

X 729
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ANALYTICAL REPORT

CEI-PERRY PLANT

Donna Tizzano

ILLUMINATING COMPANY

QUANTERRA INCORPORATED

A handwritten signature in black ink, appearing to read "Duane Nielsen".

Duane Nielsen
Project Manager

August 8, 1995

9604080185 960402
PDR ADDCK 05000440
P PDR

METHOD / ANALYST SUMMARY

Analytical
Methods

CFR136A 625
MCAWW 420.1
CFR136A 608
CFR136A 624

Analyst

Thomas M Hula
Steven J Poppe
Norma J Basko
Timothy J Lavey

References:

- CFR136A "Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.
- MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SAMPLE SUMMARY

The analytical results of the samples listed below are presented on the following pages.

<u>WO #</u>	<u>LABORATORY ID</u>	<u>SAMPLE IDENTIFICATION</u>
C05MQ	A5G100112-001	SANITARY SEWER PUMP CENTER

ILLUMINATING COMPANY

SANITARY SEWER PUMP CENTER

WO #: C05MQ103
LAB #: A5G100112-001
MATRIX: WATER

DATE SAMPLED: 7/06/95
DATE RECEIVED: 7/07/95

----- GC/MS Volatiles -----

1 OF 2

<u>PARAMETER</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Acrolein	ND	50	CFR136A 624	07/12/95	5198047
Acrylonitrile	ND	50	CFR136A 624	07/12/95	5198047
Benzene	ND	5.0	CFR136A 624	07/12/95	5198047
Bromodichloromethane	2.6 J	5.0	CFR136A 624	07/12/95	5198047
Bromoform	ND	5.0	CFR136A 624	07/12/95	5198047
Bromomethane	ND	10	CFR136A 624	07/12/95	5198047
Carbon tetrachloride	ND	5.0	CFR136A 624	07/12/95	5198047
Chlorobenzene	ND	5.0	CFR136A 624	07/12/95	5198047
Chloroethane	ND	10	CFR136A 624	07/12/95	5198047
2-Chloroethyl vinyl ether	ND	10	CFR136A 624	07/12/95	5198047
Chloroform	3.9 J	5.0	CFR136A 624	07/12/95	5198047
Chloromethane	ND	10	CFR136A 624	07/12/95	5198047
Dibromochloromethane	ND	5.0	CFR136A 624	07/12/95	5198047
1,1-Dichloroethane	ND	5.0	CFR136A 624	07/12/95	5198047
1,2-Dichloroethane	ND	5.0	CFR136A 624	07/12/95	5198047
1,1-Dichloroethene	ND	5.0	CFR136A 624	07/12/95	5198047
1,2-Dichloroethene (total)	ND	5.0	CFR136A 624	07/12/95	5198047
1,2-Dichloropropane	ND	5.0	CFR136A 624	07/12/95	5198047
cis-1,3-Dichloropropene	ND	5.0	CFR136A 624	07/12/95	5198047
trans-1,3-Dichloropropene	ND	5.0	CFR136A 624	07/12/95	5198047
Ethylbenzene	ND	5.0	CFR136A 624	07/12/95	5198047
Methylene chloride	ND	5.0	CFR136A 624	07/12/95	5198047
1,1,2,2-Tetrachloroethane	ND	5.0	CFR136A 624	07/12/95	5198047
<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>			
1,2-Dichloroethane-d4	106	(76 - 114)			
Toluene-d8	100	(88 - 110)			
Bromofluorobenzene	95	(86 - 115)			

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT

J ESTIMATED VALUE. (DETECTED), BUT BELOW QUANTITATION LIMIT.

ILLUMINATING COMPANY

SANITARY SEWER PUMP CENTER

WO #: C05MQ103
LAB #: A5G100112-001
MATRIX: WATER

DATE SAMPLED: 7/06/95
DATE RECEIVED: 7/07/95

----- GC/MS Volatiles -----

2 OF 2

<u>PARAMETER</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Tetrachloroethene	ND	5.0	CFR136A 624	07/12/95	5198047
Toluene	2.8 J	5.0	CFR136A 624	07/12/95	5198047
1,1,1-Trichloroethane	ND	5.0	CFR136A 624	07/12/95	5198047
1,1,2-Trichloroethane	ND	5.0	CFR136A 624	07/12/95	5198047
Trichloroethene	ND	5.0	CFR136A 624	07/12/95	5198047
Vinyl chloride	ND	10	CFR136A 624	07/12/95	5198047

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
1,2-Dichloroethane-d4	106	(76 - 114)
Toluene-d8	100	(88 - 110)
Bromofluorobenzene	95	(86 - 115)

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT

J ESTIMATED VALUE. (DETECTED), BUT BELOW QUANTITATION LIMIT.

ILLUMINATING COMPANY

SANITARY SEWER PUMP CENTER

WO #: C05MQ104
LAB #: A5G100112-001
MATRIX: WATER

DATE SAMPLED: 7/06/95
DATE RECEIVED: 7/07/95

----- GC/MS Semi-Volatiles -----

1 OF 3

<u>PARAMETER</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Acenaphthene	ND	10	CFR136A 625	07/12-07/18/95	5193005
Acenaphthylene	ND	10	CFR136A 625	07/12-07/18/95	5193005
Anthracene	ND	10	CFR136A 625	07/12-07/18/95	5193005
Benzidine	ND	50	CFR136A 625	07/12-07/18/95	5193005
Benzo (a) anthracene	ND	10	CFR136A 625	07/12-07/18/95	5193005
Benzo (b) fluoranthene	ND	10	CFR136A 625	07/12-07/18/95	5193005
Benzo (k) fluoranthene	ND	10	CFR136A 625	07/12-07/18/95	5193005
Benzo (ghi) perylene	ND	10	CFR136A 625	07/12-07/18/95	5193005
Benzo (a) pyrene	ND	10	CFR136A 625	07/12-07/18/95	5193005
bis (2-Chloroethoxy) methane	ND	10	CFR136A 625	07/12-07/18/95	5193005
bis (2-Chloroethyl) ether	ND	10	CFR136A 625	07/12-07/18/95	5193005
bis (2-Chloroisopropyl) ether	ND	10	CFR136A 625	07/12-07/18/95	5193005
bis (2-Ethylhexyl) phthalate	ND	10	CFR136A 625	07/12-07/18/95	5193005
4-Bromophenyl phenyl ether	ND	10	CFR136A 625	07/12-07/18/95	5193005
Butyl benzyl phthalate	ND	10	CFR136A 625	07/12-07/18/95	5193005
4-Chloro-3-methylphenol	ND	10	CFR136A 625	07/12-07/18/95	5193005
2-Chloronaphthalene	ND	10	CFR136A 625	07/12-07/18/95	5193005
2-Chlorophenol	ND	10	CFR136A 625	07/12-07/18/95	5193005
4-Chlorophenyl phenyl ether	ND	10	CFR136A 625	07/12-07/18/95	5193005
Chrysene	ND	10	CFR136A 625	07/12-07/18/95	5193005
Dibenzo (a, h) anthracene	ND	10	CFR136A 625	07/12-07/18/95	5193005
Di-n-butyl phthalate	ND	10	CFR136A 625	07/12-07/18/95	5193005
1,2-Dichlorobenzene	ND	10	CFR136A 625	07/12-07/18/95	5193005

SURROGATE RECOVERY

μ

ACCEPTABLE LIMITS

2-Fluorophenol	66	(17 - 106)
Phenol-d5	67	(15 - 126)
2,4,6-Tribromophenol	82	(13 - 145)
Nitrobenzene-d5	66	(36 - 148)
2-Fluorobiphenyl	68	(38 - 106)
Terphenyl-d14	18	(10 - 169)

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT

ILLUMINATING COMPANY

SANITARY SEWER PUMP CENTER

WO #: C05MQ104
 LAB #: A5G100112-001
 MATRIX: WATER

DATE SAMPLED: 7/06/95
 DATE RECEIVED: 7/07/95

----- GC/MS Semi-Volatiles -----

2 OF 3

<u>PARAMETER</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
1,3-Dichlorobenzene	ND	10	CFR136A 625	07/12-07/18/95	5193005
1,4-Dichlorobenzene	ND	20	CFR136A 625	07/12-07/18/95	5193005
3,3'-Dichlorobenzidine	ND	20	CFR136A 625	07/12-07/18/95	5193005
2,4-Dichlorophenol	ND	10	CFR136A 625	07/12-07/18/95	5193005
Diethyl phthalate	ND	10	CFR136A 625	07/12-07/18/95	5193005
2,4-Dimethylphenol	ND	10	CFR136A 625	07/12-07/18/95	5193005
Dimethyl phthalate	ND	10	CFR136A 625	07/12-07/18/95	5193005
4,6-Dinitro- 2-methylphenol	ND	50	CFR136A 625	07/12-07/18/95	5193005
2,4-Dinitrophenol	ND	50	CFR136A 625	07/12-07/18/95	5193005
2,4-Dinitrotoluene	ND	10	CFR136A 625	07/12-07/18/95	5193005
2,6-Dinitrotoluene	ND	10	CFR136A 625	07/12-07/18/95	5193005
Di-n-octyl phthalate	ND	10	CFR136A 625	07/12-07/18/95	5193005
1,2-Diphenylhydrazine	ND	10	CFR136A 625	07/12-07/18/95	5193005
Fluoranthene	ND	10	CFR136A 625	07/12-07/18/95	5193005
Fluorene	ND	10	CFR136A 625	07/12-07/18/95	5193005
Hexachlorobenzene	ND	10	CFR136A 625	07/12-07/18/95	5193005
Hexachlorobutadiene	ND	10	CFR136A 625	07/12-07/18/95	5193005
Hexachlorocyclopentadiene	ND	10	CFR136A 625	07/12-07/18/95	5193005
Hexachloroethane	ND	10	CFR136A 625	07/12-07/18/95	5193005
Indeno(1,2,3-cd)pyrene	ND	10	CFR136A 625	07/12-07/18/95	5193005
Isophorone	ND	10	CFR136A 625	07/12-07/18/95	5193005
Naphthalene	ND	10	CFR136A 625	07/12-07/18/95	5193005
Nitrobenzene	ND	10	CFR136A 625	07/12-07/18/95	5193005
<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>			
2-Fluorophenol	66	(17 - 106)			
Phenol-d5	67	(15 - 126)			
2,4,6-Tribromophenol	82	(13 - 145)			
Nitrobenzene-d5	66	(36 - 148)			
2-Fluorobiphenyl	68	(38 - 106)			
Terphenyl-d14	18	(10 - 169)			

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT

ILLUMINATING COMPANY

SANITARY SEWER PUMP CENTER

WO #: C05MQ104
LAB #: A5G100112-001
MATRIX: WATER

DATE SAMPLED: 7/06/95
DATE RECEIVED: 7/07/95

----- GC/MS Semi-Volatiles -----

3 OF 3

PARAMETER	RESULT (ug/L)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
2-Nitrophenol	ND	10	CFR136A 625	07/12-07/18/95	5193005
4-Nitrophenol	ND	50	CFR136A 625	07/12-07/18/95	5193005
N-Nitrosodimethylamine	ND	10	CFR136A 625	07/12-07/18/95	5193005
N-Nitrosodiphenylamine	ND	10	CFR136A 625	07/12-07/18/95	5193005
N-Nitrosodi-n-propylamine	ND	10	CFR136A 625	07/12-07/18/95	5193005
Pentachlorophenol	ND	50	CFR136A 625	07/12-07/18/95	5193005
Phenanthrene	ND	10	CFR136A 625	07/12-07/18/95	5193005
Phenol	ND	10	CFR136A 625	07/12-07/18/95	5193005
Pyrene	ND	10	CFR136A 625	07/12-07/18/95	5193005
1,2,4-Trichlorobenzene	ND	10	CFR136A 625	07/12-07/18/95	5193005
2,4,6-Trichlorophenol	ND	10	CFR136A 625	07/12-07/18/95	5193005

SURROGATE RECOVERY

%

ACCEPTABLE LIMITS

2-Fluorophenol	66	(17 - 106)
Phenol-d5	67	(15 - 126)
2,4,6-Tribromophenol	82	(13 - 145)
Nitrobenzene-d5	66	(36 - 148)
2-Fluorobiphenyl	68	(38 - 106)
Terphenyl-d14	18	(10 - 169)

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT

ILLUMINATING COMPANY

SANITARY SEWER PUMP CENTER

WO #: C05MQ102
LAB #: A5G100112-001
MATRIX: WATER

DATE SAMPLED: 7/06/95
DATE RECEIVED: 7/07/95

----- GC Semi-Volatiles -----

1 OF 2

<u>PARAMETER</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Aldrin	ND	0.050	CFR136A 608	07/12-07/18/95	5193004
Aroclor 1232	ND	0.50	CFR136A 608	07/12-07/18/95	5193004
Aroclor 1016	ND	0.50	CFR136A 608	07/12-07/18/95	5193004
Aroclor 1221	ND	0.50	CFR136A 608	07/12-07/18/95	5193004
Aroclor 1242	ND	0.50	CFR136A 608	07/12-07/18/95	5193004
Aroclor 1248	ND	0.50	CFR136A 608	07/12-07/18/95	5193004
Aroclor 1254	ND	1.0	CFR136A 608	07/12-07/18/95	5193004
Aroclor 1260	ND	1.0	CFR136A 608	07/12-07/18/95	5193004
alpha-BHC	ND	0.050	CFR136A 608	07/12-07/18/95	5193004
beta-BHC	ND	0.050	CFR136A 608	07/12-07/18/95	5193004
delta-BHC	ND	0.050	CFR136A 608	07/12-07/18/95	5193004
gamma-BHC (Lindane)	ND	0.050	CFR136A 608	07/12-07/18/95	5193004
Chlordane	ND	0.50	CFR136A 608	07/12-07/18/95	5193004
4,4'-DDD	ND	0.10	CFR136A 608	07/12-07/18/95	5193004
4,4'-DDE	ND	0.10	CFR136A 608	07/12-07/18/95	5193004
4,4'-DDT	ND	0.10	CFR136A 608	07/12-07/18/95	5193004
Dieldrin	ND	0.10	CFR136A 608	07/12-07/18/95	5193004
Endosulfan I	ND	0.050	CFR136A 608	07/12-07/18/95	5193004
Endosulfan II	ND	0.10	CFR136A 608	07/12-07/18/95	5193004
Endosulfan sulfate	ND	0.10	CFR136A 608	07/12-07/18/95	5193004
Endrin	ND	0.10	CFR136A 608	07/12-07/18/95	5193004
Endrin aldehyde	ND	0.10	CFR136A 608	07/12-07/18/95	5193004
Heptachlor	ND	0.050	CFR136A 608	07/12-07/18/95	5193004
<u>SURROGATE RECOVERY</u>	<u>†</u>	<u>ACCEPTABLE LIMITS</u>			
Tetrachloro-m-xylene	52	(14 - 155)			
Dibutylchlorendate	34	(10 - 155)			

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT

ILLUMINATING COMPANY

SANITARY SEWER PUMP CENTER

WO #: C05MQ102
LAB #: A5G100112-001
MATRIX: WATER

DATE SAMPLED: 7/06/95
DATE RECEIVED: 7/07/95

----- GC Semi-Volatiles -----

2 OF 2

<u>PARAMETER</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Heptachlor epoxide	ND	0.050	CFR136A 608	07/12-07/18/95	5193004
Toxaphene	ND	1.0	CFR136A 608	07/12-07/18/95	5193004

SURROGATE RECOVERY

%

ACCEPTABLE LIMITS

Tetrachloro-m-xylene
Dibutylchloredate

52
34

(14 - 155)
(10 - 155)

NOTE: AS RECEIVED

ND NOT DETECTED AT THE STATED REPORTING LIMIT

ILLUMINATING COMPANY

SANITARY SEWER PUMP CENTER

WO #: C05MQ
LAB #: A5G100112-001
MATRIX: WATER

DATE SAMPLED: 7/06/95
DATE RECEIVED: 7/07/95

----- INORGANIC ANALYTICAL REPORT -----

PARAMETER	RESULT	REPORTING		METHOD	PREPARATION	QC
		LIMIT	UNIT		ANALYSIS DATE	BATCH
Phenolics	ND	0.020	mg/L	MCAWW 420.1	7/24- 7/25/95	5205116

NOTE: AS RECEIVED
ND NOT DETECTED AT THE STATED REPORTING LIMIT

QUALITY CONTROL SECTION

QUALITY CONTROL NARRATIVE

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol with the exception of those items noted.

The matrix spike and matrix spike duplicate (MS/MSD) contained in this quality control report were generated as part of the laboratory QA/QC program requirements. These requirements include the analysis of a MS/MSD on a one in twenty basis. Therefore, the associated batch number indicated on the MS/MSD reports may not reflect the same batch numbers as those of the samples contained in the analytical report.

Recoveries for Di-n-octyl phthalate and 2,4-Dinitrophenol exceeds the quality control acceptance limits in the Base Neutral and Acid Compounds MS/MSD associated with batch number 5193005. According to EPA 600 series method requirements, analytical data for these analytes have been verified by the check sample recoveries meeting quality control criteria.

The 600 Series Methods as defined in the 40 CFR part 136, Appendix A require the analysis of a matrix spike sample at a frequency of 5% for GC/MS organics and 10% for GCS organics. The analytes used in the matrix spike will be those found in the analytical methods list.

CHECK SAMPLE REPORT

QC BATCH: 5198047
LAB #: A5G170000-047 C

PREPARATION DATE: 7/13/95
DATE ANALYZED: 7/13/95

----- GC/MS Volatiles -----

COMPOUND	SPIKE PERCENT RECOVERY	Q/C LIMITS
Benzene	99	(79-125)
Bromodichloromethane	106	(65-144)
Bromoform	95	(46-151)
Bromomethane	112	(47-160)
Carbon tetrachloride	109	(63-141)
Chlorobenzene	97	(81-121)
Chloroethane	102	(38-170)
2-Chloroethyl vinyl ether	91	(27-166)
Chloroform	102	(70-141)
Chloromethane	99	(36-158)
Dibromochloromethane	103	(58-140)
1,2-Dichlorobenzene	104	(18-190)
1,3-Dichlorobenzene	106	(59-156)
1,4-Dichlorobenzene	102	(18-190)
1,1-Dichloroethane	94	(64-145)
1,2-Dichloroethane	99	(66-150)
1,1-Dichloroethene	97	(70-143)
trans-1,2-Dichloroethene	94	(58-140)
1,2-Dichloropropane	98	(71-142)
cis-1,3-Dichloropropene	100	(59-140)
trans-1,3-Dichloropropene	98	(53-148)
Ethylbenzene	96	(70-140)
Methylene chloride	93	(72-144)
1,1,2,2-Tetrachloroethane	100	(52-153)
Tetrachloroethene	100	(67-136)
Toluene	104	(79-122)
1,1,1-Trichloroethane	103	(67-137)
1,1,2-Trichloroethane	97	(70-140)
Trichloroethene	101	(76-121)
INVALID	116	(17-181)
Vinyl chloride	101	(47-156)

CHECK SAMPLE REPORT

QC BATCH: 5193005
LAB #: A5G120000-005 C

PREPARATION DATE: 7/12/95
DATE ANALYZED: 7/18/95

----- GC/MS Semi-Volatiles -----

COMPOUND	SPIKE PERCENT RECOVERY	Q/C LIMITS
Acenaphthene	74	(48-113)
Acenaphthylene	80	(47-111)
Anthracene	82	(53-107)
Benzo(a)anthracene	83	(53-110)
Benzo(b)fluoranthene	96	(43-110)
Benzo(k)fluoranthene	94	(36-136)
Benzo(a)pyrene	82	(28-114)
Benzo(ghi)perylene	52	(17-120)
Benzyl butyl phthalate	73	(35-110)
bis(2-Chloroethyl) ether	59	(44-95)
bis(2-Chloroethoxy)methane	72	(50-106)
bis(2-Chloroisopropyl) ether	60	(21-122)
bis(2-Ethylhexyl) phthalate	75	(30-123)
4-Bromophenyl phenyl ether	87	(52-114)
2-Chloronaphthalene	76	(43-111)
4-Chlorophenyl phenyl ether	81	(48-124)
Chrysene	85	(54-120)
Dibenzo(a,h)anthracene	62	(23-112)
Di-n-butyl phthalate	78	(44-115)
1,2-Dichlorobenzene	57	(43-95)
1,3-Dichlorobenzene	54	(41-92)
1,4-Dichlorobenzene	56	(37-92)
3,3'-Dichlorobenzidine	80	(19-137)
Diethyl phthalate	57	(16-129)
Dimethyl phthalate	50	(10-115)
2,4-Dinitrotoluene	80	(37-131)
2,6-Dinitrotoluene	81	(40-121)
Di-n-octyl phthalate	103	(25-123)
Fluoranthene	89	(35-131)
Fluorene	80	(45-124)
Hexachlorobenzene	83	(53-110)
Hexachlorobutadiene	64	(45-96)
Hexachloroethane	46	(38-90)
Indeno(1,2,3-cd)pyrene	59	(28-112)
Isophorone	75	(44-105)
Naphthalene	67	(44-99)
Nitrobenzene	66	(44-102)
N-Nitrosodi-n-propylamine	63	(31-113)
Phenanthrene	78	(50-109)
Pyrene	63	(50-159)
1,2,4-Trichlorobenzene	68	(39-136)

CHECK SAMPLE REPORT

QC BATCH: 5193005
LAB #: ASG120000-005 C

PREPARATION DATE: 7/12/95
DATE ANALYZED: 7/18/95

----- GC/MS Semi-Volatiles -----

COMPOUND	SPIKE PERCENT RECOVERY	Q/C LIMITS
4-Chloro-3-methylphenol	78	(30-117)
2-Chlorophenol	66	(35-111)
2,4-Dichlorophenol	79	(33-93)
2,4-Dimethylphenol	38	(23-74)
2,4-Dinitrophenol	72	(10-96)
4,6-Dinitro- 2-methylphenol	74	(10-115)
2-Nitrophenol	60	(10-99)
4-Nitrophenol	85	(10-128)
Pentachlorophenol	76	(10-113)
Phenol	60	(12-116)
2,4,6-Trichlorophenol	93	(22-102)

CHECK SAMPLE REPORT

QC BATCH: 5193004
LAB #: A5G120000-004 C

PREPARATION DATE: 7/12/95
DATE ANALYZED: 7/17/95

----- GC Semi-Volatiles -----

COMPOUND	SPIKE PERCENT RECOVERY	Q/C LIMITS
Aldrin	72	(57-145)
alpha-BHC	71	(37-134)
beta-BHC	74	(17-147)
delta-BHC	76	(19-140)
gamma-BHC (Lindane)	70	(52-139)
4,4'-DDD	75	(31-141)
4,4'-DDE	80	(30-145)
4,4'-DDT	85	(64-144)
Dieldrin	75	(36-172)
Endosulfan I	76	(45-153)
Endosulfan II	83	(10-202)
Endosulfan sulfate	83	(26-144)
Endrin	77	(63-165)
Heptachlor	78	(66-156)
Heptachlor epoxide	84	(37-142)

CHECK SAMPLE REPORT

LAB #: A5G100112

----- INORGANIC ANALYTICAL REPORT -----

<u>COMPOUND</u>	SPIKE PERCENT <u>RECOVERY</u>	<u>LIMITS</u>	<u>PREPARATION - ANALYSIS DATE</u>	<u>Q/C BATCH</u>
Phenolics	98	(51-125)	7/24- 7/25/95	5205116

METHOD BLANK REPORT

LAB #: A5G170000-047

----- GC/MS Volatiles -----

<u>PARAMETER</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Acrolein	ND	50	7/12/95	5198047
Acrylonitrile	ND	50	7/12/95	5198047
Benzene	ND	5.0	7/12/95	5198047
Bromodichloromethane	ND	5.0	7/12/95	5198047
Bromoform	ND	5.0	7/12/95	5198047
Bromomethane	ND	10	7/12/95	5198047
Carbon tetrachloride	ND	5.0	7/12/95	5198047
Chlorobenzene	ND	5.0	7/12/95	5198047
Dibromochloromethane	ND	5.0	7/12/95	5198047
Chloroethane	ND	10	7/12/95	5198047
2-Chloroethyl vinyl ether	ND	10	7/12/95	5198047
Chloroform	ND	5.0	7/12/95	5198047
Chloromethane	ND	10	7/12/95	5198047
1,1-Dichloroethane	ND	5.0	7/12/95	5198047
1,2-Dichloroethane	ND	5.0	7/12/95	5198047
1,1-Dichloroethene	ND	5.0	7/12/95	5198047
1,2-Dichloroethene (total)	ND	5.0	7/12/95	5198047
1,2-Dichloropropane	ND	5.0	7/12/95	5198047
cis-1,3-Dichloropropene	ND	5.0	7/12/95	5198047
trans-1,3-Dichloropropene	ND	5.0	7/12/95	5198047
Ethylbenzene	ND	5.0	7/12/95	5198047
Methylene chloride	ND	5.0	7/12/95	5198047
1,1,2,2-Tetrachloroethane	ND	5.0	7/12/95	5198047
Tetrachloroethene	ND	5.0	7/12/95	5198047
Toluene	ND	5.0	7/12/95	5198047
<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>		
1,2-Dichloroethane-d4	108	(76 - 114)		
Toluene-d8	98	(88 - 110)		
Bromofluorobenzene	97	(86 - 115)		

NOTE:

ND (NONE DETECTED)

METHOD BLANK REPORT

LAB #: A5G170000-047

----- GC/MS Volatiles -----

<u>PARAMETER</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
1,1,1-Trichloroethane	ND	5.0	7/12/95	5198047
1,1,2-Trichloroethane	ND	5.0	7/12/95	5198047
Trichloroethene	ND	5.0	7/12/95	5198047
Vinyl chloride	ND	10	7/12/95	5198047

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
1,2-Dichloroethane-d4	108	(76 - 114)
Toluene-d8	98	(88 - 110)
Bromofluorobenzene	97	(86 - 115)

NOTE:

ND (NONE DETECTED)

METHOD BLANK REPORT

LAB #: A5G120000-005

----- GC/MS Semi-Volatiles -----

<u>PARAMETER</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Acenaphthene	ND	10	7/12- 7/17/95	5193005
Acenaphthylene	ND	10	7/12- 7/17/95	5193005
Anthracene	ND	10	7/12- 7/17/95	5193005
Benzidine	ND	50	7/12- 7/17/95	5193005
Benzo(a)anthracene	ND	10	7/12- 7/17/95	5193005
Benzo(b)fluoranthene	ND	10	7/12- 7/17/95	5193005
Benzo(k)fluoranthene	ND	10	7/12- 7/17/95	5193005
Benzo(ghi)perylene	ND	10	7/12- 7/17/95	5193005
Benzo(a)pyrene	ND	10	7/12- 7/17/95	5193005
bis(2-Chloroethoxy)methane	ND	10	7/12- 7/17/95	5193005
bis(2-Chloroethyl) ether	ND	10	7/12- 7/17/95	5193005
bis(2-Chloroisopropyl) ether	ND	10	7/12- 7/17/95	5193005
bis(2-Ethylhexyl) phthalate	ND	10	7/12- 7/17/95	5193005
4-Bromophenyl phenyl ether	ND	10	7/12- 7/17/95	5193005
Butyl benzyl phthalate	ND	10	7/12- 7/17/95	5193005
4-Chloro-3-methylphenol	ND	10	7/12- 7/17/95	5193005
2-Chloronaphthalene	ND	10	7/12- 7/17/95	5193005
2-Chlorophenol	ND	10	7/12- 7/17/95	5193005
4-Chlorophenyl phenyl ether	ND	10	7/12- 7/17/95	5193005
Chrysene	ND	10	7/12- 7/17/95	5193005
Di-n-butyl phthalate	ND	10	7/12- 7/17/95	5193005
1,2-Dichlorobenzene	ND	10	7/12- 7/17/95	5193005
1,3-Dichlorobenzene	ND	10	7/12- 7/17/95	5193005
1,4-Dichlorobenzene	ND	20	7/12- 7/17/95	5193005
3,3'-Dichlorobenzidine	ND	20	7/12- 7/17/95	5193005
<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>		
2-Fluorophenol	57	(17 - 106)		
Phenol-d5	50	(15 - 126)		
2,4,6-Tribromophenol	74	(13 - 145)		
Nitrobenzene-d5	64	(36 - 148)		
2-Fluorobiphenyl	62	(38 - 106)		
Terphenyl-d14	80	(10 - 169)		

NOTE:

ND (NONE DETECTED)

METHOD BLANK REPORT

LAB #: A5G120000-005

----- GC/MS Semi-Volatiles -----

<u>PARAMETER</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
2,4-Dichlorophenol	ND	10	7/12- 7/17/95	5193005
Diethyl phthalate	ND	10	7/12- 7/17/95	5193005
2,4-Dimethylphenol	ND	10	7/12- 7/17/95	5193005
Dimethyl phthalate	ND	10	7/12- 7/17/95	5193005
Di-n-octyl phthalate	ND	10	7/12- 7/17/95	5193005
4,6-Dinitro- 2-methylphenol	ND	50	7/12- 7/17/95	5193005
2,4-Dinitrophenol	ND	50	7/12- 7/17/95	5193005
2,4-Dinitrotoluene	ND	10	7/12- 7/17/95	5193005
2,6-Dinitrotoluene	ND	10	7/12- 7/17/95	5193005
1,2-Diphenylhydrazine	ND	10	7/12- 7/17/95	5193005
Fluoranthene	ND	10	7/12- 7/17/95	5193005
Fluorene	ND	10	7/12- 7/17/95	5193005
Hexachlorobenzene	ND	10	7/12- 7/17/95	5193005
Hexachlorobutadiene	ND	10	7/12- 7/17/95	5193005
Hexachlorocyclopentadiene	ND	10	7/12- 7/17/95	5193005
Hexachloroethane	ND	10	7/12- 7/17/95	5193005
Indeno (1,2,3-cd) pyrene	ND	10	7/12- 7/17/95	5193005
Isophorone	ND	10	7/12- 7/17/95	5193005
Naphthalene	ND	10	7/12- 7/17/95	5193005
Nitrobenzene	ND	10	7/12- 7/17/95	5193005
2-Nitrophenol	ND	10	7/12- 7/17/95	5193005
4-Nitrophenol	ND	50	7/12- 7/17/95	5193005
N-Nitrosodimethylamine	ND	10	7/12- 7/17/95	5193005
N-Nitrosodi-n-propylamine	ND	10	7/12- 7/17/95	5193005
<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>		
2-Fluorophenol	57	(17 - 106)		
Phenol-d5	50	(15 - 126)		
2,4,6-Tribromophenol	74	(13 - 145)		
Nitrobenzene-d5	64	(36 - 148)		
2-Fluorobiphenyl	62	(38 - 106)		
Terphenyl-d14	80	(10 - 169)		

NOTE:

ND (NONE DETECTED)

METHOD BLANK REPORT

LAB #: A5G120000-005

----- GC/MS Semi-Volatiles -----

<u>PARAMETER</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
N-Nitrosodiphenylamine	ND	10	7/12- 7/17/95	5193005
Pentachlorophenol	ND	50	7/12- 7/17/95	5193005
Phenanthrene	ND	10	7/12- 7/17/95	5193005
Phenol	ND	10	7/12- 7/17/95	5193005
Pyrene	ND	10	7/12- 7/17/95	5193005
1,2,4-Trichlorobenzene	ND	10	7/12- 7/17/95	5193005
2,4,6-Trichlorophenol	ND	10	7/12- 7/17/95	5193005
Dibenzo (a, h) anthracene	ND	10	7/12- 7/17/95	5193005

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
2-Fluorophenol	57	(17 - 106)
Phenol-d5	50	(15 - 126)
2,4,6-Tribromophenol	74	(13 - 145)
Nitrobenzene-d5	64	(36 - 148)
2-Fluorobiphenyl	62	(38 - 106)
Terphenyl-d14	80	(10 - 169)

NOTE:

ND (NONE DETECTED)

METHOD BLANK REPORT

LAB #: A5G120000-004

----- GC Semi-Volatiles -----

<u>PARAMETER</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Aldrin	ND	0.050	7/12- 7/17/95	5193004
alpha-BHC	ND	0.050	7/12- 7/17/95	5193004
beta-BHC	ND	0.050	7/12- 7/17/95	5193004
delta-BHC	ND	0.050	7/12- 7/17/95	5193004
gamma-BHC (Lindane)	ND	0.050	7/12- 7/17/95	5193004
Chlordane	ND	0.50	7/12- 7/17/95	5193004
4,4'-DDD	ND	0.10	7/12- 7/17/95	5193004
4,4'-DDE	ND	0.10	7/12- 7/17/95	5193004
4,4'-DDT	ND	0.10	7/12- 7/17/95	5193004
Dieldrin	ND	0.10	7/12- 7/17/95	5193004
Endosulfan I	ND	0.050	7/12- 7/17/95	5193004
Endosulfan II	ND	0.10	7/12- 7/17/95	5193004
Endosulfan sulfate	ND	0.10	7/12- 7/17/95	5193004
Endrin	ND	0.10	7/12- 7/17/95	5193004
Endrin aldehyde	ND	0.10	7/12- 7/17/95	5193004
Heptachlor	ND	0.050	7/12- 7/17/95	5193004
Heptachlor epoxide	ND	0.050	7/12- 7/17/95	5193004
Aroclor 1016	ND	0.50	7/12- 7/17/95	5193004
Aroclor 1221	ND	0.50	7/12- 7/17/95	5193004
Aroclor 1232	ND	0.50	7/12- 7/17/95	5193004
Aroclor 1242	ND	0.50	7/12- 7/17/95	5193004
Aroclor 1248	ND	0.50	7/12- 7/17/95	5193004
Aroclor 1254	ND	1.0	7/12- 7/17/95	5193004
Aroclor 1260	ND	1.0	7/12- 7/17/95	5193004
Toxaphene	ND	1.0	7/12- 7/17/95	5193004
<u>SPURIOUS RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>		
Tetrachloro-m-xylene	99	(14 - 155)		
Diethylchlorodate	92	(10 - 155)		

NOTE:

ND (NONE DETECTED)

METHOD BLANK REPORT

LAB #: A5G100112

----- INORGANIC ANALYTICAL REPORT -----

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNIT</u>	<u>PREPARATION - ANALYSIS DATE</u>	<u>QC BATCH</u>
Phenolics	ND	0.020	mg/L	7/24- 7/25/95	5205116

NOTE:

ND NOT DETECTED AT THE STATED REPORTING LIMIT

MATRIX SPIKE REPORT

QC BATCH: 5195040
LAB #: B5G030011-001 S
MATRIX: WATER

WO #: A5A6D
PREPARATION DATE: 7/12/95
DATE ANALYZED: 7/12/95

----- GC/MS Volatiles -----

COMPOUND	SPIKE PERCENT RECOVERY	Q/C LIMITS
Benzene	98	(83-123)
Bromodichloromethane	104	(57-153)
Bromoform	95	(47-165)
Bromomethane	113	(76-150)
Carbon tetrachloride	106	(73-135)
Chlorobenzene	96	(85-120)
Chloroethane	100	(71-154)
2-Chloroethyl vinyl ether	51	(10-153)
Chloroform	100	(10-204)
Chloromethane	101	(44-151)
Dibromochloromethane	105	(60-146)
1,2-Dichlorobenzene	103	(18-190)
1,3-Dichlorobenzene	104	(59-156)
1,4-Dichlorobenzene	102	(18-190)
1,1-Dichloroethane	93	(53-148)
1,2-Dichloroethane	98	(52-167)
1,1-Dichloroethene	98	(55-142)
trans-1,2-Dichloroethene	95	(55-139)
1,2-Dichloropropane	96	(64-146)
cis-1,3-Dichloropropene	101	(52-135)
trans-1,3-Dichloropropene	100	(50-144)
Ethylbenzene	93	(72-140)
Methylene chloride	89	(62-152)
1,1,2,2-Tetrachloroethane	96	(53-149)
Tetrachloroethene	72	(67-141)
Toluene	101	(82-122)
1,1,1-Trichloroethane	102	(33-171)
1,1,2-Trichloroethane	98	(73-138)
Trichloroethene	98	(77-124)
Trichlorofluoromethane	114	(17-181)
Vinyl chloride	103	(48-161)



Environmental
Services

MATRIX SPIKE REPORT

QC BATCH: 5175008
LAB #: A5F220034-001 S
MATRIX: WATER

WO #: A55LQ
PREPARATION DATE: 6/24/95
DATE ANALYZED: 7/01/95

----- GC/MS Semi-Volatiles -----

COMPOUND	SPIKE PERCENT RECOVERY	Q/C LIMITS
Acenaphthene	82	(45-112)
Acenaphthylene	90	(30-122)
Anthracene	95	(18-133)
Benzo(a)anthracene	92	(17-130)
Benzo(b)fluoranthene	97	(29-108)
Benzo(k)fluoranthene	92	(23-127)
Benzo(a)pyrene	78	(13-126)
Benzo(g,h,i)perylene	42	(10-128)
Benzyl butyl phthalate	102	(10-152)
bis(2-Chloroethyl)ether	82	(29-103)
bis(2-Chloroethoxy)methane	87	(29-130)
bis(2-Chloroisopropyl)ether	70	(19-150)
bis(2-Ethylhexyl)phthalate	103	(12-145)
4-Bromophenyl phenyl ether	88	(32-128)
2-Chloronaphthalene	82	(27-125)
4-Chlorophenyl phenyl ether	87	(33-131)
Chrysene	93	(20-138)
Dibenzo(a,h)anthracene	52	(18-116)
Di-n-butyl phthalate	94	(24-126)
1,2-Dichlorobenzene	72	(28-103)
1,3-Dichlorobenzene	68	(31-97)
1,4-Dichlorobenzene	71	(33-90)
3,3'-Dichlorobenzidine	79	(10-139)
Diethyl phthalate	84	(27-110)
Dimethyl phthalate	59	(10-101)
2,4-Dinitrotoluene	89	(37-124)
2,6-Dinitrotoluene	85	(23-130)
Di-n-octyl phthalate	140	(31-110)
Fluoranthene	97	(26-123)
Fluorene	89	(32-122)
Hexachlorobenzene	83	(34-129)
Hexachlorobutadiene	73	(31-109)
Hexachloroethane	63	(32-95)
Indeno(1,2,3-cd)pyrene	49	(13-127)
Isophorone	94	(19-133)
Naphthalene	79	(32-111)
Nitrobenzene	83	(34-114)
N-Nitrosodi-n-propylamine	84	(10-230)
Phenanthrene	85	(30-120)

MATRIX SPIKE REPORT

QC BATCH: 5175008
LAB #: A5F220034-001 S
MATRIX: WATER

WO #: A55LQ
PREPARATION DATE: 6/24/95
DATE ANALYZED: 7/01/95

----- GC/MS Semi-Volatiles -----

COMPOUND	SPIKE PERCENT RECOVERY	Q/C LIMITS
Pyrene	95	(15-185)
1,2,4-Trichlorobenzene	75	(40-133)
4-Chloro-3-methylphenol	95	(21-120)
2-Chlorophenol	78	(10-134)
2,4-Dichlorophenol	88	(34-100)
2,4-Dimethylphenol	54	(11-78)
2,4-Dinitrophenol	9.5	(10-114)
4,6-Dinitro- 2-methylphenol	18	(10-181)
2-Nitrophenol	61	(19-107)
4-Nitrophenol	100	(10-144)
Pentachlorophenol	75	(10-122)
Phenol	81	(10-107)
2,4,6-Trichlorophenol	96	(18-118)



Environmental
Services

MATRIX SPIKE REPORT

QC BATCH: 5142064
LAB #: ASE190007-001 S
MATRIX: WATER

WO #: A4LM1
PREPARATION DATE: 5/21/95
DATE ANALYZED: 5/31/95

----- GC Semi-Volatiles -----

COMPOUND	SPIKE PERCENT RECOVERY	Q/C LIMITS
Aldrin	104	(54-120)
alpha-BHC	96	(37-134)
beta-BHC	87	(17-147)
delta-BHC	114	(19-140)
gamma-BHC (Lindane)	90	(48-135)
4,4'-DDD	114	(31-141)
4,4'-DDE	110	(30-145)
4,4'-DDT	116	(48-154)
Dieldrin	100	(54-143)
Endosulfan I	100	(45-153)
Endosulfan II	115	(10-202)
Endosulfan sulfate	115	(26-144)
Endrin	104	(64-142)
Heptachlor	102	(56-158)
Heptachlor epoxide	112	(50-140)

MATRIX SPIKE REPORT

QC BATCH: 5205116
LAB #: ASG110107-007 S
MATRIX: WATER

WO #: C05VP
PREPARATION DATE: 7/24/95
DATE ANALYZED: 7/25/95

----- Phenolics -----

COMPOUND	SPIKE PERCENT RECOVERY	SPIKE/DUP PERCENT RECOVERY	Q/C LIMITS	RPD	RPD LIMIT
Phenolics	64	59	(31-142)	8.0	(0-54)

Interlaboratory Chain of Custody

QUANTERRA CORPORATION
 4101 SHUFFLE DR., N.W.
 NORTH CANTON, OHIO 44720
 PHONE (216) 497-9396 FAX (216) 497-0772



CLIENT CODE _____
 QUOTE / SAR NUMBER _____
 Chain-of-Custody Record

69941

PROJ. NO.		PROJECT NAME/LOCATION				NO. OF CONTAINERS	PARAMETER				REMARKS
SAMPLERS: (Signature)		STATION LOCATION					VOC 624	PHENOLS	BVA 625	RESORB 608	
STA. NO.	DATE	TIME	COMP.	GRAB.	STATION LOCATION						
					CEI - PERRY PLANT						
					Cue S Mill						
	7/6/95	10:05		X	SEWITARY SEWER POND CENTER	2	X				
	7/6/95	10:20		X	" " " "	2	X				
	7/7/95	10:40		X	" " " "	2	X				
	7/7/95	10:55		X	" " " "	2	X				
	7/7/95	10:55	X		" " " "	5		X	X	X	
Relinquished by: (Signature)		Date / Time		Received by: (Signature)		Relinquished by: (Signature)		Date / Time		Received by: (Signature)	
Cue S Mill		7/7/95									
Relinquished by: (Signature)		Date / Time		Received by: (Signature)		Relinquished by: (Signature)		Date / Time		Received by: (Signature)	
Relinquished by: (Signature)		Date / Time		Received for Laboratory by: (Signature)		Date / Time		Remarks			
				Doris Werrin		7-7-95 200 #					