



UCAR CARBON COMPANY INC. P.O. BOX 887, NIAGARA FALLS, NEW YORK 14302

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MAR 08 1994
N.Y.S. DEPT. OF
ENVIRONMENTAL CONSERVATION
REGION 9

March 7, 1994

Mr. Peter J. Buechi, PE
Regional Engineer
NYS Department of Environmental Conservation
270 Michigan Avenue
Buffalo, New York 14203-2999

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

Dear Mr. Buechi:

I am enclosing a copy of the twenty-third quarter's groundwater sampling analysis from the closed Republic Waste Management Facility. Bedrock well, BW-4-86, continues to demonstrate some slight volatile organic contamination in the less than one part per million range.

The following will summarize the positive organic parameters:

<u>Contaminate</u>	<u>Conc. 23rd</u> <u>Qtr. ppb.</u>	<u>Mean Conc.</u> <u>ppb.</u>	<u>Range</u> <u>ppb</u>
Vinyl Chloride	58	97	29-300
Trans-1,2-Dichloroethene	200	393	6-1000
Trichloroethene	180	320	30-740
Tetrachloroethene	66	281	72-440
Hexachlorobutadiene	26	52	10-160

UCAR Carbon Company Inc. continues to maintain the position that this contamination at well, BW-4-86 is not related to the closed Republic Waste Management Facility given the fact that downgradient bedrock well, BW-6-86, continues to show no contamination.

Letter to Peter J. Buechi
March 7, 1994
Page 2

Mr. R.A. Bolton will be the Title V Coordinator for UCAR Carbon Company Inc. and will not be involved with the Republic S.W.M.F. in the foreseeable future.

If you have any questions, please contact me at 278-3275.

Very truly yours,

A handwritten signature in cursive script, appearing to read "A.C. Ogg".

A.C. Ogg
Site Manager

A.C. Ogg
nm
enc.

cc: Mr. Jim Devald, Dir. of Environmental Health
Niagara County Health Department
P.O. Box 428
Niagara Falls, N.Y. 14302-0428

Mr. Dave O'Toole
New York Department of Environmental Conservation
50 Wolf Road
Albany, N.Y. 12233-4013

UCAR CARBON COMPANY, INCORPORATED

REPUBLIC WASTE MANAGEMENT FACILITY

POST CLOSURE MONITORING PROGRAM

QUARTERLY REPORT

Prepared By:

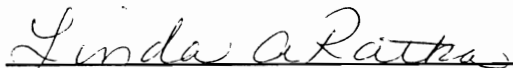


"A Company Dedicated to Honesty, Quality and Service"

January 17, 1994
REF: CTC34IJ/100B

QA/QC VERIFICATION FOR PROJECT ID 34IJ

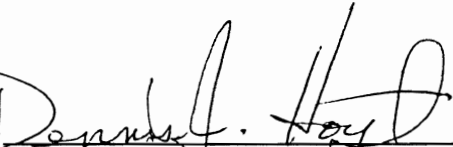
The following report, as well as the supporting data, have been carefully reviewed for accuracy, adherence to the cited methods, and completeness. All data contained in this report was generated in accordance with the AES Laboratory Quality Assurance/Quality Control Program.



Linda A. Ratka
Inorganic Senior Technician



Joseph P. Masaracchia
Laboratory Manager



Dennis J. Hoyt
AES Field Engineer



Paul T. McMahon
Quality Control Officer



Catherine Mocniak
Manager, Industrial Hygiene

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

QUALITY CONTROL COMMENT

CLIENT: UCAR CARBON COMPANY, INCORPORATED
PROJECT: QUARTERLY MONITORING
AES PROJECT CODE: CTC 34IJ

A comparison of the blind duplicate sample to the original well (BW-6) resulted in a disparity in the total metals results. A visual inspection of the two samples revealed that there were considerably more suspended solids in the original sample than in the blind duplicate. This would account for the higher metal content in the original well. As a check, the digestion and analysis of the two samples was repeated, with similar results.

Advanced Environmental Services, Inc.

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

QUARTERLY GROUNDWATER MONITORING - WELL INFORMATION

December 28, 1993 thru December 29, 1993

UCAR CARBON COMPANY, INC.

Hyde Park Boulevard
Niagara Falls, New York

AES Code: CTC

Project I.D. # 34IJ

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	12/28/93	610.72	4	16.14	594.58	34.50	11.99	36.0	C
BW-2	12/29/93	608.43	4	13.92	594.51	35.00	13.76	40.0	C
BW-3	12/29/93	604.72	4	10.81	593.91	22.40	7.57	29.0	C
BW-4	12/29/93	607.08	4	9.87	597.21	25.00	9.88	34.0	C
BW-5	12/29/93	603.33	4	9.10	594.23	24.90	10.31	35.0	C
BW-6	12/28/93	607.04	4	15.54	591.50	32.90	11.33	37.0	C
MW-1	12/28/93	609.43	2	12.02	597.41	21.10	1.48	2.0	S
*MW-2	12/28/93	607.54	2	24.25	583.29	24.60	0.06	.05 (DRY)	VS
MW-3	12/28/93	601.61	2	6.98	594.63	15.25	1.35	4.5	R
OW-1 SOUTH	12/29/93	608.81	2	6.58	602.23	8.70	0.35	NR	N/A
OW-2 NORTH	12/29/93	607.06	2	6.59	600.47	9.74	0.51	NR	N/A

* Dry, no samples collected

Upon inspection of monitoring wells BW-2 and MW-2 it was noted that the outside casing caps and locks were removed and discarded by vandals.

While trying to purge monitoring well MW-2 with a teflon bailer an apparent obstruction was noticed at approximately 22.0' feet. Vandal(s) may have dropped debris of some type down the throat of the monitoring well.

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

Field Technician

Date

Advanced Environmental Services, Inc.

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

QUARTERLY GROUNDWATER MONITORING - FIELD PARAMETER INFORMATION

December 28, 1993 thru December 29, 1993

UCAR CARBON COMPANY, INC.

Hyde Park Boulevard
Niagara Falls, New York

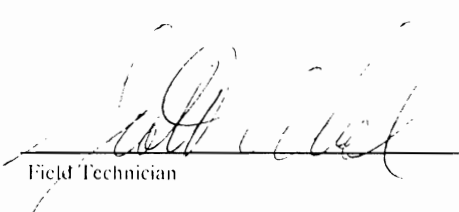
AES Code: CTC

Project I.D. #341J

Monitoring Well I.D.	Sampling Date	Sampling Time	Water Level (ft.)	Turbidity (NTU)	Filter Time	Field Comments/Observations
BW-1	12/28/93	12:30 PM	16.25	0.1	12:30 PM	Clear with strong sulfur odor.
BW-2	12/29/93	2:35 PM	13.63	0.5	2:35 PM	Clear with sulfur odor
BW-3	12/29/93	11:30 AM	10.82	57.2	11:30 AM	Clear with sulfur odor
BW-4	12/29/93	12:10PM	10.86	0.4	12:10 PM	Clear with sulfur odor
BW-5	12/29/93	10:30 AM	8.91	62.8	10:30 AM	Turbid tan with a sulfur odor
BW-6	12/28/93	2:20 PM	19.19	151.0	2:20 PM	Turbid brown with fine solids. no odor.
MW-1	12/29/93	2:20 PM	11.85	10.3	2:25 PM	Clear with no odor
MW-2**	12/28/93	3:00 PM	24.50	**	**	Black with stringy solids and strong "leachate-smelling" odor.
MW-3	12/28/93	1:40 PM	15.22	340	3:50 PM	Turbid orange
OW-1 South	12/29/93	2:40 PM	6.58	NA	NA	Required to take water elevation only.
OW-2 North	12/29/93	2:45 PM	6.59	NA	NA	Required to take water elevation only.
Blind Dup	12/28/93	2:20 PM	19.19	151.0	2:20 PM	Turbid brown with fine solids, no odor
Trip Blank	12/29/93	9:30 AM	NA	0.02	NA	Deionized Water

** Insufficient volume and recharge rate to collect for any parameters.

The Blind Duplicate site is BW-6.


Field Technician

1/6/94
Date

CLIENT: Ucar Carbon Company, Incorporated
SAMPLE ID: MW-1
COLLECTION METHOD: GRAB
COLLECTION DATE(S): 12/29/93
SAMPLE TYPE: GROUNDWATER

AES CLIENT ID: CTC
AES SAMPLE ID: 341J-1

PROJECT ID: 341J

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
Turbidity *	10.3	NTU	0.1	EPA 180.1
Ammonia	5.40	mg/L	0.05	EPA 350.1
Nitrite	BQL	mg/L	0.05	EPA 353.2
Total Kjeldahl Nitrogen	6.6	mg/L	0.1	EPA 351.2
Total Iron	1.0	mg/L	0.05	EPA 200.7
Soluble Iron	0.10	mg/L	0.05	EPA 200.7
Total Potassium	39	mg/L	1.0	EPA 200.7
Soluble Potassium	38	mg/L	1.0	EPA 200.7
Total Zinc	BQL	mg/L	0.02	EPA 200.7
Soluble Zinc	BQL	mg/L	0.02	EPA 200.7

* Analysis performed in the field.

CLIENT: Ucar Carbon Company, Incorporated
SAMPLE ID: MW-3
COLLECTION METHOD: GRAB
COLLECTION DATE(S): 12/28/93
SAMPLE TYPE: GROUNDWATER

AES CLIENT ID: CTC
AES SAMPLE ID: 341J-2

PROJECT ID: 341J

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
Turbidity *	340	NTU	0.1	EPA 180.1
Ammonia	0.12	mg/L	0.05	EPA 350.1
Nitrite	BQL	mg/L	0.05	EPA 353.2
Total Kjeldahl Nitrogen	BQL	mg/L	0.1	EPA 351.2
Total Iron	24	mg/L	0.05	EPA 200.7
Soluble Iron	0.06	mg/L	0.05	EPA 200.7
Total Potassium	4.8	mg/L	1.0	EPA 200.7
Soluble Potassium	1.6	mg/L	1.0	EPA 200.7
Total Zinc	0.12	mg/L	0.02	EPA 200.7
Soluble Zinc	0.03	mg/L	0.02	EPA 200.7

* Analysis performed in the field.

CLIENT: Ucar Carbon Company, Incorporated
SAMPLE ID: BW-1
COLLECTION METHOD: GRAB
COLLECTION DATE(S): 12/28/93
SAMPLE TYPE: GROUNDWATER

AES CLIENT ID: CTC
AES SAMPLE ID: 341J-3

PROJECT ID: 341J

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
Turbidity *	0.1	NTU	0.1	EPA 180.1
Ammonia	0.18	mg/L	0.05	EPA 350.1
Nitrite	BQL	mg/L	0.05	EPA 353.2
Total Kjeldahl Nitrogen	0.2	mg/L	0.1	EPA 351.2
Total Iron	1.2	mg/L	0.05	EPA 200.7
Soluble Iron	1.2	mg/L	0.05	EPA 200.7
Total Potassium	4.7	mg/L	1.0	EPA 200.7
Soluble Potassium	3.9	mg/L	1.0	EPA 200.7
Total Zinc	0.08	mg/L	0.02	EPA 200.7
Soluble Zinc	0.07	mg/L	0.02	EPA 200.7

* Analysis performed in the field.

CLIENT: Ucar Carbon Company, Incorporated
SAMPLE ID: BW-2
COLLECTION METHOD: GRAB
COLLECTION DATE(S): 12/29/93
SAMPLE TYPE: GROUNDWATER

AES CLIENT ID: CTC
AES SAMPLE ID: 34IJ-4

PROJECT ID: 34IJ

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
Turbidity *	0.5	NTU	0.1	EPA 180.1
Ammonia	0.80	mg/L	0.05	EPA 350.1
Nitrite	BQL	mg/L	0.05	EPA 353.2
Total Kjeldahl Nitrogen	1.3	mg/L	0.1	EPA 351.2
Total Iron	3.0	mg/L	0.05	EPA 200.7
Soluble Iron	3.0	mg/L	0.05	EPA 200.7
Total Potassium	7.3	mg/L	1.0	EPA 200.7
Soluble Potassium	6.9	mg/L	1.0	EPA 200.7
Total Zinc	0.06	mg/L	0.02	EPA 200.7
Soluble Zinc	BQL	mg/L	0.02	EPA 200.7

* Analysis performed in the field.

CLIENT: Ucar Carbon Company, Incorporated
SAMPLE ID: BW-3
COLLECTION METHOD: GRAB
COLLECTION DATE(S): 12/29/93
SAMPLE TYPE: GROUNDWATER

AES CLIENT ID: CTC
AES SAMPLE ID: 341J-5

PROJECT ID: 341J

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
Turbidity *	57.2	NTU	0.1	EPA 180.1
Ammonia	0.85	mg/L	0.05	EPA 350.1
Nitrite	BQL	mg/L	0.05	EPA 353.2
Total Kjeldahl Nitrogen	1.2	mg/L	0.1	EPA 351.2
Total Iron	3.5	mg/L	0.05	EPA 200.7
Soluble Iron	1.1	mg/L	0.05	EPA 200.7
Total Potassium	6.4	mg/L	1.0	EPA 200.7
Soluble Potassium	5.5	mg/L	1.0	EPA 200.7
Total Zinc	3.7	mg/L	0.02	EPA 200.7
Soluble Zinc	0.17	mg/L	0.02	EPA 200.7

* Analysis performed in the field.

CLIENT: Ucar Carbon Company, Incorporated
 SAMPLE ID: BW-4
 COLLECTION METHOD: GRAB
 COLLECTION DATE(S): 12/29/93
 SAMPLE TYPE: GROUNDWATER

AES CLIENT ID: CTC
 AES SAMPLE ID: 341J-6

PROJECT ID: 341J

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
Turbidity *	0.4	NTU	0.1	EPA 180.1
Ammonia	3.35	mg/L	0.05	EPA 350.1
Nitrite	BQL	mg/L	0.05	EPA 353.2
Total Kjeldahl Nitrogen	3.0	mg/L	0.1	EPA 351.2
Total Iron	2.3	mg/L	0.05	EPA 200.7
Soluble Iron	2.2	mg/L	0.05	EPA 200.7
Total Potassium	16	mg/L	1.0	EPA 200.7
Soluble Potassium	15	mg/L	1.0	EPA 200.7
Total Zinc	0.04	mg/L	0.02	EPA 200.7
Soluble Zinc	BQL	mg/L	0.02	EPA 200.7
Chloromethane	BQL	µg/L	10	SW 846 8240
Bromomethane	BQL	µg/L	10	SW 846 8240
Vinyl chloride	58	µg/L	10	SW 846 8240
Chloroethane	BQL	µg/L	10	SW 846 8240
Methylene chloride	BQL	µg/L	10	SW 846 8240
Acetone	BQL	µg/L	10	SW 846 8240
Carbon disulfide	BQL	µg/L	10	SW 846 8240
1,1-Dichloroethene	BQL	µg/L	10	SW 846 8240
1,1-Dichloroethane	BQL	µg/L	10	SW 846 8240
trans-1,2-Dichloroethene	200	µg/L	10	SW 846 8240
Chloroform	BQL	µg/L	10	SW 846 8240
1,2-Dichloroethane	BQL	µg/L	10	SW 846 8240
2-Butanone	BQL	µg/L	10	SW 846 8240
1,1,1-Trichloroethane	BQL	µg/L	10	SW 846 8240
Carbon tetrachloride	BQL	µg/L	10	SW 846 8240
Vinyl acetate	BQL	µg/L	10	SW 846 8240
Bromodichloromethane	BQL	µg/L	10	SW 846 8240
1,2-Dichloropropane	BQL	µg/L	10	SW 846 8240

* Analysis performed in the field.

CLIENT: Ucar Carbon Company, Incorporated
 SAMPLE ID: BW-4
 COLLECTION METHOD: GRAB
 COLLECTION DATE(S): 12/29/93
 SAMPLE TYPE: GROUNDWATER

AES CLIENT ID: CTC
 AES SAMPLE ID: 341J-6

PROJECT ID: 341J

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
cis-1,3-Dichloropropene	BQL	µg/L	10	SW 846 8240
Trichloroethene	180	µg/L	10	SW 846 8240
Benzene	BQL	µg/L	10	SW 846 8240
trans-1,3-Dichloropropene	BQL	µg/L	10	SW 846 8240
Chlorodibromomethane	BQL	µg/L	10	SW 846 8240
1,1,2-Trichloroethane	BQL	µg/L	10	SW 846 8240
Bromoform	BQL	µg/L	10	SW 846 8240
4-Methyl-2-pentanone	BQL	µg/L	10	SW 846 8240
2-Hexanone	BQL	µg/L	10	SW 846 8240
Tetrachloroethene	66	µg/L	10	SW 846 8240
1,1,2,2-Tetrachloroethane	BQL	µg/L	10	SW 846 8240
Toluene	BQL	µg/L	10	SW 846 8240
Chlorobenzene	BQL	µg/L	10	SW 846 8240
Ethylbenzene	BQL	µg/L	10	SW 846 8240
Styrene	BQL	µg/L	10	SW 846 8240
m-Xylene	BQL	µg/L	10	SW 846 8240
o/p-Xylene	BQL	µg/L	10	SW 846 8240
bis(2-chloroethyl)ether	BQL	µg/L	10	SW 846 8270
1,3-Dichlorobenzene	BQL	µg/L	10	SW 846 8270
1,4-Dichlorobenzene	BQL	µg/L	10	SW 846 8270
Benzyl alcohol	BQL	µg/L	10	SW 846 8270
1,2-Dichlorobenzene	BQL	µg/L	10	SW 846 8270
bis(2-chloroisopropyl)ether	BQL	µg/L	10	SW 846 8270
n-Nitrosodi-n-propylamine	BQL	µg/L	10	SW 846 8270
Hexachloroethane	BQL	µg/L	10	SW 846 8270
Nitrobenzene	BQL	µg/L	10	SW 846 8270
Isophorone	BQL	µg/L	10	SW 846 8270
bis(2-chloroethoxy)methane	BQL	µg/L	10	SW 846 8270
1,2,4-Trichlorobenzene	BQL	µg/L	10	SW 846 8270

CLIENT: Ucar Carbon Company, Incorporated
 SAMPLE ID: BW-4
 COLLECTION METHOD: GRAB
 COLLECTION DATE(S): 12/29/93
 SAMPLE TYPE: GROUNDWATER

AES CLIENT ID: CTC
 AES SAMPLE ID: 341J-6

PROJECT ID: 341J

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
Naphthalene	BQL	µg/L	10	SW 846 8270
4-Chloroaniline	BQL	µg/L	10	SW 846 8270
Hexachlorobutadiene	26	µg/L	10	SW 846 8270
2-Methylnaphthalene	BQL	µg/L	10	SW 846 8270
Hexachlorocyclopentadiene	BQL	µg/L	10	SW 846 8270
2-Chloronaphthalene	BQL	µg/L	10	SW 846 8270
2-Nitroaniline	BQL	µg/L	10	SW 846 8270
Dimethylphthalate	BQL	µg/L	10	SW 846 8270
2,6-Dinitrotoluene	BQL	µg/L	10	SW 846 8270
Acenaphthylene	BQL	µg/L	10	SW 846 8270
3-Nitroaniline	BQL	µg/L	10	SW 846 8270
Acenaphthene	BQL	µg/L	10	SW 846 8270
2,4-Dinitrotoluene	BQL	µg/L	10	SW 846 8270
Dibenzofuran	BQL	µg/L	10	SW 846 8270
Diethylphthalate	BQL	µg/L	10	SW 846 8270
4-Chlorophenylphenyl ether	BQL	µg/L	10	SW 846 8270
Fluorene	BQL	µg/L	10	SW 846 8270
4-Nitroaniline	BQL	µg/L	10	SW 846 8270
n-Nitrosodiphenylamine	BQL	µg/L	10	SW 846 8270
4-Bromophenylphenyl ether	BQL	µg/L	10	SW 846 8270
Hexachlorobenzene	BQL	µg/L	10	SW 846 8270
Phenanthrene	BQL	µg/L	10	SW 846 8270
Anthracene	BQL	µg/L	10	SW 846 8270
di-n-Butylphthalate	BQL	µg/L	10	SW 846 8270
Fluoranthene	BQL	µg/L	10	SW 846 8270
Pyrene	BQL	µg/L	10	SW 846 8270
Butylbenzylphthalate	BQL	µg/L	10	SW 846 8270
3,3'-Dichlorobenzidine	BQL	µg/L	10	SW 846 8270
bis(2ethylhexyl)phthalate	BQL	µg/L	10	SW 846 8270

CLIENT: Ucar Carbon Company, Incorporated
 SAMPLE ID: BW-4
 COLLECTION METHOD: GRAB
 COLLECTION DATE(S): 12/29/93
 SAMPLE TYPE: GROUNDWATER

AES CLIENT ID: CTC
 AES SAMPLE ID: 34IJ-6

PROJECT ID: 34IJ

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
Benzo(a)anthracene	BQL	µg/L	10	SW 846 8270
Chrysene	BQL	µg/L	10	SW 846 8270
di-n-Octylphthalate	BQL	µg/L	10	SW 846 8270
Benzo(b)fluoranthene	BQL	µg/L	10	SW 846 8270
Benzo(k)fluoranthene	BQL	µg/L	10	SW 846 8270
Benzo(a)pyrene	BQL	µg/L	10	SW 846 8270
Indeno(1,2,3-cd)pyrene	BQL	µg/L	10	SW 846 8270
Dibenzo(a,h)anthracene	BQL	µg/L	10	SW 846 8270
Benzo(g,h,i)perylene	BQL	µg/L	10	SW 846 8270
Phenol	BQL	µg/L	10	SW 846 8270
2-Chlorophenol	BQL	µg/L	10	SW 846 8270
2-Methylphenol	BQL	µg/L	10	SW 846 8270
4-Methylphenol	BQL	µg/L	10	SW 846 8270
2-Nitrophenol	BQL	µg/L	10	SW 846 8270
2,4-Dimethylphenol	BQL	µg/L	10	SW 846 8270
Benzoic acid	BQL	µg/L	10	SW 846 8270
2,4-Dichlorophenol	BQL	µg/L	10	SW 846 8270
4-Chloro-3-methylphenol	BQL	µg/L	10	SW 846 8270
2,4,6-Trichlorophenol	BQL	µg/L	10	SW 846 8270
2,4,5-Trichlorophenol	BQL	µg/L	10	SW 846 8270
2,4-Dinitrophenol	BQL	µg/L	10	SW 846 8270
4-Nitrophenol	BQL	µg/L	10	SW 846 8270
4,6-Dinitro-2-methylphenol	BQL	µg/L	10	SW 846 8270
Pentachlorophenol	BQL	µg/L	10	SW 846 8270

CLIENT: Ucar Carbon Company, Incorporated
SAMPLE ID: BW-5
COLLECTION METHOD: GRAB
COLLECTION DATE(S): 12/29/93
SAMPLE TYPE: GROUNDWATER

AES CLIENT ID: CTC
AES SAMPLE ID: 34IJ-7

PROJECT ID: 34IJ

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
Turbidity *	62.8	NTU	0.1	EPA 180.1
Ammonia	0.14	mg/L	0.05	EPA 350.1
Nitrite	BQL	mg/L	0.05	EPA 353.2
Total Kjeldahl Nitrogen	0.3	mg/L	0.1	EPA 351.2
Total Iron	57	mg/L	0.05	EPA 200.7
Soluble Iron	2.1	mg/L	0.05	EPA 200.7
Total Potassium	3.5	mg/L	1.0	EPA 200.7
Soluble Potassium	3.4	mg/L	1.0	EPA 200.7
Total Zinc	0.42	mg/L	0.02	EPA 200.7
Soluble Zinc	0.03	mg/L	0.02	EPA 200.7

* Analysis performed in the field.

CLIENT: Ucar Carbon Company, Incorporated
 SAMPLE ID: BW-6
 COLLECTION METHOD: GRAB
 COLLECTION DATE(S): 12/28/93
 SAMPLE TYPE: GROUNDWATER

AES CLIENT ID: CTC
 AES SAMPLE ID: 341J-8

PROJECT ID: 341J

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
Turbidity *	151.0	NTU	0.1	EPA 180.1
Ammonia	0.26	mg/L	0.05	EPA 350.1
Nitrite	BQL	mg/L	0.05	EPA 353.2
Total Kjeldahl Nitrogen	0.3	mg/L	0.1	EPA 351.2
Total Iron	81	mg/L	0.05	EPA 200.7
Soluble Iron	3.5	mg/L	0.05	EPA 200.7
Total Potassium	7.3	mg/L	1.0	EPA 200.7
Soluble Potassium	2.0	mg/L	1.0	EPA 200.7
Total Zinc	0.13	mg/L	0.02	EPA 200.7
Soluble Zinc	BQL	mg/L	0.02	EPA 200.7
Chloromethane	BQL	µg/L	10	SW 846 8240
Bromomethane	BQL	µg/L	10	SW 846 8240
Vinyl chloride	BQL	µg/L	10	SW 846 8240
Chloroethane	BQL	µg/L	10	SW 846 8240
Methylene chloride	BQL	µg/L	10	SW 846 8240
Acetone	BQL	µg/L	10	SW 846 8240
Carbon disulfide	BQL	µg/L	10	SW 846 8240
1,1-Dichloroethene	BQL	µg/L	10	SW 846 8240
1,1-Dichloroethane	BQL	µg/L	10	SW 846 8240
trans-1,2-Dichloroethene	BQL	µg/L	10	SW 846 8240
Chloroform	BQL	µg/L	10	SW 846 8240
1,2-Dichloroethane	BQL	µg/L	10	SW 846 8240
2-Butanone	BQL	µg/L	10	SW 846 8240
1,1,1-Trichloroethane	BQL	µg/L	10	SW 846 8240
Carbon tetrachloride	BQL	µg/L	10	SW 846 8240
Vinyl acetate	BQL	µg/L	10	SW 846 8240
Bromodichloromethane	BQL	µg/L	10	SW 846 8240
1,2-Dichloropropane	BQL	µg/L	10	SW 846 8240

* Analysis performed in the field.

CLIENT: Ucar Carbon Company, Incorporated
 SAMPLE ID: BW-6
 COLLECTION METHOD: GRAB
 COLLECTION DATE(S): 12/28/93
 SAMPLE TYPE: GROUNDWATER

AES CLIENT ID: CTC
 AES SAMPLE ID: 341J-8

PROJECT ID: 341J

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
cis-1,3-Dichloropropene	BQL	µg/L	10	SW 846 8240
Trichloroethene	BQL	µg/L	10	SW 846 8240
Benzene	BQL	µg/L	10	SW 846 8240
trans-1,3-Dichloropropene	BQL	µg/L	10	SW 846 8240
Chlorodibromomethane	BQL	µg/L	10	SW 846 8240
1,1,2-Trichloroethane	BQL	µg/L	10	SW 846 8240
Bromoform	BQL	µg/L	10	SW 846 8240
4-Methyl-2-pentanone	BQL	µg/L	10	SW 846 8240
2-Hexanone	BQL	µg/L	10	SW 846 8240
Tetrachloroethene	BQL	µg/L	10	SW 846 8240
1,1,2,2-Tetrachloroethane	BQL	µg/L	10	SW 846 8240
Toluene	BQL	µg/L	10	SW 846 8240
Chlorobenzene	BQL	µg/L	10	SW 846 8240
Ethylbenzene	BQL	µg/L	10	SW 846 8240
Styrene	BQL	µg/L	10	SW 846 8240
m-Xylene	BQL	µg/L	10	SW 846 8240
o/p-Xylene	BQL	µg/L	10	SW 846 8240
bis(2-chloroethyl)ether	BQL	µg/L	10	SW 846 8270
1,3-Dichlorobenzene	BQL	µg/L	10	SW 846 8270
1,4-Dichlorobenzene	BQL	µg/L	10	SW 846 8270
Benzyl alcohol	BQL	µg/L	10	SW 846 8270
1,2-Dichlorobenzene	BQL	µg/L	10	SW 846 8270
bis(2-chloroisopropyl)ether	BQL	µg/L	10	SW 846 8270
n-Nitrosodi-n-propylamine	BQL	µg/L	10	SW 846 8270
Hexachloroethane	BQL	µg/L	10	SW 846 8270
Nitrobenzene	BQL	µg/L	10	SW 846 8270
Isophorone	BQL	µg/L	10	SW 846 8270
bis(2-chloroethoxy)methane	BQL	µg/L	10	SW 846 8270
1,2,4-Trichlorobenzene	BQL	µg/L	10	SW 846 8270

CLIENT: Ucar Carbon Company, Incorporated
 SAMPLE ID: BW-6
 COLLECTION METHOD: GRAB
 COLLECTION DATE(S): 12/28/93
 SAMPLE TYPE: GROUNDWATER

AES CLIENT ID: CTC
 AES SAMPLE ID: 341J-8

PROJECT ID: 341J

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
Naphthalene	BQL	µg/L	10	SW 846 8270
4-Chloroaniline	BQL	µg/L	10	SW 846 8270
Hexachlorobutadiene	BQL	µg/L	10	SW 846 8270
2-Methylnaphthalene	BQL	µg/L	10	SW 846 8270
Hexachlorocyclopentadiene	BQL	µg/L	10	SW 846 8270
2-Chloronaphthalene	BQL	µg/L	10	SW 846 8270
2-Nitroaniline	BQL	µg/L	10	SW 846 8270
Dimethylphthalate	BQL	µg/L	10	SW 846 8270
2,6-Dinitrotoluene	BQL	µg/L	10	SW 846 8270
Acenaphthylene	BQL	µg/L	10	SW 846 8270
3-Nitroaniline	BQL	µg/L	10	SW 846 8270
Acenaphthene	BQL	µg/L	10	SW 846 8270
2,4-Dinitrotoluene	BQL	µg/L	10	SW 846 8270
Dibenzofuran	BQL	µg/L	10	SW 846 8270
Diethylphthalate	BQL	µg/L	10	SW 846 8270
4-Chlorophenylphenyl ether	BQL	µg/L	10	SW 846 8270
Fluorene	BQL	µg/L	10	SW 846 8270
4-Nitroaniline	BQL	µg/L	10	SW 846 8270
n-Nitrosodiphenylamine	BQL	µg/L	10	SW 846 8270
4-Bromophenylphenyl ether	BQL	µg/L	10	SW 846 8270
Hexachlorobenzene	BQL	µg/L	10	SW 846 8270
Phenanthrene	BQL	µg/L	10	SW 846 8270
Anthracene	BQL	µg/L	10	SW 846 8270
di-n-Butylphthalate	BQL	µg/L	10	SW 846 8270
Fluoranthene	BQL	µg/L	10	SW 846 8270
Pyrene	BQL	µg/L	10	SW 846 8270
Butylbenzylphthalate	BQL	µg/L	10	SW 846 8270
3,3'-Dichlorobenzidine	BQL	µg/L	10	SW 846 8270
bis(2ethylhexyl)phthalate	BQL	µg/L	10	SW 846 8270

CLIENT: Ucar Carbon Company, Incorporated
 SAMPLE ID: BW-6
 COLLECTION METHOD: GRAB
 COLLECTION DATE(S): 12/28/93
 SAMPLE TYPE: GROUNDWATER

AES CLIENT ID: CTC
 AES SAMPLE ID: 34IJ-8

PROJECT ID: 34IJ

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
Benzo(a)anthracene	BQL	µg/L	10	SW 846 8270
Chrysene	BQL	µg/L	10	SW 846 8270
di-n-Octylphthalate	BQL	µg/L	10	SW 846 8270
Benzo(b)fluoranthene	BQL	µg/L	10	SW 846 8270
Benzo(k)fluoranthene	BQL	µg/L	10	SW 846 8270
Benzo(a)pyrene	BQL	µg/L	10	SW 846 8270
Indeno(1,2,3-cd)pyrene	BQL	µg/L	10	SW 846 8270
Dibenzo(a,h)anthracene	BQL	µg/L	10	SW 846 8270
Benzo(g,h,i)perylene	BQL	µg/L	10	SW 846 8270
Phenol	BQL	µg/L	10	SW 846 8270
2-Chlorophenol	BQL	µg/L	10	SW 846 8270
2-Methylphenol	BQL	µg/L	10	SW 846 8270
4-Methylphenol	BQL	µg/L	10	SW 846 8270
2-Nitrophenol	BQL	µg/L	10	SW 846 8270
2,4-Dimethylphenol	BQL	µg/L	10	SW 846 8270
Benzoic acid	BQL	µg/L	10	SW 846 8270
2,4-Dichlorophenol	BQL	µg/L	10	SW 846 8270
4-Chloro-3-methylphenol	BQL	µg/L	10	SW 846 8270
2,4,6-Trichlorophenol	BQL	µg/L	10	SW 846 8270
2,4,5-Trichlorophenol	BQL	µg/L	10	SW 846 8270
2,4-Dinitrophenol	BQL	µg/L	10	SW 846 8270
4-Nitrophenol	BQL	µg/L	10	SW 846 8270
4,6-Dinitro-2-methylphenol	BQL	µg/L	10	SW 846 8270
Pentachlorophenol	BQL	µg/L	10	SW 846 8270

CLIENT: Ucar Carbon Company, Incorporated
 SAMPLE ID: BLIND DUPLICATE
 COLLECTION METHOD: GRAB
 COLLECTION DATE(S): 12/28/93
 SAMPLE TYPE: GROUNDWATER

AES CLIENT ID: CTC
 AES SAMPLE ID: 341J-9

PROJECT ID: 341J

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
Turbidity *	151.0	NTU	0.1	EPA 180.1
Ammonia	0.27	mg/L	0.05	EPA 350.1
Nitrite	BQL	mg/L	0.05	EPA 353.2
Total Kjeldahl Nitrogen	BQL	mg/L	0.1	EPA 351.2
Total Iron	23	mg/L	0.05	EPA 200.7
Soluble Iron	3.6	mg/L	0.05	EPA 200.7
Total Potassium	3.5	mg/L	1.0	EPA 200.7
Soluble Potassium	2.0	mg/L	1.0	EPA 200.7
Total Zinc	0.04	mg/L	0.02	EPA 200.7
Soluble Zinc	BQL	mg/L	0.02	EPA 200.7
Chloromethane	BQL	µg/L	10	SW 846 8240
Bromomethane	BQL	µg/L	10	SW 846 8240
Vinyl chloride	BQL	µg/L	10	SW 846 8240
Chloroethane	BQL	µg/L	10	SW 846 8240
Methylene chloride	BQL	µg/L	10	SW 846 8240
Acetone	BQL	µg/L	10	SW 846 8240
Carbon disulfide	BQL	µg/L	10	SW 846 8240
1,1-Dichloroethene	BQL	µg/L	10	SW 846 8240
1,1-Dichloroethane	BQL	µg/L	10	SW 846 8240
trans-1,2-Dichloroethene	BQL	µg/L	10	SW 846 8240
Chloroform	BQL	µg/L	10	SW 846 8240
1,2-Dichloroethane	BQL	µg/L	10	SW 846 8240
2-Butanone	BQL	µg/L	10	SW 846 8240
1,1,1-Trichloroethane	BQL	µg/L	10	SW 846 8240
Carbon tetrachloride	BQL	µg/L	10	SW 846 8240
Vinyl acetate	BQL	µg/L	10	SW 846 8240
Bromodichloromethane	BQL	µg/L	10	SW 846 8240
1,2-Dichloropropane	BQL	µg/L	10	SW 846 8240

* Analysis performed in the field.

CLIENT: Ucar Carbon Company, Incorporated
 SAMPLE ID: BLIND DUPLICATE
 COLLECTION METHOD: GRAB
 COLLECTION DATE(S): 12/28/93
 SAMPLE TYPE: GROUNDWATER

AES CLIENT ID: CTC
 AES SAMPLE ID: 34IJ-9

PROJECT ID: 34IJ

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
cis-1,3-Dichloropropene	BQL	µg/L	10	SW 846 8240
Trichloroethene	BQL	µg/L	10	SW 846 8240
Benzene	BQL	µg/L	10	SW 846 8240
trans-1,3-Dichloropropene	BQL	µg/L	10	SW 846 8240
Chlorodibromomethane	BQL	µg/L	10	SW 846 8240
1,1,2-Trichloroethane	BQL	µg/L	10	SW 846 8240
Bromoform	BQL	µg/L	10	SW 846 8240
4-Methyl-2-pentanone	BQL	µg/L	10	SW 846 8240
2-Hexanone	BQL	µg/L	10	SW 846 8240
Tetrachloroethene	BQL	µg/L	10	SW 846 8240
1,1,2,2-Tetrachloroethane	BQL	µg/L	10	SW 846 8240
Toluene	BQL	µg/L	10	SW 846 8240
Chlorobenzene	BQL	µg/L	10	SW 846 8240
Ethylbenzene	BQL	µg/L	10	SW 846 8240
Styrene	BQL	µg/L	10	SW 846 8240
m-Xylene	BQL	µg/L	10	SW 846 8240
o/p-Xylene	BQL	µg/L	10	SW 846 8240
bis(2-chloroethyl)ether	BQL	µg/L	10	SW 846 8270
1,3-Dichlorobenzene	BQL	µg/L	10	SW 846 8270
1,4-Dichlorobenzene	BQL	µg/L	10	SW 846 8270
Benzyl alcohol	BQL	µg/L	10	SW 846 8270
1,2-Dichlorobenzene	BQL	µg/L	10	SW 846 8270
bis(2-chloroisopropyl)ether	BQL	µg/L	10	SW 846 8270
n-Nitrosodi-n-propylamine	BQL	µg/L	10	SW 846 8270
Hexachloroethane	BQL	µg/L	10	SW 846 8270
Nitrobenzene	BQL	µg/L	10	SW 846 8270
Isophorone	BQL	µg/L	10	SW 846 8270
bis(2-chloroethoxy)methane	BQL	µg/L	10	SW 846 8270
1,2,4-Trichlorobenzene	BQL	µg/L	10	SW 846 8270

CLIENT: Ucar Carbon Company, Incorporated
 SAMPLE ID: BLIND DUPLICATE
 COLLECTION METHOD: GRAB
 COLLECTION DATE(S): 12/28/93
 SAMPLE TYPE: GROUNDWATER

AES CLIENT ID: CTC
 AES SAMPLE ID: 341J-9

PROJECT ID: 341J

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
Naphthalene	BQL	µg/L	10	SW 846 8270
4-Chloroaniline	BQL	µg/L	10	SW 846 8270
Hexachlorobutadiene	BQL	µg/L	10	SW 846 8270
2-Methylnaphthalene	BQL	µg/L	10	SW 846 8270
Hexachlorocyclopentadiene	BQL	µg/L	10	SW 846 8270
2-Chloronaphthalene	BQL	µg/L	10	SW 846 8270
2-Nitroaniline	BQL	µg/L	10	SW 846 8270
Dimethylphthalate	BQL	µg/L	10	SW 846 8270
2,6-Dinitrotoluene	BQL	µg/L	10	SW 846 8270
Acenaphthylene	BQL	µg/L	10	SW 846 8270
3-Nitroaniline	BQL	µg/L	10	SW 846 8270
Acenaphthene	BQL	µg/L	10	SW 846 8270
2,4-Dinitrotoluene	BQL	µg/L	10	SW 846 8270
Dibenzofuran	BQL	µg/L	10	SW 846 8270
Diethylphthalate	BQL	µg/L	10	SW 846 8270
4-Chlorophenylphenyl ether	BQL	µg/L	10	SW 846 8270
Fluorene	BQL	µg/L	10	SW 846 8270
4-Nitroaniline	BQL	µg/L	10	SW 846 8270
n-Nitrosodiphenylamine	BQL	µg/L	10	SW 846 8270
4-Bromophenylphenyl ether	BQL	µg/L	10	SW 846 8270
Hexachlorobenzene	BQL	µg/L	10	SW 846 8270
Phenanthrene	BQL	µg/L	10	SW 846 8270
Anthracene	BQL	µg/L	10	SW 846 8270
di-n-Butylphthalate	BQL	µg/L	10	SW 846 8270
Fluoranthene	BQL	µg/L	10	SW 846 8270
Pyrene	BQL	µg/L	10	SW 846 8270
Butylbenzylphthalate	BQL	µg/L	10	SW 846 8270
3,3'-Dichlorobenzidine	BQL	µg/L	10	SW 846 8270
bis(2ethylhexyl)phthalate	BQL	µg/L	10	SW 846 8270

CLIENT: Ucar Carbon Company, Incorporated
 SAMPLE ID: BLIND DUPLICATE
 COLLECTION METHOD: GRAB
 COLLECTION DATE(S): 12/28/93
 SAMPLE TYPE: GROUNDWATER

AES CLIENT ID: CTC
 AES SAMPLE ID: 341J-9

PROJECT ID: 341J

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
Benzo(a)anthracene	BQL	µg/L	10	SW 846 8270
Chrysene	BQL	µg/L	10	SW 846 8270
di-n-Octylphthalate	BQL	µg/L	10	SW 846 8270
Benzo(b)fluoranthene	BQL	µg/L	10	SW 846 8270
Benzo(k)fluoranthene	BQL	µg/L	10	SW 846 8270
Benzo(a)pyrene	BQL	µg/L	10	SW 846 8270
Indeno(1,2,3-cd)pyrene	BQL	µg/L	10	SW 846 8270
Dibenzo(a,h)anthracene	BQL	µg/L	10	SW 846 8270
Benzo(g,h,i)perylene	BQL	µg/L	10	SW 846 8270
Phenol	BQL	µg/L	10	SW 846 8270
2-Chlorophenol	BQL	µg/L	10	SW 846 8270
2-Methylphenol	BQL	µg/L	10	SW 846 8270
4-Methylphenol	BQL	µg/L	10	SW 846 8270
2-Nitrophenol	BQL	µg/L	10	SW 846 8270
2,4-Dimethylphenol	BQL	µg/L	10	SW 846 8270
Benzoic acid	BQL	µg/L	10	SW 846 8270
2,4-Dichlorophenol	BQL	µg/L	10	SW 846 8270
4-Chloro-3-methylphenol	BQL	µg/L	10	SW 846 8270
2,4,6-Trichlorophenol	BQL	µg/L	10	SW 846 8270
2,4,5-Trichlorophenol	BQL	µg/L	10	SW 846 8270
2,4-Dinitrophenol	BQL	µg/L	10	SW 846 8270
4-Nitrophenol	BQL	µg/L	10	SW 846 8270
4,6-Dinitro-2-methylphenol	BQL	µg/L	10	SW 846 8270
Pentachlorophenol	BQL	µg/L	10	SW 846 8270

CLIENT: Ucar Carbon Company, Incorporated
 SAMPLE ID: TRIP BLANK
 COLLECTION METHOD: GRAB
 COLLECTION DATE(S): 12/29/93
 SAMPLE TYPE: BAKER WATER

AES CLIENT ID: CTC
 AES SAMPLE ID: 341J-10

PROJECT ID: 341J

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
Turbidity *	BQL	NTU	0.1	EPA 180.1
Ammonia	BQL	mg/L	0.05	EPA 350.1
Nitrite	BQL	mg/L	0.05	EPA 353.2
Total Kjeldahl Nitrogen	BQL	mg/L	0.1	EPA 351.2
Total Iron	BQL	mg/L	0.05	EPA 200.7
Total Potassium	BQL	mg/L	1.0	EPA 200.7
Total Zinc	BQL	mg/L	0.02	EPA 200.7
Chloromethane	BQL	µg/L	10	SW 846 8240
Bromomethane	BQL	µg/L	10	SW 846 8240
Vinyl chloride	BQL	µg/L	10	SW 846 8240
Chloroethane	BQL	µg/L	10	SW 846 8240
Methylene chloride	BQL	µg/L	10	SW 846 8240
Acetone	BQL	µg/L	10	SW 846 8240
Carbon disulfide	BQL	µg/L	10	SW 846 8240
1,1-Dichloroethene	BQL	µg/L	10	SW 846 8240
1,1-Dichloroethane	BQL	µg/L	10	SW 846 8240
trans-1,2-Dichloroethene	BQL	µg/L	10	SW 846 8240
Chloroform	BQL	µg/L	10	SW 846 8240
1,2-Dichloroethane	BQL	µg/L	10	SW 846 8240
2-Butanone	BQL	µg/L	10	SW 846 8240
1,1,1-Trichloroethane	BQL	µg/L	10	SW 846 8240
Carbon tetrachloride	BQL	µg/L	10	SW 846 8240
Vinyl acetate	BQL	µg/L	10	SW 846 8240
Bromodichloromethane	BQL	µg/L	10	SW 846 8240
1,2-Dichloropropane	BQL	µg/L	10	SW 846 8240
cis-1,3-Dichloropropene	BQL	µg/L	10	SW 846 8240
Trichloroethene	BQL	µg/L	10	SW 846 8240
Benzene	BQL	µg/L	10	SW 846 8240

* Analysis performed in the field.

CLIENT: Ucar Carbon Company, Incorporated
 SAMPLE ID: TRIP BLANK
 COLLECTION METHOD: GRAB
 COLLECTION DATE(S): 12/29/93
 SAMPLE TYPE: BAKER WATER

AES CLIENT ID: CTC
 AES SAMPLE ID: 341J-10

PROJECT ID: 341J

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
trans-1,3-Dichloropropene	BQL	µg/L	10	SW 846 8240
Chlorodibromomethane	BQL	µg/L	10	SW 846 8240
1,1,2-Trichloroethane	BQL	µg/L	10	SW 846 8240
Bromoform	BQL	µg/L	10	SW 846 8240
4-Methyl-2-pentanone	BQL	µg/L	10	SW 846 8240
2-Hexanone	BQL	µg/L	10	SW 846 8240
Tetrachloroethene	BQL	µg/L	10	SW 846 8240
1,1,2,2-Tetrachloroethane	BQL	µg/L	10	SW 846 8240
Toluene	BQL	µg/L	10	SW 846 8240
Chlorobenzene	BQL	µg/L	10	SW 846 8240
Ethylbenzene	BQL	µg/L	10	SW 846 8240
Styrene	BQL	µg/L	10	SW 846 8240
m-Xylene	BQL	µg/L	10	SW 846 8240
o/p-Xylene	BQL	µg/L	10	SW 846 8240
bis(2-chloroethyl)ether	BQL	µg/L	10	SW 846 8270
1,3-Dichlorobenzene	BQL	µg/L	10	SW 846 8270
1,4-Dichlorobenzene	BQL	µg/L	10	SW 846 8270
Benzyl alcohol	BQL	µg/L	10	SW 846 8270
1,2-Dichlorobenzene	BQL	µg/L	10	SW 846 8270
bis(2-chloroisopropyl)ether	BQL	µg/L	10	SW 846 8270
n-Nitrosodi-n-propylamine	BQL	µg/L	10	SW 846 8270
Hexachloroethane	BQL	µg/L	10	SW 846 8270
Nitrobenzene	BQL	µg/L	10	SW 846 8270
Isophorone	BQL	µg/L	10	SW 846 8270
bis(2-chloroethoxy)methane	BQL	µg/L	10	SW 846 8270
1,2,4-Trichlorobenzene	BQL	µg/L	10	SW 846 8270
Naphthalene	BQL	µg/L	10	SW 846 8270
4-Chloroaniline	BQL	µg/L	10	SW 846 8270
Hexachlorobutadiene	BQL	µg/L	10	SW 846 8270

CLIENT: Ucar Carbon Company, Incorporated
 SAMPLE ID: TRIP BLANK
 COLLECTION METHOD: GRAB
 COLLECTION DATE(S): 12/29/93
 SAMPLE TYPE: BAKER WATER

AES CLIENT ID: CTC
 AES SAMPLE ID: 341J-10

PROJECT ID: 341J

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
2-Methylnaphthalene	BQL	µg/L	10	SW 846 8270
Hexachlorocyclopentadiene	BQL	µg/L	10	SW 846 8270
2-Chloronaphthalene	BQL	µg/L	10	SW 846 8270
2-Nitroaniline	BQL	µg/L	10	SW 846 8270
Dimethylphthalate	BQL	µg/L	10	SW 846 8270
2,6-Dinitrotoluene	BQL	µg/L	10	SW 846 8270
Acenaphthylene	BQL	µg/L	10	SW 846 8270
3-Nitroaniline	BQL	µg/L	10	SW 846 8270
Acenaphthene	BQL	µg/L	10	SW 846 8270
2,4-Dinitrotoluene	BQL	µg/L	10	SW 846 8270
Dibenzofuran	BQL	µg/L	10	SW 846 8270
Diethylphthalate	BQL	µg/L	10	SW 846 8270
4-Chlorophenylphenyl ether	BQL	µg/L	10	SW 846 8270
Fluorene	BQL	µg/L	10	SW 846 8270
4-Nitroaniline	BQL	µg/L	10	SW 846 8270
n-Nitrosodiphenylamine	BQL	µg/L	10	SW 846 8270
4-Bromophenylphenyl ether	BQL	µg/L	10	SW 846 8270
Hexachlorobenzene	BQL	µg/L	10	SW 846 8270
Phenanthrene	BQL	µg/L	10	SW 846 8270
Anthracene	BQL	µg/L	10	SW 846 8270
di-n-Butylphthalate	BQL	µg/L	10	SW 846 8270
Fluoranthene	BQL	µg/L	10	SW 846 8270
Pyrene	BQL	µg/L	10	SW 846 8270
Butylbenzylphthalate	BQL	µg/L	10	SW 846 8270
3,3'-Dichlorobenzidine	BQL	µg/L	10	SW 846 8270
bis(2ethylhexyl)phthalate	BQL	µg/L	10	SW 846 8270
Benzo(a)anthracene	BQL	µg/L	10	SW 846 8270
Chrysene	BQL	µg/L	10	SW 846 8270
di-n-Octylphthalate	BQL	µg/L	10	SW 846 8270

CLIENT: Ucar Carbon Company, Incorporated
 SAMPLE ID: TRIP BLANK
 COLLECTION METHOD: GRAB
 COLLECTION DATE(S): 12/29/93
 SAMPLE TYPE: BAKER WATER

AES CLIENT ID: CTC
 AES SAMPLE ID: 34IJ-10

PROJECT ID: 34IJ

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
Benzo(b)fluoranthene	BQL	µg/L	10	SW 846 8270
Benzo(k)fluoranthene	BQL	µg/L	10	SW 846 8270
Benzo(a)pyrene	BQL	µg/L	10	SW 846 8270
Indeno(1,2,3-cd)pyrene	BQL	µg/L	10	SW 846 8270
Dibenzo(a,h)anthracene	BQL	µg/L	10	SW 846 8270
Benzo(g,h,i)perylene	BQL	µg/L	10	SW 846 8270
Phenol	BQL	µg/L	10	SW 846 8270
2-Chlorophenol	BQL	µg/L	10	SW 846 8270
2-Methylphenol	BQL	µg/L	10	SW 846 8270
4-Methylphenol	BQL	µg/L	10	SW 846 8270
2-Nitrophenol	BQL	µg/L	10	SW 846 8270
2,4-Dimethylphenol	BQL	µg/L	10	SW 846 8270
Benzoic acid	BQL	µg/L	10	SW 846 8270
2,4-Dichlorophenol	BQL	µg/L	10	SW 846 8270
4-Chloro-3-methylphenol	BQL	µg/L	10	SW 846 8270
2,4,6-Trichlorophenol	BQL	µg/L	10	SW 846 8270
2,4,5-Trichlorophenol	BQL	µg/L	10	SW 846 8270
2,4-Dinitrophenol	BQL	µg/L	10	SW 846 8270
4-Nitrophenol	BQL	µg/L	10	SW 846 8270
4,6-Dinitro-2-methylphenol	BQL	µg/L	10	SW 846 8270
Pentachlorophenol	BQL	µg/L	10	SW 846 8270

CLIENT: Ucar Carbon Company, Incorporated

AES CLIENT ID: CTC
PROJECT ID: 341J

ACCURACY

Analytical Parameter(s)	Method	Sample ID	Type	Percent Recovery
Ammonia	EPA 350.1	341J-6	Matrix Spike	92
Nitrite	EPA 353.2	341J-6	Matrix Spike	108
Total Kjeldahl Nitrogen	EPA 351.2	341J-6	Matrix Spike	90
Total Iron	EPA 200.7	341J-6	Matrix Spike	92
Soluble Iron	EPA 200.7	341J-6	Matrix Spike	90
Total Potassium	EPA 200.7	341J-6	Matrix Spike	98
Soluble Potassium	EPA 200.7	341J-6	Matrix Spike	106
Total Zinc	EPA 200.7	341J-6	Matrix Spike	88
Soluble Zinc	EPA 200.7	341J-6	Matrix Spike	88
1,1-Dichloroethene	SW 846 8240	341J-6	Matrix Spike	96
Trichloroethene	SW 846 8240	341J-6	Matrix Spike	78
Benzene	SW 846 8240	341J-6	Matrix Spike	92
Toluene	SW 846 8240	341J-6	Matrix Spike	94
Chlorobenzene	SW 846 8240	341J-6	Matrix Spike	96
1,4-Dichlorobenzene	SW 846 8270	341J-6	Matrix Spike	63
n-Nitrosodi-n-propylamine	SW 846 8270	341J-6	Matrix Spike	89
1,2,4-Trichlorobenzene	SW 846 8270	341J-6	Matrix Spike	72
Acenaphthene	SW 846 8270	341J-6	Matrix Spike	79
2,4-Dinitrotoluene	SW 846 8270	341J-6	Matrix Spike	76
Pyrene	SW 846 8270	341J-6	Matrix Spike	70
Phenol	SW 846 8270	341J-6	Matrix Spike	44
2-Chlorophenol	SW 846 8270	341J-6	Matrix Spike	81
4-Chloro-3-methylphenol	SW 846 8270	341J-6	Matrix Spike	80
4-Nitrophenol	SW 846 8270	341J-6	Matrix Spike	45
Pentachlorophenol	SW 846 8270	341J-6	Matrix Spike	83

CLIENT: Ucar Carbon Company, Incorporated

AES CLIENT ID: CTC
PROJECT ID: 34IJ

PRECISION

Analytical Parameter(s)	Method	Sample ID	Type	Relative % Difference
Ammonia	EPA 350.1	34IJ-6	Duplicate	1.5
Nitrite	EPA 353.2	34IJ-6	Duplicate	NA
Total Kjeldahl Nitrogen	EPA 351.2	34IJ-6	Duplicate	3.3
Total Iron	EPA 200.7	34IJ-6	Duplicate	0
Soluble Iron	EPA 200.7	34IJ-6	Duplicate	4.5
Total Potassium	EPA 200.7	34IJ-6	Duplicate	6.2
Soluble Potassium	EPA 200.7	34IJ-6	Duplicate	0
Total Zinc	EPA 200.7	34IJ-6	Duplicate	0
Soluble Zinc	EPA 200.7	34IJ-6	Duplicate	NA
Chloromethane	SW 846 8240	34IJ-6	Duplicate	NA
Bromomethane	SW 846 8240	34IJ-6	Duplicate	NA
Vinyl chloride	SW 846 8240	34IJ-6	Duplicate	6.9
Chloroethane	SW 846 8240	34IJ-6	Duplicate	NA
Methylene chloride	SW 846 8240	34IJ-6	Duplicate	NA
Acetone	SW 846 8240	34IJ-6	Duplicate	NA
Carbon disulfide	SW 846 8240	34IJ-6	Duplicate	NA
1,1-Dichloroethene	SW 846 8240	34IJ-6	Duplicate	NA
1,1-Dichloroethane	SW 846 8240	34IJ-6	Duplicate	NA
trans-1,2-Dichloroethene	SW 846 8240	34IJ-6	Duplicate	0
Chloroform	SW 846 8240	34IJ-6	Duplicate	NA
1,2-Dichloroethane	SW 846 8240	34IJ-6	Duplicate	NA
2-Butanone	SW 846 8240	34IJ-6	Duplicate	NA
1,1,1-Trichloroethane	SW 846 8240	34IJ-6	Duplicate	NA
Carbon tetrachloride	SW 846 8240	34IJ-6	Duplicate	NA
Vinyl acetate	SW 846 8240	34IJ-6	Duplicate	NA
Bromodichloromethane	SW 846 8240	34IJ-6	Duplicate	NA
1,2-Dichloropropane	SW 846 8240	34IJ-6	Duplicate	NA
cis-1,3-Dichloropropene	SW 846 8240	34IJ-6	Duplicate	NA

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

CLIENT: Ucar Carbon Company, Incorporated

AES CLIENT ID: CTC
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PRECISION

Analytical Parameter(s)	Method	Sample ID	Type	Relative % Difference
Trichloroethene	SW 846 8240	341J-6	Duplicate	5.6
Benzene	SW 846 8240	341J-6	Duplicate	NA
trans-1,3-Dichloropropene	SW 846 8240	341J-6	Duplicate	NA
Chlorodibromomethane	SW 846 8240	341J-6	Duplicate	NA
1,1,2-Trichloroethane	SW 846 8240	341J-6	Duplicate	NA
Bromoform	SW 846 8240	341J-6	Duplicate	NA
4-Methyl-2-pentanone	SW 846 8240	341J-6	Duplicate	NA
2-Hexanone	SW 846 8240	341J-6	Duplicate	NA
Tetrachloroethene	SW 846 8240	341J-6	Duplicate	7.6
1,1,2,2-Tetrachloroethane	SW 846 8240	341J-6	Duplicate	NA
Toluene	SW 846 8240	341J-6	Duplicate	NA
Chlorobenzene	SW 846 8240	341J-6	Duplicate	NA
Ethylbenzene	SW 846 8240	341J-6	Duplicate	NA
Styrene	SW 846 8240	341J-6	Duplicate	NA
m-Xylene	SW 846 8240	341J-6	Duplicate	NA
o/p-Xylene	SW 846 8240	341J-6	Duplicate	NA
bis(2-chloroethyl)ether	SW 846 8270	341J-6	Duplicate	NA
1,3-Dichlorobenzene	SW 846 8270	341J-6	Duplicate	NA
1,4-Dichlorobenzene	SW 846 8270	341J-6	Duplicate	NA
Benzyl alcohol	SW 846 8270	341J-6	Duplicate	NA
1,2-Dichlorobenzene	SW 846 8270	341J-6	Duplicate	NA
bis(2-chloroisopropyl)ether	SW 846 8270	341J-6	Duplicate	NA
n-Nitrosodi-n-propylamine	SW 846 8270	341J-6	Duplicate	NA
Hexachloroethane	SW 846 8270	341J-6	Duplicate	NA
Nitrobenzene	SW 846 8270	341J-6	Duplicate	NA
Isophorone	SW 846 8270	341J-6	Duplicate	NA
bis(2-chloroethoxy)methane	SW 846 8270	341J-6	Duplicate	NA
1,2,4-Trichlorobenzene	SW 846 8270	341J-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: 34IJ

PRECISION

Analytical Parameter(s)	Method	Sample ID	Type	Relative % Difference
Naphthalene	SW 846 8270	34IJ-6	Duplicate	NA
4-Chloroaniline	SW 846 8270	34IJ-6	Duplicate	NA
Hexachlorobutadiene	SW 846 8270	34IJ-6	Duplicate	7.7
2-Methylnaphthalene	SW 846 8270	34IJ-6	Duplicate	NA
Hexachlorocyclopentadiene	SW 846 8270	34IJ-6	Duplicate	NA
2-Chloronaphthalene	SW 846 8270	34IJ-6	Duplicate	NA
2-Nitroaniline	SW 846 8270	34IJ-6	Duplicate	NA
Dimethylphthalate	SW 846 8270	34IJ-6	Duplicate	NA
2,6-Dinitrotoluene	SW 846 8270	34IJ-6	Duplicate	NA
Acenaphthylene	SW 846 8270	34IJ-6	Duplicate	NA
3-Nitroaniline	SW 846 8270	34IJ-6	Duplicate	NA
Acenaphthene	SW 846 8270	34IJ-6	Duplicate	NA
2,4-Dinitrotoluene	SW 846 8270	34IJ-6	Duplicate	NA
Dibenzofuran	SW 846 8270	34IJ-6	Duplicate	NA
Diethylphthalate	SW 846 8270	34IJ-6	Duplicate	NA
4-Chlorophenylphenyl ether	SW 846 8270	34IJ-6	Duplicate	NA
Fluorene	SW 846 8270	34IJ-6	Duplicate	NA
4-Nitroaniline	SW 846 8270	34IJ-6	Duplicate	NA
n-Nitrosodiphenylamine	SW 846 8270	34IJ-6	Duplicate	NA
4-Bromophenylphenyl ether	SW 846 8270	34IJ-6	Duplicate	NA
Hexachlorobenzene	SW 846 8270	34IJ-6	Duplicate	NA
Phenanthrene	SW 846 8270	34IJ-6	Duplicate	NA
Anthracene	SW 846 8270	34IJ-6	Duplicate	NA
di-n-Butylphthalate	SW 846 8270	34IJ-6	Duplicate	NA
Fluoranthene	SW 846 8270	34IJ-6	Duplicate	NA
Pyrene	SW 846 8270	34IJ-6	Duplicate	NA
Butylbenzylphthalate	SW 846 8270	34IJ-6	Duplicate	NA
3,3'-Dichlorobenzidine	SW 846 8270	34IJ-6	Duplicate	NA

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CLIENT: Ucar Carbon Company, Incorporated

AES CLIENT ID: CTC
PROJECT ID: 341J

PRECISION

Analytical Parameter(s)	Method	Sample ID	Type	Relative % Difference
bis(2ethylhexyl)phthalate	SW 846 8270	341J-6	Duplicate	NA
Benzo(a)anthracene	SW 846 8270	341J-6	Duplicate	NA
Chrysene	SW 846 8270	341J-6	Duplicate	NA
di-n-Octylphthalate	SW 846 8270	341J-6	Duplicate	NA
Benzo(b)fluoranthene	SW 846 8270	341J-6	Duplicate	NA
Benzo(k)fluoranthene	SW 846 8270	341J-6	Duplicate	NA
Benzo(a)pyrene	SW 846 8270	341J-6	Duplicate	NA
Indeno(1,2,3-cd)pyrene	SW 846 8270	341J-6	Duplicate	NA
Dibenzo(a,h)anthracene	SW 846 8270	341J-6	Duplicate	NA
Benzo(g,h,i)perylene	SW 846 8270	341J-6	Duplicate	NA
Phenol	SW 846 8270	341J-6	Duplicate	NA
2-Chlorophenol	SW 846 8270	341J-6	Duplicate	NA
2-Methylphenol	SW 846 8270	341J-6	Duplicate	NA
4-Methylphenol	SW 846 8270	341J-6	Duplicate	NA
2-Nitrophenol	SW 846 8270	341J-6	Duplicate	NA
2,4-Dimethylphenol	SW 846 8270	341J-6	Duplicate	NA
Benzoic acid	SW 846 8270	341J-6	Duplicate	NA
2,4-Dichlorophenol	SW 846 8270	341J-6	Duplicate	NA
4-Chloro-3-methylphenol	SW 846 8270	341J-6	Duplicate	NA
2,4,6-Trichlorophenol	SW 846 8270	341J-6	Duplicate	NA
2,4,5-Trichlorophenol	SW 846 8270	341J-6	Duplicate	NA
2,4-Dinitrophenol	SW 846 8270	341J-6	Duplicate	NA
4-Nitrophenol	SW 846 8270	341J-6	Duplicate	NA
4,6-Dinitro-2-methylphenol	SW 846 8270	341J-6	Duplicate	NA
Pentachlorophenol	SW 846 8270	341J-6	Duplicate	NA

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

Advanced Environmental Services

Sample Traceability Report

Inorganics Analysis

AES Job Code CTC

AES Job No. 34IJ

		Sample Prep				Analysis			
AES Sample No.	Sample Date	Method Number	Date	Analyst	Run #	Method Number	Date	Analyst	Run #
1-9 SOLUBLE + TOTAL 1-10 34IJ	12-24-93	9.3	12-30-93	JK	76	200.7	1/12/94	DJC	76

Note: Areas marked using a dash indicate that no sample preparation was required under the applied methodology.

CHAIN OF CUSTODY RECORD

PROJECT NAME: UCAR - CARBON

SAMPLER'S SIGNATURE: [Signature]

34IJ

JOB CODE: CTC

IDENTIFICATION OF
BLIND FIELD DUPLICATE SITE: _____

DATE	TIME	SAMPLE IDENTIFICATION	GRAB	COMP	SAMPLE TYPE	CONTAINER CLASSIFICATION								PARAMETERS/REMARKS
						UNPRESERVED	HNO ₃	H ₂ SO ₄	HCL	NAOH	VIAL (PRES.)	VIAL (UNPRES.)	TOTAL	
12/29/93	14:20	MW - 1	x		GROUNDWATER		2	1					3	TOTAL METALS, Ammo, N/AE, TRN
	14:35	BW - 2	x				2	1					3	
	11:30	BW - 3	x				2	1					3	
	10:30	BW - 5	x				2	1					3	
	12:10	BW - 4	x			4	4	2				3	13	TCLSV, TCLV
	9:30	TRIP BLANK	x		D.I. WATER	1	1	1				2	5	TOTAL METALS, TCLSV, TCLV Ammo, N/AE, TRN
TOTAL NUMBER OF CONTAINERS													30	

NOTE: Please indicate required analysis, and whom we may contact with questions, if you have not yet done so through your customer service representative.

1. RELINQUISHED BY: <u>[Signature]</u>	DATE 12/29/93	TIME 15:40	RECEIVED BY: <u>Wendy Herbst</u>
2. RELINQUISHED BY: _____	DATE _____	TIME _____	RECEIVED BY: _____
3. RELINQUISHED BY: _____	DATE _____	TIME _____	RECEIVED BY: _____



34IT

CONTAINER CLASSIFICATION

SAMPLER'S SIGNATURE: [Signature]

IDENTIFICATION OF
BLIND FIELD DUPLICATE SITE: _____

NOTE: Please indicate required analysis, and whom we may contact with questions, if you have not yet done so through your customer service representative.

1. RELINQUISHED BY: 	DATE 12/28/93	TIME 16:05	RECEIVED BY: Wendy Horvath
2. RELINQUISHED BY: _____	DATE	TIME	RECEIVED BY: _____
3. RELINQUISHED BY: _____	DATE	TIME	RECEIVED BY: _____

Advanced Environmental Services

Sample Traceability Report

Inorganics Analysis

AES Job Code CTC

AES Job No. 34IJ

AES Sample No.	Sample Date	Sample Prep				Analysis			
		Method Number	Date	Analyst	Run #	Method Number	Date	Analyst	Run #
34IJ-1-7	12/28-29/93	351.2	1-11-94	CW/SF	13	351.2	1-13-94	TS	13
34IJ-1-10	12/28-29/93	351.2	1-12-94	CW	14	351.2	1-13-94	TS	14
34IJ 1-10	12/28-29/93	—	—	—	—	353.2	1-12-94	TS	9
34IJ 1-10	12/28-29/93	—	—	—	—	350.1	1-16-94	TS	11

Note: Areas marked using a dash indicate that no sample preparation was required under the applied methodology.

Advanced Environmental Services

Sample Traceability Report

Organics Analysis

AES Job Code CTC

AES Job No. 34IJ

AES Sample No.	Sample Date	Sample Prep				Analysis			
		Method Number	Date	Analyst	Run #	Method Number	Date	Analyst	Run #
3415-6	12/29/93	8270	1/3/94	CB/HH	32	8270	1/7/94	JF	33
3415-8							L		
3415-9							1/11/94		
3415-10							L		
3415-6	12/29/93	-	-	-	-	8240	1/5/94	SS	23
3415-8									
3415-9									
3415-10									

Note: Areas marked using a dash indicate that no sample preparation was required under the applied methodology.