40122  
JPL





**MONTGOMERY WATSON LABORATORIES**

February 24, 1998

Foster Wheeler Environmental  
611 Anton Blvd Suite 800  
Costa Mesa, CA.92626

Attention: Mark Cutler

Re: Report # 40122 (MW-981-090, -0091, -016, -017, -018,  
MW-981-019, -019MS, -019MSD) Revised

Dear Mark,

Enclosed please find REVISED data deliverables for the recent JPL project. This report was revised to correct reporting limits for lead and chromium. A detailed quality control (QC) summary follows:

**Non-conformance (LCS,MS/MSD, Surrogates, and Holding Times):**

None

**Samples requiring dilution (with increased MRL's):**

MW-981-016: Iron, Nitrate, Sulfate, chloride

MW-981-017, -018, -019: Nitrate, Sulfate, chloride

**Method blanks with compounds detected:**

None

**Other Comments:**

Extra volume for MW-981-019 VOC's was submitted for MS/MSD QC batching, for use as needed by the laboratory.

Cis-1,2-Dichloroethylene was detected in sample ID: MW-981-016,

Tetrachloroethylene was detected in sample ID: MW-981-016,

MW-981-017, -018, -019

Trichloroethylene was detected in sample ID: MW-981-018

Perchlorate was detected in sample ID: MW-981-016

**TICs**

Carbon Disulfide was detected in sample ID: MW-981-090, MW-981-016. This detection is determined to be laboratory analyte carryover. Re-analysis of the samples past HT are Non Detect for this compound. See the copy of the FAX dated 2/9/98 attached. Re-analysis raw data will be included in Level IV deliverable.

**Method Variance:**

MWlabs was experiencing difficulty in achieving the required Detection limit for Calcium by Flame AA analysis, EPA 215.1. Permission was granted by Mark Cutler 2/3/98 to analyze by ICP, EPA 200.7

Sincerely,

Debbie Frank  
Project Manager

cc: Judy Novelly (JPL)

a Division of Montgomery Watson Americas, Inc.

555 East Walnut Street  
Pasadena, California 91101  
Tel: 626 568 6400  
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Quality Environmental Analysis



**MONTGOMERY WATSON LABORATORIES**

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Laboratory  
Report  
#40122

Foster Wheeler Environmental, Inc  
Mark Cutler  
611 Anton Boulevard  
Suite 800  
Costa Mesa , CA 92626

Samples Received  
22-Jan-1998 16:27:34

Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
MW-981-090 (980122108)				Sampled on 01/22/98				
<b>Regulated VOCs plus Lists 1&amp;3</b>								
01/27/98	72356	( ML/EPA 524.2 )	1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1	
01/27/98	72356	( ML/EPA 524.2 )	1,1,1-Trichloroethane	ND	ug/l	0.50	1	
01/27/98	72356	( ML/EPA 524.2 )	1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1	
01/27/98	72356	( ML/EPA 524.2 )	1,1,2-Trichloroethane	ND	ug/l	0.50	1	
01/27/98	72356	( ML/EPA 524.2 )	1,1-Dichloroethane	ND	ug/l	0.50	1	
01/27/98	72356	( ML/EPA 524.2 )	1,1-Dichloroethylene	ND	ug/l	0.50	1	
01/27/98	72356	( ML/EPA 524.2 )	1,1-Dichloropropene	ND	ug/l	0.50	1	
01/27/98	72356	( ML/EPA 524.2 )	1,2,3-Trichlorobenzene	ND	ug/l	0.50	1	
01/27/98	72356	( ML/EPA 524.2 )	1,2,3-Trichloropropane	ND	ug/l	0.50	1	
01/27/98	72356	( ML/EPA 524.2 )	1,2,4-Trichlorobenzene	ND	ug/l	0.50	1	
01/27/98	72356	( ML/EPA 524.2 )	1,2,4-Trimethylbenzene	ND	ug/l	0.50	1	
01/27/98	72356	( ML/EPA 524.2 )	1,2-Dichloroethane	ND	ug/l	0.50	1	
01/27/98	72356	( ML/EPA 524.2 )	1,2-Dichloropropane	ND	ug/l	0.50	1	
01/27/98	72356	( ML/EPA 524.2 )	1,3,5-Trimethylbenzene	ND	ug/l	0.50	1	
01/27/98	72356	( ML/EPA 524.2 )	1,3-Dichloropropane	ND	ug/l	0.50	1	
01/27/98	72356	( ML/EPA 524.2 )	p-Dichlorobenzene (1,4-DCB)	ND	ug/l	0.50	1	
01/27/98	72356	( ML/EPA 524.2 )	2,2-Dichloropropane	ND	ug/l	0.50	1	
01/27/98	72356	( ML/EPA 524.2 )	2-Butanone (MEK)	ND	ug/l	5.0	1	
01/27/98	72356	( ML/EPA 524.2 )	o-Chlorotoluene	ND	ug/l	0.50	1	
01/27/98	72356	( ML/EPA 524.2 )	p-Chlorotoluene	ND	ug/l	0.50	1	
01/27/98	72356	( ML/EPA 524.2 )	4-Methyl-2-Pentanone (MIBK)	ND	ug/l	5.0	1	
01/27/98	72356	( ML/EPA 524.2 )	Benzene	ND	ug/l	0.50	1	
01/27/98	72356	( ML/EPA 524.2 )	Bromobenzene	ND	ug/l	0.50	1	
01/27/98	72356	( ML/EPA 524.2 )	Bromomethane (Methyl Bromide)	ND	ug/l	0.50	1	
01/27/98	72356	( ML/EPA 524.2 )	cis-1,2-Dichloroethylene	ND	ug/l	0.50	1	
01/27/98	72356	( ML/EPA 524.2 )	Chlorobenzene	ND	ug/l	0.50	1	
01/27/98	72356	( ML/EPA 524.2 )	Carbon Tetrachloride	ND	ug/l	0.50	1	
01/27/98	72356	( ML/EPA 524.2 )	cis-1,3-Dichloropropene	ND	ug/l	0.50	1	
01/27/98	72356	( ML/EPA 524.2 )	Bromoform	ND	ug/l	0.50	1	



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Laboratory  
Report  
#40122

Foster Wheeler Environmental, Inc  
(continued)

Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
	01/27/98	72356	( ML/EPA 524.2 )	Chloroform (Trichloromethane)	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Bromochloromethane	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Chloroethane	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Chloromethane (Methyl Chloride)	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Chlorodibromomethane	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Dibromomethane	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Bromodichloromethane	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Dichloromethane	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Ethyl benzene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Dichlorodifluoromethane	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Fluorotrichloromethane-Freon11	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Hexachlorobutadiene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Isopropylbenzene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	m-Dichlorobenzene (1,3-DCB)	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	m,p-Xylenes	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Naphthalene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	n-Butylbenzene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	n-Propylbenzene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	o-Xylene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	o-Dichlorobenzene (1,2-DCB)	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Tetrachloroethylene (PCE)	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	p-Isopropyltoluene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	sec-Butylbenzene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Styrene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	trans-1,2-Dichloroethylene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	tert-Butylbenzene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Trichloroethylene (TCE)	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Trichlorotrifluoroethane (Freon	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	trans-1,3-Dichloropropene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Toluene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Vinyl chloride (VC)	ND	ug/l	0.30	1
			( EPA 524.2 )	Carbon disulfide	1.1	ug/l		1
			( Surrogate )	1,2-Dichloroethane-d4	109	% Rec		
			( Surrogate )	4-Bromofluorobenzene	86	% Rec		
			( Surrogate )	Toluene-d8	104	% Rec		



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Foster Wheeler Environmental, Inc  
(continued)

Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
<b>MW-981-091 (980122109)</b>				<b>Sampled on 01/22/98</b>				
01/27/98	01/29/98	72416	( S3113B/E200.9 )	Arsenic, Total, GF	ND	mg/l	0.005	1
	01/28/98	72168	( MOD/EPA 300 )	Perchlorate	ND	ug/l	4.0	1
01/28/98	01/28/98	73250	( EPA/ML 200.8 )	Chromium, Total, ICAP/MS	ND	ug/l	10	1
	01/22/98	71785	( ML/SW 7196 )	Hexavalent chromium (Cr VI)	ND	mg/l	0.005	1
01/28/98	01/28/98	73260	( EPA/ML 200.8 )	Lead, Total, ICAP/MS	ND	ug/l	2.0	1
<b>Regulated VOCs plus Lists 1&amp;3</b>								
	01/27/98	72356	( ML/EPA 524.2 )	1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	1,1,1-Trichloroethane	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	1,1,2-Trichloroethane	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	1,1-Dichloroethane	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	1,1-Dichloroethylene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	1,1-Dichloropropene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	1,2,3-Trichlorobenzene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	1,2,3-Trichloropropane	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	1,2,4-Trichlorobenzene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	1,2,4-Trimethylbenzene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	1,2-Dichloroethane	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	1,2-Dichloropropane	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	1,3,5-Trimethylbenzene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	1,3-Dichloropropane	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	p-Dichlorobenzene (1,4-DCB)	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	2,2-Dichloropropane	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	2-Butanone (MEK)	ND	ug/l	5.0	1
	01/27/98	72356	( ML/EPA 524.2 )	o-Chlorotoluene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	p-Chlorotoluene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	4-Methyl-2-Pentanone (MIBK)	ND	ug/l	5.0	1
	01/27/98	72356	( ML/EPA 524.2 )	Benzene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Bromobenzene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Bromomethane (Methyl Bromide)	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	cis-1,2-Dichloroethylene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Chlorobenzene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Carbon Tetrachloride	ND	ug/l	0.50	1



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Foster Wheeler Environmental, Inc  
(continued)

Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
	01/27/98	72356	( ML/EPA 524.2 )	cis-1,3-Dichloropropene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Bromoform	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Chloroform (Trichloromethane)	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Bromochloromethane	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Chloroethane	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Chloromethane(Methyl Chloride)	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Chlorodibromomethane	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Dibromomethane	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Bromodichloromethane	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Dichloromethane	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Ethyl benzene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Dichlorodifluoromethane	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Fluorotrichloromethane-Freon11	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Hexachlorobutadiene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Isopropylbenzene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	m-Dichlorobenzene (1,3-DCB)	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	m,p-Xylenes	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Naphthalene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	n-Butylbenzene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	n-Propylbenzene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	o-Xylene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	o-Dichlorobenzene (1,2-DCB)	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Tetrachloroethylene (PCE)	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	p-Isopropyltoluene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	sec-Butylbenzene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Styrene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	trans-1,2-Dichloroethylene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	tert-Butylbenzene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Trichloroethylene (TCE)	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Trichlorotrifluoroethane (Freon	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	trans-1,3-Dichloropropene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Toluene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Vinyl chloride (VC)	ND	ug/l	0.30	1
			( EPA 524.2 )	None Detected	ND	ug/l		1
			( Surrogate )	1,2-Dichloroethane-d4	101	% Rec		
			( Surrogate )	4-Bromofluorobenzene	102	% Rec		



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Foster Wheeler Environmental, Inc  
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Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
			( Surrogate )	Toluene-d8	100	% Rec		
<b>MW-981-016 (980122110)</b>			<b>Sampled on 01/22/98</b>					
	02/03/98	72695	( ML/S2320B )	Alkalinity	200	mg/l	2.0	1
	02/09/98		( ML/SM1040 )	Anion Sum	8.05	meq/l	0.0010	1
01/27/98	01/29/98	72416	( S3113B/E200.9 )	Arsenic, Total, GF	ND	mg/l	0.005	1
	02/03/98	72510	( ML/S3111B )	Calcium, Flame AA	96	mg/l	1.0	1
	02/04/98		( ML/SM1040 )	Cation Sum	8.87	meq/l	0.0010	1
	01/23/98	72102	( ML/EPA 300 )	Chloride	63	mg/l	2.0	2
	01/28/98	72168	( MOD/EPA 300 )	Perchlorate	5.2	ug/l	4.0	1
	02/09/98		( ML/S2320-B )	Carbonate as CO3, Calculated	0.795	mg/l	0.0010	1
01/28/98	01/28/98	73250	( EPA/ML 200.8 )	Chromium, Total, ICAP/MS	ND	ug/l	10	1
	01/22/98	71785	( ML/SW 7196 )	Hexavalent chromium (Cr VI)	ND	mg/l	0.005	1
	01/28/98		( ML/S2510B )	Specific Conductance	820	umho/cm	4.0	1
01/28/98	01/28/98	73255	( EPA/ML 200.8 )	Iron, Total, ICAP/MS	2100	ug/l	500	10
	02/09/98		( ML/S2320B )	Bicarbonate as HCO3,calculated	244	mg/l	0.0010	1
	02/04/98	72523	( ML/S3111B )	Potassium, Flame AA	3.0	mg/l	1.0	1
	02/04/98	72527	( ML/S3111B )	Magnesium, Flame AA	30	mg/l	1.0	1
	02/04/98	72525	( ML/S3111B )	Sodium, Flame AA	35	mg/l	1.0	1
	01/23/98	72105	( ML/EPA 300.0 )	Nitrate-N by IC	10	mg/l	0.20	2
01/28/98	01/28/98	73260	( EPA/ML 200.8 )	Lead, Total, ICAP/MS	ND	ug/l	2.0	1
	01/27/98		( ML/SM 4500H )	Lab pH	7.7	Units	0.0010	1
	01/23/98	72107	( ML/EPA 300.0 )	Sulfate	75	mg/l	4.0	2
	01/28/98	72312	( ML/S2540C )	Total Dissolved Solid (TDS)	490	mg/l	10	1
<b>Regulated VOCs plus Lists 1&amp;3</b>								
	01/27/98	72356	( ML/EPA 524.2 )	1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	1,1,1-Trichloroethane	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	1,1,2-Trichloroethane	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	1,1-Dichloroethane	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	1,1-Dichloroethylene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	1,1-Dichloropropene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	1,2,3-Trichlorobenzene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	1,2,3-Trichloropropane	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	1,2,4-Trichlorobenzene	ND	ug/l	0.50	1

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 (continued)

Prepared	Analyzed	QC Batch#	Method	Analyte	Result	Units	MDL	Dilution
	01/27/98	72356	( ML/EPA 524.2 )	1,2,4-Trimethylbenzene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	1,2-Dichloroethane	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	1,2-Dichloropropane	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	1,3,5-Trimethylbenzene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	1,3-Dichloropropane	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	p-Dichlorobenzene (1,4-DCB)	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	2,2-Dichloropropane	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	2-Butanone (MEK)	ND	ug/l	5.0	1
	01/27/98	72356	( ML/EPA 524.2 )	o-Chlorotoluene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	p-Chlorotoluene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	4-Methyl-2-Pentanone (MIBK)	ND	ug/l	5.0	1
	01/27/98	72356	( ML/EPA 524.2 )	Benzene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Bromobenzene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Bromomethane (Methyl Bromide)	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	cis-1,2-Dichloroethylene	0.6	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Chlorobenzene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Carbon Tetrachloride	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	cis-1,3-Dichloropropene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Bromoform	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Chloroform (Trichloromethane)	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Bromochloromethane	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Chloroethane	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Chloromethane (Methyl Chloride)	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Chlorodibromomethane	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Dibromomethane	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Bromodichloromethane	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Dichloromethane	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Ethyl benzene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Dichlorodifluoromethane	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Fluorotrichloromethane-Freon11	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Hexachlorobutadiene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Isopropylbenzene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	m-Dichlorobenzene (1,3-DCB)	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	m,p-Xylenes	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	Naphthalene	ND	ug/l	0.50	1
	01/27/98	72356	( ML/EPA 524.2 )	n-Butylbenzene	ND	ug/l	0.50	1