CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
EMS HERITAGE LABORATORIES, INC. 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	20-DEC-91	638	A244479
	Complete	PO Number	
	13-JAN-92	PO072488-CHAMPAIGN	
	Printed	Sampled	
	30-APR-92	14-DEC-91 14:20	

Report To	Bill To
KATHLEEN A. BLAINE JOHN MATHES AND ASSOCIATES 210 WEST SAND BANK ROAD P.O. BOX 330 COLUMBIA, IL 62236-0330	ACCOUNTS PAYABLE ILLINOIS POWER COMPANY P.O. BOX 511 DECATUR, IL 62525

Sample Description

SAMPLE ID:: UTB-23-S01
DESCRIPTION: 06'-08' IMPACTED
LOCATION: CHAMPAIGN

PHENOLS DISTILLATION SW846-9065

Analyst: M. GAUGHAN Analysis Date: 23-DEC-91 Test: P405.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	10		Grams
FINAL VOLUME	100		mL

PHENOLS 4AAP (AUTOMATED) SW846-9066

Analyst: J. GRIFFIN Analysis Date: 24-DEC-91 Instrument: AUTO-ANALYZER Test: 0405.7.0

Prep: PHENOLS DISTILLATION SW846-9065 P405.7.0

Parameter	Result	Det. Limit	Units
PHENOLS	7.2	0.20	mg/kg

CYANIDE DISTILLATION SW846-9010

Analyst: J. GRIFFIN Analysis Date: 02-JAN-92 Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	10		Grams
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst: J. GRIFFIN Analysis Date: 03-JAN-92 Instrument: AUTO-ANALYZER Test: G101.4.0

Prep: CYANIDE DISTILLATION SW846-9010 P101.4.0

Parameter	Result	Det. Limit	Units
CYANIDE	14	0.50	mg/kg

SONICATION EXTRACTION FOR ORGANICS BY IR SW846-3550

Analyst: C. BRODERICK Analysis Date: 27-DEC-91 Test: P503.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	26.82		Grams
FINAL VOLUME	100		mL

1:50 dilution

TOTAL PETROLEUM HYDROCARBONS BY IR SM 503E
Analyst: C. BRODERICK Analysis Date: 27-DEC-91 Instrument: IR Test: G503.7.0
Prep: SONICATION EXTRACTION FOR ORGANICS BY IR SW846-3550 P503.7.0

Parameter	Result	Det. Limit	Units
PETROLEUM HYDROCARBONS	2900	10	mg/kg

CHEMICAL OXYGEN DEMAND EPA 410.4
Analyst: K. FULLMER Analysis Date: 27-DEC-91 Test: G301.1.0

Parameter	Result	Det. Limit	Units
CHEMICAL OXYGEN DEMAND	10000	1000	mg/kg
1:100 DILUTION			

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050
Analyst: J. VANSKYOCK Analysis Date: 27-DEC-91 Test: P129.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050
Analyst: J. VANSKYOCK Analysis Date: 10-JAN-92 Test: P129.7.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

BARIUM ICP SW846-6010
Analyst: M. JAO Analysis Date: 31-DEC-91 Instrument: ICP Test: M104.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050 P129.7.0

Parameter	Result	Det. Limit	Units
BARIUM	77.	1.0	mg/kg

CADMIUM ICP SW846-6010
Analyst: A. HILSCHER Analysis Date: 08-JAN-92 Instrument: ICP Test: M108.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050 P129.7.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.50	mg/kg

CHROMIUM ICP SW846-6010
Analyst: M. JAO Analysis Date: 31-DEC-91 Instrument: ICP Test: M110.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050 P129.7.0

Parameter	Result	Det. Limit	Units
CHROMIUM	5.3	1.0	mg/kg

COPPER ICP SW846-6010
Analyst: M. JAO Analysis Date: 31-DEC-91 Instrument: ICP Test: M112.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050 P129.7.0

Parameter	Result	Det. Limit	Units
COPPER	22.	2.0	mg/kg

IRON ICP SW846-6010
Analyst: M. JAO Analysis Date: 31-DEC-91 Instrument: ICP Test: M115.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050 P129.7.0

Parameter	Result	Det. Limit	Units
IRON	13000	2.0	mg/kg

LEAD ICP SW846-6010

Analyst: M. JAO Analysis Date: 31-DEC-91 Instrument: ICP Test: M116.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050 P129.7.0

Parameter	Result	Det. Limit	Units
LEAD	170	5.0	mg/kg

MANGANESE ICP SW846-6010

Analyst: A. HILSCHER Analysis Date: 12-JAN-92 Instrument: ICP Test: M119.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050 P129.7.1

Parameter	Result	Det. Limit	Units
MANGANESE	180	1.0	mg/kg
DILUTION 1:100			

NICKEL ICP SW846-6010

Analyst: A. HILSCHER Analysis Date: 08-JAN-92 Instrument: ICP Test: M122.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050 P129.7.0

Parameter	Result	Det. Limit	Units
NICKEL	8.1	1.0	mg/kg

ZINC ICP SW846-6010

Analyst: A. HILSCHER Analysis Date: 12-JAN-92 Instrument: ICP Test: M139.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050 P129.7.1

Parameter	Result	Det. Limit	Units
ZINC	100	2.0	mg/kg
DILUTION 1:100			

GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050

Analyst: J. VANSKYOCK Analysis Date: 23-DEC-91 Test: P130.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

ARSENIC GFAA SW846-7060

Analyst: W. WATNESS Analysis Date: 04-JAN-92 Instrument: GFAA Test: M103.2.0

Prep: GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050 P130.7.0

Parameter	Result	Det. Limit	Units
ARSENIC	2.5	2.5	mg/kg
1:5 DILUTION			

MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471 MOD

Analyst: K. HACK Analysis Date: 26-DEC-91 Test: P131.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	0.4		Grams
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7471 MOD

Analyst: K. HACK Analysis Date: 26-DEC-91 Instrument: CVAA Test: M120.2.0

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471 MOD P131.7.0

Parameter	Result	Det. Limit	Units
MERCURY	0.33	0.13	mg/kg

VOLATILE ORGANICS SW846-8240

Analyst: H. WILLIAMS Analysis Date: 24-DEC-91 Instrument: GC/MS VOA Test: 0510.3.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	48	mg/kg
ACROLEIN	BDL	120	mg/kg
ACRYLONITRILE	BDL	170	mg/kg
BENZENE	56	12	mg/kg
BROMODICHLOROMETHANE	BDL	12	mg/kg
BROMOFORM	BDL	12	mg/kg
BROMOMETHANE	BDL	25	mg/kg
CARBON DISULFIDE	BDL	12	mg/kg
CARBON TETRACHLORIDE	BDL	12	mg/kg
CHLOROBENZENE	BDL	12	mg/kg
CHLOROETHANE	BDL	25	mg/kg
CHLOROFORM	BDL	12	mg/kg
CHLOROMETHANE	BDL	25	mg/kg
DIBROMOCHLOROMETHANE	BDL	12	mg/kg
CIS-1,3-DICHLOROPROPENE	BDL	12	mg/kg
DICHLORODIFLUOROMETHANE	BDL	12	mg/kg
1,1-DICHLOROETHANE	BDL	12	mg/kg
1,2-DICHLOROETHANE	BDL	12	mg/kg
1,1-DICHLOROETHENE	BDL	12	mg/kg
1,2-DICHLOROPROPANE	BDL	12	mg/kg
ETHYLBENZENE	82	12	mg/kg
FLUOROTRICHLOROMETHANE	BDL	12	mg/kg
2-HEXANONE	BDL	25	mg/kg
METHYLENE CHLORIDE	BDL	12	mg/kg
METHYL ETHYL KETONE	BDL	25	mg/kg
4-METHYL-2-PENTANONE	BDL	25	mg/kg
STYRENE	BDL	12	mg/kg
1,1,2,2-TETRACHLOROETHANE	BDL	12	mg/kg
TETRACHLOROETHENE	BDL	12	mg/kg
TETRAHYDROFURAN	BDL	60	mg/kg
TOLUENE	54	12	mg/kg
1,2-DICHLOROETHENE (TOTAL)	BDL	12	mg/kg
TRANS-1,3-DICHLOROPROPENE	BDL	12	mg/kg
1,1,1-TRICHLOROETHANE	BDL	12	mg/kg
1,1,2-TRICHLOROETHANE	BDL	12	mg/kg
TRICHLOROETHENE	BDL	12	mg/kg
VINYL ACETATE	BDL	25	mg/kg
VINYL CHLORIDE	BDL	25	mg/kg
XYLENE (TOTAL)	100	12	mg/kg
.			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	**		% Rec
TOLUENE-D8	**		% Rec
BROMOFLUOROBENZENE	**		% Rec

1:2500 DILUTION
*NOTE: ** DILUTED OUT*

GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550

Analyst: N. ROHADFOX Analysis Date: 24-DEC-91 Test: P236.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	30.03		Grams
FINAL VOLUME	2.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270

Analyst: J. ELLIS Analysis Date: 09-JAN-92 Instrument: GC/MS SVOA Test: 0505.3.1

Prep: GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.4.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	390000	160000	ug/kg
ACENAPHTHYLENE	BDL	160000	ug/kg
ANTHRACENE	230000	160000	ug/kg
BENZ(A)ANTHRACENE	EST 160000	160000	ug/kg
BENZO(A)PYRENE	BDL	160000	ug/kg
BENZO(B)FLUORANTHENE	BDL	160000	ug/kg
BENZO(G,H,I)PERYLENE	BDL	160000	ug/kg
BENZO(K)FLUORANTHENE	BDL	160000	ug/kg
BENZYL ALCOHOL	BDL	160000	ug/kg
BENZYLBUTYLPHTHALATE	BDL	160000	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	160000	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	160000	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	160000	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	160000	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	160000	ug/kg
CARBAZOLE	BDL	160000	ug/kg
4-CHLOROANILINE	BDL	160000	ug/kg
2-CHLORONAPHTHALENE	BDL	160000	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	160000	ug/kg
CHRYSENE	EST 160000	160000	ug/kg
DIBENZ(A,H)ANTHRACENE	BDL	160000	ug/kg
DIBENZOFURAN	BDL	160000	ug/kg
1,2-DICHLOROBENZENE	BDL	160000	ug/kg
1,3-DICHLOROBENZENE	BDL	160000	ug/kg
1,4-DICHLOROBENZENE	BDL	160000	ug/kg
3,3'-DICHLOROBENZIDINE	BDL	330000	ug/kg
DIETHYLPHTHALATE	BDL	160000	ug/kg
DIMETHYLPHTHALATE	BDL	160000	ug/kg
DI-N-BUTYLPHTHALATE	BDL	160000	ug/kg
DINITROBENZENES	BDL	160000	ug/kg
2,4-DINITROTOLUENE	BDL	160000	ug/kg
2,6-DINITROTOLUENE	BDL	160000	ug/kg
DI-N-OCTYLPHTHALATE	BDL	160000	ug/kg
FLUORANTHENE	360000	160000	ug/kg
FLUORENE	370000	160000	ug/kg
HEXACHLOROBENZENE	BDL	160000	ug/kg
HEXACHLOROBUTADIENE	BDL	160000	ug/kg
HEXACHLOROCYCLOPENTADIENE	BDL	160000	ug/kg
HEXACHLOROETHANE	BDL	160000	ug/kg
INDENO(1,2,3-CD)PYRENE	BDL	160000	ug/kg
ISOPHORONE	BDL	160000	ug/kg
2-METHYLNAPHTHALENE	1600000	160000	ug/kg
NAPHTHALENE	2600000	160000	ug/kg
2-NITROANILINE	BDL	800000	ug/kg
3-NITROANILINE	BDL	800000	ug/kg
4-NITROANILINE	BDL	800000	ug/kg
NITROBENZENE	BDL	160000	ug/kg
N-NITROSO-DIPHENYLAMINE	BDL	160000	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	BDL	160000	ug/kg
PHENANTHRENE	1000000	160000	ug/kg
2-PICOLINE	BDL	800000	ug/kg
PYRENE	630000	160000	ug/kg
PYRIDINE	BDL	800000	ug/kg

Parameter	Result	Det. Limit	Units
TETRACHLOROBENZENES	BDL	160000	ug/kg
TOLUENEDIAMINE	BDL	800000	ug/kg
1,2,4-TRICHLOROBENZENE	BDL	160000	ug/kg
BENZOIC ACID	BDL	800000	ug/kg
4-CHLORO-3-METHYLPHENOL	BDL	160000	ug/kg
2-CHLOROPHENOL	BDL	160000	ug/kg
2,4-DICHLOROPHENOL	BDL	160000	ug/kg
2,4-DIMETHYLPHENOL	BDL	160000	ug/kg
4,6-DINITRO-2-METHYLPHENOL	BDL	800000	ug/kg
2,4-DINITROPHENOL	BDL	800000	ug/kg
2-METHYLPHENOL	BDL	160000	ug/kg
4-METHYLPHENOL	BDL	160000	ug/kg
2-NITROPHENOL	BDL	160000	ug/kg
4-NITROPHENOL	BDL	800000	ug/kg
PENTACHLOROPHENOL	BDL	800000	ug/kg
PHENOL	BDL	160000	ug/kg
TETRACHLOROPHENOL	BDL	160000	ug/kg
2,4,5-TRICHLOROPHENOL	BDL	160000	ug/kg
2,4,6-TRICHLOROPHENOL	BDL	160000	ug/kg
SURROGATE RECOVERY			
2-FLUOROPHENOL	*		% Rec
PHENOL-D5	*		% Rec
NITROBENZENE-D5	*		% Rec
2-FLUOROBIPHENYL	*		% Rec
2,4,6-TRIBROMOPHENOL	*		% Rec
TERPHENYL-D14	*		% Rec

1:250 DILUTION
*NOTE: * SURROGATES DILUTED OUT*
NOTE: FAILS INTERNAL STANDARD

SONICATION EXTRACTION FOR ORGANICS SW846-3550
Analyst: G. WILSON Analysis Date: 30-DEC-91 Test: P236.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	29.96		Grams
FINAL VOLUME	5		mL

POLYNUCLEAR AROMATIC HYDROCARBONS BY HPLC SW846-8310
Analyst: T. COFFELT Analysis Date: 02-JAN-92 Instrument: HPLC Test: 0630.0.0

Parameter	Result	Det. Limit	Units
NAPHTHALENE	1800	2.5	mg/kg
ACENAPHTHYLENE	BDL	4.0	mg/kg
ACENAPHTHENE	500	2.5	mg/kg
FLUORENE	670	0.30	mg/kg
PHENANTHRENE	1000	2.5	mg/kg
ANTHRACENE	270	0.35	mg/kg
FLUORANTHENE	1400	0.35	mg/kg
PYRENE	1200	1.3	mg/kg
BENZ(A)ANTHRACENE	390	2.2	mg/kg
CHRYSENE	250	5.0	mg/kg
BENZO(B)FLUORANTHENE	180	5.0	mg/kg
BENZO(K)FLUORANTHENE	170	0.20	mg/kg
BENZO(A)PYRENE	250 5/21	3.9	mg/kg
DIBENZO(A,H)ANTHRACENE	BDL	1.4	mg/kg
BENZO(G,H,I)PERYLENE	160	2.4	mg/kg

EMS HERITAGE LABORATORIES, INC. **Lab Sample ID: A244479**

Parameter	Result	Det. Limit	Units
INDENO(1,2,3-CD)PYRENE	50	5.0	mg/kg

1:500 DILUTION
MATRIX INTERFERENCES PRESENT A QUESTION OF APPLICABILITY OF THIS SAMPLE TO HPLC ANALYSIS.
AMENDED REPORT 4/30/92, GAB.

Sample Comments

DIFFERENCES BETWEEN SW-846 8310 AND 8270 DATA ARE POSSIBLY DUE TO SAMPLE NON-HOMOGENEITY; DIFFERENT SAMPLE CONTAINERS WERE USED FOR THESE METHODS. THE NATURE OF THE SAMPLE MADE HOMOGENIZATION PROBLEMATIC. COMPARISON OF SAMPLES AFTER ANALYSIS SHOW OBVIOUS VISUAL DIFFERENCES BETWEEN CONTAINERS OF THE SAME SAMPLE.
AMENDED REPORT 4/30/92, GAB.

* *See Note for Parameter*
** *See Note for Parameter*
BDL Below Detection Limit
EST Estimated Value

IDEM Drinking Water Certification Number C-49-01

Additional copies of this report sent to:
NATALIE E. LOCKE, ILLINOIS POWER COMPANY
500 SOUTH 27TH STREET P.O. BOX 511, DECATUR, IL 62525

WILLIAM WITTS, ILLINOIS POWER COMPANY
500 SOUTH 27TH STREET P.O. BOX 511, DECATUR, IL 62525

Quality Assurance Officer: GABrisch

CERTIFICATE OF ANALYSIS

Service Location	Received	Lab ID
EMS HERITAGE LABORATORIES, INC. 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	20-DEC-91	A244480
	Complete 13-JAN-92	PO Number PO072488-CHAMPAIGN
	Printed 14-JAN-92	Sampled 14-DEC-91 15:30

Report To	Bill To
JOHN MATHES AND ASSOCIATES KATHLEEN A. BLAINE 210 WEST SAND BANK ROAD P.O. BOX 330 COLUMBIA, IL 62236-0330	ILLINOIS POWER COMPANY ACCOUNTS PAYABLE P.O. BOX 511 DECATUR, IL 62525

Sample Description

SAMPLE ID:: UTB-23-SO2
DESCRIPTION: 26'-28' CLEAN
LOCATION: CHAMPAIGN

PHENOLS DISTILLATION SW846-9065
Analyst: M. GAUGHAN Analysis Date: 23-DEC-91 Test: P405.7. 0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	10		Grams
FINAL VOLUME	100		mL

PHENOLS 4AAP (AUTOMATED) SW846-9066
Analyst: J. GRIFFIN Analysis Date: 24-DEC-91 Instrument: AUTO-ANALYZER Test: O405.7. 0
Prep: PHENOLS DISTILLATION SW846-9065

Parameter	Result	Det. Limit	Units
PHENOLS	BDL	0.10	mg/kg

CYANIDE DISTILLATION SW846-9010
Analyst: J. GRIFFIN Analysis Date: 30-DEC-91 Test: P101.4. 0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	10		Grams
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012
Analyst: J. GRIFFIN Analysis Date: 30-DEC-91 Instrument: AUTO-ANALYZER Test: G101.4. 0
Prep: CYANIDE DISTILLATION SW846-9010

Parameter	Result	Det. Limit	Units
CYANIDE	BDL	0.25	mg/kg

SONICATION EXTRACTION FOR ORGANICS BY IR SW846-3550
Analyst: N. HEMMERLEIN Analysis Date: 30-DEC-91 Test: P503.7. 0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	25.22		Grams
FINAL VOLUME	100		mL

TOTAL PETROLEUM HYDROCARBONS BY IR SM 503E

Analyst: C. BRODERICK Analysis Date: 31-DEC-91 Instrument: IR Test: G503.7. 0

Prep: SONICATION EXTRACTION FOR ORGANICS BY IR SW846-3550

Parameter	Result	Det. Limit	Units
PETROLEUM HYDROCARBONS	BDL	10	mg/kg

CHEMICAL OXYGEN DEMAND EPA 410.4

Analyst: K. FULLMER Analysis Date: 27-DEC-91 Test: G301.1. 0

Parameter	Result	Det. Limit	Units
CHEMICAL OXYGEN DEMAND	4400	1000	mg/kg

1:100 DILUTION

VOLATILE ORGANICS SW846-8240

Analyst: H. WILLIAMS Analysis Date: 24-DEC-91 Instrument: GC/MS VOA Test: 0510.3. 0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	1.2	mg/kg
ACROLEIN	BDL	3.1	mg/kg
ACRYLONITRILE	BDL	4.4	mg/kg
BENZENE	0.73	0.31	mg/kg
BROMODICHLOROMETHANE	BDL	0.31	mg/kg
BROMOFORM	BDL	0.31	mg/kg
BROMOMETHANE	BDL	0.63	mg/kg
CARBON DISULFIDE	BDL	0.31	mg/kg
CARBON TETRACHLORIDE	BDL	0.31	mg/kg
CHLOROBENZENE	BDL	0.31	mg/kg
CHLOROETHANE	BDL	0.63	mg/kg
CHLOROFORM	BDL	0.31	mg/kg
CHLOROMETHANE	BDL	0.63	mg/kg
DIBROMOCHLOROMETHANE	BDL	0.31	mg/kg
CIS-1,3-DICHLOROPROPENE	BDL	0.31	mg/kg
DICHLORODIFLUOROMETHANE	BDL	0.31	mg/kg
1,1-DICHLOROETHANE	BDL	0.31	mg/kg
1,2-DICHLOROETHANE	BDL	0.31	mg/kg
1,1-DICHLOROETHENE	BDL	0.31	mg/kg
1,2-DICHLOROPROPANE	BDL	0.31	mg/kg
ETHYLBENZENE	BDL	0.31	mg/kg
FLUOROTRICHLOROMETHANE	BDL	0.31	mg/kg
2-HEXANONE	BDL	0.63	mg/kg
METHYLENE CHLORIDE	BDL	0.31	mg/kg
METHYL ETHYL KETONE	BDL	0.63	mg/kg
4-METHYL-2-PENTANONE	BDL	0.63	mg/kg
STYRENE	BDL	0.31	mg/kg
1,1,2,2-TETRACHLOROETHANE	BDL	0.31	mg/kg
TETRACHLOROETHENE	BDL	0.31	mg/kg
TETRAHYDROFURAN	BDL	1.5	mg/kg
TOLUENE	BDL	0.31	mg/kg
1,2-DICHLOROETHENE (TOTAL)	BDL	0.31	mg/kg
TRANS-1,3-DICHLOROPROPENE	BDL	0.31	mg/kg
1,1,1-TRICHLOROETHANE	BDL	0.31	mg/kg
1,1,2-TRICHLOROETHANE	BDL	0.31	mg/kg
TRICHLOROETHENE	BDL	0.31	mg/kg
VINYL ACETATE	BDL	0.63	mg/kg
VINYL CHLORIDE	BDL	0.63	mg/kg
XYLENE (TOTAL)	BDL	0.31	mg/kg
.			
SURROGATE RECOVERY			

Parameter	Result	Det. Limit	Units
DICHLOROETHANE-D4	94		% Rec
TOLUENE-D8	92		% Rec
BROMOFLUOROBENZENE	98		% Rec
1:63 DILUTION			

GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550
Analyst: N. ROHADFOX Analysis Date: 24-DEC-91 Test: P236.4. 0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	30.07		Grams
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270
Analyst: J. ELLIS Analysis Date: 09-JAN-92 Instrument: GC/MS SVOA Test: 0505.3. 0
Prep: GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	330	ug/kg
ACENAPHTHYLENE	BDL	330	ug/kg
ANTHRACENE	BDL	330	ug/kg
BENZ(A)ANTHRACENE	BDL	330	ug/kg
BENZO(A)PYRENE	BDL	330	ug/kg
BENZO(B)FLUORANTHENE	BDL	330	ug/kg
BENZO(G,H,I)PERYLENE	BDL	330	ug/kg
BENZO(K)FLUORANTHENE	BDL	330	ug/kg
BENZYL ALCOHOL	BDL	330	ug/kg
BENZYLBUTYLPHTHALATE	BDL	330	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	330	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	330	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	330	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	EST 280	330	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	330	ug/kg
CARBAZOLE	BDL	330	ug/kg
4-CHLOROANILINE	BDL	330	ug/kg
2-CHLORONAPHTHALENE	BDL	330	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	330	ug/kg
CHRYSENE	BDL	330	ug/kg
DIBENZ(A,H)ANTHRACENE	BDL	330	ug/kg
DIBENZOFURAN	BDL	330	ug/kg
1,2-DICHLOROBENZENE	BDL	330	ug/kg
1,3-DICHLOROBENZENE	BDL	330	ug/kg
1,4-DICHLOROBENZENE	BDL	330	ug/kg
3,3'-DICHLOROBENZIDINE	BDL	660	ug/kg
DIETHYLPHTHALATE	BDL	330	ug/kg
DIMETHYLPHTHALATE	BDL	330	ug/kg
DI-N-BUTYLPHTHALATE	BDL	330	ug/kg
DINITROBENZENES	BDL	330	ug/kg
2,4-DINITROTOLUENE	BDL	330	ug/kg
2,6-DINITROTOLUENE	BDL	330	ug/kg
DI-N-OCTYLPHTHALATE	BDL	330	ug/kg
FLUORANTHENE	BDL	330	ug/kg
FLUORENE	BDL	330	ug/kg
HEXACHLOROBENZENE	BDL	330	ug/kg
HEXACHLOROBUTADIENE	BDL	330	ug/kg
HEXACHLOROCYCLOPENTADIENE	BDL	330	ug/kg
HEXACHLOROETHANE	BDL	330	ug/kg
INDENO(1,2,3-CD)PYRENE	BDL	330	ug/kg
ISOPHORONE	BDL	330	ug/kg

Parameter	Result	Det. Limit	Units
2-METHYLNAPHTHALENE	BDL	330	ug/kg
NAPHTHALENE	BDL	330	ug/kg
2-NITROANILINE	BDL	1600	ug/kg
3-NITROANILINE	BDL	1600	ug/kg
4-NITROANILINE	BDL	1600	ug/kg
NITROBENZENE	BDL	330	ug/kg
N-NITROSO-DIPHENYLAMINE	BDL	330	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	BDL	330	ug/kg
PHENANTHRENE	BDL	330	ug/kg
2-PICOLINE	BDL	1600	ug/kg
PYRENE	BDL	330	ug/kg
PYRIDINE	BDL	1600	ug/kg
TETRACHLOROBENZENES	BDL	330	ug/kg
TOLUENEDIAMINE	BDL	1600	ug/kg
1,2,4-TRICHLOROBENZENE	BDL	330	ug/kg
BENZOIC ACID	BDL	1600	ug/kg
4-CHLORO-3-METHYLPHENOL	BDL	330	ug/kg
2-CHLOROPHENOL	BDL	330	ug/kg
2,4-DICHLOROPHENOL	BDL	330	ug/kg
2,4-DIMETHYLPHENOL	BDL	330	ug/kg
4,6-DINITRO-2-METHYLPHENOL	BDL	1600	ug/kg
2,4-DINITROPHENOL	BDL	1600	ug/kg
2-METHYLPHENOL	BDL	330	ug/kg
4-METHYLPHENOL	BDL	330	ug/kg
2-NITROPHENOL	BDL	330	ug/kg
4-NITROPHENOL	BDL	1600	ug/kg
PENTACHLOROPHENOL	BDL	1600	ug/kg
PHENOL	BDL	330	ug/kg
TETRACHLOROPHENOL	BDL	330	ug/kg
2,4,5-TRICHLOROPHENOL	BDL	330	ug/kg
2,4,6-TRICHLOROPHENOL	BDL	330	ug/kg
.			
SURROGATE RECOVERY			
2-FLUOROPHENOL	76		% Rec
PHENOL-D5	82		% Rec
NITROBENZENE-D5	70		% Rec
2-FLUOROBIPHENYL	74		% Rec
2,4,6-TRIBROMOPHENOL	53		% Rec
TERPHENYL-D14	75		% Rec

SONICATION EXTRACTION FOR ORGANICS SW846-3550

Analyst: G. WILSON Analysis Date: 30-DEC-91 Test: P236.1. 0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	30.07		Grams
FINAL VOLUME	5		mL

POLYNUCLEAR AROMATIC HYDROCARBONS BY HPLC SW846-8310

Analyst: T. COFFELT Analysis Date: 02-JAN-92 Instrument: HPLC Test: 0630.0. 0

Prep: SONICATION EXTRACTION FOR ORGANICS SW846-3550

Parameter	Result	Det. Limit	Units
NAPHTHALENE	0.13	0.005	mg/kg
ACENAPHTHYLENE	BDL	0.008	mg/kg
ACENAPHTHENE	0.028	0.005	mg/kg
FLUORENE	BDL	0.0006	mg/kg
PHENANTHRENE	0.077	0.005	mg/kg
ANTHRACENE	0.016	0.0007	mg/kg

EMS HERITAGE LABORATORIES, INC. Lab Sample ID: A244480

Parameter	Result	Det. Limit	Units
FLUORANTHENE	0.16	0.0007	mg/kg
PYRENE	0.11	0.0025	mg/kg
BENZ(A)ANTHRACENE	0.035	0.0043	mg/kg
CHRYSENE	0.035	0.001	mg/kg
BENZO(B)FLUORANTHENE	BDL	0.001	mg/kg
BENZO(K)FLUORANTHENE	BDL	0.0004	mg/kg
BENZO(A)PYRENE	0.12	0.0077	mg/kg
DIBENZO(A,H)ANTHRACENE	BDL	0.0028	mg/kg
BENZO(G,H,I)PERYLENE	BDL	0.0047	mg/kg
INDENO(1,2,3-CD)PYRENE	BDL	0.001	mg/kg

Sample Comments

BDL Below Detection Limit
EST Estimated Value

HERITAGE

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
EMS HERITAGE LABORATORIES, INC. 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	20-DEC-91	638	A244481
	Complete	PO Number	
	13-JAN-92	PO072488-CHAMPAIGN	
	Printed	Sampled	
	30-APR-92	15-DEC-91 08:30	

Report To	Bill To
KATHLEEN A. BLAINE JOHN MATHES AND ASSOCIATES 210 WEST SAND BANK ROAD P.O. BOX 330 COLUMBIA, IL 62236-0330	ACCOUNTS PAYABLE ILLINOIS POWER COMPANY P.O. BOX 511 DECATUR, IL 62525

Sample Description

SAMPLE ID:: UTB-24-SO1
DESCRIPTION: 06'-08' IMPACTED
LOCATION: CHAMPAIGN

PHENOLS DISTILLATION SW846-9065

Analyst: M. GAUGHAN Analysis Date: 23-DEC-91 Test: P405.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	10		Grams
FINAL VOLUME	100		mL

PHENOLS 4AAP (AUTOMATED) SW846-9066

Analyst: J. GRIFFIN Analysis Date: 24-DEC-91 Instrument: AUTO-ANALYZER Test: O405.7.0

Prep: PHENOLS DISTILLATION SW846-9065 P405.7.0

Parameter	Result	Det. Limit	Units
PHENOLS	0.84	0.10	mg/kg

CYANIDE DISTILLATION SW846-9010

Analyst: J. GRIFFIN Analysis Date: 30-DEC-91 Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	10		Grams
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst: J. GRIFFIN Analysis Date: 30-DEC-91 Instrument: AUTO-ANALYZER Test: G101.4.0

Prep: CYANIDE DISTILLATION SW846-9010 P101.4.0

Parameter	Result	Det. Limit	Units
CYANIDE	11	0.50	mg/kg

SONICATION EXTRACTION FOR ORGANICS BY IR SW846-3550

Analyst: N. HEMMERLEIN Analysis Date: 30-DEC-91 Test: P503.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	27.70		Grams
FINAL VOLUME	100		mL

TOTAL PETROLEUM HYDROCARBONS BY IR SM 503E

Analyst: C. BRODERICK Analysis Date: 31-DEC-91 Instrument: IR Test: G503.7.0

Prep: SONICATION EXTRACTION FOR ORGANICS BY IR SW846-3550 P503.7.0

Parameter	Result	Det. Limit	Units
PETROLEUM HYDROCARBONS	350	10	mg/kg

CHEMICAL OXYGEN DEMAND EPA 410.4
Analyst: K. FULLMER Analysis Date: 31-DEC-91 Test: G301.1.0

Parameter	Result	Det. Limit	Units
CHEMICAL OXYGEN DEMAND	32000	1000	mg/kg

1:100 DILUTION

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050
Analyst: J. VANSKYOCK Analysis Date: 27-DEC-91 Test: P129.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050
Analyst: J. VANSKYOCK Analysis Date: 10-JAN-92 Test: P129.7.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

BARIUM ICP SW846-6010
Analyst: M. JAO Analysis Date: 31-DEC-91 Instrument: ICP Test: M104.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050 P129.7.0

Parameter	Result	Det. Limit	Units
BARIUM	83.	1.0	mg/kg

CADMIUM ICP SW846-6010
Analyst: A. HILSCHER Analysis Date: 08-JAN-92 Instrument: ICP Test: M108.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050 P129.7.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.50	mg/kg

CHROMIUM ICP SW846-6010
Analyst: M. JAO Analysis Date: 31-DEC-91 Instrument: ICP Test: M110.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050 P129.7.0

Parameter	Result	Det. Limit	Units
CHROMIUM	11.	1.0	mg/kg

COPPER ICP SW846-6010
Analyst: M. JAO Analysis Date: 31-DEC-91 Instrument: ICP Test: M112.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050 P129.7.0

Parameter	Result	Det. Limit	Units
COPPER	14.	2.0	mg/kg

IRON ICP SW846-6010
Analyst: M. JAO Analysis Date: 31-DEC-91 Instrument: ICP Test: M115.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050 P129.7.0

Parameter	Result	Det. Limit	Units
IRON	20000	2.0	mg/kg

LEAD ICP SW846-6010
Analyst: M. JAO Analysis Date: 31-DEC-91 Instrument: ICP Test: M116.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050 P129.7.0

Parameter	Result	Det. Limit	Units
LEAD	14.	5.0	mg/kg

MANGANESE ICP SW846-6010

Analyst: A. HILSCHER Analysis Date: 12-JAN-92 Instrument: ICP Test: M119.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050 P129.7.1

Parameter	Result	Det. Limit	Units
MANGANESE	79.	1.0	mg/kg
DILUTION 1:100			

NICKEL ICP SW846-6010

Analyst: A. HILSCHER Analysis Date: 08-JAN-92 Instrument: ICP Test: M122.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050 P129.7.0

Parameter	Result	Det. Limit	Units
NICKEL	18.	1.0	mg/kg

ZINC ICP SW846-6010

Analyst: A. HILSCHER Analysis Date: 12-JAN-92 Instrument: ICP Test: M139.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050 P129.7.1

Parameter	Result	Det. Limit	Units
ZINC	96.	2.0	mg/kg
DILUTION 1:100			

GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050

Analyst: J. VANSKYOCK Analysis Date: 23-DEC-91 Test: P130.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

ARSENIC GFAA SW846-7060

Analyst: W. WATNESS Analysis Date: 04-JAN-92 Instrument: GFAA Test: M103.2.0

Prep: GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050 P130.7.0

Parameter	Result	Det. Limit	Units
ARSENIC	5.5	2.0	mg/kg
1:4 DILUTION			

MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471 MOD

Analyst: K. HACK Analysis Date: 26-DEC-91 Test: P131.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	0.4		Grams
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7471 MOD

Analyst: K. HACK Analysis Date: 26-DEC-91 Instrument: CVAA Test: M120.2.0

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471 MOD P131.7.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.13	mg/kg

VOLATILE ORGANICS SW846-8240

Analyst: H. WILLIAMS Analysis Date: 24-DEC-91 Instrument: GC/MS VOA Test: 0510.3.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	12	mg/kg
ACROLEIN	BDL	31	mg/kg
ACRYLONITRILE	BDL	44	mg/kg
BENZENE	BDL	3.1	mg/kg
BROMODICHLOROMETHANE	BDL	3.1	mg/kg
BROMOFORM	BDL	3.1	mg/kg
BROMOMETHANE	BDL	6.3	mg/kg

EMS HERITAGE LABORATORIES, INC. **Lab Sample ID: A244481**

Parameter	Result	Det. Limit	Units
CARBON DISULFIDE	BDL	3.1	mg/kg
CARBON TETRACHLORIDE	BDL	3.1	mg/kg
CHLOROBENZENE	BDL	3.1	mg/kg
CHLOROETHANE	BDL	6.3	mg/kg
CHLOROFORM	BDL	3.1	mg/kg
CHLOROMETHANE	BDL	6.3	mg/kg
DIBROMOCHLOROMETHANE	BDL	3.1	mg/kg
CIS-1,3-DICHLOROPROPENE	BDL	3.1	mg/kg
DICHLORODIFLUOROMETHANE	BDL	3.1	mg/kg
1,1-DICHLOROETHANE	BDL	3.1	mg/kg
1,2-DICHLOROETHANE	BDL	3.1	mg/kg
1,1-DICHLOROETHENE	BDL	3.1	mg/kg
1,2-DICHLOROPROPANE	BDL	3.1	mg/kg
ETHYLBENZENE	8.2	3.1	mg/kg
FLUOROTRICHLOROMETHANE	BDL	3.1	mg/kg
2-HEXANONE	BDL	6.3	mg/kg
METHYLENE CHLORIDE	BDL	3.1	mg/kg
METHYL ETHYL KETONE	BDL	6.3	mg/kg
4-METHYL-2-PENTANONE	BDL	6.3	mg/kg
STYRENE	BDL	3.1	mg/kg
1,1,2,2-TETRACHLOROETHANE	BDL	3.1	mg/kg
TETRACHLOROETHENE	BDL	3.1	mg/kg
TETRAHYDROFURAN	BDL	15	mg/kg
TOLUENE	BDL	3.1	mg/kg
1,2-DICHLOROETHENE (TOTAL)	BDL	3.1	mg/kg
TRANS-1,3-DICHLOROPROPENE	BDL	3.1	mg/kg
1,1,1-TRICHLOROETHANE	BDL	3.1	mg/kg
1,1,2-TRICHLOROETHANE	BDL	3.1	mg/kg
TRICHLOROETHENE	BDL	3.1	mg/kg
VINYL ACETATE	BDL	6.3	mg/kg
VINYL CHLORIDE	BDL	6.3	mg/kg
XYLENE (TOTAL)	5.6	3.1	mg/kg
.			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	**		% Rec
TOLUENE-D8	**		% Rec
BROMOFLUOROBENZENE	**		% Rec

1:630 DILUTION
*NOTE: ** DILUTED OUT*

GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550
Analyst: N. ROHADFOX Analysis Date: 24-DEC-91 Test: P236.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	30.05		Grams
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270
Analyst: J. ELLIS Analysis Date: 09-JAN-92 Instrument: GC/MS SVOA Test: 0505.3.0
Prep: GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.4.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	EST 140000	330	ug/kg
ACENAPHTHYLENE	EST 35000	330	ug/kg
ANTHRACENE	EST 42000	330	ug/kg
BENZ(A)ANTHRACENE	EST 29000	330	ug/kg
BENZO(A)PYRENE	EST 640000	330	ug/kg

Parameter	Result	Det. Limit	Units
BENZO(B)FLUORANTHENE	EST 15000	330	ug/kg
BENZO(G,H,I)PERYLENE	EST 17000	330	ug/kg
BENZO(K)FLUORANTHENE	3600	330	ug/kg
BENZYL ALCOHOL	BDL	330	ug/kg
BENZYLBUTYLPHTHALATE	BDL	330	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	330	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	330	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	330	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	EST 8600	330	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	330	ug/kg
CARBAZOLE	970	330	ug/kg
4-CHLOROANILINE	BDL	330	ug/kg
2-CHLORONAPHTHALENE	BDL	330	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	330	ug/kg
CHRYSENE	EST 18000	330	ug/kg
DIBENZ(A,H)ANTHRACENE	4900	330	ug/kg
DIBENZOFURAN	EST 12000	330	ug/kg
1,2-DICHLOROBENZENE	BDL	330	ug/kg
1,3-DICHLOROBENZENE	BDL	330	ug/kg
1,4-DICHLOROBENZENE	BDL	330	ug/kg
3,3'-DICHLOROBENZIDINE	BDL	660	ug/kg
DIETHYLPHTHALATE	BDL	330	ug/kg
DIMETHYLPHTHALATE	BDL	330	ug/kg
DI-N-BUTYLPHTHALATE	BDL	330	ug/kg
DINITROBENZENES	BDL	330	ug/kg
2,4-DINITROTOLUENE	BDL	330	ug/kg
2,6-DINITROTOLUENE	BDL	330	ug/kg
DI-N-OCTYLPHTHALATE	BDL	330	ug/kg
FLUORANTHENE	EST 110000	330	ug/kg
FLUORENE	EST 64000	330	ug/kg
HEXACHLOROBENZENE	BDL	330	ug/kg
HEXACHLOROBUTADIENE	BDL	330	ug/kg
HEXACHLOROCYCLOPENTADIENE	BDL	330	ug/kg
HEXACHLOROETHANE	BDL	330	ug/kg
INDENO(1,2,3-CD)PYRENE	EST 17000	330	ug/kg
ISOPHORONE	BDL	330	ug/kg
2-METHYLNAPHTHALENE	EST 200000	330	ug/kg
NAPHTHALENE	EST 1000000	330	ug/kg
2-NITROANILINE	BDL	1600	ug/kg
3-NITROANILINE	BDL	1600	ug/kg
4-NITROANILINE	BDL	1600	ug/kg
NITROBENZENE	BDL	330	ug/kg
N-NITROSO-DIPHENYLAMINE	BDL	330	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	BDL	330	ug/kg
PHENANTHRENE	EST 200000	330	ug/kg
2-PICOLINE	BDL	1600	ug/kg
PYRENE	EST 86000	330	ug/kg
PYRIDINE	BDL	1600	ug/kg
TETRACHLOROBENZENES	BDL	330	ug/kg
TOLUENEDIAMINE	BDL	1600	ug/kg
1,2,4-TRICHLOROBENZENE	BDL	330	ug/kg
BENZOIC ACID	BDL	1600	ug/kg
4-CHLORO-3-METHYLPHENOL	BDL	330	ug/kg
2-CHLOROPHENOL	BDL	330	ug/kg
2,4-DICHLOROPHENOL	BDL	330	ug/kg
2,4-DIMETHYLPHENOL	BDL	330	ug/kg
4,6-DINITRO-2-METHYLPHENOL	BDL	1600	ug/kg

Parameter	Result	Det. Limit	Units
2,4-DINITROPHENOL	BDL	1600	ug/kg
2-METHYLPHENOL	BDL	330	ug/kg
4-METHYLPHENOL	BDL	330	ug/kg
2-NITROPHENOL	BDL	330	ug/kg
4-NITROPHENOL	BDL	1600	ug/kg
PENTACHLOROPHENOL	BDL	1600	ug/kg
PHENOL	BDL	330	ug/kg
TETRACHLOROPHENOL	BDL	330	ug/kg
2,4,5-TRICHLOROPHENOL	BDL	330	ug/kg
2,4,6-TRICHLOROPHENOL	BDL	330	ug/kg
.			
SURROGATE RECOVERY			

2-FLUOROPHENOL	93		% Rec
PHENOL-D5	90		% Rec
NITROBENZENE-D5	447		% Rec
2-FLUOROBIPHENYL	95		% Rec
2,4,6-TRIBROMOPHENOL	274		% Rec
TERPHENYL-D14	46		% Rec

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270

Analyst: J. ELLIS Analysis Date: 09-JAN-92 Instrument: GC/MS SVOA Test: 0505.3.1

Prep: GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.4.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	100000	82000	ug/kg
ACENAPHTHYLENE	BDL	82000	ug/kg
ANTHRACENE	BDL	82000	ug/kg
BENZ(A)ANTHRACENE	BDL	82000	ug/kg
BENZO(A)PYRENE	BDL	82000	ug/kg
BENZO(B)FLUORANTHENE	BDL	82000	ug/kg
BENZO(G,H,I)PERYLENE	BDL	82000	ug/kg
BENZO(K)FLUORANTHENE	BDL	82000	ug/kg
BENZYL ALCOHOL	BDL	82000	ug/kg
BENZYLBUTYLPHTHALATE	BDL	82000	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	82000	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	82000	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	82000	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	82000	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	82000	ug/kg
CARBAZOLE	BDL	82000	ug/kg
4-CHLOROANILINE	BDL	82000	ug/kg
2-CHLORONAPHTHALENE	BDL	82000	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	82000	ug/kg
CHRYSENE	BDL	82000	ug/kg
DIBENZ(A,H)ANTHRACENE	BDL	82000	ug/kg
DIBENZOFURAN	BDL	82000	ug/kg
1,2-DICHLOROBENZENE	BDL	82000	ug/kg
1,3-DICHLOROBENZENE	BDL	82000	ug/kg
1,4-DICHLOROBENZENE	BDL	82000	ug/kg
3,3'-DICHLOROBENZIDINE	BDL	160000	ug/kg
DIETHYLPHTHALATE	BDL	82000	ug/kg
DIMETHYLPHTHALATE	BDL	82000	ug/kg
DI-N-BUTYLPHTHALATE	BDL	82000	ug/kg
DINITROBENZENES	BDL	82000	ug/kg
2,4-DINITROTOLUENE	BDL	82000	ug/kg
2,6-DINITROTOLUENE	BDL	82000	ug/kg
DI-N-OCTYLPHTHALATE	BDL	82000	ug/kg

Parameter	Result	Det. Limit	Units
FLUORANTHENE	68000	82000	ug/kg
FLUORENE	EST 57000	82000	ug/kg
HEXACHLOROBENZENE	BDL	82000	ug/kg
HEXACHLOROBUTADIENE	BDL	82000	ug/kg
HEXACHLOROCYCLOPENTADIENE	BDL	82000	ug/kg
HEXACHLOROETHANE	BDL	82000	ug/kg
INDENO(1,2,3-CD)PYRENE	BDL	82000	ug/kg
ISOPHORONE	BDL	82000	ug/kg
2-METHYLNAPHTHALENE	110000	82000	ug/kg
NAPHTHALENE	490000	82000	ug/kg
2-NITROANILINE	BDL	400000	ug/kg
3-NITROANILINE	BDL	400000	ug/kg
4-NITROANILINE	BDL	400000	ug/kg
NITROBENZENE	BDL	82000	ug/kg
N-NITROSO-DIPHENYLAMINE	BDL	82000	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	BDL	82000	ug/kg
PHENANTHRENE	56000	82000	ug/kg
2-PICOLINE	BDL	400000	ug/kg
PYRENE	110000	82000	ug/kg
PYRIDINE	BDL	400000	ug/kg
TETRACHLOROBENZENES	BDL	82000	ug/kg
TOLUENEDIAMINE	BDL	400000	ug/kg
1,2,4-TRICHLOROBENZENE	BDL	82000	ug/kg
BENZOIC ACID	BDL	400000	ug/kg
4-CHLORO-3-METHYLPHENOL	BDL	82000	ug/kg
2-CHLOROPHENOL	BDL	82000	ug/kg
2,4-DICHLOROPHENOL	BDL	82000	ug/kg
2,4-DIMETHYLPHENOL	BDL	82000	ug/kg
4,6-DINITRO-2-METHYLPHENOL	BDL	400000	ug/kg
2,4-DINITROPHENOL	BDL	400000	ug/kg
2-METHYLPHENOL	BDL	82000	ug/kg
4-METHYLPHENOL	BDL	82000	ug/kg
2-NITROPHENOL	BDL	82000	ug/kg
4-NITROPHENOL	BDL	400000	ug/kg
PENTACHLOROPHENOL	BDL	400000	ug/kg
PHENOL	BDL	82000	ug/kg
TETRACHLOROPHENOL	BDL	82000	ug/kg
2,4,5-TRICHLOROPHENOL	BDL	82000	ug/kg
2,4,6-TRICHLOROPHENOL	BDL	82000	ug/kg
.			
SURROGATE RECOVERY			

2-FLUOROPHENOL	*		% Rec
PHENOL-D5	*		% Rec
NITROBENZENE-D5	*		% Rec
2-FLUOROBIPHENYL	*		% Rec
2,4,6-TRIBROMOPHENOL	*		% Rec
TERPHENYL-D14	*		% Rec

1:250 DILUTION
*NOTE: * SURROGATES DILUTED OUT*
NOTE: FAILS INTERNAL STANDARD

EMS HERITAGE LABORATORIES, INC. **Lab Sample ID: A244481**

SONICATION EXTRACTION FOR ORGANICS SW846-3550

Analyst: G. WILSON Analysis Date: 30-DEC-91 Test: P236.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	31.05		Grams
FINAL VOLUME	5		mL

POLYNUCLEAR AROMATIC HYDROCARBONS BY HPLC SW846-8310

Analyst: T. COFFELT Analysis Date: 02-JAN-92 Instrument: HPLC Test: 0630.0.0

Prep: SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.1.0

Parameter	Result	Det. Limit	Units
NAPHTHALENE	430	1.0	mg/kg
ACENAPHTHYLENE	28 BDL	1.6	mg/kg
ACENAPHTHENE	120	1.0	mg/kg
FLUORENE	100	.12	mg/kg
PHENANTHRENE	160 200	1.0	mg/kg
ANTHRACENE	64	.14	mg/kg
FLUORANTHENE	110 140	.14	mg/kg
PYRENE	81 200	.5	mg/kg
BENZ(A)ANTHRACENE	47 69	.86	mg/kg
CHRYSENE	35 46	.20	mg/kg
BENZO(B)FLUORANTHENE	21 33	.20	mg/kg
BENZO(K)FLUORANTHENE	16 50	.08	mg/kg
BENZO(A)PYRENE	46 86	1.5	mg/kg
DIBENZO(A,H)ANTHRACENE	BDL	.56	mg/kg
BENZO(G,H,I)PERYLENE	23 33	.94	mg/kg
INDENO(1,2,3-CD)PYRENE	16 21	.20	mg/kg

1:200 DILUTION
MATRIX INTERFERENCES PRESENT A QUESTION OF APPLICABILITY OF THIS SAMPLE TO HPLC ANALYSIS.
AMENDED REPORT 4/30/92, GAB.

Sample Comments

DIFFERENCE BETWEEN SW-846 8310 AND 8270 DATA ARE POSSIBLY DUE TO SAMPLE NON-HOMOGENEITY; DIFFERENT SAMPLE CONTAINERS WERE USED FOR THESE METHODS. THE NATURE OF THE SAMPLE MADE HOMOGENIZATION PROBLEMATIC. COMPARISON OF SAMPLES AFTER ANALYSIS SHOW OBVIOUS VISUAL DIFFERENCES BETWEEN CONTAINERS OF THE SAME SAMPLE.
AMENDED REPORT 4/30/92, GAB.

* See Note for Parameter
** See Note for Parameter
BDL Below Detection Limit
EST Estimated Value

IDEM Drinking Water Certification Number C-49-01

Additional copies of this report sent to:
NATALIE E. LOCKE, ILLINOIS POWER COMPANY
500 SOUTH 27TH STREET P.O. BOX 511, DECATUR, IL 62525

WILLIAM WITTS, ILLINOIS POWER COMPANY
500 SOUTH 27TH STREET P.O. BOX 511, DECATUR, IL 62525

Quality Assurance Officer: G.W. Busch

CERTIFICATE OF ANALYSIS

Service Location	Received	Lab ID
EMS HERITAGE LABORATORIES, INC. 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	20-DEC-91	A244482
	Complete 13-JAN-92	PO Number PO072488-CHAMPAIGN
	Printed 14-JAN-92	Sampled 15-DEC-91 09:00

Report To	Bill To
JOHN MATHES AND ASSOCIATES KATHLEEN A. BLAINE 210 WEST SAND BANK ROAD P.O. BOX 330 COLUMBIA, IL 62236-0330	ILLINOIS POWER COMPANY ACCOUNTS PAYABLE P.O. BOX 511 DECATUR, IL 62525

Sample Description

SAMPLE ID:: UTB-24-SO2
DESCRIPTION: 21'-23' CLEAN
LOCATION: CHAMPAIGN

PHENOLS DISTILLATION SW846-9065
Analyst: R. RIFE Analysis Date: 03-JAN-92 Test: P405.7. 0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	10		Grams
FINAL VOLUME	100		mL

PHENOLS 4AAP (AUTOMATED) SW846-9066
Analyst: J. GRIFFIN Analysis Date: 07-JAN-92 Instrument: AUTO-ANALYZER Test: 0405.7. 0
Prep: PHENOLS DISTILLATION SW846-9065

Parameter	Result	Det. Limit	Units
PHENOLS	BDL	0.1	mg/kg

CYANIDE DISTILLATION SW846-9010
Analyst: J. GRIFFIN Analysis Date: 02-JAN-92 Test: P101.4. 0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	10		Grams
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012
Analyst: J. GRIFFIN Analysis Date: 03-JAN-92 Instrument: AUTO-ANALYZER Test: G101.4. 0
Prep: CYANIDE DISTILLATION SW846-9010

Parameter	Result	Det. Limit	Units
CYANIDE	BDL	0.25	mg/kg

SONICATION EXTRACTION FOR ORGANICS BY IR SW846-3550
Analyst: N. HEMMERLEIN Analysis Date: 30-DEC-91 Test: P503.7. 0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	28.87		Grams
FINAL VOLUME	100		mL

TOTAL PETROLEUM HYDROCARBONS BY IR SM 503E

Analyst: C. BRODERICK Analysis Date: 31-DEC-91 Instrument: IR Test: G503.7. 0

Prep: SONICATION EXTRACTION FOR ORGANICS BY IR SW846-3550

Parameter	Result	Det. Limit	Units
PETROLEUM HYDROCARBONS	BDL	10	mg/kg

CHEMICAL OXYGEN DEMAND EPA 410.4

Analyst: K. FULLMER Analysis Date: 27-DEC-91 Test: G301.1. 0

Parameter	Result	Det. Limit	Units
CHEMICAL OXYGEN DEMAND	2000	1000	mg/kg

1:100 DILUTION

VOLATILE ORGANICS SW846-8240

Analyst: H. WILLIAMS Analysis Date: 24-DEC-91 Instrument: GC/MS VOA Test: 0510.3. 0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	1.2	mg/kg
ACROLEIN	BDL	3.1	mg/kg
ACRYLONITRILE	BDL	4.4	mg/kg
BENZENE	0.61	0.31	mg/kg
BROMODICHLOROMETHANE	BDL	0.31	mg/kg
BROMOFORM	BDL	0.31	mg/kg
BROMOMETHANE	BDL	0.63	mg/kg
CARBON DISULFIDE	BDL	0.31	mg/kg
CARBON TETRACHLORIDE	BDL	0.31	mg/kg
CHLOROBENZENE	BDL	0.31	mg/kg
CHLOROETHANE	BDL	0.63	mg/kg
CHLOROFORM	BDL	0.31	mg/kg
CHLOROMETHANE	BDL	0.63	mg/kg
DIBROMOCHLOROMETHANE	BDL	0.31	mg/kg
CIS-1,3-DICHLOROPROPENE	BDL	0.31	mg/kg
DICHLORODIFLUOROMETHANE	BDL	0.31	mg/kg
1,1-DICHLOROETHANE	BDL	0.31	mg/kg
1,2-DICHLOROETHANE	BDL	0.31	mg/kg
1,1-DICHLOROETHENE	BDL	0.31	mg/kg
1,2-DICHLOROPROPANE	BDL	0.31	mg/kg
ETHYLBENZENE	BDL	0.31	mg/kg
FLUOROTRICHLOROMETHANE	BDL	0.31	mg/kg
2-HEXANONE	BDL	0.63	mg/kg
METHYLENE CHLORIDE	BDL	0.31	mg/kg
METHYL ETHYL KETONE	BDL	0.63	mg/kg
4-METHYL-2-PENTANONE	BDL	0.63	mg/kg
STYRENE	BDL	0.31	mg/kg
1,1,2,2-TETRACHLOROETHANE	BDL	0.31	mg/kg
TETRACHLOROETHENE	BDL	0.31	mg/kg
TETRAHYDROFURAN	BDL	1.5	mg/kg
TOLUENE	BDL	0.31	mg/kg
1,2-DICHLOROETHENE (TOTAL)	BDL	0.31	mg/kg
TRANS-1,3-DICHLOROPROPENE	BDL	0.31	mg/kg
1,1,1-TRICHLOROETHANE	BDL	0.31	mg/kg
1,1,2-TRICHLOROETHANE	BDL	0.31	mg/kg
TRICHLOROETHENE	BDL	0.31	mg/kg
VINYL ACETATE	BDL	0.63	mg/kg
VINYL CHLORIDE	BDL	0.63	mg/kg
XYLENE (TOTAL)	BDL	0.31	mg/kg
.			
SURROGATE RECOVERY			

Parameter	Result	Det. Limit	Units
DICHLOROETHANE-D4	98		% Rec
TOLUENE-D8	94		% Rec
BROMOFLUOROBENZENE	95		% Rec
1:63 DILUTION			

GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550

Analyst: N. ROHADFOX Analysis Date: 24-DEC-91 Test: P236.4. 0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	30.09		Grams
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270

Analyst: J. ELLIS Analysis Date: 09-JAN-92 Instrument: GC/MS SVOA Test: 0505.3. 0

Prep: GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	330	ug/kg
ACENAPHTHYLENE	BDL	330	ug/kg
ANTHRACENE	BDL	330	ug/kg
BENZ(A)ANTHRACENE	BDL	330	ug/kg
BENZO(A)PYRENE	BDL	330	ug/kg
BENZO(B)FLUORANTHENE	BDL	330	ug/kg
BENZO(G,H,I)PERYLENE	BDL	330	ug/kg
BENZO(K)FLUORANTHENE	BDL	330	ug/kg
BENZYL ALCOHOL	BDL	330	ug/kg
BENZYLBUTYLPHTHALATE	BDL	330	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	330	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	330	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	330	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	1500	330	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	330	ug/kg
CARBAZOLE	BDL	330	ug/kg
4-CHLOROANILINE	BDL	330	ug/kg
2-CHLORONAPHTHALENE	BDL	330	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	330	ug/kg
CHRYSENE	BDL	330	ug/kg
DIBENZ(A,H)ANTHRACENE	BDL	330	ug/kg
DIBENZOFURAN	BDL	330	ug/kg
1,2-DICHLOROBENZENE	BDL	330	ug/kg
1,3-DICHLOROBENZENE	BDL	330	ug/kg
1,4-DICHLOROBENZENE	BDL	330	ug/kg
3,3'-DICHLOROBENZIDINE	BDL	660	ug/kg
DIETHYLPHTHALATE	BDL	330	ug/kg
DIMETHYLPHTHALATE	BDL	330	ug/kg
DI-N-BUTYLPHTHALATE	BDL	330	ug/kg
DINITROBENZENES	BDL	330	ug/kg
2,4-DINITROTOLUENE	BDL	330	ug/kg
2,6-DINITROTOLUENE	BDL	330	ug/kg
DI-N-OCTYLPHTHALATE	BDL	330	ug/kg
FLUORANTHENE	EST 230	330	ug/kg
FLUORENE	BDL	330	ug/kg
HEXACHLOROBENZENE	BDL	330	ug/kg
HEXACHLOROBUTADIENE	BDL	330	ug/kg
HEXACHLOROCYCLOPENTADIENE	BDL	330	ug/kg
HEXACHLOROETHANE	BDL	330	ug/kg
INDENO(1,2,3-CD)PYRENE	BDL	330	ug/kg
ISOPHORONE	BDL	330	ug/kg

Parameter	Result	Det. Limit	Units
2-METHYLNAPHTHALENE	EST 290	330	ug/kg
NAPHTHALENE	760	330	ug/kg
2-NITROANILINE	BDL	1600	ug/kg
3-NITROANILINE	BDL	1600	ug/kg
4-NITROANILINE	BDL	1600	ug/kg
NITROBENZENE	BDL	330	ug/kg
N-NITROSO-DIPHENYLAMINE	BDL	330	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	BDL	330	ug/kg
PHENANTHRENE	520	330	ug/kg
2-PICOLINE	BDL	1600	ug/kg
PYRENE	EST 310	330	ug/kg
PYRIDINE	BDL	1600	ug/kg
TETRACHLOROBENZENES	BDL	330	ug/kg
TOLUENEDIAMINE	BDL	1600	ug/kg
1,2,4-TRICHLOROBENZENE	BDL	330	ug/kg
BENZOIC ACID	BDL	1600	ug/kg
4-CHLORO-3-METHYLPHENOL	BDL	330	ug/kg
2-CHLOROPHENOL	BDL	330	ug/kg
2,4-DICHLOROPHENOL	BDL	330	ug/kg
2,4-DIMETHYLPHENOL	BDL	330	ug/kg
4,6-DINITRO-2-METHYLPHENOL	BDL	1600	ug/kg
2,4-DINITROPHENOL	BDL	1600	ug/kg
2-METHYLPHENOL	BDL	330	ug/kg
4-METHYLPHENOL	BDL	330	ug/kg
2-NITROPHENOL	BDL	330	ug/kg
4-NITROPHENOL	BDL	1600	ug/kg
PENTACHLOROPHENOL	BDL	1600	ug/kg
PHENOL	BDL	330	ug/kg
TETRACHLOROPHENOL	BDL	330	ug/kg
2,4,5-TRICHLOROPHENOL	BDL	330	ug/kg
2,4,6-TRICHLOROPHENOL	BDL	330	ug/kg
.			
SURROGATE RECOVERY			
2-FLUOROPHENOL	73		% Rec
PHENOL-D5	71		% Rec
NITROBENZENE-D5	61		% Rec
2-FLUOROBIPHENYL	67		% Rec
2,4,6-TRIBROMOPHENOL	46		% Rec
TERPHENYL-D14	71		% Rec

SONICATION EXTRACTION FOR ORGANICS SW846-3550

Analyst: G. WILSON Analysis Date: 30-DEC-91 Test: P236.1. 0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	30.11		Grams
FINAL VOLUME	5		mL

POLYNUCLEAR AROMATIC HYDROCARBONS BY HPLC SW846-8310

Analyst: T. COFFELT Analysis Date: 02-JAN-92 Instrument: HPLC Test: 0630.0. 0

Prep: SONICATION EXTRACTION FOR ORGANICS SW846-3550

Parameter	Result	Det. Limit	Units
NAPHTHALENE	0.46	0.005	mg/kg
ACENAPHTHYLENE	0.047	0.008	mg/kg
ACENAPHTHENE	0.084	0.005	mg/kg
FLUORENE	0.089	0.0006	mg/kg
PHENANTHRENE	0.27	0.005	mg/kg
ANTHRACENE	0.074	0.0007	mg/kg

EMS HERITAGE LABORATORIES, INC. Lab Sample ID: A244482

Parameter	Result	Det. Limit	Units
FLUORANTHENE	0.34	0.0007	mg/kg
PYRENE	0.35	0.0025	mg/kg
BENZ(A)ANTHRACENE	0.10	0.0043	mg/kg
CHRYSENE	0.073	0.001	mg/kg
BENZO(B)FLUORANTHENE	BDL	0.001	mg/kg
BENZO(K)FLUORANTHENE	BDL	0.0004	mg/kg
BENZO(A)PYRENE	0.20	0.0077	mg/kg
DIBENZO(A,H)ANTHRACENE	BDL	0.0028	mg/kg
BENZO(G,H,I)PERYLENE	0.15	0.0047	mg/kg
INDENO(1,2,3-CD)PYRENE	0.063	0.001	mg/kg

Sample Comments

BDL Below Detection Limit
EST Estimated Value

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
EMS HERITAGE LABORATORIES, INC. 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	20-DEC-91	638	A244477
	Complete: 16-JAN-92	PO Number: PO072488-CHAMPAIGN	
	Printed: 30-APR-92	Sampled: 14-DEC-91 09:00	

Report To

KATHLEEN A. BLAINE
JOHN MATHES AND ASSOCIATES
210 WEST SAND BANK ROAD
P.O. BOX 330
COLUMBIA, IL 62236-0330

Bill To

ACCOUNTS PAYABLE
ILLINOIS POWER COMPANY
P.O. BOX 511
DECATUR, IL 62525

Sample Description

SAMPLE ID:: UTB-25-S01
DESCRIPTION: 09'-11' IMPACTED
LOCATION: CHAMPAIGN

PHENOLS DISTILLATION SW846-9065

Analyst: R. RIFE Analysis Date: 03-JAN-92 Test: P405.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	10		Grams
FINAL VOLUME	100		mL

PHENOLS 4AAP (AUTOMATED) SW846-9066

Analyst: J. GRIFFIN Analysis Date: 07-JAN-92 Instrument: AUTO-ANALYZER Test: O405.7.0
Prep: PHENOLS DISTILLATION SW846-9065 P405.7.0

Parameter	Result	Det. Limit	Units
PHENOLS	1.5	0.1	mg/kg

CYANIDE DISTILLATION SW846-9010

Analyst: J. GRIFFIN Analysis Date: 30-DEC-91 Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	10		Grams
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst: J. GRIFFIN Analysis Date: 30-DEC-91 Instrument: AUTO-ANALYZER Test: G101.4.0
Prep: CYANIDE DISTILLATION SW846-9010 P101.4.0

Parameter	Result	Det. Limit	Units
CYANIDE	0.80	0.25	mg/kg

SONICATION EXTRACTION FOR ORGANICS BY IR SW846-3550

Analyst: C. BRODERICK Analysis Date: 27-DEC-91 Test: P503.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	27.51		Grams
FINAL VOLUME	100		mL

TOTAL PETROLEUM HYDROCARBONS BY IR SM 503E

Analyst: C. BRODERICK Analysis Date: 27-DEC-91 Instrument: IR Test: G503.7.0
Prep: SONICATION EXTRACTION FOR ORGANICS BY IR SW846-3550 P503.7.0

Parameter	Result	Det. Limit	Units
PETROLEUM HYDROCARBONS	69	10	mg/kg

CHEMICAL OXYGEN DEMAND EPA 410.4
Analyst: K. FULLMER Analysis Date: 31-DEC-91 Test: G301.1.0

Parameter	Result	Det. Limit	Units
CHEMICAL OXYGEN DEMAND	18000	1000	mg/kg
1:100 DILUTION			

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050
Analyst: J. VANSKYOCK Analysis Date: 27-DEC-91 Test: P129.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050
Analyst: J. VANSKYOCK Analysis Date: 10-JAN-92 Test: P129.7.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

BARIUM ICP SW846-6010
Analyst: M. JAO Analysis Date: 31-DEC-91 Instrument: ICP Test: M104.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050 P129.7.0

Parameter	Result	Det. Limit	Units
BARIUM	55.	1.0	mg/kg

CADMIUM ICP SW846-6010
Analyst: A. HILSCHER Analysis Date: 08-JAN-92 Instrument: ICP Test: M108.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050 P129.7.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.50	mg/kg

CHROMIUM ICP SW846-6010
Analyst: M. JAO Analysis Date: 31-DEC-91 Instrument: ICP Test: M110.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050 P129.7.0

Parameter	Result	Det. Limit	Units
CHROMIUM	8.6	1.0	mg/kg

COPPER ICP SW846-6010
Analyst: M. JAO Analysis Date: 31-DEC-91 Instrument: ICP Test: M112.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050 P129.7.0

Parameter	Result	Det. Limit	Units
COPPER	11.	2.0	mg/kg

IRON ICP SW846-6010
Analyst: M. JAO Analysis Date: 31-DEC-91 Instrument: ICP Test: M115.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050 P129.7.0

Parameter	Result	Det. Limit	Units
IRON	12000	2.0	mg/kg

LEAD ICP SW846-6010
Analyst: M. JAO Analysis Date: 31-DEC-91 Instrument: ICP Test: M116.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050 P129.7.0

Parameter	Result	Det. Limit	Units
LEAD	8.9	5.0	mg/kg

MANGANESE ICP SW846-6010

Analyst: A. HILSCHER Analysis Date: 12-JAN-92 Instrument: ICP Test: M119.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050 P129.7.1

Parameter	Result	Det. Limit	Units
MANGANESE	560	1.0	mg/kg

DILUTION 1:100

NICKEL ICP SW846-6010

Analyst: A. HILSCHER Analysis Date: 08-JAN-92 Instrument: ICP Test: M122.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050 P129.7.0

Parameter	Result	Det. Limit	Units
NICKEL	14.	1.0	mg/kg

ZINC ICP SW846-6010

Analyst: A. HILSCHER Analysis Date: 12-JAN-92 Instrument: ICP Test: M139.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050 P129.7.1

Parameter	Result	Det. Limit	Units
ZINC	42.	2.0	mg/kg

DILUTION 1:100

GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050

Analyst: J. VANSKYOCK Analysis Date: 23-DEC-91 Test: P130.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

ARSENIC GFAA SW846-7060

Analyst: W. WATNESS Analysis Date: 04-JAN-92 Instrument: GFAA Test: M103.2.0

Prep: GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050 P130.7.0

Parameter	Result	Det. Limit	Units
ARSENIC	3.7	2.5	mg/kg

1:5 DILUTION

MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471 MOD

Analyst: K. HACK Analysis Date: 26-DEC-91 Test: P131.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	0.4		Grams
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7471 MOD

Analyst: K. HACK Analysis Date: 26-DEC-91 Instrument: CVAA Test: M120.2.0

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471 MOD P131.7.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.13	mg/kg

VOLATILE ORGANICS SW846-8240

Analyst: H. WILLIAMS Analysis Date: 24-DEC-91 Instrument: GC/MS VOA Test: 0510.3.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	1.2	mg/kg
ACROLEIN	BDL	3.1	mg/kg
ACRYLONITRILE	BDL	4.4	mg/kg
BENZENE	2.7	0.31	mg/kg
BROMODICHLOROMETHANE	BDL	0.31	mg/kg
BROMOFORM	BDL	0.31	mg/kg
BROMOMETHANE	BDL	0.63	mg/kg

Parameter	Result	Det. Limit	Units
CARBON DISULFIDE	BDL	0.31	mg/kg
CARBON TETRACHLORIDE	BDL	0.31	mg/kg
CHLOROBENZENE	BDL	0.31	mg/kg
CHLOROETHANE	BDL	0.63	mg/kg
CHLOROFORM	BDL	0.31	mg/kg
CHLOROMETHANE	BDL	0.63	mg/kg
DIBROMOCHLOROMETHANE	BDL	0.31	mg/kg
CIS-1,3-DICHLOROPROPENE	BDL	0.31	mg/kg
DICHLORODIFLUOROMETHANE	BDL	0.31	mg/kg
1,1-DICHLOROETHANE	BDL	0.31	mg/kg
1,2-DICHLOROETHANE	BDL	0.31	mg/kg
1,1-DICHLOROETHENE	BDL	0.31	mg/kg
1,2-DICHLOROPROPANE	BDL	0.31	mg/kg
ETHYLBENZENE	9.5	0.31	mg/kg
FLUOROTRICHLOROMETHANE	BDL	0.31	mg/kg
2-HEXANONE	BDL	0.63	mg/kg
METHYLENE CHLORIDE	BDL	0.31	mg/kg
METHYL ETHYL KETONE	BDL	0.63	mg/kg
4-METHYL-2-PENTANONE	BDL	0.63	mg/kg
STYRENE	BDL	0.31	mg/kg
1,1,2,2-TETRACHLOROETHANE	BDL	0.31	mg/kg
TETRACHLOROETHENE	BDL	0.31	mg/kg
TETRAHYDROFURAN	BDL	1.5	mg/kg
TOLUENE	4.0	0.31	mg/kg
1,2-DICHLOROETHENE (TOTAL)	BDL	0.31	mg/kg
TRANS-1,3-DICHLOROPROPENE	BDL	0.31	mg/kg
1,1,1-TRICHLOROETHANE	BDL	0.31	mg/kg
1,1,2-TRICHLOROETHANE	BDL	0.31	mg/kg
TRICHLOROETHENE	BDL	0.31	mg/kg
VINYL ACETATE	BDL	0.63	mg/kg
VINYL CHLORIDE	BDL	0.63	mg/kg
XYLENE (TOTAL)	12	0.31	mg/kg
.			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	116		% Rec
TOLUENE-D8	92		% Rec
BROMOFLUOROBENZENE	91		% Rec

1:63 DILUTION

GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550

Analyst: N. ROHADFOX Analysis Date: 24-DEC-91 Test: P236.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	29.97		Grams
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270

Analyst: J. ELLIS Analysis Date: 08-JAN-92 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.4.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	EST 53000	330	ug/kg
ACENAPHTHYLENE	EST 13000	330	ug/kg
ANTHRACENE	37000	330	ug/kg
BENZ(A)ANTHRACENE	EST 13000	330	ug/kg
BENZO(A)PYRENE	EST 6800	330	ug/kg
BENZO(B)FLUORANTHENE	5200	330	ug/kg

EMS HERITAGE LABORATORIES, INC. **Lab Sample ID: A244477**

Parameter	Result	Det. Limit	Units
BENZO(G,H,I)PERYLENE	EST 5600	330	ug/kg
BENZO(K)FLUORANTHENE	2000	330	ug/kg
BENZYL ALCOHOL	BDL	330	ug/kg
BENZYLBUTYLPHTHALATE	BDL	330	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	330	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	330	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	330	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	EST 9200	330	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	330	ug/kg
CARBAZOLE	1300	330	ug/kg
4-CHLOROANILINE	BDL	330	ug/kg
2-CHLORONAPHTHALENE	BDL	330	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	330	ug/kg
CHRYSENE	EST 8100	330	ug/kg
DIBENZ(A,H)ANTHRACENE	1300	330	ug/kg
DIBENZOFURAN	5200	330	ug/kg
1,2-DICHLOROBENZENE	BDL	330	ug/kg
1,3-DICHLOROBENZENE	BDL	330	ug/kg
1,4-DICHLOROBENZENE	BDL	330	ug/kg
3,3'-DICHLOROBENZIDINE	BDL	660	ug/kg
DIETHYLPHTHALATE	BDL	330	ug/kg
DIMETHYLPHTHALATE	BDL	330	ug/kg
DI-N-BUTYLPHTHALATE	BDL	330	ug/kg
DINITROBENZENES	BDL	330	ug/kg
2,4-DINITROTOLUENE	BDL	330	ug/kg
2,6-DINITROTOLUENE	BDL	330	ug/kg
DI-N-OCTYLPHTHALATE	BDL	330	ug/kg
FLUORANTHENE	EST 51000	330	ug/kg
FLUORENE	EST 38000	330	ug/kg
HEXACHLOROBENZENE	BDL	330	ug/kg
HEXACHLOROBUTADIENE	BDL	330	ug/kg
HEXACHLOROCYCLOPENTADIENE	BDL	330	ug/kg
HEXACHLOROETHANE	BDL	330	ug/kg
INDENO(1,2,3-CD)PYRENE	EST 5400	330	ug/kg
ISOPHORONE	BDL	330	ug/kg
2-METHYLNAPHTHALENE	EST 190000	330	ug/kg
NAPHTHALENE	EST 290000	330	ug/kg
2-NITROANILINE	BDL	1600	ug/kg
3-NITROANILINE	BDL	1600	ug/kg
4-NITROANILINE	BDL	1600	ug/kg
NITROBENZENE	BDL	330	ug/kg
N-NITROSO-DIPHENYLAMINE	BDL	330	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	BDL	330	ug/kg
PHENANTHRENE	EST 174000	330	ug/kg
2-PICOLINE	BDL	1600	ug/kg
PYRENE	EST 34000	330	ug/kg
PYRIDINE	BDL	1600	ug/kg
TETRACHLOROBENZENES	BDL	330	ug/kg
TOLUENEDIAMINE	BDL	1600	ug/kg
1,2,4-TRICHLOROBENZENE	BDL	330	ug/kg
BENZOIC ACID	BDL	1600	ug/kg
4-CHLORO-3-METHYLPHENOL	BDL	330	ug/kg
2-CHLOROPHENOL	BDL	330	ug/kg
2,4-DICHLOROPHENOL	BDL	330	ug/kg
2,4-DIMETHYLPHENOL	BDL	330	ug/kg
4,6-DINITRO-2-METHYLPHENOL	BDL	1600	ug/kg
2,4-DINITROPHENOL	BDL	1600	ug/kg

Parameter	Result	Det. Limit	Units
2-METHYLPHENOL	EST 240	330	ug/kg
4-METHYLPHENOL	EST 320	330	ug/kg
2-NITROPHENOL	BDL	330	ug/kg
4-NITROPHENOL	BDL	1600	ug/kg
PENTACHLOROPHENOL	BDL	1600	ug/kg
PHENOL	EST 200	330	ug/kg
TETRACHLOROPHENOL	BDL	330	ug/kg
2,4,5-TRICHLOROPHENOL	BDL	330	ug/kg
2,4,6-TRICHLOROPHENOL	BDL	330	ug/kg
.			
SURROGATE RECOVERY			

2-FLUOROPHENOL	84		% Rec
PHENOL-D5	94		% Rec
NITROBENZENE-D5	215		% Rec
2-FLUOROBIPHENYL	78		% Rec
2,4,6-TRIBROMOPHENOL	152		% Rec
TERPHENYL-D14	68		% Rec

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270

Analyst: J. ELLIS Analysis Date: 13-JAN-92 Instrument: GC/MS SVOA Test: 0505.3.1

Prep: GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.4.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	130000	ug/kg
ACENAPHTHYLENE	BDL	130000	ug/kg
ANTHRACENE	BDL	130000	ug/kg
BENZ(A)ANTHRACENE	BDL	130000	ug/kg
BENZO(A)PYRENE	BDL	130000	ug/kg
BENZO(B)FLUORANTHENE	BDL	130000	ug/kg
BENZO(G,H,I)PERYLENE	BDL	130000	ug/kg
BENZO(K)FLUORANTHENE	BDL	130000	ug/kg
BENZYL ALCOHOL	BDL	130000	ug/kg
BENZYLBUTYLPHTHALATE	BDL	130000	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	130000	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	130000	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	130000	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	130000	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	130000	ug/kg
CARBAZOLE	BDL	130000	ug/kg
4-CHLOROANILINE	BDL	130000	ug/kg
2-CHLORONAPHTHALENE	BDL	130000	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	130000	ug/kg
CHRYSENE	BDL	130000	ug/kg
DIBENZ(A,H)ANTHRACENE	BDL	130000	ug/kg
DIBENZOFURAN	BDL	130000	ug/kg
1,2-DICHLOROBENZENE	BDL	130000	ug/kg
1,3-DICHLOROBENZENE	BDL	130000	ug/kg
1,4-DICHLOROBENZENE	BDL	130000	ug/kg
3,3'-DICHLOROBENZIDINE	BDL	260000	ug/kg
DIETHYLPHTHALATE	BDL	130000	ug/kg
DIMETHYLPHTHALATE	BDL	130000	ug/kg
DI-N-BUTYLPHTHALATE	BDL	130000	ug/kg
DINITROBENZENES	BDL	130000	ug/kg
2,4-DINITROTOLUENE	BDL	130000	ug/kg
2,6-DINITROTOLUENE	BDL	130000	ug/kg
DI-N-OCTYLPHTHALATE	BDL	130000	ug/kg
FLUORANTHENE	BDL	130000	ug/kg

Parameter	Result	Det. Limit	Units
FLUORENE	BDL	130000	ug/kg
HEXACHLOROBENZENE	BDL	130000	ug/kg
HEXACHLOROBUTADIENE	BDL	130000	ug/kg
HEXACHLOROCYCLOPENTADIENE	BDL	130000	ug/kg
HEXACHLOROETHANE	BDL	130000	ug/kg
INDENO(1,2,3-CD)PYRENE	BDL	130000	ug/kg
ISOPHORONE	BDL	130000	ug/kg
2-METHYLNAPHTHALENE	120000	130000	ug/kg
NAPHTHALENE	380000	130000	ug/kg
2-NITROANILINE	BDL	640000	ug/kg
3-NITROANILINE	BDL	640000	ug/kg
4-NITROANILINE	BDL	640000	ug/kg
NITROBENZENE	BDL	130000	ug/kg
N-NITROSO-DIPHENYLAMINE	BDL	130000	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	BDL	130000	ug/kg
PHENANTHRENE	EST 68000	130000	ug/kg
2-PICOLINE	BDL	640000	ug/kg
PYRENE	BDL	130000	ug/kg
PYRIDINE	BDL	640000	ug/kg
TETRACHLOROBENZENES	BDL	130000	ug/kg
TOLUENEDIAMINE	BDL	640000	ug/kg
1,2,4-TRICHLOROBENZENE	BDL	130000	ug/kg
BENZOIC ACID	BDL	640000	ug/kg
4-CHLORO-3-METHYLPHENOL	BDL	130000	ug/kg
2-CHLOROPHENOL	BDL	130000	ug/kg
2,4-DICHLOROPHENOL	BDL	130000	ug/kg
2,4-DIMETHYLPHENOL	BDL	130000	ug/kg
4,6-DINITRO-2-METHYLPHENOL	BDL	640000	ug/kg
2,4-DINITROPHENOL	BDL	640000	ug/kg
2-METHYLPHENOL	BDL	130000	ug/kg
4-METHYLPHENOL	BDL	130000	ug/kg
2-NITROPHENOL	BDL	130000	ug/kg
4-NITROPHENOL	BDL	640000	ug/kg
PENTACHLOROPHENOL	BDL	640000	ug/kg
PHENOL	BDL	130000	ug/kg
TETRACHLOROPHENOL	BDL	130000	ug/kg
2,4,5-TRICHLOROPHENOL	BDL	130000	ug/kg
2,4,6-TRICHLOROPHENOL	BDL	130000	ug/kg
.			
SURROGATE RECOVERY			

2-FLUOROPHENOL	*		% Rec
PHENOL-D5	*		% Rec
NITROBENZENE-D5	*		% Rec
2-FLUOROBIPHENYL	*		% Rec
2,4,6-TRIBROMOPHENOL	*		% Rec
TERPHENYL-D14	*		% Rec

1:400 DILUTION
*NOTE: * SURROGATES DILUTED OUT*

SONICATION EXTRACTION FOR ORGANICS SW846-3550
Analyst: G. WILSON Analysis Date: 30-DEC-91 Test: P236.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	30.13		Grams
FINAL VOLUME	5		mL