

**Document Control No. 4400-03-ACJH**

**Revision 1**

**APPENDICES C, D, AND E**

**REMEDIAL INVESTIGATION REPORT**

**ABC ONE-HOUR DRY CLEANERS  
JACKSONVILLE, NORTH CAROLINA**

**November 1992**

**REGION IV**

**Work Assignment No. 03-419E**

**U.S. EPA Contract No. 68-W9-0057**

10098574



**Roy F. Weston, Inc.  
1880-H Beaver Ridge Circle  
Norcross, Georgia 30071**

**WESTON W.O. No. 04400-003-021-0071-00**

**Document Control No. 4400-03-ACJH**

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Remedial Investigation Report  
ABC One-Hour Cleaners, Inc.  
Jacksonville, Onslow County, North Carolina  
Section: Appendix C  
Revision: 1  
Date: November 1992

**APPENDIX C**  
**CLP ANALYTICAL DATA**

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Remedial Investigation Report  
ABC One-Hour Cleaners, Inc.  
Jacksonville, Onslow County, North Carolina  
Section: Appendix C  
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## **SUBSURFACE SOILS**

### **VOLATILES**

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Remedial Investigation Report  
ABC One-Hour Cleaners, Inc.  
Jacksonville, Onslow County, North Carolina  
Section: Appendix C  
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**SEPTIC TANK**  
**VOLATILES**

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

07/10/91

PURGEABLE ORGANICS DATA REPORT  
\*\*\*  
\*\*  
\*\* PROJECT NO. 91-775 SAMPLE NO. 59401 SAMPLE TYPE: WATER  
\*\* SOURCE: ABC ONE HOUR CLEANER  
\*\* STATION ID: ABC-SS-011-01  
\*\*\*  
\*\* PROG ELEM: SSF COLLECTED BY: CONLEY PHIFER  
\*\* CITY: JACKSONVIL ST: NC  
\*\* COLLECTION START: 06/29/91 1500 STOP: 00/00/00  
\*\*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\*  
\*\*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\*  
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UG/L ANALYTICAL RESULTS ANALYTICAL RESULTS

CONCENTRATION	ANALYTICAL RESULTS	CONCENTRATION	ANALYTICAL RESULTS
2000U	CHLOROMETHANE	2000U	CIS-1,3-DICHLOROPROPENE
4000	VINYL CHLORIDE	5000U	METHYL ISOBUTYL KETONE
2000U	BROMOMETHANE	2000U	TOLUENE
2000U	CHLOROETHANE	2000U	TRANS-1,3-DICHLOROPROPENE
2000U	TRICHLOROFLUOROMETHANE	2000U	1,1,2-TRICHLOROETHANE
2000U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)	6800	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
20000U	ACETONE	2000U	1,3-DICHLOROPROPANE
5000U	CARBON DISULFIDE	5000U	METHYL BUTYL KETONE
2000U	METHYLENE CHLORIDE	2000U	DIBROMOCHLOROMETHANE
2000U	TRANS-1,2-DICHLOROETHENE	2000U	CHLOROBENZENE
2000U	1,1-DICHLOROETHANE	2000U	1,1,1,2-TETRACHLOROETHANE
5000U	VINYL ACETATE	2000U	ETHYL BENZENE
6700	CIS-1,2-DICHLOROETHENE	2000U	(M- AND/OR P-)XYLENE
2000U	2,2-DICHLOROPROPANE	2000U	O-XYLENE
20000U	METHYL ETHYL KETONE	2000U	STYRENE
2000U	BROMOCHLOROMETHANE	2000U	BROMOFORM
2000U	CHLOROFORM	2000U	BROMOBENZENE
2000U	1,1,1-TRICHLOROETHANE	2000U	1,1,2,2-TETRACHLOROETHANE
2000U	1,1-DICHLOROPROPENE	2000U	1,2,3-TRICHLOROPROPANE
2000U	CARBON TETRACHLORIDE	2000U	O-CHLOROTOLUENE
2000U	1,2-DICHLOROETHANE	2000U	P-CHLOROTOLUENE
2000U	BENZENE	2000U	1,3-DICHLOROBENZENE
840J	TRICHLOROETHENE(TRICHLOROETHYLENE)	2000U	1,4-DICHLOROBENZENE
2000U	1,2-DICHLOROPROPANE	2000U	1,2-DICHLOROBENZENE
2000U	DIBROMOMETHANE		
2000U	BROMODICHLOROMETHANE		

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
\*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTIFICATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

07/09/91

PURGEABLE ORGANICS DATA REPORT  
 \*\*\* PROJECT NO. 91-775 SAMPLE NO. 59402 SAMPLE TYPE: WATER  
 \*\* SOURCE: ABC ONE HOUR CLEANER  
 \*\* STATION ID: ABC-SS-011-02

PROG ELEM: SSF COLLECTED BY: CONLEY PHIFER  
 CITY: JACKSONVIL SI: NC  
 COLLECTION START: 06/29/91 1510 STOP: 00/00/00

\*\*\* UG/L \*\*\* ANALYTICAL RESULTS \*\*\* ANALYTICAL RESULTS \*\*\*

100000 CHLOROMETHANE  
 79000J VINYL CHLORIDE  
 100000 BROMOMETHANE  
 100000 CHLOROETHANE  
 100000 TRICHLOROFLUOROMETHANE  
 100000 1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)  
 100000 ACETONE  
 250000 CARBON DISULFIDE  
 100000 METHYLENE CHLORIDE  
 100000 TRANS-1,2-DICHLOROETHENE  
 100000 1,1-DICHLOROETHANE  
 100000 VINYL ACETATE  
 250000 CIS-1,2-DICHLOROETHENE  
 63000 2,2-DICHLOROPROPANE  
 100000 METHYL ETHYL KETONE  
 100000 BROMOCHLOROMETHANE  
 100000 CHLOROFORM  
 100000 1,1,1-TRICHLOROETHANE  
 100000 1,1-DICHLOROPROPENE  
 100000 CARBON TETRACHLORIDE  
 100000 1,2-DICHLOROETHANE  
 100000 BENZENE  
 100000 TRICHLOROETHENE (TRICHLOROETHYLENE)  
 3400J 1,2-DICHLOROPROPANE  
 100000 DIBROMOMETHANE  
 100000 BROMODICHLOROMETHANE

100000 CIS-1,3-DICHLOROPROPENE  
 250000 METHYL ISOBUTYL KETONE  
 100000 TOLUENE  
 100000 TRANS-1,3-DICHLOROPROPENE  
 100000 1,1,2-TRICHLOROETHANE  
 100000 TETRACHLOROETHENE (TETRACHLOROETHYLENE)  
 230000J 1,3-DICHLOROPROPANE  
 100000 METHYL BUTYL KETONE  
 250000 DIBROMOCHLOROMETHANE  
 100000 CHLOROBENZENE  
 100000 1,1,1,2-TETRACHLOROETHANE  
 100000 ETHYL BENZENE  
 100000 (M- AND/OR P-)XYLENE  
 100000 O-XYLENE  
 100000 STYRENE  
 100000 BROMOFORM  
 100000 BROMOBENZENE  
 100000 1,1,2,2-TETRACHLOROETHANE  
 100000 1,2,3-TRICHLOROPROPANE  
 100000 O-CHLOROTOLUENE  
 100000 P-CHLOROTOLUENE  
 100000 1,3-DICHLOROBENZENE  
 100000 1,4-DICHLOROBENZENE  
 100000 1,2-DICHLOROBENZENE

\*\*\* FOOTNOTES \*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTIFICATION LIMIT.

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Remedial Investigation Report  
ABC One-Hour Cleaners, Inc.  
Jacksonville, Onslow County, North Carolina  
Section: Appendix C  
Revision: 1  
Date: November 1992

**SEPTIC TANK**  
**SEMI-VOLATILES**



SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

07/24/91

EXTRACTABLE ORGANICS DATA REPORT  
 \*\*\* PROJECT NO. 91-775 SAMPLE NO. 59401  
 \*\* SOURCE: ABC ONE HOUR CLEANER  
 \*\* STATION ID: ABC-SS-011-01

SAMPLE TYPE: WATER

PROG ELEM: SSF COLLECTED BY: CONLEY PHIFER  
 CITY: JACKSONVIL ST: NC  
 COLLECTION START: 06/29/91 1500 STOP: 00/00/00

ANALYTICAL RESULTS

UG/L

(3-AND/OR 4-)METHYLPHENOL  
 1 2,4-TRICHLOROBENZENE  
 2 2'-CHLOROISOPROPYLETHER  
 2 3,4,6-TRICHLOROPHENOL  
 2 4,5-TRICHLOROPHENOL  
 2 4,6-TRICHLOROPHENOL  
 2 4-DICHLOROPHENOL  
 2 4-DIMETHYLPHENOL  
 2 4-DINITROPHENOL  
 2 4-DINITROTOLUENE  
 2 6-DINITROTOLUENE  
 2 6-DICHLORONAPHTHALENE  
 2-CHLOROPHENOL  
 2-METHYL-4,6-DINITROPHENOL  
 2-METHYLNAPHTHALENE  
 2-METHYLPHENOL  
 2-NITROANILINE  
 2-NITROPHENOL  
 3,3'-DICHLOROBENZIDINE  
 3-NITROANILINE  
 4-BROMOPHENYL PHENYL ETHER  
 4-CHLORO-3-METHYLPHENOL  
 4-CHLOROPHENYL PHENYL ETHER  
 4-NITROANILINE  
 4-NITROPHENOL  
 ACENAPHTHENE  
 ACENAPHTHYLENE  
 ANTHRACENE  
 BENZO(A)ANTHRACENE  
 BENZO(B AND/OR K)FLUORANTHENE

BENZO(GHI)PERYLENE  
 BENZO-A-PYRENE  
 BENZYL BUTYL PHTHALATE  
 BIS(2-CHLOROETHOXY) METHANE  
 BIS(2-CHLOROETHYL) ETHER  
 BIS(2-ETHYLHEXYL) PHTHALATE  
 CARBAZOLE  
 CHRYSENE  
 DI-N-BUTYLPHTHALATE  
 DI-N-OCTYLPHTHALATE  
 DIBENZO(A,H)ANTHRACENE  
 DIBENZOFURAN  
 DIETHYL PHTHALATE  
 DIMETHYL PHTHALATE  
 FLUORANTHENE  
 FLUORENE  
 HEXACHLOROBENZENE (HCB)  
 HEXACHLOROBUTADIENE  
 HEXACHLOROCYCLOPENTADIENE (HCCP)  
 HEXACHLOROETHANE  
 INDENO (1,2,3-CD) PYRENE  
 ISOPHORONE  
 N-NITROSODI-N-PROPYLAMINE  
 N-NITROSODIPHENYLAMINE/DIPHENYLAMINE  
 NAPHTHALENE  
 NITROBENZENE  
 NITROCHLOROPHENOL  
 PENTACHLOROPHENOL  
 PHENANTHRENE  
 PHENOL  
 PYRENE

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*N1-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

07/24/91

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

\*\*\*  
\*\* PROJECT NO. 91-775      SAMPLE NO. 59401      SAMPLE TYPE: WATER      PROG ELEM: SSF      COLLECTED BY: CONLEY PHIFER      \*\*  
\*\* SOURCE: ABC ONE HOUR CLEANER      CITY: JACKSONVILLE      ST: NC      \*\*  
\*\* STATION ID: ABC-SS-011-01      COLLECTION START: 06/29/91 1500      STOP: 00/00/00      \*\*  
\*\*\*

ANALYTICAL RESULTS UG/L

30JN (METHOXYMETHYLETHOXY)PROPANOL (2 ISOMERS)  
8JN HEXADECANOIC ACID  
9JN OCTADECANOIC ACID  
6JN TRI(BUTOXYETHANOL)PHOSPHATE

\*\*\*FOOTNOTES\*\*\*  
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\*K-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
\*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTIFICATION LIMIT  
\*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

07/24/91

EXTRACTABLE ORGANICS DATA REPORT  
 \*\*\* \*\* \*\* \*\* \*\*  
 \*\* PROJECT NO. 91-775 SAMPLE NO. 59402  
 \*\* SOURCE: ABC ONE HOUR CLEANER  
 \*\* STATION ID: ABC-SS-011-02

\*\*\* \*\* \*\* \*\* \*\*  
 \*\* PROG ELEM: SSF COLLECTED BY: CONLEY PHIFER  
 \*\* CITY: JACKSONVIL  
 \*\* COLLECTION START: 06/29/91 1510 STOP: 00/00/00

\*\*\* \*\* \*\* \*\* \*\* ANALYTICAL RESULTS

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
1400	(3-AND/OR 4-METHYLPHENOL	2000	BENZO(GHI)PERYLENE
2000	1,2,4-TRICHLOROBENZENE	2000	BENZO-A-PYRENE
2000	2,4-DICHLOROPHENOL	2000	BENZYL BUTYL PHTHALATE
2000	2,3,4,6-TETRACHLOROPHENOL	2000	BIS(2-CHLOROETHOXY) METHANE
2000	2,4,5-TRICHLOROPHENOL	2000	BIS(2-CHLOROETHYL) ETHER
2000	2,4,6-TRICHLOROPHENOL	400	BIS(2-ETHYLHEXYL) PHTHALATE
2000	2,4-DICHLOROPHENOL	2000	CARBAZOLE
2000	2,4-DIMETHYLPHENOL	2000	CHRYSENE
4000	2,4-DINITROPHENOL	2000	DI-N-BUTYL PHTHALATE
2000	2,4-DINITROTOLUENE	2000	DI-N-OCTYL PHTHALATE
2000	2,6-DINITROTOLUENE	2000	DIBENZO(A,H)ANTHRACENE
2000	2-CHLORONAPHTHALENE	2000	DIBENZOFURAN
2000	2-CHLOROPHENOL	2000	DIETHYL PHTHALATE
4000	2-METHYL-4,6-DINITROPHENOL	2000	DIMETHYL PHTHALATE
2000	2-METHYLNAPHTHALENE	40J	FLUORANTHENE
2000	2-METHYLPHENOL	2000	FLUORENE
2000	2-NITROANILINE	2000	HEXACHLOROBENZENE (HCB)
2000	2-NITROPHENOL	2000	HEXACHLOROBUTADIENE
2000	3,3'-DICHLOROBENZIDINE	2000	HEXACHLOROCYCLOPENTADIENE (HCCP)
2000	4-BROMOPHENYL PHENYL ETHER	2000	HEXACHLOROETHANE
2000	4-CHLORO-3-METHYLPHENOL	2000	INDENO (1,2,3-CD) PYRENE
2000	4-CHLOROPHENYL PHENYL ETHER	2000	ISOPHORONE
4000	4-NITROANILINE	2000	N-NITROSODI-N-PROPYLAMINE
2000	4-NITROPHENOL	2000	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
2000	ACENAPHTHENE	120J	NAPHTHALENE
2000	ACENAPHTHYLENE	4000	NITROBENZENE
2000	ANTHRACENE	24J	PENTACHLOROPHENOL
2000	BENZO(A)ANTHRACENE	33J	PHENANTHRENE
2000	BENZO(B AND/OR K)FLUORANTHENE	2000	PHENOL
			PYRENE

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

07/24/91

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

\*\*\* PROJECT NO. 91-775 SAMPLE NO. 59402 SAMPLE TYPE: WATER  
 \*\*\* SOURCE: ABC ONE HOUR CLEANER  
 \*\*\* STATION ID: ABC-SS-011-02  
 \*\*\* PROG ELEM: SSF COLLECTED BY: CONLEY PHIFER  
 \*\*\* CITY: JACKSONVIL ST: NC  
 \*\*\* COLLECTION START: 06/29/91 1510 STOP: 00/00/00

ANALYTICAL RESULTS UG/L

- 1000JN (METHOXYMETHYLETHOXY)PROPANOL (2 ISOMERS)
- 100JN METHYLHEXADECANOIC ACID
- 40JN METHYLPROPYLBENZENE
- 100JN DIETHYLBENZENE
- 500JN ETHYLDIMETHYLBENZENE (5 ISOMERS)
- 200JN (ETHYLTHIO)ACETIC ACID
- 60JN DIETHYLMETHYLBENZENE (2 ISOMERS)
- 800JN OCTANOIC ACID
- 500JN (BUTOXYETHOXY)ETHANOL
- 300JN TRIMETHYLCYCLOHEXENE METHANOL
- 70JN TRIMETHYLCYCLOPENTENONE
- 1000JN PHENYLPROPANEDIOIC ACID
- 100JN NONANOIC ACID
- 300JN BENZENEPROPANOIC ACID
- 60JN DECANOIC ACID
- 90JN METHYLINDOLE
- 20JN DIHYDROINDOLONE
- 100JN HYDROXYBENZENEACETIC ACID
- 90JN DODECANOIC ACID
- 50JN HYDROXYBENZENEPROPANOIC ACID
- 300JN TETRADECANOIC ACID
- 100JN PENTADECANOIC ACID
- 100JN INDOLEACETIC ACID
- 50JN METHYLPHENANTHRENE
- 5000JN HEXADECANOIC ACID
- 80JN HEPTADECANOIC ACID
- 30JN DIMETHYLPHENANTHRENE
- 3000JN OCTADECANOIC ACID
- 2000J 4 UNIDENTIFIED COMPOUNDS

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
 \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

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Remedial Investigation Report  
ABC One-Hour Cleaners, Inc.  
Jacksonville, Onslow County, North Carolina  
Section: Appendix C  
Revision: 1  
Date: November 1992

**SEPTIC TANK**  
**PESTICIDES/PCBs**

SAMPLE AND ANALYSTS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

08/08/91

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 91-775 SAMPLE NO. 59401 SAMPLE TYPE: WATER  
SOURCE: ABC ONE HOUR CLEANER  
STATION ID: ABC-SS-011-01  
PROG ELEM: SSF COLLECTED BY: COMLEY PHIFER  
CITY: JACKSONVILLE ST: NC  
COLLECTION START: 06/29/91 1500 STOP: 00/00/00

ANALYTICAL RESULTS

ANALYTICAL RESULTS

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
0.10U	ALDRIN	1.5U	PCB-1232 (AROCLOR 1232)
0.12U	HEPTACHLOR	1.5U	PCB-1248 (AROCLOR 1248)
0.10U	HEPTACHLOR EPOXIDE	1.5U	PCB-1260 (AROCLOR 1260)
0.10U	ALPHA-BHC	10U	TOXAPHENE
0.10U	BETA-BHC	---	CHLORDIENE /2
0.10U	GAMMA-BHC (LINDANE)	---	ALPHA-CHLORDIENE /2
0.091	DELTA-BHC	---	BETA-CHLORDIENE /2
0.10U	ENDOSULFAN I (ALPHA)	---	GAMMA-CHLORDIENE /2
0.10U	DIELDRIN	---	GAMMA-CHLORDANE /2
0.40U	4,4'-DDY (P, P'-DDT)	---	TRANS-NONACHLOR /2
0.88	4,4'-DDE (P, P'-DDE)	---	ALPHA-CHLORDANE /2
0.92	4,4'-DDD (P, P'-DDD)	---	CIS-NONACHLOR /2
0.20U	ENDRIN	---	DYCHLORDANE (OCTACHLORPOXIDE) /2
0.20U	ENDOSULFAN II (BETA)	0.61U	METHOXYCHLOR
0.74U	ENDOSULFAN SULFATE	0.25U	ENDRIN KETONE
0.78U	CHLORDANE (TECH. MIXTURE) /1		
1.5U	PCB-1242 (AROCLOR 1242)		
1.5U	PCB-1254 (AROCLOR 1254)		
1.5U	PCB-1221 (AROCLOR 1221)		

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAJ-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT. C-CONFIRMED BY GC/MS  
 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS. 2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

SAMPLE AND ANALYSTS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

08/12/91

MISCELLANEOUS PEST/PCB COMPOUNDS - DATA REPORT

PROJECT NO. 91-775 SAMPLE NO. 59401 SAMPLE TYPE: WATER  
SOURCE: ABC ONE HOUR CLEANER STATION ID: ABC-55-011-01  
PROB ELEM: SSF COLLECTED BY: COMLEY PHIFER  
CITY: JACKSONVIL ST: NC  
COLLECTION START: 06/28/91 1500 STOP: 00/00/00

ANALYTICAL RESULTS UG/L

.065J O P DDE  
0.33 O P DDD

\*\*\*FOOTNOTES\*\*\*

- \*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
- \*K-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
- \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
- \*R-OC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
- \*J-ESTIMATED VALUE
- \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
- \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
- \*M-INTERFERENCES
- \*O-P DDE
- \*O-P DDD

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

08/08/91

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 91-775 SAMPLE NO. 59402 SAMPLE TYPE: WATER  
SOURCE: ABC ONE HOUR CLEANER  
STATION ID: ABC-SS-011-02  
PROG. ELFN: SSF COLLECTED BY: COMLEY PHIFER  
CITY: JACKSONVILLE ST: NC  
COLLECTION START: 06/29/91 1510 STOP: 00/00/00

ANALYTICAL RESULTS

ANALYTICAL RESULTS

UG/L

ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
ALDRIN	0.20U	PCB-1232 (AROCOR 1232)
HEPTACHLOR EPOXIDE	0.83U	PCB-1248 (AROCOR 1248)
ALPHA-BHC	0.20U	PCB-1260 (AROCOR 1260)
BETA-BHC	0.50U	PCB-1016 (AROCOR 1016)
GAMMA-BHC (LINDANE)	0.20U	TOXAPHENE
DELTA-BHC	0.75U	CHLORDANE /2
ENDOSULFAN I (ALPHA)	0.34U	ALPHA-CHLORDANE /2
DIELDRIN	0.20U	BETA-CHLORDANE /2
4,4'-DDE (P,P'-DDE)	0.76U	GAMMA-CHLORDANE /2
4,4'-DDD (P,P'-DDD)	5.2	TRANS-NONACHLOR /2
4,4'	4.4	ALPHA-CHLORDANE /2
ENDRIN	0.20U	CIS-NONACHLOR /2
ENDOSULFAN II (BETA)	0.20U	OXYCHLORDANE (OCTACHLOROPOXIDE) /2
ENDOSULFAN SULFATE	5.5U	METHOXYCHLOR
CHLORDANE (TECH. MIXTURE) /1	2.4U	ENDRIN KETONE
PCB-1242 (AROCOR 1242)	2.5U	
PCB-1254 (AROCOR 1254)	2.5U	
PCB-1221 (AROCOR 1221)	2.5U	

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

- \*A-AVERAGE VALUE
- \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
- \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
- \*NA-NOT ANALYZED
- \*NAI-INTERFERENCES
- \*J-ESTIMATED VALUE
- \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
- \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
- \*C-CONFIRMED BY GC/MS

1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS. 2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.



SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

08/12/91

MISCELLANEOUS PEST/PCB COMPOUNDS - DATA REPORT

PROJECT NO. 91-775 SAMPLE NO. 59402 SAMPLE TYPE: WATER  
SOURCE: ABC ONE HOUR CLEANER  
STATION ID: ABC-SS-011-02  
PROG ELEM: SSF COLLECTED BY: COMLEY PHIFER  
CITY: JACKSONVIL ST: NC  
COLLECTION START: 06/29/91 1510 STOP: 00/00/00

ANALYTICAL RESULTS UG/L

.65 0 P 00E  
2.3M 0 P 00D

\*\*\*FOOTNOTES\*\*\*  
\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*N1-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
\*B-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT  
\*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

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Remedial Investigation Report  
ABC One-Hour Cleaners, Inc.  
Jacksonville, Onslow County, North Carolina  
Section: Appendix C  
Revision: 1  
Date: November 1992

## SEPTIC TANK

### METALS

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
 EPA-REGION IV ESD, ATHENS, GA.

07/18/91

METALS DATA REPORT  
 \*\*\* PROJECT NO. 91-775 SAMPLE NO. 59401 SAMPLE TYPE: WATER  
 \*\*\* SOURCE: ABC ONE HOUR CLEANER  
 \*\*\* STATION ID: ABC-SS-011-01  
 \*\*\* ANALYTICAL RESULTS

PROG ELEM: SSF COLLECTED BY: CONLEY PHIFER  
 CITY: JACKSONVIL ST: NC  
 COLLECTION START: 06/29/91 1500 STOP: 00/00/00

\*\*\* ANALYTICAL RESULTS \*\*\* ANALYTICAL RESULTS \*\*\*

UG/L	MG/L	ANALYTICAL RESULTS
100	62	SILVER
300	4.5	ARSENIC
NA	72	BORON
62	46	BARIUM
5.00	60	BERYLLIUM
5.00		CADMIUM
100		COBALT
18		CHROMIUM
81		COPPER
100		MOLYBDENUM
25		NICKEL
400		LEAD
300		ANTIMONY
400		SELENIUM
250		TIN
400		STRONTIUM
500		TELLURIUM
24		TITANIUM
1000		THALLIUM
100		VANADIUM
100		YTRIUM
660		ZINC
NA		ZIRCONIUM
0.30		MERCURY
1800		ALUMINIUM
200		MANGANESE

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
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 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
 \*NA-NOT ANALYZED  
 \*NAI-INTERFERENCES  
 \*J-ESTIMATED VALUE  
 \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
 EPA-REGION IV ESD, ATHENS, GA.

07/18/91

METALS DATA REPORT  
 \*\*\* PROJECT NO. 91-775 SAMPLE NO. 59402 SAMPLE TYPE: WATER  
 \*\*\* SOURCE: ABC ONE HOUR CLEANER  
 \*\*\* STATION ID: ABC-SS-011-02  
 \*\*\* ANALYTICAL RESULTS

PROG ELEM: SSF COLLECTED BY: CONLEY PHIFER  
 CITY: JACKSONVIL ST: NC  
 COLLECTION START: 06/29/91 1510 STOP: 00/00/00  
 \*\*\* ANALYTICAL RESULTS

UG/L ANALYTICAL RESULTS MG/L ANALYTICAL RESULTS

35 SILVER	180 CALCIUM
300 ARSENIC	49 MAGNESIUM
NA BORON	130 IRON
860 BARIUM	55 SODIUM
5.00 BERYLLIUM	8.7 POTASSIUM
76 CADMIUM	
41 COBALT	
360 CHROMIUM	
1900 COPPER	
24 MOLYBDENUM	
240 NICKEL	
680 LEAD	
140 ANTIMONY	
400 SELENIUM	
210 TIN	
940 STRONTIUM	
500 TELLURIUM	
460 TITANIUM	
1000 THALLIUM	
100 VANADIUM	
10 YTTRIUM	
12000 ZINC	
NA ZIRCONIUM	
0.30 MERCURY	
49000 ALUMINUM	
510 MANGANESE	

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
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PURGEABLE ORGANICS DATA REPORT  
 EPA-REGION IV ESD, ATHENS, GA  
 SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
 09/17/91

PROJECT NO. 91-758 SAMPLE NO. 59565 SAMPLE TYPE. SOIL  
 SOURCE. ABC ONE-HOUR CLEANER  
 STATION ID SS-001-01-6  
 COLLECTION START 06/26/91 1620 STOP 00/00/00  
 PROG ELEM SSF COLLECTED BY. W MORRIS  
 CITY. JACKSONVIL ST NC  
 D NO BK55  
 UG/KG UG/KG

ANALYTICAL RESULTS

57U CHLOROMETHANE  
 57U BROMOMETHANE  
 57U VINYL CHLORIDE  
 57U CHLOROETHANE  
 50U METHYLENE CHLORIDE  
 100U ACETONE  
 29U CARBON DISULFIDE  
 29U 1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)  
 29U 1,1-DICHLOROETHANE  
 95 1,2-DICHLOROETHENE (TOTAL)  
 29U CHLOROFORM  
 29U 1,2-DICHLOROETHANE  
 57U METHYL ETHYL KETONE  
 29U 1,1,1-TRICHLOROETHANE  
 29U CARBON TETRACHLORIDE  
 29U BROMODICHLOROMETHANE

ANALYTICAL RESULTS

29U 1,2-DICHLOROPROPANE  
 29U CIS-1,3-DICHLOROPROPENE  
 96 TRICHLOROETHENE (TRICHLOROETHYLENE)  
 29U DIBROMOCHLOROMETHANE  
 29U 1,1,2-TRICHLOROETHANE  
 29U BENZENE  
 29U TRANS-1,3-DICHLOROPROPENE  
 29U BROMOFORM  
 57U METHYL ISOBUTYL KETONE  
 57U TETRACHLOROETHENE (TETRACHLOROETHYLENE)  
 640 1,1,2,2-TETRACHLOROETHANE  
 29U TOLUENE  
 29U CHLOROBENZENE  
 29U ETHYL BENZENE  
 29U STYRENE  
 29U TOTAL XYLENES  
 13 PERCENT MOISTURE

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
 \*K-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED  
 \*R-OC INDICATES THAT DATA UNUSABLE COMPOUND MAY OR MAY NOT BE PRESENT  
 \*NA-NOT ANALYZED  
 \*NAI-INTERFERENCES  
 \*J-ESTIMATED VALUE  
 \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT  
 \*R-OC INDICATES THAT DATA UNUSABLE COMPOUND MAY OR MAY NOT BE PRESENT RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
 EPA-REGION IV ESD, ATHENS, GA.

09/17/91

PURGEABLE ORGANICS DATA REPORT  
 PROJECT NO. 91-758 SAMPLE NO. 59566 SAMPLE TYPE: SOIL  
 SOURCE: ABC ONE-HOUR CLEANER  
 STATION ID: SS-001-01-10

PROG ELEM: SSF COLLECTED BY: W MORRIS  
 CITY: JACKSONVIL ST: NC  
 COLLECTION START: 06/26/91 1638 STOP: 00/00/00

CASE NO.: 16691 SAS NO.: D. NO.: BK56  
 UG/KG ANALYTICAL RESULTS UG/KG ANALYTICAL RESULTS

CHLOROMETHANE  
 11U BROMOMETHANE  
 11U VINYL CHLORIDE  
 11U CHLOROETHANE  
 6U METHYLENE CHLORIDE  
 6U ACETONE  
 6U CARBON DISULFIDE  
 6U 1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)  
 6U 1,1-DICHLOROETHANE  
 6U 1,2-DICHLOROETHENE (TOTAL)  
 6U CHLOROFORM  
 6U 1,2-DICHLOROETHANE  
 11U METHYL ETHYL KETONE  
 6U 1,1,1-TRICHLOROETHANE  
 6U CARBON TETRACHLORIDE  
 6U BROMODICHLOROMETHANE

1,2-DICHLOROPROPANE  
 6U CIS-1,3-DICHLOROPROPENE  
 2J TRICHLOROETHENE(TRICHLOROETHYLENE)  
 6U DIBROMOCHLOROMETHANE  
 6U 1,1,2-TRICHLOROETHANE  
 6U BENZENE  
 6U TRANS-1,3-DICHLOROPROPENE  
 6U BROMOFORM  
 11U METHYL ISOBUTYL KETONE  
 11U METHYL BUTYL KETONE  
 37 TETRACHLOROETHENE(TETRACHLOROETHYLENE)  
 6U 1,1,2,2-TETRACHLOROETHANE  
 6U TOLUENE  
 6U CHLOROETHYLENE  
 6U ETHYL BENZENE  
 6U STYRENE  
 6U TOTAL XYLENES  
 11 PERCENT MOISTURE

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*NA-NOT ANALYZED \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

09/17/91

PURGEABLE ORGANICS DATA REPORT

\*\*\* PROJECT NO. 91-758 SAMPLE NO. 59567 SAMPLE TYPE: SOIL PROG ELEM: SSF COLLECTED BY: W MORRIS \*\*\*  
 \*\* SOURCE: ABC ONE-HOUR CLEANER STATION ID: SS-001-01-14 CITY: JACKSONVIL ST. NC \*\*  
 \*\* COLLECTION START: 06/26/91 1656 STOP: 00/00/00 \*\*

\*\*\* CASE NO.: 16691 SAS NO.: D. NO.: BK57 ANALYTICAL RESULTS \*\*\*  
 \*\* UG/KG \*\* UG/KG \*\* ANALYTICAL RESULTS \*\*

56U CHLOROMETHANE  
 56U BROMOMETHANE  
 56U VINYL CHLORIDE  
 28U CHLOROETHANE  
 28U METHYLENE CHLORIDE  
 1400J ACETONE  
 28U CARBON DISULFIDE  
 28U 1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)  
 28U 1,1-DICHLOROETHANE  
 28U 1,2-DICHLOROETHENE (TOTAL)  
 28U CHLOROFORM  
 28U 1,2-DICHLOROETHANE  
 56U METHYL ETHYL KETONE  
 28U 1,1,1-TRICHLOROETHANE  
 28U CARBON TETRACHLORIDE  
 28U BROMODICHLOROMETHANE

28U 1,2-DICHLOROPROPANE  
 28U CIS-1,3-DICHLOROPROPENE  
 16J TRICHLOROETHENE (TRICHLOROETHYLENE)  
 28U DIBROMOCHLOROMETHANE  
 28U 1,1,2-TRICHLOROETHANE  
 28U BENZENE  
 28U TRANS-1,3-DICHLOROPROPENE  
 28U BROMOFORM  
 56U METHYL ISOBUTYL KETONE  
 56U METHYL BUTYL KETONE  
 440 TETRACHLOROETHENE (TETRACHLOROETHYLENE)  
 28U 1,1,2,2-TETRACHLOROETHANE  
 28U TOLUENE  
 28U CHLOROETHYLENE  
 28U ETHYL BENZENE  
 28U STYRENE  
 28U TOTAL XYLENES  
 10 PERCENT MOISTURE

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTIFICATION LIMIT  
 \*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA

09/17/91

PURGEABLE ORGANICS DATA REPORT

\*\*\* \*\* \* \* \* \* \*  
 \*\* PROJECT NO 91-758 SAMPLE NO 59571 SAMPLE TYPE SOIL  
 \*\* SOURCE ABC ONE-HOUR CLEANER  
 \*\* STATION ID SS-002-01-2  
 \*\*  
 \*\* CASE NO 16691 SAS NO  
 \*\* UG/KG  
 \*\* ANALYTICAL RESULTS  
 \*\* ANALYTICAL RESULTS  
 \*\* D NO BK61  
 \*\* UG/KG  
 \*\* ANALYTICAL RESULTS  
 \*\* COLLECTED BY W MORRIS  
 \*\* CITY JACKSONVIL ST NC  
 \*\* COLLECTION START 06/26/91 1746 STOP 00/00/00  
 \*\* \*\* \* \* \* \* \*

ANALYTICAL RESULTS	ANALYTICAL RESULTS	ANALYTICAL RESULTS
11U CHLOROMETHANE	5U 1,2-DICHLOROPROPANE	5U
11U BROMOMETHANE	5U CIS-1,3-DICHLOROPROPENE	5U
11U VINYL CHLORIDE	2J TRICHLOROETHENE (TRICHLOROETHYLENE)	5U
11U CHLOROETHANE	5U DIBROMOCHLOROMETHANE	5U
7U METHYLENE CHLORIDE	1,1,2-TRICHLOROETHANE	5U
230J ACETONE	5U BENZENE	5U
5U CARBON DISULFIDE	5U TRANS-1,3-DICHLOROPROPENE	5U
5U 1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	5U BROMOFORM	5U
5U 1,1-DICHLOROETHANE	11U METHYL ISOBUTYL KETONE	5U
5U 1,2-DICHLOROETHENE (TOTAL)	11U METHYL BUTYL KETONE	5U
5U CHLOROFORM	10 TETRACHLOROETHENE (TETRACHLOROETHYLENE)	5U
5U 1,2-DICHLOROETHANE	5U 1,1,2,2-TETRACHLOROETHANE	5U
11U METHYL ETHYL KETONE	2J TOLUENE	5U
5U 1,1,1-TRICHLOROETHANE	5U CHLOROBENZENE	5U
5U CARBON TETRACHLORIDE	5U ETHYL BENZENE	5U
5U BROMODICHLOROMETHANE	5U STYRENE	5U
	5U TOTAL XYLENES	5U
	5 PERCENT MOISTURE	5

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT  
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\*\*\* \*\* \*\* \*\* \*\*  
 \*\* PROJECT NO. 91-758 SAMPLE NO. 59568 SAMPLE TYPE: SOIL  
 \*\* SOURCE: ABC ONE-HOUR CLEANER  
 \*\* STATION ID: SS-002-01-6  
 \*\*  
 \*\* CASE NO.: 16691 SAS NO.:  
 \*\* UG/KG  
 \*\* ANALYTICAL RESULTS  
 \*\* ANALYTICAL RESULTS  
 \*\* D. NO.: BK58  
 \*\* UG/KG  
 \*\* ANALYTICAL RESULTS  
 \*\*  
 \*\* PROG ELEM: SSF COLLECTED BY: W MORRIS  
 \*\* CITY: JACKSONVIL ST: NC  
 \*\* COLLECTION START: 06/26/91 1802 STOP: 00/00/00  
 \*\*

CONCENTRATION	ANALYTICAL RESULTS	CONCENTRATION	ANALYTICAL RESULTS
15U	CHLOROMETHANE	8U	1,2-DICHLOROPROPANE
15U	BROMOMETHANE	8U	CIS-1,3-DICHLOROPROPENE
42	VINYL CHLORIDE	72	TRICHLOROETHENE (TRICHLOROETHYLENE)
15U	CHLOROETHANE	8U	DIBROMOCHLOROMETHANE
8U	METHYLENE CHLORIDE	8U	1,1,2-TRICHLOROETHANE
330J	ACETONE	8U	BENZENE
8U	CARBON DISULFIDE	8U	TRANS-1,3-DICHLOROPROPENE
8U	1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	8U	BROMOFORM
8U	1,1-DICHLOROETHANE	15U	METHYL ISOBUTYL KETONE
200	1,2-DICHLOROETHENE (TOTAL)	15U	METHYL BUTYL KETONE
8U	CHLOROFORM	19	TETRACHLOROETHENE (TETRACHLOROETHYLENE)
8U	1,2-DICHLOROETHANE	8U	1,1,2,2-TETRACHLOROETHANE
8U	METHYL ETHYL KETONE	8U	TOLUENE
15U	1,1,1-TRICHLOROETHANE	8U	CHLOROBENZENE
8U	CARBON TETRACHLORIDE	8U	ETHYL BENZENE
8U	BROMODICHLOROMETHANE	8U	STYRENE
		8U	TOTAL XYLENES
		18	PERCENT MOISTURE

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

09/17/91

PURGEABLE ORGANICS DATA REPORT

\*\*\* PROJECT NO. 91-758 SAMPLE NO. 59569 SAMPLE TYPE. SOIL \*\*\*  
 \*\*\* SOURCE. ABC ONE-HOUR CLEANER \*\*\*  
 \*\*\* STATION ID. SS-002-01-10 \*\*\*  
 \*\*\* CASE NO. 16691 \*\*\*  
 \*\*\* UG/KG \*\*\*

PROG ELEM. SSF COLLECTED BY: W MORRIS  
 CITY. JACKSONVIL ST. NC  
 COLLECTION START 06/26/91 1832 STOP. 00/00/00

\*\*\* ANALYTICAL RESULTS \*\*\*  
 \*\*\* ANALYTICAL RESULTS \*\*\*  
 \*\*\* ANALYTICAL RESULTS \*\*\*

CONCENTRATION	ANALYTICAL RESULTS	CONCENTRATION	ANALYTICAL RESULTS
60U	CHLOROMETHANE	30U	1,2-DICHLOROPROPANE
60U	BROMOMETHANE	30U	CIS-1 3-DICHLOROPROPENE
55J	VINYL CHLORIDE	110	TRICHLOROETHENE (TRICHLOROETHYLENE)
60U	CHLOROETHANE	30U	DIBROMOCHLOROMETHANE
40U	METHYLENE CHLORIDE	30U	1,1,2-TRICHLOROETHANE
510	ACETONE	30U	BENZENE
30U	CARRON DISULFIDE	30U	TRANS-1 3-DICHLOROPROPENE
30U	1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	30U	BROMOFORM
30U	1,1-DICHLOROETHANE	60U	METHYL ISOBUTYL KETONE
730	1,2-DICHLOROETHENE (TOTAL)	60U	METHYL BUTYL KETONE
30U	CHLOROFORM	27J	TETRACHLOROETHENE (TETRACHLOROETHYLENE)
30U	1,2-DICHLOROETHANE	30U	1 1 2 2-TETRACHLOROETHANE
30U	METHYL ETHYL KETONE	14J	TOLUENE
30U	1,1 1-TRICHLOROETHANE	30U	CHLOROBENZENE
30U	CARBON TETRACHLORIDE	30U	ETHYL BENZENE
30U	BROMODICHLOROMETHANE	30U	STYRENE
		30U	TOTAL XYLENES
		17	PERCENT MOISTURE

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
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 \*K-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT  
 \*R-QC INDICATES THAT DATA UNUSABLE COMPOUND MAY OR MAY NOT BE PRESENT RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION

PURGEABLE ORGANICS DATA REPORT  
 EPA-REGION IV ESD, ATHENS, GA.

09/17/91

\*\*\*  
 \*\* PROJECT NO. 91-758 SAMPLE NO. 59570 SAMPLE TYPE. SOIL  
 \*\* SOURCE ABC ONE-HOUR CLEANER  
 \*\* STATION ID SS-002-01-14  
 \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\*  
 \*\* CASE NO 16691 SAS NO  
 \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\*  
 \*\* UG/KG ANALYTICAL RESULTS ANALYTICAL RESULTS  
 \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\*

ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS	UG/KG
CHLOROMETHANE	1500U	1,2-DICHLOROPROPANE	740U
BROMOMETHANE	1500U	CIS-1,3-DICHLOROPROPENE	740U
VINYL CHLORIDE	1500U	TRICHLOROETHENE (TRICHLOROETHYLENE)	740U
CHLOROETHANE	1500U	DIBROMOCHLOROMETHANE	740U
METHYLENE CHLORIDE	740U	1,1,2-TRICHLOROETHANE	740U
ACETONE	1600U	BENZENE	740U
CARBON DISULFIDE	740U	TRANS-1,2-DICHLOROPROPENE	740U
1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	740U	BROMOFORM	740U
1-DICHLOROETHANE	740U	METHYL ISOBUTYL KETONE	1500UU
1,2-DICHLOROETHANE (TOTAL)	1800U	METHYL BUTYL KETONE	1500UU
CHLOROFORM	740U	TETRACHLOROETHENE (TETRACHLOROETHYLENE)	740U
1,2-DICHLOROETHANE	740U	1,1,2,2-TETRACHLOROETHANE	740U
METHYL ETHYL KETONE	1500U	TOLUENE	740U
1,1,1-TRICHLOROETHANE	740U	CHLOROBENZENE	740U
CARBON TETRACHLORIDE	740U	ETHYL BENZENE	740U
BROMODICHLOROMETHANE	740U	STYRENE	740U
		TOTAL XYLENES	740U
		PERCENT MOISTURE	15

\*\*\*REMARKS\*\*\*  
 \*\*\*REMARKS\*\*\*  
 \*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT  
 \*R-QC INDICATES THAT DATA UNUSABLE COMPOUND MAY OR MAY NOT BE PRESENT RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

09/17/91

PURGEABLE ORGANICS DATA REPORT

\*\*\* PROJECT NO. 91-758 SAMPLE NO. 59572 SAMPLE TYPE: SOIL  
 \*\*\* SOURCE: ABC ONE-HOUR CLEANER  
 \*\*\* STATION ID: SS-003-01-6  
 \*\*\* PROG ELEM: SSF COLLECTED BY: W MORRIS  
 \*\*\* CITY: JACKSONVIL ST: NC  
 \*\*\* COLLECTION START: 06/27/91 0920 STOP: 00/00/00

\*\*\* CASE NO.: 16691 SAS NO.: D. NO.: BK62  
 \*\*\* UG/KG ANALYTICAL RESULTS UG/KG ANALYTICAL RESULTS

ANALYTICAL RESULTS	ANALYTICAL RESULTS
12U CHLOROMETHANE	6U 1,2-DICHLOROPROPANE
12U BROMOMETHANE	6U CIS-1,3-DICHLOROPROPENE
12U VINYL CHLORIDE	6U TRICHLOROETHENE (TRICHLOROETHYLENE)
12U CHLOROETHANE	6U DIBROMOCHLOROMETHANE
6U METHYLENE CHLORIDE	6U 1,1,2-TRICHLOROETHANE
230J ACETONE	6U BENZENE
6U CARBON DISULFIDE	6U TRANS-1,3-DICHLOROPROPENE
6U 1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	6U BROMOFORM
6U 1,1-DICHLOROETHANE	12U METHYL ISOBUTYL KETONE
6U 1,2-DICHLOROETHENE (TOTAL)	12U METHYL BUTYL KETONE
6U CHLOROFORM	6U TETRACHLOROETHENE (TETRACHLOROETHYLENE)
6U 1,2-DICHLOROETHANE	6U 1,1,2,2-TETRACHLOROETHANE
12U METHYL ETHYL KETONE	6U TOLUENE
6U 1,1,1-TRICHLOROETHANE	6U CHLOROBENZENE
6U CARBON TETRACHLORIDE	6U ETHYL BENZENE
6U BROMODICHLOROMETHANE	6U STYRENE
	6U TOTAL XYLENES
	18 PERCENT MOISTURE

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT  
 \*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

09/17/91

MISCELLANEOUS PURGEABLE ORGANICS - DATA REPORT

\*\*\*  
\*\* PROJECT NO. 91-758 SAMPLE NO. 59572 SAMPLE TYPE: SOIL  
\*\* SOURCE: ABC ONE-HOUR CLEANER  
\*\* STATION ID: SS-003-01-6 SAS NO.:  
\*\* CASE NO.: 16691  
\*\*\* \*\*

PROG ELEM: SSF COLLECTED BY: W MORRIS  
CITY: JACKSONVIL ST: NC  
COLLECTION START: 06/27/91 0920 STOP: 00/00/00  
D. NO.: BK62 MD NO.

ANALYTICAL RESULTS UG/KG

80J 5 UNIDENTIFIED COMPOUND

\*\*\*FOOTNOTES\*\*\*  
\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
\*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT  
\*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
 EPA-REGION IV ESD, ATHENS, GA.

09/17/91

PURGEABLE ORGANICS DATA REPORT

\*\*\* PROJECT NO. 91-758 SAMPLE NO. 59573 SAMPLE TYPE: SOIL  
 \*\* SOURCE: ABC ONE-HOUR CLEANER  
 \*\* STATION ID: SS-003-01-10  
 \*\*  
 \*\* CASE NO 16691 SAS NO D NO BK63  
 \*\* UG/KG ANALYTICAL RESULTS ANALYTICAL RESULTS  
 \*\*  
 \*\* PROG ELEM SSF COLLECTED BY: W MORRIS  
 \*\* CITY: JACKSONVIL ST. NC  
 \*\* COLLECTION START 06/27/91 0939 STOP. 00/00/00  
 \*\*

ANALYTICAL RESULTS

12U CHLOROMETHANE  
 12U BROMOMETHANE  
 12U VINYL CHLORIDE  
 12U CHLOROETHANE  
 6U METHYLENE CHLORIDE  
 90U ACETONE  
 6U CARBON DISULFIDE  
 6U 1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)  
 6U 1,1-DICHLOROETHANE  
 6U 1,2-DICHLOROETHENE (TOTAL)  
 6U CHLOROFORM  
 6U 1,2-DICHLOROETHANE  
 12U METHYL ETHYL KETONE  
 6U 1,1,1-TRICHLOROETHANE  
 6U CARBON TETRACHLORIDE  
 6U BROMODICHLOROMETHANE

ANALYTICAL RESULTS

6U 1,2-DICHLOROPROPANE  
 6U CIS-1,3-DICHLOROPROPENE  
 6U TRICHLOROETHENE (TRICHLOROETHYLENE)  
 6U DIBROMOCHLOROMETHANE  
 6U 1,1,2-TRICHLOROETHANE  
 6U BENZENE  
 6U TRANS-1,3-DICHLOROPROPENE  
 6U BROMOFORM  
 12U METHYL ISOBUTYL KETONE  
 12U METHYL BUTYL KETONE  
 6U TETRACHLOROETHENE (TETRACHLOROETHYLENE)  
 6U 1,1,2,2-TETRACHLOROETHANE  
 2J TOLUENE  
 6U CHLOROBENZENE  
 6U ETHYL BENZENE  
 6U STYRENE  
 6U TOTAL XYLENES  
 18 PERCENT MOISTURE

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT  
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

09/17/91

MISCELLANEOUS PURGEABLE ORGANICS - DATA REPORT

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***
** PROJECT NO 91-758      SAMPLE NO 59573      SAMPLE TYPE: SOIL
** SOURCE ABC ONE-HOUR CLEANER
** STATION ID SS-003-01-10      SAS NO.
** CASE NO . 16691
**
**
**          ***
**          *N-AVERAGE VALUE
**          *K-ACTUAL VALUE
**          *U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED.
**          *R-QC INDICATES THAT DATA UNUSABLE
**
**          ***
**          *NA-NOT ANALYZED
**          *K-ACTUAL VALUE
**          *U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED.
**          *R-QC INDICATES THAT DATA UNUSABLE
**
**          ***
**          *J-ESTIMATED VALUE
**          *K-ACTUAL VALUE
**          *U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED.
**          *R-QC INDICATES THAT DATA UNUSABLE
**
**          ***
**          *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
**          *K-ACTUAL VALUE
**          *U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED.
**          *R-QC INDICATES THAT DATA UNUSABLE
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ANALYTICAL RESULTS UG/KG

60J 2 UNIDENTIFIED COMPOUNDS

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***FOOTNOTES***
**A-AVERAGE VALUE
**K-ACTUAL VALUE
**U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED.
**R-QC INDICATES THAT DATA UNUSABLE
**NA-NOT ANALYZED
**K-ACTUAL VALUE
**U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED.
**R-QC INDICATES THAT DATA UNUSABLE
**J-ESTIMATED VALUE
**K-ACTUAL VALUE
**U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED.
**R-QC INDICATES THAT DATA UNUSABLE
**N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
**K-ACTUAL VALUE
**U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED.
**R-QC INDICATES THAT DATA UNUSABLE

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA

09/17/91

PURGEABLE ORGANICS DATA REPORT

\*\*\* PROJECT NO. 91-758 SAMPLE NO. 59574 SAMPLE TYPE: SOIL  
 \*\*\* SOURCE: ABC ONE-HOUR CLEANER  
 \*\*\* STATION ID: SS-003-01-14  
 \*\*\* CASE NO. 16691 SAS NO. BK64  
 \*\*\* UG/KG ANALYTICAL RESULTS UG/KG ANALYTICAL RESULTS  
 \*\*\* PROG. ELEM. SSF COLLECTED BY: W MORRIS  
 \*\*\* CITY: JACKSONVIL ST. NC  
 \*\*\* COLLECTION START 06/27/91 1004 STOP 00/00/00  
 \*\*\*

ANALYTICAL RESULTS

58U CHLOROMETHANE  
 8J BROMOMETHANE  
 58U VINYL CHLORIDE  
 58U CHLOROETHANE  
 200U METHYLENE CHLORIDE  
 100U ACETONE  
 29U CARBON DISULFIDE  
 29U 1,1-DICHLOROETHANE(1,1-DICHLOROETHYLENE)  
 29U 1,1-DICHLOROETHANE  
 29U 1,2-DICHLOROETHANE (TOTAL)  
 29U CHLOROFORM  
 29U 1,2-DICHLOROETHANE  
 58U METHYL ETHYL KETONE  
 29U 1,1-TRICHLOROETHANE  
 29U CARBON TETRACHLORIDE  
 29U BROMODICHLOROMETHANE

29U 1,2-DICHLOROPROPANE  
 29U CIS-1,3-DICHLOROPROPENE  
 29U TRICHLOROETHENE(TRICHLOROETHYLENE)  
 29U DIBROMOCHLOROMETHANE  
 29U 1,1,2-TRICHLOROETHANE  
 29U BENZENE  
 29U TRANS-1,3-DICHLOROPROPENE  
 29U BROMOFORM  
 58U METHYL ISOBUTYL KETONE  
 58U METHYL BUTYL KETONE  
 29U TETRACHLOROETHENE(TETRACHLOROETHYLENE)  
 29U 1,1,2,2-TETRACHLOROETHANE  
 29U TOLUENE  
 29U CHLOROBENZENE  
 29U ETHYL BENZENE  
 29U STYRENE  
 29U TOTAL XYLENES  
 14 PERCENT MOISTURE

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT  
 \*R-QC INDICATES THAT DATA UNUSABLE COMPOUND MAY OR MAY NOT BE PRESENT RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION



09/17/91

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

MISCELLANEOUS PURGEABLE ORGANICS - DATA REPORT

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*** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** **
** PROJECT NO. 91-758 SAMPLE NO. 59574 SAMPLE TYPE: SOIL          PROG ELEM: SSF          COLLECTED BY: W MORRIS          **
** SOURCE: ABC ONE-HOUR CLEANER                               CITY: JACKSONVIL       ST: NC           **
** STATION ID: SS-003-01-14                                COLLECTION START: 06/27/91 1004 STOP: 00/00/00          **
** CASE NO.: 16691                                         D. NO.: BK64          MD NO:              **
*** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** **

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ANALYTICAL RESULTS UG/KG

900J 10 UNIDENTIFIED COMPOUNDS

\*\*\*FOOTNOTES\*\*\*

- \*A-AVERAGE VALUE
- \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
- \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
- \*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION
- \*NA-NOT ANALYZED
- \*NAT-INTERFERENCES
- \*J-ESTIMATED VALUE
- \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
- \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

09/17/91

PURGEABLE ORGANICS DATA REPORT

\*\*\* PROJECT NO. 91-758 SAMPLE NO. 59575 SAMPLE TYPE: SOIL  
 \*\*\* SOURCE: ABC ONE-HOUR CLEANER  
 \*\*\* STATION ID: SS-004-01-12  
 \*\*\* CASE NO.: 16691  
 \*\*\* SAS NO.:  
 \*\*\* D. NO.: BK65  
 \*\*\* COLLECTED BY: W MORRIS  
 \*\*\* CITY: JACKSONVILLE  
 \*\*\* ST: NC  
 \*\*\* COLLECTION START: 06/27/91 1227 STOP: 00/00/00

ANALYTICAL RESULTS  
 UG/KG

ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS	UG/KG
CHLOROMETHANE	12U	1,2-DICHLOROPROPANE	6U
BROMOMETHANE	12U	CIS-1,3-DICHLOROPROPENE	6U
VINYL CHLORIDE	12U	TRICHLOROETHENE (TRICHLOROETHYLENE)	6U
CHLOROETHANE	12U	DIBROMOCHLOROMETHANE	6U
METHYLENE CHLORIDE	10U	1,1,2-TRICHLOROETHANE	6U
ACETONE	60U	BENZENE	6U
CARBON DISULFIDE	6U	TRANS-1,3-DICHLOROPROPENE	6U
1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	6U	BROMOFORM	6U
1,1-DICHLOROETHANE	6U	METHYL ISOBUTYL KETONE	12U
1,2-DICHLOROETHENE (TOTAL)	6U	METHYL BUTYL KETONE	12U
CHLOROFORM	6U	TETRACHLOROETHENE (TETRACHLOROETHYLENE)	6U
1,2-DICHLOROETHANE	6U	1,1,2,2-TETRACHLOROETHANE	6U
METHYL ETHYL KETONE	12U	TOLUENE	6U
1,1,1-TRICHLOROETHANE	6U	CHLOROETHYLENE	6U
CARBON TETRACHLORIDE	6U	ETHYL BENZENE	6U
BROMODICHLOROMETHANE	6U	STYRENE	6U
		TOTAL XYLENES	6U
		PERCENT MOISTURE	16

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
 \*K-ACTUAL VALUE WAS ANALYZED FOR BUT NOT DETECTED  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED  
 \*R-OC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.  
 \*NA-NOT ANALYZED  
 \*NAI-INTERFERENCES  
 \*J-ESTIMATED VALUE  
 \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*R-OC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

PURGEABLE ORGANICS DATA REPORT  
 \*\*\* PROJECT NO. 91-758 SAMPLE NO. 59576 SAMPLE TYPE: SOIL  
 \*\*\* SOURCE: ABC ONE-HOUR CLEANER  
 \*\*\* STATION ID: SS-004-01-16  
 \*\*\* CASE NO. 16691 SAS NO. BK66  
 \*\*\* UG/KG ANALYTICAL RESULTS ANALYTICAL RESULTS  
 \*\*\* D NO BK66  
 \*\*\* UG/KG ANALYTICAL RESULTS

ANALYTICAL RESULTS	ANALYTICAL RESULTS
12U CHLOROMETHANE	6U 1,2-DICHLOROPROPANE
12U BROMOMETHANE	6U CIS-1,3-DICHLOROPROPENE
12U VINYL CHLORIDE	6U TRICHLOROETHENE (TRICHLOROETHYLENE)
12U CHLOROETHANE	6U DIBROMOCHLOROMETHANE
8U METHYLENE CHLORIDE	6U 1,1,2-TRICHLOROETHANE
30U ACETONE	6U BENZENE
6U CARBON DISULFIDE	6U TRANS-1,3-DICHLOROPROPENE
6U 1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	6U BROMOFORM
6U 1,1-DICHLOROETHANE	12U METHYL ISOBUTYL KETONE
6U 1,2-DICHLOROETHENE (TOTAL)	12U METHYL BUTYL KETONE
6U CHLOROFORM	6U TETRACHLOROETHENE (TETRACHLOROETHYLENE)
6U 1,2-DICHLOROETHANE	6U 1,1,2,2-TETRACHLOROETHANE
12U METHYL ETHYL KETONE	2J TOLUENE
6U 1,1,1-TRICHLOROETHANE	6U CHLOROBENZENE
6U CARBON TETRACHLORIDE	6U ETHYL BENZENE
6U BROMODICHLOROMETHANE	6U STYRENE
	6U TOTAL XYLENES
	19 PERCENT MOISTURE

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED, THE NUMBER IS THE MINIMUM QUANTITATION LIMIT  
 \*R-QC INDICATES THAT DATA UNUSABLE COMPOUND MAY OR MAY NOT BE PRESENT RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

09/17/91

PURGEABLE ORGANICS DATA REPORT

\*\*\* \*\* \*\* \*\* \*\*  
 \*\* PROJECT NO. 91-758 SAMPLE NO. 59577 SAMPLE TYPE: SOIL  
 \*\* SOURCE: ABC ONE-HOUR CLEANER  
 \*\* STATION ID: SS-005-01-6  
 \*\*  
 \*\* CASE NO. 16691 SAS NO. BK67  
 \*\* UG/KG  
 \*\* ANALYTICAL RESULTS  
 \*\* ANALYTICAL RESULTS  
 \*\*  
 \*\* PROG ELEM: SSF COLLECTED BY: W MORRIS  
 \*\* CITY JACKSONVILLE ST. NC  
 \*\* COLLECTION START: 06/27/91 1723 STOP 00/00/00  
 \*\*

\*\*\* \*\* \*\* \*\* \*\*

CONCENTRATION	COMPOUND	UNIT
13U	CHLOROMETHANE	6U
13U	BROMOMETHANE	6U
13U	VINYL CHLORIDE	6U
13U	CHLOROETHANE	6U
10U	METHYLENE CHLORIDE	6U
340J	ACETONE	6U
6U	CARBON DISULFIDE	6U
6U	1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	6U
6U	1,1-DICHLOROETHANE	6U
6U	1,2-DICHLOROETHENE (TOTAL)	6U
6U	CHLOROFORM	6U
13U	1,2-DICHLOROETHANE	6U
6U	METHYL ETHYL KETONE	6U
6U	1,1,1-TRICHLOROETHANE	6U
6U	CARBON TETRACHLORIDE	6U
6U	BROMODICHLOROMETHANE	6U
6U	1,2-DICHLOROPROPANE	6U
6U	CIS-1,3-DICHLOROPROPENE	6U
6U	TRICHLOROETHENE (TRICHLOROETHYLENE)	6U
6U	DIBROMOCHLOROMETHANE	6U
6U	1,1,2-TRICHLOROETHANE	6U
6U	BENZENE	6U
6U	TRANS-1,3-DICHLOROPROPENE	6U
6U	BROMOFORM	6U
13U	METHYL ISOBUTYL KETONE	6U
13U	METHYL BUTYL KETONE	6U
3J	TETRACHLOROETHENE (TETRACHLOROETHYLENE)	6U
6U	1,1,2,2-TETRACHLOROETHANE	6U
9	TOLUENE	6U
6U	CHLOROBENZENE	6U
6U	ETHYL BENZENE	6U
6U	STYRENE	6U
6U	TOTAL XYLENES	6U
21	PERCENT MOISTURE	6U

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTIFICATION LIMIT  
 \*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA

09/17/91

MISCELLANEOUS PURGEABLE ORGANICS - DATA REPORT

\*\*\* PROJECT NO 91-758 SAMPLE NO 59577 SAMPLE TYPE SOIL  
 \*\* SOURCE ABC ONE-HOUR CLEANER  
 \*\* STATION ID SS-005-01-6 SAS NO  
 \*\* CASE NO 16691  
 \*\*  
 \*\*  
 \*\* PROG ELEM SSF COLLECTED BY W MORRIS  
 \*\* CITY JACKSONVIL ST NC  
 \*\* COLLECTION START 06/27/91 1723 STOP 00/00/00  
 \*\* D NO BK67 MD NO

ANALYTICAL RESULTS UG/KG

20J 1 UNIDENTIFIED COMPOUND

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT  
 \*R-QC INDICATES THAT DATA UNUSABLE COMPOUND MAY OR MAY NOT BE PRESENT RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

09/17/91

PURGEABLE ORGANICS DATA REPORT  
 \*\*\* PROJECT NO. 91-758 SAMPLE NO. 59578 SAMPLE TYPE: SOIL  
 \*\* SOURCE: ABC ONE-HOUR CLEANER  
 \*\* STATION ID: SS-005-01-12

PROG ELEM SSF COLLECTED BY: W MORRIS  
 CITY: JACKSONVIL ST: NC  
 COLLECTION START 06/27/91 1742 STOP 00/00/00

CASE NO 16691 SAS NO : D NO BK68  
 UG/KG ANALYTICAL RESULTS UG/KG ANALYTICAL RESULTS

ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS	UG/KG
13U CHLOROMETHANE	6U	1,2-DICHLOROPROPANE	6U
13U BROMOMETHANE	6U	CIS-1,3-DICHLOROPROPENE	6U
13U VINYL CHLORIDE	6U	TRICHLOROETHENE (TRICHLOROETHYLENE)	6U
13U CHLOROETHANE	6U	DIBROMOCHLOROMETHANE	6U
7100J METHYLENE CHLORIDE	6U	1,1,2-TRICHLOROETHANE	6U
14000J ACETONE	6U	BENZENE	6U
6U CARBON DISULFIDE	6U	TRANS-1,3-DICHLOROPROPENE	6U
6U 1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	6U	BROMOFORM	6U
6U 1,1-DICHLOROETHANE	13U	METHYL ISOBUTYL KETONE	13U
6U 1,2-DICHLOROETHENE (TOTAL)	13U	METHYL BUTYL KETONE	6U
6U CHLOROFORM	6U	TETRACHLOROETHENE (TETRACHLOROETHYLENE)	6U
6U 1,2-DICHLOROETHANE	6U	1,1,2,2-TETRACHLOROETHANE	6U
13U METHYL ETHYL KETONE	2J	TOLUENE	2J
1,1,1-TRICHLOROETHANE	6U	CHLOROETHYLENE	6U
CARBON TETRACHLORIDE	6U	ETHYL BENZENE	6U
BROMODICHLOROMETHANE	6U	STYRENE	6U
	21	TOTAL XYLENES	6U
		PERCENT MOISTURE	21

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT  
 \*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION

PURGEABLE ORGANICS DATA REPORT  
 EPA-REGION IV ESD, ATHENS, GA. 09/17/91

PROJECT NO. 91-758 SAMPLE NO. 59579 SAMPLE TYPE: SOIL  
 SOURCE: ABC ONE-HOUR CLEANER  
 STATION ID: SS-006-01-12  
 COLLECTION START: 06/27/91 1927 STOP: 00/00/00  
 CITY: JACKSONVILLE ST: NC  
 PROG ELEM: SSF COLLECTED BY: W MORRIS

CASE NO.: 16691 SAS NO.: D. NO.: BK69  
 ANALYTICAL RESULTS ANALYTICAL RESULTS  
 UG/KG UG/KG

ANALYTICAL RESULTS	ANALYTICAL RESULTS
12U CHLOROMETHANE	6U 1,2-DICHLOROPROPANE
12U BROMOMETHANE	6U CIS-1,3-DICHLOROPROPENE
12U VINYL CHLORIDE	6U TRICHLOROETHENE (TRICHLOROETHYLENE)
12U CHLOROETHANE	6U DIBROMOCHLOROMETHANE
10U METHYLENE CHLORIDE	6U 1,1,2-TRICHLOROETHANE
60U ACETONE	6U BENZENE
6U CARBON DISULFIDE	6U TRANS-1,3-DICHLOROPROPENE
6U 1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	6U BROMOFORM
6U 1,1-DICHLOROETHANE	12U METHYL ISOBUTYL KETONE
6U 1,2-DICHLOROETHENE (TOTAL)	12U METHYL BUTYL KETONE
6U CHLOROFORM	6U TETRACHLOROETHENE (TETRACHLOROETHYLENE)
6U 1,2-DICHLOROETHANE	6U 1,1,2,2-TETRACHLOROETHANE
12U METHYL ETHYL KETONE	7 TOLUENE
2J 1,1,1-TRICHLOROETHANE	6U CHLOROBENZENE
6U CARBON TETRACHLORIDE	6U ETHYL BENZENE
6U BROMODICHLOROMETHANE	6U STYRENE
	4J TOTAL XYLENES
	19 PERCENT MOISTURE

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
 \*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

09/17/91

PURGEABLE ORGANICS DATA REPORT

\*\*\* PROJECT NO. 91-758 SAMPLE NO. 59580 SAMPLE TYPE. SOIL  
 \*\*\* SOURCE. ABC ONE-HOUR CLEANER  
 \*\*\* STATION ID 55-006-01-14  
 \*\*\* PROG ELEM. SSF COLLECTED BY: W MORRIS  
 \*\*\* CITY. JACKSONWIL ST. NC  
 \*\*\* COLLECTION START. 06/27/91 1935 STOP 00/00/00

\*\*\* CASE NO . 16691 SAS NO D NO BK70  
 \*\*\* UG/KG ANALYTICAL RESULTS UG/KG ANALYTICAL RESULTS

13U CHLOROMETHANE  
 13U BROMOMETHANE  
 13U VINYL CHLORIDE  
 13U CHLOROETHANE  
 20U METHYLENE CHLORIDE  
 2600J ACETONE  
 7U CARBON DISULFIDE  
 7U 1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)  
 7U 1,1-DICHLOROETHANE  
 7U 1,2-DICHLOROETHENE ( TOTAL )  
 7U CHLOROFORM  
 7U 1,2-DICHLOROETHANE  
 13U METHYL ETHYL KETONE  
 7U 1,1,1-TRICHLOROETHANE  
 7U CARBON TETRACHLORIDE  
 7U BROMODICHLOROMETHANE

7U 1,2-DICHLOROPROPANE  
 7U CIS-1,3-DICHLOROPROPENE  
 7U TRICHLOROETHENE (TRICHLOROETHYLENE)  
 7U DIBROMOCHLOROMETHANE  
 7U 1,1,2-TRICHLOROETHANE  
 7U BENZENE  
 7U TRANS-1,3-DICHLOROPROPENE  
 7U BROMOFORM  
 2J METHYL ISOBUTYL KETONE  
 13U METHYL BUTYL KETONE  
 7U TETRACHLOROETHENE (TETRACHLOROETHYLENE)  
 7U 1,1,2,2-TETRACHLOROETHANE  
 22 TOLUENE  
 7U CHLOROBENZENE  
 7U ETHYL BENZENE  
 7U STYRENE  
 7U TOTAL XYLENES  
 24 PERCENT MOISTURE

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT  
 \*R-QC INDICATES THAT DATA UNUSABLE COMPOUND MAY OR MAY NOT BE PRESENT RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION



SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
 EPA-REGION IV ESD, ATHENS, GA.

09/17/91

MISCELLANEOUS PURGEABLE ORGANICS - DATA REPORT

\*\*\* PROJECT NO: 91-758  
 \*\*\* SOURCE: ABC ONE-HOUR CLEANER  
 \*\*\* STATION ID: 55-006-01-14  
 \*\*\* CASE NO.: 16691  
 \*\*\* SAS NO.:  
 \*\*\* SAMPLE NO. 59580 SAMPLE TYPE: SOIL  
 \*\*\* PROG ELEM: SSF COLLECTED BY: W MORRIS  
 \*\*\* CITY: JACKSONVIL ST: NC  
 \*\*\* COLLECTION START: 06/27/91 1935 STOP: 00/00/00  
 \*\*\* D. NO.: BK70 MD NO.:  
 \*\*\*

ANALYTICAL RESULTS UG/KG

70JN	CARENE
30JN	CINEOLE
700JN	TRIMETHYLBICYCLOHEPTANONE (2 ISOMERS)
700JN	TRIMETHYLBICYCLOHEPTANAL (2 ISOMERS)
20J	1 UNIDENTIFIED COMPOUND

\*\*\* FOOTNOTES \*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*K-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
 \*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

PURGEABLE ORGANICS DATA REPORT  
 \*\* PROJECT NO. 91-758 SAMPLE NO. 59581 SAMPLE TYPE: SOIL  
 \*\* SOURCE: ABC ONE-HOUR CLEANER  
 \*\* STATION ID: SS-007-01A-10

\*\* CASE NO.: 16691 SAS NO.: D. NO.: BK71  
 \*\* UG/KG ANALYTICAL RESULTS UG/KG ANALYTICAL RESULTS  
 \*\* \*\* \*\* \*\*

ANALYTICAL RESULTS	ANALYTICAL RESULTS
11U CHLOROMETHANE	6U 1,2-DICHLOROPROPANE
11U BROMOMETHANE	6U CIS-1,3-DICHLOROPROPENE
11U VINYL CHLORIDE	6U TRICHLOROETHENE (TRICHLOROETHYLENE)
11U CHLOROETHANE	6U DIBROMOCHLOROMETHANE
6U METHYLENE CHLORIDE	1,1,2-TRICHLOROETHANE
11U ACETONE	6U BENZENE
6U CARBON DISULFIDE	6U TRANS-1,3-DICHLOROPROPENE
6U 1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	6U BROMOFORM
6U 1,1-DICHLOROETHANE	11U METHYL ISOBUTYL KETONE
6U 1,2-DICHLOROETHANE (TOTAL)	11U METHYL BUTYL KETONE
6U CHLOROFORM	6U TETRACHLOROETHENE (TETRACHLOROETHYLENE)
6U 1,2-DICHLOROETHANE	6U 1,1,2,2-TETRACHLOROETHANE
11U METHYL ETHYL KETONE	6U TOLUENE
6U 1,1,1-TRICHLOROETHANE	6U CHLOROETHYLENE
6U CARBON TETRACHLORIDE	6U ETHYL BENZENE
6U BROMODICHLOROMETHANE	6U STYRENE
	6U TOTAL XYLENES
	13 PERCENT MOISTURE

\*\*\* REMARKS \*\*\*

\*\*\* REMARKS \*\*\*

\*\*\* FOOTNOTES \*\*\*

\*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT  
 \*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.



SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
 EPA-REGION IV ESD, ATHENS, GA

09/17/91

PURGEABLE ORGANICS DATA REPORT  
 \*\*\*  
 \*\* PROJECT NO 91-758 SAMPLE NO 59582 SAMPLE TYPE SOIL  
 \*\* SOURCE ABC ONE-HOUR CLEANER  
 \*\* STATION ID SS-007-01B-10

\*\*\*  
 \*\* PROG ELEM SSF COLLECTED BY W MORRIS  
 \*\* CITY JACKSONVIL ST NC  
 \*\* COLLECTION START 06/28/91 1219 STOP 00/00/00  
 \*\*

\*\*\* CASE NO 16691 SAS NO D NO Bk72  
 \*\* UG/KG ANALYTICAL RESULTS UG/KG ANALYTICAL RESULTS

12U	CHLOROMETHANE	6U	1,2-DICHLOROPROPANE
12U	BROMOMETHANE	6U	CIS-1,3-DICHLOROPROPENE
12U	VINYL CHLORIDE	6U	TRICHLOROETHENE (TRICHLOROETHYLENE)
12U	CHLOROETHANE	6U	DIBROMOCHLOROMETHANE
20U	METHYLENE CHLORIDE	1	1,2-TRICHLOROETHANE
50U	ACETONE	6U	BENZENE
6U	CARBON DISULFIDE	6U	TRANS-1,3-DICHLOROPROPENE
6U	1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	6U	BROMOFORM
6U	1,1-DICHLOROETHANE	12U	METHYL ISOBUTYL KETONE
6U	1,2-DICHLOROETHANE (TOTAL)	12U	METHYL BUTYL KETONE
6U	CHLOROFORM	6U	TETRACHLOROETHENE (TETRACHLOROETHYLENE)
6U	1,2-DICHLOROETHANE	6U	1,1,2-TETRACHLOROETHANE
12U	METHYL ETHYL KETONE	10	TOLUENE
6U	1,1,1-TRICHLOROETHANE	6U	CHLOROBENZENE
6U	CARBON TETRACHLORIDE	6U	ETHYL BENZENE
6U	BROMODICHLOROMETHANE	6U	STYRENE
		6U	TOTAL XYLENES
		20	PERCENT MOISTURE

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT  
 \*R-QC INDICATES THAT DATA UNUSABLE COMPOUND MAY OR MAY NOT BE PRESENT RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION



SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

09/17/91

PURGEABLE ORGANICS DATA REPORT  
\*\*\* PROJECT NO. 91-758 SAMPLE NO. 59583 SAMPLE TYPE. SOIL  
\*\* SOURCE: ABC ONE-HOUR CLEANER  
\*\* STATION ID 55-007-01-14

PROG ELEM. SSF COLLECTED BY W MORRIS  
CITY. JACKSONVIL ST NC  
COLLECTION START 06/28/91 1240 STOP 00/00/00

CASE NO 16691 SAS NO D NO Bk73  
UG/KG ANALYTICAL RESULTS UG/KG ANALYTICAL RESULTS

13U CHLOROMETHANE  
13U BROMOMETHANE  
13U VINYL CHLORIDE  
13U CHLOROETHANE  
20U METHYLENE CHLORIDE  
80U ACETONE  
6U CARBON DISULFIDE  
6U 1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)  
6U 1,1-DICHLOROETHANE  
6U 1,2-DICHLOROETHENE (TOTAL)  
6U CHLOROFORM  
6U 1,2-DICHLOROETHANE  
13U METHYL ETHYL KETONE  
6U 1,1,1-TRICHLOROETHANE  
6U CARBON TETRACHLORIDE  
6U BROMODICHLOROMETHANE

6U 1,2-DICHLOROPROPANE  
6U CIS-1,3-DICHLOROPROPENE  
6U TRICHLOROETHENE(TRICHLOROETHYLENE)  
6U DIBROMOCHLOROMETHANE  
6U 1,1,2-TRICHLOROETHANE  
6U BENZENE  
6U TRANS-1,3-DICHLOROPROPENE  
6U BROMOFORM  
13U METHYL ISOBUTYL KETONE  
13U METHYL BUTYL KETONE  
6U TETRACHLOROETHENE(TETRACHLOROETHYLENE)  
6U 1,1,2,2-TETRACHLOROETHANE  
5J TOLUENE  
5J CHLOROBENZENE  
6U ETHYL BENZENE  
6U STYRENE  
6U TOTAL XYLENES  
21 PERCENT MOISTURE

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
\*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT  
\*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
 EPA-REGION IV ESD, ATHENS, GA

09/17/91

MISCELLANEOUS PURGEABLE ORGANICS - DATA REPORT

\*\*\* PROJECT NO 91-758 SAMPLE NO 59583 SAMPLE TYPE SOIL  
 \*\*\* SOURCE ABC ONE-HOUR CLEANER  
 \*\*\* STATION ID SS-007-01-14 SAS NO  
 \*\*\* CASE NO 16691  
 \*\*\*  
 \*\*\* PROG ELEM SSF COLLECTED BY W MORRIS  
 \*\*\* CITY JACKSONVIL ST NC  
 \*\*\* COLLECTION START 06/28/91 1240 STOP 00/00/00  
 \*\*\* D NO BK73 MD NO  
 \*\*\*

ANALYTICAL RESULTS UG/KG

500J 2 UNIDENTIFIED COMPOUNDS

\*\*\*FOOTNOTES\*\*\*  
 \*\*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*NA-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*\*K-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*\*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT  
 \*\*R-QC INDICATES THAT DATA UNUSABLE COMPOUND MAY OR MAY NOT BE PRESENT RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION

PURGEABLE ORGANICS DATA REPORT  
 \*\*\* PROJECT NO. 91-775 SAMPLE NO. 59999 SAMPLE TYPE: SOIL  
 \*\*\* SOURCE: ABC ONE HOUR CLEANER  
 \*\*\* STATION ID: ABC-SS-009-01-06  
 \*\*\* PROG ELEM: SSF COLLECTED BY: CONLEY PHIFER  
 \*\*\* CITY: JACKSONVIL ST: NC  
 \*\*\* COLLECTION START: 06/29/91 0933 STOP: 00/00/00

UG/KG ANALYTICAL RESULTS ANALYTICAL RESULTS

UG/KG	ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS
46U	CHLOROMETHANE	46U	CIS-1,3-DICHLOROPROPENE
46U	VINYL CHLORIDE	110U	METHYL ISOBUTYL KETONE
46U	BROMOMETHANE	46U	TOLUENE
46U	CHLOROETHANE	46U	TRANS-1,3-DICHLOROPROPENE
46U	TRICHLOROFLUOROMETHANE	46U	1,1,2-TRICHLOROETHANE
46U	1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	46U	TETRACHLOROETHENE (TETRACHLOROETHYLENE)
460U	ACETONE	46U	1,3-DICHLOROPROPANE
110U	CARBON DISULFIDE	110U	METHYL BUTYL KETONE
46U	METHYLENE CHLORIDE	46U	DIBROMOCHLOROMETHANE
46U	TRANS-1,2-DICHLOROETHENE	46U	CHLOROBENZENE
46U	1,1-DICHLOROETHANE	46U	1,1,1,2-TETRACHLOROETHANE
110U	VINYL ACETATE	46U	ETHYL BENZENE
46U	CIS-1,2-DICHLOROETHENE	46U	(M- AND/OR P-)XYLENE
46U	2,2-DICHLOROPROPANE	46U	O-XYLENE
460U	METHYL ETHYL KETONE	46U	STYRENE
46U	BROMOCHLOROMETHANE	46U	BROMOFORM
46U	CHLOROFORM	46U	BROMOBENZENE
46U	1,1,1-TRICHLOROETHANE	46U	1,1,2,2-TETRACHLOROETHANE
46U	1,1-DICHLOROPROPENE	46U	1,2,3-TRICHLOROPROPANE
46U	CARBON TETRACHLORIDE	46U	O-CHLOROTOLUENE
46U	1,2-DICHLOROETHANE	46U	P-CHLOROTOLUENE
46U	BENZENE	46U	1,3-DICHLOROBENZENE
46U	TRICHLOROETHENE (TRICHLOROETHYLENE)	46U	1,4-DICHLOROBENZENE
46U	1,2-DICHLOROPROPANE	46U	1,2-DICHLOROBENZENE
46U	DIBROMOMETHANE		PERCENT MOISTURE
46U	BROMODICHLOROMETHANE		

\*\*\*REMARKS\*\*\*  
 DATA REPORTED ON WET WEIGHT BASIS

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.



PURGEABLE ORGANICS DATA REPORT  
 \*\*\* PROJECT NO 91-775 SAMPLE NO 59400 SAMPLE TYPE SOIL  
 \*\* SOURCE ABC ONE HOUR CLEANER  
 \*\* STATION ID ABC-SS-009-01-12  
 \*\* PROG ELEM SSF COLLECTED BY CONLEY PHIFER  
 \*\* CITY JACKSONVIL ST NC  
 \*\* COLLECTION START 06/29/91 0950 STOP 00/00/00  
 \*\*

\*\*\* UG/KG ANALYTICAL RESULTS \*\*\* ANALYTICAL RESULTS \*\*\*

UG/KG	ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS
42U	CHLOROMETHANE	42U	CIS-1,3-DICHLOROPROPENE
42U	VINYL CHLORIDE	100U	METHYL ISOBUTYL KETONE
42U	BROMOMETHANE	42U	TOLUENE
42U	CHLOROETHANE	42U	TRANS-1,3-DICHLOROPROPENE
42U	TRICHLOROFLUOROMETHANE	42U	1,1,2-TRICHLOROETHANE
42U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)	42U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
420U	ACETONE	42U	1,3-DICHLOROPROPANE
100U	CARBON DISULFIDE	100U	METHYL BUTYL KETONE
130U	METHYLENE CHLORIDE	42U	DIBROMOCHLOROMETHANE
42U	TRANS-1,2-DICHLOROETHENE	42U	CHLOROBENZENE
42U	1,1-DICHLOROETHANE	42U	1,1,1,2-TETRACHLOROETHANE
100U	VINYL ACETATE	42U	ETHYL BENZENE
42U	CIS-1,2-DICHLOROETHENE	42U	(M- AND/OR P-)XYLENE
42U	2,2-DICHLOROPROPANE	42U	O-XYLENE
42U	METHYL ETHYL KETONE	42U	STYRENE
420U	BROMOCHLOROMETHANE	42U	BROMOFORM
42U	CHLOROFORM	42U	BROMOBENZENE
42U	1,1,1-TRICHLOROETHANE	42U	1,1,2,2-TETRACHLOROETHANE
42U	1,1-DICHLOROPROPENE	42U	1,2,3-TRICHLOROPROPANE
42U	CARBON TETRACHLORIDE	42U	O-CHLOROTOLUENE
42U	1,2-DICHLOROETHANE	42U	P-CHLOROTOLUENE
42U	BENZENE	42U	1,3-DICHLOROBENZENE
42U	TRICHLOROETHENE(TRICHLOROETHYLENE)	42U	1,4-DICHLOROBENZENE
42U	1,2-DICHLOROPROPANE	42U	1,2-DICHLOROBENZENE
42U	DIBROMOMETHANE		PERCENT MOISTURE
42U	BROMODICHLOROMETHANE		

\*\*\*REMARKS\*\*\*  
 DATA REPORTED ON WET WEIGHT BASIS  
 \*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

07/18/91

PURGEABLE ORGANICS DATA REPORT  
 \*\* PROJECT NO. 91-775 SAMPLE NO. 59403 SAMPLE TYPE: SOIL  
 \*\* SOURCE: ABC ONE HOUR CLEANER  
 \*\* STATION ID: ABC-SS-010-01-04  
 \*\* PROG ELEM: SSF COLLECTED BY: CONLEY PHIFER  
 \*\* CITY: JACKSONVIL ST: NC  
 \*\* COLLECTION START: 06/30/91 0848 STOP: 00/00/00

ANALYTICAL RESULTS

UG/KG	ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS
100000	CHLOROMETHANE	100000	CIS-1,3-DICHLOROPROPENE
100000	VINYL CHLORIDE	250000	METHYL ISOBUTYL KETONE
100000	BROMOMETHANE	100000	TOLUENE
100000	CHLOROETHANE	100000	TRANS-1,3-DICHLOROPROPENE
100000	TRICHLOROFLUOROMETHANE	100000	1,1,2-TRICHLOROETHANE
100000	1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	21000	TETRACHLOROETHENE (TETRACHLOROETHYLENE)
1000000	ACETONE	100000	1,3-DICHLOROPROPANE
250000	CARBON DISULFIDE	250000	METHYL BUTYL KETONE
100000	METHYLENE CHLORIDE	100000	DIBROMOCHLOROMETHANE
100000	TRANS-1,2-DICHLOROETHENE	100000	CHLOROBENZENE
100000	1,1-DICHLOROETHANE	100000	1,1,1,2-TETRACHLOROETHANE
250000	VINYL ACETATE	100000	ETHYL BENZENE
100000	CIS-1,2-DICHLOROETHENE	100000	(M- AND/OR P-)XYLENE
100000	2,2-DICHLOROPROPANE	100000	O-XYLENE
1000000	METHYL ETHYL KETONE	100000	STYRENE
100000	BROMOCHLOROMETHANE	100000	BROMOFORM
100000	CHLOROFORM	100000	BROMOBENZENE
100000	1,1,1-TRICHLOROETHANE	100000	1,1,2-TRICHLOROETHANE
100000	1,1-DICHLOROPROPENE	100000	1,2,3-TRICHLOROPROPANE
100000	CARBON TETRACHLORIDE	100000	O-CHLOROTOLUENE
100000	1,2-DICHLOROETHANE	100000	P-CHLOROTOLUENE
100000	BENZENE	100000	1,3-DICHLOROBENZENE
100000	TRICHLOROETHENE (TRICHLOROETHYLENE)	100000	1,4-DICHLOROBENZENE
100000	1,2-DICHLOROPROPANE	100000	1,2-DICHLOROBENZENE
100000	DIBROMOMETHANE	100000	PERCENT MOISTURE
100000	BROMODICHLOROMETHANE		

\*\*\*REMARKS\*\*\*  
DATA REPORTED ON WET WEIGHT BASIS

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

07/25/91

PURGEABLE ORGANICS DATA REPORT

\*\*\* PROJECT NO. 91-775 SAMPLE NO. 59404 SAMPLE TYPE: SOIL  
\*\*\* SOURCE: ABC ONE HOUR CLEANER  
\*\*\* STATION ID: ABC-SS-010-01-10  
\*\*\* PROG ELEM: SSF COLLECTED BY: CONLEY PHIFER  
\*\*\* CITY: JACKSONVIL ST: NC  
\*\*\* COLLECTION START: 06/30/91 0913 STOP: 00/00/00

ANALYTICAL RESULTS

ANALYTICAL RESULTS

1600U CHLOROMETHANE  
1600U VINYL CHLORIDE  
1600U BROMOMETHANE  
1600U CHLOROETHANE  
1600U TRICHLOROFLUOROMETHANE  
1600U 1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)  
1600U ACETONE  
3900U CARBON DISULFIDE  
1600U METHYLENE CHLORIDE  
1600U TRANS-1,2-DICHLOROETHENE  
1600U 1,1-DICHLOROETHANE  
3900U VINYL ACETATE  
1600U CIS-1,2-DICHLOROETHENE  
1600U 2,2-DICHLOROPROPANE  
1600U METHYL ETHYL KETONE  
1600U BROMOCHLOROMETHANE  
1600U CHLOROFORM  
1600U 1,1,1-TRICHLOROETHANE  
1600U 1,1-DICHLOROPROPENE  
1600U CARBON TETRACHLORIDE  
1600U 1,2-DICHLOROETHANE  
1600U BENZENE  
1600U TRICHLOROETHENE (TRICHLOROETHYLENE)  
1600U 1,2-DICHLOROPROPANE  
1600U DIBROMOMETHANE  
1600U BROMODICHLOROMETHANE

1600U CIS-1,3-DICHLOROPROPENE  
3900U METHYL ISOBUTYL KETONE  
1600U TOLUENE  
1600U TRANS-1,3-DICHLOROPROPENE  
1600U 1,1,2-TRICHLOROETHANE  
210J TETRACHLOROETHENE (TETRACHLOROETHYLENE)  
1600U 1,3-DICHLOROPROPANE  
3900U METHYL BUTYL KETONE  
1600U DIBROMOCHLOROMETHANE  
1600U CHLOROBENZENE  
1600U 1,1,1,2-TETRACHLOROETHANE  
1600U ETHYL BENZENE  
1600U (M- AND/OR P-)XYLENE  
1600U O-XYLENE  
1600U STYRENE  
1600U BROMOFORM  
1600U BROMOBENZENE  
1600U 1,1,2,2-TETRACHLOROETHANE  
1600U 1,2,3-TRICHLOROPROPANE  
1600U O-CHLOROTOLUENE  
1600U P-CHLOROTOLUENE  
1600U 1,3-DICHLOROBENZENE  
1600U 1,4-DICHLOROBENZENE  
1600U 1,2-DICHLOROBENZENE  
na PERCENT MOISTURE

\*\*\*REMARKS\*\*\*  
DATA REPORTED ON WET WEIGHT BASIS

\*\*\*REMARKS\*\*\*

\*\*\* FOOTNOTES \*\*\*  
\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
\*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

07/17/91

PURGEABLE ORGANICS DATA REPORT  
 \*\*\* PROJECT NO. 91-775 SAMPLE NO. 59405 SAMPLE TYPE: SOIL  
 \*\* SOURCE: ABC ONE HOUR CLEANER  
 \*\* STATION ID: ABC-SS-010-01-14  
 \*\* PROG ELEM: SSF COLLECTED BY: CONLEY PHIFER  
 \*\* CITY: JACKSONVIL ST: NC  
 \*\* COLLECTION START: 06/30/91 0932 STOP: 00/00/00

\*\*\* UG/KG ANALYTICAL RESULTS ANALYTICAL RESULTS

1700	CHLOROMETHANE	1700	CIS-1,3-DICHLOROPROPENE
1700	VINYL CHLORIDE	4200	METHYL ISOBUTYL KETONE
1700	BROMOMETHANE	1700	TOLUENE
1700	CHLOROETHANE	1700	TRANS-1,3-DICHLOROPROPENE
1700	TRICHLOROFLUOROMETHANE	1700	1,1,2-TRICHLOROETHANE
1700	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)	90J	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
1700U	ACETONE	1700	1,3-DICHLOROPROPANE
4200	CARBON DISULFIDE	4200	METHYL BUTYL KETONE
5100	METHYLENE CHLORIDE	1700	DIBROMOCHLOROMETHANE
1700	TRANS-1,2-DICHLOROETHENE	1700	CHLOROBENZENE
1700	1,1-DICHLOROETHANE	1700	1,1,1,2-TETRACHLOROETHANE
4200	VINYL ACETATE	1700	ETHYL BENZENE
1700	CIS-1,2-DICHLOROETHENE	1700	(M- AND/OR P-)XYLENE
1700	2,2-DICHLOROPROPANE	1700	O-XYLENE
1700U	METHYL ETHYL KETONE	1700	STYRENE
1700	BROMOCHLOROMETHANE	1700	BROMOFORM
1700	CHLOROFORM	1700	BROMOBENZENE
1700	1,1,1-TRICHLOROETHANE	1700	1,1,2,2-TETRACHLOROETHANE
1700	1,1-DICHLOROPROPENE	1700	1,2,3-TRICHLOROPROPANE
1700	CARBON TETRACHLORIDE	1700	O-CHLOROTOLUENE
1700	1,2-DICHLOROETHANE	1700	P-CHLOROTOLUENE
1700	BENZENE	1700	1,3-DICHLOROBENZENE
1700	TRICHLOROETHENE(TRICHLOROETHYLENE)	1700	1,4-DICHLOROBENZENE
1700	1,2-DICHLOROPROPANE	1700	1,2-DICHLOROBENZENE
1700	DIBROMOMETHANE	1700	PERCENT MOISTURE
1700	BROMODICHLOROMETHANE		

\*\*\*REMARKS\*\*\*  
 DATA REPORTED ON WET WEIGHT BASIS

\*\*\*REMARKS\*\*\*

\*\*\* FOOTNOTES \*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

07/19/91

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

MISCELLANEOUS PURGEABLE ORGANICS - DATA REPORT

\*\*\*  
\*\* PROJECT NO. 91-775 SAMPLE NO. 59405 SAMPLE TYPE: SOIL  
\*\* SOURCE: ABC ONE HOUR CLEANER  
\*\* STATION ID: ABC-SS-010-01-14  
\*\*\*  
\*\* PROG ELEM: SSF COLLECTED BY: CONLEY PHIFER  
\*\* CITY: JACKSONWIL ST: NC  
\*\* COLLECTION START: 06/30/91 0932 STOP: 00/00/00  
\*\*\*

ANALYTICAL RESULTS UG/KG

300JN ISOPROPANOL

\*\*\*REMARKS\*\*\*  
DATA REPORTED ON WET WEIGHT BASIS

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
\*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
\*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
\*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

\*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL KNOWN TO BE GREATER THAN VALUE GIVEN

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

07/17/91

PURGEABLE ORGANICS DATA REPORT  
 \*\*\* PROJECT NO. 91-775 SAMPLE NO. 59406 SAMPLE TYPE: SOIL  
 \*\* SOURCE: ABC ONE HOUR CLEANER  
 \*\* STATION ID: ABC-SS-012-01-4  
 \*\*\* ANALYTICAL RESULTS  
 UG/KG  
 \*\*\* ANALYTICAL RESULTS  
 UG/KG  
 \*\*\* ANALYTICAL RESULTS  
 UG/KG  
 \*\*\* ANALYTICAL RESULTS  
 UG/KG

PROG ELEM: SSF COLLECTED BY: CONLEY PHIFER  
 CITY: JACKSONVIL ST: NC  
 COLLECTION START: 06/30/91 1058 STOP: 00/00/00

ANALYTICAL RESULTS	ANALYTICAL RESULTS	ANALYTICAL RESULTS	ANALYTICAL RESULTS
38U CHLOROMETHANE	38U CIS-1,3-DICHLOROPROPENE	38U CHLOROMETHANE	38U CIS-1,3-DICHLOROPROPENE
38U VINYL CHLORIDE	96U METHYL ISOBUTYL KETONE	38U VINYL CHLORIDE	96U METHYL ISOBUTYL KETONE
38U BROMOMETHANE	12J TOLUENE	38U BROMOMETHANE	12J TOLUENE
38U CHLOROETHANE	38U TRANS-1,3-DICHLOROPROPENE	38U CHLOROETHANE	38U TRANS-1,3-DICHLOROPROPENE
38U TRICHLOROFLUOROMETHANE	38U 1,1,2-TRICHLOROETHANE	38U TRICHLOROFLUOROMETHANE	38U 1,1,2-TRICHLOROETHANE
38U 1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	38U TETRACHLOROETHENE (TETRACHLOROETHYLENE)	38U 1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	38U TETRACHLOROETHENE (TETRACHLOROETHYLENE)
270J ACETONE	38U 1,3-DICHLOROPROPANE	270J ACETONE	38U 1,3-DICHLOROPROPANE
96U CARBON DISULFIDE	96U METHYL BUTYL KETONE	96U CARBON DISULFIDE	96U METHYL BUTYL KETONE
120U METHYLENE CHLORIDE	38U DIBROMOCHLOROMETHANE	120U METHYLENE CHLORIDE	38U DIBROMOCHLOROMETHANE
38U TRANS-1,2-DICHLOROETHENE	38U CHLOROBENZENE	38U TRANS-1,2-DICHLOROETHENE	38U CHLOROBENZENE
38U 1,1-DICHLOROETHANE	38U 1,1,1,2-TETRACHLOROETHANE	38U 1,1-DICHLOROETHANE	38U 1,1,1,2-TETRACHLOROETHANE
96U VINYL ACETATE	38U ETHYL BENZENE	96U VINYL ACETATE	38U ETHYL BENZENE
38U CIS-1,2-DICHLOROETHENE	38U (M- AND/OR P-)XYLENE	38U CIS-1,2-DICHLOROETHENE	38U (M- AND/OR P-)XYLENE
38U 2,2-DICHLOROPROPANE	38U O-XYLENE	38U 2,2-DICHLOROPROPANE	38U O-XYLENE
38U METHYL ETHYL KETONE	38U STYRENE	38U METHYL ETHYL KETONE	38U STYRENE
38U BROMOCHLOROMETHANE	38U BROMOFORM	38U BROMOCHLOROMETHANE	38U BROMOFORM
38U 1,1-TRICHLOROETHANE	38U BROMOBENZENE	38U 1,1-TRICHLOROETHANE	38U BROMOBENZENE
38U 1,1-DICHLOROPROPENE	38U 1,1,2-TETRACHLOROETHANE	38U 1,1-DICHLOROPROPENE	38U 1,1,2-TETRACHLOROETHANE
38U CARBON TETRACHLORIDE	38U 1,2,3-TRICHLOROPROPANE	38U CARBON TETRACHLORIDE	38U 1,2,3-TRICHLOROPROPANE
38U 1,2-DICHLOROETHANE	38U O-CHLOROTOLUENE	38U 1,2-DICHLOROETHANE	38U O-CHLOROTOLUENE
38U BENZENE	38U P-CHLOROTOLUENE	38U BENZENE	38U P-CHLOROTOLUENE
38U TRICHLOROETHENE (TRICHLOROETHYLENE)	38U 1,3-DICHLOROBENZENE	38U TRICHLOROETHENE (TRICHLOROETHYLENE)	38U 1,3-DICHLOROBENZENE
38U 1,2-DICHLOROPROPANE	38U 1,4-DICHLOROBENZENE	38U 1,2-DICHLOROPROPANE	38U 1,4-DICHLOROBENZENE
38U DIBROMOMETHANE	38U 1,2-DICHLOROBENZENE	38U DIBROMOMETHANE	38U 1,2-DICHLOROBENZENE
38U BROMODICHLOROMETHANE	38U PERCENT MOISTURE	38U BROMODICHLOROMETHANE	38U PERCENT MOISTURE

\*\*\*REMARKS\*\*\*  
 DATA REPORTED ON WET WEIGHT BASIS  
 \*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

07/17/91

PURGEABLE ORGANICS DATA REPORT

\*\*\* PROJECT NO. 91-775 SAMPLE NO. 59407 SAMPLE TYPE: SOIL  
 \*\* SOURCE: ABC ONE HOUR CLEANER  
 \*\* STATION ID: ABC-SS-012-01A-8  
 \*\* PROG ELEM: SSF COLLECTED BY: CONLEY PHIFER  
 \*\* CITY: JACKSONVIL ST: NC  
 \*\* COLLECTION START: 06/30/91 1112 STOP: 00/00/00

UG/KG ANALYTICAL RESULTS

46U CHLOROMETHANE  
 46U VINYL CHLORIDE  
 46U BROMOMETHANE  
 46U CHLOROETHANE  
 46U TRICHLOROFLUOROMETHANE  
 46U 1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)  
 46U ACETONE  
 110U CARBON DISULFIDE  
 92U METHYLENE CHLORIDE  
 46U TRANS-1,2-DICHLOROETHENE  
 46U 1,1-DICHLOROETHANE  
 110U VINYL ACETATE  
 46U CIS-1,2-DICHLOROETHENE  
 46U 2,2-DICHLOROPROPANE  
 46U METHYL ETHYL KETONE  
 46U BROMOCHLOROMETHANE  
 46U CHLOROFORM  
 46U 1,1,1-TRICHLOROETHANE  
 46U 1,1-DICHLOROPROPENE  
 46U CARBON TETRACHLORIDE  
 46U 1,2-DICHLOROETHANE  
 46U BENZENE  
 46U TRICHLOROETHENE (TRICHLOROETHYLENE)  
 46U 1,2-DICHLOROPROPANE  
 46U DIBROMOMETHANE  
 46U BROMODICHLOROMETHANE

UG/KG ANALYTICAL RESULTS

46U CIS-1,3-DICHLOROPROPENE  
 110U METHYL ISOBUTYL KETONE  
 46U TOLUENE  
 46U TRANS-1,3-DICHLOROPROPENE  
 46U 1,1,2-TRICHLOROETHANE  
 46U TETRACHLOROETHENE (TETRACHLOROETHYLENE)  
 46U 1,3-DICHLOROPROPANE  
 110U METHYL BUTYL KETONE  
 46U DIBROMOCHLOROMETHANE  
 46U CHLOROBENZENE  
 46U 1,1,1,2-TETRACHLOROETHANE  
 46U ETHYL BENZENE  
 46U (M- AND/OR P-)XYLENE  
 46U O-XYLENE  
 46U STYRENE  
 46U BROMOFORM  
 46U BROMOBENZENE  
 46U 1,1,2,2-TETRACHLOROETHANE  
 46U 1,2,3-TRICHLOROPROPANE  
 46U O-CHLOROTOLUENE  
 46U P-CHLOROTOLUENE  
 46U 1,3-DICHLOROBENZENE  
 46U 1,4-DICHLOROBENZENE  
 46U 1,2-DICHLOROBENZENE  
 46U PERCENT MOISTURE

\*\*\*REMARKS\*\*\*  
 DATA REPORTED ON WET WEIGHT BASIS

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

PURGEABLE ORGANICS DATA REPORT  
 \*\*\* PROJECT NO. 91-775 SAMPLE NO. 59408 SAMPLE TYPE: SOIL  
 \*\* SOURCE: ABC ONE HOUR CLEANER  
 \*\* STATION ID: ABC-SS-012-01B-8  
 \*\*\* PROG ELEM: SSF COLLECTED BY: CONLEY PHIFER  
 \*\* CITY: JACKSONVILLE ST: NC  
 \*\* COLLECTION START: 06/30/91 1113 STOP: 00/00/00  
 \*\*\*

ANALYTICAL RESULTS

UG/KG	ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS
36U	CHLOROMETHANE	36U	CIS-1,3-DICHLOROPROPENE
36U	VINYL CHLORIDE	89U	METHYL ISOBUTYL KETONE
36U	BROMOMETHANE	11J	TOLUENE
36U	CHLOROETHANE	36U	TRANS-1,3-DICHLOROPROPENE
36U	TRICHLOROFLUOROMETHANE	36U	1,1,2-TRICHLOROETHANE
36U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)	36U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
360U	ACETONE	36U	1,3-DICHLOROPROPANE
89U	CARBON DISULFIDE	89U	METHYL BUTYL KETONE
110U	METHYLENE CHLORIDE	36U	DIBROMOCHLOROMETHANE
36U	TRANS-1,2-DICHLOROETHENE	36U	CHLOROBENZENE
36U	1,1-DICHLOROETHANE	36U	1,1,1,2-TETRACHLOROETHANE
89U	VINYL ACETATE	36U	ETHYL BENZENE
36U	CIS-1,2-DICHLOROETHENE	36U	(M- AND/OR P-)XYLENE
36U	2,2-DICHLOROPROPANE	36U	O-XYLENE
360U	METHYL ETHYL KETONE	36U	STYRENE
36U	BROMOCHLOROMETHANE	36U	BROMOFORM
36U	CHLOROFORM	36U	BROMOBENZENE
36U	1,1,1-TRICHLOROETHANE	36U	1,1,2,2-TETRACHLOROETHANE
36U	1,1-DICHLOROPROPENE	36U	1,2,3-TRICHLOROPROPANE
36U	CARBON TETRACHLORIDE	36U	O-CHLOROTOLUENE
36U	1,2-DICHLOROETHANE	36U	P-CHLOROTOLUENE
36U	BENZENE	36U	1,3-DICHLOROBENZENE
36U	TRICHLOROETHENE(TRICHLOROETHYLENE)	36U	1,4-DICHLOROBENZENE
36U	1,2-DICHLOROPROPANE	36U	1,2-DICHLOROBENZENE
36U	DIBROMOMETHANE	36U	PERCENT MOISTURE
36U	BROMODICHLOROMETHANE		

\*\*\*REMARKS\*\*\*  
 DATA REPORTED ON WET WEIGHT BASIS

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*N1-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.



SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

07/17/91

PURGEABLE ORGANICS DATA REPORT

\*\*\* PROJECT NO. 91-775 SAMPLE NO. 59409 SAMPLE TYPE: SOIL  
 \*\* SOURCE: ABC ONE HOUR CLEANER  
 \*\* STATION ID: ABC-SS-012-01-12  
 \*\*\* ANALYTICAL RESULTS  
 UG/KG

\*\*\* ANALYTICAL RESULTS  
 UG/KG  
 \*\*\* ANALYTICAL RESULTS  
 UG/KG

PROG ELEM: SSF COLLECTED BY: CONLEY PHIFER  
 CITY: JACKSONVIL ST: NC  
 COLLECTION START: 06/30/91 1130 STOP: 00/00/00

ANALYTICAL RESULTS	ANALYTICAL RESULTS
CHLOROMETHANE	CIS-1,3-DICHLOROPROPENE
VINYL CHLORIDE	METHYL ISOBUTYL KETONE
BROMOMETHANE	TOLUENE
CHLOROETHANE	TRANS-1,3-DICHLOROPROPENE
TRICHLOROFLUOROMETHANE	1,1,2-TRICHLOROETHANE
1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	TETRACHLOROETHENE (TETRACHLOROETHYLENE)
ACETONE	1,3-DICHLOROPROPANE
CARBON DISULFIDE	METHYL BUTYL KETONE
METHYLENE CHLORIDE	DIBROMOCHLOROMETHANE
TRANS-1,2-DICHLOROETHENE	CHLOROBENZENE
1,1-DICHLOROETHANE	1,1,1,2-TETRACHLOROETHANE
VINYL ACETATE	ETHYL BENZENE
CIS-1,2-DICHLOROETHENE	(M- AND/OR P-)XYLENE
2,2-DICHLOROPROPANE	O-XYLENE
METHYL ETHYL KETONE	STYRENE
BROMOCHLOROMETHANE	BROMOFORM
CHLOROFORM	BROMOBENZENE
1,1,1-TRICHLOROETHANE	1,1,2-TETRACHLOROETHANE
1,1-DICHLOROPROPENE	1,2,3-TRICHLOROPROPANE
CARBON TETRACHLORIDE	O-CHLOROTOLUENE
1,2-DICHLOROETHANE	P-CHLOROTOLUENE
BENZENE	1,3-DICHLOROBENZENE
TRICHLOROETHENE (TRICHLOROETHYLENE)	1,4-DICHLOROBENZENE
1,2-DICHLOROPROPANE	1,2-DICHLOROBENZENE
DIBROMOMETHANE	PERCENT MOISTURE
BROMODICHLOROMETHANE	

\*\*\*REMARKS\*\*\*  
 DATA REPORTED ON WET WEIGHT BASIS

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

PURGEABLE ORGANICS DATA REPORT  
 \*\*\* PROJECT NO. 91-775 SAMPLE NO. 59410 SAMPLE TYPE: SOIL  
 \*\*\* SOURCE: ABC ONE HOUR CLEANER  
 \*\*\* STATION ID: ABC-SS-012-01-16  
 \*\*\* PROG ELEM: SSF COLLECTED BY: COMLEY PHIFER  
 \*\*\* CITY: JACKSONVIL ST: NC  
 \*\*\* COLLECTION START: 06/30/91 1151 STOP: 00/00/00

\*\*\* UG/KG \*\*\* ANALYTICAL RESULTS \*\*\* UG/KG \*\*\* ANALYTICAL RESULTS \*\*\*

ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS	UG/KG
CHLOROMETHANE	33U	CIS-1,3-DICHLOROPROPENE	33U
VINYL CHLORIDE	33U	METHYL ISOBUTYL KETONE	83U
BROMOMETHANE	33U	TOLUENE	33U
CHLOROETHANE	33U	TRANS-1,3-DICHLOROPROPENE	33U
TRICHLOROFLUOROMETHANE	33U	1,1,2-TRICHLOROETHANE	33U
1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)	33U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)	33U
ACETONE	33U	1,3-DICHLOROPROPANE	33U
CARBON DISULFIDE	83U	METHYL BUTYL KETONE	83U
METHYLENE CHLORIDE	99U	DIBROMOCHLOROMETHANE	33U
TRANS-1,2-DICHLOROETHENE	33U	CHLOROBENZENE	33U
1,1-DICHLOROETHANE	33U	1,1,1,2-TETRACHLOROETHANE	33U
VINYL ACETATE	83U	ETHYL BENZENE	33U
CIS-1,2-DICHLOROETHENE	33U	(M- AND/OR P-)XYLENE	33U
2,2-DICHLOROPROPANE	33U	O-XYLENE	33U
METHYL ETHYL KETONE	33U	STYRENE	33U
BROMOCHLOROMETHANE	33U	BROMOFORM	33U
CHLOROFORM	33U	BROMOBENZENE	33U
1,1,1-TRICHLOROETHANE	33U	1,1,2,2-TETRACHLOROETHANE	33U
1,1-DICHLOROPROPENE	33U	1,2,3-TRICHLOROPROPANE	33U
CARBON TETRACHLORIDE	33U	O-CHLOROTOLUENE	33U
1,2-DICHLOROETHANE	33U	P-CHLOROTOLUENE	33U
BENZENE	33U	1,3-DICHLOROBENZENE	33U
TRICHLOROETHENE(TRICHLOROETHYLENE)	33U	1,4-DICHLOROBENZENE	33U
1,2-DICHLOROPROPANE	33U	1,2-DICHLOROBENZENE	33U
DIBROMOMETHANE	33U	PERCENT MOISTURE	33U
BROMODICHLOROMETHANE	33U		

\*\*\*REMARKS\*\*\*  
 DATA REPORTED ON WET WEIGHT BASIS

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

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Remedial Investigation Report  
ABC One-Hour Cleaners, Inc.  
Jacksonville, Onslow County, North Carolina  
Section: Appendix C  
Revision: 1  
Date: November 1992

**SEPTIC TANK**  
**CYANIDE**

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

07/24/91

SPECIFIED ANALYSIS DATA REPORT

\*\*\* \*\* \*\* \*\* \*\*  
\*\* PROJECT NO. 91-775    SAMPLE NO. 59401    SAMPLE TYPE: WATER    PROG ELEM: SSF    COLLECTED BY: CONLEY PHIFER    \*\*  
\*\* SOURCE: ABC ONE HOUR CLEANER    CITY: JACKSONVIL    ST: NC    \*\*  
\*\* STATION ID: ABC-SS-011-01    COLLECTION START: 06/29/91 1500    STOP: 00/00/00    \*\*  
\*\* \*\* \*\* \*\*

RESULTS    UNITS    PARAMETER  
          4U UG/L    CYANIDE

\*\*\*REMARKS\*\*\*

DATA SUSPECT BASED ON QC--USE FOR "SCREENING" ONLY!!

\*\*\*FOOTNOTES\*\*\*  
\*A-AVERAGE VALUE    \*NA-NOT ANALYZED    \*NAT-INTERFERENCES    \*J-ESTIMATED VALUE    \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN    \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
\*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

07/24/91

SPECIFIED ANALYSIS DATA REPORT

\*\*\* \*\* \*\* \*\* \*\*  
\*\* PROJECT NO. 91-775 SAMPLE NO. 59402 SAMPLE TYPE: WATER  
\*\* SOURCE: ABC ONE HOUR CLEANER  
\*\* STATION ID: ABC-SS-011-02  
\*\*\* \*\* \*\* \*\* \*\*  
\*\* PROG ELEM: SSF COLLECTED BY: CONLEY PHIFER  
\*\* CITY: JACKSONVIL ST: NC  
\*\* COLLECTION START: 06/29/91 1510 STOP: 00/00/00  
\*\*\* \*\* \*\* \*\*\*\*

RESULTS UNITS PARAMETER  
41 UG/L CYANIDE

\*\*\*REMARKS\*\*\*  
DATA SUSPECT BASED ON QC--USE FOR "SCREENING" ONLY!!  
\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*N1-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
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Remedial Investigation Report  
ABC One-Hour Cleaners, Inc.  
Jacksonville, Onslow County, North Carolina  
Section: Appendix C  
Revision: 1  
Date: November 1992

**SEPTIC TANK AND SUBSURFACE SOILS QA/QC**  
**VOLATILES**

PURGEABLE ORGANICS DATA REPORT  
 \*\*\* \*\* \*\* \*\* \*\*  
 PROJECT NO. 91-758 SAMPLE NO. 59584 SAMPLE TYPE:  
 SOURCE: JACKSONVIL  
 STATION ID: FB-000-01 COLLECTION START: 06/28/91 1700 STOP: 00/00/00  
 CASE NO.: 16691 SAS NO.: BK74  
 UG/L UG/L  
 ANALYTICAL RESULTS ANALYTICAL RESULTS

CONCENTRATION	ANALYTICAL RESULTS	CONCENTRATION	ANALYTICAL RESULTS
10U	CHLOROMETHANE	5U	1,2-DICHLOROPROPANE
10U	BROMOMETHANE	5U	CIS-1,3-DICHLOROPROPENE
10U	VINYL CHLORIDE	5U	TRICHLOROETHENE (TRICHLOROETHYLENE)
10U	CHLOROETHANE	5U	DIBROMOCHLOROMETHANE
5U	METHYLENE CHLORIDE	5U	1,1,2-TRICHLOROETHANE
20U	ACETONE	5U	BENZENE
5U	CARBON DISULFIDE	5U	TRANS-1,3-DICHLOROPROPENE
5U	1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	5U	BROMOFORM
5U	1,1-DICHLOROETHANE	10U	METHYL ISOBUTYL KETONE
5U	1,2-DICHLOROETHANE (TOTAL)	10U	METHYL BUTYL KETONE
5U	CHLOROFORM	5U	TETRACHLOROETHENE (TETRACHLOROETHYLENE)
5U	1,2-DICHLOROETHANE	5U	1,1,2,2-TETRACHLOROETHANE
10U	METHYL ETHYL KETONE	5U	TOLUENE
5U	1,1,1-TRICHLOROETHANE	5U	CHLOROBENZENE
5U	CARBON TETRACHLORIDE	5U	ETHYL BENZENE
5U	BROMODICHLOROMETHANE	5U	STYRENE
		5U	TOTAL XYLENES

\*\*\*REMARKS\*\*\*  
 \*\*\*REMARKS\*\*\*  
 \*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT  
 \*R-QC INDICATES THAT DATA UNUSABLE COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION  
 \*NA-NOT ANALYZED  
 \*NAI-INTERFERENCES  
 \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*J-ESTIMATED VALUE  
 \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*R-GC INDICATES THAT DATA UNUSABLE COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION

PURGEABLE ORGANICS DATA REPORT  
 \*\*\* PROJECT NO. 91-775 SAMPLE NO. 59398 SAMPLE TYPE: WATER  
 \*\* SOURCE: ABC ONE HOUR CLEANER  
 \*\* STATION ID: ABC-FB-000-02  
 \*\*\* ANALYTICAL RESULTS  
 UG/L

ANALYTICAL RESULTS		ANALYTICAL RESULTS	
UG/L		UG/L	
5.00	CHLOROMETHANE	5.00	CIS-1,3-DICHLOROPROPENE
5.00	VINYL CHLORIDE	120	METHYL ISOBUTYL KETONE
5.00	BROMOMETHANE	5.00	TOLUENE
5.00	CHLOROETHANE	5.00	TRANS-1,3-DICHLOROPROPENE
5.00	TRICHLOROFLUOROMETHANE	5.00	1,1,2-TRICHLOROETHANE
5.00	1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	5.00	TETRACHLOROETHENE (TETRACHLOROETHYLENE)
5.00	ACETONE	5.00	1,3-DICHLOROPROPANE
120	CARBON DISULFIDE	120	METHYL BUTYL KETONE
5.00	METHYLENE CHLORIDE	5.00	DIBROMOCHLOROMETHANE
5.00	TRANS-1,2-DICHLOROETHENE	5.00	CHLOROBENZENE
5.00	1,1-DICHLOROETHANE	5.00	1,1,1,2-TETRACHLOROETHANE
120	VINYL ACETATE	5.00	ETHYL BENZENE
5.00	CIS-1,2-DICHLOROETHENE	5.00	(M- AND/OR P-)XYLENE
5.00	2,2-DICHLOROPROPANE	5.00	O-XYLENE
5.00	METHYL ETHYL KETONE	5.00	STYRENE
5.00	BROMOCHLOROMETHANE	5.00	BROMOFORM
14	CHLOROFORM	5.00	BROMOBENZENE
5.00	1,1,1-TRICHLOROETHANE	5.00	1,1,2-TETRACHLOROETHANE
5.00	1,1-DICHLOROPROPENE	5.00	1,2,3-TRICHLOROPROPANE
5.00	CARBON TETRACHLORIDE	5.00	O-CHLOROTOLUENE
5.00	1,2-DICHLOROETHANE	5.00	P-CHLOROTOLUENE
5.00	BENZENE	5.00	1,3-DICHLOROBENZENE
5.00	TRICHLOROETHENE (TRICHLOROETHYLENE)	5.00	1,4-DICHLOROBENZENE
5.00	1,2-DICHLOROPROPANE	5.00	1,2-DICHLOROBENZENE
5.00	DIBROMOMETHANE		
10	BROMODICHLOROMETHANE		

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
 \*NA-NOT ANALYZED  
 \*NAI-INTERFERENCES  
 \*J-ESTIMATED VALUE  
 \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN



SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

09/17/91

PURGEABLE ORGANICS DATA REPORT

\*\*\* PROJECT NO. 91-758 SAMPLE NO. 59589 SAMPLE TYPE . RINSATE  
 \*\*\* SOURCE . ABC ONE-HOUR CLEANER  
 \*\*\* STATION ID RB-000-01  
 \*\*\* COLLECTION START 06/24/91 1705 STOP 00/00/00

\*\*\* CASE NO. 16691 SAS NO. D NO. BK75  
 \*\*\* ANALYTICAL RESULTS UG/L ANALYTICAL RESULTS UG/L

ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS	UG/L
100 CHLOROMETHANE	50	1-2-DICHLOROPROPANE	50
100 BROMOMETHANE	50	CIS-1,3-DICHLOROPROPENE	50
100 VINYL CHLORIDE	50	TRICHLOROETHENE (TRICHLOROETHYLENE)	50
100 CHLOROETHANE	50	DIBROMOCHLOROMETHANE	50
50 METHYLENE CHLORIDE	50	1,1,2-TRICHLOROETHANE	50
100 ACETONE	50	BENZENE	50
50 CARBON DISULFIDE	50	TRANS-1,3-DICHLOROPROPENE	50
50 1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	100	BROMOFORM	50
50 1,1-DICHLOROETHANE	100	METHYL ISOBUTYL KETONE	100
50 1,2-DICHLOROETHENE (TOTAL)	50	METHYL BUTYL KETONE	100
50 CHLOROFORM	50	TETRACHLOROETHENE (TETRACHLOROETHYLENE)	50
50 1,2-DICHLOROETHANE	50	1,1,2,2-TETRACHLOROETHANE	50
100 METHYL ETHYL KETONE	50	TOLUENE	50
50 1,1,1-TRICHLOROETHANE	50	CHLOROBENZENE	50
50 CARBON TETRACHLORIDE	50	ETHYL BENZENE	50
50 BROMODICHLOROMETHANE	50	STYRENE	50
		TOTAL XYLENES	50

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT  
 \*R-QC INDICATES THAT DATA UNUSABLE COMPOUND MAY OR MAY NOT BE PRESENT RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

07/17/91

PURGEABLE ORGANICS DATA REPORT  
 \*\*\* PROJECT NO. 91-775 SAMPLE NO. 59411 SAMPLE TYPE: TRIPBLANK  
 \*\* SOURCE: ABC ONE HOUR CLEANER  
 \*\* STATION ID: ABC-TB-000-01  
 \*\* PROG ELEM: SSF COLLECTED BY: CONLEY PHIFER  
 \*\* CITY: JACKSONVIL ST: NC  
 \*\* COLLECTION START: 07/02/91 1200 STOP: 00/00/00  
 \*\*

\*\*\* UG/L \*\*\* ANALYTICAL RESULTS \*\*\* UG/L \*\*\* ANALYTICAL RESULTS \*\*\*

5.00	CHLOROMETHANE	5.00	CIS-1,3-DICHLOROPROPENE
5.00	VINYL CHLORIDE	120	METHYL ISOBUTYL KETONE
5.00	BROMOMETHANE	5.00	TOLUENE
5.00	CHLOROETHANE	5.00	TRANS-1,3-DICHLOROPROPENE
5.00	TRICHLOROFLUOROMETHANE	5.00	1,1,2-TRICHLOROETHANE
5.00	1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	5.00	TETRACHLOROETHENE (TETRACHLOROETHYLENE)
500	ACETONE	5.00	1,3-DICHLOROPROPANE
120	CARBON DISULFIDE	120	METHYL BUTYL KETONE
5.00	METHYLENE CHLORIDE	5.00	DIBROMOCHLOROMETHANE
5.00	TRANS-1,2-DICHLOROETHENE	5.00	CHLOROBENZENE
5.00	1,1-DICHLOROETHANE	5.00	1,1,1,2-TETRACHLOROETHANE
120	VINYL ACETATE	5.00	ETHYL BENZENE
5.00	CIS-1,2-DICHLOROETHENE	5.00	(M- AND/OR P-)XYLENE
5.00	2,2-DICHLOROPROPANE	5.00	O-XYLENE
500	METHYL ETHYL KETONE	5.00	STYRENE
5.00	BROMOCHLOROMETHANE	5.00	BROMOFORM
5.00	CHLOROFORM	5.00	BROMOBENZENE
5.00	1,1,1-TRICHLOROETHANE	5.00	1,1,2,2-TETRACHLOROETHANE
5.00	1,1-DICHLOROPROPENE	5.00	1,2,3-TRICHLOROPROPANE
5.00	CARBON TETRACHLORIDE	5.00	O-CHLOROTOLUENE
5.00	1,2-DICHLOROETHANE	5.00	P-CHLOROTOLUENE
5.00	BENZENE	5.00	1,3-DICHLOROBENZENE
5.00	TRICHLOROETHENE (TRICHLOROETHYLENE)	5.00	1,4-DICHLOROBENZENE
5.00	1,2-DICHLOROPROPANE	5.00	1,2-DICHLOROBENZENE
5.00	DIBROMOMETHANE		
5.00	BROMODICHLOROMETHANE		

\*\*\*REMARKS\*\*\*  
 SAMPLE WAS NOT PRESERVED

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
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Remedial Investigation Report  
ABC One-Hour Cleaners, Inc.  
Jacksonville, Onslow County, North Carolina  
Section: Appendix C  
Revision: 1  
Date: November 1992

**SEPTIC TANK AND SUBSURFACE SOILS QA/QC**  
**SEMI-VOLATILES**

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
 EPA-REGION IV ESD, ATHENS, GA.

09/13/91

EXTRACTABLE ORGANICS DATA REPORT

\*\*\* PROJECT NO. 91-758 SAMPLE NO. 59584 SAMPLE TYPE: \*\*\*  
 \*\*\* SOURCE: \*\*\*  
 \*\*\* STATION ID: FB-000-01 \*\*\*  
 \*\*\* CASE NO : 16691 \*\*\*  
 \*\*\* SAS NO : \*\*\*  
 \*\*\* D NO : Bk74 \*\*\*

\*\*\* PROG ELEM: SSF COLLECTED BY: W MORRIS \*\*\*  
 \*\*\* CITY: JACKSONVIL ST: NC \*\*\*  
 \*\*\* COLLECTION START: 06/28/91 1700 STOP 00/00/00 \*\*\*

\*\*\* ANALYTICAL RESULTS \*\*\*  
 UG/L

ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS	UG/L
10U PHENOL	50U	3-NITROANILINE	50U
10U BIS(2-CHLOROETHYL) ETHER	10U	ACENAPHTHENE	10U
10U 2-CHLOROPHENOL	50U	2,4-DINITROPHENOL	50U
10U 1,3-DICHLOROBENZENE	50U	4-NITROPHENOL	50U
10U 1,4-DICHLOROBENZENE	10U	DIBENZOFURAN	10U
10U 1,2-DICHLOROBENZENE	10U	2,4-DINITROTOLUENE	10U
10U 2 METHYL PHENOL	10U	DIFHYL PHTHALAT	10U
10U 2,2'-CHLOROISOPROPYLETHIER	10U	4-CHLOROPHENYL PHENYL ETHER	10U
10U (3-AND/OR 4-)METHYLPHENOL	10U	FLUORENE	10U
10U N-NITROSODI-N-PROPYLAMINE	50U	4-NITROANILINE	50U
10U NITROBENZENE	10U	2-METHYL-4,6-DINITROPHENOL	50U
10U ISOPHORONE	10U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE	10U
10U 2-NITROPHENOL	10U	4-BROMOPHENYL PHENYL ETHER	10U
10U 2,4-DIMETHYLPHENOL	10U	HEXACHLOROBENZENE (HrB)	10U
10U BIS(2-CHLOROETHOXY) METHANE	50U	PENTACHLOROPHENOL	50U
10U 2,4-DICHLOROPHENOL	10U	PHENANTHRENE	10U
10U 1,2,4-TRICHLOROBENZENE	10U	ANTHRACENE	10U
10U NAPHTHALENE	10U	CARBAZOLE	10U
10U 4-CHLORANILINE	10U	DI-N-BUTYLPHTHALATE	10U
10U HEXACHLOROBUTADIENE	10U	FLUORANTHENE	10U
10U 4-CHLORO-3-METHYLPHENOL	10U	PYRENE	10U
10U 2-METHYLNAPHTHALENE	20U	3,3'-DICHLOROBENZIDINE	20U
10U HEXACHLOROCYCLOPENTADIENE (HCCP)	10U	BENZO(A)ANTHRACENE	10U
10U 2,4,6-TRICHLOROPHENOL	50U	CHRYSENE	10U
10U 2,4,5-TRICHLOROPHENOL	50U	BIS(2-ETHYLHEXYL) PHTHALATE	10U
10U 2-CHLORONAPHTHALENE	50U	DI-N-OCTYLPHTHALATE	10U
10U 2-NITROANILINE	50U	BENZO(B AND/OR K)FLUORANTHENE	10U
10U DIMETHYL PHTHALATE	10U	BENZO-A-PYRENE	10U
10U ACENAPHTHYLENE	10U	INDENO (1,2,3-CD) PYRENE	10U
10U 2,6-DINITROTOLUENE	10U	DIBENZO(A,H)ANTHRACENE	10U
		BENZO(GHI)PERYLENE	10U

\*\*\*REMARKS\*\*\*

\*\*\* FOOTNOTES \*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*N-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

07/24/91

EXTRACTABLE ORGANICS DATA REPORT

\*\*\* PROJECT NO. 91-775 SAMPLE NO. 59398 SAMPLE TYPE: WATER  
 \*\* SOURCE: ABC ONE HOUR CLEANER  
 \*\* STATION ID: ABC-FB-000-02  
 \*\*  
 \*\*\* PROG ELEM: SSF COLLECTED BY: CONLEY PHIFER  
 \*\* CITY: JACKSONVIL ST: NC  
 \*\* COLLECTION START: 06/30/91 1335 STOP: 00/00/00  
 \*\*

UG/L ANALYTICAL RESULTS

100 (3-AND/OR 4-METHYLPHENOL  
 100 1,2,4-TRICHLOROBENZENE  
 100 2,2'-CHLOROISOPROPYLETHER  
 100 2,3,4,6-TETRACHLOROPHENOL  
 100 2,4,5-TRICHLOROPHENOL  
 100 2,4,6-TRICHLOROPHENOL  
 100 2,4-DICHLOROPHENOL  
 100 2,4-DIMETHYLPHENOL  
 200 2,4-DINITROPHENOL  
 100 2,4-DINITROTOLUENE  
 100 2,6-DINITROTOLUENE  
 100 2-CHLORONAPHTHALENE  
 100 2-CHLOROPHENOL  
 200 2-METHYL-4,6-DINITROPHENOL  
 100 2-METHYLNAPHTHALENE  
 100 2-METHYLPHENOL  
 100 2-NITROANILINE  
 100 2-NITROPHENOL  
 100 3,3'-DICHLOROBENZIDINE  
 100 3-NITROANILINE  
 100 4-BROMOPHENYL PHENYL ETHER  
 100 4-CHLORO-3-METHYLPHENOL  
 100 4-CHLOROANILINE  
 100 4-CHLOROPHENYL PHENYL ETHER  
 100 4-NITROANILINE  
 200 4-NITROPHENOL  
 100 ACENAPHTHENE  
 100 ACENAPHTHYLENE  
 100 ANTHRACENE  
 100 BENZO(A)ANTHRACENE  
 100 BENZO(B AND/OR K)FLUORANTHENE

UG/L ANALYTICAL RESULTS

100 BENZO(GHI)PERYLENE  
 100 BENZO-A-PYRENE  
 100 BENZYL BUTYL PHTHALATE  
 100 BIS(2-CHLOROETHOXY) METHANE  
 100 BIS(2-ETHYLHEXYL) PHTHALATE  
 500 CARBAZOLE  
 100 CHRYSENE  
 100 DI-N-BUTYL PHTHALATE  
 100 DI-N-OCTYL PHTHALATE  
 100 DIBENZO(A,H)ANTHRACENE  
 100 DIBENZOFURAN  
 100 DIETHYL PHTHALATE  
 100 DIMETHYL PHTHALATE  
 100 FLUORANTHENE  
 100 FLUORENE  
 100 HEXACHLOROBENZENE (HCB)  
 100 HEXACHLOROBUTADIENE  
 100 HEXACHLOROCYCLOPENTADIENE (HCCP)  
 100 HEXACHLOROETHANE  
 100 INDENO (1,2,3-CD) PYRENE  
 100 ISOPHORONE  
 100 N-NITROSODI-N-PROPYLAMINE  
 100 N-NITROSODIPHENYLAMINE/DIPHENYLAMINE  
 100 NAPHTHALENE  
 100 NITROBENZENE  
 200 PENTACHLOROPHENOL  
 100 PHENANTHRENE  
 100 PHENOL  
 100 PYRENE

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\* FOOTNOTES \*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAT-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

09/13/91

EXTRACTABLE ORGANICS DATA REPORT

\*\*\* PROJECT NO. 91-758 \*\*\* SAMPLE NO. 59589 \*\*\* RINSATE \*\*\*  
 \*\*\* SOURCE: ABC ONE-HOUR CLEANER \*\*\*  
 \*\*\* STATION ID. RB-000-01 \*\*\*

CITY: JACKSONVILLE

COLLECTION START 06/24/91 1705 STOP 00/00/00

CASE NO 16691 SAS NO BK75 ANALYTICAL RESULTS  
 UG/L UG/L

ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS	UG/L
PHENOL	100	3-NITROANILINE	500
BIS(2-CHLOROETHYL) ETHER	100	ACENAPHTHENE	100
2-CHLOROPHENOL	100	2,4-DINITROPHENOL	500
1,3-DICHLOROBENZENE	100	4-NITROPHENOL	500
1,4-DICHLOROBENZENE	100	DIBENZOFURAN	100
2-DICHLOROBENZENE	100	2,4-DINITROTOLUENE	100
METHYL PHENOL	100	DIETHYL PHTHALATE	100
2,2-DICHLOROISOPROPYLETHYLENE	100	4 CHLOROPHENYL PHENYL ETHER	100
(3-AND/OR 4-METHYLPHENOL)	100	FLUORENE	100
N-NITROSODI-N-PROPYLAMINE	100	4-NITROANILINE	500
HEXACHLOROETHANE	100	2-METHYL-4,6-DINITROPHENOL	500
NITROBENZENE	100	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE	100
ISOPHORONE	100	4-BROMOPHENYL PHENYL ETHER	100
2-NITROPHENOL	100	HEXACHLOROBENZENE (HrB)	100
2,4-DIMETHYLPHENOL	100	PENTACHLOROPHENOL	500
BIS(2-CHLOROETHOXY) METHANE	100	PHENANTHRENE	100
2,4-DICHLOROPHENOL	100	ANTHRACENE	100
1,2,4-TRICHLOROBENZENE	100	CARBAZOLE	NA
NAPHTHALENE	100	DI-N-BUTYLPHTHALATE	100
4-CHLOROANILINE	100	FLUORANTHENE	100
HEXACHLOROBUTADIENE	100	PYRENE	100
4-CHLORO-3-METHYLPHENOL	100	BENZYL BUTYL PHTHALATE	100
2-METHYLNAPHTHALENE	100	3,3'-DICHLOROBENZIDINE	200
HEXACHLOROCYCLOPENTADIENE (HCCP)	100	BENZO(A)ANTHRACENE	100
2,4,6-TRICHLOROPHENOL	100	CHRYSENE	100
2,4,5-TRICHLOROPHENOL	500	BIS(2-ETHYLHEXYL) PHTHALATE	100
2-CHLORONAPHTHALENE	100	DI-N-OCTYLPHTHALATE	100
2-NITROANILINE	500	BENZO(B AND/OR K)FLUORANTHENE	100
DIMETHYL PHTHALATE	100	BENZO(A-PYRENE	100
ACENAPHTHYLENE	100	INDENO (1,2,3-CD) PYRENE	100
2,6-DINITROTOLUENE	100	DIBENZO(A,H)ANTHRACENE	100
		BENZO(GH)PERYLENE	100J

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*  
 \*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED  
 \*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION

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Remedial Investigation Report  
ABC One-Hour Cleaners, Inc.  
Jacksonville, Onslow County, North Carolina  
Section: Appendix C  
Revision: 1  
Date: November 1992

**SEPTIC TANK AND SUBSURFACE SOILS QA/QC**  
**PESTICIDES/PCBs**

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS GA

09/17/91

PESTICIDES/PCB'S DATA REPORT

\*\*\* PROJECT NO 91-758 SAMPLE NO. 59584 SAMPLE TYPE  
 \*\*\* SOURCE  
 \*\*\* STATION ID FB-000-01 SAS NUMBER  
 \*\*\* CASE NUMBER 16691  
 \*\*\* PROG ELEM SSF COLLECTED BY W MORRIS  
 \*\*\* CITY JACKSONVIL ST NC  
 \*\*\* COLLECTION START 06/28/91 1700 STOP 00/00/00  
 \*\*\* D NUMBER BK74

ANALYTICAL RESULTS

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
0 050U	ALPHA-BHC	0 50U	METHOXYCHLOR
0 050U	BETA-BHC	0 10U	ENDRIN KETONE
0 050U	DELTA-BHC	NA	ENDRIN ALDEHYDE
0 050U	GAMMA-BHC (LINDANE)	---	CHLORDANE (TECH MIXTURE) /1
0 050UJ	HEPTACHLOR	0 50U	GAMMA-CHLORDANE /2
0 050U	ALDRIN	0 50U	ALPHA-CHLORDANE /2
0 050U	HEPTACHLOR EPOXIDE	1 0U	TOXAPHENE
0 050U	ENDOSULFAN I (ALPHA)	0 50U	PCB-101C (AROCOR 101G)
0 10U	DIELDRIN	0 50U	PCB-1221 (AROCOR 1221)
0 10U	4 4' -DDE (P P' -DDE)	0 50U	PCB-1232 (AROCOR 1232)
0 10U	ENDRIN	0 50U	PCB-1242 (AROCOR 1242)
0 10U	ENDOSULFAN II (BETA)	0 50U	PCB-1248 (AROCOR 1248)
0 10U	4 4' -DDD (P P' -DDD)	1 0U	PCB-1254 (AROCOR 1254)
0 10U	4 4' -DDT (P P' -DDT)	1 0U	PCB-1260 (AROCOR 1260)

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED  
 \*R-QC INDICATES THAT DATA UNUSABLE  
 \*C-CONFIRMED BY GCMS  
 \*NA-NOT ANALYZED  
 \*N1-INTERFERENCES  
 \*J-ESTIMATED VALUE  
 \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*M-MINIMUM QUANTITATION LIMIT  
 \*R-RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION  
 \*1 WHEN NO VALUE IS REPORTED SEE CHLORDANE CONSTITUENTS



SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

08/08/91

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 91-775 SAMPLE NO. 59388 SAMPLE TYPE: WATER  
 SOURCE: ABC ONE HOUR CLEANER  
 STATION ID. ABC-FB-000-02  
 PROG ELEM: SSF COLLECTED BY: COMLEY PHIFER  
 CITY: JACKSONVILLE ST: NC  
 COLLECTION START: 06/30/91 1335 STOP: 00/00/00

ANALYTICAL RESULTS

ANALYTICAL RESULTS

UG/L	UG/L
0.10U	1.2U
0.10U	1.2U
0.10U	1.2U
0.10U	1.0U
0.10U	---
0.10U	---
0.10U	---
0.10U	---
0.10U	---
0.25U	---
0.10U	---
0.20U	---
0.20U	---
0.20U	---
0.62U	0.50U
1.2U	0.25U
1.2U	---

PCB-1232 (AROCLOR 1232)	/2
PCB-1248 (AROCLOR 1248)	/2
PCB-1260 (AROCLOR 1260)	/2
PCB-1016 (AROCLOR 1016)	/2
TOXAPHENE	/2
CHLORDENE	/2
ALPHA-CHLORDENE	/2
BETA-CHLORDENE	/2
GAMMA-CHLORDENE	/2
TRANS-NOMACHLOR	/2
ALPHA-CHLORDANE	/2
CTS-NOMACHLOR	/2
OXYCHLORDANE (OCTACHLOROXIDE)	/2
METHOXYCHLOR	
ENDRIN KETONE	

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*M-I-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT C-CONFIRMED BY GC/MS  
 1. WHEN NO VALUE IS REPORTED SEE CHLORDANE CONSTITUENTS 2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
 EPA-REGION IV ESD, ATHENS, GA.

09/17/91

PESTICIDES/PCB'S DATA REPORT

\*\*\* PROJECT NO. 91-758 SAMPLE NO. 59589 SAMPLE TYPE: RINSATE  
 \*\*\* SOURCE: ABC ONE-HOUR CLEANER  
 \*\*\* STATION ID: RB-000-01  
 \*\*\* CASE NUMBER: 16691  
 \*\*\* SAS NUMBER: BK75  
 \*\*\* PROG ELEM. SSF COLLECTED BY: W MORRIS  
 \*\*\* CITY JACKSONVIL ST. NC  
 \*\*\* COLLECTION START 06/24/91 1705 STOP 00/00/00  
 \*\*\* D NUMBER: BK75

UG/L ANALYTICAL RESULTS ANALYTICAL RESULTS

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
0.050U	ALPHA-BHC	0.50U	METHOXYCHLOR
0.050U	BETA-BHC	0.10U	ENDRIN KETONE
0.050U	DELTA-BHC	NA	ENDRIN ALDEHYDE
0.050U	GAMMA-BHC (LINDANE)	---	CHLORDANE (TECH MIXTURE) /1
0.050UJ	HEPTACHLOR	0.50U	GAMMA-CHLORDANE /2
0.050U	ALDRIN	0.50U	ALPHA-CHLORDANE /2
0.050U	HEPTACHLOR EPOXIDE	1.0U	TOXAPHENE
0.050U	ENDOSULFAN I (ALPHA)	0.50U	PCB-1016 (AROCLOR 1016)
0.10U	DIELDRIN	0.50U	PCB-1221 (AROCLOR 1221)
0.10U	4,4'-DDE (P,P'-DDE)	0.50U	PCB-1232 (AROCLOR 1232)
0.10U	ENDRIN	0.50U	PCB-1242 (AROCLOR 1242)
0.10U	ENDOSULFAN II (BETA)	0.50U	PCB-1248 (AROCLOR 1248)
0.10U	4,4'-DDD (P,P'-DDD)	1.0U	PCB-1254 (AROCLOR 1254)
0.10U	ENDOSULFAN SULFATE	1.0U	PCB-1260 (AROCLOR 1260)
0.10U	4,4'-DDT (P,P'-DDT)		

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT  
 \*R-QC INDICATES THAT DATA UNUSABLE COMPOUND MAY OR MAY NOT BE PRESENT RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION  
 \*C-CONFIRMED BY GCMS 1 WHEN NO VALUE IS REPORTED SEE CHLORDANE CONSTITUENTS

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Remedial Investigation Report  
ABC One-Hour Cleaners, Inc.  
Jacksonville, Onslow County, North Carolina  
Section: Appendix C  
Revision: 1  
Date: November 1992

**SEPTIC TANK AND SUBSURFACE SOILS QA/QC**  
**METALS**

08/22/91

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT  
\*\*\* PROJECT NO. 91-758 SAMPLE NO. 59936 SAMPLE TYPE: RINSATE  
\*\* SOURCE: ABC ONE-HOUR CLEANER  
\*\* STATION ID: FB-000-01 SAS NUMBER:  
\*\* CASE NUMBER: 16691

PROG ELEM: SSF COLLECTED BY: B MORRIS  
CITY: JACKSONVIL ST: NC  
COLLECTION START: 06/28/91 1700 STOP: 00/00/00  
MD NUMBER: BK55

ANALYTICAL RESULTS		ANALYTICAL RESULTS	
UG/L		UG/L	
110U	ALUMINIUM	2U	MANGANESE
20U	ANTIMONY	0.20U	MERCURY
4U	ARSENIC	4U	NICKEL
1U	BARIIUM	70U	POTASSIUM
1U	BERYLLIUM	4U	SELENIUM
2U	CADMIUM	22U	SILVER
7U	CALCIUM	1U	SODIUM
2U	CHROMIUM	1U	THALLIUM
4U	COBALT	NA	TIN
3U	COPPER	2U	VANADIUM
110U	IRON	3U	ZINC
2U	LEAD		
13U	MAGNESIUM		

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
\*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*K-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
\*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
\*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION

07/18/91

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT  
\*\*\* \*\* \* \* \* \* \*  
PROJECT NO. 91-775 SAMPLE NO. 59398 SAMPLE TYPE: WATER  
SOURCE: ABC ONE HOUR CLEANER  
STATION ID: ABC-FB-000-02  
\*\*\* \*\* \* \* \* \* \*  
PROG ELEM: SSF COLLECTED BY: CONLEY PHIFER  
CITY: JACKSONVIL ST: NC  
COLLECTION START: 06/30/91 1335 STOP: 00/00/00  
\*\*\* \*\* \* \* \* \* \*

ANALYTICAL RESULTS

MG/L

26 CALCIUM  
2.6 MAGNESIUM  
0.0500 IRON  
9.7 SODIUM  
2.00 POTASSIUM

ANALYTICAL RESULTS

UG/L

100 SILVER  
300 ARSENIC  
NA BORON  
100 BARIUM  
5.00 BERYLLIUM  
5.00 CADMIUM  
100 COBALT  
100 CHROMIUM  
100 COPPER  
100 MOLYBDENUM  
200 NICKEL  
400 LEAD  
300 ANTIMONY  
400 SELENIUM  
250 TIN  
130 STRONTIUM  
500 TELLURIUM  
100 TITANIUM  
1000 THALLIUM  
100 VANADIUM  
100 YTTRIUM  
40 ZINC  
NA ZIRCONIUM  
0.30 MERCURY  
140 ALUMINUM  
100 MANGANESE

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\* FOOTNOTES \*\*\*  
\*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
\*K-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
\*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
\*NA-NOT ANALYZED  
\*N-INTERFERENCES  
\*J-ESTIMATED VALUE  
\*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN

08/22/91

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT

\*\*\* PROJECT NO. 91-758 SAMPLE NO. 59937 SAMPLE TYPE: RINSATE  
\*\*\* SOURCE: ABC ONE-HOUR CLEANER  
\*\*\* STATION ID: RB-000-01  
\*\*\* CASE NUMBER: 16691 SAS NUMBER:  
\*\*\*

\*\*\* PROG ELEM: SSF COLLECTED BY: B MORRIS  
\*\*\* CITY: JACKSONVIL ST: NC  
\*\*\* COLLECTION START: 06/28/91 1705 STOP: 00/00/00  
\*\*\* MD NUMBER: BK56

UG/L ANALYTICAL RESULTS

UG/L ANALYTICAL RESULTS

30U ALUMINUM  
11U ANTIMONY  
4U ARSENIC  
1U BARIUM  
1U BERYLLIUM  
1U CADMIUM  
7U CALCIUM  
2U CHROMIUM  
2U COBALT  
3U COPPER  
20U IRON  
4U LEAD  
13U MAGNESIUM

2U MANGANESE  
0.20U MERCURY  
4U NICKEL  
42U POTASSIUM  
4U SELENIUM  
2U SILVER  
22U SODIUM  
1U THALLIUM  
1U TIN  
2U VANADIUM  
3U ZINC

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
\*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTIFICATION LIMIT.  
\*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION

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Remedial Investigation Report  
ABC One-Hour Cleaners, Inc  
Jacksonville, Onslow County, North Carolina  
Section Appendix C  
Revision 1  
Date November 1992

**SEPTIC TANK AND SUBSURFACE SOILS QA/QC  
CYANIDE**

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

08/22/91

SPECIFIED ANALYSIS DATA REPORT

\*\*\* PROJECT NO. 91-758 SAMPLE NO. 59936 \*\*\*  
\*\*\* SOURCE: ABC ONE-HOUR CLEANER \*\*\*  
\*\*\* STATION ID: FB-000-01 \*\*\*  
\*\*\* CASE NO.: 16691 \*\*\*  
\*\*\* SAS NO.: \*\*\*  
\*\*\*  
\*\*\* PROG ELEM: SSF COLLECTED BY: B MORRIS \*\*\*  
\*\*\* CITY: JACKSONVIL ST: NC \*\*\*  
\*\*\* COLLECTION START: 06/28/91 1700 STOP: 00/00/00 \*\*\*  
\*\*\* D. NO.: MD NO: BK55 \*\*\*

RESULTS UNITS PARAMETER  
10U UG/L CYANIDE

\*\*\* FOOTNOTES \*\*\*  
\* A-AVERAGE VALUE \* NA-NOT ANALYZED \* NAI-INTERFERENCES \* J-ESTIMATED VALUE \* N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\* K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \* L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
\* U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT



SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

07/24/91

SPECIFIED ANALYSIS DATA REPORT

\*\*\* PROJECT NO. 91-775 SAMPLE NO. 59398 \*\*\*  
\*\*\* SOURCE: ABC ONE HOUR CLEANER \*\*\*  
\*\*\* STATION ID: ABC-FB-000-02 \*\*\*  
\*\*\*  
\*\*\* PROG ELEM: SSF COLLECTED BY: CONLEY PHIFER \*\*\*  
\*\*\* CITY: JACKSONVIL ST: NC \*\*\*  
\*\*\* COLLECTION START: 06/30/91 1335 STOP: 00/00/00 \*\*\*

RESULTS UNITS PARAMETER  
4U UG/L CYANIDE

\*\*\*REMARKS\*\*\*  
DATA SUSPECT BASED ON QC--USE FOR "SCREENING" ONLY!!  
\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*N1-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
\*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

08/22/91

SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 91-758      SAMPLE NO. 59937      PROG ELEM: SSF      COLLECTED BY: B MORRIS  
SOURCE: ABC ONE-HOUR CLEANER      CITY: JACKSONVIL      ST: NC  
STATION ID: RB-000-01      COLLECTION START: 06/28/91      1705      STOP: 00/00/00  
CASE NO.: 16691      D. NO.:      MD NO: BK56

RESULTS UNITS PARAMETER  
10U UG/L CYANIDE

\*\*\*\*FOOTNOTES\*\*\*\*  
\*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*K-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

07/17/91

PURGEABLE ORGANICS DATA REPORT  
 \*\*\* PROJECT NO. 91-776 SAMPLE NO. 59696 SAMPLE TYPE: SURFACEWA  
 \*\* SOURCE: ABC ONE HOUR CLEANER  
 \*\* STATION ID: RW-003-01  
 \*\* PROG ELEM: SSF COLLECTED BY: BILL MORRIS  
 \*\* CITY: JACKSONVIL ST: NC  
 \*\* COLLECTION START: 07/12/91 1955 STOP: 00/00/00

ANALYTICAL RESULTS

ANALYTICAL RESULTS

5.00 CHLOROMETHANE  
 5.00 VINYL CHLORIDE  
 5.00 BROMOMETHANE  
 5.00 CHLOROETHANE  
 5.00 TRICHLOROFLUOROMETHANE  
 5.00 1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)  
 5.00 ACETONE  
 120 CARBON DISULFIDE  
 5.00 METHYLENE CHLORIDE  
 5.00 TRANS-1,2-DICHLOROETHENE  
 5.00 1,1-DICHLOROETHANE  
 120 VINYL ACETATE  
 5.00 CIS-1,2-DICHLOROETHENE  
 5.00 2,2-DICHLOROPROPANE  
 5.00 METHYL ETHYL KETONE  
 5.00 BROMOCHLOROMETHANE  
 5.00 CHLOROFORM  
 5.00 1,1,1-TRICHLOROETHANE  
 5.00 1,1-DICHLOROPROPENE  
 5.00 CARBON TETRACHLORIDE  
 5.00 1,2-DICHLOROETHANE  
 5.00 BENZENE  
 5.00 TRICHLOROETHENE (TRICHLOROETHYLENE)  
 5.00 1,2-DICHLOROPROPANE  
 5.00 DIBROMOMETHANE  
 5.00 BROMODICHLOROMETHANE

5.00 CIS-1,3-DICHLOROPROPENE  
 120 METHYL ISOBUTYL KETONE  
 5.00 TOLUENE  
 5.00 TRANS-1,3-DICHLOROPROPENE  
 5.00 1,2-TRICHLOROETHANE  
 5.00 TETRACHLOROETHENE (TETRACHLOROETHYLENE)  
 5.00 1,3-DICHLOROPROPANE  
 120 METHYL BUTYL KETONE  
 5.00 DIBROMOCHLOROMETHANE  
 5.00 CHLOROBENZENE  
 5.00 1,1,1,2-TETRACHLOROETHANE  
 5.00 ETHYL BENZENE  
 5.00 (M- AND/OR P-)XYLENE  
 5.00 O-XYLENE  
 5.00 STYRENE  
 5.00 BROMOFORM  
 5.00 BROMOBENZENE  
 5.00 1,1,2,2-TETRACHLOROETHANE  
 5.00 1,2,3-TRICHLOROPROPANE  
 5.00 O-CHLOROTOLUENE  
 5.00 P-CHLOROTOLUENE  
 5.00 1,3-DICHLOROBENZENE  
 5.00 1,4-DICHLOROBENZENE  
 5.00 1,2-DICHLOROBENZENE

\*\*\*REMARKS\*\*\*  
 SAMPLE WAS NOT PRESERVED

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

07/23/91

PURGEABLE ORGANICS DATA REPORT

\*\*\* PROJECT NO. 91-776 SAMPLE NO. 59691 SAMPLE TYPE: SURFACEWA  
 \*\* SOURCE: ABC ONE HOUR CLEANER  
 \*\* STATION ID: SW-T23-01  
 \*\* PROG ELEM: SSF COLLECTED BY: BILL MORRIS  
 \*\* CITY: JACKSONVIL ST: NC  
 \*\* COLLECTION START: 07/11/91 1440 STOP: 00/00/00

UG/L ANALYTICAL RESULTS

5.00 CHLOROMETHANE  
 5.00 VINYL CHLORIDE  
 5.00 BROMOMETHANE  
 5.00 CHLOROETHANE  
 5.00 TRICHLOROFLUOROMETHANE  
 5.00 1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)  
 5.00 ACETONE  
 120 CARBON DISULFIDE  
 5.00 METHYLENE CHLORIDE  
 5.00 TRANS-1,2-DICHLOROETHENE  
 5.00 1,1-DICHLOROETHANE  
 120 VINYL ACETATE  
 5.00 CIS-1,2-DICHLOROETHENE  
 5.00 2,2-DICHLOROPROPANE  
 5.00 METHYL ETHYL KETONE  
 5.00 BROMOCHLOROMETHANE  
 5.00 CHLOROFORM  
 5.00 1,1,1-TRICHLOROETHANE  
 5.00 1,1-DICHLOROPROPENE  
 5.00 CARBON TETRACHLORIDE  
 5.00 1,2-DICHLOROETHANE  
 5.00 BENZENE  
 5.00 TRICHLOROETHENE (TRICHLOROETHYLENE)  
 5.00 1,2-DICHLOROPROPANE  
 5.00 DIBROMOMETHANE  
 5.00 BROMODICHLOROMETHANE

UG/L ANALYTICAL RESULTS

5.00 CIS-1,3-DICHLOROPROPENE  
 120 METHYL ISOBUTYL KETONE  
 5.00 TOLUENE  
 5.00 TRANS-1,3-DICHLOROPROPENE  
 5.00 1,1,2-TRICHLOROETHANE  
 5.00 TETRACHLOROETHENE (TETRACHLOROETHYLENE)  
 5.00 1,3-DICHLOROPROPANE  
 120 METHYL BUTYL KETONE  
 5.00 DIBROMOCHLOROMETHANE  
 5.00 CHLOROBENZENE  
 5.00 1,1,1,2-TETRACHLOROETHANE  
 5.00 ETHYL BENZENE  
 5.00 (M- AND/OR P-)XYLENE  
 5.00 O-XYLENE  
 5.00 STYRENE  
 5.00 BROMOFORM  
 5.00 BROMOBENZENE  
 5.00 1,1,2,2-TETRACHLOROETHANE  
 5.00 1,2,3-TRICHLOROPROPANE  
 5.00 O-CHLOROTOLUENE  
 5.00 P-CHLOROTOLUENE  
 5.00 1,3-DICHLOROBENZENE  
 5.00 1,4-DICHLOROBENZENE  
 5.00 1,2-DICHLOROBENZENE

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*N1-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

PURGEABLE ORGANICS DATA REPORT  
 EPA-REGION IV ESD, ATHENS, GA.

07/18/91

\*\*\* PROJECT NO. 91-776 SAMPLE NO. 59690 SAMPLE TYPE: SURFACEWA  
 \*\*\* SOURCE: ABC ONE HOUR CLEANER  
 \*\*\* STATION ID: SW-T25-01  
 \*\*\* PROG ELEM: SSF COLLECTED BY: BILL MORRIS  
 \*\*\* CITY: JACKSONVIL ST: NC  
 \*\*\* COLLECTION START: 07/11/91 1055 STOP: 00/00/00

ANALYTICAL RESULTS

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
5.0U	CHLOROMETHANE	5.0U	CIS-1,3-DICHLOROPROPENE
5.0U	VINYL CHLORIDE	12U	METHYL ISOBUTYL KETONE
5.0U	BROMOMETHANE	5.0U	TOLUENE
5.0U	CHLOROETHANE	5.0U	TRANS-1,3-DICHLOROPROPENE
5.0U	TRICHLOROFLUOROMETHANE	5.0U	1,1,2-TRICHLOROETHANE
5.0U	1,1-DICHLOROETHENE(1,1-DICHLOROE THYLENE)	23	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
50U	ACETONE	5.0U	1,3-DICHLOROPROPANE
12U	CARBON DISULFIDE	12U	METHYL BUTYL KETONE
5.0U	METHYLENE CHLORIDE	5.0U	DIBROMOCHLOROMETHANE
5.0U	TRANS-1,2-DICHLOROETHENE	5.0U	CHLOROBENZENE
5.0U	1,1-DICHLOROETHANE	5.0U	1,1,2-TETRACHLOROETHANE
12U	VINYL ACETATE	5.0U	ETHYL BENZENE
1.4J	CIS-1,2-DICHLOROETHENE	5.0U	(M- AND/OR P-)XYLENE
5.0U	2,2-DICHLOROPROPANE	5.0U	O-XYLENE
50U	METHYL ETHYL KETONE	5.0U	STYRENE
5.0U	BROMOCHLOROMETHANE	5.0U	BROMOFORM
5.0U	CHLOROFORM	5.0U	BROMOBENZENE
5.0U	1,1,1-TRICHLOROETHANE	5.0U	1,1,2,2-TETRACHLOROETHANE
5.0U	1,1-DICHLOROPROPENE	5.0U	1,2,3-TRICHLOROPROPANE
5.0U	CARBON TETRACHLORIDE	5.0U	O-CHLOROTOLUENE
5.0U	1,2-DICHLOROETHANE	5.0U	P-CHLOROTOLUENE
5.0U	BENZENE	5.0U	1,3-DICHLOROBENZENE
5.8	TRICHLOROETHENE (TRICHLOROETHYLENE)	5.0U	1,4-DICHLOROBENZENE
5.0U	1,2-DICHLOROPROPANE	5.0U	1,2-DICHLOROBENZENE
5.0U	DIBROMOMETHANE		
5.0U	BROMODICHLOROMETHANE		

\*\*\* FOOTNOTES \*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

PURGEABLE ORGANICS DATA REPORT  
 \*\*\* PROJECT NO. 91-776 SAMPLE NO. 59692 SAMPLE TYPE: SURFACEWA  
 \*\* SOURCE: ABC ONE HOUR CLEANER  
 \*\* STATION ID: SW-T26-01A  
 \*\* PROG ELEM: SSF COLLECTED BY: BILL MORRIS  
 \*\* CITY: JACKSONVIL ST: NC  
 \*\* COLLECTION START: 07/11/91 1550 STOP: 00/00/00  
 \*\*

\*\*\* UG/L \*\*\* ANALYTICAL RESULTS \*\*\* UG/L \*\*\* ANALYTICAL RESULTS \*\*\*

ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS	UG/L
CHLOROMETHANE	2000	CIS-1,3-DICHLOROPROPENE	2000
VINYL CHLORIDE	2000	METHYL ISOBUTYL KETONE	5000
BROMOMETHANE	2000	TOLUENE	2000
CHLOROETHANE	2000	TRANS-1,3-DICHLOROPROPENE	2000
TRICHLOROFLUOROMETHANE	2000	1,1,2-TRICHLOROETHANE	2000
1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	2000	TETRACHLOROETHENE (TETRACHLOROETHYLENE)	340
ACETONE	2000	1,3-DICHLOROPROPANE	2000
CARBON DISULFIDE	5000	METHYL BUTYL KETONE	5000
METHYLENE CHLORIDE	2000	DIBROMOCHLOROMETHANE	2000
TRANS-1,2-DICHLOROETHENE	2000	CHLOROBENZENE	2000
1,1-DICHLOROETHANE	2000	1,1,1,2-TETRACHLOROETHANE	2000
VINYL ACETATE	5000	ETHYL BENZENE	2000
CIS-1,2-DICHLOROETHENE	2000	(M- AND/OR P-)XYLENE	2000
2,2-DICHLOROPROPANE	2000	O-XYLENE	2000
METHYL ETHYL KETONE	2000	STYRENE	2000
BROMOCHLOROMETHANE	2000	BROMOFORM	2000
CHLOROFORM	2000	BROMOBENZENE	2000
1,1,1-TRICHLOROETHANE	2000	1,1,2,2-TETRACHLOROETHANE	2000
1,1-DICHLOROPROPENE	2000	1,2,3-TRICHLOROPROPANE	2000
CARBON TETRACHLORIDE	2000	O-CHLOROTOLUENE	2000
1,2-DICHLOROETHANE	2000	P-CHLOROTOLUENE	2000
BENZENE	2000	1,3-DICHLOROBENZENE	2000
TRICHLOROETHENE (TRICHLOROETHYLENE)	56J	1,4-DICHLOROBENZENE	2000
1,2-DICHLOROPROPANE	2000	1,2-DICHLOROBENZENE	2000
DIBROMOMETHANE	2000		
BROMODICHLOROMETHANE	2000		

\*\*\* FOOTNOTES \*\*\*  
 \*A-AVERAGE VALUE  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
 \*NA-NOT ANALYZED  
 \*NAI-INTERFERENCES  
 \*J-ESTIMATED VALUE  
 \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

07/18/91

PURGEABLE ORGANICS DATA REPORT  
 \*\*\* PROJECT NO. 91-776 SAMPLE NO. 59693 SAMPLE TYPE: SURFACEWA  
 \*\*\* SOURCE: ABC ONE HOUR CLEANER  
 \*\*\* STATION ID: SW-T26-01B  
 \*\*\* PROG ELEM: SSF COLLECTED BY: BILL MORRIS  
 \*\*\* CITY: JACKSONVIL ST: NC  
 \*\*\* COLLECTION START: 07/11/91 1555 STOP: 00/00/00

\*\*\* UG/L  
 \*\*\* ANALYTICAL RESULTS  
 \*\*\* ANALYTICAL RESULTS

ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS	UG/L
CHLOROMETHANE	1000	CIS-1,3-DICHLOROPROPENE	1000
VINYL CHLORIDE	1000	METHYL ISOBUTYL KETONE	2500
BROMOMETHANE	1000	TOLUENE	1000
CHLOROETHANE	1000	TRANS-1,3-DICHLOROPROPENE	1000
TRICHLOROFLUOROMETHANE	1000	1,1,2-TRICHLOROETHANE	1000
1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	1000	TETRACHLOROETHENE (TETRACHLOROETHYLENE)	360
ACETONE	10000	1,3-DICHLOROPROPANE	1000
CARBON DISULFIDE	2500	METHYL BUTYL KETONE	2500
METHYLENE CHLORIDE	1000	DIBROMOCHLOROMETHANE	1000
TRANS-1,2-DICHLOROETHENE	1000	CHLOROBENZENE	1000
1,1-DICHLOROETHANE	1000	1,1,1,2-TETRACHLOROETHANE	1000
VINYL ACETATE	2500	ETHYL BENZENE	1000
CIS-1,2-DICHLOROETHENE	15J	(M- AND/OR P-)XYLENE	1000
2,2-DICHLOROPROPANE	1000	O-XYLENE	1000
METHYL ETHYL KETONE	10000	STYRENE	1000
BROMOCHLOROMETHANE	1000	BROMOFORM	1000
CHLOROFORM	1000	BROMOBENZENE	1000
1,1,1-TRICHLOROETHANE	1000	1,1,2,2-TETRACHLOROETHANE	1000
1,1-DICHLOROPROPENE	1000	1,2,3-TRICHLOROPROPANE	1000
CARBON TETRACHLORIDE	1000	O-CHLOROTOLUENE	1000
1,2-DICHLOROETHANE	1000	P-CHLOROTOLUENE	1000
BENZENE	1000	1,3-DICHLOROBENZENE	1000
TRICHLOROETHENE (TRICHLOROETHYLENE)	62J	1,4-DICHLOROBENZENE	1000
1,2-DICHLOROPROPANE	1000	1,2-DICHLOROBENZENE	1000
DIBROMOMETHANE	1000		
BROMODICHLOROMETHANE	1000		

\*\*\* FOOTNOTES \*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT

\*\*\* PROJECT NO. 91-776 SAMPLE NO. 59689 SAMPLE TYPE: SURFACEWA  
\*\* SOURCE: ABC ONE HOUR CLEANER  
\*\* STATION ID: SW-T54-01  
\*\*\* ANALYTICAL RESULTS

PROG ELEM: SSF COLLECTED BY: BILL MORRIS  
CITY: JACKSONVIL  
COLLECTION START: 07/11/91 0940 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
5.00	CHLOROMETHANE	5.00	CIS-1,3-DICHLOROPROPENE
5.00	VINYL CHLORIDE	120	METHYL ISOBUTYL KETONE
5.00	BROMOMETHANE	5.00	TOLUENE
5.00	CHLOROETHANE	5.00	TRANS-1,3-DICHLOROPROPENE
5.00	TRICHLOROFLUOROMETHANE	5.00	1,1,2-TRICHLOROETHANE
5.00	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)	5.00	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
500	ACETONE	5.00	1,3-DICHLOROPROPANE
120	CARBON DISULFIDE	120	METHYL BUTYL KETONE
5.00	METHYLENE CHLORIDE	5.00	DIBROMOCHLOROMETHANE
5.00	TRANS-1,2-DICHLOROETHENE	5.00	CHLOROBENZENE
5.00	1,1-DICHLOROETHANE	5.00	1,1,1,2-TETRACHLOROETHANE
120	VINYL ACETATE	5.00	ETHYL BENZENE
5.00	CIS-1,2-DICHLOROETHENE	5.00	(M- AND/OR P-)XYLENE
5.00	2,2-DICHLOROPROPANE	5.00	O-XYLENE
500	METHYL ETHYL KETONE	5.00	STYRENE
5.00	BROMOCHLOROMETHANE	5.00	BROMOFORM
5.00	CHLOROFORM	5.00	BROMOBENZENE
5.00	1,1,1-TRICHLOROETHANE	5.00	1,1,2,2-TETRACHLOROETHANE
5.00	1,1-DICHLOROPROPENE	5.00	1,2,3-TRICHLOROPROPANE
5.00	CARBON TETRACHLORIDE	5.00	O-CHLOROTOLUENE
5.00	1,2-DICHLOROETHANE	5.00	P-CHLOROTOLUENE
1.3J	BENZENE	5.00	1,3-DICHLOROBENZENE
5.00	TRICHLOROETHENE(TRICHLOROETHYLENE)	5.00	1,4-DICHLOROBENZENE
5.00	1,2-DICHLOROPROPANE	5.00	1,2-DICHLOROBENZENE
5.00	DIBROMOMETHANE		
5.00	BROMODICHLOROMETHANE		

\*\*\*FOOTNOTES\*\*\*  
\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
\*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.



07/18/91

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

MISCELLANEOUS PURGEABLE ORGANICS - DATA REPORT

\*\*\*  
\*\* PROJECT NO. 91-776 SAMPLE NO. 59689 SAMPLE TYPE: SURFACEWA  
\*\* SOURCE: ABC ONE HOUR CLEANER  
\*\* STATION ID: SW-T54-01  
\*\*  
\*\*\*

PROG ELEM: SSF COLLECTED BY: BILL MORRIS  
CITY: JACKSONVIL ST: NC  
COLLECTION START: 07/11/91 0940 STOP: 00/00/00

ANALYTICAL RESULTS UG/L

80JN PROPANE

\*\*\*FOOTNOTES\*\*\*  
\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
\*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
\*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

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Remedial Investigation Report  
ABC One-Hour Cleaners, Inc.  
Jacksonville, Onslow County, North Carolina  
Section: Appendix C  
Revision: 1  
Date: November 1992

**RESIDENTIAL WELLS AND SUPPLY WELLS**  
**SEMI-VOLATILES**

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

07/29/91

EXTRACTABLE ORGANICS DATA REPORT  
 \*\*\* PROJECT NO. 91-776 SAMPLE NO. 59694 SAMPLE TYPE: SURFACEWA  
 \*\* SOURCE: ABC ONE HOUR CLEANER  
 \*\* STATION ID: RW-001-01  
 \*\* PROG ELEM: SSF COLLECTED BY: BILL MORRIS  
 \*\* CITY: JACKSONVIL ST: NC  
 \*\* COLLECTION START: 07/12/91 1520 STOP: 00/00/00

\*\*\* UG/L \*\*\* ANALYTICAL RESULTS \*\*\*

(3-AND/OR 4-) METHYLPHENOL 12U  
 1,2,4-TRICHLOROBENZENE 12U  
 2,2'-CHLOROISOPROPYLEETHER 12U  
 2,3,4,6-TETRACHLOROPHENOL 12U  
 2,4,5-TRICHLOROPHENOL 12U  
 2,4,6-TRICHLOROPHENOL 12U  
 2,4-DICHLOROPHENOL 12U  
 2,4-DIMETHYLPHENOL 12U  
 2,4-DINITROPHENOL 25U  
 2,4-DINITROTOLUENE 12U  
 2,6-DINITROTOLUENE 12U  
 2-CHLORONAPHTHALENE 12U  
 2-CHLOROPHENOL 12U  
 2-METHYL-4,6-DINITROPHENOL 25U  
 2-METHYLNAPHTHALENE 12U  
 2-METHYLPHENOL 12U  
 2-NITROANILINE 12U  
 2-NITROPHENOL 12U  
 3,3'-DICHLOROBENZIDINE 12U  
 3-NITROANILINE 12U  
 4-BROMOPHENYL PHENYL ETHER 12U  
 4-CHLORO-3-METHYLPHENOL 12U  
 4-CHLOROANILINE 12U  
 4-CHLOROPHENYL PHENYL ETHER 12U  
 4-NITROANILINE 12U  
 4-NITROPHENOL 25U  
 ACENAPHTHENE 12U  
 ACENAPHTHYLENE 12U  
 ANTHRACENE 12U  
 BENZO(A)ANTHRACENE 12U  
 BENZO(B AND/OR K)FLUORANTHENE 12U

\*\*\* UG/L \*\*\* ANALYTICAL RESULTS \*\*\*

BENZO(GHI)PERYLENE 12U  
 BENZO-A-PYRENE 12U  
 BENZYL BUTYL PHTHALATE 12U  
 BIS(2-CHLOROETHOXY) METHANE 12U  
 BIS(2-CHLOROETHYL) ETHER 12U  
 BIS(2-ETHYLHEXYL) PHTHALATE 12U  
 CARBAZOLE 12U  
 CHRYSENE 12U  
 DI-N-BUTYLPHTHALATE 12U  
 DI-N-OCTYLPHTHALATE 12U  
 DIBENZO(A,H)ANTHRACENE 12U  
 DIBENZOFURAN 12U  
 DIETHYL PHTHALATE 12U  
 DIMETHYL PHTHALATE 12U  
 FLUORANTHENE 12U  
 FLUORENE 12U  
 HEXACHLOROBENZENE (HCB) 12U  
 HEXACHLOROBTADIENE 12U  
 HEXACHLOROCYCLOPENTADIENE (HCCP) 12U  
 HEXACHLOROETHANE 12U  
 INDENO (1,2,3-CD) PYRENE 12U  
 ISOPHORONE 12U  
 N-NITROSODI-N-PROPYLAMINE 12U  
 N-NITROSODIPHENYLAMINE/DIPHENYLAMINE 12U  
 NAPHTHALENE 12U  
 NITROBENZENE 12U  
 PENTACHLOROPHENOL 25U  
 PHENANTHRENE 12U  
 PHENOL 12U  
 PYRENE 12U

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
 EPA-REGION IV ESD, ATHENS, GA.

07/29/91

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

\*\*\*  
 \*\* PROJECT NO. 91-776 SAMPLE NO. 59694 SAMPLE TYPE: SURFACEWA  
 \*\* SOURCE: ABC ONE HOUR CLEANER  
 \*\* STATION ID: RW-001-01  
 \*\*  
 \*\*\*  
 \*\* PROG ELEM: SSF COLLECTED BY: BILL MORRIS  
 \*\* CITY: JACKSONVIL ST: NC  
 \*\* COLLECTION START: 07/12/91 1520 STOP: 00/00/00  
 \*\*  
 \*\*\*

ANALYTICAL RESULTS UG/L  
 2JN CHLOROCYCLOHEXANE

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
 \*K-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
 \*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
 EPA-REGION IV ESD, ATHENS, GA.

07/29/91

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 91-776 SAMPLE NO. 59695 SAMPLE TYPE: SURFACEWA  
 SOURCE: ABC ONE HOUR CLEANER  
 STATION ID: RW-002-01  
 PROG ELEM: SSF COLLECTED BY: BILL MORRIS  
 CITY: JACKSONVIL ST: NC  
 COLLECTION START: 07/12/91 1750 STOP: 00/00/00

ANALYTICAL RESULTS

UG/L  
 (3-AND/OR 4-)METHYLPHENOL 12U  
 1,2,4-TRICHLOROBENZENE 12U  
 2,2'-CHLOROISOPROPYLEETHER 12U  
 2,3,4,6-TETRACHLOROPHENOL 12U  
 2,4,5-TRICHLOROPHENOL 12U  
 2,4,6-TRICHLOROPHENOL 12U  
 2,4-DICHLOROPHENOL 12U  
 2,4-DIMETHYLPHENOL 12U  
 2,4-DINITROPHENOL 23U  
 2,4-DINITROTOLUENE 12U  
 2,6-DINITROTOLUENE 12U  
 2-CHLORONAPHTHALENE 12U  
 2-CHLOROPHENOL 12U  
 2-METHYL-4,6-DINITROPHENOL 23U  
 2-METHYLNAPHTHALENE 12U  
 2-METHYLPHENOL 12U  
 2-NITROANILINE 12U  
 2-NITROPHENOL 12U  
 3,3'-DICHLOROBENZIDINE 12U  
 3-NITROANILINE 12U  
 4-BROMOPHENYL PHENYL ETHER 12U  
 4-CHLORO-3-METHYLPHENOL 12U  
 4-CHLOROANILINE 12U  
 4-CHLOROPHENYL PHENYL ETHER 12U  
 4-NITROANILINE 12U  
 4-NITROPHENOL 23U  
 ACENAPHTHENE 12U  
 ACENAPHTHYLENE 12U  
 ANTHRACENE 12U  
 BENZO(A)ANTHRACENE 12U  
 BENZO(B AND/OR K)FLUORANTHENE 12U

ANALYTICAL RESULTS

UG/L  
 BENZO(GHI)PERYLENE 12U  
 BENZO-A-PYRENE 12U  
 BENZYL BUTYL PHTHALATE 12U  
 BIS(2-CHLOROETHOXY) METHANE 12U  
 BIS(2-CHLOROETHYL) ETHER 12U  
 BIS(2-ETHYLHEXYL) PHTHALATE 12U  
 CARBAZOLE 12U  
 CHRYSENE 12U  
 DI-N-BUTYL PHTHALATE 12U  
 DI-N-OCTYL PHTHALATE 12U  
 DIBENZO(A,H)ANTHRACENE 12U  
 DIBENZOFURAN 12U  
 DIETHYL PHTHALATE 12U  
 DIMETHYL PHTHALATE 12U  
 FLUORANTHENE 12U  
 FLUORENE 12U  
 HEXACHLOROBENZENE (HCB) 12U  
 HEXACHLOROBUTADIENE 12U  
 HEXACHLOROCYCLOPENTADIENE (HCCP) 12U  
 HEXACHLOROETHANE 12U  
 INDENO (1,2,3-CD) PYRENE 12U  
 ISOPHORONE 12U  
 N-NITROSODI-N-PROPYLAMINE 12U  
 N-NITROSODIPHENYLAMINE/DIPHENYLAMINE 12U  
 NAPHTHALENE 12U  
 NITROBENZENE 12U  
 NITROBENZENE 23U  
 PENTACHLOROPHENOL 12U  
 PHENANTHRENE 12U  
 PHENOL 12U  
 PYRENE 12U

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

07/29/91

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

\*\*\* \*\* \*\* \*\* \*\*  
\*\* PROJECT NO. 91-776      SAMPLE NO. 59695      SAMPLE TYPE: SURFACEWA      PROG ELEM: SSF      COLLECTED BY: BILL MORRIS      \*\*  
\*\* SOURCE: ABC ONE HOUR CLEANER      CITY: JACKSONVIL      ST: NC      \*\*  
\*\* STATION ID: RW-002-01      COLLECTION START: 07/12/91 1750      STOP: 00/00/00      \*\*  
\*\*\* \*\* \*\* \*\* \*\*

ANALYTICAL RESULTS UG/L

10JN    CHLOROCYCLOHEXANE

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE      \*NA-NOT ANALYZED      \*NAI-INTERFERENCES      \*J-ESTIMATED VALUE      \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN      \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
\*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
\*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

07/29/91

EXTRACTABLE ORGANICS DATA REPORT  
 \*\*\* PROJECT NO. 91-776 SAMPLE NO. 59696 SAMPLE TYPE: SURFACEWA  
 \*\* SOURCE: ABC ONE HOUR CLEANER  
 \*\* STATION ID: RW-003-01  
 \*\* PROG ELEM: SSF COLLECTED BY: BILL MORRIS  
 \*\* CITY: JACKSONVIL ST. NC  
 \*\* COLLECTION START: 07/12/91 1955 STOP: 00/00/00  
 \*\*

\*\*\* UG/L \*\*\* ANALYTICAL RESULTS \*\*\* UG/L \*\*\* ANALYTICAL RESULTS \*\*\*

ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS	UG/L
(3-AND/OR 4-METHYLPHENOL	12U	BENZO(GHI)PERYLENE	12U
1,2,4-TRICHLOROBENZENE	12U	BENZO-A-PYRENE	12U
2,2'-CHLOROBIS(2-PROPYLETHYL ETHER	12U	BENZYL BUTYL PHTHALATE	12U
2,3,4,6-TETRACHLOROPHENOL	12U	BIS(2-CHLOROETHOXY) METHANE	12U
2,4,5-TRICHLOROPHENOL	12U	BIS(2-CHLOROETHYL) ETHER	12U
2,4,6-TRICHLOROPHENOL	12U	BIS(2-ETHYLHEXYL) PHTHALATE	12U
2,4-DICHLOROPHENOL	12U	CARBAZOLE	12U
2,4-DIMETHYLPHENOL	12U	CHRYSENE	12U
2,4-DINITROPHENOL	24U	DI-N-BUTYL PHTHALATE	12U
2,4-DINITROTOLUENE	12U	DI-N-OCTYL PHTHALATE	12U
2,6-DINITROTOLUENE	12U	DIBENZO(A,H)ANTHRACENE	12U
2-CHLORONAPHTHALENE	12U	DIBENZOFURAN	12U
2-CHLOROPHENOL	12U	DIETHYL PHTHALATE	12U
2-METHYL-4,6-DINITROPHENOL	24U	DIMETHYL PHTHALATE	12U
2-METHYLNAPHTHALENE	12U	FLUORANTHENE	12U
2-METHYLPHENOL	12U	FLUORENE	12U
2-NITROANILINE	12U	HEXACHLOROBENZENE (HCB)	12U
2-NITROPHENOL	12U	HEXACHLOROBUTADIENE	12U
3,3'-DICHLOROBENZIDINE	12U	HEXACHLOROCYCLOPENTADIENE (HCCP)	12U
3-NITROANILINE	12U	HEXACHLOROETHANE	12U
4-BROMOPHENYL PHENYL ETHER	12U	INDENO (1,2,3-CD) PYRENE	12U
4-CHLORO-3-METHYLPHENOL	12U	ISOPHORONE	12U
4-CHLOROANILINE	12U	N-NITROSODI-N-PROPYLAMINE	12U
4-CHLOROPHENYL PHENYL ETHER	12U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE	12U
4-NITROANILINE	12U	NAPHTHALENE	12U
4-NITROPHENOL	24U	NITROBENZENE	12U
ACENAPHTHENE	12U	PENTACHLOROPHENOL	24U
ACENAPHTHYLENE	12U	PHENANTHRENE	12U
ANTHRACENE	12U	PHENOL	12U
BENZO(A)ANTHRACENE	12U	PYRENE	12U
BENZO(B AND/OR K)FLUORANTHENE	12U		

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

07/29/91

EXTRACTABLE ORGANICS DATA REPORT  
\*\*\* PROJECT NO. 91-776 SAMPLE NO. 59691  
\*\* SOURCE: ABC ONE HOUR CLEANER  
\*\* STATION ID: SW-123-01

PROG ELEM: SSF COLLECTED BY: BILL MORRIS  
CITY: JACKSONVILLE ST: NC  
COLLECTION START: 07/11/91 1440 STOP: 00/00/00

\*\*\* UG/L \*\*\* ANALYTICAL RESULTS \*\*\* UG/L \*\*\* ANALYTICAL RESULTS \*\*\*

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
12U	(3-AND/OR 4-)METHYLPHENOL	12U	BENZO(GHI)PERYLENE
12U	1,2,4-TRICHLOROBENZENE	12U	BENZO-A-PYRENE
12U	2,2',-CHLOROISOPROPYLETHER	12U	BENZYL BUTYL PHTHALATE
12U	2,3,4,6-TETRACHLOROPHENOL	12U	BIS(2-CHLOROETHOXY) METHANE
12U	2,4,5-TRICHLOROPHENOL	12U	BIS(2-CHLOROETHYL) ETHER
12U	2,4,6-TRICHLOROPHENOL	12U	BIS(2-ETHYLHEXYL) PHTHALATE
12U	2,4-DICHLOROPHENOL	12U	CARBAZOLE
12U	2,4-DIMETHYLPHENOL	12U	CHRYSENE
23U	2,4-DINITROPHENOL	12U	DI-N-BUTYLPHTHALATE
12U	2,4-DINITROTOLUENE	12U	DI-N-OCTYLPHTHALATE
12U	2,6-DINITROTOLUENE	12U	DIBENZO(A,H)ANTHRACENE
12U	2-CHLORONAPHTHALENE	12U	DIBENZOFURAN
12U	2-CHLOROPHENOL	12U	DIETHYL PHTHALATE
23U	2-METHYL-4,6-DINITROPHENOL	12U	DIMETHYL PHTHALATE
12U	2-METHYLNAPHTHALENE	12U	FLUORANTHENE
12U	2-METHYLPHENOL	12U	FLUORENE
12U	2-NITROANILINE	12U	HEXACHLOROBENZENE (HCB)
12U	2-NITROPHENOL	12U	HEXACHLOROBUTADIENE
12U	3,3'-DICHLOROBENZIDINE	12U	HEXACHLOROCYCLOPENTADIENE (HCCP)
12U	3-NITROANILINE	12U	HEXACHLOROETHANE
12U	4-BROMOPHENYL PHENYL ETHER	12U	INDENO (1,2,3-CD) PYRENE
12U	4-CHLORO-3-METHYLPHENOL	12U	ISOPHORONE
12U	4-CHLOROANILINE	12U	N-NITROSODI-N-PROPYLAMINE
12U	4-CHLOROPHENYL PHENYL ETHER	12U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
12U	4-NITROANILINE	12U	NAPHTHALENE
23U	4-NITROPHENOL	12U	NITROBENZENE
12U	ACENAPHTHENE	23U	PENTACHLOROPHENOL
12U	ACENAPHTHYLENE	12U	PHENANTHRENE
12U	ANTHRACENE	12U	PHENOL
12U	BENZO(A)ANTHRACENE	12U	PYRENE
12U	BENZO(B AND/OR K)FLUORANTHENE		

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
\*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*NA-NOT ANALYZED \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
\*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.



SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

07/29/91

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

\*\*\* PROJECT NO. 91-776 SAMPLE NO. 59691 SAMPLE TYPE: SURFACEWA  
\*\*\* SOURCE: ABC ONE HOUR CLEANER  
\*\*\* STATION ID: SW-T23-01  
\*\*\* PROG ELEM: SSF COLLECTED BY: BILL MORRIS  
\*\*\* CITY: JACKSONVIL ST: NC  
\*\*\* COLLECTION START: 07/11/91 1440 STOP: 00/00/00

ANALYTICAL RESULTS UG/L

10JN CHLOROCYCLOHEXANE

\*\*\* FOOTNOTES \*\*\*  
\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
\*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
\*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

07/29/91

EXTRACTABLE ORGANICS DATA REPORT  
\*\*\* PROJECT NO. 91-776 SAMPLE NO. 59690  
\*\* SOURCE: ABC ONE HOUR CLEANER  
\*\* STATION ID: SW-125-01

\*\*\* PROG ELEM: SSF COLLECTED BY: BILL MORRIS  
\*\* CITY: JACKSONVIL ST: NC  
\*\* COLLECTION START: 07/11/91 1055 STOP: 00/00/00

ANALYTICAL RESULTS

ANALYTICAL RESULTS

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
11U	(3-AND/OR 4-)METHYLPHENOL	11U	BENZO(GHI)PERYLENE
11U	1,2,4-TRICHLOROBENZENE	11U	BENZO-A-PYRENE
11U	2,2'-CHLOROISOPROPYLE ETHER	11U	BENZYL BUTYL PHTHALATE
11U	2,3,4,6-TETRACHLOROPHENOL	11U	BIS(2-CHLOROETHOXY) METHANE
11U	2,4,5-TRICHLOROPHENOL	11U	BIS(2-ETHYLHEXYL) PHTHALATE
11U	2,4,6-TRICHLOROPHENOL	11U	CARBAZOLE
11U	2,4-DICHLOROPHENOL	11U	CHRYSENE
11U	2,4-DIMETHYLPHENOL	11U	DI-N-BUTYL PHTHALATE
23U	2,4-DINITROPHENOL	11U	DI-N-OCTYL PHTHALATE
11U	2,4-DINITROTOLUENE	11U	DIBENZO(A,H)ANTHRACENE
11U	2,6-DINITROTOLUENE	11U	DIBENZOFURAN
11U	2-CHLORONAPHTHALENE	11U	DIETHYL PHTHALATE
11U	2-CHLOROPHENOL	11U	DIMETHYL PHTHALATE
23U	2-METHYL-4,6-DINITROPHENOL	11U	FLUORANTHENE
11U	2-METHYLNAPHTHALENE	11U	FLUORENE
11U	2-METHYLPHENOL	11U	HEXACHLOROBENZENE (HCB)
11U	2-NITROANILINE	11U	HEXACHLOROBUTADIENE
11U	2-NITROPHENOL	11U	HEXACHLOROCYCLOPENTADIENE (HCCP)
11U	3,3'-DICHLOROBENZIDINE	11U	HEXACHLOROETHANE
11U	3-NITROANILINE	11U	INDENO (1,2,3-CD) PYRENE
11U	4-BROMOPHENYL PHENYL ETHER	11U	ISOPHORONE
11U	4-CHLORO-3-METHYLPHENOL	11U	N-NITROSODI-N-PROPYLAMINE
11U	4-CHLOROANILINE	11U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
11U	4-CHLOROPHENYL PHENYL ETHER	11U	NAPHTHALENE
23U	4-NITROPHENOL	11U	NITROBENZENE
11U	ACENAPHTHENE	23U	PENTACHLOROPHENOL
11U	ACENAPHTHYLENE	11U	PHENANTHRENE
11U	ANTHRACENE	11U	PHENOL
11U	BENZO(A)ANTHRACENE	11U	PYRENE
11U	BENZO(B AND/OR K)FLUORANTHENE		

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*N1-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
\*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

EXTRACTABLE ORGANICS DATA REPORT  
 \*\*\* PROJECT NO. 91-776 SAMPLE NO. 59692 SAMPLE TYPE: SURFACEWA  
 \*\* SOURCE: ABC ONE HOUR CLEANER  
 \*\* STATION ID: SW-T26-01A  
 \*\* COLLECTION START: 07/11/91 1550 STOP: 00/00/00  
 \*\* CITY: JACKSONVIL ST: NC  
 \*\* PROG ELEM: SSF COLLECTED BY: BILL MORRIS  
 \*\* \*\* \*\* \*\*

\*\*\* UG/L ANALYTICAL RESULTS UG/L \*\*\*

ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS	UG/L
(3-AND/OR 4-METHYLPHENOL	11U	BENZO(GHI)PERYLENE	11U
1,2,4-TRICHLOROBENZENE	11U	BENZO-A-PYRENE	11U
2,2'-CHLOROISOPROPYLEETHER	11U	BENZYL BUTYL PHTHALATE	11U
2,3,4,6-TETRACHLOROPHENOL	11U	BIS(2-CHLOROETHOXY) METHANE	11U
2,4,5-TRICHLOROPHENOL	11U	BIS(2-ETHYLHEXYL) PHTHALATE	11U
2,4,6-TRICHLOROPHENOL	11U	CARBAZOLE	11U
2,4-DICHLOROPHENOL	11U	CHRYSENE	11U
2,4-DIMETHYLPHENOL	11U	DI-N-BUTYL PHTHALATE	11U
2,4-DINITROPHENOL	22U	DI-N-OCTYL PHTHALATE	11U
2,4-DINITROTOLUENE	11U	DIBENZO(A,H)ANTHRACENE	11U
2,6-DINITROTOLUENE	11U	DIBENZOFURAN	11U
2-CHLORONAPHTHALENE	11U	DIETHYL PHTHALATE	11U
2-CHLOROPHENOL	11U	DIMETHYL PHTHALATE	11U
2-METHYL-4,6-DINITROPHENOL	22U	FLUORANTHENE	11U
2-METHYLNAPHTHALENE	11U	FLUORENE	11U
2-METHYLPHENOL	11U	HEXACHLOROBENZENE (HCB)	11U
2-NITROANILINE	11U	HEXACHLOROBUTADIENE	11U
2-NITROPHENOL	11U	HEXACHLOROCYCLOPENTADIENE (HCCP)	11U
3,3'-DICHLOROBENZIDINE	11U	HEXACHLOROETHANE	11U
3-NITROANILINE	11U	INDENO (1,2,3-CD) PYRENE	11U
4-BROMOPHENYL PHENYL ETHER	11U	ISOPHORONE	11U
4-CHLORO-3-METHYLPHENOL	11U	N-NITROSODI-N-PROPYLAMINE	11U
4-CHLOROANILINE	11U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE	11U
4-CHLOROPHENYL PHENYL ETHER	11U	NAPHTHALENE	11U
4-NITROANILINE	11U	NITROBENZENE	11U
4-NITROPHENOL	22U	PENTACHLOROPHENOL	22U
ACENAPHTHENE	11U	PHENANTHRENE	11U
ACENAPHTHYLENE	11U	PHENOL	11U
ANTHRACENE	11U	PYRENE	11U
BENZO(A)ANTHRACENE	11U		
BENZO(B AND/OR K)FLUORANTHENE	11U		

\*\*\*REMARKS\*\*\* \*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

07/29/91

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

\*\*\* PROJECT NO. 91-776 SAMPLE NO. 59692 SAMPLE TYPE: SURFACEWA  
\*\*\* SOURCE: ABC ONE HOUR CLEANER  
\*\*\* STATION ID: SW-T26-01A  
\*\*\* PROG ELEM: SSF COLLECTED BY: BILL MORRIS  
\*\*\* CITY: JACKSONVIL ST: NC  
\*\*\* COLLECTION START: 07/11/91 1550 STOP: 00/00/00  
\*\*\*

ANALYTICAL RESULTS UG/L

7JN CHLOROCYCLOHEXANE

\*\*\*FOOTNOTES\*\*\*  
\*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*K-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
\*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
\*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

07/29/91

EXTRACTABLE ORGANICS DATA REPORT  
 \*\*\* PROJECT NO. 91-776 SAMPLE NO. 59693 \*\*\*  
 \*\*\* SOURCE: ABC ONE HOUR CLEANER \*\*\*  
 \*\*\* STATION ID: SW-T26-01B \*\*\*

PROG ELEM: SSF COLLECTED BY: BILL MORRIS  
 CITY: JACKSONVILLE ST: NC  
 COLLECTION START: 07/11/91 1555 STOP: 00/00/00

ANALYTICAL RESULTS

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
11U	(3-AND/OR 4-METHYLPHENOL	11U	BENZO(GHI)PERYLENE
11U	1,2,4-TRICHLOROBENZENE	11U	BENZO-A-PYRENE
11U	2,2'-CHLOROISOPROPYLETHER	11U	BENZYL BUTYL PHTHALATE
11U	2,3,4,6-TETRACHLOROPHENOL	11U	BIS(2-CHLOROETHOXY) METHANE
11U	2,4,5-TRICHLOROPHENOL	11U	BIS(2-CHLOROETHYL) ETHER
11U	2,4,6-TRICHLOROPHENOL	11U	BIS(2-ETHYLHEXYL) PHTHALATE
11U	2,4-DICHLOROPHENOL	11U	CARBAZOLE
11U	2,4-DIMETHYLPHENOL	11U	CHRYSENE
22U	2,4-DINITROPHENOL	11U	DI-N-BUTYL PHTHALATE
11U	2,4-DINITROTOLUENE	11U	DI-N-OCTYL PHTHALATE
11U	2,6-DINITROTOLUENE	11U	DIBENZO(A,H)ANTHRACENE
11U	2-CHLORONAPHTHALENE	11U	DIBENZOFURAN
11U	2-CHLOROPHENOL	11U	DIETHYL PHTHALATE
22U	2-METHYL-4,6-DINITROPHENOL	11U	DIMETHYL PHTHALATE
11U	2-METHYLNAPHTHALENE	11U	FLUORANTHENE
11U	2-METHYLPHENOL	11U	FLUORENE
11U	2-NITROANILINE	11U	HEXACHLOROBENZENE (HCB)
11U	3,3'-DICHLOROBENZIDINE	11U	HEXACHLOROBUTADIENE
11U	3-NITROANILINE	11U	HEXACHLOROCYCLOPENTADIENE (HCCP)
11U	4-BROMOPHENYL PHENYL ETHER	11U	HEXACHLOROETHANE
11U	4-CHLORO-3-METHYLPHENOL	11U	INDENO (1,2,3-CD) PYRENE
11U	4-CHLOROANILINE	11U	ISOPHORONE
11U	4-CHLOROPHENYL PHENYL ETHER	11U	N-NITROSODI-N-PROPYLAMINE
11U	4-NITROANILINE	11U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
22U	4-NITROPHENOL	11U	NAPHTHALENE
11U	ACENAPHTHENE	11U	NITROBENZENE
11U	ACENAPHTHYLENE	22U	PENTACHLOROPHENOL
11U	ANTHRACENE	11U	PHENANTHRENE
11U	BENZO(A)ANTHRACENE	11U	PHENOL
11U	BENZO(B AND/OR K)FLUORANTHENE	11U	PYRENE

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

07/29/91

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

\*\*\*  
\*\* PROJECT NO. 91-776      SAMPLE NO. 59693      SAMPLE TYPE: SURFACEWA      PROG ELEM: SSF      COLLECTED BY: BILL MORRIS      \*\*  
\*\* SOURCE: ABC ONE HOUR CLEANER      CITY: JACKSONVIL      ST: NC      \*\*  
\*\* STATION ID: SW-T26-018      COLLECTION START: 07/11/91 1555      STOP: 00/00/00      \*\*  
\*\*\*

ANALYTICAL RESULTS UG/L

8JN    CHLOROCYCLOHEXANE

\*\*\*FOOTNOTES\*\*\*  
\*A-AVERAGE VALUE      \*NA-NOT ANALYZED      \*NAI-INTERFERENCES      \*J-ESTIMATED VALUE      \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN      \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
\*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
\*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSTS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

07/29/91

EXTRACTABLE ORGANICS DATA REPORT  
 \*\* PROJECT NO. 91-776 SAMPLE NO. 59689 SAMPLE TYPE: SURFACEWA  
 \*\* SOURCE: ABC ONE HOUR CLEANER  
 \*\* STATION ID: SW-T54-01  
 \*\* PROG ELEM: SSF COLLECTED BY: BILL MORRIS  
 \*\* CITY: JACKSONVIL ST: NC  
 \*\* COLLECTION START: 07/11/91 0940 STOP: 00/00/00

\*\*\* UG/L ANALYTICAL RESULTS \*\*\* UG/L ANALYTICAL RESULTS \*\*\*

ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS	UG/L
(3-AND/OR 4-)METHYLPHENOL	11U	BENZO(GHI)PERYLENE	11U
1,2,4-TRICHLOROBENZENE	11U	BENZO-A-PYRENE	11U
2,2'-CHLOROISOPROPYLETHER	11U	BENZYL BUTYL PHTHALATE	11U
2,3,4,6-TETRACHLOROPHENOL	11U	BIS(2-CHLOROETHOXY) METHANE	11U
2,4,5-TRICHLOROPHENOL	11U	BIS(2-CHLOROETHYL) ETHER	11U
2,4,6-TRICHLOROPHENOL	11U	BIS(2-ETHYLHEXYL) PHTHALATE	11U
2,4-DICHLOROPHENOL	11U	CARBAZOLE	11U
2,4-DIMETHYLPHENOL	11U	CHRYSENE	11U
2,4-DINITROPHENOL	23U	DI-N-BUTYLPHTHALATE	11U
2,4-DINITROTOLUENE	11U	DI-N-OCTYLPHTHALATE	11U
2,6-DINITROTOLUENE	11U	DIBENZO(A,H)ANTHRACENE	11U
2-CHLORONAPHTHALENE	11U	DIBENZOFURAN	11U
2-CHLOROPHENOL	11U	DIETHYL PHTHALATE	11U
2-METHYL-4,6-DINITROPHENOL	23U	DIMETHYL PHTHALATE	11U
2-METHYLNAPHTHALENE	11U	FLUORANTHENE	11U
2-METHYLPHENOL	11U	FLUORENE	11U
2-NITROANILINE	11U	HEXACHLOROBENZENE (HCB)	11U
2-NITROPHENOL	11U	HEXACHLOROBUTADIENE	11U
3,3'-DICHLOROBENZIDINE	11U	HEXACHLOROCYCLOPENTADIENE (HCCP)	11U
3-NITROANILINE	11U	HEXACHLOROETHANE	11U
4-BROMOPHENYL PHENYL ETHER	11U	INDENO (1,2,3-CD) PYRENE	11U
4-CHLORO-3-METHYLPHENOL	11U	ISOPHORONE	11U
4-CHLOROANILINE	11U	N-NITROSODI-N-PROPYLAMINE	11U
4-CHLOROPHENYL PHENYL ETHER	11U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE	11U
4-NITROANILINE	11U	NAPHTHALENE	11U
4-NITROPHENOL	23U	NITROBENZENE	11U
ACENAPHTHENE	11U	PENTACHLOROPHENOL	23U
ACENAPHTHYLENE	11U	PHENANTHRENE	11U
ANTHRACENE	11U	PHENOL	11U
BENZO(A)ANTHRACENE	11U	PYRENE	11U
BENZO(B AND/OR K)FLUORANTHENE	11U		

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
 \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

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Remedial Investigation Report  
ABC One-Hour Cleaners, Inc.  
Jacksonville, Onslow County, North Carolina  
Section: Appendix C  
Revision: 1  
Date: November 1992

**RESIDENTIAL WELLS AND SUPPLY WELLS**  
**PESTICIDES/PCBs**



SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

08/02/91

PESTICIDES/PCB'S DATA REPORT

\*\*\* PROJECT NO. 91-776 SAMPLE NO. 59694 SAMPLE TYPE: SURFACEWA  
 \*\*\* SOURCE: ABC ONE HOUR CLEANER  
 \*\*\* STATION ID: RW-001-01  
 \*\*\* PROG ELEM: SSF COLLECTED BY: BILL MORRIS  
 \*\*\* CITY: JACKSONVIL ST: NC  
 \*\*\* COLLECTION START: 07/12/91 1520 STOP: 00/00/00

UG/L ANALYTICAL RESULTS

0.12U ALDRIN  
 0.12U HEPTACHLOR  
 0.12U HEPTACHLOR EPOXIDE  
 0.12U ALPHA-BHC  
 0.12U BETA-BHC  
 0.12U GAMMA-BHC (LINDANE)  
 0.12U DELTA-BHC  
 0.12U ENDOSULFAN I (ALPHA)  
 0.12U DIELDRIN  
 0.30U 4,4'-DDT (P, P')  
 0.30U 4,4'-DDE (P, P')  
 0.30U 4,4'-DDD (P, P')  
 0.30U ENDRIN  
 0.30U ENDOSULFAN II (BETA)  
 0.30U ENDOSULFAN SULFATE  
 0.75U CHLORDANE (TECH. MIXTURE) /1  
 1.5U PCB-1242 (AROCLOR 1242)  
 1.5U PCB-1254 (AROCLOR 1254)  
 1.5U PCB-1221 (AROCLOR 1221)

UG/L ANALYTICAL RESULTS

1.5U PCB-1232 (AROCLOR 1232)  
 1.5U PCB-1248 (AROCLOR 1248)  
 1.5U PCB-1260 (AROCLOR 1260)  
 1.5U PCB-1016 (AROCLOR 1016)  
 12U TOXAPHENE  
 --- CHLORDANE /2  
 --- ALPHA-CHLORDENE /2  
 --- BETA-CHLORDENE /2  
 --- GAMMA-CHLORDENE /2  
 --- TRANS-CHLORDANE /2  
 --- TRANS-NONACHLOR /2  
 --- ALPHA-CHLORDANE /2  
 --- CIS-NONACHLOR /2  
 --- OXYCHLORDANE (OCTACHLOROPOXIDE) /2  
 --- METHOXYCHLOR  
 0.60U ENDRIN KETONE  
 0.30U

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAT-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT. C-CONFIRMED BY GC/MS  
 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS. 2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

PESTICIDES/PCB'S DATA REPORT  
 \*\*\* PROJECT NO. 91-776 SAMPLE NO. 59695 \*\*\*  
 \*\*\* SOURCE: ABC ONE HOUR CLEANER \*\*\*  
 \*\*\* STATION ID: RW-002-01 \*\*\*  
 \*\*\* ANALYTICAL RESULTS \*\*\*  
 UG/L

ANALYTICAL RESULTS		ANALYTICAL RESULTS	
CONCENTRATION	COMPOUND	CONCENTRATION	COMPOUND
0.12U	ALDRIN	1.5U	PCB-1232 (AROCLOR 1232)
0.12U	HEPTACHLOR	1.5U	PCB-1248 (AROCLOR 1248)
0.12U	HEPTACHLOR EPOXIDE	1.5U	PCB-1260 (AROCLOR 1260)
0.12U	ALPHA-BHC	12U	PCB-1016 (AROCLOR 1016)
0.12U	BETA-BHC	---	TOXAPHENE
0.12U	GAMMA-BHC (LINDANE)	---	CHLORDENE /2
0.12U	DELTA-BHC	---	ALPHA-CHLORDENE /2
0.12U	ENDOSULFAN I (ALPHA)	---	BETA-CHLORDENE /2
0.12U	DIELDRIN	---	GAMMA-CHLORDENE /2
0.30U	4,4'-DDT (P,P'-DDT)	---	GAMMA-CHLORDANE /2
0.30U	4,4'-DDE (P,P'-DDE)	---	TRANS-NONACHLOR /2
0.30U	4,4'-DDD (P,P'-DDD)	---	ALPHA-CHLORDANE /2
0.30U	ENDRIN	---	CIS-NONACHLOR /2
0.30U	ENDOSULFAN II (BETA)	0.60U	OXYCHLORDANE (OCTACHLOROPOXIDE) /2
0.30U	ENDOSULFAN SULFATE	0.30U	METHOXYCHLOR
0.75U	CHLORDANE (TECH. MIXTURE) /1		ENDRIN KETONE
1.5U	PCB-1242 (AROCLOR 1242)		
1.5U	PCB-1254 (AROCLOR 1254)		
1.5U	PCB-1221 (AROCLOR 1221)		

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT. C-CONFIRMED BY GC/MS  
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
 EPA-REGION IV ESD, ATHENS, GA.

08/02/91

PESTICIDES/PCB'S DATA REPORT  
 PROJECT NO. 91-776 SAMPLE NO. 59696 SAMPLE TYPE: SURFACEWA  
 SOURCE: ABC ONE HOUR CLEANER  
 STATION ID: RW-003-01  
 PROG ELEM: SSF COLLECTED BY: BILL MORRIS  
 CITY: JACKSONVIL ST: NC  
 COLLECTION START: 07/12/91 1955 STOP: 00/00/00

ANALYTICAL RESULTS UG/L ANALYTICAL RESULTS UG/L

0.12U ALDRIN	1.5U PCB-1232 (AROCLOR 1232)
0.12U HEPTACHLOR	1.5U PCB-1248 (AROCLOR 1248)
0.12U HEPTACHLOR EPOXIDE	1.5U PCB-1260 (AROCLOR 1260)
0.12U ALPHA-BHC	1.5U PCB-1016 (AROCLOR 1016)
0.12U BETA-BHC	TOXAPHENE
0.12U GAMMA-BHC (LINDANE)	CHLORDENE /2
0.12U DELTA-BHC	ALPHA-CHLORDENE /2
0.12U ENDOSULFAN I (ALPHA)	BETA CHLORDENE /2
0.12U DIELDRIN	GAMMA-CHLORDENE /2
0.30U 4,4'-DDT (P,P'-DDT)	GAMMA-CHLORDANE /2
0.30U 4,4'-DDE (P,P'-DDE)	TRANS-NONACHLOR /2
0.30U 4,4'-DDD (P,P'-DDD)	ALPHA-CHLORDANE /2
0.30U ENDRIN	CIS-NONACHLOR /2
0.30U ENDOSULFAN II (BETA)	OXYCHLORDANE (OCTACHLOROPOXIDE) /2
0.30U ENDOSULFAN SULFATE	METHOXYCHLOR
0.75U CHLORDANE (TECH. MIXTURE) /1	ENDRIN KETONE
1.5U PCB-1242 (AROCLOR 1242)	
1.5U PCB-1254 (AROCLOR 1254)	
1.5U PCB-1221 (AROCLOR 1221)	

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT. C-CONFIRMED BY GC/MS  
 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS. 2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
 EPA-REGION IV ESD, ATHENS, GA.

08/02/91

PESTICIDES/PCB'S DATA REPORT

\*\*\* PROJECT NO. 91-776 SAMPLE NO. 59691 SAMPLE TYPE: SURFACEWA  
 \*\*\* SOURCE: ABC ONE HOUR CLEANER  
 \*\*\* STATION ID: SW-123-01  
 \*\*\* PROG ELEM: SSF COLLECTED BY: BILL MORRIS  
 \*\*\* CITY: JACKSONVIL ST: NC  
 \*\*\* COLLECTION START: 07/11/91 1440 STOP: 00/00/00

UG/L ANALYTICAL RESULTS

0.12U ALDRIN  
 0.12U HEPTACHLOR EPOXIDE  
 0.12U ALPHA-BHC  
 0.12U BETA-BHC  
 0.12U GAMMA-BHC (LINDANE)  
 0.12U DELTA-BHC  
 0.12U ENDOSULFAN I (ALPHA)  
 0.12U DIELDRIN  
 0.30U 4,4'-DDT (P,P'-DDT)  
 0.30U 4,4'-DDE (P,P'-DDE)  
 0.30U 4,4'-DDD (P,P'-DDD)  
 0.30U ENDRIN  
 0.30U ENDOSULFAN II (BETA)  
 0.30U ENDOSULFAN SULFATE  
 0.75U CHLORDANE (TECH. MIXTURE) /1  
 1.5U PCB-1242 (AROCLOR 1242)  
 1.5U PCB-1254 (AROCLOR 1254)  
 1.5U PCB-1221 (AROCLOR 1221)

UG/L ANALYTICAL RESULTS

1.5U PCB-1232 (AROCLOR 1232)  
 1.5U PCB-1248 (AROCLOR 1248)  
 1.5U PCB-1260 (AROCLOR 1260)  
 1.5U PCB-1016 (AROCLOR 1016)  
 12U TOXAPHENE  
 --- CHLORDANE /2  
 --- ALPHA-CHLORDENE /2  
 --- BETA-CHLORDENE /2  
 --- GAMMA-CHLORDENE /2  
 --- TRANS-NONACHLOR /2  
 --- ALPHA-CHLORDANE /2  
 --- CIS-NONACHLOR /2  
 --- OXYCHLORDANE (OCTACHLOROPOXIDE) /2  
 --- METHOXYCHLOR  
 --- ENDRIN KETONE  
 0.60U  
 0.30U

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
 \*NA-NOT ANALYZED  
 \*NAI-INTERFERENCES  
 \*J-ESTIMATED VALUE  
 \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*C-CONFIRMED BY GC/MS  
 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.  
 2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
 EPA-REGION IV ESD, ATHENS, GA.

08/02/91

PESTICIDES/PCB'S DATA REPORT  
 PROJECT NO. 91-776 SAMPLE NO. 59690 SAMPLE TYPE: SURFACEWA  
 SOURCE: ABC ONE HOUR CLEANER  
 STATION ID: SW-T25-01  
 PROG ELEM: SSF COLLECTED BY: BILL MORRIS  
 CITY: JACKSONVIL ST: NC  
 COLLECTION START: 07/11/91 1055 STOP: 00/00/00

ANALYTICAL RESULTS

ANALYTICAL RESULTS

CONCENTRATION	COMPOUND	UNIT
0.12U	ALDRIN	UG/L
0.12U	HEPTACHLOR	UG/L
0.12U	HEPTACHLOR EPOXIDE	UG/L
0.12U	ALPHA-BHC	UG/L
0.12U	BETA-BHC	UG/L
0.12U	GAMMA-BHC (LINDANE)	UG/L
0.12U	DELTA-BHC	UG/L
0.12U	ENDOSULFAN I (ALPHA)	UG/L
0.12U	DIELDRIN	UG/L
0.30U	4,4'-DDT (P,P'-DDT)	UG/L
0.30U	4,4'-DDE (P,P'-DDE)	UG/L
0.30U	4,4'-DDD (P,P'-DDD)	UG/L
0.30U	ENDRIN	UG/L
0.30U	ENDOSULFAN II (BETA)	UG/L
0.30U	ENDOSULFAN SULFATE	UG/L
0.75U	CHLORDANE (TECH. MIXTURE)	/1
1.5U	PCB-1242 (AROCLOR 1242)	UG/L
1.5U	PCB-1254 (AROCLOR 1254)	UG/L
1.5U	PCB-1221 (AROCLOR 1221)	UG/L
1.5U	PCB-1232 (AROCLOR 1232)	UG/L
1.5U	PCB-1248 (AROCLOR 1248)	UG/L
1.5U	PCB-1260 (AROCLOR 1260)	UG/L
1.5U	PCB-1016 (AROCLOR 1016)	UG/L
12U	TOXAPHENE	UG/L
---	CHLORDANE /2	UG/L
---	ALPHA-CHLORDANE /2	UG/L
---	BETA-CHLORDANE /2	UG/L
---	GAMMA-CHLORDANE /2	UG/L
---	TRANS-NONACHLOR /2	UG/L
---	ALPHA-CHLORDANE /2	UG/L
---	CIS-NONACHLOR /2	UG/L
---	OXYCHLORDANE (OCTACHLOROPOXIDE) /2	UG/L
0.60U	METHOXYCHLOR	UG/L
0.30U	ENDRIN KETONE	UG/L

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT C-CONFIRMED BY GC/MS  
 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS. 2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
 EPA-REGION IV ESD, ATHENS, GA.

08/02/91

PESTICIDES/PCB'S DATA REPORT

\*\*\* PROJECT NO. 91-776 SAMPLE NO. 59692 SAMPLE TYPE: SURFACEWA  
 \*\*\* SOURCE: ABC ONE HOUR CLEANER  
 \*\*\* STATION ID: SW-T26-01A  
 \*\*\* PROG ELEM: SSF COLLECTED BY: BILL MORRIS  
 \*\*\* CITY: JACKSONWTL ST: NC  
 \*\*\* COLLECTION START: 07/11/91 1550 STOP: 00/00/00

ANALYTICAL RESULTS

ANALYTICAL RESULTS

UG/L  
 0.12U ALDRIN  
 0.12U HEPTACHLOR EPOXIDE  
 0.12U ALPHA-BHC  
 0.12U BETA-BHC  
 0.12U GAMMA-BHC (LINDANE)  
 0.12U DELTA-BHC  
 0.12U ENDOSULFAN I (ALPHA)  
 0.12U DIELDRIN  
 0.30U 4,4'-DDT (P,P'-DDT)  
 0.30U 4,4'-DDE (P,P'-DDE)  
 0.30U 4,4'-DDD (P,P'-DDD)  
 0.30U ENDRIN  
 0.30U ENDOSULFAN II (BETA)  
 0.30U ENDOSULFAN SULFATE  
 0.75U CHLORDANE (TECH. MIXTURE) /1  
 1.5U PCB-1242 (AROCOLOR 1242)  
 1.5U PCB-1254 (AROCOLOR 1254)  
 1.5U PCB-1221 (AROCOLOR 1221)

UG/L  
 1.5U PCB-1232 (AROCOLOR 1232)  
 1.5U PCB-1248 (AROCOLOR 1248)  
 1.5U PCB-1260 (AROCOLOR 1260)  
 1.5U PCB-1016 (AROCOLOR 1016)  
 12U TOXAPHENE  
 CHLORDANE /2  
 ALPHA-CHLORDENE /2  
 BETA-CHLORDENE /2  
 GAMMA-CHLORDENE /2  
 TRANS-NONACHLOR /2  
 ALPHA-CHLORDANE /2  
 CIS-NONACHLOR /2  
 OXYCHLORDANE (OCTACHLOROPOXIDE) /2  
 METHOXYCHLOR  
 ENDRIN KETONE  
 0.60U

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT. C-CONFIRMED BY GC/MS  
 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS. 2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

PESTICIDES/PCB'S DATA REPORT  
 \*\*\* PROJECT NO. 91-776 SAMPLE NO. 59693 SAMPLE TYPE: SURFACEWA  
 \*\*\* SOURCE: ABC ONE HOUR CLEANER  
 \*\*\* STATION ID: SW-T26-01B  
 \*\*\* PROG ELEM: SSF COLLECTED BY: BILL MORRIS  
 \*\*\* CITY: JACKSONVIL ST: NC  
 \*\*\* COLLECTION START: 07/11/91 1555 STOP: 00/00/00

\*\*\* UG/L ANALYTICAL RESULTS  
 \*\*\* UG/L ANALYTICAL RESULTS

ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS	UG/L
ALDRIN	0.12U	PCB-1232 (AROCLOR 1232)	1.5U
HEPTACHLOR	0.12U	PCB-1248 (AROCLOR 1248)	1.5U
HEPTACHLOR EPOXIDE	0.12U	PCB-1260 (AROCLOR 1260)	1.5U
ALPHA-BHC	0.12U	PCB-1016 (AROCLOR 1016)	12U
BETA-BHC	0.12U	TOXAPHENE	---
GAMMA-BHC (LINDANE)	0.12U	CHLORDENE	---
DELTA-BHC	0.12U	ALPHA-CHLORDENE /2	---
ENDOSULFAN I (ALPHA)	0.12U	BETA CHLORDENE /2	---
DIELDRIN	0.12U	GAMMA-CHLORDENE /2	---
4,4'-DDT (P,P'-DDT)	0.30U	GAMMA-CHLORDANE /2	---
4,4'-DDE (P,P'-DDE)	0.30U	TRANS-NONACHLOR /2	---
4,4'-DDD (P,P'-DDD)	0.30U	ALPHA-CHLORDANE /2	---
ENDRIN	0.30U	CIS-NONACHLOR /2	---
ENDOSULFAN II (BETA)	0.30U	OXYCHLORDANE (OCTACHLOROPOXIDE) /2	---
ENDOSULFAN SULFATE	0.30U	METHOXYCHLOR	0.60U
CHLORDANE (TECH. MIXTURE) /1	0.75U	ENDRIN KETONE	0.30U
PCB-1242 (AROCLOR 1242)	1.5U		
PCB-1254 (AROCLOR 1254)	1.5U		
PCB-1221 (AROCLOR 1221)	1.5U		

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

08/02/91

PESTICIDES/PCB'S DATA REPORT  
 \*\*\* PROJECT NO. 91-776 SAMPLE NO. 59689 SAMPLE TYPE: SURFACEWA  
 \*\*\* SOURCE: ABC ONE HOUR CLEANER  
 \*\*\* STATION ID: SW-T54-01  
 \*\*\* PROG ELEM: SSF COLLECTED BY: BILL MORRIS  
 \*\*\* CITY: JACKSONVIL SI: NC  
 \*\*\* COLLECTION START: 07/11/91 0940 STOP: 00/00/00

\*\*\* UG/L ANALYTICAL RESULTS ANALYTICAL RESULTS

0.12U	ALDRIN	1.5U	PCB-1232 (AROCOR 1232)
0.12U	HEPTACHLOR	1.5U	PCB-1248 (AROCOR 1248)
0.12U	HEPTACHLOR EPOXIDE	1.5U	PCB-1260 (AROCOR 1260)
0.12U	ALPHA-BHC	1.5U	PCB-1016 (AROCOR 1016)
0.12U	BETA-BHC	12U	TOXAPHENE
0.12U	GAMMA-BHC (LINDANE)	---	CHLORDENE /2
0.12U	DELTA-BHC	---	ALPHA-CHLORDENE /2
0.12U	ENDOSULFAN I (ALPHA)	---	BETA CHLORDENE /2
0.12U	DIELDRIN	---	GAMMA-CHLORDENE /2
0.30U	4,4'-DDT (P,P'-DDT)	---	GAMMA-CHLORDANE /2
0.30U	4,4'-DDE (P,P'-DDE)	---	TRANS-NONACHLOR /2
0.30U	4,4'-DDD (P,P'-DDD)	---	ALPHA-CHLORDANE /2
0.30U	ENDRIN	---	CIS-NONACHLOR /2
0.30U	ENDOSULFAN II (BETA)	---	OXYCHLORDANE (OCTACHLOROPOXIDE) /2
0.30U	ENDOSULFAN SULFATE	---	METHOXYCHLOR
0.75U	CHLORDANE (TECH. MIXTURE)	0.60U	ENDRIN KETONE
1.5U	PCB-1242 (AROCOR 1242)	0.30U	
1.5U	PCB-1254 (AROCOR 1254)		
1.5U	PCB-1221 (AROCOR 1221)		

\*\*\* REMARKS \*\*\*

\*\*\* FOOTNOTES \*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT. C-CONFIRMED BY GC/MS  
 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS. 2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.



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Remedial Investigation Report  
ABC One-Hour Cleaners, Inc.  
Jacksonville, Onslow County, North Carolina  
Section: Appendix C  
Revision: 1  
Date: November 1992

## **RESIDENTIAL WELLS AND SUPPLY WELLS**

### **METALS**

METALS DATA REPORT

PROJECT NO. 91-778 SAMPLE NO. 59694  
SOURCE: ABC ONE HOUR CLEANER  
STATION ID: RW-001-01

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

PROG ELEM: SSF COLLECTED BY: BILL MORRIS  
CITY: JACKSONVIL ST: NC  
COLLECTION START: 07/12/91 1520 STOP: 00/00/00

08/08/91

ANALYTICAL RESULTS

MG/L

100	SILVER	72	CALCIUM
300	ARSENIC	1.7	MAGNESIUM
NA	BORON	1.4	IRON
100	BARIUM	5.1	SODIUM
5.00	BERYLLIUM	2.00	POTASSIUM
5.00	CADMIUM		
100	COBALT		
100	CHROMIUM		
100	COPPER		
100	MOLYBDENUM		
200	NICKEL		
5.00	LEAD		
300	ANTIMONY		
400	SELENIUM		
250	TIN		
100	STRONTIUM		
500	TELLURIUM		
100	TITANIUM		
1000	THALLIUM		
100	VANADIUM		
100	YTRBIUM		
210	ZINC		
NA	ZIRCONIUM		
0.20	MERCURY		
100	ALUMINIUM		
19	MANGANESE		

ANALYTICAL RESULTS

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
\*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSTS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

08/08/91

METALS DATA REPORT

PROJECT NO. 91-776 SAMPLE NO. 50895 SAMPLE TYPE: SURFACEMA  
SOURCE: ABC ONE HOUR CLEANER  
STATION ID: RB-002-01  
PROG ELEM: SSF COLLECTED BY: BILL MORRIS  
CITY: JACKSONVIL ST: NC  
COLLECTION START: 07/12/91 1750 STOP: 00/00/00

ANALYTICAL RESULTS

UG/L	ME/L	ANALYTICAL RESULTS
10U	72	CALCIUM
30U	1.7	MAGNESIUM
NA	22	IRON
10U	4.6	SODIUM
5.0U	2.0U	POTASSIUM
9.3		
10U		
10U		
17		
10U		
20U		
98		
90U		
40U		
25U		
200		
50U		
10U		
100U		
10U		
6600		
NA		
0.2U		
120		
55		

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

08/08/91

METALS DATA REPORT

PROJECT NO. 91-776 SAMPLE NO. 59696 SAMPLE TYPE. SURFACEWA  
 SOURCE: ABC ONE HOUR CLEANER  
 STATION ID: RW-003-01  
 PROG ELEM: SSF COLLECTED BY: BILL MORRIS  
 CITY: JACKSONVIL ST: NC  
 COLLECTION START: 07/12/91 1955 STOP: 00/00/00

ANALYTICAL RESULTS  
 ANALYTICAL RESULTS

UG/L	MG/L	ANALYTICAL RESULTS
100	86	SILVER
300	1.5	ARSENIC
NA	0.77	BORON
100	4.8	BARIUM
5.00	2.00	BERYLLIUM
5.00	2.00	CADMIUM
100		COBALT
100		CHROMIUM
100		COPPER
100		MOLYBDENUM
200		NICKEL
5.00		LEAD
300		ANTHRONY
400		SELENIUM
250		TIN
180		STRONTIUM
500		TELLURIUM
100		TITANIUM
1000		THALLIUM
100		VANADIUM
100		ZINC
82		ZIRCONIUM
NA		MERCURY
0.20		ALUMINIUM
1000		MANGANESE
17		

\*\*\*\*REMARKS\*\*\*\*

\*\*\*\*REMARKS\*\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*M-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

08/08/91

METALS DATA REPORT  
 PROJECT NO. 91-778 SAMPLE NO. S06891 SAMPLE TYPE: SURFACEWA  
 SOURCE: ABC ONE HOUR CLEANER  
 STATION ID: SM-123-01  
 PROG ELEM: SSF COLLECTED BY: BILL MORRIS  
 CITY: JACKSONVIL ST: NC  
 COLLECTION START: 07/11/91 1440 STOP: 00/00/00

ANALYTICAL RESULTS  
 ANALYTICAL RESULTS

UG/L	MG/L	ANALYTICAL RESULTS
100	78	SILVER
300	2.6	ARSENIC
NA	4.5	BORON
100	8.1	BARIUM
5.00	2.00	BERYLLIUM
5.00		CADMIUM
100		COBALT
100		CHROMIUM
100		COPPER
100		MOLYBDENUM
200		NICKEL
5.00		LEAD
300		ANTIMONY
400		SELENIUM
250		TIN
240		STRONTIUM
500		TELLURIUM
100		TITANIUM
1000		THALLIUM
100		VANADIUM
100		YTRIUM
500		ZINC
NA		ZIRCONIUM
0.20		MERCURY
240		ALUMINUM
83		MANGANESE

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSTS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

08/08/91

METALS DATA REPORT

PROJECT NO. 91-776 SAMPLE NO. 58690 SAMPLE TYPE: SURFACEMA PROG ELEM: SSF COLLECTED BY: BILL MORRIS  
SOURCE: ABC ONE HOUR CLEANER CITY: JACKSONVIL ST: NC COLLECTION START: 07/11/91 1055 STOP: 00/00/00

ANALYTICAL RESULTS

UG/L ANALYTICAL RESULTS  
80 CALCIUM  
1.9 MAGNESIUM  
1.4 IRON  
5.3 SODIUM  
2.00 POTASSIUM

100 SILVER  
308 ARSENIC  
NA BORON  
100 BARIUM  
5.00 BERYLLIUM  
S.00 CADMIUM  
100 COBALT  
100 CHROMIUM  
14 COPPER  
100 MOLYBDENUM  
200 NICKEL  
S.00 LEAD  
300 ANTIMONY  
400 SELENIUM  
250 TIN  
220 STRONTIUM  
500 TELLURIUM  
100 TITANIUM  
1000 THALLIUM  
100 VANADIUM  
100 YTTRIUM  
140 ZINC  
NA ZIRCONIUM  
0.20 MERCURY  
130 ALUMINIUM  
28 MANGANESE

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*M-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

08/08/91

METALS DATA REPORT

PROJECT NO. 91-776 SAMPLE NO. 59692 SAMPLE TYPE: SURFACEWA PROG ELEM: SSF COLLECTED BY: BILL MORRIS  
SOURCE: ABC ONE HOUR CLEANER CITY: JACKSONVIL ST: NC COLLECTION START: 07/11/91 1550 STOP: 00/00/00  
STATION ID: SM-T28-01A

ANALYTICAL RESULTS

ANALYTICAL RESULTS

UG/L

UG/L

10U SILVER  
30U ARSENIC  
NA BORON  
10U BARIUM  
5.0U BERYLLIUM  
5.0U CADMIUM  
10U COBALT  
12 CHROMIUM  
140 COPPER  
10U MOLYBDENUM  
20U NICKEL  
13 LEAD  
30U ANTIMONY  
40U SELENIUM  
25U TIN  
220 STRONTIUM  
50U TELLURIUM  
10U TITANIUM  
100B THALLIUM  
10U VANADIUM  
10U YTTRIUM  
32 ZINC  
NA ZIRCONIUM  
0.2U MERCURY  
170 ALUMINIUM  
110 MANGANESE

77 CALCIUM  
1.8 MAGNESIUM  
7.2 IRON  
5.2 SODIUM  
2.0U POTASSIUM

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*K-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
\*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTIFICATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

08/08/91

METALS DATA REPORT

PROJECT NO. 91-776 SAMPLE NO. 59693 SAMPLE TYPE: SURFACEWA PROG ELEM: SSF COLLECTED BY: BILL MORRIS  
SOURCE: ABC ONE HOUR CLEANER CITY: JACKSONVIL ST: NC COLLECTION START: 07/11/91 1556 STOP: 00/00/00  
STATION ID: SM-T26-01B

ANALYTICAL RESULTS

ANALYTICAL RESULTS

MG/L

100	SILVER	76	CALCIUM
300	ARSENIC	1.7	MAGNESIUM
NA	BORON	4.2	IRON
100	BARIIUM	5.0	SODIUM
5.00	BERYLLIUM	2.00	POTASSIUM
5.00	CADMIUM		
100	COBALT		
100	CHROMIUM		
54	COPPER		
100	MOLYBDENUM		
200	NICKEL		
7.6	LEAD		
300	ANTIMONY		
400	SELENIUM		
250	TIN		
220	STRONTIUM		
500	TELLURIUM		
100	TITANIUM		
1000	THALLIUM		
100	VANADIUM		
100	YTRIUM		
27	ZINC		
NA	ZIRCONIUM		
0.20	MERCURY		
1.40	ALUMINUM		
85	MANGANESE		

\*\*\*\*REMARKS\*\*\*\*

\*\*\*\*REMARKS\*\*\*\*

\*\*\*\*FOOTNOTES\*\*\*\*

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METALS DATA REPORT

PROJECT NO. 91-776 SAMPLE NO. 59689 SAMPLE TYPE: SURFACE MA PROG ELEM: SSF COLLECTED BY: BILL MORRIS  
SOURCE: ABC ONE HOUR CLEANER STATION ID: SN-154-01 CITY: JACKSONVILLE ST: NC COLLECTION START: 07/11/91 09:40 STOP: 00/00/00

08/08/91

ANALYTICAL RESULTS

ANALYTICAL RESULTS

UG/L

MG/L

100 SILVER  
300 ARSENIC  
NA BORON  
100 BARIUM  
5.00 BERYLLIUM  
5.00 CADMIUM  
100 COBALT  
100 CHROMIUM  
20 COPPER  
100 MOLYBDENUM  
200 NICKEL  
5.0 LEAD  
300 ANTIMONY  
400 SELENIUM  
250 TIN  
320 STRONTIUM  
500 TELLURIUM  
1000 THALLIUM  
100 VANADIUM  
100 YTTRIUM  
20 ZINC  
NA ZIRCONIUM  
0.20 MERCURY  
120 ALUMINIUM  
51 MANGANESE

94 CALCIUM  
2.0 MAGNESIUM  
4.0 IRON  
6.7 SODIUM  
2.00 POTASSIUM

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

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Remedial Investigation Report  
ABC One-Hour Cleaners, Inc.  
Jacksonville, Onslow County, North Carolina  
Section: Appendix C  
Revision: 1  
Date: November 1992

**RESIDENTIAL WELLS AND SUPPLY WELLS**  
**CYANIDE**

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

07/30/91

SPECIFIED ANALYSIS DATA REPORT

\*\*\*  
\*\* PROJECT NO. 91-776    SAMPLE NO. 59694    SAMPLE TYPE: SURFACEWA    PROG ELEM: SSF    COLLECTED BY: BILL MORRIS    \*\*\*  
\*\* SOURCE: ABC ONE HOUR CLEANER    CITY: JACKSONVIL    ST: NC    \*\*\*  
\*\* STATION ID: RW-001-01    COLLECTION START: 07/12/91 1520    STOP: 00/00/00    \*\*\*  
\*\*  
\*\*\*

RESULTS    UNITS    PARAMETER  
          4U UG/L    CYANIDE

\*\*\*FOOTNOTES\*\*\*  
\*A-AVERAGE VALUE    \*NA-NOT ANALYZED    \*N1-INTERFERENCES    \*J-ESTIMATED VALUE    \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN    \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

07/30/91

SPECIFIED ANALYSIS DATA REPORT

\*\*\*  
\*\* PROJECT NO. 91-776      SAMPLE NO. 59695      PROG ELEM: SSF      COLLECTED BY: BILL MORRIS      \*\*\*  
\*\* SOURCE: ABC ONE HOUR CLEANER      CITY: JACKSONVIL      ST: NC      \*\*\*  
\*\* STATION ID: RW-002-01      COLLECTION START: 07/12/91 1750      STOP: 00/00/00      \*\*\*  
\*\*\*

RESULTS    UNITS    PARAMETER  
            4U    UG/L    CYANIDE

\*\*\*FOOTNOTES\*\*\*  
\*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*K-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

07/30/91

SPECIFIED ANALYSIS DATA REPORT

\*\*\* PROJECT NO. 91-776 SAMPLE NO. 59696 SAMPLE TYPE: SURFACEWA  
\*\*\* SOURCE: ABC ONE HOUR CLEANER PROG ELEM: SSF COLLECTED BY: BILL MORRIS  
\*\*\* STATION ID: RW-003-01 CITY: JACKSONVIL ST: NC  
\*\*\* COLLECTION START: 07/12/91 1955 STOP: 00/00/00

RESULTS UNITS PARAMETER  
4U UG/L CYANIDE

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
 EPA-REGION IV ESD, ATHENS, GA.

07/30/91

SPECIFIED ANALYSIS DATA REPORT

\*\*\* PROJECT NO. 91-776 SAMPLE NO. 59691 \*\*\*  
 \*\* SOURCE: ABC ONE HOUR CLEANER \*\*  
 \*\* STATION ID: SW-T23-01 \*\*  
 \*\*\*  
 \*\* SAMPLE TYPE: SURFACEWA \*\*  
 \*\* PROG ELEM: SSF \*\*  
 \*\* CITY: JACKSONVIL \*\*  
 \*\* COLLECTION START: 07/11/91 1440 \*\*  
 \*\* COLLECTION BY: BILL MORRIS \*\*  
 \*\* ST, NC \*\*  
 \*\* STOP: 00/00/00 \*\*  
 \*\*\*

RESULTS UNITS PARAMETER  
 4U UG/L CYANIDE

\*\*\* FOOTNOTES \*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

07/30/91

SPECIFIED ANALYSIS DATA REPORT

\*\*\* PROJECT NO. 91-776 SAMPLE NO. 59690 SAMPLE TYPE: SURFACEWA PROG ELEM: SSF COLLECTED BY: BILL MORRIS \*\*\*  
\*\* SOURCE: ABC ONE HOUR CLEANER CITY: JACKSONVIL ST: NC \*\*  
\*\* STATION ID: SW-T25-01 COLLECTION START: 07/11/91 1055 STOP: 00/00/00 \*\*  
\*\*\*

RESULTS UNITS PARAMETER  
4U UG/L CYANIDE

\*\*\*FOOTNOTES\*\*\*  
\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

07/30/91

SPECIFIED ANALYSIS DATA REPORT

\*\*\* \*\* \*\* \*\* \*\*  
\*\* PROJECT NO. 91-776 SAMPLE NO. 59692 SAMPLE TYPE: SURFACEWA PROG ELEM: SSF COLLECTED BY: BILL MORRIS \*\* \*\* \*\*  
\*\* SOURCE: ABC ONE HOUR CLEANER CITY: JACKSONVIL ST: NC \*\* \*\* \*\*  
\*\* STATION ID: SW-T26-01A COLLECTION START: 07/11/91 1550 STOP: 00/00/00 \*\* \*\* \*\*  
\*\* \*\* \*\* \*\*

RESULTS UNITS PARAMETER  
4U UG/L CYANIDE

\*\*\*FOOTNOTES\*\*\*  
\*A-AVERAGE VALUE  
\*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
\*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
\*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
\*NA-NOT ANALYZED \*NAI-INTERFERENCES  
\*O-AVERAGE VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN



SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

07/30/91

SPECIFIED ANALYSIS DATA REPORT

\*\*\*  
\*\* PROJECT NO. 91-776 SAMPLE NO. 59693  
\*\* SOURCE: ABC ONE HOUR CLEANER SAMPLE TYPE: SURFACEWA  
\*\* STATION ID: SW-T26-01B COLLECTION START: 07/11/91 1555 STOP: 00/00/00  
\*\*\*

PROG ELEM: SSF COLLECTED BY: BILL MORRIS  
CITY: JACKSONVIL ST: NC

RESULTS UNITS PARAMETER  
4U UG/L CYANIDE

\*\*\*FOOTNOTES\*\*\*  
\*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
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\*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

07/30/91

SPECIFIED ANALYSIS DATA REPORT

\*\*\* PROJECT NO. 91-776 SAMPLE NO. 59689 SAMPLE TYPE: SURFACEWA PROG ELEM: SSF COLLECTED BY: BILL MORRIS \*\*\*  
\*\* SOURCE: ABC ONE HOUR CLEANER CITY: JACKSONWIL ST: NC \*\*  
\*\* STATION ID: SW-T54-01 COLLECTION START: 07/11/91 0940 STOP: 00/00/00 \*\*  
\*\*\*

RESULTS UNITS PARAMETER  
4U UG/L CYANIDE

\*\*\* FOOTNOTES \*\*\*  
\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
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\*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

This document was prepared by Roy F. Weston, Inc., expressly for EPA. It shall not be released or disclosed, in whole or in part, without the express written permission of EPA.

Remedial Investigation Report  
ABC One-Hour Cleaners, Inc.  
Jacksonville, Onslow County, North Carolina  
Section: Appendix C  
Revision: 1  
Date: November 1992

## **RESIDENTIAL WELLS AND SUPPLY WELLS QA/QC**

**VOLATILES**

**SEMI-VOLATILES**

**PESTICIDES/PCBs**

**METALS**

**CYANIDE**

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

07/17/91

PURGEABLE ORGANICS DATA REPORT  
 \*\*\* PROJECT NO. 91-776 SAMPLE NO. 59697 SAMPLE TYPE: SURFACEWA PROG ELEM: SSF COLLECTED BY: BILL MORRIS  
 \*\* SOURCE: ABC ONE HOUR CLEANER CITY: JACKSONVIL ST: NC  
 \*\* STATION ID: TB-000-02 COLLECTION START: 07/13/91 1200 STOP: 00/00/00

\*\*\* UG/L \*\*\* ANALYTICAL RESULTS \*\*\* UG/L \*\*\* ANALYTICAL RESULTS \*\*\*

5.0U CHLOROMETHANE  
 5.0U VINYL CHLORIDE  
 5.0U BROMOMETHANE  
 5.0U CHLOROETHANE  
 5.0U TRICHLOROFLUOROMETHANE  
 5.0U 1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)  
 5.0U ACETONE  
 12U CARBON DISULFIDE  
 5.0U METHYLENE CHLORIDE  
 5.0U TRANS-1,2-DICHLOROETHENE  
 5.0U 1,1-DICHLOROETHANE  
 12U VINYL ACETATE  
 5.0U CIS-1,2-DICHLOROETHENE  
 5.0U 2,2-DICHLOROPROPANE  
 5.0U METHYL ETHYL KETONE  
 5.0U BROMOCHLOROMETHANE  
 5.0U CHLOROFORM  
 5.0U 1,1,1-TRICHLOROETHANE  
 5.0U 1,1-DICHLOROPROPENE  
 5.0U CARBON TETRACHLORIDE  
 5.0U 1,2-DICHLOROETHANE  
 5.0U BENZENE  
 5.0U TRICHLOROETHENE(TRICHLOROETHYLENE)  
 5.0U 1,2-DICHLOROPROPANE  
 5.0U DIBROMOMETHANE  
 5.0U BROMODICHLOROMETHANE

5.0U CIS-1,3-DICHLOROPROPENE  
 12U METHYL ISOBUTYL KETONE  
 5.0U TOLUENE  
 5.0U TRANS-1,3-DICHLOROPROPENE  
 5.0U 1,1,2-TRICHLOROETHANE  
 5.0U TETRACHLOROETHENE(TETRACHLOROETHYLENE)  
 5.0U 1,3-DICHLOROPROPANE  
 12U METHYL BUTYL KETONE  
 5.0U DIBROMOCHLOROMETHANE  
 5.0U CHLOROBENZENE  
 5.0U 1,1,1,2-TETRACHLOROETHANE  
 5.0U ETHYL BENZENE  
 5.0U (M- AND/OR P-)XYLENE  
 5.0U STYRENE  
 5.0U BROMOFORM  
 5.0U BROMOBENZENE  
 5.0U 1,1,2,2-TETRACHLOROETHANE  
 5.0U 1,2,3-TRICHLOROPROPANE  
 5.0U O-CHLOROTOLUENE  
 5.0U P-CHLOROTOLUENE  
 5.0U 1,3-DICHLOROBENZENE  
 5.0U 1,4-DICHLOROBENZENE  
 5.0U 1,2-DICHLOROBENZENE

\*\*\* FOOTNOTES \*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
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 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

07/29/91

EXTRACTABLE ORGANICS DATA REPORT

\*\*\* \*\* \*\* \*\* \*\*  
 PROJECT NO. 91-776 SAMPLE NO. 59697 SAMPLE TYPE: SURFACEWA  
 SOURCE: ABC ONE HOUR CLEANER  
 STATION ID: TB-000-02  
 PROG ELEM: SSF COLLECTED BY: BILL MORRIS  
 CITY: JACKSONVILLE ST: NC  
 COLLECTION START: 07/13/91 1200 STOP: 00/00/00

ANALYTICAL RESULTS

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
100	(3-AND/OR 4-METHYLPHENOL	100	BENZO(GHI)PERYLENE
100	1,2,4-TRICHLOROBENZENE	100	BENZO-A-PYRENE
100	2,2'-CHLOROISOPROPYLETHER	100	BENZYL BUTYL PHTHALATE
100	2,3,4,6-TETRACHLOROPHENOL	100	BIS(2-CHLOROETHOXY) METHANE
100	2,4,5-TRICHLOROPHENOL	100	BIS(2-CHLOROETHYL) ETHER
100	2,4,6-TRICHLOROPHENOL	100	BIS(2-ETHYLHEXYL) PHTHALATE
100	2,4-DICHLOROPHENOL	100	CARBAZOLE
100	2,4-DIMETHYLPHENOL	100	CHRYSENE
200	2,4-DINITROPHENOL	100	DI-N-BUTYLPHTHALATE
100	2,4-DINITROTOLUENE	100	DI-N-OCTYLPHTHALATE
100	2,6-DINITROTOLUENE	100	DIBENZO(A,H)ANTHRACENE
100	2-CHLORONAPHTHALENE	100	DIBENZOFURAN
100	2-CHLOROPHENOL	100	DIETHYL PHTHALATE
200	2-METHYL-4,6-DINITROPHENOL	100	DIMETHYL PHTHALATE
100	2-METHYLNAPHTHALENE	100	FLUORANTHENE
100	2-METHYLPHENOL	100	FLUORENE
100	2-NITROANILINE	100	HEXACHLOROBENZENE (HCB)
100	2-NITROPHENOL	100	HEXACHLOROBUTADIENE
100	3,3'-DICHLOROBENZIDINE	100	HEXACHLOROCYCLOPENTADIENE (HCCP)
100	3-NITROANILINE	100	HEXACHLOROETHANE
100	4-BROMOPHENYL PHENYL ETHER	100	INDENO (1,2,3-CD) PYRENE
100	4-CHLORO-3-METHYLPHENOL	100	ISOPHORONE
100	4-CHLOROANILINE	100	N-NITROSODI-N-PROPYLAMINE
100	4-CHLOROPHENYL PHENYL ETHER	100	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
200	4-NITROPHENOL	100	NAPHTHALENE
100	ACENAPHTHENE	100	NITROBENZENE
100	ACENAPHTHYLENE	200	PENTACHLOROPHENOL
100	ANTHRACENE	100	PHENANTHRENE
100	BENZO(A)ANTHRACENE	100	PHENOL
100	BENZO(B AND/OR K)FLUORANTHENE	100	PYRENE

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

08/02/91

PESTICIDES/PCB'S DATA REPORT

\*\*\* PROJECT NO. 91-776 SAMPLE NO. 59697 SAMPLE TYPE: SURFACEWA  
 \*\*\* SOURCE: ABC ONE HOUR CLEANER  
 \*\*\* STATION ID: TB-000-02  
 \*\*\* PROG ELEM: SSF COLLECTED BY: BILL MORRIS  
 \*\*\* CITY: JACKSONVIL ST: NC  
 \*\*\* COLLECTION START: 07/13/91 1200 STOP: 00/00/00

ANALYTICAL RESULTS

ANALYTICAL RESULTS

UG/L  
 0.10U ALDRIN  
 0.10U HEPTACHLOR  
 0.10U HEPTACHLOR EPOXIDE  
 0.10U ALPHA-BHC  
 0.10U BETA-BHC  
 0.10U GAMMA-BHC (LINDANE)  
 0.10U DELTA-BHC  
 0.10U ENDOSULFAN I (ALPHA)  
 0.10U DIELDRIN  
 0.25U 4,4'-DDT (P,P'-DDT)  
 0.25U 4,4'-DDE (P,P'-DDE)  
 0.25U 4,4'-DDD (P,P'-DDD)  
 0.25U ENDRIN  
 0.25U ENDOSULFAN II (BETA)  
 0.25U CHLORDANE (TECH MIXTURE) /1  
 0.65U CHLORDANE (AROCLOR 1242)  
 1.5U PCB-1242 (AROCLOR 1242)  
 1.5U PCB-1254 (AROCLOR 1254)  
 1.5U PCB-1221 (AROCLOR 1221)

UG/L  
 1.5U PCB-1232 (AROCLOR 1232)  
 1.5U PCB-1248 (AROCLOR 1248)  
 1.5U PCB-1260 (AROCLOR 1260)  
 1.5U PCB-1016 (AROCLOR 1016)  
 10U TOXAPHENE  
 --- CHLORDANE /2  
 --- ALPHA-CHLORDENE /2  
 --- BETA CHLORDENE /2  
 --- GAMMA-CHLORDENE /2  
 --- GAMMA-CHLORDANE /2  
 --- TRANS-NONACHLOR /2  
 --- ALPHA-CHLORDANE /2  
 --- CIS-NONACHLOR /2  
 --- OXYCHLORDANE (OCTACHLOROPOXIDE) /2  
 0.50U METHOXYCHLOR  
 0.25U ENDRIN KETONE

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

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 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT. C-CONFIRMED BY GC/MS  
 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS. 2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

08/08/91

METALS DATA REPORT  
 PROJECT NO. 91-776 SAMPLE NO. 59697 SAMPLE TYPE: SURFACEWA  
 SOURCE: ABC ONE HOUR CLEANER  
 STATION ID: 78-000-02  
 PROG ELEM: SSF COLLECTED BY: BILL MORRIS  
 CITY: JACKSONVIL ST: NC  
 COLLECTION START: 07/13/91 1200 STOP: 00/00/00

ANALYTICAL RESULTS

MG/L

CONCENTRATION	ELEMENT	UNIT
100	SILVER	0.50U CALCIUM
300	ARSENIC	0.10U MAGNESIUM
NA	BORON	0.050U IRON
100	BARIUM	1.0U SODIUM
5.0U	BERYLLIUM	2.0U POTASSIUM
5.0U	CADMIUM	
100	CORAL	
100	CHROMIUM	
100	COPPER	
100	MOLYBDENUM	
200	NICKEL	
5.0U	LEAD	
300	ANTIMONY	
400	SELENIUM	
250	TIN	
100	STRONTIUM	
500	TELLURIUM	
100	TITANIUM	
1000	THALLIUM	
100	VANADIUM	
100	YTRIUM	
100	ZINC	
NA	ZIRCONIUM	
0.20	MERCURY	
1000	ALUMINUM	
100	MANGANESE	

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

07/30/91

SPECIFIED ANALYSIS DATA REPORT

\*\*\*  
\*\* PROJECT NO. 91-776 SAMPLE NO. 59697 SAMPLE TYPE: SURFACEWA  
\*\* SOURCE: ABC ONE HOUR CLEANER PROG ELEM: SSF COLLECTED BY: BILL MORRIS  
\*\* STATION ID: TB-000-02 CITY: JACKSONVIL ST: NC  
\*\* COLLECTION START: 07/13/91 1200 STOP: 00/00/00  
\*\*\* \*\*

RESULTS UNITS PARAMETER  
4U UG/L CYANIDE

\*\*\*FOOTNOTES\*\*\*  
\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
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Remedial Investigation Report  
ABC One-Hour Cleaners, Inc  
Jacksonville, Onslow County, North Carolina  
Section Appendix C  
Revision 1  
Date November 1992

## **DIRECT-PUSH TECHNOLOGY SPLIT SAMPLES**

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
ENVIRONMENTAL SERVICES DIVISION  
REGION IV  
960 COLLEGE STATION RD.  
ATHENS, GA 30613

MEMORANDUM

DATE: September 30, 1992

SUBJECT: Evaluation of Split Sample Data from ABC One-Hour  
Cleaner, Jacksonville, NC

FROM: John P. McConney *J.P. McConney*  
Environmental Scientist  
Laboratory Evaluation & Quality Assurance Section

TO: Darcy Duin, RPM  
North Superfund Remedial Branch  
Waste Management Division

THRU: Wade Knight, Chief *WK*  
Laboratory Evaluation & Quality Assurance Section

We have received and evaluated data for 25 water samples which were collected at the subject site in December of 1991. The samples were split between a mobile laboratory operated by In-Situ Technology and a CLP laboratory.

The split samples were analyzed for a select group of 13 volatile organic compounds (VOCs) by the mobile laboratory using method 601. There was poor qualitative and quantitative agreement between the two laboratories for these analyses. The mobile laboratory claimed a detection limit of 1 ug/L for benzene but did not report any positive values for benzene. However, the CLP laboratory reported benzene in seven samples in amounts ranging from 1J to 12. The mobile laboratory also consistently failed to detect trichloroethene and 1,2-dichloroethene. The CLP lab reported twelve positive values for these compounds in amounts that ranged from 4J to 5700 ug/L. Both laboratories reported the presence of tetrachloroethene in fourteen samples; however, the numerical agreement was poor with the mobile laboratory reporting lower amounts of tetrachloroethene in most samples. Please note that the CLP laboratory reported positive values for carbon disulfide in eighteen samples in amounts that ranged from 8J to 110 ug/L. This compound was not included in the 13 VOCs that the mobile laboratory analyzed for.

The mobile laboratory did not receive ESD blank and spike samples for analysis.

Based on the limited split sample results, the data from the mobile laboratory does not appear to be acceptable.

Copies of the ESD split sample data are attached. If you have any concerns or questions please contact me at (706) 546-2445.

Attachments

CC: Bokey/Hall w/o attachments

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region IV  
Environmental Services Division  
College Station Road, Athens, Ga. 30613

12/14-19/91  
\*\*\*\*\*MEMORANDUM\*\*\*\*\*

DATE: 02/06/92

SUBJECT: Results of Purgeable Organic Analysis;  
92-0176 ABC ONE-HOUR CLEANER  
JACKSONVIL NC  
CASE NO: 17580

FROM: Robert W. Knight  
Chief, Laboratory Evaluation/Quality Assurance Section

TO: WADE KNIGHT

Attached are the results of analysis of samples collected as part of the subject project.

As a result of the Quality Assurance Review, certain data qualifiers may have been placed on the data. Attached is a DATA QUALIFIER REPORT which explains the reasons that these qualifiers were required.

If you have any questions please contact me.

ATTACHMENT

FEB 18 1992

ORGANIC DATA QUALIFIER REPORT

Case Number 17580 Project Number 92-0176 SAS Number  
Site ID. ABC One-Hour Cleaner, Jacksonville, NC.

<u>Affected Samples</u>	<u>Compound or Fraction</u>	<u>Flag Used</u>	<u>Reason</u>
<u>Volatiles</u>			
64336,64337,64349	trichloroethene	J	<quantitation limit
64348	benzene	J	<quantitation limit
64349	1,2-dichloroethene	J	<quantitation limit

PURGEABLE ORGANICS DATA REPORT  
 SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
 EPA-REGION IV ESD, ATHENS, GA.

02/05/92

PROJECT NO. 92-0176 SAMPLE NO. 64935 SAMPLE TYPE: GROUNDWA  
 SOURCE: ABC ONE-HOUR CLEANER  
 STATION ID: FB-000-04  
 PROG ELEM: SSF COLLECTED BY: B MORRIS  
 CITY: JACKSONVIL ST: NC  
 COLLECTION START: 12/18/91 1705 STOP: 00/00/00

CASE NO.: 17580 SAS NO.: D. NO.: BX18  
 UG/L UG/L UG/L ANALYTICAL RESULTS ANALYTICAL RESULTS

ANALYTICAL RESULTS	ANALYTICAL RESULTS
CHLOROMETHANE	1,2-DICHLOROPROPANE
BROMOMETHANE	CIS-1,3-DICHLOROPROPENE
VINYL CHLORIDE	TRICHLOROETHENE (TRICHLOROETHYLENE)
CHLOROETHANE	DIBROMOCHLOROMETHANE
METHYLENE CHLORIDE	1,1,2-TRICHLOROETHANE
ACETONE	BENZENE
CARBON DISULFIDE	TRANS-1,3-DICHLOROPROPENE
1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	BROMOFORM
1,1-DICHLOROETHANE	METHYL ISOBUTYL KETONE
1,2-DICHLOROETHENE (TOTAL)	METHYL BUTYL KETONE
CHLOROFORM	TETRACHLOROETHENE (TETRACHLOROETHYLENE)
1,2-DICHLOROETHANE	1,1,2,2-TETRACHLOROETHANE
METHYL ETHYL KETONE	TOLUENE
1,1,1-TRICHLOROETHANE	CHLOROETHYLENE
CARBON TETRACHLORIDE	ETHYL BENZENE
BROMODICHLOROMETHANE	STYRENE
	TOTAL XYLENES

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
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 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
 \*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

02/05/92

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT  
PROJECT NO. 92-0176 SAMPLE NO. 64336 SAMPLE TYPE: GROUNDWA  
SOURCE: ABC ONE-HOUR CLEANER  
STATION ID: DP-044-01A  
CASE NO.: 17580  
D. NO.: BX19  
PROG ELEM: SSF COLLECTED BY: B MORRIS  
CITY: JACKSONVIL ST: NC  
COLLECTION START: 12/19/91 1155 STOP: 00/00/00

ANALYTICAL RESULTS  
UG/L

ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS	UG/L
CHLOROMETHANE	10U	1,2-DICHLOROPROPANE	10U
BROMOMETHANE	10U	CIS-1,3-DICHLOROPROPENE	10U
VINYL CHLORIDE	10U	TRICHLOROETHENE (TRICHLOROETHYLENE)	5J
CHLOROETHANE	10U	DIBROMOCHLOROMETHANE	10U
METHYLENE CHLORIDE	10U	1,1,2-TRICHLOROETHANE	10U
ACETONE	10U	BENZENE	10U
CARBON DISULFIDE	21	TRANS-1,3-DICHLOROPROPENE	10U
1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	10U	BROMOFORM	10U
1,1-DICHLOROETHANE	10U	METHYL ISOBUTYL KETONE	10U
1,2-DICHLOROETHENE (TOTAL)	17	METHYL BUTYL KETONE	10U
CHLOROFORM	10U	TETRACHLOROETHENE (TETRACHLOROETHYLENE)	13
1,2-DICHLOROETHANE	10U	1,1,2,2-TETRACHLOROETHANE	10U
METHYL ETHYL KETONE	10U	TOLUENE	10U
1,1,1-TRICHLOROETHANE	10U	CHLOROBENZENE	10U
CARBON TETRACHLORIDE	10U	ETHYL BENZENE	10U
BROMODICHLOROMETHANE	10U	STYRENE	10U
		TOTAL XYLENES	10U

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
\*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*K-ACTUAL VALUE WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT  
\*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT  
\*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

PURGEABLE ORGANICS DATA REPORT  
 \*\*\* PROJECT NO. 92-0176 SAMPLE NO. 64337 SAMPLE TYPE: GROUNDWA  
 \*\*\* SOURCE: ABC ONE-HOUR CLEANER  
 \*\*\* STATION ID: DP-044-1B  
 \*\*\* CASE NO. 17580 SAS NO. : D. NO. : BX20  
 \*\*\* UG/L ANALYTICAL RESULTS UG/L ANALYTICAL RESULTS  
 \*\*\* PROG ELEM: SSF COLLECTED BY: B MORRIS  
 \*\*\* CITY: JACKSONVILLE ST: NC  
 \*\*\* COLLECTION START: 12/19/91 1155 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
10U	CHLOROMETHANE	10U	1,2-DICHLOROPROPANE
10U	BROMOMETHANE	10U	CIS-1,3-DICHLOROPROPENE
10U	VINYL CHLORIDE	6J	TRICHLOROETHENE (TRICHLOROETHYLENE)
10U	CHLOROETHANE	10U	DIBROMOCHLOROMETHANE
10U	METHYLENE CHLORIDE	10U	1,1,2-TRICHLOROETHANE
10U	ACETONE	10U	BENZENE
23	CARBON DISULFIDE	10U	TRANS-1,3-DICHLOROPROPENE
10U	1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	10U	BROMOFORM
10U	1,1-DICHLOROETHANE	10U	METHYL ISOBUTYL KETONE
17	1,2-DICHLOROETHENE (TOTAL)	10U	METHYL BUTYL KETONE
10U	CHLOROFORM	13	TETRACHLOROETHENE (TETRACHLOROETHYLENE)
10U	1,2-DICHLOROETHANE	10U	1,1,2,2-TETRACHLOROETHANE
10U	METHYL ETHYL KETONE	10U	TOLUENE
10U	1,1,1-TRICHLOROETHANE	10U	CHLOROETHYLENE
10U	CARBON TETRACHLORIDE	10U	ETHYL BENZENE
10U	BROMODICHLOROMETHANE	10U	STYRENE
		10U	TOTAL XYLENES

\*\*\*REMARKS\*\*\*

\*\*\* FOOTNOTES \*\*\*  
 \*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
 \*K-ACTUAL VALUE WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION  
 \*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT.  
 \*NAT-INTERFERENCES  
 \*J-ESTIMATED VALUE  
 \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL



SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

02/05/92

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 92-0176 SAMPLE NO. 64340 SAMPLE TYPE: GROUNDWA  
SOURCE: ABC ONE-HOUR CLEANER  
STATION ID: RB-000-04  
COLLECTION START: 12/19/91 1545 STOP: 00/00/00  
CITY: JACKSONVILLE ST: NC  
PROG ELEM. SSF COLLECTED BY: B MORRIS

CASE NO.: 17580 SAS NO.: D. NO.: BX22  
UG/L UG/L ANALYTICAL RESULTS ANALYTICAL RESULTS

ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS	UG/L
CHLOROMETHANE	100	1,2-DICHLOROPROPANE	100
BROMOMETHANE	100	CIS-1,3-DICHLOROPROPENE	100
VINYL CHLORIDE	100	TRICHLOROETHENE (TRICHLOROETHYLENE)	100
CHLOROETHANE	100	DIBROMOCHLOROMETHANE	100
METHYLENE CHLORIDE	100	1,1,2-TRICHLOROETHANE	100
ACETONE	100	BENZENE	100
CARBON DISULFIDE	100	TRANS-1,3-DICHLOROPROPENE	100
1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	100	BROMOFORM	100
1,1-DICHLOROETHANE	100	METHYL ISOBUTYL KETONE	100
1,2-DICHLOROETHENE (TOTAL)	100	METHYL BUTYL KETONE	100
CHLOROFORM	100	TETRACHLOROETHENE (TETRACHLOROETHYLENE)	100
1,2-DICHLOROETHANE	100	1,1,2,2-TETRACHLOROETHANE	100
METHYL ETHYL KETONE	100	TOLUENE	100
1,1,1-TRICHLOROETHANE	100	CHLOROETHENE	100
CARBON TETRACHLORIDE	100	ETHYL BENZENE	100
BROMODICHLOROMETHANE	100	STYRENE	100
		TOTAL XYLENES	100

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*K-ACTUAL VALUE WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT. \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
\*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
\*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

02/05/92

PURGEABLE ORGANICS DATA REPORT  
 PROJECT NO. 92-0176 SAMPLE NO. 64341 SAMPLE TYPE: GROUNDWA  
 SOURCE: ABC ONE-HOUR CLEANER  
 STATION ID: DP-017-01  
 PROG ELEM: SSF COLLECTED BY: B MORRIS  
 CITY: JACKSONVIL ST: NC  
 COLLECTION START: 12/14/91 1055 STOP: 00/00/00

CASE NO.: 17580 SAS NO.: D. NO.: BX01  
 ANALYTICAL RESULTS ANALYTICAL RESULTS

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
100	CHLOROMETHANE	100	1,2-DICHLOROPROPANE
100	BROMOMETHANE	100	CIS-1,3-DICHLOROPROPENE
100	VINYL CHLORIDE	100	TRICHLOROETHENE (TRICHLOROETHYLENE)
100	CHLOROETHANE	100	DIBROMOCHLOROMETHANE
100	METHYLENE CHLORIDE	100	1,1,2-TRICHLOROETHANE
100	ACETONE	100	BENZENE
100	CARBON DISULFIDE	100	TRANS-1,3-DICHLOROPROPENE
100	1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	100	BROMOFORM
100	1,1-DICHLOROETHANE	100	METHYL ISOBUTYL KETONE
100	1,2-DICHLOROETHANE	100	METHYL BUTYL KETONE
100	CHLOROFORM	100	TETRACHLOROETHENE (TETRACHLOROETHYLENE)
100	1,2-DICHLOROETHANE	100	1,1,2,2-TETRACHLOROETHANE
100	METHYL ETHYL KETONE	100	TOLUENE
100	1,1,1-TRICHLOROETHANE	100	CHLOROETHYLENE
100	CARBON TETRACHLORIDE	100	ETHYL BENZENE
100	BROMODICHLOROMETHANE	100	STYRENE
		100	TOTAL XYLENES

\*\*\*REMARKS\*\*\*  
 \*\*\*REMARKS\*\*\*  
 \*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAJ-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
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02/05/92

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 92-0176 SAMPLE NO. 64342 SAMPLE TYPE: GROUNDWA  
SOURCE: ABC ONE-HOUR CLEANER  
STATION ID: DP-020-01  
PROG ELEM: SSF COLLECTED BY: B MORRIS  
CITY: JACKSONVIL ST: NC  
COLLECTION START: 12/14/91 1105 STOP: 00/00/00

CASE NO.: 17580 SAS NO.: D. NO.: BX02  
UG/L UG/L ANALYTICAL RESULTS ANALYTICAL RESULTS

CONCENTRATION	ANALYTICAL RESULTS	CONCENTRATION	ANALYTICAL RESULTS
17000	CHLOROMETHANE	17000	1,2-DICHLOROPROPANE
17000	BROMOMETHANE	17000	CIS-1,3-DICHLOROPROPENE
17000	VINYL CHLORIDE	2900	TRICHLOROETHENE (TRICHLOROETHYLENE)
17000	CHLOROETHANE	17000	DIBROMOCHLOROMETHANE
17000	METHYLENE CHLORIDE	17000	1,1,2-TRICHLOROETHANE
17000	ACETONE	17000	BENZENE
17000	CARBON DISULFIDE	17000	TRANS-1,3-DICHLOROPROPENE
17000	1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	17000	BROMOFORM
17000	1,1-DICHLOROETHANE	17000	METHYL ISOBUTYL KETONE
5700	1,2-DICHLOROETHENE (TOTAL)	17000	METHYL BUTYL KETONE
17000	CHLOROFORM	30000	TETRACHLOROETHENE (TETRACHLOROETHYLENE)
17000	1,2-DICHLOROETHANE	17000	1,1,2,2-TETRACHLOROETHANE
17000	METHYL ETHYL KETONE	17000	TOLUENE
17000	1,1,1-TRICHLOROETHANE	17000	CHLOROBENZENE
17000	CARBON TETRACHLORIDE	17000	ETHYL BENZENE
17000	BROMODICHLOROMETHANE	17000	STYRENE
		17000	TOTAL XYLENES

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

- \*A-AVERAGE VALUE
- \*NA-NOT ANALYZED
- \*NAI-INTERFERENCES
- \*J-ESTIMATED VALUE
- \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
- \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
- \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
- \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
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PROJECT NO. 92-0176 SAMPLE NO. 64343 SAMPLE TYPE: GROUNDWA  
 SOURCE: ABC ONE-HOUR CLEANER  
 STATION ID: DP-017-02  
 PROG ELEM. SSF COLLECTED BY: B MORRIS  
 CITY JACKSONVILLE ST: NC  
 COLLECTION START. 12/14/91 1140 STOP: 00/00/00

CASE NO.: 17580 SAS NO.: D NO.: BX03  
 UG/L ANALYTICAL RESULTS ANALYTICAL RESULTS

ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS	UG/L
CHLOROMETHANE	100	1,2-DICHLOROPROPANE	100
BROMOMETHANE	100	CIS-1,3-DICHLOROPROPENE	100
VINYL CHLORIDE	100	TRICHLOROETHENE (TRICHLOROETHYLENE)	100
CHLOROETHANE	100	DIBROMOCHLOROMETHANE	100
METHYLENE CHLORIDE	200	1,1,2-TRICHLOROETHANE	100
ACETONE	100	BENZENE	100
CARBON DISULFIDE	14	TRANS-1,3-DICHLOROPROPENE	100
1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	100	BROMOFORM	100
1,1-DICHLOROETHANE	100	METHYL ISOBUTYL KETONE	100
1,2-DICHLOROETHANE (TOTAL)	100	METHYL BUTYL KETONE	100
CHLOROFORM	100	TETRACHLOROETHENE (TETRACHLOROETHYLENE)	100
1,2-DICHLOROETHANE	100	1,1,2,2-TETRACHLOROETHANE	100
METHYL ETHYL KETONE	100	TOLUENE	100
1,1,1-TRICHLOROETHANE	100	CHLOROBENZENE	100
CARBON TETRACHLORIDE	100	ETHYL BENZENE	100
BROMODICHLOROMETHANE	100	STYRENE	100
		TOTAL XYLENES	100

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
 \*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION  
 \*NA-NOT ANALYZED  
 \*NAI-INTERFERENCES  
 \*J-ESTIMATED VALUE  
 \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

02/05/92

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 92-0176 SAMPLE NO. 64344 SAMPLE TYPE: GROUNDWA  
SOURCE: ABC ONE-HOUR CLEANER  
STATION ID: DP-019-01  
PROG ELEM: SSF COLLECTED BY: B MORRIS  
CITY: JACKSONVIL ST: NC  
COLLECTION START: 12/14/91 1340 STOP: 00/00/00

CASE NO.: 17580 SAS NO.: D. NO.: BX04  
UG/L ANALYTICAL RESULTS UG/L ANALYTICAL RESULTS

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
17U	CHLOROMETHANE	17U	1,2-DICHLOROPROPANE
17U	BROMOMETHANE	17U	CIS-1,3-DICHLOROPROPENE
30	VINYL CHLORIDE	100	TRICHLOROETHENE (TRICHLOROETHYLENE)
17U	CHLOROETHANE	17U	DIBROMOCHLOROMETHANE
17U	METHYLENE CHLORIDE	17U	1,1,2-TRICHLOROETHANE
17U	ACETONE	17U	BENZENE
17U	CARBON DISULFIDE	17U	TRANS-1,3-DICHLOROPROPENE
17U	1,1-DICHLOROETHANE (1,1-DICHLOROETHYLENE)	17U	BROMOFORM
17U	1,1-DICHLOROETHANE	17U	METHYL ISOBUTYL KETONE
170	1,2-DICHLOROETHANE (TOTAL)	17U	METHYL BUTYL KETONE
17U	CHLOROFORM	200	TETRACHLOROETHENE (TETRACHLOROETHYLENE)
17U	1,2-DICHLOROETHANE	17U	1,1,2,2-TETRACHLOROETHANE
17U	METHYL ETHYL KETONE	17U	TOLUENE
17U	1,1,1-TRICHLOROETHANE	17U	CHLOROBENZENE
17U	CARBON TETRACHLORIDE	17U	ETHYL BENZENE
17U	BROMODICHLOROMETHANE	17U	STYRENE
		17U	TOTAL XYLENES

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*NA1-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
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\*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION

PURGEABLE ORGANICS DATA REPORT  
 SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
 EPA-REGION IV ESD, ATHENS, GA.

02/05/92

PROJECT NO. 92-0176 SAMPLE NO. 64345 SAMPLE TYPE: GROUNDWA  
 SOURCE: ABC ONE-HOUR CLEANER  
 STATION ID: DP-020-02  
 CASE NO.: 17580  
 D. NO.: BX05  
 PROG ELEM: SSF COLLECTED BY: B MORRIS  
 CITY: JACKSONVIL ST: NC  
 COLLECTION START: 12/14/91 1205 STOP: 00/00/00  
 ANALYTICAL RESULTS ANALYTICAL RESULTS

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
100	CHLOROMETHANE	100	1,2-DICHLOROPROPANE
100	BROMOMETHANE	100	CIS-1,3-DICHLOROPROPENE
100	VINYL CHLORIDE	29	TRICHLOROETHENE (TRICHLOROETHYLENE)
100	CHLOROETHANE	100	DIBROMOCHLOROMETHANE
100	METHYLENE CHLORIDE	100	1,1,2-TRICHLOROETHANE
100	ACETONE	100	BENZENE
53	CARBON DISULFIDE	100	TRANS-1,3-DICHLOROPROPENE
100	1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	100	BROMOFORM
100	1,1-DICHLOROETHANE	100	METHYL ISOBUTYL KETONE
89	1,2-DICHLOROETHENE (TOTAL)	100	METHYL BUTYL KETONE
100	CHLOROFORM	43	TETRACHLOROETHENE (TETRACHLOROETHYLENE)
100	1,2-DICHLOROETHANE	100	1,1,2,2-TETRACHLOROETHANE
100	METHYL ETHYL KETONE	100	TOLUENE
100	1,1,1-TRICHLOROETHANE	100	CHLOROBENZENE
100	CARBON TETRACHLORIDE	100	ETHYL BENZENE
100	BROMODICHLOROMETHANE	100	STYRENE
		100	TOTAL XYLENES

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
 \*K-ACTUAL VALUE WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTIFICATION LIMIT  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTIFICATION LIMIT  
 \*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.  
 \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*\*\*REMARKS\*\*\*  
 \*\*\*REMARKS\*\*\*

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

02/05/92

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 92-0176 SAMPLE NO. 64346 SAMPLE TYPE: GROUNDWA  
 SOURCE: ABC ONE-HOUR CLEANER  
 STATION ID: DP-021-01  
 PROG ELEM: SSF COLLECTED BY: B MORRIS  
 CITY: JACKSONVIL ST: NC  
 COLLECTION START: 12/15/91 1010 STOP: 00/00/00

CASE NO.: 17580 SAS NO.: D. NO.: BX09  
 UG/L ANALYTICAL RESULTS UG/L ANALYTICAL RESULTS

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
360U	CHLOROMETHANE	360U	1,2-DICHLOROPROPANE
360U	BROMOMETHANE	360U	CIS-1,3-DICHLOROPROPENE
360U	VINYL CHLORIDE	1100	TRICHLOROETHENE (TRICHLOROETHYLENE)
360U	CHLOROETHANE	360U	DIBROMOCHLOROMETHANE
360U	METHYLENE CHLORIDE	360U	1,1,2-TRICHLOROETHANE
360U	ACETONE	360U	BENZENE
360U	CARBON DISULFIDE	360U	TRANS-1,3-DICHLOROPROPENE
360U	1,1-DICHLOROETHANE (1,1-DICHLOROETHYLENE)	360U	BROMOFORM
360U	1,1-DICHLOROETHANE	360U	METHYL ISOBUTYL KETONE
2300	1,2-DICHLOROETHENE (TOTAL)	360U	METHYL BUTYL KETONE
360U	CHLOROFORM	6900	TETRACHLOROETHENE (TETRACHLOROETHYLENE)
360U	1,2-DICHLOROETHANE	360U	1,1,2,2-TETRACHLOROETHANE
360U	METHYL ETHYL KETONE	360U	TOLUENE
360U	1,1,1-TRICHLOROETHANE	360U	CHLOROBENZENE
360U	CARBON TETRACHLORIDE	360U	ETHYL BENZENE
360U	BROMODICHLOROMETHANE	360U	STYRENE
		360U	TOTAL XYLENES

\*\*\*\*REMARKS\*\*\*\*

\*\*\*\*REMARKS\*\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*NA1-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

02/05/92

PURGEABLE ORGANICS DATA REPORT  
 PROJECT NO. 92-0176 SAMPLE NO. 64347 SAMPLE TYPE: GROUNDWA  
 SOURCE: ABC ONE-HOUR CLEANER  
 STATION ID: DP-036-01  
 COLLECTION START: 12/18/91 0930 STOP: 00/00/00  
 CITY: JACKSONVIL ST: NC  
 PROG ELEM: SSF COLLECTED BY: B MORRIS

CASE NO.: 17580 SAS NO.: D. NO.: BX10  
 UG/L UG/L UG/L

ANALYTICAL RESULTS

ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS	UG/L
CHLOROMETHANE	100	1,2-DICHLOROPROPANE	100
BROMOMETHANE	100	CIS-1,3-DICHLOROPROPENE	100
VINYL CHLORIDE	100	TRICHLOROETHENE (TRICHLOROETHYLENE)	100
CHLOROETHANE	100	DIBROMOCHLOROMETHANE	100
METHYLENE CHLORIDE	100	1,1,2-TRICHLOROETHANE	100
ACETONE	100	BENZENE	100
CARBON DISULFIDE	50	TRANS-1,3-DICHLOROPROPENE	100
1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	100	BROMOFORM	100
1,1-DICHLOROETHANE	100	METHYL ISOBUTYL KETONE	100
1,2-DICHLOROETHANE (TOTAL)	100	METHYL BUTYL KETONE	100
CHLOROFORM	100	TETRACHLOROETHENE (TETRACHLOROETHYLENE)	100
1,2-DICHLOROETHANE	100	1,1,2,2-TETRACHLOROETHANE	100
METHYL ETHYL KETONE	100	TOLUENE	100
1,1,1-TRICHLOROETHANE	100	CHLOROETHYLENE	100
CARBON TETRACHLORIDE	100	ETHYL BENZENE	100
BROMODICHLOROMETHANE	100	STYRENE	100
		TOTAL XYLENES	100

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
 \*K-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
 \*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.  
 \*NA-NOT ANALYZED  
 \*NAI-INTERFERENCES  
 \*J-ESTIMATED VALUE  
 \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL



SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

02/05/92

PURGEABLE ORGANICS DATA REPORT  
 \*\*\* PROJECT NO. 92-0176 SAMPLE NO. 64348 SAMPLE TYPE: GROUNDWA PROG ELEM: SSF COLLECTED BY: B MORRIS  
 \*\* SOURCE: ABC ONE-HOUR CLEANER STATION ID: DP-039-01 CITY: JACKSONVIL ST: NC  
 \*\* COLLECTION START: 12/18/91 1059 STOP: 00/00/00  
 \*\* CASE NO.: 17580 SAS NO.: D. NO.: BX12

UG/L ANALYTICAL RESULTS UG/L ANALYTICAL RESULTS

100	CHLOROMETHANE	100	1,2-DICHLOROPROPANE
100	BROMOMETHANE	100	CIS-1,3-DICHLOROPROPENE
100	VINYL CHLORIDE	100	TRICHLOROETHENE (TRICHLOROETHYLENE)
100	CHLOROETHANE	100	DIBROMOCHLOROMETHANE
100	METHYLENE CHLORIDE	100	1,1,2-TRICHLOROETHANE
100	ACETONE	1J	BENZENE
58	CARBON DISULFIDE	100	TRANS-1,3-DICHLOROPROPENE
100	1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	100	BROMOFORM
100	1,1-DICHLOROETHANE	100	METHYL ISOBUTYL KETONE
100	1,2-DICHLOROETHENE (TOTAL)	100	METHYL BUTYL KETONE
100	CHLOROFORM	100	TETRACHLOROETHENE (TETRACHLOROETHYLENE)
100	1,2-DICHLOROETHANE	100	1,1,2,2-TETRACHLOROETHANE
100	METHYL ETHYL KETONE	100	TOLUENE
100	1,1,1-TRICHLOROETHANE	100	CHLOROBENZENE
100	CARBON TETRACHLORIDE	120	ETHYL BENZENE
100	BROMODICHLOROMETHANE	100	STYRENE
		57	TOTAL XYLENES

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
 \*K-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

02/05/92

PURGEABLE ORGANICS DATA REPORT  
 PROJECT NO. 92-0176 SAMPLE NO. 64349 SAMPLE TYPE: GROUNDWA  
 SOURCE: ABC ONE-HOUR CLEANER  
 STATION ID: DP-041-01  
 PROG ELEM: SSF COLLECTED BY: B MORRIS  
 CITY: JACKSONVILLE ST. NC  
 COLLECTION START: 12/18/91 1400 STOP: 00/00/00

CASE NO.: 17580 SAS NO.: D. NO.: BX14  
 UG/L ANALYTICAL RESULTS UG/L ANALYTICAL RESULTS

ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS	UG/L
CHLOROMETHANE	10U	1,2-DICHLOROPROPANE	10U
BROMOMETHANE	10U	CIS-1,3-DICHLOROPROPENE	10U
VINYL CHLORIDE	10U	TRICHLOROETHENE (TRICHLOROETHYLENE)	4J
CHLOROETHANE	10U	DIBROMOCHLOROMETHANE	10U
METHYLENE CHLORIDE	10U	1,1,2-TRICHLOROETHANE	10U
ACETONE	10U	BENZENE	10U
CARBON DISULFIDE	13	TRANS-1,3-DICHLOROPROPENE	10U
1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	10U	BROMOFORM	10U
1,1-DICHLOROETHANE	10U	METHYL ISOBUTYL KETONE	10U
4J	10U	METHYL BUTYL KETONE	10U
1,2-DICHLOROETHENE (TOTAL)	120	TETRACHLOROETHENE (TETRACHLOROETHYLENE)	10U
CHLOROFORM	10U	1,1,2,2-TETRACHLOROETHANE	10U
1,2-DICHLOROETHANE	10U	TOLUENE	10U
METHYL ETHYL KETONE	10U	CHLOROBENZENE	10U
1,1,1-TRICHLOROETHANE	10U	ETHYL BENZENE	10U
CARBON TETRACHLORIDE	10U	STYRENE	10U
BROMODICHLOROMETHANE	10U	TOTAL XYLENES	10U

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*N1-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
 \*R-OC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

02/05/92

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 92-0176 SAMPLE NO. 64350 SAMPLE TYPE: GROUNDWA  
 SOURCE: ABC ONE-HOUR CLEANER  
 STATION ID: RB-000-03  
 PROG ELEM: SSF COLLECTED BY: B MORRIS  
 CITY: JACKSONVIL ST: NC  
 COLLECTION START: 12/18/91 1700 STOP: 00/00/00

CASE NO.: 17580 SAS NO.: D. NO.: BX15  
 UG/L UG/L UG/L ANALYTICAL RESULTS ANALYTICAL RESULTS

ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS	UG/L
CHLOROMETHANE	10U	1,2-DICHLOROPROPANE	10U
BROMOMETHANE	10U	CIS-1,3-DICHLOROPROPENE	10U
VINYL CHLORIDE	10U	TRICHLOROETHENE (TRICHLOROETHYLENE)	10U
CHLOROETHANE	10U	DIBROMOCHLOROMETHANE	10U
METHYLENE CHLORIDE	20U	1,1,2-TRICHLOROETHANE	10U
ACETONE	10U	BENZENE	10U
CARBON DISULFIDE	10U	TRANS-1,3-DICHLOROPROPENE	10U
1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	10U	BROMOFORM	10U
1,1-DICHLOROETHANE	10U	METHYL ISOBUTYL KETONE	10U
1,2-DICHLOROETHENE (TOTAL)	10U	METHYL BUTYL KETONE	10U
CHLOROFORM	10U	TETRACHLOROETHENE (TETRACHLOROETHYLENE)	10U
1,2-DICHLOROETHANE	10U	1,1,2,2-TETRACHLOROETHANE	10U
METHYL ETHYL KETONE	10U	TOLUENE	10U
1,1,1-TRICHLOROETHANE	10U	CHLOROBENZENE	10U
CARBON TETRACHLORIDE	10U	ETHYL BENZENE	10U
BROMODICHLOROMETHANE	10U	STYRENE	10U
		TOTAL XYLENES	10U

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
 \*J-ESTIMATED VALUE \*N-I-INTERFERENCES \*N-N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT  
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

02/05/92

MISCELLANEOUS PURGEABLE ORGANICS - DATA REPORT

PROJECT NO. 92-0176 SAMPLE NO. 64348 SAMPLE TYPE: GROUNDWA  
SOURCE: ABC ONE-HOUR CLEANER  
STATION ID: DP-039-01 SAS NO.:  
CASE NO.: 17580  
PROG ELEM: SSF COLLECTED BY: B MORRIS  
CITY: JACKSONVIL ST: NC  
COLLECTION START: 12/18/91 1059 STOP: 00/00/00  
D. NO.: BX12 MD NO:

ANALYTICAL RESULTS UG/L

400JN METHYLPENTANE (2 ISOMERS)  
100JN METHYLPENTENE  
200JN CYCLOHEXANE  
100JN METHYLCYCLOHEXANE  
80JN TRIMETHYLBENZENE  
300J 4 UNIDENTIFIED COMPOUNDS

\*\*\*\*\* FOOTNOTES \*\*\*\*\*  
\*A-AVERAGE VALUE  
\*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
\*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
\*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.  
\*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
\*NA-NOT ANALYZED  
\*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
\*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region IV  
Environmental Services Division  
College Station Road, Athens, Ga. 30613

12/11-13797  
\*\*\*\*\*MEMORANDUM\*\*\*\*\*

DATE: 01/15/92

SUBJECT: Results of Purgeable Organic Analysis;  
92-0175 ABC ONE-HOUR CLEANUP  
JACKSONVILLE  
CASE NO: 17535

FROM: Robert W. Knight  
Chief, Laboratory Evaluation/Quality Assurance Section

TO: WADE KNIGHT

Attached are the results of analysis of samples collected as part of the subject project.

As a result of the Quality Assurance Review, certain data qualifiers may have been placed on the data. Attached is a DATA QUALIFIER REPORT which explains the reasons that these qualifiers were required.

If you have any questions please contact me.

ATTACHMENT

JAN 23 1992

ORGANIC DATA QUALIFIER REPORT

Case Number 17535 Project Number 92-0175 SAS Number  
 Site ID. ABC One-Hour Cleaner, Jacksonville, NC.

<u>Affected Samples</u>	<u>Compound or Fraction</u>	<u>Flag Used</u>	<u>Reason</u>
<u>Volatiles</u>			
64351-64354, 64358, 64360	tetrachloroethene	J	<quantitation limit
64353, 64355-64356, 64359, 64364	benzene	J	<quantitation limit
64354, 64357-64358, 64363	carbon disulfide	J	<quantitation limit
64355	trichloroethene	J	<quantitation limit

PURGEABLE, ORGANICS DATA REPORT  
 SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
 EPA-REGION IV ESD, ATHENS, GA

01/14/92

PROJECT NO. 92-0175 SAMPLE NO. 64351 SAMPLE TYPE: GROUNDWA  
 SOURCE: ABC ONE-HOUR CLEANER  
 STATION ID DP-005-01  
 CASE NO. 17535 SAS NO. D NO CJ16  
 COLLECTION START 12/11/91 1830 STOP. 00/00/00  
 CITY JACKSONVIL ST. NC  
 COLLECTED BY B MORRIS  
 PROG ELEM SSF  
 ANALYTICAL RESULTS

ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
CHLOROMETHANE	10U	1,2-DICHLOROPROPANE
BROMOMETHANE	10U	CIS-1,3-DICHLOROPROPENE
VINYL CHLORIDE	10U	TRICHLOROETHENE (TRICHLOROETHYLENE)
CHLOROETHANE	10U	DIBROMOCHLOROMETHANE
METHYLENE CHLORIDE	10U	1,1,2-TRICHLOROETHANE
ACETONE	12	BENZENE
CARBON DISULFIDE	10U	TRANS-1,3-DICHLOROPROPENE
1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	10U	BROMOFORM
1,1-DICHLOROETHANE	10U	METHYL ISOBUTYL KETONE
1,2-DICHLOROETHENE (TOTAL)	10U	METHYL BUTYL KETONE
CHLOROFORM	2J	TETRACHLOROETHENE (TETRACHLOROETHYLENE)
1,2-DICHLOROETHANE	10U	1,1,2-TETRACHLOROETHANE
METHYL ETHYL KETONE	10U	TOLUENE
1,1,1-TRICHLOROETHANE	10U	CHLOROETHYLENE
CARBON TETRACHLORIDE	10U	ETHYL BENZENE
BROMODICHLOROMETHANE	10U	STYRENE
		TOTAL XYLENES

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT  
 \*R-QC INDICATES THAT DATA UNUSABLE COMPOUND MAY OR MAY NOT BE PRESENT RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION  
 \*NA-NOT ANALYZED  
 \*NAI-INTERFERENCES  
 \*J-ESTIMATED VALUE  
 \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA

01/14/92

PURGEABLE ORGANICS DATA REPORT

PROJECT NO 92-0175 SAMPLE NO. 64352 SAMPLE TYPE. GROUNDWA  
SOURCE ABL ONE-HOUR CLEANER  
STATION ID DP-007-02  
PROG ELEM SSF COLLECTED BY B MORRIS  
CITY JACKSONVIL  
COLLECTION START 12/12/91 1020 STOP 00/00/00  
SI NC

CASE NO 17535 SAS NO D NO CJ17

ANALYTICAL RESULTS

ANALYTICAL RESULTS

UG/L

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
100	CHLOROMETHANE	100	1,2-DICHLOROPROPANE
100	BROMOMETHANE	100	CIS-1 3-DICHLOROPROPENE
100	VINYL CHLORIDE	100	TRICHLOROETHENE (TRICHLOROETHYLENE)
100	CHLOROETHANE	100	DIBROMOCHLOROMETHANE
100	METHYLENE CHLORIDE	100	1,1,2-TRICHLOROETHANE
100	ACETONE	100	BENZENE
14	CARBON DISULFIDE	100	TRANS-1 3-DICHLOROPROPENE
100	1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	100	BROMOFORM
100	1,1-DICHLOROETHANE	100	METHYL ISOBUTYL KETONE
100	1,2-DICHLOROETHENE (TOTAL)	100	METHYL BUTYL KETONE
100	CHLOROFORM	2J	TETRACHLOROETHENE (TETRACHLOROETHYLENE)
100	1,2-DICHLOROETHANE	100	1,1 2,2-TETRACHLOROETHANE
100	METHYL ETHYL KETONE	100	TOLUENE
100	1,1,1-TRICHLOROETHANE	100	CHLOROBENZENE
100	CARBON TETRACHLORIDE	100	ETHYL BENZENE
100	BROMODICHLOROMETHANE	100	STYRENE
		100	TOTAL XYLFNS

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

01/14/92

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 92-0175 SAMPLE NO. 64353 SAMPLE TYPE: GROUNDWA  
CITY: JACKSONVILLE ST: NC  
STATION ID DP-007-01 COLLECTION START: 12/12/91 1105 STOP: 00/00/00

CASE NO.: 17535 SAS NO.: D. NO. CJI8

ANALYTICAL RESULTS

ANALYTICAL RESULTS

UG/L	UG/L	D. NO.	CJI8
10U	CHLOROMETHANE	10U	1,2-DICHLOROPROPANE
10U	BROMOMETHANE	10U	CIS-1,3-DICHLOROPROPENE
10U	VINYL CHLORIDE	10U	TRICHLOROETHENE (TRICHLOROETHYLENE)
10U	CHLOROETHANE	10U	DIBROMOCHLOROMETHANE
10U	METHYLENE CHLORIDE	10U	1,1,2-TRICHLOROETHANE
10U	ACETONE	10U	BENZENE
8J	CARBON DISULFIDE	10U	TRANS-1,3-DICHLOROPROPENE
10U	1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	10U	BROMOFORM
10U	1,1-DICHLOROETHANE	10U	METHYL ISOBUTYL KETONE
10U	1,2-DICHLOROETHANE	10U	METHYL BUTYL KETONE
10U	CHLOROFORM	10U	TETRACHLOROETHENE (TETRACHLOROETHYLENE)
10U	1,2-DICHLOROETHANE	10U	1,1,2,2-TETRACHLOROETHANE
10U	METHYL ETHYL KETONE	10U	TOLUENE
10U	1,1,1-TRICHLOROETHANE	10U	CHLOROETHYLENE
10U	CARBON TETRACHLORIDE	10U	ETHYL BENZENE
10U	BROMODICHLOROMETHANE	10U	STYRENE
		10U	TOTAL XYLENES

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*NA1-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
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\*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA

01/14/92

PURGEABLE ORGANICS DATA REPORT

PROJECT NO 92-0175 SAMPLE NO 64354 SAMPLE TYPE GROUNDWA  
SOURCE ABC ONE-HOUR CLEANER  
STATION ID DP-007-01B  
PROG ELEM SSF COLLECTED BY B MORRIS  
CITY JACKSONVIL ST NC  
COLLECTION START 12/12/91 1105 STOP 00/00/00

CASE NO 17535 SAS NO D NO CJ19  
UG/L ANALYTICAL RESULTS ANALYTICAL RESULTS

ANALYTICAL RESULTS	UG/L	D	NO	CJ19
CHLOROMETHANE	100			
BROMOMETHANE	100			
VINYL CHLORIDE	100			
CHLOROETHANE	100			
METHYLENE CHLORIDE	100			
ACETONE	100			
CARBON DITSULFIDE	9J			
1,1-DICHLOROETHENE (1,1-DICHLOROE THYLENE)	100			
1,1-DICHLOROETHANE	100			
1,2-DICHLOROETHENE (TOTAL)	100			
CHLOROFORM	100			
1,2-DICHLOROETHANE	100			
METHYL ETHYL KETONE	100			
1,1,1-TRICHLOROETHANE	100			
CARBON TETRACHLORIDE	100			
BROMODICHLOROMETHANE	100			
1,2-DICHLOROPROPANE	100			
CIS-1,3-DICHLOROPROPENE	100			
TRICHLOROETHENE (TRICHLOROE THYLENE)	100			
DIBROMOCHLOROMETHANE	100			
1,1,2-TRICHLOROETHANE	100			
BENZENE	100			
TRANS-1,3-DICHLOROPROPENE	100			
BROMOFORM	100			
METHYL ISOBUTYL KETONE	100			
METHYL BUTYL KETONE	100			
TETRACHLOROETHENE (TETRACHLOROE THYLENE)	5J			
1,1,2,2-TETRACHLOROETHANE	100			
TOLUENE	100			
CHLOROBENZENE	100			
ETHYL BENZENE	100			
STYRENE	100			
TOTAL XYLENES	100			

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
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 \*J-ESTIMATED VALUE  
 \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*R-REANALYSIS IS NECESSARY FOR VERIFICATION  
 \*MINIMUM QUANTITATION LIMIT

PURGEABLE ORGANICS DATA REPORT  
 SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
 EPA-REGION IV ESD ATHENS, GA

01/14/92

PROJECT NO 92-0175 SAMPLE NO 64355 SAMPLE TYPE GROUNDWA  
 SOURCE CITY JACKSONVIL  
 STATION ID DP-008-01 COLLECTION START 12/12/91 STOP 00/00/00  
 CASE NO 17535 SAS NO D NO CJ20  
 UG/L UG/L ANALYTICAL RESULTS ANALYTICAL RESULTS

ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS	UG/L
CHLOROMETHANE	10U	1,2-DICHLOROPROPANE	10U
BROMOMETHANE	10U	CIS-1,3-DICHLOROPROPENE	10U
VINYL CHLORIDE	10U	TRICHLOROETHENE (TRICHLOROETHYLENE)	3J
CHLOROETHANE	10U	DIBROMOCHLOROMETHANE	10U
METHYLENE CHLORIDE	10U	1,1,2-TRICHLOROETHANE	1J
ACETONE	10U	BENZENE	10U
CARBON DISULFIDE	10U	TRANS-1,3-DICHLOROPROPENE	10U
1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	10U	BROMOFORM	10U
1,1-DICHLOROETHANE	10U	METHYL ISOBUTYL KETONE	10U
1,2-DICHLOROETHENE (TOTAL)	10U	METHYL BUTYL KETONE	10U
CHLOROFORM	27	TETRACHLOROETHENE (TETRACHLOROETHYLENE)	10U
1,2-DICHLOROETHANE	10U	1,1,2,2-TETRACHLOROETHANE	10U
METHYL ETHYL KETONE	10U	TOLUENE	10U
1,1,1-TRICHLOROETHANE	10U	CHLOROETHYLENE	10U
CARBON TETRACHLORIDE	10U	ETHYL BENZENE	10U
BROMODICHLOROMETHANE	10U	STYRENE	10U
		TOTAL XYLENES	10U

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT  
 \*R-QC INDICATES THAT DATA UNUSABLE COMPOUND MAY OR MAY NOT BE PRESENT RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION  
 \*NA-NOT ANALYZED  
 \*NAI-INTERFERENCES  
 \*J-ESTIMATED VALUE  
 \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
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 \*R-OC INDICATES THAT DATA UNUSABLE COMPOUND MAY OR MAY NOT BE PRESENT RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION

PURGEABLE ORGANICS DATA REPORT  
 PROJECT NO 92-0175 SAMPLE NO 64356 SAMPLE TYPE GROUNDWA D NO CJ21  
 SOURCE ABC ONE-HOUR CLEANER COLLECTION START 12/12/91 1500 STOP 00/00/00  
 STATION ID DP-010-01  
 CASE NO 17535 SAS NO  
 UG/L ANALYTICAL RESULTS ANALYTICAL RESULTS

ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
10U CHLOROMETHANE	10U	1 2-DICHLOROPROPANE
10U BROMOMETHANE	10U	CIS-1 3-DICHLOROPROPENE
10U VINYL CHLORIDE	10U	TRICHLOROETHENE (TRICHLOROETHYLENE)
10U CHLOROETHANE	10U	DIBROMOCHLOROMETHANE
10U METHYLENE CHLORIDE	10U	1 1 2-TRICHLOROETHANE
30U ACETONE	10U	BENZENE
42 CARBON DISULFIDE	10U	TRANS-1 3-DICHLOROPROPENE
10U 1 1-DICHLOROETHENE (1 1-DICHLOROETHYLENE)	10U	BROMOFORM
10U 1 1-DICHLOROETHANE	10U	METHYL ISOBUTYL KETONE
10U 1 2-DICHLOROETHENE (TOTAL)	10U	METHYL BUTYL KETONE
10U CHLOROFORM	10U	1 1 2-TETRACHLOROETHANE
10U 1 2-DICHLOROETHANE	10U	1 1 2-TETRACHLOROETHANE
10U METHYL ETHYL KETONE	10U	TOLUENE
10U 1 1-TRICHLOROETHANE	10U	CHLOROBENZENE
10U CARBON TETRACHLORIDE	10U	ETHYL BENZENE
10U BROMODICHLOROMETHANE	10U	STYRENE
		TOTAL XYLENES

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT  
 \*R-QC INDICATES THAT DATA UNUSABLE COMPOUND MAY OR MAY NOT BE PRESENT RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION

PROJECT NO. 92-0175 SAMPLE NO. 64357  
 SOURCE: ABC ONE-HOUR CLEANER  
 STATION ID: DP-012-01  
 GROUNDWA  
 COLLECTION START: 12/12/91 1735 STOP: 00/00/00  
 COLLECTED BY: B MORRIS  
 CITY: JACKSONVILLE, NC  
 CASE NO. 17535 SAS NO. D. NO. CJ22  
 ANALYTICAL RESULTS ANALYTICAL RESULTS

ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS	UG/L
CHLOROMETHANE	100	1,2-DICHLOROPROPANE	100
BROMOMETHANE	100	CIS-1,3-DICHLOROPROPENE	100
VINYL CHLORIDE	100	TRICHLOROETHENE (TRICHLOROETHYLENE)	100
CHLOROETHANE	100	DIBROMOCHLOROMETHANE	100
METHYLENE CHLORIDE	100	1,1,2-TRICHLOROETHANE	100
ACETONE	100	BENZENE	100
CARBON DISULFIDE	8J	TRANS-1,3-DICHLOROPROPENE	100
1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	100	BROMOFORM	100
1,1-DICHLOROETHANE	100	METHYL ISOBUTYL KETONE	100
1,2-DICHLOROETHENE (TOTAL)	100	METHYL BUTYL KETONE	100
CHLOROFORM	100	TETRACHLOROETHENE (TETRACHLOROETHYLENE)	100
1,2-DICHLOROETHANE	100	1,1,2,2-TETRACHLOROETHANE	100
METHYL ETHYL KETONE	100	TOLUENE	100
1,1,1-TRICHLOROETHANE	100	CHLOROBENZENE	100
CARBON TETRACHLORIDE	100	ETHYL BENZENE	100
BROMODICHLOROMETHANE	100	STYRENE	100
		TOTAL XYLENE	100

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
 \*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION  
 \*NA-NOT ANALYZED  
 \*NAI-INTERFERENCES  
 \*J-ESTIMATED VALUE  
 \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN

PURGEABLE ORGANICS DATA REPORT

PROJECT NO 92-0175 SAMPLE NO. 64358 SAMPLE TYPE: GROUNDWA  
 SOURCE ABC ONE-HOUR CLEANER  
 STATION ID DP-011-01  
 CASE NO 17535 SAS NO  
 PROG ELEM SSF COLLECTED BY B MORRIS  
 CITY JACKSONVIL ST. NC  
 COLLECTION START 12/12/91 1800 STOP 00/00/00

D NO CJ23

ANALYTICAL RESULTS

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
10U	CHLOROMETHANE	10U	1,2-DICHLOROPROPANE
10U	BROMOMETHANE	10U	CIS-1,3-DICHLOROPROPENE
10U	VINYL CHLORIDE	10U	TRICHLOROETHENE (TRICHLOROETHYLENE)
10U	CHLOROETHANE	10U	DIBROMOCHLOROMETHANE
10U	METHYLENE CHLORIDE	10U	1,1,2-TRICHLOROETHANE
10U	ACETONE	10U	BENZENE
5J	CARBON DISULFIDE	10U	TRANS-1,3-DICHLOROPROPENE
10U	1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	10U	BROMOFORM
10U	1,1-DICHLOROETHANE	10U	METHYL ISOBUTYL KETONE
10U	1,2-DICHLOROETHENE (TOTAL)	10U	METHYL BUTYL KETONE
10U	CHLOROFORM	8J	TETRACHLOROETHENE (TETRACHLOROETHYLENE)
10U	1,2-DICHLOROETHANE	10U	1,1,2,2-TETRACHLOROETHANE
10U	METHYL ETHYL KETONE	10U	TOLUENE
10U	1,1,1-TRICHLOROETHANE	10U	CHLOROBENZENE
10U	CARBON TETRACHLORIDE	10U	ETHYL BENZENE
10U	BROMODICHLOROMETHANE	10U	STYRENE
		10U	TOTAL XYLFMS

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
 \*U-MATERIAL INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION  
 \*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD ATHENS GA

01/14/92

PURGEABLE ORGANICS DATA REPORT

PROJECT NO 92-0175 SAMPLE NO 64359 SAMPLE TYPE GROUNDWA  
 SOURCE ABU ONE-HOUR CLEANER  
 STATION ID DP-014-01  
 CASE NO 17535 SAS NO  
 ANALYTICAL RESULTS  
 D NO C124  
 UG/L  
 ANALYTICAL RESULTS  
 PROGRAM COLLECTED BY B MORRIS  
 CITY JACKSONVILLE NC  
 COLLECTION START 12/13/91 T340 STOP 00/00/00

ANALYTICAL RESULTS	U6/L	D NO	C124
CHLOROMETHANE	10U		
BROMOMETHANE	10U		
VINYL CHLORIDE	10U		
CHLOROETHANE	10U		
METHYLENE CHLORIDE	10U		
ACETONE	10U		
CARBON DISULFIDE	32		
1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	10U		
1,1-DICHLOROETHANE	10U		
1,2-DICHLOROETHENE (TOTAL)	10U		
CHLOROFORM	10U		
1,2-DICHLOROETHANE	10U		
METHYL ETHYL KETONE	10U		
1,1-TRICHLOROETHANE	10U		
CARBON TETRACHLORIDE	10U		
BROMODICHLOROMETHANE	10U		
1,2-DICHLOROPROPANE	10U		
CIS-1,3-DICHLOROPROPENE	10U		
TRICHLOROETHENE (TRICHLOROETHYLENE)	10U		
DIBROMOCHLOROMETHANE	10U		
1,1,2-TRICHLOROETHANE	10U		
BENZENE	2J		
TRANS-1,3-DICHLOROPROPENE	10U		
BROMOFORM	10U		
METHYL ISOBUTYL KETONE	10U		
METHYL BUTYL KETONE	10U		
TETRACHLOROETHENE (TETRACHLOROETHYLENE)	10U		
1,1,2,2-TETRACHLOROETHANE	10U		
TOLUENE	10U		
CHLOROBENZENE	10U		
ETHYL BENZENE	10U		
STYRENE	10U		
TOTAL XYLNES	10U		

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED  
 \*R-QC INDICATES THAT DATA UNUSABLE  
 \*NA-NOT ANALYZED  
 \*NAI-INTERFERENCES  
 \*J-ESTIMATED VALUE  
 \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MINIMUM QUANTITATION LIMIT  
 \*R-RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION

PROJECT NO 92-0175 SAMPLE NO 64360 SAMPLE TYPE GROUNDWA  
 SOURCE ABC ONE-HOUR CLEANER  
 STATION ID DP-013-01  
 CASE NO 17535 SAS NO  
 UG/L  
 ANALYTICAL RESULTS  
 ANALYTICAL RESULTS  
 PROG ELEM SSF COLLECTED BY, B MORRIS  
 CITY JACKSONVIL ST NC  
 COLLECTION START 12/13/91 1011 STOP 00/00/00  
 D NO CJ25  
 UG/L  
 ANALYTICAL RESULTS

ANALYTICAL RESULTS	ANALYTICAL RESULTS
100 CHLOROMETHANE	100 1,2-DICHLOROPROPANE
100 BROMOMETHANE	100 CIS-1,3-DICHLOROPROPENE
100 VINYL CHLORIDE	100 TRICHLOROETHENE (TRICHLOROETHYLENE)
100 CHLOROETHANE	100 DIBROMOCHLOROMETHANE
100 METHYLENE CHLORIDE	100 1,1,2-TRICHLOROETHANE
100 ACETONE	100 BENZENE
12 CARBON DISULFIDE	100 TRANS-1,3-DICHLOROPROPENE
100 1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	100 BROMOFORM
100 1,1-DICHLOROETHANE	100 METHYL ISOBUTYL KETONE
100 1,2-DICHLOROETHENE (TOTAL)	100 METHYL BUTYL KETONE
100 CHLOROFORM	2J TETRACHLOROETHENE (TETRACHLOROETHYLENE)
100 1,2-DICHLOROETHANE	100 1,1,2,2-TETRACHLOROETHANE
100 METHYL ETHYL KETONE	100 TOLUENE
100 1,1,1-TRICHLOROETHANE	100 CHLOROBENZENE
100 CARBON TETRACHLORIDE	100 ETHYL BENZENE
100 BROMODICHLOROMETHANE	100 STYRENE
	100 TOTAL XYLINES

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
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 \*R-QC INDICATES THAT DATA UNUSABLE COMPOUND MAY OR MAY NOT BE PRESENT RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION  
 \*NA-NOT ANALYZED  
 \*NAI-INTERFERENCES  
 \*J-ESTIMATED VALUE  
 \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT



01/14/92

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT  
PROJECT NO. 92-0175 SAMPLE NO. 64361 SAMPLE TYPE: GROUNDWA  
SOURCE: ABC ONE-HOUR CLEANER  
STATION ID: DP-018-01  
CASE NO. 17535 SAS NO.: D. NO. CJ31  
COLLECTED BY: B MORRIS  
CITY: JACKSONVIL ST: NC  
COLLECTION START: 12/13/91 1745 STOP: 00/00/00  
ANALYTICAL RESULTS  
ANALYTICAL RESULTS

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
100	CHLOROMETHANE	100	1,2-DICHLOROPROPANE
100	BROMOMETHANE	100	CIS-1,3-DICHLOROPROPENE
100	VINYL CHLORIDE	100	TRICHLOROETHENE (TRICHLOROETHYLENE)
100	CHLOROETHANE	100	DIBROMOCHLOROMETHANE
100	METHYLENE CHLORIDE	100	1,1,2-TRICHLOROETHANE
500	ACETONE	100	BENZENE
28	CARBON DISULFIDE	100	TRANS-1,3-DICHLOROPROPENE
100	1,1-DICHLOROETHANE (1,1-DICHLOROETHYLENE)	100	BROMOFORM
100	1,1-DICHLOROETHANE	100	METHYL ISOBUTYL KETONE
100	1,2-DICHLOROETHANE (TOTAL)	100	METHYL BUTYL KETONE
100	CHLOROFORM	100	TETRACHLOROETHENE (TETRACHLOROETHYLENE)
100	1,2-DICHLOROETHANE	100	1,1,2,2-TETRACHLOROETHANE
100	METHYL ETHYL KETONE	100	TOLUENE
100	1,1,1-TRICHLOROETHANE	100	CHLOROETHYLENE
100	CARBON TETRACHLORIDE	100	ETHYL BENZENE
100	BROMODICHLOROMETHANE	100	STYRENE
		100	TOTAL XYLENES

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

- \*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
- \*K-ACTUAL VALUE WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
- \*U-MATERIAL WAS ANALYZED FOR BUT NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION
- \*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT.
- \*NA1-INTERFERENCES
- \*NA-NOT ANALYZED
- \*J-ESTIMATED VALUE
- \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
- \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT  
 PROJECT NO. 92-0175 SAMPLE NO. 64362 SAMPLE TYPE: GROUNDWA  
 SOURCE: ABC ONE-HOUR CLEANER  
 STATION ID. DP-015-01  
 CASE NO. 17535 SAS NO.: D. NO. CJ26  
 ANALYTICAL RESULTS ANALYTICAL RESULTS  
 UG/L UG/L

ANALYTICAL RESULTS	ANALYTICAL RESULTS
100 CHLOROMETHANE	100 1,2-DICHLOROPROPANE
100 BROMOMETHANE	100 CIS-1,3-DICHLOROPROPENE
100 VINYL CHLORIDE	100 TRICHLOROETHENE (TRICHLOROETHYLENE)
100 CHLOROETHANE	100 DIBROMOCHLOROMETHANE
100 METHYLENE CHLORIDE	100 1,1,2-TRICHLOROETHANE
300 ACETONE	100 BENZENE
100 CARBON DISULFIDE	100 TRANS-1,3-DICHLOROPROPENE
100 1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	100 BROMOFORM
100 1,1-DICHLOROETHANE	100 METHYL ISOBUTYL KETONE
100 1,2-DICHLOROETHENE (TOTAL)	100 METHYL BUTYL KETONE
100 CHLOROFORM	100 TETRACHLOROETHENE (TETRACHLOROETHYLENE)
100 1,2-DICHLOROETHANE	100 1,1,2,2-TETRACHLOROETHANE
100 METHYL ETHYL KETONE	100 TOLUENE
100 1,1,1-TRICHLOROETHANE	100 CHLOROETHYLENE
100 CARBON TETRACHLORIDE	100 ETHYL BENZENE
100 BROMODICHLOROMETHANE	100 STYRENE
	100 TOTAL XYLENES

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAT-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
 \*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

01/14/92

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 92-0175 SAMPLE NO. 64363 SAMPLE TYPE: GROUNDWA  
SOURCE: ABC ONE-HOUR CLEANER  
STATION ID: DP-014-02  
PROG ELEM: SSF COLLECTED BY: B MORRIS  
CITY: JACKSONVIL ST: NC  
COLLECTION START 12/13/91 1445 STOP: 00/00/00

CASE NO. 17535 SAS NO. CJ27  
UG/L ANALYTICAL RESULTS UG/L ANALYTICAL RESULTS

ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS	UG/L
CHLOROMETHANE	100	1,2-DICHLOROPROPANE	100
BROMOMETHANE	100	CIS-1,3-DICHLOROPROPENE	100
VINYL CHLORIDE	100	TRICHLOROETHENE (TRICHLOROETHYLENE)	100
CHLOROETHANE	100	DIBROMOCHLOROMETHANE	100
METHYLENE CHLORIDE	100	1,1,2-TRICHLOROETHANE	100
ACETONE	100	BENZENE	100
CARBON DISULFIDE	100	TRANS-1,3-DICHLOROPROPENE	100
1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	100	BROMOFORM	100
1,1-DICHLOROETHANE	100	METHYL ISOBUTYL KETONE	100
1,2-DICHLOROETHANE (TOTAL)	100	METHYL BUTYL KETONE	100
CHLOROFORM	100	TETRAHYDROETHENE (TETRACHLOROETHYLENE)	100
1,2-DICHLOROETHANE	100	1,1,2,2-TETRACHLOROETHANE	100
METHYL ETHYL KETONE	100	TOLUENE	100
1,1,1-TRICHLOROETHANE	100	CHLOROBENZENE	100
CARBON TETRACHLORIDE	100	ETHYL BENZENE	100
BROMODICHLOROMETHANE	100	STYRENE	100
		TOTAL XYLFNE	100

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
\*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
\*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD ATHENS, GA

01/14/92

PURGEABLE ORGANICS DATA REPORT  
 PROJECT NO 92-0175 SAMPLE NO. 64364 SAMPLE TYPE GROUNDWA  
 SOURCE ABC ONE-HOUR CLEANER  
 STATION ID DP-015-02  
 PROG ELEM SSF COLLECTED BY B MORRIS  
 CITY JACKSONVIL ST NC  
 COLLECTION START 12/13/91 1525 STOP 00/00/00

CASE NO 17535 SAS NO D NO CJ28  
 UG/L UG/L ANALYTICAL RESULTS ANALYTICAL RESULTS

ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS	UG/L
CHLOROMETHANE	10U	1,2-DICHLOROPROPANE	10U
BROMOMETHANE	10U	CIS-1 3-DICHLOROPROPENE	10U
VINYL CHLORIDE	10U	TRICHLOROETHENE (TRICHLOROETHYLENE)	10U
CHLOROETHANE	10U	DIBROMOCHLOROMETHANE	10U
METHYLENE CHLORIDE	10U	1,1 2-TRICHLOROETHANE	10U
ACETONE	10U	BENZENE	2J
CARBON DISULFIDE	10U	TRANS-1 3-DICHLOROPROPENE	10U
1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	10U	BROMOFORM	10U
1,1-DICHLOROETHANE	10U	METHYL ISOBUTYL KETONE	10U
1,2-DICHLOROETHENE (TOTAL)	10U	METHYL BUTYL KETONE	10U
CHLOROFORM	10U	TETRACHLOROETHENE (TETRACHLOROETHYLENE)	10U
1,2-DICHLOROETHANE	10U	1,1 2,2-TETRACHLOROETHANE	10U
METHYL ETHYL KETONE	10U	TOLUENE	10U
1,1 1-TRICHLOROETHANE	10U	CHLOROETHYLENE	10U
CARBON TETRACHLORIDE	10U	ETHYL BENZENE	10U
BROMODICHLOROMETHANE	10U	STYRENE	10U
		TOTAL XYLENES	10U

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT  
 \*R-QC INDICATES THAT DATA UNUSABLE COMPOUND MAY OR MAY NOT BE PRESENT RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD ATHENS GA

01/14/92

PURGEABLE ORGANICS DATA REPORT

PROJECT NO 92-0175 SAMPLE NO 64367 SAMPLE TYPE GROUNDWA  
SOURCE ABC ONE-HOUR CLEANER  
STATION ID FB-000-03

CASE NO 17535 SAS NO  
D NO CJ29

PROG ELEM SSF COLLECTED BY B MORRIS  
CITY JACKSONVIL ST NC  
COLLECTION START 12/13/91 1600 STOP 00/00/00

ANALYTICAL RESULTS

UG/L	D	NO	CJ29	ANALYTICAL RESULTS
100				CHLOROMETHANE
100				BROMOMETHANE
100				VINYL CHLORIDE
100				CHLOROETHANE
100				METHYLENE CHLORIDE
100				ACETONE
100				CARBON DISULFIDE
100				1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)
100				1,1-DICHLOROETHANE
100				1,2-DICHLOROETHENE (TOTAL)
100				CHLOROFORM
100				1,2-DICHLOROETHANE
100				METHYL ETHYL KETONE
100				1,1,1-TRICHLOROETHANE
100				CARBON TETRACHLORIDE
100				BROMODICHLOROMETHANE
100				1,2-DICHLOROPROPANE
100				CIS-1,3-DICHLOROPROPENE
100				TRICHLOROETHENE (TRICHLOROETHYLENE)
100				DIBROMOCHLOROMETHANE
100				1,1,2-TRICHLOROETHANE
100				BENZENE
100				TRANS-1,3-DICHLOROPROPENE
100				BROMOFORM
100				METHYL ISOBUTYL KETONE
100				METHYL BUTYL KETONE
100				TETPACHLOROETHENE (TETRACHLOROETHYLENE)
100				1,1,2,2-TETRACHLOROETHANE
100				TOLUENE
100				CHLOROBENZENE
100				ETHYL BENZENE
100				STYRENE
100				TOTAL XYI ENF

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT  
 \*R-QC INDICATES THAT DATA UNUSABLE COMPOUND MAY OR MAY NOT BE PRESENT RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION  
 \*NA-NOT ANALYZED  
 \*NAI-INTERFERENCES  
 \*J-ESTIMATED VALUE  
 \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN

01/14/92

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA

PURGEABLE ORGANICS DATA REPORT

\*\*\* PROJECT NO 92-0175 SAMPLE NO. 64368 SAMPLE TYPE: GROUNDWA  
\*\* SOURCE: ABC ONE-HOUR CLEANER  
\*\* STATION ID: RB-000-02  
\*\*  
\*\* CASE NO 17535 SAS NO D NO CJ30  
\*\* UG/L

PROG ELEM SSF COLLECTED BY B MORRIS  
CITY JACKSONVIL ST. NC  
COLLECTION START 12/13/91 1630 STOP 00/00/00

ANALYTICAL RESULTS  
ANALYTICAL RESULTS

CONCENTRATION	COMPOUND	UNIT
100	CHLOROMETHANE	UG/L
100	BROMOMETHANE	UG/L
100	VINYL CHLORIDE	UG/L
100	CHLOROETHANE	UG/L
100	METHYLENE CHLORIDE	UG/L
100	ACETONE	UG/L
100	CARBON DISULFIDE	UG/L
100	1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	UG/L
100	1,1-DICHLOROETHANE	UG/L
100	1,2-DICHLOROETHENE (TOTAL)	UG/L
100	CHLOROFORM	UG/L
100	1,2-DICHLOROETHANE	UG/L
100	METHYL ETHYL KETONE	UG/L
100	1,1,1-TRICHLOROETHANE	UG/L
100	CARBON TETRACHLORIDE	UG/L
100	BROMODICHLOROMETHANE	UG/L
100	1,2-DICHLOROPROPANE	UG/L
100	CIS-1,3-DICHLOROPROPENE	UG/L
100	TRICHLOROETHENE (TRICHLOROETHYLENE)	UG/L
100	DIBROMOCHLOROMETHANE	UG/L
100	1,1,2-TRICHLOROETHANE	UG/L
100	BENZENE	UG/L
100	TRANS-1,3-DICHLOROPROPENE	UG/L
100	BROMOFORM	UG/L
100	METHYL ISOBUTYL KETONE	UG/L
100	METHYL BUTYL KETONE	UG/L
100	TETRACHLOROETHENE (TETRACHLOROETHYLENE)	UG/L
100	1,1,2,2-TETRACHLOROETHANE	UG/L
100	TOLUENE	UG/L
100	CHLOROBENZENE	UG/L
100	ETHYL BENZENE	UG/L
100	STYRENE	UG/L
100	TOTAL XY1 FNF 5	UG/L

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

- \*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
- \*K-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
- \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT
- \*R-OC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION
- \*NA-NOT ANALYZED
- \*NA1-INTERFERENCES
- \*J-ESTIMATED VALUE
- \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

01/14/92

PURGEABLE ORGANICS DATA REPORT  
 PROJECT NO. 92-0175 SAMPLE NO. 64413 SAMPLE TYPE: GROUNDWA  
 SOURCE: ABC ONE-HOUR CLEANER  
 STATION ID: DCF95  
 CASE NO.: 17535 SAS NO.: D NO.: CF95  
 COLLECTION START: 00/00/00 ST: NC STOP: 00/00/00  
 ANALYTICAL RESULTS ANALYTICAL RESULTS

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
10U	CHLOROMETHANE	10U	1,2-DICHLOROPROPANE
10U	BROMOMETHANE	10U	C15-1,3-DICHLOROPROPENE
10U	VINYL CHLORIDE	10U	TRICHLOROETHENE (TRICHLOROETHYLENE)
10U	CHLOROETHANE	10U	DIBROMOCHLOROMETHANE
10U	METHYLENE CHLORIDE	10U	1,1,2-TRICHLOROETHANE
10U	ACETONE	10U	BENZENE
10U	CARBON DISULFIDE	10U	TRANS-1,3-DICHLOROPROPENE
10U	1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	10U	BROMOFORM
10U	1,1-DICHLOROETHANE	10U	METHYL ISOBUTYL KETONE
10U	1,2-DICHLOROETHENE (TOTAL)	10U	METHYL BUTYL KETONE
10U	CHLOROFORM	10U	TETRACHLOROETHENE (TETRACHLOROETHYLENE)
10U	1,2-DICHLOROETHANE	10U	1,1,2,2-TETRACHLOROETHANE
10U	METHYL ETHYL KETONE	10U	TOLUENE
10U	1,1,1-TRICHLOROETHANE	10U	CHLOROBENZENE
10U	CARBON TETRACHLORIDE	10U	ETHYL BENZENE
10U	BROMODICHLOROMETHANE	10U	STYRENE
		10U	TOTAL XYLENES

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION  
 \*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT.

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Remedial Investigation Report  
ABC One-Hour Cleaners, Inc.  
Jacksonville, Onslow County, North Carolina  
Section: Appendix C  
Revision: 1  
Date: November 1992

## WELL CONSTRUCTION MATERIALS



SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

04/16/92

PURGEABLE ORGANICS DATA REPORT

\*\*\* PROJECT NO. 92-0407 SAMPLE NO. 66584 SAMPLE TYPE: GROUNDWA  
 \*\* SOURCE: ABC ONE-HOUR CLEANER  
 \*\* STATION ID: ABC-MW-MUD-01  
 \*\* PROG ELEM: SSF COLLECTED BY: B MORRIS  
 \*\* CITY: JACKSONVIL ST: NC  
 \*\* COLLECTION START: 04/03/92 1040 STOP: 00/00/00

\*\*\* UG/L \*\*\* ANALYTICAL RESULTS \*\*\*

5.0U CHLOROMETHANE  
 5.0U VINYL CHLORIDE  
 5.0U BROMOMETHANE  
 5.0U CHLOROETHANE  
 5.0U TRICHLOROFLUOROMETHANE  
 5.0U 1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)  
 5.0U ACETONE  
 12U CARBON DISULFIDE  
 5.0U METHYLENE CHLORIDE  
 5.0U TRANS-1,2-DICHLOROETHENE  
 5.0U 1,1-DICHLOROETHANE  
 5.0U CIS-1,2-DICHLOROETHENE  
 5.0U 2,2-DICHLOROPROPANE  
 5.0U METHYL ETHYL KETONE  
 5.0U BROMOCHLOROMETHANE  
 5.0U CHLOROFORM  
 9.4 1,1,1-TRICHLOROETHANE  
 5.0U 1,1-DICHLOROPROPENE  
 5.0U CARBON TETRACHLORIDE  
 5.0U 1,2-DICHLOROETHANE  
 5.0U BENZENE  
 5.0U TRICHLOROETHENE (TRICHLOROETHYLENE)  
 5.0U 1,2-DICHLOROPROPANE  
 5.0U DIBROMOMETHANE  
 5.0U 7 6 BROMODICHLOROMETHANE

\*\*\* UG/L \*\*\* ANALYTICAL RESULTS \*\*\*

5.0U CIS-1,3-DICHLOROPROPENE  
 12U METHYL ISOBUTYL KETONE  
 5.0U TOLUENE  
 5.0U TRANS-1,3-DICHLOROPROPENE  
 5.0U 1,1,2-TRICHLOROETHANE  
 5.0U TETRACHLOROETHENE (TETRACHLOROETHYLENE)  
 5.0U 1,3-DICHLOROPROPANE  
 12U METHYL BUTYL KETONE  
 6.6 DIBROMOCHLOROMETHANE  
 5.0U CHLOROETHENE  
 5.0U 1,1,1,2-TETRACHLOROETHANE  
 5.0U ETHYL BENZENE  
 5.0U (M- AND/OR P-)XYLENE  
 5.0U STYRENE  
 1.3J BROMOFORM  
 5.0U BROMOBENZENE  
 5.0U 1,1,2,2-TETRACHLOROETHANE  
 5.0U 1,2,3-TRICHLOROPROPANE  
 5.0U O-CHLOROTOLUENE  
 5.0U P-CHLOROTOLUENE  
 5.0U 1,3-DICHLOROBENZENE  
 5.0U 1,4-DICHLOROBENZENE  
 5.0U 1,2-DICHLOROBENZENE

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

04/15/92

EXTRACTABLE ORGANICS DATA REPORT  
 PROJECT NO. 92-0407 SAMPLE NO. 66584 SAMPLE TYPE: GROUNDWA  
 SOURCE: ABC ONE-HOUR CLEANER  
 STATION ID: ABC-MW-MUD-01  
 PROG ELEM: SSF COLLECTED BY: B MORRIS  
 CITY: JACKSONVIL  
 COLLECTION START: 04/03/92 1040 STOP: 00/00/00  
 ST: NC

\*\*\* UG/L ANALYTICAL RESULTS \*\*\*  
 \*\*\* ANALYTICAL RESULTS \*\*\*

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
12U	(3-AND/OR 4-METHYLPHENOL	12U	BENZO(GH)PERYLENE
12U	1,2,4-TRICHLOROBENZENE	12U	BENZO-A-PYRENE
12U	2,2',4-TRICHLOROISOPROPYLETHER	12U	BENZYL BUTYL PHTHALATE
12U	2,3,4,6-TETRACHLOROPHENOL	12U	BIS(2-CHLOROETHOXY) METHANE
12U	2,4,5-TRICHLOROPHENOL	12U	BIS(2-CHLOROETHYL) ETHER
12U	2,4,6-TRICHLOROPHENOL	12U	BIS(2-ETHYLHEXYL) PHTHALATE
12U	2,4-DICHLOROPHENOL	12U	CARBAZOLE
12U	2,4-DIMETHYLPHENOL	12U	CHRYSENE
23U	2,4-DINITROPHENOL	12U	DI-N-BUTYLPHTHALATE
12U	2,4-DINITROTOLUENE	12U	DI-N-OCTYLPHTHALATE
12U	2,6-DINITROTOLUENE	12U	DIBENZO(A,H)ANTHRACENE
12U	2-CHLORONAPHTHALENE	12U	DIBENZOFURAN
12U	2-CHLOROPHENOL	12U	DIETHYL PHTHALATE
23U	2-METHYL-4,6-DINITROPHENOL	12U	DIMETHYL PHTHALATE
12U	2-METHYLNAPHTHALENE	12U	FLUORANTHENE
12U	2-NITROANILINE	12U	FLUORENE
12U	2-NITROPHENOL	12U	HEXACHLOROBENZENE (HCB)
12U	3,3'-DICHLOROBENZIDINE	12U	HEXACHLOROBUTADIENE
12U	4-BROMOPHENYL PHENYL ETHER	12U	HEXACHLOROCYCLOPENTADIENE (HCCP)
12U	4-CHLORO-3-METHYLPHENOL	12U	HEXACHLOROETHANE
12U	4-CHLOROPHENYL PHENYL ETHER	12U	INDENO (1,2,3-CD) PYRENE
12U	4-NITROANILINE	12U	ISOPHORONE
23U	4-NITROPHENOL	12U	N-NITROSODI-N-PROPYLAMINE
12U	ACENAPHTHENE	12U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
12U	ACENAPHTHYLENE	12U	NAPHTHALENE
12U	BENZO(A)ANTHRACENE	23U	NITROBENZENE
12U	BENZO(B AND/OR K)FLUORANTHENE	12U	PENTACHLOROPHENOL
		12U	PHENANTHRENE
		12U	PHENOL
		12U	PYRENE

\*\*\*REMARKS\*\*\*  
 \*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

04/15/92

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

\*\*\* PROJECT NO. 92-0407 SAMPLE NO. 66584 SAMPLE TYPE: GROUNDWA  
 \*\*\* SOURCE: ABC ONE-HOUR CLEANER  
 \*\*\* STATION ID: ABC-MW-MUD-01  
 \*\*\*  
 \*\*\* PROG ELEM: SSF COLLECTED BY: B MORRIS  
 \*\*\* CITY: JACKSONVIL ST: NC  
 \*\*\* COLLECTION START: 04/03/92 1040 STOP: 00/00/00  
 \*\*\*

ANALYTICAL RESULTS UG/L

9JN CHLOROCYCLOPENTANEDIONE  
 100JN CHLOROCYCLOHEXANOL

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTIFICATION LIMIT  
 \*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
 EPA-REGION IV ESD, ATHENS, GA.

05/12/92

EXTRACTABLE ORGANICS DATA REPORT  
 PROJECT NO. 92-0407 SAMPLE NO. 66583 SAMPLE TYPE: SOIL  
 SOURCE: ABC ONE-HOUR CLEANER  
 STATION ID: ABC-MW-BNT-01  
 PROG ELEM: SSF COLLECTED BY: B MORRIS  
 CITY: JACKSONVILLE ST: NC  
 COLLECTION START: 04/03/92 1400 STOP: 00/00/00

ANALYTICAL RESULTS ANALYTICAL RESULTS

UG/KG	ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS
14000	(3-AND/OR 4-)METHYLPHENOL	14000	BENZO(GHI)PERYLENE
14000	1,2,4-TRICHLOROBENZENE	14000	BENZO-A-PYRENE
14000	2,2,4-TRICHLOROISOPROPYLETHANOL	14000	BENZYL BUTYL PHTHALATE
14000	2,3,4,6-TETRACHLOROPHENOL	14000	BIS(2-CHLOROETHOXY) METHANE
14000	2,4,5-TRICHLOROPHENOL	14000	BIS(2-ETHYLHEXYL) PHTHALATE
14000	2,4,6-TRICHLOROPHENOL	14000	CARBAZOLE
14000	2,4-DICHLOROPHENOL	14000	CHRYSENE
14000	2,4-DIMETHYLPHENOL	14000	DI-N-BUTYL PHTHALATE
28000	2,4-DINITROPHENOL	14000	DI-N-OCTYL PHTHALATE
14000	2,4-DINITROTOLUENE	14000	DIBENZO(A,H)ANTHRACENE
14000	2,6-DINITROTOLUENE	14000	DIBENZOFURAN
14000	2-CHLORONAPHTHALENE	14000	DIETHYL PHTHALATE
14000	2-CHLOROPHENOL	14000	DIMETHYL PHTHALATE
28000	2-METHYL-4,6-DINITROPHENOL	14000	FLUORANTHENE
14000	2-METHYLNAPHTHALENE	14000	FLUORENE
14000	2-METHYLPHENOL	14000	HEXACHLOROBENZENE (HCB)
14000	2-NITROANILINE	14000	HEXACHLOROBUTADIENE
14000	2-NITROPHENOL	14000	HEXACHLOROCYCLOPENTADIENE (HCCP)
14000	3,3'-DICHLOROBENZIDINE	14000	HEXACHLOROETHANE
14000	3-NITROANILINE	14000	INDENO (1,2,3-CD) PYRENE
14000	4-BROMOPHENYL PHENYL ETHER	14000	ISOPHORONE
14000	4-CHLORO-3-METHYLPHENOL	14000	N-NITROSODI-N-PROPYLAMINE
14000	4-CHLOROANILINE	14000	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
14000	4-NITROANILINE	14000	NAPHTHALENE
28000	4-NITROPHENOL	14000	NITROBENZENE
14000	ACENAPHTHENE	28000	PENTACHLOROPHENOL
14000	ACENAPHTHYLENE	14000	PHENANTHRENE
14000	ANTIURACENE	14000	PHENOL
14000	BENZO(A)ANTHRACENE	14000	PYRENE
14000	BENZO(B AND/OR K)FLUORANTHENE	7.3	PERCENT MOISTURE

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTIFICATION LIMIT.

SAMPLE AND ANALYSTS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/12/92

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 92-0407 SAMPLE NO. 66582 SAMPLE TYPE: SOIL  
SOURCE: ABC ONE-HOUR CLEANER  
STATION ID: ABC-MW-CMT-01

PROG ELEM: SSF COLLECTED BY: B MORRIS  
CITY: JACKSONVIL ST: NC  
COLLECTION START: 04/03/92 1412 STOP: 00/00/00

ANALYTICAL RESULTS

ANALYTICAL RESULTS

1300U (3-AND/OR 4-)METHYLPHENOL  
1300U 1,2,4-TRICHLOROBENZENE  
1300U 2,2'-CHLOROSOPROPYLEETHER  
1300U 2,3,4,6-TETRACHLOROPHENOL  
1300U 2,4,5-TRICHLOROPHENOL  
1300U 2,4,6-TRICHLOROPHENOL  
1300U 2,4-DICHLOROPHENOL  
1300U 2,4-DIMETHYLPHENOL  
2600U 2,4-DINITROPHENOL  
1300U 2,4-DINITROTOLUENE  
1300U 2,6-DINITROTOLUENE  
1300U 2-CHLORONAPHTHALENE  
1300U 2-CHLOROPHENOL  
2600U 2-METHYL-4,6-DINITROPHENOL  
1300U 2-METHYLNAPHTHALENE  
1300U 2-METHYLPHENOL  
1300U 2-NITROANILINE  
1300U 2-NITROPHENOL  
1300U 3,3'-DICHLOROBENZIDINE  
1300U 3-NITROANILINE  
1300U 4-BROMOPHENYL PHENYL ETHER  
1300U 4-CHLORO-3-METHYLPHENOL  
1300U 4-CHLOROANILINE  
1300U 4-CHLOROPHENYL PHENYL ETHER  
1300U 4-NITROANILINE  
2600U 4-NITROPHENOL  
1300U ACENAPHTHENE  
1300U ADENAPHTHYLENE  
1300U ANTHRACENE  
1300U BENZO(A)ANTHRACENE  
1300U BENZO(B AND/OR K)FLUORANTHENE

1300U BENZO(GHI)PERYLENE  
1300U BENZO-A-PYRENE  
1300U BENZYL BUTYL PHTHALATE  
1300U BIS(2-CHLOROETHOXY) METHANE  
1300U BIS(2-CHLOROETHYL) ETHER  
1300U BIS(2-ETHYLHEXYL) PHTHALATE  
1300U CARBAZOLE  
1300U CHRYSENE  
1300U DI-N-BUTYLPHTHALATE  
1300U DI-N-OCTYLPHTHALATE  
1300U DIBENZO(A,H)ANTHRACENE  
1300U DIBENZOFURAN  
1300U DIETHYL PHTHALATE  
1300U DIMETHYL PHTHALATE  
1300U FLUORANTHENE  
1300U FLUORENE  
1300U HEXACHLOROBENZENE (HCB)  
1300U HEXACHLOROBUTADIENE  
1300U HEXACHLOROCYCLOPENTADIENE (HCCP)  
1300U HEXACHLOROETHANE  
1300U INDENO (1,2,3-CD) PYRENE  
1300U ISOPHORONE  
1300U N-NITROSODI-N-PROPYLAMINE  
1300U N-NITROSODIPHENYLAMINE/DIPHENYLAMINE  
1300U NAPHTHALENE  
1300U NITROBENZENE  
2600U PENTACHLOROPHENOL  
1300U PHENANTHRENE  
1300U PHENOL  
1300U PYRENE  
0.2 PERCENT MOISTURE

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*NA-NOT ANALYZED \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*K-ACTUAL VALUE WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
\*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

04/21/92

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 92-0407 SAMPLE NO. 66581 SAMPLE TYPE: SOIL  
 SOURCE: ABC ONE-HOUR CLEANER  
 STATION ID: ABC-MW-PEL-01  
 PROG ELEM: SSF COLLECTED BY: B MORRIS  
 CITY: JACKSONVIL ST: NC  
 COLLECTION START: 04/03/92 1152 STOP: 00/00/00

ANALYTICAL RESULTS

ANALYTICAL RESULTS

UG/KG  
 (3-AND/OR 4-)METHYLPHENOL 14000  
 1,2,4-TRICHLOROBENZENE 14000  
 2,2'-CHLOROISOPROPYLETHER 14000  
 2,3,4,6-TETRACHLOROPHENOL 14000  
 2,4,5-TRICHLOROPHENOL 14000  
 2,4,6-TRICHLOROPHENOL 14000  
 2,4-DICHLOROPHENOL 14000  
 2,4-DIMETHYLPHENOL 14000  
 2,4-DINITROPHENOL 29000  
 2,4-DINITROTOLUENE 14000  
 2,6-DINITROTOLUENE 14000  
 2-CHLORONAPHTHALENE 14000  
 2-CHLOROPHENOL 14000  
 2-METHYL-4,6-DINITROPHENOL 29000  
 2-METHYLNAPHTHALENE 14000  
 2-NITROANILINE 14000  
 2-NITROPHENOL 14000  
 3,3'-DICHLOROBENZIDINE 14000  
 3-NITROANILINE 14000  
 4-BROMOPHENYL PHENYL ETHER 14000  
 4-CHLORO-3-METHYLPHENOL 14000  
 4-CHLOROANILINE 14000  
 4-CHLOROPHENYL PHENYL ETHER 14000  
 4-NITROANILINE 14000  
 4-NITROPHENOL 29000  
 ACENAPHTHENE 14000  
 ACENAPHTHYLENE 14000  
 ANTHRACENE 14000  
 BENZO(A)ANTHRAKENE 14000  
 BENZO(B AND/OR K)FLUORANTHENE 14000

UG/KG  
 BENZO(GHI)PERYLENE 14000  
 BENZO-A-PYRENE 14000  
 BENZYL BUTYL PHTHALATE 14000  
 BIS(2-CHLOROETHOXY) METHANE 14000  
 BIS(2-CHLOROETHYL) ETHER 14000  
 BIS(2-ETHYLHEXYL) PHTHALATE 14000  
 CARBAZOLE 14000  
 CHRYSENE 14000  
 DI-N-BUTYL PHTHALATE 14000  
 DI-N-OCTYL PHTHALATE 14000  
 DIBENZO(A,H)ANTHRACENE 14000  
 DIBENZOFURAN 14000  
 DIETHYL PHTHALATE 14000  
 DIMETHYL PHTHALATE 14000  
 FLUORANTHENE 14000  
 FLUORENE 14000  
 HEXACHLOROBENZENE (HCB) 14000  
 HEXACHLOROBUTADIENE 14000  
 HEXACHLOROCYCLOPENTADIENE (HCCP) 14000  
 HEXACHLOROETHANE 14000  
 INDENO (1,2,3-CD) PYRENE 14000  
 ISOPHORONE 14000  
 N-NITROSODI-N-PROPYLAMINE 14000  
 N-NITROSODIPHENYLAMINE/DIPHENYLAMINE 14000  
 NAPHTHALENE 14000  
 NITROBENZENE 14000  
 PENTACHLOROPHENOL 29000  
 PHENANTHRENE 14000  
 PHENOL 14000  
 PYRENE 14000  
 PERCENT MOISTURE 7.1

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

04/21/92

EXTRACTABLE ORGANICS DATA REPORT  
 PROJECT NO. 92-0407 SAMPLE NO. 66580 SAMPLE TYPE: SOIL  
 SOURCE: ABC ONE-HOUR CLEANER  
 STATION ID: ABC-MW-SND-01  
 PROG ELEM: SSF COLLECTED BY: B MORRIS  
 CITY: JACKSONWIL ST: NC  
 COLLECTION START: 04/03/92 1030 STOP: 00/00/00

ANALYTICAL RESULTS  
 ANALYTICAL RESULTS

UG/KG	ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS
1400UJ	(3-AND/OR 4-METHYLPHENOL	1400U	BENZO(GHI)PERYLENE
1400U	1.2.4-TRICHLOROBENZENE	1400U	BENZO-A-PYRENE
1400U	2.2'-CHLOROISOPROPYLETHER	1400U	BENZYL BUTYL PHTHALATE
1400UJ	2.3.4.6-TETRACHLOROPHENOL	1400U	BIS(2-CHLOROETHOXY) METHANE
1400UJ	2.4.5-TRICHLOROPHENOL	1400U	BIS(2-CHLOROETHYL) ETHER
1400UJ	2.4.6-TRICHLOROPHENOL	1400U	BIS(2-ETHYLHEXYL) PHTHALATE
1400UJ	2.4-DICHLOROPHENOL	1400U	CARBAZOLE
1400UJ	2.4-DIMETHYLPHENOL	1400U	CHRYSENE
2800UJ	2.4-DINITROPHENOL	1400U	DI-N-BUTYLPHTHALATE
1400U	2.4-DINITROTOLUENE	1400U	DI-N-OCTYLPHTHALATE
1400U	2.6-DINITROTOLUENE	1400U	DIBENZO(A,H)ANTHRACENE
1400U	2-CHLORONAPHTHALENE	1400U	DIBENZOFURAN
1400UJ	2-CHLOROPHENOL	1400U	DIETHYL PHTHALATE
2800UJ	2-METHYL-4,6-DINITROPHENOL	1400U	DIMETHYL PHTHALATE
1400U	2-METHYLNAPHTHALENE	1400U	FLUORANTHENE
1400U	2-NITROANILINE	1400U	FLUORENE
1400UJ	2-NITROPHENOL	1400U	HEXACHLOROBENZENE (HCB)
1400U	3.3'-DICHLOROBENZIDINE	1400U	HEXACHLOROBUTADIENE
1400U	3-NITROANILINE	1400U	HEXACHLOROCYCLOPENTADIENE (HCCP)
1400U	4-BROMOPHENYL PHENYL ETHER	1400U	HEXACHLOROETHANE
1400UJ	4-CHLORO-3-METHYLPHENOL	1400U	INDENO (1,2,3-CD) PYRENE
1400U	4-CHLOROANILINE	1400U	ISOPHORONE
1400U	4-CHLOROPHENYL PHENYL ETHER	1400U	N-NITROSODI-N-PROPYLAMINE
1400U	4-NITROANILINE	1400U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
2800UJ	4-NITROPHENOL	1400U	NAPHTHALENE
1400U	ACENAPHTHENE	1400U	NITROBENZENE
1400U	ACENAPHTHYLENE	2800UJ	PENTACHLOROPHENOL
1400U	BENZO(A)ANTHRACENE	1400UJ	PHENANTHRENE
1400U	BENZO(B AND/OR K)FLUORANTHENE	1400U	PHENOL
		1000U	PERCENT MOISTURE
		0.2	

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/21/92

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 92-0407 SAMPLE NO. 66584 SAMPLE TYPE: GROUNDWA  
 SOURCE: ABC ONE-HOUR CLEANER  
 STATION ID: ABC-MW-MUD-01  
 PROG ELEM: SSF COLLECTED BY: B MORRIS  
 CITY: JACKSONVIL ST: NC  
 COLLECTION START: 04/03/92 1040 STOP: 00/00/00

ANALYTICAL RESULTS

ANALYTICAL RESULTS

UG/L  
 0.11U ALDRIN  
 0.11U HEPTACHLOR  
 0.11U HEPTACHLOR EPOXIDE  
 0.056U ALPHA-BHC  
 0.11U BETA-BHC  
 0.056U GAMMA-BHC (LINDANE)  
 0.11U DELTA-BHC  
 0.11U ENDOSULFAN I (ALPHA)  
 0.11U DIELDRIN  
 0.28U 4,4'-DDT (P,P'-DDT)  
 0.11U 4,4'-DDE (P,P'-DDE)  
 0.22U 4,4'-DDD (P,P'-DDD)  
 0.22U ENDRIN  
 0.22U ENDOSULFAN II (BETA)  
 0.28U ENDOSULFAN SULFATE  
 0.69U CHLORDANE (TECH. MIXTURE) /1  
 1.4U PCB-1242 (AROCLOR 1242)  
 1.4U PCB-1254 (AROCLOR 1254)  
 1.4U PCB 1221 (AROCLOR 1221)

1.4U PCB-1232 (AROCLOR 1232)  
 1.4U PCB-1248 (AROCLOR 1248)  
 1.4U PCB-1260 (AROCLOR 1260)  
 1.4U PCB-1016 (AROCLOR 1016)  
 11U TOXAPHENE  
 --- CHLORDENE /2  
 --- ALPHA-CHLORDENE /2  
 --- BETA CHLORDENE /2  
 --- GAMMA-CHLORDENE /2  
 --- TRANS-CHLORDANE /2  
 --- TRANS-NONACHLOR /2  
 --- ALPHA-CHLORDANE /2  
 --- CIS-NONACHLOR /2  
 --- OXYCHLORDANE (OCTACHLOROPEOXIDE) /2  
 0.56U METHOXYCHLOR  
 0.28U ENDRIN KETONE

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT. C-CONFIRMED BY GC/MS  
 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS. 2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.



SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESP, ATHENS, GA.

06/16/92

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 92-0407 SAMPLE NO. 66583 SAMPLE TYPE: SOIL  
 SOURCE: ABC ONE-HOUR CLEANER  
 STATION ID: ABC-MW-BNT-01  
 PROG ELEM: SSF COLLECTED BY: B MORRIS  
 CITY: JACKSONVILLE ST. NC  
 COLLECTION START: 04/03/92 1400 STOP: 00/00/00

ANALYTICAL RESULTS

ANALYTICAL RESULTS

UG/KG

14U ALDRIN  
 14U HEPTACHLOR EPOXIDE  
 7.1U ALPHA-BHC  
 14U BETA-BHC  
 7.1U GAMMA-BHC (LINDANE)  
 14U DELTA-BHC  
 14U ENDOSULFAN I (ALPHA)  
 35U 4,4'-DDT (P,P'-DDT)  
 14U 4,4'-DDE (P,P'-DDE)  
 28U 4,4'-DDD (P,P'-DDD)  
 28U ENDRIN  
 28U ENDOSULFAN II (BETA)  
 35U ENDOSULFAN SULFATE  
 88U CHLORDANE (TECH. MIXTURE) /1  
 180U PCB-1242 (AROCLOR 1242)  
 180U PCB-1254 (AROCLOR 1254)  
 180U PCB-1221 (AROCLOR 1221)

180U PCB-1232 (AROCLOR 1232)  
 180U PCB-1248 (AROCLOR 1248)  
 180U PCB-1260 (AROCLOR 1260)  
 1400U PCB-1016 (AROCLOR 1016)  
 1400U TOXAPHENE  
 --- ALPHA-CHLORDANE /2  
 --- BETA-CHLORDANE /2  
 --- GAMMA-CHLORDANE /2  
 --- TRANS-NONACHLOR /2  
 --- ALPHA-CHLORDANE /2  
 --- CIS-NONACHLOR /2  
 --- OXYCHLORDANE (OCTACHLOROXIDE) /2  
 --- METHOXYCHLOR  
 --- ENDRIN KETONE  
 --- PERCENT MOISTURE

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*N1-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT. C-CONFIRMED BY GC/MS  
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

06/16/92

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 92-0407 SAMPLE NO. 66582 SAMPLE TYPE: SOIL  
 SOURCE: ABC ONE-HOUR CLEANER  
 STATION ID: ABC-MM-CMT-01  
 PROG ELEM: SSF COLLECTED BY: B MORRIS  
 CITY: JACKSONVIL ST: NC  
 COLLECTION START: 04/03/92 1412 STOP: 00/00/00

ANALYTICAL RESULTS

ANALYTICAL RESULTS

UG/KG	ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS
13U	ALDRIN	170U	PCB-1232 (AROCLOR 1232)
13U	HEPTACHLOR	170U	PCB-1248 (AROCLOR 1248)
13U	HEPTACHLOR EPOXIDE	170U	PCB-1260 (AROCLOR 1260)
6.6U	ALPHA-BHC	1300U	TOXAPHENE
13U	BETA-BHC	---	CHLORDENE /2
6.6U	GAMMA-BHC (LINDANE)	---	ALPHA-CHLORDENE /2
13U	DELTA-BHC	---	BETA-CHLORDENE /2
13U	ENDOSULFAN I (ALPHA)	---	GAMMA-CHLORDANE /2
13U	DIELDRIN	---	GAMMA-CHLORDANE /2
33U	4,4'-DDT (P,P'-DDT)	---	TRANS-NONACHLOR /2
13U	4,4'-DDE (P,P'-DDE)	---	ALPHA-CHLORDANE /2
27U	4,4'-DDD (P,P'-DDD)	---	CIS-NONACHLOR /2
27U	ENDRIN	---	OXYCHLORDANE (OCTACHLORPOXIDE) /2
27U	ENDOSULFAN II (BETA)	66U	METHOXYCHLOR
33U	ENDOSULFAN SULFATE	33U	ENDRIN KETONE
83U	CHLORDANE (TECH. MIXTURE) /1	0 23	PERCENT MOISTURE
170U	PCB-1242 (AROCLOR 1242)		
170U	PCB-1254 (AROCLOR 1254)		
170U	PCB-1221 (AROCLOR 1221)		

\*\*\*\*REMARKS\*\*\*\*

\*\*\*\*REMARKS\*\*\*\*

\*\*\*\*FOOTNOTES\*\*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAT-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

06/16/92

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 92-0407 SAMPLE NO. 66581 SAMPLE TYPE: SOIL  
 SOURCE: ABC ONE-HOUR CLEANER  
 STATION ID. ABC-MW-PEL-01  
 PROG ELEM: SSF COLLECTED BY: B MORRIS  
 CITY: JACKSONVILLE ST: NC  
 COLLECTION START: 04/03/92 1152 STOP: 00/00/00

ANALYTICAL RESULTS

ANALYTICAL RESULTS

UG/KG

CONCENTRATION	ANALYTICAL RESULTS	ANALYTICAL RESULTS
14U	ALDRIN	PCB-1232 (AROCLOR 1232)
14U	HEPTACHLOR	PCB-1248 (AROCLOR 1248)
7.1U	HEPTACHLOR EPOXIDE	PCB-1260 (AROCLOR 1260)
14U	ALPHA-BHC	PCB-1016 (AROCLOR 1016)
14U	BETA-BHC	TOXAPHENE
7.1U	GAMMA-BHC (LINDANE)	CHLORDENE /2
14U	DELTA-BHC	ALPHA-CHLORDENE /2
14U	ENDOSULFAN I (ALPHA)	BETA-CHLORDENE /2
14U	DIELDRIN	GAMMA-CHLORDENE /2
36U	4,4'-DDT (P,P'-DDT)	GAMMA-CHLORDANE /2
14U	4,4'-DDE (P,P'-DDE)	TRANS-NONACHLOR /2
29U	4,4'-DDD (P,P'-DDD)	ALPHA-CHLORDANE /2
29U	ENDRIN	CIS-NONACHLOR /2
29U	ENDOSULFAN II (BETA)	OXYCHLORDANE (OCTACHLOROPOXIDE) /2
36U	ENDOSULFAN SULFATE	METHOXYCHLOR
89U	CHLORDANE (TECH. MIXTURE) /1	ENDRIN KEITONE
180U	PCB-1242 (AROCLOR 1242)	PERCENT MOISTURE
180U	PCB-1254 (AROCLOR 1254)	
180U	PCB-1221 (AROCLOR 1221)	

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAT-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*I-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT. C-CONFIRMED BY GC/MS  
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SAMPLE AND ANALYSTS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

06/16/92

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 92-0407 SAMPLE NO. 66580 SAMPLE TYPE: SOIL  
 SOURCE: ABC ONE-HOUR CLEANER  
 STATION ID: ABC-MW-SND-G1  
 PROG. ELEM: SSF COLLECTED BY: B. MORRIS  
 CITY: JACKSONVIL ST: NC  
 COLLECTION START: 04/03/92 1030 STOP: 00/00/00

ANALYTICAL RESULTS

ANALYTICAL RESULTS

UG/KG	ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS
14U	ALDRIN	170U	PCB-1232 (AROCLOR 1232)
14U	HEPTACHLOR	170U	PCB-1248 (AROCLOR 1248)
14U	HEPTACHLDR EPOXIDE	170U	PCB-1260 (AROCLOR 1260)
6.9U	ALPHA-BHC	170U	PCB-1016 (AROCLOR 1016)
14U	BETA-BHC	1400U	TOXAPHENE
6.9U	GAMMA-BHC (LINDANE)	---	CHLORDENE /2
14U	DELTA-BHC	---	ALPHA-CHLORDENE /2
14U	ENDOSULFAN I (ALPHA)	---	BETA-CHLORDENE /2
14U	DELDRIN	---	GAMMA-CHLORDANE /2
35U	4.4'-DDT (P,P'-DDT)	---	TRANS-NONACHLOR /2
14U	4.4'-DDE (P,P'-DDE)	---	ALPHA-CHLORDANE /2
28U	4.4'-DDD (P,P'-DDD)	---	CIS-NONACHLOR /2
28U	ENDRIN	---	OXYCHLORDANE (OCTACHLORPOXIDE) /2
28U	ENDOSULFAN II (BETA)	69U	METHOXYCHLOR
35U	ENDOSULFAN SULFATE	35U	ENDRIN KETONE
86U	CHLORDANE (1FCH. MIXTURE) /1	0.18	PERCENT MOISTURE
170U	PCB-1242 (AROCLOR 1242)		
170U	PCB-1254 (AROCLOR 1254)		
170U	PCB-1221 (AROCLOR 1221)		

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAT-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTIFICATION LIMIT. C-CONFIRMED BY GC/MS  
 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS. 2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/01/92

METALS DATA REPORT

\*\*\* PROJECT NO. 92-0407 SAMPLE NO. 66584 SAMPLE TYPE: GROUNDWA  
 \*\* SOURCE: ABC ONE-HOUR CLEANER  
 \*\* STATION ID: ABC-MW-MUD-01  
 \*\* PROG ELEM: SSF COLLECTED BY: B MORRIS  
 \*\* CITY: JACKSONVIL ST: NC  
 \*\* COLLECTION START: 04/03/92 1040 STOP: 00/00/00

ANALYTICAL RESULTS

ANALYTICAL RESULTS

MG/L

UG/L  
 2.5U SILVER  
 7.5U ARSENIC  
 NA BORON  
 8.3 BARIUM  
 1.2U BERYLLIUM  
 1.2U CADMIUM  
 2.5U COBALT  
 2.5U CHROMIUM  
 2.5U COPPER  
 2.5U MOLYBDENUM  
 5.0U NICKEL  
 10U LEAD  
 7.5U ANTIMONY  
 10U SELENIUM  
 6.2U TIN  
 120 STRONTIUM  
 12U TELLURIUM  
 6.7 TITANIUM  
 25U THALLIUM  
 2.5U VANADIUM  
 2.5U YTTRIUM  
 190 ZINC  
 NA ZIRCONIUM  
 0.2U MERCURY  
 230 ALUMINUM  
 13 MANGANESE

25 CALCIUM  
 2.2 MAGNESIUM  
 0.85 IRON  
 12 SODIUM  
 1.2 POTASSIUM

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
 \*NA-NOT ANALYZED  
 \*NAI-INTERFERENCES  
 \*J-ESTIMATED VALUE  
 \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/01/92

METALS DATA REPORT

\*\*\* PROJECT NO. 92-0407 SAMPLE NO. 66583 SAMPLE TYPE: SOIL  
 \*\*\* SOURCE: ABC ONE-HOUR CLEANER  
 \*\*\* STATION ID: ABC-MW-BNT-01  
 \*\*\* PROG ELEM: SSF COLLECTED BY: B MORRIS  
 \*\*\* CITY: JACKSONVIL ST: NC  
 \*\*\* COLLECTION START: 04/03/92 1400 STOP: 00/00/00

MG/KG ANALYTICAL RESULTS

MG/KG ANALYTICAL RESULTS

2.0U SILVER  
 6.0U ARSENIC  
 NA BORON  
 100 BARIUM  
 1.5 BERYLLIUM  
 1.0U CADMIUM  
 2.0U COBALT  
 2.0U CHROMIUM  
 2.6 COPPER  
 3.4 MOLYBDENUM  
 4.0U NICKEL  
 38 LEAD  
 6.0U ANTIMONY  
 8.0U SELENIUM  
 5.1 TIN  
 250 STRONTIUM  
 10U TELLURIUM  
 8.6 TITANIUM  
 20U THALIUM  
 2.0U VANADIUM  
 35 YTRIUM  
 75 ZINC  
 NA ZIRCONIUM  
 0.05U MERCURY  
 18000 ALUMINUM  
 530 MANGANESE

11000 CALCIUM  
 4900 MAGNESIUM  
 13000 IRON  
 12000 SODIUM  
 680 POTASSIUM  
 7 PERCENT MOISTURE

\*\*\*\*REMARKS\*\*\*\*

\*\*\*\*REMARKS\*\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/01/92

METALS DATA REPORT

PROJECT NO. 92-0407 SAMPLE NO. 66582 SAMPLE TYPE: SOIL  
SOURCE: ABC ONE-HOUR CLEANER  
STATION ID: ABC-MW-CMT-01

PROG ELEM: SSF COLLECTED BY: B MORRIS  
CITY: JACKSONVIL ST: NC  
COLLECTION START: 04/03/92 1412 STOP: 00/00/00

ANALYTICAL RESULTS

ANALYTICAL RESULTS

MG/KG  
200 SILVER  
600 ARSENIC  
NA BORON  
220 BARIUM  
100 BERYLLIUM  
100 CADMIUM  
200 COBALT  
40 CHROMIUM  
34 COPPER  
200 MOLYBDENUM  
400 NICKEL  
800 LEAD  
600 ANTIMONY  
800 SELENIUM  
500 TIN  
340 STRONTIUM  
1000 TELLURIUM  
1400 TITANIUM  
2000 THALLIUM  
34 VANADIUM  
21 YTRIUM  
78 ZINC  
NA ZIRCONIUM  
0.050 MERCURY  
24000 ALUMINUM  
1300 MANGANESE

MG/KG  
430000 CALCIUM  
73000 MAGNESIUM  
23000 IRON  
20000 SODIUM  
5500 POTASSIUM  
0 PERCENT MOISTURE

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*NAT-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*K-ACTUAL VALUE WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
\*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/01/92

METALS DATA REPORT

\*\*\* PROJECT NO. 92-0407 SAMPLE NO. 66581 SAMPLE TYPE: SOIL  
 \*\* SOURCE: ABC ONE-HOUR CLEANER  
 \*\* STATION ID: ABC-MW-PEL-01  
 \*\* ANALYTICAL RESULTS

\*\*\* ANALYTICAL RESULTS  
 \*\* PROG ELEM: SSF COLLECTED BY: B MORRIS  
 \*\* CITY: JACKSONVIL ST: NC  
 \*\* COLLECTION START: 04/03/92 1152 STOP: 00/00/00

MG/KG SILVER  
 2.0U ARSENIC  
 6.0U BORON  
 NA BARIUM  
 240 BERYLLIUM  
 1.2 CADMIUM  
 1.0U COBALT  
 2.3 CHROMIUM  
 4.4 COPPER  
 2.0U MOLYBDENUM  
 5.8 NICKEL  
 38 LEAD  
 6.0U ANTIMONY  
 8.0U SELENIUM  
 5.7 TIN  
 260 STRONTIUM  
 10U TELLURIUM  
 12 TITANIUM  
 20U THALLIUM  
 2.0U VANADIUM  
 19 VITRIUM  
 71 ZINC  
 NA ZIRCONIUM  
 0.05U MERCURY  
 18000 ALUMINIUM  
 230 MANGANESE

ANALYTICAL RESULTS

MG/KG CALCIUM  
 5800 MAGNESIUM  
 3800 IRON  
 11000 SODIUM  
 15000 POTASSIUM  
 750 PERCENT MOISTURE

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
 \*NA-NOT ANALYZED  
 \*NAI-INTERFERENCES  
 \*J-ESTIMATED VALUE  
 \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN



SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/01/92

METALS DATA REPORT

\*\*\* PROJECT NO. 92-0407 SAMPLE NO. 66580 SAMPLE TYPE: SOIL  
 \*\* SOURCE: ABC ONE-HOUR CLEANER  
 \*\* STATION ID: ABC-MW-SND-01  
 \*\*  
 \*\* PROG ELEM: SSF COLLECTED BY: B MORRIS  
 \*\* CITY: JACKSONVIL ST: NC  
 \*\* COLLECTION START: 04/03/92 1030 STOP: 00/00/00  
 \*\*

ANALYTICAL RESULTS

ANALYTICAL RESULTS

MG/KG  
 1.0U SILVER  
 3.0U ARSENIC  
 NA BORON  
 1.0U BARIUM  
 0.50U BERYLLIUM  
 0.50U CADMIUM  
 1.0U COBALT  
 1.0U CHROMIUM  
 1.0U COPPER  
 1.0U MOLYBDENUM  
 2.0U NICKEL  
 4.0U LEAD  
 3.0U ANTIMONY  
 4.0U SELENIUM  
 2.5U TIN  
 1.0U STRONTIUM  
 5.0U TELLURIUM  
 5.3 TITANIUM  
 10H THALLIUM  
 1.0U VANADIUM  
 1.0U YTTRIUM  
 1.0U ZINC  
 NA ZIRCONIUM  
 0.05U MERCURY  
 75 ALUMINUM  
 1.0U MANGANESE

50U CALCIUM  
 10U MAGNESIUM  
 28 IRON  
 100U SODIUM  
 200U POTASSIUM  
 0 PERCENT MOISTURE

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

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 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
 \*NA-NOT ANALYZED  
 \*NAI-INTERFERENCES  
 \*J-ESTIMATED VALUE  
 \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

04/21/92

SPECIFIED ANALYSIS DATA REPORT

\*\*\* PROJECT NO. 92-0407 SAMPLE NO. 66584 SAMPLE TYPE: GROUNDWA      PROG ELEM: SSF      COLLECTED BY: B MORRIS      \*\*\*  
\*\*\* SOURCE: ABC ONE-HOUR CLEANER      CITY: JACKSONVIL      ST: NC      \*\*\*  
\*\*\* STATION ID: ABC-MW-MUD-01      COLLECTION START: 04/03/92 1040      STOP: 00/00/00      \*\*\*  
\*\*\*

RESULTS    UNITS    PARAMETER  
            4U    UG/L    CYANIDE

\*\*\* FOOTNOTES \*\*\*  
\*A-AVERAGE VALUE      \*NA-NOT ANALYZED      \*NAI-INTERFERENCES      \*J-ESTIMATED VALUE      \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN      \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
\*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

04/21/92

SPECIFIED ANALYSIS DATA REPORT

\*\*\* \*\* \*\* \*\* \*\*

PROJECT NO. 92-0407    SAMPLE NO. 66583    SAMPLE TYPE: SOIL    PROG ELEM: SSF    COLLECTED BY: B MORRIS    \*\*

SOURCE: ABC ONE-HOUR CLEANER    CITY: JACKSONVIL    ST: NC    \*\*

STATION ID: ABC-MW-BNT-01    COLLECTION START: 04/03/92 1400    STOP: 00/00/00    \*\*

\*\*\* \*\* \*\* \*\* \*\*

RESULTS UNITS PARAMETER  
0.22U MG/KG CYANIDE

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE    \*NA-NOT ANALYZED    \*NAI-INTERFERENCES    \*J-ESTIMATED VALUE    \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL

\*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN    \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN

\*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

SPECIFIED ANALYSIS DATA REPORT

\*\*\* PROJECT NO. 92-0407 SAMPLE NO. 66582 SAMPLE TYPE: SOIL \*\*\*  
\*\* SOURCE: ABC ONE-HOUR CLEANER \*\*\*  
\*\* STATION ID: ABC-MM-CMT-01 \*\*\*  
\*\*\* PROG ELEM: SSF COLLECTED BY: B MORRIS \*\*\*  
\*\* CITY: JACKSONVIL ST: NC \*\*  
\*\* COLLECTION START: 04/03/92 1412 STOP: 00/00/00 \*\*\*

RESULTS UNITS PARAMETER  
0.2U MG/KG CYANIDE

\*\*\*FOOTNOTES\*\*\*  
\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
\*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SPECIFIED ANALYSIS DATA REPORT

\*\*\* \*\* \* PROJECT NO. 92-0407 SAMPLE NO. 66581 SAMPLE TYPE: SOIL  
\*\* SOURCE: ABC ONE-HOUR CLEANER  
\*\* STATION ID: ABC-MW-PEL-01  
\*\*\* \*\* \* PROG ELEM: SSF COLLECTED BY: B MORRIS  
\*\* CITY: JACKSONVIL ST: NC  
\*\* COLLECTION START: 04/03/92 1152 STOP: 00/00/00  
\*\*\* \*\* \*

RESULTS UNITS PARAMETER  
0.22U MG/KG CYANIDE

\*\*\*FOOTNOTES\*\*\*  
\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAT-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
\*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.



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Remedial Investigation Report  
ABC One-Hour Cleaners, Inc.  
Jacksonville, Onslow County, North Carolina  
Section: Appendix C  
Revision: 1  
Date: November 1992

**MONITOR WELLS - SURFICIAL AQUIFER**  
**VOLATILES**

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/21/92

PURGEABLE ORGANICS DATA REPORT

\*\*\* PROJECT NO. 92-0341 SAMPLE NO. 68213 SAMPLE TYPE: GROUNDWA  
 \*\*\* SOURCE: ABC ONE-HOUR CLEANER  
 \*\*\* STATION ID: MW-S01-01  
 \*\*\* CASE NO.: 18093  
 \*\*\* SAS NO.: 7208D  
 \*\*\* D. NO.: BT95  
 \*\*\* PROG ELEM: SSF COLLECTED BY: B MORRIS  
 \*\*\* CITY: JACKSONVIL ST: NC  
 \*\*\* COLLECTION START: 04/24/92 1800 STOP: 00/00/00

\*\*\* UG/L ANALYTICAL RESULTS \*\*\* UG/L ANALYTICAL RESULTS \*\*\*

100 UG/L	100 UG/L
CHLOROMETHANE	1,2-DICHLOROPROPANE
100 BROMOMETHANE	100 CIS-1,3-DICHLOROPROPENE
100 VINYL CHLORIDE	100 TRICHLOROETHENE (TRICHLOROETHYLENE)
100 CHLOROETHANE	100 DIBROMOCHLOROMETHANE
100 METHYLENE CHLORIDE	1,1,2-TRICHLOROETHANE
100 ACETONE	100 BENZENE
100 CARBON DISULFIDE	100 TRANS-1,3-DICHLOROPROPENE
1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	100 BROMOFORM
100 1,1-DICHLOROETHANE	100 METHYL ISOBUTYL KETONE
100 1,2-DICHLOROETHANE (TOTAL)	100 METHYL BUTYL KETONE
100 CHLOROFORM	10 TETRACHLOROETHENE (TETRACHLOROETHYLENE)
100 1,2-DICHLOROETHANE	100 1,1,2,2-TETRACHLOROETHANE
100 METHYL ETHYL KETONE	100 TOLUENE
1,1,1-TRICHLOROETHANE	100 CHLOROBENZENE
100 CARBON TETRACHLORIDE	100 ETHYL BENZENE
100 BROMODICHLOROMETHANE	100 STYRENE
	100 TOTAL XYLENES

\*\*\*\*REMARKS\*\*\*\*

\*\*\*\*REMARKS\*\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*NA1-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT  
 \*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION



SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/21/92

PURGEABLE ORGANICS DATA REPORT

\*\*\* PROJECT NO. 92-0341 SAMPLE NO. 68212 SAMPLE TYPE: GROUNDWA PROG ELEM: SSF COLLECTED BY: B MORRIS  
 \*\* SOURCE: ABC ONE-HOUR CLEANER STATION ID: MW-S02-01 CITY: JACKSONVIL ST: NC  
 \*\* COLLECTION START: 04/23/92 2120 STOP: 00/00/00

\*\*\* CASE NO.: 18093 SAS NO.: 72088 D. NO.: BT91

UG/L ANALYTICAL RESULTS

10U CHLOROMETHANE  
 10U BROMOMETHANE  
 10U VINYL CHLORIDE  
 10U CHLOROETHANE  
 10U METHYLENE CHLORIDE  
 10U ACETONE  
 10U CARBON DISULFIDE  
 5J 1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)  
 10U 1,1-DICHLOROETHANE  
 1200 1,2-DICHLOROETHENE (TOTAL)  
 1J CHLOROFORM  
 10U 1,2-DICHLOROETHANE  
 10U METHYL ETHYL KETONE  
 10U 1,1,1-TRICHLOROETHANE  
 10U CARBON TETRACHLORIDE  
 10U BROMODICHLOROMETHANE

UG/L ANALYTICAL RESULTS

10U 1,2-DICHLOROPROPANE  
 10U CIS-1,3-DICHLOROPROPENE  
 690 TRICHLOROETHENE (TRICHLOROETHYLENE)  
 10U DIBROMOCHLOROMETHANE  
 10U 1,1,2-TRICHLOROETHANE  
 10U BENZENE  
 10U TRANS-1,3-DICHLOROPROPENE  
 10U BROMOFORM  
 10U METHYL ISOBUTYL KETONE  
 10U METHYL BUTYL KETONE  
 880 TETRACHLOROETHENE (TETRACHLOROETHYLENE)  
 10U 1,1,2,2-TETRACHLOROETHANE  
 10U TOLUENE  
 10U CHLOROBENZENE  
 10U ETHYL BENZENE  
 10U STYRENE  
 10U TOTAL XYLENES

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/21/92

PURGEABLE ORGANICS DATA REPORT

\*\*\* PROJECT NO. 92-0341 SAMPLE NO. 68222 SAMPLE TYPE: GROUNDWA PROG ELEM: SSF COLLECTED BY: B MORRIS  
 \*\* SOURCE: ABC ONE-HOUR CLEANER STATION ID: MW-S02-01B CITY: JACKSONVIL ST: NC  
 \*\* COLLECTION START: 04/23/92 2120 STOP: 00/00/00

\*\*\* CASE NO.: 18093 SAS NO.: 72088 D. NO.: BT92  
 \*\* UG/L ANALYTICAL RESULTS UG/L ANALYTICAL RESULTS

ANALYTICAL RESULTS	ANALYTICAL RESULTS
10U CHLOROMETHANE	10U 1,2-DICHLOROPROPANE
10U BROMOMETHANE	10U CIS-1,3-DICHLOROPROPENE
10U VINYL CHLORIDE	720 TRICHLOROETHENE (TRICHLOROETHYLENE)
10U CHLOROETHANE	10U DIBROMOCHLOROMETHANE
10U METHYLENE CHLORIDE	10U 1,1,2-TRICHLOROETHANE
10U ACETONE	10U BENZENE
10U CARBON DISULFIDE	10U TRANS-1,3-DICHLOROPROPENE
5J 1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	10U BROMOFORM
10U 1,1-DICHLOROETHANE	10U METHYL ISOBUTYL KETONE
1200 1,2-DICHLOROETHENE (TOTAL)	10U METHYL BUTYL KETONE
10U CHLOROFORM	910 TETRACHLOROETHENE (TETRACHLOROETHYLENE)
10U 1,2-DICHLOROETHANE	10U 1,1,2,2-TETRACHLOROETHANE
10U METHYL ETHYL KETONE	10U TOLUENE
10U 1,1,1-TRICHLOROETHANE	10U CHLOROBENZENE
10U CARBON TETRACHLORIDE	10U ETHYL BENZENE
10U BROMODICHLOROMETHANE	10U STYRENE
	1J TOTAL XYLENES

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*\*A-AVERAGE VALUE \*\*NA-NOT ANALYZED \*\*N1-INTERFERENCES \*\*J-ESTIMATED VALUE \*\*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*\*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*\*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/21/92

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 92-0341 SAMPLE NO. 68219 SAMPLE TYPE: GROUNDWA  
SOURCE: ABC ONE-HOUR CLEANER  
STATION ID: MW-S03-01  
PROG ELEM: SSF COLLECTED BY: B MORRIS  
CITY: JACKSONVIL ST: NC  
COLLECTION START: 04/29/92 1315 STOP: 00/00/00

CASE NO.: 18093 SAS NO.: 72080 D. NO.: BW77

UG/L ANALYTICAL RESULTS UG/L ANALYTICAL RESULTS

10U CHLOROMETHANE  
10U BROMOMETHANE  
110 VINYL CHLORIDE  
10U CHLOROETHANE  
10U METHYLENE CHLORIDE  
10U ACETONE  
10U CARBON DISULFIDE  
6J 1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)  
10U 1,1-DICHLOROETHANE  
1200 1,2-DICHLOROETHENE (TOTAL)  
10U CHLOROFORM  
10U 1,2-DICHLOROETHANE  
10U METHYL ETHYL KETONE  
10U 1,1,1-TRICHLOROETHANE  
10U CARBON TETRACHLORIDE  
10U BROMODICHLOROMETHANE

10U 1,2-DICHLOROPROPANE  
10U CIS-1,3-DICHLOROPROPENE  
640 TRICHLOROETHENE(TRICHLOROETHYLENE)  
10U DIBROMOCHLOROMETHANE  
2J 1,1,2-TRICHLOROETHANE  
10U BENZENE  
10U TRANS-1,3-DICHLOROPROPENE  
10U BROMOFORM  
10U METHYL ISOBUTYL KETONE  
10U METHYL BUTYL KETONE  
5400 TETRACHLOROETHENE(TETRACHLOROETHYLENE)  
10U 1,1,2,2-TETRACHLOROETHANE  
10U TOLUENE  
10U CHLOROBENZENE  
10U ETHYL BENZENE  
10U STYRENE  
10U TOTAL XYLENES

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/21/92

PURGEABLE ORGANICS DATA REPORT

\*\*\*  
 \*\* PROJECT NO. 92-0341 SAMPLE NO. 68207 SAMPLE TYPE: GROUNDWA PROG ELEM: SSF COLLECTED BY: B MORRIS \*\* \*\* \*\* \*\*  
 \*\* SOURCE: ABC ONE-HOUR CLEANER \*\*  
 \*\* STATION ID: MW-504-01 \*\*

\*\*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\*  
 \*\* CASE NO.: 18093 SAS NO.: 7208D D. NO.: BT86 \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\*  
 \*\* UG/L \*\*

ANALYTICAL RESULTS

10U CHLOROMETHANE  
 10U BROMOMETHANE  
 10U VINYL CHLORIDE  
 10U CHLOROETHANE  
 10U METHYLENE CHLORIDE  
 10U ACETONE  
 10U CARBON DISULFIDE  
 10U 1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)  
 10U 1,1-DICHLOROETHANE  
 10U 1,2-DICHLOROETHENE (TOTAL)  
 10U CHLOROFORM  
 10U 1,2-DICHLOROETHANE  
 10U METHYL ETHYL KETONE  
 10U 1,1,1-TRICHLOROETHANE  
 10U CARBON TETRACHLORIDE  
 10U BROMODICHLOROMETHANE

ANALYTICAL RESULTS

10U 1,2-DICHLOROPROPANE  
 10U CIS-1,3-DICHLOROPROPENE  
 10U TRICHLOROETHENE(TRICHLOROETHYLENE)  
 10U DIBROMOCHLOROMETHANE  
 10U 1,1,2-TRICHLOROETHANE  
 10U BENZENE  
 10U TRANS-1,3-DICHLOROPROPENE  
 10U BROMOFORM  
 10U METHYL ISOBUTYL KETONE  
 10U METHYL BUTYL KETONE  
 10U TETRACHLOROETHENE(TETRACHLOROETHYLENE)  
 10U 1,1,2,2-TETRACHLOROETHANE  
 10U TOLUENE  
 10U CHLOROBENZENE  
 10U ETHYL BENZENE  
 10U STYRENE  
 10U TOTAL XYLENES

\*\*\*\*REMARKS\*\*\*\*

\*\*\*\*REMARKS\*\*\*\*

\*\*\*\*FOOTNOTES\*\*\*\*

\*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*NA1-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/21/92

PURGEABLE ORGANICS DATA REPORT

\*\*\* PROJECT NO. 92-0341 SAMPLE NO. 68210 SAMPLE TYPE: GROUNDWA  
 \*\* SOURCE: ABC ONE-HOUR CLEANER  
 \*\* STATION ID: MW-S05-01  
 \*\* CASE NO.: 18093  
 \*\* SAS NO.: 7208D  
 \*\* D. NO.: BT89  
 \*\* PROG ELEM: SSF COLLECTED BY: B MORRIS  
 \*\* CITY: JACKSONVIL ST: NC  
 \*\* COLLECTION START: 04/23/92 1330 STOP: 00/00/00

UG/L ANALYTICAL RESULTS UG/L ANALYTICAL RESULTS

10U CHLOROMETHANE	10U 1,2-DICHLOROPROPANE
10U BROMOMETHANE	10U CIS-1,3-DICHLOROPROPENE
10U VINYL CHLORIDE	3J TRICHLOROETHENE (TRICHLOROETHYLENE)
10U CHLOROETHANE	10U DIBROMOCHLOROMETHANE
10U METHYLENE CHLORIDE	10U 1,1,2-TRICHLOROETHANE
10U ACETONE	2J BENZENE
10U CARBON DISULFIDE	10U TRANS-1,3-DICHLOROPROPENE
10U 1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	10U BROMOFORM
10U 1,1-DICHLOROETHANE	10U METHYL ISOBUTYL KETONE
10U 1,2-DICHLOROETHENE (TOTAL)	10U METHYL BUTYL KETONE
10U CHLOROFORM	3J TETRACHLOROETHENE (TETRACHLOROETHYLENE)
10U 1,2-DICHLOROETHANE	10U 1,1,2,2-TETRACHLOROETHANE
10U METHYL ETHYL KETONE	4J TOLUENE
10U 1,1,1-TRICHLOROETHANE	5J CHLOROBENZENE
10U CARBON TETRACHLORIDE	10U ETHYL BENZENE
10U BROMODICHLOROMETHANE	10U STYRENE
	10U TOTAL XYLENES

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
 \*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.  
 \*NA-NOT ANALYZED  
 \*NAI-INTERFERENCES  
 \*J-ESTIMATED VALUE  
 \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/21/92

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 92-0341 SAMPLE NO. 68220 SAMPLE TYPE: GROUNDWA  
 SOURCE: ABC ONE-HOUR CLEANER  
 STATION ID: MW-S06-01  
 COLLECTION START: 04/29/92 1435 STOP: 00/00/00  
 CITY: JACKSONVIL ST: NC  
 PROG ELEM: SSF COLLECTED BY: B MORRIS

CASE NO.: 18093 SAS NO.: 7208D D. NO.: BW78  
 UG/L UG/L

ANALYTICAL RESULTS

ANALYTICAL RESULTS

10U CHLOROMETHANE  
 10U BROMOMETHANE  
 10U VINYL CHLORIDE  
 10U CHLOROETHANE  
 10U METHYLENE CHLORIDE  
 10U ACETONE  
 10U CARBON DISULFIDE  
 10U 1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)  
 10U 1,1-DICHLOROETHANE  
 10U 1,2-DICHLOROETHANE (TOTAL)  
 10U CHLOROFORM  
 10U 1,2-DICHLOROETHANE  
 10U METHYL ETHYL KETONE  
 10U 1,1,1-TRICHLOROETHANE  
 10U CARBON TETRACHLORIDE  
 10U BROMODICHLOROMETHANE

10U 1,2-DICHLOROPROPANE  
 10U CIS-1,3-DICHLOROPROPENE  
 10U TRICHLOROETHENE (TRICHLOROETHYLENE)  
 10U DIBROMOCHLOROMETHANE  
 10U 1,1,2-TRICHLOROETHANE  
 2J BENZENE  
 10U TRANS-1,3-DICHLOROPROPENE  
 10U BROMOFORM  
 10U METHYL ISOBUTYL KETONE  
 10U METHYL BUTYL KETONE  
 4J TETRACHLOROETHENE (TETRACHLOROETHYLENE)  
 10U 1,1,2,2-TETRACHLOROETHANE  
 10U TOLUENE  
 3J CHLOROBENZENE  
 10U ETHYL BENZENE  
 28 STYRENE  
 10U TOTAL XYLENES

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
 \*R-OC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/21/92

MISCELLANEOUS PURGEABLE ORGANICS - DATA REPORT

\*\* PROJECT NO. 92-0341    SAMPLE NO. 68220    SAMPLE TYPE: GROUNDWA    PROG ELEM: SSF    COLLECTED BY: B MORRIS    \*\*  
 \*\* SOURCE: ABC ONE-HOUR CLEANER    CITY: JACKSONVIL    ST: NC    \*\*  
 \*\* STATION ID: MW-S06-01    COLLECTION START: 04/29/92 1435    STOP: 00/00/00    \*\*  
 \*\* CASE NO.: 18093    D. NO.: 8W78    MD NO: CJ21    \*\*  
 \*\* SAS NO.: 7208D    \*\*

ANALYTICAL RESULTS UG/L

30JN	METHYLCYCLOHEXANE
20JN	TRIMETHYLBENZENE
10JN	CYCLOPROPYLBENZENE
10JN	ETHYLDIMETHYLBENZENE
100J	5 UNIDENTIFIED COMPOUNDS

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE    \*NA-NOT ANALYZED    \*NAI-INTERFERENCES    \*J-ESTIMATED VALUE    \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN    \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/21/92

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 92-0341 SAMPLE NO. 68217 SAMPLE TYPE: GROUNDWA  
SOURCE: ABC ONE-HOUR CLEANER  
STATION ID: MW-S07-01  
PROG ELEM: SSF COLLECTED BY: B MORRIS  
CITY: JACKSONVIL ST: NC  
COLLECTION START: 04/28/92 1925 STOP: 00/00/00

CASE NO.: 18093 SAS NO.: 7208D D. NO.: BT99  
UG/L ANALYTICAL RESULTS UG/L ANALYTICAL RESULTS

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
100	CHLOROMETHANE	100	1,2-DICHLOROPROPANE
100	BROMOMETHANE	100	CIS-1,3-DICHLOROPROPENE
100	VINYL CHLORIDE	100	TRICHLOROETHENE (TRICHLOROETHYLENE)
100	CHLOROETHANE	100	DIBROMOCHLOROMETHANE
100	METHYLENE CHLORIDE	100	1,1,2-TRICHLOROETHANE
100	ACETONE	100	BENZENE
100	CARBON DISULFIDE	100	TRANS-1,3-DICHLOROPROPENE
100	1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	100	BROMOFORM
100	1,1-DICHLOROETHANE	100	METHYL ISOBUTYL KETONE
100	1,2-DICHLOROETHENE (TOTAL)	100	METHYL BUTYL KETONE
100	CHLOROFORM	100	TETRACHLOROETHENE (TETRACHLOROETHYLENE)
100	1,2-DICHLOROETHANE	100	1,1,2,2-TETRACHLOROETHANE
100	METHYL ETHYL KETONE	100	TOLUENE
100	1,1,1-TRICHLOROETHANE	100	CHLOROBENZENE
100	CARBON TETRACHLORIDE	100	ETHYL BENZENE
100	BROMODICHLOROMETHANE	100	STYRENE
		100	TOTAL XYLENES

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/21/92

PURGEABLE ORGANICS DATA REPORT

\*\*\* PROJECT NO. 92-0341 SAMPLE NO. 68215 SAMPLE TYPE: GROUNDWA  
 \*\* SOURCE: ABC ONE-HOUR CLEANER  
 \*\* STATION ID: MW-S08-01  
 \*\* CASE NO.: 18093  
 \*\* SAS NO.: 7208D  
 \*\* D. NO.: BT97  
 \*\* PROG ELEM: SSF COLLECTED BY: B MORRIS  
 \*\* CITY: JACKSONVIL ST: NC  
 \*\* COLLECTION START: 04/24/92 1900 STOP: 00/00/00

ANALYTICAL RESULTS

ANALYTICAL RESULTS

10U CHLOROMETHANE  
 10U BROMOMETHANE  
 10U VINYL CHLORIDE  
 10U CHLOROETHANE  
 10U METHYLENE CHLORIDE  
 10U ACETONE  
 10U CARBON DISULFIDE  
 10U 1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)  
 10U 1,1-DICHLOROETHANE  
 10U 1,2-DICHLOROETHANE (TOTAL)  
 10U CHLOROFORM  
 10U 1,2-DICHLOROETHANE  
 10U METHYL ETHYL KETONE  
 10U 1,1,1-TRICHLOROETHANE  
 10U CARBON TETRACHLORIDE  
 10U BROMODICHLOROMETHANE

10U 1,2-DICHLOROPROPANE  
 10U CIS-1,3-DICHLOROPROPENE  
 10U TRICHLOROETHENE (TRICHLOROETHYLENE)  
 10U DIBROMOCHLOROMETHANE  
 10U 1,1,2-TRICHLOROETHANE  
 10U BENZENE  
 10U TRANS-1,3-DICHLOROPROPENE  
 10U BROMOFORM  
 10U METHYL ISOBUTYL KETONE  
 10U METHYL BUTYL KETONE  
 10U TETRACHLOROETHENE (TETRACHLOROETHYLENE)  
 10U 1,1,2,2-TETRACHLOROETHANE  
 10U TOLUENE  
 10U CHLORO BENZENE  
 10U ETHYL BENZENE  
 10U STYRENE  
 10U TOTAL XYLENES

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/21/92

PURGEABLE ORGANICS DATA REPORT

\*\*\* PROJECT NO. 92-0341 SAMPLE NO. 68206 SAMPLE TYPE: GROUNDWA  
 \*\*\* SOURCE: ABC ONE-HOUR CLEANER  
 \*\*\* STATION ID: MW-S09-01  
 \*\*\* CASE NO.: 18093 SAS NO.: 7208D D. NO.: BT85  
 \*\*\* ANALYTICAL RESULTS UG/L ANALYTICAL RESULTS

PROG ELEM: SSF COLLECTED BY: B MORRIS  
 CITY: JACKSONVIL ST: NC  
 COLLECTION START: 04/22/92 1040 STOP: 00/00/00

ANALYTICAL RESULTS

10U CHLOROMETHANE  
 10U BROMOMETHANE  
 10U VINYL CHLORIDE  
 10U CHLOROETHANE  
 10U METHYLENE CHLORIDE  
 10U ACETONE  
 10U CARBON DISULFIDE  
 10U 1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)  
 10U 1,1-DICHLOROETHANE  
 10U 1,2-DICHLOROETHENE (TOTAL)  
 10U CHLOROFORM  
 10U 1,2-DICHLOROETHANE  
 10U METHYL ETHYL KETONE  
 10U 1,1,1-TRICHLOROETHANE  
 10U CARBON TETRACHLORIDE  
 10U BROMODICHLOROMETHANE

ANALYTICAL RESULTS

10U 1,2-DICHLOROPROPANE  
 10U CIS-1,3-DICHLOROPROPENE  
 10U TRICHLOROETHENE (TRICHLOROETHYLENE)  
 10U DIBROMOCHLOROMETHANE  
 10U 1,1,2-TRICHLOROETHANE  
 10U BENZENE  
 10U TRANS-1,3-DICHLOROPROPENE  
 10U BROMOFORM  
 10U METHYL ISOBUTYL KETONE  
 10U METHYL BUTYL KETONE  
 10U TETRACHLOROETHENE (TETRACHLOROETHYLENE)  
 10U 1,1,2,2-TETRACHLOROETHANE  
 10U TOLUENE  
 10U CHLOROBENZENE  
 10U ETHYL BENZENE  
 10U STYRENE  
 10U TOTAL XYLENES

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*NAT-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/21/92

PURGEABLE ORGANICS DATA REPORT

\*\*\* PROJECT NO. 92-0341 SAMPLE NO. 68216 SAMPLE TYPE: GROUNDWA PROG ELEM: SSF COLLECTED BY: B MORRIS  
 \*\* SOURCE: ABC ONE-HOUR CLEANER STATION ID: MW-S10-01 CITY: JACKSONVIL ST: NC  
 \*\* STATION ID: MW-S10-01 COLLECTION START: 04/28/92 1800 STOP: 00/00/00

\*\*\* CASE NO.: 18093 SAS NO.: 7208D D. NO.: BT98  
 \*\* UG/L ANALYTICAL RESULTS UG/L ANALYTICAL RESULTS

ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS	UG/L
10U CHLOROMETHANE		10U 1,2-DICHLOROPROPANE	
10U BROMOMETHANE		10U CIS-1,3-DICHLOROPROPENE	
10U VINYL CHLORIDE		10U TRICHLOROETHENE(TRICHLOROETHYLENE)	
10U CHLOROETHANE		10U DIBROMOCHLOROMETHANE	
10U METHYLENE CHLORIDE		10U 1,1,2-TRICHLOROETHANE	
10U ACETONE		10U BENZENE	
10U CARBON DISULFIDE		10U TRANS-1,3-DICHLOROPROPENE	
10U 1,1-DICHLOROETHANE(1,1-DICHLOROETHYLENE)		10U BROMOFORM	
10U 1,1-DICHLOROETHANE		10U METHYL ISOBUTYL KETONE	
10U 1,2-DICHLOROETHENE (TOTAL)		10U METHYL BUTYL KETONE	
10U CHLOROFORM		10U TETRACHLOROETHENE(TETRACHLOROETHYLENE)	
10U 1,2-DICHLOROETHANE		10U 1,1,2,2-TETRACHLOROETHANE	
10U METHYL ETHYL KETONE		10U TOLUENE	
10U 1,1,1-TRICHLOROETHANE		10U CHLOROBENZENE	
10U CARBON TETRACHLORIDE		10U ETHYL BENZENE	
10U BROMODICHLOROMETHANE		10U STYRENE	
		10U TOTAL XYLENES	

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
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 \*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

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Remedial Investigation Report  
ABC One-Hour Cleaners, Inc  
Jacksonville, Onslow County, North Carolina  
Section Appendix C  
Revision 1  
Date November 1992

**MONITOR WELLS - SURFICIAL AQUIFER**  
**SEMI-VOLATILES**

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/21/92

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 92-0341 SAMPLE NO. 68213 SAMPLE TYPE: GROUNDWA  
SOURCE: ABC ONE-HOUR CLEANER  
STATION ID: MW-S01-01  
PROG ELEM: SSF COLLECTED BY: B MORRIS  
CITY: JACKSONVIL ST: NC  
COLLECTION START: 04/24/92 1800 STOP: 00/00/00

CASE NO.: 18093 SAS NO.: 7208D D. NO.: BT95

ANALYTICAL RESULTS

ANALYTICAL RESULTS

10U PHENOL  
10U BIS(2-CHLOROETHYL) ETHER  
10U 2-CHLOROPHENOL  
10U 1,3-DICHLOROBENZENE  
10U 1,4-DICHLOROBENZENE  
10U 1,2-DICHLOROBENZENE  
10U 2-METHYLPHENOL  
10U 2,2'-CHLOROISOPROPYLETHER  
10U (3-AND/OR 4-)METHYLPHENOL  
10U N-NITROSODI-N-PROPYLAMINE  
10U HEXACHLOROETHANE  
10U NITROBENZENE  
10U ISOPHORONE  
10U 2-NITROPHENOL  
10U 2,4-DIMETHYLPHENOL  
10U BIS(2-CHLOROETHOXY) METHANE  
10U 2,4-DICHLOROPHENOL  
10U 1,2,4-TRICHLOROBENZENE  
10U NAPHTHALENE  
10U 4-CHLOROANILINE  
10U HEXACHLOROBUTADIENE  
10U 4-CHLORO-3-METHYLPHENOL  
10U 2-METHYLNAPHTHALENE  
10U HEXACHLOROCYCLOPENTADIENE (HCCP)  
25U 2,4,6-TRICHLOROPHENOL  
10U 2,4,5-TRICHLOROPHENOL  
2 CHLORONAPHTHALENE  
2 NITROANILINE  
10U DIMETHYL PHTHALATE  
10U ACENAPHTHYLENE  
10U 2,6-DINITROTOLUENE

25U 3-NITROANILINE  
10U ACENAPHTHENE  
25U 2,4-DINITROPHENOL  
25U 4-NITROPHENOL  
10U DIBENZOFURAN  
10U 2,4-DINITROTOLUENE  
10U DIETHYL PHTHALATE  
10U 4-CHLOROPHENYL PHENYL ETHER  
10U FLUORENE  
4-NITROANILINE  
25U 4-NITROANILINE  
25U 2-METHYL-4,6-DINITROPHENOL  
10U N-NITROSODIPHENYLAMINE/DIPHENYLAMINE  
10U 4-BROMOPHENYL PHENYL ETHER  
10U HEXACHLOROBENZENE (HCB)  
25U PENTACHLOROPHENOL  
10U PHENANTHRENE  
10U ANTHRACENE  
10U CARBAZOLE  
10U DI-N-BUTYLPHTHALATE  
10U FLUORANTHENE  
10U PYRENE  
10U RFNZYI RUTYL PHTHALATE  
10U 3,3'-DICHLOROBENZIDINE  
10U BENZO(A)ANTHRACENE  
10U CHRYSENE  
10U BIS(2-ETHYLHEXYL) PHTHALATE  
10U DI-N-OCTYLPHTHALATE  
10U BENZO(B AND/OR K)FLUORANTIENE  
10U BENZO-A-PYRENE  
10U INDENO (1,2,3-CD) PYRENE  
10U DIBENZO(A,H)ANTHRACENE  
10U BENZO(GH)PERYLENE

\*\*\*\*REMARKS\*\*\*\*

\*\*\*\*REMARKS\*\*\*\*

\*\*\*\*FOOTNOTES\*\*\*\*

\*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
\*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
\*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
\*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*NA-NOT ANALYZED  
\*NAI-INTERFERENCES  
\*J-ESTIMATED VALUE  
\*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.  
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\*R-ESTIMATED VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/21/92

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 92-0341 SAMPLE NO. 68212 SAMPLE TYPE: GROUNDWA  
SOURCE: ABC ONE-HOUR CLEANER  
STATION ID: MW-S02-01

PROG ELEM: SSF COLLECTED BY: B MORRIS  
CITY: JACKSONVIL ST: NC  
COLLECTION START: 04/23/92 2120 STOP: 00/00/00

CASE NO.: 18093

SAS NO.: 7208D

D. NO.: BT91

ANALYTICAL RESULTS

ANALYTICAL RESULTS

10U PHENOL  
10U BIS(2-CHLOROETHYL) ETHER  
10U 2-CHLOROPHENOL  
10U 1,3-DICHLOROBENZENE  
10U 1,4-DICHLOROBENZENE  
10U 1,2-DICHLOROBENZENE  
10U 2-METHYLPHENOL  
10U 2,2-CHLOROISOPROPYLETHER  
10U (3-AND/OR 4-)METHYLPHENOL  
10U N-NITROSODI-N-PROPYLAMINE  
10U HEXACHLOROETHANE  
10U NITROBENZENE  
10U ISOPHORONE  
10U 2-NITROPHENOL  
10U 2,4-DIMETHYLPHENOL  
10U BIS(2-CHLOROETHOXY) METHANE  
10U 2,4-DICHLOROPHENOL  
10U 1,2,4-TRICHLOROBENZENE  
10U NAPHTHALENE  
3J 4-CHLOROANILINE  
10U HEXACHLOROBUTADIENE  
10U 4-CHLORO-3-METHYLPHENOL  
10U 2-METHYLNAPHTHALENE  
10U HEXACHLOROCYCLOPENTADIENE (HCCP)  
10U 2,4,6-TRICHLOROPHENOL  
25U 2,4,5-TRICHLOROPHENOL  
10U 2-CHLORONAPHTHALENE  
25U NITROANILINE  
10U DIMETHYLPHTHALATE  
10U ACENAPHTHYLENE  
10U 2,6-DINITROTOLUENE

25U 3-NITROANILINE  
10U ACENAPHTHENE  
25U 2,4-DINITROPHENOL  
25U 4-NITROPHENOL  
10U DIBENZOFURAN  
10U 2,4-DINITROTOLUENE  
10U DIETHYL PHTHALATE  
10U 4-CHLOROPHENYL PHENYL ETHER  
10U FLUORENE  
25U 4-NITROANILINE  
25U 2-METHYL-4,6-DINITROPHENOL  
10U N-NITROSODIPHENYLAMINE/DIPHENYLAMINE  
10U 4-BROMOPHENYL PHENYL ETHER  
10U HEXACHLOROBENZENE (HCB)  
25U PENTACHLOROPHENOL  
10U PHENANTHRENE  
10U ANTHRACENE  
10U CARBAZOLE  
10U DI-N-BUTYLPHTHALATE  
10U FLUORANTHENE  
10U PYRENE  
10U RFLN7VI RIITYL PHTHALATE  
10U 3,3'-DICHLOROBENZIDINE  
10U BENZO(A)ANTHRACENE  
10U CHRYSENE  
10U BIS(2-ETHYLHEXYL) PHTHALATE  
10U DI-N-OCTYLPHTHALATE  
10U BENZO(B AND/OR K)FLUORANTHENE  
10U BENZO-A-PYRENE  
10U INDENO (1,2,3-CD) PYRENE  
10U DIBENZO(A,H)ANTHRACENE  
10U BENZO(GH)PERYLENE

UG/L

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*K-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
\*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT  
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/21/92

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

PROJECT NO. 92-0341      SAMPLE NO. 68212      SAMPLE TYPE: GROUNDWA      PROG ELEM: SSF      COLLECTED BY: B MORRIS      \*\*  
SOURCE: ABC ONE-HOUR CLEANER      CITY: JACKSONVIL      ST: NC      \*\*  
STATION ID: MW-S02-01      COLLECTION START: 04/23/92      2120      STOP: 00/00/00      \*\*  
CASE NO.: 18093      D. NO.: BT91      MD NO: CJ10      \*\*

ANALYTICAL RESULTS UG/L

2JN DIMETHYLNAPHTHALENE

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*N1-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*K-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
\*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
\*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/21/92

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 92-0341 SAMPLE NO. 68222 SAMPLE TYPE: GROUNDWA  
SOURCE: ABC ONE-HOUR CLEANER  
STATION ID: MW-S02-01B  
PROG ELEM: SSF COLLECTED BY: B MORRIS  
CITY: JACKSONVIL ST: NC  
COLLECTION START: 04/23/92 2120 STOP: 00/00/00

CASE NO : 18093 SAS NO : 7208D D. NO. : BT92  
UG/L ANALYTICAL RESULTS ANALYTICAL RESULTS

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
100	PHENOL	250	3-NITROANILINE
100	BIS(2-CHLOROETHYL) ETHER	100	ACENAPHTHENE
100	2-CHLOROPHENOL	250	2,4-DINITROPHENOL
100	1,3-DICHLOROBENZENE	250	4-NITROPHENOL
100	1,4-DICHLOROBENZENE	100	DIBENZOFURAN
100	2-METHYLPHENOL	100	2,4-DINITROTOLUENE
100	2,2'-CHLOROISOPROPYLETHER	100	DIETHYL PHTHALATE
100	(3-AND/OR 4-)METHYLPHENOL	100	4-CHLOROPHENYL PHENYL ETHER
100	N-NITROSODI-N-PROPYLAMINE	100	FLUORENE
100	HEXACHLOROETHANE	250	4-NITROANILINE
100	NITROBENZENE	250	2-METHYL-4,6-DINITROPHENOL
100	ISOPHORONE	100	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
100	2-NITROPHENOL	100	4-BROMOPHENYL PHENYL ETHER
100	2,4-DIMETHYLPHENOL	100	HEXACHLOROBENZENE (HCB)
100	BIS(2-CHLOROETHOXY) METHANE	250	PENTACHLOROPHENOL
100	2,4-DICHLOROPHENOL	100	PHENANTHRENE
100	1,2,4 TRICHLOROBENZENE	100	ANTHRACENE
3J	NAPHTHALENE	100	CARBAZOLE
100	4-CHLORDANILINE	100	DI-N-BUTYLPHTHALATE
100	HEXACHLOROBUTADIENE	100	FLUORANTHENE
100	4-CHLORO-3-METHYLPHENO	100	PYRENE
3J	METHYLNAPHTHALENE	100	RFN7YI RUTYI PHTHAIA TF
100	HEXACHLOROCYCLOPENTADIENE (HCCP)	100	3,3' DICHLOROBENZIDINE
100	2,4,6-TRICHLOROPHENOL	100	BENZO(A)ANTHRACENE
250	2,4,5-TRICHLOROPHENOL	100	CHRYSENE
100	2-CHLORONAPHTHALENE	100	BIS(2-ETHYLHEXYL) PHTHALATE
250	3-NITROANILINE	100	DI-N-OCTYLPHTHALATE
100	DIMETHYL PHTHALATE	100	BENZO(B AND/OR K)FLUORANTHIENE
100	ACENAPHTHYLENE	100	BENZO-A-PYRENE
100	2,6-DINITROTOLUENE	100	INDENO (1,2,3-CD) PYRENE
		100	DIBENZO(A,H)ANTHRACENE
		100	BENZO(GHI)PERYLENE

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*N-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT  
 \*R-Q INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.



SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/21/92

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

\*\*\*  
\*\* PROJECT NO. 92-0341 SAMPLE NO. 68222 SAMPLE TYPE: GROUNDWA  
\*\* SOURCE: ABC ONE-HOUR CLEANER  
\*\* STATION ID: MW-S02-01B SAS NO.: 7208D  
\*\* CASE NO.: 18093  
\*\*  
\*\*\*

\*\*\*  
\*\* PROG ELEM: SSF COLLECTED BY: B MORRIS  
\*\* CITY: JACKSONVIL ST: NC  
\*\* COLLECTION START: 04/23/92 2120 STOP: 00/00/00  
\*\* D. NO.: BT92 MD NO: CJ11  
\*\*  
\*\*\*

ANALYTICAL RESULTS UG/L

2JN DIMETHYLNAPHTHALENE

\*\*\*FOOTNOTES\*\*\*  
\*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*K-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
\*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
\*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

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Remedial Investigation Report  
ABC One-Hour Cleaners, Inc.  
Jacksonville, Onslow County, North Carolina  
Section: Appendix C  
Revision: 1  
Date: November 1992

**MONITOR WELLS - SURFICIAL AQUIFER**  
**PESTICIDES/PCBs**

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/21/92

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 92-0341 SAMPLE NO. 68213 SAMPLE TYPE: GROUNDWA  
 SOURCE: ABC ONE-HOUR CLEANER  
 STATION ID: MW-501-01  
 CASE NUMBER: 18093 SAS NUMBER: 7208D  
 PROG ELEM: SSF COLLECTED BY: B MORRIS  
 CITY: JACKSONVIL ST: NC  
 COLLECTION START: 04/24/92 1800 STOP: 00/00/00  
 D. NUMBER: BT95

ANALYTICAL RESULTS

ANALYTICAL RESULTS

UG/L  
 0.053U ALPHA-BHC  
 0.053U BETA-BHC  
 0.053U DELTA-BHC  
 0.053U GAMMA-BHC (LINDANE)  
 0.053U HEPTACHLOR  
 0.053U ALDRIN  
 0.053U HEPTACHLOR EPOXIDE  
 0.053U ENDOSULFAN I (ALPHA)  
 0.11U DIELDRIN  
 0.11U 4,4'-DDE (P,P'-DDE)  
 0.11U ENDRIN  
 0.11U ENDOSULFAN II (BETA)  
 0.11U 4,4'-DDD (P,P'-DDD)  
 0.11U ENDOSULFAN SULFATE  
 0.11U 4,4'-DDT (P,P'-DDT)

UG/L  
 0.53U METHOXYCHLOR  
 0.11U ENDRIN KETONE  
 0.11U ENDRIN ALDEHYDE  
 0.053U CHLORDANE (TECH. MIXTURE) /1  
 0.053U GAMMA-CHLORDANE /2  
 1.1U ALPHA-CHLORDANE  
 1.1U TOXAPHENE  
 1.1U PCB-1016 (AROCLOR 1016)  
 2.1U PCB-1221 (AROCLOR 1221)  
 1.1U PCB-1232 (AROCLOR 1232)  
 1.1U PCB-1242 (AROCLOR 1242)  
 1.1U PCB-1248 (AROCLOR 1248)  
 1.1U PCB-1254 (AROCLOR 1254)  
 1.1U PCB-1260 (AROCLOR 1260)

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

- \*A-AVERAGE VALUE
- \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
- \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
- \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
- \*NA-NOT ANALYZED
- \*NAI-INTERFERENCES
- \*J-ESTIMATED VALUE
- \*R-OC INDICATES THAT DATA UNUSABLE. 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.
- \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
- \*C-CONFIRMED BY GCMS

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT

\*\*\* PROJECT NO. 92-0341 SAMPLE NO. 68212 SAMPLE TYPE: GROUNDWA  
\*\*\* SOURCE: ABC ONE-HOUR CLEANER  
\*\*\* STATION ID: MW-S02-01  
\*\*\* CASE NUMBER: 18093 SAS NUMBER: 7208D  
\*\*\* PROG ELEM: SSF COLLECTED BY: B MORRIS  
\*\*\* CITY: JACKSONVIL ST: NC  
\*\*\* COLLECTION START: 04/23/92 2120 STOP: 00/00/00  
\*\*\* D. NUMBER: BT91

UG/L ANALYTICAL RESULTS

0.059U ALPHA-BHC  
0.059U BETA-BHC  
0.059U DELTA-BHC  
0.059U GAMMA-BHC (LINDANE)  
0.059U HEPTACHLOR  
0.059U ALDRIN  
0.059U HEPTACHLOR EPOXIDE  
0.059U ENDOSULFAN I (ALPHA)  
0.12U DIELDRIN  
0.12U 4,4'-DDE (P,P'-DDE)  
0.12U ENDRIN  
0.12U ENDOSULFAN II (BETA)  
0.12U 4,4'-DDD (P,P'-DDD)  
0.12U ENDOSULFAN SULFATE  
0.12U 4,4'-DDT (P,P'-DDT)

UG/L ANALYTICAL RESULTS

0.59U METHOXYCHLOR  
0.12U ENDRIN KETONE  
0.12U ENDRIN ALDEHYDE  
--- CHLORDANE (TECH. MIXTURE) /1  
0.059U GAMMA-CHLORDANE /2  
0.059U ALPHA-CHLORDANE /2  
1.2U TOXAPHENE  
1.2U PCB-1016 (AROCLOR 1016)  
2.4U PCB-1221 (AROCLOR 1221)  
1.2U PCB-1232 (AROCLOR 1232)  
1.2U PCB-1242 (AROCLOR 1242)  
1.2U PCB-1248 (AROCLOR 1248)  
1.2U PCB-1254 (AROCLOR 1254)  
1.2U PCB-1260 (AROCLOR 1260)

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE  
\*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
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\*C-CONFIRMED BY GCMS  
\*NA-NOT ANALYZED  
\*NAT-INTERFERENCES  
\*J-ESTIMATED VALUE  
\*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
\*MATERIAL IS KNOWN TO BE GREATER THAN VALUE GIVEN  
1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/21/92

PESTICIDES/PCB'S DATA REPORT

\*\*\* PROJECT NO. 92-0341 SAMPLE NO. 68222 SAMPLE TYPE: GROUNDWA  
 \*\* SOURCE: ABC ONE-HOUR CLEANER  
 \*\* STATION ID: MW-S02-01B  
 \*\* CASE NUMBER: 18093 SAS NUMBER: 7208D  
 \*\* PROG ELEM: SSF COLLECTED BY: B MORRIS  
 \*\* CITY: JACKSONVIL ST: NC  
 \*\* COLLECTION START: 04/23/92 2120 STOP: 00/00/00  
 \*\* D. NUMBER: BT92

\*\*\* UG/L ANALYTICAL RESULTS \*\*\*

0.056U ALPHA-BHC  
 0.056U BETA-BHC  
 0.056U DELTA-BHC  
 0.056U GAMMA-BHC (LINDANE)  
 0.056U HEPTACHLOR  
 0.056U ALDRIN  
 0.056U HEPTACHLOR EPOXIDE  
 0.056U ENDOSULFAN I (ALPHA)  
 0.11U DIELDRIN  
 0.11U 4,4'-DDE (P,P'-DDE)  
 0.11U ENDRIN  
 0.11U ENDOSULFAN II (BETA)  
 0.11U 4,4'-DDD (P,P'-DDD)  
 0.11U ENDOSULFAN SULFATE  
 0.11U 4,4'-DDT (P,P'-DDT)

\*\*\* UG/L ANALYTICAL RESULTS \*\*\*

0.56U METHOXYCHLOR  
 0.11U ENDRIN KETONE  
 0.11U ENDRIN ALDEHYDE  
 --- CHLORDANE (TECH MIXTURE) /1  
 0.056U GAMMA-CHLORDANE /2  
 1.1U ALPHA-CHLORDANE /2  
 1.1U TOXAPHENE  
 1.1U PCB-1016 (AROCLOR 1016)  
 2.2U PCB-1221 (AROCLOR 1221)  
 1.1U PCB-1232 (AROCLOR 1232)  
 1.1U PCB-1242 (AROCLOR 1242)  
 1.1U PCB-1248 (AROCLOR 1248)  
 1.1U PCB-1254 (AROCLOR 1254)  
 1.1U PCB-1260 (AROCLOR 1260)

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAT-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
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Remedial Investigation Report  
ABC One-Hour Cleaners, Inc.  
Jacksonville, Onslow County, North Carolina  
Section: Appendix C  
Revision: 1  
Date: November 1992

## MONITOR WELLS - SURFICIAL AQUIFER

### METALS

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/29/92

METALS DATA REPORT

\*\*\* PROJECT NO. 92-0341 SAMPLE NO. 68213 SAMPLE TYPE: GROUNDWA  
 \*\*\* SOURCE: ABC ONE-HOUR CLEANER  
 \*\*\* STATION ID: MW-S01-01  
 \*\*\* CASE NUMBER: 18093 SAS NUMBER: 7208D  
 \*\*\* PROG ELEM: SSF COLLECTED BY: B MORRIS  
 \*\*\* CITY: JACKSONVIL ST: NC  
 \*\*\* COLLECTION START: 04/24/92 1800 STOP: 00/00/00  
 \*\*\* MD NUMBER: CJ14

\*\*\* UG/L ANALYTICAL RESULTS  
 3200J ALUMINUM  
 54U ANTIMONY  
 4U ARSENIC  
 35 BARIUM  
 1U BERYLLIUM  
 5U CADMIUM  
 11000 CALCIUM  
 7U CHROMIUM  
 9U COBALT  
 9U COPPER  
 910J IRON  
 3 LEAD  
 1300 MAGNESIUM

\*\*\* UG/L ANALYTICAL RESULTS  
 10 MANGANESE  
 .20U MERCURY  
 12U NICKEL  
 29000U POTASSIUM  
 3U SELENIUM  
 10U SILVER  
 3700 SODIUM  
 2U THALLIUM  
 NA TIN  
 9 VANADIUM  
 23 ZINC

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/29/92

METALS DATA REPORT

\*\*\* PROJECT NO. 92-0341 SAMPLE NO. 68212 SAMPLE TYPE: GROUNDWA  
 \*\*\* SOURCE: ABC ONE-HOUR CLEANER  
 \*\*\* STATION ID: MW-502-01  
 \*\*\* CASE NUMBER: 18093 SAS NUMBER: 7208D  
 \*\*\* PROG ELEM: SSF COLLECTED BY: B MORRIS  
 \*\*\* CITY: JACKSONVIL ST: NC  
 \*\*\* COLLECTION START: 04/23/92 2120 STOP: 00/00/00  
 \*\*\* MD NUMBER: CJTO

ANALYTICAL RESULTS

ANALYTICAL RESULTS

UG/L  
 320UJ ALUMINUM  
 54U ANTIMONY  
 4U ARSENIC  
 44 BARIUM  
 1U BERYLLIUM  
 5U CADMIUM  
 930 CALCIUM  
 7U CHROMIUM  
 9U COBALT  
 11 COPPER  
 370UJ IRON  
 2U LEAD  
 1200 MAGNESIUM

UG/L  
 4 MANGANESE  
 20U MERCURY  
 12U NICKEL  
 2900U POTASSIUM  
 3U SELENIUM  
 10U SILVER  
 3300U SODIUM  
 2U THALLIUM  
 NA TIN  
 7U VANADIUM  
 19 ZINC

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
 EPA-REGION IV ESD, ATHENS, GA.

05/29/92

METALS DATA REPORT  
 \*\*\* PROJECT NO. 92-0341 SAMPLE NO. 68222 SAMPLE TYPE: GROUNDWA  
 \*\* SOURCE: ABC ONE-HOUR CLEANER  
 \*\* STATION ID: MW-502-01B  
 \*\* CASE NUMBER: 18093 SAS NUMBER: 7208D  
 \*\*\*

PROG ELEM: SSF COLLECTED BY: B MORRIS  
 CITY: JACKSONVIL ST: NC  
 COLLECTION START: 04/23/92 2120 STOP: 00/00/00  
 MD NUMBER: CJ11

ANALYTICAL RESULTS

ANALYTICAL RESULTS

UG/L	UG/L
340UJ ALUMINUM	4 MANGANESE
54U ANTIMONY	.20U MERCURY
3U ARSENIC	12U NICKEL
43 BARIUM	2900U POTASSIUM
1U BERYLLIUM	3U SELENIUM
5U CADMIUM	10U SILVER
880 CALCIUM	3200U SODIUM
7U CHROMIUM	2U THALLIUM
9U COBALT	NA TIN
13 COPPER	7U VANADIUM
310UJ IRON	19 ZINC
2U LEAD	
1100 MAGNESIUM	

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

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METALS DATA REPORT

PROJECT NO. 92-0341 SAMPLE NO. 68219 SAMPLE TYPE: GROUNDWA  
 SOURCE: ABC ONE-HOUR CLEANER  
 STATION ID: MW-503-01  
 CASE NUMBER: 18093 SAS NUMBER: 7208D  
 PROG ELEM: SSF COLLECTED BY: B MORRIS  
 CITY: JACKSONVIL ST: NC  
 COLLECTION START: 04/29/92 1315 STOP: 00/00/00  
 MD NUMBER: CJ20

ANALYTICAL RESULTS		ANALYTICAL RESULTS	
UG/L		UG/L	
2800J	ALUMINUM	34	MANGANESE
54U	ANTIMONY	.20U	MERCURY
5U	ARSENIC	16	NICKEL
120	BARIUM	2900U	POTASSIUM
1U	BERYLLIUM	3U	SELENIUM
5U	CADMIUM	10U	SILVER
6800	CALCIUM	20000	SODIUM
9	CHROMIUM	2U	THALLIUM
9U	COBALT	NA	TIN
89	COPPER	9	VANADIUM
5200J	IRON	84	ZINC
3	LEAD		
1100	MAGNESIUM		

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
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 \*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/29/92

METALS DATA REPORT

\*\*\* PROJECT NO. 92-0341 SAMPLE NO. 68207 SAMPLE TYPE: GROUNDWA  
\*\* SOURCE: ABC ONE-HOUR CLEANER  
\*\* STATION ID: MW-504-01  
\*\* CASE NUMBER: 18093 SAS NUMBER: 7208D  
\*\*\*

\*\*\* COLLECTED BY: B MORRIS  
\*\* CITY: JACKSONVILLE  
\*\* COLLECTION START: 04/22/92 1715 STOP: 00/00/00  
\*\* MD NUMBER: CJ05  
\*\*\*

ANALYTICAL RESULTS

\*\*\* UG/L  
3100J ALUMINUM  
54U ANTIMONY  
3U ARSENIC  
120 BARIUM  
1U BERYLLIUM  
5U CADMIUM  
1700 CALCIUM  
7U CHROMIUM  
9U COBALT  
9U COPPER  
5600J IRON  
3U LEAD  
2300 MAGNESIUM

ANALYTICAL RESULTS

\*\*\* UG/L  
25 MANGANESE  
20U MERCURY  
12U NICKEL  
2900U POTASSIUM  
3U SELENIUM  
10U SILVER  
8600 SODIUM  
2U THALLIUM  
NA TIN  
7U VANADIUM  
15 ZINC

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/29/92

METALS DATA REPORT

\*\*\* PROJECT NO. 92-0341 SAMPLE NO. 68210 SAMPLE TYPE: GROUNDWA  
 \*\*\* SOURCE: ABC ONE-HOUR CLEANER  
 \*\*\* STATION ID: MW-S05-01  
 \*\*\* CASE NUMBER: 18093 SAS NUMBER: 7208D  
 \*\*\* COLLECTED BY: B MORRIS  
 \*\*\* CITY: JACKSONVIL ST: NC  
 \*\*\* COLLECTION START: 04/23/92 1330 STOP: 00/00/00  
 \*\*\* MD NUMBER: CJO8

ANALYTICAL RESULTS		ANALYTICAL RESULTS	
UG/L		UG/L	
17000J	ALUMINUM	41	MANGANESE
54U	ANTIMONY	.20U	MERCURY
28	ARSENIC	.77	NICKEL
220	BARIIUM	2900U	POTASSIUM
2U	BERYLLIUM	3U	SELENIUM
5U	CADMIUM	10U	SILVER
2200	CALCIUM	5800	SODIUM
57	CHROMIUM	2U	THALLIUM
43	COPPER	NA	TIN
9U	COBALT	45	VANADIUM
11000J	IRON	270	ZINC
10	LEAD		
3500	MAGNESIUM		

\*\*\*REMARKS\*\*\*

\*\*\*\*FOOTNOTES\*\*\*\*  
 \*A-AVERAGE VALUE  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
 \*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.  
 \*NA-NOT ANALYZED  
 \*NAI-INTERFERENCES  
 \*J-ESTIMATED VALUE  
 \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/29/92

METALS DATA REPORT

\*\*\* PROJECT NO. 92-0341 SAMPLE NO. 68220 SAMPLE TYPE: GROUNDWA PROG ELEM: SSF COLLECTED BY: B MORRIS \*\*\*  
 \*\*\* SOURCE: ABC ONE-HOUR CLEANER STATION ID: MW-506-01 SAS NUMBER: 7208D COLLECTION START: 04/29/92 1435 STOP: 00/00/00 \*\*\*  
 \*\*\* CASE NUMBER: 18093 MD NUMBER: CJ21

UG/L ANALYTICAL RESULTS

3300J ALUMINUM  
 54U ANTIMONY  
 12 ARSENIC  
 56 BARIUM  
 1U BERYLLIUM  
 5U CADMIUM  
 790 CALCIUM  
 11 CHROMIUM  
 9U COBALT  
 13 COPPER  
 4000J IRON  
 3U LEAD  
 770 MAGNESIUM

UG/L ANALYTICAL RESULTS

9 MANGANESE  
 :20U MERCURY  
 12U NICKEL  
 2900U POTASSIUM  
 3U SELENIUM  
 10U SILVER  
 17000 SODIUM  
 2U THALLIUM  
 NA TIN  
 16 VANADIUM  
 46 ZINC

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
 \*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

METALS DATA REPORT  
 \*\*\* PROJECT NO. 92-0341 SAMPLE NO. 68217 SAMPLE TYPE: GROUNDWA  
 \*\*\* SOURCE: ABC ONE-HOUR CLEANER  
 \*\*\* STATION ID: MW-S07-01  
 \*\*\* CASE NUMBER: 18093 SAS NUMBER: 7208D  
 \*\*\* COLLECTED BY: B MORRIS  
 \*\*\* ST: NC  
 \*\*\* COLLECTION START: 04/28/92 1925 STOP: 00/00/00  
 \*\*\* MD NUMBER: CJ18

ANALYTICAL RESULTS		ANALYTICAL RESULTS	
UG/L		UG/L	
6600J	ALUMINUM	27	MANGANESE
54U	ANTIMONY	.20U	MERCURY
3U	ARSENIC	12U	NICKEL
140	BARIUM	2900U	POTASSIUM
1U	BERYLLIUM	3U	SELENIUM
5U	CADMIUM	10U	SILVER
6500	CALCIUM	11000	SODIUM
7U	CHROMIUM	2U	THALLIUM
9U	COBALT	NA	TIN
9U	COPPER	7U	VANADIUM
580J	IRON	14	ZINC
2U	LEAD		
2200	MAGNESIUM		

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE \*NA-NOT ANALYZED \*N1-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
 \*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/29/92

METALS DATA REPORT

\*\*\* PROJECT NO. 92-0341 SAMPLE NO. 68215 SAMPLE TYPE: GROUNDWA  
 \*\*\* SOURCE: ABC ONE-HOUR CLEANER  
 \*\*\* STATION ID: MW-S08-01  
 \*\*\* CASE NUMBER: 18093 SAS NUMBER: 7208D  
 \*\*\* PROG ELEM: SSF COLLECTED BY: B MORRIS  
 \*\*\* CITY: JACKSONVIL ST: NC  
 \*\*\* COLLECTION START: 04/24/92 1900 STOP: 00/00/00  
 \*\*\* MD NUMBER: CJ16

\*\*\* UG/L ANALYTICAL RESULTS

2300J	ALUMINIUM
54U	ANTIMONY
3U	ARSENIC
84	BARIUM
1U	BERYLLIUM
5U	CADMIUM
1300	CALCIUM
7U	CHROMIUM
9U	COBALT
9U	COPPER
3600J	IRON
3	LEAD
880	MAGNESIUM

\*\*\* UG/L ANALYTICAL RESULTS

11	MANGANESE
20U	MERCURY
12U	NICKEL
2900U	POTASSIUM
3U	SELENIUM
10U	SILVER
7700	SODIUM
2U	THALLIUM
NA	TIN
9	VANADIUM
25	ZINC

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
 \*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

METALS DATA REPORT  
 \*\*\* PROJECT NO. 92-0341 SAMPLE NO. 68206 SAMPLE TYPE: GROUNDWA  
 \*\*\* SOURCE: ABC ONE-HOUR CLEANER  
 \*\*\* STATION ID: MW-S09-01  
 \*\*\* CASE NUMBER: 18093 SAS NUMBER: 7208D  
 \*\*\* ANALYTICAL RESULTS

\*\*\* ANALYTICAL RESULTS  
 \*\*\* MANGANESE  
 \*\*\* MERCURY  
 \*\*\* NICKEL  
 \*\*\* POTASSIUM  
 \*\*\* SELENIUM  
 \*\*\* SILVER  
 \*\*\* SODIUM  
 \*\*\* THALLIUM  
 \*\*\* TIN  
 \*\*\* VANADIUM  
 \*\*\* ZINC  
 \*\*\* ANALYTICAL RESULTS

\*\*\* PROG ELEM: SSF COLLECTED BY: B MORRIS  
 \*\*\* CITY: JACKSONVIL  
 \*\*\* COLLECTION START: 04/22/92 1040 STOP: 00/00/00  
 \*\*\* MD NUMBER: CJO4

6600J ALUMINUM  
 54U ANTIMONY  
 12 ARSENIC  
 200 BARIUM  
 2U BERYLLIUM  
 5U CADMIUM  
 16000 CALCIUM  
 21 CHROMIUM  
 9U COBALT  
 10 COPPER  
 24000J IRON  
 7 LEAD  
 3000 MAGNESIUM

33 UG/L  
 20U  
 14J  
 2900U  
 3U  
 10U  
 10000  
 2U  
 NA  
 32  
 220

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT  
 \*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.



SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/29/92

METALS DATA REPORT  
 \*\*\* PROJECT NO. 92-0341 SAMPLE NO. 68216 SAMPLE TYPE: GROUNDWA  
 \*\*\* SOURCE: ABC ONE-HOUR CLEANER  
 \*\*\* STATION ID: MW-S10-01  
 \*\*\* CASE NUMBER: 18093 SAS NUMBER: 7208D  
 \*\*\* UG/L  
 1800J ALUMINUM  
 54U ANTIMONY  
 3U ARSENIC  
 68 BARIUM  
 1U BERYLLIUM  
 5U CADMIUM  
 1200 CALCIUM  
 7U CHROMIUM  
 9U COBALT  
 9U COPPER  
 830J IRON  
 2U LEAD  
 1400 MAGNESIUM

\*\*\* UG/L  
 19 MANGANESE  
 .20U MERCURY  
 12U NICKEL  
 2900U POTASSIUM  
 3U SELENIUM  
 10U SILVER  
 7000 SODIUM  
 2U THALLIUM  
 NA TIN  
 7U VANADIUM  
 15 ZINC

ANALYTICAL RESULTS

ANALYTICAL RESULTS

\*\*\* COLLECTED BY: B MORRIS  
 \*\*\* ST: NC  
 \*\*\* COLLECTION START: 04/28/92 1800 STOP: 00/00/00  
 \*\*\* MD NUMBER: CJ17

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT  
 \*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

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Remedial Investigation Report  
ABC One-Hour Cleaners, Inc.  
Jacksonville, Onslow County, North Carolina  
Section: Appendix C  
Revision: 1  
Date: November 1992

**MONITOR WELLS - SURFICIAL AQUIFER**  
**CYANIDE**

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/29/92

SPECIFIED ANALYSIS DATA REPORT

\*\*\* PROJECT NO. 92-0341 SAMPLE NO. 68213 SAMPLE TYPE: GROUNDWA  
\*\* SOURCE: ABC ONE-HOUR CLEANER  
\*\* STATION ID: MW-S01-01 SAS NO.: 7208D  
\*\* CASE NO.: 18093  
\*\*\*

\*\*\* PROG ELEM: SSF COLLECTED BY: B MORRIS  
\*\* CITY: JACKSONVIL ST: NC  
\*\* COLLECTION START: 04/24/92 1800 STOP: 00/00/00  
\*\* D. NO.: BT95 MD NO: CJ14  
\*\*\*

RESULTS UNITS PARAMETER  
10U UG/L CYANIDE

\*\*\*FOOTNOTES\*\*\*  
\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAT-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
\*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/29/92

SPECIFIED ANALYSIS DATA REPORT

\*\*\*  
\*\* PROJECT NO. 92-0341 SAMPLE NO. 68212 SAMPLE TYPE: GROUNDWA  
\*\* SOURCE: ABC ONE-HOUR CLEANER  
\*\* STATION ID: MW-502-01  
\*\* CASE NO.: 18093 SAS NO.: 7208D  
\*\*\*  
\*\* PROG ELEM: SSF COLLECTED BY: B MORRIS  
\*\* CITY: JACKSONVIL ST: NC  
\*\* COLLECTION START: 04/23/92 2120 STOP: 00/00/00  
\*\* D. NO.: BT91 MD NO: CJ10  
\*\*\*

RESULTS UNITS PARAMETER  
10U UG/L CYANIDE

\*\*\*FOOTNOTES\*\*\*  
\*A-AVERAGE VALUE  
\*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
\*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
\*NA-NOT ANALYZED  
\*NAI-INTERFERENCES  
\*J-ESTIMATED VALUE  
\*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/29/92

SPECIFIED ANALYSIS DATA REPORT

\*\*\*  
\*\* PROJECT NO. 92-0341      SAMPLE NO. 68222      SAMPLE TYPE: GROUNDWA      PROG ELEM: SSF      COLLECTED BY: B MORRIS      \*\*  
\*\* SOURCE: ABC ONE-HOUR CLEANER      CITY: JACKSONVIL      ST: NC      \*\*  
\*\* STATION ID: MW-S02-01B      COLLECTION START: 04/23/92      2120      STOP: 00/00/00      \*\*  
\*\* CASE NO.: 18093      SAS NO.: 7208D      D. NO.: BT92      MD NO: CJ11      \*\*  
\*\*

RESULTS    UNITS    PARAMETER  
          100 UG/L    CYANIDE

\*\*\* FOOTNOTES \*\*\*  
\*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
\*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

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Remedial Investigation Report  
ABC One-Hour Cleaners, Inc.  
Jacksonville, Onslow County, North Carolina  
Section: Appendix C  
Revision: 1  
Date: November 1992

**MONITOR WELLS - CASTLE HAYNE AQUIFER**  
**VOLATILES**

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/21/92

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 92-0341 SAMPLE NO. 68214 SAMPLE TYPE: GROUNDWA  
 SOURCE: ABC ONE-HOUR CLEANER  
 STATION ID: MW-CO1-01  
 COLLECTION START: 04/24/92 1815 STOP: 00/00/00  
 CITY: JACKSONVIL ST: NC  
 PROG ELEM: SSF COLLECTED BY: B MORRIS

CASE NO.: 18093 SAS NO.: 7208D D. NO.: BT96  
 UG/L UG/L UG/L ANALYTICAL RESULTS ANALYTICAL RESULTS

10U CHLOROMETHANE  
 10U BROMOMETHANE  
 10U VINYL CHLORIDE  
 10U CHLOROETHANE  
 10U METHYLENE CHLORIDE  
 10U ACETONE  
 10U CARBON DISULFIDE  
 10U 1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)  
 10U 1,1-DICHLOROETHANE  
 10U 1,2-DICHLOROETHANE (TOTAL)  
 10U CHLOROFORM  
 10U 1,2-DICHLOROETHANE  
 10U METHYL ETHYL KETONE  
 10U 1,1-TRICHLOROETHANE  
 10U CARBON TETRACHLORIDE  
 10U BROMODICHLOROMETHANE

10U 1,2-DICHLOROPROPANE  
 10U CIS-1,3-DICHLOROPROPENE  
 10U TRICHLOROETHENE (TRICHLOROETHYLENE)  
 10U DIBROMOCHLOROMETHANE  
 10U 1,1,2-TRICHLOROETHANE  
 10U BENZENE  
 10U TRANS-1,3-DICHLOROPROPENE  
 10U BROMOFORM  
 10U METHYL ISOBUTYL KETONE  
 10U METHYL BUTYL KETONE  
 10U TETRACHLOROETHENE (TETRACHLOROETHYLENE)  
 10U 1,1,2,2-TETRACHLOROETHANE  
 10U TOLUENE  
 10U CHLOROBENZENE  
 10U ETHYL BENZENE  
 10U STYRENE  
 10U TOTAL XYLENES

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
 \*NA-NOT ANALYZED  
 \*NAI-INTERFERENCES  
 \*J-ESTIMATED VALUE  
 \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT  
 \*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/21/92

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 92-0341 SAMPLE NO. 68211 SAMPLE TYPE: GROUNDWA  
 SOURCE: ABC ONE-HOUR CLEANER  
 STATION ID: MW-C02-01  
 PROG ELEM: SSF COLLECTED BY: B MORRIS  
 CITY: JACKSONVIL ST: NC  
 COLLECTION START: 04/23/92 1925 STOP: 00/00/00

CASE NO. 18093 SAS NO.: 7208D D. NO.: BT90  
 UG/L ANALYTICAL RESULTS UG/L ANALYTICAL RESULTS

CONCENTRATION	ANALYTICAL RESULTS	CONCENTRATION	ANALYTICAL RESULTS
100	CHLOROMETHANE	100	1,2-DICHLOROPROPANE
100	BROMOMETHANE	100	CIS-1,3-DICHLOROPROPENE
100	VINYL CHLORIDE	3J	TRICHLOROETHENE (TRICHLOROETHYLENE)
100	CHLOROETHANE	100	DIBROMOCHLOROMETHANE
100	METHYLENE CHLORIDE	100	1,1,2-TRICHLOROETHANE
100	ACETONE	100	BENZENE
100	CARBON DISULFIDE	100	TRANS-1,3-DICHLOROPROPENE
100	1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	100	BROMOFORM
100	1,1-DICHLOROETHANE	100	METHYL ISOBUTYL KETONE
9J	1,2-DICHLOROETHENE (TOTAL)	100	METHYL BUTYL KETONE
2J	CHLOROFORM	1J	TETRACHLOROETHENE (TETRACHLOROETHYLENE)
100	1,2-DICHLOROETHANE	100	1,1,2,2-TETRACHLOROETHANE
100	METHYL ETHYL KETONE	100	TOLUENE
100	1,1,1-TRICHLOROETHANE	100	CHLOROBENZENE
100	CARBON TETRACHLORIDE	100	ETHYL BENZENE
100	BROMODICHLOROMETHANE	100	STYRENE
		100	TOTAL XYLENES

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
 \*K-ACTUAL VALUE WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT  
 \*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.  
 \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN



SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/21/92

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 92-0341 SAMPLE NO. 68218 SAMPLE TYPE: GROUNDWA  
 SOURCE: ABC ONE-HOUR CLEANER  
 STATION ID: MW-C03-01  
 PROGRAM: SSF COLLECTED BY: B MORRIS  
 CITY: JACKSONVIL ST: NC  
 COLLECTION START: 04/29/92 1125 STOP: 00/00/00

CASE NO.: 18093 SAS NO.: 7208D D. NO.: BW76

UG/L ANALYTICAL RESULTS UG/L ANALYTICAL RESULTS

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
100	CHLOROMETHANE	100	1,2-DICHLOROPROPANE
100	BROMOMETHANE	100	CIS-1,3-DICHLOROPROPENE
100	VINYL CHLORIDE	28	TRICHLOROETHENE (TRICHLOROETHYLENE)
100	CHLOROETHANE	100	DIBROMOCHLOROMETHANE
100	METHYLENE CHLORIDE	100	1,1,2-TRICHLOROETHANE
100	ACETONE	100	BENZENE
100	CARBON DISULFIDE	100	TRANS-1,3-DICHLOROPROPENE
100	1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	100	BROMOFORM
100	1,1-DICHLOROETHANE	100	METHYL ISOBUTYL KETONE
100	1,2-DICHLOROETHANE	100	METHYL BUTYL KETONE
14	1,2-DICHLOROETHENE (TOTAL)	7J	TETRACHLOROETHENE (TETRACHLOROETHYLENE)
100	CHLOROFORM	100	1,1,2,2-TETRACHLOROETHANE
100	1,2-DICHLOROETHANE	100	TOLUENE
100	METHYL ETHYL KETONE	100	CHLOROETHYLENE
100	1,1,1-TRICHLOROETHANE	100	ETHYL BENZENE
100	CARBON TETRACHLORIDE	100	STYRENE
100	BROMODICHLOROMETHANE	100	TOTAL XYLENES

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
 \*K-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTIFICATION LIMIT  
 \*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/21/92

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 92-0341 SAMPLE NO. 68208 SAMPLE TYPE: GROUNDWA  
 SOURCE: ABC ONE-HOUR CLEANER  
 STATION ID: MW-C04-01  
 CITY: JACKSONVIL  
 COLLECTION START: 04/22/92 2040 STOP: 00/00/00  
 ST: NC

CASE NO.: 18093 SAS NO.: 7208D D. NO.: BT87

ANALYTICAL RESULTS

ANALYTICAL RESULTS

10U CHLOROMETHANE  
 10U BROMOMETHANE  
 10U VINYL CHLORIDE  
 10U CHLOROETHANE  
 10U METHYLENE CHLORIDE  
 10U ACETONE  
 10U CARBON DISULFIDE  
 10U 1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)  
 10U 1,1-DICHLOROETHANE  
 10U 1,2-DICHLOROETHENE (TOTAL)  
 10U CHLOROFORM  
 10U 1,2-DICHLOROETHANE  
 10U METHYL ETHYL KETONE  
 10U 1,1,1-TRICHLOROETHANE  
 10U CARBON TETRACHLORIDE  
 10U BROMODICHLOROMETHANE

10U 1,2-DICHLOROPROPANE  
 10U CIS-1,3-DICHLOROPROPENE  
 10U TRICHLOROETHENE (TRICHLOROETHYLENE)  
 10U DIBROMOCHLOROMETHANE  
 10U 1,1,2-TRICHLOROETHANE  
 10U BENZENE  
 10U TRANS-1,3-DICHLOROPROPENE  
 10U BROMOFORM  
 10U METHYL ISOBUTYL KETONE  
 10U METHYL BUTYL KETONE  
 10U TETRACHLOROETHENE (TETRACHLOROETHYLENE)  
 10U 1,1,2,2-TETRACHLOROETHANE  
 10U TOLUENE  
 10U CHLOROBENZENE  
 10U ETHYL BENZENE  
 10U STYRENE  
 10U TOTAL XYLENES

UG/L

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*NAT-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
 \*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/21/92

PURGEABLE ORGANICS DATA REPORT

\*\*\* PROJECT NO. 92-0341 SAMPLE NO. 68209 SAMPLE TYPE: GROUNDWA  
 \*\*\* SOURCE: ABC ONE-HOUR CLEANER  
 \*\*\* STATION ID: MW-C05-01  
 \*\*\* CASE NO.: 18093 SAS NO.: 7208D D. NO.: BT88  
 \*\*\* UG/L ANALYTICAL RESULTS UG/L ANALYTICAL RESULTS

PROG ELEM: SSF COLLECTED BY: B MORRIS  
 CITY: JACKSONVIL ST: NC  
 COLLECTION START: 04/23/92 1135 STOP: 00/00/00

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
1000	CHLOROMETHANE	1000	1,2-DICHLOROPROPANE
1000	BROMOMETHANE	1000	CIS-1,3-DICHLOROPROPENE
1000	VINYL CHLORIDE	17J	TRICHLOROETHENE (TRICHLOROETHYLENE)
1000	CHLOROETHANE	1000	DIBROMOCHLOROMETHANE
1000	METHYLENE CHLORIDE	1000	1,1,2-TRICHLOROETHANE
1400	ACETONE	18J	BENZENE
1000	CARBON DISULFIDE	1000	TRANS-1,3-DICHLOROPROPENE
1000	1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)	1000	BROMOFORM
1000	1,1-DICHLOROETHANE	1000	METHYL ISOBUTYL KETONE
1000	1,2-DICHLOROETHENE (TOTAL)	1000	METHYL BUTYL KETONE
1000	CHLOROFORM	1000	TETRACHLOROETHENE (TETRACHLOROETHYLENE)
1000	1,2-DICHLOROETHANE	1000	1,1,2,2-TETRACHLOROETHANE
1000	METHYL ETHYL KETONE	25J	TOLUENE
1000	1,1,1-TRICHLOROETHANE	1000	CHLOROBENZENE
1000	CARBON TETRACHLORIDE	1000	ETHYL BENZENE
1000	BROMODICHLOROMETHANE	1000	STYRENE
		1000	TOTAL XYLENES

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

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Remedial Investigation Report  
ABC One-Hour Cleaners, Inc.  
Jacksonville, Onslow County, North Carolina  
Section: Appendix C  
Revision: 1  
Date: November 1992

**MONITOR WELLS - CASTLE HAYNE AQUIFER**  
**SEMI-VOLATILES**

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/21/92

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 92-0341 SAMPLE NO. 68214 SAMPLE TYPE: GROUNDWA PROG ELEM: SSF COLLECTED BY: B MORRIS  
SOURCE: ABC ONE-HOUR CLEANER CITY: JACKSONVIL ST: NC  
STATION ID: MW-CO1-01 COLLECTION START: 04/24/92 1815 STOP: 00/00/00

CASE NO.: 18093 SAS NO.: 7208D D. NO.: BT96

ANALYTICAL RESULTS

ANALYTICAL RESULTS

10U PHENOL  
10U BIS(2-CHLOROETHYL) ETHER  
10U 2-CHLOROPHENOL  
10U 1,3-DICHLOROBENZENE  
10U 1,4-DICHLOROBENZENE  
10U 1,2-DICHLOROBENZENE  
10U 2-METHYLPHENOL  
10U 2,2'-CHLOROISOPROPYLETHER  
10U (3-AND/OR 4-)METHYLPHENOL  
10U HEXACHLOROETHANE  
10U NITROBENZENE  
10U ISOPHORONE  
10U 2-NITROPHENOL  
10U 2,4-DIMETHYLPHENOL  
10U BIS(2-CHLOROETHOXY) METHANE  
10U 2,4-DICHLOROPHENOL  
10U 1,2,4 TRICHLOROBENZENE  
10U NAPHTHALENE  
10U 4-CHLOROANILINE  
10U HEXACHLOROBUTADIENE  
10U 4-CHLORO-3-METHYLPHENOL  
10U 2 METHYLNAPHTHALENE  
10U HEXACHLOROCYCLOPENTADIENE (HCCP)  
25U 2,4,6-TRICHLOROPHENOL  
25U 2,4,5-TRICHLOROPHENOL  
10U 2-CHLORONAPHTHALENE  
25U DIMETHYL PHTHALATE  
10U ACENAPHTHYLENE  
10U 2,6-DINITROTOLUENE

25U 3-NITROANILINE  
10U ACENAPHTHENE  
25U 2,4-DINITROPHENOL  
25U 4-NITROPHENOL  
10U DIBENZOFURAN  
10U 2,4-DINITROTOLUENE  
10U DIETHYL PHTHALATE  
10U 4-CHLOROPHENYL PHENYL ETHER  
10U FLUORENE  
10U 4-NITROANILINE  
25U 2-METHYL-4,6-DINITROPHENOL  
10U N-NITROSODIPHENYLAMINE/DIPHENYLAMINE  
10U 4-BROMOPHENYL PHENYL ETHER  
10U HEXACHLOROBENZENE (HCB)  
25U PENTACHLOROPHENOL  
10U PHENANTHRENE  
10U ANTHRACENE  
10U CARBAZOLE  
10U DI-N-BUTYL PHTHALATE  
10U FLUORANTHENE  
10U PYRENE  
10U RFN7VI RIITYL PHTHALATE  
10U 3,3' DICHLOROBENZIDINE  
10U BENZO(A)ANTHRACENE  
10U CHRYSENE  
10U BIS(2-ETHYLHEXYL) PHTHALATE  
10U DI-N-OCTYL PHTHALATE  
10U BENZO(B AND/OR K)FLUORANTHENE  
10U BENZO-A-PYRENE  
10U INDENO (1,2,3-CD) PYRENE  
10U DIBENZO(A,H)ANTHRACENE  
10U BENZO(GHI)PERYLENE

\*\*\*\*REMARKS\*\*\*\*

\*\*\*\*REMARKS\*\*\*\*

\*\*\*\*FOOTNOTES\*\*\*\*

\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*N1-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/21/92

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 92-0341 SAMPLE NO. 68211  
SOURCE: ABC ONE-HOUR CLEANER  
STATION ID: MW-CO2-01

SAMPLE TYPE: GROUNDWA

PROG ELEM: SSF COLLECTED BY: B MORRIS  
CITY: JACKSONVIL ST: NC  
COLLECTION START: 04/23/92 1925 STOP: 00/00/00

CASE NO.: 18093

SAS NO.: 7208D

D. NO.: BT90

ANALYTICAL RESULTS

ANALYTICAL RESULTS

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
100	PHENOL	250	3-NITROANILINE
100	BIS(2-CHLOROETHYL) ETHER	100	ACENAPHTHENE
100	2-CHLOROPHENOL	250	2,4-DINITROPHENOL
100	1,3-DICHLOROBENZENE	250	4-NITROPHENOL
100	1,4-DICHLOROBENZENE	100	DIBENZOFURAN
100	1,2-DICHLOROBENZENE	100	2,4-DINITROTOLUENE
100	2-METHYLPHENOL	100	DIETHYL PHTHALATE
100	2,2'-CHLOROISOPROPYLETHER	100	4-CHLOROPHENYL PHENYL ETHER
100	(3-AND/OR 4-METHYLPHENOL	100	FLUORENE
100	N-NITROSODI-N-PROPYLAMINE	250	4-NITROANILINE
100	HEXACHLOROETHANE	250	2-METHYL-4,6-DINITROPHENOL
100	NITROBENZENE	100	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
100	ISOPHORONE	100	4-BROMOPHENYL PHENYL ETHER
100	2-NITROPHENOL	100	HEXACHLOROBENZENE (HCB)
100	2,4-DIMETHYLPHENOL	250	PENTACHLOROPHENOL
100	BIS(2-CHLOROETHOXY) METHANE	100	PHENANTHRENE
100	2,4-DICHLOROPHENOL	100	ANTHRACENE
100	1,2,4-TRICHLOROBENZENE	100	CARBAZOLE
100	NAPHTHALENE	100	DI-N-BUTYLPHTHALATE
100	4-CHLOROANILINE	100	FLUORANTHENE
100	HEXACHLOROBUTADIENE	100	PYRENE
100	4-CHLORO-3-METHYLPHENOL	100	3,3'-DICHLOROBENZIDINE
100	METHYLNAPHTHALENE	100	BENZO(A)ANTHRACENE
100	HEXACHLOROCYCLOPENTADIENE (HCCP)	100	CHRYSENE
250	2,4,5-TRICHLOROPHENOL	100	BIS(2-ETHYLHEXYL) PHTHALATE
100	2-CHLORONAPHTHALENE	100	DI-N-OCTYLPHTHALATE
250	NITROANILINE	100	BENZO(B AND/OR K)FLUORANTHENE
100	DIMETHYL PHTHALATE	100	BENZO-A-PYRENE
100	ACENAPHTHYLENE	100	INDENO (1,2,3-CD) PYRENE
100	2,6-DINITROTOLUENE	100	DIBENZO(A,H)ANTHRACENE
		100	BENZO(GHI)PERYLENE

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

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- \*NAI-INTERFERENCES
- \*J-ESTIMATED VALUE
- \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL

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Remedial Investigation Report  
ABC One-Hour Cleaners, Inc.  
Jacksonville, Onslow County, North Carolina  
Section: Appendix C  
Revision: 1  
Date: November 1992

**MONITOR WELLS - CASTLE HAYNE AQUIFER**  
**PESTICIDES/PCBs**

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/21/92

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 92-0341 SAMPLE NO. 68214 SAMPLE TYPE: GROUNDWA  
 SOURCE: ABC ONE-HOUR CLEANER  
 STATION ID: MW-C01-01  
 CASE NUMBER: 18093 SAS NUMBER: 7208D  
 PROG ELEM: SSF COLLECTED BY: B MORRIS  
 CITY: JACKSONVILLE ST: NC  
 COLLECTION START: 04/24/92 1815 STOP: 00/00/00  
 D. NUMBER: BT96

UG/L ANALYTICAL RESULTS

0.056U ALPHA-BHC  
 0.056U BETA-BHC  
 0.056U DELTA-BHC  
 0.056U GAMMA-BHC (LINDANE)  
 0.056U HEPTACHLOR  
 0.056U ALDRIN  
 0.056U HEPTACHLOR EPOXIDE  
 0.056U ENDOSULFAN I (ALPHA)  
 0.11U DIELDRIN  
 0.11U 4,4'-DDE (P.P'-DDE)  
 0.11U ENDRIN  
 0.11U ENDOSULFAN II (BETA)  
 0.11U 4,4'-DDD (P.P'-DDD)  
 0.11U ENDOSULFAN SULFATE  
 0.11U 4,4'-DDT (P.P'-DDT)

UG/L ANALYTICAL RESULTS

0.56U METHOXYCHLOR  
 0.11U ENDRIN KETONE  
 0.11U ENDRIN ALDEHYDE  
 CHLORDANE (TECH. MIXTURE) /1  
 0.056U GAMMA-CHLORDANE /2  
 0.056U ALPHA-CHLORDANE /2  
 1.1U TOXAPHENE  
 1.1U PCB-1016 (AROCLOR 1016)  
 2.2U PCB-1221 (AROCLOR 1221)  
 1.1U PCB-1232 (AROCLOR 1232)  
 1.1U PCB-1242 (AROCLOR 1242)  
 1.1U PCB-1248 (AROCLOR 1248)  
 1.1U PCB-1254 (AROCLOR 1254)  
 1.1U PCB-1260 (AROCLOR 1260)

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
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 \*C-CONFIRMED BY GCMS  
 \*NA-NOT ANALYZED  
 \*NAT-INTERFERENCES  
 \*J-ESTIMATED VALUE  
 \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
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 \*C-CONFIRMED BY GCMS



SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/21/92

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 92-0341 SAMPLE NO. 68211 SAMPLE TYPE: GROUNDWA  
 SOURCE: ABC ONE-HOUR CLEANER  
 STATION ID: MW-CO2-01  
 CASE NUMBER: 18093 SAS NUMBER: 7208D  
 PROG ELEM: SSF COLLECTED BY: B MORRIS  
 CITY: JACKSONVIL ST: NC  
 COLLECTION START: 04/23/92 1925 STOP: 00/00/00  
 D. NUMBER: BT90

ANALYTICAL RESULTS ANALYTICAL RESULTS

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
0.053U	ALPHA-BHC	0.53U	METHOXYCHLOR
0.053U	BETA-BHC	0.11U	ENDRIN KETONE
0.053U	DELTA-BHC	0.11U	ENDRIN ALDEHYDE
0.053U	GAMMA-BHC (LINDANE)	0.053U	CHLORDANE (TECH. MIXTURE) /1
0.053U	HEPTACHLOR	0.053U	GAMMA-CHLORDANE /2
0.053U	ALDRIN	1.1U	ALPHA-CHLORDANE
0.053U	HEPTACHLOR EPOXIDE	1.1U	TOXAPHENE
0.053U	ENDOSULFAN I (ALPHA)	1.1U	PCB-1016 (AROCLOR 1016)
0.11U	DIELDRIN	2.1U	PCB-1221 (AROCLOR 1221)
0.11U	4,4'-DDE (P,P'-DDE)	1.1U	PCB-1232 (AROCLOR 1232)
0.11U	ENDRIN	1.1U	PCB-1242 (AROCLOR 1242)
0.11U	ENDOSULFAN II (BETA)	1.1U	PCB-1248 (AROCLOR 1248)
0.11U	4,4'-DDD (P,P'-DDD)	1.1U	PCB-1254 (AROCLOR 1254)
0.11U	ENDOSULFAN SULFATE	1.1U	PCB-1260 (AROCLOR 1260)
0.11U	4,4'-DDT (P,P'-DDT)		

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

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 \*C-CONFIRMED BY GCMS  
 \*NA-NOT ANALYZED  
 \*N1-INTERFERENCES  
 \*J-ESTIMATED VALUE  
 \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

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Remedial Investigation Report  
ABC One-Hour Cleaners, Inc.  
Jacksonville, Onslow County, North Carolina  
Section: Appendix C  
Revision: 1  
Date: November 1992

**MONITOR WELLS - CASTLE HAYNE AQUIFER**  
**METALS**

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
 EPA-REGION IV ESD, ATHENS, GA.

05/29/92

METALS DATA REPORT

PROJECT NO. 92-0341 SAMPLE NO. 68214 SAMPLE TYPE: GROUNDWA  
 SOURCE: ABC ONE-HOUR CLEANER  
 STATION ID: MW-C01-01  
 CASE NUMBER: 18093 SAS NUMBER: 7208D  
 PROG ELEM: SSF COLLECTED BY: B MORRIS  
 CITY: JACKSONVIL ST: NC  
 COLLECTION START: 04/24/92 1815 STOP: 00/00/00  
 MD NUMBER: CJ15

ANALYTICAL RESULTS		ANALYTICAL RESULTS	
UG/L		UG/L	
5500J	ALUMINUM	38	MANGANESE
54U	ANTIMONY	.20U	MERCURY
6U	ARSENIC	12U	NICKEL
21	BARIUM	3000	POTASSIUM
1U	BERYLLIUM	3U	SELENIUM
5U	CADMIUM	10U	SILVER
63000	CALCIUM	23000	SODIUM
11	CHROMIUM	2U	THALLIUM
9U	COBALT	NA	TIN
41	COPPER	13	VANADIUM
2200J	IRON	58	ZINC
6	LEAD		
2600	MAGNESIUM		

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

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 \*NA-NOT ANALYZED  
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METALS DATA REPORT  
 PROJECT NO. 92-0341 SAMPLE NO. 68211 SAMPLE TYPE: GROUNDWA  
 SOURCE: ABC ONE-HOUR CLEANER  
 STATION ID: MW-C02-01  
 CASE NUMBER: 18093 SAS NUMBER: 7208D  
 PROG ELEM: SSF COLLECTED BY: B MORRIS  
 CITY: JACKSONVIL ST: NC  
 COLLECTION START: 04/23/92 1925 STOP: 00/00/00  
 MD NUMBER: CJ09

ANALYTICAL RESULTS		ANALYTICAL RESULTS	
UG/L		UG/L	
3300J	ALUMINUM	45	MANGANESE
54U	ANTIMONY		MERCURY
8U	ARSENIC	:20U	NICKEL
36	BARIUM	12U	POTASSIUM
1U	BERYLLIUM	5100	SELENIUM
5U	CADMIUM	4U	SILVER
48000	CALCIUM	10U	SODIUM
9	CHROMIUM	33000	THALLIUM
9U	COBALT	2U	TIN
30	COPPER	NA	VANADIUM
1000J	IRON	8	ZINC
10	LEAD	390	
3000	MAGNESIUM		

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/29/92

METALS DATA REPORT

\*\*\* PROJECT NO. 92-0341 SAMPLE NO. 68218 SAMPLE TYPE: GROUNDWA  
\*\*\* SOURCE: ABC ONE-HOUR CLEANER  
\*\*\* STATION ID: MW-C03-01  
\*\*\* CASE NUMBER: 18093 SAS NUMBER: 7208D  
\*\*\*

\*\*\* PROG ELEM: SSF COLLECTED BY: B MORRIS  
\*\*\* CITY: JACKSONVIL ST: NC  
\*\*\* COLLECTION START: 04/29/92 1125 STOP: 00/00/00  
\*\*\* MD NUMBER: CJ19  
\*\*\*

ANALYTICAL RESULTS

UG/L  
1800J ALUMINUM  
54U ANTIMONY  
7U ARSENIC  
21 BARIUM  
1U BERYLLIUM  
5U CADMIUM  
76000 CALCIUM  
9U CHROMIUM  
9U COBALT  
9U COPPER  
420J IRON  
2U LEAD  
2500 MAGNESIUM

ANALYTICAL RESULTS

UG/L  
43 MANGANESE  
20U MERCURY  
12U NICKEL  
2900U POTASSIUM  
3U SELENIUM  
10U SILVER  
7700 SODIUM  
2U THALLIUM  
NA TIN  
7U VANADIUM  
70 ZINC

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/29/92

METALS DATA REPORT

\*\*\* PROJECT NO. 92-0341 SAMPLE NO. 68208 SAMPLE TYPE: GROUNDWA  
 \*\*\* SOURCE: ABC ONE-HOUR CLEANER  
 \*\*\* STATION ID: MW-CO4-01  
 \*\*\* CASE NUMBER: 18093 SAS NUMBER: 7208D

\*\*\* PROG ELEM: SSF COLLECTED BY: B MORRIS  
 \*\*\* CITY: JACKSONVIL ST: NC  
 \*\*\* COLLECTION START: 04/22/92 2040 STOP: 00/00/00  
 \*\*\* MD NUMBER: CJ06

ANALYTICAL RESULTS

UG/L  
 3200J ALUMINUM  
 54U ANTIMONY  
 3U ARSENIC  
 4 BARIUM  
 1U BERYLLIUM  
 5U CADMIUM  
 14000 CALCIUM  
 7U CHROMIUM  
 9U COBALT  
 9U COPPER  
 1100J IRON  
 5 LEAD  
 1900 MAGNESIUM

ANALYTICAL RESULTS

UG/L  
 2U MANGANESE  
 20U MERCURY  
 12U NICKEL  
 15000 POTASSIUM  
 15U SELENIUM  
 10U SILVER  
 13000 SODIUM  
 2U THALLIUM  
 NA TIN  
 7U VANADIUM  
 58 ZINC

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT  
 \*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/29/92

SPECIFIED ANALYSIS DATA REPORT

\*\*\* PROJECT NO. 92-0341 SAMPLE NO. 68211 SAMPLE TYPE: GROUNDWA  
\*\* SOURCE: ABC ONE-HOUR CLEANER  
\*\* STATION ID: MW-CO2-01  
\*\* CASE NO.: 18093 SAS NO.: 7208D  
\*\*\*

\*\*\* PROG ELEM: SSF COLLECTED BY: B MORRIS  
\*\* CITY: JACKSONVIL ST: NC  
\*\* COLLECTION START: 04/23/92 1925 STOP: 00/00/00  
\*\* D. NO.: BT90 MD NO: CJO9  
\*\*\*

RESULTS UNITS PARAMETER  
10U UG/L CYANIDE

\*\*\*FOOTNOTES\*\*\*  
\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
\*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

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Remedial Investigation Report  
ABC One-Hour Cleaners, Inc.  
Jacksonville, Onslow County, North Carolina  
Section: Appendix C  
Revision: 1  
Date: November 1992

**MONITOR WELLS - SURFICIAL AQUIFER  
AND CASTLE HAYNE AQUIFER QA/QC**

**VOLATILES**



SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/21/92

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 92-0341 SAMPLE NO. 68224 SAMPLE TYPE: GROUNDWA  
 SOURCE: ABC ONE-HOUR CLEANER  
 STATION ID: FB-000-05  
 COLLECTION START: 04/24/92 1015 STOP: 00/00/00  
 CITY: JACKSONVIL ST: NC  
 PROG ELEM: SSF COLLECTED BY: B MORRIS

CASE NO.: 18093 SAS NO.: 7208D D. NO.: BT94  
 UG/L UG/L UG/L ANALYTICAL RESULTS ANALYTICAL RESULTS

10U CHLOROMETHANE  
 10U BROMOMETHANE  
 10U VINYL CHLORIDE  
 10U CHLOROETHANE  
 10U METHYLENE CHLORIDE  
 10U ACETONE  
 10U CARBON DISULFIDE  
 10U 1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)  
 10U 1,1-DICHLOROETHANE  
 10U 1,2-DICHLOROETHANE (TOTAL)  
 10U CHLOROFORM  
 10U 1,2-DICHLOROETHANE  
 10U METHYL ETHYL KETONE  
 10U 1,1,1-TRICHLOROETHANE  
 10U CARBON TETRACHLORIDE  
 10U BROMODICHLOROMETHANE

10U 1,2-DICHLOROPROPANE  
 10U CIS-1,3-DICHLOROPROPENE  
 10U TRICHLOROETHENE (TRICHLOROETHYLENE)  
 10U DIBROMOCHLOROMETHANE  
 10U 1,1,2-TRICHLOROETHANE  
 10U BENZENE  
 10U TRANS-1,3-DICHLOROPROPENE  
 10U BROMOFORM  
 10U METHYL ISOBUTYL KETONE  
 10U METHYL BUTYL KETONE  
 10U TETRACHLOROETHENE (TETRACHLOROETHYLENE)  
 10U 1,1,2,2-TETRACHLOROETHANE  
 10U TOLUENE  
 10U CHLOROBENZENE  
 10U ETHYL BENZENE  
 10U STYRENE  
 10U TOTAL XYLENES

\*\*\*\*REMARKS\*\*\*\*

\*\*\*\*REMARKS\*\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*NAT-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
 \*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/21/92

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 92-0341 SAMPLE NO. 68223 SAMPLE TYPE: GROUNDWA  
 SOURCE: ABC ONE-HOUR CLEANER  
 STATION ID: RB-000-05  
 PROG ELEM: SSF COLLECTED BY: B MORRIS  
 CITY: JACKSONVIL ST: NC  
 COLLECTION START: 04/24/92 1000 STOP: 00/00/00

CASE NO.: 18093 SAS NO.: 7208D D. NO.: BT93

ANALYTICAL RESULTS

ANALYTICAL RESULTS

10U CHLOROMETHANE  
 10U BROMOMETHANE  
 10U VINYL CHLORIDE  
 10U CHLOROETHANE  
 10U METHYLENE CHLORIDE  
 10U ACETONE  
 10U CARBON DISULFIDE  
 10U 1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)  
 10U 1,1-DICHLOROETHANE  
 10U 1,2-DICHLOROETHENE (TOTAL)  
 10U CHLOROFORM  
 10U 1,2-DICHLOROETHANE  
 10U METHYL ETHYL KETONE  
 10U 1,1-TRICHLOROETHANE  
 10U CARBON TETRACHLORIDE  
 10U BROMODICHLOROMETHANE

10U 1,2-DICHLOROPROPANE  
 10U CIS-1,3-DICHLOROPROPENE  
 10U TRICHLOROETHENE (TRICHLOROETHYLENE)  
 10U DIBROMOCHLOROMETHANE  
 10U 1,1,2-TRICHLOROETHANE  
 10U BENZENE  
 10U TRANS-1,3-DICHLOROPROPENE  
 10U BROMOFORM  
 10U METHYL ISOBUTYL KETONE  
 10U METHYL BUTYL KETONE  
 10U TETRACHLOROETHENE (TETRACHLOROETHYLENE)  
 10U 1,1,2,2-TETRACHLOROETHANE  
 10U TOLUENE  
 10U CHLOROBENZENE  
 10U ETHYL BENZENE  
 10U STYRENE  
 10U TOTAL XYLENES

\*\*\*\*REMARKS\*\*\*\*

\*\*\*\*REMARKS\*\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NA1-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/21/92

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 92-0341 SAMPLE NO. 68221 SAMPLE TYPE: GROUNDWA  
SOURCE: ABC ONE-HOUR CLEANER  
STATION ID: TB-000-03  
PROG ELEM: SSF COLLECTED BY: B MORRIS  
CITY: JACKSONVIL ST: NC  
COLLECTION START: 04/29/92 1540 STOP: 00/00/00

CASE NO.: 18093 SAS NO.: 7208D D. NO.: BW79  
ANALYTICAL RESULTS ANALYTICAL RESULTS

UG/L  
CHLOROMETHANE  
BROMOMETHANE  
VINYL CHLORIDE  
CHLOROETHANE  
METHYLENE CHLORIDE  
ACETONE  
CARBON DISULFIDE  
1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)  
1,1-DICHLOROETHANE  
1,2-DICHLOROETHENE (TOTAL)  
CHLOROFORM  
1,2-DICHLOROETHANE  
METHYL ETHYL KETONE  
1,1,1-TRICHLOROETHANE  
CARBON TETRACHLORIDE  
BROMODICHLOROMETHANE

100 1,2-DICHLOROPROPANE  
100 CIS-1,3-DICHLOROPROPENE  
100 TRICHLOROETHENE (TRICHLOROETHYLENE)  
100 DIBROMOCHLOROMETHANE  
100 1,1,2-TRICHLOROETHANE  
100 BENZENE  
100 TRANS-1,3-DICHLOROPROPENE  
100 BROMOFORM  
100 METHYL ISOBUTYL KETONE  
100 METHYL BUTYL KETONE  
100 TETRACHLOROETHENE (TETRACHLOROETHYLENE)  
100 1,1,2,2-TETRACHLOROETHANE  
100 TOLUENE  
100 CHLOROBENZENE  
100 ETHYL BENZENE  
100 STYRENE  
100 TOTAL XYLENES

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
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Remedial Investigation Report  
ABC One-Hour Cleaners, Inc.  
Jacksonville, Onslow County, North Carolina  
Section: Appendix C  
Revision: 1  
Date: November 1992

**MONITOR WELLS - SURFICIAL AQUIFER  
AND CASTLE HAYNE AQUIFER QA/QC**

**SEMI-VOLATILES**

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/21/92

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 92-0341 SAMPLE NO. 68224  
SOURCE: ABC ONE-HOUR CLEANER  
STATION ID: FB-000-05

PROG ELEM: SSF COLLECTED BY: B MORRIS  
CITY: JACKSONVIL ST: NC  
COLLECTION START: 04/24/92 1015 STOP: 00/00/00

CASE NO.: 18093 SAS NO.: 7208D D. NO.: BT94  
UG/L ANALYTICAL RESULTS UG/L ANALYTICAL RESULTS

100 PHENOL  
100 BIS(2-CHLOROETHYL) ETHER  
100 2-CHLOROPHENOL  
100 1,3-DICHLOROBENZENE  
100 1,4-DICHLOROBENZENE  
100 1,2-DICHLOROBENZENE  
100 2-METHYLPHENOL  
100 2,2'-CHLOROISOPROPYLETHER  
100 (3-AND/OR 4-)METHYLPHENOL  
100 N-NITROSODI-N-PROPYLAMINE  
100 HEXACHLOROETHANE  
100 NITROBENZENE  
100 ISOPHORONE  
100 2-NITROPHENOL  
100 2,4-DIMETHYLPHENOL  
100 BIS(2-CHLOROETHOXY) METHANE  
100 2,4-DICHLOROPHENOL  
100 1,2,4-TRICHLOROBENZENE  
100 NAPHTHALENE  
100 4-CHLOROANILINE  
100 HEXACHLOROBUTADIENE  
100 4-CHLORO-3-METHYLPHENOL  
100 2-METHYLNAPHTHALENE  
100 HEXACHLOROCYCLOPENTADIENE (HCCP)  
250 2,4,6-TRICHLOROPHENOL  
100 2,4,5-TRICHLOROPHENOL  
100 2-CHLORONAPHTHALENE  
250 2-NITROANILINE  
100 DIMETHYL PHTHALATE  
100 ACENAPHTHYLENE  
100 2,6-DINITROTOLUENE

3-NITROANILINE  
100 ACENAPHTHENE  
250 2,4-DINITROPHENOL  
250 4-NITROPHENOL  
100 DIBENZOFURAN  
100 2,4-DINITROTOLUENE  
100 DIETHYL PHTHALATE  
100 4-CHLOROPHENYL PHENYL ETHER  
100 FLUORENE  
250 4-NITROANILINE  
250 2-METHYL-4,6-DINITROPHENOL  
100 N-NITROSODIPHENYLAMINE/DIPHENYLAMINE  
100 4-BROMOPHENYL PHENYL ETHER  
100 HEXACHLOROBENZENE (HCB)  
250 PENTACHLOROPHENOL  
100 PHENANTHRENE  
100 ANTHRACENE  
100 CARBAZOLE  
100 DI-N-BUTYLPHTHALATE  
100 FLUORANTHENE  
100 PYRENE  
100 RFNZYI RUTVI PHTHAIA TF  
100 3,3'-DICHLOROBENZIDINE  
100 BENZO(A)ANTHRACENE  
100 CHRYSENE  
100 BIS(2-ETHYLHEXYL) PHTHALATE  
100 DI-N-OCTYLPHTHALATE  
100 BENZO(B AND/OR K)FLUORANTHENE  
100 BENZO-A-PYRENE  
100 INDENO (1,2,3-CD) PYRENE  
100 DIBENZO(A,H)ANTHRACENE  
100 BENZO(GHI)PERYLENE

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
\*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
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\*J-ESTIMATED VALUE  
\*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/21/92

EXTRACTABLE ORGANICS DATA REPORT

\*\*\* PROJECT NO. 92-0341 SAMPLE NO. 68223 SAMPLE TYPE: GROUNDWA  
 \*\* SOURCE: ABC ONE-HOUR CLEANER  
 \*\* STATION ID: RB-000-05  
 \*\*  
 \*\* CASE NO.: 18093 SAS NO.: 7208D D. NO.: BT93  
 \*\*  
 \*\* PROG ELEM: SSF COLLECTED BY: B MORRIS  
 \*\* CITY: JACKSONVIL ST: NC  
 \*\* COLLECTION START: 04/24/92 1000 STOP: 00/00/00

ANALYTICAL RESULTS

ANALYTICAL RESULTS

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
10U	PHENOL	25U	3-NITROANILINE
10U	BIS(2-CHLOROETHYL) ETHER	10U	ACENAPHTHENE
10U	2-CHLOROPHENOL	25U	2,4-DINITROPHENOL
10U	1,3-DICHLOROBENZENE	25U	4-NITROPHENOL
10U	1,4-DICHLOROBENZENE	10U	DIBENZOFURAN
10U	1,2-DICHLOROBENZENE	10U	2,4-DINITROTOLUENE
10U	2-METHYLPHENOL	10U	DIETHYL PHTHALATE
10U	2,2'-CHLOROTISOPROPYLETHER	10U	4-CHLOROPHENYL PHENYL ETHER
10U	(3-AND/OR 4-)METHYLPHENOL	10U	FLUORENE
10U	N-NITROSODI-N-PROPYLAMINE	25U	4-NITROANILINE
10U	HEXACHLOROETHANE	25U	2-METHYL-4,6-DINITROPHENOL
10U	NITROBENZENE	10U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10U	ISOPHORONE	10U	4-BROMOPHENYL PHENYL ETHER
10U	2-NITROPHENOL	10U	HEXACHLOROBENZENE (HCB)
10U	2,4-DIMETHYLPHENOL	25U	PENTACHLOROPHENOL
10U	BIS(2-CHLOROETHOXY) METHANE	10U	PHENANTHRENE
10U	2,4-DICHLOROPHENOL	10U	ANTHRACENE
10U	1,2,4-TRICHLOROBENZENE	10U	CARBAZOLE
10U	NAPHTHALENE	10U	DI-N-BUTYLPHTHALATE
10U	4-CHLOROANILINE	10U	FLUORANTHENE
10U	HEXACHLOROBUTADIENE	10U	PYRENE
10U	4-CHLORO-3-METHYLPHENOL	10U	RYTYL PHTHALATE
10U	2 METHYLNAPHTHALENE	10U	3,3' DICHLOROBENZIDINE
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)	10U	BENZO(A)ANTHRACENE
25U	2,4,6-TRICHLOROPHENOL	10U	CHRYSENE
10U	2,4,5-TRICHLOROPHENOL	10U	BIS(2-ETHYLHEXYL) PHTHALATE
10U	2-CHLORONAPHTHALENE	10U	DI-N-OCTYLPHTHALATE
25U	NITROANILINE	10U	BENZO(B AND/OR K)FLUORANTHIENE
10U	DIMETHYL PHTHALATE	10U	BENZO-A-PYRENE
10U	ACENAPHTHYLENE	10U	INDENO (1,2,3-CD) PYRENE
10U	2,6-DINITROTOLUENE	10U	DIBENZO(A,H)ANTHRACENE
		10U	BENZO(GHI)PERYLENE

\*\*\*\*REMARKS\*\*\*\*

\*\*\*\*REMARKS\*\*\*\*

\*\*\*\*FOOTNOTES\*\*\*\*

\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAT-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
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ABC One-Hour Cleaners, Inc.  
Jacksonville, Onslow County, North Carolina  
Section: Appendix C  
Revision: 1  
Date: November 1992

**MONITOR WELLS - SURFICIAL AQUIFER  
AND CASTLE HAYNE AQUIFER QA/QC**

**PESTICIDES/PCBs**

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/21/92

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 92-0341 SAMPLE NO. 68224 SAMPLE TYPE: GROUNDWA  
 SOURCE: ABC ONE-HOUR CLEANER  
 STATION ID: FB-000-05  
 CASE NUMBER: 18093  
 SAS NUMBER: 7208D  
 PROG ELEM: SSF COLLECTED BY: B MORRIS  
 CITY: JACKSONVIL ST: NC  
 COLLECTION START: 04/24/92 1015 STOP: 00/00/00  
 D. NUMBER: BT94

ANALYTICAL RESULTS

ANALYTICAL RESULTS

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
0.056U	ALPHA-BHC	0.56U	METHOXYCHLOR
0.056U	BETA-BHC	0.11U	ENDRIN KETONE
0.056U	DELTA-BHC	0.11U	ENDRIN ALDEHYDE
0.056U	GAMMA-BHC (LINDANE)	0.056U	CHLORDANE (TECH. MIXTURE) /1
0.056U	HEPTACHLOR	0.056U	GAMMA-CHLORDANE /2
0.056U	ALDRIN	1.1U	ALPHA-CHLORDANE /2
0.056U	HEPTACHLOR EPOXIDE	1.1U	TOXAPHENE
0.056U	ENDOSULFAN I (ALPHA)	1.1U	PCB-1016 (AROCLOR 1016)
0.11U	DIELDRIN	2.2U	PCB-1221 (AROCLOR 1221)
0.11U	4,4'-DDE (P, P'-DDE)	1.1U	PCB-1232 (AROCLOR 1232)
0.11U	ENDRIN	1.1U	PCB-1242 (AROCLOR 1242)
0.11U	ENDOSULFAN II (BETA)	1.1U	PCB-1248 (AROCLOR 1248)
0.11U	4,4'-DDD (P, P'-DDD)	1.1U	PCB-1254 (AROCLOR 1254)
0.11U	ENOOSULFAN SULFATE	1.1U	PCB-1260 (AROCLOR 1260)
0.11U	4,4'-DDT (P, P'-DDT)		

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

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 \*K-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
 \*R-DC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.  
 \*C-CONFIRMED BY GCMS  
 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.



SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/21/92

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 92-0341 SAMPLE NO. 68223 SAMPLE TYPE: GROUNDWA  
 SOURCE: ABC ONE-HOUR CLEANER  
 STATION ID: RB-000-05  
 CASE NUMBER: 18093 SAS NUMBER: 7208D

CITY: JACKSONVIL  
 COLLECTED BY: B MORRIS  
 ST. NC  
 COLLECTION START: 04/24/92 1000 STOP: 00/00/00  
 D. NUMBER: BT93

UG/L ANALYTICAL RESULTS

0.056U ALPHA-BHC  
 0.056U BETA-BHC  
 0.056U DELTA-BHC  
 0.056U GAMMA-BHC (LINDANE)  
 0.056U HEPTACHLOR  
 0.056U ALDRIN  
 0.056U HEPTACHLOR EPOXIDE  
 0.056U ENDOSULFAN I (ALPHA)  
 0.11U DIELDRIN  
 0.11U 4,4'-DDE (P,P'-DDE)  
 0.11U ENDRIN  
 0.11U ENDOSULFAN II (BETA)  
 0.11U 4,4'-DDD (P,P'-DDD)  
 0.11U ENDOSULFAN SULFATE  
 0.11U 4,4'-DDT (P,P'-DDT)

UG/L ANALYTICAL RESULTS

0.56U METHOXYCHLOR  
 0.11U ENDRIN KETONE  
 0.11U ENDRIN ALDEHYDE  
 CHLORDANE (TECH. MIXTURE) /1  
 0.056U GAMMA-CHLORDANE /2  
 0.056U ALPHA-CHLORDANE /2  
 1.1U TOXAPHENE  
 1.1U PCB-1016 (AROCLOR 1016)  
 2.2U PCB-1221 (AROCLOR 1221)  
 1.1U PCB-1232 (AROCLOR 1232)  
 1.1U PCB-1242 (AROCLOR 1242)  
 1.1U PCB-1248 (AROCLOR 1248)  
 1.1U PCB-1254 (AROCLOR 1254)  
 1.1U PCB-1260 (AROCLOR 1260)

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

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 \*NA-NOT ANALYZED  
 \*NAI-INTERFERENCES  
 \*J-ESTIMATED VALUE  
 \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
 \*RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.  
 \*SEE CHLORDANE CONSTITUENTS.

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Remedial Investigation Report  
ABC One-Hour Cleaners, Inc  
Jacksonville, Onslow County, North Carolina  
Section Appendix C  
Revision 1  
Date November 1992

**MONITOR WELLS - SURFICIAL AQUIFER  
AND CASTLE HAYNE AQUIFER QA/QC**

**METALS**

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/29/92

METALS DATA REPORT

\*\*\* PROJECT NO. 92-0341 SAMPLE NO. 68224 SAMPLE TYPE: GROUNDWA PROG ELEM: SSF COLLECTED BY: B MORRIS  
 \*\*\* SOURCE: ABC ONE-HOUR CLEANER CITY: JACKSONVILLE ST: NC  
 \*\*\* STATION ID: FB-000-05 COLLECTION START: 04/24/92 1015 STOP: 00/00/00  
 \*\*\* CASE NUMBER: 18093 SAS NUMBER: 7208D MD NUMBER: CJ13

ANALYTICAL RESULTS

ANALYTICAL RESULTS

90UJ ALUMINUM  
 54U ANTIMONY  
 3U ARSENIC  
 2U BARIUM  
 1U BERYLLIUM  
 5U CADMIUM  
 130U CALCIUM  
 7U CHROMIUM  
 9U COBALT  
 9U COPPER  
 60UJ IRON  
 3U LEAD  
 70U MAGNESIUM

2U MANGANESE  
 20U MERCURY  
 12U NICKEL  
 2900U POTASSIUM  
 3U SELENIUM  
 10U SILVER  
 2U SODIUM  
 2U THALLIUM  
 NA TIN  
 7U VANADIUM  
 3U ZINC

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*

\*A-AVERAGE VALUE \*NA-NOT ANALYZED \*NAI-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
 \*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
 EPA-REGION IV ESD, ATHENS, GA.

05/29/92

METALS DATA REPORT

\*\*\* PROJECT NO. 92-0341 SAMPLE NO. 68221 SAMPLE TYPE: GROUNDWA  
 \*\*\* SOURCE: ABC ONE-HOUR CLEANER  
 \*\*\* STATION ID: TB-000-03  
 \*\*\* CASE NUMBER: 18093 SAS NUMBER: 7208D  
 \*\*\* PROG ELEM: SF COLLECTED BY: B MORRIS  
 \*\*\* CITY: JACKSONVIL ST: NC  
 \*\*\* COLLECTION START: 04/29/92 1540 STOP: 00/00/00  
 \*\*\* MD NUMBER: CJ22

\*\*\* UG/L ANALYTICAL RESULTS  
 70UJ ALUMINUM  
 54U ANTIMONY  
 3U ARSENIC  
 2U BARIUM  
 1U BERYLLIUM  
 5U CADMIUM  
 57 CALCIUM  
 7U CHROMIUM  
 9U COBALT  
 9U COPPER  
 50UJ IRON  
 2U LEAD  
 70U MAGNESIUM

\*\*\* UG/L ANALYTICAL RESULTS  
 2U MANGANESE  
 12U MERCURY  
 2900U NICKEL  
 3U POTASSIUM  
 10U SELENIUM  
 334U SILVER  
 2U SODIUM  
 NA THALLIUM  
 7U TIN  
 5 VANADIUM  
 ZINC

\*\*\*REMARKS\*\*\*

\*\*\*REMARKS\*\*\*

\*\*\*FOOTNOTES\*\*\*  
 \*A-AVERAGE VALUE  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
 \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
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Remedial Investigation Report  
ABC One-Hour Cleaners, Inc.  
Jacksonville, Onslow County, North Carolina  
Section: Appendix C  
Revision: 1  
Date: November 1992

**MONITOR WELLS - SURFICIAL AQUIFER  
AND CASTLE HAYNE AQUIFER QA/QC**

**CYANIDE**

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/29/92

SPECIFIED ANALYSIS DATA REPORT

\*\*\* PROJECT NO. 92-0341 SAMPLE NO. 68224 SAMPLE TYPE: GROUNDWA  
 \*\*\* SOURCE: ABC ONE-HOUR CLEANER  
 \*\*\* STATION ID: FB-000-05 SAS NO.: 7208D  
 \*\*\* CASE NO.: 18093  
 \*\*\*  
 \*\*\* PROG ELEM: SSF COLLECTED BY: B MORRIS  
 \*\*\* CITY: JACKSONVIL ST: NC  
 \*\*\* COLLECTION START: 04/24/92 1015 STOP: 00/00/00  
 \*\*\* D. NO.: BT94 MD NO: CJ13  
 \*\*\*

RESULTS UNITS PARAMETER  
100 UG/L CYANIDE

\*\*\* FOOTNOTES \*\*\*  
 \*A-AVERAGE VALUE  
 \*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN  
 \*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
 \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
 \*J-ESTIMATED VALUE  
 \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/29/92

SPECIFIED ANALYSIS DATA REPORT

\*\*\*  
\*\* PROJECT NO. 92-0341    SAMPLE NO. 68223    SAMPLE TYPE: GROUNDWA    PROG ELEM: SSF    COLLECTED BY: B MORRIS    \*\*  
\*\* SOURCE: ABC ONE-HOUR CLEANER    CITY: JACKSONVIL    ST: NC    \*\*  
\*\* STATION ID: RB-000-05    COLLECTION START: 04/24/92    1000    STOP: 00/00/00    \*\*  
\*\* CASE NO.: 18093    D. NO.: BT93    MD NO: CJ12    \*\*  
\*\*  
\*\*

RESULTS    UNITS    PARAMETER  
100 UG/L    CYANIDE

\*\*\* FOOTNOTES \*\*\*  
\*A-AVERAGE VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN \*NAT-INTERFERENCES \*J-ESTIMATED VALUE \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*K-ACTUAL VALUE WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.  
\*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM  
EPA-REGION IV ESD, ATHENS, GA.

05/29/92

SPECIFIED ANALYSIS DATA REPORT

\*\*\*  
\*\* PROJECT NO. 92-0341    SAMPLE NO. 68221    SAMPLE TYPE: GROUNDWA    PROG ELEM: SSF    COLLECTED BY: B MORRIS    \*\*  
\*\* SOURCE: ABC ONE-HOUR CLEANER    CITY: JACKSONVIL    ST: NC    \*\*  
\*\* STATION ID: TB-000-03    COLLECTION START: 04/29/92 1540    STOP: 00/00/00    \*\*  
\*\* CASE NO.: 18093    D. NO.: BW79    MD NO: CJ22    \*\*  
\*\*

RESULTS    UNITS    PARAMETER  
100 UG/L    CYANIDE

\*\*\*FOOTNOTES\*\*\*  
\*A-AVERAGE VALUE    \*NA-NOT ANALYZED    \*NAI-INTERFERENCES    \*J-ESTIMATED VALUE    \*N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL  
\*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN    \*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN  
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Remedial Investigation Report  
ABC One-Hour Cleaners, Inc.  
Jacksonville, Onslow County, North Carolina  
Section: Appendix D  
Revision: 1  
Date: November 1992

**APPENDIX D**  
**RISK ASSESSMENT METHODS**

Table D-1  
 ABC One Hour Cleaners  
 Groundwater – Surficial Aquifer  
 Data Used In Risk Assessment

	S02 *	S03	S04	S05	S06	S07
<b>ORGANICS (UG/L)</b>						
Benzene	5 000 U	5 000 U	5 000 U	2 000 J	2 000 J	5 000 U
Chlorobenzene	5 000 U	5 000 U	5 000 U	5 000 J	5 000 U	5 000 U
Chloroform	3 000	5 000 U	5 000 U	5 000 U	5 000 U	5 000 U
1,1 –Dichloroethene	5 000 J	6 000 J	5 000 U	5 000 U	5 000 U	5 000 U
1,2 –Dichloroethene (Total)	1200 000	1200 000	5 000 U	5 000 U	5 000 U	5 000 U
Ethyl Benzene	5 000 U	5 000 U	5 000 U	5 000 U	28 000	5 000 U
2 –Methylinaphthalene	3 000 J	NA	NA	NA	NA	NA
Naphthalene	3 000 J	NA	NA	NA	NA	NA
Tetrachloroethene	895 000	5400 000	5 000 U	3 000 J	4 000 J	5 000 U
Toluene	3 000	6 000 U	6 000 U	4 000 J	3 000 J	5 000 U
1,1,2 – Trichloroethane	5 000 U	2 000 J	5 000 U	5 000 U	5 000 U	5 000 U
Trichloroethene	705 000	640 000	5 000 U	3 000 J	5 000 U	5 000 U
Vinyl Chloride	100 000	110 000	5 000 U	5 000 U	5 000 U	5 000 U
Xylenes (total)	3 000	5 000 U	5 000 U	5 000 U	5 000 U	5 000 U
<b>INORGANICS (UG/L)</b>						
Aluminum	165 000 U	2800 000 J	155 000 U	17000 000 J	3300 000 J	330 000 U
Arsenic	1 750 U	2 500 U	1 500 U	28 000	12 000	1 500 U
Barium	43 500	120 000	120 000	220 000	56 000	140 000
Calcium	905 000	6800 000	1700 000	2200 000	790 000	6500 000
Chromium	3 500 U	9 000	3 500 U	57 000	11 000	3 500 U
Cobalt	4 500 U	4 500 U	4 500 U	43 000	4 500 U	4 500 U
Copper	12 000	89 000	4 500 U	4 500 U	13 000	4 500 U
Iron	170 000 U	5200 000 J	5600 000 J	11000 000 J	4000 000 J	580 000 J
Lead	1 000 U	3 000	1 500 U	10 000	1 500 U	1 000 U
Magnesium	1150 000	1100 000	2300 000	3500 000	770 000	2200 000
Manganese	4 000	34 000	25 000	41 000	9 000	27 000
Nickel	6 000 U	16 000	6 000 U	77 000	6 000 U	6 000 U
Sodium	32500 000	20000 000	8600 000	5800 000	17000 000	11000 000
Vanadium	3 500 U	9 000	3 500 U	45 000	16 000	3 500 U
Zinc	19 000	84 000	15 000	270 000	46 000	14 000

J= Estimated detected concentration

NA= Not applicable

U= Not detected One half of the sample detection limit

\* – Average of a sample and a duplicate

Table D-1  
 ABC One Hour Cleaners  
 Groundwater- Surficial Aquifer  
 (Continued)

	\$08	\$09	\$10
<b>ORGANICS (UG/L)</b>			
Benzene	5.000 U	5.000 U	5.000 U
Chlorobenzene	5.000 U	5.000 U	5.000 U
Chloroform	5.000 U	5.000 U	5.000 U
1,1 - Dichloroethene	5.000 U	5.000 U	5.000 U
1,2 - Dichloroethene (Total)	5.000 U	5.000 U	5.000 U
Ethyl Benzene	5.000 U	5.000 U	5.000 U
2 - Methyleneaphthalene	NA	NA	NA
Napthalene	NA	NA	NA
Tetrachloroethene	5.000 U	5.000 U	5.000 U
Toluene	5.000 U	5.000 U	5.000 U
1,1,2 - Trichloroethane	5.000 U	5.000 U	5.000 U
Trichloroethene	5.000 U	5.000 U	5.000 U
Vinyl Chloride	5.000 U	5.000 U	5.000 U
Xylenes (total)	5.000 U	5.000 U	5.000 U
<b>INORGANICS (UG/L)</b>			
Aluminum	2300.000 J	6600.000 J	90.000 U
Arsenic	1.500 U	12.000	1.500 U
Barium	84.000	200.000	68.000
Calcium	1300.000	16000.000	1200.000
Chromium	3.500 U	21.000	3.500 U
Cobalt	4.500 U	4.500 U	4.500 U
Copper	4.500 U	10.000	4.500 U
Iron	3600.000 J	24000.000 J	830.000 J
Lead	3.000	7.000	1.000 U
Magnesium	880.000	3000.000	1400.000
Manganese	11.000	33.000	19.000
Nickel	6.000 U	14.000 J	6.000 U
Sodium	7700.000	10000.000	7000.000
Vanadium	9.000	32.000	3.500 U
Zinc	25.000	220.000	15.000

J= Estimated detected concentration.

NA= Not applicable.

U= Not detected. One half of the sample detection limit.

\* - Average of a sample and a duplicate.

Table D-2  
 ABC One Hour Cleaners  
 Groundwater - Caste Hayne Aquifer  
 Data Used in Risk Assessment

	C02	C03	C04	C05
<b>ORGANICS(UG/L)</b>				
Acetone	5,000 U	5,000 U	5,000 U	1400,000
Benzene	5,000 U	5,000 U	5,000 U	18,000 J
Chloroform	2,000 J	5,000 U	5,000 U	50,000 U
1,2-Dichloroethene (Total)	9,000 J	14,000	5,000 U	50,000 U
Tetrachloroethene	1,000 J	7,000 J	5,000 U	50,000 U
Toluene	5,000 U	5,000 U	5,000 U	25,000 J
Trichloroethene	3,000 J	28,000	5,000 U	17,000 J
<b>INORGANICS(UG/L)</b>				
Aluminum	3300,000 J	90,000 U	160,000 U	5600,000 J
Arsenic	4,000 U	3,500 U	1,500 U	14,000
Barium	36,000	21,000	4,000	30,000
Calcium	48000,000	76000,000	14000,000	50000,000
Chromium	9,000	3,500 U	3,500 U	32,000
Copper	30,000	4,500 U	4,500 U	16,000
Iron	1000,000 J	420,000 J	55,000 U	1900,000 J
Lead	10,000	1,000 U	5,000	4,000
Magnesium	3000,000	2500,000	1900,000	3000,000
Manganese	45,000	43,000	1,000 U	37,000
Nickel	6,000 U	6,000 U	6,000 U	14,000
Potassium	5100,000	1450,000 U	1500,000	8100,000
Sodium	33000,000	7700,000	13000,000	100000,000
Vanadium	8,000	3,500 U	3,500 U	15,000
Zinc	390,000	70,000	58,000	270,000

J= Estimated detected concentration.  
 U= Not detected. One half of the sample detection limit.

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Remedial Investigation Report  
ABC One-Hour Cleaners, Inc.  
Jacksonville, Onslow County, North Carolina  
Section: Appendix E  
Revision: 1  
Date: November 1992

**APPENDIX E**  
**TOXICITY PROFILES**

## ACETONE

### SUMMARY

Subchronic and long-term exposure to acetone effects the lungs, gastrointestinal tract, central nervous system (CNS), and liver. Acetone is listed in Group D of EPA's carcinogenicity classification. Terrestrial and aquatic organisms also exhibit toxic effects following exposure to acetone.

### HUMAN HEALTH

Noncarcinogenic Toxicity - Workers exposed to approximately 700 to 1,000 ppm in air for up to 7 to 15 years complained of inflamed respiratory tract, stomach, and small intestines (NLM, 1991).

Baboons exposed to 500 ppm (in air) for 6 hours/day, for 7 days showed altered responses to stimulation and response times (ORNL 1989). Acute exposure at approximately 4800 ppm caused decreased respiration in rats, probably due to a depression of the CNS (ORNL, 1989).

Carcinogenicity - No apparent carcinogenic effects were noted after 0.1 ml acetone was painted on the skin of female ICR/HN Swiss Mice 3 times/week for one year (ORNL, 1989). EPA has classified acetone as a Group D compound.

Genotoxicity - Acetone has been used as a solvent for other compounds in many genotoxicity experiments and seldom showed potential for chromosomal damage (ORNL, 1989). Acetone has tested negative in the Ames Test using five separate strains of Salmonella typhimurium. All other studies reviewed indicated acetone did not possess genotoxic potential (ORNL, 1989).

## ECOLOGICAL TOXICITY

Aquatic Toxicity - The Great Pond Snail (Lymnaea stagnalis) showed inhibited shell growth, altered eggs and embryonic abnormalities after 240 days of exposure to 1 ug/l. Daphnia magna exposed to 550 mg/L for 7, 21, and 28 days showed 6%, 9% and 10% mortality, respectively (AQUIRE, 1991).

Results from a number of static, 96-hour LC50 studies indicate that acetone is not toxic to aquatic organisms. The LC50 values for the bluegill (Lepomis macrochirus), fathead minnow (Pimephales promelas), and rainbow trout (Oncorhynchus mykiss) ranged from 5,540 to 8,300 mg/L, and those for the water flea (Daphnia pulex), scud (Hyalella azteca) and grass shrimp (Palaemonetes kadiakensis) were 1,220, 2,780 and 2,610 mg/L, respectively (AQUIRE, 1991).

Terrestrial Toxicity - No information was available. The animal toxicity information presented in the human health section is generally applicable to terrestrial mammals.

Avian Toxicity - No information was available on the toxicity of acetone to birds.

## REFERENCES

AQUIRE (Aquatic Information Retrieval), 1991, on line.

NLM (National Library of Medicine), 1991. Hazardous Substance Databank, on line.

ORNL (Oak Ridge National Laboratory), 1989. The Installation Restoration Program Toxicity Guide. Prepared for Harry G. Armstrong Aerospace Medical Research Laboratory, Wright-Patterson Air Force Base, Ohio, dated July 1989.

## ARSENIC (As)

### SUMMARY

Long-term oral exposure may lead to anemia, peripheral neuropathy, hepatotoxicity, nephrotoxicity, cardiotoxicity and a variety of skin disorders. It is also associated with increased risk of skin cancer and possibly internal cancer as well. Inhalation exposure to dust or aerosols containing inorganic arsenic may lead to the appearance of some of the same symptoms as seen following oral exposure. The principle health concern following inhalation exposure is increased risk of lung cancer. Dermal contact with As is generally not associated with any systemic effects.

### HUMAN HEALTH

Noncarcinogenic Toxicity - Oral exposure of humans to As often produces a range of gastrointestinal symptoms, with nausea, vomiting, diarrhea, and thirst being the most common. Gastrointestinal symptoms are rarely noted with As following inhalation or dermal contact. Gastrointestinal toxicity was observed in people ingesting As in water at concentrations of 0.4 mg/L and 180 mg/L and 3 to 10 mg/day.

Infants exposed to 3.5 mg/day of As in contaminated milk for 33 days, and adults ingesting 3 mg/day in contaminated soy sauce experienced anemia and leukopenia including eosinophilia in infants. Autopsy of infants also showed liver injury. Rats exposed to arsenate at concentrations of 20 to 85mg/L in water for 6 weeks or more resulted in decreased hemoglobin production and decreased enzyme activity necessary for heme biosynthesis.

The proliferative response of peripheral blood lymphocytes was examined in 10 workers exposed to As during their employment at a semiconductor



manufacturing facility for at least three years. The level in worker's hair was 0.68 mg/kg compared to 0.05 mg/kg for a comparison group. The proliferative response of peripheral blood lymphocytes was significantly higher than the normal comparison group and the stimulation index of workers was three times the normal level. *In vitro* exposure of normal lymphocytes to 10 to 100 ng As/ml as sodium arsenite enhanced the proliferative response. At concentrations  $\geq 500$  ng/ml, all samples showed suppression of lymphocyte stimulation (NLM, 1991).

Myocardial infarction and arterial thickening were observed in children consuming water containing about 0.6 mg/L. Peripheral vascular disease leading to gangrene of the toes and feet, known as "Black foot disease", was reported with chronic As exposure in 0.9% of a population of 40,000 who consumed about 0.4 to 0.6 mg/L, whereas no cases were reported in a population of 7,500 people who consumed less than 0.02 mg/L. Prevalence rate tended to increase with age and with the As content of the water. Severity of the disease was directly related to duration of exposure. Black foot disease was often fatal, with an overall mortality rate close to 50%.

As-induced peripheral neuropathy has been noted in patients exposed to doses of 3 to 10 mg/day for periods ranging from several weeks up to several years. EMG (electromyograph) abnormalities were observed in about half of the patients who were exposed to elevated levels (above 100 ug/L) of inorganic As in drinking water. A significant decrease in the ulnar sensory nerve function was noted in both males and females in western communities where drinking water levels of As ranged from 50 to 387 mg/L.

Hyperkeratoses and hyperpigmentation are two skin disorders seen in chronic oral exposure to As. These effects have been seen in a number of epidemiological studies. They are apparent in populations consuming drinking water containing As at levels of 0.4 mg/L or higher. Similar findings were reported in

retrospective studies of patients who had been treated with Fowler's solution and in workers exposed to airborne As in a pharmaceutical plant or a sheep-dip factory. Liver damage was also demonstrated in patients using Fowler's solution.

Chronic inhalation exposure results in irritation of the mucous membranes of the eyes and nasopharynx. A hoarse voice and a perforated nasal septum may occur following prolonged exposures. However, no such effects were noted in workers exposed to 0.2 mg/m<sup>3</sup> in air.

There is evidence of As acting as a contact allergen, causing an increased response in dermal patch tests of workers who were chronically exposed to As dust in a copper smelter. However, neither sodium arsenite nor sodium arsenate induced contact allergy in guinea pigs.

Although reproductive toxicity has not been thoroughly investigated, mice exposed to 5 mg arsenite/L (about 0.7mg/kg/day) in drinking water showed no effects on survival after three generations, and the only effects were an increase in the ratio of males to females in the F<sub>3</sub> generation and a small decrease in the average litter size.

**Carcinogenicity** - There is clear evidence that chronic oral exposure to elevated levels of As increases the risk of skin cancer. The most common cancerous lesions are squamous cell carcinomas. In addition, multiple basal cell carcinomas may occur.

The largest study focussed on 40,000 people in Taiwan where As levels in deep wells used for drinking water ranged from 0.001 to 1.82 mg/L, with average levels of around 0.4 to 6 mg/L. The skin cancer rate was found to be 10.6/1000. Typical As blood levels in residents of this area were around 15 ug/L. There was

a strong relationship between the occurrence of skin cancer and other signs of As intoxication, and skin cancer incidence was correlated with As levels in the water. No cases of skin cancer or other signs of As poisoning were reported in a control population of 7500 people consuming water with less than 17 ug/L of As.

Although the precise dose-response relationship may be questioned due to the fact that there may have been significant exposure to As from other sources and the dietary and socioeconomic characteristics of the exposed populations are quite different from those of average U.S. citizens, they do not alter the conclusion that chronic As ingestion is associated with increased risk of skin cancer.

A 3.6-fold elevation in the incidence of ulcerative skin lesions was reported in the residents of a Mexican town where drinking water contained 0.4 mg/L of As, compared to a similar town where water content was 0.005mg/L. Similarly, elevated levels of skin cancer have been reported in studies of humans who used Fowler's solution as a medicine. No increased frequency of skin cancer was detected in small populations consuming water containing As at levels of around 0.1 to 0.2 mg/L.

Some studies suggest that the incidence of some types of internal malignancies may also be increased by chronic oral exposure to As, but the data are not adequate to draw a firm conclusion. Several types of internal tumors have been observed in association with oral As exposure. A number of studies have noted that hepatic angiosarcoma occurs at increased frequencies in persons exposed to Fowler's solution. Angiosarcoma was also seen in vintners exposed to arsenical pesticides.

Corrolation between mortality from several types of internal cancer and exposure to As through ingestion of water containing 0.35 to 1.14 mg/L of As showed that the standardized mortality ratios (SMR) for bladder, kidney, lung, and liver were 1100/2009, 772/1119, 320/413, and 170/229 in males/females respectively. A

positive dose-response relationship with As exposure was noted for bladder, lung, and liver cancer, but not for kidney cancer.

A follow-up case-control study found that the odds ratio for bladder, lung, and liver cancers for those who had used well water containing As for 40 years or more were 3.90, 3.30, and 2.67 respectively, compared to people who had never used As-contaminated well water.

Limited observations suggest an As association with other types of cancer such as mammary gland, lymphatic tissue, leukemia, and renal adenocarcinoma.

An exposure-dependent increase in frequency of respiratory cancer was reported in workers in a large copper smelter in Montana. SMR values were 239, 478, and 667 in low, medium, and high exposure groups respectively. The average levels of air concentration for these three groups were 0.4, 7, and 62 mg/m<sup>3</sup>. There was additional evidence of a level- and duration-dependent increase in lung cancer risk. Similarly, workers at a copper smelter in Tacoma, Washington exhibited death rates from lung cancer that were higher than expected. Airborne concentrations of As ranged from 3 to 295 ug/m<sup>3</sup> (averaging around 53 ug/m<sup>3</sup>). It has also been suggested in epidemiological studies that there is an increased risk of lung cancer for nonoccupationally exposed individuals living within several kilometers of As-emitting industries.

**Genotoxicity** - As (III) and As (V) compounds showed negative results for gene mutations in a number of systems. Arsenite and arsenate were also reported to be inactive in gene-specific mutation assays in yeast and cultured mammalian cells. On the other hand, both arsenite and arsenate have been found to result in chromosome aberrations and sister chromatid exchanges (SCE) in cultured animal and human cells tested *in vitro*. Arsenite was about tenfold more potent than arsenate and dose-related increases in SCE were also reported.

Several studies have described a positive association between As exposure and chromosome aberration or SCEs in humans. Reports show that there was a threefold increase in SCEs in lymphocytes from patients who had taken Fowler's solution for periods of 4 to 27 years. Increased frequencies of chromosomal aberrations had been reported in patients exposed to total doses of 300 to 1200 mg of As taken in Fowler's solution. There was no increase in chromosomal aberrations or SCEs observed in a recent study of residents in Fallon, Nevada, where drinking water contained about 0.1 mg/L of As. Examination of bone marrow cells and spermatogonia from mice treated with 4 to 12 mg/kg of arsenate found no significant increase in chromosomal aberrations in either cell type.

## ECOLOGICAL

Aquatic Toxicity - No information was found on the toxicity of As to aquatic organisms.

Terrestrial Toxicity - The animal toxicity information presented in the human health section above is generally applicable to terrestrial mammals.

Avian Toxicity - No information was found on the toxicity of As to birds.

## REFERENCES

ATSDR (Agency for Toxic Substances and Disease Registry), 1989. Toxicological Profile for Arsenic. Final Report dated March, 1989.

NLM (National Library of Medicine), 1991. Hazardous Substances Databank, on line.

## BARIUM (Ba)

### SUMMARY

Very little is known about the human health effects of Ba. Limited human and animal data suggest that the cardiovascular system may be one of the primary targets of Ba toxicity. Evidence from case reports suggests that Ba may also cause some neurological effects. No adequate human or animal studies were available to evaluate the carcinogenic potential of Ba. Similarly, available data are inadequate to evaluate the genotoxicity of Ba.

### HUMAN HEALTH

Noncarcinogenic Toxicity - There is some evidence that gastrointestinal (GI) absorption of Ba in humans is less than 5% of the administered dose. This suggests that although individuals may become exposed orally to high levels of Ba, adverse health effects may not necessarily develop because of the limited GI absorption. Another important factor affecting toxicity is the solubility of the Ba compound. For example, barium sulfate and barium carbonate are inefficient sources of Ba<sup>2+</sup> ions because of limited solubility, and are therefore generally nontoxic to humans by way of the GI tract.

Case reports of humans exposed orally indicate that Ba induces a number of cardiovascular effects. These include increased blood pressure, changes in heart rhythm, and myocardial damage. One epidemiological study and one experimental study evaluating cardiovascular effects in humans indicated no evidence that subchronic or chronic exposure to Ba in drinking water was associated with cardiovascular effects. However, these studies had major limitations that made them unreliable.

Results from acute, subchronic, and chronic oral toxicity studies with experimental

animals indicate that Ba is associated with adverse cardiovascular effects. Rats administered barium chloride in drinking water for 1 (0, 0.071, 0.71, or 7.1 mgBa/kg/day), 4 (0, 0.0643, 0.643 or 6.43 mgBa/kg/day), or 16 months (0, 0.054, 0.54 or 5.4 mgBa/kg/day) showed significant increases in blood pressure at 7.1, 6.43, 0.54 and 5.4 mg/kg/day. No effects on blood pressure were noted with the other doses. In addition, rats receiving 5.4 mg/kg/day for 16 months also had abnormalities in cardiac rhythm.

Results from 90 day and 2 year studies with barium chloride and barium acetate administered in drinking water to rats were not associated with any changes in the heart weight or gross or microscopic lesions of the heart. The reported no effect levels were 35 and 0.95 mg/kg/day, respectively.

No studies were located regarding cardiovascular effects in humans after inhalation exposure to Ba. Guinea pigs exposed to 0.06 mg Ba/m<sup>3</sup>/min as aerosolized barium chloride solution for an unspecified period of time developed increased blood pressure and cardiac irregularities.

There were no changes in pulmonary weight in rats receiving less than 35 mg Ba/kg/day as barium chloride in drinking water in a subchronic study. No gross or histopathological lesions of the lung were observed in rats exposed to 0.7 mg Ba/kg/day as barium acetate in drinking water for their lifetime.

Blood effects, pulmonary lesions, impaired detoxifying functions of the liver, decreased body weight and decreased urinary calcium and testicular changes were observed in rats exposed subchronically by inhalation to 3.6 mg Ba/m<sup>3</sup> as Ba carbonate dust.

Subchronic inhalation exposure to 2.2 or 9.4 mg Ba/m<sup>3</sup> as Ba carbonate dust caused a shortened estrous cycle and alterations in the morphological structure of the

ovaries in female rats.

No clinically significant changes were noted in any of the blood chemistry parameters monitored in humans exposed orally to 0.2 mg Ba/kg/day as barium chloride supplied in the drinking water in a subchronic study. But this study was not reliable for hematological effects or blood chemistry. Chronic oral exposure of rats to barium acetate and barium chloride in drinking water has not been associated with any significant changes in a variety of hematological parameters. Elemental Ba in the drinking water ranged from 0.7 mg to 35 mg/kg/day.

Chronic oral exposure of rats to nominal concentrations of Ba in drinking water (35 and 14 mg/kg/day) was not associated with histopathological lesions of the lymph node, thymus, uterus, ovaries or testes. However, this study was of limited value, because the Ba compound tested was not specified and the chow used to feed the rats was contaminated with 12 ppm Ba.

**Carcinogenicity** - No adequate studies were available that evaluated the carcinogenic potential of Ba in humans. Results from two chronic toxicity studies with rats and mice exposed to barium acetate in drinking water for lifetime were negative for carcinogenicity. However, these studies were inadequate.

**Genotoxicity** - In vivo genotoxicity studies with Ba were not available. In vitro studies were limited, and cannot support any conclusion on the genotoxicity of Ba. These studies involved tests of the fidelity of DNA synthesis using an avian myeloblastosis virus (AMV) DNA polymerase system. The results showed that neither barium acetate nor barium chloride affect the accuracy of DNA replication. Similarly, barium chloride did not inhibit growth in wild and recombination deficient strains of Bacillus subtilis. These results indicate that barium chloride is not mutagenic.



## ECOLOGICAL

Aquatic Toxicity - No information was available on the toxicity of Ba to aquatic organisms.

Terrestrial Toxicity - No information was available. The animal toxicity information presented in the human health section is generally applicable to terrestrial mammals.

Avian Toxicity - No information was available on the toxicity of Ba to birds.

## REFERENCES

ATSDR (Agency for Toxic Substances and Disease Registry), 1990. Toxicological Profile for Barium. Draft dated October, 1990.

NLM (National Library of Medicine), 1991. Hazardous Substances Databank, on line.

## BENZENE

### SUMMARY

Human exposure to benzene can induce leukemia. Chronic exposure to benzene causes blood disorders, both carcinogenic and noncarcinogenic, with the target being the cells of the bone marrow. Inhibition of life cycle changes have been demonstrated at low ppm levels in crustaceans.

### HUMAN HEALTH

Noncarcinogenic Toxicity - Hematological toxicity has been reported in several studies of humans chronically exposed to benzene in air in the workplace. A common clinical finding is a decrease in various cellular elements of the circulating blood. Although no human data are available to evaluate chronic oral exposure, chronic animal studies also indicate hematological effects following either inhalation or oral exposure. Oral exposure of rats and mice to benzene (10 mg/kg/day) for 26 weeks produced abnormally low levels of leukocytes (ORNL, 1989).

Carcinogenicity - Epidemiologic studies have established the relationship between human exposure to benzene and the development of acute myeloid leukemia. Benzene is considered a known human carcinogen (EPA weight-of-evidence classification - Group A) based on a sufficient level of human and animal evidence (EPA, 1991). Occupational inhalation exposure to benzene at 2 ppm for 18 months has been correlated with an increased incidence of leukemia.

Genotoxicity - Several studies indicate a variety of genotoxic effects as a result of exposure to benzene. Studies of occupationally exposed individuals indicate an association between benzene exposure and chromosome aberrations in human lymphocytes. Animal studies have demonstrated chromosome and chromatid

aberrations, sister chromatid exchanges, and micronuclei formation as a result of exposure to benzene.

## ECOLOGICAL

Aquatic Toxicity - The ambient water quality criterion for protection of saltwater species from chronic exposure to benzene is 700 ug/L. Benzene exposure at 100 ug/L or 5000 ug/L increased the time required for molting in juvenile blue crabs (NLM, 1991). Young Coho salmon showed no significant increase in mortality after 4 days exposure at 10,000 ug/L (NLM, 1991).

Terrestrial Toxicity - No information was available. The animal toxicity information presented in the human health section above is generally applicable to terrestrial mammals.

Avian Toxicity - No information was available.

## REFERENCES

ATSDR (Agency for Toxic Substances and Disease Registry), 1991. Toxicological Profile for Benzene. Draft dated October, 1991.

EPA, 1991. The Integrated Risk Information System (IRIS), on line. Environmental Criteria and Assessment Office, Cincinnati, OH.

NLM (National Library of Medicine), 1991. Hazardous Substances Databank, on line.

ORNL (Oak Ridge National Laboratory), 1989. The Installation Restoration Program Toxicology Guide, Prepared for Harry G. Armstrong Aerospace Medical Research Laboratory, Wright-Patterson Air Force Base, OH, Dated July 1989.

## CHLOROBENZENE (CB)

### SUMMARY

CB has been shown to affect the central nervous system, liver, and kidney following inhalation and oral exposures. There is no experimental evidence suggesting that CB is a carcinogen or a genotoxin. Reproductive effects have not been established. In experimental animals, moderate doses are required to produce effects on the liver and kidneys.

### HUMAN HEALTH

Noncarcinogenic Toxicity - Case reports demonstrated that CB caused disturbances of the central nervous system in humans who inhaled vapors of CB in the workplace for up to 2 years. Effects included headaches, dizziness, and sleepiness. Unconsciousness, lack of response to skin stimuli, and muscle spasms were noted following accidental ingestion. Acute studies in animals confirm that CB is potentially neurotoxic. These effects appear to be the result of narcotic effects of CB on the central nervous system. Narcosis was reported at 1,200 ppm and restlessness, tremor, and muscular spasms at 2,400 to 2,900 ppm in the air.

No studies were located demonstrating that CB causes hepatic or renal toxicity in humans by any route of exposure. Acute and subchronic exposures in rats demonstrated that CB causes changes in liver weights and enzyme levels, degeneration, necrosis, and alterations in microsomal enzymes. These studies included acute exposure at 1,140 mg/kg/day by gavage for 5 days, 90-day oral exposure at  $\geq 250$  mg/kg/day, and inhalation exposure at 75 ppm, 7 hours/day, 5 days/week, for 24 weeks.

Results from a 90-day oral toxicity study indicate kidney damage. Effects included tubular degeneration and necrosis, as well as changes in organ weight which were

accompanied by histopathological changes at concentrations  $\geq 250$  mg/kg/day. In a two-generation inhalation study, CB did not adversely affect various reproductive parameters in rats.

**Carcinogenicity** - There are no reports on the carcinogenic potential of CB in humans. Chronic toxicity with rats and mice orally dosed with CB at doses of 60 and 120 mg/kg/day did not produce increased incidences of tumors. However, male rats showed a significant increase in neoplastic nodules of the liver.

**Genotoxicity** - No studies were located regarding the genotoxic effects of CB in humans. No in vivo animal assays were found, except the micronucleus test in mice which was moderately positive. In vitro tests employing bacterial and yeast assay systems with and without metabolic activation were negative. CB induced transformation in adult rat liver epithelial cells, but was not genotoxic to hepatocytes.

## ECOLOGICAL

**Aquatic Toxicity** - No information was available on the toxicity of CB to aquatic organisms.

**Terrestrial Toxicity** - No information was available. The animal toxicity information presented in the human health section is generally applicable to terrestrial mammals.

**Avian Toxicity** - No information was available on the toxicity of CB to birds.

## REFERENCES

ATSDR (Agency for Toxic Substances and Disease Registry), 1990. Toxicological Profile for Chlorobenzene. Draft dated February 16, 1990.

## CHLOROFORM

### SUMMARY

Chloroform induces effects on the central nervous system, liver, and kidneys of human or animal species following acute or chronic oral and inhalation exposure. Chronic oral toxicity studies indicate increased incidences of liver and kidney tumors in mice and rats; however, the data for mice are conflicting. There is some evidence that chloroform is a weak mutagen. Aquatic organisms are sensitive to chloroform's toxic effects.

### HUMAN HEALTH

Noncarcinogenic Effects - The liver is a primary target organ of chloroform toxicity in humans and animals following acute and chronic inhalation or oral exposures. Impaired liver function as manifested by increased sulfobromophthalein retention has been reported in some patients exposed to chloroform via anesthesia. Case reports of intentional and accidental ingestion of high doses ( $\geq 2.5$  g/kg) indicate severe clinical and biochemical effects of the liver. Occupational exposures of 14 to 400 ppm chloroform resulted in jaundice in one study and exposures of 2 to 205 ppm resulted in adverse effects on the liver as indicated by hepatomegaly, enhanced serum glutamic-pyruvic transaminase (SGPT), and serum glutamic-oxaloacetic transaminase (SGOT) activities. Hypergammaglobulinemia was observed in another study. In contrast, no clinical evidence of liver toxicity was found among chloroform workers exposed to  $\leq 237$  ppm. Liver damage was induced by chronic use of a cough medicine containing chloroform, but not in individuals chronically exposed to chloroform in mouthwash.

Case studies of individuals who intentionally or accidentally ingested high doses of chloroform report biochemical changes indicative of kidney damage, as well as fatty degeneration at autopsy. Albuminuria and casts were also reported in a case of

chronic use of a cough medicine containing chloroform; however, no renal effects were observed in individuals chronically exposed to chloroform in a mouthwash.

Neurological effects in humans and animals after acute or chronic exposure are well documented. Central nervous system toxicity following acute inhalation or oral exposure appear to be similar. Chronic inhalation exposure to chloroform resulted in exhaustion, lack of concentration, depression, and irritability in occupationally exposed people. In a case study, chloroform inhalation for 12 years resulted in psychotic episodes, hallucinations, and convulsions.

In animals, studies indicate increased kidney weights and cloudy swelling in rats and dogs following subchronic inhalation of chloroform at concentration  $\geq 25$  ppm. Several subchronic oral toxicity studies indicate increased relative kidney weights, tubular necrosis, and chronic inflammation. It has been demonstrated that kidney damage is related to the ability of the kidney to metabolize chloroform to phosgene. No definite renal effects were observed in rats or mice dosed orally to chloroform at concentrations of  $\leq 200$  and  $< 477$  mg/kg-day, respectively. However, fat deposition in renal glomeruli was reported in dogs dosed orally to 30 mg/kg-day for 7.5 years.

Adverse effects in the liver have been reported in chronic oral toxicity studies with rats, mice, and dogs. The effects included nodular hyperplasia, fibrosis, and increased SGPT activities at concentrations  $\geq 15$  mg/kg-day.

**Carcinogenicity** - Epidemiology studies suggest an association between chronic exposure to chloroform from chlorinated drinking water sources and increased incidences of gastrointestinal cancer, urinary tract cancer, brain cancer, and Hodgkin's lymphoma. However, chloroform is one of many organic contaminants found in chlorinated drinking water, many of which are considered to have carcinogenic potential. No studies were available regarding cancer in humans or animals after inhalation exposure to chloroform.

The carcinogenic potential of chloroform has been tested in animal studies. A dose-related increase in the incidence of liver tumors was observed in mice exposed to chloroform for

intermediate durations. Chronic exposure induced an increased incidence of renal adenoma and carcinoma in rats exposed to chloroform in drinking water and in rats treated by gavage with chloroform in oil. Hepatic neoplastic nodules were observed in female rats, and lymphosarcoma was observed in male rats exposed to chloroform in drinking water. In addition, hepatocellular carcinoma was observed in mice given chloroform in oil by gavage and kidney tumors were observed in ICI mice exposed by gavage to chloroform in toothpaste.

The data concerning mouse liver tumors are conflicting. In contrast to the increased incidence of liver tumors observed in mice exposed by gavage to chloroform in oil, no increased incidence of liver tumors was observed in female mice exposed to chloroform in drinking water. This result is consistent with the absence of liver tumor effects in four other strains of mice exposed by gavage to chloroform in toothpaste.

EPA has classified chloroform as a probable human carcinogen (i.e., Group B2) which denotes the presence of sufficient evidence of carcinogenicity in animals and inadequate evidence in humans (EPA, 1992).

**Genotoxicity** - In general, most of the assays for chloroform genotoxicity are negative. Therefore, it seems that chloroform is a weak mutagen and that its potential to interact with DNA is low. In *in vitro* experiments, chloroform did not cause reverse mutations in *Salmonella typhimurium* or in *Escherichia coli* with or without metabolic activation. Inconclusive results were obtained in *Saccharomyces cerevisiae* and *Schistosaccharomyces pombe*; however, chloroform induced aneuploidy in *Aspergillus nidulans*. Chloroform caused forward mutations in L5178Y mouse lymphoma cells after metabolic activation, but did not cause mutations at the 8-azaguanine locus in Chinese hamster lung fibroblasts or sister chromatid exchange in Chinese hamster ovary cells. In human lymphocytes, chloroform did not induce unscheduled DNA synthesis and did not increase the frequency of sister chromatid exchange and chromosome aberrations. In contrast, increases in sister chromatid exchange were reported after metabolic activation in another study. Unspecified mutagenic effects occurred in grasshoppers exposed to 16 pph chloroform fumes for 16 hours (NLM, 1992b).



## ECOLOGICAL

Aquatic Toxicity - Goldfish were exposed to chloroform at various concentrations for four days. At 160 ppm, the goldfish had darker pigmentation, retarded reproduction and growth rates, and a loss of equilibrium (NLM, 1992a). At 40 ppm for six months, a five-fold increase in leukocytes was observed in the goldfish (NLM, 1992a). Rainbow trout exposed to 20 mg/L for 24 hours had an increased respiration rate (AQUIRE, 1992).

The following teratogenic EC50 values were calculated for various species of amphibians at hatching and at four days after hatching, respectively: spring peeper, 0.76 and 0.27 mg/L; leopard frog, 4.56 and 4.16 mg/L; pickeral frog, 28.17 and 20.55 mg/L; and Fowler's toad, >40 and 35.14 mg/L (AQUIRE, 1992).

The following values are the lowest reported LC50 values found: frog, 16.95 mg/L; salamander, 21.58 mg/L; clawed toad, >0.068 mg/L; rainbow trout, 1.24 mg/L for 96 hours; largemouth bass, 45.4 mg/L for 96 hours; channel catfish, 75 mg/L for 96 hours; bluegill, 13.3 mg/L for 96 hours; guppy, 300 mg/L for 96 hours; zebrafish, 100 mg/L for 48 hours; common carp, 9.7 mg/L for 5 days; *Daphnia magna*, 7.8 mg/L for 48 hours; *Limanda* species (dab), 28 mg/L for 96 hours; and pink shrimp, 81.5 mg/L for 96 hours (NLM, 1992a; AQUIRE, 1992). Behavioral and color changes were noted in some fish species after exposure to chloroform (AQUIRE, 1992).

Terrestrial Toxicity - No data were found on the toxicity of Chloroform to terrestrial wildlife; however, the information covered in the human health section is generally applicable to terrestrial mammals.

Avian Toxicity - No avian toxicity data were available for chloroform.

## REFERENCES

AQUIRE (Aquatic Information Retrieval), 1992. On line databank.

ATSDR (Agency for Toxic Substances and Disease Registry), 1991. Toxicological Profile for Chloroform. Draft Report dated October 1991.

EPA, 1992. The Integrated Risk Information System (IRIS), On line. Environmental Criteria and Assessment Office, Cincinnati, OH.

NLM, 1992a. Hazardous Substances Databank (HSDB) On line databank.

NLM, 1992b. Registry of Toxic Effects of Chemical Substances (RTECS). On line databank.

## CHROMIUM (Cr)

### SUMMARY

Adverse Human health effects have been associated primarily with occupational exposure to Cr (VI) salts from Cr plating manufacturing. These are manifested by nasal irritation, pulmonary effects, contact sensitization and kidney effects. Pulmonary tumors are primarily associated with selected Cr (VI) compounds inhaled over a chronic period. In vivo and in vitro mutagenicity studies have been positive for Cr (VI). However, the evidence for chromium (III) seems to be negative with respect to in vivo tests and limited positive evidence for in vitro tests.

### HUMAN HEALTH

Noncarcinogenic Toxicity - Chronic human occupational exposure clearly indicates that Cr (VI) is a respiratory tract irritant. The apparent "no-observed-adverse-effect level" is around 0.2 to 1.2  $\mu\text{g}/\text{m}^3$ , with nasal irritation and slight, transient effects on pulmonary function tests at levels greater than 2  $\mu\text{g}/\text{m}^3$ . At concentrations of 20 to 46  $\mu\text{g}/\text{m}^3$ , ulceration and perforation have been observed. Mice exposed to higher levels of calcium chromate dust at 13  $\mu\text{g}/\text{m}^3$  at a regular dosing interval from 6 months to lifetime experienced marked alteration of the bronchial epithelium, bronchiolization of the alveoli and alveolar proteinosis.

Evidence of contact sensitization reactions have been seen both through the inhalation and dermal routes of exposure. A steel worker developed an allergy in which an inhalation challenge with sodium chromate at 1.2  $\mu\text{g}/\text{m}^3$  for 5 minutes did not result in a reaction, while a challenge at 29  $\mu\text{g}/\text{m}^3$  for 25 minutes resulted in a reaction (urticaria, vasodilation, bronchospasm accompanied by tripling of plasma histamine levels). Chromic acid, dichromate compounds, and other Cr (VI) compounds are not only powerful skin irritants but can also be corrosive. When these

compounds are deposited on broken skin, a penetrating round ulcer may develop. A patch test study in Scotland found that out of 1,312 patients examined, 11.58 percent were sensitized to potassium dichromate.

Human kidney damage was indicated by high levels of beta-2-macroglobulin found in a occupational study of workers exposed during an average workday to  $6 \mu\text{g}/\text{m}^3$  of Cr for an average duration of 5.3 years. Statistically significant levels of beta-2-macroglobulin present in the urine indicate renal tubular damage.

**Carcinogenicity** - Carcinogenicity is most often associated with the exposure to Cr (VI) compounds through the inhalation route. Significant evidence is not available to characterize Cr as a carcinogen through the oral and dermal routes. In a study of chromate production workers exposed for greater than one year, the percentage of deaths due to lung cancer among chromate workers (18.2 %) was significantly higher than deaths due to lung cancer among control males residing in the same county where the plant was located. In a population of 136 mice exposed with regular dose intervals throughout their lifetime to an atmosphere containing calcium chromate, 14 mice developed lung tumors at  $13 \text{ mg}/\text{m}^3$  compared with 5 mice in the control. The tumors were pathologically described as being alveologenic adenomas and adenocarcinomas.

**Genotoxicity** - Results of mutagenicity studies have shown positive results for Cr (VI) compounds and negative results for Cr (III) compounds in standard tests. Available human in vivo information indicate evidence of genotoxicity. These studies indicate a significant increase of chromosomal aberrations in peripheral blood lymphocytes of workers exposed to soluble Cr (VI) compounds. In those workers who developed chromosomal aberrations, an age-associated increase in sister chromatid exchange was apparent. In vitro tests of Cr (VI) for gene mutation, chromosome aberrations, and cell transformation have been consistently positive for all cell types. The only apparent genotoxic evidence for Cr (III) have been in tests which examine cells with

high phagocytic activity. Cr (III) has been shown to interact with isolated and purified DNA.

## ECOLOGICAL

Aquatic Toxicity - For freshwater species the only toxicity information available was for Daphnia. Effective concentrations for immobilization of 50% of the test organisms were the only measured toxic endpoints. The following are the immobilization EC50's at a 72 hour exposure interval (AQUIRE, 1991): D. ambigua - 1700 and 7700  $\mu\text{g/L}$ , D. galeata - 65600  $\mu\text{g/L}$ , D. magna - 42100  $\mu\text{g/L}$ , D. pulicaria - 110800  $\mu\text{g/L}$ .

Terrestrial Toxicity - No information was available. The animal toxicity information presented in the human health section above is generally applicable to terrestrial mammals.

Avian Toxicity - No information was available for the toxicity of chromium in birds.

## REFERENCES

ATSDR (Agency for Toxic Substances and Disease Registry), 1989. Toxicological Profile for Chromium. Draft dated July 1989.

AQUIRE (Aquatic Information Retrieval), 1991, on line.

## COBALT (Co)

### SUMMARY

Exposure to Co through inhalation can cause lung disease, asthma, pneumonia and wheezing in humans. Ingestion of Co through drinking water can cause thyroid, heart and lung problems. In laboratory rats, a one-day ingestion experiment at various levels of exposure caused kidney, liver, heart and red blood cell damage. Co is not listed as a carcinogen in humans or animals by any route of exposure

### HUMAN HEALTH

Noncarcinogenic Toxicity - People who inhaled 0.038 milligrams of Co per cubic meter of air ( $\text{mg}/\text{m}^3$ ) for 6 hours had trouble breathing. Rats that inhaled  $9 \text{ mg}/\text{m}^3$  for a period of one week died. In another rat study, concentrations of  $26 \text{ mg}/\text{m}^3$  inhaled for 30 minutes caused lung damage.

Ingestion of Co in drinking water caused thyroid problems at 19 ppm in humans after 14 to 25 days of exposure. At 46 ppm, vision problems occurred in humans during 6 weeks of exposure.

There is no information regarding dermal Co exposure to humans. However, guinea pigs developed sores after 18 days of dermal exposure to Co.

Carcinogenicity - No conclusive evidence was found that Co is a carcinogen in its non-radioactive form through any route of exposure. However, laboratory animals developed tumors at the site of Co applications.

Genotoxicity - No studies are available regarding genotoxic effects in humans or animals following inhalation, ingestion or dermal exposure.

## ECOLOGICAL

Aquatic Toxicity - In fresh water, 1,000 ppm Co concentrations killed goldfish in 30 to 32 hours and 10 ppm concentrations killed goldfish in 168 hours. No studies were found regarding Co effects in salt water.

Terrestrial Toxicity - No information is available. However, the animal toxicity information presented in the human health section above is generally applicable to terrestrial mammals.

Avian Toxicity - No data on the toxicity of Co to birds is available.

## REFERENCES

ATSDR (Agency for Toxic substances and Disease Registry), 1991. Toxicological Profile for Cobalt. Draft Report dated 15 February 1991.

## CIS- AND TRANS-1,2-DICHLOROETHENE (DCE)

### SUMMARY

No chronic human health effects data were available. Exposure of experimental animals to DCE results in liver, lung, kidney and heart damage. EPA does not consider either DCE isomer to be carcinogenic to humans at this time.

### HUMAN HEALTH

Noncarcinogenic Toxicity - There is no information available concerning the relative toxicities of the cis- and trans-isomers. Most of the available toxicity information is for trans-DCE. The lowest observed adverse effect level (LOAEL) for trans-DCE based on a 16 week inhalation study in rats was 200 ppm; both respiratory and liver function were reported.

Oral toxicity data exist only for trans-DCE. Biochemical changes in the liver have been reported in mice and cats exposed to cis and trans-DCE, but a relationship between these changes and impaired liver function has not been established. Reported exposure of rats to 23-452 mg/kg/day of trans-DCE in drinking water for 90 days resulted in decreased hepatic aniline hydroxylase activity and glutathione levels. In mice receiving dose levels of 17-452 mg/kg/day of trans DCE in drinking water for 90 days, increased activity of serum alkaline phosphatase and decreased activities of serum glutamic-pyruvic and glutamic-oxaloacetic transaminases were reported. Similarly, no effects on body weight were reported in rats receiving dose levels of 353-3,114 mg/kg/day in drinking water for 90 days.

Ninety day exposure studies reported NOAEL's (no observed adverse effect level) in mice ranging from 452 to 3114 mg/kg/day based on liver, kidney, blood and immune system function. Dogs and cats exposed to cis-DCE concentrations of 1,000



and 1,900 ppm for an unspecified duration exhibited loss of appetite, decreased body weight, and pathological changes in the liver, kidney and lungs (ATSDR, 1989).

**Carcinogenicity** - No information assessing carcinogenicity in humans or animals by either isomer is available. EPA has therefore classified both isomers as Group D compounds.

**Genotoxicity** - No data are available on the genotoxic effects of either isomer in humans. In-vitro studies using Escherichia coli K12 and Salmonella typhimurium were negative for both cis and trans-DCE. cis-DCE was shown to be mutagenic in vivo in the mouse bone marrow assay. Host mediated (mice) studies with Salmonella tester strains also showed the cis isomer to be mutagenic.

## ECOLOGICAL

**Aquatic Toxicity** - Only one acute lethality test was available for review. The 96-hour, LC50 (lethal concentration needed to kill 50 percent of a test population) value for bluegill (Lepomis macrochirus) was 135 mg/L in a static test (NLM, 1991).

**Terrestrial Toxicity** - The animal toxicity information presented in the human health section is generally applicable to terrestrial mammals.

**Avian Toxicity** - No information was available on the toxicity of DCE to birds.

## REFERENCES

ATSDR (Agency for Toxic Substances and Disease Registry), 1990. Toxicity Profile for cis-1,2-Dichloroethene, trans-1,2-Dichloroethene, 1,2-Dichloroethene. Draft dated October, 1989.

NLM (National Library of Medicine), 1991. Hazardous Substance Databank, on line.

## 1,1-DICHLOROETHYLENE (1,1-DCE)

### SUMMARY

Limited evidence suggests that repeated exposure to 1,1-DCE is associated with liver damage in humans. The major target organs of 1,1-DCE toxicity in animals appear to be the liver, kidneys and lungs. Short-term exposure in both humans and animals has been associated with effects on the central nervous system. Available data were inadequate to evaluate the relationship between the occurrence of cancer and occupational exposure to 1,1-DCE. Of various carcinogenicity studies conducted with a number of animal species, only one chronic inhalation study provides clear evidence of a positive carcinogenic effect. 1,1-DCE is mutagenic, and a metabolite is known to alkylate and bind covalently to DNA.

### HUMAN HEALTH

**Noncarcinogenic Effects** - A high incidence of hepatotoxicity was reported in a preliminary clinical study of workers exposed to 1,1-DCE for up to 6 years in a 1,1-DCE polymerization plant. Marked liver dysfunction was found in 27 of 46 workers. No other studies were found. In animals, hepatotoxicity is evident by both biochemical and histopathological changes. These effects appear to follow a dose-response relationship that may also be influenced by the duration of exposure. Rats exposed by inhalation to  $\geq 24$  ppm 1,1-DCE, 6 hours/day, 5 days/week for 18 months exhibited fatty changes in the liver. Chronic oral toxicity studies with rats indicate few treatment-related changes in the liver at low doses ranging from 9-20 mg/kg/day.

Renal effects have been reported in animal studies primarily following acute exposures. Severe nephrotoxicity occurred in male mice exposed to 25 ppm 1,1-DCE, 4 hours/day, 4 to 5 days/week for one year. However, no treatment-related effects were noted following chronic inhalation (24 or 72 ppm, 5 hours/day, 5 days/week, for 18 months) or oral (25 to 200 mg/kg/day) exposures.

Subchronic inhalation exposure to 1,1-DCE is also associated with adverse respiratory effects. Inflammation of the trachea of rats exposed to 72 ppm for 6 months has been reported. Other pulmonary effects seen in rats, guinea pigs, and dogs exposed to 48 to 189 mg/m<sup>3</sup> for 90 days include discoloration and morphologic changes in the lungs.

**Carcinogenicity** - Available data were inadequate to evaluate the carcinogenic potential of 1,1-DCE to humans. The carcinogenicity of 1,1-DCE following inhalation, oral, or dermal exposure has been evaluated in several animal species. However, only one inhalation study with mice provided clear evidence of a positive carcinogenic effect. In this study increases in renal adenocarcinomas were noted in male mice exposed to 25 ppm 1,1-DCE, 4 hours/day, 4-5 days/week for 1 year and then observed for one year. Results from a dermal initiation-promotion study with mice indicated that 1,1-DCE is an active tumor-initiating agent. EPA has classified 1,1-DCE as a possible human carcinogen (i.e., Group C) which denotes inadequate evidence in humans and limited evidence in animals (EPA, 1992).

**Genotoxicity** - Available studies suggest that 1,1-DCE is genotoxic in a number of test systems. The results of in vitro and in-vivo studies indicate that 1,1-DCE is mutagenic in bacteria and yeast in the presence of a mammalian metabolic system. It also induces gene conversion in yeast, chromosome aberrations and sister chromatid exchanges in cultured mammalian cells in vitro and DNA damage in mice in vivo. These results indicate that DCE is mutagenic.

## **ECOLOGICAL**

**Aquatic Toxicity** - No information was found on the toxicology of 1,1-DCE to aquatic organisms.

**Terrestrial Toxicity** - No information was found on the toxicity of 1,1-DCE to wildlife; however, the information provided in the human health toxicity section above is generally applicable to terrestrial mammals.

Avian Toxicity - No information was found on the toxicity of 1,1-DCE to birds.

## REFERENCES

ATSDR (Agency for Toxic Substances and Disease Registry), 1988, Toxicological Profile for 1,1-Dichloroethene. Draft Report dated December, 1988.

EPA, 1992. The Integrated Risk Information System (IRIS), on line. Environmental Criteria and Assessment Office, Cincinnati, OH.

## ETHYLBENZENE (EB)

### SUMMARY

No long-term health effects have been documented for EB in humans. However, short-term exposure is associated with liver and kidney damage, and changes in nervous system and blood function in laboratory animals. EB is not toxic to aquatic organisms.

### HUMAN HEALTH

Noncarcinogenic Toxicity - Human health effects data are extremely limited for EB. Eye irritation and burning sensations were reported at 230 ppm in air. Effects became more pronounced at higher concentrations and intolerable at 1200 ppm. A 20 year study of occupationally exposed workers showed no cases of liver lesions or altered function; however, no workplace monitoring data were available.

Subchronic rat studies showed increased white blood cell counts after a 4-week exposure to 782 ppm in air. The inhalation NOEL (no observed effect level) was reported to be 382 ppm. Chronic NOEL's for rats and mice, based on inhalation, ranged from 600 to 1610 ppm in all other reviewed publications. One study provided a chronic NOEL of 77 mg/m<sup>3</sup> (18 ppm) in rats (EPA, 1991).

A six month dietary study in mice revealed swelling in liver and kidney cells after exposure to 408 mg/kg/day. Guinea pigs, monkeys, and rabbits exhibited increased kidney weights after 186 days of exposure to 400 ppm EB in their diet (NLM, 1991).

Carcinogenicity - Studies of carcinogenicity in laboratory animals via ingestion, inhalation and dermal exposure are inconclusive. Therefore EPA has assigned EB a Group D classification.

Genotoxicity - Available in vitro studies suggest that EB is not genotoxic.

## ECOLOGICAL

Aquatic Toxicity - No chronic toxicity studies on aquatic organisms were available for review. A number of static, 96-hour, LC50 studies have been performed. Results suggest that EB is not toxic to fish but is toxic to bay shrimp (AQUIRE, 1991). The 96-hour LC50 value for fathead minnow (Pimephales promelas), bluegill (Lepomis macrochirus), bay shrimp (Crangon franciscorum), striped bass (Morone saxatilis), rainbow trout (Oncorhynchus mykiss), and channel catfish (Ictalums punctatus) ranged from 4,300 to 42,330 mg/L (AQUIRE, 1991).

Terrestrial Toxicity - No information was available on the toxicity of EB to terrestrial animals. The animal toxicity information presented in the human health section is generally applicable to terrestrial mammals.

Avian Toxicity - No information was available on the toxicity of EB to birds.

## REFERENCES

AQUIRE (Aquatic Information Retrieval), 1991, on line.

ATSDR (Agency for Toxic Substances and Disease Registry), 1990. Toxicity Profile for Ethylbenzene. Draft dated February 1990.

EPA, 1991. The Integrated Risk Information System, on line. Environmental Criteria and Assessment Office, Cincinnati, OH.

NLM (National Library of Medicine), 1991. Hazardous Substances Databank, on line.

## LEAD (Pb)

### SUMMARY

Pb interferes with heme biosynthesis which results in a reduction of the hemoglobin concentration in blood. Decreased hemoglobin production, coupled with an increase in erythrocyte destruction results in anemia associated with reticulocytosis. Exposure to Pb in occupational studies is primarily through inhalation although some contribution to body burden is derived from the oral route. Conversely, the general population, including children is exposed to Pb primarily through the oral route, but with some contribution to body burden through inhalation. The evidence from occupational, clinical, and laboratory studies suggests that Pb affects the cardiovascular system in humans and animals, producing cardiac lesions and electrocardiographic abnormalities at high levels of exposure, and increases in blood pressure. Gastrointestinal symptoms occur in Pb workers whose primary exposure is by inhalation and in children whose primary exposure to Pb is oral. Pertinent data were not reported regarding the carcinogenicity of Pb in humans exposed solely by the oral route. Several studies in animals reviewed by the EPA qualitatively associate oral exposure to Pb compounds with renal tumors.

### HUMAN HEALTH

Noncarcinogenic Toxicity - Decreased hemoglobin and anemia have been observed in Pb workers and in children with prolonged exposure at higher blood Pb levels than those noted as threshold levels for inhibition or stimulation of enzyme activities involved in heme synthesis.

The EPA concluded that the threshold for a decrease in hemoglobin in occupationally exposed adults is a blood Pb level of 50 ug/dL. The EPA also concluded that adults tend to show a threshold for inhibition of pyrimidine-5'-nucleotidase at a blood Pb level of  $\geq 44$  ug/dL.

The blood Pb threshold for decreased hemoglobin levels in children is judged to be approximately 40 ug/dL.

In rats fed Pb acetate in their diets for 2 years, no effects on heme synthesis or hematological effects were observed at 10 ppm Pb. Significant inhibition of ALA-D occurred at  $\geq 50$  ppm and a significant increase in urinary ALA occurred at  $\geq 500$  ppm. A slight but significant decrease in hemoglobin concentration and hematocrit was observed at  $\geq 1000$  ppm Pb.

In dogs fed Pb acetate in their diets for 2 years, no effects on heme synthesis or hematocrit were produced at  $\leq 50$  ppm Pb. Significant inhibition of ALA-D at  $\geq 100$  ppm Pb was observed, however no effects on urinary ALA, hemoglobin, or hematocrit at any exposure level (highest level was 500 ppm) was determined.

The lowest effect levels of Pb exposure due to inhalation for neurological signs and symptoms in adults is in the range of 40 to 60 ug/dL. Neurological signs and symptoms occur at roughly the same blood Pb levels as do other overt signs and symptoms of Pb intoxication, such as gastrointestinal complaints.

Deficits in hand to eye coordination and reaction time was noted in 190 workers (who had been exposed to Pb via inhalation) for 5 to 20 years (mean blood Pb levels were 60.5 ug/dL).

The EPA concluded that cognitive deficits occur in apparently asymptomatic children with markedly elevated blood Pb levels (40 to 80 ug/dL) due to ingestion.



An increased incidence of hyperkinetic behavior and a statistically significant decrease in IQ have been shown in children with blood Pb levels of 30 to 50 ug/dL.

Monkeys fed 0.05 mg/kg/day Pb from birth through testing at 3 to 4, 6 to 7, and 9 to 10 years of age performed significantly less well when compared to controls, in learning discrimination-reversal and a delayed alternation task.

Exposure of rats to drinking water containing 10 ppm Pb for 35 days (starting at postnatal day 21 - postweaning) produced a decrease in spontaneous alternation in a radial arm maze. Estimated maximum blood Pb levels for this study were probably < 20 ug/dL.

Monkeys administered Pb acetate orally from birth at levels (0.3 or 0.9 mg/kg/day Pb) that produced blood Pb levels  $\geq$  32 ug/dL for 5 months to 1 year were consistently slower in reversal and other learning tasks. The same results were seen when the exposure was terminated at 1 year and the monkeys were tested again at 33, 49, and 55 months of age. Blood Pb levels at that time had decreased to 5 ug/dL, virtually the same as control values. No effects were seen on body weight, growth rate, hematocrit, or general health. In a supporting study, monkeys were given a soluble Pb compound orally from birth throughout the duration of the study. At low dosages of 0.05 and 0.1 mg/kg/day Pb, the monkeys performed significantly less well in learning discrimination reversals at 3 to 4 years of age, in learning a delayed alternation task at 6 to 7 years of age, and in learning discrimination reversals in the presence of irrelevant cues at 9 to 10 years of age.

Suckling rats whose dams were given 2000 ppm Pb acetate in drinking water had significant alterations in the visual evoked responses (VERs) and decreased scotopic visual acuity at postnatal day 21 which corresponded to an average blood Pb level of 65 ug/dL.

Approximately 66% of a group of adults, 46 years or older, with chronic Pb poisoning of occupational origin due to inhalation, had electrocardiographic abnormalities. This rate is four times the adjusted normal rate for that age group.

A higher incidence (20%) of ischemic electrocardiographic (ECG) changes occurred in Pb smelter workers due to inhalation as compared to an unexposed control group (6%). In addition, a slight (4 to 5 mm Hg) but significant increase in diastolic blood pressure was seen in the Pb workers as compared to the controls.

Male rats given Pb acetate (50 ppm Pb) in drinking water for 160 days had markedly increased blood pressure of 182/138 as compared with 128/98 in controls. This correlated with a mean blood Pb level of 38.4 ug/dL. Rats administered Pb acetate at 5 or 25 ppm Pb in drinking water for 5 months (blood Pb levels of 5.6 and 18.2 ug/dL), did not develop hypertension, although plasma renin activity was increased at 25 ppm.

The EPA concluded that there is evidence to suggest that chronic nephropathy is associated with blood Pb levels ranging from 40 to greater than 100 ug/dL due to inhalation.

The EPA concluded that nephropathy occurs in children only at blood Pb levels greater than 80 ug/dL, and usually exceeding 120 ug/dL due to ingestion.

Renal abnormalities were reported in 23 symptomatic Pb workers whose blood Pb levels ranged from 30 to 87 ug/dL due to inhalation.

Histopathological changes were observed in the kidneys of rats exposed to Pb acetate in drinking water through the dams during gestation and lactation and then directly until 9 months of age. No lesions were seen in the 0.5 ppm Pb treatment.

Pb appears to interfere with the conversion of vitamin D to its hormonal form, 1,25-dihydroxyvitamin D. Children exposed to Pb through ingestion with blood Pb levels of 33 to 120 ug/dL had marked reductions in serum levels of 1,25-dihydroxyvitamin D comparable to those levels observed in children with severe renal insufficiency or those found in vitamin D-dependent rickets.

Stepwise multiple regression analyses on data for children less than or equal to 7 years of age indicated that blood Pb levels (range from 4 to 35 ug/dL) were statistically significant predictor of children's height, weight, and chest circumference, after controlling for age, race, sex, and nutritional covariates. Exposure was due to ingestion.

The EPA concluded from a quick review of 65 relevant animal studies that low-level chronic Pb exposure during prenatal or early postnatal life due to Pb ingestion results in retarded growth in the absence of overt signs of Pb poisoning.

Prenatal and postnatal exposure of rats to Pb acetate at 25 ppm Pb in drinking water (indirectly through their dams and then directly) until testing at 35 to 45 days of age resulted in mean blood Pb levels of 29.3 ug/dL and marked depression of antibody responses as compared with controls.

Gastrointestinal symptoms have been noted sometimes in workers whose blood Pb levels were as low as 40 to 60 ug/dL due to inhalation.

The EPA has identified a lowest effect level of approximately 60 to 100 ug/dL for children due to ingestion of Pb.

Gestational age is reduced as prenatal Pb exposure increases, even at blood Pb levels below 15 ug/dL. Negative correlations have been found between maternal or cord blood Pb levels and gestational age. The risk of preterm delivery has been found to

increase at least by 4 as either cord blood or maternal blood Pb level at delivery increases from less than or equal to 8 to greater than 14 ug/dL.

Neurobehavioral effects of a group of Pb workers were statistically related to a mean blood Pb level of 50 ug/dL due to a mean inhalation exposure duration of 8109 hours (338 days).

Deleterious effects of prenatal Pb on neurobehavioral development were noted in children with blood Pb levels at birth ranging from 10 to 25 ug/dL.

Blood Pb levels in children ranging from 40 to 80 ug/dL seem to be associated with adverse neuropsychological effects.

Neurobehavioral toxicity from prenatal exposure to Pb in rats was associated with blood Pb levels of 35 ug/dL or greater.

Reproductive effects (on sperm or testes) may occur in men as a result of chronic exposure at blood Pb levels of 40 to 50 ug/dL due to inhalation. Studies of Pb workers with blood Pb levels greater than or equal to 66 ug/dL indicate that Pb acts directly on the testes to produce severe depression of sperm count and peritubular testicular fibrosis, and also produces defects in regulation of LH secretion at the hypothalamic-pituitary level.

Concentrations of Pb in blood greater than 52 ug/dL were associated with a high frequency of altered spermatogenesis.

Inhalation of 10 mg/m<sup>3</sup> was reported as the effect level for depression of fetal weight and hematocrit in rats.

Testicular atrophy and cellular degeneration were observed in male rats given Pb

acetate in drinking water at 1000 ppm (blood Pb level of 142 ug/dL) for 60 days. At a blood Pb level of 71.7 ug/dL, the seminiferous tubular diameter and spermatic count were reduced. No significant changes were observed at a blood Pb level of 54.0 ug/dL.

Delayed vaginal opening was observed in rats exposed to 25, 50 or 250 ppm Pb in drinking water indirectly through their dams during gestation and lactation and then directly after birth.

Carcinogenicity - The incidence of total malignant neoplasms, cancers of the digestive tract, and cancers of the respiratory tract were statistically elevated in both Pb production workers and battery plant workers due to inhalation.

Pb acetate was administered to rats in their diet for 2 years at the following concentrations: 0, 10, 50, 100, 500, 1000, and 2000 ppm Pb. Renal tumors occurred in 5% of the male rats at 500 ppm, 50% of the male rats at 1000 ppm, and 80% of the male rats and 35% of the female rats at 2000 ppm.

The EPA stated that "little can now be concluded from available epidemiological studies" regarding the carcinogenicity of Pb. The EPA concluded that animal data are sufficient to declare Pb to be clearly carcinogenic in animals, but that data are not sufficient for quantitative risk assessment.

Genotoxicity - The EPA noted that Pb was consistently negative in tests for mutagenicity in microbial systems and concluded that these systems are not sufficiently developed to demonstrate mutagenicity for metals that are known carcinogens. The EPA has also noted that conflicting results were reported for genotoxicity in mammalian tests in vitro and in vivo, although the weight of evidence suggests a clastogenic effect of Pb.

A few clinical studies have found increased chromosomal defects in workers with blood Pb levels above 60 ug/dL.

## ECOLOGICAL

Aquatic Toxicity - A 20% inhibition in erythrocyte ALA-D activity was observed in rainbow trout when exposed to 10 ug/L Pb for 16 weeks. An increase in spinal curvature occurred in newly hatched rainbow trout when exposed to 32 ug/L Pb for 189 days. No effect on hematocrit or red blood cell count was noted when rainbow trout were exposed to 100 ug/L Pb for 189 days (AQUIRE, 1991).

Terrestrial Toxicity - The studies presented in the human health section above may apply to terrestrial mammals.

Avian Toxicity - Toxicity data for avian species concerning exposure to Pb was not found in the literature.

## REFERENCES

AQUIRE (Aquatic Information Retrieval), 1991. On line.

ATSDR (Agency for Toxic Substances and Disease Registry), 1988. Toxicological Profile for Lead. Draft dated February, 1988.

NLM (National Library of Medicine), 1991. Hazardous Substances Databank, on line.

## 2-METHYLNAPHTHALENE (2-MN)

### SUMMARY

Human toxicity data were not found for this compound. With the exception of a few animal studies, most of the available data address aquatic toxicity of 2-MN.

### HUMAN HEALTH

Noncarcinogenic Toxicity - The acute oral LD50 value in rats was reported to be 1630 mg/kg (NLM, 1991).

Carcinogenic Toxicity - No studies were available addressing the carcinogenicity of 2-MN.

Genotoxicity - No studies were available addressing the genotoxicity of 2-MN.

### ECOLOGICAL

Aquatic Toxicity - The following acute LC50 values for both marine and freshwater organisms have been reported (AQUIRE, 1991): Brown shrimp (Penaeus aztecus); LC50 = 600 ug/l; Grass shrimp (Palaemonetes pugio); LC50 = 1100 ug/l; Dungeness crab (Cancer magister); LC50 = 1300 - 5000 ug/l; Common bay mussel (Mytilus edulis); NOEL = 1420 mg/l.

Terrestrial Toxicity - The animal toxicity information presented in the human health section is generally applicable to terrestrial mammals.

Avian Toxicity - No information was available on the toxicity of naphthalene in birds.

## REFERENCES

AQUIRE (Aquatic Toxicity Information Retrieval) Databank, 1991, on line.

ATSDR (Agency for Toxic Substances and Disease Registry), 1990. Toxicological Profile for Naphthalene and 2-Methylnaphthalene. Draft Report dated February 1990.

NLM (National Library of Medicine), 1991. Registry of Toxic Effects of Chemical Substances, on line.



## NAPHTHALENE (NAPH)

### SUMMARY

The primary human health concerns associated with acute NAPH poisoning are hemolytic anemia, hepatotoxicity, and formation of cataracts. Renal, neurologic and hepatic effects may be secondary to anemia. Laboratory animals exhibited liver and kidney damage following NAPH exposure. NAPH is not considered a human carcinogen. Effects to aquatic organisms ranged from altered antennular orientation/movement in crabs to loss of ionic regulation in dipteran larvae.

### HUMAN HEALTH

Noncarcinogenic Toxicity - Chronic effects data are not currently available for humans and they are limited in laboratory animals. Although NAPH has been used extensively in mothballs and other insect repellents, human inhalation exposure data are sparse and may be confounded by simultaneous exposure to paradichlorobenzene, another compound used to make mothballs. Effects due to short-term inhalation include headaches, vomiting, anemia, kidney damage and jaundice. Concentrations measured in one home were reported to be 20 ppb. Similar effects have been reported following accidental ingestion of NAPH or dermal contact in humans. Cataracts have been observed in 8/21 workers exposed to NAPH for up to five years in a plant manufacturing dye intermediates. Cataract formation and retinal damage has been reported in several animal species following oral administration of NAPH for 4 to 13 weeks at doses of 1000 mg/kg/day.

Carcinogenicity - No epidemiological studies were found. In a 2-year feeding study with rats administered NAPH at 41 mg/kg/day no tumors were reported.

Genotoxicity - No genotoxicity studies were found in humans or animals. NAPH was not mutagenic in several bacterial/microsomal assay systems including Salmonella tester strains TA 98, 100, 1535, or 1537 in the absence or presence of Aroclor 1254-induced hamster or rat liver microsomes. NAPH did not cause cell transformations in rodent embryo cells or in a murine mammary gland organ culture system.

## ECOLOGICAL

Aquatic - The freshwater dipteran Chironomus attenuatus showed a loss of ionic regulation at a concentration of 1 mg/L. LD50 in sheephead minnows and grass shrimp were reported at 2.4 and 2.6 mg/L, respectively, in static 24 hour tests. The LD50 for the amphipod Parhyale hawaiiensis was reported to be 15 ppm (medium not specified) (NLM, 1991).

Terrestrial - The animal toxicity information presented in the human health section is generally applicable to terrestrial mammals. No other information was available.

Avian Toxicity - No information was available on the toxicity of NAPH to birds.

## REFERENCES

ATSDR (Agency for Toxic Substances and Disease Registry), 1990. Toxicological Profile for Naphthalene and 2-Methylnaphthalene. Draft Report dated February 1990.

NLM (National Library of Medicine), 1991. Hazardous Substances Databank, on line.

## TETRACHLOROETHYLENE (Tetra-CE)

### **SUMMARY**

Humans exposed to Tetra-CE by inhalation and oral exposure showed liver, kidney, and central nervous system dysfunction. Evidence of carcinogenicity in humans is inconclusive. Test mammals exposed to Tetra-CE through oral and inhalation routes developed liver carcinoma and mononuclear cell leukemia. Toxicity to test mammals occurred following oral and inhalation exposure with the chief target organs being the liver and kidney. Tetra-CE was found to be acutely toxic to many aquatic organisms.

### **HUMAN HEALTH**

Noncarcinogenic Toxicity - Tetra-CE is a commercially important solvent widely used in dry-cleaning, textile processing and metal degreasing. Humans are exposed primarily through inhalation and it is readily absorbed through the lungs into the blood. Information on the chronic toxic effects of Tetra-CE in humans was limited. Groups of workers occupationally exposed to 60 ppm Tetra-CE for up to 15 years complained of headaches, fatigue, and dizziness (ORNL, 1989). Similar symptoms were found for subjects exposed to 25 or 100 ppm for 5.5 hours daily for 55 days. Hepatotoxic effects (i.e. hepatitis, cirrhosis, liver-cell necrosis and enlarged liver) resulting from long-term exposure has been documented at concentrations greater than 100 ppm.

Rats and mice exposed through inhalation to Tetra-CE (e.g. 200 or 400 ppm or 100 or 200 ppm respectively for 6 hours daily, 5 days weekly for 103 weeks) showed increased mortality for male and female mice and male rats. In another trial, liver and kidney pathology was observed in rats exposed to 230 ppm for 8 hours daily, 5 days weekly for up to 7 months (ORNL, 1989).

Increased mortality occurred in mice and rats following exposure to Tetra-CE (e.g. administered in corn oil by gavage to male rats at 471 and 941 mg/kg/day, female rats at 474 and 949 mg/kg/day, male mice at 536 and 1072 mg/kg/day, and female mice at 386 and 772 mg/kg/day as a time weighted average for 5 days/week for 78 weeks). Death was due to toxic nephropathy.

**Carcinogenicity** - Epidemiological studies of dry-cleaning and laundry workers have linked Tetra-CE exposure with cancers of the lung, cervix, kidney, skin and/or colon (ORNL, 1989). However, these studies are regarded inconclusive because of numerous confounding factors.

Rats and mice of both sexes exposed to Tetra-CE through inhalation (e.g. 200 or 400 ppm, and 100 or 200 ppm respectively for 6 hours per day, 5 days per week for 103 weeks) showed a significant increased incidence of mononuclear cell leukemia for male and female rats in both treatment groups (ORNL, 1989). Mice showed significantly increased incidence of hepatocellular adenomas and hepatocellular carcinomas in males and hepatocellular carcinomas in females.

Rats and mice exposed to Tetra-CE administered in corn oil by gavage (male rats: 471 and 941 mg/kg/day; female rats: 474 and 949 mg/kg/day; male mice: 536 and 1072 mg/kg/day; and female mice: 386 and 772 mg/kg/day as a time weighted average for 5 days/week for 78 weeks) showed that 40% to 65% of all treated mice developed hepatocellular carcinoma compared with 0-10% incidence in controls (ORNL, 1989). A high incidence of nephropathy was observed in both species. A high incidence of early dose-related deaths in rats due to toxic nephropathy rendered the bioassay inconclusive for rats.

EPA has classified Tetra-CE as a probable human carcinogen (i.e. Group B2 which signifies inadequate human evidence for carcinogenicity and sufficient animal evidence).

**Genotoxicity** - A large number of studies of the in vitro genotoxicity of Tetra-CE have been performed using prokaryotic, eukaryotic and mammalian cells. Responses were weak and required high concentrations of the chemical. No clear dose-response relationships were established. Impurities and stabilizers could have contributed to the response. Therefore, Tetra-CE has not been clearly shown to be a mutagen.

## ECOLOGICAL

**Aquatic Toxicity** - The only chronic aquatic toxicity study found was on the water flea (Daphnia magna). In 28 day laboratory tests with renewal of Tetra-CE, reproduction and growth were adversely affected at concentrations as low as 0.5 mg/l (AQUIRE, 1991).

Concentrations at which 50% mortality were derived included 13.5 mg/l for fathead minnow (Pimephales promelas) in a 96 hour flow-through test, 13.0 mg/l for bluegill (Lepomis macrochirus) in a 96 hour static test, 9.1 mg/l for daphnia (Daphnia magna) in a 48 hour static test, 4.9 mg/l for rainbow trout (Oncorhynchus mykiss) in a 96 hour flow-through test, and 30.8 mg/l for a midge (Tanytarus dissimilis) in a 48 hour static test (AQUIRE, 1991).

In a experimental pond study, Tetra-CE was applied once at 0.44 and 1.2 mg/l to separate compartments. Both doses were lethal to daphnia (Daphnia magna) and although there was an increase in phytoplankton abundance, there was a decrease in species abundance with 4 of 6 selected species being eliminated (NLM, 1991).

**Terrestrial Toxicity** - The animal toxicity information presented in the human health section above is generally applicable to terrestrial mammals. No additional information was available.

**Avian Toxicity** - No information was available on the toxicity of Tetra-CE to birds.

## REFERENCES

AQUIRE (Aquatic Information Retrieval), 1991, on line.

ATSDR (Agency for Toxic Substances and Disease Registry), 1990. Toxicological profile for Tetrachloroethylene. Draft dated January 1990.

NLM (National Library of Medicine), 1991. Hazardous Substance Databank, on line.

ORNL (Oak Ridge National Laboratory), 1989. The Installation Restoration Program Toxicity Guide. Prepared for Harry G. Armstrong Aerospace Medical Research Laboratory, Wright-Patterson Air Force Base, Ohio, dated July 1989.

## 1,1,2-TRICHLOROETHANE (1,1,2-TCA)

### SUMMARY

Limited evidence suggests that the target organs of 1,1,2-TCA toxicity in animals appear to be the liver and immune system. Acute exposures to 1,1,2-TCA have been associated with neurological effects. No human data have been reported. Results on the genotoxicity of 1,1,2-TCA were equivocal. However, increased DNA adduct formation in mouse liver *in vivo* has been suggested to be associated with increased incidence of hepatocellular carcinoma.

### HUMAN HEALTH

**Noncarcinogenic Effects** - Subchronic oral toxicity studies with mice indicate altered blood chemistry indicative of liver damage in female mice administered doses of  $\geq 44$  mg/kg/day. Similarly, reduced hemoglobin titer was reported in mice receiving  $\geq 44$  mg/kg/day. This finding indicates an effect of 1,1,2-TCA on the humoral immune response.

**Carcinogenic Effects** - No significant increase in neoplasms occurred in rats following oral administration of 1,1,2-TCA at doses of 46 or 92 mg/kg/day. In mice however, there was a highly significant dose-related increase in the incidence of hepatocellular carcinomas following oral administration of 1,1,2-TCA at doses of 195 and 390 mg/kg/day when compared to control. In addition, there was a significant increase in the occurrence of adrenal pheochromocytomas at 390 mg/kg/day. EPA has classified 1,1,2-TCA as a possible human carcinogen (i.e. Group C) which denotes inadequate evidence in humans and limited evidence in animals (EPA, 1992).

**Genotoxicity** - Results of genotoxicity studies for 1,1,2-TCA are equivocal; both

positive and negative results were reported. The significance of these effects for humans is not clear. A correlation between increased DNA adduct formation *in vivo* and increased incidence of hepatocellular carcinomas in mice, but not rats, has been suggested.

## ECOLOGICAL

Aquatic Toxicity - No information was found on the toxicology of 1,1,2-TCA to aquatic organisms.

Terrestrial Toxicity - No information was found on the toxicity of 1,1,2-TCA to wildlife; however, the information provided in the human health toxicity section above is generally applicable to terrestrial mammals.

Avian Toxicity - No information was found on the toxicity of 1,1,2-TCA to birds.

## REFERENCES

ATSDR (Agency for Toxic Substances and Disease Registry), 1988. Toxicological Profile for 1,1,2-Trichloroethane. Draft Report dated December, 1988.

EPA, 1992. The Integrated Risk Information System (IRIS), on line. Environmental Criteria and Assessment Office, Cincinnati, OH.



## TRICHLOROETHENE (TCE)

### SUMMARY

The principal target organs for chronic inhalation exposure to TCE are the central nervous system, liver and kidney. Animal studies indicate that the liver, kidney and immunological system are the principal target organs following oral administration of TCE. Available epidemiological studies are limited and a definite conclusion cannot be drawn concerning TCE exposure and cancer risk in humans. Chronic oral toxicity studies with mice and rats indicate increased incidences of hepatocellular carcinomas and renal tubular cell adenomas. Studies with occupationally exposed workers are inconclusive regarding genotoxicity. In vivo and in vitro assays are suggestive of a genotoxic effect.

### HUMAN HEALTH

Noncarcinogenic Toxicity - Results from a study of CNS effects of workers exposed to TCE for an average of 3.75 years indicated vertigo, headache, short-term memory loss, and fewer word associations in workers exposed to 85 ppm TCE as compared to 14 or 34 ppm. The lowest-observed-adverse-effect level for CNS effects in animals for subchronic inhalation exposure is 100 ppm.

Information on hepatic and renal toxicity in humans following inhalation exposure is derived primarily from cases of acute overexposure. No studies were available for oral exposure. Results from three subchronic inhalation studies with mice and rats indicate increased liver weights and histopathological alterations of the liver at a concentration of  $\geq 37$  ppm. Increased kidney weights and renal dysfunction have also been reported in mice and rats exposed to TCE by inhalation. The LOAEL and NOAEL for subchronic exposure to TCE are 75 and 35 ppm, respectively.

Subchronic and chronic oral toxicity studies also indicate adverse hepatic and renal effects associated with TCE exposure. The LOAEL for hepatic effects following subchronic exposure to TCE is 250 mg/kg. The LOAEL for renal effects following chronic exposure to TCE is 500 mg/kg/day. NOAELs were not achieved.

The immunological system is also a principal target organ in animals following oral exposure. Depressed cell-mediated immunity to sheep erythrocytes and inhibited bone marrow stem cell colonization has been reported in mice receiving  $\geq 18$  mg/kg/day TCE in drinking water for 6 months (the lowest dose tested).

In a 2 generation reproductive toxicity study no effects were noted on fertility and reproductive performance in rats and mice fed diets containing 75, 150 or 300 mg/kg/day and 195, 390 or 780 mg/kg/day, respectively. However, increased liver and kidney weights were noted in rats exposed to  $\geq 75$  mg/kg/day.

Dogs exposed to 500 or 750 ppm TCE vapor for up to 8 hours daily, up to 6 days weekly, for up to 8 weeks showed toxicity symptoms including lethargy, anorexia, nausea, vomiting, weight loss, and liver dysfunction (NLM, 1991). Cats and guinea pigs exposed to 1000 ppm TCE for 1.5 hours daily for up to 10 months showed liver cirrhosis and biliary hyperplasia.

**Carcinogenicity** - A number of epidemiological studies have been conducted to investigate adverse health effects in humans following exposure to TCE in the workplace. Results of these studies were conflicting and confounded by exposure to other compounds, unknown duration of exposure, and/or small sample size.

Available evidence indicates that exposure to TCE vapor is carcinogenic in laboratory animals. Increased incidences of hepatocellular carcinomas were noted in male and female mice exposed to 100, 300 or 600 ppm technical grade TCE vapor for 6 hours/day, 5 days/week, for 24 months. No carcinogenic effects were observed

in rats exposed to the same regimen. Two strains of mice exposed to TCE at 0, 100, 300, or 600 ppm, 7 hours/day, 5 days/week for 78 weeks showed an increased incidence of liver and lung tumors at the two highest dose levels. Rats exposed to the same dosing regimen for 24 months exhibited increased incidences of testicular Leydig cell tumors at all concentrations and renal adenomas and carcinomas combined in the high dose group. Increased incidences of lung adenocarcinomas were also noted in mice exposed to 150 or 450 ppm TCE, 7 hours/day, 5 days/week for 104 weeks; no tumors were noted in mice exposed to 50 ppm or rats exposed to all three concentrations.

Mice and rats were exposed orally to 99% pure TCE in corn oil by gavage 5 days weekly for 78 weeks and were sacrificed after 90 and 110 weeks, respectively. The time weighted average exposures were 0, 1169 or 2339 mg/kg/day for male mice; 0, 869 or 1739 for female mice; and 0, 549, or 1097 for male and female rats. No compound-related carcinogenic effects were seen in rats, but high mortality rates confounded the results. There was a significant increase in the incidence of hepatocellular carcinomas in male mice at both dose levels and in female mice at the highest dose level.

EPA classifies TCE as a probable human carcinogen i.e. B2, indicating that there is sufficient evidence of carcinogenicity in animals and inadequate or no evidence in humans (EPA, 1991).

**Genotoxicity** - A large number of in vivo and in vitro genotoxicity studies of TCE have been conducted, but results have been inconclusive. In vitro tests on bacterial, fungal, animal hepatocyte, and embryo and human lymphocyte cells with and without metabolic activation had a more or less equal distribution of positive and negative results. In vivo studies on mice, rats, fruit fly and human occupational exposure showed both positive and negative results. Metabolites of TCE may also be in rats

exposed potentially genotoxic. It is concluded that available data suggest that commercial-grade TCE is a weakly active indirect mutagen.

## ECOLOGICAL

Aquatic Toxicity - No chronic toxicity data were found for aquatic organisms. However, in acute toxicity studies TCE was found to be toxic to a broad range of aquatic target species (AQUIRE, 1991). The LC50 values were 39.0 mg/L for the fathead minnow in a 72-hour flowthrough test; 45.0 mg/L for bluegill in a 96-hour static test; 18.0 and 24.0 mg/L for Daphnia and scud, respectively, in 48-hour static tests; and 42.0 and 49.0 mg/L for stonefly and dragonfly, respectively, in 48-hour static tests.

Terrestrial Toxicity - The animal toxicity information presented in the human health section above is generally applicable to terrestrial mammals. No other information was available.

Avian Toxicity - No information was available on the toxicity of TCE to birds.

## REFERENCES

ATSDR (Agency for Toxic Substances and Disease Registry), 1989. Toxicological profile for Trichloroethylene. Draft dated January 1988.

EPA, 1991. The Integrated Risk Information System (IRIS), on line. Environmental Criteria and Assessment Office, Cincinnati, OH.

NLM (National Library of Medicine), 1991. Hazardous Substance Databank, on line.

## VINYL CHLORIDE (VC)

### **SUMMARY**

The liver is the primary target organ for both the noncarcinogenic and carcinogenic effects of VC in humans and animals. VC has been shown to be genotoxic to humans and it is mutagenic and genotoxic in a variety of in vivo and in vitro assay systems.

### **HUMAN HEALTH**

Noncarcinogenic Effects - Chronic occupational exposure of humans to VC has produced "vinyl chloride disease." This disease is characterized by severe damage to the liver, effects on the lungs, poor circulation in the fingers, changes in the bones at the end of the fingers, thickening of the skin, and changes in the blood. While the levels of exposure required to cause these effects have not been quantified, they are certainly far above levels expected to be encountered in the environment.

Effects on the liver have been documented in rodents after chronic exposure to VC through ingestion (levels as low as 0.1 mg/kg/day) or inhalation (levels as low as 10 ppm). Chronic rodent inhalation studies have resulted in testicular effects and reduced body weight gain at levels in the range of 10 to 100 ppm. Chronic rodent ingestion studies have resulted in blood effects at levels around 10 mg/kg/day. Kidney effects have been observed in chronic rodent inhalation studies but not until levels reach over 1000 ppm.

Carcinogenicity - Vinyl Chloride is regarded worldwide as a chemical that causes cancer in humans, but exposure levels necessary to cause cancer in humans are not known. To date, only workers exposed to very high levels of VC have shown an increased incidence of liver cancer.

In rodent inhalation studies, lung cancer has been observed in mice at levels as low

as 10 ppm and liver cancer has been observed in mice, rats, and hamsters at levels between 10 and 100 ppm. Cancer has also been reported in rats exposed orally to VC at levels between 1 and 10 mg/kg/day.

**Genotoxicity** - A no observed adverse effect level for chromosomal aberrations in peripheral lymphocytes of occupationally exposed workers was found to be 1 ppm for inhalation exposures.

VC tested positive for recessive lethal effects but negative for dominant lethal effects, chromosomal translocation, and sex chromosome loss in Drosophila melanogaster. Negative results were also obtained for the dominant lethal test in mice. Positive results were obtained in mutation and cell transformation tests and in chromosomal aberration tests in in vivo and in vitro mammalian systems. Positive results were also reported for DNA alkylation tests in rats and mice and for RNA alkylation in rat liver microsomes. VC has been found to be mutagenic to bacteria and yeasts.

## ECOLOGICAL

**Aquatic Toxicity** - Little information was found on the toxicity of VC to freshwater or marine organisms. Complete mortality of northern pike after a 10 day exposure to 388 ppm VC was reported (NLM, 1991).

**Terrestrial Toxicity** - No information was found. The animal toxicity information presented in the human health section above is generally applicable to terrestrial mammals.

**Avian Toxicity** - No information was found on the toxicity of VC to birds.

## REFERENCES

ATSDR (Agency for Toxic Substances and Disease Registry), 1989. Toxicological Profile for Vinyl Chloride. Final report dated August, 1989.

NLM (National Library of Medicine), 1991. Hazardous Substances Databank, on line.

## XYLENES

### SUMMARY

Xylenes consist of a mixture of three isomers (ortho-, meta-, and para-). The history of industrial exposure to xylenes provides no indication of significant chronic adverse health effects. Xylenes have not been found to be carcinogenic or genotoxic. Developmental effects in birds have been reported.

### HUMAN HEALTH

Noncarcinogenic Toxicity - Quantitative information on the effects of chronic low-level exposure of humans to xylenes is not available. Studies involving laboratory animals generally indicate that xylenes have a relatively low chronic toxicity. Oral intubation of 500 mg/kg/day for 103 weeks produced hyperactivity and decreased body weight gain in rats. No adverse effects were observed at 250 mg/kg/day. Hyperactivity is an indication of central nervous system toxicity, which is the primary effect of acute, high-level exposure to xylenes.

Carcinogenicity - There are no reports of cancer causation in humans. Oral intubation of mixed xylenes (up to 500 mg/kg/day) for 103 weeks produced no evidence of carcinogenicity in rats or mice.

Genotoxicity - Xylenes have been found to be nonmutagenic in both bacterial and mammalian systems. Xylenes failed to induce sister chromatid exchange, both in cultured human lymphocytes and in paint industry workers (EPA, 1991). Technical grade xylene was found to be weakly mutagenic in Drosophila melanogaster recessive lethal tests.



## ECOLOGICAL

Aquatic Toxicity - There are no ambient water quality criteria for protection of freshwater or saltwater species. The 4-day LC50 for fathead minnows was reported to be 42,000 ug/L (NLM, 1991).

Terrestrial Toxicity - No information was available. The animal toxicity information presented in the human health section above is generally applicable to terrestrial mammals.

Avian Toxicity - Xylenes fed to quail or sprayed directly on the eggs (0.05% or 2% xylene) resulted in decreased hatching rate. Treatment with xylenes also increased the ratio of male to female birds (NLM, 1991).

## REFERENCES

ATSDR (Agency for Toxic Substances and Disease Registry), 1989. Toxicological Profile for Total Xylenes. Draft dated October, 1989.

EPA, 1991. The Integrated Risk Information System (IRIS), on line. Environmental Criteria and Assessment Office, Cincinnati, OH.

NLM (National Library of Medicine), 1991. Hazardous Substances Databank, on line.