



UCAR CARBON COMPANY INC.

32N03. EW54

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P.O. Box 887, Niagara Falls, NY 14302-0887

December 20, 1999

Mr. Mark Hans, PE
Regional Solid Materials Engineer
NYS Department of Environmental Conservation
270 Michigan Avenue
Buffalo, New York 14203-2999

DEC 21 1999
X

Subject: Quarterly Report of Groundwater Analysis
Republic Solid Waste Management Facility
Post-Closure Monitoring Program

Dear Mr. Hans,

Please find enclosed a copy of the forty-seventh (47) quarter's groundwater analysis from the closed Republic Waste Management Facility. Bedrock Well, BW-4, continues to demonstrate some slight semi-volatile organic contamination in less than one part per million range.

The downgradient Bedrock Well, BW-6, shows no contamination.

If you have any questions, please contact me at 278-3486.

Very truly yours,

R. Bucci
Site Manager

R. Bucci
nm
Attachments

**QUARTERLY REPORT OF GROUNDWATER ANALYSIS
REPUBLIC SOLID WASTE MANAGEMENT FACILITY POST-CLOSURE MONITORING PROGRAM**

47th QUARTER

POSITIVE ORGANIC PARAMETERS FROM BW-4

CONTAMINATE	47th Quarter ppb	Mean Conc. ppb	Range ppb
Trichloroethene	390	288	30 - 740
Tetrachloroethene	380	230	72 – 601
Hexachlobutadiene	69	49	10 – 160
Vinyl Chloride	75	98	29 – 300
cis-1,2 Dichloroethene	186	160	137 - 197

CC: Mr. Jim Devald, Dir. of Environmental Health
Niagara County Health Department
Environmental Division
5467 Upper Mountain Road
Lockport, New York 14094-1899

DEC 21 1999

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UCAR CARBON COMPANY, INCORPORATED

REPUBLIC WASTE MANAGEMENT FACILITY
POST CLOSURE MONITORING PROGRAM
QUARTERLY REPORT

Prepared By:

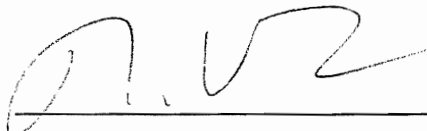


"A Company Dedicated to Honesty, Quality and Service"

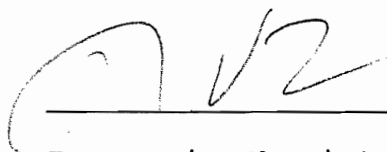
December 14, 1999
REF: CTC93FN/100B
Lab ID No. 10233

QA/QC VERIFICATION FOR PROJECT ID 93FN

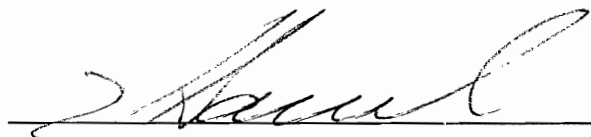
The following report, as well as the supporting data, have been carefully reviewed for accuracy, adherence to the cited methods, and completeness. All data contained in this report was generated in accordance with the AES Laboratory Quality Assurance/Quality Control Program.



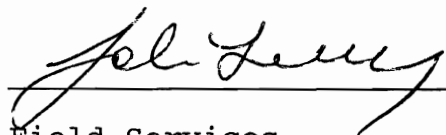
Metals Department



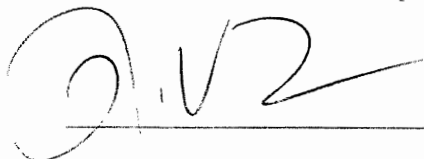
Inorganic Chemistry



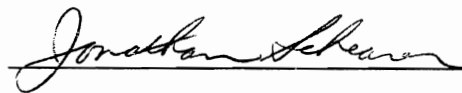
Organic Chemistry



Field Services



Quality Control



Project Manager

All 'Total' results on soil matrices are calculated on a dry weight basis, unless otherwise noted. Analyses noted as 'Performed in the laboratory' require immediate testing and should be performed in the field.

The following are standard abbreviations:

BQL - Below Quantifiable Limits
ND - None Detected
NG - No Growth of Colonies
NR - Not Requested
D - Indicates a dilution was required

Advanced Environmental Services, Inc.

2186 Liberty Drive
Niagara Falls, New York 14304
(716) 283-3120

QUARTERLY GROUNDWATER MONITORING - WELL INFORMATION

Nov 22/23,1999

UCAR CARBON COMPANY, INC.

Hyde Park Boulevard
Niagara Falls, New York

AES Code: CTC

Project I.D. # 93FN

Monitoring Well I.D.	Evacuation Date	Top of Inner Casing Elevation (ft.)	Monitoring Well Diameter	Water Level (ft.)	Water Elevation (ft.)	Bottom of Well (ft.)	Volume of Standing Water (gallons)	Volume of Evacuated Water (gallons)	Recharge Rate
BW-1	11/22/99	610.72	4	17.20	593.52	28.86	7.61	23.0	C
BW-2	11/22/99	608.43	4	15.17	593.26	26.57	7.44	22.0	C
BW-3	11/22/99	604.72	4	13.15	591.57	24.81	7.61	23.0	C
BW-4	11/22/99	607.08	4	13.03	594.05	22.65	6.28	19.0	C
BW-5	11/22/99	603.33	4	11.20	592.13	28.62	11.37	34.5	C
BW-6	11/22/99	607.04	4	16.40	590.64	24.98	5.60	17.0	C
MW-1	11/22/99	609.43	2	12.96	596.47	23.35	1.74	1.75(Dry)	VS
MW-2	11/22/99	607.54	3	24.05	583.49	24.60	0.19	0*	S
MW-3	11/22/99	601.61	2	9.28	592.33	15.17	0.98	2.9	C
OW-1 SOUTH	11/22/99	608.81	2	7.99	600.82	NR	NR	NR	NR
OW-2 NORTH	11/22/99	607.06	2	7.35	599.71	NR	NR	NR	NR

Abbreviations:

VS = Very Slow ----- Recharge Rate longer than 24 hr period.

S = Slow ----- Recharge Rate within 24 hr period.

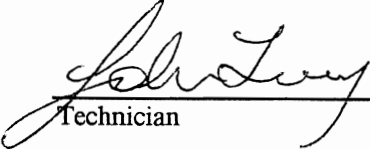
R = Rapid ----- Recharge Rate within 1 hr period.

C = Continuous ---- Recharge Rate immediate.

NR = Not Required

N/A = Not Applicable

Insignificant volume to purge


Technician

11/29/99
Date

Advanced Environmental Services, Inc.

2186 Liberty Drive
Niagara Falls, New York 14304
(716) 283-3120

QUARTERLY GROUNDWATER MONITORING - FIELD PARAMETER INFORMATION

Nov 22/23,1999

UCAR CARBON COMPANY, INC.

Hyde Park Boulevard
Niagara Falls, New York

AES Code: CTC

Project I.D. # 93FN

Monitoring Well I.D.	Sampling Date	Sampling Time	Water Level (ft.)	Turbidity (NTU)	Filter Time	Field Comments/Observations
BW-1	11/23/99	12:30 PM	17.25	11.8	12:35 PM	Clear
BW-2	11/23/99	2:05 PM	15.40	26.4	2:10 PM	Sl. Brown Tint,SO2 Odor
BW-3	11/23/99	1:45 PM	13.18	9.5	1:55 PM	Clear,SO2
BW-4	11/23/99	11:35 AM	13.00	119.0	11:45 AM	Brown-Oily Sheen
BW-5	11/23/99	11:20 AM	11.11	26.7	11:25 AM	Sl.Brown Tint,SO2 Odor
BW-6	11/23/99	1:25 PM	16.47	18.5	1:30 PM	Sl.Tan Tint
MW-1	11/23/99	12:10 PM	16.56	7.6	12:15 PM	Clear
MW-2	N/A	N/A	Dry	N/A	N/A	Dry
MW-3	11/23/99	11:05 AM	12.62	68.8	11:10 AM	Brown Tint
OW-1 South	11/22/99	3:05 PM	7.99	NA	NA	Required to take water elevation only.
OW-2 North	11/22/99	3:15 PM	7.35	NA	NA	Required to take water elevation only.
Blind Dup	11/23/99	1:25 PM	16.47	18.7	1:30 PM	Sl. Tan Tint
Trip Blank	11/23/99	12:30 PM	NA	NA	NA	Deionized Water

The Blind Duplicate site was BW-6

 11/29/99
Field Technician Date

CLIENT: Ucar Carbon Company, Incorporated
SAMPLE ID: MW-1
COLLECTION METHOD: GRAB
COLLECTION DATE(S): 11/23/99
SAMPLE TYPE: GROUNDWATER

AES CLIENT ID: CTC
AES SAMPLE ID: 93FN-1

PROJECT ID: 93FN

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
Turbidity *	7.59	NTU	0.1	EPA 180.1
Ammonia	ND	mg/L	0.4	EPA 350.3
Nitrite	ND	mg/L	0.04	HACH 8507
Total Kjeldahl Nitrogen	ND	mg/L	0.8	EPA 351.3
Total Iron	1.43	mg/L	0.060	EPA 200.7
Soluble Iron	0.613	mg/L	0.060	EPA 200.7
Total Potassium	36.8	mg/L	1.8	EPA 200.7
Soluble Potassium	39.3	mg/L	1.8	EPA 200.7
Total Zinc	0.025	mg/L	0.016	EPA 200.7
Soluble Zinc	ND	mg/L	0.016	EPA 200.7

* Analysis performed in the field.

CLIENT: Ucar Carbon Company, Incorporated
SAMPLE ID: MW-3
COLLECTION METHOD: GRAB
COLLECTION DATE(S): 11/23/99
SAMPLE TYPE: GROUNDWATER

AES CLIENT ID: CTC
AES SAMPLE ID: 93FN-2

PROJECT ID: 93FN

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
Turbidity *	68.8	NTU	0.1	EPA 180.1
Ammonia	7.62	mg/L	0.4	EPA 350.3
Nitrite	ND	mg/L	0.04	HACH 8507
Total Kjeldahl Nitrogen	ND	mg/L	0.8	EPA 351.3
Total Iron	6.34	mg/L	0.060	EPA 200.7
Soluble Iron	ND	mg/L	0.060	EPA 200.7
Total Potassium	2.24	mg/L	1.8	EPA 200.7
Soluble Potassium	2.63	mg/L	1.8	EPA 200.7
Total Zinc	0.045	mg/L	0.016	EPA 200.7
Soluble Zinc	ND	mg/L	0.016	EPA 200.7

* Analysis performed in the field.

CLIENT: Ucar Carbon Company, Incorporated
SAMPLE ID: BW-1
COLLECTION METHOD: GRAB
COLLECTION DATE(S): 11/23/99
SAMPLE TYPE: GROUNDWATER

AES CLIENT ID: CTC
AES SAMPLE ID: 93FN-3

PROJECT ID: 93FN

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
Turbidity *	11.8	NTU	0.1	EPA 180.1
Ammonia	0.160	mg/L	0.4	EPA 350.3
Nitrite	ND	mg/L	0.04	HACH 8507
Total Kjeldahl Nitrogen	ND	mg/L	0.8	EPA 351.3
Total Iron	1.81	mg/L	0.060	EPA 200.7
Soluble Iron	1.32	mg/L	0.060	EPA 200.7
Total Potassium	3.66	mg/L	1.8	EPA 200.7
Soluble Potassium	4.42	mg/L	1.8	EPA 200.7
Total Zinc	1.53	mg/L	0.016	EPA 200.7
Soluble Zinc	0.663	mg/L	0.016	EPA 200.7

* Analysis performed in the field.

CLIENT: Ucar Carbon Company, Incorporated
SAMPLE ID: BW-3
COLLECTION METHOD: GRAB
COLLECTION DATE(S): 11/23/99
SAMPLE TYPE: GROUNDWATER

AES CLIENT ID: CTC
AES SAMPLE ID: 93FN-5

PROJECT ID: 93FN

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
Turbidity *	9.53	NTU	0.1	EPA 180.1
Ammonia	1.01	mg/L	0.4	EPA 350.3
Nitrite	ND	mg/L	0.04	HACH 8507
Total Kjeldahl Nitrogen	1.05	mg/L	0.8	EPA 351.3
Total Iron	0.893	mg/L	0.060	EPA 200.7
Soluble Iron	0.907	mg/L	0.060	EPA 200.7
Total Potassium	4.43	mg/L	1.8	EPA 200.7
Soluble Potassium	4.72	mg/L	1.8	EPA 200.7
Total Zinc	0.020	mg/L	0.016	EPA 200.7
Soluble Zinc	ND	mg/L	0.016	EPA 200.7

* Analysis performed in the field.

CLIENT: Ucar Carbon Company, Incorporated
 SAMPLE ID: BW-4
 COLLECTION METHOD: GRAB
 COLLECTION DATE(S): 11/23/99
 SAMPLE TYPE: GROUNDWATER

AES CLIENT ID: CTC
 AES SAMPLE ID: 93FN-6

PROJECT ID: 93FN

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
Turbidity *	119	NTU	0.1	EPA 180.1
Ammonia	5.52	mg/L	0.4	EPA 350.3
Nitrite	ND	mg/L	0.04	HACH 8507
Total Kjeldahl Nitrogen	5.58	mg/L	0.8	EPA 351.3
Total Iron	10.9	mg/L	0.060	EPA 200.7
Soluble Iron	4.52	mg/L	0.060	EPA 200.7
Total Potassium	21.2	mg/L	1.8	EPA 200.7
Soluble Potassium	22.6	mg/L	1.8	EPA 200.7
Total Zinc	0.223	mg/L	0.016	EPA 200.7
Soluble Zinc	ND	mg/L	0.016	EPA 200.7
Chloromethane	ND	µg/L	10	SW 846 8260
Vinyl chloride	75 ✓	µg/L	10	SW 846 8260
Bromomethane	ND	µg/L	10	SW 846 8260
Chloroethane	ND	µg/L	10	SW 846 8260
1,1-Dichloroethene	ND	µg/L	10	SW 846 8260
Carbon disulfide	ND	µg/L	20	SW 846 8260
Acetone	ND	µg/L	20	SW 846 8260
Methylene chloride	ND	µg/L	10	SW 846 8260
trans-1,2-Dichloroethene	ND	µg/L	10	SW 846 8260
1,1-Dichloroethane	ND	µg/L	10	SW 846 8260
cis-1,2-Dichloroethene	186 ✓	µg/L	10	SW 846 8260
2-Butanone	ND	µg/L	20	SW 846 8260
Chloroform	ND	µg/L	10	SW 846 8260
1,1,1-Trichloroethane	ND	µg/L	10	SW 846 8260
Carbon tetrachloride	ND	µg/L	10	SW 846 8260
Benzene	ND	µg/L	10	SW 846 8260
1,2-Dichloroethane	ND	µg/L	10	SW 846 8260
Trichloroethene	390 D ✓	µg/L	10	SW 846 8260

* Analysis performed in the field.

CLIENT: Ucar Carbon Company, Incorporated
 SAMPLE ID: BW-4
 COLLECTION METHOD: GRAB
 COLLECTION DATE(S): 11/23/99
 SAMPLE TYPE: GROUNDWATER

AES CLIENT ID: CTC
 AES SAMPLE ID: 93FN-6

PROJECT ID: 93FN

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
1,2-Dichloropropane	ND	µg/L	10	SW 846 8260
Bromodichloromethane	ND	µg/L	10	SW 846 8260
cis-1,3-Dichloropropene	ND	µg/L	10	SW 846 8260
Toluene	ND	µg/L	10	SW 846 8260
4-Methyl-2-pentanone	ND	µg/L	20	SW 846 8260
trans-1,3-Dichloropropene	ND	µg/L	10	SW 846 8260
Tetrachloroethene	380 D	µg/L	10	SW 846 8260
1,1,2-Trichloroethane	ND	µg/L	10	SW 846 8260
Chlorodibromomethane	ND	µg/L	10	SW 846 8260
2-Hexanone	ND	µg/L	20	SW 846 8260
Chlorobenzene	ND	µg/L	10	SW 846 8260
Ethylbenzene	ND	µg/L	10	SW 846 8260
m/p-Xylene	ND	µg/L	10	SW 846 8260
o-Xylene	ND	µg/L	10	SW 846 8260
Styrene	ND	µg/L	10	SW 846 8260
Bromoform	ND	µg/L	10	SW 846 8260
1,1,2,2-Tetrachloroethane	ND	µg/L	10	SW 846 8260
Aniline	ND	µg/L	10	SW 846 8270
Benzoic acid	ND	µg/L	60	SW 846 8270
Benzyl alcohol	ND	µg/L	20	SW 846 8270
Phenol	ND	µg/L	10	SW 846 8270
bis(2-chloroethyl)ether	ND	µg/L	10	SW 846 8270
2-Chlorophenol	ND	µg/L	10	SW 846 8270
1,3-Dichlorobenzene	ND	µg/L	10	SW 846 8270
1,4-Dichlorobenzene	ND	µg/L	10	SW 846 8270
1,2-Dichlorobenzene	ND	µg/L	10	SW 846 8270
2-Methylphenol	ND	µg/L	10	SW 846 8270
bis(2-chloroisopropyl)ether	ND	µg/L	10	SW 846 8270
4-Methylphenol	ND	µg/L	10	SW 846 8270

CLIENT: Ucar Carbon Company, Incorporated
 SAMPLE ID: BW-4
 COLLECTION METHOD: GRAB
 COLLECTION DATE(S): 11/23/99
 SAMPLE TYPE: GROUNDWATER

AES CLIENT ID: CTC
 AES SAMPLE ID: 93FN-6

PROJECT ID: 93FN

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
n-Nitrosodi-n-propylamine	ND	µg/L	10	SW 846 8270
Hexachloroethane	ND	µg/L	10	SW 846 8270
Nitrobenzene	ND	µg/L	10	SW 846 8270
Isophorone	ND	µg/L	10	SW 846 8270
2-Nitrophenol	ND	µg/L	10	SW 846 8270
2,4-Dimethylphenol	ND	µg/L	10	SW 846 8270
bis(2-chloroethoxy)methane	ND	µg/L	10	SW 846 8270
2,4-Dichlorophenol	ND	µg/L	10	SW 846 8270
1,2,4-Trichlorobenzene	ND	µg/L	10	SW 846 8270
Naphthalene	ND	µg/L	10	SW 846 8270
4-Chloroaniline	ND	µg/L	10	SW 846 8270
Hexachlorobutadiene	69	µg/L	10	SW 846 8270
4-Chloro-3-methylphenol	ND	µg/L	10	SW 846 8270
2-Methylnaphthalene	ND	µg/L	10	SW 846 8270
Hexachlorocyclopentadiene	ND	µg/L	60	SW 846 8270
2,4,6-Trichlorophenol	ND	µg/L	10	SW 846 8270
2,4,5-Trichlorophenol	ND	µg/L	10	SW 846 8270
2-Chloronaphthalene	ND	µg/L	10	SW 846 8270
2-Nitroaniline	ND	µg/L	10	SW 846 8270
Dimethyl phthalate	ND	µg/L	10	SW 846 8270
Acenaphthylene	ND	µg/L	10	SW 846 8270
2,6-Dinitrotoluene	ND	µg/L	10	SW 846 8270
3-Nitroaniline	ND	µg/L	10	SW 846 8270
Acenaphthene	ND	µg/L	10	SW 846 8270
2,4-Dinitrophenol	ND	µg/L	60	SW 846 8270
4-Nitrophenol	ND	µg/L	60	SW 846 8270
Dibenzofuran	ND	µg/L	10	SW 846 8270
2,4-Dinitrotoluene	ND	µg/L	10	SW 846 8270
Diethyl phthalate	ND	µg/L	10	SW 846 8270

CLIENT: Ucar Carbon Company, Incorporated
 SAMPLE ID: BW-4
 COLLECTION METHOD: GRAB
 COLLECTION DATE(S): 11/23/99
 SAMPLE TYPE: GROUNDWATER

AES CLIENT ID: CTC
 AES SAMPLE ID: 93FN-6

PROJECT ID: 93FN

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
4-Chlorophenyl phenyl ether	ND	µg/L	10	SW 846 8270
Fluorene	ND	µg/L	10	SW 846 8270
4-Nitroaniline	ND	µg/L	10	SW 846 8270
4,6-Dinitro-2-methylphenol	ND	µg/L	10	SW 846 8270
n-Nitrosodiphenylamine	ND	µg/L	10	SW 846 8270
4-Bromophenyl phenyl ether	ND	µg/L	10	SW 846 8270
Hexachlorobenzene	ND	µg/L	10	SW 846 8270
Pentachlorophenol	ND	µg/L	60	SW 846 8270
Phenanthrene	ND	µg/L	10	SW 846 8270
Anthracene	ND	µg/L	10	SW 846 8270
Carbazole	ND	µg/L	10	SW 846 8270
di-n-Butylphthalate	ND	µg/L	10	SW 846 8270
Fluoranthene	ND	µg/L	10	SW 846 8270
Pyrene	ND	µg/L	10	SW 846 8270
Butyl benzyl phthalate	ND	µg/L	10	SW 846 8270
3,3'-Dichlorobenzidine	ND	µg/L	10	SW 846 8270
Benzo(a)anthracene	ND	µg/L	10	SW 846 8270
Chrysene	ND	µg/L	10	SW 846 8270
bis(2ethylhexyl)phthalate	ND	µg/L	10	SW 846 8270
di-n-Octylphthalate	ND	µg/L	10	SW 846 8270
Benzo(b)fluoranthene	ND	µg/L	10	SW 846 8270
Benzo(k)fluoranthene	ND	µg/L	10	SW 846 8270
Benzo(a)pyrene	ND	µg/L	10	SW 846 8270
Indeno(1,2,3-cd)pyrene	ND	µg/L	10	SW 846 8270
Dibenzo(a,h)anthracene	ND	µg/L	10	SW 846 8270
Benzo(g,h,i)perylene	ND	µg/L	10	SW 846 8270

CLIENT: Ucar Carbon Company, Incorporated
SAMPLE ID: BW-5
COLLECTION METHOD: GRAB
COLLECTION DATE(S): 11/23/99
SAMPLE TYPE: GROUNDWATER

AES CLIENT ID: CTC
AES SAMPLE ID: 93FN-7

PROJECT ID: 93FN

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
Turbidity *	26.7	NTU	0.1	EPA 180.1
Ammonia	ND	mg/L	0.4	EPA 350.3
Nitrite	ND	mg/L	0.04	HACH 8507
Total Kjeldahl Nitrogen	ND	mg/L	0.8	EPA 351.3
Total Iron	13.2	mg/L	0.060	EPA 200.7
Soluble Iron	4.28	mg/L	0.060	EPA 200.7
Total Potassium	3.13	mg/L	1.8	EPA 200.7
Soluble Potassium	3.03	mg/L	1.8	EPA 200.7
Total Zinc	1.25	mg/L	0.016	EPA 200.7
Soluble Zinc	0.019	mg/L	0.016	EPA 200.7

* Analysis performed in the field.

CLIENT: Ucar Carbon Company, Incorporated
 SAMPLE ID: BW-6
 COLLECTION METHOD: GRAB
 COLLECTION DATE(S): 11/23/99
 SAMPLE TYPE: GROUNDWATER

AES CLIENT ID: CTC
 AES SAMPLE ID: 93FN-8

PROJECT ID: 93FN

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
Turbidity *	18.5	NTU	0.1	EPA 180.1
Ammonia	ND	mg/L	0.4	EPA 350.3
Nitrite	ND	mg/L	0.04	HACH 8507
Total Kjeldahl Nitrogen	ND	mg/L	0.8	EPA 351.3
Total Iron	14.0	mg/L	0.060	EPA 200.7
Soluble Iron	14.9	mg/L	0.060	EPA 200.7
Total Potassium	3.11	mg/L	1.8	EPA 200.7
Soluble Potassium	2.20	mg/L	1.8	EPA 200.7
Total Zinc	0.019	mg/L	0.016	EPA 200.7
Soluble Zinc	ND	mg/L	0.016	EPA 200.7
Chloromethane	ND	µg/L	10	SW 846 8260
Vinyl chloride	ND	µg/L	10	SW 846 8260
Bromomethane	ND	µg/L	10	SW 846 8260
Chloroethane	ND	µg/L	10	SW 846 8260
1,1-Dichloroethene	ND	µg/L	10	SW 846 8260
Carbon disulfide	ND	µg/L	20	SW 846 8260
Acetone	ND	µg/L	20	SW 846 8260
Methylene chloride	ND	µg/L	10	SW 846 8260
trans-1,2-Dichloroethene	ND	µg/L	10	SW 846 8260
1,1-Dichloroethane	ND	µg/L	10	SW 846 8260
cis-1,2-Dichloroethene	ND	µg/L	10	SW 846 8260
2-Butanone	ND	µg/L	20	SW 846 8260
Chloroform	ND	µg/L	10	SW 846 8260
1,1,1-Trichloroethane	ND	µg/L	10	SW 846 8260
Carbon tetrachloride	ND	µg/L	10	SW 846 8260
Benzene	ND	µg/L	10	SW 846 8260
1,2-Dichloroethane	ND	µg/L	10	SW 846 8260
Trichloroethene	ND	µg/L	10	SW 846 8260

* Analysis performed in the field.

CLIENT: Ucar Carbon Company, Incorporated
 SAMPLE ID: BW-6
 COLLECTION METHOD: GRAB
 COLLECTION DATE(S): 11/23/99
 SAMPLE TYPE: GROUNDWATER

AES CLIENT ID: CTC
 AES SAMPLE ID: 93FN-8

PROJECT ID: 93FN

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
1,2-Dichloropropane	ND	µg/L	10	SW 846 8260
Bromodichloromethane	ND	µg/L	10	SW 846 8260
cis-1,3-Dichloropropene	ND	µg/L	10	SW 846 8260
Toluene	ND	µg/L	10	SW 846 8260
4-Methyl-2-pentanone	ND	µg/L	20	SW 846 8260
trans-1,3-Dichloropropene	ND	µg/L	10	SW 846 8260
Tetrachloroethene	ND	µg/L	10	SW 846 8260
1,1,2-Trichloroethane	ND	µg/L	10	SW 846 8260
Chlorodibromomethane	ND	µg/L	10	SW 846 8260
2-Hexanone	ND	µg/L	20	SW 846 8260
Chlorobenzene	ND	µg/L	10	SW 846 8260
Ethylbenzene	ND	µg/L	10	SW 846 8260
m/p-Xylene	ND	µg/L	10	SW 846 8260
o-Xylene	ND	µg/L	10	SW 846 8260
Styrene	ND	µg/L	10	SW 846 8260
Bromoform	ND	µg/L	10	SW 846 8260
1,1,2,2-Tetrachloroethane	ND	µg/L	10	SW 846 8260
Aniline	ND	µg/L	10	SW 846 8270
Benzoic acid	ND	µg/L	60	SW 846 8270
Benzyl alcohol	ND	µg/L	20	SW 846 8270
Phenol	ND	µg/L	10	SW 846 8270
bis(2-chloroethyl)ether	ND	µg/L	10	SW 846 8270
2-Chlorophenol	ND	µg/L	10	SW 846 8270
1,3-Dichlorobenzene	ND	µg/L	10	SW 846 8270
1,4-Dichlorobenzene	ND	µg/L	10	SW 846 8270
1,2-Dichlorobenzene	ND	µg/L	10	SW 846 8270
2-Methylphenol	ND	µg/L	10	SW 846 8270
bis(2-chloroisopropyl)ether	ND	µg/L	10	SW 846 8270
4-Methylphenol	ND	µg/L	10	SW 846 8270

CLIENT: Ucar Carbon Company, Incorporated
 SAMPLE ID: BW-6
 COLLECTION METHOD: GRAB
 COLLECTION DATE(S): 11/23/99
 SAMPLE TYPE: GROUNDWATER

AES CLIENT ID: CTC
 AES SAMPLE ID: 93FN-8

PROJECT ID: 93FN

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
n-Nitrosodi-n-propylamine	ND	µg/L	10	SW 846 8270
Hexachloroethane	ND	µg/L	10	SW 846 8270
Nitrobenzene	ND	µg/L	10	SW 846 8270
Isophorone	ND	µg/L	10	SW 846 8270
2-Nitrophenol	ND	µg/L	10	SW 846 8270
2,4-Dimethylphenol	ND	µg/L	10	SW 846 8270
bis(2-chloroethoxy)methane	ND	µg/L	10	SW 846 8270
2,4-Dichlorophenol	ND	µg/L	10	SW 846 8270
1,2,4-Trichlorobenzene	ND	µg/L	10	SW 846 8270
Naphthalene	ND	µg/L	10	SW 846 8270
4-Chloroaniline	ND	µg/L	10	SW 846 8270
Hexachlorobutadiene	ND	µg/L	10	SW 846 8270
4-Chloro-3-methylphenol	ND	µg/L	10	SW 846 8270
2-Methylnaphthalene	ND	µg/L	10	SW 846 8270
Hexachlorocyclopentadiene	ND	µg/L	60	SW 846 8270
2,4,6-Trichlorophenol	ND	µg/L	10	SW 846 8270
2,4,5-Trichlorophenol	ND	µg/L	10	SW 846 8270
2-Chloronaphthalene	ND	µg/L	10	SW 846 8270
2-Nitroaniline	ND	µg/L	10	SW 846 8270
Dimethyl phthalate	ND	µg/L	10	SW 846 8270
Acenaphthylene	ND	µg/L	10	SW 846 8270
2,6-Dinitrotoluene	ND	µg/L	10	SW 846 8270
3-Nitroaniline	ND	µg/L	10	SW 846 8270
Acenaphthene	ND	µg/L	10	SW 846 8270
2,4-Dinitrophenol	ND	µg/L	60	SW 846 8270
4-Nitrophenol	ND	µg/L	60	SW 846 8270
Dibenzofuran	ND	µg/L	10	SW 846 8270
2,4-Dinitrotoluene	ND	µg/L	10	SW 846 8270
Diethyl phthalate	24	µg/L	10	SW 846 8270

CLIENT: Ucar Carbon Company, Incorporated
 SAMPLE ID: BW-6
 COLLECTION METHOD: GRAB
 COLLECTION DATE(S): 11/23/99
 SAMPLE TYPE: GROUNDWATER

AES CLIENT ID: CTC
 AES SAMPLE ID: 93FN-8

PROJECT ID: 93FN

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
4-Chlorophenyl phenyl ether	ND	µg/L	10	SW 846 8270
Fluorene	ND	µg/L	10	SW 846 8270
4-Nitroaniline	ND	µg/L	10	SW 846 8270
4,6-Dinitro-2-methylphenol	ND	µg/L	60	SW 846 8270
n-Nitrosodiphenylamine	ND	µg/L	10	SW 846 8270
4-Bromophenyl phenyl ether	ND	µg/L	10	SW 846 8270
Hexachlorobenzene	ND	µg/L	10	SW 846 8270
Pentachlorophenol	ND	µg/L	60	SW 846 8270
Phenanthrene	ND	µg/L	10	SW 846 8270
Anthracene	ND	µg/L	10	SW 846 8270
Carbazole	ND	µg/L	10	SW 846 8270
di-n-Butylphthalate	ND	µg/L	10	SW 846 8270
Fluoranthene	ND	µg/L	10	SW 846 8270
Pyrene	ND	µg/L	10	SW 846 8270
Butyl benzyl phthalate	ND	µg/L	10	SW 846 8270
3,3'-Dichlorobenzidine	ND	µg/L	10	SW 846 8270
Benzo(a)anthracene	ND	µg/L	10	SW 846 8270
Chrysene	ND	µg/L	10	SW 846 8270
bis(2ethylhexyl)phthalate	ND	µg/L	10	SW 846 8270
di-n-Octylphthalate	ND	µg/L	10	SW 846 8270
Benzo(b)fluoranthene	ND	µg/L	10	SW 846 8270
Benzo(k)fluoranthene	ND	µg/L	10	SW 846 8270
Benzo(a)pyrene	ND	µg/L	10	SW 846 8270
Indeno(1,2,3-cd)pyrene	ND	µg/L	10	SW 846 8270
Dibenzo(a,h)anthracene	ND	µg/L	10	SW 846 8270
Benzo(g,h,i)perylene	ND	µg/L	10	SW 846 8270

CLIENT: Ucar Carbon Company, Incorporated
 SAMPLE ID: BLIND DUPLICATE
 COLLECTION METHOD: GRAB
 COLLECTION DATE(S): 11/23/99
 SAMPLE TYPE: GROUNDWATER

AES CLIENT ID: CTC
 AES SAMPLE ID: 93FN-9

PROJECT ID: 93FN

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
Turbidity *	18.7	NTU	0.1	EPA 180.1
Ammonia	ND	mg/L	0.4	EPA 350.3
Nitrite	ND	mg/L	0.04	HACH 8507
Total Kjeldahl Nitrogen	ND	mg/L	0.8	EPA 351.3
Total Iron	13.3	mg/L	0.060	EPA 200.7
Soluble Iron	15.8	mg/L	0.060	EPA 200.7
Total Potassium	2.00	mg/L	1.8	EPA 200.7
Soluble Potassium	ND	mg/L	1.8	EPA 200.7
Total Zinc	ND	mg/L	0.016	EPA 200.7
Soluble Zinc	ND	mg/L	0.016	EPA 200.7
Chloromethane	ND	µg/L	10	SW 846 8260
Vinyl chloride	ND	µg/L	10	SW 846 8260
Bromomethane	ND	µg/L	10	SW 846 8260
Chloroethane	ND	µg/L	10	SW 846 8260
1,1-Dichloroethene	ND	µg/L	10	SW 846 8260
Carbon disulfide	ND	µg/L	20	SW 846 8260
Acetone	ND	µg/L	20	SW 846 8260
Methylene chloride	ND	µg/L	10	SW 846 8260
trans-1,2-Dichloroethene	ND	µg/L	10	SW 846 8260
1,1-Dichloroethane	ND	µg/L	10	SW 846 8260
cis-1,2-Dichloroethene	ND	µg/L	10	SW 846 8260
2-Butanone	ND	µg/L	20	SW 846 8260
Chloroform	ND	µg/L	10	SW 846 8260
1,1,1-Trichloroethane	ND	µg/L	10	SW 846 8260
Carbon tetrachloride	ND	µg/L	10	SW 846 8260
Benzene	ND	µg/L	10	SW 846 8260
1,2-Dichloroethane	ND	µg/L	10	SW 846 8260
Trichloroethene	ND	µg/L	10	SW 846 8260

* Analysis performed in the field.

CLIENT: Ucar Carbon Company, Incorporated
 SAMPLE ID: BLIND DUPLICATE
 COLLECTION METHOD: GRAB
 COLLECTION DATE(S): 11/23/99
 SAMPLE TYPE: GROUNDWATER

AES CLIENT ID: CTC
 AES SAMPLE ID: 93FN-9

PROJECT ID: 93FN

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
1,2-Dichloropropane	ND	µg/L	10	SW 846 8260
Bromodichloromethane	ND	µg/L	10	SW 846 8260
cis-1,3-Dichloropropene	ND	µg/L	10	SW 846 8260
Toluene	ND	µg/L	10	SW 846 8260
4-Methyl-2-pentanone	ND	µg/L	20	SW 846 8260
trans-1,3-Dichloropropene	ND	µg/L	10	SW 846 8260
Tetrachloroethene	ND	µg/L	10	SW 846 8260
1,1,2-Trichloroethane	ND	µg/L	10	SW 846 8260
Chlorodibromomethane	ND	µg/L	10	SW 846 8260
2-Hexanone	ND	µg/L	20	SW 846 8260
Chlorobenzene	ND	µg/L	10	SW 846 8260
Ethylbenzene	ND	µg/L	10	SW 846 8260
m/p-Xylene	ND	µg/L	10	SW 846 8260
o-Xylene	ND	µg/L	10	SW 846 8260
Styrene	ND	µg/L	10	SW 846 8260
Bromoform	ND	µg/L	10	SW 846 8260
1,1,2,2-Tetrachloroethane	ND	µg/L	10	SW 846 8260
Aniline	ND	µg/L	10	SW 846 8270
Benzoic acid	ND	µg/L	60	SW 846 8270
Benzyl alcohol	ND	µg/L	20	SW 846 8270
Phenol	ND	µg/L	10	SW 846 8270
bis(2-chloroethyl)ether	ND	µg/L	10	SW 846 8270
2-Chlorophenol	ND	µg/L	10	SW 846 8270
1,3-Dichlorobenzene	ND	µg/L	10	SW 846 8270
1,4-Dichlorobenzene	ND	µg/L	10	SW 846 8270
1,2-Dichlorobenzene	ND	µg/L	10	SW 846 8270
2-Methylphenol	ND	µg/L	10	SW 846 8270
bis(2-chloroisopropyl)ether	ND	µg/L	10	SW 846 8270
4-Methylphenol	ND	µg/L	10	SW 846 8270

CLIENT: Ucar Carbon Company, Incorporated
 SAMPLE ID: BLIND DUPLICATE
 COLLECTION METHOD: GRAB
 COLLECTION DATE(S): 11/23/99
 SAMPLE TYPE: GROUNDWATER

AES CLIENT ID: CTC
 AES SAMPLE ID: 93FN-9

PROJECT ID: 93FN

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
n-Nitrosodi-n-propylamine	ND	µg/L	10	SW 846 8270
Hexachloroethane	ND	µg/L	10	SW 846 8270
Nitrobenzene	ND	µg/L	10	SW 846 8270
Isophorone	ND	µg/L	10	SW 846 8270
2-Nitrophenol	ND	µg/L	10	SW 846 8270
2,4-Dimethylphenol	ND	µg/L	10	SW 846 8270
bis(2-chloroethoxy)methane	ND	µg/L	10	SW 846 8270
2,4-Dichlorophenol	ND	µg/L	10	SW 846 8270
1,2,4-Trichlorobenzene	ND	µg/L	10	SW 846 8270
Naphthalene	ND	µg/L	10	SW 846 8270
4-Chloroaniline	ND	µg/L	10	SW 846 8270
Hexachlorobutadiene	ND	µg/L	10	SW 846 8270
4-Chloro-3-methylphenol	ND	µg/L	10	SW 846 8270
2-Methylnaphthalene	ND	µg/L	10	SW 846 8270
Hexachlorocyclopentadiene	ND	µg/L	60	SW 846 8270
2,4,6-Trichlorophenol	ND	µg/L	10	SW 846 8270
2,4,5-Trichlorophenol	ND	µg/L	10	SW 846 8270
2-Chloronaphthalene	ND	µg/L	10	SW 846 8270
2-Nitroaniline	ND	µg/L	10	SW 846 8270
Dimethyl phthalate	ND	µg/L	10	SW 846 8270
Acenaphthylene	ND	µg/L	10	SW 846 8270
2,6-Dinitrotoluene	ND	µg/L	10	SW 846 8270
3-Nitroaniline	ND	µg/L	10	SW 846 8270
Acenaphthene	ND	µg/L	10	SW 846 8270
2,4-Dinitrophenol	ND	µg/L	60	SW 846 8270
4-Nitrophenol	ND	µg/L	60	SW 846 8270
Dibenzofuran	ND	µg/L	10	SW 846 8270
2,4-Dinitrotoluene	ND	µg/L	10	SW 846 8270
Diethyl phthalate	22	µg/L	10	SW 846 8270

CLIENT: Ucar Carbon Company, Incorporated
 SAMPLE ID: BLIND DUPLICATE
 COLLECTION METHOD: GRAB
 COLLECTION DATE(S): 11/23/99
 SAMPLE TYPE: GROUNDWATER

AES CLIENT ID: CTC
 AES SAMPLE ID: 93FN-9

PROJECT ID: 93FN

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
4-Chlorophenyl phenyl ether	ND	µg/L	10	SW 846 8270
Fluorene	ND	µg/L	10	SW 846 8270
4-Nitroaniline	ND	µg/L	10	SW 846 8270
4,6-Dinitro-2-methylphenol	ND	µg/L	60	SW 846 8270
n-Nitrosodiphenylamine	ND	µg/L	10	SW 846 8270
4-Bromophenyl phenyl ether	ND	µg/L	10	SW 846 8270
Hexachlorobenzene	ND	µg/L	10	SW 846 8270
Pentachlorophenol	ND	µg/L	60	SW 846 8270
Phenanthrene	ND	µg/L	10	SW 846 8270
Anthracene	ND	µg/L	10	SW 846 8270
Carbazole	ND	µg/L	10	SW 846 8270
di-n-Butylphthalate	ND	µg/L	10	SW 846 8270
Fluoranthene	ND	µg/L	10	SW 846 8270
Pyrene	ND	µg/L	10	SW 846 8270
Butyl benzyl phthalate	ND	µg/L	10	SW 846 8270
3,3'-Dichlorobenzidine	ND	µg/L	10	SW 846 8270
Benzo(a)anthracene	ND	µg/L	10	SW 846 8270
Chrysene	ND	µg/L	10	SW 846 8270
bis(2ethylhexyl)phthalate	ND	µg/L	10	SW 846 8270
di-n-Octylphthalate	ND	µg/L	10	SW 846 8270
Benzo(b)fluoranthene	ND	µg/L	10	SW 846 8270
Benzo(k)fluoranthene	ND	µg/L	10	SW 846 8270
Benzo(a)pyrene	ND	µg/L	10	SW 846 8270
Indeno(1,2,3-cd)pyrene	ND	µg/L	10	SW 846 8270
Dibenzo(a,h)anthracene	ND	µg/L	10	SW 846 8270
Benzo(g,h,i)perylene	ND	µg/L	10	SW 846 8270

CLIENT: Ucar Carbon Company, Incorporated
 SAMPLE ID: TRIP BLANK
 COLLECTION METHOD: GRAB
 COLLECTION DATE(S): 11/23/99
 SAMPLE TYPE: BAKER WATER

AES CLIENT ID: CTC
 AES SAMPLE ID: 93FN-10

PROJECT ID: 93FN

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
Turbidity *	0.1	NTU	0.1	EPA 180.1
Ammonia	ND	mg/L	0.4	EPA 350.3
Nitrite	ND	mg/L	0.04	HACH 8507
Total Kjeldahl Nitrogen	ND	mg/L	0.8	EPA 351.3
Total Iron	ND	mg/L	0.060	EPA 200.7
Total Potassium	ND	mg/L	1.8	EPA 200.7
Total Zinc	ND	mg/L	0.016	EPA 200.7
Chloromethane	ND	µg/L	10	SW 846 8260
Vinyl chloride	ND	µg/L	10	SW 846 8260
Bromomethane	ND	µg/L	10	SW 846 8260
Chloroethane	ND	µg/L	10	SW 846 8260
1,1-Dichloroethene	ND	µg/L	10	SW 846 8260
Carbon disulfide	ND	µg/L	20	SW 846 8260
Acetone	ND	µg/L	20	SW 846 8260
Methylene chloride	ND	µg/L	10	SW 846 8260
trans-1,2-Dichloroethene	ND	µg/L	10	SW 846 8260
1,1-Dichloroethane	ND	µg/L	10	SW 846 8260
cis-1,2-Dichloroethene	ND	µg/L	10	SW 846 8260
2-Butanone	ND	µg/L	20	SW 846 8260
Chloroform	ND	µg/L	10	SW 846 8260
1,1,1-Trichloroethane	ND	µg/L	10	SW 846 8260
Carbon tetrachloride	ND	µg/L	10	SW 846 8260
Benzene	ND	µg/L	10	SW 846 8260
1,2-Dichloroethane	ND	µg/L	10	SW 846 8260
Trichloroethene	ND	µg/L	10	SW 846 8260
1,2-Dichloropropane	ND	µg/L	10	SW 846 8260
Bromodichloromethane	ND	µg/L	10	SW 846 8260
cis-1,3-Dichloropropene	ND	µg/L	10	SW 846 8260

* Analysis performed in the field.

CLIENT: Ucar Carbon Company, Incorporated
 SAMPLE ID: TRIP BLANK
 COLLECTION METHOD: GRAB
 COLLECTION DATE(S): 11/23/99
 SAMPLE TYPE: BAKER WATER

AES CLIENT ID: CTC
 AES SAMPLE ID: 93FN-10

PROJECT ID: 93FN

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
Toluene	ND	µg/L	10	SW 846 8260
4-Methyl-2-pentanone	ND	µg/L	20	SW 846 8260
trans-1,3-Dichloropropene	ND	µg/L	10	SW 846 8260
Tetrachloroethene	ND	µg/L	10	SW 846 8260
1,1,2-Trichloroethane	ND	µg/L	10	SW 846 8260
Chlorodibromomethane	ND	µg/L	10	SW 846 8260
2-Hexanone	ND	µg/L	20	SW 846 8260
Chlorobenzene	ND	µg/L	10	SW 846 8260
Ethylbenzene	ND	µg/L	10	SW 846 8260
m/p-Xylene	ND	µg/L	10	SW 846 8260
o-Xylene	ND	µg/L	10	SW 846 8260
Styrene	ND	µg/L	10	SW 846 8260
Bromoform	ND	µg/L	10	SW 846 8260
1,1,2,2-Tetrachloroethane	ND	µg/L	10	SW 846 8260
Aniline	ND	µg/L	10	SW 846 8270
Benzoic acid	ND	µg/L	60	SW 846 8270
Benzyl alcohol	ND	µg/L	20	SW 846 8270
Phenol	ND	µg/L	10	SW 846 8270
bis(2-chloroethyl)ether	ND	µg/L	10	SW 846 8270
2-Chlorophenol	ND	µg/L	10	SW 846 8270
1,3-Dichlorobenzene	ND	µg/L	10	SW 846 8270
1,4-Dichlorobenzene	ND	µg/L	10	SW 846 8270
1,2-Dichlorobenzene	ND	µg/L	10	SW 846 8270
2-Methylphenol	ND	µg/L	10	SW 846 8270
bis(2-chloroisopropyl)ether	ND	µg/L	10	SW 846 8270
4-Methylphenol	ND	µg/L	10	SW 846 8270
n-Nitrosodi-n-propylamine	ND	µg/L	10	SW 846 8270
Hexachloroethane	ND	µg/L	10	SW 846 8270
Nitrobenzene	ND	µg/L	10	SW 846 8270

CLIENT: Ucar Carbon Company, Incorporated
 SAMPLE ID: TRIP BLANK
 COLLECTION METHOD: GRAB
 COLLECTION DATE(S): 11/23/99
 SAMPLE TYPE: BAKER WATER

AES CLIENT ID: CTC
 AES SAMPLE ID: 93FN-10

PROJECT ID: 93FN

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
Isophorone	ND	µg/L	10	SW 846 8270
2-Nitrophenol	ND	µg/L	10	SW 846 8270
2,4-Dimethylphenol	ND	µg/L	10	SW 846 8270
bis(2-chloroethoxy)methane	ND	µg/L	10	SW 846 8270
2,4-Dichlorophenol	ND	µg/L	10	SW 846 8270
1,2,4-Trichlorobenzene	ND	µg/L	10	SW 846 8270
Naphthalene	ND	µg/L	10	SW 846 8270
4-Chloroaniline	ND	µg/L	10	SW 846 8270
Hexachlorobutadiene	ND	µg/L	10	SW 846 8270
4-Chloro-3-methylphenol	ND	µg/L	10	SW 846 8270
2-Methylnaphthalene	ND	µg/L	10	SW 846 8270
Hexachlorocyclopentadiene	ND	µg/L	60	SW 846 8270
2,4,6-Trichlorophenol	ND	µg/L	10	SW 846 8270
2,4,5-Trichlorophenol	ND	µg/L	10	SW 846 8270
2-Chloronaphthalene	ND	µg/L	10	SW 846 8270
2-Nitroaniline	ND	µg/L	10	SW 846 8270
Dimethyl phthalate	ND	µg/L	10	SW 846 8270
Acenaphthylene	ND	µg/L	10	SW 846 8270
2,6-Dinitrotoluene	ND	µg/L	10	SW 846 8270
3-Nitroaniline	ND	µg/L	10	SW 846 8270
Acenaphthene	ND	µg/L	10	SW 846 8270
2,4-Dinitrophenol	ND	µg/L	60	SW 846 8270
4-Nitrophenol	ND	µg/L	60	SW 846 8270
Dibenzofuran	ND	µg/L	10	SW 846 8270
2,4-Dinitrotoluene	ND	µg/L	10	SW 846 8270
Diethyl phthalate	ND	µg/L	10	SW 846 8270
4-Chlorophenyl phenyl ether	ND	µg/L	10	SW 846 8270
Fluorene	ND	µg/L	10	SW 846 8270
4-Nitroaniline	ND	µg/L	10	SW 846 8270

CLIENT: Ucar Carbon Company, Incorporated
 SAMPLE ID: TRIP BLANK
 COLLECTION METHOD: GRAB
 COLLECTION DATE(S): 11/23/99
 SAMPLE TYPE: BAKER WATER

AES CLIENT ID: CTC
 AES SAMPLE ID: 93FN-10

PROJECT ID: 93FN

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
4,6-Dinitro-2-methylphenol	ND	µg/L	60	SW 846 8270
n-Nitrosodiphenylamine	ND	µg/L	10	SW 846 8270
4-Bromophenyl phenyl ether	ND	µg/L	10	SW 846 8270
Hexachlorobenzene	ND	µg/L	10	SW 846 8270
Pentachlorophenol	ND	µg/L	60	SW 846 8270
Phenanthrene	ND	µg/L	10	SW 846 8270
Anthracene	ND	µg/L	10	SW 846 8270
Carbazole	ND	µg/L	10	SW 846 8270
di-n-Butylphthalate	ND	µg/L	10	SW 846 8270
Fluoranthene	ND	µg/L	10	SW 846 8270
Pyrene	ND	µg/L	10	SW 846 8270
Butyl benzyl phthalate	ND	µg/L	10	SW 846 8270
3,5'-Dichlorobenzidine	ND	µg/L	10	SW 846 8270
Benzo(a)anthracene	ND	µg/L	10	SW 846 8270
Chrysene	ND	µg/L	10	SW 846 8270
bis(2ethylhexyl)phthalate	ND	µg/L	10	SW 846 8270
di-n-Octylphthalate	ND	µg/L	10	SW 846 8270
Benzo(b)fluoranthene	ND	µg/L	10	SW 846 8270
Benzo(k)fluoranthene	ND	µg/L	10	SW 846 8270
Benzo(a)pyrene	ND	µg/L	10	SW 846 8270
Indeno(1,2,3-cd)pyrene	ND	µg/L	10	SW 846 8270
Dibenzo(a,h)anthracene	ND	µg/L	10	SW 846 8270
Benzo(g,h,i)perylene	ND	µg/L	10	SW 846 8270

CLIENT: Ucar Carbon Company, Incorporated

AES CLIENT ID: CTC
PROJECT ID: 93FN

ACCURACY

Analytical Parameter(s)	Method	Sample ID	Type	Percent Recovery
Ammonia	EPA 350.3	93FN-6	Matrix Spike	94
Nitrite	HACH 8507	93FN-6	Matrix Spike	96
Total Kjeldahl Nitrogen	EPA 351.3	93FN-6	Matrix Spike	80
Total Iron	EPA 200.7	93FN-6	Matrix Spike	104
Soluble Iron	EPA 200.7	93FN-6	Matrix Spike	100
Total Potassium	EPA 200.7	93FN-6	Matrix Spike	104
Soluble Potassium	EPA 200.7	93FN-6	Matrix Spike	104
Total Zinc	EPA 200.7	93FN-6	Matrix Spike	98
Soluble Zinc	EPA 200.7	93FN-6	Matrix Spike	100
Chloromethane	SW 846 8260	93FN-6	Matrix Spike	88
Vinyl chloride	SW 846 8260	93FN-6	Matrix Spike	71
Bromomethane	SW 846 8260	93FN-6	Matrix Spike	98
Chloroethane	SW 846 8260	93FN-6	Matrix Spike	105
1,1-Dichloroethene	SW 846 8260	93FN-6	Matrix Spike	101
Carbon disulfide	SW 846 8260	93FN-6	Matrix Spike	100
Acetone	SW 846 8260	93FN-6	Matrix Spike	90
Methylene chloride	SW 846 8260	93FN-6	Matrix Spike	96
trans-1,2-Dichloroethene	SW 846 8260	93FN-6	Matrix Spike	97
1,1-Dichloroethane	SW 846 8260	93FN-6	Matrix Spike	95
cis-1,2-Dichloroethene	SW 846 8260	93FN-6	Matrix Spike	55 *
2-Butanone	SW 846 8260	93FN-6	Matrix Spike	95
Chloroform	SW 846 8260	93FN-6	Matrix Spike	94
1,1,1-Trichloroethane	SW 846 8260	93FN-6	Matrix Spike	99
Carbon tetrachloride	SW 846 8260	93FN-6	Matrix Spike	91
Benzene	SW 846 8260	93FN-6	Matrix Spike	84
1,2-Dichloroethane	SW 846 8260	93FN-6	Matrix Spike	92
Trichloroethene	SW 846 8260	93FN-6	Matrix Spike	NA *
1,2-Dichloropropane	SW 846 8260	93FN-6	Matrix Spike	89

* Sample + Spike value exceeded calibration range of 200 ug/L.

CLIENT: Ucar Carbon Company, Incorporated

AES CLIENT ID: CTC
PROJECT ID: 93FN

ACCURACY

Analytical Parameter(s)	Method	Sample ID	Type	Percent Recovery
Bromodichloromethane	SW 846 8260	93FN-6	Matrix Spike	95
cis-1,3-Dichloropropene	SW 846 8260	93FN-6	Matrix Spike	89
Toluene	SW 846 8260	93FN-6	Matrix Spike	93
4-Methyl-2-pentanone	SW 846 8260	93FN-6	Matrix Spike	89
trans-1,3-Dichloropropene	SW 846 8260	93FN-6	Matrix Spike	108
Tetrachloroethene	SW 846 8260	93FN-6	Matrix Spike	116
1,1,2-Trichloroethane	SW 846 8260	93FN-6	Matrix Spike	101
Chlorodibromomethane	SW 846 8260	93FN-6	Matrix Spike	107
2-Hexanone	SW 846 8260	93FN-6	Matrix Spike	108
Chlorobenzene	SW 846 8260	93FN-6	Matrix Spike	105
Ethylbenzene	SW 846 3260	93FN-6	Matrix Spike	113
m/p-Xylene	SW 846 8260	93FN-6	Matrix Spike	115
o-Xylene	SW 846 8260	93FN-6	Matrix Spike	111
Styrene	SW 846 8260	93FN-6	Matrix Spike	111
Bromoform	SW 846 8260	93FN-6	Matrix Spike	105
1,1,2,2-Tetrachloroethane	SW 846 8260	93FN-6	Matrix Spike	107
Benzoic acid	SW 846 8270	93FN-6	Matrix Spike	36
Benzyl alcohol	SW 846 8270	93FN-6	Matrix Spike	95
Phenol	SW 846 8270	93FN-6	Matrix Spike	37
bis(2-chloroethyl)ether	SW 846 8270	93FN-6	Matrix Spike	98
2-Chlorophenol	SW 846 8270	93FN-6	Matrix Spike	78
1,3-Dichlorobenzene	SW 846 8270	93FN-6	Matrix Spike	62
1,4-Dichlorobenzene	SW 846 8270	93FN-6	Matrix Spike	65
1,2-Dichlorobenzene	SW 846 8270	93FN-6	Matrix Spike	65
2-Methylphenol	SW 846 8270	93FN-6	Matrix Spike	70
bis(2-chloroisopropyl)ether	SW 846 8270	93FN-6	Matrix Spike	68
4-Methylphenol	SW 846 8270	93FN-6	Matrix Spike	64
n-Nitrosodi-n-propylamine	SW 846 8270	93FN-6	Matrix Spike	102
Hexachloroethane	SW 846 8270	93FN-6	Matrix Spike	60

CLIENT: Ucar Carbon Company, Incorporated

AES CLIENT ID: CTC
PROJECT ID: 93FN

ACCURACY

Analytical Parameter(s)	Method	Sample ID	Type	Percent Recovery
Nitrobenzene	SW 846 8270	93FN-6	Matrix Spike	81
Isophorone	SW 846 8270	93FN-6	Matrix Spike	84
2-Nitrophenol	SW 846 8270	93FN-6	Matrix Spike	101
2,4-Dimethylphenol	SW 846 8270	93FN-6	Matrix Spike	69
bis(2-chloroethoxy)methane	SW 846 8270	93FN-6	Matrix Spike	86
2,4-Dichlorophenol	SW 846 8270	93FN-6	Matrix Spike	92
1,2,4-Trichlorobenzene	SW 846 8270	93FN-6	Matrix Spike	71
Naphthalene	SW 846 8270	93FN-6	Matrix Spike	78
4-Chloroaniline	SW 846 8270	93FN-6	Matrix Spike	51
Hexachlorobutadiene	SW 846 8270	93FN-6	Matrix Spike	110*
4-Chloro-3-methylphenol	SW 846 8270	93FN-6	Matrix Spike	50
2-Methylnaphthalene	SW 846 8270	93FN-6	Matrix Spike	76
Hexachlorocyclopentadiene	SW 846 8270	93FN-6	Matrix Spike	84
2,4,6-Trichlorophenol	SW 846 8270	93FN-6	Matrix Spike	91
2,4,5-Trichlorophenol	SW 846 8270	93FN-6	Matrix Spike	90
2-Chloronaphthalene	SW 846 8270	93FN-6	Matrix Spike	81
2-Nitroaniline	SW 846 8270	93FN-6	Matrix Spike	98
Dimethyl phthalate	SW 846 8270	93FN-6	Matrix Spike	87
Acenaphthylene	SW 846 8270	93FN-6	Matrix Spike	81
2,6-Dinitrotoluene	SW 846 8270	93FN-6	Matrix Spike	90
3-Nitroaniline	SW 846 8270	93FN-6	Matrix Spike	40
Acenaphthene	SW 846 8270	93FN-6	Matrix Spike	78
2,4-Dinitrophenol	SW 846 8270	93FN-6	Matrix Spike	101
4-Nitrophenol	SW 846 8270	93FN-6	Matrix Spike	33
Dibenzofuran	SW 846 8270	93FN-6	Matrix Spike	78
2,4-Dinitrotoluene	SW 846 8270	93FN-6	Matrix Spike	99
Diethyl phthalate	SW 846 8270	93FN-6	Matrix Spike	81
4-Chlorophenyl phenyl ether	SW 846 8270	93FN-6	Matrix Spike	80

* Not corrected for concentration in sample.

CLIENT: Ucar Carbon Company, Incorporated

AES CLIENT ID: CTC
PROJECT ID: 93FN

ACCURACY

Analytical Parameter(s)	Method	Sample ID	Type	Percent Recovery
Fluorene	SW 846 8270	93FN-6	Matrix Spike	83
4-Nitroaniline	SW 846 8270	93FN-6	Matrix Spike	79
4,6-Dinitro-2-methylphenol	SW 846 8270	93FN-6	Matrix Spike	109
n-Nitrosodiphenylamine	SW 846 8270	93FN-6	Matrix Spike	91
4-Bromophenyl phenyl ether	SW 846 8270	93FN-6	Matrix Spike	80
Hexachlorobenzene	SW 846 8270	93FN-6	Matrix Spike	75
Pentachlorophenol	SW 846 8270	93FN-6	Matrix Spike	107
Phenanthrene	SW 846 8270	93FN-6	Matrix Spike	81
Anthracene	SW 846 8270	93FN-6	Matrix Spike	88
Carbazole	SW 846 8270	93FN-6	Matrix Spike	97
di-n-Butylphthalate	SW 846 8270	93FN-6	Matrix Spike	81
Fluoranthene	SW 846 8270	93FN-6	Matrix Spike	78
Pyrene	SW 846 8270	93FN-6	Matrix Spike	77
Butyl benzyl phthalate	SW 846 8270	93FN-6	Matrix Spike	86
3,3'-Dichlorobenzidine	SW 846 8270	93FN-6	Matrix Spike	23
Benzo(a)anthracene	SW 846 8270	93FN-6	Matrix Spike	88
Chrysene	SW 846 8270	93FN-6	Matrix Spike	86
bis(2ethylhexyl)phthalate	SW 846 8270	93FN-6	Matrix Spike	90
di-n-Octylphthalate	SW 846 8270	93FN-6	Matrix Spike	96
Benzo(b)fluoranthene	SW 846 8270	93FN-6	Matrix Spike	88
Benzo(k)fluoranthene	SW 846 8270	93FN-6	Matrix Spike	89
Benzo(a)pyrene	SW 846 8270	93FN-6	Matrix Spike	86
Indeno(1,2,3-cd)pyrene	SW 846 8270	93FN-6	Matrix Spike	53
Dibenzo(a,h)anthracene	SW 846 8270	93FN-6	Matrix Spike	49
Benzo(g,h,i)perylene	SW 846 8270	93FN-6	Matrix Spike	47

CLIENT: Ucar Carbon Company, Incorporated

AES CLIENT ID: CTC
PROJECT ID: 93FN

PRECISION

Analytical Parameter(s)	Method	Sample ID	Type	Relative % Difference
Ammonia	EPA 350.3	93FN-6	Duplicate	0
Nitrite	HACH 8507	93FN-6	Duplicate	NA
Total Kjeldahl Nitrogen	EPA 351.3	93FN-6	Duplicate	0
Total Iron	EPA 200.7	93FN-6	Duplicate	3.3
Soluble Iron	EPA 200.7	93FN-6	Duplicate	0
Total Potassium	EPA 200.7	93FN-6	Duplicate	1.4
Soluble Potassium	EPA 200.7	93FN-6	Duplicate	0
Total Zinc	EPA 200.7	93FN-6	Duplicate	9.4
Soluble Zinc	EPA 200.7	93FN-6	Duplicate	NA
Chloromethane	SW 846 8260	93FN-6	Duplicate	NA
Vinyl chloride	SW 846 8260	93FN-6	Duplicate	26
Bromomethane	SW 846 8260	93FN-6	Duplicate	NA
Chloroethane	SW 846 8260	93FN-6	Duplicate	NA
1,1-Dichloroethene	SW 846 8260	93FN-6	Duplicate	NA
Carbon disulfide	SW 846 8260	93FN-6	Duplicate	NA
Acetone	SW 846 8260	93FN-6	Duplicate	NA
Methylene chloride	SW 846 8260	93FN-6	Duplicate	NA
trans-1,2-Dichloroethene	SW 846 8260	93FN-6	Duplicate	NA
1,1-Dichloroethane	SW 846 8260	93FN-6	Duplicate	NA
cis-1,2-Dichloroethene	SW 846 8260	93FN-6	Duplicate	12
2-Butanone	SW 846 8260	93FN-6	Duplicate	NA
Chloroform	SW 846 8260	93FN-6	Duplicate	NA
1,1,1-Trichloroethane	SW 846 8260	93FN-6	Duplicate	NA
Carbon tetrachloride	SW 846 8260	93FN-6	Duplicate	NA
Benzene	SW 846 8260	93FN-6	Duplicate	NA
1,2-Dichloroethane	SW 846 8260	93FN-6	Duplicate	NA
Trichloroethene	SW 846 8260	93FN-6	Duplicate	4.3
1,2-Dichloropropane	SW 846 8260	93FN-6	Duplicate	NA

NA = NOT AVAILABLE - ORIGINAL AND/OR DUPLICATE RESULTS ARE BELOW REPORTED LIMITS

CLIENT: Ucar Carbon Company, Incorporated

AES CLIENT ID: CTC
PROJECT ID: 93FN

PRECISION

Analytical Parameter(s)	Method	Sample ID	Type	Relative % Difference
Bromodichloromethane	SW 846 8260	93FN-6	Duplicate	NA
cis-1,3-Dichloropropene	SW 846 8260	93FN-6	Duplicate	NA
Toluene	SW 846 8260	93FN-6	Duplicate	NA
4-Methyl-2-pentanone	SW 846 8260	93FN-6	Duplicate	NA
trans-1,3-Dichloropropene	SW 846 8260	93FN-6	Duplicate	NA
Tetrachloroethene	SW 846 8260	93FN-6	Duplicate	5.0
1,1,2-Trichloroethane	SW 846 8260	93FN-6	Duplicate	NA
Chlorodibromomethane	SW 846 8260	93FN-6	Duplicate	NA
2-Hexanone	SW 846 8260	93FN-6	Duplicate	NA
Chlorobenzene	SW 846 8260	93FN-6	Duplicate	NA
Ethylbenzene	SW 846 8260	93FN-6	Duplicate	NA
m/p-Xylene	SW 846 8260	93FN-6	Duplicate	NA
o-Xylene	SW 846 8260	93FN-6	Duplicate	NA
Styrene	SW 846 8260	93FN-6	Duplicate	NA
Bromoform	SW 846 8260	93FN-6	Duplicate	NA
1,1,2,2-Tetrachloroethane	SW 846 8260	93FN-6	Duplicate	NA
Aniline	SW 846 8270	93FN-6	Duplicate	NA
Benzoic acid	SW 846 8270	93FN-6	Duplicate	NA
Benzyl alcohol	SW 846 8270	93FN-6	Duplicate	NA
Phenol	SW 846 8270	93FN-6	Duplicate	NA
bis(2-chloroethyl)ether	SW 846 8270	93FN-6	Duplicate	NA
2-Chlorophenol	SW 846 8270	93FN-6	Duplicate	NA
1,3-Dichlorobenzene	SW 846 8270	93FN-6	Duplicate	NA
1,4-Dichlorobenzene	SW 846 8270	93FN-6	Duplicate	NA
1,2-Dichlorobenzene	SW 846 8270	93FN-6	Duplicate	NA
2-Methylphenol	SW 846 8270	93FN-6	Duplicate	NA
bis(2-chloroisopropyl)ether	SW 846 8270	93FN-6	Duplicate	NA
4-Methylphenol	SW 846 8270	93FN-6	Duplicate	NA

NA = NOT AVAILABLE - ORIGINAL AND/OR DUPLICATE RESULTS ARE BELOW REPORTED LIMITS

CLIENT: Ucar Carbon Company, Incorporated

AES CLIENT ID: CTC
PROJECT ID: 93FN

PRECISION

Analytical Parameter(s)	Method	Sample ID	Type	Relative % Difference
n-Nitrosodi-n-propylamine	SW 846 8270	93FN-6	Duplicate	NA
Hexachloroethane	SW 846 8270	93FN-6	Duplicate	NA
Nitrobenzene	SW 846 8270	93FN-6	Duplicate	NA
Isophorone	SW 846 8270	93FN-6	Duplicate	NA
2-Nitrophenol	SW 846 8270	93FN-6	Duplicate	NA
2,4-Dimethylphenol	SW 846 8270	93FN-6	Duplicate	NA
bis(2-chloroethoxy)methane	SW 846 8270	93FN-6	Duplicate	NA
2,4-Dichlorophenol	SW 846 8270	93FN-6	Duplicate	NA
1,2,4-Trichlorobenzene	SW 846 8270	93FN-6	Duplicate	NA
Naphthalene	SW 846 8270	93FN-6	Duplicate	NA
4-Chloroaniline	SW 846 8270	93FN-6	Duplicate	NA
Hexachlorobutadiene	SW 846 8270	93FN-6	Duplicate	1.8
4-Chloro-3-methylphenol	SW 846 8270	93FN-6	Duplicate	NA
2-Methylnaphthalene	SW 846 8270	93FN-6	Duplicate	NA
Hexachlorocyclopentadiene	SW 846 8270	93FN-6	Duplicate	NA
2,4,6-Trichlorophenol	SW 846 8270	93FN-6	Duplicate	NA
2,4,5-Trichlorophenol	SW 846 8270	93FN-6	Duplicate	NA
2-Chloronaphthalene	SW 846 8270	93FN-6	Duplicate	NA
2-Nitroaniline	SW 846 8270	93FN-6	Duplicate	NA
Dimethyl phthalate	SW 846 8270	93FN-6	Duplicate	NA
Acenaphthylene	SW 846 8270	93FN-6	Duplicate	NA
2,6-Dinitrotoluene	SW 846 8270	93FN-6	Duplicate	NA
3-Nitroaniline	SW 846 8270	93FN-6	Duplicate	NA
Acenaphthene	SW 846 8270	93FN-6	Duplicate	NA
2,4-Dinitrophenol	SW 846 8270	93FN-6	Duplicate	NA
4-Nitrophenol	SW 846 8270	93FN-6	Duplicate	NA
Dibenzofuran	SW 846 8270	93FN-6	Duplicate	NA
2,4-Dinitrotoluene	SW 846 8270	93FN-6	Duplicate	NA

NA = NOT AVAILABLE - ORIGINAL AND/OR DUPLICATE RESULTS ARE BELOW REPORTED LIMITS

CLIENT: Ucar Carbon Company, Incorporated

AES CLIENT ID: CTC
PROJECT ID: 93FN

PRECISION

Analytical Parameter(s)	Method	Sample ID	Type	Relative % Difference
Diethyl phthalate	SW 846 8270	93FN-6	Duplicate	NA
4-Chlorophenyl phenyl ether	SW 846 8270	93FN-6	Duplicate	NA
Fluorene	SW 846 8270	93FN-6	Duplicate	NA
4-Nitroaniline	SW 846 8270	93FN-6	Duplicate	NA
4,6-Dinitro-2-methylphenol	SW 846 8270	93FN-6	Duplicate	NA
n-Nitrosodiphenylamine	SW 846 8270	93FN-6	Duplicate	NA
4-Bromophenyl phenyl ether	SW 846 8270	93FN-6	Duplicate	NA
Hexachlorobenzene	SW 846 8270	93FN-6	Duplicate	NA
Pentachlorophenol	SW 846 8270	93FN-6	Duplicate	NA
Phenanthrene	SW 846 8270	93FN-6	Duplicate	NA
Anthracene	SW 846 8270	93FN-6	Duplicate	NA
Carbazole	SW 846 8270	93FN-6	Duplicate	NA
di-n-Butylphthalate	SW 846 8270	93FN-6	Duplicate	NA
Fluoranthene	SW 846 8270	93FN-6	Duplicate	NA
Pyrene	SW 846 8270	93FN-6	Duplicate	NA
Butyl benzyl phthalate	SW 846 8270	93FN-6	Duplicate	NA
3,3'-Dichlorobenzidine	SW 846 8270	93FN-6	Duplicate	NA
Benzo(a)anthracene	SW 846 8270	93FN-6	Duplicate	NA
Chrysene	SW 846 8270	93FN-6	Duplicate	NA
bis(2ethylhexyl)phthalate	SW 846 8270	93FN-6	Duplicate	NA
di-n-Octylphthalate	SW 846 8270	93FN-6	Duplicate	NA
Benzo(b)fluoranthene	SW 846 8270	93FN-6	Duplicate	NA
Benzo(k)fluoranthene	SW 846 8270	93FN-6	Duplicate	NA
Benzo(a)pyrene	SW 846 8270	93FN-6	Duplicate	NA
Indeno(1,2,3-cd)pyrene	SW 846 8270	93FN-6	Duplicate	NA
Dibenzo(a,h)anthracene	SW 846 8270	93FN-6	Duplicate	NA
Benzo(g,h,i)perylene	SW 846 8270	93FN-6	Duplicate	NA

NA = NOT AVAILABLE - ORIGINAL AND/OR DUPLICATE RESULTS ARE BELOW REPORTED LIMITS

Advanced Environmental Services, Inc.
Sample Traceability Report

Project Identification

CTC 93FN

Sample #	Sample Collection	Group #	Run #	Prep Method	Prep Date	Analyst	Analytical Methodology	Analysis Date	Analyst
93FN-6	11/23/99	-	-	3510	11/24/99	SB/TS	8270	11/29/99	SB
93FN-8	11/23/99	-	-	3510	11/24/99	SB/TS	8270	11/29/99	SB
93FN-9	11/23/99	-	-	3510	11/24/99	SB/TS	8270	11/29/99	SB
93FN-10	11/23/99	-	-	3510	11/24/99	SB/TS	8270	11/29/99	SB
6, 8, 9, 10	11/23/99	-	-	-	-	-	8260	11/30/99	DS

Please note: Areas marked by a dash indicate that no sample preparation is required under the applied methodology.

Advanced Environmental Services, Inc.
Sample Traceability Report

Project Identification CTC 93FN

Sample #	Sample Collection	Group #	Run #	Prep Method	Prep Date	Analyst	Analytical Methodology	Analysis Date	Analyst
93FN 1-10	11/23/99	—	—	9.3	11/30/99	RP	200.7	118144 12114199	RP

Please note: Areas marked by a dash indicate that no sample preparation is required under the applied methodology.

Advanced Environmental Services, Inc.
Sample Traceability Report

Project Identification CTC 93FN

Sample #	Sample Collection	Group #	Run #	Prep Method	Prep Date	Analyst	Analytical Methodology	Analysis Date	Analyst
93FN-1-10	11/23/99	2120 2100a	174	-	-	-	8507	11/23/99	LN
93FN 1-5	11/23/99	2027	197	351.3	11/29/99	KM	351.4	11/29/99	KM
93FN 1-6	11/23/99	2005	230	-	-	-	350.3	12/3/99	KM
93FN 6-10	11/23/99	2005	231	-	-	-	350.3	12/7/99	KM
93FN 4-6	11/23/99	2027	198	351.3	12/8/99	KM	351.4	12/8/99	KM
93FN 7-10	11/23/99	2027	198	351.3	12/9/99	KM	351.4	12/9/99	KM

Please note: Areas marked by a dash indicate that no sample preparation is required under the applied methodology.

ADVANCED
ENVIRONMENTAL SERVICES INC.

(716) 283-3120
(800) 791-3120
Fax (716) 283-4727

SAMPLER'S SIGNATURE:

JOB CODE: CTC

TOTAL NUMBER OF CONTAINERS 62

1. RELINQUISHED BY:

DATE _____

TIME

RECEIVED BY:

11/23/99

345 pm

RECEIVED BY:

DATE _____

TIME

RECEIVED BY: