OH-264-09

EPA Region 5 Records Ctr.
373673

DATE: 2/1/83

TO: Kathleen Hetty

FROM: Rene Van Someren

SUBJECT: Analytical Results for Woodford Rd. Quarry
F5-8203-6 #6
Low Water Org.

We have received the analytical results from your investigation of the subject site.

I have forwarded the data to _____ for further review.

Missing ABN (volatiles too) page for E1676
Data set complete except for above

SINCE THERE IS NO INFORMATION AVAILABLE CONCERNING THE ACCURACY OF THE STANDARDS, THIS DATA SHOULD BE, AT BEST, USED ONLY FOR SCREENING PURPOSES

—QNDI

Please make copy & map for Superfund.
See Anne Sause for assistance

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 1/24/83

SUBJECT: Review of Region V CLP Data
Received for Review on 1/17/83

FROM: Curtis Ross, Director
Central Regional Laboratory
Chuck Kelly for Kathleen Getty
F5-8203-6 #6
Low Waters

TO: Data User: FIT

We have reviewed the data for the following case(s).

SITE NAME: Woodford Road Quarry, OH SMO CASE NO. 1332
EPA DATA SET NO. SF1856 NO. of SAMPLES: 6 DU/ACTIVITY NOS. Y905, C47303
CRL NOS. 83MG01 R01 TO 83MG01S05
SMO TRAFFIC NOS. E1674 to E1679
CONTRACT LAB: ERCO HOURS REQUIRED FOR REVIEW: 4

Following are our findings.

Although the company reported the standards calibration data had failed to include the total ion chromatograms for the standards. No report on tailing factors. Poor Matrix Spike recovery was observed.

* These are final data for Mitre files. Additional costs would be incurred if we requested the chromatograms.

1-21-83 SR
1-24-83 TMKy

( ) Data are acceptable for use.
( ) Data are acceptable for use with qualifications noted above.
(✓) Data are preliminary - pending verification by contractor laboratory.
( ) Data are unacceptable.

cc: Dr. Alfred Haeberer, EPA Support Services
Dr. Gene Meier, EMSL-Las Vegas
Robert Pritchard, CLP, Sample Management Office

EPA FORM 1320-6 (REV. 3-76)

Woodford Rd. Quarry
F5-82036 #6
Low Water

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US EPA CENTRAL REGIONAL LAB.
536 S. CLARK STREET
CHICAGO, ILLINOIS 60605

CHECKLIST FOR ORGANIC ANALYSIS DELIVERABLES

Sample #s E1674, E1675, E1676, E1677, E1678, E1679 Case # 1332

A. ORGANIC ANALYSIS DATA SHEETS	
1. Organic Analysis Data Sheets	1-54
B. ACID-BASE/NEUTRAL FRACTION	
1. Sample Chromatograms	55-63
2. Sample spectra of priority pollutants	64-88
3. Sample spectra of tentatively identified compounds and the spectra of the three primary library choices	89-114
C. VOLATILES ORGANICS FRACTION	
1. Sample chromatograms	115-123
2. Sample spectra of priority pollutants	124-129
3. Sample spectra of tentatively identified compounds and the spectra of the three primary library choices	NA
D. PESTICIDE FRACTION	
1. GC/ECD sample chromatogram	-
a. First column	160-
b. Second column	130-143
2. GC/MS sample chromatogram	NA
3. Spectra of confirmed pesticides	144-146
E. GC SCREENS	
1. Volatiles	148-153
2. Acid-Base/neutral	154-159
3. Pesticide	160-165
F. FSCC GC/MS DATA	
1. Initial QC calibration data	166
2. Ongoing QC data	167-169
3. Ongoing QC data - Internal standards versus time	170-174
G. DFTTP	
1. Criteria forms	175-176
2. Spectra	177-178
3. Mass versus intensity listing	179-180

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CHECKLIST - PAGE 2

H. BFB	
1. Criteria forms	181
2. Spectra	182
3. Mass versus intensity listings	183
I. STANDARD REFERENCE DATA (ACID-BASE/NEUTRAL)	
1. Standard chromatograms	NA
2. Standard spectra of identified sample priority pollutants	NA
J. STANDARD REFERENCE DATA (VOLATILES)	
1. Standard chromatograms	NA
2. Standard spectra of identified sample priority pollutants	NA
K. STANDARD REFERENCE DATA (PESTICIDES)	
1. GC/ECD Chromatograms	
a. first column	NA
b. second column	NA
2. GC/MS Standard chromatograms	NA
3. Standard spectra of identified sample priority pollutants	NA
L. SENSITIVITY TESTS	
1. EICP of m/e's 184, 188, 198, and 266	184-185
APPENDIX - QUANTITATION REPORTS	

NA = Not applicable.

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(12)

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: TOXIC SUBSTANCES

DIVISION/BRANCH Superfund SAMPLING DATE 9/29/82 LAB ARRIVAL DATE 10/7/82 DUE DATE 11/8/82

DO NUMBER Y905 DATASET NUMBER 1856 STUDY Wood Ford Road Quarry, OH PRIORITY N CONTRACTOR ERCO

Case # 1332

CRL LOG NUMBER	SAMPLE DESCRIPTION	WATER LOW CONC PRIORITY POLLUTANT UG/L 6 TOX461751
83MG01R01	E 1674	✓
83MG01B01	E 1675	✓
83MG01S02	E 1676	✓
83MG01S03	E 1677	✓
83MG01S04	E 1678	✓
83MG01S05	E 1679	✓

Getty
F5-8203-6 #6
Low water

(3)

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: TOXIC SUBSTANCES

ION/BRANCH Superfund SAMPLING DATE 9/29/82 LAB ARRIVAL DATE 10/7/82 DUE DATE 11/8/82

NUMBER Y905 DATASET NUMBER 1856 STUDY Woodford Rd. Quarry, OH. PRIORITY N CONTRACTOR ERCO

Case # 1332

LOG NUMBER	SAMPLE DESCRIPTION	VOLATILE ORGANIC ANALYSES PRIORITY POLLUTANTS UG/L 6 TOX10561	VOLATILE ORGANIC ANALYSES ORGANIC SCAN UG/L TOX10571	VOLATILE ORGANIC ANALYSES PRIORITY POLLUTANTS MG/KG TOX105631	VOLATILE ORGANIC ANALYSES ORGANIC SCAN MG/KG TOX105731
83MG01R01	E1674	✓			
83MG01S01	E1675	✓			
83MG01S02	E1676	✓			
83MG01S03	E1677	✓			
83MG01S04	E1678	✓			
83MG01S05	E1679	✓			

Getty
F5-8803-6#6
Low Waters

SF 1856

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US EPA CENTRAL REGIONAL LAB.
536 S. CLARK STREET
CHICAGO, ILLINOIS 60605

INVENTORY SHEET

ERCO ID	EPA ID	Description	
35-79	E1674	water	(L)
35-80	E1675	water	(L)
35-81	E1676	water	(L)
35-82	E1677	water	(L)
35-83	E1678	water	(L)
35-84	E1679	water	(L)
35-85S	E1676	matrix spike	(L)
35-86D	E1677	duplicate	(L)
35-87B	--	ERCO blank	(L)

L = low

Woodford Rd. Quarry
F5-8203-6 #6
Low Water

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Each Sample Data file should contain the following information in the following sequence:

A. Organic Analysis Data sheets

- [ ] 1. Priority Pollutant list completed
- [ ] 2. Surrogate Spike Results
- [ ] 3. Tentatively Identified Compounds
  - [ ] a) C.A.S. No. for each compound
  - [ ] b) Percent fit

B. Acid Fraction

- [ ] 1. Sample Chromatogram
- [ ] 2. Sample spectra of priorty pollutants detected
- [ ] 3. Sample spectra of tentatively identified compounds
- [ ] 4. Spectra of the three primary library choices for each tentatively identified compound
- [ ] 5. Computer-generated Quantitation Report

C. Base/Neutral Fraction

- [ ] 1. Sample Chromatogram
- [ ] 2. Sample spectra of priorty pollutants detected
- [ ] 3. Sample spectra of tentatively identified compounds
- [ ] 4. Spectra of the three primary library choices for each tentatively identified compound
- [ ] 5. Computer-generated Quantitation Report

D. Volatile Organics Fraction

- [ ] 1. Sample Chromatogram
- [ ] 2. Sample spectra of priorty pollutants detected
- [ ] 3. Sample spectra of tentatively identified compounds
- [ ] 4. Spectra of the three primary library choices for each tentatively identified compound
- [ ] 5. Computer-generated Quantitation Report

E. Pesticide Fraction

- [ ] 1. GC/ECD sample chromatogram
  - [ ] a) Second column chromatogram
- [ ] 2. GC/MS sample chromatogram
  - [ ] a) Spectra of confirmed pesticides
  - [ ] b) Computer-generated Quantitation Report

F. Other Chromatograms

- [ ] 1. GC Screen Chromatograms
- [ ] 2. Gel Permeation Chromatograms

G. FSCC GC/MS Data

- [ ] 1. Initial QC calibration data
- [ ] 2. Ongoing QC data - semivolatiles
- [ ] 3. Ongoing QC data - internal standards vs time

Each Back-Up Data file should contain the following information in the following sequence:

A. DFTPP calibration data

- [ ] 1. Criteria forms
- [ ] 2. Spectra
- [ ] 3. Mass versus intensity listings

B. BFB calibration data

- [ ] 1. Criteria forms
- [ ] 2. Spectra
- [ ] 3. Mass versus intensity listings

C. Acid fraction standard reference data

- [ ] 1. Standard chromatograms
- [ ] 2. Standard spectra of identified sample priority pollutants
- [ ] 3. Computer-generated Quantitation Report

D. Base/Neutral fraction standard reference data

- [ ] 1. Standard chromatograms
- [ ] 2. Standard spectra of identified sample priority pollutants
- [ ] 3. Computer-generated Quantitation Report

E. Volatile Organics fraction standard reference data

- [ ] 1. Standard chromatograms
- [ ] 2. Standard spectra of identified sample priority pollutants
- [ ] 3. Computer-generated Quantitation Report

F. Pesticide fraction standard reference data

- [ ] 1. GC/ECD standard chromatograms
  - [ ] a) Second column chromatogram
- [ ] 2. GC/MS standard chromatograms
  - [ ] a) Standard spectra of identified sample priority pollutants
  - [ ] b) Computer-generated Quantitation Report

G. Base/Neutral Sensitivity Test

- [ ] 1. EICP of m/z 184 from 100 ng Benzidine Injection
- [ ] 2. Calculation of tailing factor

H. Acid Sensitivity Test

- [ ] 1. EICP of m/z 266 from 50 ng Pentachlorophenol Injection
- [ ] 2. Calculation of tailing factor

I. Pesticide GC/MS Sensitivity Test

- [ ] 1. EICP of m/z 66 from 100 ng Aldrin Injection
- [ ] 2. Calculation of tailing factor

Each Quality Control Data file should contain the following information in the following sequence:

A. Method Blanks

- [ ] 1. Organic analysis data sheets
- [ ] 2. Chromatogram of each fraction analyzed
- [ ] 3. Spectra of priority pollutants detected
- [ ] 4. Spectra of tentatively identified compounds
- [ ] 5. Spectra of the three primary library choices for each tentatively identified compound
- [ ] 6. Computer-generated Quantitation Report

B. Matrix Spike Analysis

- [ ] 1. Matrix Spike forms
- [ ] 2. Chromatogram of each fraction
- [ ] 3. Computer-generated Quantitation Report

C. Duplicate Analysis

- [ ] 1. Organic analysis data sheets
- [ ] 2. Q.C. spike data sheet
- [ ] 3. Chromatogram of each fraction
- [ ] 4. Spectra of compounds which are not common to each analysis
- [ ] 5. Computer-generated Quantitation Report

Woodford Rd. Quarry
F5-82036 #6
Low Water

Form VI

Lab Name: ERCO
Report No.: 26
Date Submitted: 1/14/83

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Woodford Rd. Quarry F5-8203-6 #6 Low Water

Sample Number
E16741
83MG01R01

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Energy Resources Co Case No: 1332
Lab Sample I.D. No: 35-79 QC Report No: 26

Multiply Detection Limits by 1 ☑ or 10 ☐ (Check Box for Appropriate Factor)

ACID COMPOUNDS

PP #	CAS #		ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6- trichlorophenol	10U
(22A)	59-50-7	p-chloro-m-cresol	10U
(24A)	95-57-8	2- chlorophenol	10U
(31A)	120-83-2	2,4-dichlorophenol	10U
(34A)	105-67-9	2,4-dimethylphenol	10U
(57A)	88-75-5	2- nitrophenol	10U
(58A)	100-02-7	4-nitrophenol	10U
(59A)	51-28-5	2,4-dinitrophenol	10U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	10U
(64A)	87-86-5	pentachlorophenol	10U
(65A)	108-95-2	phenol	10U

BASE/NEUTRAL COMPOUNDS

PP #	CAS #		ug/l or ug/kg (circle one)
(1B)	83-32-9	acenaphthene	10U
(5B)	92-87-5	benzidine	10U
(8B)	120-82-1	1,2,4-trichlorobenzene	10U
(9B)	118-74-1	hexachlorobenzene	10U
(12B)	67-72-1	hexachloroethane	10U
(18B)	111-44-4	bis(2-chloroethyl)ether	10U
(20B)	91-58-7	2-chloronaphthalene	10U
(25B)	95-50-1	1,2-dichlorobenzene	10U
(26B)	541-73-1	1,3-dichlorobenzene	10U
(27B)	106-46-7	1,4-dichlorobenzene	10U
(28B)	91-94-1	3,3'-dichlorobenzidine	10U
(35B)	121-14-2	2,4-dinitrotoluene	10U
(36B)	606-20-2	2,6-dinitrotoluene	10U
(37B)	122-66-7	1,2-diphenylhydrazine	10U
(39B)	206-44-0	fluoranthene	10U
(40B)	7005-72-3	4-chlorophenyl phenyl ether	10U
(41B)	101-55-3	4-bromophenyl phenyl ether	10U
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	10U
(43B)	111-91-1	bis (2-chloroethoxy) methane	10U
(52B)	87-68-3	hexachlorobutadiene	10U
(53B)	77-47-4	hexachlorocyclopentadiene	10U
(54B)	78-59-1	isophorone	10U
(55B)	91-20-3	naphthalene	10U
(56B)	98-95-3	nitrobenzene	10U
(62B)	86-30-6	N-nitrosodiphenylamine	10U
(63B)	621-64-7	N-nitrosodipropylamine	10U
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	2K
(67B)	85-68-7	benzyl butyl phthalate	10U
(68B)	84-74-2	di-n-butyl phthalate	1K
(69B)	117-84-0	di-n-octyl phthalate	10U
(70B)	84-66-2	diethyl phthalate	10U
(71B)	131-11-3	dimethyl phthalate	10U
(72B)	56-55-3	benzo(a)anthracene	10U

BASE/NEUTRAL COMPOUNDS

PP #	CAS #		ug/l or ug/kg (circle one)
(73B)	50-32-8	benzo(a)pyrene	10U
(74B)	205-99-2	benzo(b)fluoranthene	10U
(75B)	207-08-9	benzo(k)fluoranthene	10U
(76B)	218-01-9	chrysene	10U
(77B)	208-96-8	acenaphthylene	10U
(78B)	120-12-7	anthracene	10U
(79B)	191-24-2	benzo(ghi)perylene	10U
(80B)	86-73-7	fluorene	10U
(81B)	85-01-8	phenanthrene	10U
(82B)	53-70-3	dibenzo(a,h)anthracene	10U
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	10U
(84B)	129-00-0	pyrene	10U

VOLATILES

(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	10U
(6V)	56-23-5	carbon tetrachloride	10U
(7V)	108-90-7	chlorobenzene	10U
(10V)	107-06-2	1,2-dichloroethane	10U
(11V)	71-55-6	1,1,1-trichloroethane	10U
(13V)	75-34-3	1,1-dichloroethane	10U
(14V)	79-00-5	1,1,2-trichloroethane	10U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10U
(16V)	75-00-3	chloroethane	10U
(19V)	110-75-8	2-chloroethylvinyl ether	10U
(23V)	67-66-3	chloroform	10U
(29V)	75-35-4	1,1-dichloroethene	10U
(30V)	156-60-5	trans-1,2-dichloroethene	10U
(32V)	78-87-5	1,2-dichloropropane	10U
(33V)	10061-02-6	trans-1,3-dichloropropene	10U
	10061-01-05	cis-1,3-dichloropropene	10U
(38V)	100-41-4	ethylbenzene	10U
(44V)	75-09-2	methylene chloride	10U
(45V)	74-87-3	chloromethane	10U
(46V)	74-83-9	bromomethane	10U
(47V)	75-25-2	bromoform	10U
(48V)	75-27-4	bromodichloromethane	10U
(49V)	75-69-4	fluorotrichloromethane	10U
(50V)	75-71-8	dichlorodifluoromethane	10U
(51V)	124-48-1	chlorodibromomethane	10U
(85V)	127-18-4	tetrachloroethene	10U
(86V)	108-88-3	toluene	10U
(87V)	79-01-6	trichloroethene	10U
(88V)	75-01-4	vinyl chloride	10U

4/82

Sample Number
E1674

Laboratory Name: Energy Resources Co Case No: 1332
Lab Sample I.D. No: 35-79 QC Report No: 26

Multiply Detection Limits by 1 ☑ or 10 ☐ (Check Box for Appropriate Factor)

PESTICIDES

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	.1U
(90P)	60-57-1	dieldrin	.1U
(91P)	57-74-9	chlordane	.1U
(92P)	50-29-3	4,4'-DDT	.1U
(93P)	72-55-9	4,4'-DDE	.1U
(94P)	72-54-8	4,4'-DDD	.1U
(95P)	115-29-7	α-endosulfan	.1U
(96P)	115-29-7	β-endosulfan	.1U
(97P)	1031-07-8	endosulfan sulfate	.1U
(98P)	72-20-8	endrin	.1U
(99P)	7421-93-4	endrin aldehyde	.1U
(100P)	76-44-8	heptachlor	.1U
(101P)	1024-57-3	heptachlor epoxide	.1U
(102P)	319-84-6	α-BHC	.1U

PESTICIDES

PP #	CAS #		ug/l or ug/kg (circle one)
(103P)	319-85-7	β-BHC	.1U
(104P)	319-86-8	δ-BHC	.1U
(105P)	58-89-9	γ-BHC (lindane)	.1U
(106P)	53469-21-9	PCB-1242	.1U
(107P)	11097-69-1	PCB-1254	.1U
(108P)	11104-28-2	PCB-1221	.1U
(109P)	11141-16-5	PCB-1232	.1U
(110P)	12672-29-6	PCB-1248	.1U
(111P)	11096-82-5	PCB-1260	.1U
(112P)	12674-11-2	PCB-1016	.1U
(113P)	8001-35-2	toxaphene	.1U

DIOXINS

(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	.1U

Non-Priority Pollutant Hazardous Substances List Compounds

ACID COMPOUNDS

CAS #		ug/l or ug/kg (circle one)
65-85-0	benzoic acid	10U
95-48-7	2-methylphenol	10U
108-39-4	4-methylphenol	10U
95-95-4	2,4,5-trichlorophenol	10U

BASE/NEUTRAL COMPOUNDS

62-53-3	aniline	10U
100-51-6	benzyl alcohol	10U
106-47-8	4-chloroaniline	10U
132-64-9	dibenzofuran	10U
91-57-6	2-methylnaphthalene	10U
88-74-4	2-nitroaniline	10U
99-09-2	3-nitroaniline	10U
100-01-6	4-nitroaniline	10U

VOLATILES

CAS #		ug/l or ug/kg (circle one)
67-64-1	acetone	10U
78-93-3	2-butanone	10U
75-15-0	carbondisulfide	10U
519-78-6	2-hexanone	10U
108-10-1	4-methyl-2-pentanone	10U
100-42-5	styrene	10U
108-05-4	vinyl acetate	10U
95-47-6	o-xylene	10U

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4/82

Form I (continued)

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample Number
E1674

Laboratory Name: ERCO

QC Report No: 26

A. Surrogate Spike Results

Compound Name	Fraction	Concentration (ug/l)	Surrogates Only	
			Spike Added (ug/l)	Percent Recovery
2-Fluorophenol	A-B/N	79	50	148
D5-Phenol	A-B/N	42	50	84
D5-Nitrobenzene	A-B/N	46	50	92
2-Fluorobiphenyl	A-B/N	37	50	74
D6-Benzene	VOL	101	100	101
D8-Toluene	VOL	95	100	95

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Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit however.

Value - If the result is a value greater than or equal to the detection limit, report the value.

U - Indicates compound was analyzed for but not detected. Report the minimum detection limit value with the U, e.g., 10U. The footnote should read: U - Compound was analyzed for but not detected. The number is the minimum detection limit.

K - If the mass spectral data indicate the presence of a compound that meets the identification criteria but the quantitative result is less than the specified detection limit but greater than zero, report the detection limit as K, e.g., 10K. The footnote should read: K - Actual value, within the limitations of this method, is less than the value given.

FS - This flag applies to analysis performed by Fused Silica Capillary Column.

J - Indicates an estimated value which is used when estimating a concentration for tentatively identified compounds; e.g., 1200J. The footnote should read: J - Estimated value.

Other - Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described in a page attached to the data summary report.

** - This flag applies to pesticides parameters where the identification has been performed using two column confirmation (as specified in Method 608) but the level is too low for verification of the compound by mass spectrometry.

CX - This flag is used to indicate those compounds which were concentrated by a factor of 10 times.

ORGANICS ANALYSIS DATA SHEET - Page 4

Sample Number
E1674

Laboratory Name: Energy Resources Co. Inc Case No: 1332
QC Report No: 26

B. Tentatively Identified Compounds

	CAS #	Compound Name	Fraction	Scan No. or Retention Time	% Maximum Score Attained Mass Matching Routine: (Specify: FINN)	Estimated Concentration (ug/L or ug/kg)
1.	565-68-4	4-Methyl-1-Pentyn-3-OL	A-B/N	219	811	6
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4/82

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U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Woodford Rd. Quarry
F5-8203-6 #6 Low Water

RECEIVED JAN 2 5 1983

ORGANICS ANALYSIS DATA SHEET

Sample Number
E16 75

83 MG01501

Laboratory Name: Energy Resources Co Case No: 1332
Lab Sample I.D. No: 35-80 QC Report No: 26

Multiply Detection Limits by 1 ☑ or 10 ☐ (Check Box for Appropriate Factor)

ACID COMPOUNDS

PP #	CAS #		ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6-trichlorophenol	10U
(22A)	59-50-7	p-chloro-m-cresol	10U
(24A)	95-57-8	2-chlorophenol	10U
(31A)	120-83-2	2,4-dichlorophenol	10U
(34A)	105-67-9	2,4-dimethylphenol	10U
(57A)	88-75-5	2-nitrophenol	10U
(58A)	100-02-7	4-nitrophenol	10U
(59A)	51-28-5	2,4-dinitrophenol	10U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	10U
(64A)	87-86-5	pentachlorophenol	10U
(65A)	108-95-2	phenol	10U

BASE/NEUTRAL COMPOUNDS

PP #	CAS #		ug/l or ug/kg (circle one)
(1B)	83-32-9	acenaphthene	10U
(5B)	92-87-5	benzidine	10U
(8B)	120-82-1	1,2,4-trichlorobenzene	10U
(9B)	118-74-1	hexachlorobenzene	10U
(12B)	67-72-1	hexachloroethane	10U
(18B)	111-44-4	bis(2-chloroethyl)ether	10U
(20B)	91-58-7	2-chloronaphthalene	10U
(25B)	95-50-1	1,2-dichlorobenzene	10U
(26B)	541-73-1	1,3-dichlorobenzene	10U
(27B)	106-46-7	1,4-dichlorobenzene	10U
(28B)	91-94-1	3,3'-dichlorobenzidine	10U
(35B)	121-14-2	2,4-dinitrotoluene	10U
(36B)	606-20-2	2,6-dinitrotoluene	10U
(37B)	122-66-7	1,2-diphenylhydrazine	10U
(39B)	206-44-0	fluoranthene	10U
(40B)	7005-72-3	4-chlorophenyl phenyl ether	10U
(41B)	101-55-3	4-bromophenyl phenyl ether	10U
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	10U
(43B)	111-91-1	bis (2-chloroethoxy) methane	10U
(52B)	87-68-3	hexachlorobutadiene	10U
(53B)	77-47-4	hexachlorocyclopentadiene	10U
(54B)	78-59-1	isophorone	10U
(55B)	91-20-3	naphthalene	10U
(56B)	98-95-3	nitrobenzene	10U
(62B)	86-30-6	N-nitrosodiphenylamine	10U
(63B)	621-64-7	N-nitrosodipropylamine	10U
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	20
(67B)	85-68-7	benzyl butyl phthalate	10U
(68B)	84-74-2	di-n-butyl phthalate	1K
(69B)	117-84-0	di-n-octyl phthalate	10U
(70B)	84-66-2	diethyl phthalate	10U
(71B)	131-11-3	dimethyl phthalate	10U
(72B)	56-55-3	benzo(a)anthracene	10U

BASE/NEUTRAL COMPOUNDS

PP #	CAS #		ug/l or ug/kg (circle one)
(73B)	50-32-8	benzo(a)pyrene	10U
(74B)	205-99-2	benzo(b)fluoranthene	10U
(75B)	207-08-9	benzo(k)fluoranthene	10U
(76B)	218-01-9	chrysene	10U
(77B)	208-96-8	acenaphthylene	10U
(78B)	120-12-7	anthracene	10U
(79B)	191-24-2	benzo(ghi)perylene	10U
(80B)	86-73-7	fluorene	10U
(81B)	85-01-8	phenanthrene	10U
(82B)	53-70-3	dibenzo(a,h)anthracene	10U
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	10U
(84B)	129-00-0	pyrene	10U

VOLATILES

(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	10U
(6V)	56-23-5	carbon tetrachloride	10U
(7V)	108-90-7	chlorobenzene	10U
(10V)	107-06-2	1,2-dichloroethane	10U
(11V)	71-55-6	1,1,1-trichloroethane	10U
(13V)	75-34-3	1,1-dichloroethane	10U
(14V)	79-00-5	1,1,2-trichloroethane	10U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10U
(16V)	75-00-3	chloroethane	10U
(19V)	110-75-8	2-chloroethylvinyl ether	10U
(23V)	67-66-3	chloroform	10U
(29V)	75-35-4	1,1-dichloroethene	10U
(30V)	156-60-5	trans-1,2-dichloroethene	97
(32V)	78-87-5	1,2-dichloropropane	10U
(33V)	10061-02-6	trans-1,3-dichloropropene	10U
	10061-01-05	cis-1,3-dichloropropene	10U
(38V)	100-41-4	ethylbenzene	10U
(44V)	75-09-2	methylene chloride	10U
(45V)	74-87-3	chloromethane	10U
(46V)	74-83-9	bromomethane	10U
(47V)	75-25-2	bromoform	10U
(48V)	75-27-4	bromodichloromethane	10U
(49V)	75-69-4	fluorotrichloromethane	10U
(50V)	75-71-8	dichlorodifluoromethane	10U
(51V)	124-48-1	chlorodibromomethane	10U
(85V)	127-18-4	tetrachloroethene	10U
(86V)	108-88-3	toluene	10U
(87V)	79-01-6	trichloroethene	10U
[illegible]	[illegible]	vinyl chloride	10U

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ORGANICS ANALYSIS DATA SHEET - Page 2

Sample Number
E1675

Laboratory Name: Energy Resources Co Case No: 1332
Lab Sample I.D. No: 35-80 QC Report No: 26

Multiply Detection Limits by 1 ☑ or 10 ☐ (Check Box for Appropriate Factor)

PESTICIDES

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	.1U
(90P)	60-57-1	dieldrin	.1U
(91P)	57-74-9	chlordane	.1U
(92P)	50-29-3	4,4'-DDT	.1U
(93P)	72-55-9	4,4'-DDE	.1U
(94P)	72-54-8	4,4'-DDD	.1U
(95P)	115-29-7	α-endosulfan	.1U
(96P)	115-29-7	β-endosulfan	.1U
(97P)	1031-07-8	endosulfan sulfate	.1U
(98P)	72-20-8	endrin	.1U
(99P)	7421-93-4	endrin aldehyde	.1U
(100P)	76-44-8	heptachlor	.1U
(101P)	1024-57-3	heptachlor epoxide	.1U
(102P)	319-84-6	α-BHC	.1U

PESTICIDES

PP #	CAS #		ug/l or ug/kg (circle one)
(103P)	319-85-7	β-BHC	.1U
(104P)	319-86-8	δ-BHC	.1U
(105P)	58-89-9	γ-BHC (lindane)	.1U
(106P)	53469-21-9	PCB-1242	.1U
(107P)	11097-69-1	PCB-1254	.1U
(108P)	11104-28-2	PCB-1221	.1U
(109P)	11141-16-5	PCB-1232	.1U
(110P)	12672-29-6	PCB-1248	.1U
(111P)	11096-82-5	PCB-1260	.1U
(112P)	12674-11-2	PCB-1016	.1U
(113P)	8001-35-2	toxaphene	.1U

DIOXINS

(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	.1U

Non-Priority Pollutant Hazardous Substances List Compounds

ACID COMPOUNDS

CAS #		ug/l or ug/kg (circle one)
65-85-0	benzoic acid	10U
95-48-7	2-methylphenol	10U
108-39-4	4-methylphenol	10U
95-95-4	2,4,5-trichlorophenol	10U

BASE/NEUTRAL COMPOUNDS

62-53-3	aniline	10U
100-51-6	benzyl alcohol	10U
106-47-8	4-chloroaniline	10U
132-64-9	dibenzofuran	10U
91-57-6	2-methylnaphthalene	10U
88-74-4	2-nitroaniline	10U
99-09-2	3-nitroaniline	10U
100-01-6	4-nitroaniline	10U

VOLATILES

CAS #		ug/l or ug/kg (circle one)
67-64-1	acetone	10U
78-93-3	2-butanone	10U
75-15-0	carbondisulfide	10U
519-78-6	2-hexanone	10U
108-10-1	4-methyl-2-pentanone	10U
100-42-5	styrene	10U
108-05-4	vinyl acetate	10U
95-47-6	o-xylene	10U

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Form I (continued)

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample Number
E1675

Laboratory Name: ERCO

QC Report No: 26

A. Surrogate Spike Results

Compound Name	Fraction	Concentration (ug/l)	Surrogates Only	
			Spike Added (ug/l)	Percent Recovery
2-Fluorophenol	A-B/N	100	50	200
D5-Phenol	A-B/N	32	50	64
D5-Nitrobenzene	A-B/N	15	50	30
2-Fluorobiphenyl	A-B/N	20	50	40
D6-Benzene	VOL	84	100	84
D8-Toluene	VOL	69	100	69

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Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit however.

Value - If the result is a value greater than or equal to the detection limit, report the value.

U - Indicates compound was analyzed for but not detected. Report the minimum detection limit value with the U, e.g., 10U. The footnote should read: U - Compound was analyzed for but not detected. The number is the minimum detection limit.

K - If the mass spectral data indicate the presence of a compound that meets the identification criteria but the quantitative result is less than the specified detection limit but greater than zero, report the detection limit as K, e.g., 10K. The footnote should read: K - Actual value, within the limitations of this method, is less than the value given.

FS - This flag applies to analysis performed by Fused Silica Capillary Column.

J - Indicates an estimated value which is used when estimating a concentration for tentatively identified compounds; e.g., 1200J. The footnote should read: J - Estimated value.

Other - Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described in a page attached to the data summary report.

** - This flag applies to pesticides parameters where the identification has been performed using two column confirmation (as specified in Method 608) but the level is too low for verification of the compound by mass spectrometry.

CX - This flag is used to indicate those compounds which were concentrated by a factor of 10 times.

ORGANICS ANALYSIS DATA SHEET - Page 4

Sample Number
E1675

Laboratory Name: Energy Resources Co. Inc Case No: 1332
QC Report No: 26

B. Tentatively Identified Compounds

CAS #	Compound Name	Fraction	Scan No. or Retention Time	% Maximum Score Attained Mass Matching Routine: (Specify: FINN)	Estimated Concentration (ug/L or ug/kg)
1. 105-60-2	HexAHYDRO-2H-AZEP-	A-B/N	733	987	1075
2.	IN-2-ONE				
3. 56728-10-0	3,4,5-TRIMethyl-1-	A-B/N	982	760	11
4.	HexENE				
5. 55669-83-5	2-Methyl-3-(1-Methyl	A-B/N	1427	826	25
6.	Ethyl),-TRANS-1-				
7.	AziRidinepropanol				
8. 100-75-4	1-Nitroso-Piperidine	A-B/N	2283	835	38
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Woodford Rd. Quarry
FS-8203-6 #6
Low Water

ORGANICS ANALYSIS DATA SHEET - Page 2

Sample Number
E1676

Laboratory Name: Energy Resources Co Case No: 1332
Lab Sample I.D. No: 35-81 QC Report No: 26

Multiply Detection Limits by 1 ☑ or 10 ☐ (Check Box for Appropriate Factor)

PESTICIDES

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	.1U
(90P)	60-57-1	dieldrin	.1U
(91P)	57-74-9	chlordane	.1U
(92P)	50-29-3	4,4'-DDT	.1U
(93P)	72-55-9	4,4'-DDE	.1U
(94P)	72-54-8	4,4'-DDD	.1U
(95P)	115-29-7	α-endosulfan	.1U
(96P)	115-29-7	β-endosulfan	.1U
(97P)	1031-07-8	endosulfan sulfate	.1U
(98P)	72-20-8	endrin	.1U
(99P)	7421-93-4	endrin aldehyde	.1U
(100P)	76-44-8	heptachlor	.1U
(101P)	1024-57-3	heptachlor epoxide	.1U
(102P)	319-84-6	α-BHC	.1U

PESTICIDES

PP #	CAS #		ug/l or ug/kg (circle one)
(103P)	319-85-7	β-BHC	.1U
(104P)	319-86-8	δ-BHC	.1U
(105P)	58-89-9	γ-BHC (lindane)	.1U
(106P)	53469-21-9	PCB-1242	.1U
(107P)	11097-69-1	PCB-1254	.1U
(108P)	11104-28-2	PCB-1221	.1U
(109P)	11141-16-5	PCB-1232	.1U
(110P)	12672-29-6	PCB-1248	.1U
(111P)	11096-82-5	PCB-1260	.1U
(112P)	12674-11-2	PCB-1016	.1U
(113P)	8001-35-2	toxaphene	.1U

DIOXINS

(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	.1U

Non-Priority Pollutant Hazardous Substances List Compounds

ACID COMPOUNDS

CAS #		ug/l or ug/kg (circle one)
65-85-0	benzoic acid	10U
95-48-7	2-methylphenol	10U
108-39-4	4-methylphenol	10U
95-95-4	2,4,5-trichlorophenol	10U

BASE/NEUTRAL COMPOUNDS

62-53-3	aniline	10U
100-51-6	benzyl alcohol	10U
106-47-8	4-chloroaniline	10U
132-64-9	dibenzofuran	10U
91-57-6	2-methylnaphthalene	10U
88-74-4	2-nitroaniline	10U
99-09-2	3-nitroaniline	10U
100-01-6	4-nitroaniline	10U

VOLATILES

CAS #		ug/l or ug/kg (circle one)
67-64-1	acetone	10U
78-93-3	2-butanone	10U
75-15-0	carbondisulfide	10U
519-78-6	2-hexanone	10U
108-10-1	4-methyl-2-pentanone	10U
100-42-5	styrene	10U
108-05-4	vinyl acetate	10U
95-47-6	o-xylene	10U

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Form I (continued)

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample Number
E1676

Laboratory Name: ERCO
QC Report No: 26

A. Surrogate Spike Results

Compound Name	Fraction	Concentration (ug/l)	Surrogates Only	
			Spike Added (ug/l)	Percent Recovery
2-Fluorophenol	A-B/N	36	50	72
D5-Phenol	A-B/N	8	50	16
D5-Nitrobenzene	A-B/N	41	50	82
2-Fluorobiphenyl	A-B/N	46	50	92
D6-Benzene	VOL	85	100	85
D8-Toluene	VOL	74	100	74

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Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit however.

Value - If the result is a value greater than or equal to the detection limit, report the value.

U - Indicates compound was analyzed for but not detected. Report the minimum detection limit value with the U, e.g., 10U. The footnote should read: U - Compound was analyzed for but not detected. The number is the minimum detection limit.

K - If the mass spectral data indicate the presence of a compound that meets the identification criteria but the quantitative result is less than the specified detection limit but greater than zero, report the detection limit as K, e.g., 10K. The footnote should read: K - Actual value, within the limitations of this method, is less than the value given.

FS - This flag applies to analysis performed by Fused Silica Capillary Column.

J - Indicates an estimated value which is used when estimating a concentration for tentatively identified compounds; e.g., 1200J. The footnote should read: J - Estimated value.

Other - Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described in a page attached to the data summary report.

** - This flag applies to pesticides parameters where the identification has been performed using two column confirmation (as specified in Method 608) but the level is too low for verification of the compound by mass spectrometry.

CX - This flag is used to indicate those compounds which were concentrated by a factor of 10 times.

ORGANICS ANALYSIS DATA SHEET - Page 4

Sample Number
E1676

Laboratory Name: Energy Resources Co. Inc Case No: 1332
QC Report No: 26

B. Tentatively Identified Compounds

CAS #	Compound Name	Fraction	Scan No. or Retention Time	% Maximum Score Attained Mass Matching Routine: (Specify: FMN)	Estimated Concentration (ug/L or ug/kg)
1. 105-60-2	Hexahydro-2H-Azep	A-B/N	714	98%	351
2.	IN-2-One				
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U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Woodford Rd. Quarry
F5-8203-6#6 Low Waters

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ORGANICS ANALYSIS DATA SHEET

Sample Number
E1677
83MG01/503

Laboratory Name: Energy Resources Co Case No: 1332
Lab Sample I.D. No: 35-82 QC Report No: 26

Multiply Detection Limits by 1 ☑ or 10 ☐ (Check Box for Appropriate Factor)

ACID COMPOUNDS

PP #	CAS #		ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6-trichlorophenol	10U
(22A)	59-50-7	p-chloro-m-cresol	10U
(24A)	95-57-8	2-chlorophenol	10U
(31A)	120-83-2	2,4-dichlorophenol	10U
(34A)	105-67-9	2,4-dimethylphenol	10U
(57A)	88-75-5	2-nitrophenol	10U
(58A)	100-02-7	4-nitrophenol	10U
(59A)	51-28-5	2,4-dinitrophenol	10U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	10U
(64A)	87-86-5	pentachlorophenol	10U
(65A)	108-95-2	phenol	10U

BASE/NEUTRAL COMPOUNDS

PP #	CAS #		ug/l or ug/kg (circle one)
(1B)	83-32-9	acenaphthene	10U
(5B)	92-87-5	benzidine	10U
(8B)	120-82-1	1,2,4-trichlorobenzene	10U
(9B)	118-74-1	hexachlorobenzene	10U
(12B)	67-72-1	hexachloroethane	10U
(18B)	111-44-4	bis(2-chloroethyl)ether	10U
(20B)	91-58-7	2-chloronaphthalene	10U
(25B)	95-50-1	1,2-dichlorobenzene	10U
(26B)	541-73-1	1,3-dichlorobenzene	10U
(27B)	106-46-7	1,4-dichlorobenzene	10U
(28B)	91-94-1	3,3'-dichlorobenzidine	10U
(35B)	121-14-2	2,4-dinitrotoluene	10U
(36B)	606-20-2	2,6-dinitrotoluene	10U
(37B)	122-66-7	1,2-diphenylhydrazine	10U
(39B)	206-44-0	fluoranthene	10U
(40B)	7005-72-3	4-chlorophenyl phenyl ether	10U
(41B)	101-55-3	4-bromophenyl phenyl ether	10U
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	10U
(43B)	111-91-1	bis (2-chloroethoxy) methane	10U
(52B)	87-68-3	hexachlorobutadiene	10U
(53B)	77-47-4	hexachlorocyclopentadiene	10U
(54B)	78-59-1	isophorone	10U
(55B)	91-20-3	naphthalene	10U
(56B)	98-95-3	nitrobenzene	10U
(62B)	86-30-6	N-nitrosodiphenylamine	10U
(63B)	621-64-7	N-nitrosodipropylamine	10U
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	5K
(67B)	85-68-7	benzyl butyl phthalate	10U
(68B)	84-74-2	di-n-butyl phthalate	2K
(69B)	117-84-0	di-n-octyl phthalate	10U
(70B)	84-66-2	diethyl phthalate	10U
(71B)	131-11-3	dimethyl phthalate	10U
(72B)	56-55-3	benzo(a)anthracene	10U
(73B)	50-32-8	benzo(a)pyrene	10U
(74B)	205-99-2	benzo(b)fluoranthene	10U
(75B)	207-08-9	benzo(k)fluoranthene	10U
(76B)	218-01-9	chrysene	10U
(77B)	208-96-8	acenaphthylene	10U
(78B)	120-12-7	anthracene	10U
(79B)	191-24-2	benzo(ghi)perylene	10U
(80B)	86-73-7	fluorene	10U
(81B)	85-01-8	phenanthrene	10U
(82B)	53-70-3	dibenzo(a,h)anthracene	10U
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	10U
(84B)	129-00-0	pyrene	10U

VOLATILES

(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	10U
(6V)	56-23-5	carbon tetrachloride	10U
(7V)	108-90-7	chlorobenzene	10U
(10V)	107-06-2	1,2-dichloroethane	10U
(11V)	71-55-6	1,1,1-trichloroethane	10U
(13V)	75-34-3	1,1-dichloroethane	10U
(14V)	79-00-5	1,1,2-trichloroethane	10U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10U
(16V)	75-00-3	chloroethane	10U
(19V)	110-75-8	2-chloroethylvinyl ether	10U
(23V)	67-66-3	chloroform	10U
(29V)	75-35-4	1,1-dichloroethene	10U
(30V)	156-60-5	trans-1,2-dichloroethene	10U
(32V)	78-87-5	1,2-dichloropropane	10U
(33V)	10061-02-6	trans-1,3-dichloropropene	10U
	10061-01-05	cis-1,3-dichloropropene	10U
(38V)	100-41-4	ethylbenzene	10U
(44V)	75-09-2	methylene chloride	10U
(45V)	74-87-3	chloromethane	10U
(46V)	74-83-9	bromomethane	10U
(47V)	75-25-2	bromoform	10U
(48V)	75-27-4	bromodichloromethane	10U
(49V)	75-69-4	fluorotrichloromethane	10U
(50V)	75-71-8	dichlorodifluoromethane	10U
(51V)	124-48-1	chlorodibromomethane	10U
(85V)	127-18-4	tetrachloroethene	10U
(86V)	108-88-3	toluene	10U
(87V)	79-01-6	trichloroethene	10U
(88V)	75-01-4	vinyl chloride	10U

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ORGANICS ANALYSIS DATA SHEET - Page 2

Sample Number
E1677

Laboratory Name: Energy Resources Co Case No: 1332
Lab Sample I.D. No: 35-82 QC Report No: 26

Multiply Detection Limits by 1 ☑ or 10 ☐ (Check Box for Appropriate Factor)

PESTICIDES

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	.1U
(90P)	60-57-1	dieldrin	.1U
(91P)	57-74-9	chlordane	.1U
(92P)	50-29-3	4,4'-DDT	.1U
(93P)	72-55-9	4,4'-DDE	.1U
(94P)	72-54-8	4,4'-DDD	.1U
(95P)	115-29-7	α-endosulfan	.1U
(96P)	115-29-7	β-endosulfan	.1U
(97P)	1031-07-8	endosulfan sulfate	.1U
(98P)	72-20-8	endrin	.1U
(99P)	7421-93-4	endrin aldehyde	.1U
(100P)	76-44-8	heptachlor	.1U
(101P)	1024-57-3	heptachlor epoxide	.1U
(102P)	319-84-6	α-BHC	.1U

PESTICIDES

PP #	CAS #		ug/l or ug/kg (circle one)
(103P)	319-85-7	β-BHC	.1U
(104P)	319-86-8	δ-BHC	.1U
(105P)	58-89-9	γ-BHC (lindane)	.1U
(106P)	53469-21-9	PCB-1242	.1U
(107P)	11097-69-1	PCB-1254	.1U
(108P)	11104-28-2	PCB-1221	.1U
(109P)	11141-16-5	PCB-1232	.1U
(110P)	12672-29-6	PCB-1248	.1U
(111P)	11096-82-5	PCB-1260	.1U
(112P)	12674-11-2	PCB-1016	.1U
(113P)	8001-35-2	toxaphene	.1U

DIOXINS

(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	.1U

Non-Priority Pollutant Hazardous Substances List Compounds

ACID COMPOUNDS

CAS #		ug/l or ug/kg (circle one)
65-85-0	benzoic acid	10U
95-48-7	2-methylphenol	10U
108-39-4	4-methylphenol	10U
95-95-4	2,4,5-trichlorophenol	10U

BASE/NEUTRAL COMPOUNDS

62-53-3	aniline	10U
100-51-6	benzyl alcohol	10U
106-47-8	4-chloroaniline	10U
132-64-9	dibenzofuran	10U
91-57-6	2-methylnaphthalene	10U
88-74-4	2-nitroaniline	10U
99-09-2	3-nitroaniline	10U
100-01-6	4-nitroaniline	10U

VOLATILES

CAS #		ug/l or ug/kg (circle one)
67-64-1	acetone	10U
78-93-3	2-butanone	10U
75-15-0	carbondisulfide	10U
519-78-6	2-hexanone	10U
108-10-1	4-methyl-2-pentanone	10U
100-42-5	styrene	10U
108-05-4	vinyl acetate	10U
95-47-6	o-xylene	10U

4/82

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Form I (continued)

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample Number
Σ1677

Laboratory Name: ERCO

QC Report No: 26

A. Surrogate Spike Results

Compound Name	Fraction	Concentration (ug/l)	Surrogates Only	
			Spike Added (ug/l)	Percent Recovery
2-Fluorophenol	A-B/N	43	50	86
D5-Phenol	A-B/N	39	50	78
D5-Nitrobenzene	A-B/N	30	50	60
2-Fluorobiphenyl	A-B/N	31	50	62
D6-Benzene	VOL	116	100	116
D8-Toluene	VOL	100	100	100

RECEIVED [illegible]

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit however.

Value - If the result is a value greater than or equal to the detection limit, report the value.

U - Indicates compound was analyzed for but not detected. Report the minimum detection limit value with the U, e.g., 10U. The footnote should read: U - Compound was analyzed for but not detected. The number is the minimum detection limit.

K - If the mass spectral data indicate the presence of a compound that meets the identification criteria but the quantitative result is less than the specified detection limit but greater than zero, report the detection limit as K, e.g., 10K. The footnote should read: K - Actual value, within the limitations of this method, is less than the value given.

FS - This flag applies to analysis performed by Fused Silica Capillary Column.

J - Indicates an estimated value which is used when estimating a concentration for tentatively identified compounds; e.g., 1200J. The footnote should read: J - Estimated value.

Other - Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described in a page attached to the data summary report.

** - This flag applies to pesticides parameters where the identification has been performed using two column confirmation (as specified in Method 603) but the level is too low for verification of the compound by mass spectrometry.

CX - This flag is used to indicate those compounds which were concentrated by a factor of 10 times.

ORGANICS ANALYSIS DATA SHEET - Page 4

Sample Number: E16677

Laboratory Name: Energy Resources Co. Inc Case No: 1332

QC Report No: 26

B. Tentatively Identified Compounds

CAS #	Compound Name	Fraction	Scan No. or Retention Time	% Maximum Score Attained Mass Matching Routine: (Specify: FINN)	Estimated Concentration (ug/l or ug/kg)
1. 1195-79-5	Bicyclo[2.2.1]Heptane-	A-B/N	522	934	7
2.	2-ONE, 1,3,3-Trimethyl-				
3. 105-60-2	HexAhydRO-2H-Azep	A/B/N	725	976	886
4.	IN-2-ONE				
5. 17301-32-5	4,7-Dimethyl-Undecane	A-B/N	1048	958	7
6. 17301-32-5	4,7-Dimethyl-Undecane	A-B/N	1183	964	8
7. 1636-43-7	6,6-Dimethyl-Decane	A-B/N	1418	667	57
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P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

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Sample Number
21678

Woodford Rd. Quarry
FS-8203-6#6 Low Water

ORGANICS ANALYSIS DATA SHEET

83MG01 504

Laboratory Name: Energy Resources Co Case No: 1332
Lab Sample I.D. No: 35-83 QC Report No: 26

Multiply Detection Limits by 1 ☑ or 10 ☐ (Check Box for Appropriate Factor)

ACID COMPOUNDS

PP #	CAS #		ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6- trichlorophenol	10U
(22A)	59-50-7	p-chloro-m-cresol	10U
(24A)	95-57-8	2- chlorophenol	10U
(31A)	120-83-2	2,4-dichlorophenol	10U
(34A)	105-67-9	2,4-dimethylphenol	10U
(57A)	88-75-5	2- nitrophenol	10U
(58A)	100-02-7	4-nitrophenol	10U
(59A)	51-28-5	2,4-dinitrophenol	10U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	10U
(64A)	87-86-5	pentachlorophenol	10U
(65A)	108-95-2	phenol	10U

BASE/NEUTRAL COMPOUNDS

PP #	CAS #		ug/l or ug/kg (circle one)
(1B)	83-32-9	acenaphthene	10U
(5B)	92-87-5	benzidine	10U
(8B)	120-82-1	1,2,4-trichlorobenzene	10U
(9B)	118-74-1	hexachlorobenzene	10U
(12B)	67-72-1	hexachloroethane	10U
(18B)	111-44-4	bis(2-chloroethyl)ether	10U
(20B)	91-58-7	2-chloronaphthalene	10U
(25B)	95-50-1	1,2-dichlorobenzene	10U
(26B)	541-73-1	1,3-dichlorobenzene	10U
(27B)	106-46-7	1,4-dichlorobenzene	10U
(28B)	91-94-1	3,3'-dichlorobenzidine	10U
(35B)	121-14-2	2,4-dinitrotoluene	10U
(36B)	606-20-2	2,6-dinitrotoluene	10U
(37B)	122-66-7	1,2-diphenylhydrazine	10U
(39B)	206-44-0	fluoranthene	10U
(40B)	7005-72-3	4-chlorophenyl phenyl ether	10U
(41B)	101-55-3	4-bromophenyl phenyl ether	10U
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	10U
(43B)	111-91-1	bis (2-chloroethoxy) methane	10U
(52B)	87-68-3	hexachlorobutadiene	10U
(53B)	77-47-4	hexachlorocyclopentadiene	10U
(54B)	78-59-1	isophorone	10U
(55B)	91-20-3	naphthalene	10U
(56B)	98-95-3	nitrobenzene	10U
(62B)	86-30-6	N-nitrosodiphenylamine	10U
(63B)	621-64-7	N-nitrosodipropylamine	10U
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	5K
(67B)	85-68-7	benzyl butyl phthalate	10U
(68B)	84-74-2	di-n-butyl phthalate	10U
(69B)	117-84-0	di-n-octyl phthalate	3K
(70B)	84-66-2	diethyl phthalate	10U
(71B)	131-11-3	dimethyl phthalate	10U
(72B)	56-55-3	benzo(a)anthracene	10U
(73B)	50-32-8	benzo(a)pyrene	10U
(74B)	205-99-2	benzo(b)fluoranthene	10U
(75B)	207-08-9	benzo(k)fluoranthene	10U
(76B)	218-01-9	chrysene	10U
(77B)	208-96-8	acenaphthylene	10U
(78B)	120-12-7	anthracene	10U
(79B)	191-24-2	benzo(ghi)perylene	10U
(80B)	86-73-7	fluorene	10U
(81B)	85-01-8	phenanthrene	10U
(82B)	53-70-3	dibenzo(a,h)anthracene	10U
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	10U
(84B)	129-00-0	pyrene	10U

VOLATILES

(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	10U
(6V)	56-23-5	carbon tetrachloride	10U
(7V)	108-90-7	chlorobenzene	10U
(10V)	107-06-2	1,2-dichloroethane	10U
(11V)	71-55-6	1,1,1-trichloroethane	10U
(13V)	75-34-3	1,1-dichloroethane	10U
(14V)	79-00-5	1,1,2-trichloroethane	10U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10U
(16V)	75-00-3	chloroethane	10U
(19V)	110-75-8	2-chloroethylvinyl ether	10U
(23V)	67-66-3	chloroform	10U
(29V)	75-35-4	1,1-dichloroethene	10U
(30V)	156-60-5	trans-1,2-dichloroethene	10U
(32V)	78-87-5	1,2-dichloropropane	10U
(33V)	10061-02-6	trans-1,3-dichloropropene	10U
	10061-01-05	cis-1,3-dichloropropene	10U
(38V)	100-41-4	ethylbenzene	10U
(44V)	75-09-2	methylene chloride	10U
(45V)	74-87-3	chloromethane	10U
(46V)	74-83-9	bromomethane	10U
(47V)	75-25-2	bromoform	10U
(48V)	75-27-4	bromodichloromethane	10U
(49V)	75-69-4	fluorotrichloromethane	10U
(50V)	75-71-8	dichlorodifluoromethane	10U
(51V)	124-48-1	chlorodibromomethane	10U
(85V)	127-18-4	tetrachloroethene	10U
(86V)	108-88-3	toluene	10U
(87V)	79-01-6	trichloroethene	10U
(88V)	75-01-4	vinyl chloride	10U

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ORGANICS ANALYSIS DATA SHEET - Page 2

Sample Number
E1678

Laboratory Name: Energy Resources Co Case No: 1332
Lab Sample I.D. No: 35-83 QC Report No: 26

Multiply Detection Limits by 1 ☑ or 10 ☐ (Check Box for Appropriate Factor)

PESTICIDES

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	.1U
(90P)	60-57-1	dieldrin	.1U
(91P)	57-74-9	chlordane	.1U
(92P)	50-29-3	4,4'-DDT	.1U
(93P)	72-55-9	4,4'-DDE	.1U
(94P)	72-54-8	4,4'-DDD	.1U
(95P)	115-29-7	α-endosulfan	.1U
(96P)	115-29-7	β-endosulfan	.1U
(97P)	1031-07-8	endosulfan sulfate	.1U
(98P)	72-20-8	endrin	.1U
(99P)	7421-93-4	endrin aldehyde	.1U
(100P)	76-44-8	heptachlor	.1U
(101P)	1024-57-3	heptachlor epoxide	.1U
(102P)	319-84-6	α-BHC	.1U

PESTICIDES

PP #	CAS #		ug/l or ug/kg (circle one)
(103P)	319-85-7	β-BHC	.1U
(104P)	319-86-8	δ-BHC	.1U
(105P)	58-89-9	γ-BHC (lindane)	.1U
(106P)	53469-21-9	PCB-1242	.1U
(107P)	11097-69-1	PCB-1254	.1U
(108P)	11104-28-2	PCB-1221	.1U
(109P)	11141-16-5	PCB-1232	.1U
(110P)	12672-29-6	PCB-1248	.1U
(111P)	11096-82-5	PCB-1260	.1U
(112P)	12674-11-2	PCB-1016	.1U
(113P)	8001-35-2	toxaphene	.1U

DIOXINS

(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-o-dioxin	.1U

Non-Priority Pollutant Hazardous Substances List Compounds

ACID COMPOUNDS

CAS #		ug/l or ug/kg (circle one)
65-85-0	benzoic acid	10U
95-48-7	2-methylphenol	10U
108-39-4	4-methylphenol	10U
95-95-4	2,4,5-trichlorophenol	10U

BASE/NEUTRAL COMPOUNDS

62-53-3	aniline	10U
100-51-6	benzyl alcohol	10U
106-47-8	4-chloroaniline	10U
132-64-9	dibenzofuran	10U
91-57-6	2-methylnaphthalene	10U
88-74-4	2-nitroaniline	10U
99-09-2	3-nitroaniline	10U
100-01-6	4-nitroaniline	10U

VOLATILES

CAS #		ug/l or ug/kg (circle one)
67-64-1	acetone	10U
78-93-3	2-butanone	10U
75-15-0	carbondisulfide	10U
519-78-6	2-hexanone	10U
108-10-1	4-methyl-2-pentanone	10U
100-42-5	styrene	10U
108-05-4	vinyl acetate	10U
95-47-6	o-xylene	10U

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Form I (continued)

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample Number
51678

Laboratory Name: ERCO

QC Report No: 26

A. Surrogate Spike Results

Compound Name	Fraction	Concentration (ug/l)	Surrogates Only	
			Spike Added (ug/l)	Percent Recovery
2-Fluorophenol	A-B/N	46	50	92
D6-Phenol	A-B/N	31	50	62
D5-Nitrobenzene	A-B/N	46	50	92
2-Fluorobiphenyl	A-B/N	53	50	106
D6-Benzene	VOL	117	100	117
D8-Toluene	VOL	95	100	95

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Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit however.

Value - If the result is a value greater than or equal to the detection limit, report the value.

U - Indicates compound was analyzed for but not detected. Report the minimum detection limit value with the U, e.g., 10U. The footnote should read: U - Compound was analyzed for but not detected. The number is the minimum detection limit.

K - If the mass spectral data indicate the presence of a compound that meets the identification criteria but the quantitative result is less than the specified detection limit but greater than zero, report the detection limit as K, e.g., 10K. The footnote should read: K - Actual value, within the limitations of this method, is less than the value given.

FS - This flag applies to analysis performed by Fused Silica Capillary Column.

J - Indicates an estimated value which is used when estimating a concentration for tentatively identified compounds; e.g., 1200J. The footnote should read: J - Estimated value.

Other - Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described in a page attached to the data summary report.

** - This flag applies to pesticides parameters where the identification has been performed using two column confirmation (as specified in Method 608) but the level is too low for verification of the compound by mass spectrometry.

CX - This flag is used to indicate those compounds which were concentrated by a factor of 10 times.

ORGANICS ANALYSIS DATA SHEET - Page 4

Sample Number
Σ16 78

Laboratory Name: Energy Resources Co. Inc Case No: 1332
QC Report No: 26

B. Tentatively Identified Compounds

CAS #	Compound Name	Fraction	Scan No. or Retention Time	% Maximum Score Attained Mass Matching Routine: (Specify: FINN)	Estimated Concentration (ug/L or ug/kg)
1. 105-60-2	Hexahydro-2H-Azep-	A-B/N	705	969	193
2.	in-2-one				
3. 56738-10-0	3,4,5-Trimethyl-1-H	A-B/N	982	785	23
4.	exene				
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4/82

Sample No: 21676
Case No: 1332
Standard ID: 35-855

U. S. ENVIRONMENTAL PROTECTION AGENCY
HWI SAMPLE MANAGEMENT OFFICE

Lab Name: CRCO
Report No: 26
Page 5 of 6

-29-

Re

QUALITY CONTROL REPORT

A. MATRIX SPIKE ANALYSIS

COMPOUND (Including Surrogates)		CONCENTRATION (ug/l)			%
CAS #	COMPOUND NAME	Sample Result (SR)	Spiked Sample Result (SSR)	Spike Added (SA)	Recovery
71-43-2	Benzene	Ø	24	25	98
108-90-7	Chlorobenzene	Ø	21	25	83
108-88-3	Toluene	Ø	22	25	89
59-50-7	p-chloro-m-cresol (22A)	Ø	44	50	88
95-57-8	2-Chlorophenol (24A)	Ø	111	50	222
100-02-7	4-Nitrophenol (51A)	Ø	Ø	50	Ø
108-95-7	phenol (65A)	Ø	25	50	50
87-86-5	Pentachlorophenol (64A)	Ø	25	50	50
83-32-9	Acenaphthene (1B)	Ø	33	50	66
120-82-1	1,2,4-Trichlorobenzene (8B)	Ø	45	50	90
106-46-7	1,4-Dichlorobenzene (27B)	Ø	103	50	206
121-14-2	2,4-Dinitrotoluene (35B)	Ø	35	50	70
621-64-7	N-nitrosodipropylamine (63B)	Ø	67	50	134
84-74-2	di-n-butyl phthalate (68B)	Ø	29	50	58
60-57-1	dieldrin	Ø	32.5	50	65
72-20-8	endrin	Ø	35.5	50	71
76-44-8	heptachlor	Ø	38.4	50	77
129-00-0	pyrene (84B)	Ø	17	50	34

This QC Report also covers the following sample numbers: E1674, E1675, E1676, E1677, E1678, E1679

*% Recovery = $\frac{(SSR - SR)}{(SA)}$ X 100

Form II

ıse No: 1332
ıb Standard ID: 35-86D

HWI SAMPLE MANAGEMENT

Page 10

QUALITY CONTROL REPORT

B. DUPLICATE ANALYSIS

COMPOUND (Including Surrogates)		CONCENTRATION (ug/l)		Relative Percent Difference (RPD)*
CAS #	COMPOUND NAME	Aliquot 1 (D_1)	Aliquot 2 (D_2)	
	2-Fluorophenol	43	18	82
	D_5-Phenol	39	9	125
	D_5-Nitrobenzene	30	34	13
	2-Fluorobiphenyl	31	31	0
	D_6-Benzene	116	111	4
	D_8-Toluene	100	97	3
	bis (2 ethylhexyl) phthalate	5	6	18
	di-n-butyl phthalate	2	0	200

This QC Report also covers the following sample numbers: E1674, E1675, E1676, E1677, E1678, E1679

$$*RPD = \frac{(D_1 - D_2)}{\left[(D_1 + D_2)/2\right]} \times 100$$

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Form II (continued)

(1/12/8

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Woodford Rd. Quarry
FS-8203-6#6 Low Water

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Sample Number
E1679
83MGC/505

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Energy Resources Co Case No: 1332
Lab Sample I.D. No: 35-84 QC Report No: 26

Multiply Detection Limits by 1 ☑ or 10 ☐ (Check Box for Appropriate Factor)

ACID COMPOUNDS

PP #	CAS #		ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6- trichlorophenol	10U
(22A)	59-50-7	p-chloro-m-cresol	10U
(24A)	95-57-8	2- chlorophenol	10U
(31A)	120-83-2	2,4-dichlorophenol	10U
(34A)	105-67-9	2,4-dimethylphenol	10U
(57A)	88-75-5	2- nitrophenol	10U
(58A)	100-02-7	4-nitrophenol	10U
(59A)	51-28-5	2,4-dinitrophenol	10U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	10U
(64A)	87-86-5	pentachlorophenol	10U
(65A)	108-95-2	phenol	10U

BASE/NEUTRAL COMPOUNDS

PP #	CAS #		ug/l or ug/kg (circle one)
(1B)	83-32-9	acenaphthene	10U
(5B)	92-87-5	benzidine	10U
(8B)	120-82-1	1,2,4-trichlorobenzene	10U
(9B)	118-74-1	hexachlorobenzene	10U
(12B)	67-72-1	hexachloroethane	10U
(18B)	111-44-4	bis(2-chloroethyl)ether	10U
(20B)	91-58-7	2-chloronaphthalene	10U
(25B)	95-50-1	1,2-dichlorobenzene	10U
(26B)	541-73-1	1,3-dichlorobenzene	10U
(27B)	106-46-7	1,4-dichlorobenzene	10U
(28B)	91-94-1	3,3'-dichlorobenzidine	10U
(35B)	121-14-2	2,4-dinitrotoluene	10U
(36B)	606-20-2	2,6-dinitrotoluene	10U
(37B)	122-66-7	1,2-diphenylhydrazine	10U
(39B)	206-44-0	fluoranthene	10U
(40B)	7005-72-3	4-chlorophenyl phenyl ether	10U
(41B)	101-55-3	4-bromophenyl phenyl ether	10U
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	10U
(43B)	111-91-1	bis (2-chloroethoxy) methane	10U
(52B)	87-68-3	hexachlorobutadiene	10U
(53B)	77-47-4	hexachlorocyclopentadiene	10U
(54B)	78-59-1	isophorone	10U
(55B)	91-20-3	naphthalene	10U
(56B)	98-95-3	nitrobenzene	10U
(62B)	86-30-6	N-nitrosodiphenylamine	10U
(63B)	621-64-7	N-nitrosodipropylamine	10U
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	1K
(67B)	85-68-7	benzyl butyl phthalate	10U
(68B)	84-74-2	di-n-butyl phthalate	1K
(69B)	117-84-0	di-n-octyl phthalate	10U
(70B)	84-66-2	diethyl phthalate	10U
(71B)	131-11-3	dimethyl phthalate	10U
(72B)	56-55-3	benzo(a)anthracene	10U
(73B)	50-32-8	benzo(a)pyrene	10U
(74B)	205-99-2	benzo(b)fluoranthene	10U
(75B)	207-08-9	benzo(k)fluoranthene	10U
(76B)	218-01-9	chrysene	10U
(77B)	208-96-8	acenaphthylene	10U
(78B)	120-12-7	anthracene	10U
(79B)	191-24-2	benzo(ghi)perylene	10U
(80B)	86-73-7	fluorene	10U
(81B)	85-01-8	phenanthrene	10U
(82B)	53-70-3	dibenzo(a,h)anthracene	10U
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	10U
(84B)	129-00-0	pyrene	10U

VOLATILES

(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	10U
(6V)	56-23-5	carbon tetrachloride	10U
(7V)	108-90-7	chlorobenzene	10U
(10V)	107-06-2	1,2-dichloroethane	10U
(11V)	71-55-6	1,1,1-trichloroethane	10U
(13V)	75-34-3	1,1-dichloroethane	10U
(14V)	79-00-5	1,1,2-trichloroethane	10U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10U
(16V)	75-00-3	chloroethane	10U
(19V)	110-75-8	2-chloroethylvinyl ether	10U
(23V)	67-66-3	chloroform	10U
(29V)	75-35-4	1,1-dichloroethene	10U
(30V)	156-60-5	trans-1,2-dichloroethene	281
(32V)	78-87-5	1,2-dichloropropane	10U
(33V)	10061-02-6	trans-1,3-dichloropropene	10U
	10061-01-05	cis-1,3-dichloropropene	10U
(38V)	100-41-4	ethylbenzene	10U
(44V)	75-09-2	methylene chloride	10U
(45V)	74-87-3	chloromethane	10U
(46V)	74-83-9	bromomethane	10U
(47V)	75-25-2	bromoform	10U
(48V)	75-27-4	bromodichloromethane	10U
(49V)	75-69-4	fluorotrichloromethane	10U
(50V)	75-71-8	dichlorodifluoromethane	10U
(51V)	124-48-1	chlorodibromomethane	10U
(85V)	127-18-4	tetrachloroethene	10U
(86V)	108-88-3	toluene	10U
(87V)	79-01-6	trichloroethene	11
		vinyl chloride	10U

ORGANICS ANALYSIS DATA SHEET - Page 2

Sample Number
51679

Laboratory Name: Energy Resources Co Case No: 1332
Lab Sample I.D. No: 35-84 QC Report No: 26

Multiply Detection Limits by 1 ☑ or 10 ☐ (Check Box for Appropriate Factor)

PESTICIDES

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	.1U
(90P)	60-57-1	dieldrin	.1U
(91P)	57-74-9	chlordane	.1U
(92P)	50-29-3	4,4'-DDT	.1U
(93P)	72-55-9	4,4'-DDE	.1U
(94P)	72-54-8	4,4'-DDD	.1U
(95P)	115-29-7	α-endosulfan	.1U
(96P)	115-29-7	β-endosulfan	.1U
(97P)	1031-07-8	endosulfan sulfate	.1U
(98P)	72-20-8	endrin	.1U
(99P)	7421-93-4	endrin aldehyde	.1U
(100P)	76-44-8	heptachlor	.1U
(101P)	1024-57-3	heptachlor epoxide	.1U
(102P)	319-84-6	α-BHC	.1U

PESTICIDES

PP #	CAS #		ug/l or ug/kg (circle one)
(103P)	319-85-7	β-BHC	.1U
(104P)	319-86-8	δ-BHC	.1U
(105P)	58-89-9	γ-BHC (lindane)	.1U
(106P)	53469-21-9	PCB-1242	.1U
(107P)	11097-69-1	PCB-1254	.1U
(108P)	11104-28-2	PCB-1221	.1U
(109P)	11141-16-5	PCB-1232	.1U
(110P)	12672-29-6	PCB-1248	.1U
(111P)	11096-82-5	PCB-1260	.1U
(112P)	12674-11-2	PCB-1016	.1U
(113P)	8001-35-2	toxaphene	.1U

DIOXINS

(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	.1U

Non-Priority Pollutant Hazardous Substances List Compounds

ACID COMPOUNDS

CAS #		ug/l or ug/kg (circle one)
65-85-0	benzoic acid	10U
95-48-7	2-methylphenol	10U
108-39-4	4-methylphenol	10U
95-95-4	2,4,5-trichlorophenol	10U

BASE/NEUTRAL COMPOUNDS

62-53-3	aniline	10U
100-51-6	benzyl alcohol	10U
106-47-8	4-chloroaniline	10U
132-64-9	dibenzofuran	10U
91-57-6	2-methylnaphthalene	10U
88-74-4	2-nitroaniline	10U
99-09-2	3-nitroaniline	10U
100-01-6	4-nitroaniline	10U

VOLATILES

CAS #		ug/l or ug/kg (circle one)
67-64-1	acetone	10U
78-93-3	2-butanone	10U
75-15-0	carbondisulfide	10U
519-78-6	2-hexanone	10U
108-10-1	4-methyl-2-pentanone	10U
100-42-5	styrene	10U
108-05-4	vinyl acetate	10U
95-47-6	o-xylene	10U

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Form I (continued)

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample Number
E1679

Laboratory Name: ERCO

QC Report No: 26

A. Surrogate Spike Results

Compound Name	Fraction	Concentration (ug/l)	Surrogates Only	
			Spike Added (ug/l)	Percent Recovery
2-Fluorophenol	A-B/N	215*	50	430*
D5-Phenol	A-B/N	60*	50	120*
D5-Nitrobenzene	A-B/N	37	50	74
2-Fluorobiphenyl	A-B/N	40	50	80
D6-Benzene	VOL	119	100	119
D8-Toluene	VOL	98	100	98

* Surrogate quantitation high due to interference with internal standard.

RECEIVED

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit however.

Value - If the result is a value greater than or equal to the detection limit, report the value.

U - Indicates compound was analyzed for but not detected. Report the minimum detection limit value with the U, e.g., 10U. The footnote should read: U - Compound was analyzed for but not detected. The number is the minimum detection limit.

K - If the mass spectral data indicate the presence of a compound that meets the identification criteria but the quantitative result is less than the specified detection limit but greater than zero, report the detection limit as K, e.g., 10K. The footnote should read: K - Actual value, within the limitations of this method, is less than the value given.

FS - This flag applies to analysis performed by Fused Silica Capillary Column.

J - Indicates an estimated value which is used when estimating a concentration for tentatively identified compounds; e.g., 1200J. The footnote should read: J - Estimated value.

Other - Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described in a page attached to the data summary report.

** - This flag applies to pesticides parameters where the identification has been performed using two column confirmation (as specified in Method 608) but the level is too low for verification of the compound by mass spectrometry.

CX - This flag is used to indicate those compounds which were concentrated by a factor of 10 times.

ORGANICS ANALYSIS DATA SHEET - Page 4

Sample Number
Σ1679

Laboratory Name: Energy Resources Co. Inc Case No: 1332
QC Report No: 26

B. Tentatively Identified Compounds

CAS #	Compound Name	Fraction	Scan No. or Retention Time	% Maximum Score Attained Mass Matching Routine: (Specify: FINN)	Estimated Concentration (ug/l or ug/kg)
1. 7523-15-1	Dihexylester, CARBONIC	A-B/N	728	944	646
2.	ACID				
3. 56728-10-0	3,4,5-Trimethyl-1-Hexene	A-B/N	980	787	36
4. 14212-87-4	4,4'-Ethenylidenebis-	A-B/N	1428	689	35
5.	MORPHOLINE				
6.					
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REC

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
Σ1676
MATRIX Spike

WOODFORD RD QUARRY ORGANICS ANALYSIS DATA SHEET

Laboratory Name: ENERGY RESOURCES CO Case No: 1332
Lab Sample I.D. No: 35-855 QC Report No: 26

Multiply Detection Limits by 1 [✓] or 10 [ ] (Check Box for Appropriate Factor)

ACID COMPOUNDS

PP #	CAS #		ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6-trichlorophenol	10U
(22A)	59-50-7	p-chloro-m-cresol	44
(24A)	95-57-8	2-chlorophenol	111
(31A)	120-83-2	2,4-dichlorophenol	10U
(34A)	105-67-9	2,4-dimethylphenol	10U
(57A)	88-75-5	2-nitrophenol	10U
(58A)	100-02-7	4-nitrophenol	10U
(59A)	51-28-5	2,4-dinitrophenol	10U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	10U
(64A)	87-86-5	pentachlorophenol	25
(65A)	108-95-2	phenol	25

BASE/NEUTRAL COMPOUNDS

PP #	CAS #		ug/l or ug/kg (circle one)
(1B)	83-32-9	acenaphthene	33
(5B)	92-87-5	benzidine	10U
(8B)	120-82-1	1,2,4-trichlorobenzene	45
(9B)	118-74-1	hexachlorobenzene	10U
(12B)	67-72-1	hexachloroethane	10U
(18B)	111-44-4	bis(2-chloroethyl)ether	10U
(20B)	91-58-7	2-chloronaphthalene	10U
(25B)	95-50-1	1,2-dichlorobenzene	10U
(26B)	541-73-1	1,3-dichlorobenzene	10U
(27B)	106-46-7	1,4-dichlorobenzene	103
(28B)	91-94-1	3,3'-dichlorobenzidine	10U
(35B)	121-14-2	2,4-dinitrotoluene	35
(36B)	606-20-2	2,6-dinitrotoluene	10U
(37B)	122-66-7	1,2-diphenylhydrazine	10U
(39B)	206-44-0	fluoranthene	10U
(40B)	7005-72-3	4-chlorophenyl phenyl ether	10U
(41B)	101-55-3	4-bromophenyl phenyl ether	10U
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	10U
(43B)	111-91-1	bis (2-chloroethoxy) methane	10U
(52B)	87-68-3	hexachlorobutadiene	10U
(53B)	77-47-4	hexachlorocyclopentadiene	10U
(54B)	78-59-1	isophorone	10U
(55B)	91-20-3	naphthalene	10U
(56B)	98-95-3	nitrobenzene	10U
(62B)	86-30-6	N-nitrosodiphenylamine	10U
(63B)	621-64-7	N-nitrosodipropylamine	67
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	1K
(67B)	85-68-7	benzyl butyl phthalate	10U
(68B)	84-74-2	di-n-butyl phthalate	29
(69B)	117-84-0	di-n-octyl phthalate	10U
(70B)	84-66-2	diethyl phthalate	10U
(71B)	131-11-3	dimethyl phthalate	10U
(72B)	56-55-3	benzo(a)anthracene	10U
(73B)	50-32-8	benzo(a)pyrene	10U
(74B)	205-99-2	benzo(b)fluoranthene	10U
(75B)	207-08-9	benzo(k)fluoranthene	10U
(76B)	218-01-9	chrysene	10U
(77B)	208-96-8	acenaphthylene	10U
(78B)	120-12-7	anthracene	10U
(79B)	191-24-2	benzo(ghi)perylene	10U
(80B)	86-73-7	fluorene	10U
(81B)	85-01-8	phenanthrene	10U
(82B)	53-70-3	dibenzo(a,h)anthracene	10U
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	10U
(84B)	129-00-0	pyrene	17

VOLATILES

(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	24
(6V)	56-23-5	carbon tetrachloride	10U
(7V)	108-90-7	chlorobenzene	21
(10V)	107-06-2	1,2-dichloroethane	10U
(11V)	71-55-6	1,1,1-trichloroethane	10U
(13V)	75-34-3	1,1-dichloroethane	10U
(14V)	79-00-5	1,1,2-trichloroethane	10U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10U
(16V)	75-00-3	chloroethane	10U
(19V)	110-75-8	2-chloroethylvinyl ether	10U
(23V)	67-66-3	chloroform	10U
(29V)	75-35-4	1,1-dichloroethene	10U
(30V)	156-60-5	trans-1,2-dichloroethene	10U
(32V)	78-87-5	1,2-dichloropropane	10U
(33V)	10061-02-6	trans-1,3-dichloropropene	10U
	10061-01-05	cis-1,3-dichloropropene	10U
(38V)	100-41-4	ethylbenzene	10U
(44V)	75-09-2	methylene chloride	10U
(45V)	74-87-3	chloromethane	10U
(46V)	74-83-9	bromomethane	10U
(47V)	75-25-2	bromoform	10U
(48V)	75-27-4	bromodichloromethane	10U
(49V)	75-69-4	fluorotrichloromethane	10U
(50V)	75-71-8	dichlorodifluoromethane	10U
(51V)	124-48-1	chlorodibromomethane	10U
(85V)	127-18-4	tetrachloroethene	10U
(86V)	108-88-3	toluene	22
(87V)	79-01-6	trichloroethene	10U
(88V)	75-01-4	vinyl chloride	10U

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ORGANICS ANALYSIS DATA SHEET - Page 2

Sample Number
E1676
MATRIX SPIKE

Laboratory Name: Energy Resources Co Case No: 1332
Lab Sample I.D. No: 35-855 QC Report No: 26

Multiply Detection Limits by 1 ☑ or 10 ☐ (Check Box for Appropriate Factor)

PESTICIDES

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	.1U
(90P)	60-57-1	dieldrin	32.5
(91P)	57-74-9	chlordane	.1U
(92P)	50-29-3	4,4'-DDT	.1U
(93P)	72-55-9	4,4'-DDE	.1U
(94P)	72-54-8	4,4'-DDD	.1U
(95P)	115-29-7	α-endosulfan	.1U
(96P)	115-29-7	β-endosulfan	.1U
(97P)	1031-07-8	endosulfan sulfate	.1U
(98P)	72-20-8	endrin	35.5
(99P)	7421-93-4	endrin aldehyde	.1U
(100P)	76-44-8	heptachlor	38.4
(101P)	1024-57-3	heptachlor epoxide	.1U
(102P)	319-84-6	α-BHC	.1U

PESTICIDES

PP #	CAS #		ug/l or ug/kg (circle one)
(103P)	319-85-7	β-BHC	.1U
(104P)	319-86-8	δ-BHC	.1U
(105P)	58-89-9	γ-BHC (lindane)	.1U
(106P)	53469-21-9	PCB-1242	.1U
(107P)	11097-69-1	PCB-1254	.1U
(108P)	11104-28-2	PCB-1221	.1U
(109P)	11141-16-5	PCB-1232	.1U
(110P)	12672-29-6	PCB-1248	.1U
(111P)	11096-82-5	PCB-1260	.1U
(112P)	12674-11-2	PCB-1016	.1U
(113P)	8001-35-2	toxaphene	.1U

DIOXINS

(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	.1U

Non-Priority Pollutant Hazardous Substances List Compounds

ACID COMPOUNDS

CAS #		ug/l or ug/kg (circle one)
65-85-0	benzoic acid	10U
95-48-7	2-methylphenol	10U
108-39-4	4-methylphenol	10U
95-95-4	2,4,5-trichlorophenol	10U

BASE/NEUTRAL COMPOUNDS

62-53-3	aniline	10U
100-51-6	benzyl alcohol	10U
106-47-8	4-chloroaniline	10U
132-64-9	dibenzofuran	10U
91-57-6	2-methylnaphthalene	10U
88-74-4	2-nitroaniline	10U
99-09-2	3-nitroaniline	10U
100-01-6	4-nitroaniline	10U

VOLATILES

CAS #		ug/l or ug/kg (circle one)
67-64-1	acetone	10U
78-93-3	2-butanone	10U
75-15-0	carbondisulfide	10U
519-78-6	2-hexanone	10U
108-10-1	4-methyl-2-pentanone	10U
100-42-5	styrene	10U
108-05-4	vinyl acetate	10U
95-47-6	o-xylene	10U

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Form I (continued)

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample Number
Σ1676
MATRIX SPIKE

Laboratory Name: ERCO

QC Report No: 26

A. Surrogate Spike Results

Compound Name	Fraction	Concentration (ug/l)	Surrogates Only	
			Spike Added (ug/l)	Percent Recovery
2-Fluorophenol	A-B/N	53	50	106
D5-Phenol	A-B/N	17	50	34
D5-Nitrobenzene	A-B/N	36	50	72
2-Fluorobiphenyl	A-B/N	27	50	54
D6-Benzene	VOL	91	100	91
D8-Toluene	VOL	78	100	78

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit however.

Value - If the result is a value greater than or equal to the detection limit, report the value.

U - Indicates compound was analyzed for but not detected. Report the minimum detection limit value with the U, e.g., 10U. The footnote should read: U - Compound was analyzed for but not detected. The number is the minimum detection limit.

K - If the mass spectral data indicate the presence of a compound that meets the identification criteria but the quantitative result is less than the specified detection limit but greater than zero, report the detection limit as K, e.g., 10K. The footnote should read: K - Actual value, within the limitations of this method, is less than the value given.

FS - This flag applies to analysis performed by Fused Silica Capillary Column.

J - Indicates an estimated value which is used when estimating a concentration for tentatively identified compounds; e.g., 1200J. The footnote should read: J - Estimated value.

Other - Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described in a page attached to the data summary report.

** - This flag applies to pesticides parameters where the identification has been performed using two column confirmation (as specified in Method 608) but the level is too low for verification of the compound by mass spectrometry.

CX - This flag is used to indicate those compounds which were concentrated by a factor of 10 times.

ORGANICS ANALYSIS DATA SHEET - Page 4

Sample Number
E1676
MATRIX SPIKE

Laboratory Name: Energy Resources Co. Inc Case No: 1332
QC Report No: 26

B. Tentatively Identified Compounds

CAS #	Compound Name	Fraction	Scan No. or Retention Time	% Maximum Score Attained Mass Matching Routine: (Specify: FINN)	Estimated Concentration (ug/L or ug/kg)
1. 105-60-2	HexAhydRO-2HAzepIN-2-ONE	A-B/N	709	978	425
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
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30.					

4/32

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Woodford Rd. Quarry

ORGANICS ANALYSIS DATA SHEET

Sample Number: 21677
Duplicate

Laboratory Name: Energy Resources Co
Case No: 1332
Lab Sample I.D. No: 35-860
QC Report No: 26

Multiply Detection Limits by 1 ☑ or 10 ☐ (Check Box for Appropriate Factor)

ACID COMPOUNDS

PP #	CAS #		ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6-trichlorophenol	10U
(22A)	59-50-7	p-chloro-m-cresol	10U
(24A)	95-57-8	2-chlorophenol	10U
(31A)	120-83-2	2,4-dichlorophenol	10U
(34A)	105-67-9	2,4-dimethylphenol	10U
(57A)	88-75-5	2-nitrophenol	10U
(58A)	100-02-7	4-nitrophenol	10U
(59A)	51-28-5	2,4-dinitrophenol	10U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	10U
(64A)	87-86-5	pentachlorophenol	10U
(65A)	108-95-2	phenol	10U

BASE/NEUTRAL COMPOUNDS

PP #	CAS #		ug/l or ug/kg (circle one)
(1B)	83-32-9	acenaphthene	10U
(5B)	92-87-5	benzidine	10U
(8B)	120-82-1	1,2,4-trichlorobenzene	10U
(9B)	118-74-1	hexachlorobenzene	10U
(12B)	67-72-1	hexachloroethane	10U
(18B)	111-44-4	bis(2-chloroethyl)ether	10U
(20B)	91-58-7	2-chloronaphthalene	10U
(25B)	95-50-1	1,2-dichlorobenzene	10U
(26B)	541-73-1	1,3-dichlorobenzene	10U
(27B)	106-46-7	1,4-dichlorobenzene	10U
(28B)	91-94-1	3,3'-dichlorobenzidine	10U
(35B)	121-14-2	2,4-dinitrotoluene	10U
(36B)	606-20-2	2,6-dinitrotoluene	10U
(37B)	122-66-7	1,2-diphenylhydrazine	10U
(39B)	206-44-0	fluoranthene	10U
(40B)	7005-72-3	4-chlorophenyl phenyl ether	10U
(41B)	101-55-3	4-bromophenyl phenyl ether	10U
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	10U
(43B)	111-91-1	bis (2-chloroethoxy) methane	10U
(52B)	87-68-3	hexachlorobutadiene	10U
(53B)	77-47-4	hexachlorocyclopentadiene	10U
(54B)	78-59-1	isophorone	10U
(55B)	91-20-3	naphthalene	10U
(56B)	98-95-3	nitrobenzene	10U
(62B)	86-30-6	N-nitrosodiphenylamine	10U
(63B)	621-64-7	N-nitrosodipropylamine	10U
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	6K
(67B)	85-68-7	benzyl butyl phthalate	10U
(68B)	84-74-2	di-n-butyl phthalate	10U
(69B)	117-84-0	di-n-octyl phthalate	10U
(70B)	84-66-2	diethyl phthalate	10U
(71B)	131-11-3	dimethyl phthalate	10U
(72B)	56-55-3	benzo(a)anthracene	10U

BASE/NEUTRAL COMPOUNDS

PP #	CAS #		ug/l or ug/kg (circle one)
(73B)	50-32-8	benzo(a)pyrene	10U
(74B)	205-99-2	benzo(b)fluoranthene	10U
(75B)	207-08-9	benzo(k)fluoranthene	10U
(76B)	218-01-9	chrysene	10U
(77B)	208-96-8	acenaphthylene	10U
(78B)	120-12-7	anthracene	10U
(79B)	191-24-2	benzo(ghi)perylene	10U
(80B)	86-73-7	fluorene	10U
(81B)	85-01-8	phenanthrene	10U
(82B)	53-70-3	dibenzo(a,h)anthracene	10U
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	10U
(84B)	129-00-0	pyrene	10U

VOLATILES

(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	10U
(6V)	56-23-5	carbon tetrachloride	10U
(7V)	108-90-7	chlorobenzene	10U
(10V)	107-06-2	1,2-dichloroethane	10U
(11V)	71-55-6	1,1,1-trichloroethane	10U
(13V)	75-34-3	1,1-dichloroethane	10U
(14V)	79-00-5	1,1,2-trichloroethane	10U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10U
(16V)	75-00-3	chloroethane	10U
(19V)	110-75-8	2-chloroethylvinyl ether	10U
(23V)	67-66-3	chloroform	10U
(29V)	75-35-4	1,1-dichloroethene	10U
(30V)	156-60-5	trans-1,2-dichloroethene	10U
(32V)	78-87-5	1,2-dichloropropane	10U
(33V)	10061-02-6	trans-1,3-dichloropropene	10U
	10061-01-05	cis-1,3-dichloropropene	10U
(38V)	100-41-4	ethylbenzene	10U
(44V)	75-09-2	methylene chloride	10U
(45V)	74-87-3	chloromethane	10U
(46V)	74-83-9	bromomethane	10U
(47V)	75-25-2	bromoform	10U
(48V)	75-27-4	bromodichloromethane	10U
(49V)	75-69-4	fluorotrichloromethane	10U
(50V)	75-71-8	dichlorodifluoromethane	10U
(51V)	124-48-1	chlorodibromomethane	10U
(85V)	127-18-4	tetrachloroethene	10U
(86V)	108-88-3	toluene	10U
(87V)	79-01-6	trichloroethene	10U
(88V)	75-01-4	vinyl chloride	10U

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ORGANICS ANALYSIS DATA SHEET - Page 2

RECEIVED

Sample Number
E1677
Duplicate

Laboratory Name: Energy Resources Co Case No: 1332

Lab Sample I.D. No: 35-860 QC Report No: 26

Multiply Detection Limits by 1 ☑ or 10 ☐ (Check Box for Appropriate Factor)

PESTICIDES

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	.1U
(90P)	60-57-1	dieldrin	.1U
(91P)	57-74-9	chlordane	.1U
(92P)	50-29-3	4,4'-DDT	.1U
(93P)	72-55-9	4,4'-DDE	.1U
(94P)	72-54-8	4,4'-DDD	.1U
(95P)	115-29-7	α-endosulfan	.1U
(96P)	115-29-7	β-endosulfan	.1U
(97P)	1031-07-8	endosulfan sulfate	.1U
(98P)	72-20-8	endrin	.1U
(99P)	7421-93-4	endrin aldehyde	.1U
(100P)	76-44-8	heptachlor	.1U
(101P)	1024-57-3	heptachlor epoxide	.1U
(102P)	319-84-6	α-BHC	.1U

PESTICIDES

PP #	CAS #		ug/l or ug/kg (circle one)
(103P)	319-85-7	β-BHC	.1U
(104P)	319-86-8	δ-BHC	.1U
(105P)	58-89-9	γ-BHC (lindane)	.1U
(106P)	53469-21-9	PCB-1242	.1U
(107P)	11097-69-1	PCB-1254	.1U
(108P)	11104-28-2	PCB-1221	.1U
(109P)	11141-16-5	PCB-1232	.1U
(110P)	12672-29-6	PCB-1248	.1U
(111P)	11096-82-5	PCB-1260	.1U
(112P)	12674-11-2	PCB-1016	.1U
(113P)	8001-35-2	toxaphene	.1U

DIOXINS

(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	.1U

Non-Priority Pollutant Hazardous Substances List Compounds

ACID COMPOUNDS

CAS #		ug/l or ug/kg (circle one)
65-85-0	benzoic acid	10U
95-48-7	2-methylphenol	10U
108-39-4	4-methylphenol	10U
95-95-4	2,4,5-trichlorophenol	10U

BASE/NEUTRAL COMPOUNDS

62-53-3	aniline	10U
100-51-6	benzyl alcohol	10U
106-47-8	4-chloroaniline	10U
132-64-9	dibenzofuran	10U
91-57-6	2-methylnaphthalene	10U
88-74-4	2-nitroaniline	10U
99-09-2	3-nitroaniline	10U
100-01-6	4-nitroaniline	10U

VOLATILES

CAS #		ug/l or ug/kg (circle one)
67-64-1	acetone	10U
78-93-3	2-butanone	10U
75-15-0	carbondisulfide	10U
519-78-6	2-hexanone	10U
108-10-1	4-methyl-2-pentanone	10U
100-42-5	styrene	10U
108-05-4	vinyl acetate	10U
95-47-6	o-xylene	10U

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Form I (continued)

RE[illegible]

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample Number
Σ1677
Duplicate

Laboratory Name: ERCO
QC Report No: 26

A. Surrogate Spike Results

Compound Name	Fraction	Concentration (ug/l)	Surrogates Only	
			Spike Added (ug/l)	Percent Recovery
2-Fluorophenol	A-B/N	18	50	36
D5-Phenol	A-B/N	9	50	18
D5-Nitrobenzene	A-B/N	34	50	68
2-Fluorobiphenyl	A-B/N	31	50	62
D6-Benzene	VOL	111	100	111
D8-Toluene	VOL	97	100	97

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit however.

Value - If the result is a value greater than or equal to the detection limit, report the value.

U - Indicates compound was analyzed for but not detected. Report the minimum detection limit value with the U, e.g., 10U. The footnote should read: U - Compound was analyzed for but not detected. The number is the minimum detection limit.

K - If the mass spectral data indicate the presence of a compound that meets the identification criteria but the quantitative result is less than the specified detection limit but greater than zero, report the detection limit as K, e.g., 10K. The footnote should read: K - Actual value, within the limitations of this method, is less than the value given.

FS - This flag applies to analysis performed by Fused Silica Capillary Column.

J - Indicates an estimated value which is used when estimating a concentration for tentatively identified compounds; e.g., 1200J. The footnote should read: J - Estimated value.

Other - Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described in a page attached to the data summary report.

∞ - This flag applies to pesticides parameters where the identification has been performed using two column confirmation (as specified in Method 608) but the level is too low for verification of the compound by mass spectrometry.

CX - This flag is used to indicate those compounds which were concentrated by a factor of 10 times.

ORGANICS ANALYSIS DATA SHEET - Page 4

Sample Number
E1677
Duplicate

Laboratory Name: Energy Resources Co. Inc Case No: 1332
QC Report No: 26

B. Tentatively Identified Compounds

CAS #	Compound Name	Fraction	Scan No. or Retention Time	% Maximum Score Attained Mass Matching Routine: (Specify: FINN)	Estimated Concentration (ug/L or ug/kg)
1. ~~150~~ 105-60-2	Hexahydro-2H-Azepin	A-B/N	717	980	949
2.	-2-One				
3. 24560-98-3	3-Octyl-, cis-Oxir	A-B/N	837	526	14
4.	anooctanoicacid				
5. 3385-21-5	1,3-Cyclohexanediamine	A-B/N	854	580	14
6. 62238-14-6	2,3,8-Trimethyl-Decane	A-B/N	976	895	8
7. 29812-79-1	O-Decyl-Hydroxylamine	A-B/N	1185	938	10
8. 29812-79-1	O-Decyl-Hydroxylamine	A-B/N	1248	945	9
9. 10544-50-0	Mol. (S8) Sulfur	A-B/N	1273	873	14
10. 60-56-0	1,3-Dihydro-1-Methyl-	A-B/N	1423	798	195
11.	2H-Imidazole-2-Thione				
12. 13302-87-9	(1. Alpha., 2. Alpha., 3.	A-B/N	2248	805	34
13.	Beta.) -(1)-1,2,3-				
14.	Cyclohexanetriol				
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

4/32

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number: BLANK

Woodford Rd. Quarry

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: Energy Resources Co Case No: 1332

Lab Sample I.D. No: 35-878 QC Report No: 26

Multiply Detection Limits by 1 ☑ or 10 ☐ (Check Box for Appropriate Factor)

ACID COMPOUNDS

PP #	CAS #		ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6-trichlorophenol	10U
(22A)	59-50-7	p-chloro-m-cresol	10U
(24A)	95-57-8	2-chlorophenol	10U
(31A)	120-83-2	2,4-dichlorophenol	10U
(34A)	105-67-9	2,4-dimethylphenol	10U
(57A)	88-75-5	2-nitrophenol	10U
(58A)	100-02-7	4-nitrophenol	10U
(59A)	51-28-5	2,4-dinitrophenol	10U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	10U
(64A)	87-86-5	pentachlorophenol	10U
(65A)	108-95-2	phenol	10U

BASE/NEUTRAL COMPOUNDS

PP #	CAS #		ug/l or ug/kg (circle one)
(1B)	83-32-9	acenaphthene	10U
(5B)	92-87-5	benzidine	10U
(8B)	120-82-1	1,2,4-trichlorobenzene	10U
(9B)	118-74-1	hexachlorobenzene	10U
(12B)	67-72-1	hexachloroethane	10U
(18B)	111-44-4	bis(2-chloroethyl)ether	10U
(20B)	91-58-7	2-chloronaphthalene	10U
(25B)	95-50-1	1,2-dichlorobenzene	10U
(26B)	541-73-1	1,3-dichlorobenzene	10U
(27B)	106-46-7	1,4-dichlorobenzene	10U
(28B)	91-94-1	3,3'-dichlorobenzidine	10U
(35B)	121-14-2	2,4-dinitrotoluene	10U
(36B)	606-20-2	2,6-dinitrotoluene	10U
(37B)	122-66-7	1,2-diphenylhydrazine	10U
(39B)	206-44-0	fluoranthene	10U
(40B)	7005-72-3	4-chlorophenyl phenyl ether	10U
(41B)	101-55-3	4-bromophenyl phenyl ether	10U
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	10U
(43B)	111-91-1	bis (2-chloroethoxy) methane	10U
(52B)	87-68-3	hexachlorobutadiene	10U
(53B)	77-47-4	hexachlorocyclopentadiene	10U
(54B)	78-59-1	isophorone	10U
(55B)	91-20-3	naphthalene	10U
(56B)	98-95-3	nitrobenzene	10U
(62B)	86-30-6	N-nitrosodiphenylamine	10U
(63B)	621-64-7	N-nitrosodipropylamine	10U
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	10U
(67B)	85-68-7	benzyl butyl phthalate	10U
(68B)	84-74-2	di-n-butyl phthalate	10U
(69B)	117-84-0	di-n-octyl phthalate	10U
(70B)	84-66-2	diethyl phthalate	10U
(71B)	131-11-3	dimethyl phthalate	10U
(72B)	56-55-3	benzo(a)anthracene	10U

BASE/NEUTRAL COMPOUNDS

PP #	CAS #		ug/l or ug/kg (circle one)
(73B)	50-32-8	benzo(a)pyrene	10U
(74B)	205-99-2	benzo(b)fluoranthene	10U
(75B)	207-08-9	benzo(k)fluoranthene	10U
(76B)	218-01-9	chrysene	10U
(77B)	208-96-8	acenaphthylene	10U
(78B)	120-12-7	anthracene	10U
(79B)	191-24-2	benzo(ghi)perylene	10U
(80B)	86-73-7	fluorene	10U
(81B)	85-01-8	phenanthrene	10U
(82B)	53-70-3	dibenzo(a,h)anthracene	10U
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	10U
(84B)	129-00-0	pyrene	10U

VOLATILES

(2V)	107-02-8	acrolein	10U
(3V)	107-13-1	acrylonitrile	10U
(4V)	71-43-2	benzene	10U
(6V)	56-23-5	carbon tetrachloride	10U
(7V)	108-90-7	chlorobenzene	10U
(10V)	107-06-2	1,2-dichloroethane	10U
(11V)	71-55-6	1,1,1-trichloroethane	10U
(13V)	75-34-3	1,1-dichloroethane	10U
(14V)	79-00-5	1,1,2-trichloroethane	10U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10U
(16V)	75-00-3	chloroethane	10U
(19V)	110-75-8	2-chloroethylvinyl ether	10U
(23V)	67-66-3	chloroform	10U
(29V)	75-35-4	1,1-dichloroethene	10U
(30V)	156-60-5	trans-1,2-dichloroethene	10U
(32V)	78-87-5	1,2-dichloropropane	10U
(33V)	10061-02-6	trans-1,3-dichloropropene	10U
	10061-01-05	cis-1,3-dichloropropene	10U
(38V)	100-41-4	ethylbenzene	10U
(44V)	75-09-2	methylene chloride	10U
(45V)	74-87-3	chloromethane	10U
(46V)	74-83-9	bromomethane	10U
(47V)	75-25-2	bromoform	10U
(48V)	75-27-4	bromodichloromethane	10U
(49V)	75-69-4	fluorotrichloromethane	10U
(50V)	75-71-8	dichlorodifluoromethane	10U
(51V)	124-48-1	chlorodibromomethane	10U
(85V)	127-18-4	tetrachloroethene	10U
(86V)	108-88-3	toluene	10U
(87V)	79-01-6	trichloroethene	10U
[illegible]	[illegible]	vinyl chloride	10U

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Sample Number: BLANK

Laboratory Name: Energy Resources Co Case No: 1332

Lab Sample I.D. No: 35-87B QC Report No: 26

Multiply Detection Limits by 1 [✓] or 10 [ ] (Check Box for Appropriate Factor)

PESTICIDES

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	.1U
(90P)	60-57-1	dieldrin	.1U
(91P)	57-74-9	chlordane	.1U
(92P)	50-29-3	4,4'-DDT	.1U
(93P)	72-55-9	4,4'-DDE	.1U
(94P)	72-54-8	4,4'-DDD	.1U
(95P)	115-29-7	α-endosulfan	.1U
(96P)	115-29-7	β-endosulfan	.1U
(97P)	1031-07-8	endosulfan sulfate	.1U
(98P)	72-20-8	endrin	.1U
(99P)	7421-93-4	endrin aldehyde	.1U
(100P)	76-44-8	heptachlor	.1U
(101P)	1024-57-3	heptachlor epoxide	.1U
(102P)	319-84-6	α-BHC	.1U

PESTICIDES

PP #	CAS #		ug/l or ug/kg (circle one)
(103P)	319-85-7	β-BHC	.1U
(104P)	319-86-8	δ-BHC	.1U
(105P)	58-89-9	γ-BHC (lindane)	.1U
(106P)	53469-21-9	PCB-1242	.1U
(107P)	11097-69-1	PCB-1254	.1U
(108P)	11104-28-2	PCB-1221	.1U
(109P)	11141-16-5	PCB-1232	.1U
(110P)	12672-29-6	PCB-1248	.1U
(111P)	11096-82-5	PCB-1260	.1U
(112P)	12674-11-2	PCB-1016	.1U
(113P)	8001-35-2	toxaphene	.1U

DIOXINS

(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	.1U

Non-Priority Pollutant Hazardous Substances List Compounds

ACID COMPOUNDS

CAS #		ug/l or ug/kg (circle one)
65-85-0	benzoic acid	10U
95-48-7	2-methylphenol	10U
108-39-4	4-methylphenol	10U
95-95-4	2,4,5-trichlorophenol	10U

BASE/NEUTRAL COMPOUNDS

62-53-3	aniline	10U
100-51-6	benzyl alcohol	10U
106-47-8	4-chloroaniline	10U
132-64-9	dibenzofuran	10U
91-57-6	2-methylnaphthalene	10U
88-74-4	2-nitroaniline	10U
99-09-2	3-nitroaniline	10U
100-01-6	4-nitroaniline	10U

VOLATILES

CAS #		ug/l or ug/kg (circle one)
67-64-1	acetone	10U
78-93-3	2-butanone	10U
75-15-0	carbondisulfide	10U
519-78-6	2-hexanone	10U
108-10-1	4-methyl-2-pentanone	10U
100-42-5	styrene	10U
108-05-4	vinyl acetate	10U
95-47-6	o-xylene	10U

4/82

Form I (continued)

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample Number: BLANK

Laboratory Name: ERCO

QC Report No: 26

A. Surrogate Spike Results

Compound Name	Fraction	Concentration (ug/l)	Surrogates Only	
			Spike Added (ug/l)	Percent Recovery
2-Fluorophenol	A-B/N	36	50	72
D5-Phenol	A-B/N	7	50	14
D5-Nitrobenzene	A-B/N	25	50	50
2-Fluorobiphenyl	A-B/N	16	50	32
D6-Benzene	VOL	83	100	83
D8-Toluene	VOL	106	100	106

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit however.

Value - If the result is a value greater than or equal to the detection limit, report the value.

U - Indicates compound was analyzed for but not detected. Report the minimum detection limit value with the U, e.g., 10U. The footnote should read: U - Compound was analyzed for but not detected. The number is the minimum detection limit.

K - If the mass spectral data indicate the presence of a compound that meets the identification criteria but the quantitative result is less than the specified detection limit but greater than zero, report the detection limit as K, e.g., 10K. The footnote should read: K - Actual value, within the limitations of this method, is less than the value given.

This flag applies to analysis performed by Fused Silica Capillary Column.

J - Indicates an estimated value which is used when estimating a concentration for tentatively identified compounds; e.g., 1200J. The footnote should read: J - Estimated value.

Other - Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described in a page attached to the data summary report.

** - This flag applies to pesticides parameters where the identification has been performed using two column confirmation (as specified in Method 608) but the level is too low for verification of the compound by mass spectrometry.

CX - This flag is used to indicate those compounds which were concentrated by a factor of 10 times.

ORGANICS ANALYSIS DATA SHEET - Page 4

Sample Number
BLANK

Laboratory Name: Energy Resources Co. Inc Case No: 1332
QC Report No: 26

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B. Tentatively Identified Compounds

CAS #	Compound Name	Fraction	Scan No. or Retention Time	% Maximum Score Attained Mass Matching Routine: (Specify:_____)	Estimated Concentration (ug/L or ug/kg)
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
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30.					

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Sample No: E1676
Case No: 1332
Lab Standard ID: 35-855

U. S. ENVIRONMENTAL PROTECTION AGENCY
HWI SAMPLE MANAGEMENT OFFICE

Lab Name: CRCO
Report No: 26
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QUALITY CONTROL REPORT

A. MATRIX SPIKE ANALYSIS

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COMPOUND (Including Surrogates)		CONCENTRATION (ug/l)			%
CAS #	COMPOUND NAME	Sample Result (SR)	Spiked Sample Result (SSR)	Spike Added (SA)	Recovery
71-43-2	Benzene	Ø	24	25	98
108-90-7	Chlorobenzene	Ø	21	25	83
108-88-3	Toluene	Ø	22	25	89
59-50-7	p-chloro-m-cresol (22A)	Ø	44	50	88
95-57-8	2-Chlorophenol (24A)	Ø	111	50	222
100-02-7	4-Nitrophenol (59A)	Ø	Ø	50	Ø
108-95-7	phenol (65A)	Ø	25	50	50
87-86-5	Pentachlorophenol (64A)	Ø	25	50	50
83-32-9	Acenaphthene (1B)	Ø	33	50	66
120-82-1	1,2,4-Trichlorobenzene (8B)	Ø	45	50	90
106-46-7	1,4-Dichlorobenzene (27B)	Ø	103	50	206
121-14-2	2,4-Dinitrotoluene (35B)	Ø	35	50	70
621-64-7	N-nitrosodipropylamine (63B)	Ø	67	50	134
84-74-2	di-n-butyl phthalate (68B)	Ø	29	50	58
60-57-1	dieldrin	Ø	32.5	50	65
72-20-8	endrin	Ø	35.5	50	71
76-44-8	heptachlor	Ø	38.4	50	77
129-00-0	pyrene (84B)	Ø	17	50	34

This QC Report also covers the following sample numbers: E1674, E1675, E1676, E1677, E1678, E1679

*% Recovery = $\frac{(SSR - SR)}{(SA)}$ X 100

Form II