UCAR CARBON COMPANY INC. P.O. BOX 513, COLUMBIA, TENNESSEE 38402-0513

January 21, 1992

Mr. Robert J. Mitrey
Associate Sanitary Engineer
New York State Department of
Environmental Conservation
600 Delaware Street
Buffalo, New York 14202-1073

Re: Quarterly Report of Groundwater Analysis
Republic Solid Waste Management Facility
Post-closure Monitoring Program

Dear Mr. Mitrey:

I am enclosing a copy of the fifteenth quarter's groundwater sampling analysis from the closed Republic Solid Waste Management Facility. Bedrock well, BW-4 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:

Contaminate	15th Qtr. ppb	Mean Conc. ppb.	Range ppb
Vinyl Chloride	58	91	29-300
Trans-1,2-Dichloroethene	260	133	5.6-260
Chloroform	9.6	8	0-11.3
Trichloroethene	330	343	30-740
Tetrachloroethane	310	292	72-380
1,1,2,2-Tetrachloroethane	6.2	763	6.2-1600
Hexachlorobutadiene	72	55	10-160
bis(2-ethylhexyl) Phthalate	16	16	0-16

UCAR Carbon Company continues to maintain the opinion that this contamination at well BW-4-86 is not related to the closed Republic Solid Waste Management Facility particularly since the down-gradient bedrock well BW-6 continues to show no contamination.

If you have further questions or concerns about this data, please contact me at 615-380-4215.

Very truly yours,

UCAR CARBON COMPANY, INC.

R.A. Bolton

R. A. Bolton
HSEP Manager

RAB/bc

cc: Mr. Jim Devald, Sr. Public Health Engineer
Niagara County Health Department
P. O. Box 428
Niagara Falls, NY 14302-0428

Mr. Dave O'Tool
New York Department of Environmental Conservation
50 Wolf Road
Albany, NY 12233

Mr. A. C. Ogg

UCAR CARBON COMPANY, INC.

QUARTERLY REPUBLIC WASTE MANAGEMENT FACILITY POST CLOSURE MONITORING PROGRAM

Prepared By:

ADVANCED ENVIRONMENTAL SERVICES INC.

"A Company Dedicated to Honesty, Quality and Service"

Ref. # 914098, 914082, 914127

QA/QC Verification

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.

Denise R. Tuhovak
Organics Supervisor

Linda A. Ratka
Senior Inorganic Technician

Paul T. McMahon
Quality Control Officer

The following are standard abbreviations:

BQL - Below Quantifiable Limits
ND - None Detected
NG - No Growth of Colonies
NR - Not Requested

ADVANCED ENVIRONMENTAL SERVICES, INC.

QUARTERLY MONITORING WELL INFORMATION

UCAR Carbon Company
Niagara Falls, New York

AES Code: CTC

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	12/16/91	610.72	4	19.89	590.83	28.60	5.69	16.0	C
BW-2	12/18/91	608.43	4	18.02	590.41	26.10	5.27	16.0	C
BW-3	12/17/91	604.72	4	16.23	588.49	24.70	5.53	17.0	C
BW-4	12/17/91	607.08	4	16.18	590.90	22.50	4.13	16.0	C
BW-5	12/17/91	603.33	4	15.32	588.01	25.70	6.78	24.0	C
BW-6	12/18/91	607.04	4	19.26	587.78	24.65	3.52	10.0	R
MW-1	12/16/91	609.43	2	14.92	594.51	21.10	1.01	1.5(DRY)	S
MW-2	12/18/91	607.54	2	21.77	585.77	24.40	0.43	1.5(DRY)	R
MW-3	12/17/91	601.61	2	14.20	587.41	16.20	0.33	2.0(DRY)	N/A
OW-1 SOUTH	12/18/91	608.81	4	8.75	608.81	81.05	47.20	NR	N/A
OW-2 NORTH	12/18/91	607.06	4	8.95	607.06	35.90	17.59	NR	N/A

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

Michael Chang — Technician
1-13-92 — Date

ADVANCED ENVIRONMENTAL SERVICES, INC.

QUARTERLY MONITORING FIELD INFORMATION

UCAR Carbon Company

Niagara Falls, New York

AES Code: CTC

Monitoring Well I.D.	Date	Sampling Time	Water Level (ft.)	Turbidity (NTU)	Filter Time	Comments
BW-1	12/17/91	10:55 AM	19.62	9.25	4:25 PM	Clear w/orange particuli, no odor.
BW-2	12/18/91	11:05 AM	18.03	335.00	4:00 PM	Clear with fine black particuli.
BW-3	12/17/91	3:35 PM	16.25	27.50	4:50 PM	Slightly cloudy w/black solids, slight odor.
BW-4	12/17/91	3:45 PM	16.71	550.00	5:00 PM	Dark orange/rust color, globules of solids, strong SO2 odor.
BW-5	12/17/91	11:45 AM	15.35	96.30	4:45 PM	Orange particulates, slight odor.
BW-6	12/18/91	3:20 PM	19.45	1091.00	4:15 PM	Cloudy to turbid black.
MW-1	12/17/91	11:10 AM	15.07	17.60	4:35 PM	Cloudy, suspended solids, slight odor.
MW-2	12/18/91	2:55 PM	21.78	301.00	----*	Turbid black.
MW-2	12/19/91	11:30 AM	24.33	N/A	N/A**	Turbid black w/black solids, odor.
MW-3	12/18/91	3:00 PM	DRY	DRY	N/A	Well dry, no sample taken
OW-1 SOUTH	N/A	N/A	N/A	N/A	N/A	N/A
OW-2 NORTH	N/A	N/A	N/A	N/A	N/A	N/A
BLIND DUP	12/18/91	3:20 PM	N/A	945	4:15 PM	Cloudy to turbid, black.

The blind duplicate site was BW-6 and the quality control site was BW-4.

* Insufficient volume for filtered parameters.

** Monitoring location sampled for TKN, Ammonia, and Nitrate before well went dry.

N/A = Not Applicable

Michael Champ 1-13-92

Technician Date

CUST SAMPLE ID: MW-1
COLLECTION DATE(S): 12/17/91

COLLECTION METHOD: GRAB
SAMPLE TYPE: GROUNDWATER

LABORATORY JOB NO: 914082
LABORATORY REFERENCE NO: 10619
LABORATORY INORGANICS

Analytical Parameters	Analytical Results	Units	Method Detection Limits	Practical Quantifiable Limit	Method
Iron, Total (on flame)	8.96	mg/l	----	0.30	EPA 236.1
Iron, Soluble (on flame)	BQL	mg/l	----	0.30	EPA 236.1
Potassium, Total (on flame)	40.7	mg/l	----	1.00	EPA 258.1
Potassium, Soluble (on flame)	37.5	mg/l	----	1.00	EPA 258.1
Zinc, Total (on flame)	0.66	mg/l	----	0.05	EPA 289.1
Zinc, Soluble (on flame)	BQL	mg/l	----	0.05	EPA 289.1
Ammonia	7.80	mg/l	----	0.02	EPA 350.1
Nitrite	BQL	mg/l	----	0.01	EPA 353.2
Total Kjeldahl Nitrogen	8.0	mg/l	----	0.1	EPA 351.2

CUST SAMPLE ID: BW-1
COLLECTION DATE(S): 12/17/91

COLLECTION METHOD: GRAB
SAMPLE TYPE: GROUNDWATER

LABORATORY JOB NO: 914082
LABORATORY REFERENCE NO: 10620
LABORATORY INORGANICS

Analytical Parameters	Analytical Results	Units	Method Detection Limits	Practical Quantifiable Limit	Method
Iron, Total (on flame)	4.36	mg/l	----	0.30	EPA 236.1
Iron, Total (on flame)	1.09	mg/l	----	0.30	EPA 236.1
Potassium, Total (on flame)	4.57	mg/l	----	1.00	EPA 258.1
Potassium, Soluble (on flame)	4.33	mg/l	----	1.00	EPA 258.1
Zinc, Total (on flame)	2.13	mg/l	----	0.05	EPA 289.1
Zinc, Soluble (on flame)	1.26	mg/l	----	0.05	EPA 289.1
Ammonia	0.16	mg/l	----	0.02	EPA 350.1
Nitrite	BQL	mg/l	----	0.01	EPA 353.2
Total Kjeldahl Nitrogen	0.4	mg/l	----	0.1	EPA 351.2

CUST SAMPLE ID: BW-3
COLLECTION DATE(S): 12/17/91

COLLECTION METHOD: GRAB
SAMPLE TYPE: GROUNDWATER

LABORATORY JOB NO: 914082
LABORATORY REFERENCE NO: 10621
LABORATORY INORGANICS

Analytical Parameters	Analytical Results	Units	Method Detection Limits	Practical Quantifiable Limit	Method
Iron, Total (on flame)	2.98	mg/l	----	0.30	EPA 236.1
Iron, Soluble (on flame)	0.77	mg/l	----	0.30	EPA 236.1
Potassium, Total (on flame)	4.10	mg/l	----	1.00	EPA 258.1
Potassium, Soluble (on flame)	4.09	mg/l	----	1.00	EPA 258.1
Zinc, Total (on flame)	0.99	mg/l	----	0.05	EPA 289.1
Zinc, Soluble (on flame)	0.16	mg/l	----	0.05	EPA 289.1
Ammonia	0.74	mg/l	----	0.02	EPA 350.1
Nitrate	BQL	mg/l	----	0.01	EPA 353.2
Total Kjeldahl Nitrogen	1.2	mg/l	----	0.1	EPA 351.2

CUST SAMPLE ID: BW-4
COLLECTION DATE(S): 12/17/91

COLLECTION METHOD: GRAB
SAMPLE TYPE: GROUNDWATER

LABORATORY JOB NO: 914082
LABORATORY REFERENCE NO: 10622
LABORATORY INORGANICS/ORGANICS

Analytical Parameters	Analytical Results	Units	Method Detection Limits	Practical Quantifiable Limit	Method
Iron, Total (on flame)	567	mg/l	----	0.30	EPA 236.1
Iron, Soluble (on flame)	2.96	mg/l	----	0.30	EPA 236.1
Potassium, Total (on flame)	30.8	mg/l	----	1.00	EPA 258.1
Potassium, Soluble (on flame)	30.4	mg/l	----	1.00	EPA 258.1
Zinc, Total (on flame)	5.40	mg/l	----	0.05	EPA 289.1
Zinc, Soluble (on flame)	BQL	mg/l	----	0.05	EPA 289.1
Ammonia	7.10	mg/l	----	0.02	EPA 350.1
Nitrite	BQL	mg/l	----	0.01	EPA 353.2
Total Kjeldahl Nitrogen	7.8	mg/l	----	0.1	EPA 351.2
Chloromethane	BQL	ug/l	----	10	SW 846 8240
Vinyl Chloride	58	ug/l	----	10	SW 846 8240
Chloroethane	BQL	ug/l	----	10	SW 846 8240
Bromomethane	BQL	ug/l	----	10	SW 846 8240
Acetone	BQL	ug/l	----	50	SW 846 8240
1,1-dichloroethene	BQL	ug/l	----	5.0	SW 846 8240
Carbon Disulfide	BQL	ug/l	----	5.0	SW 846 8240
Methylene Chloride	BQL	ug/l	----	10	SW 846 8240
trans-1,2-dichloroethene	260	ug/l	----	5.0	SW 846 8240
1,1-dichloroethane	BQL	ug/l	----	5.0	SW 846 8240
Vinyl Acetate	BQL	ug/l	----	50	SW 846 8240
2-butanone	BQL	ug/l	----	50	SW 846 8240
Chloroform	9.6	ug/l	----	5.0	SW 846 8240
1,1,1-Trichloroethane	BQL	ug/l	----	5.0	SW 846 8240
Carbon Tetrachloride	BQL	ug/l	----	5.0	SW 846 8240
Benzene	BQL	ug/l	----	5.0	SW 846 8240

CUST SAMPLE ID: BW-4
COLLECTION DATE(S): 12/17/91

COLLECTION METHOD: GRAB
SAMPLE TYPE: GROUNDWATER

LABORATORY JOB NO: 914082
LABORATORY REFERENCE NO: 10622
LABORATORY INORGANICS/ORGANICS

Analytical Parameters	Analytical Results	Units	Method Detection Limits	Practical Quantifiable Limit	Method
1,2-dichloroethane	BQL	ug/l	----	5.0	SW 846 8240
Trichloroethene	330	ug/l	----	5.0	SW 846 8240
1,2-dichloropropane	BQL	ug/l	----	5.0	SW 846 8240
Bromodichloromethane	BQL	ug/l	----	5.0	SW 846 8240
2-Chloroethyl vinyl ether	BQL	ug/l	----	10	SW 846 8240
4-Methyl-2-Pentanone	BQL	ug/l	----	5.0	SW 846 8240
cis-1,3-dichloropropene	BQL	ug/l	----	5.0	SW 846 8240
Toluene	BQL	ug/l	----	5.0	SW 846 8240
trans-1,3-dichloropropene	BQL	ug/l	----	5.0	SW 846 8240
1,1,2-Trichloroethane	BQL	ug/l	----	5.0	SW 846 8240
Tetrachloroethene	310	ug/l	----	5.0	SW 846 8240
Chlorodibromomethane	BQL	ug/l	----	5.0	SW 846 8240
Chlorobenzene	BQL	ug/l	----	5.0	SW 846 8240
Ethylbenzene	BQL	ug/l	----	5.0	SW 846 8240
Bromoform	BQL	ug/l	----	5.0	SW 846 8240
1,1,2,2-Tetrachloroethane	6.2	ug/l	----	5.0	SW 846 8240
2-hexanone	BQL	ug/l	----	50	SW 846 8240
o/p-Xylene	BQL	ug/l	----	5.0	SW 846 8240
m-Xylene	BQL	ug/l	----	5.0	SW 846 8240
Styrene	BQL	ug/l	----	5.0	SW 846 8240
N-Nitrosodimethylamine	BQL *	ug/l	----	10	SW846 8270
bis (2-chlrooethyl) Ether	BQL *	ug/l	----	10	SW846 8270
1,3-dichlorobenzene	BQL *	ug/l	----	10	SW846 8270
1,4-dichlorobenzene	BQL *	ug/l	----	10	SW846 8270
Benzyl Alcohol	BQL *	ug/l	----	10	SW846 8270

CUST SAMPLE ID: BW-4
COLLECTION DATE(S): 12/17/91

COLLECTION METHOD: GRAB
SAMPLE TYPE: GROUNDWATER

LABORATORY JOB NO: 914082
LABORATORY REFERENCE NO: 10622
LABORATORY INORGANICS/ORGANICS

Analytical Parameters	Analytical Results	Units	Method Detection Limits	Practical Quantifiable Limit	Method
1,2-dichlorobenzene	BQL *	ug/l	----	10	SW846 8270
bis (2-chloroisopropyl) Ether	BQL *	ug/l	----	10	SW846 8270
N-nitrosodinpropylamine	BQL *	ug/l	----	10	SW846 8270
Hexachloroethane	BQL *	ug/l	----	10	SW846 8270
Nitrobenzene	BQL *	ug/l	----	10	SW846 8270
Isophorone	BQL *	ug/l	----	10	SW846 8270
bis (2-chloroethoxy) Methane	BQL *	ug/l	----	10	SW846 8270
1,2,4-trichlorobenzene	BQL *	ug/l	----	10	SW846 8270
Naphthalene	BQL *	ug/l	----	10	SW846 8270
4-chloroaniline	BQL *	ug/l	----	10	SW846 8270
Hexachlorobutadiene	72 *	ug/l	----	10	SW846 8270
2-methylnaphthalene	BQL *	ug/l	----	10	SW846 8270
Hexachlorocyclopentadiene	BQL *	ug/l	----	10	SW846 8270
2-chloronaphthalene	BQL *	ug/l	----	10	SW846 8270
2-nitroaniline	BQL *	ug/l	----	40	SW846 8270
Dimethylphthalate	BQL *	ug/l	----	10	SW846 8270
2,6-dinitrotoluene	BQL *	ug/l	----	10	SW846 8270
Acenaphthylene	BQL *	ug/l	----	10	SW846 8270
3-nitroaniline	BQL *	ug/l	----	40	SW846 8270
Acenaphthene	BQL *	ug/l	----	10	SW846 8270
Dibenzofuran	BQL *	ug/l	----	10	SW846 8270
2,4-dinitrotoluene	BQL *	ug/l	----	10	SW846 8270
Diethylphthalate	BQL *	ug/l	----	10	SW846 8270
4-Chlorophenylphenylether	BQL *	ug/l	----	10	SW846 8270
Fluorene	BQL *	ug/l	----	10	SW846 8270

CUST SAMPLE ID: BW-4
COLLECTION DATE(S): 12/17/91

COLLECTION METHOD: GRAB
SAMPLE TYPE: GROUNDWATER

LABORATORY JOB NO: 914082
LABORATORY REFERENCE NO: 10622
LABORATORY INORGANICS/ORGANICS

Analytical Parameters	Analytical Results	Units	Method Detection Limits	Practical Quantifiable Limit	Method
4-nitroaniline	BQL *	ug/l	----	40	SW846 8270
n-nitrosodiphenylamine	BQL *	ug/l	----	10	SW846 8270
4-Bromophenylphenylether	BQL *	ug/l	----	10	SW846 8270
Hexachlorobenzene	BQL *	ug/l	----	10	SW846 8270
Phenanathrene	BQL *	ug/l	----	10	SW846 8270
Anthracene	BQL *	ug/l	----	10	SW846 8270
di-n-Butylphthalate	BQL *	ug/l	----	10	SW846 8270
Fluoranthene	BQL *	ug/l	----	10	SW846 8270
Benzidine	BQL *	ug/l	----	40	SW846 8270
Pyrene	BQL *	ug/l	----	10	SW846 8270
Butylbenzylphtalate	BQL *	ug/l	----	10	SW846 8270
3,3-dichlorobenzidine	BQL *	ug/l	----	20	SW846 8270
Benzo (a) Anthracene	BQL *	ug/l	----	10	SW846 8270
bis (2-ethylhexyl) Phthalate	16 *	ug/l	----	10	SW846 8270
Chrysene	BQL *	ug/l	----	10	SW846 8270
di-n-octylphthalate	BQL *	ug/l	----	10	SW846 8270
Benzo (b) Fluoranthene	BQL *	ug/l	----	10	SW846 8270
Benzo (k) Fluoranthene	BQL *	ug/l	----	10	SW846 8270
Benzo (a) Pyrene	BQL *	ug/l	----	10	SW846 8270
Indeno (1,2,3-cd)pyrene	BQL *	ug/l	----	10	SW846 8270
Dibenzo (a,h) Anthracene	BQL *	ug/l	----	10	SW846 8270
Benzo (g,h,i) Perylene	BQL *	ug/l	----	10	SW846 8270
Phenol	BQL *	ug/l	----	10	SW846 8270
2-methylphenol	BQL *	ug/l	----	10	SW846 8270
4-methylphenol	BQL *	ug/l	----	10	SW846 8270

CUST SAMPLE ID: BW-4
COLLECTION DATE(S): 12/17/91

COLLECTION METHOD: GRAB
SAMPLE TYPE: GROUNDWATER

LABORATORY JOB NO: 914082
LABORATORY REFERENCE NO: 10622
LABORATORY INORGANICS/ORGANICS

Analytical Parameters	Analytical Results	Units	Method Detection Limits	Practical Quantifiable Limit	Method
2-nitrophenol	BQL *	ug/l	----	10	SW846 8270
2,4-dimethylphenol	BQL *	ug/l	----	10	SW846 8270
Benzoic Acid	BQL *	ug/l	----	30	SW846 8270
2,4-dichlorophenol	BQL *	ug/l	----	10	SW846 8270
2-chlorophenol	BQL *	ug/l	----	10	SW846 8270
4-chloro-3-methylphenol	BQL *	ug/l	----	10	SW846 8270
2,4,6-trichlorophenol	BQL *	ug/l	----	10	SW846 8270
2,4,5-trichlorophenol	BQL *	ug/l	----	10	SW846 8270
2,4-dinitrophenol	BQL *	ug/l	----	40	SW846 8270
4-nitrophenol	BQL *	ug/l	----	40	SW846 8270
4,6-Dinitro-2-Methylphenol	BQL *	ug/l	----	40	SW846 8270
pentachlorophenol	BQL *	ug/l	----	40	SW846 8270

FOOTNOTES

* Samples for 8270 analysis were collected in clear jars. While, Method 8270 specifies amber jars. Customer was notified 12/20/91.

CUST SAMPLE ID: BW-5
COLLECTION DATE(S): 12/17/91

COLLECTION METHOD: GRAB
SAMPLE TYPE: GROUNDWATER

LABORATORY JOB NO: 914082
LABORATORY REFERENCE NO: 10623
LABORATORY INORGANICS

Analytical Parameters	Analytical Results	Units	Method Detection Limits	Practical Quantifiable Limit	Method
Iron, Total (on flame)	14.0	mg/l	----	0.30	EPA 236.1
Iron, Soluble (on flame)	0.48	mg/l	----	0.30	EPA 236.1
Potassium, Total (on flame)	2.92	mg/l	----	1.00	EPA 258.1
Potassium, Soluble (on flame)	2.89	mg/l	----	1.00	EPA 258.1
Zinc, Total (on flame)	2.01	mg/l	----	0.05	EPA 289.1
Zinc, Soluble (on flame)	BQL	mg/l	----	0.05	EPA 289.1
Ammonia	0.27	mg/l	----	0.02	EPA 350.1
Nitrite	BQL	mg/l	----	0.01	EPA 353.2
Total Kjeldahl Nitrogen	0.5	mg/l	----	0.1	EPA 351.2

CUST SAMPLE ID: TRIP BLANK
COLLECTION DATE(S): 12/17/91

COLLECTION METHOD: GRAB
SAMPLE TYPE: BAKER WATER

LABORATORY JOB NO: 914082
LABORATORY REFERENCE NO: 10624
LABORATORY ORGANICS

Analytical Parameters	Analytical Results	Units	Method Detection Limits	Practical Quantifiable Limit	Method
Chloromethane	BQL	ug/l	----	10	SW 846 8240
Vinyl Chloride	BQL	ug/l	----	10	SW 846 8240
Chloroethane	BQL	ug/l	----	10	SW 846 8240
Bromomethane	BQL	ug/l	----	10	SW 846 8240
Acetone	BQL	ug/l	----	50	SW 846 8240
1,1 dichloroethene	BQL	ug/l	----	5.0	SW 846 8240
Carbon Disulfide	BQL	ug/l	----	5.0	SW 846 8240
Methylene Chloride	BQL	ug/l	----	10	SW 846 8240
trans-1,2-dichloroethene	BQL	ug/l	----	5.0	SW 846 8240
1,1 dichloroethane	BQL	ug/l	----	5.0	SW 846 8240
Vinyl Acetate	BQL	ug/l	----	50	SW 846 8240
2-butanone	BQL	ug/l	----	50	SW 846 8240
Chloroform	BQL	ug/l	----	5.0	SW 846 8240
1,1,1-Trichloroethane	BQL	ug/l	----	5.0	SW 846 8240
Carbon Tetrachloride	BQL	ug/l	----	5.0	SW 846 8240
Benzene	BQL	ug/l	----	5.0	SW 846 8240
1,2 dichloroethane	BQL	ug/l	----	5.0	SW 846 8240
Trichloroethene	BQL	ug/l	----	5.0	SW 846 8240
1,2 dichloropropane	BQL	ug/l	----	5.0	SW 846 8240
Bromodichloromethane	BQL	ug/l	----	5.0	SW 846 8240
2-Chloroethyl vinyl ether	BQL	ug/l	----	10	SW 846 8240
4-Methyl-2-Pentanone	BQL	ug/l	----	5.0	SW 846 8240
cis-1,3-dichloropropene	BQL	ug/l	----	5.0	SW 846 8240
Toluene	BQL	ug/l	----	5.0	SW 846 8240
trans-1,3-dichloropropene	BQL	ug/l	----	5.0	SW 846 8240

CUST SAMPLE ID: TRIP BLANK
COLLECTION DATE(S): 12/17/91

COLLECTION METHOD: GRAB
SAMPLE TYPE: BAKER WATER

LABORATORY JOB NO: 914082
LABORATORY REFERENCE NO: 10624
LABORATORY ORGANICS

Analytical Parameters	Analytical Results	Units	Method Detection Limits	Practical Quantifiable Limit	Method
1,1,2-Trichloroethane	BQL	ug/l	----	50.	SW 846 8240
Tetrachloroethene	BQL	ug/l	----	5.0	SW 846 8240
Chlorodibromomethane	BQL	ug/l	----	5.0	SW 846 8240
Chlorobenzene	BQL	ug/l	----	5.0	SW 846 8240
Ethylbenzene	BQL	ug/l	----	5.0	SW 846 8240
Bromoform	BQL	ug/l	----	5.0	SW 846 8240
1,1,2,2-Tetrachloroethane	BQL	ug/l	----	5.0	SW 846 8240
2-hexanone	BQL	ug/l	----	50	SW 846 8240
o/p-Xylene	BQL	ug/l	----	5.0	SW 846 8240
m-Xylene	BQL	ug/l	----	5.0	SW 846 8240
Styrene	BQL	ug/l	----	5.0	SW 846 8240

CUST SAMPLE ID: FIELD BLANK
COLLECTION DATE(S): 12/17/91

COLLECTION METHOD: GRAB
SAMPLE TYPE: DI WATER

LABORATORY JOB NO: 914082
LABORATORY REFERENCE NO: 10625
LABORATORY INORGANICS/ORGANICS

Analytical Parameters	Analytical Results	Units	Method Detection Limits	Practical Quantifiable Limit	Method
Iron, Total (on flame)	BQL	mg/l	----	0.30	EPA 236.1
Potassium, Total (on flame)	BQL	mg/l	----	1.00	EPA 258.1
Zinc, Total (on flame)	BQL	mg/l	----	0.05	EPA 289.1
Ammonia	BQL	mg/l	----	0.02	EPA 350.1
Nitrite	BQL	mg/l	----	0.01	EPA 353.2
Total Kjeldahl Nitrogen	BQL	mg/l	----	0.1	EPA 351.2
N-Nitrosodimethylamine	BQL *	ug/l	----	10	SW 846 8270
bis (2-chloroethyl) Ether	BQL *	ug/l	----	10	SW 846 8270
1,3-dichlorobenzene	BQL *	ug/l	----	10	SW 846 8270
1,4-dichlorobenzene	BQL *	ug/l	----	10	SW 846 8270
Benzyl Alcohol	BQL *	ug/l	----	10	SW 846 8270
1,2-dichlorobenzene	BQL *	ug/l	----	10	SW 846 8270
bis (2-chloroisopropyl) Ether	BQL *	ug/l	----	10	SW 846 8270
N-nitrosodinpropylamine	BQL *	ug/l	----	10	SW 846 8270
Hexachloroethane	BQL *	ug/l	----	10	SW 846 8270
Nitrobenzene	BQL *	ug/l	----	10	SW 846 8270
Isophorone	BQL *	ug/l	----	10	SW 846 8270
bis (2-chloroethoxy) Methane	BQL *	ug/l	----	10	SW 846 8270
1,2,4-trichlorobenzene	BQL *	ug/l	----	10	SW 846 8270
Napthalene	BQL *	ug/l	----	10	SW 846 8270
4-chloroaniline	BQL *	ug/l	----	10	SW 846 8270
Hexachlorobutadiene	BQL *	ug/l	----	10	SW 846 8270
2-methylnapthalene	BQL *	ug/l	----	10	SW 846 8270
Hexachlorocyclopentadiene	BQL *	ug/l	----	10	SW 846 8270
2-chloronaphthalene	BQL *	ug/l	----	10	SW 846 8270

CUST SAMPLE ID: FIELD BLANK
COLLECTION DATE(S): 12/17/91

COLLECTION METHOD: GRAB
SAMPLE TYPE: DI WATER

LABORATORY JOB NO: 914082
LABORATORY REFERENCE NO: 10625
LABORATORY INORGANICS/ORGANICS

Analytical Parameters	Analytical Results	Units	Method Detection Limits	Practical Quantifiable Limit	Method
2-nitroaniline	BQL *	ug/l	----	40	SW 846 8270
Dimethylphthalate	BQL *	ug/l	----	10	SW 846 8270
2,6-dinitrotoluene	BQL *	ug/l	----	10	SW 846 8270
Acenaphthylene	BQL *	ug/l	----	10	SW 846 8270
3-nitroanaline	BQL *	ug/l	----	40	SW 846 8270
Acenaphthene	BQL *	ug/l	----	10	SW 846 8270
Dibenzofuran	BQL *	ug/l	----	10	SW 846 8270
2,4-dinitrotoluene	BQL *	ug/l	----	10	SW 846 8270
Diethylphthalate	BQL *	ug/l	----	10	SW 846 8270
4-Chlorophenylphenylether	BQL *	ug/l	----	10	SW 846 8270
Fluorene	BQL *	ug/l	----	10	SW 846 8270
4-nitroaniline	BQL *	ug/l	----	40	SW 846 8270
n-nitrosodiphenylamine	BQL *	ug/l	----	10	SW 846 8270
4-Bromophenylphenylether	BQL *	ug/l	----	10	SW 846 8270
Hexachlorobenzene	BQL *	ug/l	----	10	SW 846 8270
Phenanthrene	BQL *	ug/l	----	10	SW 846 8270
Anthracene	BQL *	ug/l	----	10	SW 846 8270
di-n-Butylphthalate	BQL *	ug/l	----	10	SW 846 8270
Fluoranthene	BQL *	ug/l	----	10	SW 846 8270
Benzidine	BQL *	ug/l	----	40	SW 846 8270
Pyrene	BQL *	ug/l	----	10	SW 846 8270
Butylbenzylphthalate	BQL *	ug/l	----	10	SW 846 8270
3,3-dichlorobenzidine	BQL *	ug/l	----	20	SW 846 8270
Benzo (a) Anthracene	BQL *	ug/l	----	10	SW 846 8270
bis (2-ethylhexyl) Phthalate	BQL *	ug/l	----	10	SW 846 8270

CUST SAMPLE ID: FIELD BLANK
COLLECTION DATE(S): 12/17/91

COLLECTION METHOD: GRAB
SAMPLE TYPE: DI WATER

LABORATORY JOB NO: 914082
LABORATORY REFERENCE NO: 10625
LABORATORY INORGANICS/ORGANICS

Analytical Parameters	Analytical Results	Units	Method Detection Limits	Practical Quantifiable Limit	Method
Chyrsene	BQL *	ug/l	----	10	SW 846 8270
di-n-octylphthalate	BQL *	ug/l	----	10	SW 846 8270
Benzo (b) Fluoranthene	BQL *	ug/l	----	10	SW 846 8270
Benzo (k) Fluoranthene	BQL *	ug/l	----	10	SW 846 8270
Benzo (a) Pyrene	BQL *	ug/l	----	10	SW 846 8270
Indeno (1,2,3-cd)pyrene	BQL *	ug/l	----	10	SW 846 8270
Dibenzo (a,h) Anthracene	BQL *	ug/l	----	10	SW 846 8270
Benzo (g,h,i) Perylene	BQL *	ug/l	----	10	SW 846 8270
Phenol	BQL *	ug/l	----	10	SW 846 8270
2-methylphenol	BQL *	ug/l	----	10	SW 846 8270
4-methylphenol	BQL *	ug/l	----	10	SW 846 8270
2-nitrophenol	BQL *	ug/l	----	10	SW 846 8270
2,4-dimethylphenol	BQL *	ug/l	----	10	SW 846 8270
Benzoic Acid	BQL *	ug/l	----	30	SW 846 8270
2,4-dichlorophenol	BQL *	ug/l	----	10	SW 846 8270
2-chlorophenol	BQL *	ug/l	----	10	SW 846 8270
4-chloro-3-methylphenol	BQL *	ug/l	----	10	SW 846 8270
2,4,6-trichlorophenol	BQL *	ug/l	----	10	SW 846 8270
2,4,5-trichlorophenol	BQL *	ug/l	----	10	SW 846 8270
2,4-dinitrophenol	BQL *	ug/l	----	40	SW 846 8270
4-nitrophenol	BQL *	ug/l	----	40	SW 846 8270
4,6-Dinitro-2-Methylphenol	BQL *	ug/l	----	40	SW 846 8270
pentachlorophenol	BQL *	ug/l	----	40	SW 846 8270

FOOTNOTES

* Samples for 8270 analysis were collected in clear jars. While, Method 8270 specifies amber jars. Customer was notified 12/20/91.

LABORATORY REPORT
QUALITY CONTROL - PRECISION

Type of Analysis: Duplicate Analysis A.E.S. Job Code: CTC
Client: UCAR CARBON COMPANY INC. Units: Milligrams/Liter

Analytical Parameters	Sample No.	Original Concentration	Duplicate Concentration	Average Concentration	Range	Relative % Difference
Zinc, Total	10622	5.20	5.60	5.40	0.4	7.4
Zinc, Soluble	10622	BQL	BQL	BQL	NA	NA
Potassium, Total	10622	30.5	31.0	30.8	0.5	1.6
Potassium, Soluble	10622	30.4	30.4	30.4	0	0
Iron, Total	10622	543	591	567	48	8.5
Iron, Soluble	10622	2.91	3.00	2.96	0.09	3.0
Nitrite	10622	BQL	BQL	BQL	NA	NA
Total Kjeldahl Nitrogen	10622	8.0	7.6	7.8	0.4	5.1
Ammonia	10622	7.00	7.20	7.10	0.2	2.8
Vinyl Chloride (ug/l)	10622	60	55	58	5.0	9
Chloroform (ug/l)	10622	9.8	9.5	9.6	0.3	3
1,1,2,2-Tetrachloroethane (ug/l)	10622	6.2	6.1	6.2	0.1	2
trans-1,2-Dichloroethene (ug/l)	10622	260	250	260	10	4

* Relative Percent Difference = (Range/Average) X 100

FOOTNOTES

** Due to extraction problem the duplicate for the 8270 anlaysis could not be reported.

LABORATORY REPORT
QUALITY CONTROL - PRECISION

Type of Analysis: Duplicate Analysis
Client: UCAR CARBON COMPANY INC.

A.E.S. Job Code: CTC
Units: ug/l

Analytical Parameters	Sample No.	Original Concentration	Duplicate Concentration	Average Concentration	Range	Relative % Difference
Trichloroethene	10622	330	320	330	10	3
Tetrachloroethene	10622	320	300	310	20	6
All other 8240 Analytes	10622	BQL	BQL	BQL	NA	NA

* Relative Percent Difference = (Range/Average) X 100

FOOTNOTES

** Due to extraction problem the duplicate for the 8270 analysis could not be reported.

LABORATORY CONTROL
QUALITY CONTROL - ACCURACY

Type of Analysis: Matrix Spikes and E.P.A. Standards
Client: UCAR CARBON COMPANY INC.

A.E.S. Job Code: CTC
Units: mg/l

Analytical Parameters	Sample No.	Type	Observed Concentration	Original Concentration	Added Concentration	Percent Recovery*
Zinc, Total	10622	SPK	5.90	5.40	0.50	100
Zinc, Soluble	10622	SPK	0.47	BQL	0.50	94
Potassium, Total	10622	SPK **	36.2	15.4	20.0	104
Potassium, Soluble	10622	SPK **	36.4	15.2	20.0	106
Iron, Total	10622	SPK	570	567	4.00	75
Iron, Soluble	10622	SPK	6.82	2.96	4.00	96
Nitrite	10622	SPK	0.26	BQL	0.25	104
Total Kjeldahl Nitrogen	10622	SPK	17	7.8	8.0	115
Total Kjeldahl Nitrogen	----	EPA	5.2	5.0	NONE	104
Ammonia	10622	SPK	18.4	7.1	10.0	113
Ammonia	----	EPA	1.95	1.98	NONE	98
1,1-Dichloroethene (ug/l)	10622	SPK	22.9	BQL	20.0	114
Chloroform (ug/l)	10622	SPK	29.8	9.6	20.0	101

* % Recovery = 100 x ((Observed Concentration - "background" Original Concentration) / "Spike" Added Concentration)

* If Added=NONE: % Recovery = 100 x (Observed Concentration / "background" Original Concentration)

FOOTNOTES

** Spike performed on a sample dilution.

LABORATORY CONTROL
QUALITY CONTROL - ACCURACY

Type of Analysis: Matrix Spikes and E.P.A. Standards
Client: UCAR CARBON COMPANY INC.

A.E.S. Job Code: CTC
Units: ug/l or ppb

Analytical Parameters	Sample No.	Type	Observed Concentration	Original Concentration	Added Concentration	Percent Recovery*
Benzene	10622	SPK	21.5	BQL	20.0	108
Toluene	10622	SPK	21.4	BQL	20.0	107
Chlorobenzene	10622	SPK	20.2	BQL	20.0	101
Phenol	10622	SPK	112	BQL	200	56
2-Chlorophenol	10622	SPK	139	BQL	200	70
1,4-Dichlorobenzene	10622	SPK	73.1	BQL	100	73
N-nitrosodipropylamine	10622	SPK	81.1	BQL	100	81
1,2,4-Trichlorobenzene	10622	SPK	79.0	BQL	100	79
4-Chloro-3-Methylphenol	10622	SPK	151	BQL	200	75
Acenaphthene	10622	SPK	79.9	BQL	100	80
4-Nitrophenol	10622	SPK	119	BQL	200	60
2,4-Dinitrotoluene	10622	SPK	91.5	BQL	100	92
Pentachlorophenol	10622	SPK	206	BQL	200	103

* % Recovery = 100 x ((Observed Concentration - "background" Original Concentration) / "Spike" Added Concentration)

* If Added=NONE: % Recovery = 100 x (Observed Concentration / "background" Original Concentration)

LABORATORY CONTROL
QUALITY CONTROL - ACCURACY

Type of Analysis: Matrix Spikes and E.P.A. Standards
Client: UCAR CARBON COMPANY INC.

A.E.S. Job Code: CTC
Units: ug/l or ppb

Analytical Parameters	Sample No.	Type	Observed Concentration	Original Concentration	Added Concentration	Percent Recovery*
Pyrene	10622	SPK	72.7	BQL	100	73

* % Recovery = 100 x ((Observed Concentration - "background" Original Concentration) / "Spike" Added Concentration)

* If Added=NONE: % Recovery = 100 x (Observed Concentration / "background" Original Concentration)

CUST SAMPLE ID: BW-2
COLLECTION DATE(S): 12/18/91

COLLECTION METHOD: GRAB
SAMPLE TYPE: GROUNDWATER

LABORATORY JOB NO: 914098
LABORATORY REFERENCE NO: 10667
LABORATORY INORGANIC ANALYSIS

Analytical Parameters	Analytical Results	Units	Method Detection Limits	Practical Quantifiable Limit	Method
Iron, Total (on flame)	19.0	mg/l	----	0.30	EPA 236.1
Iron, Soluble (on flame)	2.74	mg/l	----	0.30	EPA 236.1
Potassium, Total (on flame)	8.26	mg/l	----	1.00	EPA 258.1
Potassium, Soluble (on flame)	8.03	mg/l	----	1.00	EPA 258.1
Zinc, Total (on flame)	36.5	mg/l	----	0.05	EPA 289.1
Zinc, Soluble (on flame)	0.15	mg/l	----	0.05	EPA 289.1
Ammonia	1.48	mg/l	----	0.02	EPA 350.1
Nitrite	BQL	mg/l	----	0.01	EPA 353.2
Total Kjeldahl Nitrogen	1.6	mg/l	----	0.1	EPA 351.2

CUST SAMPLE ID: BW-6
COLLECTION DATE(S): 12/18/91

COLLECTION METHOD: GRAB
SAMPLE TYPE: GROUNDWATER

LABORATORY JOB NO: 914098
LABORATORY REFERENCE NO: 10668
LABORATORY INORGANICS/ORGANICS

Analytical Parameters	Analytical Results	Units	Method Detection Limits	Practical Quantifiable Limit	Method
Iron, Total (on flame)	618	mg/l	----	0.30	EPA 236.1
Iron, Soluble (on flame)	5.40	mg/l	----	0.30	EPA 236.1
Potassium, Total (on flame)	24.2	mg/l	----	1.00	EPA 258.1
Potassium, Soluble (on flame)	1.74	mg/l	----	1.00	EPA 258.1
Zinc, Total (on flame)	1.06	mg/l	----	0.05	EPA 289.1
Zinc, Soluble (on flame)	BQL	mg/l	----	0.05	EPA 289.1
Ammonia	0.23	mg/l	----	0.02	EPA 350.1
Nitrite	BQL	mg/l	----	0.01	EPA 353.2
Total Kjeldahl Nitrogen	0.5	mg/l	----	0.1	EPA 351.2
Chloromethane	BQL	ug/l	----	10	SW 846 8240
Vinyl Chloride	BQL	ug/l	----	10	SW 846 8240
Chloroethane	BQL	ug/l	----	10	SW 846 8240
Bromomethane	BQL	ug/l	----	10	SW 846 8240
Acetone	BQL	ug/l	----	50	SW 846 8240
1,1-dichloroethene	BQL	ug/l	----	5.0	SW 846 8240
Carbon Disulfide	BQL	ug/l	----	5.0	SW 846 8240
Methylene Chloride	BQL	ug/l	----	10	SW 846 8240
trans-1,2-dichloroethene	BQL	ug/l	----	5.0	SW 846 8240
1,1-dichloroethane	BQL	ug/l	----	5.0	SW 846 8240
Vinyl Acetate	BQL	ug/l	----	50	SW 846 8240
2-butanone	BQL	ug/l	----	50	SW 846 8240
Chloroform	BQL	ug/l	----	5.0	SW 846 8240
1,1,1-Trichloroethane	BQL	ug/l	----	5.0	SW 846 8240
Carbon Tetrachloride	BQL	ug/l	----	5.0	SW 846 8240
Benzene	BQL	ug/l	----	5.0	SW 846 8240

CUST SAMPLE ID: BW-6
COLLECTION DATE(S): 12/18/91

COLLECTION METHOD: GRAB
SAMPLE TYPE: GROUNDWATER

LABORATORY JOB NO: 914098
LABORATORY REFERENCE NO: 10668
LABORATORY INORGANICS/ORGANICS

Analytical Parameters	Analytical Results	Units	Method Detection Limits	Practical Quantifiable Limit	Method
1,2-dichloroethane	BQL	ug/l	----	5.0	SW 846 8240
Trichloroethene	BQL	ug/l	----	5.0	SW 846 8240
1,2-dichloropropane	BQL	ug/l	----	5.0	SW 846 8240
Bromodichloromethane	BQL	ug/l	----	5.0	SW 846 8240
2-Chloroethyl vinyl ether	BQL	ug/l	----	10	SW 846 8240
4-Methyl-2-Petanone	BQL	ug/l	----	50	SW 846 8240
cis-1,3-dichlroopropene	BQL	ug/l	----	5.0	SW 846 8240
Toluene	BQL	ug/l	----	5.0	SW 846 8240
trans-1,3-dichloropropene	BQL	ug/l	----	5.0	SW 846 8240
1,1,2-Trichloroethane	BQL	ug/l	----	5.0	SW 846 8240
Tetrachloroethene	BQL	ug/l	----	5.0	SW 846 8240
Chlorodibromomethane	BQL	ug/l	----	5.0	SW 846 8240
Chlorobenzene	BQL	ug/l	----	5.0	SW 846 8240
Ethylbenzene	BQL	ug/l	----	5.0	SW 846 8240
Bromoform	BQL	ug/l	----	5.0	SW 846 8240
1,1,2,2-Tetrachloroethane	BQL	ug/l	----	5.0	SW 846 8240
2-hexanone	BQL	ug/l	----	50	SW 846 8240
o/p-Xylene	BQL	ug/l	----	5.0	SW 846 8240
m-Xylene	BQL	ug/l	----	5.0	SW 846 8240
Styrene	BQL	ug/l	----	5.0	SW 846 8240
N-Nitrosodimethylamine	BQL *	ug/l	----	10	SW846 8270
bis (2-chloroethyl) Ether	BQL *	ug/l	----	10	SW846 8270
1,3-dichlorobenzene	BQL *	ug/l	----	10	SW846 8270
1,4-dichlorobenzene	BQL *	ug/l	----	10	SW846 8270
Benzyl Alcohol	BQL *	ug/l	----	10	SW846 8270

CUST SAMPLE ID: BW-6
COLLECTION DATE(S): 12/18/91

COLLECTION METHOD: GRAB
SAMPLE TYPE: GROUNDWATER

LABORATORY JOB NO: 914098
LABORATORY REFERENCE NO: 10668
LABORATORY INORGANICS/ORGANICS

Analytical Parameters	Analytical Results	Units	Method Detection Limits	Practical Quantifiable Limit	Method
1,2-dichlorobenzene	BQL *	ug/l	----	10	SW846 8270
bis (2-chloroisopropyl) Ether	BQL *	ug/l	----	10	SW846 8270
N-nitrosoinpropylamine	BQL *	ug/l	----	10	SW846 8270
Hexachloroethane	BQL *	ug/l	----	10	SW846 8270
Nitrobenzene	BQL *	ug/l	----	10	SW846 8270
Isophorone	BQL *	ug/l	----	10	SW846 8270
bis (2-chloroethoxy) Methane	BQL *	ug/l	----	10	SW846 8270
1,2,4-trichlorobenzene	BQL *	ug/l	----	10	SW846 8270
Naphthalene	BQL *	ug/l	----	10	SW846 8270
4-chloroaniline	BQL *	ug/l	----	10	SW846 8270
Hexachlorobutadiene	BQL *	ug/l	----	10	SW846 8270
2-methylnaphthalene	BQL *	ug/l	----	10	SW846 8270
Hexachlorocyclopentadiene	BQL *	ug/l	----	10	SW846 8270
2-chloronaphthalene	BQL *	ug/l	----	10	SW846 8270
2-nitroaniline	BQL *	ug/l	----	40	SW846 8270
Dimethylphthalate	BQL *	ug/l	----	10	SW846 8270
2,6-dinitrotoluene	BQL *	ug/l	----	10	SW846 8270
Acenaphthylene	BQL *	ug/l	----	10	SW846 8270
3-nitroaniline	BQL *	ug/l	----	40	SW846 8270
Acenaphthene	BQL *	ug/l	----	10	SW846 8270
Dibenzofuran	BQL *	ug/l	----	10	SW846 8270
2,4-dinitrotoluene	BQL *	ug/l	----	10	SW846 8270
Diethylphthalate	BQL *	ug/l	----	10	SW846 8270
4-Chlorophenylphenylether	BQL *	ug/l	----	10	SW846 8270
Fluorene	BQL *	ug/l	----	10	SW846 8270

* CUST SAMPLE ID: BW-6
COLLECTION DATE(S): 12/18/91

COLLECTION METHOD: GRAB
SAMPLE TYPE: GROUNDWATER

LABORATORY JOB NO: 914098
LABORATORY REFERENCE NO: 10668
LABORATORY INORGANICS/ORGANICS

Analytical Parameters	Analytical Results	Units	Method Detection Limits	Practical Quantifiable Limit	Method
4-nitroaniline	BQL *	ug/l	----	40	SW846 8270
n-nitrosodiphenylamine	BQL *	ug/l	----	10	SW846 8270
4-Bormophenylphenylether	BQL *	ug/l	----	10	SW846 8270
Hexachlorobenzene	BQL *	ug/l	----	10	SW846 8270
Phenanthrene	BQL *	ug/l	----	10	SW846 8270
Anthracene	BQL *	ug/l	----	10	SW846 8270
di-n-Butylphthalate	BQL *	ug/l	----	10	SW846 8270
Fluoranthene	BQL *	ug/l	----	10	SW846 8270
Benzidine	BQL *	ug/l	----	40	SW846 8270
Pyrene	BQL *	ug/l	----	10	SW846 8270
Butylbenzylphthalate	BQL *	ug/l	----	10	SW846 8270
3,3-dichlorobenzidine	BQL *	ug/l	----	20	SW846 8270
Benzo (a) Anthracene	BQL *	ug/l	----	10	SW846 8270
bis (2-ethylhexyl) Phthalate	BQL *	ug/l	----	10	SW846 8270
Chrysene	BQL *	ug/l	----	10	SW846 8270
di-n-octylphthalate	BQL *	ug/l	----	10	SW846 8270
Benzo (b) Fluoranthene	BQL *	ug/l	----	10	SW846 8270
Benzo (k) Fluoranthene	BQL *	ug/l	----	10	SW846 8270
Benzo (a) Pyrene	BQL *	ug/l	----	10	SW846 8270
Indeno (1,2,3-cd) Pyrene	BQL *	ug/l	----	10	SW846 8270
Dibenzo (a,h) Anthracene	BQL *	ug/l	----	10	SW846 8270
Benzo (g,h,i) Perylene	BQL *	ug/l	----	10	SW846 8270
Phenol	BQL *	ug/l	----	10	SW846 8270
2-methylphenol	BQL *	ug/l	----	10	SW846 8270
4-methylphenol	BQL *	ug/l	----	10	SW846 8270

CUST SAMPLE ID: BW-6
COLLECTION DATE(S): 12/18/91

COLLECTION METHOD: GRAB
SAMPLE TYPE: GROUNDWATER

LABORATORY JOB NO: 914098
LABORATORY REFERENCE NO: 10668
LABORATORY INORGANICS/ORGANICS

Analytical Parameters	Analytical Results	Units	Method Detection Limits	Practical Quantifiable Limit	Method
2-nitrophenol	BQL *	ug/l	----	10	SW846 8270
2,4-dimethylphenol	BQL *	ug/l	----	10	SW846 8270
Benzoic Acid	BQL *	ug/l	----	30	SW846 8270
2,4-dichlorophenol	BQL *	ug/l	----	10	SW846 8270
2-chlorophenol	BQL *	ug/l	----	10	SW846 8270
4-chloro-3-methylphenol	BQL *	ug/l	----	10	SW846 8270
2,4,6-trichlorophenol	BQL *	ug/l	----	10	SW846 8270
2,4,5-trichlorophenol	BQL *	ug/l	----	10	SW846 8270
2,4-dinitrophenol	BQL *	ug/l	----	40	SW846 8270
4-nitrophenol	BQL *	ug/l	----	40	SW846 8270
4,6-Dinitro-2-Methylphenol	BQL *	ug/l	----	40	SW846 8270
pentachlorophenol	BQL *	ug/l	----	40	SW846 8270

FOOTNOTES

* Samples for 8270 analysis were collected in clear jars. While, method 8270 specifies amber jars. Customer was notified 12/20/91.

CUST SAMPLE ID: BLIND DUPLICATE (BW-6)
COLLECTION DATE(S): 12/18/91

COLLECTION METHOD: GRAB
SAMPLE TYPE: GROUNDWATER

LABORATORY JOB NO: 914098
LABORATORY REFERENCE NO: 10669
LABORATORY INORGANICS/ORGANICS

Analytical Parameters	Analytical Results	Units	Method Detection Limits	Practical Quantifiable Limit	Method
Iron, Total (on flame)	271	mg/l	----	0.30	EPA 236.1
Iron, Soluble (on flame)	2.48	mg/l	----	0.30	EPA 236.1
Potassium, Total (on flame)	23.9	mg/l	----	1.00	EPA 258.1
Potassium, Soluble (on flame)	1.85	mg/l	----	1.00	EPA 258.1
Zinc, Total (on flame)	0.38	mg/l	----	0.05	EPA 289.1
Zinc, Soluble (on flame)	BQL	mg/l	----	0.05	EPA 289.1
Ammonia	0.24	mg/l	----	0.02	EPA 350.1
Nitrite	BQL	mg/l	----	0.01	EPA 353.2
Total Kjeldahl Nitrogen	0.4	mg/l	----	0.1	EPA 351.2
Chloromethane	BQL	ug/l	----	10	SW 846 8240
Vinyl Chloride	BQL	ug/l	----	10	SW 846 8240
Chloroethane	BQL	ug/l	----	10	SW 846 8240
Bromomethane	BQL	ug/l	----	10	SW 846 8240
Acetone	BQL	ug/l	----	50	SW 846 8240
1,1-dichloroethene	BQL	ug/l	----	5.0	SW 846 8240
Carbon Disulfide	BQL	ug/l	----	5.0	SW 846 8240
Methylene Chloride	BQL	ug/l	----	10	SW 846 8240
trans-1,2-dichloroethene	BQL	ug/l	----	5.0	SW 846 8240
1,1-dichloroethane	BQL	ug/l	----	5.0	SW 846 8240
Vinyl Acetate	BQL	ug/l	----	50	SW 846 8240
2-butanone	BQL	ug/l	----	50	SW 846 8240
Chloroform	BQL	ug/l	----	5.0	SW 846 8240
1,1,1-Trichloroethane	BQL	ug/l	----	5.0	SW 846 8240
Carbon Tetrachloride	BQL	ug/l	----	5.0	SW 846 8240
Benzene	BQL	ug/l	----	5.0	SW 846 8240

CUST SAMPLE ID: BLIND DUPLICATE (BW-6)
COLLECTION DATE(S): 12/18/91

COLLECTION METHOD: GRAB
SAMPLE TYPE: GROUNDWATER

LABORATORY JOB NO: 914098
LABORATORY REFERENCE NO: 10669
LABORATORY INORGANICS/ORGANICS

Analytical Parameters	Analytical Results	Units	Method Detection Limits	Practical Quantifiable Limit	Method
1,2-dichloroethane	BQL	ug/l	----	5.0	SW 846 8240
Trichloroethene	BQL	ug/l	----	5.0	SW 846 8240
1,2-dichloropropane	BQL	ug/l	----	5.0	SW 846 8240
Bromodichloromethane	BQL	ug/l	----	5.0	SW 846 8240
2-Chloroethyl vinyl ether	BQL	ug/l	----	10	SW 846 8240
4-Methyl-2-Pentanone	BQL	ug/l	----	50	SW 846 8240
cis-1,3-dichloropropene	BQL	ug/l	----	5.0	SW 846 8240
Toluene	BQL	ug/l	----	5.0	SW 846 8240
trans-1,3-dichloropropene	BQL	ug/l	----	5.0	SW 846 8240
1,1,2-Trichloroethane	BQL	ug/l	----	5.0	SW 846 8240
Tetrachloroethene	BQL	ug/l	----	5.0	SW 846 8240
Chlorodibromomethane	BQL	ug/l	----	5.0	SW 846 8240
Chlorobenzene	BQL	ug/l	----	5.0	SW 846 8240
Ethylbenzene	BQL	ug/l	----	5.0	SW 846 8240
Bromoform	BQL	ug/l	----	5.0	SW 846 8240
1,1,2,2-Tetrachloroethane	BQL	ug/l	----	5.0	SW 846 8240
2-hexanone	BQL	ug/l	----	50	SW 846 8240
o/p-Xylene	BQL	ug/l	----	5.0	SW 846 8240
m-Xylene	BQL	ug/l	----	5.0	SW 846 8240
Styrene	BQL	ug/l	----	5.0	SW 846 8240
N-Nitrosodimethylamine	BQL *	ug/l	----	10	SW846 8270
bis (2-chlrooethyl) Ether	BQL *	ug/l	----	10	SW846 8270
1,3-dichlorobenzene	BQL *	ug/l	----	10	SW846 8270
1,4-dichlorobenzene	BQL *	ug/l	----	10	SW846 8270
Benzyl Alcohol	BQL *	ug/l	----	10	SW846 8270

CUST SAMPLE ID: BLIND DUPLICATE (BW-6)
COLLECTION DATE(S): 12/18/91
COLLECTION METHOD: GRAB
SAMPLE TYPE: GROUNDWATER

LABORATORY JOB NO: 914098
LABORATORY REFERENCE NO: 10669
LABORATORY INORGANICS/ORGANICS

Analytical Parameters	Analytical Results	Units	Method Detection Limits	Practical Quantifiable Limit	Method
1,2-dichlorobenzene	BQL *	ug/l	----	10	SW846 8270
bis (2-chloroisopropyl) Ether	BQL *	ug/l	----	10	SW846 8270
N-nitrosodinpropylamine	BQL *	ug/l	----	10	SW846 8270
Hexachloroethane	BQL *	ug/l	----	10	SW846 8270
Nitrobenzene	BQL *	ug/l	----	10	SW846 8270
Isophorone	BQL *	ug/l	----	10	SW846 8270
bis (2-chloroethoxy) Methane	BQL *	ug/l	----	10	SW846 8270
1,2,4-trichlorobenzene	BQL *	ug/l	----	10	SW846 8270
Naphthalene	BQL *	ug/l	----	10	SW846 8270
4-chloroaniline	BQL *	ug/l	----	10	SW846 8270
Hexachlorobutadiene	BQL *	ug/l	----	10	SW846 8270
2-methylnaphthalene	BQL *	ug/l	----	10	SW846 8270
Hexachlorocyclopentadiene	BQL *	ug/l	----	10	SW846 8270
2-chloronaphthalene	BQL *	ug/l	----	10	SW846 8270
2-nitroaniline	BQL *	ug/l	----	40	SW846 8270
Dimethylphthalate	BQL *	ug/l	----	10	SW846 8270
2,6-dinitrotoluene	BQL *	ug/l	----	10	SW846 8270
Acenaphthylene	BQL *	ug/l	----	10	SW846 8270
3-nitroaniline	BQL *	ug/l	----	40	SW846 8270
Acenaphthene	BQL *	ug/l	----	10	SW846 8270
Dibenzofuran	BQL *	ug/l	----	10	SW846 8270
2,4-dinitrotoluene	BQL *	ug/l	----	10	SW846 8270
Diethylphthalate	BQL *	ug/l	----	10	SW846 8270
4-Chlorophenylphenylether	BQL *	ug/l	----	10	SW846 8270
Fluorene	BQL *	ug/l	----	10	SW846 8270

CUST SAMPLE ID: BLIND DUPLICATE (BW-6)
COLLECTION DATE(S): 12/18/91
COLLECTION METHOD: GRAB
SAMPLE TYPE: GROUNDWATER

LABORATORY JOB NO: 914098
LABORATORY REFERENCE NO: 10669
LABORATORY INORGANICS/ORGANICS

Analytical Parameters	Analytical Results	Units	Method Detection Limits	Practical Quantifiable Limit	Method
4-nitroaniline	BQL *	ug/l	----	40	SW846 8270
n-nitrosodiphenylamine	BQL *	ug/l	----	10	SW846 8270
4-Bromophenylphenylether	BQL *	ug/l	----	10	SW846 8270
Hexachlorobenzene	BQL *	ug/l	----	10	SW846 8270
Phenanthrene	BQL *	ug/l	----	10	SW846 8270
Anthracene	BQL *	ug/l	----	10	SW846 8270
di-n-Butylphthalate	BQL *	ug/l	----	10	SW846 8270
Fluoranthene	BQL *	ug/l	----	10	SW846 8270
Benzidine	BQL *	ug/l	----	10	SW846 8270
Pyrene	BQL *	ug/l	----	10	SW846 8270
Butylbenzylphthalate	BQL *	ug/l	----	10	SW846 8270
3,3-dichlorobenzidine	BQL *	ug/l	----	20	SW846 8270
Benzo (a) Anthracene	BQL *	ug/l	----	10	SW846 8270
bis (2-ethylhexyl) Phthalate	85	ug/l	----	10	SW846 8270
Chrysene	BQL *	ug/l	----	10	SW846 8270
di-n-octylphthalate	BQL *	ug/l	----	10	SW846 8270
Benzo (b) Fluoranthene	BQL *	ug/l	----	10	SW846 8270
Benzo (k) Fluoranthene	BQL *	ug/l	----	10	SW846 8270
Benzo (a) Pyrene	BQL *	ug/l	----	10	SW846 8270
Indeno (1,2,3-cd) Pyrene	BQL *	ug/l	----	10	SW846 8270
Dibenzo (a,h) Anthracene	BQL *	ug/l	----	10	SW846 8270
Benzo (g,h,i) Perylene	BQL *	ug/l	----	10	SW846 8270
Phenol	BQL *	ug/l	----	10	SW846 8270
2-methylphenol	BQL *	ug/l	----	10	SW846 8270
4-methylphenol	BQL *	ug/l	----	10	SW846 8270

CUST SAMPLE ID: BLIND DUPLICATE (BW-6)
COLLECTION DATE(S): 12/18/91
COLLECTION METHOD: GRAB
SAMPLE TYPE: GROUNDWATER

LABORATORY JOB NO: 914098
LABORATORY REFERENCE NO: 10669
LABORATORY INORGANICS/ORGANICS

Analytical Parameters	Analytical Results	Units	Method Detection Limits	Practical Quantifiable Limit	Method
2-nitrophenol	BQL *	ug/l	----	10	SW846 8270
2,4-dimethylphenol	BQL *	ug/l	----	10	SW846 8270
Benzoic Acid	BQL *	ug/l	----	30	SW846 8270
2,4-dichlorophenol	BQL *	ug/l	----	10	SW846 8270
2-chlorophenol	BQL *	ug/l	----	10	SW846 8270
4-chloro-3-methylphenol	BQL *	ug/l	----	10	SW846 8270
2,4,6-trichlorophenol	BQL *	ug/l	----	10	SW846 8270
2,4,5-trichlorophenol	BQL *	ug/l	----	10	SW846 8270
2,4-dinitrophenol	BQL *	ug/l	----	40	SW846 8270
4-nitrophenol	BQL *	ug/l	----	40	SW846 8270
4,6-Dinitro-2-Methylphenol	BQL *	ug/l	----	40	SW846 8270
pentachlorophenol	BQL *	ug/l	----	40	SW846 8270

FOOTNOTES

* Samples for 8270 analysis were collected in clear jars while Method 8270 specifies amber jars. Customer was notified 12/20/91.

CUST SAMPLE ID: MW-2
COLLECTION DATE(S): 12/18/91

COLLECTION METHOD: GRAB
SAMPLE TYPE: GROUNDWATER

LABORATORY JOB NO: 914127
LABORATORY REFERENCE NO: 10772
LABORATORY INORGANIC ANALYSIS

Analytical Parameters	Analytical Results	Units	Method Detection Limits	Practical Quantifiable Limit	Method
Iron, Total (on flame)	5.66	mg/l	----	0.30	EPA 236.1
Potassium, Total (on flame)	7.38	mg/l	----	1.00	EPA 258.1
Zinc, Total (on flame)	2.40	mg/l	----	0.05	EPA 289.1

CUST SAMPLE ID: MW-2
COLLECTION DATE(S): 12/19/91

COLLECTION METHOD: GRAB
SAMPLE TYPE: GROUNDWATER

LABORATORY JOB NO: 914127
LABORATORY REFERENCE NO: 10773
LABORATORY INORGANIC ANALYSIS

Analytical Parameters	Analytical Results	Units	Method Detection Limits	Practical Quantifiable Limit	Method
Ammonia	1.70	mg/l	----	0.02	EPA 350.1
Nitrite	0.04	mg/l	----	0.01	EPA 353.2
Total Kjeldahl Nitrogen	2.4	mg/l	----	0.1	EPA 351.2

AES INORGANICS DEPARTMENT TRACEABILITY

JOB CODE: CTC

Technician Signature	AES Sample #	Method	Date of Analysis	Time of Analysis
[signature]	10619-23,25	353.2	12/20/91	1700-2300
[signature]	10619-23,25	351.2	12/31/91	900-1200
[signature]	10619-23,25	350.1	1/2/92	2000-2300

AES INORGANICS DEPARTMENT TRACEABILITY

JOB CODE: CTC

Technician Signature	AES Sample #	Method	Date of Analysis	Time of Analysis
[signature]	10619-23,25	289.1	12-26-91	09:52
[signature]	"	258.1	12-27-91	11:23
[signature]	"	236.1	1-2-92	13:43

AES ORGANICS DEPARTMENT TRACEABILITY

JOB CODE: CTC

Technician Signature	AES Sample #	Method	Date of Analysis	Time of Analysis
Jim Fish	10622, 10624	8240	12/19/91	11:17, 11:55
Jim Fish	10622, 10625	8270	12/27/91	9:49, 10:51

ADVANCED ENVIRONMENTAL SEVICES, Inc.
EXTRACTION TRACEABILITY REPORT
INORGANICS REPORT

A.E.S. Job Code: CTC A.E.S. Job Number: _____

TECHNICIAN	ANALYTICAL METHOD	SAMPLE CODE(S)	DATE OF EXTRACTION
[illegible]	3510(8270)	10622,10625	12-19-91

AES INORGANICS DEPARTMENT TRACEABILITY

JOB CODE: CTC

Technician Signature	AES Sample #	Method	Date of Analysis	Time of Analysis
[signature]	10667-69	353.2	12/20/91	1700-2300
[signature]	10667-69	351.2	12/31/91	900-1200
[signature]	10667-69	350.1	1/2/92	2000-2300

AES INORGANICS DEPARTMENT TRACEABILITY

JOB CODE: CTC

Technician Signature	AES Sample #	Method	Date of Analysis	Time of Analysis
M. Wilson	10667-69	289.1	12-26-91	09:52
M. Wilson	"	258.1	12-27-91	11:23
M. Wilson	"	236.1	1-2-92	13:43

AES ORGANICS DEPARTMENT TRACEABILITY

JOB CODE: CTC

Technician Signature	AES Sample #	Method	Date of Analysis	Time of Analysis
Jim Fish	10668, 10669	8270	12/27/91	12:04, 13:15
Jim Fish	10668, 10669	8240	12/27/91	13:02, 13:42

ADVANCED ENVIRONMENTAL SEVICES, Inc.
EXTRACTION TRACEABILITY REPORT
INORGANICS REPORT

A.E.S. Job Code: CTC A.E.S. Job Number: _____

TECHNICIAN	ANALYTICAL METHOD	SAMPLE CODE(S)	DATE OF EXTRACTION
[signature]	3510(8270)	10668-69	12-19-91

AES INORGANICS DEPARTMENT TRACEABILITY

JOB CODE: CTC

Technician Signature	AES Sample #	Method	Date of Analysis	Time of Analysis
[signature]	10773	353.2	12/20/91	1700-2300
[signature]	10773	351.2	12/31/91	900-1200
[signature]	10773	350.1	1/2/92	2000-230

AES INORGANICS DEPARTMENT TRACEABILITY

JOB CODE: CTC

Technician Signature	AES Sample #	Method	Date of Analysis	Time of Analysis
[signature]	10772	289.1	12-26-91	09:32
[signature]	"	258.1	12-27-91	11:23
[signature]	"	236.1	1-2-92	13:43

CHAIN OF CUSTODY RECORD

ENVIRONMENTAL SERVICES, INC.
2186 LIBERTY DRIVE
NIAGARA FALLS, NY 14304 • (716) 283-3120

PROJECT NAME: ~~UNION CARBIDE~~ UCAR Carbon mc

SAMPLER'S SIGNATURE:

JOB CODE: CTC

IDENTIFICATION OF BLIND FIELD DUPLICATE SITE: BW-6

DATE	TIME	SAMPLE IDENTIFICATION	GRAB	COMP	SAMPLE TYPE	CONTAINER CLASSIFICATION: UNPRESERVED	HNO_3	H_2SO_4	HCL	NAOH	VIAL (PRES.)	VIAL (UNPRES.)	TOTAL	PARAMETERS/REMARKS
12/18/91	11:05	BW-2					2	1					3	T+Sol METALS, Ammo, N/Ite, TKN
12/18/91	15:20	BW-6				1	2	1			2		6	T+SOL METALS, Ammo, N/Ite, TKN, TCLSV, TCLV
12/18/91	15:20	BLIND DUPLICATE				1	2	1			2		6	

TOTAL NUMBER OF CONTAINERS: 15

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

	DATE	TIME	RECEIVED BY:
1. RELINQUISHED BY:	12/18/91	4 35 pm	Marcia Lewis
2. RELINQUISHED BY:	DATE	TIME	RECEIVED BY:
3. RELINQUISHED BY:	DATE	TIME	RECEIVED BY:

1593

ADVANCED ENVIRONMENTAL SERVICES, INC.
2186 LIBERTY DRIVE
NIAGARA FALLS, NY 14304 • (716) 283-3120

CHAIN OF CUSTODY RECORD

PROJECT NAME: [illegible]

SAMPLER'S SIGNATURE: [illegible]

JOB CODE: [illegible]

IDENTIFICATION OF BLIND FIELD DUPLICATE SITE: [illegible]

DATE	TIME	SAMPLE IDENTIFICATION	GRAB	COMP	SAMPLE TYPE	CONTAINER CLASSIFICATION: UNPRESERVED	HNO_3	H_2SO_4	HCL	NAOH	VIAL (PRES.)	VIAL (UNPRES.)	TOTAL	PARAMETERS/REMARKS
[illegible]	[illegible]	[illegible]	[illegible]		[illegible]		2	1					3	[illegible]
|	[illegible]	[illegible]	[illegible]		|		2	1					3	|
|	[illegible]	[illegible]	[illegible]		|		2	1					3	|
	[illegible]	[illegible]	[illegible]				[illegible]	1					3	|
|	[illegible]	[illegible]	[illegible]		—	3	[illegible]	1			2		[illegible]	[illegible], TCL[illegible], TCL[illegible]
|														
—	—	[illegible]	[illegible]		[illegible]	1	1	1			2		5	[illegible]
														[illegible]
														BL-4 QUALITY CONTROL

TOTAL NUMBER OF CONTAINERS: 25

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

	DATE	TIME	RECEIVED BY:
1. RELINQUISHED BY: [illegible]	12/[illegible]/[illegible]	4:55 PM	[illegible]
2. RELINQUISHED BY:			
3. RELINQUISHED BY:			

1585

CHAIN OF CUSTODY RECORD

ENVIRONMENTAL SERVICES, INC.
2186 LIBERTY DRIVE
NIAGARA FALLS, NY 14304 • (716) 283-3120

PROJECT NAME: UCAR CARBON

SAMPLER'S SIGNATURE: Mike Champ

JOB CODE: CTC

IDENTIFICATION OF BLIND FIELD DUPLICATE SITE: _____

DATE	TIME	SAMPLE IDENTIFICATION	GRAB	COMP	SAMPLE TYPE	CONTAINER CLASSIFICATION: UNPRESERVED	HNO_3	H_2SO_4	HCL	NAOH	VIAL (PRES.)	VIAL (UNPRES.)	TOTAL	PARAMETERS/REMARKS
12/19/91		MW-2	✓		Groundwater		1	1					2	T. Metals, Ammo., NITE, TKN (partial site, Metals taken on 12-18 91)

TOTAL NUMBER OF CONTAINERS: 2

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	TIME	RECEIVED BY:
Mike Champ	12-19-91	3 30 PM	[illegible]
2. RELINQUISHED BY:	**DATE**	**TIME**	**RECEIVED BY:**
3. RELINQUISHED BY:	**DATE**	**TIME**	**RECEIVED BY:**

12/18