

US EPA RECORDS CENTER REGION 5



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**A REPORT OF
RCRA FACILITY INVESTIGATION (RFI)
ACTIVITIES AT THE FORMER AMPHENOL SITE,
FRANKLIN, INDIANA**

Volume 2: Appendices A through J

DRAFT

Prepared for:

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APPENDIX A

**Historic analytical data for surface
water and ground water.**

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Table A-1. Previous Ground Water Analytical Data.

Monitoring Well Number Date Sampled	IT-1A	IT-1A	IT-1A	IT-1A	IT-1A	IT-1B	IT-2	IT-2	IT-2
	May-85	Feb-86	May-86	Aug-86	Nov-86	May-85	May-85	Feb-86	May-86
Inorganics (mg/l)									
Aluminum	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide (amenable)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide (total)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tin	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	NA	NA	NA	NA	NA		NA	NA	NA
Volatile Organics (ug/l)						<10			
Acetone	<10	<10	<10	<10	12	<1.0	<10	<10	<10
Benzene	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<1.0
2-Butanone	<10	<10	<10	<10	<10	<10	<10	<10	<10
Carbon disulfide	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
Carbon tetrachloride	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chlorobenzene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloroethane	<1.0	<10	<10	<10	<1.0	<1.0	<1.0	<10	<10
Chloroform	<1.0	3.2	<1.0	<1.0	<1.0	1.1	<1.0	<1.0	<1.0
1,1-Dichloroethane	<1.0	<1.0	3.7	<1.0	1.1	<1.0	2.9	15	10
1,1-Dichloroethylene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.6	<1.0
1,2-Dichloroethane	<1.0	12	<1.0	<1.0	<1.0	NA	<1.0	<1.0	3.6
1,2-Dichloroethene (total)	NA	NA	NA	NA	NA	<1.0	NA	NA	NA
1,2-Dichloropropane	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	<1.0	54	<10	<10	<10	<10	<1.0	<10	<10
4-Methyl-2-pentanone	<10	<10	<10	<10	<10	<1.0	<10	<10	<10
Styrene	<1.0	2.3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2,2-Tetrachloroethane	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Tetrachloroethene	<1.0	1.2	21	49	77	<1.0	<1.0	1.5	7.5
Toluene	9.1	<1.0	<1.0	<1.0	<1.0	<1.0	1.2	<1.0	<1.0
trans-1,2-Dichloroethene	<1.0	1.0	<1.0	<1.0	<1.0	84	<1.0	<1.0	<1.0
1,1,1-Trichloroethane	2.2	<1.0	5.2	<1.0	<1.0	<1.0	65	90	64
1,1,2-Trichloroethane	<1.0	<1.0	<1.0	<1.0	<1.0	6.9	<1.0	<1.0	<1.0
Trichloroethene	1.2	<1.0	4.0	26	55	<1.0	73	88	83
Xylenes	2.2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

Monitoring wells installed April, 1985.

NA = Not Analyzed

Table A-1, Continued.

Monitoring Well Number Date Sampled	IT-2	IT-2	IT-3	IT-3	IT-3	IT-3	IT-3	IT-4	IT-5
	Aug-86	Nov-86	May-85	Feb-86	May-86	Aug-86	Nov-86	May-85	Feb-85
Inorganics (mg/l)									
Aluminum	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide (amenable)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide (total)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tin	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	NA	NA	NA	NA	NA	NA	NA	NA	NA
Volatile Organics (ug/l)									
Acetone	<10	<10	18	<10	<10	<10	<10	<10	NA
Benzene	1.2	1.0	<1.0	<1.0	<1.0	1.0	1.0	<1.0	NA
2-Butanone	<10	<10	<10	<10	<10	<10	<10	<10	NA
Carbon disulfide	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA
Carbon tetrachloride	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA
Chlorobenzene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA
Chloroethane	<10	<10	<1.0	<10	<10	<10	<10	<1.0	NA
Chloroform	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA
1,1-Dichloroethane	11	34	14	13	10	7.5	7.9	<1.0	NA
1,1-Dichloroethylene	29	<1.0	<1.0	5.3	1.9	38	2.3	<1.0	NA
1,2-Dichloroethane	<1.0	<1.0	<1.0	19	11	<1.0	<1.0	<1.0	NA
1,2-Dichloroethene (total)	NA	NA	NA	NA	NA	NA	NA	N/A	NA
1,2-Dichloropropane	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA
Methylene Chloride	<10	<10	<1.0	<10	<10	<10	<10	<1.0	NA
4-Methyl-2-pentanone	<10	<10	<10	<10	<10	<10	<10	<10	NA
Styrene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA
1,1,2,2-Tetrachloroethane	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA
Tetrachloroethene	38	55	<1.0	290	<1.0	24	16	<1.0	NA
Toluene	<1.0	<1.0	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA
trans-1,2-Dichloroethene	<1.0	51	<1.0	1.4	<1.0	<1.0	1.0	<1.0	NA
1,1,1-Trichloroethane	120	39	67	190	200	150	160	<1.0	NA
1,1,2-Trichloroethane	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA
Trichloroethene	120	130	9.3	67	27	50	72	<1.0	NA
Xylenes	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA

Monitoring wells installed April, 1985.

NA = Not Analyzed

Table A-1, Continued.

Monitoring Well Number Date Sampled	IT-5	IT-5	IT-5	IT-5	IT-5	MW-1	MW-1	MW-1	MW-2
	May-85	Feb-86	May-86	Aug-86	Nov-86	Feb-84	Aug-84	Feb-85	Feb-84
Inorganics (mg/l)									
Aluminum	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	NA	NA	NA	NA	NA	0.01	NA	NA	0.01
Arsenic	NA	NA	NA	NA	NA	<0.03	NA	0.006	<0.01
Barium	NA	NA	NA	NA	NA	NA	0.22	0.22	NA
Beryllium	NA	NA	NA	NA	NA	0.01	NA	NA	0.01
Cadmium	NA	NA	NA	NA	NA	<0.01	NA	<0.001	<0.01
Calcium	NA	NA	NA	NA	NA	145	NA	NA	120
Chromium	NA	NA	NA	NA	NA	0.01	NA	<0.001	<0.01
Cobalt	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	NA	NA	NA	NA	NA	0.06	NA	0.02	0.04
Cyanide (amenable)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide (total)	NA	NA	NA	NA	NA	NA	NA	<0.02	NA
Iron	NA	NA	NA	NA	NA	8.9	NA	NA	7.9
Lead	NA	NA	NA	NA	NA	<0.1	NA	0.02	<0.1
Magnesium	NA	NA	NA	NA	NA	37.2	NA	NA	34.0
Manganese	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	NA	NA	NA	NA	NA	<0.0005	NA	<0.0002	<0.0005
Nickel	NA	NA	NA	NA	NA	0.08	NA	<0.01	0.15
Potassium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	NA	NA	NA	NA	NA	<0.02	NA	<0.001	<0.02
Silver	NA	NA	NA	NA	NA	<0.01	NA	<0.001	<0.01
Sodium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	NA	NA	NA	NA	NA	0.1	NA	NA	0.1
tin	NA	NA	NA	NA	NA	1	NA	NA	1
Vanadium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	NA	NA	NA	NA	NA	0.072	NA	0.03	0.084
Volatile Organics (ug/l)									
Acetone	<10	NA	NA	NA	NA	NA	NA	<10/24	NA
Benzene	<1.0	NA	NA	NA	NA	NA	NA	<1.0/<1.0	NA
2-Butanone	<10	NA	NA	NA	NA	NA	NA	<10/<10	NA
Carbon disulfide	<10	NA	NA	NA	NA	NA	NA	<1.0/<1.0	NA
Carbon tetrachloride	<1.0	NA	NA	NA	NA	ND	NA	<1.0/<1.0	45
Chlorobenzene	<1.0	NA	NA	NA	NA	ND	NA	<1.0/<1.0	ND
Chloroethane	<1.0	NA	NA	NA	NA	NA	NA	<1.0/2.2	NA
Chloroform	<1.0	NA	NA	NA	NA	ND	NA	<1.0/<1.0	1.7
1,1-Dichloroethane	<1.0	NA	NA	NA	NA	ND	ND	4.0/6.1	7.8
1,1-Dichloroethylene	<1.0	NA	NA	NA	NA	NA	ND	<1.0/<1.0	NA
1,2-Dichloroethane	<1.0	NA	NA	NA	NA	NA	NA	<1.0/<1.0	NA
1,2-Dichloroethene (total)	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	<1.0	NA	NA	NA	NA	NA	NA	<1.0/<1.0	NA
Ethylbenzene	<1.0	NA	NA	NA	NA	6.0	NA	<1.0/4.1	5.8
Methylene Chloride	<1.0	NA	NA	NA	NA	NA	ND	<1.0/<1.0	NA
4-Methyl-2-pentanone	<10	NA	NA	NA	NA	NA	NA	<10/<10	NA
Styrene	<1.0	NA	NA	NA	NA	NA	NA	<1.0/<1.0	NA
1,1,2,2-Tetrachloroethane	<1.0	NA	NA	NA	NA	NA	NA	<1.0/<1.0	NA
Tetrachloroethene	<1.0	NA	NA	NA	NA	3,200	1,150	<1.0/1.3	3,200
Toluene	1.6	NA	NA	NA	NA	3.9	NA	1.6/5.7	3.4
trans-1,2-Dichloroethene	<1.0	NA	NA	NA	NA	ND	NA	<1.0/<1.0	1.0
,1,1-Trichloroethane	<1.0	NA	NA	NA	NA	ND	NA	18/18	85
1,1,2-Trichloroethane	<1.0	NA	NA	NA	NA	NA	NA	<1.0/<1.0	NA
Trichloroethene	<1.0	NA	NA	NA	NA	160	1,250	2.0/6.4	5,700
Xylenes	<1.0	NA	NA	NA	NA	NA	NA	11/14	NA

IT monitoring wells installed April, 1985.

NA = Not Analyzed

Table A-1, Continued.

Monitoring Well Number Date Sampled	MW-2	MW-2	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3
	Aug-84	Feb-85	Feb-84	Aug-84	Feb-85	May-85	Feb-86	May-86	Aug-86
Inorganics (mg/l)									
Aluminum	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	NA	NA	0.1	NA	NA	NA	NA	NA	NA
Arsenic	NA	0.002/0.003	<0.01	NA	<0.001	NA	NA	NA	NA
Barium	0.14/0.15	0.14/0.15	NA	NA	0.15	NA	NA	NA	NA
Beryllium	NA	NA	0.01	NA	NA	NA	NA	NA	NA
Cadmium	NA	<0.001/<0.001	<0.01	NA	<0.001	NA	NA	NA	NA
Calcium	NA	NA	88	NA	NA	NA	NA	NA	NA
Chromium	NA	0.002/<0.001	0.02	NA	<0.001	NA	NA	NA	NA
Cobalt	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	NA	0.02	0.07	NA	0.03	NA	NA	NA	NA
Cyanide (amenable)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide (total)	NA	<0.02	NA	NA	<0.02	NA	NA	NA	NA
Iron	NA	NA	4.12	NA	NA	NA	NA	NA	NA
Lead	NA	0.01/0.01	<0.1	NA	0.01	NA	NA	NA	NA
Magnesium	NA	NA	21.9	NA	NA	NA	NA	NA	NA
Manganese	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	NA	<0.0002	<0.0005	NA	0.0003	NA	NA	NA	NA
Nickel	NA	0.03	0.05	NA	0.02	NA	NA	NA	NA
Potassium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	NA	0.004/0.002	<0.02	NA	0.003	NA	NA	NA	NA
Silver	NA	<0.001/<0.001	<0.01	NA	<0.001	NA	NA	NA	NA
Sodium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	NA	NA	0.1	NA	NA	NA	NA	NA	NA
Tin	NA	NA	1	NA	NA	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	NA	0.03	0.089	NA	0.08	NA	NA	NA	NA
Volatile Organics (ug/l)									
Acetone	NA	<10	NA	NA	39	NA	<10	<10	<10
Benzene	NA	<1.0	NA	NA	<1.0	NA	<1.0	<1.0	2.0
2-Butanone	NA	<10	NA	NA	<10	NA	<10	<10	<10
Carbon disulfide	NA	<1.0	NA	NA	<1.0	NA	<1.0	<1.0	<1.0
Carbon tetrachloride	NA	<1.0	ND	NA	<1.0	NA	<1.0	<1.0	<1.0
Chlorobenzene	NA	<1.0	4.3	NA	<1.0	NA	<1.0	<1.0	<1.0
Chloroethane	NA	<1.0	NA	NA	<1.0	NA	<10	<10	<10
Chloroform	NA	<1.0	ND	NA	<1.0	NA	<1.0	<1.0	<1.0
1,1-Dichloroethane	NA	13	42	ND	<1.0	NA	<1.0	1.0	<1.0
1,1-Dichloroethylene	NA	<1.0	NA	490	1.1	NA	1.5	<1.0	4.1
1,2-Dichloroethane	NA	<1.0	NA	NA	<1.0	NA	8.8	5.2	24
1,2-Dichloroethene (total)	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	NA	<1.0	NA	NA	NA	NA	<1.0	<1.0	<1.0
Ethylbenzene	NA	2.0	12.2	NA	<1.0	NA	<1.0	<1.0	<1.0
Methylene Chloride	ND	<1.0	NA	1,100	<1.0	NA	<10	<10	61
4-Methyl-2-pentanone	NA	<10	NA	NA	<10	NA	<10	<10	<10
Styrene	NA	<1.0	NA	NA	<1.0	NA	<1.0	<1.0	<1.0
1,1,2,2-Tetrachloroethane	NA	<1.0	NA	NA	<1.0	NA	<1.0	<1.0	<1.0
Tetrachloroethene	2,000	82	640	18,000	770	NA	10,000	12,000	11,000
Toluene	NA	6.8	27	NA	1.3	NA	<1.0	<1.0	<1.0
trans-1,2-Dichloroethene	NA	2.3	1.4	NA	<1.0	NA	2.4	<1.0	8.9
1,1,1-Trichloroethane	NA	38	3,700	640	360	NA	88	100	<1.0
1,1,2-Trichloroethane	NA	<1.0	NA	NA	<1.0	NA	<1.0	<1.0	<1.0
Trichloroethene	5,800	820	16,600	56,000	19,000	NA	14,000	8,000	9,700
Xylenes	NA	7.6	NA	NA	<1.0	NA	<1.0	<1.0	<1.0

MW-2 decommissioned after September, 1985.

NA = Not Analyzed

Table A-1, Continued.

Monitoring Well Number Date Sampled	MW-3	MW-4	MW-4	MW-4	MW-5	MW-5	MW-5	MW-6	MW-6
	Nov-86	Feb-84	Aug-84	Feb-85	Feb-84	Aug-84	Feb-85	Aug-84	Feb-85
Inorganics (mg/l)									
Aluminum	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	NA	0.1	NA	NA	NA	NA	NA	NA	NA
Arsenic	NA	<0.01	NA	0.003	NA	NA	0.003	NA	0.008
Barium	NA	NA	NA	0.15	NA	NA	0.16	NA	0.54
Beryllium	NA	0.01	NA	NA	NA	NA	NA	NA	NA
Cadmium	NA	<0.1	NA	<0.001	NA	NA	<0.001	NA	<0.001
Calcium	NA	97	NA	NA	NA	NA	NA	NA	NA
Chromium	NA	0.02	NA	<0.001	NA	NA	<0.001	NA	0.004
Cobalt	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	NA	0.07	NA	0.03	NA	NA	0.03	NA	0.18
Cyanide (amenable)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide (total)	NA	NA	NA	<0.02	NA	NA	<0.02/<0.02	NA	<0.02
Iron	NA	1.08	NA	NA	NA	NA	NA	NA	NA
Lead	NA	<0.1	NA	0.01	NA	NA	0.02	NA	0.13
Magnesium	NA	26.9	NA	NA	NA	NA	NA	NA	NA
Manganese	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	NA	<0.0005	NA	<0.0002	NA	NA	<0.0002	NA	<0.0002
Nickel	NA	0.05	NA	<0.01	NA	NA	<0.01	NA	0.04
Potassium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	NA	<0.03	NA	0.002	NA	NA	0.003	NA	0.002
Silver	NA	<0.01	NA	<0.001	NA	NA	<0.001	NA	<0.001
Sodium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	NA	0.1	NA	NA	NA	NA	NA	NA	NA
Tin	NA	1	NA	NA	NA	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	NA	0.083	NA	0.06	NA	NA	0.07	NA	0.21
Volatile Organics (ug/l)									
Acetone	<10	NA	NA	<10	NA	NA	<10/<10	NA	<10
Benzene	<1.0	NA	NA	<1.0	NA	NA	<1.0/<1.0	NA	1.2
2-Butanone	<10	NA	NA	<10	NA	NA	<10/<10	NA	<10
Carbon disulfide	<1.0	NA	NA	<1.0	NA	NA	6.0/5.6	NA	<1.0
Carbon tetrachloride	<1.0	ND	NA	<1.0	NA	NA	<1.0/<1.0	NA	<1.0
Chlorobenzene	<1.0	ND	NA	<1.0	NA	NA	<1.0/<1.0	NA	<1.0
Chloroethane	<10	NA	NA	<1.0	NA	NA	<1.0/<1.0	NA	<1.0
Chloroform	<1.0	ND	NA	<1.0	NA	NA	<1.0/<1.0	NA	<1.0
1,1-Dichloroethane	1.6	ND	ND	<1.0	NA	ND	<1.0/<1.0	ND	1.8
1,1-Dichloroethylene	<1.0	NA	ND	<1.0	NA	ND	<1.0/<1.0	ND	<1.0
1,2-Dichloroethane	<1.0	NA	NA	<1.0	NA	NA	<1.0/<1.0	NA	<1.0
1,2-Dichloroethene (total)	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	<1.0	NA	NA	<1.0	NA	NA	<1.0/<1.0	NA	<1.0
Ethylbenzene	<1.0	ND	NA	3.1	NA	NA	<1.0/<1.0	NA	3.2
Methylene Chloride	<10	NA	ND	<1.0	NA	620	<1.0/<1.0	ND	<1.0
4-Methyl-2-pentanone	<10	NA	NA	<10	NA	NA	<10/<10	NA	<10
Styrene	<1.0	NA	NA	<1.0	NA	NA	<1.0/2.2	NA	<1.0
1,1,2,2-Tetrachloroethane	<1.0	NA	NA	<1.0	NA	NA	<1.0/<1.0	NA	<1.0
Tetrachloroethene	6,000	681	550	2.5	NA	NA	4.6/<1.0	1,000	<1.0
Toluene	<1.0	5.4	NA	6.2	NA	NA	<1.0/<1.0	NA	7.4
trans-1,2-Dichloroethene	3.9	ND	NA	<1.0	NA	NA	<1.0/<1.0	NA	<1.0
1,1,1-Trichloroethane	87	ND	ND	<1.0	NA	32	1.7/<1.0	30	<1.0
1,1,2-Trichloroethane	<1.0	NA	NA	<1.0	NA	NA	<1.0/<1.0	NA	<1.0
Trichloroethene	9,200	1,040	610	28	NA	70	3.0/<1.0	1,200	<1.0
Xylenes	<1.0	NA	NA	10	NA	NA	<1.0/1.3	NA	10

MW-4, MW-5 installed February 1984, MW-6 installed June 1984.

NA = Not Analyzed

BU/mke/JDB/123/7026.00/2/Table1.wk1

MW-4, MW-5, and MW-6 decommissioned after September, 1985.

ND = Not Detected

Table A-1, Continued.

Monitoring Well Number Date Sampled	MW-7	MW-7	MW-8	MW-8	MW-9	MW-9	MW-9	MW-9	MW-9
	Aug-84	Feb-85	Aug-84	Feb-85	Aug-84	Feb-85	May-85	Feb-86	May-86
Inorganics (mg/l)									
Aluminum	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	NA	0.004	NA	0.002	NA	<0.001	NA	NA	NA
Barium	NA	0.15	NA	0.15	NA	0.10	NA	NA	NA
Beryllium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	NA	<0.001	NA	<0.001	NA	<0.001	NA	NA	NA
Calcium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	NA	<0.001	NA	<0.001	NA	0.004	NA	NA	NA
Cobalt	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	NA	0.02	NA	0.04	NA	<0.01	NA	NA	NA
Cyanide (amenable)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide (total)	NA	<0.02	NA	<0.02	NA	<0.02	NA	NA	NA
Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	NA	0.01	NA	0.01	NA	<0.01	NA	NA	NA
Magnesium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	NA	<0.0002	NA	<0.0002	NA	<0.0002	NA	NA	NA
Nickel	NA	<0.01	NA	<0.01	NA	0.10	NA	NA	NA
Potassium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	NA	0.003	NA	0.004	NA	0.004	NA	NA	NA
Silver	NA	<0.001	NA	<0.001	NA	<0.001	NA	NA	NA
Sodium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tin	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	NA	0.04	NA	0.05	NA	0.05	NA	NA	NA
Volatile Organics (ug/l)									
Acetone	NA	<10	NA	18	NA	<10/<10	NA	<10	<10
Benzene	NA	<1.0	NA	2.8	NA	8.7/4.9	NA	<1.0	<1.0
2-Butanone	NA	11	NA	<10	NA	<10/<10	NA	<10	<10
Carbon disulfide	NA	<1.0	NA	<1.0	NA	<1.0/<1.0	NA	1.4	<1.0
Carbon tetrachloride	NA	<1.0	NA	<1.0	NA	<1.0/<1.0	NA	<1.0	<1.0
Chlorobenzene	NA	<1.0	NA	<1.0	NA	<1.0/<1.0	NA	<1.0	<1.0
Chloroethane	NA	<1.0	NA	<1.0	NA	<1.0/<1.0	NA	<10	<10
Chloroform	NA	<1.0	NA	<1.0	NA	<1.0/<1.0	NA	<1.0	<1.0
1,1-Dichloroethane	ND	<1.0	ND	<1.0	ND	<1.0/<1.0	NA	1.3	<1.0
1,1-Dichloroethylene	ND	<1.0	ND	<1.0	ND	<1.0/<1.0	NA	<1.0	<1.0
1,2-Dichloroethane	NA	<1.0	NA	<1.0	NA	<1.0/<1.0	NA	4.3	<1.0
1,2-Dichloroethene (total)	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	NA	<1.0	NA	<1.0	NA	<1.0/<1.0	NA	<1.0	<1.0
Ethylbenzene	NA	2.7	NA	7.3	NA	28/19	NA	<1.0	<1.0
Methylene Chloride	ND	<1.0	ND	5.6	ND	<1.0/<1.0	NA	<10	<10
4-Methyl-2-pentanone	NA	<10	NA	<10	NA	<10/<10	NA	<10	<10
Styrene	NA	1.0	NA	1.3	NA	3.5/<1.0	NA	<1.0	<1.0
1,1,2,2-Tetrachloroethane	NA	<1.0	NA	<1.0	NA	<1.0/<1.0	NA	<1.0	<1.0
Tetrachloroethene	600	<1.0	835	4.4	NA	<1.0/<1.0	NA	220	18
Toluene	NA	5.8	NA	15	NA	63/45	NA	<1.0	<1.0
trans-1,2-Dichloroethene	NA	<1.0	NA	<1.0	NA	<1.0/<1.0	NA	<1.0	<1.0
1,1,1-Trichloroethane	ND	3.0	ND	<1.0	ND	<1.0/<1.0	NA	42	30
1,1,2-Trichloroethane	NA	<1.0	NA	<1.0	NA	<1.0/<1.0	NA	<1.0	<1.0
Trichloroethene	430	2.7	870	<1.0	ND	<1.0/<1.0	NA	40	24
Xylenes	NA	6.4	NA	25	NA	120/30	NA	<1.0	<1.0

MW-7 and MW-8 installed June, 1984; MW-9 installed July, 1984.

NA = Not Analyzed

BLU/mke/JDB/1237026.00/2/ Table 1. wk 1

MW-7, and MW-8 decommissioned after September, 1985.

ND = Not Detected

Table A-1, Continued.

Monitoring Well Number Date Sampled	MW-9	MW-9	MW-10	MW-10	MW-11	MW-11	MW-12	MW-12	MW-12
	Aug-86	Nov-86	Aug-84	Feb-85	Aug-84	Feb-85	Aug-84	Feb-85	May-85
Inorganics (mg/l)									
Aluminum	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	NA	NA	NA	0.008	NA	<0.001	NA	<0.001	NA
Barium	NA	NA	NA	0.18	NA	<0.01	NA	0.12	NA
Beryllium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	NA	NA	NA	<0.001	NA	<0.001	NA	<0.001	NA
Calcium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	NA	NA	NA	<0.001	NA	<0.001	NA	0.001	NA
Cobalt	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	NA	NA	NA	0.02	NA	0.02	NA	0.03	NA
Cyanide (amenable)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide (total)	NA	NA	NA	<0.02	NA	<0.02/<0.02	NA	<0.02	NA
Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	NA	NA	NA	0.02	NA	0.01	NA	0.71/0.73	NA
Magnesium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	NA	NA	NA	<0.0002	NA	<0.0002	NA	0.0016	NA
Nickel	NA	NA	NA	<0.01	NA	<0.01	NA	0.01	NA
Potassium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	NA	NA	NA	0.004	NA	0.006	NA	0.004	NA
Silver	NA	NA	NA	<0.001	NA	<0.001	NA	<0.001	NA
Sodium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tin	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	NA	NA	NA	0.04	NA	0.02	NA	0.05	NA
Volatile Organics (ug/l)									
Acetone	<10	170	NA	<10	NA	<10	NA	<10	NA
Benzene	<1.0	<1.0	NA	2.9	NA	<1.0	NA	<1.0	NA
2-Butanone	<10	<10	NA	19	NA	40	NA	<10	NA
Carbon disulfide	<1.0	<1.0	NA	6.0	NA	2.0	NA	2.6	NA
Carbon tetrachloride	<1.0	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA
Chlorobenzene	<1.0	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA
Chloroethane	<10	<10	NA	<1.0	NA	<1.0	NA	2.0	NA
Chloroform	<1.0	<1.0	NA	<1.0	NA	<1.0	NA	1.2	NA
1,1-Dichloroethane	<1.0	<1.0	ND	<1.0	130	6.0	1,100	430	NA
1,1-Dichloroethylene	8.8	<1.0	ND	<1.0	NP	14	5,700	64	NA
1,2-Dichloroethane	<1.0	<1.0	NA	1.9	NA	<1.0	NA	1.6	NA
1,2-Dichloroethene (total)	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	<1.0	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	<1.0
Ethylbenzene	<1.0	<1.0	NA	7.1	NA	9.7	NA	<1.0	NA
Methylene Chloride	<10	<10	20	<1.0	90	<1.0	NA	<1.0	NA
4-Methyl-2-pentanone	<10	<10	NA	14	NA	<10	ND	<10	NA
Styrene	<1.0	<1.0	NA	3.2	NA	5.4	NA	<1.0	NA
1,1,2,2-Tetrachloroethane	<1.0	<1.0	NA	2.1	NA	<1.0	NA	<1.0	NA
Tetrachloroethene	<1.0	<1.0	ND	<1.0	10	430	780	9,400	NA
Toluene	<1.0	<1.0	NA	14	NA	<1.0	NA	<1.0	NA
trans-1,2-Dichloroethene	<1.0	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA
1,1,1-Trichloroethane	30	32	ND	<1.0	110	610	27,000	13,000	NA
1,1,2-Trichloroethane	<1.0	<1.0	NA	1.1	NA	150	NA	<1.0	NA
Trichloroethene	6.6	5.0	ND	<1.0	210	210	7,200	7,000	NA
Xylenes	<1.0	<1.0	NA	33	NA	14	NA	<1.0	NA

Monitoring wells installed July, 1984.

NA = Not Analyzed

BL/mk/JDB/123/7026.00/2/Table 1.wk1

MW-10, and MW-11 decommissioned after September, 1985.

ND = Not Detected

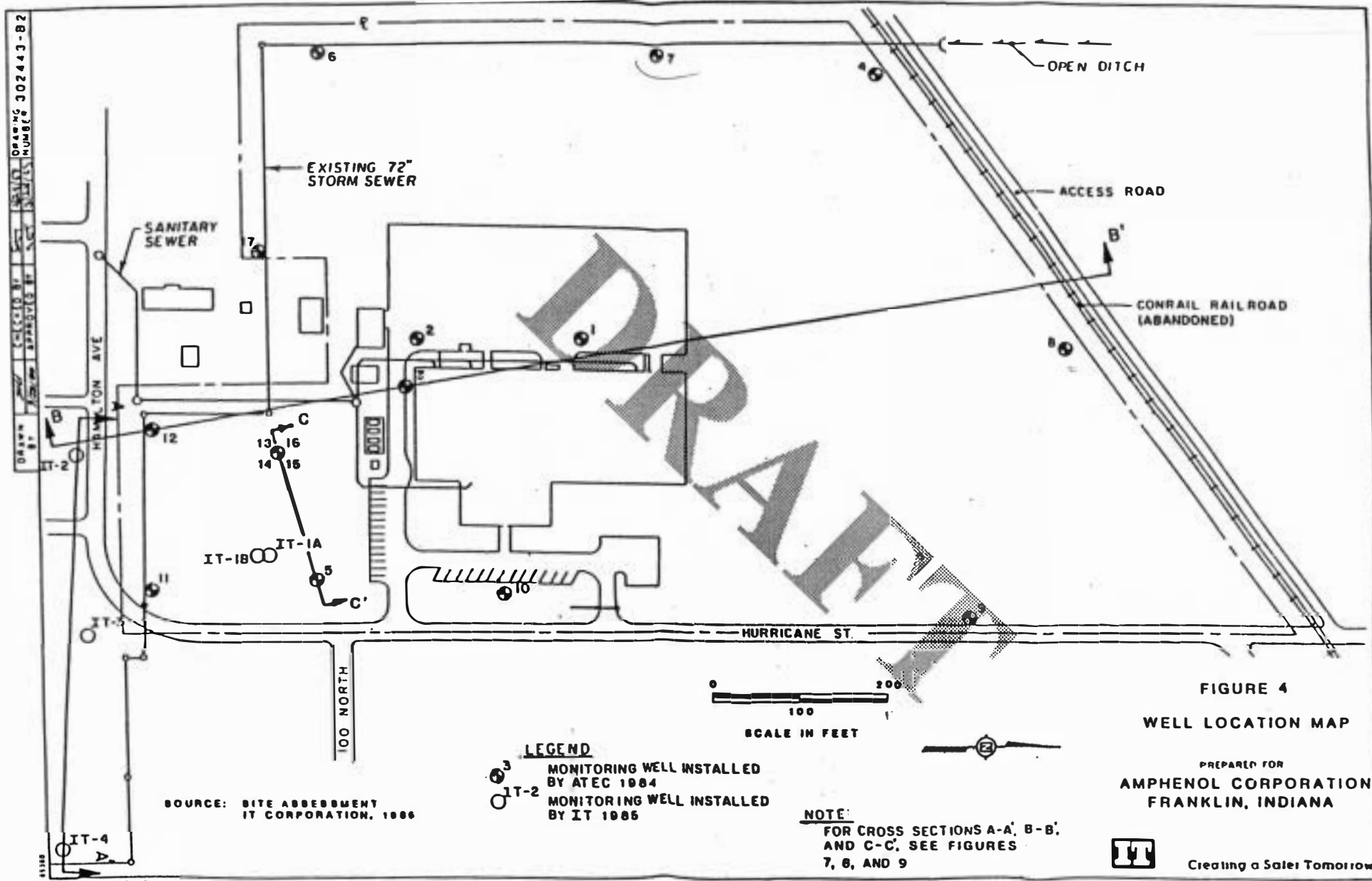


Figure 2. Site map showing locations of 1984-1985 monitoring wells (modified from IT, 1988).

Table A-1, Continued.

Monitoring Well Number Date Sampled	MW-12	MW-12	MW-12	MW-12	MW-13	MW-13	MW-14	MW-14	MW-15
	Feb-86	May-86	Aug-86	Nov-86	Aug-84	Feb-85	Aug-84	Feb-85	Aug-84
Inorganics (mg/l)									
Aluminum	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	NA	NA	NA	NA	NA	0.011	NA	NA	NA
Barium	NA	NA	NA	NA	NA	0.02	NA	NA	NA
Beryllium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	NA	NA	NA	NA	NA	<0.001	NA	NA	NA
Calcium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	NA	NA	NA	NA	NA	<0.001	NA	NA	NA
Cobalt	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	NA	NA	NA	NA	NA	<0.01	NA	NA	NA
Cyanide (amenable)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide (total)	NA	NA	NA	NA	NA	<0.02	NA	NA	NA
Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	NA	NA	NA	NA	NA	0.01	NA	NA	NA
Magnesium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	NA	NA	NA	NA	NA	<0.0002	NA	NA	NA
Nickel	NA	NA	NA	NA	NA	<0.01	NA	NA	NA
Potassium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	NA	NA	NA	NA	NA	0.003	NA	NA	NA
Silver	NA	NA	NA	NA	NA	<0.001	NA	NA	NA
Sodium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tin	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	NA	NA	NA	NA	NA	0.01	NA	NA	NA
Volatile Organics (ug/l)									
Acetone	<10	<10	<10	<10	NA	<10	NA	NA	NA
Benzene	<1.0	<1.0	1.3	<1.0	NA	<1.0	NA	NA	NA
2-Butanone	13	<10	<10	<10	NA	<10	NA	NA	NA
Carbon disulfide	<1.0	<1.0	<1.0	<1.0	NA	<1.0	NA	NA	NA
Carbon tetrachloride	<1.0	<1.0	<1.0	<1.0	NA	<1.0	NA	NA	NA
Chlorobenzene	<1.0	<1.0	<1.0	<1.0	NA	<1.0	NA	NA	NA
Chloroethane	<10	<10	<10	<10	NA	<1.0	NA	NA	NA
Chloroform	2.9	<1.0	<1.0	<1.0	NA	<1.0	NA	NA	NA
1,1-Dichloroethane	360	280	310	440	ND	<1.0	ND	NA	30
1,1-Dichloroethylene	180	120	3,000	280	.7	<1.0	8	NA	80
1,2-Dichloroethane	1,600	1,400	<1.0	6.2	NA	<1.0	NA	NA	NA
1,2-Dichloroethene (total)	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	<1.0	<1.0	<1.0	<1.0	NA	<1.0	NA	NA	NA
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	NA	5.6	NA	NA	NA
Methylene Chloride	<10	<10	<10	<10	32	<1.0	ND	NA	ND
4-Methyl-2-pentanone	<10	<10	<10	<10	NA	<10	NA	NA	NA
Styrene	<1.0	<1.0	<1.0	<1.0	NA	2.6	NA	NA	NA
1,1,2,2-Tetrachloroethane	<1.0	<1.0	<1.0	<1.0	NA	<1.0	NA	NA	NA
Tetrachloroethene	17,000	34,000	18,000	26,000	250	<1.0	140	NA	400
Toluene	<1.0	<1.0	<1.0	<1.0	NA	27	NA	NA	NA
trans-1,2-Dichloroethene	5.9	<1.0	5.6	6.7	NA	<1.0	NA	NA	NA
1,1,1-Trichloroethane	19,000	25,000	9,600	24,000	63	1.4	28	NA	115
1,1,2-Trichloroethane	<1.0	<1.0	<1.0	<1.0	NA	<1.0	NA	NA	NA
Trichloroethene	7,400	5,400	6,100	9,100	790	28	60	NA	340
Xylenes	<1.0	<1.0	<1.0	<1.0	NA	18	NA	NA	NA

Monitoring wells installed June and July, 1984

NA = Not Analyzed

BL/mke/JDB/123/7026.00/2/Table1.wk1

MW-13 MW-14, MW-15 decommissioned April, 1985.

MW-14 not sampled February 1984

ND = Not Detected

Table A-1, Continued.

Monitoring Well Number Date Sampled	MW-15	MW-16 Bottom		MW-16 Top		MW-17	MW-17
	Feb-85	Aug-84	Feb-85	Aug-84	Feb-85	Aug-84	Feb-85
Inorganics (mg/l)							
Aluminum	NA	NA	NA	NA	NA	NA	NA
Antimony	NA	NA	NA	NA	NA	NA	NA
Arsenic	0.016	NA	NA	NA	<0.001	NA	<0.001
Barium	0.11	NA	NA	NA	0.09	NA	0.09
Beryllium	NA	NA	NA	NA	NA	NA	NA
Cadmium	<0.001	NA	NA	NA	<0.001	NA	<0.001
Calcium	NA	NA	NA	NA	NA	NA	NA
Chromium	<0.001	NA	NA	NA	<0.001	NA	<0.001
Cobalt	NA	NA	NA	NA	NA	NA	NA
Copper	0.03	NA	NA	NA	0.03	NA	0.03
Cyanide (amenable)	NA	NA	NA	NA	NA	NA	NA
Cyanide (total)	<0.02	NA	NA	NA	<0.02	NA	<0.02
Iron	NA	NA	NA	NA	NA	NA	NA
Lead	0.04	NA	NA	NA	0.02	NA	<0.01
Magnesium	NA	NA	NA	NA	NA	NA	NA
Manganese	NA	NA	NA	NA	NA	NA	NA
Mercury	0.0002	NA	NA	NA	<0.0002	NA	<0.0002
Nickel	0.03	NA	NA	NA	0.08	NA	0.01
Potassium	NA	NA	NA	NA	NA	NA	NA
Selenium	0.003	NA	NA	NA	0.003	NA	NA
Silver	<0.001	NA	NA	NA	<0.001	NA	NA
Sodium	NA	NA	NA	NA	NA	NA	NA
Thallium	NA	NA	NA	NA	NA	NA	NA
Tin	NA	NA	NA	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA	NA	NA	NA
Zinc	0.08	NA	NA	NA	0.05	NA	NA
Volatile Organics (ug/l)							
Acetone	<10	NA	NA	NA	<10	NA	NA
Benzene	<1.0	NA	NA	NA	<1.0	NA	NA
2-Butanone	<10	NA	NA	NA	<10	NA	NA
Carbon disulfide	<1.0	NA	NA	NA	<1.0	NA	<1.0
Carbon tetrachloride	<1.0	NA	NA	NA	<1.0	NA	<1.0
Chlorobenzene	<1.0	NA	NA	NA	<1.0	NA	<1.0
Chloroethane	<1.0	NA	NA	NA	<1.0	NA	<1.0
Chloroform	<1.0	NA	NA	NA	<1.0	NA	<1.0
1,1-Dichloroethane	5.2	ND	NA	ND	10	ND	<1.0
1,1-Dichloroethylene	<1.0	210	NA	ND	3.3	ND	<1.0
1,2-Dichloroethane	<1.0	NA	NA	NA	<1.0	NA	<1.0
1,2-Dichloroethene (total)	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	<1.0	NA	NA	NA	<1.0	NA	<1.0
Ethylbenzene	<1.0	NA	NA	NA	<1.0	NA	1.9
Methylene Chloride	<1.0	300	NA	ND	5.8	NA	<1.0
4-Methyl-2-pentanone	<10	NA	NA	NA	<10	NA	<10
Styrene	<1.0	NA	NA	NA	<1.0	NA	<1.0
1,1,1,2-Tetrachloroethane	<1.0	NA	NA	NA	<1.0	NA	<1.0
Tetrachloroethene	1.1	550	NA	440	76	800	120
Toluene	<1.0	NA	NA	NA	<1.0	NA	<1.0
trans-1,2-Dichloroethene	<1.0	NA	NA	NA	<1.0	NA	<1.0
1,1,1-Trichloroethane	<1.0	4,300	NA	4,400	450	NA	80
1,1,2-Trichloroethane	8.4	NA	NA	NA	2,000	NA	<1.0
Trichloroethene	8.1	5,700	NA	19,000	3,300	560	7.3
Xylenes	<1.0	NA	NA	NA	<1.0	NA	20

Monitoring Wells Installed July 1984, decommissioned April 1985.

NA = Not Analyzed

ND = Not Detected

Table A-2. Previous stream water analytical data.

HURRICANE CREEK	Feb-85		
	H-1	H-2	H-3
Inorganics (mg/l)	<0.001	NA	NA
Aluminum	NA	NA	NA
Antimony	NA	NA	NA
Arsenic		<0.001	<0.001
Barium	0.04	0.04	0.04
Beryllium	NA	NA	NA
Cadmium	<0.001	<0.001	<0.001
Calcium	NA	NA	NA
Chromium	<0.001	<0.001	<0.001
Cobalt	NA	NA	NA
Copper	<0.01	<0.01	<0.01
Cyanide (amenable)	NA	NA	NA
Cyanide (total)	<0.02	<0.02	<0.02/<0.02
Iron	NA	NA	NA
Lead	0.01	0.01	0.06
Magnesium	NA	NA	NA
Manganese	NA	NA	NA
Mercury	<0.0002	<0.0002	<0.0002
Nickel	<0.01	<0.01	<0.01
Potassium	NA	NA	NA
Selenium	0.003	0.003	0.003
Silver	<0.001	<0.001	<0.001
Sodium	NA	NA	NA
Thallium	NA	NA	NA
Tin	NA	NA	NA
Vanadium	NA	NA	NA
Zinc	0.01	0.03	0.02
Volatile Organics (ug/l)			
Acetone	<10	<10	16
Benzene	<1.0	<1.0	<1.0
2-Butanone	<10	<10	<10
Carbon disulfide	<1.0	3.8	16
Carbon tetrachloride	<1.0	<1.0	<1.0
Chlorobenzene	<1.0	<1.0	<1.0
Chloroethane	<1.0	<1.0	<1.0
Chloroform	<1.0	<1.0	<1.0
1,1-Dichloroethane	<1.0	<1.0	<1.0
1,1-Dichloroethylene	<1.0	<1.0	<1.0
1,2-Dichloroethane	<1.0	<1.0	<1.0
1,2-Dichloroethene (total)	NA	NA	NA
1,2-Dichloropropane	<1.0	<1.0	<1.0
Ethylbenzene	<1.0	<1.0	<1.0
Methylene Chloride	<1.0	<1.0	<1.0
4-Methyl-2-pentanone	<10	<10	<10
Styrene	<1.0	<1.0	<1.0
1,1,2,2-Tetrachloroethane	<1.0	<1.0	<1.0
Tetrachloroethene	<1.0	12	2.2
Toluene	<1.0	<1.0	<1.0
trans-1,2-Dichloroethene	<1.0	<1.0	<1.0
1,1,1-Trichloroethane	<1.0	11	1.4
1,1,2-Trichloroethane	<1.0	36	<1.0
Trichloroethene	<1.0	34	7.5
Xylenes	<1.0	<1.0	<1.0

NA=not analyzed
JDB/OLDHC.VK.1

Table A-2, continued.

STORM SEWER	Feb-85				
	Arvin-1	SD-4	SD-2	SD-3	SD-1
Inorganics (mg/l)	NA	NA	NA	NA	NA
Aluminum	NA	NA	NA	NA	NA
Antimony	NA	NA	NA	NA	NA
Arsenic	0.038	<0.001	<0.001	<0.001	<0.001
Barium	0.39	0.04	0.06	0.05	0.05
Beryllium	NA	NA	NA	NA	NA
Cadmium	0.014	<0.001	<0.001	<0.001	<0.001
Calcium	NA	NA	NA	NA	NA
Chromium	0.43	0.012	<0.001	<0.001	0.003
Cobalt	NA	NA	NA	NA	NA
Copper	1.1	0.04	<0.01	0.02	0.09
Cyanide (amenable)	NA	NA	NA	NA	NA
Cyanide (total)	0.39	<0.02	<0.02	<0.02	<0.02
Iron	NA	<0.02	<0.02	<0.02	<0.02
Lead	0.41	0.02	0.01	0.01	0.16
Magnesium	NA	NA	NA	NA	NA
Manganese	NA	NA	NA	NA	NA
Mercury	0.0006	<0.0002	<0.0002	<0.0002	<0.0002
Nickel	0.19	<0.01	0.09	0.05	0.09
Potassium	NA	NA	NA	NA	NA
Selenium	<0.001	0.005	0.005	0.004	0.004
Silver	0.001	<0.001	<0.001	<0.001	<0.001
Sodium	NA	NA	NA	NA	NA
Thallium	NA	NA	NA	NA	NA
Tin	NA	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA	NA
Zinc	2.1	0.03	0.01	0.04	0.08
Volatile Organics (ug/l)					
Acetone	18	<10	<10	<10	<10
Benzene	<1.0	<1.0	<1.0	<1.0	<1.0
2-Butanone	<10	<10	10	<10	<10
Carbon disulfide	<1.0	<1.0	<1.0	<1.0	<1.0
Carbon tetrachloride	<1.0	<1.0	<1.0	<1.0	<1.0
Chlorobenzene	<1.0	<1.0	<1.0	<1.0	<1.0
Chloroethane	<1.0	<1.0	<1.0	<1.0	<1.0
Chloroform	<1.0	<1.0	1.7	<1.0	<1.0
1,1-Dichloroethane	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethylene	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloroethane	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloroethene (total)	NA	NA	NA	NA	NA
1,2-Dichloropropane	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	1.2
4-Methyl-2-pentanone	<10	<10	<10	<10	<10
Styrene	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2,2-Tetrachloroethane	<1.0	<1.0	<1.0	<1.0	3.8
Tetrachloroethene	<1.0	<1.0	4.6	270	200
Toluene	<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,2-Dichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,1-Trichloroethane	1.1	9.7	6.7	110	91
1,1,2-Trichloroethane	<1.0	<1.0	<1.0	<1.0	400
Trichloroethene	17	<1.0	12	680	380
Xylenes	<1.0	<1.0	<1.0	2.7	<1.0

NA=not analyzed
 JOB/OLODSTSWR.VK1

Table A-2, continued.

STORM SEWER OUTFALL	Feb-85	Feb-86	May-86	Aug-86	Nov-86
	SD-5	HCO-1	HCO-2	OHC-1	OHC-1
Inorganics (mg/l)					
Aluminum	NA	NA	NA	NA	NA
Antimony	NA	NA	NA	NA	NA
Arsenic	<0.001	NA	NA	NA	NA
Barium	0.05	NA	NA	NA	NA
Beryllium	NA	NA	NA	NA	NA
Cadmium	<0.001	NA	NA	NA	NA
Calcium	NA	NA	NA	NA	NA
Chromium	0.001	NA	NA	NA	NA
Cobalt	NA	NA	NA	NA	NA
Copper	<0.01	NA	NA	NA	NA
Cyanide (amenable)	NA	NA	NA	NA	NA
Cyanide (total)	NA	NA	NA	NA	NA
Iron	NA	NA	NA	NA	NA
Lead	<0.01	NA	NA	NA	NA
Magnesium	NA	NA	NA	NA	NA
Manganese	NA	NA	NA	NA	NA
Mercury	<0.0002	NA	NA	NA	NA
Nickel	<0.01	NA	NA	NA	NA
Potassium	NA	NA	NA	NA	NA
Selenium	0.004	NA	NA	NA	NA
Silver	<0.001	NA	NA	NA	NA
Sodium	NA	NA	NA	NA	NA
Thallium	NA	NA	NA	NA	NA
Tin	NA	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA	NA
Zinc	0.03	NA	NA	NA	NA
Volatile Organics (ug/l)					
Acetone	<10	<10	<10	<10	<10
Benzene	<1.0	<1.0	<1.0	<1.0	<1.0
2-Butanone	<10	<10	<10	<10	<10
Carbon disulfide	37	<1.0	<1.0	<1.0	<1.0
Carbon tetrachloride	<1.0	<1.0	<1.0	<1.0	<1.0
Chlorobenzene	<1.0	<1.0	<1.0	<1.0	<1.0
Chloroethane	<1.0	<1.0	<1.0	<1.0	<1.0
Chloroform	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethane	3.0	<1.0	4.4	<1.0	4.1
1,1-Dichloroethylene	<1.0	<1.0	1.0	35	1.1
1,2-Dichloroethane	<1.0	3.1	15	<1.0	<1.0
1,2-Dichloroethene (total)	NA	NA	NA	NA	NA
1,2-Dichloropropane	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	<1.0
4-Methyl-2-pentanone	<10	<10	<10	<10	<10
Styrene	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2,2-Tetrachloroethane	<1.0	<1.0	<1.0	<1.0	<1.0
Tetrachloroethene	240	58	1500	96	23
Toluene	<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,2-Dichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,1-Trichloroethane	270	31	720	69	89
1,1,2-Trichloroethane	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene	780	120	850	200	190
Xylenes	<1.0	<1.0	<1.0	<1.0	<1.0

NA=not analyzed

JDB/OLDOUTFL.WK1

APPENDIX B

**Plume delineation technical memorandum,
June 23, 1992.**

DRAFT



TECHNICAL MEMORANDUM

DRAFT

TO: Mike Jarvis, President
Franklin Power Products
400 Forsythe Street
Franklin, Indiana 46131

FROM: James H. Keith, Project Manager
WW Engineering & Science
5010 Stone Mill Road
Bloomington, Indiana 47408

RE: Preliminary Results of Plume Delineation in the Upper Aquifer (Unit B) at
the Former Amphenol Facility at 980 Hurricane Road, Franklin, Indiana

DATE: June 23, 1992

BACKGROUND

In accordance with Section VII.2.a.(4)(c) of the U.S. EPA Administrative Order on Consent (CO) dated November 27, 1990, a draft report summarizing the results of the initial plume delineation shall be submitted within 30 days of receipt of analytical data for ground water samples collected in accordance with the CO and the IT Work Plan for the Former Amphenol RFI. The basis for this Technical Memorandum is also described in Section 3.7 - "RFI Decision Points" in Volume I of Interim Final RCRA Facility Investigation (RFI) Guidance - Volume I and II (OSWER Directive 9502.00-6D) as follows: "As monitoring data become available, both within and at the conclusion of discrete investigative phases, they should be reported to the regulatory agency as directed. The regulatory agency will compare the monitoring data to applicable health and environmental criteria to determine the need for (1) interim corrective measures; and (2) a CMS. In addition, the regulatory agency will evaluate the monitoring data with respect to adequacy and completeness to determine the need for any additional monitoring efforts."

This draft Technical Memorandum describes the samples collected, sampling methods and analytical parameters for ground water. Also included are the findings of a soil gas survey submitted to U.S. EPA as a draft Technical Memorandum on April 8, 1992. The

sufficiency of the existing data to describe a ground water plume in the upper aquifer at the Former Amphenol facility is discussed. No plume was delineated for the lower aquifer at the site, but the possibility for vertical migration of contaminants from the Unit B aquifer is discussed. Only aspects of the RFI study that pertain directly to plume delineation are discussed in this Technical Memorandum.

SAMPLING LOCATIONS, METHODS AND PARAMETERS

Ground water samples were collected from six existing ground water monitoring wells (IT-1A, IT-2, IT-3, MW-3, MW-9 and MW-12), and from seven ground water monitoring wells installed by WW Engineering & Science (WWES) for this RFI. Well locations are shown on Sheet 1 - Topographic Map. Site geology is shown on the Cross Sections in Sheet 2. Four geologic units (Units A to D) have been identified.

Prior to the RFI field work, horizontal and vertical ground controls were established. Temporary bench marks (TBMs) were established on two of the new sanitary sewer manhole rims, and all site elevations are based upon these TBMs.

Monitoring wells were constructed in accordance with the RCRA Ground Water Monitoring Technical Enforcement Guidance Document (OSWER 9950.1 Sept., 1986), as detailed in the 1988 IT Work Plan, with the following exceptions:

- No water was used in the installation of the filter-pack sand.
- Laboratory-grade deionized water was added to the well pipe as required to counteract the buoyant force of well fluids, and to clean fine soil particles from the well screen.
- Where installation of the bentonite seal was made above the saturated zone, three gallons of laboratory-grade deionized water were added to the borehole to hydrate the pellets.

Wells 20, 21, 22, 24 and 26 are completed in the upper sand and gravel unit (Unit B). Wells 23 and 25 are completed in the lower sand unit at approximately 60 foot depth, herein referred to as Unit D. The new monitoring well installation resulted in three paired shallow sand/deep sand installations where hydraulic gradients and levels of

contaminants could be compared vertically between the two units. These installations consisted of MW-22/23, MW-12/25 and MW-24/IT-1A.

Wells 23 and 25 were installed utilizing a double well casing to limit the potential for cross contamination between the shallow and deep sand units. The following procedure was utilized. A hole was augered through the shallow sand unit and into the top of the underlying glacial till. A large diameter casing was then inserted in the hole, and cemented inside and out to the surface. After the cement had set a minimum of 24 hours, the cement inside the casing was drilled out, and the boring was advanced to the Bottom of Unit D utilizing hollow stem auger drilling techniques through the surface casing.

Monitoring wells MW-12, IT-1A, IT-2, IT-3 and MW-22 through 25 served to investigate conditions around the old sanitary sewer line and the downgradient portion of the site. Monitoring wells MW-21 and MW-3 provided ground water samples from the vicinity of the former plating room and RCRA storage area. Monitoring wells MW-9, MW-20 and MW-26 were utilized as upgradient sampling points.

New monitoring wells MW-20 through MW-26, as well as existing monitoring wells MW-3, MW-9 and MW-12, previously installed by ATEC, and monitoring wells IT-1A, IT-2 and IT-3, installed previously by IT were sampled. Prior to sampling, each well was developed by bailer surging to remove fines from the well screen area. Approximately ten well volumes were removed from most shallow wells, but low yield prevented this volume of purging in wells 12, 20 and IT-2. Deep wells 23, 25 and IT-1A were purged of three casing volumes. A large steel treble hook, cotton string, and a group of lead sinkers were removed from MW-12. These are presumed to have been lost at some point in the past, possibly from a previous attempt to retrieve lost sampling equipment.

Analytical parameters for ground water included volatile organic compounds (VOCs), metals, and total and amenable cyanide. Samples for metals were collected unfiltered. Existing monitoring wells MW-12 and WWES monitoring well MW-22 were analyzed for Appendix IX constituents in accordance with Section VII.2.a.(4)(c)(ii) of the CO, and samples for metals analysis were collected both filtered and unfiltered.

A soil vapor survey was performed as a part of the RFI study, and a draft Technical Memorandum was submitted to U.S. EPA on April 8, 1992. Results and

recommendations of this survey, as they pertain to a ground water plume, are briefly discussed in the section on results.

RESULTS AND DISCUSSION

Summary monitoring well data including location, top of casing and ground elevation, screened intervals, and measured water levels are given in Table 1. Analytical results for ground water are given in Table 2. A potentiometric surface map is shown in Figure 1, and a ground water plume delineation map is shown in Figure 2. Monitoring wells were sampled for ground water between March 2, 1992 and March 10, 1992. Unvalidated analytical results were received then sent to the WWES Grand Rapids office for data validation. Validation results were received on May 26, 1992.

Soil Vapor Survey

Two separate compounds were identified in soil gas: tetrachloroethylene (PCE) and trichloroethylene (TCE). When soil gas concentrations at sampling points were plotted, distinct distributions were defined for each compound.

The pattern of concentrations for PCE suggested a point contamination source at an old concrete pad at the southwest corner of the back facility parking lot. The PCE soil gas plume had a distinct northwest-southeast direction which corresponds with the potentiometric surface in that part of the site (Figure 1). The pattern of concentrations for TCE had a peak in the vicinity of the point where a storm sewer crosses beneath the old sanitary sewer line, and at a point where sewer inspection reports indicated a break in the old sanitary sewer line. Peak soil gas values for TCE tended to parallel the sanitary sewer line, fall off rapidly to the west, and extend southeasterly.

Ground Water Quality

The analytical results in Table 2 indicate that for the most part, metals would not be expected to be a significant component of any contaminant plume that may be present. Likewise, total or amenable cyanide does not appear in significant concentrations in the ground water and would not be expected to be a significant plume component.

For Appendix IX compounds in MW-12 and MW-22, there were no detects for parameter groups other than metals and VOCs.

Of the VOCs detected in the ground water, we consider the three compounds present in the highest concentrations and present in the greatest number of samples to be most indicative of the plume: TCE, PCE and 1,1,1-Trichloroethane (TCA). All three compounds are denser than water. For the purposes of this report, a summed VOC value in ground water for the three compounds will be used to describe the plume. In cases where compounds are below detection limits, a value of one-half the detection limit is used in the summation.

Combined VOC values are highest for MW-22 (20,191 ug/l), followed by MW-12 (8,153 ug/l). Both are located along the abandoned sanitary sewer line. Two samples collected of ground water south of the storm sewer at IT-2 and IT-3 have values of 45.5 ug/l and 64.5 ug/l, respectively. The three upgradient monitoring wells MW-9, MW-20 and MW-26 have values of 13.5 ug/l, 7.5 ug/l (no detects) and 10.5 ug/l, respectively.

MW-3, located at the south side of the old plating room, had the next highest value at 245 ug/l). The MW-3 sample is assumed not to be directly associated with values along the old sewer line. There was once contamination (since removed) beneath the floor of the plating room, and the values for PCE and TCE in MW-3, once equal to those of MW-12, are now reduced far below values both for MW-3 in the past (see 1986 quarterly monitoring results, Table 3 of IT Work Pan) and MW-12 in the present (Table 2).

Plume Delineation

The potentiometric surface map shown in Figure 1 indicates that ground water flow in the southern portion of the site trends generally northwest-southeast. The ground water flow data do not suggest that the storm sewer is at this time influencing ground water flow. In Sheet 2 (line B-C-D), it can be seen that during sampling for this study, the ground water surface was slightly below the bottom of the storm sewer. Sheet 2 also indicates that the Unit B sand is much thinner in the vicinity of the sewer line it is not known whether this unit continues to thin to the south, but any further thinning may influence plume movement in this direction.

Figure 2 shows ground water isoconcentration lines for the summed VOC values. The largest summed values appear to be centered along the old sanitary sewer line, and higher values appear to run east along the storm sewer line. For reasons previously explained, we believe that VOCs at MW-3 are not directly related to the values in the vicinity of the sanitary sewer line, and that the plating room may have been a separate source of contamination. The VOC value at MW-3 is isolated from the rest by a closed isoconcentration line.

Two of the three upgradient monitoring wells (MW-9 and MW-26) have positive results for at least one of the compounds, but the results are at or near the detection levels for all compounds. MW-9, installed by ATEC in 1984, has a history of positive results for PCE, TCA and TCE (see 1986 quarterly monitoring results, Table 3 of the IT Work Plan), but the values have diminished for all three compounds in the intervening period. Based upon the comparisons of current analytical data and the 1986 results, and IT comments regarding deficiencies in ATEC well construction at this site, we conclude that it is likely that the values for PCE, TCA and TCE at MW-9 are the result of cross contamination at that time. This is indicated by a closed isoconcentration line around the well.

Because of the low levels of PCE, TCA and TCE in the upgradient monitoring wells, and remaining questions about the adequacy of MW-9, it is likely that the plume boundary will have to be based upon detection limits rather than upgradient ground water contaminant values.

Wells IT-2 and IT-3, located south of the storm sewer line, have concentrations well above detection limits for both TCE and TCA. These are the most downgradient wells used for this project, and it is apparent that significant concentrations of TCE and TCA are present in the ground water off site. It appears that at least during periods of low ground water levels, the storm sewer does not intercept the ground water plume. Well IT-2 and IT-3 data suggest that contaminants may migrate both beneath and along the storm sewer alignment. Based upon these results, it is apparent that a ground water plume extends off site to the south, but cannot totally be delineated to background or upgradient levels.

By comparing individual values for contaminants in Figure 2, it can be seen that PCE is present at its highest levels at MW-22 and MW-12. PCE is not present off site at IT-2 and IT-3. This suggests a source and pattern of PCE contamination that is separate from a TCA/TCE source and movement pattern, and is further suggested by the data gathered from the soil gas survey that indicates a PCE soil gas plume at the southwest parking lot corner and a TCE plume centered on the old sanitary sewer line (TCA was not identified as one of the soil gases present).

Comparison of Unit B/Unit D water levels from paired wells indicates a significant downward hydraulic gradient between the two zones, and suggests the potential for downward migration of contaminants (Table 1). Table 2 indicates that PCE and TCE were detected well above detection limits in all three Unit D monitoring wells, and 1986 quarterly monitoring data (Table 3 in the IT Work Plan) indicate the presence of 1,1-Dichloroethane, 1,2-Dichloroethane, PCE, 1,2-Dichloroethylene, TCA, TCE, acetone, chloroform, methylene chloride and styrene in IT-1A. In each case, however, the deeper wells were installed through the Unit B sand units containing orders of magnitude higher contaminants levels. Despite the use of a well casing through Unit B, some cross contamination may have occurred during well construction. The possibility of Unit D contamination from two sources needs to be evaluated:

- Downward migration along the well bore during construction

- Downward migration of contaminants through the confining layer separating Units B and D.

In addition, it remains to be determined if deeper water-bearing zones have been contaminated.

CONCLUSIONS

- 1) A soil gas survey conducted at the Former Amphenol site indicates two separate soil gas plumes on site: A TCE plume centered near the crossing of the old sanitary sewer line and the storm sewer, and a PCE plume centered near an old concrete pad at the southwest corner of the facility parking lot. The TCE plume appears to follow the trend of the old sewer line and the PCE plume has a well-defined northwest-southeast direction from the old concrete pad.
- 2) The major components of the plume are determined to be TCE, PCE and TCA. All three compounds are denser than water.
- 3) A ground water plume defined by the summed values of the major plume components has its highest values along the old sanitary sewer line. The plume appears to extend southerly and off the site, and easterly along the storm sewer line. The values at MW-3 adjacent to the plating room are assumed to be attributed to former plating room contamination, and not directly related to the rest of the plume.
- 4) During ground water sampling for the Former Amphenol RFI, the ground water surface was beneath the bottom of the storm sewer, which has been described as acting as a ground water intercept.
- 5) Geologic cross sections of the site indicate a thinning of Unit B at the south end. It is not known if this thinning continues further south.
- 6) There are some positive values for the plume components in upgradient wells, but these are at or near detection limits. Positive values at MW-9 may be due to residual contamination from faulty well construction. Detection limits would be the most appropriate means to delineate the plume.
- 7) The ground water plume cannot be delineated with the information available.

- 7) A comparison of individual component values indicates that PCE is present along the sanitary sewer line but not south of the storm sewer line or in the easterly extension of the plume along the storm sewer line. When the soil gas data are considered as well, a separate source for PCE is indicated.
- 8) There is a definite downward hydraulic gradient between Units B and D and evidence of contaminants in Unit D. The source of the contamination to Unit D has not been completely evaluated.

RECOMMENDATIONS

In order to more completely describe the ground water plume present at the Former Amphenol facility, ground water pathways, and plume boundaries, the following additional information needs to be gathered for the RFI:

- 1) Evaluation of a potential separate PCE ground water plume at the southwest corner of the facility parking lot.
- 2) Additional sampling points to delineate the plume boundary in Unit B south of the storm sewer (off site).
- 3) Evaluation of the storm sewer and storm sewer trench as a possible pathway for contaminant migration, and delineation of any plume extension along the storm sewer.
- 4) Evaluation of ground water flow patterns and contaminants in storm sewer water during periods when ground water levels are above the bottom of the storm sewer.
- 5) Evaluation of possible sources of contamination to Unit D, perhaps utilizing additional well purging and sample analysis.
- 6) Evaluation of Unit B thickness south of the site.

Table 1. Monitoring Well Completion and Water Level Data

WELL NO	INSTALLED		LOCATION		T.O.C.	ELEVATION (feet M.S.L.)					NOTES	LITHO-STRATIGRAPHIC UNIT
	BY	DATE	N (feet)	E (feet)		GROUND	SCREEN TOP	SCREEN BOTTOM	WATER 03/25	WATER 06/02		
MW-1	A TEC	09-Feb-84	NA	NA	734.4	734.4	714.4	704.4	NA	NA	D	
MW-2	A TEC	09-Feb-84	NA	NA	734.4	734.7	714.7	704.7	NA	NA	D	
MW-3	A TEC	08-Feb-84	241	-244	736.44	735.3	715.8	705.8	719.47	720.40		B
MW-4	A TEC	13-Feb-84	NA	NA	733.5	731.3	711.8	701.8	NA	NA	D	
MW-5	A TEC	14-Feb-84	NA	NA	736.4	734.3	714.3	704.3	NA	NA	D	
MW-6	A TEC	26-Jun-84	NA	NA	NA	732.7	714.0	709.2	NA	NA	D	
MW-7	A TEC	26-Jun-84	NA	NA	NA	730.1	712.1	707.1	NA	NA	D	
MW-8	A TEC	27-Jun-84	NA	NA	NA	731.1	715.6	710.6	NA	NA	D	
MW-9	A TEC	03-Jul-84	852	5	733.04	730.5	713.5	708.5	720.28	721.57		B
MW-10	A TEC	03-Jul-84	NA	NA	NA	734.1	716.1	711.1	NA	NA	D	
MW-11	A TEC	05-Jul-84	NA	NA	NA	731.9	717.9	712.9	NA	NA	D	
MW-12	A TEC	05-Jul-84	-51	-215	736.38	733.8	716.3	711.3	718.99	719.62		B
MW-13	A TEC	19-Jun-84	NA	NA	NA	734.7	558.7	553.7	NA	NA	D	
MW-14	A TEC	06-Jul-84	NA	NA	NA	734.7	621.7	616.7	NA	NA	D	
MW-15	A TEC	05-Jul-84	NA	NA	NA	734.7	678.7	673.7	NA	NA	D	
MW-16	A TEC	05-Jul-84	NA	NA	NA	734.7	721.2	711.2	NA	NA	D	
MW-17	A TEC	10-Jul-84	NA	NA	NA	734.6	714.6	709.6	NA	NA	D	
IT-1A	IT	Apr-85	83	-46	736.38	733.9	683.9	673.9	718.27	717.47		D
IT-1B	IT	Apr-85	NA	NA	736.73	734.5	725.6	715.5	NA	NA	D	
IT-2	IT	Apr-85	-116	-117	728.71	732.4	724.5	714.4	718.95	719.52		B
IT-3	IT	Apr-85	-105	52	728.71	728.9	723.0	712.9	718.45	718.69		B
IT-4	IT	Apr-85	NA	NA	731.73	728.9	718.9	713.9	NA	NA	U	
IT-5	IT	Apr-85	NA	NA	735.82	732.9	680.6	670.9	NA	NA	U	
MW-20	WWES	05-Feb-92	856	-558	734.03	731.8	719.7	710.4	721.14	722.52		B
MW-21	WWES	20-Feb-92	210	-244	737.91	735.1	720.2	710.8	719.44	720.31		B
MW-22	WWES	11-Feb-92	109	-237	737.64	735.0	723.4	714.0	719.25	720.08		B
MW-23	WWES	17-Feb-92	110	-237	737.43	735.1	682.7	673.4	718.28	717.51		D
MW-24	WWES	06-Feb-92	83	-52	736.02	733.8	723.0	713.6	719.12	719.80		B
MW-25	WWES	20-Feb-92	-46	-215	736.21	733.8	676.2	666.8	718.14	717.35		D
MW-26	WWES	05-Feb-92	585	-283	736.39	734.0	716.1	706.6	720.31	721.57		B

A TEC-A TEC Associates, Indianapolis, IN

IT-IT Corporation, Pittsburgh, PA

WWES-WW Engineering & Science, Bloomington, IN

NA-data not available

D-decommissioned

U-not used in the RFI

Table 2

Analytical Data for Ground Water
Former Amphenol Site, Franklin, IN
Units as Given

Location:		GWIT-1A	GWIT-2	GWIT-3	MW-03	MW-09	MW-12	MW-20	MW-21D _{up}	MW-21
Sample Identification:		894311	894313	894301	892911	894304	892902	894307	894308	894309
Sample Date:		03/05/92	03/05/92	03/05/92	03/02/92	03/05/92	03/02/92	03/05/92	03/05/92	03/05/92
Volatiles	Units									
Chloromethane	ug/L	10 U	10 U	10 U	10 U	10 U	<500	10 U	10 U	10 U
Bromomethane	ug/L	10 U	10 U	10 U	10 U	10 U	<500	10 U	10 U	10 U
Vinyl chloride	ug/L	10 U	10 U	10 U	10 U	10 U	<500	10 U	10 U	10 U
Chloroethane	ug/L	10 U	10 U	10 U	10 U	10 U	<500	10 U	10 U	10 U
Methylene chloride	ug/L	5 U	5 U	5 U	5 U	5 U	<250	5 U	5 U	5 U
Acetone	ug/L	8 J	11	10 U	10 U	7 J	<500	10 U	10 U	10 U
Carbon disulfide	ug/L	5 U	5 U	5 U	5 U	5 U	<250	5 U	5 U	5 U
1,1-Dichloroethylene	ug/L	5 U	5 U	5 U	5 U	5 U	<250	5 U	5 U	5 U
1,1-Dichloroethane	ug/L	5 U	41	4 J	5 U	5 U	103 J	5 U	5 U	5 U
trans-1,2-Dichloroethylene	ug/L						<250			
Chloroform	ug/L	5 U	5 U	5 U	5 U	5 U	<250	5 U	5 U	5 U
1,2-Dichloroethane	ug/L	5 U	5 U	5 U	5 U	5 U	<250	5 U	5 U	5 U
Methyl ethyl ketone	ug/L	10 U	10 U	10 U	10 U	10 U	<500	10 U	10 U	10 U
1,1,1-Trichloroethane	ug/L	5 U	25	83	4 J	9	2041	5 U	0.8 J	5 U
Carbon tetrachloride	ug/L	5 U	5 U	5 U	5 U	5 U	<250	5 U	5 U	5 U
Vinyl acetate	ug/L						<500			
Dichlorobromomethane	ug/L	5 U	5 U	5 U	5 U	5 U	<250	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	ug/L	5 U	5 U	5 U	5 U	5 U	<250	5 U	5 U	5 U
1,2-Dichloropropane	ug/L	5 U	5 U	5 U	5 U	5 U	<250	5 U	5 U	5 U
trans-1,3-Dichloropropene	ug/L	5 U	5 U	5 U	5 U	5 U	<250	5 U	5 U	5 U
Trichloroethylene	ug/L	5 U	18	34	81	2 J	2641	5 U	14	15
Dibromochloromethane	ug/L	5 U	5 U	5 U	5 U	5 U	<250	5 U	5 U	5 U
1,1,2-Trichloroethane	ug/L	5 U	5 U	5 U	5 U	5 U	<250	5 U	5 U	5 U
Benzene	ug/L	5 U	5 U	5 U	5 U	5 U	<250	5 U	5 U	5 U
cis-1,3-Dichloropropene	ug/L	5 U	5 U	5 U	5 U	5 U	<250	5 U	5 U	5 U
2-Chloroethyl vinyl ether	ug/L						<500			
Bromoform	ug/L	5 U	5 U	5 U	5 U	5 U	<250	5 U	5 U	5 U
2-Hexanone	ug/L	10 U	10 U	10 U	10 U	10 U	<500	10 U	10 U	10 U
Methyl isobutyl keytone	ug/L	10 U	10 U	10 U	10 U	10 U	<500	10 U	10 U	10 U
Tetrachloroethylene	ug/L	9	5 U	5 U	160	5 U	3471	5 U	58	59
Toluene	ug/L	5 U	5 U	5 U	5 U	5 U	<250	5 U	5 U	5 U

Table 2 (cont.)
Analytical Data for Ground Water
Former Amphenol Site, Franklin, IN
Units as Given

Location:		GWIT-1A	GWIT-2	GWIT-3	MW-03	MW-09	MW-12	MW-20	MW-21 Dup	MW-21
Sample Identification:		894311	894313	894301	892911	894304	892902	894307	894308	894309
Sample Date:		03/05/92	03/05/92	03/05/92	03/02/92	03/05/92	03/02/92	03/05/92	03/05/92	03/05/92
Volatiles	Units									
Chlorobenzene	ug/L	5 U	5 U	5 U	5 U	5 U	<250	5 U	5 U	5 U
Ethylbenzene	ug/L	5 U	5 U	5 U	5 U	5 U	<250	5 U	5 U	5 U
Styrene	ug/L	5 U	5 U	5 U	5 U	5 U	<250	5 U	5 U	5 U
Xylene	ug/L	5 U	5 U	5 U	5 U	5 U	<250	5 U	5 U	5 U
Acrolein	ug/L						<2500			
Iodomethane	ug/L						<250			
3-Chloropropene	ug/L						<250			
Chloroprene	ug/L						<250			
trans-1,4-Dichloro-2-butene	ug/L						<250			
Pentachloroethane	ug/L						<250			
Acetonitrile	ug/L						<5000			
Acrylonitrile	ug/L						<2500			
Penta CDF	ug/L						<500			
Methacrylonitrile	ug/L						<2500			
Isobutyl alcohol	ug/L						<5000			
1,4-Dioxane	ug/L						<25000			
Methyl methacrylate	ug/L						<250			
Pyridine	ug/L						<5000			
Ethyl methacrylate	ug/L						<250			
1,2-Dibromoethane	ug/L						<250			
1,1,1,2-Tetrachloroethane	ug/L						<250			
1,2,3-Trichloropropane	ug/L						<250			
Dichlorodifluoromethane	ug/L						<250			
Trichlorofluoromethane	ug/L						<250			
Dibromomethane	ug/L						<500			
1,2-Dichloroethylene	ug/L	5 U	78	5 U	5 U	5 U		5 U	5 U	5 U

Table 2 (cont.)

**Analytical Data for Ground Water
Former Amphenol Site, Franklin, IN
Units as Given**

Location:	MW-22	MW-23 Dup	MW-23	MW-24	MW-25	MW-26	
Sample Identification:	892904	894302	894303	892909	897901	894312	
Sample Date:	03/02/92	03/05/92	03/05/92	03/02/92	03/11/92	03/05/92	
<i>Volatiles</i>	<i>Units</i>						
Chloromethane	ug/L	<1000	10 U	10 U	10 U	10 U	10 U
Bromomethane	ug/L	<1000	10 U	10 U	10 U	10 U	10 U
Vinyl chloride	ug/L	<1000	10 U	10 U	10 U	10 U	10 U
Chloroethane	ug/L	<1000	10 U	10 U	10 U	10 U	10 U
Methylene chloride	ug/L	<500	5 U	5 U	2 J	5 U	5 U
Acetone	ug/L	<1000	10 U	10 U	10 U	10 U	10 U
Carbon disulfide	ug/L	<500	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethylene	ug/L	<500	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	ug/L	<500	5 U	5 U	5 U	5 U	5 U
trans-1,2-Dichloroethylene	ug/L	<500					
Chloroform	ug/L	<500	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	ug/L	<500	5 U	5 U	5 U	5 U	5 U
Methyl ethyl ketone	ug/L	<1000	10 U	10 U	10 U	10 U	10 U
1,1,1-Trichloroethane	ug/L	<500	5 U	5 U	44	5 U	5
Carbon tetrachloride	ug/L	<500	5 U	5 U	5 U	5 U	5 U
Vinyl acetate	ug/L	<1000					
Dichlorobromomethane	ug/L	<500	5 U	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	ug/L	<500	5 U	5 U	5 U	5 U	5 U
1,2-Dichloropropane	ug/L	<500	5 U	5 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	ug/L	<500	5 U	5 U	5 U	5 U	5 U
Trichloroethylene	ug/L	3167	5	7	40	5 U	5 U
Dibromochloromethane	ug/L	<500	5 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	ug/L	<500	5 U	5 U	5 U	5 U	5 U
Benzene	ug/L	<500	5 U	5 U	5 U	5 U	5 U
cis-1,3-Dichloropropene	ug/L	<500	5 U	5 U	5 U	5 U	5 U
2-Chloroethylvinyl ether	ug/L	<1000					
Bromoform	ug/L	<500	5 U	5 U	5 U	5 U	5 U
2-Hexanone	ug/L	<1000	10 U	10 U	10 U	10 U	10 U
Methyl isobutyl ketone	ug/L	<1000	10 U	10 U	10 U	10 U	10 U
Tetrachloroethylene	ug/L	16774	40	47	8	2 J	3 J
Toluene	ug/L	<500	5 U	5 U	1 J	5 U	5 U

**Analytical Data for Ground Water
Former Amphenol Site, Franklin, IN
Units as Given**

Location:	MW-22	MW-23 Dup	MW-23	MW-24	MW-25	MW-26	
Sample Identification:	892904	894302	894303	892909	897901	894312	
Sample Date:	03/02/92	03/05/92	03/05/92	03/02/92	03/11/92	03/05/92	
<i>Volatiles</i>	<i>Units</i>						
Chlorobenzene	ug/L	<500	5 U	5 U	5 U	5 U	5 U
Ethylbenzene	ug/L	<500	5 U	5 U	5 U	5 U	5 U
Styrene	ug/L	<500	5 U	5 U	5 U	5 U	5 U
Xylene	ug/L	<500	5 U	5 U	5 U	5 U	5 U
Acrolein	ug/L	<5000					
Iodomethane	ug/L	<500					
3-Chloropropene	ug/L	<500					
Chloroprene	ug/L	<500					
trans-1,4-Dichloro-2-butene	ug/L	<500					
Pentachloroethane	ug/L	<500					
Acetonitrile	ug/L	<10000					
Acrylonitrile	ug/L	<5000					
Penta CDF	ug/L	<1000					
Methacrylonitrile	ug/L	<5000					
Isobutyl alcohol	ug/L	<10000					
1,4-Dioxane	ug/L	<50000					
Methyl methacrylate	ug/L	<500					
Pyridine	ug/L	<10000					
Ethyl methacrylate	ug/L	<500					
1,2-Dibromoethane	ug/L	<500					
1,1,1,2-Tetrachloroethane	ug/L	<500					
1,2,3-Trichloropropane	ug/L	<500					
Dichlorodifluoromethane	ug/L	<500					
Trichlorofluoromethane	ug/L	<500					
Dibromomethane	ug/L	<1000					
1,2-Dichloroethylene	ug/L		5 U	5 U	5 U	5 U	5 U

Footnotes:

U = Chemical not detected at specified detection limit.

J = Estimated value.

Table 2 (cont.)

**Analytical Data for Ground Water
Former Amphenol Site, Franklin, IN
Units as Given**

Location:		GW-103BB	MW-12	MW-22	MW-22Dup
Sample Identification:		892901	892902	892904	892906
Sample Date:		03/04/92	03/02/92	03/02/92	03/02/92
<i>Semi-Volatiles</i>	<i>Units</i>				
Phenol	ug/L	<20	<20	<20	<20
Bis(2-chloroethyl)ether	ug/L	<20	<20	<20	<20
2-Chlorophenol	ug/L	<20	<20	<20	<20
1,3-Dichlorobenzene	ug/L	<20	<20	<20	<20
1,4-Dichlorobenzene	ug/L	<20	<20	<20	<20
Benzyl alcohol	ug/L	<20	<20	<20	<20
1,2-Dichlorobenzene	ug/L	<20	<20	<20	<20
o-Cresol	ug/L	<20	<20	<20	<20
Bis(2-chloroisopropyl)ether	ug/L	<20	<20	<20	<20
m,p-Cresol	ug/L	<20	<20	<20	<20
n-Nitrosodi-n-propylamine	ug/L	<20	<20	<20	<20
Hexachloroethane	ug/L	<20	<20	<20	<20
Nitrobenzene	ug/L	<20	<20	<20	<20
Isophorone	ug/L	<20	<20	<20	<20
2-Nitrophenol	ug/L	<20	<20	<20	<20
2,4-Dimethylphenol	ug/L	<20	<20	<20	<20
Benzoic acid	ug/L	<100	<100	<100	<100
Bis(2-chloroethoxy)methane	ug/L	<20	<20	<20	<20
2,4-Dichlorophenol	ug/L	<20	<20	<20	<20
1,2,4-Trichlorobenzene	ug/L	<20	<20	<20	<20
Naphthalene	ug/L	<20	<20	<20	<20
4-Chloroaniline	ug/L	<20	<20	<20	<20
Hexachloro-1,3-butadiene	ug/L	<20	<20	<20	<20
p-Chloro-m-cresol	ug/L	<20	<20	<20	<20
2-Methylnaphthalene	ug/L	<20	<20	<20	<20
Hexachlorocyclopentadiene	ug/L	<20	<20	<20	<20
2,4,6-Trichlorophenol	ug/L	<20	<20	<20	<20
2,4,5-Trichlorophenol	ug/L	<100	<100	<100	<100
2-Chloronaphthalene	ug/L	<20	<20	<20	<20
2-Nitroaniline	ug/L	<100	<100	<100	<100
Dimethyl phthalate	ug/L	<20	<20	<20	<20
Acenaphthylene	ug/L	<20	<20	<20	<20
3-Nitroaniline	ug/L	<100	<100	<100	<100
Acenaphthene	ug/L	<20	<20	<20	<20
2,4-Dinitrophenol	ug/L	<100	<100	<100	<100
4-Nitrophenol	ug/L	<100	<100	<100	<100
Dibenzofuran	ug/L	<20	<20	<20	<20
2,4-Dinitrotoluene	ug/L	<20	<20	<20	<20
2,6-Dinitrotoluene	ug/L	<20	<20	<20	<20
Diethyl phthalate	ug/L	<20	<20	<20	<20
4-Chlorodiphenyl ether	ug/L	<20	<20	<20	<20
Fluorene	ug/L	<20	<20	<20	<20
4-Nitroaniline	ug/L	<100	<100	<100	<100

Table 2 (cont.)
Analytical Data for Ground Water
Former Amphenol Site, Franklin, IN
Units as Given

Location:		GW-103EB	MW-12	MW-22	MW-22Dup
Sample Identification:		892901	892902	892904	892906
Sample Date:		03/04/92	03/02/92	03/02/92	03/02/92
<i>Semi-Volatiles</i>	<i>Units</i>				
4,6-Dinitro-o-cresol	ug/L	<100	<100	<100	<100
n-Nitrosodiphenylamine	ug/L	<20	<20	<20	<20
4-Bromodiphenyl ether	ug/L	<20	<20	<20	<20
Hexachlorobenzene	ug/L	<20	<20	<20	<20
Pentachlorophenol	ug/L	<20	<20	<20	<20
Phenanthrene	ug/L	<20	<20	<20	<20
Anthracene	ug/L	<20	<20	<20	<20
Di-n-butyl phthalate	ug/L	<20	<20	<20	<20
Fluoranthene	ug/L	<20	<20	<20	<20
Pyrene	ug/L	<20	<20	<20	<20
Butyl benzyl phthalate	ug/L	<20	<20	<20	<20
3,3'-Dichlorobenzidine	ug/L	<40	<40	<40	<40
Benzo(a)anthracene	ug/L	<20	<20	<20	<20
Bis(2-ethyl hexyl)phthalate	ug/L	<20	<20	<20	<20
Chrysene	ug/L	<20	<20	<20	<20
Di-n-octyl phthalate	ug/L	<20	<20	<20	<20
Benzo(b)fluoranthene	ug/L	<20	<20	<20	<20
Benzo(k)fluoranthene	ug/L	<20	<20	<20	<20
Benzo(a)pyrene	ug/L	<20	<20	<20	<20
Indeno(1,2,3-cd)pyrene	ug/L	<20	<20	<20	<20
Dibenz(a,h)anthracene	ug/L	<20	<20	<20	<20
Benzo(ghi)perylene	ug/L	<20	<20	<20	<20
Parathion	ug/L	<40	<40	<40	<40
Ethyl methanesulfonate	ug/L	<20	<20	<20	<20
p-Phenylenediamine	ug/L	<20	<20	<20	<20
n-Nitrosodiethylamine	ug/L	<20	<20	<20	<20
n-Nitrosomethylethylamine	ug/L	<20	<20	<20	<20
n-Nitrosodi-n-butylamine	ug/L	<20	<20	<20	<20
n-Nitrosopiperidine	ug/L	<20	<20	<20	<20
5-Nitro-o-toluidine	ug/L	<20	<20	<20	<20
4-Dimethylaminoazobenzene	ug/L	<20	<20	<20	<20
Methyl parathion	ug/L	<0.03	<0.033	<0.03	<0.03
Safrole	ug/L	<40	<40	<40	<40
Isosafrole	ug/L	<40	<40	<40	<40
2-Picoline	ug/L	<20	<20	<20	<20
Phenacetin	ug/L	<20	<20	<20	<20
2-Toluidine	ug/L	<20	<20	<20	<20
3,3'-Dimethylbenzidine	ug/L	<100	<100	<100	<100
m-Dinitrobenzene	ug/L	<20	<20	<20	<20
a,a-Dimethylphenethylamine	ug/L	<20	<20	<20	<20
O,O,O-Triethyl phosphorothioate	ug/L	<20	<20	<20	<20
Methapyrilene	ug/L	<40	<40	<40	<40
Diallate	ug/L	<40	<40	<40	<40

Table 2 (cont.)
Analytical Data for Ground Water
Former Amphenol Site, Franklin, IN
Units as Given

Location:		GW-103EB	MW-12	MW-22	MW-22D _{up}
Sample Identification:		892901	892902	892904	892906
Sample Date:		03/04/92	03/02/92	03/02/92	03/02/92
<i>Semi-Volatiles</i>	<i>Units</i>				
1,3,5-Trinitrobenzene	ug/L	<200	<200	<200	<200
Famphur	ug/L	<20	<20	<20	<20
4-Nitroquinoline-1-oxide	ug/L	<200	<200	<200	<200
1,2,4,5-Tetrachlorobenzene	ug/L	<20	<20	<20	<20
Pentachloronitrobenzene	ug/L	<20	<20	<20	<20
Phorate	ug/L	<0.15	<0.16	<0.15	<0.15
7,12-Dimethylbenz(a)anthracene	ug/L	<20	<20	<20	<20
n-Nitrosodimethylamine	ug/L	<20	<20	<20	<20
2,4,5,6-Tetrachlorophenol	ug/L	<20	<20	<20	<20
Chlorobenzilate	ug/L	<20	<20	<20	<20
Thionazin	ug/L	<40	<40	<40	<40
Disulfoton	ug/L	<0.2	<0.22	<0.2	<0.2
Isodrin	ug/L	<200	<200	<200	<200
n-Nitrosomorpholine	ug/L	<20	<20	<20	<20
Pentachlorobenzene	ug/L	<20	<20	<20	<20
4-Aminobiphenyl	ug/L	<20	<20	<20	<20
Hexachloropropene	ug/L	<20	<20	<20	<20
2,6-Dichlorophenol	ug/L	<20	<20	<20	<20
Sulfotepp	ug/L	<20	<20	<20	<20
Methyl methanesulfonate	ug/L	<20	<20	<20	<20
1,4-Naphthoquinone	ug/L	<20	<20	<20	<20
n-Nitrosopyrrolidine	ug/L	<20	<20	<20	<20
Acetophenone	ug/L	<20	<20	<20	<20
Dimethoate	ug/L	<20	<20	<20	<20
3-Methylcholanthrene	ug/L	<20	<20	<20	<20
2-Acetylaminofluorene	ug/L	<20	<20	<20	<20
Aniline	ug/L	<100	<100	<100	<100
1,2-Dibromo-3-chloropropane	ug/L	<20	<20	<20	<20
Hexachlorophene	ug/L	<20	<20	<20	<20
Kepon	ug/L	<100	<100	<100	<100
1-Naphthylamine	ug/L	<20	<20	<20	<20
2-Naphthylamine	ug/L	<20	<20	<20	<20
Pronamide	ug/L	<100	<100	<100	<100
Aramite	ug/L	<200	<200	<200	<200

**Analytical Data for Ground Water
Former Amphenol Site, Franklin, IN**
Units as Given

Location:	GW-103EB	MW-12	MW-22	MW-22Dup	
Sample Identification:	892901	892902	892904	892906	
Sample Date:	03/04/92	03/02/92	03/02/92	03/02/92	
<i>Pesticides</i>	<i>Units</i>				
Azinphos-methyl	ug/L	<1.5	<1.6	<1.5	<1.5
Bolstar	ug/L	<0.15	<0.16	<0.15	<0.15
Chlorpyrifos	ug/L	<0.3	<0.33	<0.3	<0.3
Coumaphos	ug/L	<1.5	<1.6	<1.5	<1.5
Demeton-S	ug/L	<0.25	<0.27	<0.25	<0.25
Diazinon	ug/L	<0.6	<0.66	<0.6	<0.6
Dichlorvos	ug/L	<0.1	<0.11	<0.1	<0.1
Disulfoton	ug/L	<0.2	<0.22	<0.2	<0.2
Ethoprop	ug/L	<0.25	<0.27	<0.25	<0.25
Fensulfothion	ug/L	<1.5	<1.6	<1.5	<1.5
Fenthion	ug/L	<0.1	<0.11	<0.1	<0.1
Merphos	ug/L	<0.25	<0.27	<0.25	<0.25
Mevinphos	ug/L	<0.3	<0.33	<0.3	<0.3
Naled	ug/L	<0.1	<0.11	<0.1	<0.1
Methyl parathion	ug/L	<0.03	<0.033	<0.03	<0.03
Malathion	ug/L	<0.5	<0.55	<0.5	<0.5
Phorate	ug/L	<0.15	<0.16	<0.15	<0.15
Ronnel	ug/L	<0.3	<0.33	<0.3	<0.3
Stirofos	ug/L	<5	<5.5	<5	<5
PCB: aroclor 1016	ug/L	<1	<1	<1	<1
PCB: aroclor 1221	ug/L	<1	<1	<1	<1
PCB: aroclor 1232	ug/L	<1	<1	<1	<1
PCB: aroclor 1242	ug/L	<1	<1	<1	<1
PCB: aroclor 1248	ug/L	<1	<1	<1	<1
PCB: aroclor 1254	ug/L	<2	<2	<2	<2
PCB: aroclor 1260	ug/L	<2	<2	<2	<2
TCDD, total	ug/L	<0.0031	<0.0006	<0.0018	<0.0014
Penta CDD, total	ug/L	<0.0045	<0.0007	<0.0022	<0.0008
Hexa CDD, total	ug/L	<0.0013	<0.0028	<0.0017	<0.0015
Hepta CDD, total	ug/L	<0.0058	<0.003	<0.0025	<0.0029
Octa CDD, total	ug/L	<0.0063	<0.0079	<0.0055	<0.0048
Tetra CDF, total	ug/L	<0.0006	<0.0002	<0.0014	<0.0015
Penta CDF, total	ug/L	<0.0018	<0.0013	<0.0014	<0.0004
Hexa CDF, total	ug/L	<0.0018	<0.0006	<0.0012	<0.0017
Hepta CDF, total	ug/L	<0.0021	<0.0008	<0.0014	<0.0015
Octa CDF, total	ug/L	<0.0059	<0.0056	<0.0032	<0.0025
2,4-D	ug/L	<1.8	<1.8	<1.8	<1.8
2,4,5-T	ug/L	<0.3	<0.3	<0.3	<0.3
Silvex (2,4,5-TP)	ug/L	<0.3	<0.3	<0.3	<0.3
2-sec-Butyl-4,6-dinitro-phenol	ug/L	<0.3	<0.3	<0.3	<0.3

Table 2 (cont.)

**Analytical Data for Ground Water
Former Amphenol Site, Franklin, IN
Units as Given**

Location:		GWIT-1A	GWIT-1A	GWIT-2	GWIT-2	GWIT-3	MW-03	MW-09	MW-12	MW-12Dis	MW-20	MW-21Dup
Sample Identification:		894311	896002	894313	896001	894301	892911	894304	892902	892903	894307	894308
Sample Date:		03/05/92	03/06/92	03/05/92	03/06/92	03/05/92	03/02/92	03/05/92	03/02/92	03/02/92	03/05/92	03/05/92
<i>Inorganics</i>	<i>Units</i>											
Aluminum	ug/L	484		6020		11000	4860	8610			5710	101 B
Antimony	ug/L	17 UN		17 UN		17 UN	17 U	17 UN	<60	<60	17 UN	17 UN
Arsenic	ug/L	77 N		6 UN		6 UNWM	3.3 B	6 UN	<10	<10	6 UN	6 UN
Barium	ug/L	114 B		694		423	269	270	559	101	380	528
Beryllium	ug/L	1 U		1.1 B		1.8 B	1 U	1.4 B	<5	<5	1.1 B	1 U
Cadmium	ug/L	2 U		2 U		2 U	2 U	2 U	<5	<5	2 U	2 U
Calcium	ug/L	63000		394000		567000	340000	525000			612000	1170000
Chromium	ug/L	4 U		16.9		32.8	15.6	27	24.7	<5	20.1	87.3
Cobalt	ug/L	4 U		15.3 B		34.4 B	8 B	15.6 B	80.4	<10	12.5 B	11 B
Copper	ug/L	6 U		76.7		94.9	90.6	72.7	160	<10	67.4	18.1 B
Iron	ug/L	2920		21200		28400	8790	16700			13200	407
Lead	ug/L	2.7 B*		41.7 S*		79 *	29.5 S	58.5 *	623.4	9.08	40.8 *	4.6 *
Magnesium	ug/L	30800		123000		187000	65700	158000			232000	323000
Manganese	ug/L	202		1730		2800	982	1030			2840	2440
Mercury	ug/L	0.2 U		0.2		0.3	0.26	0.38	0.49	<0.2	0.34	0.45
Nickel	ug/L	11.3 B		50.1		64.6	58.8	47.6	118	<10	40.9	122
Potassium	ug/L	1830 B		3610 B		3510 B	3540 B	3840 B			4590 B	3520 B
Selenium	ug/L	3 U		3 U		5.3	3.4 B	4.3 B	7.75	<5	3 U	25.9 SM
Silver	ug/L	2 U		2 U		2 U	12.1	2 U	<10	<10	2 U	2 U
Sodium	ug/L	34800		20900		7390	8790	9530			10300	7530
Sulfide, total	ug/L											
Thallium	ug/L	2 UN		2 UN		2 UN	2 U	2 UN	<10	<10	2 UN	2 UN
Tin	ug/L								<50	511		
Vanadium	ug/L	4 U		23 B		36.9 B	20 B	42.1 B	28.9	<10	35.4 B	89
Zinc	ug/L	9.2 BE		110 E		177 E	94.4 E	198 E	345	11.9	1080 E	5.3 BE
Cyanide	ug/L					10 U	10 U	10 U			10 U	10 U
Cyanide, amenable	ug/L		<10		<10	<10	<10	<10			<10	<10

Table 2 (cont.)

**Analytical Data for Ground Water
Former Amphenol Site, Franklin, IN
Units as Given**

Location:	MW-21	MW-21	MW-22	MW-22D13	MW-22Dup	MW-23Dup	MW-23	MW-24	MW-25	MW-26	MW-26
Sample Identification:	894309	896003	892904	892905	892906	894302	894303	892909	897901	894312	934301
Sample Date:	03/05/92	03/06/92	03/02/92	03/02/92	03/02/92	03/05/92	03/05/92	03/02/92	03/11/92	03/05/92	04/16/92
<i>Inorganics</i>	<i>Units</i>										
Aluminum	ug/L	8500				14700	15800	15600	700	6020	
Antimony	ug/L	17 UN	<60	<60		17 UN	17 UN	17 U	16 U	17 UN	
Arsenic	ug/L	6 UN	<10	<10		7.4 BN	7.6 BN	4.4 B	6 U	6 UN	
Barium	ug/L	472	307	82.4		473	500	505	64.2 B	223	
Beryllium	ug/L	2.6 B	<5	<5		1.9 B	2.1 B	2.3 B	1 U	1 U	
Cadmium	ug/L	2.5 B	<5	<5		2 U	2 U	2 U	2 U	2 U	
Calcium	ug/L	1000000				169000	193000	774000	60000	345000	
Chromium	ug/L	58.5	36.5	<5		25.6	28.4	37.1	3 U	23.2	
Cobalt	ug/L	75	34.3	<10		11.8 B	13.6 B	23.1 B	6 U	11 B	
Copper	ug/L	510	234	<10		121	130	142	4 U	47.4	
Iron	ug/L	7670				23100	26000	18100	1220	16900	
Lead	ug/L	162 *	68.42	<3		95.7 *	69.3 *	89.4 W	4.3 W	32.4 S*	
Magnesium	ug/L	342000				63200	73300	178000	26600	114000	
Manganese	ug/L	3520				2900	3250	2170	357	1020	
Mercury	ug/L	0.35	0.26	<0.2		0.2 U	0.2 U	0.67	0.2 U	0.23	
Nickel	ug/L	538	92.9	<10		34.6 B	41.7	65.2	8 U	43.4	
Potassium	ug/L	3570 B				2880 B	2870 B	5530	2250 B	7010	
Selenium	ug/L	7.5	<5	<5		3 U	3 U	4.9 BS	2 U	3 UW	
Silver	ug/L	46.7	62.2	<10		2 U	2 U	2 U	1 U	2 U	
Sodium	ug/L	6530				30900	31200	5840	25700	10000	
Sulfide, total	ug/L					<1000					
Thallium	ug/L	2 UN	<10	<10		2 UN	2 UN	2 U	2 U	2 UN	
Tin	ug/L		<50	<50							
Vanadium	ug/L	63.8	70.5	<10		35.7 B	37 B	53.8	6 U	22.7 B	
Zinc	ug/L	256 E	236	<10		234 E	261 E	224 E	17.2 B	89.9 E	
Cyanide	ug/L					10 U	10 U	10 U	10 U		
Cyanide, amenable	ug/L		<10			<10	<10	<10	<10		<10

**Analytical Data for Ground Water
Former Amphenol Site, Franklin, IN**
Units as Given

Footnotes:

U = Chemical not detected at specified detection limit.

* = Duplicate analysis was not within control limits.

B = Reported value is below Contract Required Detection Limit (DL) but above instrument DL.

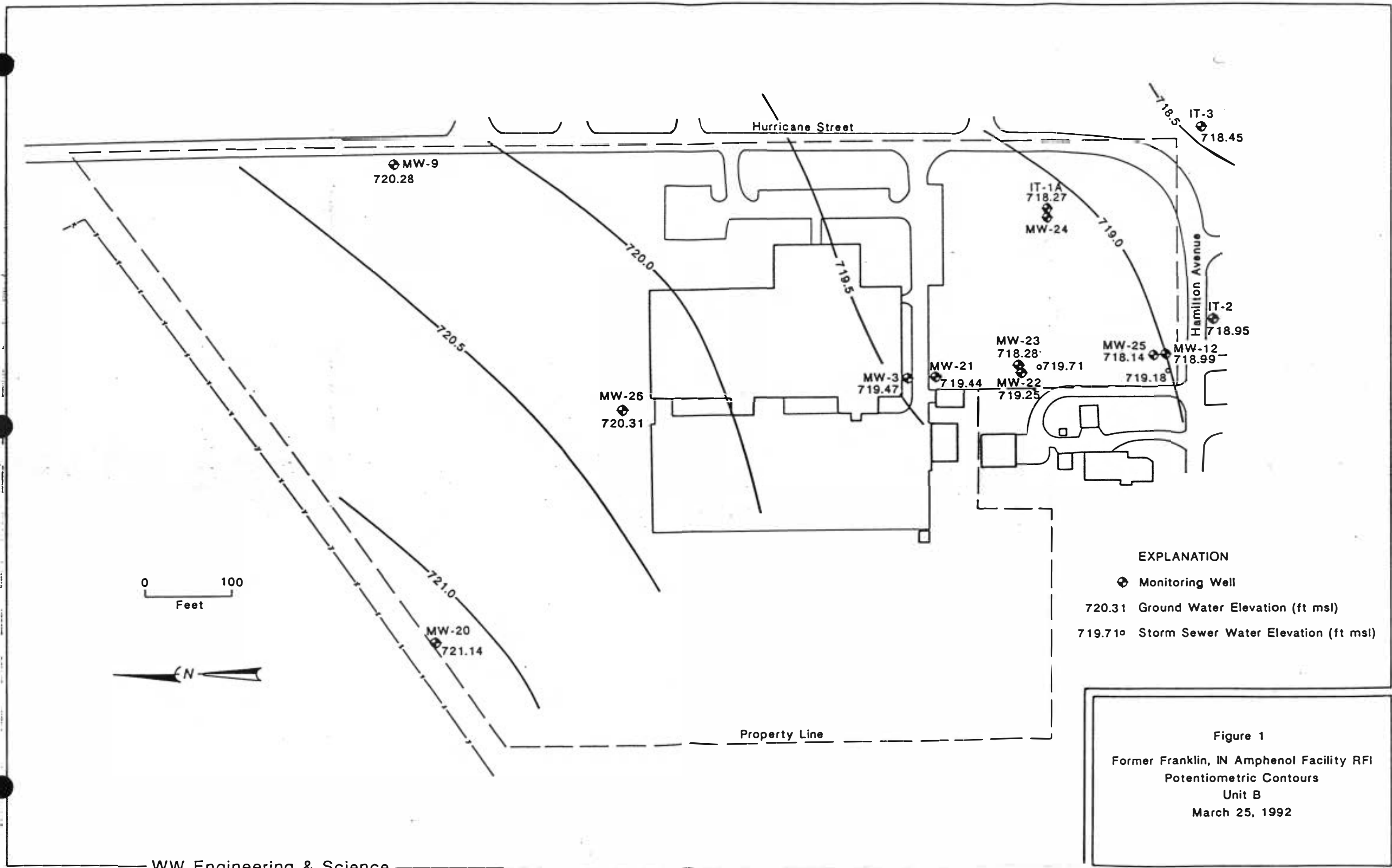
E = Value is estimated due to matrix spike interferences.

M = Duplicate injection precision criteria not met.

N = Spiked sample recovery not within control limits.

S = Reported value was determined by the Method of Standard Additions (MSA).

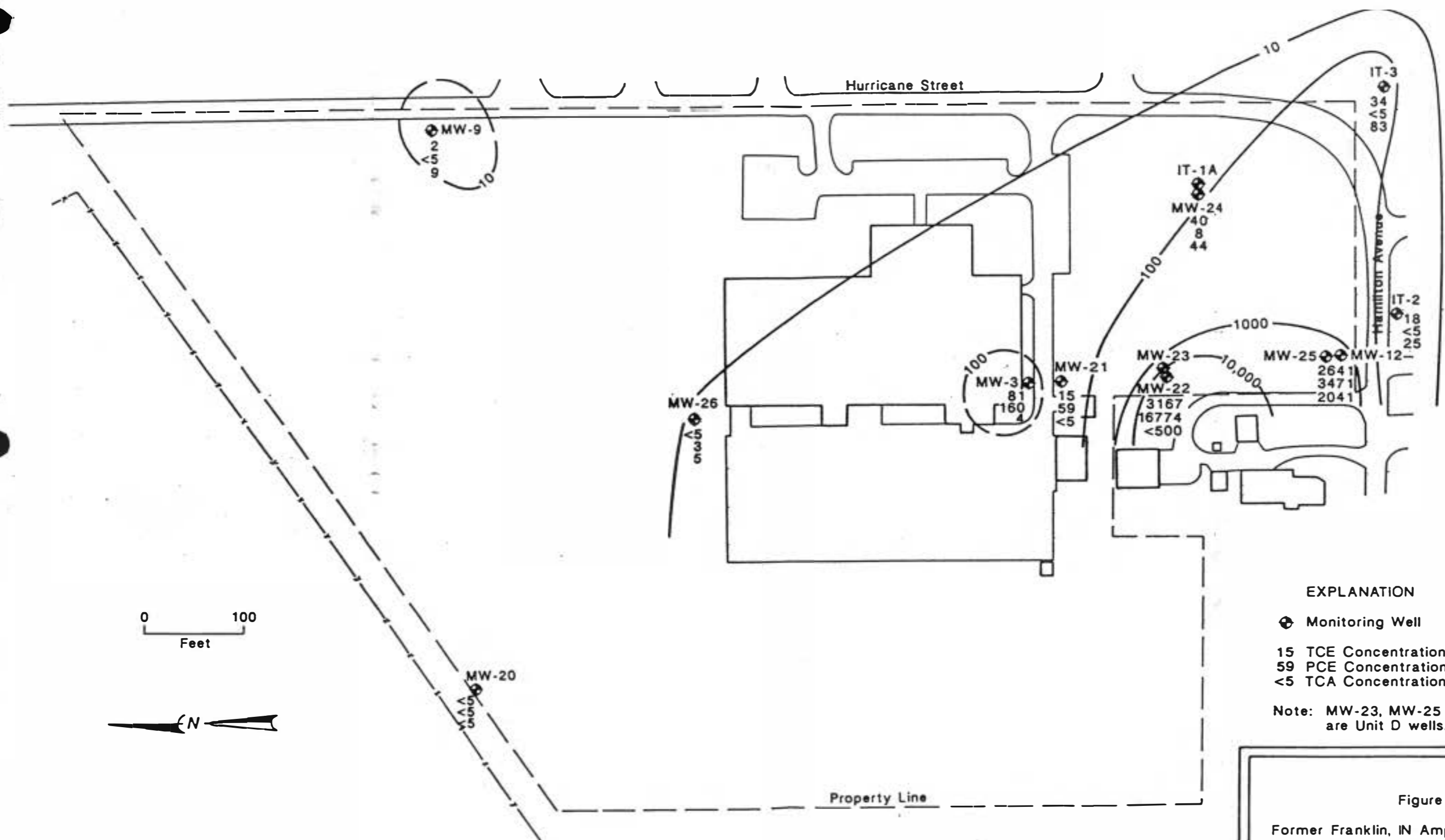
W = Post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is <50% of spike absorbance.



EXPLANATION

- ⊕ Monitoring Well
- 720.31 Ground Water Elevation (ft msl)
- 719.71° Storm Sewer Water Elevation (ft msl)

Figure 1
 Former Franklin, IN Amphenol Facility RFI
 Potentiometric Contours
 Unit B
 March 25, 1992



EXPLANATION

- ⊕ Monitoring Well
- 15 TCE Concentration (ug/L)
- 59 PCE Concentration (ug/L)
- <5 TCA Concentration (ug/L)

Note: MW-23, MW-25 and IT-1A are Unit D wells.

Figure 2
Former Franklin, IN Amphenol Facility RFI
Ground Water Isoconcentration
Map for Combined TCE, PCE
and TCA in Unit B

Sheet 1, Topographic Map

included in report as Sheet 1

DRAFT

Sheet 2, Geologic Cross Sections

included in report as Sheets 4A and 4B

APPENDIX C

Survey data.

DRAFT

Appendix C. Survey Data.

Point	Northing (feet)	Easting (feet)	Elevation (feet above MSL)	
			T.O.C.	Ground
SE Corner	811.49	2010.37	NA	732.46
New Sanitary Sewer MH South	738.82	1802.49	733.79	(Top of Cast.)
New Sanitary Sewer MH North	964.25	1801.83	734.96	(Top of Cast.)
SB-3	1199	1732	NA	735.05
SB-4	1215	1738	NA	735.28
SB-5	1267	1690	NA	735.36
SB-6	769	1766	NA	733.95
SB-7	852	1768	NA	734.47
SB-8	1054	1772	NA	735.28
SB-9	1054	1745	NA	735.36
SB-22A	717	1768	NA	734.97
MW-3	1052	1766	736.44	735.32
MW-9	1663	2015	733.04	730.52
MW-12	760	1795	736.38	733.84
MW-20	1667	1452	734.03	731.84
MW-21	1021	1766	737.91	735.11
MW-22	920	1773	737.64	735.03
MW-23	921	1773	737.43	735.07
MW-24	894	1958	736.02	733.83
MW-25	765	1795	736.21	733.77
MW-26	1396	1727	736.39	734.04
MW-27	1063	1585	736.63	734.25
MW-28	991	1689	738.04	735.67
MW-29	918	1604	737.61	734.86
MW-30	741	1949	734.84	732.41
IT-1A	894	1964	736.38	733.87
IT-2	695	1893	732.25	732.44
IT-3	706	2062	728.71	728.96
PGP-1	707.82	2232.13	NA	727.77
PGP-2	376.69	1919.87	NA	727.12
PGP-3	726.44	1484.69	NA	734.77
PGP-4	758.89	1793.81	NA	733.72
PGP-6	470.55	1420.17	NA	731.15
PGP-7	104.74	1309.98	NA	728.36
PGP-8	736.43	1630.63	NA	734.61
PGP-9	115.21	1625.42	NA	727.92
PGP-10	-106.12	1842.40	NA	723.82
PGP-11	-624.63	1634.05	NA	720.75

NA = Not applicable

T.O.C. = Top of Casing

APPENDIX D

**Soil boring logs and monitoring
well completion diagrams.**

DRAFT

Date Former Amphenol
 February 7, 1992
 Logged by M. Lytle
 Location 1199 N. 1732 E

Boring No. SB-3
 Driller A. Schrader
 Elevation 735.05
 Page 1 of 1

Water Level				Start	Finish
Time				Time 10:00	Time 10:45
Date				Date 2/7/92	Date 2/7/92

SAMPLE TYPE	DEPTH (ft)	DEPTH (ft)	BLOWS (6")	DEPTH (ft)	DEPTH (ft)	DESCRIPTION
SS	2.0	1.5	4	0	0	Gravel, coarse, pebbly, lt gry (10 YR 7/1), moist, (fill), abrupt contact @ 0.5' to loam, trace pebbles, dark brown (10 YR 3/3), moist, friable, noncalcareous, massive
			5	1		
			6	2		
SS	2.0	1.2	4	2	0	Loam, as above, gradual contact @ 2.7' to silty clay loam, trace pebbles, dark yellowish brown (10 YR 4/4), moist, friable, noncalcareous, massive
			6	3		
			12	4		
3SS	2.0	1.7	5	4	0.2	Silty clay loam, as 2.7' above, faint contact @ 4.6' to loamy sand, coarse, pebbly, dark yellowish brown (10 YR 4/4), moist, friable, noncalcareous, massive
			7	5		
			10	6		
S	2.0	2.0	4	6	0.6	Loamy sand, as 4.6' above
			3	7		
			2	8		
3SS	2.0	1.3	2	8	1.0	Sand, medium to coarse, pebbly, brown (10 YR 5/3), moist, loose, calcareous, poorly sorted
			3	9		
			2	10		
			1	10		T.D. 10.0 ft
			2	11		
			3	12		
			4	13		
			5	14		
			6	15		
			7	16		
			8	17		
			9	18		
			0	19		

Remarks Mobile B-57 equipped with 4 1/4" ID/ 8 1/4" OD HSA
 Borehole collapsed to 5 feet below ground surface when augers were pulled.
 Borehole was backfilled on completion with cement grout.

Date Former Amphenol
 February 7, 1992
 Logged by M. Lytle
 Location 1215 N. 1738 E

Boring No. SB-4
 Driller A. Schrader
 Elevation 735.28
 Page 1 of 1

Water Level					Start	Finish
Time					Time 11:30	Time 12:00
Date					Date 2/7/92	Date 2/7/92

SAMPLE TYPE	DEPTH	DEPTH CORRECTED	BLOWS (6")	DEPTH (ft.)	DEPTH	DESCRIPTION
SS	2.0	0.3	3 5 6	0 1		Gravel, coarse, light gray (10 YR 7/1), (fill)
SS	2.0	0.6	9 3 4 4	2 3		Clay loam, pebbly, dark yellowish brown (10 YR 4/4), moist, friable, noncalcareous
3SS	2.0	1.2	2 3 9 10 14	4 5 6	0	Loam, pebbly, dark yellowish brown (10 YR 4/4), moist, friable, noncalcareous, massive, abrupt contact @ 4.6' to loamy sand, coarse, pebbly, dark yellowish brown (10 YR 4/4), moist, friable, noncalcareous, massive
SS	2.0	1.4	10 7 3 2	7 8	0.2	Loamy sand, as 4.6' above
3SS	2.0	1.3	3 4 5 4	9 10	0.7	Loamy sand, as 4.6' above, abrupt contact @ 8.3' to sand, coarse, pebbly, brown (10 YR 5/3), moist, loose, noncalcareous, poorly sorted
				1 2 3 4 5 6 7 8 9 10		T.D. 10.0 ft

Remarks Mobile B-57 equipped with 4 1/4" ID/ 8 1/4" OD HSA
 Borehole collapsed to 5 feet below ground surface when augers were pulled.
 Borehole was backfilled on completion with cement grout.

Date Former Amphenoil
February 10, 1992
Logged by M. Lytle
Location 1267 N, 1690 E

Boring No. SB-5
Driller A. Schrader
Elevation 735.36
Page 1 of 1

Water Level					Start	Finish
Time					Time 10:00	Time 10:40
Date					Date 2/10/92	Date 2/10/92

SAMPLE TYPE	DIENE	DEPTH (feet)	BLOWS (6")	DEPTH (ft.)	NO.	DESCRIPTION
3SS	2.0	1.8	7 9 8 11	0 1 2	0.6	Silt loam, dark yellowish brown (10 YR 3/4), moist, friable, massive, abrupt contact @ 0.3' to silty clay loam, pebbly, dark yellowish brown (10 YR 3/4), moist, friable, noncalcareous, massive
3SS	2.0	1.6	4 3 8	3	0.6	Silty clay loam, as 0.3 ft above, gradual contact @ 2.6' to sandy loam, fine, dark yellowish brown (10 YR 4/6), moist, friable, sl plastic, noncalcareous, massive
SS	2.0	1.7	7 4 5 7	4 5	0.6	Sandy loam, as 2.6' above, contact @ 4.5' to loamy sand, medium coarse, trace pebbles, dark yellowish brown (10 YR 4/6), moist, poorly washed & sorted
	2.0	1.1	4 4 8	6 7	0.6	Loamy sand, as 4.5' above, abrupt contact @ 7.2' to sand, coarse, with coarse gravel, brown (10 YR 5/3), moist, calcareous, poorly washed & sorted
SS	2.0	1.1	10 4 7 8 12	8 9 10	0.6	Sand, coarse, as 7.2' above
				1 2 3		
SS	2.0	0.7	7 12 14	4	0.6	Sand, medium, grayish brown (10 YR 5/2), moist to wet, nonplastic, calcareous, poorly washed & sorted
SS	2.0	1.6	4 5 8 9	5 6 7	0.6	Sand, medium, as 13.0' above, wet, nonplastic
				8 9 0		T.D. 17.0 ft

Remarks Mobile B-57 equipped with 4 1/4" ID/ 8 1/4" OD HSA

Borehole collapsed to 7.0 feet below ground surface when augers were pulled.
Borehole was backfilled on completion with cement grout.

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Former Amphenol
 Date February 12, 1992
 Logged by M. Lytle
 Location 769 N, 1766 E

Boring No. SB-6
 Driller A. Schrader
 Elevation 733.95
 Page 1 of 2

Water Level					Start	Finish
Time					Time 10:15	Time 13:30
Date					Date 2/12/92	Date 2/12/92

SAMPLE TYPE	DRIVEN	CHUCKER	BLOWS (6")	DEPTH (ft.)	HN	DESCRIPTION
SS	2.0	2.0	4 7 5	0 1	4.2	Silt loam, dark brown (10 YR 3/3), moist, friable, massive, abrupt contact @ 0.35' to loam, pebbly, dark brown (10 YR 3/3), moist, friable, massive, abrupt contact @ 1.3' to clay loam, slightly pebbly, dark brown (10 YR 4/6), moist, friable, massive
SS	2.0	1.0	4 3 5 5	2 3	2.0	
SS	2.0	1.3	7 2 3 4	4 5	3.3	Loamy sand, coarse, pebbly, dark brown (7.5 YR 4/4), moist, friable, poorly washed & sorted
SS	2.0	2.0	2 3 7	6 7	2.8	Loamy sand, as 4.0' above, abrupt contact @ 6.6' to sand, medium to coarse, pebbly, brown (10 YR 5/3), moist to dry, loose, moderately sorted, color change @ 7.5' to grayish brown (10 YR 5/2), bedded
3SS	1.0	0.1	12 3 50	8 9	0.8	Sand, medium to coarse, as 7.5' above, large stone in shoe
SS	2.0	1.2	12 34 7	3 4	4.6	Sand, medium to coarse, as 7.5' above, moist, stone in shoe
SS	2.0	1.0	9 12 50	5 6	38.0	Sand, coarse, pebbly, gray (10 YR 5/1), wet, poorly washed & sorted, with iron staining
SS	2.0	1.4	7	20	85.0	Sand & gravel, gray (10 YR 5/1), wet, poorly sorted

Remarks Mobile B-57 equipped with 4 1/4" ID/ 8 1/4" HSA
 Borehole collapsed to 14.0 feet below ground surface when augers were pulled.
 Borehole was backfilled on completion with cement grout.

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Date Former Amphenol
February 12, 1992
Logged by M. Lytle
Location 769 N, 1766 E

Boring No. SB-6
Driller A. Schrader
Elevation 733.95
Page 2 of 2

Water Level					Start	Finish
Time					Time 10:15	Time 13:30
Date					Date 2/12/92	Date 2/12/92

SAMPLE TYPE	DRIVE	DEPTH (feet)	BOWS (6")	DEPTH (ft.)	SIZE	DESCRIPTION
SS	2.0	1.4	5	20		
			5	1		
			6			
SS	1.0	0.7	12	2	40.0	Sand & gravel, as 19.5' above
			14	3		
			50	4		
				5		
SS	2.0	<0.1	12	5		Loam, pebbly, dk gry (10 YR 4/1), moist, firm
			14	6		
			25	7		
			50	8		T.D. 25.0ft
				9		
				0		
				1		
				2		
				3		
				4		
				5		
				6		
				7		
				8		
				9		
				0		

Remarks Dark gray loam on lower 0.5' of augers @ removal.

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Date Former Amphenol
February 21, 1992
Logged by M. Lyle
Location 852 N, 1768 E

Boring No. SB-7
Driller A. Schrader
Elevation 734.47
Page 1 of 1

Water Level						Start		Finish	
Time						Time	9:40	Time	10:35
Date						Date	2/21/92	Date	2/21/92

SAMPLE TYPE	DEPTH	DEPTH CORRECTED	BLOWS (6")	DEPTH (ft.)	ELEVATION	DESCRIPTION
SS	2.0	1.8	2 5 7 12	0 1 2	1.2	Silt loam, dark yellowish brown (10 YR 3/4), moist, friable, noncalcareous, massive, contact @ 0.4' to loam, abundant sand, pebbly, dark yellowish brown (10 YR 4/3), moist, friable, noncalcareous, massive
SS	2.0	1.5	2 5 7	3	5.6	Loam, as 0.4' above
SS	2.0	0.7	7 1 3 2 1	4 5 6	10.4	Loamy sand, coarse, pebbly, dark yellowish brown (10 YR 4/6), moist, loose, noncalcareous, poorly washed & sorted
SS	2.0	1.6	6 8 9 9	7 8	20.0	Loamy sand, as 4.0' above, abrupt contact @ 6.4' to sand, medium to coarse, pebbly, yellowish brown (10 YR 5/4), moist, loose, calcareous, poorly sorted
3SS	1.0	0.5	6 50	9	18.0	Sand, as 6.4' above
SS	1.0	0.6	25 50	3 4	9.4	Sandy gravel, pebbly, yellowish brown (10 YR 5/4), dry, loose, calcareous, poorly sorted
3SS	1.0	0.5	6 50	5 6	8.5	Sandy gravel, as 13.0' above, moist below 15.2'
3SS	2.0	2.0	48 35 30 6	7 8	60.0	Sandy gravel, as 13.0' above, wet
				9		T.D. 18.0 feet
				0		

Remarks Mobile B-57 equipped with 4 1/4" ID/ 8 1/4" OD HSA

Borehole was backfilled on completion with cement grout.

Date Former Amphenol
February 10, 1992
Logged by M. Lytle
Location 1054 N, 1772 E

Boring No. SB-8
Driller A. Schrader
Elevation 735.28 ft
Page 1 of 1

Water Level					Start	Finish
Time					Time 13:15	Time 14:10
Date					Date 2/10/92	Date 2/10/92

SAMPLE TYPE	DRIVE	ROCKET	BLOWS (6")	DEPTH (ft.)	HN	DESCRIPTION
3SS	2.0	2.0	4 9 14 24	0 1 2	0.5	Silt loam, dark yellowish brown (10 YR 3/4), dry, loose, noncalcareous, massive, abrupt contact @ 0.3' to sandy clay loam, trace pebbles, dark yellowish brown (10 YR 4/6), moist, friable, calcareous, massive
SS	2.0	1.6	3 4 6 7	3 4	0.6	Sandy clay loam, as 0.3' above
SS	2.0	1.7	3 5 5 4	5 6	0.7	Sandy clay loam, as 0.3' above, abrupt contact @ 4.3' to loamy sand, dark brown (7.5 YR 4/4), moist, loose, noncalcareous, poorly washed & sorted
	2.0	1.4	3 6 7 5	7 8	1.3	Loamy sand, as 4.3' above
SS	2.0	1.4	3 2 1 1	9 10	8.6	Loamy sand, as 4.3' above, abrupt contact @ 8.5' to sand, medium to coarse, pebbly, brown (10 YR 5/3), moist, loose, calcareous, poorly washed & sorted
				1 2 3		
3SS	1.0	0.5	5 50	4 5	13.0	Sand, fine to medium, trace pebbles, brown (10 YR 5/3), moist, loose, calcareous, poorly washed & sorted
				6		
3SS	2.0	2.0	5 36 5 4	7 8 9	15.0	Sand, fine to medium, as 14.0' above, abrupt contact @ 17.3' to sand, coarse, brown (10 YR 5/3), wet, poorly washed & sorted
				0		T.D. 19.0 ft

Remarks Mobile B-57 equipped with 4 1/4" ID/ 8 1/4" OD HSA

Borehole collapsed to 14.0 feet below ground surface when augers were pulled.
Borehole was backfilled on completion with cement grout.

Former Amphenol
 Date February 21, 1992
 Logged by M. Lytle
 Location 1054 N, 1745 E

Boring No. SB-9
 Driller A. Schrader
 Elevation 735.36
 Page 1 of 1

Water Level					Start	Finish
Time					Time 13:00	Time 14:00
Date					Date 2/21/92	Date 2/21/92

SAMPLE TYPE	DEPTH (ft.)	DEPTH (ft.)	BOWS (6")	DEPTH (ft.)	DEPTH (ft.)	DESCRIPTION
SS	2.0	1.8	3 5 6 7	0 1 2	0.6	Silt loam, very dark yellowish brown (10 YR 3/2), moist, friable, slightly plastic, noncalcareous, massive, abrupt contact @ 0.7' to sandy clay loam, pebbly, dark yellowish brown (10 YR 4/4), moist, slightly plastic, noncalcareous, massive
SS	2.0	0.6	4 5 7	3	0.6	Sandy clay loam, as 0.7' above
SS	2.0	1.2	3 2 3 3	4 5	1.6	Sandy clay loam, as 0.7' above, abrupt contact @ 4.6' to loamy sand, medium to coarse, pebbly, dark yellowish brown (10 YR 4/4), moist, loose, noncalcareous, poorly washed & sorted
SS	1.0	0.0	2 4 50	6 7		
3SS	2.0	0.5	14 32 38	8 9	13.2	Sand, medium, gravelly, dark yellowish brown (10 YR 4/4), moist, loose, calcareous, poorly washed & sorted
3SS	1.0	0.4	35 4 50	10 1 2	11.8	Sand, m, as 8.0' above
SS	2.0	0.9	4 7 12 14	3 4 5	5.0	Sand, medium as 8.0' above
3SS	1.0	0.5	8 50	5 6	10.8	Sand, medium, as 8.0' above
3SS	2.0	1.6	6 8 10 10	6 7 8	7.0	Sand, medium, as 8.0' above, abrupt contact @ 16.6' to sand, coarse, trace pebbles, dark gray (10 YR 4/1), wet, calcareous, poorly washed & sorted
				9 0		T.D. 18.0 ft

Remarks Mobile B-57 equipped with 4 1/4" ID/ 8 1/4" OD HSA
 Borehole was backfilled on completion with cement grout.

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Date Former Amphenol
February 5, 1992
Logged by J.A. Duwelius
Location 1667 N, 1452 E

Boring No. MW-20
Driller A. Schrader
Elevation 731.84
Page 1 of 2

Water Level					Start	Finish
Time					Time 13:00	Time 14:40
Date					Date 2/5/92	Date 2/5/92

SAMPLE TYPE	DRIVE	ROCK CORRECTION	BLOWS (6")	DEPTH (ft.)	HT	DESCRIPTION
SS	2.0	1.0	3 5 5 9	0 1	0	Loam, dark brown (10 YR 4/3), moist, slightly firm, noncalcareous, contains plant material, (top soil)
SS	2.0	0.6	3 2 4 3	2 3 4	0	Sandy clay loam, dark gray (10 YR 4/1), moist, slightly firm, noncalcareous, few, medium, distinct mottles, yellow (10 YR 8/8) and yellowish brown (10 YR 6/8)
SS	2.0	1.0	4 5 6	4 5	0	Sandy clay loam, as 2.0' above
	2.0	1.3	12 4 8 12 17	6 7 8	0	Sandy clay loam, dark gray (10 YR 4/1), mottling coarse, common, distinct, yellow and yellowish brown (10 YR 8/8) and (10 YR 6/8), dry, hard, noncalcareous, with iron & manganese staining throughout
SS	2.0	1.5	4 8 3	8 9	0	Loamy sand, trace, granules, brown (10 YR 5/3), dry, soft, noncalcareous, clear contact @ 8.9' to sand, fine to medium, brown (10 YR 4/3), dry, loose, poorly sorted
3SS	2.0	1.1	2 1 2 2 3	10 11 12	0	Sand, fine to medium, as above, wet @ 10.6', gradual contact @ 11.5' to muddy sandy gravel, fine, brown, (10 YR 5/3), wet, nonplastic, slightly calcareous, contains large silt clast
SS	2.0	1.0	3 4 5 7	3 4 5	0	Sand, medium coarse, pebbly, brown (10 YR 5/3), wet, nonplastic, calcareous, poorly sorted
SS	2.0	1.0	3 5 9 12	6 7	0	Muddy sandy gravel, fine to medium, brown (10 YR 5/3), wet, nonplastic, calcareous, poorly sorted
SS	2.0	1.3	5 7 9 14	8 9 10 11	0	Muddy sandy gravel, fine to medium, as 15.5' above

Remarks Mobile B-57 equipped with 4 1/4" ID/ 8 1/4" OD HSA

Set monitoring well MW-20 in boring on completion.

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Date Former AmphenoI
 February 5, 1992
Logged by J.A. Duwelius
Location 1667 N, 1452 E

Boring No. MW-20
Driller A. Schrader
Elevation 731.84
Page 2 of 2

Water Level						Start	Finish
Time						Time 13:00	Time 14:40
Date						Date 2/5/92	Date 2/5/92

SAMPLE TYPE	DIAMETER	RECORD NUMBER	BLOWS (6")	DEPTH (ft.)	HZ	DESCRIPTION
SS	2.0	0.6	3	20	0	Muddy sandy gravel, f-m, as above, clear contact @ 22.2 ft to loam, sl pebbly, br (10 YR 5/3), dry, v hard, calc T.D. 22.5 ft
			7	1		
			12	2		
			18	3		
				4		
				5		
				6		
				7		
				8		
				9		
				0		
				1		
				2		
				3		
				4		
				5		
				6		
				7		
				8		
				9		
				0		

Remarks

Former Amphenol
 Date February 20, 1992
 Logged by J.D. Bryan
 Location 1021 N. 1766 E

Boring No. MW-21
 Driller A. Schrader
 Elevation 735.11
 Page 1 of 2

Water Level					Start	Finish
Time					Time 11:30	Time 14:10
Date					Date 2/20/92	Date 2/20/92

SAMPLE TYPE	DEPTH	DEPTH COVER	BLOWS (6")	DEPTH (ft.)	HT	DESCRIPTION
SS	2.0	1.7	1 6 7 12	0 1 2	0.6	Loam, dark brown (10 YR 3/3), slightly moist, friable, noncalcareous, gradual contact @ 1.5' to sandy loam dark yellowish brown (10 YR 4/6), moist, firm, noncalcareous
SS	2.0	1.5	1 3 3 4	1 3 4	1.3	Sandy loam, as 1.5' above, clear contact @ 3.3' to loamy sand, dark yellowish brown (10 YR 4/6), moist, friable, noncalcareous
SS	2.0	0.9	1 2 2 1	4 5 6	2.4	Sand, medium, strong brown (7.5 R 4/6), slightly moist, friable, noncalcareous
S	2.0	1.1	4 6 6 12	6 7 8	3.4	Sand, medium to coarse, as 4.0' above
3SS	2.0	0.4	4 12 18 31	8 9 10	3.8	Sand, medium to coarse, as 4.0' above, but has a slight petroleum (?) odor
3SS	2.0	1.5	6 13 17 23	10 11 12		Sand, medium to coarse, as 4.0' above, no odor
SS	2.0	1.6	10 12 12 14	13 14 15	13.2	Sand, medium to coarse, as 4.0' above
3SS	2.0	1.3	10 14 15 19	16 17 18 19	33.0	Sand, medium to coarse, as 4.0' above, wet, loose, nonplastic
				20		

Remarks Mobile B-57 equipped with 4 1/4" ID/ 8 1/4" HSA

Set monitoring well MW-21 in boring on completion.

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Date Former Amphenoel
 February 20, 1992
Logged by J.D. Bryan
Location 1021 N. 1766 E

Boring No. MW-21
Driller A. Schrader
Elevation 735.11
Page 2 of 2

Water Level						Start	Finish
Time						Time 11:30	Time 14:10
Date						Date 2/20/92	Date 2/20/92

S A M P L E	T Y P E	D I V E R	D E P T H O C C U R	B L O W S (6")	D E P T H (ft.)	H Z	D E S C R I P T I O N
3SS 3SS	2.0 2.0	0.0 0.3			20 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0	5.0	<p>Loam, brown (10 YR 5/3), slightly moist, extra firm, calcareous</p> <p>T.D. 25.5 ft</p>

Remarks

Heaving sand from 23 to 25 ft

Date Former Amphenol
February 11, 1992
Logged by M. Lytle
Location

Boring No. MW-22A
Driller A. Schrader
Elevation 734.97
Page 1 of 1

Water Level					Start	Finish
Time					Time 10:45	Time 12:00
Date					Date 2/11/92	Date 2/11/92

SAMPLE TYPE	DEPTH (FEET)	DEPTH (FEET)	BLOWS (6")	DEPTH (ft.)	DEPTH (ft.)	DESCRIPTION
3SS	2.0	1.7	9 10 10 14	0 1 2	6.0	Silt loam, trace pebbles, very dark grayish brown (10 YR 3/2), moist to dry, very friable, massive, abrupt contact @ 0.4' to sandy clay loam, pebbly, dark yellowish brown (10 YR 4/4), moist, friable, massive
SS	2.0	1.3	6 5 4 2	3 4	18.0	Sandy clay loam, as 0.4' above, abrupt contact @ 3.0' to loamy sand, slightly pebbly, dark yellowish brown (10 YR 4/6), moist, very friable, poorly sorted
SS	2.0	0.5	2 2 3 3	5 6	8.0	Sand, coarse, pebbly, dark yellowish brown (10 YR 4/6), moist, loose, poorly washed & sorted
SS	2.0	1.9	3 3 4 5	7 8	11.0	Sand, coarse, as 4.0' above
3SS	1.0	0.7	5 50	9		Sand, coarse, as 4.0' above
				0		T.D. 9.0 feet

Remarks Mobile B-57 equipped with 4 1/4" ID/ 8 1/4" OD HSA

Auger refusal @ 9.0 ft, abandoned boring, relocated, augured 6.0 ft and started sampling MW-22
Borehole was backfilled on completion with cement grout.

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Date Former Amphenol
February 11, 1992
Logged by M. Lyle
Location 920 N, 1773 E

Boring No. MW-22
Driller A. Schrader
Elevation 735.03
Page 1 of 2

Water Level					Start	Finish
Time					Time 13:45	Time 14:50
Date					Date 2/11/92	Date 2/11/92

SAMPLE TYPE	DRIVE	ROCKER	BLOWS (6")	DEPTH (ft.)	H ₂ O	DESCRIPTION
				0	2.0	Blank drill to 6.0', for soil description see boring log MW-22A
				1		
				2		
				3		
				4		
				5		
SS	1.0	1.4	6 50	6	15.0	Sand, coarse, pebbly, brown (10 YR 5/3), dry, very hard, poorly sorted
3SS	1.0	0.7	7 50	8	24.0	Sand, coarse, as 6.0' above
				9		
				10		
				1		
				2		
SS	1.0	1.0	6 50	3	12.0	Sand, Coarse, as 6.0' above
				4		
				5		
				6		
SS	1.5	1.2	10 21 50	7	400.0	Sand, medium to coarse, brown (10 YR 5/3), wet, loose, poorly washed & sorted
				8		
				9		
				20		

Remarks Mobile B-57 equipped with 4 1/4" ID/ 8 1/4" OD HSA
Set monitoring well MW-22 in boring on completion

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Date Former Amphenol
February 11, 1992
Logged by M. Lytle
Location 920 N, 1773 E

Boring No. MW-22
Driller A. Schrader
Elevation 735.03
Page 2 of 2

Water Level						Start	Finish
Time						Time 13:45	Time 14:50
Date						Date 2/11/92	Date 2/11/92

SAMPLE TYPE	DEPTH (FEET)	CORRECTION	BOWS (6")	DEPTH (ft.)	ELEVATION	DESCRIPTION
SS	1.5	1.1	6	0	250.0	Sand, as 17.0 ft. above, abrupt contact @ 20.3' to loam, pebbly, dark gray (10 YR 4/1), moist to dry, very firm, massive T.D. 21.5 feet
			8	1		
			50	2		
				3		
				4		
				5		
				6		
				7		
				8		
				9		
				0		
				1		
				2		
				3		
				4		
				5		
				6		
				7		
				8		
				9		
				0		

Remarks

Title Former Amphenol
Date February 14, 1992
Logged by J.D. Bryan
Location 921 N, 1773 E

Boring No. MW-23
Driller A. Schrader
Elevation 735.07
Page 1 **of** 3

Water Level				Start	Finish
Time				Time 14:00	Time 15:50
Date				Date 2/13/92	Date 2/14/92

SAMPLE TYPE	DRIVEN	DEPTH (ft.)	BLOWS (6")	DEPTH (ft.)	DEPTH (ft.)	DESCRIPTION
SS	2.0	2.0		20	3.2	Blank drill to 21.5 ft, for soil description see boring logs MW-22A and MW-22.
				1		
				2		
			4	3		
			6	4		
SS	2.0	1.6	6	4	1.4	Cement grout, moist, ab contact @ 24.8 ft to lm, dk gry br (10 YR 4/2), moist, v firm, calc, contains blk angular shale frag
			6	5		
			16	6		
				7		
				8		
SS	2.0	1.2	4	8	0	Loam, as 24.8 ft above, gradual contact @ 29.0 ft to lm, as 24.8 ft above, but moist, soft, gradual contact @ 29.4 ft to loam as 24.8 ft above
			6	9		
			6	30		
			30	1		
				2		
SS	2.0	1.2	4	3	0	Loam, gran. dk gry br (10 YR 4/2), dry, hard, calc
			6	4		
			12	5		
			28	6		
				7		
SS	2.0	2.0	4	8		Loam, gran, as 33.0 ft above, sl hard
			6	9		
			7			
			12	40		

Remarks Mobile B-57 equipped with 4 1/4" ID/ 8 1/4" OD HSA
 Installed 10"x22' steel surface casing in concrete 2/13/92.

Date Former Amphenol
 February 14, 1992
 Logged by J.D. Bryan
 Location 921 N, 1773 E

Boring No. MW-23
 Driller A. Schrader
 Elevation 735.07
 Page 2 of 3

Water Level					Start	Finish
Time					Time 14:00	Time 15:50
Date					Date 2/13/92	Date 2/14/92

SOIL TYPE	DIAMETER	DEPTH	BLOWS (6")	DEPTH (ft)	Hz	DESCRIPTION
SS	2.0	1.2	4 7 11 14	40 1 2 3 4 5 6 7		Sandy Loam, dk gry br (10 YR 4/2), mottled, com dist grn gry (5 GB 5/4), moist, firm, noncalc
SS	2.0	0.9	2 6 9 12	8 9 50		Loamy sand, f, gry br (10 Yr 5/2), wet, nonsticky, nonplastic, noncalc
SS	2.0	1.6	3 WOR WOR WOR	3 4 5 6 7		Sand, m, dk gry br (10 YR 4/2), wet, nonsticky, nonplastic, noncalc
SS	2.0	2.0	1 2 4 4	8 9 60	0.2	Sand, m, as 53.0 ft above

Remarks WOR = weight of rods

Date Former Amphenol
 February 14, 1992
Logged by J.D. Bryan
Location 921 N, 1773 E

Boring No. MW-23
Driller A. Schrader
Elevation 735.07
Page 3 of 3

Water Level					Start	Finish
Time					Time 14:00	Time 15:50
Date					Date 2/13/92	Date 2/14/92

SAMPLE TYPE	DEPTH	DEPTH (FEET)	BLOWS (6")	DEPTH (ft.)	DEPTH	DESCRIPTION
SS	2.0	1.5	1 2 2 3	60 1 2 3 4 5 6	0	Sand, m, as 53.0 ft above
SS	2.0	0.8		7 8 9 70 1 2 3 4 5 6 7 8 9 0	0	Loam, gran, dk yel br (10 YR 4/6), moist, v firm, calc T.D. 69.0 ft

Remarks Seated augers in till at 67.0 ft, drove several 3" spoons to clear heaving sand.

Set monitoring well MW-23 in boring on completion.

Date Former Amphenol
 February 6, 1992
Logged by M. Lytle
Location 894 N, 1958 E

Boring No. MW-24
Driller A. Schrader
Elevation 733.83
Page 1 of 2

Water Level					Start	Finish
Time					Time 11:00	Time 12:25
Date					Date 2/6/92	Date 2/6/92

SOIL TYPE	DEPTH (ft.)	DEPTH (ft.)	BLOWS (6")	DEPTH (ft.)	DEPTH (ft.)	DESCRIPTION
SS	2.0	1.5	2 4 6 14	0 1 2	0	Silt loam, dk yel br (10 YR 3/4), moist, friable, noncalc, massive, ab contact @ 0.3 ft to clay loam, pebbly, dk yel br (10 YR 3/6), moist, firm, noncalc, massive
SS	2.0	1.5	3 5 3 2	3 4	0	Clay loam, as 0.3 ft above, gradual contact @ 3.0 ft to loamy sand, c, pebbly, dk yel br (10 YR 3/6), moist, loose, noncalc, massive
SS	2.0	1.7	1 2 1	4 5	0	Loamy sand, as 3.0 ft above, contact @ 5.3 ft to sand, m, br (10 YR 5/3), dry, loose, calc
SS	2.0	1.6	1 14 19 13	6 7	0	Sand, m, as 5.3 ft above, pebbly
SS	2.0	1.0	11 5 7 12	8 9	0	Sand, m, as 5.3 ft above
SS	2.0	0.0	7 50	10		cobble in shoe
3SS	2.0	2.0	45 30 25 22	1 2 3 4 5	0	Sand, m, as 5.3 ft above
SS	2.0	1.5	5 12 14 13	6 7 8 9 20	0	Sand, m, as 5.3 ft above, wet, nonplastic

Remarks Mobile B-57 equipped with 4 1/4" ID/ 8 1/4" OD HSA

Set monitoring well MW-24 in boring on completion.

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Date Former Amphenol
 February 6, 1992
Logged by M. Lytle
Location 894 N, 1958 E

Boring No. MW-24
Driller A. Schrader
Elevation 733.83
Page 2 of 2

Water Level						Start	Finish
Time						Time 11:00	Time 12:25
Date						Date 2/6/92	Date 2/6/92

S A M P L E	T Y P E	D I V E	D E P T H (ft)	B L O W S (6")	D E P T H (ft)	# /ft	D E S C R I P T I O N
SS		0.5	0.5	50	20	0	Loam, pebbly, dk yel br (10 YR 4/4), moist, firm, calc
					1		
					2		
					3		
					4		
					5		
					6		
					7		
					8		
					9		
					0		
					1		
					2		
					3		
					4		
					5		
					6		
					7		
					8		
					9		
					0		

Remarks

Date Former Amphenol
February 19, 1992
Logged by M.Lytle
Location 765 N, 1795 E

Boring No. MW-25
Driller A.Schrader
Elevation 733.77
Page 1 of 3

Water Level						Start	Finish
Time						Time 10:00	Time 15:00
Date						Date 2/18/92	Date 2/19/92

SAMPLE TYPE	DEPTH (ft)	DIAMETER (ft)	BOSS (ft)	DEPTH (ft)	THICKNESS (ft)	DESCRIPTION
				20		Blank drill to 23.0 ft, for soil description see boring log SB-6.
				1		
				2		
				3		
				4		
				5		
				6		
				7		
				8		
				9		
				30		Loam, pebbly, dk gry br (2.5 Y 4/2), moist-dry, hard, calc. massive
				1		
				2		
3SS	2.0	1.5	6	3	0.8	
			9	4		
			24	5		
			27	6		
				7		
				8		
				9		
				40		Loam, as 33.0 ft above
				1		
				2		
				3		
SS	1.0	1.0	6.5	4	0.8	
			50	5		
				6		
				7		
				8		
				9		
				40		

Remarks Mobile B-57 equipped with 4 1/4" ID/8 1/4" OD HSA
Installed 10"x23' steel surface casing in concrete 2/18/92.

Former Ampheno1
 Date February 19, 1992
 Logged by M. Lyle
 Location 765 N, 1795 E

Boring No. MW-25
 Driller A. Schrader
 Elevation 733.77
 Page 2 of 3

Water Level					Start	Finish
Time					Time 10:00	Time 15:00
Date					Date 2/18/92	Date 2/19/92

SAMPLE TYPE	DEPTH	DEPTH CORRECTED	BOWS (6")	DEPTH (ft.)	HT	DESCRIPTION
SS	2.0	1.4	7 9 10 12	40 1 2 3 4 5 6 7	0.8	Loam, as 33.0 ft above, color change @ 43.2 ft to dk yel br (10 YR 4/4), moist, friable, noncalc, massive, gradual contact @ 44.0 ft to loamy sand, dk yel br (10 YR 4/4), moist-wet, loose, noncalc, poorly washed & sorted
SS	2.0	1.6	2 4 4 6	8 9 50	0.8	Sand, m-c, pebbly, dk yel br (10 YR 4/4), wet, noncalc, poorly washed & sorted
SS	2.0	0.0	2 2 3 6	1 2 3 4 5 6 7		
SS	2.0	1.6	2 3 3 5	8 9 60	0.8	Sand, m-c, as 48.0 ft above

Remarks Sand heave @ 53 ft.

Date Former Amphenol
 February 19, 1992
Logged by M. Lytle
Location 765 N. 1795 E

Boring No. MW-25
Driller A.Schrader
Elevation 733.77
Page 3 of 3

Water Level					Start	Finish
Time					Time 10:00	Time 15:00
Date					Date 2/18/92	Date 2/19/92

SAMPLE TYPE	DIAMETER (IN)	DEPTH (FEET)	SOIL SAMPLES (6")	DEPTH (FEET)	WATER	DESCRIPTION
SS	1.5	0.3		60	0.8	Loam, pebbly, dk yel br (10 YR 4/2), moist, firm, calc, massive T.D. 67.0 ft
				59		
				58		
				57		
				56		
				55		
				54		
				53		
				52		
				51		
				50		
				49		
				48		
				47		
				46		
				45		
				44		
				43		
				42		
				41		
	40					
	39					
	38					
	37					
	36					
	35					
	34					
	33					
	32					
	31					
	30					
	29					
	28					
	27					
	26					
	25					
	24					
	23					
	22					
	21					
	20					
	19					
	18					
	17					
	16					
	15					
	14					
	13					
	12					
	11					
	10					
	9					
	8					
	7					
	6					
	5					
	4					
	3					
	2					
	1					
	0					

Remarks
 Advanced augers to 67.0 feet and removed heave sand with 3-inch spoon.

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Date Former Amphenol
February 4, 1992
Logged by J.A. Duwelius
Location 1396 N, 1727 E

Boring No. MW-26
Driller A. Schrader
Elevation 734.04
Page 1 of 2

Water Level					Start	Finish
Time					Time 13:00	Time 15:40
Date					Date 2/4/92	Date 2/4/92

S A M P L E	T Y P E	D R I V E	R E C O V E R E D	B L O W S (6")	D E P T H (ft.)	G R A P H I C	D E S C R I P T I O N
SS	2.0	1.3		3	0		Loam, dk br (10 YR 4/3), moist, v friable, noncalc, contains plant material, (top soil)
				4	1		
				5			
SS	2.0	0.8		7	2		Sandy clay loam, granular, dk yel br (10 YR 4/4), sl moist, firm, noncalc
				2	3		
				4			
3SS	2.0	2.0		8	4		Sandy clay loam, as above, clear contact @ 5.0 ft to sand, m, tr pebs, br (10 YR 5/3), dry, loose, sl calc
				3	5		
				5			
	2.0	1.0		7	6		Sand, m, as 5.0 ft above
				2	7		
				3			
SS	2.0	1.5		4	8		Sand, m-c, br (10 YR 5/3), dry, loose, calc
				2	9		
				3			
3SS	2.0	2.0		4	10		Sand, m-c, sl pebbly, br (10 YR 5/3), dry, loose, calc
				4	1		
				4			
SS	2.0	1.4		5	2		Sand, m-c, as above, wet @ 13.3 ft, nonplastic
				3	3		
				5	4		
				12	5		
SS	2.0	2.0		3	6		Sand, m, br (10 YR 5/3), wet, nonplastic, calc
				6	7		
				10			
				12	8		
SS	2.0	2.0		5	9		Sand, m, as 15.5 ft above
				6			
				10	10		
				14	20		

Remarks Mobile B-57 equipped with 4 1/4" ID/ 8 1/4" OD HSA

Heaving sand @ 15.5 feet.
Set monitoring well MW-26 in boring on completion.

Date Former AmphenoI
February 4, 1992
Logged by J.A. Duwelius
Location 1396 N, 1727 E

Boring No. MW-26
Driller A. Schrader
Elevation 734.04
Page 2 of 2

Water Level					Start	Finish
Time					Time 13:00	Time 15:40
Date					Date 2/4/92	Date 2/4/92

SAMPLE TYPE	DRIVE	RECOVERED	BLOWS (6")	DEPTH (ft.)	GRAPHIC	DESCRIPTION
SS	2.0	2.0	4	20		Sand, m-c, sl pebbly, br (10 YR 5/3) wet, nonplastic, calc
			7	1		
			9	2		
			7	3		Sand, m-c, 20.5 ft as above
SS	2.0	1.5	3	3		
			5	4		
			4	5		Gravel, pebbly, clear contact @ 25.9 to sand, f-m, br (10 YR 5/3), wet, nonplastic, calc
			2	6		
SS	2.0	1.4	5	7		
			15	8		Loam, gry (10 YR 5/1), moist-dry, ex firm, calc
			17	9		
			31	0		
SS	0.5	0.4	65	1		T.D. 28.5 ft
				2		
				3		
				4		
				5		
				6		
				7		
				8		
				9		
				0		

Remarks

Date Former Amphenol (07026.05)
 January 13, 1993
Logged by J.A. Duwelius
Location 1063 N, 1585 E

Boring No. MW-27
Driller A. Schrader, Env. Drilling Svc.
Elevation 734.25
Page 1 of 2

Water Level				Start	Finish
Time				Time	Time
Date				Date	Date
				9:55AM	1:15PM
				1/13/93	1/13/93

SOIL TYPE	DEPTH (FEET)	DEPTH (METERS)	ROWS (6")	DEPTH (FEET)	DEPTH (METERS)	DESCRIPTION
SS	2.0	2.0	5	0	0	Loam mixed with crushed stone (asphalt base), clear contact at 0.2' to loam, dark gray (10 YR 4/1), color change at 0.5' to dark yellowish brown (10 YR 4/4), moist, friable, noncalcareous
			7	1		
			7			
			4	2		
SS	2.0	1.2	2	3	1.5	Loamy sand, medium, dark yellowish brown (10 YR 4/4), moist, friable, noncalcareous, clear contact at 3.3' to sandy gravel, fine, dry, loose, noncalcareous, clear contact at 3.5' to loam, as 0.2' above, clear contact at 3.8' to sand, medium, brown (10 YR 5/3), dry, loose, calcareous, poorly sorted and washed
			3	4		
			1			
SS	2.0	1.0	5	5	2.0	Sand, fine to medium, pebbly, brown (10 YR 5/3), dry, loose, calcareous, moderately sorted and washed
			3	6		
			3			
SS	2.0	1.0	2	7	4.5	Sand, fine to medium, pebbly, as 5.0' above
			7	8		
			8			
SS	2.0	0.5	4	9	3.5	Sand, fine to medium, brown (10 YR 5/3), wet, loose, calcareous, moderately sorted and washed
			5	10		
			5			
SS	2.0	0.0	6	1		
			5	2		
			7			
3SS	2.0	2.0	10	3	5.0	Sand, fine to medium, brown (10 YR 5/3), wet, loose, calcareous, moderately sorted and washed
			19	4		
			5			
SS	2.0	1.8	24	5	1.0	Sand, fine to medium, as 13.0' above
			3	6		
			5			
SS	2.0	2.0	7	7	0	Sand, fine to medium, as 15.0' above, trace pebbles
			12	8		
			4			
3SS	2.0	2.0	8	9	0	Sand, fine to medium, as 17.0' above
			10			
			5	20		
7						

Remarks Mobile B-57 equipped with 4 1/4" ID X 8 1/4" OD HSA.

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Former Amphenol (07026.05)
Date January 13, 1993
Logged by J.A. Duwelius
Location 1063 N, 1585 E

Boring No. MW-27
Driller A. Schrader, Env. Drilling Svc.
Elevation 734.25
Page 2 of 2

Water Level						Start	Finish
Time						9:55AM	1:15PM
Date						1/13/93	1/13/93

S A M P L E	D E P T H	R E C O R D	B L O W S (6")	D E P T H (ft.)	N E T	D E S C R I P T I O N
SS	2.0	2.0	11 14 5	20	0	Sand, fine to medium, brown (10 YR 5/3), wet, loose, calcareous, moderately sorted and washed, abrupt contact at 23.0' to loam, granular, gray (10 YR 5/1), dry, hard, calcareous, massive
SS	2.0	0.1	12 19 24 3 3 14 29	1 2 3 4 5		
				6 7 8 9 30 1 2 3 4 5 6 7 8 9 40		Loam, granular, gray (10 YR 5/1), dry, hard, calcareous T.D. 25.0 ft.

Remarks Installed monitoring well MW-27 in boring on completion.

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Date Former Amphenol (07026.05)
 January 13, 1993
Logged by J.A. Duwelius
Location 991 N, 1689 E

Boring No. MW-28
Driller A. Schrader, Environmental Drilling
Elevation 735.67
Page 1 of 2

Water Level						Start	Finish
Time						Time 3:00PM	Time 8:50AM
Date						Date 1/13/93	Date 1/14/93

SAMPLE TYPE	DRIVE	RECOVER	BLOWS (6")	DEPTH (ft.)	GRAPHIC	DESCRIPTION
SS	2.0	2.0		0		Loam, dark yellowish brown (10 YR 4/4), moist, friable, noncalcareous, gradual contact to sandy loam, f-m, dk yel br (10 YR 4/4), moist, v friable, noncalc
				1		
				2		
			4	3		
			6	4		
			7			
			8			
SS	2.0	1.8	4	8		Sand, fine to medium, brown (10 YR 5/3), dry, loose, calcareous, moderately washed and sorted, contains trace pebbles
			6	9		
			12	10		
			4	11		
				1		
				2		
SS	2.0	0.5	3	3		Sand, medium, brown (10 YR 5/3), moist, friable, calcareous, poorly washed and sorted
			5	4		
			5	5		
			6	6		
				7		
				8		
			9			
				20		

Remarks Mobile B-57 equipped with 4 1/4" ID X 8 1/4" HSA.

Date Former Amphenol (07026.05)
Logged by January 13, 1993
Location J.A. Duwelius
 991 N, 1689 E

Boring No. MW-28
Driller A. Schrader, Environmental Drilling
Elevation 735.67
Page 2 of 2

Water Level					Start	Finish
Time					Time 3:00PM	Time 8:50AM
Date					Date 1/13/93	Date 1/14/93

S M E T E	D E P T H	D E P T H	R O W S (6")	D E P T H (ft.)	G R A P H I C	DESCRIPTION
SS	2.0	2.0	4	20		Sand, fine to medium, brown (10 YR 5/3), wet, loose, calcareous, moderately washed and sorted
			5	1		
			7			
			6	2		
3SS	2.0	2.0	4	23.5		Sand, fine to medium, as 20.0' above, abrupt contact at 23.5' to loam, pebbly, gray (10 YR 5/1), dry, hard, calcareous
			7	3		
			8			
			21	4		
				5		
				6		
				7		
				8		
				9		
				30		
				1		
				2		
				3		
				4		
				5		
				6		
				7		
				8		
				9		
				40		

T.D. 24.0 feet

Remarks Installed monitoring well MW-28 in boring on completion.

Former Amphenol (07026.05)
 Date January 15, 1993
 Logged by J.A. Duwelius
 Location 918 N, 1604 E

Boring No. MW-29
 Driller A. Schrader, Env. Drilling Svc.
 Elevation 734.86
 Page 1 of 2

Water Level					Start	Finish
Time					Time 8:45AM	Time 11:45AM
Date					Date 1/15/93	Date 1/15/93

SAMPLE TYPE	DEPTH (FEET)	DEPTH (FOOT)	BLOWS (6")	DEPTH (FEET)	GRAPHIC	DESCRIPTION
SS	2.0	1.5		0		Sandy loam, slightly pebbly, dark yellowish brown (10 YR 4/4), moist, friable, slightly calcareous
				1		
				2		
				3		
				4		
				5	3	
				6	5	
				7	7	
				8	9	
				9		
SS	2.0	0.4		10		Loamy sand, fine, dark yellowish brown (10 YR 4/4), moist, friable, calcareous
				11		
				12	7	
				13	4	
				14	3	
				15	2	
				16		
				17		
				18		
				19		
SS	2.0	0.0		20		Storm sewer
				21		
				22		
				23		
				24		
				25	5	
				26	9	
				27	14	
				28	21	
				29		
SS	2.0	2.0		30		Sandy gravel, fine, strong brown (7.5 YR 5/8), wet, loose, poorly sorted and washed, calcareous
				31		
				32	5	

Remarks: Mobile B-57 equipped with 4 1/4" ID X 8 1/4" OD HSA.
 Encountered steel storm sewerpipe at 14'.
 Abandoned boring, moved 10 feet north to redrill.

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Date Former Amphenol (07026.05)
 January 15, 1993
Logged by J.A. Duwelius
Location 918 N. 1604 E

Boring No. MW-29
Driller A. Schrader, Env. Drilling Svc.
Elevation 734.86
Page 2 of 2

Water Level					Start	Finish
Time					Time 8:45AM	Time 11:45AM
Date					Date 1/15/93	Date 1/15/93

S A M P L E T Y P E	D I V E	R E C O V E R	B L O W S (6")	D E P T H (ft.)	G R A P H I C	D E S C R I P T I O N
SS	2.0	0.0	11	20		Sandy gravel, fine, as 19.0' above, abrupt contact at 23.7' to loam, pebbly, gray (10 YR 5/1), dry, hard, calcareous T.D. 25.0 feet
			15	1		
				2		
				3		
			50	4		
			50	5		
			50	6		
				7		
				8		
				9		
				30		
				1		
				2		
				3		
				4		
				5		
				6		
				7		
				8		
				9		
	40					

Remarks Installed monitoring well MW-29 in boring on completion.

Date Former Amphenol (07026.05)
 January 14, 1993
Logged by J.A. Duwelius
Location 741 N, 1949 E

Boring No. MW-30
Driller A. Schrader, Env. Drilling Svc.
Elevation 732.41
Page 1 of 1

Water Level					Start	Finish
Time					Time 10:45AM	Time 1:10PM
Date					Date 1/14/93	Date 1/14/93

SAMPLE TYPE	DRIVE	DEPTH (FEET)	BLOWS (6")	DEPTH (ft.)	GRAPHIC	DESCRIPTION
SS	2.0	0.9	2 5 6 6	0 1 2 3 4 5		Sand, medium to coarse, pebbly, brown (10 YR 5/3), moist, friable, calcareous, poorly washed and sorted
	2.0	0.9	2 2 3 2	6 7 8		Sand, medium to coarse, pebbly, as 5.0' above
SS	2.0	1.0	2 4 9 17	9 10 11 12 13 14 15 16 17		Sandy gravel, yellowish brown (10 YR 5/8), slightly moist, friable, calcareous, poorly sorted and washed, limonitic staining throughout, contains silt clast and limestone fragments, clear contact at 10.7' to sand, fine to medium, brown (10 YR 5/3), slightly moist, friable, calcareous, moderately sorted and washed
SS	2.0	2.0	3 8 5 14	18 19 20 21 22		Sand, medium to coarse, grayish brown (10 YR 5/2), wet, loose, calcareous, poorly sorted and washed
SS	1.0	1.0	3 58	23 24		Sand, medium to coarse, brown (10 YR 5/3), wet, loose, calcareous, poorly washed and sorted, clear contact at 17.0' to loam, pebbly, gray (10 YR 5/1), dry, hard, calcareous
SS	0.5	0.4	50	25		
				20		T.D. 19.5 feet

Remarks Mobile B-57 equipped with 4 1/4" ID X 8 1/4" OD HSA.
 Installed monitoring well MW-30 in boring on completion.

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Date Former Amphenol
 2-16-93
Logged by M. Lytle
Location 708 N, 2232 E (S. Edge Church Lot East Off-Site)

Boring No. PGP-1
Driller B. Barrett (GeoTrace)
Elevation 727.77
Page 1 of 1

Water Level						Start	Finish
Time						9:15AM	10:50AM
Date						2-16-93	2-16-93

S A M P L E	T Y P E	D R I V E N	D E P T H (F E E T)	B L O W S (6")	D E P T H (F T)	G R A P H I C	D E S C R I P T I O N
Probe		2.0	1.1		0		Silty clay, abundant sand, medium, dark grayish brown (10 YR 4/2), moist, firm, stringers of sand, medium, massive, noncalcareous
					1		
Probe		2.0	0.85		2		Silty clay, as 0.0' above
					3		
Probe		2.0	0.7		4		Sandy loam, coarse, dark yellowish brown (10 YR 4/4), moist, s1 firm, massive, stringers of sand, noncalcareous
					5		
Probe		2.0	0.8		6		Sandy loam, as 4.0' above
					7		
Probe		2.0	1.0		8		Sand, coarse, dark yellowish brown (10 YR 4/4), wet, poorly washed and sorted, noncalcareous
					9		
Probe		2.0	1.3		10		Sandy loam, as 4.0' above, contact at 10.5' with sand, medium to coarse, dark grayish brown (10 YR 4/2), wet, poorly washed and sorted, noncalcareous
					11		
Probe		2.0	1.7		12		Sand, as 10.5' above, contact at 12.6' with loam, pebbly, dark gray (10 YR 4/1), dry, hard, massive, calcareous
					13		
					14		T.D. 14.0'
					15		
					16		
					17		
					18		
					19		
					20		

Remarks Installed temp. screen from 11.5' to 13.5' in adj. hole, collected ground water sample PGP-1.

Former Amphenol
 Date 2-16-93
 Logged by M. Lytle
 Location 377 N, 1920 E (892 Glendale Ct.)

Boring No. PGP-2
 Driller B. Barrett (GeoTrace)
 Elevation 727.12
 Page 1 of 1

Water Level					Start	Finish
Time					Time 3:30PM	Time 4:47PM
Date					Date 2-16-93	Date 2-16-93

SAMPLE TYPE	DEPTH	DEPTH CORRECTED	BLOWS (6")	DEPTH (ft.)	GRAPHIC	DESCRIPTION
Probe	2.0	0.7		0		0.0 - 0.3' asphalt and fill, pebbly, black (10 YR 3/1), dry, contact at 0.5' with silty clay loam, trace pebbles, dark yellowish brown (10 YR 3/4), moist, firm, massive, organic debris, noncalcareous
Probe	2.0	1.65		2		Silty clay loam, as 0.5' above, abrupt contact at 3.25' with loamy sand, medium, dark yellowish brown (10 YR 4/4), moist, loose, poorly washed and sorted, noncalcareous
Probe	2.0	0.8		4		Loamy sand, as 3.25' above, color change to yellowish brown (10 YR 5/6)
Probe	2.0	1.6		6		Sand, coarse, abundant pebbly gravel, yellowish brown (10 YR 5/6), dry to moist, loose, poorly washed and sorted, iron stains, slightly calcareous
Probe	2.0	1.3		8		Sand, as 6.0' above, wet, contact at 8.6' with sandy loam, pebbly, dark gray (10 YR 4/1), moist, friable, massive, calcareous
Probe	2.0	1.5		10		Sandy loam, as 8.6' above, contact at 11.25' with sand, coarse, coarse pebbles, gray (10 YR 5/1), wet, poorly washed and sorted
Probe	2.0	1.9		2		Sand, as 11.25' above, contact at 12.20' with loam, pebbly, dark gray (10 YR 4/1), dry, hard, massive, calcareous
				3		
				4		
				5		T.D. 14.0'
				6		
				7		
				8		
				9		
				20		

Remarks Collected one ground water sample (PGP-2) in adjacent hole.

Date Former Amphenol
 2-18-93
Logged by M. Lytle
Location 726 N, 1485 E (960 Hamilton Ave.)

Boring No. PGP-3
Driller B. Barrett (GeoTrace)
Elevation 734.77
Page 1 of 1

Water Level				Start	Finish
Time				Time 1:00PM	Time 3:45PM
Date				Date 2-18-93	Date 2-18-93

SAMPLE TYPE	DRIVEN	RECOVERED	BLOWS (6")	DEPTH (ft.)	GRAPHIC	DESCRIPTION
Probe	2.0	0.9		0		0.0' - 0.3' asphalt, contact at 0.3' with silty clay loam, gray (10 YR 5/1), dry, hard, massive, noncalcareous, color change at 0.8' to dark yellowish brown (10 YR 4/6)
Probe	2.0	1.3		2		Silty clay loam, abundant sand, dark yellowish brown (10 YR 4/6), moist, friable, noncalcareous, contact at 3.1' with loamy sand, medium to coarse, dark yellowish brown (10 YR 4/6), moist, loose, poorly washed and sorted, noncalcareous
Probe	2.0	1.1		4		Loamy sand, as 3.1' above
Probe	2.0	1.0		6		Loamy sand, as 3.1' above
Probe	2.0	0.9		8		Sand, coarse, coarse pebbles, yellowish brown (10 YR 5/6), dry, loose, poorly washed and sorted, noncalcareous
Probe	2.0	0.8		10		Sand, as 8.0' above, large rock in tip
Probe	2.0	0.8		2		Sand, as 8.0' above
Probe	2.0	0.5		4		Sand, as 8.0' above, wet, rock in tip
Probe	2.0	0.9		6		Sand, as 8.0' above, wet
Probe	2.0	0.8		8		Sand, as 8.0' above, wet, contact at 18.6' with loam, pebbly, dark grayish brown (10 YR 4/2), moist, calcareous

Remarks Collected ground water sample PGP-3 in adjacent hole.

Date Former Amphenol
2-24-93
Logged by J. Bryan
Location 471 N, 1420 E (951 Hamilton, North of East Shed)

Boring No. PGP-6
Driller B. Barrett (GeoTrace)
Elevation 731.15
Page 1 of 2

Water Level					Start	Finish
Time					Time 9:50AM	Time 3:50PM
Date					Date 2-24-93	Date 2-24-93

SAMPLE TYPE	DRIVE	DEPTH (ft)	BOSS (6")	DEPTH (ft)	GRAPHIC	DESCRIPTION
Probe	2.0	1.0		0		Crushed limestone, clear contact at 0.3' with loam, dark yellowish brown (10 YR 4/6), slightly moist, firm, noncalcareous
				1		
Probe	2.0	1.0		2		Loam, as above, gradual contact at 2.7' with sandy loam, dark yellowish brown (10 YR 4/6), slightly moist, friable, noncalcareous
				3		
Probe	2.0	0.8		4		Sand, medium to fine, dark yellowish brown (10 YR 4/6), slightly moist, loose, noncalcareous, abrupt contact at 4.7' with sand, as above, yellowish brown (10 YR 5/6), noncalcareous
				5		
Probe	2.0	1.1		6		Sand, as at 4.7'
				7		
Probe	2.0	1.0		8		Sand, as above, pebbly
				9		
Probe	2.0	0.1		10		Sand, as above, very friable, very moist
				11		
Probe	2.0	0.5		12		Sandy gravel, brownish yellow (10 YR 6/8), very friable, moist
				13		
Probe	2.0	1.0		14		Sandy gravel, as above, wet, nonsticky, nonplastic, rods wet 12.7' - 16.0'
				15		
Probe	2.0	1.3		16		Sandy gravel, as above
				17		
Probe	2.0	0.0		18		
				19		
				20		

Remarks

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Date Former Amphenol
2-24-93
Logged by J. Bryan
Location 471 N, 1420 E (951 Hamilton, North of East Shed)

Boring No. PGP-6
Driller B. Barrett (GeoTrace)
Elevation 731.15
Page 2 of 2

Water Level				Start	Finish
Time				Time 9:50AM	Time 3:50PM
Date				Date 2-24-93	Date 2-24-93

SAMPLE TYPE	DRIVE	RECOVER	BLOWS (6")	DEPTH (ft.)	GRATIC	DESCRIPTION
Probe	2.0	1.3		20		Sand, medium, brown (10 YR 5/3), wet, nonsticky, nonplastic, gradual contact at 21.1' with sand, medium to fine, yellowish brown (10 YR 5/6), wet, nonsticky, nonplastic
				1		
Probe	2.0	1.0		2		Sand, as above
				3		
Probe	2.0	1.0		4		Sand, as above, coarser with depth
				5		
Probe	2.0	1.3		6		Sand, as above, abrupt contact at 26.9' with loam, granular, gray (10 YR 5/1), slightly moist, very firm, calcareous
				7		
				8		TD 27.3'
				9		
				30		
				1		
				2		
				3		
				4		
				5		
				6		
				7		
				8		
				9		
				40		

Remarks Collected ground water samples from 13.0'-15.0', 18.0'-20.0', and 25.0'-27.0' in separate adjacent holes.

Date Former Amphenol
2-25-93
Logged by J. Bryan
Location 104 N, 1310 E (SW Corner City St. Dept., 951 Hamilton)

Boring No. PGP-7
Driller M. Chenoweth (GeoTrace)
Elevation 728.36
Page 1 of 2

Water Level					Start	Finish
Time					Time 10:00AM	Time 2:45PM
Date					Date 2-25-93	Date 2-25-93

SAMPLE TYPE	DEPTH	DEPTH COVER	BLOWS (6")	DEPTH (ft.)	GRAPHIC	DESCRIPTION
Probe	2.0	1.3		0		Loam, dark yellowish brown (10 YR 4/6), firm, slightly moist, noncalcareous
Probe	2.0	0.7		1		Loam, as above
Probe	2.0	0.8		2		Loam, as above
Probe	2.0	0.4		3		Loam, as above, gradual contact at 4.8' with sand, medium, pebbly, light yellowish brown (10 YR 6/4), loose, dry, noncalcareous
Probe	2.0	0.7		4		Sand, as above
Probe	2.0	1.4		5		Sand, as above
Probe	2.0	1.3		6		Sand, medium to coarse, dark yellowish brown (10 YR 4/6), moist, friable, calcareous
Probe	2.0	0.5		7		Sand, as above, poorly sorted
Probe	2.0	1.3		8		Sand, medium to coarse, as above, well sorted, wet, nonsticky, nonplastic
Probe	2.0	1.7		9		Sand, as above
Probe	2.0	1.7		10		Sandy gravel, yellowish brown (10 YR 5/6), wet, loose, calcareous
				11		
				12		
				13		
				14		
				15		
				16		
				17		
				18		
				19		
				20		

Remarks

Former Amphenol
Date 2-25-93
Logged by J. Bryan
Location 104 N, 1310 E (SW Corner City St. Dept., 951 Hamilton)

Boring No. PGP-7
Driller M. Chenoweth (GeoTrace)
Elevation 728.36
Page 2 of 2

Water Level					Start	Finish
Time					Time 10:00AM	Time 4:30PM
Date					Date 2-25-93	Date 2-25-93

S A M P L E	D E P T H (ft.)	D E P T H (ft.)	D E P T H (ft.)	D E P T H (ft.)	D E P T H (ft.)	D E S C R I P T I O N
Probe	2.0	1.3		20		Sandy gravel, as above
				1		
Probe	2.0	1.6		2		Sandy gravel, as above, gradual contact at 23.0' with sand, medium to fine, dark yellowish brown (10 YR 4/6), wet, calcareous
				3		
Probe	2.0	1.7		4		Sand, as above, clear contact at 25.6' with loam, granular, dark gray (10 YR 4/1), slightly moist, very firm, calcareous
				5		
				6		
				7		
				8		TD 26.0'
				9		
				30		
				1		
				2		
				3		
				4		
				5		
				6		
				7		
				8		
				9		
				40		

Remarks Collected ground water samples from 13.0'-15.0', 19.0'-21.0', and 24.5'-26.5' in separate adjacent holes.

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Date Former Amphenol
2-25-93
Logged by J. Bryan
Location 736 N. 1631 E (990 Hurricane Road, SW Corner of Lot)

Boring No. PGP-8
Driller M. Chenoweth (GeoTrace)
Elevation 734.61
Page 1 of 2

Water Level					Start	Finish
Time					Time 10:15AM	Time 4:30PM
Date					Date 2-25-93	Date 2-25-93

S A M P L E	T Y P E	D R I V E	D E P T H (F E E T)	B L O W S (6")	D E P T H (F T)	G R A P H I C	D E S C R I P T I O N
Probe		2.0	1.4		0		Loam, dark yellowish brown (10 YR 4/6), moist, firm
Probe		2.0	1.2		1		
Probe		2.0	1.2		2		Sandy loam, strong brown (7.5 YR 4/6), slightly moist, firm
Probe		2.0	0.8		3		
Probe		2.0	0.8		4		Sandy loam, as above
Probe		2.0	0.3		5		
Probe		2.0	1.0		6		Sand, medium to coarse, poorly sorted, lightly yellowish brown (10 YR 6/4), dry, soft
Probe		2.0	1.0		7		
Probe		2.0	1.1		8		Sand, as above
Probe		2.0	1.1		9		
Probe		2.0	1.0		10		Sand, as above
Probe		2.0	1.0		1		
Probe		2.0	1.0		2		Sand, as above
Probe		2.0	1.0		3		
Probe		2.0	1.0		4		Sand, medium, dark yellowish brown (10 YR 4/6), wet, nonplastic, nonsticky
Probe		2.0	0.8		5		
Probe		2.0	0.8		6		Sandy gravel, brownish yellow (10 YR 6/6), wet, nonsticky, nonplastic
Probe		2.0	1.3		7		
Probe		2.0	1.3		8		Sandy gravel, as above, clear contact at 19.5' with sand, medium to fine, dark yellowish brown (10 YR 3/4), wet, nonsticky, nonplastic
Probe		2.0	1.3		9		
Probe		2.0	1.3		20		

Remarks

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Date Former Amphenol
 2-25-93
Logged by J. Bryan
Location 736 N, 1631 E (990 Hurricane Road, SW Corner of Lot)

Boring No. PGP-8
Driller M. Chenoweth (GeoTrace)
Elevation 734.61
Page 2 of 2

Water Level						Start	Finish
Time						Time 10:15AM	Time 4:30PM
Date						Date 2-25-93	Date 2-25-93

SAMPLE TYPE	DEPTH	DIAMETER	BOVS (6")	DEPTH (ft.)	GRAPHIC	DESCRIPTION
Probe	2.0	2.0		20		Sandy gravel, as above, abrupt contact at 21.0' with loam, granular, dark gray (10 YR 4/1), slightly moist, very firm, calcareous TD 22.0'
				1		
				2		
				3		
				4		
				5		
				6		
				7		
				8		
				9		
				30		
				1		
				2		
				3		
				4		
				5		
				6		
				7		
				8		
				9		
				40		

Remarks Collected ground water sample PGP-8 from adjacent hole.

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Date Former Amphenol
2-26-93
Logged by J. Bryan
Location 115 N, 1625 E (721 Forsythe St., Edge of Pavement)

Boring No. PGP-9
Driller B. Barrett (GeoTrace)
Elevation 727.92
Page 1 of 1

Water Level						Start	Finish
Time						Time 9:30AM	Time 10:30PM
Date						Date 2-26-93	Date 2-26-93

S A M P L E	T Y P E	R E C O R D	D E P T H (ft.)	B O W S (6")	D E P T H (ft.)	G R A P H I C	D E S C R I P T I O N
Probe	2.0	1.0	0		0		Loam, dark yellowish brown (10 YR 3/4), dry, firm
Probe	2.0	1.3	2		2		Loam, dark yellowish brown (10 YR 3/6), dry, slightly firm
Probe	2.0	1.2	4		4		Sandy gravel, yellowish brown (10 YR 5/6), dry, loose, calcareous
Probe	2.0	0.8	6		6		Sandy gravel, as above
Probe	2.0	0.8	8		8		Sandy gravel, as above, clear contact at 8.4' with silt loam, yellowish brown (10 YR 5/6), dry, friable, noncalcareous
Probe 0	2.0	1.3	10		10		Sandy gravel, dark yellowish brown (10 YR 4/6), wet, nonsticky, nonplastic, calcareous, clear contact at 11.1' with loam, granular, yellowish brown (10 YR 5/8), dry, firm, calcareous
Probe	2.0	1.5	12		12		Loam, as above, clear contact at 12.7' with sandy gravel, as above
Probe	2.0	1.5	14.6		14.6		Sand, medium, dark yellowish brown (10 YR 4/6), wet, nonsticky, nonplastic, gradual contact at 14.6' with loam, granular, dark brown (10 YR 3/3), slightly moist, very firm, calcareous
			16.0		16.0		TD 16.0'

Remarks Collected ground water sample PGP-9 from adjacent hole.

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Former Amphenol
Date 2-26-93
Logged by J. Bryan
Location -106 N, 1842 E (1020 Ross Ct., Edge of Pavement)

Boring No. PGP-10
Driller M. Chenoweth (GeoTrace)
Elevation 723.82
Page 1 of 1

Water Level						Start	Finish
Time						10:45AM	12:30PM
Date						2-26-93	2-26-93

SAMPLE TYPE	DIAMETER	DEPTH (FEET)	BLOWS (6")	DEPTH (ft.)	GRAPHIC	DESCRIPTION
Probe	2.0	0.7		0		Loam, dark yellowish brown (10 YR 4/6), slightly moist, firm, noncalcareous
				1		
Probe	2.0	0.8		2		Sand, dark yellowish brown (10 YR 4/6), slightly moist, friable, gradual contact at 2.4' with loam, grayish brown (10 YR 5/2), slightly moist, firm, calcareous
				3		
Probe	2.0	0.4		4		Loam, dark brown (10 YR 3/3), moist, slightly firm, noncalcareous, occasional wood debris
				5		
Probe	2.0	1.1		6		Red brick fragments at 6.0', sandy gravel, yellowish brown (10 YR 5/4), wet, nonsticky, nonplastic, noncalcareous
				7		
Probe	2.0	0.9		8		Sandy gravel, as above
				9		
Probe	2.0	1.6		10		Sandy gravel, as above, gradual contact at 10.3' with loam, granular, grayish brown (10 YR 5/2), slightly moist, firm, calcareous, clear contact at 11.0' with sandy gravel, as above, gradual contact at 11.8' with loam, as above
Probe	2.0	1.4		1		
				2		TD 13.0'
				3		
				4		
				5		
				6		
				7		
				8		
				9		
				20		

marks Collected ground water sample PGP-10 from adjacent hole.

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Former Amphenol
 Date 3-1-93
 Logged by M. Lytle
 Location -625 N, 1634 E (S. Forsythe Street)

Boring No. PGP-11
 Driller M. Chenoweth (GeoTrace)
 Elevation 720.75
 Page 1 of 1

Water Level					Start	Finish
Time					Time 1:45PM	Time 2:30PM
Date					Date 3-1-93	Date 3-1-93

SAMPLE TYPE	DEPTH	ROCKHEAD	BLOWS (6")	DEPTH (ft.)	GRAPHIC	DESCRIPTION
Probe	2.0	1.3		0		Silt loam, black (10 YR 2/1), wet, nonplastic, nonsticky, contact at 0.3' with silty clay loam, black (10 YR 2/1), moist, contact at 1.0' with Fill, pebbly, brick fragments
				1		
Probe	2.0	1.8		2		Silty clay loam, dark grayish brown (10 YR 4/2), moist, massive, noncalcareous
				3		
Probe	2.0	0.5		4		Silty clay loam, as 2.0' above, contact at 4.25' with loamy sand, medium to coarse, yellowish brown (10 YR 5/6), moist, poorly washed and sorted, contact at 4.5' with sandy loam, pebbly, dark gray (10 YR 4/1), dry, hard, calcareous
				5		
Probe	2.0	2.0		6		Sandy loam, as 4.5' above
				7		
				8		T.D. 8.0'
				9		
				10		
				11		
				12		
				13		
				14		
				15		
				16		
				17		
				18		
				19		
				20		

marks

Well Completion Diagram

Well No. MW-20

Project: Former Amphenol RFI
 Time & Date: Started 15:00 2/5/92
 Completed 16:05 2/5/92

Installed By: A. Schrader
 Inspected By: J. A. Duwelius

Reference Point (Top of Casing) 734.03 FT. (MSL)
 Ground Surface 731.84 FT. (MSL)

Guard Pipe

Drilling Method: Mobile B-57 HSA
4 1/4" ID 8 1/4" OD

Backfill
Cement Grout
3 - Bags

Screen:
 Type 2-Inch PVC Sch. 40
 Slot Size 10 slot
 Top Blank 0.34'
 Bottom Blank 0.56'
 Total Screen 9.38'
 Total Length 10.28'

Stand Pipe:
 Type 2-Inch PVC Sch. 40
 Total Length 19.97'

8.00 FT.
 Bentonite Seal 10.00 FT.
1/2" Pellets
12.10 FT. 719.74 FT. (MSL)

Granular Pack:
#5 Silica Sand &
Natural Cave

Well Screen 21.48 FT. = $\frac{30.25' - 6.02' - 0.56' - 2.19'}{\text{Tot. Pipe Cut Off Bot. Blk. Stick}}$
 Bottom of Bore Hole 22.50 FT.

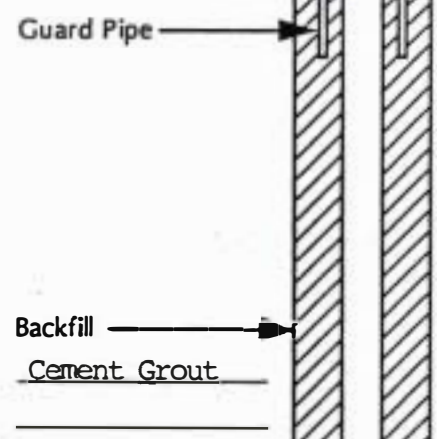
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Well Completion Diagram

Well No. MW-21
Project: Former Anphenol RFI
Time & Date: Started 14:20 2/20/92
 Completed 15:20 2/20/92

Installed By: A. Schrader
Inspected By: J. D. Bryan

Reference Point (Top of Casing) 737.91 FT. (MSL)
Ground Surface 735.11 FT. (MSL)



Drilling Method: Mobile B-57 HSA
4 1/4" ID 8 1/4" OD

Screen:
 Type 2-Inch PVC Sch. 40
 Slot Size 10 slot
 Top Blank 0.30'
 Bottom Blank 0.43'
 Total Screen 9.37'
 Total Length 10.10'

Stand Pipe:
 Type 2-Inch PVC Sch. 40
 Total Length 17.66'

Backfill 10.00 FT.
Cement Grout 12.60 FT.
Bentonite Seal 14.91 FT. 720.20 FT. (MSL)
Granular Pack: #5 Silica Sand & Natural Cave
Well Screen 24.28 FT. = $\frac{27.76'}{\text{Tot. Pipe}}$ - $\frac{0.25'}{\text{Cut Off}}$ - $\frac{0.43'}{\text{Bot. Blk.}}$ - $\frac{2.80'}{\text{Stick}}$
Bottom of Bore Hole 25.50 FT.

Not to Scale



Well Completion Diagram

Well No. MW-22

Project: Former Amphenol RFI

Installed By: A. Schrader

Time & Date: Started 15:00 2/11/92

Inspected By: M. Lytle

Completed 16:00 2/11/92

Reference Point
(Top of Casing) 737.64 FT. (MSL)

Ground Surface 735.03 FT. (MSL)

Guard Pipe

Drilling Method: Mobile B-57 HSA
4 1/4" ID 8 1/4" OD

Backfill
Cement Grout

Screen:

Type 2-Inch PVC Sch. 40

Slot Size 10 slot

Top Blank 0.34'

Bottom Blank 0.52'

Total Screen 9.37'

Total Length 10.23'

Stand Pipe:

Type 2-Inch PVC Sch. 40

Total Length 20.00'

7.20 FT.

Bentonite Seal 9.20 FT.

Granular Pack: 11.63 FT. 723.40 FT. (MSL)

#5 Silica Sand
& Natural Cave

Well Screen 21.00 FT. = $\frac{30.23'}{\text{Tot. Pipe}} - \frac{6.10'}{\text{Cut Off}} - \frac{0.52'}{\text{Bot. Blk.}} - \frac{2.61'}{\text{Stick}}$

Bottom of Bore Hole 21.50 FT.

Not to Scale



Well Completion Diagram

Well No. MW-23

Project: Former Amphenol RFI

Installed By: A. Schrader

Time & Date: Started 16:00 2/14/92

Inspected By: J. D. Bryan

Completed 10:30 2/17/92

Reference Point
(Top of Casing) 737.43 FT. (MSL)

Ground Surface 735.07 FT. (MSL)

Guard Pipe

Drilling Method: Mobile B-57 HSA
4 1/4" ID 8 1/4" OD, through
10" diameter steel casing

Screen:
Type 2-Inch PVC Sch. 40
Slot Size 10 slot
Top Blank 0.29'
Bottom Blank 0.44'
Total Screen 9.37'
Total Length 10.10'

Backfill
Cement Grout

Stand Pipe:
Type 2-Inch PVC Sch. 40
Total Length 58.90'

33.10 FT.

Bentonite Seal
3/8" Pellets 37.00 FT.

Granular Pack:
Natural Cave 52.35 FT. 682.72 FT. (MSL)

Well Screen 61.72 FT. = $\frac{69.00' - 4.48' - 0.44' - 2.36'}{\text{Tot. Pipe Cut Off Bot. Blk. Stick}}$

Bottom of Bore Hole 69.00 FT.

Not to Scale

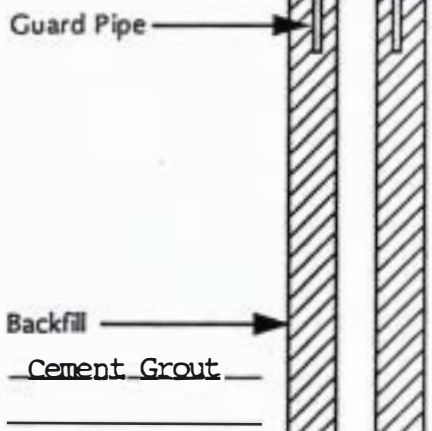
Well Completion Diagram

Well No. MW-24

Project: Former Amphenol RFI
 Time & Date: Started 13:30 2/6/92
 Completed 14:35 2/6/92

Installed By: A. Schrader
 Inspected By: M. Lytle

Reference Point (Top of Casing) 736.02 FT. (MSL)
 Ground Surface 733.83 FT. (MSL)



Drilling Method: Mobile B-57 HSA
4 1/4" ID 8 1/4" OD

Screen:
 Type 2-Inch PVC Sch. 40
 Slot Size 10 slot
 Top Blank 0.30'
 Bottom Blank 0.45'
 Total Screen 9.38'
 Total Length 10.13'

Stand Pipe:
 Type 2-Inch PVC Sch. 40
 Total Length 16.05'

Backfill 4.90 FT.
 Bentonite Seal 7.10 FT.
 Granular Pack: 10.87 FT. 722.96 FT. (MSL)
#5 Silica Sand & Natural Cave
 Well Screen 20.25 FT. = 26.18' 3.29' 0.45' 2.19'
 Bottom of Bore Hole 20.50 FT. Tot. Pipe Cut Off Bot. Blk. Stick

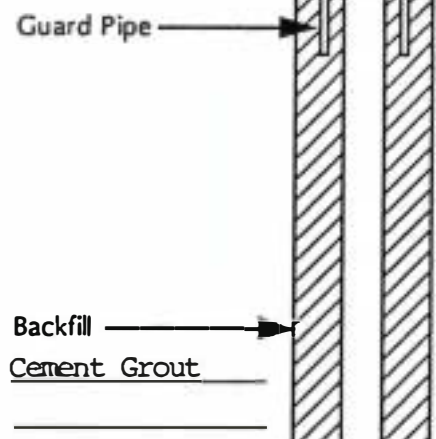
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Well Completion Diagram

Well No. MW-25
Project: Former Amphenol RFI
Time & Date: Started 15:00 2/19/92
 Completed 10:00 2/20/92

Installed By: A. Schrader
Inspected By: J. D. Bryan

Reference Point
 (Top of Casing) 736.21 FT. (MSL)
Ground Surface 733.77 FT. (MSL)



Drilling Method: Mobile B-57 HSA
4 1/4" ID 8 1/4" OD, through
10" diameter steel casing

Screen:
 Type 2-Inch PVC Sch. 40
 Slot Size 10 slot
 Top Blank 0.35'
 Bottom Blank 0.53'
 Total Screen 9.37'
 Total Length 10.25'

Stand Pipe:
 Type 2-Inch PVC Sch. 40
 Total Length 59.90'

45.00 FT.
Bentonite Seal
 1/2" Pellets 48.80 FT.
57.58 FT. 676.19 FT. (MSL)
Granular Pack:
Natural Cave
Well Screen 66.95 FT. = 70.15' 0.23' 0.53' 2.44'
 Bottom of Bore Hole 67.00 FT. Tot. Pipe Cut Off Bot. Blk. Stick

Not to Scale

Well Completion Diagram

Well No. MW-26
Project: Former Amphenol RFI
Time & Date: Started 9:00 2/5/92
 Completed 11:30 2/5/92

Installed By: A. Schrader
Inspected By: J. A. Duwelius

Reference Point
(Top of Casing) → 736.39 FT. (MSL)
Ground Surface → 734.04 FT. (MSL)

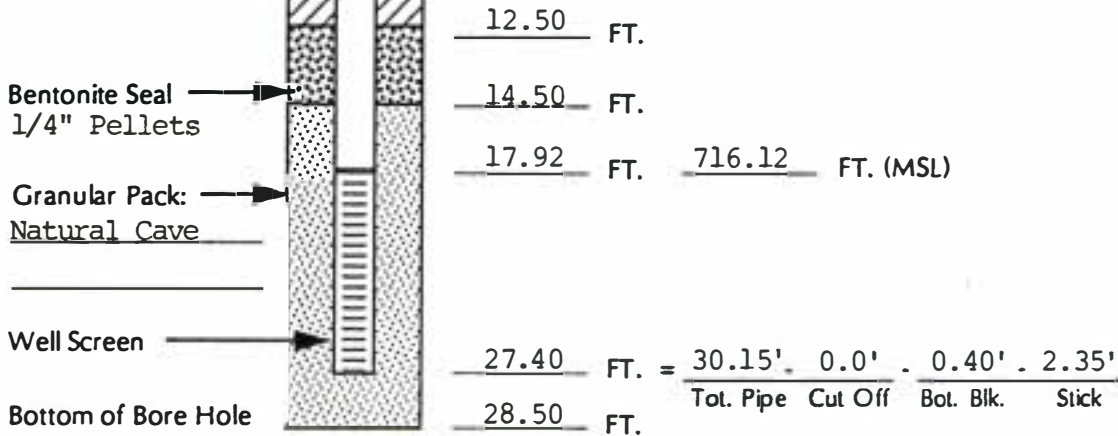
Guard Pipe →

Drilling Method: Mobile B-57 HSA
4 1/4" ID 8 1/4" OD

Backfill →
Cement Grout
3-bags

Screen:
 Type 2-Inch PVC Sch. 40
 Slot Size 10 slot
 Top Blank 0.20'
 Middle Blank 0.50'
 Bottom Blank 0.40'
 Total Screen 4.48' + 4.50' = 8.98'
 Total Length 10.08'

Stand Pipe:
 Type 2-Inch PVC Sch. 40
 Total Length 20.07'



Not to Scale

Well Completion Diagram

Well No. MW-27

Project: Former Amphenol RFI
 Time & Date: Started 13:30 1/13/93
 Completed 15:00 1/13/93

Installed By: A. Schrader, Env. Drilling
 Inspected By: J. A. Duwelius

Reference Point (Top of Casing) 736.63 FT. (MSL)
 Ground Surface 734.25 FT. (MSL)

Guard Pipe

Drilling Method: Mobile B-57
4 1/4" ID - 8 1/4" OD HSA

Backfill
 Cement Grout

Screen:
 Type 2-Inch Sch. 40 PVC
 Slot Size 10 Slot
 Top Blank 0.03'
 Bottom Blank 0.26'
 Total Screen 9.75'
 Total Length 10.04'

Stand Pipe:
 Type 2-Inch Sch. 40 PVC
 Total Length 20.07'

Bentonite Seal 6.30 FT.
 3/8" Pellets 8.30 FT.
 Granular Pack: 13.17 FT. 721.08 FT. (MSL)
 Natural Soil
 Collapse
 Well Screen 22.92 FT. = 30.11' - 4.55' - 0.26' - 2.38'
 Bottom of Bore Hole 25.00 FT. Tol Pipe Cut Off Bol Blk Stick

Not to Scale

Well Completion Diagram

Well No. MW-28
Project: Former Amphenol RFI
Time & Date: Started 08:55 1/14/93
 Completed 09:30 1/14/93

Installed By: A. Schrader, Env. Drilling
Inspected By: J. A. Duwelius

Reference Point
 (Top of Casing) → 738.04 FT. (MSL)
Ground Surface → 735.67 FT. (MSL)

Guard Pipe →

Drilling Method: Mobile B-57
4 1/4" ID - 8 1/4" OD HSA

Backfill →
Cement Grout

Screen:
 Type 2-Inch Sch. 40 PVC
 Slot Size 10 Slot
 Top Blank 0.06'
 Bottom Blank 0.25'
 Total Screen 9.76'
 Total Length 10.07'

Stand Pipe:
 Type 2-Inch Sch. 40 PVC
 Total Length 20.07'

→ 6.70 FT.
Bentonite Seal → 8.90 FT.
 → 13.69 FT. 721.98 FT. (MSL)

Granular Pack
Natural Soil
Collapse

Well Screen → 23.45 FT. = $\frac{30.14'}{\text{Tot Pipe}} - \frac{4.07'}{\text{Cut Off}} - \frac{0.25'}{\text{Bot Blk}} - \frac{2.37'}{\text{Stick}}$
Bottom of Bore Hole → 24.00 FT.

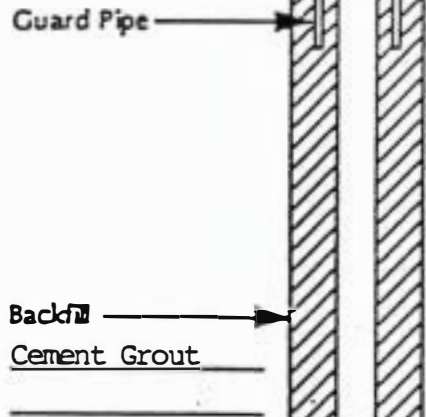
Not to Scale

Well Completion Diagram

Well No. MW-29
Project: Former Amphenol RFI
Time & Date: Started 11:45 1/15/93
 Completed 14:00 1/15/93

Installed By: A. Schrader, Env. Drilling
Inspected By: J. A. Duwelius

Reference Point
(Top of Casing) → 737.61 FT. (MSL)
Ground Surface → 734.86 FT. (MSL)



Drilling Method: Mobile B-57
4 1/4" ID - 8 1/4" OD HSA

Screen:
Type 2-Inch Sch. 40 PVC
Slot Size 10 Slot
Top Blank 0.05'
Bottom Blank 0.29'
Total Screen 9.76'
Total Length 10.10'

Stand Pipe:
Type 2-Inch Sch. 40 PVC
Total Length 20.05'

Bentonite Seal → 6.20 FT.
3/8" Pellets → 8.30 FT.
14.13 FT. 720.73 FT. (MSL)

Granular Pack: →
Natural Soil →
Collapse →
Well Screen → 23.89 FT. = 30.15' - 3.22' - 0.29' - 2.75'
Bottom of Bore Hole → 25.00 FT.

Tol Pipe Cut Off Bol. Blk Slick

Not to Scale



Well Completion Diagram

Well No. MW-30

Project: Former Amphipol RFI

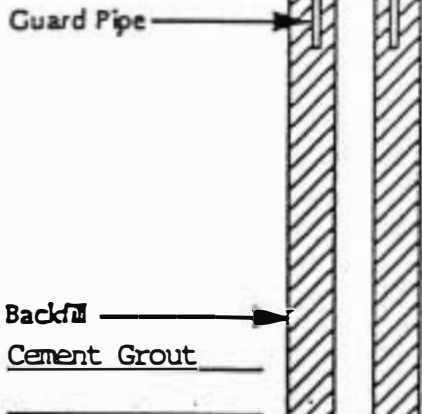
Installed By: A. Schrader, Env. Drilling

Time & Date: Started 13:10 1/14/93

Inspected By: J. D. Bryan

Completed 14:00 1/14/93

Reference Point (Top of Casing) 734.84 FT. (MSL)
 Ground Surface 732.41 FT. (MSL)



Drilling Method: Mobile B-57
4 1/4" ID - 8 1/4" OD HSA

Screen:
 Type 2-Inch Sch. 40 PVC
 Slot Size 10 Slot
 Top Blank 0.21'
 Bottom Blank 0.03'
 Total Screen 9.76'
 Total Length 10.00'

Stand Pipe:
 Type 2-Inch Sch. 40 PVC
 Total Length 11.60'

6.80 FT.
8.60 FT.
9.41 FT. 723.00 FT. (MSL)
 Bentonite Seal 3/8" Pellets
 Granular Pack
 Natural Soil Collapse
 Well Screen
19.17 FT. = 21.60' 0 0 2.43'
19.50 FT. Tol Pipe Cut Off Bot. Blk. Stick

Not to Scale

APPENDIX E

**Monitoring well and storm sewer
construction details.**

DRAFT

Appendix E. Monitoring Well and Storm Sewer Construction Details.

WELL NO	INSTALLED		T.O.C.	ELEVATION (feet MSL)			NOTES	LITHO-STRATIGRAPHIC UNIT
	BY	DATE		GROUND	SCREEN TOP	SCREEN BOTTOM		
MW-1	A TEC	09-Feb-84	734.4	734.4	714.4	704.4	D	
MW-2	A TEC	09-Feb-84	734.4	734.7	714.7	704.7	D	
MW-3	A TEC	08-Feb-84	736.44	735.3	715.8	705.8		B
MW-4	A TEC	13-Feb-84	733.5	731.3	711.8	701.8	D	
MW-5	A TEC	14-Feb-84	736.4	734.3	714.3	704.3	D	
MW-6	A TEC	26-Jun-84	NA	732.7	714.0	709.2	D	
MW-7	A TEC	26-Jun-84	NA	730.1	712.1	707.1	D	
MW-8	A TEC	27-Jun-84	NA	731.1	715.6	710.6	D	
MW-9	A TEC	03-Jul-84	733.04	730.5	713.5	708.5		B
MW-10	A TEC	03-Jul-84	NA	734.1	716.1	711.1	D	
MW-11	A TEC	05-Jul-84	NA	731.9	717.9	712.9	D	
MW-12	A TEC	05-Jul-84	736.38	733.8	716.3	711.3		B
MW-13	A TEC	19-Jun-84	NA	734.7	558.7	553.7	D	
MW-14	A TEC	06-Jul-84	NA	734.7	621.7	616.7	D	
MW-15	A TEC	05-Jul-84	NA	734.7	678.7	673.7	D	
MW-16	A TEC	05-Jul-84	NA	734.7	721.2	711.2	D	
MW-17	A TEC	10-Jul-84	NA	734.6	714.6	709.6	D	
IT-1A	IT	Apr-85	736.38	733.9	683.9	673.9		D
IT-1B	IT	Apr-85	736.73	734.5	725.6	715.5	D	
IT-2	IT	Apr-85	732.25	732.4	724.5	714.4		B
IT-3	IT	Apr-85	728.71	728.9	723.0	712.9		B
IT-4	IT	Apr-85	731.73	728.9	718.9	713.9	U	
IT-5	IT	Apr-85	735.82	732.9	680.6	670.9	U	
MW-20	WWES	05-Feb-92	734.03	731.8	719.7	710.4		B
MW-21	WWES	20-Feb-92	737.91	735.1	720.2	710.8		B
MW-22	WWES	11-Feb-92	737.64	735.0	723.4	714.0		B
MW-23	WWES	17-Feb-92	737.43	735.1	682.7	673.4		D
MW-24	WWES	06-Feb-92	736.02	733.8	723.0	713.6		B
MW-25	WWES	20-Feb-92	736.21	733.8	676.2	666.8		D
MW-26	WWES	05-Feb-92	736.39	734.0	716.1	706.6		B
MW-27	WWES	13-Jan-93	736.63	734.3	721.1	711.3		B
MW-28	WWES	14-Jan-93	738.04	735.7	722.0	712.2		B
MW-29	WWES	15-Jan-93	737.61	734.9	720.7	711.0		B
MW-30	WWES	14-Jan-93	734.84	732.4	723.0	713.2		B

STORM SEWER MANHOLES	ELEVATION (feet MSL)		SANITARY SEWER MANHOLES	ELEVATION (feet MSL)	
	RIM	INVERT		RIM	INVERT
NORTH	734.81	719.72	NEW NORTH	734.96	729.1
SOUTH	733.83	719.01	NEW SOUTH	733.75	728.09
EAST	727.89	718.01	OLD NORTH	735.67	729.36
			OLD SOUTH	734.18	727.96

T.O.C.=Top of Casing
 ATEC=A TEC Associates, Indianapolis, IN
 IT=IT Corporation, Pittsburgh, PA
 WWES=VWV Engineering & Science, Bloomington, IN

NA=data not available
 D=decommissioned
 U=not used in the RFI

APPENDIX F

Aquifer test results.

DRAFT



September 28, 1992

Memorandum

To: Jim Keith
From: John Bassett

RE: Pump Well Recovery system at former Amphenol facility, Franklin, Indiana

This memorandum presents results of an analysis of hydrologic data concerning the former Amphenol facility, Franklin, Indiana and provides recommendations for design and installation of an interim corrective measures (ICM) ground water recovery system. Background hydrogeologic data for this report are included in June 23, 1992 preliminary plume delineation report. Hydraulic data concerning Unit B were obtained from two mini-rate single well pump tests conducted at existing monitoring wells MW-12 and MW-24. Pump test data are included as Attachment A to this report.

Purpose of Ground Water Recovery

The purpose of the proposed ground water recovery system is two fold:

- 1) Provide a hydrodynamic barrier via ground water recovery and water level depression to prevent the further migration of VOC contaminants in ground water down gradient from the facility.
- 2) Provide water level depression in areas adjacent to the existing storm sewer south of the facility to prevent the inflow of ground water into the storm sewer system.
- 3) Withdraw ground water for treatment in a proposed on-site pretreatment system.

Hydrogeology

The proposed withdrawal system will recover ground water from a shallow sand and gravel zone (Unit B of the June 23, 1992 report). The base of this unit ranges from 17 to 21 feet beneath the ground surface, and the saturated thickness of the zone ranges from about five to seven feet during low ground water conditions. During low ground water flow conditions potentiometric levels are at or slightly below the storm sewer invert elevation. Ground water flow is to the

southeast, based on potentiometric data gathered during the ongoing RCRA Facility investigation (RFI).

Hydraulic Parameters

Estimates of Unit B hydraulic conductivity and transmissivity were obtained from short term mini-rate pumping tests at existing monitoring wells MW-12 and MW-24. Test data, and time-drawdown curves are provided in Attachment A. Well MW-12 was pumped at a constant rate of 1.16 gpm for a period of 1 hour, and a drawdown of 0.58 feet was observed. Well MW-24 was pumped at a rate of 4.17 gpm for a period of 67 minutes. A drawdown of 0.48 feet was observed at the end of the pumping period. Drawdown was measured in each well utilizing a pressure transducer and electronic data logger. Transmissivity was calculated using the specific capacity formula of Walton (1962, 1985), and assuming a storage coefficient of 0.20. Transmissivity values of 2,200 and 11,300 gpd/ft were calculated, respectively, for the aquifer at MW-12 and MW-24. For saturated thicknesses of 6.9 and 6.0 feet, these transmissivity values equate to hydraulic conductivities of 320 and 1860 gpd/ft². These hydraulic conductivity values, though markedly different from each other, are consistent with the observed fine to coarse sand texture of the aquifer unit.

test not on fully developed wells

SC = 2 gpm / 100

BIF 80-100,000 gpd/ft

Design Considerations

A ground water withdrawal system utilizing pumping wells is recommended for this ICM. This system is preferred over a recovery trench for the following reasons.

- 1) Excavating a trench through contaminated portions of the aquifer would produce a large quantity of contaminated sand that would need to be disposed of as hazardous or special waste. Wells minimize the amount of contaminated sand which is brought to the surface, and are a much less invasive type of installation, given the residential aspect of the area immediately south of the facility.
- 2) Wells offer more flexibility in hydrodynamic control and recovery of the contaminant plume.

System design is dictated by both the limited drawdown (based on aquifer thickness) that is available, and the necessity of providing some amount of drawdown in all areas adjacent to the storm sewer to depress water level below the storm sewer system.

Withdrawal Well Locations and Pumping Rates

Various well configurations and pump rates were evaluated using the analytical ground water flow model DREAM (Bonn and Rounds, 1990). Plots of both water level contours and drawdown were produced. Well spacing was evaluated using the low value of transmissivity (2,200 gpd/ft) obtained from the pump test data. Anticipated pumping rates were evaluated using the high transmissivity value. These procedures produce conservative designs with respect to both well spacing and pump discharge estimates.

The DREAM model produces estimates of drawdown based on the Theis equation and assumes a confined aquifer situation. Drawdowns for unconfined aquifer situations are somewhat higher than those predicted by the model as a result of decreases in transmissivity due to gravity drainage. Practically, drawdown at each withdrawal well location is limited by aquifer thickness, and a maximum allowable drawdown of 4.0 feet is assumed. The Jacob correction was utilized to calculate the equivalent drawdown in a confined aquifer (see calculation sheet 1). Based on this calculation, pump rates were chosen to limit drawdown in pump rates to about 2.4 feet.

Figures 1 and 2 show water level elevations and drawdown produced by a three well pumping system. Model input parameters are listed in Table 1. For the water level mapping, a uniform flow gradient of 0.00179 directed at 148° was assumed. This situation approximates the field conditions as determined from water level mapping on March 25, 1992.

Pumping each well at 3 gpm produces a desirable hydrodynamic control within 30 days. Minimum drawdown between wells will be about 1.5 feet (calculation sheet 1), corrected for gravity drainage. The zone of influence of the pumping well system should be sufficient to reverse the natural ground water gradient in the area immediately south of Hamilton Avenue and provide for ground water recovery in this area (Figure 1).

Assuming the higher aquifer transmissivity (11,300 gpd/ft), a longer pumping period, and higher pumping rate are necessary to produce the desired hydrodynamic control. Figures 3 and 4 show potentiometric contours and drawdown for the same three wells system after pumping each well at 10 gpm for 60 days. Model input parameters are listed in Table 2.

After the initial cones of depression are produced in 30 or 60 days, pumping will continue at some maintenance level which will be less than the rate necessary to achieve the initial water level depression. It is impossible to quantify this rate based on the available data.

Recommendations

A ground water recovery system utilizing three wells with pumps rated at 10 gpm should be sufficient to achieve an acceptable hydrodynamic control.

30 gpm

References

Bonn, Bernadine and Stewart Rounds, 1990, *Dream Analytical Groundwater Flow Programs*: Lewis Publishers, 109 p.

Walton, W. C., 1962, *Selected Analytical Methods for Well and Aquifer Evaluation*: Illinois State Water Survey, Bulletin 49, 81 p.

-----, 1985, *Practical Aspects of Ground Water Modeling*: National Water Well Association, 587 p.

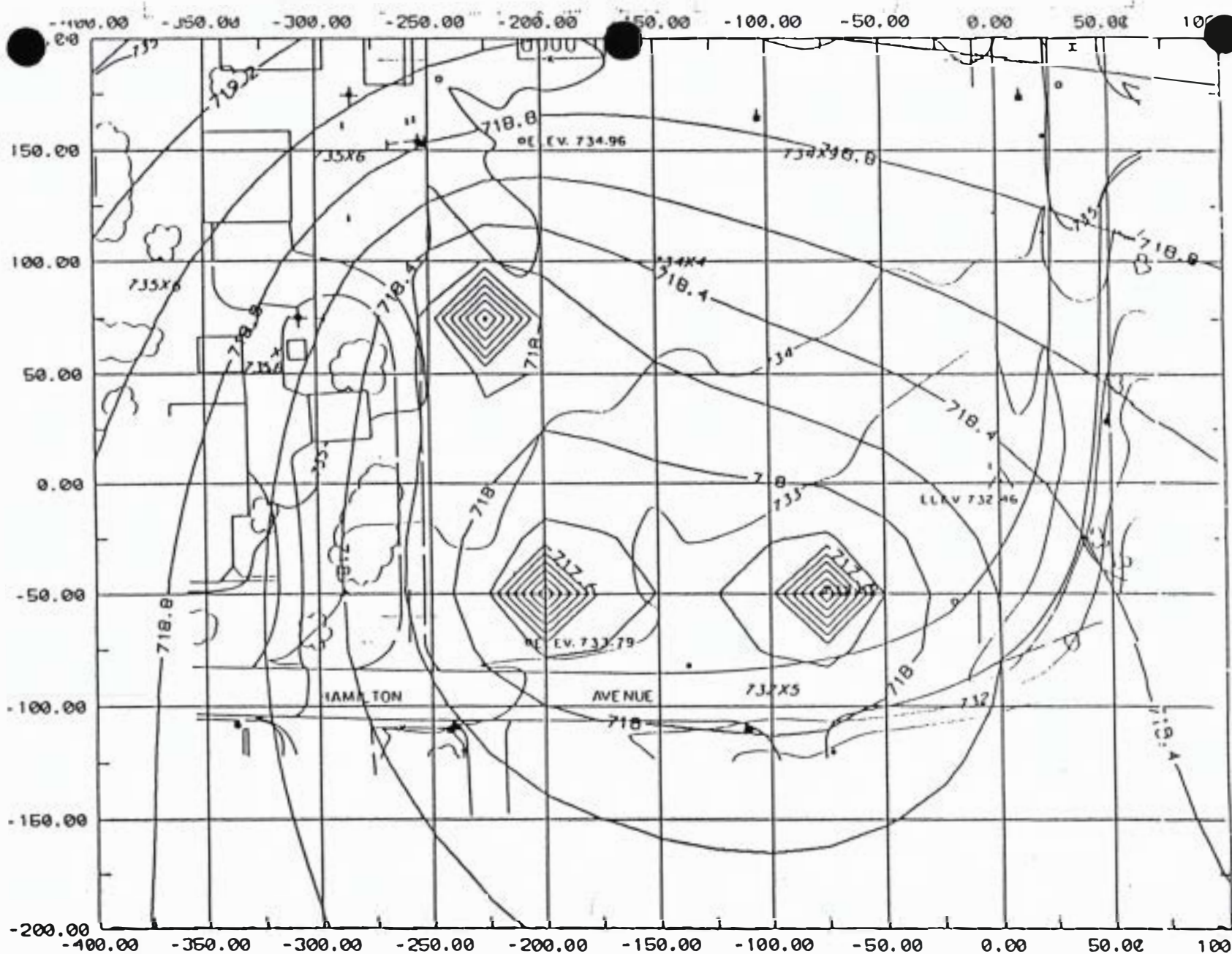


Figure 1. Potentiometric contours produced by three well pumping system. $T=2200$ gpd/ft, $Q=3 \times 3$ gpm, $t=30$ da.

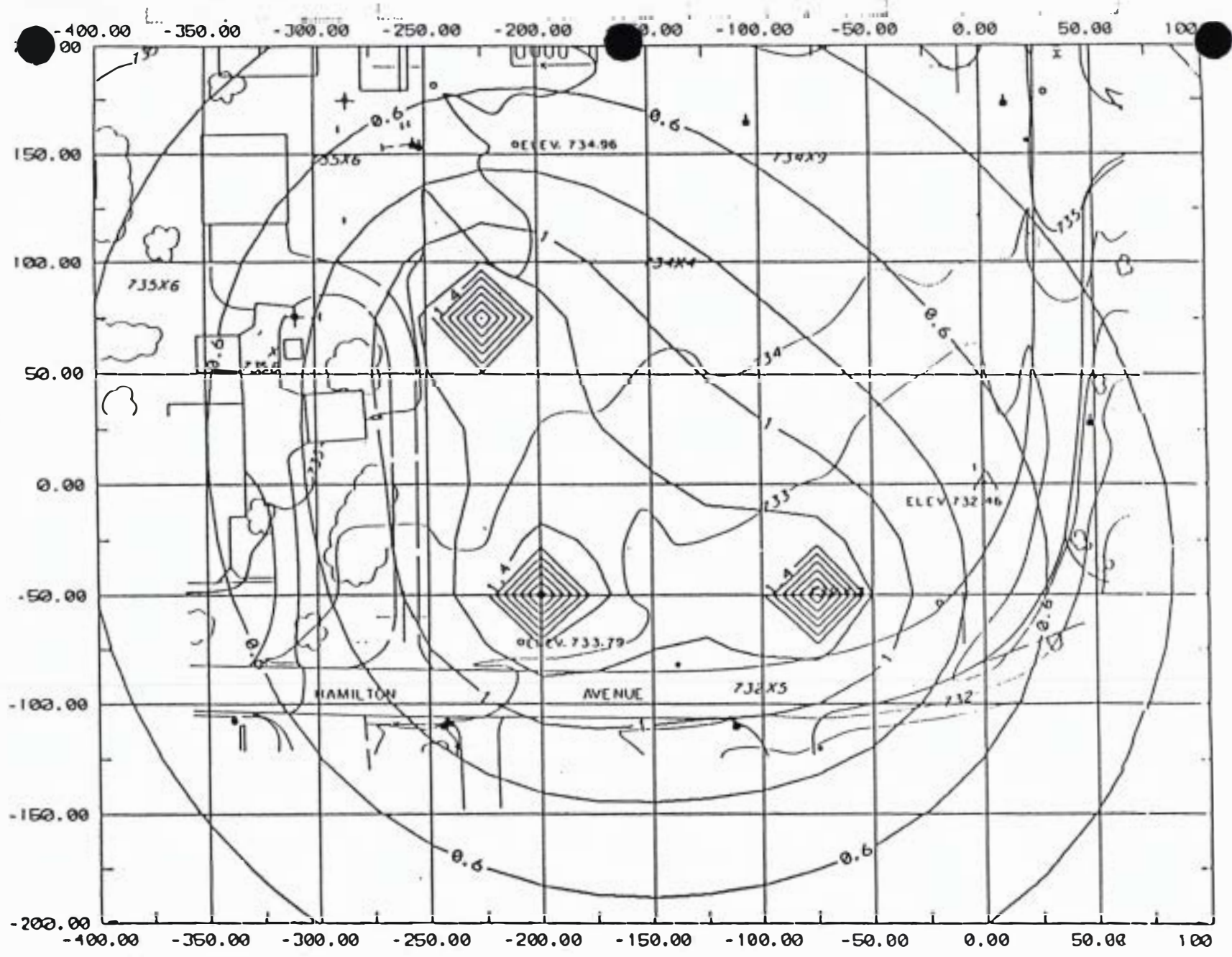


Figure 2. Drawdown produced by three well pumping system. $T=2200$ gpd/ft, $Q=3 \times 3$ gpm, $t=30$ da.

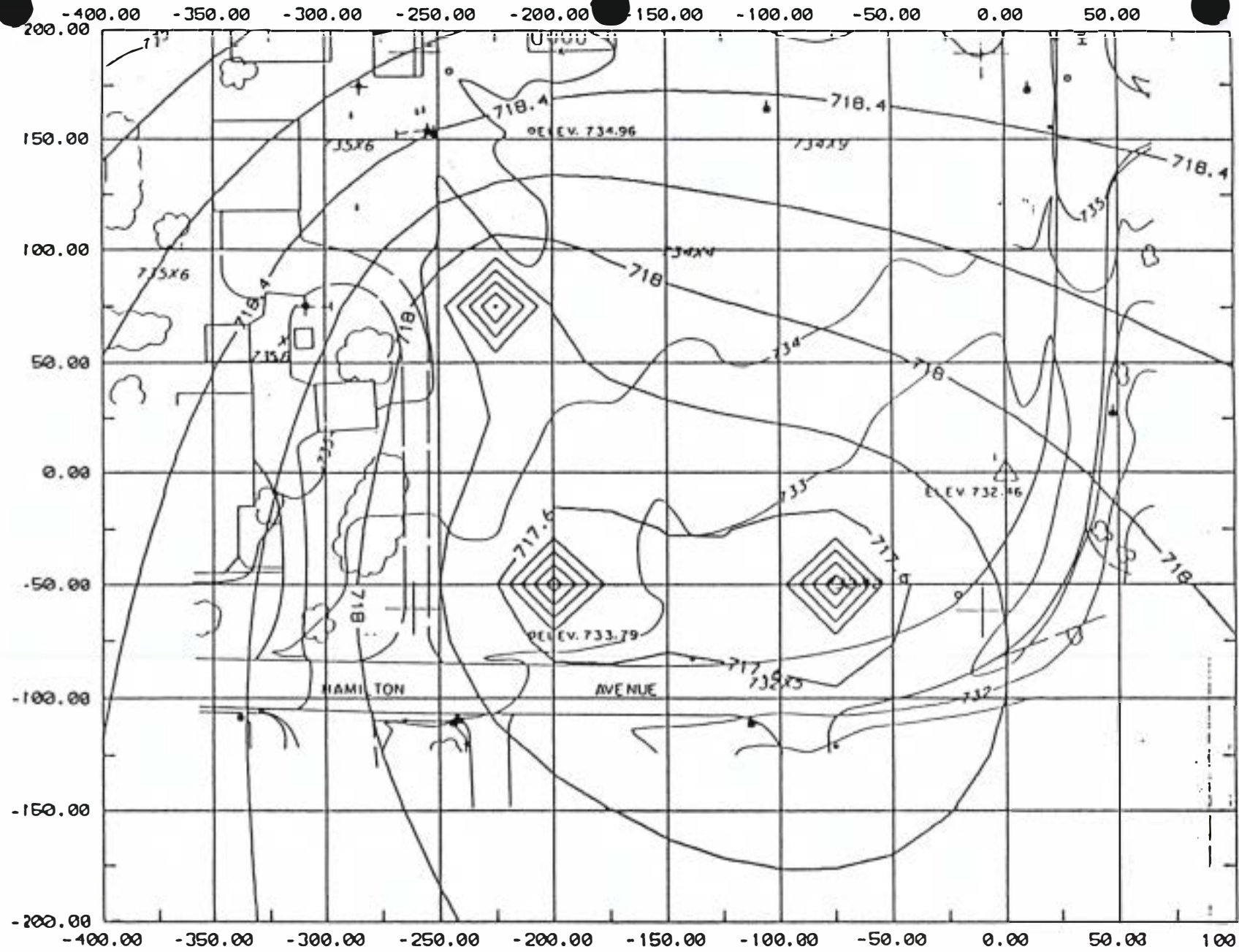


Figure 3. Potentiometric contour produced by three well pumping system. $T=11,300$ gpd/ft, $Q=3 \times 10$ gpm, $t=60$ da.

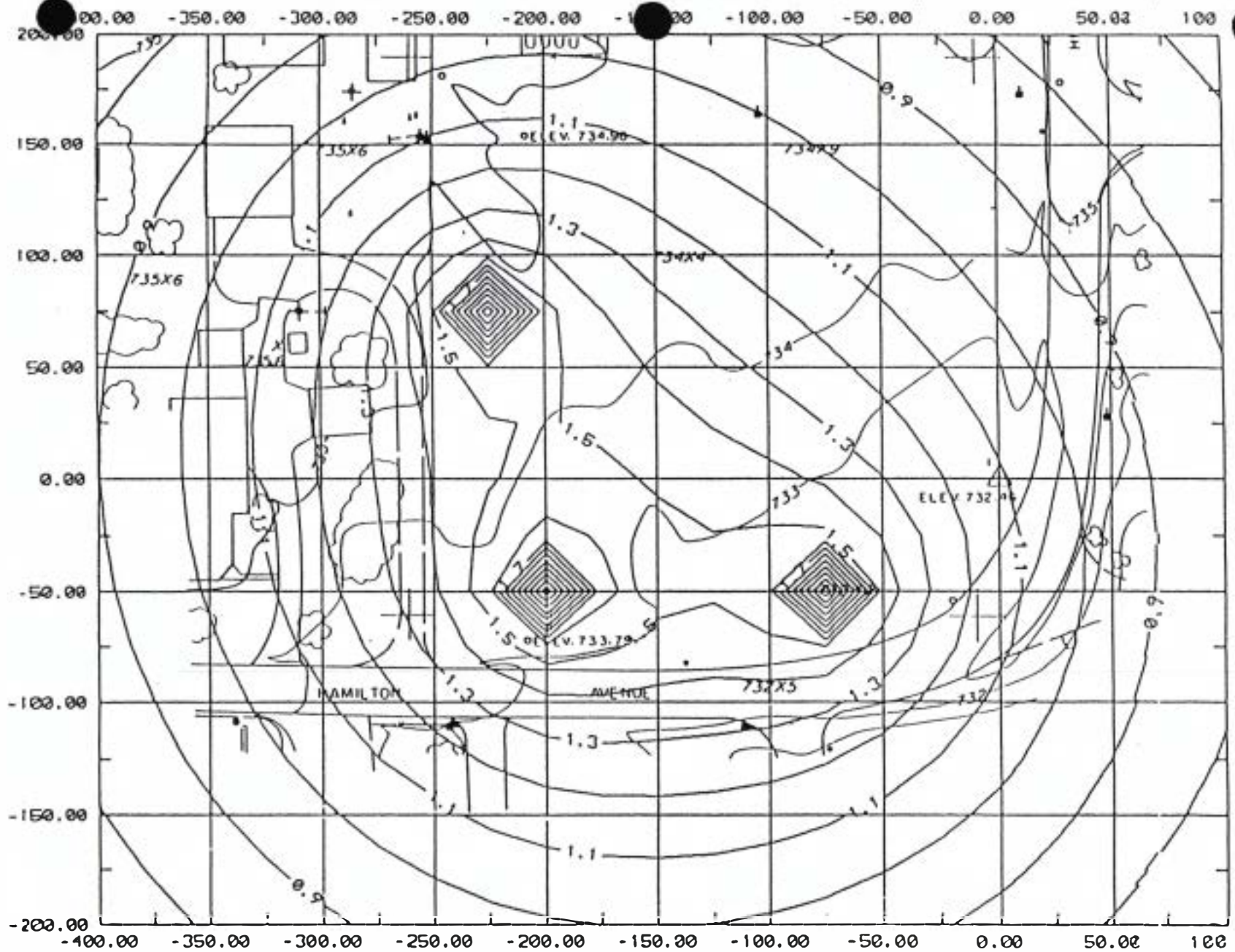


Figure 4. Drawdown produced by three well pumping system. $T=11,300$ gpd/ft, $Q=3 \times 10$ gpm, $t=60$ da.

Table 1

Date: 09-14-1992

Time: 14:27:01

Grid:

x = -400.000 to 100.000 feet
 y = -200.000 to 200.000 feet
 x grid spacing = 25.000 feet
 y grid spacing = 25.000 feet

Well #	x feet	y feet	Flow Rate gallons / min.	Pumping Time days	<u>Max. Drawdown</u>
1	-75.00	-50.00	3.000	30.00	2.62
2	-200.00	-50.00	3.000	30.00	2.73
3	-225.00	75.00	3.000	30.00	2.61

Storage coefficient = 0.200000
 Transmissivity = 0.2200D+04 gallons / foot-day
 Natural gradient = 0.001790 dimensionless
 Flow direction = 148.00 compass degrees
 Reference x-coordinate = -50.000 feet
 Reference y-coordinate = -50.000 feet
 Reference elevation = 719.000 feet

The following data files have been created:
 3level.dat = x, y, elevation

Table 2

Date: 09-15-1992
 Time: 10:12:05

Grid:

x = -400.000 to 100.000 feet
 y = -200.000 to 200.000 feet
 x grid spacing = 25.000 feet
 y grid spacing = 25.000 feet

Well #	x feet	y feet	Flow Rate gallons / min.	Pumping Time days	<u>Max. Drawdown</u>
1	-75.00	-50.00	10.000	60.00	2.38
2	-200.00	-50.00	10.000	60.00	2.47
3	-225.00	75.00	10.000	60.00	2.38

Storage coefficient = 0.200000
 Transmissivity = 0.11300+05 gallons / foot-day
 Natural gradient = 0.001790 dimensionless
 Flow direction = 148.00 compass degrees
 Reference x-coordinate = -50.000 feet
 Reference y-coordinate = -50.000 feet
 Reference elevation = 719.000 feet

The following data files have been created:
 3110hi.dat = x, y, elevation

ATTACHMENT A



Calculation Sheet

Computed by _____ Subject _____ Sheet 1 of _____
Checked by _____ Job No. _____
Client _____ Date _____

ASSUME MAXIMUM DRAWDOWN AT PUMPING WELL
IN UNCONFINED AQUIFER IS 4.0'.

CALCULATE EQUIVALENT DRAWDOWN IN CONFINED
AQUIFER; AS CALCULATED BY MODEL.

USE JACOB CORRECTION

$$s = s_0 - \frac{s_0^2}{2m}$$

s_0 = DRAWDOWN UNDER WATER TABLE CONDITIONS

s = EQUIVALENT DRAWDOWN CORRECTED FOR
DECREASE IN SATURATED THICKNESS.

m = AQUIFER THICKNESS (ASSUME 5.0')

$$s = 4.0 - \frac{4.0^2}{2(5.0)}$$

$$= 2.4'$$

⇒ LIMIT DRAWDOWN AT PUMPING WELL TO 2.4'

FOR 3 WELL PUMPING SYSTEM ASSUMING $T = 2200 \text{ gal/A}$
MIN DRAWDOWN BETWEEN WELLS IS ABOUT 1.3 FT.
USE JACOB EQUATION TO CALCULATE s_0 UNDER
WATER TABLE CONDITIONS

s_0	s
1.6	1.34
1.55	1.31
1.54	1.30

ACTUAL DRAWDOWN BETWEEN WELLS
~ 1.5'

FUMP TEST DATA SHEET

PROJECT	FRANKLIN ICM	DATE	09/10/92
WELL NO.	MW-12	COR. FACTOR	1.02
TRANSDUCER NO.	1	COR. STATIC	1.30
STATIC DEPTH (FT.)	1.27	ELEVATION	
STATIC TAPE (FT.)	16.71	AQUIFER TH.	
PUMP RATE (GPM)	1.16		

TIME (SECS)	DEPTH (FT.)	COR. DEPTH (FT.)	s (FT.)	COR. s (FT.)
1	1.17	1.19	0.10	
2	0.98	1.00	0.30	
3	0.84	0.86	0.44	
4	0.75	0.77	0.53	
5	0.69	0.70	0.59	
6	0.64	0.65	0.64	
7	0.60	0.61	0.68	
8	0.57	0.58	0.71	
9	0.53	0.54	0.75	
10	0.52	0.53	0.77	
11	0.49	0.50	0.80	
12	0.48	0.49	0.81	
13	0.47	0.48	0.82	
14	0.46	0.47	0.83	
15	0.46	0.47	0.83	
16	0.45	0.46	0.84	
17	0.46	0.47	0.83	
18	0.46	0.47	0.83	
19	0.46	0.47	0.83	
20	0.47	0.48	0.82	
21	0.47	0.48	0.82	
22	0.48	0.49	0.81	
23	0.48	0.49	0.81	
24	0.49	0.50	0.80	
25	0.49	0.50	0.80	
26	0.50	0.51	0.79	
27	0.51	0.52	0.78	
28	0.51	0.52	0.78	
29	0.51	0.52	0.78	
34	0.54	0.55	0.74	
39	0.57	0.58	0.71	
44	0.59	0.60	0.69	
49	0.61	0.62	0.67	
54	0.62	0.63	0.66	
59	0.62	0.63	0.66	
69	0.63	0.64	0.65	
79	0.64	0.65	0.64	
89	0.65	0.66	0.63	
99	0.67	0.68	0.61	
109	0.68	0.69	0.60	
119	0.68	0.69	0.60	
129	0.69	0.70	0.59	
139	0.69	0.70	0.59	

FUMP TEST DATA SHEET

PROJECT	FRANKLIN ICM	DATE	09/10/92
WELL NO.	MW-12	COR. FACTOR	1.02
TRANSDUCER NO.	1	COR. STATIC	1.30
STATIC DEPTH (FT.)	1.27	ELEVATION	
STATIC TAPE (FT.)	16.71	AQUIFER TH.	
PUMP RATE (GPM)	1.16		

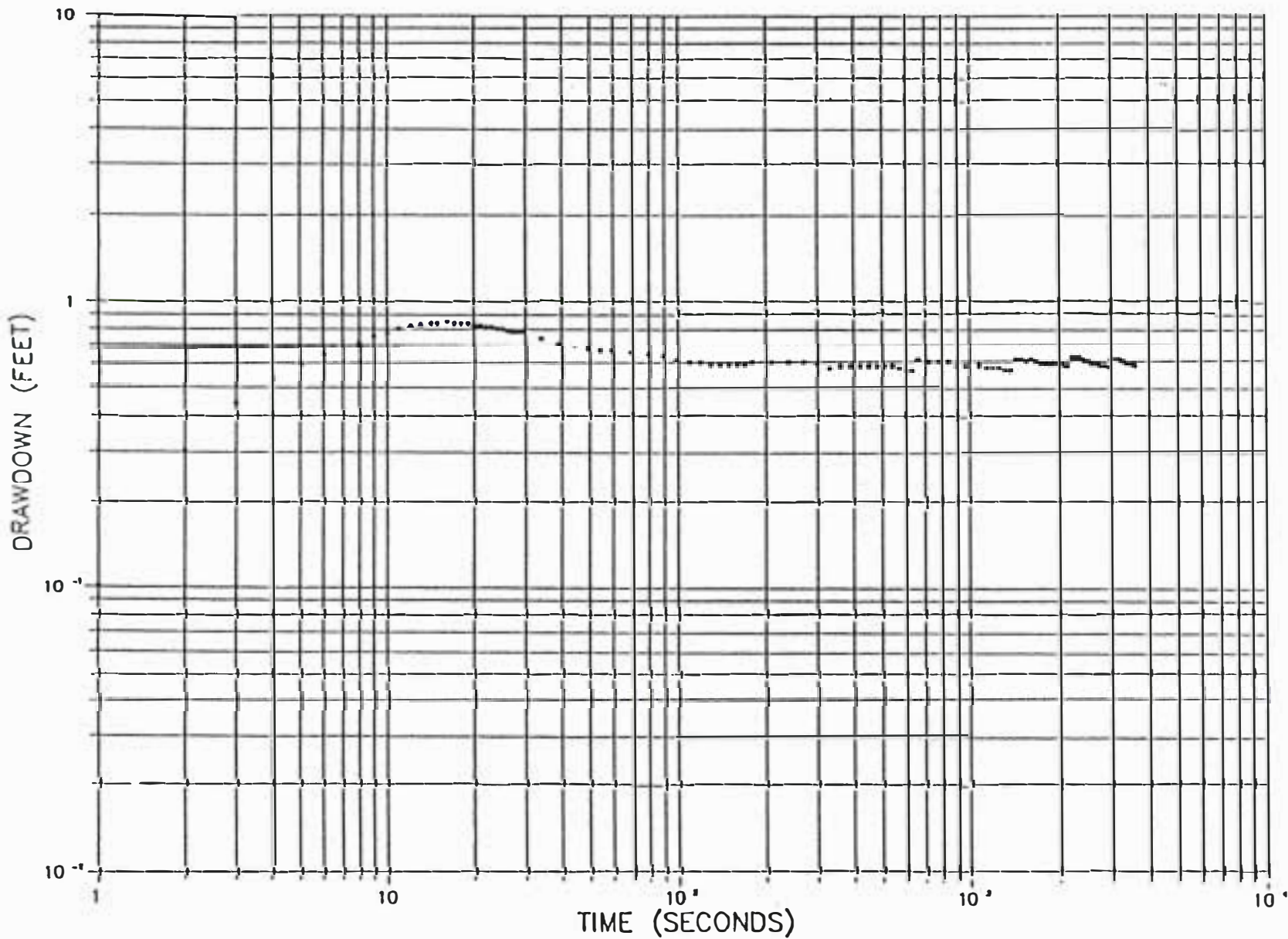
TIME (SECS)	DEPTH (FT.)	COR. DEPTH (FT.)	s (FT.)	COR. s (FT.)
149	0.69	0.70	0.59	
159	0.69	0.70	0.59	
169	0.69	0.70	0.59	
179	0.68	0.69	0.60	
209	0.68	0.69	0.60	
239	0.68	0.69	0.60	
269	0.68	0.69	0.60	
299	0.69	0.70	0.59	
329	0.71	0.72	0.57	
359	0.70	0.71	0.58	
389	0.70	0.71	0.58	
419	0.70	0.71	0.58	
449	0.70	0.71	0.58	
479	0.70	0.71	0.58	
509	0.70	0.71	0.58	
539	0.70	0.71	0.58	
569	0.71	0.72	0.57	
599	0.72	0.73	0.56	
629	0.72	0.73	0.56	
659	0.67	0.68	0.61	
719	0.68	0.69	0.60	
779	0.68	0.69	0.60	
839	0.68	0.69	0.60	
899	0.70	0.71	0.58	
959	0.70	0.71	0.58	
1072	0.70	0.71	0.58	
1132	0.71	0.72	0.57	
1192	0.71	0.72	0.57	
1252	0.71	0.72	0.57	
1312	0.72	0.73	0.56	
1372	0.72	0.73	0.56	
1432	0.67	0.68	0.61	
1492	0.67	0.68	0.61	
1552	0.68	0.69	0.60	
1612	0.67	0.68	0.61	
1672	0.68	0.69	0.60	
1732	0.69	0.70	0.59	
1792	0.69	0.70	0.59	
1852	0.69	0.70	0.59	
1912	0.69	0.70	0.59	
1972	0.69	0.70	0.59	
2032	0.69	0.70	0.59	
2092	0.70	0.71	0.58	

PUMP TEST DATA SHEET

PROJECT	FRANKLIN ICM	DATE	09/10/92
WELL NO.	MW-12	COR. FACTOR	1.02
TRANSDUCER NO.	1	COR. STATIC	1.30
STATIC DEPTH (FT.)	1.27	ELEVATION	
STATIC TAPE (FT.)	16.71	AQUIFER TH.	
PUMP RATE (GPM)	1.16		

TIME (SECS)	DEPTH (FT.)	COR. DEPTH (FT.)	s (FT.)	COR. s (FT.)
2152	0.70	0.71	0.58	
2212	0.66	0.67	0.62	
2272	0.66	0.67	0.62	
2332	0.66	0.67	0.62	
2392	0.67	0.68	0.61	
2452	0.68	0.69	0.60	
2512	0.68	0.69	0.60	
2572	0.69	0.70	0.59	
2632	0.69	0.70	0.59	
2692	0.69	0.70	0.59	
2752	0.70	0.71	0.58	
2812	0.70	0.71	0.58	
2872	0.70	0.71	0.58	
2932	0.71	0.72	0.57	
2992	0.67	0.68	0.61	
3052	0.67	0.68	0.61	
3112	0.67	0.68	0.61	
3172	0.67	0.68	0.61	
3232	0.68	0.69	0.60	
3292	0.68	0.69	0.60	
3352	0.69	0.70	0.59	
3412	0.69	0.70	0.59	
3472	0.69	0.70	0.59	
3532	0.69	0.70	0.59	
3592	0.70	0.71	0.58	

TIME-DRAWDOWN WELL MW-12



FUMP TEST DATA SHEET

PROJECT	FRANKLIN 10M	DATE	09/09/92
WELL NO.	MW-24	COR. FACTOR	1.02
TRANSDUCER NO.	1	COR. STATIC	3.83
STATIC DEPTH (FT.)	3.75	ELEVATION	
STATIC TAPE (FT.)	16.18	AQUIFER TH.	
PUMP RATE (GPM)	4.17		

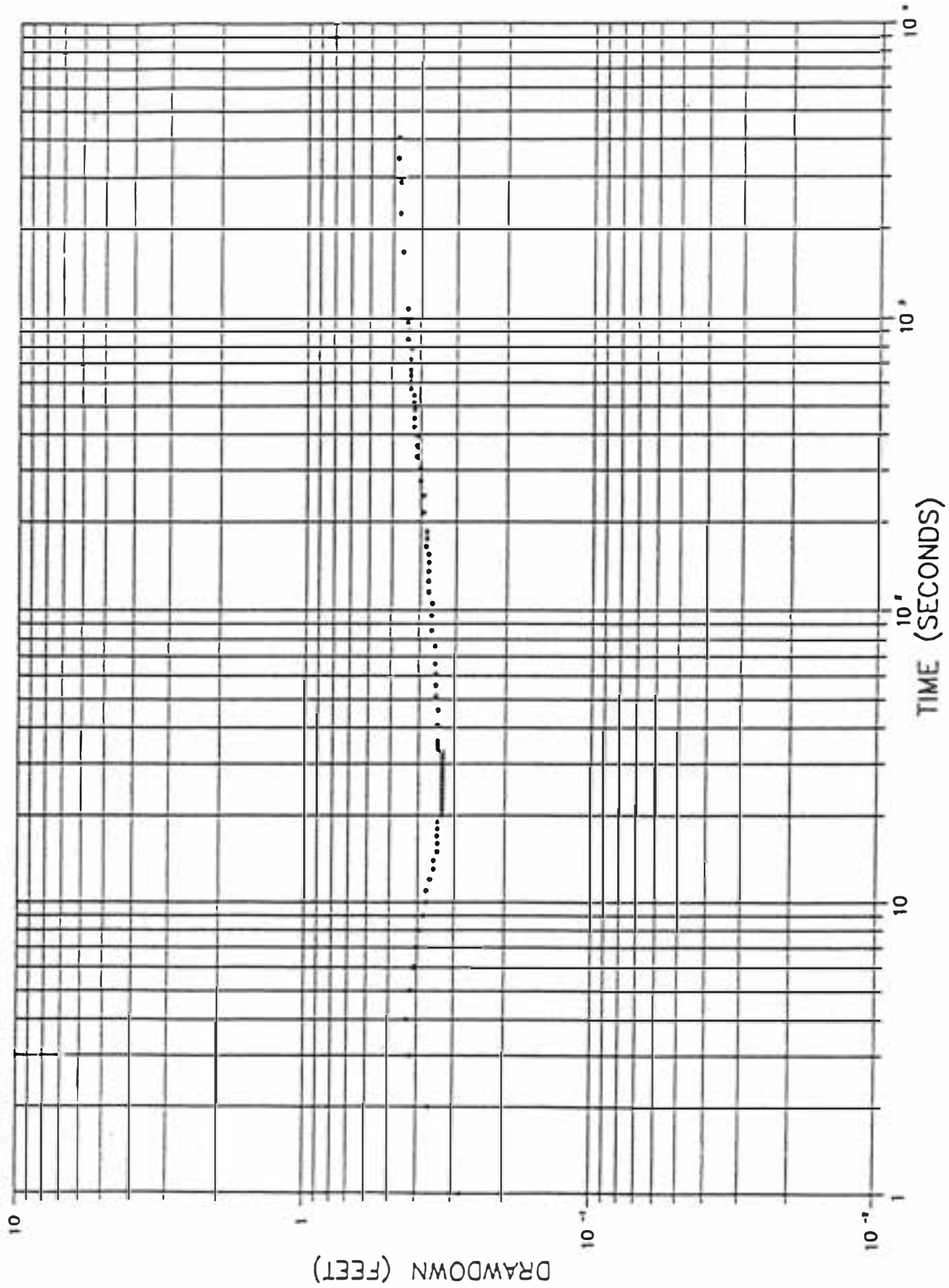
TIME (SECS)	DEPTH (FT.)	COR. DEPTH (FT.)	s (FT.)	COR. s (FT.)
1	3.48	3.55	0.28	
2	3.40	3.47	0.36	
3	3.34	3.41	0.42	
4	3.33	3.40	0.43	
5	3.34	3.41	0.42	
6	3.35	3.42	0.41	
7	3.36	3.43	0.40	
8	3.37	3.44	0.39	
9	3.38	3.45	0.38	
10	3.39	3.46	0.37	
11	3.39	3.46	0.37	
12	3.40	3.47	0.36	
13	3.41	3.48	0.35	
14	3.41	3.48	0.35	
15	3.42	3.49	0.34	
16	3.42	3.49	0.34	
17	3.42	3.49	0.34	
18	3.42	3.49	0.34	
19	3.42	3.49	0.34	
20	3.43	3.50	0.33	
21	3.43	3.50	0.33	
22	3.43	3.50	0.33	
23	3.43	3.50	0.33	
24	3.43	3.50	0.33	
25	3.43	3.50	0.33	
26	3.43	3.50	0.33	
27	3.43	3.50	0.33	
28	3.43	3.50	0.33	
29	3.43	3.50	0.33	
30	3.43	3.50	0.33	
31	3.43	3.50	0.33	
32	3.43	3.50	0.33	
33	3.43	3.50	0.33	
34	3.42	3.49	0.34	
35	3.42	3.49	0.34	
36	3.42	3.49	0.34	
41	3.42	3.49	0.34	
46	3.42	3.49	0.34	
51	3.41	3.48	0.35	
56	3.41	3.48	0.35	
61	3.41	3.48	0.35	
66	3.41	3.48	0.35	
76	3.41	3.48	0.35	

PUMP TEST DATA SHEET

PROJECT	FRANKLIN ICM	DATE	09/09/92
WELL NO.	MW-24	COR. FACTOR	1.02
TRANSDUCER NO.	1	COR. STATIC	3.83
STATIC DEPTH (FT.)	3.75	ELEVATION	
STATIC TAPE (FT.)	16.18	AQUIFER TH.	
PUMP RATE (GPM)	4.17		

TIME (SECS)	DEPTH (FT.)	COR. DEPTH (FT.)	s (FT.)	COR. s (FT.)
86	3.40	3.47	0.36	
96	3.40	3.47	0.36	
106	3.40	3.47	0.36	
116	3.39	3.46	0.37	
126	3.39	3.46	0.37	
136	3.39	3.46	0.37	
146	3.39	3.46	0.37	
156	3.39	3.46	0.37	
166	3.38	3.45	0.38	
176	3.38	3.45	0.38	
186	3.38	3.45	0.38	
216	3.37	3.44	0.39	
246	3.37	3.44	0.39	
276	3.36	3.43	0.40	
306	3.36	3.43	0.40	
336	3.35	3.42	0.41	
366	3.35	3.42	0.41	
396	3.35	3.42	0.41	
426	3.34	3.41	0.42	
456	3.34	3.41	0.42	
486	3.34	3.41	0.42	
516	3.34	3.41	0.42	
546	3.34	3.41	0.42	
576	3.33	3.40	0.43	
606	3.33	3.40	0.43	
636	3.33	3.40	0.43	
666	3.33	3.40	0.43	
726	3.33	3.40	0.43	
786	3.33	3.40	0.43	
846	3.32	3.39	0.44	
906	3.32	3.39	0.44	
966	3.32	3.39	0.44	
1075	3.32	3.39	0.44	
1675	3.30	3.37	0.46	
2275	3.29	3.36	0.47	
2875	3.29	3.36	0.47	
3475	3.28	3.35	0.48	
4075	3.28	3.35	0.48	

TIME--DRAWDOWN WELL MW-24



QW-BASIC 3.22
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0
un
(GPM), DRAWDOWN (FT), TIME (MINS), STORAGE COEF., RADIUS (FT)? 1.16, .58, 59.9, .
2, .0989

INITIAL T VALUE? 1000

2008.242
2168.054
2185.603
2187.452
2187.645
2187.665
2187.668
2187.668

MW-12

CONVERGED TO SOLUTION

(GPM), DRAWDOWN (FT), TIME (MINS), STORAGE COEF., RADIUS (FT)? 4.17, .48, 67.9, .
.0989

INITIAL T VALUE? 5000

10450.44
11184.4
11251.97
11257.97
11258.5
11258.55
11258.55
11258.55
11258.55

MW-24

CONVERGED TO SOLUTION

1LIST 2RUN 3LOAD" 4SAVE" 5CONT 6,"LPT1 7TRON 8TROFF9KEY 0SCREEN

<u>WELL</u>	<u>T (GPD/FT)</u>	<u>b (FT)</u>	<u>K (GPD/FT²)</u>
12	2188	6.87	318
24	11258	6.04	1863

ATTACHMENT II

Calculation Sheet



Computed by _____ Subject _____ Sheet ____ of _____
 Checked by _____ Job No. _____
 Client _____ Date _____

ESTIMATE UNIT B PERM FROM GRAIN SIZE

<u>BORING</u>	<u>DEPTH</u>	<u>SAMPLE</u>	<u>d₉₀ (CIT)</u>	<u>HAZENI * K (cm/sec)</u>
SB-6	15.0-16.0	9209098	0.0158	2.5×10^{-2}
MW-22	17.0-19.0	9209099	0.0110	1.2×10^{-2}
MW-24	18.0-20.0	9209100	0.00891	7.9×10^{-3}

$$K = 100 d_{90}^2$$

PUMP TEST RESULTS

MW-12 1.5×10^{-2}
 MW-24 8.8×10^{-2}

WW ENGINEERING & SCIENCE INC.
GRAIN SIZE ANALYSIS

A.S.T.M. D-422

Project: CURTIS - FRANKLIN

Identification: MW - 24 18.0-20.0

Lab No. 9209100

477.10 = Air dry wt. of total sample selected for analysis.
65.00 = Air dry wt. of sample selected for hydrometer analysis.
476.64 = Dry wt. of total sample selected for analysis.
64.93 = Dry wt. of sample selected for hydrometer analysis.

HYGROSCOPIC MOISTURE

30.12 = wt. of wet soil + container 30.09 = wt. of dry soil + container
1.60 = wt. of container
0.1 = % hygroscopic moisture 0.99895 = moisture factor

SIEVE ANALYSIS (cumulative weights)

GRAVEL (greater than 2 MM)

SAND (from hydrometer sediment)

Sieve Size	Weight Retained	% Passing	Sieve Size	Weight Retained	Ttl. Sample % Passing
4.75	24.54	94.9	0.500	37.94	38.1
2.00	39.41	91.7	0.250	53.17	16.6
			0.125	56.96	11.3
			0.075	58.22	9.5

HYDROMETER ANALYSIS

9:44AM = Time sedimentation begins

Meniscus correction = 1

Elapsed Time (min.)	Temp. (deg.C)	Initial Hydro. Reading Ra	Zero Corr.	Dia. (MM) D	Total Sample Percent Passing
t					
2	21.0	10.5	6.0	0.03559	6.3
5	21.0	10.0	6.0	0.02257	5.6
15	21.0	9.0	6.0	0.01311	4.2
30	21.0	9.0	6.0	0.00927	4.2
60	21.0	8.0	6.0	0.00659	2.8
250	21.0	8.0	6.0	0.00323	2.8
1440	21.0	7.0	6.0	0.00135	1.4



CURTIS FRANKLIN

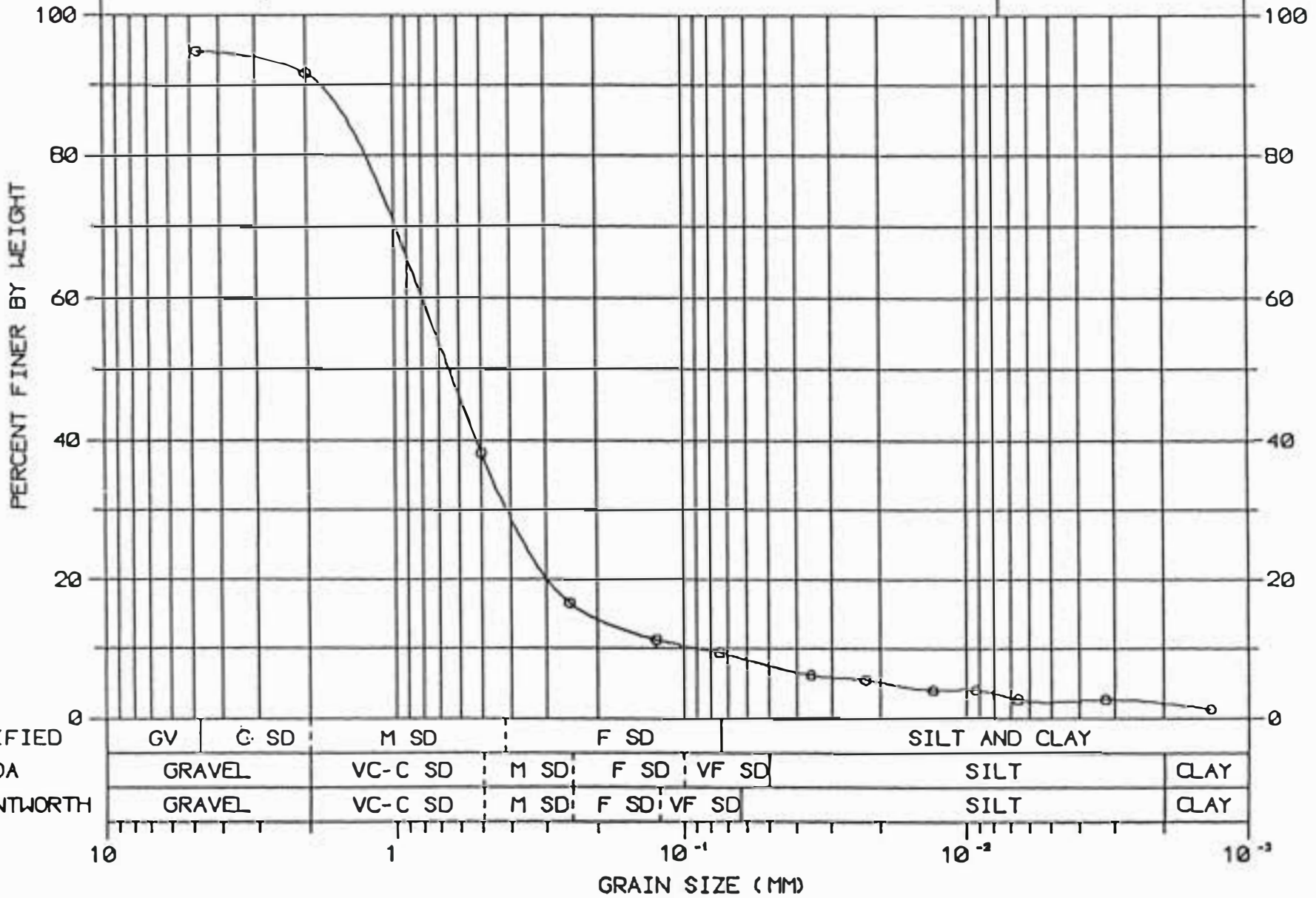
LAB I.D. 9209100

MW - 24 18.0-20.0

LL

PL

PI



WW ENGINEERING & SCIENCE INC.
GRAIN SIZE ANALYSIS

A.S.T.M. D-422

Project: CURTIS - FRANKLIN

Identification: MW - 22 17.0-19.0
Lab No. 9209099

344.20 = Air dry wt. of total sample selected for analysis.
65.00 = Air dry wt. of sample selected for hydrometer analysis.
343.75 = Dry wt. of total sample selected for analysis.
64.91 = Dry wt. of sample selected for hydrometer analysis.

HYGROSCOPIC MOISTURE

24.12 = wt. of wet soil + container 24.09 = wt. of dry soil + container
1.58 = wt. of container
0.1 = % hygroscopic moisture 0.99867 = moisture factor

SIEVE ANALYSIS (cumulative weights)

GRAVEL (greater than 2 MM)

SAND (from hydrometer sediment)

Sieve Size	Weight Retained	% Passing
4.75	0.00	100.0
2.00	3.91	98.9

Sieve Size	Weight Retained	Ttl. Sample % Passing
0.500	24.94	60.9
0.250	48.30	25.3
0.125	57.56	11.2
0.075	59.37	8.4

HYDROMETER ANALYSIS

9:42AM = Time sedimentation begins

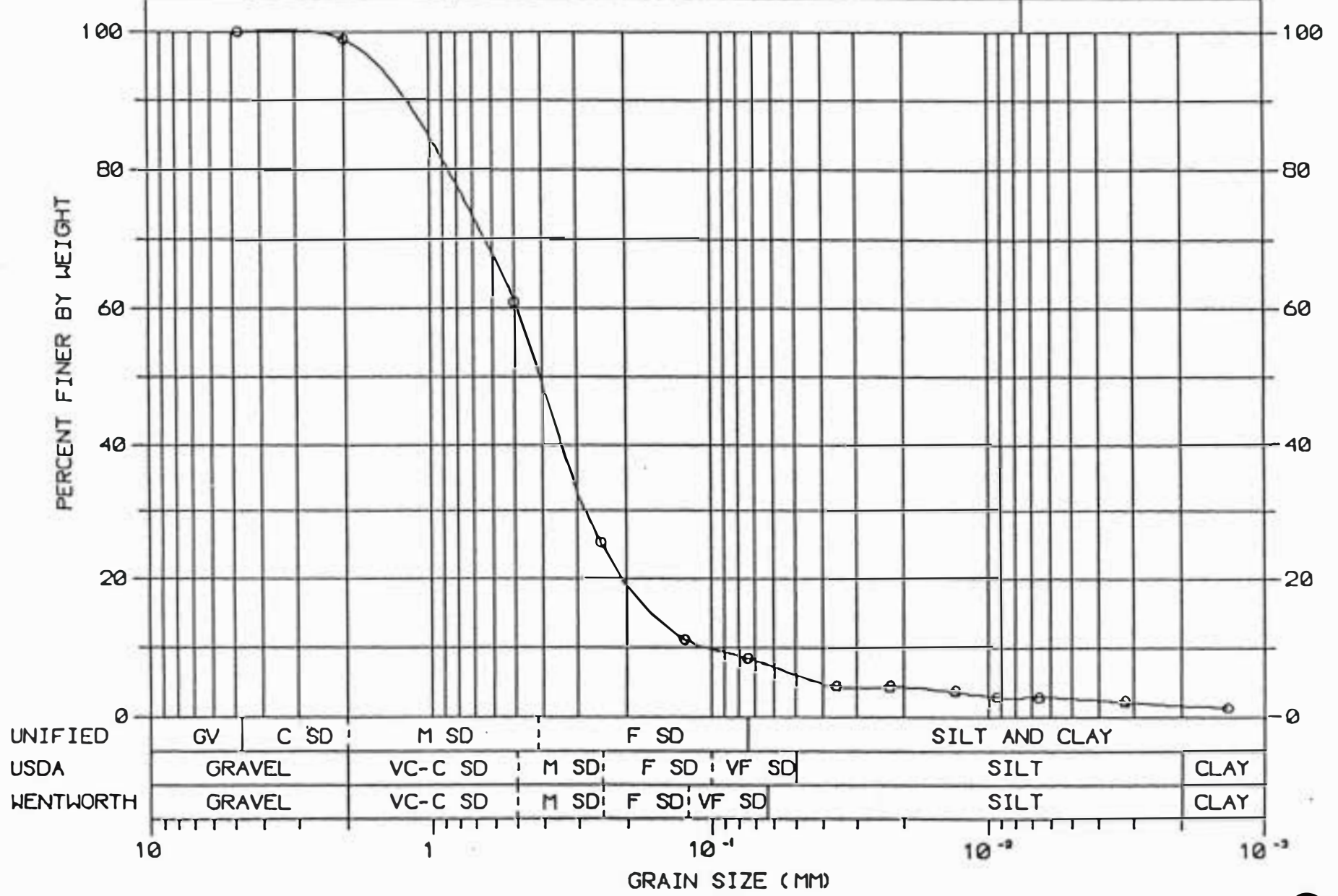
Meniscus correction = 1

Elapsed Time (min.)	Temp. (deg.C)	Initial Hydro. Reading Ra	Zero Corr.	Dia. (MM) D	Total Sample Percent Passing
t					
2	21.0	9.0	6.0	0.03589	4.5
5	21.0	9.0	6.0	0.02270	4.5
15	21.0	8.5	6.0	0.01314	3.8
30	21.0	8.0	6.0	0.00932	3.0
60	21.0	8.0	6.0	0.00659	3.0
250	21.0	7.5	6.0	0.00324	2.3
1440	21.0	7.0	6.0	0.00135	1.5



CURTIS FRANKLIN

LAB I.D. 9209099 MW - 22 17.0-19.0 LL PL PI



WW ENGINEERING & SCIENCE INC.
GRAIN SIZE ANALYSIS

A.S.T.M. D-422

Project: CURTIS - FRANKLIN

Identification: SB - 6 15.0-16.0
Lab No. 9209098

545.60 = Air dry wt. of total sample selected for analysis.
65.00 = Air dry wt. of sample selected for hydrometer analysis.
544.62 = Dry wt. of total sample selected for analysis.
64.86 = Dry wt. of sample selected for hydrometer analysis.

HYGROSCOPIC MOISTURE

30.41 = wt. of wet soil + container 30.35 = wt. of dry soil + container
1.59 = wt. of container
0.2 = % hygroscopic moisture 0.99792 = moisture factor

SIEVE ANALYSIS (cumulative weights)

GRAVEL (greater than 2 MM)

SAND (from hydrometer sediment)

Sieve Size	Weight Retained	% Passing	Sieve Size	Weight Retained	Ttl. Sample % Passing
4.75	43.15	92.1	0.500	34.14	40.7
2.00	76.83	85.9	0.250	53.04	15.7
			0.125	58.55	8.4
			0.075	59.69	6.9

HYDROMETER ANALYSIS

9:40AM = Time sedimentation begins

Meniscus correction = 1

Elapsed Time (min.)	Temp. (deg.C)	Initial Hydro. Reading Ra	Zero Corr.	Dia. (MM) D	Total Sample Percent Passing
2	21.0	8.5	6.0	0.03599	3.3
5	21.0	8.0	6.0	0.02283	2.6
15	21.0	8.0	6.0	0.01318	2.6
30	21.0	8.0	6.0	0.00932	2.6
60	21.0	8.0	6.0	0.00659	2.6
250	21.0	7.5	6.0	0.00324	2.0
1440	21.0	7.0	6.0	0.00135	1.3



CURTIS FRANKLIN

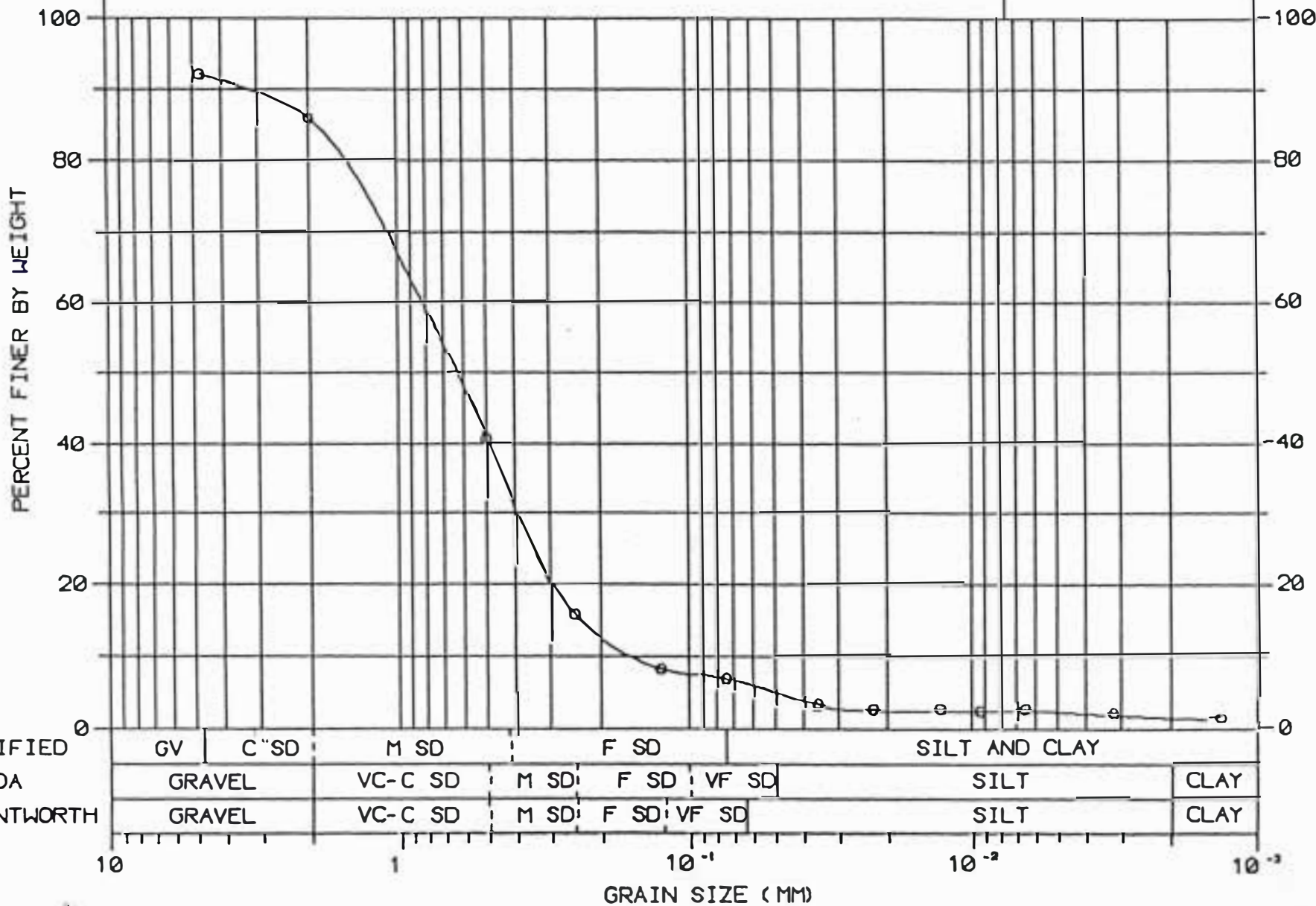
LAB I.D. 9209098

SB - 6 15.0-16.0

LL

PL

PI



APPENDIX G

**Soil gas survey technical memorandum,
April 8, 1992.**

DRAFT

TECHNICAL MEMORANDUM
DRAFT

To: Mike Jarvis,
Franklin Power Products

From: James H. Keith, Project Manager
WW Engineering & Science

Re: Soil-gas Sampling Activities and Results for the RFI/CMS at the former
Amphenol facility at 980 Hurricane Road

Date: April 8, 1992

BACKGROUND

As part of the field investigation required by the EPA approved work plan for the above referenced site, WW Engineering & Science (WWES) conducted a soil-gas survey at the former Amphenol facility at 980 Hurricane Road, Franklin Indiana, January 28-30, 1992. The purpose of this survey was to provide a preliminary assessment of the extent of volatile organic contamination (VOCs) at the site and investigate the potential residual soil contamination in product/waste areas and near the sewer lines. Figure 1 shows the location of soil-gas sampling points and sampling grid designators. At each point, two samples were collected, one from six feet and one from eight feet below the surface. Samples were analyzed for trichloroethylene (TCE), perchloroethylene (PCE), and trans-1,2-dichloroethylene.

SAMPLING METHODS

WWES sub-contracted the collection of soil-gas samples to Geo-Trace, Inc., of Wentzville, Missouri. Geo-Trace utilized a hydraulic/pneumatic probe assembly mounted on a 3/4 ton van to push a 1-inch steel probe to the desired sampling depth (see Figure 2). Once this depth was achieved, a length of new Tygon tubing was inserted into the probe, and soil-gas was extracted by vacuum applied to the tubing. At least 2 liters of gas were removed prior to sampling to purge the sampling train and assure collection of a representative sample. After purging, the tubing was connected to a Tedlar gas sampling bag that was mounted inside a 5 gallon plastic container. The container served as a vacuum chamber. Vacuum was applied to the container with a portable electric air pump thereby inducing the flow of soil vapor through the sampling train and into the sampling bag. The sampling train was then disconnected and the bag was removed from the

vacuum container for analysis. The sample was screened by exposing an HNu photoionization detector (PID) to the open sampling port. After screening, the bag was labelled with location, depth identification, and screening results, and was provided to the analyst for soil-gas analysis. Analytical work was conducted by Don Moran of WWES' Grand Rapids office.

A pilot survey was conducted to determine optimum sampling depths prior to beginning actual sample collection. This pilot survey was made in an area of known VOC contamination near monitoring well MW-12 at the southwest corner of the facility (see figure 2). Soil-gas samples were collected at 2-foot intervals from 4 to 14 feet below the surface. A sample at 2 feet was not obtained due to lack of an effective surface seal between the probe and the soil. The pilot survey terminated at the water table, just below 14 feet. Results of this survey, shown in Table 1, indicate soil-gas VOC concentrations increase with depth. Ground water levels as determined from earlier work at the site are known to rise steadily to the north with respect to the ground surface. Two sampling depths were required by the EPA approved work plan. In order to maintain a consistent sampling depth across the site, remain above the saturated zone, and achieve a reasonable representation of the extent of contamination, sampling depths of 6 and 8 feet were selected.

Soil-gas sampling was initiated upon completion of the pilot survey. The probe was washed with a detergent solution and rinsed with deionized water as needed between sampling points to prevent the transfer of potentially contaminated soil from one location to another. Each soil-gas sample was collected via new tubing into a new sampling bag. Each hole was backfilled with granular bentonite (Benseal) upon completion of sample collection. To check the integrity of the sampling procedure, an equipment blank was collected each day. An equipment blank consisted of ambient air collected by the method described above through a probe held above ground. Detection of VOCs in a blank would indicate faulty decontamination or collection procedures. No peaks were recorded in the equipment blanks. A total of 55 samples and 3 blanks were collected. Soil-gas sampling was completed January 30.

ANALYTICAL METHODS

Soil-gas samples were analyzed on a *Photo-Vac* 10S55 portable gas chromatograph (GC) equipped with a built-in integrator. The instrument was set up on-site in an unused room inside the plant. Prior to analyzing field samples, ambient air was analyzed to insure that no interferences from air contaminants were present. Facility personnel were requested to use no paints or solvents during the soil-gas survey. Samples were transferred from sampling bags to the GC with a glass syringe. The syringe was purged with several volumes of sample prior to delivering the sample to the instrument.

The approved work plan indicated that total GC response would be mapped. However, with few exceptions, only two response peaks appeared. The GC was initially calibrated with trichloroethylene (TCE) and trans-1,2-dichloroethylene. The presence of perchloroethylene (PCE) was suspected after the detection of an unidentified compound displayed on some chromatograms. A PCE standard was obtained and the GC calibrated for that compound on January 30. The second peak was positively identified as PCE against the standard. Samples collected after the instrument was calibrated for PCE were analyzed for both TCE and PCE, with a PCE detection limit of 100 ppb. Samples collected prior to calibration for PCE were not re-analyzed upon calibration. Instead, PCE concentrations were determined by comparing each sample's chromatogram with the calibration chromatograms for PCE, and calculating the PCE concentration. This procedure yielded a PCE detection limit of 2200 ppb. Analytical quality control was provided by routine analysis of known gas standards.

RESULTS

Analytical results of the soil-gas study are shown in Table 1. Sample locations are shown in Figure 1. TCE concentrations range from below detection limits (BDL) to 18,800 parts per billion (ppb). PCE concentrations range from BDL to 15,700 ppb. The highest TCE concentration was recorded at grid point 1+00N, 2+25W, along the sewer lines about 175 feet south of the plant. The highest PCE was recorded at grid point 2+50N, 4+25W, near the southwest corner of the paved parking area west of the plant. In all cases where peaks were recorded, concentrations were higher in the 8 foot sample. Figures 3 and 4 display soil-gas TCE concentrations across the site at 6 and 8 feet deep, respectively. These figures indicate the high soil-gas readings are concentrated along the sewer lines, and diminish with distance in all directions. The highest TCE soil-gas reading is located at

the point where the storm sewer turns south and parallels the sanitary sewer. TCE was not present at detectable concentrations in the soil-gas to a depth of 8 feet north and east of the plant.

Figures 4 and 5 show soil-gas PCE concentrations at 6 and 8 feet, respectively. Soil-gas PCE contamination to a depth of 8 feet is restricted to an area around a northwest-southeast trending line extending from the southwest corner of the paved parking area toward the sewer lines south of the plant. PCE was not present at detectable concentrations in the soil-gas to a depth of 8 feet around and north of the plant, and in the extreme eastern and southern portions of the site.

DISCUSSION

VOCs may be present in the soil-gas as a result of upward diffusion of organic vapors from contaminated ground water or downward migration of contamination released above the water table. The pattern of peak concentrations for PCE suggests a point contamination source at the southwest corner of the parking lot (see Figures 5 and 6), as concentrations decrease substantially with distance in all directions. A "plume" is defined by the iso-concentration lines that extend southeasterly toward the facility sanitary sewer line. Such a distribution of contamination by upward diffusion from contaminated ground water would indicate a point-source release to the saturated zone in the vicinity of the observed PCE peak. Site records indicate no subsurface means (e.g. tanks or sewer lines) for the release of contaminants in this area. There is a deteriorated concrete slab at the surface in the vicinity of the apparent point source, but its use cannot be identified. The lack of a subsurface source and the presence of the unidentified surface structure suggest PCE is present as a result of a surface release. The increase in PCE concentration with depth suggests the contaminant has migrated downward with infiltrating water. This distribution may also represent migration from the point source. Shallow PCE concentrations may exceed deeper values at the source.

The pattern of peak concentrations for TCE shows a peak in the vicinity of the point where the storm sewer, flowing from the west, turns south and runs parallel with the site sanitary sewer. In general, the highest soil-gas values parallel the sanitary sewer line,

then decrease in all directions. The pattern is consistent with a line source of contamination centered along the north-south trend of the old sanitary sewer line.

The diffuse pattern suggests that whatever TCE contamination is present in ground water has been dissipating for some time. A new sewer line was constructed 35 feet east of the original eight-inch effluent sewer line in 1985. The original line was suspected of carrying contaminants, including VOCs, from the facility. Correspondence related to the replacement indicates that the old sewer line was reported to be crushed immediately above the underlying 72-inch storm sewer (near sampling point 1+00N, 2+25W, Figure 1). A number of joints in the old sewer were reportedly separated as well.

It should be noted that the peak soil-gas concentrations and patterns shown in this technical memorandum do not necessarily coincide with the concentration and movement of PCE and TCE in ground water. Many factors can affect soil-gas readings, such as soil texture and permeability, the presence of buildings and pavement, and prior construction and excavation activities.

Table 1
SOIL GAS SURVEY RESULTS

Franklin Power Products
Hurricane Road Facility
January, 1992

SAMPLE LOCATION		SAMPLE DEPTH (feet)	COLLECTION DATE (Jan. '92)	VOC concentration (ppb)		
				TCE	PCE (1)	Trans-1,2-DCE
near MW-12 (pilot survey)		4	28	<440	<2200	<520
		6	28	<440	<2200	<520
		8	28	5800	<2200	<520
		10	28	16000	7900	<520
		12	28	27000	12100	<520
		14	28	38000	14800	<520
0	25	6	28	<440	<2200	<520
		8	28	<440	<2200	<520
0	125	6	28	7800	<2200	<520
		8	28	10700	<2200	<520
0	225	6	28	7700	<2200	<520
		8	28	14400	<2200	<520
EB		0	28	<440	<2200	<520
1	225	6	28	12200	3100	<520
		8	28	18800	4400	<520
1	125	6	28	5600	<2200	<520
		8	28	8200	<2200	<520
1	25	6	28	<440	<2200	<520
		8	28	<440	<2200	<520
190	25	6	28	<440	<2200	<520
		8	28	<440	<2200	<520
190	125	6	28	780	<2200	<520
		8	28	1500	<2200	<520
200	225	6	29	7300	<2200	<120
		8	29	12600	<2200	<120
175	375	6	29	<100	4800	<120
		8	29	<100	9300	<120
300	425	6	29	<100	<2200	<120
		8	29	<100	<2200	<120
250	425	6	29	<500	15500	<600
		8	29	<500	15700	<600
360	425	6	29	<100	<6500	<120
		8	29	<100	<2600	<120
460	425	6	29	<100	<2200	<120
		8	29	<100	<2200	<120
560	425	8	29	<100	<2200	<120
300	325	6	29	3300*	<2200	<120
		8	29	3600*	<2200	<120
360	325	6	29	<100*	<2200	<120
		8	29	<100*	<2200	<120

EB=equipment blank. probe not inserted into soil for collection

(1)=PCE concentrations for 1/28 and 1/29 estimated based on a 2.2 ppm standard created on 1/30

*=concentration estimated due to failure of QA/QC standard

Table 1 (continued)

SAMPLE LOCATION		SAMPLE DEPTH (feet)	COLLECTION DATE (Jan. '92)	VOC concentration (ppb)		
North	West			TCE	PCE (1)	Trans-1,2-DCE
460	325	6	29	<100	<2200	<120
		8	29	<100	<2200	<120
EB		0	29	<100	<2200	<120
560	300	6	29	<100	<2200	<120
		8	29	<100	<2200	<120
275	125	6	29	196	<2200	<120
		8	29	605	<2200	<120
560	300	6	29	<100	<2200	<120
		8	29	<100	<2200	<120
275	125	6	29	<100	<2200	<120
		8	29	<100	<2200	<120
560	200	6	29	<100	<2200	<120
		8	29	<100	<2200	<120
425	0	6	30	<100	<100*	NA
		8	30	<100	<100*	NA
300	0	6	30	<100	<100*	NA
		8	30	<100	<100*	NA
500	100	6	30	<100	<100*	NA
		8	30	<100	<100*	NA
425	100	6	30	<100	<100*	NA
		8	30	<100	<100*	NA
500	0	6	30	<100	<100*	NA
		8	30	<100	<100*	NA
560	0	6	30	<100	<100*	NA
		8	30	<100	<100*	NA
EB		0	30	<100	<100*	NA
250	475	6	30	<100	113*	NA
		8	30	<100	175*	NA

EB=equipment blank. probe not inserted into soil for collection

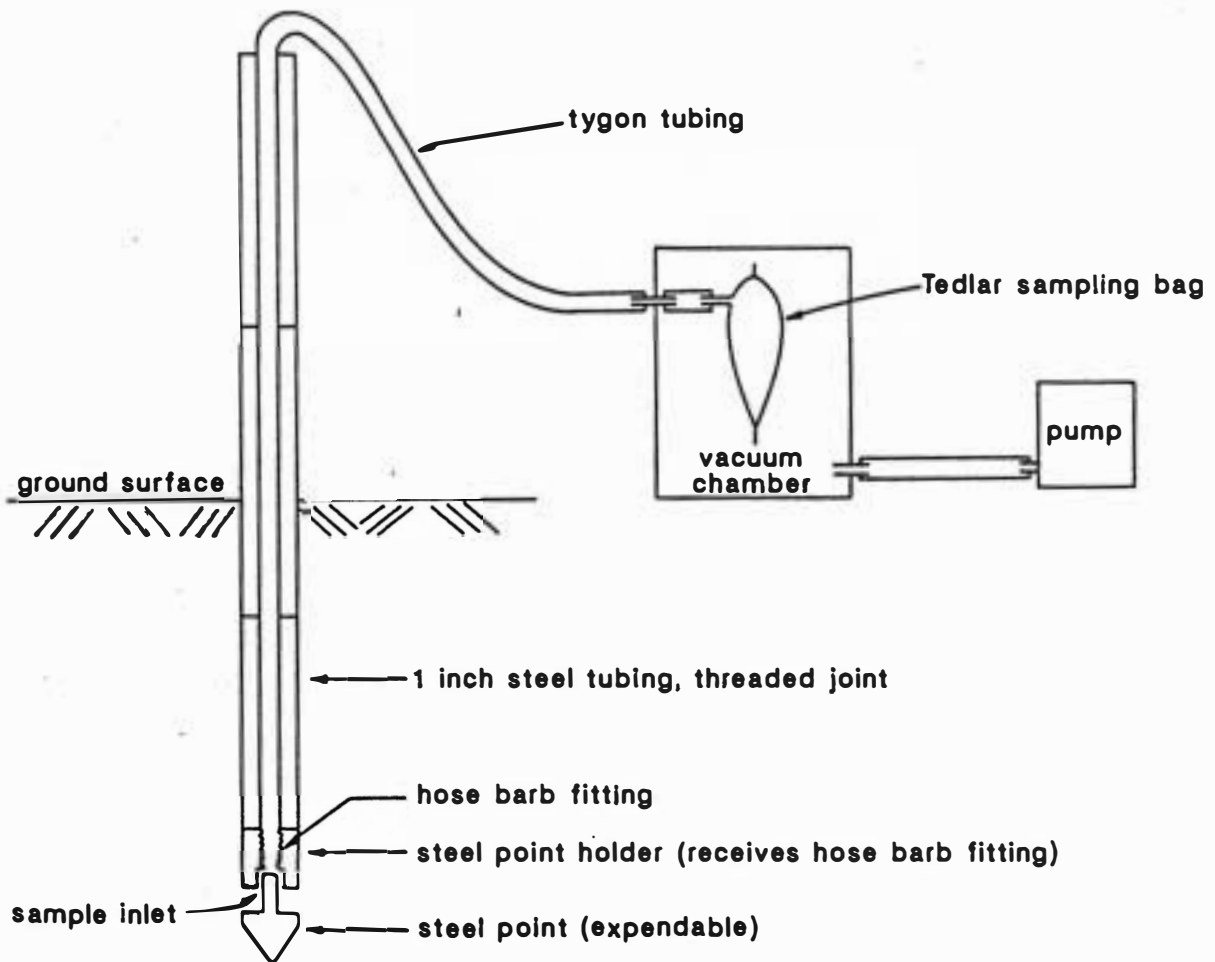
(1)=PCE concentrations for 1/28 and 1/29 estimated based on a 2.2 ppm standard created on 1/30

*=concentration estimated due to failure of QA/QC standard

EB=equipment blank. probe not inserted into soil for collection

(1)=PCE concentrations for 1/28 and 1/29 estimated based on a 2.2 ppm standard created on 1/30

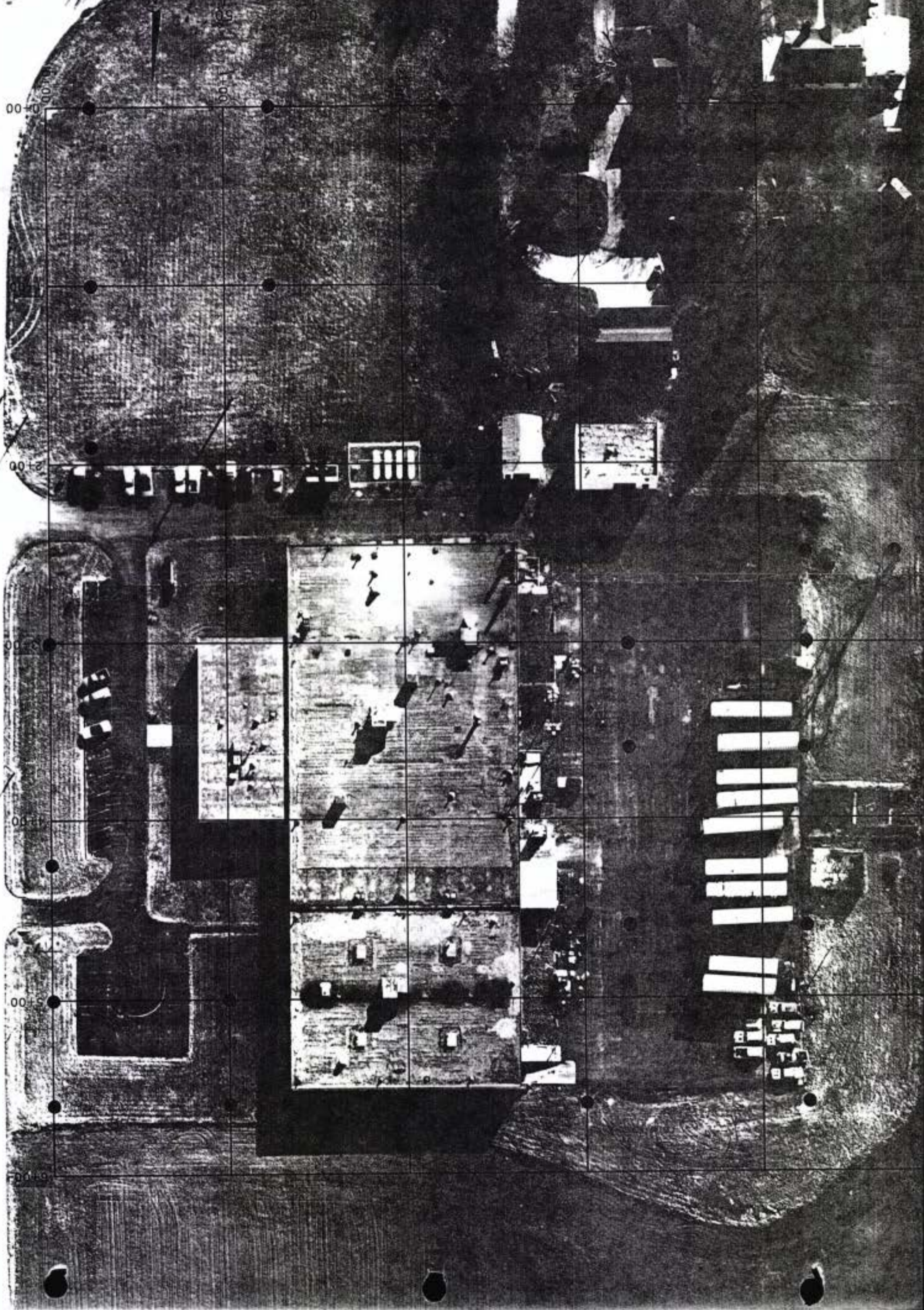
*=concentration estimated due to failure of QA/QC standard

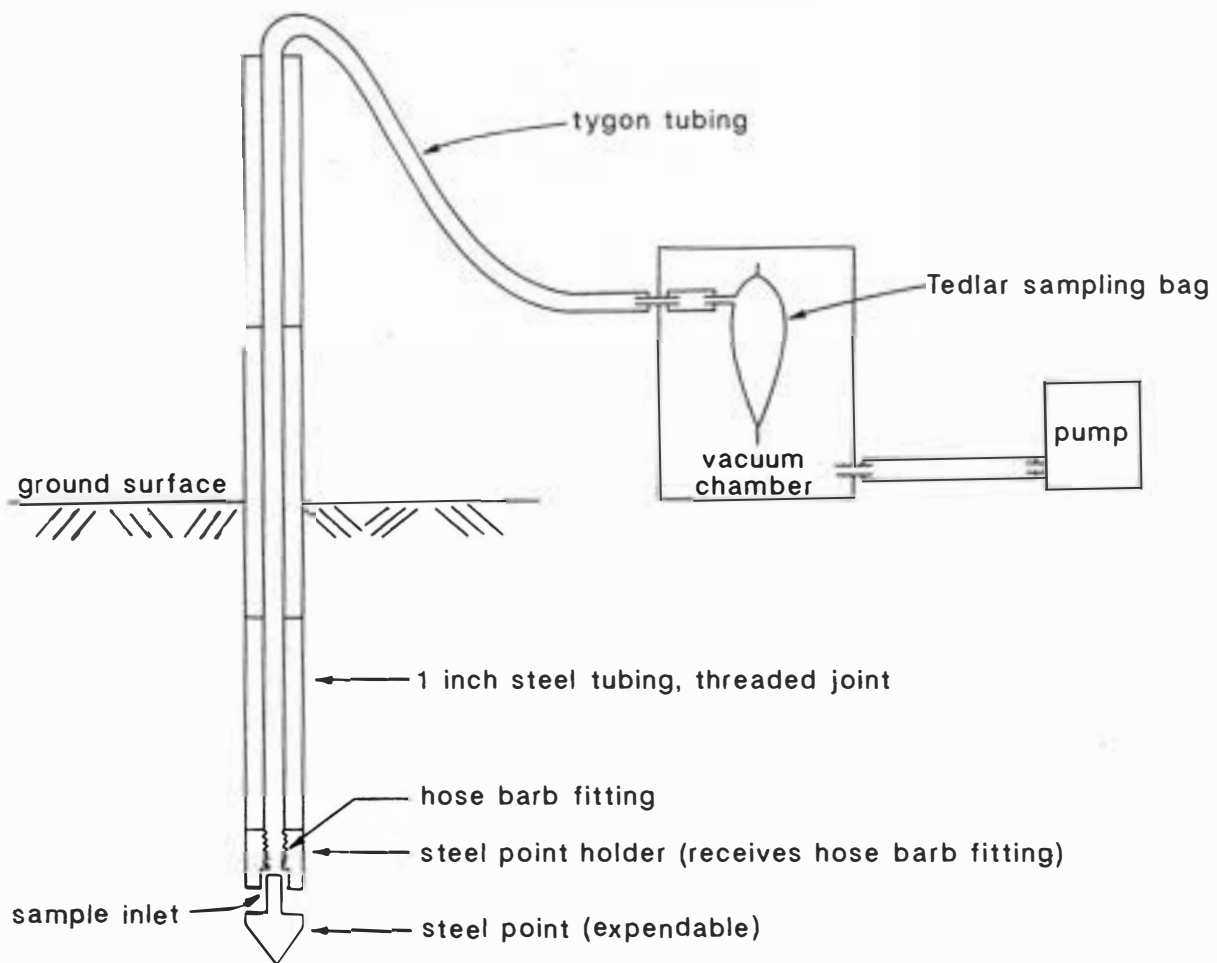


No Scale

Figure 2. Soil gas sampling apparatus.

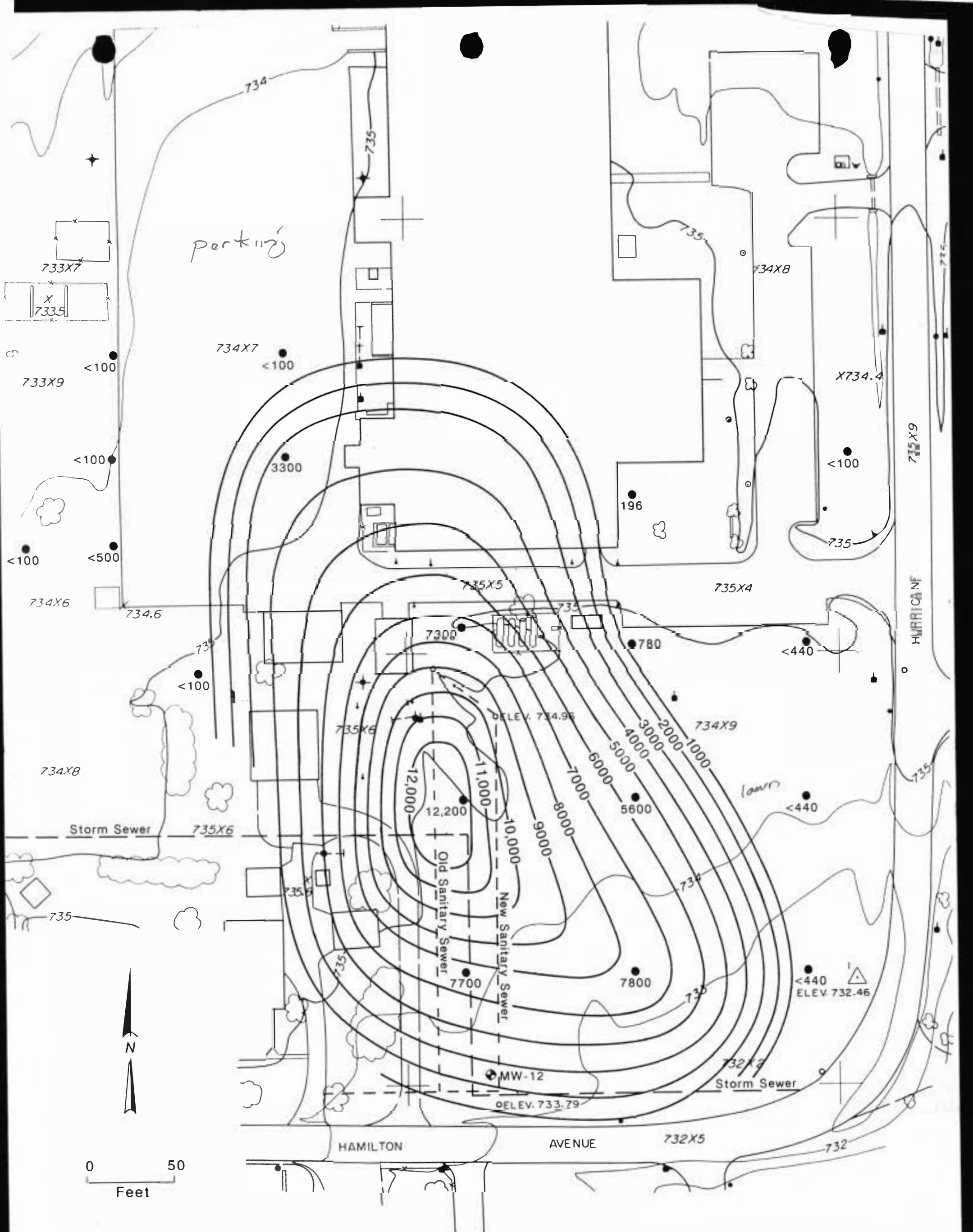
Figure 1 - Soil sampling points.





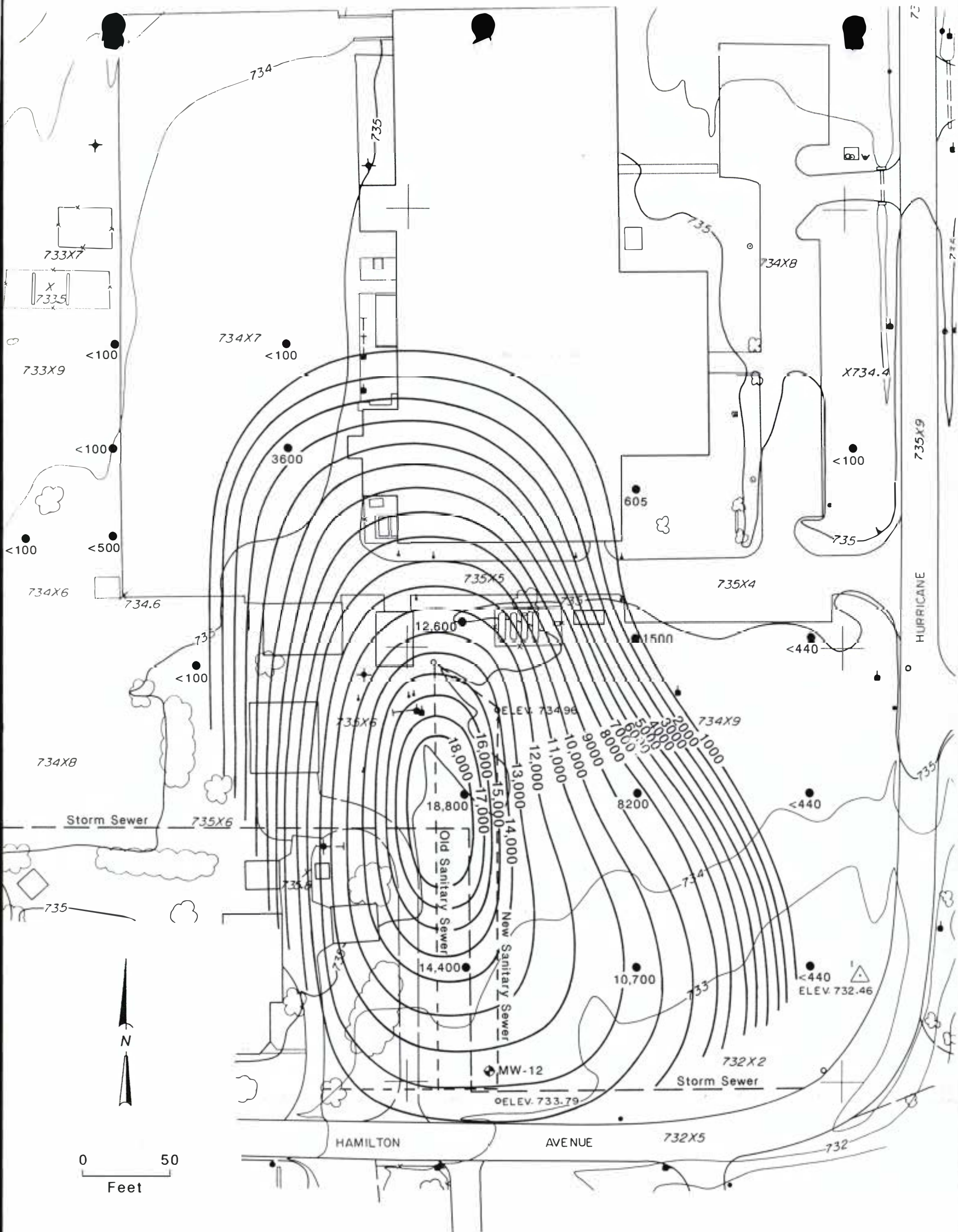
No Scale

Figure 2. Soil gas sampling apparatus.



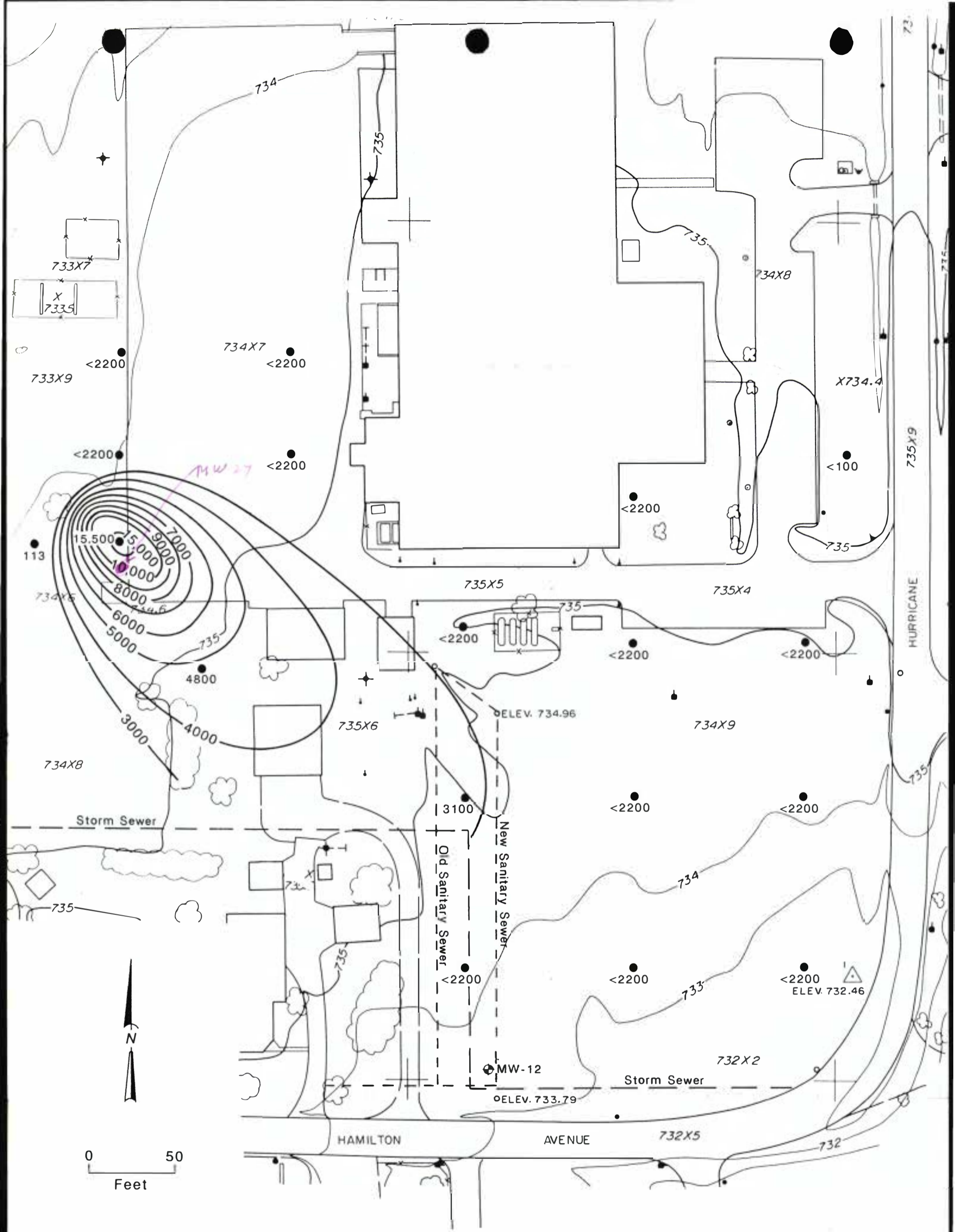
TCE concentration in parts per billion.

Figure 3. TCE concentrations in soil gas at six feet.



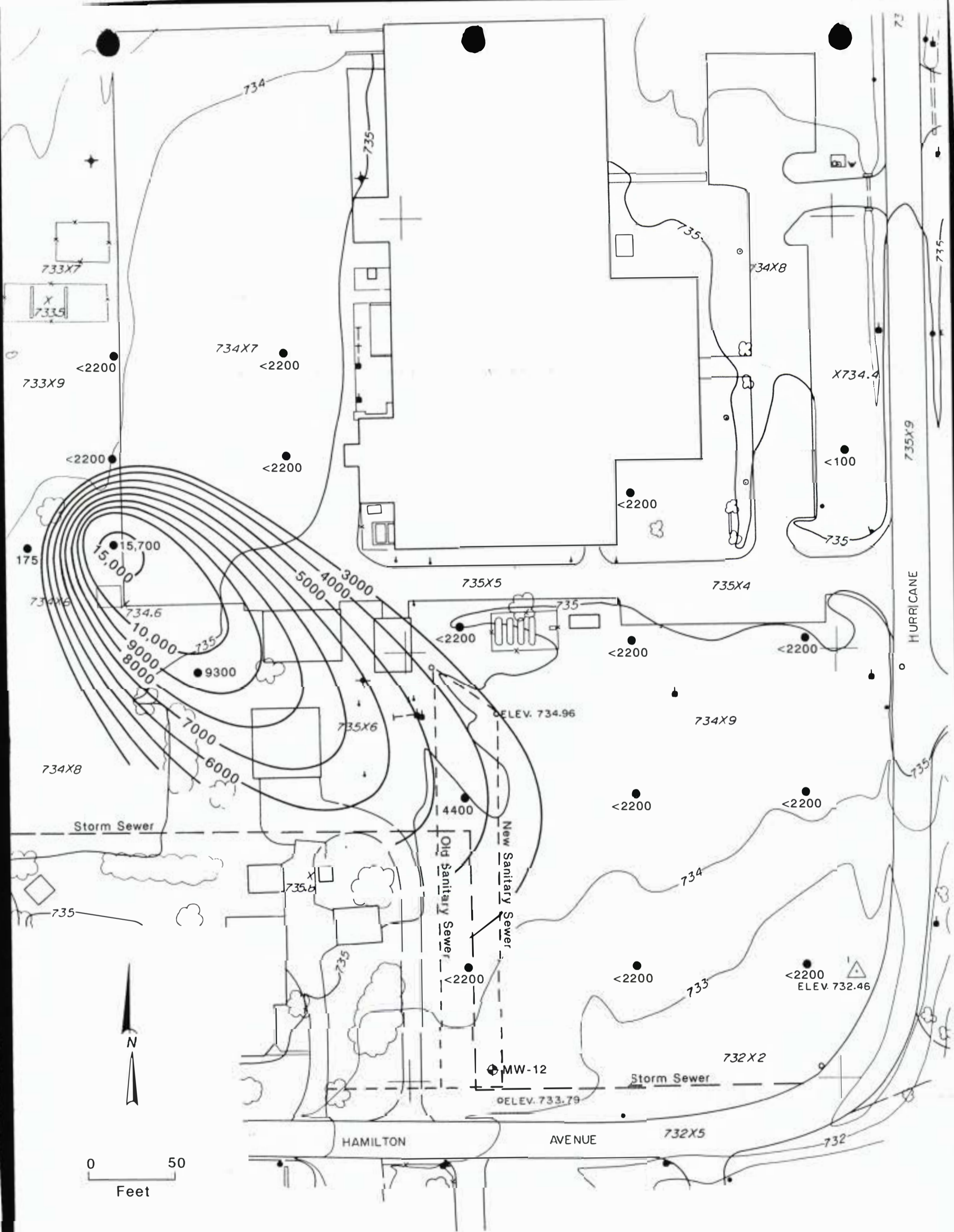
TCE concentration in parts per billion.

Figure 4. TCE concentrations in soil gas at eight feet.



PCE concentration in parts per billion.

Figure 5. PCE concentrations in soil gas at six feet.



PCE concentration in parts per billion.

Figure 6. PCE concentrations in soil gas at eight feet.

Table 1
SOIL GAS SURVEY RESULTS

Franklin Power Products
Hurricane Road Facility
January, 1992

SAMPLE LOCATION		SAMPLE DEPTH (feet)	COLLECTION DATE (Jan. '92)	VOC concentration (ppb)		
North	West			TCE	PCE (1)	Trans-1,2-DCE
<i>near MW-12 (pilot survey)</i>		4	28	<440	<2200	<520
		6	28	<440	<2200	<520
		8	28	5800	<2200	<520
		10	28	16000	7900	<520
		12	28	27000	12100	<520
		14	28	38000	14800	<520
0	25	6	28	<440	<2200	<520
		8	28	<440	<2200	<520
0	125	6	28	7800	<2200	<520
		8	28	10700	<2200	<520
0	225	6	28	7700	<2200	<520
		8	28	14400	<2200	<520
EB		0	28	<440	<2200	<520
1	225	6	28	12200	3100	<520
		8	28	18800	4400	<520
1	125	6	28	5600	<2200	<520
		8	28	8200	<2200	<520
1	25	6	28	<440	<2200	<520
		8	28	<440	<2200	<520
190	25	6	28	<440	<2200	<520
		8	28	<440	<2200	<520
190	125	6	28	780	<2200	<520
		8	28	1500	<2200	<520
200	225	6	29	7300	<2200	<120
		8	29	12600	<2200	<120
175	375	6	29	<100	4800	<120
		8	29	<100	9300	<120
300	425	6	29	<100	<2200	<120
		8	29	<100	<2200	<120
250	425	6	29	<500	15500	<600
		8	29	<500	15700	<600
360	425	6	29	<100	<6500	<120
		8	29	<100	<2600	<120
460	425	6	29	<100	<2200	<120
		8	29	<100	<2200	<120
560	425	8	29	<100	<2200	<120
300	325	6	29	3300*	<2200	<120
		8	29	3600*	<2200	<120
360	325	6	29	<100*	<2200	<120
		8	29	<100*	<2200	<120

EB=equipment blank. probe not inserted into soil for collection

(1)=PCE concentrations for 1/28 and 1/29 estimated based on a 2.2 ppm standard created on 1/30

*=concentration estimated due to failure of QA/QC standard

Table 1 (continued)

SAMPLE LOCATION		SAMPLE DEPTH (feet)	COLLECTION DATE (Jan. '92)	VOC concentration (ppb)		
North	West			TCE	PCE (1)	Trans-1,2-DCE
460	325	6	29	<100	<2200	<120
		8	29	<100	<2200	<120
EB		0	29	<100	<2200	<120
560	300	6	29	<100	<2200	<120
		8	29	<100	<2200	<120
275	125	6	29	196	<2200	<120
		8	29	605	<2200	<120
560	300	6	29	<100	<2200	<120
		8	29	<100	<2200	<120
275	125	6	29	<100	<2200	<120
		8	29	<100	<2200	<120
560	200	6	29	<100	<2200	<120
		8	29	<100	<2200	<120
425	0	6	30	<100	<100*	NA
		8	30	<100	<100*	NA
300	0	6	30	<100	<100*	NA
		8	30	<100	<100*	NA
500	100	6	30	<100	<100*	NA
		8	30	<100	<100*	NA
425	100	6	30	<100	<100*	NA
		8	30	<100	<100*	NA
500	0	6	30	<100	<100*	NA
		8	30	<100	<100*	NA
560	0	6	30	<100	<100*	NA
		8	30	<100	<100*	NA
EB	250	0	30	<100	<100*	NA
		6	30	<100	113*	NA
	475	8	30	<100	175*	NA

EB=equipment blank. probe not inserted into soil for collection

(1)=PCE concentrations for 1/28 and 1/29 estimated based on a 2.2 ppm standard created on 1/30

*=concentration estimated due to failure of QA/QC standard

EB=equipment blank. probe not inserted into soil for collection

(1)=PCE concentrations for 1/28 and 1/29 estimated based on a 2.2 ppm standard created on 1/30

*=concentration estimated due to failure of QA/QC standard

APPENDIX H

Geoprobe ground water screening results,
November 23, 1992.

DRAFT

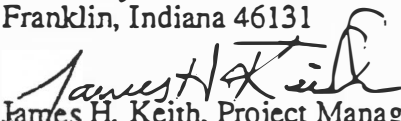


WW Engineering & Science
A Summit Company

JDB

TECHNICAL MEMORANDUM

TO: Mike Jarvis, President
Franklin Power Products
400 Forsythe Street
Franklin, Indiana 46131

FROM: 
James H. Keith, Project Manager
WW Engineering & Science
5010 Stone Mill Road
Bloomington, Indiana 47408

COPY: William Buller
U.S. EPA, Region V, SHR-12
230 South Dearborn Street
Chicago, Illinois 60604

RE: Results of November, 1992 Geoprobe ground water sampling results at the former Amphenol facility at 980 Hurricane Road, Franklin, Indiana

DATE: November 23, 1992

BACKGROUND

In accordance with the October 12 Work Plan for the installation of additional monitoring wells at the former Amphenol site, WW Engineering & Science and its subcontractor, Geotrace, Inc. performed a series of Geoprobe studies both on-site, and off-site in the Glendale Subdivision and along the storm sewer line east of the site. The purpose of the Geoprobe study was to locate the edge of the ground water contaminant plume in the Unit B saturated sand. Geoprobe work began on November 4 and ended November 6.

METHODS

Figure 1 shows the Geoprobe locations. Transect GNS is located off-site along the north-south Glendale Drive corridor, and all samples were collected from the west side of the road at the blacktop margin. Transect GWE is located off-site along the west-east Glendale Drive corridor, and all samples were collected from the north side of the road at the blacktop margin. Transect SGP was located on-site and off-site along the storm sewer line, and samples were collected four feet from the sewer centerline. Transect NGP was located on-site south and southeasterly from the southwest corner of the facility parking lot.

The Geoprobe system consists of a truck-mounted hydraulic ram that provides about 15,000 pounds of downward force to push a train of one-inch diameter hollow steel alloy rods into the ground to sampling depth. A percussion hammer assisted in driving the steel rods through blacktop and clay layers. Samples were collected of ground water in the unit B saturated sand. Sample depth was largely determined by a tough clay underlying the saturated sand, assumed to be the top of Unit C, through which rod penetration was very difficult. Once sampling depth was reached, the rod train was withdrawn several feet, leaving an expendable steel point in place in the ground and allowing ground water to flow into the hollow tube. Ground water was withdrawn from the tube by inertial pumping action utilizing dedicated polyethylene tubing and a check valve assembly, and placed in a VOA container. Following sample collection, the rod train was withdrawn from the ground and disassembled. The hole was backfilled with bentonite pellets. No water was introduced into any of the holes.

Rods were precleaned by GeoTrace. Only clean rods were used for the bottom of each new rod assembly. Rods that came in contact with ground water (usually the bottom six to nine feet) were replaced with clean rods and were not reused until they had been decontaminated. New polyethylene tubing was used for each sampling event and the check valve assembly was

decontaminated between holes by washing with a detergent solution, scrubbing, and rinsing thoroughly with DI water. Decontamination proceeded in accordance with the Work Plan.

The water samples were analyzed in a laboratory in the rear compartment of the truck. The purge-and-trap method was used for all analyses. A Tekmar LSC 2000 purge-and-trap apparatus was utilized to deliver purged samples into a Shimadzu GC-14A gas chromatograph that used a photoionization detector and an electron capture detector (PID/ECD). Specific contaminant concentrations were calculated by a Shimadzu CR-4A integrator. Target compounds for this study were tetrachloroethylene (PCE), trichloroethylene (TCE) 1,1,1-trichloroethane (TCA), and 1,1-dichloroethane (DCA). Only PCE, TCE and TCA were present in quantifiable amounts in the samples, and there did not appear to be unknown quantifiable peaks in any of the samples.

Method blanks were performed at a rate of one per ten samples, and at the beginning and end of each sampling day. Duplicate samples were also performed. Calibration standards and dilution analyses were run at the beginning of each sampling day, or more often if necessary.

Detection limits for the target compounds were approximately 1 ug/l.

RESULTS

Results are given in Table 1. All values are to the nearest ug/l, and the subcontractor report is attached as an Appendix. Depth refers to the interval in feet below the surface from which the ground water was sampled. BDL indicates that the constituent was not detected at the 1 ug/l detection limit. A ground water isoconcentration map for combined TCE, PCE and TCA in Unit B based upon the Geoprobe results and the March, 1992 RFI monitoring results is shown in Figure 1.

Table 1. Geoprobe ground water sampling results

Location	Depth	TCA	TCE	PCE	Comments
GNS-1	12-18	9	BDL	BDL	very hard at 15'
GNS-2	NA	NA	NA	NA	struck rock at 8'; no sample
GNS-3	12-15	6	BDL	BDL	very hard at 12'
GNS-4	12-15	4	BDL	BDL	very hard at 12'
GNS-6	12-15	BDL	BDL	BDL	very hard at 12'
GNS-8	12-13	BDL	BDL	BDL	very hard at 12'; little water in rods
GWE-1	12-15	5	BDL	BDL	very hard at 15'
GWE-2A	12-15	BDL	BDL	BDL	none
GWE-2B	12-15	BDL	BDL	BDL	duplicate of GWE-2 sample
GWE-4	12-14	BDL	BDL	BDL	none
SGP-1	17-21	37	108	358	near MW-12
SGP-2	17-21	7	3	BDL	none
SGP-3	17-21	10	3	BDL	none
SGP-4A	17-21	20	13	BDL	none
SGP-4B	17-21	14	11	BDL	duplicate of SGP-4 sample
SGP-5	12-14	10	9	6	off-site; near IT-3
SGP-6	12-14	16	13	2	off-site; rocks or gravel in fill
SGP-7	12-13.5	BDL	BDL	BDL	off-site; rocks or gravel in fill
SGP-8	12-15	BDL	BDL	BDL	off-site; near former IT-4
NGP-1	24	4	BDL	BDL	none
NGP-2	22.5-24	7	BDL	5	none
NGP-3	22-23	10	5	7	none
NGP-4	22-23	36	128	147	none
NGP-5	22-23	11	115	508	none
NGP-6	22-23	64	609	2753	near new sanitary sewer line

DISCUSSION

Background Levels

Section VII (4) (c) (i) of the Administrative Order on Consent states that the respondents shall properly delineate vertically and horizontally, on-site and off-site if necessary, the ground water contaminant plume at the Facility. The plume delineation shall be based on ground-water analytical data, though indirect methods may be used as supplemental data. The contaminant plume shall be delineated to the extent that at the periphery of the plume, concentrations either equal or are below upgradient background levels.

For the plume constituents, the following background concentrations were determined from the March, 1992 RFI sampling event:

TCA - 9 ug/l measured; detection limit 5 ug/l
TCE - 2 ug/l estimated; detection limit 5 ug/l
PCE - 3 ug/l estimated; detection limit 5 ug/l
DCA - not detected; detection limit 5 ug/l

Three of the four major constituents were identified in background samples, but two were below detection limits and are therefore estimated. The laboratory detection limits set forth in the approved QAPP will be used for plume delineation in the place of background values for any constituents identified below detection limits. This is 5 ug/l for each of the constituents.

Glendale Subdivision

The only contaminant detected in the Glendale Subdivision was TCA (MCL - 200 ug/l), the background level for this constituent. It had a high concentration of 9 ug/l at GNS-1. At GNS-4, approximately 250 feet south of the site, it was detected below 5 ug/l, and at GNS-6, 100 feet further south, it was not detected at the GeoTrace detection limit of 1 ug/l. TCA was detected below 5 ug/l at GWE-1 and was not detected at 1 ug/l at GWE-2. The water bearing sand in the Glendale Subdivision appears to extend to a depth of about 12 feet, below which is a clay layer which was very difficult to penetrate, possibly Unit C. The sand appears to be capped by a layer

of clay at a depth of about 8 feet, which was also very difficult to penetrate. At the southernmost extent, GNS-8, very little water was produced from the probe. GWE-4, on the other hand, readily produced adequate amounts of water for testing.

Storm Sewer Trench

TCA, TCE and PCE were all present in the storm sewer trench, but generally not at significant levels. They were highest at SGP-1 adjacent to MW-12, with lower levels found to the east along the storm sewer trench. There was no pattern of concentration increase or decrease with distance from the site. At SGP-7 and SGP-8, no VOCs were detected. It should be noted that well IT-4, used in the IT site assessment and since removed, was located near SGP-8 and water samples from this well did not produce any VOCs when sampled in 1985.

Southwest Parking Lot Corner

The westernmost sample from the NGP transect indicated a level of 4 ug/l for TCA, below the background level for this constituent. To the east, TCE and PCE appeared, and their ground water concentrations increased, but they are much lower than concentrations found in the north-south reach of the storm sewer to the east.

CONCLUSIONS AND RECOMMENDATIONS

Glendale Subdivision and Storm Sewer Trench

The Geoprobe results indicate that for the Glendale Subdivision:

- 1) No significant southward extension of the plume is evident beyond the extent already measured by sampling data from IT-2 and IT-3.
- 2) Only one plume constituent is present beneath the subdivision (TCA), which has an MCL of 200 ug/l. TCA levels were measured between 4 and 9 ug/l.

- 3) Wells IT-2 and IT-3 appear to be optimally placed to monitor changes in the quality of ground water moving off-site, and to monitor changes in ground water quality resulting from cleanup activities.
- 4) Evidence from Geoprobe activities suggests that the saturated Unit B sand has thinned considerably.
- 5) Evidence from Geoprobe activities suggests that water availability in the Unit B sand diminishes with distance from the site.

Geoprobe results from the storm sewer trench indicate that:

- 1) All three plume constituents are present at various points along the trench, but PCE appears only sporadically.
- 2) The lack of a concentration gradient for plume constituents and relatively low concentrations is consistent with the notion that the trench acts as a ground water intercept only part of the time, and perhaps not along its entire length. We may be detecting only residual materials in the trench rather than a plume.

While the accepted method of monitoring the edge of a ground water contaminant plume is to install monitoring wells and to sample and analyze the water, we believe that off-site wells are more prone to damage or tampering and they increase the perception of a crisis to the public. Additionally, with the thinning of the sand unit and the diminution of available ground water in the Glendale Subdivision, they may not be effective as monitoring devices and would have to be abandoned. Wells IT-2 and IT-3 are, we believe, suitable for monitoring the edge of the plume given the data we have at hand. Along the storm sewer trench, there is ample evidence from IT-4, and from the Geoprobe results that the extent of contamination is limited in this area. We recommend no additional off-site wells be installed, and that wells IT-2 and IT-3 be utilized to monitor the downgradient plume boundary.

Southwest Parking Lot Corner

The Geoprobe results indicate the presence of ground water contaminants in this area that have not previously been measured. We recommend the installation of monitoring wells as described in our Work Plan

GEO TRACE, INC.


environmental service company

PROJECT: Franklin Power Products
Franklin, Indiana

CLIENT: Mr. Jim Keith
W. W. Engineering
5010 Stone Mill Road
Bloomington, IN 47408

SAMPLE DATE: November 4, 1992-November 6, 1992

REPORT DATE: November 11, 1992

REPORT NUMBER: 9211321

This report summarizes groundwater sampling activities along with on-site purge and trap analyses at the above-referenced site. The groundwater samples were obtained by utilizing a ball and seat sampler attached to polytubing, or by using a stainless steel mini-bailer.

The purge and trap method was utilized for all on-site groundwater analyses. All purged samples were delivered from a Tekmar LSC 2000 into a Shimadzu GC-14A and specific contaminant concentrations were calculated by a Shimadzu CR-4A computer integrator using a Photo Ionization Detector and an Electron Capture Detector (PID/ECD). Twenty-five (25) samples were analyzed for PCE, TCA, and TCE. A total of forty-two (42) analyses were performed for quality assurance/quality control, including periodic blanks, calibration standards, and dilution analyses.

The purge and trap method utilized is a proven method for field screening of volatile organic compounds. Although at times results may prove similar to other laboratory methods, they may also prove to differ. The analytical procedure is one which provides a rapid screening for the targeted compounds with reproducible results.

Mr. James Keith and Mr. Marty Lytle of W. W. Engineering were present during sampling and directed sampling activities.

Upon reviewing the following results, please do not hesitate to call with any questions. Thank you for choosing Geo Trace, Inc. for your project.

Note: SGP-4A and SGP-4B were both collected from a depth of 17-21 feet

APPENDIX
GEOPROBE RESULTS

W. W. ENGINEERING

FRANKLIN POWER PRODUCTS
FRANKLIN, INDIANA

Report 9211321

*Top - chit e
12-18'
WT about
12'*

LOCATION	GNS-1	GNS-2	GNS-3	GNS-4
TYPE	Groundwater	Groundwater	Groundwater	Groundwater
DEPTH	12' - 18'	15'	12'-15'	12'-15'
TCA	8.58		5.65	4.20
TCE	BMDL	DRY HOLE	BMDL	BMDL
PCE	BMDL		BMDL	BMDL

LOCATION	GNS-6	GNS-8	GWE-1	GWE-2A
TYPE	Groundwater	Groundwater	Groundwater	Groundwater
DEPTH	12' - 15'	12' - 13'	12' - 15'	12'-15'
TCA	BMDL	BMDL	4.76	BMDL
TCE	BMDL	BMDL	BMDL	BMDL
PCE	BMDL	BMDL	BMDL	BMDL

LOCATION	GWE-2B	GWE-4	SGP-1	SGP-2
TYPE	Groundwater	Groundwater	Groundwater	Groundwater
DEPTH	12' - 15'	12' - 14'	17' - 21'	17' - 21'
TCA	BMDL	BMDL	37.06	6.83
TCE	BMDL	BMDL	108.19	3.16
PCE	BMDL	BMDL	357.88	BMDL

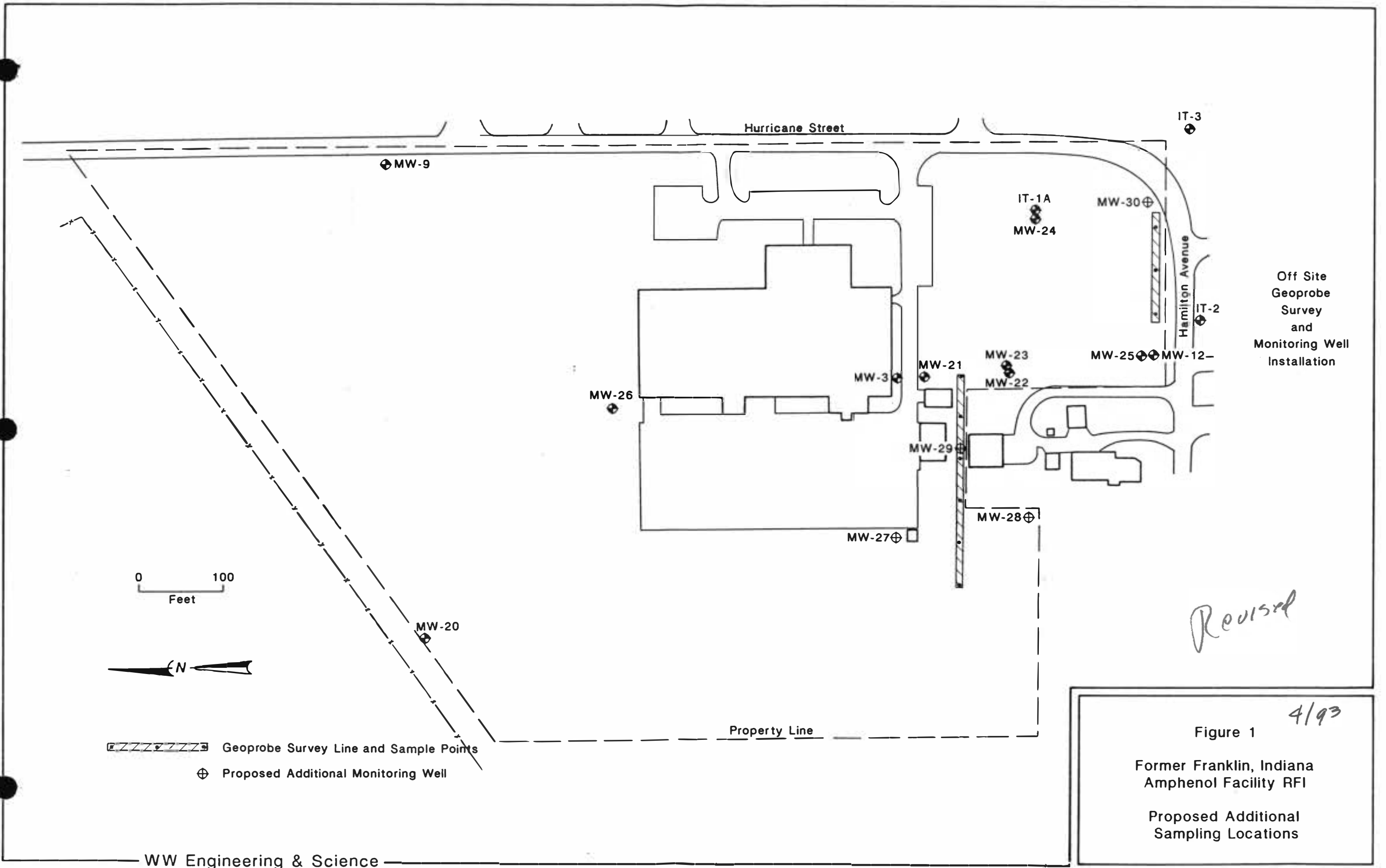
LOCATION	SGP-3	SGP-4A	SGP-4B	SGP-5
TYPE	Groundwater	Groundwater	Groundwater	Groundwater
DEPTH	17' - 21'	17' - 21'	12' - 14'	12' - 14'
TCA	10.24	19.51	14.45	10.38
TCE	3.37	13.20	10.75	8.96
PCE	BMDL	BMDL	BMDL	6.19

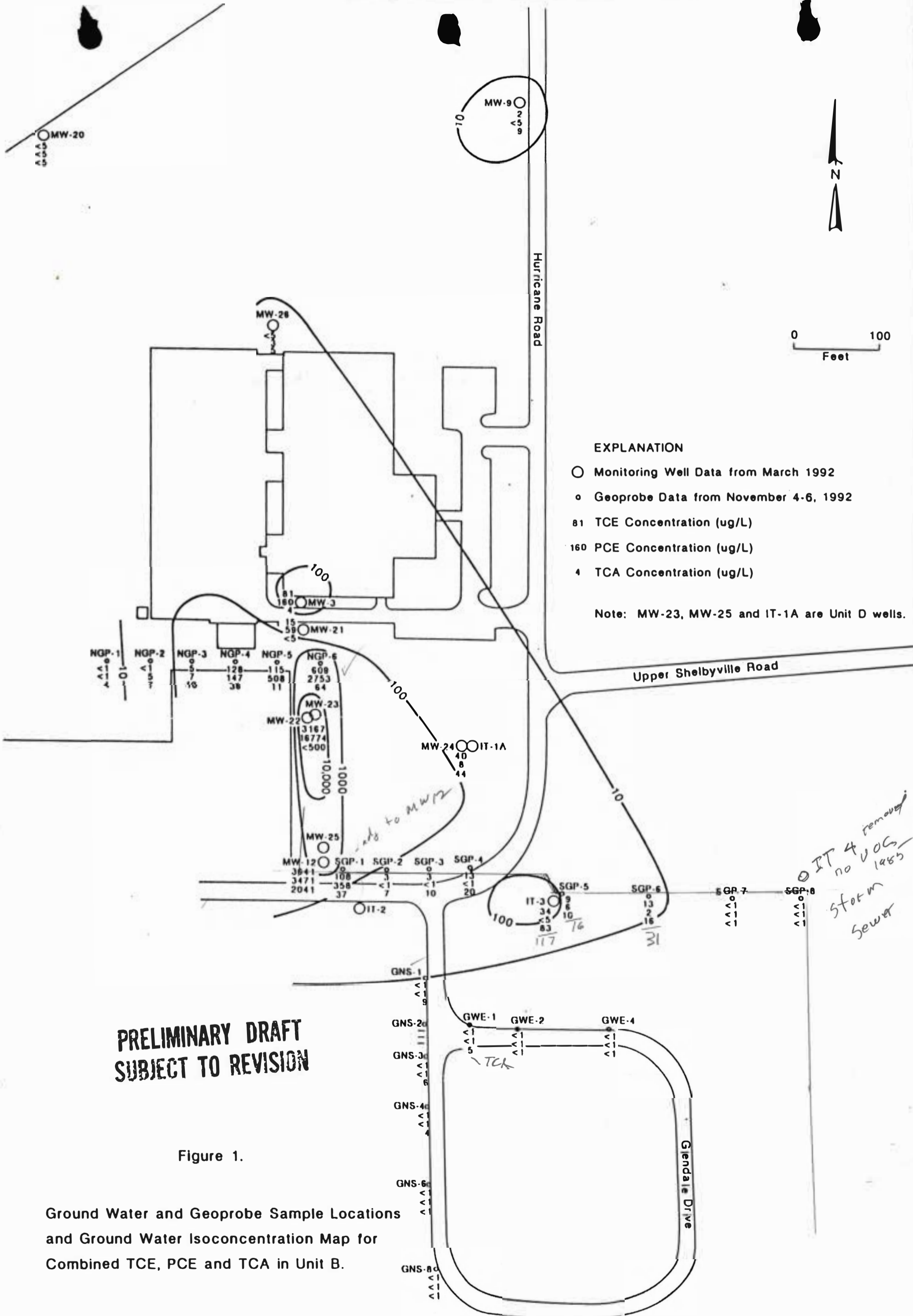
LOCATION	SGP-6	SGP-7	SGP-8	NGP-1
TYPE	Groundwater	Groundwater	Groundwater	Groundwater
DEPTH	12' - 14'	12' - 13.5'	12'-15'	24'
TCA	16.18	BMDL	BMDL	3.78
TCE	12.86	BMDL	BMDL	BMDL
PCE	1.89	BMDL	BMDL	BMDL

LOCATION	NGP-2	NGP-3	NGP-4	NGP-5
TYPE	Groundwater	Groundwater	Groundwater	Groundwater
DEPTH	22.5' - 24'	22' - 23'	22' - 23'	22' - 23'
TCA	7.15	10.06	35.78	10.98
TCE	BMDL	4.73	127.53	115.48
PCE	5.42	6.96	147.44	508.27

LOCATION	NGP-6	ATEC *		
TYPE	Groundwater	DRUM (5)		
DEPTH	22' - 23'	COMPOSITE		
TCA	63.92	1.40		
TCE	608.54	BMDL		
PCE	2752.87	9.95		

* = ANALYSIS SHOWED TWO (2) COMPOUNDS THAT WERE NOT TARGETED.
 BMDL = BELOW METHOD DETECTION LIMIT
 DETECTION LIMIT 1.00 PPB PER ANALYTE
 ALL RESULTS REPORTED IN PARTS PER BILLION





**PRELIMINARY DRAFT
SUBJECT TO REVISION**

Figure 1.

Ground Water and Geoprobe Sample Locations and Ground Water Isoconcentration Map for Combined TCE, PCE and TCA in Unit B.

APPENDIX I

List of analytical parameters.

DRAFT

Volatile Organic Compounds

Acetone	1,2-Dichloropropane
Benzene	cis-1,3-Dichloropropene
Bromodichloromethane	trans-1,3-Dichloropene
Bromoform	Ethylbenzene
Bromomethane	2-Hexanone
2-Butanone	Methylene chloride
Carbon disulfide	4-methyl-2-pentanone
Carbon tetrachloride	Styrene
Chlorobenzene	1,1,2,2-Tetrachloroethane
Chloroethane	Tetrachloroethane
Chloroform	Toluene
Chloromethane	1,1,1-Trichloroethane
Dibromochloromethane	1,1,2-Trichloroethane
1,1-Dichloroethane	Trichloroethene
1,1-Dichloroethene	Vinyl chloride
1,2-Dichloroethane	Xylenes
1,2-Dichloroethene (total)	

Inorganics

Aluminum	Lead
Antimony	Magnesium
Arsenic	Manganese
Barium	Mercury
Beryllium	Nickel
Cadmium	Potassium
Calcium	Selenium
Chromium	Silver
Cobalt	Sodium
Copper	Thallium
Cyanide (amenable)	Vanadium
Cyanide (total)	Zinc
Iron	

Appendix 9 Compounds

Volatiles	Quantitation Limits**	
	Water	Low Soil /Sediments*
	ug/L	ug/Kg
Chloromethane	10	10
Bromomethane	10	10
Vinyl Chloride	10	10
Chloroethane	10	10
Methylene Chloride	5	5
Acetone	10	10
Carbon Disulfide	5	5
1,1-Dichloroethene	5	5
1,1-Dichloroethane	5	5
1,2-Dichloroethene (total)	5	5
Chloroform	5	5
1,2-Dichloroethane	5	5
2-Butanone	10	10
1,1,1-Trichloroethane	5	5
Carbon Tetrachloride	5	5
Vinyl Acetate	10	10
Bromodichloromethane	5	5
1,2-Dichloropropane	5	5
cis-1,3-Dichloropropene	5	5
Trichloroethene	5	5
Dibromochloromethane	5	5
1,1,2-Trichloroethane	5	5
Benzene	5	5
trans-1,3-Dichloropropene	5	5
Bromoform	5	5
4-Methyl-2-pentanone	10	10
2-Hexanone	10	10
Tetrachloroethene	5	5
Toluene	5	5
1,1,2,2-Tetrachloroethane	5	5
Chlorobenzene	5	5
Ethyl Benzene	5	5
Styrene	5	5
Xylenes (Total)	5	5
Acrolein	50	5
1,4-Dioxane	50	50
Methyl Iodide	5	5
Methyl Methacrylate	5	5
Allyl Chloride	5	5
Pyridine	100	100
Chloroprene	5	5
Ethyl Methacrylate	5	5
Trans-1,4-Dichloro-2-Butene	5	5
1,2-Dibromoethane	5	5
Pentachloroethane	5	5

Appendix 9 Compounds

(CONTINUED)		Quantitation Limits**	
		Water	Low Soil /Sediments ^a
		ug/L	ug/Kg
Volatiles	CAS Number		
1,1,1,2-Tetrachloroethane		5	5
Acetonitrile		100	100
1,2,3-Trichloropropane		5	5
Acrylonitrile		50	50
Dichlorodifluoromethane		5	5
Propionitrile		10	10
Trichlorofluoromethane		5	5
Methacrylonitrile		50	50
Dibromomethane		10	10
Isobutyl Alcohol		100	100
Semivolatiles		Quantitation Limits**	
		Water	Low Soil /Sediments ^a
		ug/L	ug/Kg
Phenol		10	330
bis(2-Chloroethyl) ether		10	330
2-Chlorophenol		10	330
1,3-Dichlorobenzene		10	330
1,4-Dichlorobenzene		10	330
Benzyl alcohol		10	330
1,2-Dichlorobenzene		10	330
2-Methylphenol		10	330
bis(2-Chloroisopropyl) ether		10	330
4-Methylphenol		10	330
N-Nitroso-di-n-dipropylamine		10	330
Hexachloroethane		10	330
Nitrobenzene		10	330
Isophorone		10	330
2-Nitrophenol		10	330
2,4-Dimethylphenol		10	330
Benzoic acid		50	1600
bis(2-Chloroethoxy) methane		10	330
2,4-Dichlorophenol		10	330
1,2,4-Trichlorobenzene		10	330
Naphthalene		10	330
4-Chloroaniline		10	330
Hexachlorobutadiene		10	330
4-Chloro-3-methylphenol (para-chloro-meta-cresol)		10	330
2-Methylnaphthalene		10	330
Hexachlorocyclopentadiene		10	330
2,4,6-Trichlorophenol		10	330
2,4,5-Trichlorophenol		50	1600
2-Chloronaphthalene		10	330

Appendix 9 Compounds

(CONTINUED)	Quantitation Limits**	
	Water	Low Soil /Sediments*
	ug/L	ug/Kg
Semivolatiles		
2-Nitroaniline	50	1600
Dimethylphthalate	10	330
Acenaphthylene	10	330
2,6-Dinitrotoluene	10	330
3-Nitroaniline	50	1600
Acenaphthene	10	330
2,4-Dinitrophenol	50	1600
4-Nitrophenol	50	1600
Dibenzofuran	10	330
2,4-Dinitrotoluene	10	330
Diethylphthalate	10	330
4-Chlorophenyl-phenyl ether	10	330
Fluorene	10	330
4-Nitroaniline	50	1600
4,6-Dinitro-2-methylphenol	50	1600
N-nitrosodiphenylamine	10	330
4-Bromophenyl-phenylether	10	330
Hexachlorobenzene	10	330
Pentachlorophenol	50	1600
Phenanthrene	10	330
Anthracene	10	330
Di-n-butylphthalate	10	330
Fluoranthene	10	330
Pyrene	10	330
Butylbenzylphthalate	10	330
3,3'-Dichlorobenzidine	20	660
Benzo(a)anthracene	10	330
Chrysene	10	330
bis(2-Ethylhexyl)phthalate	10	330
Di-n-octylphthalate	10	330
Benzo(b)fluoranthene	10	330
Benzo(k)fluoranthene	10	330
Benzo(a)pyrene	10	330
Indeno(1,2,3-cd)pyrene	10	330
Dibenz(a,h)anthracene	10	330
Benzo(g,h,i)perylene	10	330
Parathion	20	660
Ethyl Methanesulfonate	10	330
P-Phenylenediamine	10	330
N-Nitrosodiethylamine	10	330
N-Nitrosomethylethylamine	10	330
N-Nitrosodibutylamine	10	330
1-Nitrosopiperidine	10	330
5-Nitro-o-Toluidine	10	330
METHYL YELLOW	10	330
METHYL PARATHION	10	330

Appendix 9 Compounds

(CONTINUED)		Quantitation Limits**	
		Water	Low Soil /Sediments*
Semivolatiles	CAS Number	ug/L	ug/Kg
SAFROLE		20	660
ISOSAFROLE		20	660
2-PICOLINE		10	330
PHENACETIN		10	330
0-TOLUIDINE		10	330
3,3-DIMETHYLBENZIDINE		50	1650
1,3-DINITROBENZENE		10	330
A,A-DIMETHYLPHENETHYLAMINE		10	330
0,0,0-TRIETHYLPHOSPHOROTHIOATE		20	660
METHAPYRILENE HYDROCHLORIDE		20	660
DIALATE		20	660
1,3,5-TRINITROBENZENE		100	3300
FAMPHUR		10	330
4-NITROQUINOLINE-N-OXIDE		100	3300
M-CRESOL		10	330
1,2,4,5-TETRACHLORO BENZENE		10	330
PENTACHLORONITROBENZENE		10	330
PHORATE		10	330
N-NITROSODIMETHYLAMINE		10	330
2,3,4,6-TETRACHLOROPHENOL		10	330
CHLORO BENZILATE		10	330
THIONAZIN		20	660
DISULFOTON		10	330
ISODRIN		100	3300
N-NITROSOMORPHOLINE		10	330
PENTACHLORO BENZENE		10	330
DIPHENYLAMINE		10	330
4-AMINO BIPHENYL		10	330
HEXACHLOROPROPENE		10	330
2,6-DICHLOROPHENOL		10	330
SULFOTEPP		10	330
METHYL METHANESULFONATE		10	330
1,4-NAPHTHAQUINONE		10	330
N-NITROSOPYROLLIDINE		10	330
ACETOPHENONE		10	330
DIMETHOATE		10	330
3-METHYL CHOLANTHRENE		10	330
2-ACETYLAMINOFLUORENE		10	330
ANILINE		10	330
1,2-DIBROMO-3-CHLOROPROPANE		10	330
HEXACHLOROPHENE		10	330
KEPONE		50	1650
1-NAPHTHYLAMINE		10	330
2-NAPHTHYLAMINE		10	330
PRONAMIDE		50	1650
ARAMITE		100	3300
7,12-DIMETHYL BENZ(A)ANTHRACENE		10	330

Appendix 9 Compounds

		Quantitation Limits**	
		Water	Low Soil /Sediments*
		ug/L	ug/Kg
Pesticides/PCBs	CAS Number		
alpha-BHC		0.05	8.0
beta-BHC		0.05	8.0
delta-BHC		0.05	8.0
gamma-BHC (Lindane)		0.05	8.0
Heptachlor		0.05	8.0
Aldrin		0.05	8.0
Heptachlor epoxide		0.05	8.0
Endosulfan I		0.05	8.0
Dieldrin		0.10	16.0
4,4'-DDE		0.10	16.0
Endrin		0.10	16.0
Endosulfan II		0.10	16.0
4,4'-DDD		0.10	16.0
Endosulfan sulfate		0.10	16.0
4,4'-DDT		0.10	16.0
Methoxychlor		0.5	80.0
Endrin ketone		0.10	16.0
alpha-Chlordane		0.5	80.0
gamma-Chlordane		0.5	80.0
Toxaphene		1.0	160.0
Aroclor-1016		0.5	80.0
Aroclor-1221		0.5	80.0
Aroclor-1232		0.5	80.0
Aroclor-1242		0.5	80.0
Aroclor-1248		0.5	80.0
Aroclor-1254		1.0	160.0
Aroclor-1260		1.0	160.0
2,4-D		3.0	480.0
2,4,5-T		0.4	64.0
2,4,5-Tp		0.4	64.0
		Quantitation Limits**	
		Water	Low Soil /Sediments*
Inorganics	CAS Number	ug/L	ug/Kg
Aluminum		200	10
Antimony		60	12
Arsenic		10	10
Barium		200	4.0
Beryllium		5	1.0
Cadmium		5	1.0
Calcium		5000	100
Chromium		10	1.0
Cobalt		50	2.0
Copper		25	2.0
Iron		100	6.0

Appendix 9 Compounds

(Continued)	Quantitation Limits**	
	Water	Low Soil /Sediments*
Inorganics	ug/L	ug/Kg
Lead	5	4.0
Magnesium	5000	100
Manganese	15	1
Mercury	0.2	10
Nickel	40	2.0
Potassium	5000	100
Selenium	5	10
Silver	10	2.0
Sodium	5000	100
Thallium	10	10
Vanadium	50	2.0
Zinc	20	2.0
Cyanide	10	0
Sulfide	2000	1.0

*Medium Soil/Sediment Practical Quantitation Limits (PQL) for Pesticide/PCB TCL compounds are 15 times the individual Low Soil/Sediment PQL; for Volatiles, 125 times; for Semivolatiles, 60 times.

Specific quantitation limits are highly matrix dependent. The quantitation limits listed herein are provided for guidance and may not always be achievable.

Quantitation limits listed for soil/sediment are based on wet weight. The quantitation Limits calculated by the laboratory for soil/sediment, calculated on dry weight basis will be higher.

APPENDIX J

Laboratory data reports.

DRAFT

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012-1421 (918) 251-2858

ENGINEERING & SCIENCE, INC.
 10 STONE MILL ROAD
 BLOOMINGTON, IN 47408

REPORT: 18526.06
 QAQC# : C940506A
 INST. BATCH# : 207328
 REPORTED : 05/20/94

PROJECT : FRANKLIN-CURTIS
 LAB# : 18526.06
 SAMPLE : FCR-GW-PGP15-04
 LOCATION:

SAMPLED : 04/29/94 10:05
 SUBMITTED: 04/30/94
 PREPARED :
 ANALYZED : 05/06/94 14:46
 DILUTION : 1
 %MOISTURE: 0.00
 LEVEL : LOW

MATRIX : WATER
 METHOD : SW 8240

**VOLATILE ORGANICS PRIORITY POLLUTANTS
 RESULTS REPORTED IN ug/L**

PARAMETER	QUANT.		PARAMETER	QUANT.	
	LIMIT	RESULTS		LIMIT	RESULTS
CHLOROMETHANE	10	ND	1,2-DICHLOROPROPANE	5	ND
BROMOMETHANE	10	ND	TRANS-1,3-DICHLOROPROPENE	5	ND
VINYL CHLORIDE	10	ND	TRICHLOROETHENE	5	75
CHLOROETHANE	10	ND	DIBROMOCHLOROMETHANE	5	ND
METHYLENE CHLORIDE	5	5.9	1,1,2-TRICHLOROETHANE	5	ND
ACETONE	10	ND	BENZENE	5	ND
CARBON DISULFIDE	5	ND	CIS-1,3-DICHLOROPROPENE	5	ND
1,1-DICHLOROETHENE	5	ND	2-CHLOROETHYL VINYL ETHER	10	ND
1,1-DICHLOROETHANE	5	ND	BROMOFORM	5	ND
1,2-DICHLOROETHENE (TOTAL)	5	ND	2-HEXANONE	10	ND
BROMOFORM	5	ND	4-METHYL-2-PENTANONE	10	ND
1,2-DICHLOROETHANE	5	ND	TETRACHLOROETHENE	5	79
2-BUTANONE	10	ND	TOLUENE	5	ND
1,1,1-TRICHLOROETHANE	5	37	CHLOROBENZENE	5	ND
CARBON TETRACHLORIDE	5	ND	ETHYLBENZENE	5	ND
VINYL ACETATE	10	ND	STYRENE	5	ND
BROMODICHLOROMETHANE	5	ND	XYLENE (TOTAL)	5	ND
1,1,2,2-TETRACHLOROETHANE	5	ND			

QA/QC SURROGATE RECOVERIES

TOLUENE-D8	(88-110)	98%	BROMOFLUOROBENZENE	(86-115)	99%
1,2-DICHLOROETHANE-D4	(76-114)	98%			

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

I = INABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

A = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012-1421 (918) 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-GW-PGP15-04 **Project ID:** FRANKLIN-CURTIS
SWLO ID: 18526.06 **Report:** 18526.06

Collected: 04/29/1994 **Report Date:** 05/20/1994 **Page:** 1
Received: 04/30/1994 **Last Modified:** 05/20/1994 **Matrix:** Water

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
TOTAL CYANIDE		10.0	ug/l	ND	05/04/94	SM 412D/SW 9010
AMENABLE CN		10.0	ug/l	ND	05/04/94	SM 412F/SW 9010
*** METALS ***						
METALS CLP 3/90						
METALS-CLP-ICP					EPA-CLP	
ALUMINUM		84.0	ug/l	23600	05/05/94	
ANTIMONY		40.0	ug/l	ND	05/03/94	
BARIUM		5.0	ug/l	366	05/03/94	
BERYLLIUM		1.0	ug/l	1.7	05/05/94	
CADMIUM		3.0	ug/l	ND	05/03/94	
CALCIUM		200	ug/l	871000	05/03/94	
CHROMIUM		5.0	ug/l	92.6	05/03/94	
COBALT		10.0	ug/l	73.8	05/03/94	
COPPER		10.0	ug/l	90.2	05/03/94	
IRON		55.0	ug/l	69600	05/03/94	
MAGNESIUM		200	ug/l	265000	05/03/94	
MANGANESE		5.0	ug/l	4954	05/03/94	
NICKEL		10.0	ug/l	129	05/03/94	
POTASSIUM		500	ug/l	5730	05/05/94	
SILVER		10.0	ug/l	ND	05/03/94	
SODIUM		500	ug/l	30700	05/05/94	
VANADIUM		5.0	ug/l	46.5	05/03/94	
ZINC		15.0	ug/l	784	05/03/94	
ARSENIC		10.0	ug/l	ND	05/04/94	SW 7060
LEAD		3.0	ug/l	61.5	05/05/94	SW 7421
MERCURY		0.20	ug/l	0.30	05/12/94	SW 7470/7471
SELENIUM		5.0	ug/l	ND	05/04/94	SW 7740
THALLIUM		10.0	ug/l	ND	05/06/94	SW 7841

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012-1421 (918) 251-2858

NEW ENGINEERING & SCIENCE, INC.
 1010 STONE MILL ROAD
 BLOOMINGTON, IN 47408

REPORT: 18526.07
 QAQC# : C940506A
 INST. BATCH# : 207328
 REPORTED : 05/20/94

PROJECT : FRANKLIN-CURTIS
 LAB# : 18526.07
 SAMPLE : FCR-GW-PGP16-04
 LOCATION :

SAMPLED : 04/29/94 11:10
 SUBMITTED: 04/30/94
 PREPARED :
 ANALYZED : 05/06/94 15:16
 DILUTION : 2.5
 %MOISTURE: 0.00
 LEVEL : LOW

MATRIX : WATER
 METHOD : SW 8240

**VOLATILE ORGANICS PRIORITY POLLUTANTS
 RESULTS REPORTED IN ug/L**

PARAMETER	QUANT.		PARAMETER	QUANT.	
	LIMIT	RESULTS		LIMIT	RESULTS
CHLOROMETHANE	25	ND	1,2-DICHLOROPROPANE	12	ND
BROMOMETHANE	25	ND	TRANS-1,3-DICHLOROPROPENE	12	ND
VINYL CHLORIDE	25	ND	TRICHLOROETHENE	12	400
CHLOROETHANE	25	ND	DIBROMOCHLOROMETHANE	12	ND
METHYLENE CHLORIDE	12	22	1,1,2-TRICHLOROETHANE	12	ND
ACETONE	25	ND	BENZENE	12	ND
CARBON DISULFIDE	12	ND	CIS-1,3-DICHLOROPROPENE	12	ND
1,1-DICHLOROETHENE	12	ND	2-CHLOROETHYL VINYL ETHER	25	ND
1,1-DICHLOROETHANE	12	ND	BROMOFORM	12	ND
1,2-DICHLOROETHENE (TOTAL)	12	ND	2-HEXANONE	25	ND
BROMOFORM	12	ND	4-METHYL-2-PENTANONE	25	ND
1,2-DICHLOROETHANE	12	ND	TETRACHLOROETHENE	12	ND
2-BUTANONE	25	ND	TOLUENE	12	ND
1,1,1-TRICHLOROETHANE	12	100	CHLOROBENZENE	12	ND
CARBON TETRACHLORIDE	12	ND	ETHYLBENZENE	12	ND
VINYL ACETATE	25	ND	STYRENE	12	ND
BROMODICHLOROMETHANE	12	ND	XYLENE (TOTAL)	12	ND
1,1,2,2-TETRACHLOROETHANE	12	ND			

QA/QC SURROGATE RECOVERIES

TOLUENE-D8	(88-110)	97%	BROMOFLUOROBENZENE	(86-115)	101%
1,2-DICHLOROETHANE-D4	(76-114)	97%			

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

I = INABLE TO QUANTITATE DUE TO MATRIX INTERPERENCE

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012-1421 (918) 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-GW-PGP16-04 **Project ID:** FRANKLIN-CURTIS
SWLO ID: 18526.07 **Report:** 18526.07

Collected: 04/29/1994 **Report Date:** 05/20/1994 **Page:** 1
Received: 04/30/1994 **Last Modified:** **Matrix:** Water

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
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*** INORGANICS ***

TOTAL CYANIDE		10.0	ug/l	ND	05/04/94	SM 412D/SW 9010
AMENABLE CN		10.0	ug/l	ND	05/04/94	SM 412F/SW 9010

*** METALS ***

METALS CLP 3/90

METALS-CLP-ICP

ALUMINUM	84.0	ug/l	2560	05/05/94
ANTIMONY	40.0	ug/l	ND	05/03/94
BARIUM	5.0	ug/l	111	05/03/94
BERYLLIUM	1.0	ug/l	ND	05/05/94
CADMIUM	3.0	ug/l	ND	05/03/94
CALCIUM	200	ug/l	214000	05/03/94
CHROMIUM	5.0	ug/l	8.1	05/03/94
COBALT	10.0	ug/l	ND	05/03/94
COPPER	10.0	ug/l	19.6	05/03/94
IRON	55.0	ug/l	8660	05/03/94
MAGNESIUM	200	ug/l	69200	05/03/94
MANGANESE	5.0	ug/l	794	05/03/94
NICKEL	10.0	ug/l	11.9	05/03/94
POTASSIUM	500	ug/l	2830	05/05/94
SILVER	10.0	ug/l	ND	05/03/94
SODIUM	500	ug/l	23500	05/05/94
VANADIUM	5.0	ug/l	6.3	05/03/94
ZINC	15.0	ug/l	35.7	05/03/94

EPA-CLP

ARSENIC	10.0	ug/l	ND	05/04/94	SW 7060
LEAD	3.0	ug/l	7.1	05/05/94	SW 7421
MERCURY	0.2	ug/l	ND	05/12/94	SW 7470/7471
SELENIUM	5.0	ug/l	ND	05/04/94	SW 7740
THALLIUM	10.0	ug/l	ND	05/06/94	SW 7841

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012-1421 (918) 251-2858

ENGINEERING & SCIENCE, INC.
 10 STONE MILL ROAD
 BLOOMINGTON, IN 47408

REPORT: 18526.08
 QAQC# : C940506A
 INST. BATCH# : 207328
 REPORTED : 05/20/94

PROJECT : FRANKLIN-CURTIS
 LAB# : 18526.08
 SAMPLE : FCR-GW-PGP16-04D
 LOCATION:
 MATRIX : WATER
 METHOD : SW 8240

SAMPLED : 04/29/94 11:10
 SUBMITTED: 04/30/94
 PREPARED :
 ANALYZED : 05/06/94 15:46
 DILUTION : 2.5
 %MOISTURE : 0.00
 LEVEL : LOW

VOLATILE ORGANICS PRIORITY POLLUTANTS
 RESULTS REPORTED IN ug/L

PARAMETER	QUANT.		PARAMETER	QUANT.	
	LIMIT	RESULTS		LIMIT	RESULTS
CHLOROMETHANE	25	ND	1,2-DICHLOROPROPANE	12	ND
BROMOMETHANE	25	ND	TRANS-1,3-DICHLOROPROPENE	12	ND
VINYL CHLORIDE	25	ND	TRICHLOROETHENE	12	380
CHLOROETHANE	25	ND	DIBROMOCHLOROMETHANE	12	ND
METHYLENE CHLORIDE	12	32	1,1,2-TRICHLOROETHANE	12	ND
ACETONE	25	ND	BENZENE	12	ND
CARBON DISULFIDE	12	ND	CIS-1,3-DICHLOROPROPENE	12	ND
1,1-DICHLOROETHENE	12	ND	2-CHLOROETHYL VINYL ETHER	25	ND
1,1-DICHLOROETHANE	12	ND	BROMOFORM	12	ND
1,1,2-DICHLOROETHENE (TOTAL)	12	ND	2-HEXANONE	25	ND
BROMOFORM	12	ND	4-METHYL-2-PENTANONE	25	ND
1,2-DICHLOROETHANE	12	ND	TETRACHLOROETHENE	12	ND
2-BUTANONE	25	ND	TOLUENE	12	ND
1,1,1-TRICHLOROETHANE	12	98	CHLOROBENZENE	12	ND
CARBON TETRACHLORIDE	12	ND	ETHYLBENZENE	12	ND
VINYL ACETATE	25	ND	STYRENE	12	ND
BROMODICHLOROMETHANE	12	ND	XYLENE (TOTAL)	12	ND
1,1,2,2-TETRACHLOROETHANE	12	ND			

QA/QC SURROGATE RECOVERIES

TOLUENE-D8	(88-110)	98%	BROMOFLUOROBENZENE	(86-115)	97%
1,2-DICHLOROETHANE-D4	(76-114)	100%			

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

I = INABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012-1421 (918) 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-GW-PGP16-04D **Project ID:** FRANKLIN-CURTIS

SWLO ID: 18526.08 **Report:** 18526.08

Collected: 04/29/1994 **Report Date:** 05/20/1994 **Page:** 1
Received: 04/30/1994 **Last Modified:** 05/20/1994 **Matrix:** Water

TEST	DATE	DETECTION			DATE	METHOD
	EXTRACTED	LIMIT	UNITS	RESULTS	ANALYZED	REFERENCE
*** INORGANICS ***						
TOTAL CYANIDE		10.0	ug/l	ND	05/04/94	SM 412D/SW 9010
AMENABLE CN		10.0	ug/l	ND	05/04/94	SM 412F/SW 9010
*** METALS ***						
METALS CLP 3/90						
METALS-CLP-ICP						EPA-CLP
ALUMINUM		84.0	ug/l	490	05/05/94	
ANTIMONY		40.0	ug/l	ND	05/03/94	
BARIUM		5.0	ug/l	72.9	05/03/94	
BERYLLIUM		1.0	ug/l	ND	05/03/94	
CADMIUM		3.0	ug/l	ND	05/03/94	
CALCIUM		200	ug/l	126000	05/03/94	
CHROMIUM		5.0	ug/l	ND	05/03/94	
COBALT		10.0	ug/l	ND	05/03/94	
COPPER		10.0	ug/l	13.8	05/03/94	
IRON		55.0	ug/l	1760	05/03/94	
MAGNESIUM		200	ug/l	36800	05/03/94	
MANGANESE		5.0	ug/l	136	05/03/94	
NICKEL		10.0	ug/l	ND	05/03/94	
POTASSIUM		500	ug/l	2350	05/05/94	
SILVER		10.0	ug/l	ND	05/03/94	
SODIUM		500	ug/l	23500	05/05/94	
VANADIUM		5.0	ug/l	ND	05/03/94	
ZINC		15.0	ug/l	ND	05/03/94	
ARSENIC		10.0	ug/l	ND	05/04/94	SW 7060
LEAD		3.0	ug/l	ND	05/05/94	SW 7421
MERCURY		0.2	ug/l	ND	05/12/94	SW 7470/7471
SELENIUM		5.0	ug/l	ND	05/04/94	SW 7740
THALLIUM		10.0	ug/l	ND	05/06/94	SW 7841

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012-1421 (918) 251-2858

ENVIRONMENTAL ENGINEERING & SCIENCE, INC.
 1010 STONE MILL ROAD
 BLOOMINGTON, IN 47408

REPORT: 18526.09
 QAQC# : C940506A
 INST. BATCH# : 207328
 REPORTED : 05/20/94

PROJECT : FRANKLIN-CURTIS
 LAB# : 18526.09
 SAMPLE : FCR-GW-PGP18-04
 LOCATION:

SAMPLED : 04/29/94 16:00
 SUBMITTED: 04/30/94
 PREPARED :
 ANALYZED : 05/06/94 16:16
 DILUTION : 1
 %MOISTURE: 0.00
 LEVEL : LOW

MATRIX : WATER
 METHOD : SW 8240

**VOLATILE ORGANICS PRIORITY POLLUTANTS
 RESULTS REPORTED IN ug/L**

PARAMETER	QUANT.		PARAMETER	QUANT.	
	LIMIT	RESULTS		LIMIT	RESULTS
CHLOROMETHANE	10	ND	1,2-DICHLOROPROPANE	5	ND
BROMOMETHANE	10	ND	TRANS-1,3-DICHLOROPROPENE	5	ND
VINYL CHLORIDE	10	ND	TRICHLOROETHENE	5	170
CHLOROETHANE	10	ND	DIBROMOCHLOROMETHANE	5	ND
METHYLENE CHLORIDE	5	12	1,1,2-TRICHLOROETHANE	5	ND
ACETONE	10	ND	BENZENE	5	ND
CARBON DISULFIDE	5	ND	CIS-1,3-DICHLOROPROPENE	5	ND
1,1-DICHLOROETHENE	5	ND	2-CHLOROETHYL VINYL ETHER	10	ND
1,1-DICHLOROETHANE	5	ND	BROMOFORM	5	ND
1,2-DICHLOROETHENE (TOTAL)	5	ND	2-HEXANONE	10	ND
BROMOFORM	5	ND	4-METHYL-2-PENTANONE	10	ND
1,2-DICHLOROETHANE	5	ND	TETRACHLOROETHENE	5	ND
2-BUTANONE	10	ND	TOLUENE	5	ND
1,1,1-TRICHLOROETHANE	5	51	CHLOROBENZENE	5	ND
CARBON TETRACHLORIDE	5	ND	ETHYLBENZENE	5	ND
VINYL ACETATE	10	ND	STYRENE	5	ND
BROMODICHLOROMETHANE	5	ND	XYLENE (TOTAL)	5	ND
1,1,2,2-TETRACHLOROETHANE	5	ND			

QA/QC SURROGATE RECOVERIES

TOLUENE-D8	(88-110)	99%	BROMOFLUOROBENZENE	(86-115)	102%
1,2-DICHLOROETHANE-D4	(76-114)	95%			

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

I = INABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012-1421 (918) 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
 5010 STONE MILL ROAD
 BLOOMINGTON, IN 47408

Client ID: FCR-GW-PGP18-04

Project ID: FRANKLIN-CURTIS

SWLO ID: 18526.09

Report: 18526.09

Collected: 04/29/1994

Report Date: 05/20/1994

Page: 1

Received: 04/30/1994

Last Modified: 05/20/1994

Matrix: Water

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
TOTAL CYANIDE		10.0	ug/l	ND	05/04/94	SM 412D/SW 9010
AMENABLE CN		10.0	ug/l	ND	05/04/94	SM 412F/SW 9010
*** METALS ***						
METALS CLP 3/90						
METALS-CLP-ICP						EPA-CLP
ALUMINUM		84.0	ug/l	12700	05/05/94	
ANTIMONY		40.0	ug/l	ND	05/03/94	
BARIUM		5.0	ug/l	163	05/03/94	
BERYLLIUM		1.0	ug/l	1.0	05/05/94	
CADMIUM		3.0	ug/l	ND	05/03/94	
CALCIUM		200	ug/l	405000	05/03/94	
CHROMIUM		5.0	ug/l	40.5	05/03/94	
COBALT		10.0	ug/l	39.8	05/03/94	
COPPER		10.0	ug/l	120	05/03/94	
IRON		55.0	ug/l	53100	05/03/94	
MAGNESIUM		200	ug/l	140000	05/03/94	
MANGANESE		5.0	ug/l	3000	05/03/94	
NICKEL		10.0	ug/l	103	05/03/94	
POTASSIUM		500	ug/l	3580	05/05/94	
SILVER		10.0	ug/l	ND	05/03/94	
SODIUM		500	ug/l	11800	05/05/94	
VANADIUM		5.0	ug/l	32.8	05/03/94	
ZINC		15.0	ug/l	326	05/03/94	
ARSENIC		10.0	ug/l	ND	05/04/94	SW 7060
LEAD		3.0	ug/l	44.0	05/05/94	SW 7421
MERCURY		0.20	ug/l	0.20	05/12/94	SW 7470/7471
SELENIUM		5.0	ug/l	ND	05/04/94	SW 7740
THALLIUM		10.0	ug/l	ND	05/06/94	SW 7841

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

D = SURROGATES DILUTED OUT

I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

EPA = #EPA600/4-79-020, MARCH 1985

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012-1421 (918) 251-2858

WW ENGINEERING & SCIENCE, INC.
 010 STONE MILL ROAD
 BLOOMINGTON, IN 47408

REPORT: 18526.02
 QAQC# : C940509A
 INST. BATCH# : 207393
 REPORTED : 05/20/94

PROJECT : FRANKLIN-CURTIS
 LAB# : 18526.02 MS
 SAMPLE : FCR-GW-PGP16-04MS
 LOCATION:

SAMPLED : 04/29/94 11:10
 SUBMITTED: 04/30/94
 PREPARED :
 ANALYZED : 05/09/94 11:51
 DILUTION : 2.5
 %MOISTURE: 0.00
 LEVEL : LOW

MATRIX : WATER
 METHOD : SW 8240

**VOLATILE ORGANICS PRIORITY POLLUTANTS
 RESULTS REPORTED IN ug/L**

PARAMETER	QUANT.		PARAMETER	QUANT.	
	LIMIT	RESULTS		LIMIT	RESULTS
CHLOROMETHANE	25	ND	1,2-DICHLOROPROPANE	12	ND
BROMOMETHANE	25	ND	TRANS-1,3-DICHLOROPROPENE	12	ND
VINYL CHLORIDE	25	ND	TRICHLOROETHENE	12	290
CHLOROETHANE	25	ND	DIBROMOCHLOROMETHANE	12	ND
METHYLENE CHLORIDE	12	ND	1,1,2-TRICHLOROETHANE	12	ND
ACETONE	25	ND	BENZENE	12	120
CARBON DISULFIDE	12	ND	CIS-1,3-DICHLOROPROPENE	12	ND
1,1-DICHLOROETHENE	12	110	2-CHLOROETHYL VINYL ETHER	25	ND
1,1-DICHLOROETHANE	12	ND	BROMOFORM	12	ND
1,2-DICHLOROETHENE (TOTAL)	12	ND	2-HEXANONE	25	ND
BROMOFORM	12	ND	4-METHYL-2-PENTANONE	25	ND
1,2-DICHLOROETHANE	12	ND	TETRACHLOROETHENE	12	ND
2-BUTANONE	25	ND	TOLUENE	12	100
1,1,1-TRICHLOROETHANE	12	42	CHLOROBENZENE	12	100
CARBON TETRACHLORIDE	12	ND	ETHYLBENZENE	12	ND
VINYL ACETATE	25	ND	STYRENE	12	ND
BROMODICHLOROMETHANE	12	ND	XYLENE (TOTAL)	12	ND
1,1,2,2-TETRACHLOROETHANE	12	ND			

QA/QC SURROGATE RECOVERIES

TOLUENE-D8	(88-110)	101%	BROMOFLUOROBENZENE	(86-115)	98%
1,2-DICHLOROETHANE-D4	(76-114)	94%			

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

N = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012-1421 (918) 251-2858

WW ENGINEERING & SCIENCE, INC.
3010 STONE MILL ROAD
BLOOMINGTON, IN 47408

REPORT: 18526.03
QAQC# : C940506A
INST. BATCH# : 207328
REPORTED : 05/20/94

PROJECT : FRANKLIN-CURTIS
LAB# : 18526.03 MSD
SAMPLE : FCR-GW-PGP16-04MSD
LOCATION :

SAMPLED : 04/29/94 11:10
SUBMITTED: 04/30/94
PREPARED :
ANALYZED : 05/06/94 17:17
DILUTION : 2.5
%MOISTURE: 0.00
LEVEL : LOW

MATRIX : WATER
METHOD : SW 8240

**VOLATILE ORGANICS PRIORITY POLLUTANTS
RESULTS REPORTED IN ug/L**

PARAMETER	QUANT.		PARAMETER	QUANT.	
	LIMIT	RESULTS		LIMIT	RESULTS
CHLOROMETHANE	25	ND	1,2-DICHLOROPROPANE	12	ND
BROMOMETHANE	25	ND	TRANS-1,3-DICHLOROPROPENE	12	ND
VINYL CHLORIDE	25	ND	TRICHLOROETHENE	12	440
CHLOROETHANE	25	ND	DIBROMOCHLOROMETHANE	12	ND
METHYLENE CHLORIDE	12	ND	1,1,2-TRICHLOROETHANE	12	ND
ACETONE	25	ND	BENZENE	12	120
CARBON DISULFIDE	12	ND	CIS-1,3-DICHLOROPROPENE	12	ND
1,1-DICHLOROETHENE	12	120	2-CHLOROETHYL VINYL ETHER	25	ND
1,1-DICHLOROETHANE	12	ND	BROMOFORM	12	ND
1,2-DICHLOROETHENE (TOTAL)	12	ND	2-HEXANONE	25	ND
BROMOFORM	12	ND	4-METHYL-2-PENTANONE	25	ND
1,2-DICHLOROETHANE	12	ND	TETRACHLOROETHENE	12	ND
2-BUTANONE	25	ND	TOLUENE	12	120
1,1,1-TRICHLOROETHANE	12	86	CHLOROBENZENE	12	120
CARBON TETRACHLORIDE	12	ND	ETHYLBENZENE	12	ND
VINYL ACETATE	25	ND	STYRENE	12	ND
BROMODICHLOROMETHANE	12	ND	XYLENE (TOTAL)	12	ND
1,1,2,2-TETRACHLOROETHANE	12	ND			

QA/QC SURROGATE RECOVERIES

TOLUENE-D8	(88-110)	101%	BROMOFLUOROBENZENE	(86-115)	98%
1,2-DICHLOROETHANE-D4	(76-114)	102%			

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

N = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012-1421 (918) 251-2858

WW ENGINEERING & SCIENCE, INC.
 3010 STONE MILL ROAD
 BLOOMINGTON, IN 47408

REPORT: 18526.05
 QAQC# : C940505A
 INST. BATCH# : 207286
 REPORTED : 05/20/94

PROJECT : FRANKLIN-CURTIS
 LAB# : 18526.05
 SAMPLE : FCR-GW-PGP0-EB-04
 LOCATION:

SAMPLED : 04/29/94 08:55
 SUBMITTED: 04/30/94
 PREPARED :
 ANALYZED : 05/05/94 20:05
 DILUTION : 1
 %MOISTURE: 0.00
 LEVEL : LOW

MATRIX : WATER
 METHOD : SW 8240

VOLATILE ORGANICS PRIORITY POLLUTANTS
 RESULTS REPORTED IN ug/L

PARAMETER	QUANT.		PARAMETER	QUANT.	
	LIMIT	RESULTS		LIMIT	RESULTS
CHLOROMETHANE	10	ND	1,2-DICHLOROPROPANE	5	ND
BROMOMETHANE	10	ND	TRANS-1,3-DICHLOROPROPENE	5	ND
VINYL CHLORIDE	10	ND	TRICHLOROETHENE	5	ND
CHLOROETHANE	10	ND	DIBROMOCHLOROMETHANE	5	ND
METHYLENE CHLORIDE	5	7.7	1,1,2-TRICHLOROETHANE	5	ND
ACETONE	10	ND	BENZENE	5	ND
CARBON DISULFIDE	5	ND	CIS-1,3-DICHLOROPROPENE	5	ND
1,1-DICHLOROETHENE	5	ND	2-CHLOROETHYL VINYL ETHER	10	ND
1,1-DICHLOROETHANE	5	ND	BROMOFORM	5	ND
1,2-DICHLOROETHENE (TOTAL)	5	ND	2-HEXANONE	10	ND
CHLOROFORM	5	ND	4-METHYL-2-PENTANONE	10	ND
1,2-DICHLOROETHANE	5	ND	TETRACHLOROETHENE	5	ND
2-BUTANONE	10	ND	TOLUENE	5	ND
1,1,1-TRICHLOROETHANE	5	ND	CHLOROBENZENE	5	ND
CARBON TETRACHLORIDE	5	ND	ETHYLBENZENE	5	ND
VINYL ACETATE	10	ND	STYRENE	5	ND
BROMODICHLOROMETHANE	5	ND	XYLENE (TOTAL)	5	ND
1,1,2,2-TETRACHLOROETHANE	5	ND			

QA/QC SURROGATE RECOVERIES

TOLUENE-D8	(88-110)	98%	BROMOFLUOROBENZENE	(86-115)	98%
1,2-DICHLOROETHANE-D4	(76-114)	98%			

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

N = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012-1421 (918) 251-2858

WW ENGINEERING & SCIENCE, INC.
010 STONE MILL ROAD
BLOOMINGTON, IN 47408

REPORT: 18526.04
QAQC# : C940506A
INST. BATCH# : 207328
REPORTED : 05/20/94

PROJECT : FRANKLIN-CURTIS
LAB# : 18526.04
SAMPLE : FCR-GW-PGP-04-TB
LOCATION:

SAMPLED :
SUBMITTED: 04/30/94
PREPARED :
ANALYZED : 05/06/94 14:15
DILUTION : 1
%MOISTURE: 0.00
LEVEL : LOW

MATRIX : WATER
METHOD : SW 8240

**VOLATILE ORGANICS PRIORITY POLLUTANTS
RESULTS REPORTED IN ug/L**

PARAMETER	QUANT.		PARAMETER	QUANT.	
	LIMIT	RESULTS		LIMIT	RESULTS
CHLOROMETHANE	10	ND	1,2-DICHLOROPROPANE	5	ND
BROMOMETHANE	10	ND	TRANS-1,3-DICHLOROPROPENE	5	ND
VINYL CHLORIDE	10	ND	TRICHLOROETHENE	5	ND
CHLOROETHANE	10	ND	DIBROMOCHLOROMETHANE	5	ND
METHYLENE CHLORIDE	5	6.7	1,1,2-TRICHLOROETHANE	5	ND
ACETONE	10	22	BENZENE	5	ND
CARBON DISULFIDE	5	ND	CIS-1,3-DICHLOROPROPENE	5	ND
1,1-DICHLOROETHENE	5	ND	2-CHLOROETHYL VINYL ETHER	10	ND
1,1-DICHLOROETHANE	5	ND	BROMOFORM	5	ND
1,2-DICHLOROETHENE (TOTAL)	5	ND	2-HEXANONE	10	ND
1,1,1-TRICHLOROETHANE	5	ND	4-METHYL-2-PENTANONE	10	ND
1,2-DICHLOROETHANE	5	ND	TETRACHLOROETHENE	5	ND
2-BUTANONE	10	ND	TOLUENE	5	ND
1,1,1-TRICHLOROETHANE	5	ND	CHLOROBENZENE	5	ND
CARBON TETRACHLORIDE	5	ND	ETHYLBENZENE	5	ND
VINYL ACETATE	10	ND	STYRENE	5	ND
BROMODICHLOROMETHANE	5	ND	XYLENE (TOTAL)	5	ND
1,1,2,2-TETRACHLOROETHANE	5	ND			

QA/QC SURROGATE RECOVERIES

TOLUENE-D8	(88-110)	98%	BROMOFLUOROBENZENE	(86-115)	96%
1,2-DICHLOROETHANE-D4	(76-114)	97%			

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

M = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012-1421 (918) 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-GW-PGP0-EB-04 **Project ID:** FRANKLIN-CURTIS

SWLO ID: 18526.05 **Report:** 18526.05

Collected: 04/29/1994 **Report Date:** 05/20/1994 **Page:** 1
Received: 04/30/1994 **Last Modified:** 05/20/1994 **Matrix:** Water

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
TOTAL CYANIDE		10.0	ug/l	ND	05/04/94	SM 412D/SW 9010
AMENABLE CN		10.0	ug/l	ND	05/04/94	SM 412F/SW 9010
*** METALS ***						
METALS CLP 3/90						
METALS-CLP-ICP						EPA-CLP
ALUMINUM		84.0	ug/l	ND	05/05/94	
ANTIMONY		40.0	ug/l	ND	05/03/94	
BARIUM		5.0	ug/l	ND	05/03/94	
BERYLLIUM		1.0	ug/l	ND	05/05/94	
CADMIUM		3.0	ug/l	ND	05/03/94	
CALCIUM		200	ug/l	564	05/05/94	
CHROMIUM		5.0	ug/l	ND	05/03/94	
COBALT		10.0	ug/l	ND	05/03/94	
COPPER		10.0	ug/l	10.6	05/03/94	
IRON		55.0	ug/l	77.9	05/03/94	
MAGNESIUM		200	ug/l	160	05/03/94	
MANGANESE		5.0	ug/l	ND	05/03/94	
NICKEL		10.0	ug/l	ND	05/03/94	
POTASSIUM		500	ug/l	ND	05/05/94	
SILVER		10.0	ug/l	ND	05/03/94	
SODIUM		500	ug/l	877	05/05/94	
VANADIUM		5.0	ug/l	ND	05/03/94	
ZINC		15.0	ug/l	ND	05/03/94	
ARSENIC		10.0	ug/l	ND	05/04/94	SW 7060
LEAD		3.0	ug/l	ND	05/05/94	SW 7421
MERCURY		0.2	ug/l	ND	05/12/94	SW 7470/7471
SELENIUM		5.0	ug/l	ND	05/04/94	SW 7740
THALLIUM		10.0	ug/l	ND	05/06/94	SW 7841

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012-1421 (918) 251-2858

ENVIRONMENTAL ENGINEERING & SCIENCE, INC.
 1010 STONE MILL ROAD
 BLOOMINGTON, IN 47408

REPORT: 18526.01
 QAQC# : C940505A
 INST. BATCH# : 207286
 REPORTED : 05/20/94

PROJECT : FRANKLIN-CURTIS
 LAB# : 18526.01
 SAMPLE : FCR-SL-PGPO-EB-04
 LOCATION:

SAMPLED : 04/29/94 08:25
 SUBMITTED: 04/30/94
 PREPARED :
 ANALYZED : 05/05/94 18:05
 DILUTION : 1
 %MOISTURE: 0.00
 LEVEL : LOW

MATRIX : WATER
 METHOD : SW 8240

**VOLATILE ORGANICS PRIORITY POLLUTANTS
 RESULTS REPORTED IN ug/L**

PARAMETER	QUANT.		PARAMETER	QUANT.	
	LIMIT	RESULTS		LIMIT	RESULTS
CHLOROMETHANE	10	ND	1,2-DICHLOROPROPANE	5	ND
BROMOMETHANE	10	ND	TRANS-1,3-DICHLOROPROPENE	5	ND
VINYL CHLORIDE	10	ND	TRICHLOROETHENE	5	ND
CHLOROETHANE	10	ND	DIBROMOCHLOROMETHANE	5	ND
METHYLENE CHLORIDE	5	5.4	1,1,2-TRICHLOROETHANE	5	ND
ACETONE	10	ND	BENZENE	5	ND
CARBON DISULFIDE	5	ND	CIS-1,3-DICHLOROPROPENE	5	ND
1,1-DICHLOROETHENE	5	ND	2-CHLOROETHYL VINYL ETHER	10	ND
1,1-DICHLOROETHANE	5	ND	BROMOFORM	5	ND
1,2-DICHLOROETHENE (TOTAL)	5	ND	2-HEXANONE	10	ND
BROMOFORM	5	ND	4-METHYL-2-PENTANONE	10	ND
1,2-DICHLOROETHANE	5	ND	TETRACHLOROETHENE	5	ND
2-BUTANONE	10	ND	TOLUENE	5	ND
1,1,1-TRICHLOROETHANE	5	ND	CHLOROBENZENE	5	ND
CARBON TETRACHLORIDE	5	ND	ETHYLBENZENE	5	ND
VINYL ACETATE	10	ND	STYRENE	5	ND
BROMODICHLOROMETHANE	5	ND	XYLENE (TOTAL)	5	ND
1,1,2,2-TETRACHLOROETHANE	5	ND			

QA/QC SURROGATE RECOVERIES

TOLUENE-D8	(88-110)	102%	BROMOFLUOROBENZENE	(86-115)	100%
1,2-DICHLOROETHANE-D4	(76-114)	98%			

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

I = INABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

DATA QUALIFIER KEY

Inorganic Qualifiers:

- U Chemical not detected at specified detection limit
- J Estimated value
- * Duplicate analysis was not within control limits
- B Reported value is Below Contract Required Detection Limit (DL) but above Instrument DL
- N Spiked sample recovery not within control limits
- W Post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is <50% of spike absorbance
- E Value is estimated due to matrix interferences
- M Duplicate injection precision criteria not met
- S Reported value was determined by the Method of Standard Additions (MSA)

Organic Qualifiers:

- U Chemical not detected at specified detection limit
- J Estimated value
- B Analyte was found in associated blank as well as sample (for volatiles only)
- E Concentrations exceeds calibration range of GC/MS instrument
- D Chemical identified in an analysis at a secondary dilution factor

App J

1/15/95

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA

Contract:

PGP16

16110-05
PGP-16

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 20772

Matrix: (soil/water) SOIL

Lab Sample ID: 20772.01

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: KN012.D

Level: (low/med) LOW

Date Received: 12/03/94

% Moisture: not dec. 7

Date Analyzed: 12/08/94

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	6	
67-64-1	Acetone	11	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	11	
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	11	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	94	
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	5	
108-88-3	Toluene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

16110-05

Lab Name: SWL-TULSA

Contract:

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 20772

Matrix: (soil/water) SOIL

Lab Sample ID: 20772.01

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: KN012.D

Level: (low/med) LOW

Date Received: 12/03/94

% Moisture: not dec. 7

Date Analyzed: 12/08/94

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-75-8-----	2-Chloroethyl Vinyl Ether	11	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

16110-05

Lab Name: SWL-TULSA

Contract:

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 20772

Matrix: (soil/water) SOIL

Lab Sample ID: 20772.01

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: KN012.D

Level: (low/med) LOW

Date Received: 12/03/94

% Moisture: not dec. 7

Date Analyzed: 12/08/94

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

Number TICs found: 1

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Silane	16.729	8	J
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

16110-05DUP

PGP 16

Lab Name: SWL-TULSA

Contract:

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 20772

Matrix: (soil/water) SOIL

Lab Sample ID: 20772.02

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: KN013.D

Level: (low/med) LOW

Date Received: 12/03/94

% Moisture: not dec. 7

Date Analyzed: 12/08/94

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	-----Chloromethane	11	U
74-83-9	-----Bromomethane	11	U
75-01-4	-----Vinyl Chloride	11	U
75-00-3	-----Chloroethane	11	U
75-09-2	-----Methylene Chloride	29	U
67-64-1	-----Acetone	95	U
75-15-0	-----Carbon Disulfide	5	U
75-35-4	-----1,1-Dichloroethene	5	U
75-34-3	-----1,1-Dichloroethane	5	U
540-59-0	-----1,2-Dichloroethene (total)	5	U
67-66-3	-----Chloroform	5	U
107-06-2	-----1,2-Dichloroethane	5	U
78-93-3	-----2-Butanone	11	U
71-55-6	-----1,1,1-Trichloroethane	16	U
56-23-5	-----Carbon Tetrachloride	5	U
108-05-4	-----Vinyl Acetate	11	U
75-27-4	-----Bromodichloromethane	5	U
78-87-5	-----1,2-Dichloropropane	5	U
10061-01-5	-----cis-1,3-Dichloropropene	5	U
79-01-6	-----Trichloroethene	140	U
124-48-1	-----Dibromochloromethane	5	U
79-00-5	-----1,1,2-Trichloroethane	5	U
71-43-2	-----Benzene	5	U
10061-02-6	-----trans-1,3-Dichloropropene	5	U
75-25-2	-----Bromoform	5	U
108-10-1	-----4-Methyl-2-Pentanone	11	U
591-78-6	-----2-Hexanone	11	U
127-18-4	-----Tetrachloroethene	9	U
108-88-3	-----Toluene	5	J
79-34-5	-----1,1,2,2-Tetrachloroethane	5	U
108-90-7	-----Chlorobenzene	5	U
100-41-4	-----Ethylbenzene	5	U
100-42-5	-----Styrene	5	U
1330-20-7	-----Xylene (Total)	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

16110-05DUP

Lab Name: SWL-TULSA	Contract:	
Lab Code: SWOK	Case No.: WWENG-I SAS No.:	SDG No.: 20772
Matrix: (soil/water) SOIL		Lab Sample ID: 20772.02
Sample wt/vol: 5.0 (g/mL) G		Lab File ID: KN013.D
Level: (low/med) LOW		Date Received: 12/03/94
% Moisture: not dec. 7		Date Analyzed: 12/08/94
Column: (pack/cap) CAP		Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-75-8-----	2-Chloroethyl Vinyl Ether	11	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

16110-05DUP

Lab Name: SWL-TULSA Contract:
Lab Code: SWOK Case No.: WWENG-I SAS No.: SDG No.: 20772
Matrix: (soil/water) SOIL Lab Sample ID: 20772.02
Sample wt/vol: 5.0 (g/mL) G Lab File ID: KN013.D
Level: (low/med) LOW Date Received: 12/03/94
% Moisture: not dec. 7 Date Analyzed: 12/08/94
Column: (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

18110-05 P6P48

Lab Name: SWL-TULSA Contract: _____

Lab Code: SWOK Case No.: WWENG-I SAS No.: _____ SDG No.: 20772

Matrix: (soil/water) SOIL Lab Sample ID: 20772.03

Sample wt/vol: 5.0 (g/mL) G Lab File ID: KN014.D

Level: (low/med) LOW Date Received: 12/03/94

% Moisture: not dec. 8 Date Analyzed: 12/08/94

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	-----Chloromethane	11	U
74-83-9	-----Bromomethane	11	U
75-01-4	-----Vinyl Chloride	11	U
75-00-3	-----Chloroethane	11	U
75-09-2	-----Methylene Chloride	20	U
67-64-1	-----Acetone	97	U
75-15-0	-----Carbon Disulfide	5	U
75-35-4	-----1,1-Dichloroethene	5	U
75-34-3	-----1,1-Dichloroethane	5	U
540-59-0	-----1,2-Dichloroethene (total)	5	U
67-66-3	-----Chloroform	5	U
107-06-2	-----1,2-Dichloroethane	5	U
78-93-3	-----2-Butanone	11	U
71-55-6	-----1,1,1-Trichloroethane	8	U
56-23-5	-----Carbon Tetrachloride	5	U
108-05-4	-----Vinyl Acetate	11	U
75-27-4	-----Bromodichloromethane	5	U
78-87-5	-----1,2-Dichloropropane	5	U
10061-01-5	-----cis-1,3-Dichloropropene	5	U
79-01-6	-----Trichloroethene	53	U
124-48-1	-----Dibromochloromethane	5	U
79-00-5	-----1,1,2-Trichloroethane	5	U
71-43-2	-----Benzene	5	U
10061-02-6	-----trans-1,3-Dichloropropene	5	U
75-25-2	-----Bromoform	5	U
108-10-1	-----4-Methyl-2-Pentanone	11	U
591-78-6	-----2-Hexanone	11	U
127-18-4	-----Tetrachloroethene	5	U
108-88-3	-----Toluene	2	J
79-34-5	-----1,1,2,2-Tetrachloroethane	5	U
108-90-7	-----Chlorobenzene	5	U
100-41-4	-----Ethylbenzene	5	U
100-42-5	-----Styrene	5	U
1330-20-7	-----Xylene (Total)	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

. 18110-05

Lab Name: SWL-TULSA

Contract:

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 20772

Matrix: (soil/water) SOIL

Lab Sample ID: 20772.03

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: KN014.D

Level: (low/med) LOW

Date Received: 12/03/94

% Moisture: not dec. 8

Date Analyzed: 12/08/94

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-75-8-----	2-Chloroethyl Vinyl Ether__	11	U

1E
 VOLATILE ORGANICS ANALYSIS DATA SHEET
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

18110-05

Lab Name: SWL-TULSA

Contract:

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 20772

Matrix: (soil/water) SOIL

Lab Sample ID: 20772.03

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: KN014.D

Level: (low/med) LOW

Date Received: 12/03/94

% Moisture: not dec. 8

Date Analyzed: 12/08/94

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:
 (ug/L or ug/Kg) UG/KG

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCRSL1605EB

Lab Name: SWL-TULSA Contract: *blank?*
Lab Code: SWOK Case No.: WWENG-I SAS No.: SDG No.: 20772
Matrix: (soil/water) WATER Lab Sample ID: 20772.06
Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R17894.D
Level: (low/med) LOW Date Received: 12/03/94
% Moisture: not dec. _____ Date Analyzed: 12/07/94
Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

74-87-3	-----Chloromethane	10	U
74-83-9	-----Bromomethane	10	U
75-01-4	-----Vinyl Chloride	10	U
75-00-3	-----Chloroethane	10	U
75-09-2	-----Methylene Chloride	15	B
67-64-1	-----Acetone	8	JB
75-15-0	-----Carbon Disulfide	5	U
75-35-4	-----1,1-Dichloroethane	5	U
75-34-3	-----1,1-Dichloroethane	5	U
540-59-0	-----1,2-Dichloroethene (total)	5	U
67-66-3	-----Chloroform	5	U
107-06-2	-----1,2-Dichloroethane	5	U
78-93-3	-----2-Butanone	10	U
71-55-6	-----1,1,1-Trichloroethane	5	U
56-23-5	-----Carbon Tetrachloride	5	U
108-05-4	-----Vinyl Acetate	10	U
75-27-4	-----Bromodichloromethane	5	U
78-87-5	-----1,2-Dichloropropane	5	U
10061-01-5	-----cis-1,3-Dichloropropene	5	U
79-01-6	-----Trichloroethene	5	U
124-48-1	-----Dibromochloromethane	5	U
79-00-5	-----1,1,2-Trichloroethane	5	U
71-43-2	-----Benzene	5	U
10061-02-6	-----trans-1,3-Dichloropropene	5	U
75-25-2	-----Bromoform	5	U
108-10-1	-----4-Methyl-2-Pentanone	10	U
591-78-6	-----2-Hexanone	10	U
127-18-4	-----Tetrachloroethene	5	U
108-88-3	-----Toluene	5	U
79-34-5	-----1,1,2,2-Tetrachloroethane	5	U
108-90-7	-----Chlorobenzene	5	U
100-41-4	-----Ethylbenzene	5	U
100-42-5	-----Styrene	5	U
1330-20-7	-----Xylene (Total)	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCRSL1605EB

Lab Name: SWL-TULSA Contract:
Lab Code: SWOK Case No.: WWENG-I SAS No.: SDG No.: 20772
Matrix: (soil/water) WATER Lab Sample ID: 20772.06
Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R17894.D
Level: (low/med) LOW Date Received: 12/03/94
% Moisture: not dec. _____ Date Analyzed: 12/07/94
Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
110-75-8-----	2-Chloroethyl Vinyl Ether	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCRSL1805TB

Lab Name: SWL-TULSA Contract:
 Lab Code: SWOK Case No.: WWENG-I SAS No.: SDG No.: 20772
 Matrix: (soil/water) WATER Lab Sample ID: 20772.07
 Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R17895.D
 Level: (low/med) LOW Date Received: 12/03/94
 % Moisture: not dec. Date Analyzed: 12/07/94
 Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND	UG/L	Q
---------	----------	------	---

74-87-3-----	Chloromethane	10	U
74-83-9-----	Bromomethane	10	U
75-01-4-----	Vinyl Chloride	10	U
75-00-3-----	Chloroethane	10	U
75-09-2-----	Methylene Chloride	15	B
67-64-1-----	Acetone	2	JB
75-15-0-----	Carbon Disulfide	5	U
75-35-4-----	1,1-Dichloroethene	5	U
75-34-3-----	1,1-Dichloroethane	5	U
540-59-0-----	1,2-Dichloroethene (total)	5	U
67-66-3-----	Chloroform	1	J
107-06-2-----	1,2-Dichloroethane	5	U
78-93-3-----	2-Butanone	10	U
71-55-6-----	1,1,1-Trichloroethane	5	U
56-23-5-----	Carbon Tetrachloride	5	U
108-05-4-----	Vinyl Acetate	10	U
75-27-4-----	Bromodichloromethane	5	U
78-87-5-----	1,2-Dichloropropane	5	U
10061-01-5-----	cis-1,3-Dichloropropene	5	U
79-01-6-----	Trichloroethene	5	U
124-48-1-----	Dibromochloromethane	5	U
79-00-5-----	1,1,2-Trichloroethane	5	U
71-43-2-----	Benzene	5	U
10061-02-6-----	trans-1,3-Dichloropropene	5	U
75-25-2-----	Bromoform	5	U
108-10-1-----	4-Methyl-2-Pentanone	10	U
591-78-6-----	2-Hexanone	10	U
127-18-4-----	Tetrachloroethene	5	U
108-88-3-----	Toluene	5	U
79-34-5-----	1,1,2,2-Tetrachloroethane	5	U
108-90-7-----	Chlorobenzene	5	U
100-41-4-----	Ethylbenzene	5	U
100-42-5-----	Styrene	5	U
1330-20-7-----	Xylene (Total)	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCRSL1805TB

Lab Name: SWL-TULSA

Contract:

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 20772

Matrix: (soil/water) WATER

Lab Sample ID: 20772.07

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R17895.D

Level: (low/med) LOW

Date Received: 12/03/94

% Moisture: not dec. _____

Date Analyzed: 12/07/94

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
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110-75-8-----	2-Chloroethyl Vinyl Ether	10	U
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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

FCRSL1805TB

Lab Name: SWL-TULSA

Contract:

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 20772

Matrix: (soil/water) WATER

Lab Sample ID: 20772.07

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R17895.D

Level: (low/med) LOW

Date Received: 12/03/94

% Moisture: not dec. _____

Date Analyzed: 12/07/94

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK1

Site Name: SWL-TULSA Contract:
Lab Code: SWOK Case No.: WWENG-I SAS No.: SDG No.: 20772
Matrix: (soil/water) WATER Lab Sample ID: R941206A
Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R17873.D
Level: (low/med) LOW Date Received: / /
% Moisture: not dec. Date Analyzed: 12/06/94
Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	1	J
67-64-1	Acetone	8	J
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
108-88-3	Toluene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK1

Lab Name: SWL-TULSA

Contract:

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 20772

Matrix: (soil/water) WATER

Lab Sample ID: R941206A

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R17873.D

Level: (low/med) LOW

Date Received: / /

% Moisture: not dec. _____

Date Analyzed: 12/06/94

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
110-75-8-----	2-Chloroethyl Vinyl Ether	10	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK1

Lab Name: SWL-TULSA

Contract:

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 20772

Matrix: (soil/water) WATER

Lab Sample ID: R941206A

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R17873.D

Level: (low/med) LOW

Date Received: / /

% Moisture: not dec. _____

Date Analyzed: 12/06/94

Column: (pack/cap) CAP

Dilution Factor: 1.0

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK2

Lab Name: SWL-TULSA Contract: _____
 Lab Code: SWOK Case No.: WWENG-I SAS No.: _____ SDG No.: 20772
 Matrix: (soil/water) SOIL Lab Sample ID: K941208B
 Sample wt/vol: 5.0 (g/mL) G Lab File ID: KM998.D
 Level: (low/med) LOW Date Received: / /
 % Moisture: not dec. 0 Date Analyzed: 12/08/94
 Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND	Q
74-87-3	-----Chloromethane	10 U
74-83-9	-----Bromomethane	10 U
75-01-4	-----Vinyl Chloride	10 U
75-00-3	-----Chloroethane	10 U
75-09-2	-----Methylene Chloride	5 U
67-64-1	-----Acetone	10 U
75-15-0	-----Carbon Disulfide	5 U
75-35-4	-----1,1-Dichloroethene	5 U
75-34-3	-----1,1-Dichloroethane	5 U
540-59-0	-----1,2-Dichloroethene (total)	5 U
67-66-3	-----Chloroform	5 U
107-06-2	-----1,2-Dichloroethane	5 U
78-93-3	-----2-Butanone	10 U
71-55-6	-----1,1,1-Trichloroethane	5 U
56-23-5	-----Carbon Tetrachloride	5 U
108-05-4	-----Vinyl Acetate	10 U
75-27-4	-----Bromodichloromethane	5 U
78-87-5	-----1,2-Dichloropropane	5 U
10061-01-5	-----cis-1,3-Dichloropropene	5 U
79-01-6	-----Trichloroethene	5 U
124-48-1	-----Dibromochloromethane	5 U
79-00-5	-----1,1,2-Trichloroethane	5 U
71-43-2	-----Benzene	5 U
10061-02-6	-----trans-1,3-Dichloropropene	5 U
75-25-2	-----Bromoform	5 U
108-10-1	-----4-Methyl-2-Pentanone	10 U
591-78-6	-----2-Hexanone	10 U
127-18-4	-----Tetrachloroethene	5 U
108-88-3	-----Toluene	5 U
79-34-5	-----1,1,2,2-Tetrachloroethane	5 U
108-90-7	-----Chlorobenzene	5 U
100-41-4	-----Ethylbenzene	5 U
100-42-5	-----Styrene	5 U
1330-20-7	-----Xylene (Total)	5 U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK2

Lab Name: SWL-TULSA

Contract:

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 20772

Matrix: (soil/water) SOIL

Lab Sample ID: K941208B

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: KM998.D

Level: (low/med) LOW

Date Received: / /

% Moisture: not dec. 0

Date Analyzed: 12/08/94

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-75-8-----	2-Chloroethyl Vinyl Ether___	10	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK2

Lab Name: SWL-TULSA

Contract:

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 20772

Matrix: (soil/water) SOIL

Lab Sample ID: K941208B

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: KM998.D

Level: (low/med) LOW

Date Received: / /

% Moisture: not dec. 0

Date Analyzed: 12/08/94

Column: (pack/cap) CAP

Dilution Factor: 1.0

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS1

Lab Name: SWL-TULSA

Contract:

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 20772

Matrix: (soil/water) WATER

Lab Sample ID: LCS1

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R17874.D

Level: (low/med) LOW

Date Received: / /

% Moisture: not dec. _____

Date Analyzed: 12/06/94

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	51	
74-83-9	Bromomethane	52	
75-01-4	Vinyl Chloride	51	
75-00-3	Chloroethane	52	
75-09-2	Methylene Chloride	55	B
67-64-1	Acetone	49	B
75-15-0	Carbon Disulfide	48	
75-35-4	1,1-Dichloroethene	43	
75-34-3	1,1-Dichloroethane	48	
540-59-0	1,2-Dichloroethene (total)	96	
67-66-3	Chloroform	49	
107-06-2	1,2-Dichloroethane	48	
78-93-3	2-Butanone	47	
71-55-6	1,1,1-Trichloroethane	48	
56-23-5	Carbon Tetrachloride	45	
108-05-4	Vinyl Acetate	46	
75-27-4	Bromodichloromethane	49	
78-87-5	1,2-Dichloropropane	50	
10061-01-5	cis-1,3-Dichloropropene	49	
79-01-6	Trichloroethene	42	
124-48-1	Dibromochloromethane	49	
79-00-5	1,1,2-Trichloroethane	48	
71-43-2	Benzene	43	
10061-02-6	trans-1,3-Dichloropropene	48	
75-25-2	Bromoform	46	
108-10-1	4-Methyl-2-Pentanone	48	
591-78-6	2-Hexanone	50	
127-18-4	Tetrachloroethene	35	
108-88-3	Toluene	44	
79-34-5	1,1,2,2-Tetrachloroethane	48	
108-90-7	Chlorobenzene	43	
100-41-4	Ethylbenzene	42	
100-42-5	Styrene	49	
1330-20-7	Xylene (Total)	140	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS1

Lab Name: SWL-TULSA

Contract:

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 20772

Matrix: (soil/water) WATER

Lab Sample ID: LCS1

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R17874.D

Level: (low/med) LOW

Date Received: / /

% Moisture: not dec. _____

Date Analyzed: 12/06/94

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
110-75-8-----	2-Chloroethyl Vinyl Ether	35	_____

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSD1

Lab Name: SWL-TULSA

Contract:

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 20772

Matrix: (soil/water) WATER

Lab Sample ID: LCSD1

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R17875.D

Level: (low/med) LOW

Date Received: / /

% Moisture: not dec. _____

Date Analyzed: 12/06/94

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	-----Chloromethane	47	
74-83-9	-----Bromomethane	55	
75-01-4	-----Vinyl Chloride	48	
75-00-3	-----Chloroethane	51	
75-09-2	-----Methylene Chloride	56	B
67-64-1	-----Acetone	46	B
75-15-0	-----Carbon Disulfide	49	
75-35-4	-----1,1-Dichloroethene	43	
75-34-3	-----1,1-Dichloroethane	48	
540-59-0	-----1,2-Dichloroethene (total)	96	
67-66-3	-----Chloroform	50	
107-06-2	-----1,2-Dichloroethane	51	
78-93-3	-----2-Butanone	49	
71-55-6	-----1,1,1-Trichloroethane	47	
56-23-5	-----Carbon Tetrachloride	47	
108-05-4	-----Vinyl Acetate	46	
75-27-4	-----Bromodichloromethane	50	
78-87-5	-----1,2-Dichloropropane	51	
10061-01-5	-----cis-1,3-Dichloropropene	50	
79-01-6	-----Trichloroethene	43	
124-48-1	-----Dibromochloromethane	50	
79-00-5	-----1,1,2-Trichloroethane	50	
71-43-2	-----Benzene	44	
10061-02-6	-----trans-1,3-Dichloropropene	49	
75-25-2	-----Bromoform	46	
108-10-1	-----4-Methyl-2-Pentanone	55	
591-78-6	-----2-Hexanone	56	
127-18-4	-----Tetrachloroethene	35	
108-88-3	-----Toluene	44	
79-34-5	-----1,1,2,2-Tetrachloroethane	52	
108-90-7	-----Chlorobenzene	44	
100-41-4	-----Ethylbenzene	41	
100-42-5	-----Styrene	50	
1330-20-7	-----Xylene (Total)	140	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSD1

Lab Name: SWL-TULSA

Contract:

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 20772

Matrix: (soil/water) WATER

Lab Sample ID: LCSD1

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R17875.D

Level: (low/med) LOW

Date Received: / /

% Moisture: not dec. _____

Date Analyzed: 12/06/94

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
110-75-8-----	2-Chloroethyl Vinyl Ether	.35	_____

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

18110-05MS

Lab Name: SWL-TULSA Contract:
Lab Code: SWOK Case No.: WWENG-I SAS No.: SDG No.: 20772
Matrix: (soil/water) SOIL Lab Sample ID: 20772.04MS
Sample wt/vol: 5.0 (g/mL) G Lab File ID: KN015.D
Level: (low/med) LOW Date Received: 12/03/94
% Moisture: not dec. 8 Date Analyzed: 12/08/94
Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	16	
67-64-1	Acetone	83	
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	46	
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	7	
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	11	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	98	
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	51	
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	5	U
108-88-3	Toluene	56	
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-90-7	Chlorobenzene	56	
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

18110-05MS

Job Name: SWL-TULSA Contract:
Lab Code: SWOK Case No.: WWENG-I SAS No.: SDG No.: 20772
Matrix: (soil/water) SOIL Lab Sample ID: 20772.04MS
Sample wt/vol: 5.0 (g/mL) G Lab File ID: KN015.D
Level: (low/med) LOW Date Received: 12/03/94
% Moisture: not dec. 8 Date Analyzed: 12/08/94
Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-75-8-----	2-Chloroethyl Vinyl Ether	11	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

18110-05MSD

Sample Name: SWL-TULSA

Contract:

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 20772

Matrix: (soil/water) SOIL

Lab Sample ID: 20772.05MSD

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: KN016.D

Level: (low/med) LOW

Date Received: 12/03/94

% Moisture: not dec. 8

Date Analyzed: 12/08/94

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	18	
67-64-1	Acetone	85	
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	49	
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	8	
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	11	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	110	
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	54	
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	5	U
108-88-3	Toluene	61	
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-90-7	Chlorobenzene	59	
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

18110-05MSD

Lab Name: SWL-TULSA

Contract:

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 20772

Matrix: (soil/water) SOIL

Lab Sample ID: 20772.05MSD

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: KN016.D

Level: (low/med) LOW

Date Received: 12/03/94

% Moisture: not dec. 8

Date Analyzed: 12/08/94

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-75-8-----	2-Chloroethyl Vinyl Ether	11	U

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Site Name: SWL-TULSA

Contract:

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 20772

	EPA SAMPLE NO.	SMC1 (TOL) #	SMC2 (BFB) #	SMC3 (DCE) #	OTHER	TOT OUT
01	VBLK1	103	100	91		0
02	LCS1	100	100	96		0
03	LCS1	103	102	105		0
04	FCRSL1605EB	100	100	90		0
05	FCRSL1805TB	103	104	92		0
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SMC1 (TOL) = Toluene-d8 (88-110)
 SMC2 (BFB) = Bromofluorobenzene (86-115)
 SMC3 (DCE) = 1,2-Dichloroethane-d4 (76-114)

Column to be used to flag recovery values
 * Values outside of contract required QC limits
 D Surrogates diluted out

2B
SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Job Name: SWL-TULSA

Contract:

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 20772

Level: (low/med) LOW

	EPA SAMPLE NO.	SMC1 (TOL) #	SMC2 (BFB) #	SMC3 (DCE) #	OTHER	TOT OUT
01	VBLK2	91	84	89		0
02	16110-05	100	78	95		0
03	16110-05DUP	96	81	91		0
04	18110-05	95	85	94		0
05	18110-05MS	95	87	105		0
06	18110-05MSD	100	85	98		0
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QC LIMITS

SMC1 (TOL) = Toluene-d8 (81-117)
 SMC2 (BFB) = Bromofluorobenzene (74-121)
 SMC3 (DCE) = 1,2-Dichloroethane-d4 (70-121)

Column to be used to flag recovery values
 * Values outside of contract required QC limits
 D Surrogates diluted out

SWOK/AATS

RECOVERY REPORT

Client Name: Client SDG: r941206a.b
 Sample Matrix: LIQUID Fraction: VOA
 Client ID: LCS Level: LOW
 Data Type: MS DATA SampleType: METHSPIKE
 SpikeList File: WATERLCS.spk Quant Type: ISTD
 Method File: /chem/r.i/r941206a.b/OW-ALLR.m
 Misc Info: MS300**INST:R*SWLO*LCS*5ML

SPIKE COMPOUND	AMOUNT ADDED ug/L	AMOUNT RECOVERED ug/L	% RECOVERED	LIMITS
2 Chloromethane	50.00	51.10	102.21	32-161
3 Vinyl Chloride	50.00	51.04	102.09	65-167
4 Bromomethane	50.00	51.60	103.21	50-191
5 Chloroethane	50.00	51.92	103.85	32-212
8 1,1-Dichloroethene	50.00	42.69	85.39	54-161
10 Acetone	50.00	49.17	98.34	53-146
12 Carbon Disulfide	50.00	48.49	96.98	50-162
15 Methylene Chloride	50.00	54.99	109.98	52-168
16 trans-1,2-Dichloro	50.00	46.65	93.30	74-162
20 1,1-Dichloroethane	50.00	48.21	96.42	55-159
23 cis-1,2-Dichloroet	50.00	48.65	97.32	54-153
24 2-Butanone	50.00	47.01	94.04	42-173
28 Chloroform	50.00	49.39	98.78	57-152
29 1,1,1-Trichloroeth	50.00	47.79	95.60	38-179
30 Carbon Tetrachlori	50.00	45.47	90.94	37-182
32 Benzene	50.00	43.07	86.15	70-134
33 1,2-Dichloroethane	50.00	47.95	95.92	59-151
36 Trichloroethene	50.00	42.59	85.19	67-149
37 1,2-Dichloropropan	50.00	49.72	99.44	40-182
41 Bromodichlorometha	50.00	49.44	98.89	48-164
44 cis-1,3-Dichloropr	50.00	49.15	98.30	34-199
45 4-Methyl-2-Pentano	50.00	48.46	96.92	23-208
47 Toluene	50.00	43.98	87.98	75-140
48 trans-1,3-Dichloro	50.00	48.05	96.11	10-164
50 1,1,2-Trichloroeth	50.00	47.57	95.14	40-179
51 Tetrachloroethene	50.00	35.12	70.25	61-141
52 2-Hexanone	50.00	49.65	99.31	27-176
53 Dibromochlorometha	50.00	48.99	97.99	43-157
56 Chlorobenzene	50.00	42.97	85.95	72-135
58 Ethylbenzene	50.00	41.71	83.43	55-147
59 m,p-Xylene	100.00	74.53	74.53	55-151
61 o-Xylene	50.00	43.86	87.73	68-144
62 Styrene	50.00	49.30	98.62	64-147
63 Bromoform	50.00	45.66	91.33	34-151
65 1,1,2,2-Tetrachlor	50.00	48.55	97.11	14-157
21 Vinyl Acetate	50.00	46.01	92.04	22-122
43 2-Chloroethyl Viny	50.00	35.10	70.21	73-156

SWOK/AATS

RECOVERY REPORT

Client Name: Client SDG: r941206a.b
 Sample Matrix: LIQUID Fraction: VOA
 Client ID: LCSD Level: LOW
 Data Type: MS DATA SampleType: METHSPIKE
 SpikeList File: WATERLCS.spk Quant Type: ISTD
 Method File: /chem/r.i/r941206a.b/OW-ALLR.m
 Misc Info: MS300**INST:R*SWLO*LCSD*5ML

SPIKE COMPOUND	AMOUNT ADDED ug/L	AMOUNT RECOVERED ug/L	RECOVERED	LIMITS
2 Chloromethane	50.00	47.28	94.56	32-161
3 Vinyl Chloride	50.00	48.03	96.07	65-167
4 Bromomethane	50.00	55.09	110.18	50-191
5 Chloroethane	50.00	50.74	101.49	32-212
8 1,1-Dichloroethene	50.00	43.22	86.46	54-161
10 Acetone	50.00	45.82	91.64	53-146
12 Carbon Disulfide	50.00	48.64	97.28	50-162
15 Methylene Chloride	50.00	55.73	111.48	52-168
16 trans-1,2-Dichloro	50.00	46.52	93.06	74-162
20 1,1-Dichloroethane	50.00	48.20	96.40	55-159
23 cis-1,2-Dichloroet	50.00	48.56	97.13	54-153
24 2-Butanone	50.00	49.38	98.76	42-173
28 Chloroform	50.00	50.04	100.10	57-152
29 1,1,1-Trichloroeth	50.00	47.25	94.51	38-179
30 Carbon Tetrachlori	50.00	47.16	94.32	37-182
32 Benzene	50.00	44.38	88.78	70-134
33 1,2-Dichloroethane	50.00	51.00	102.02	59-151
36 Trichloroethene	50.00	42.88	85.78	67-149
37 1,2-Dichloropropan	50.00	50.77	101.56	40-182
41 Bromodichlorometha	50.00	50.11	100.23	48-164
44 cis-1,3-Dichloropr	50.00	49.74	99.49	34-199
45 4-Methyl-2-Pentano	50.00	54.71	109.44	23-208
47 Toluene	50.00	43.95	87.90	75-140
48 trans-1,3-Dichloro	50.00	48.74	97.48	10-164
50 1,1,2-Trichloroeth	50.00	49.70	99.41	40-179
51 Tetrachloroethene	50.00	34.73	69.47	61-141
52 2-Hexanone	50.00	55.53	111.08	27-176
53 Dibromochlorometha	50.00	49.56	99.14	43-157
56 Chlorobenzene	50.00	43.52	87.05	72-135
58 Ethylbenzene	50.00	41.34	82.69	55-147
59 m,p-Xylene	100.00	73.67	73.67	55-151
61 o-Xylene	50.00	43.97	87.94	68-144
62 Styrene	50.00	49.78	99.56	64-147
63 Bromoform	50.00	46.58	93.16	34-151
65 1,1,2,2-Tetrachlor	50.00	52.23	104.46	14-157
21 Vinyl Acetate	50.00	45.71	91.42	22-122
43 2-Chloroethyl Viny	50.00	34.91	69.83	73-156

3B
SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SWL-TULSA

Contract:

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 20772

Matrix Spike - EPA Sample No.: 18110-05

Level(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
1,1-Dichloroethene	50	0	42	84	59-172
Trichloroethene	50	49	90	82	62-137
Benzene	50	0	47	94	66-142
Toluene	50	2	51	98	59-139
Chlorobenzene	50	0	51	102	60-133

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	REC.
1,1-Dichloroethene	50	45	90	7	22	59-172
Trichloroethene	50	99	100	20	24	62-137
Benzene	50	49	98	4	21	66-142
Toluene	50	56	108	10	21	59-139
Chlorobenzene	50	54	108	6	21	60-133

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS:

4A
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK1

Job Name: SWL-TULSA

Contract:

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 20772

Lab File ID: R17873.D

Lab Sample ID: R941206A

Date Analyzed: 12/06/94

Time Analyzed: 1652

Matrix: (soil/water) WATER

Level: (low/med) LOW

Instrument ID: R

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS1	LCS1	R17874.D	1726
02	LCSD1	LCSD1	R17875.D	1750
03	FCRSL1605EB	20772.06	R17894.D	0149
04	FCRSL1805TB	20772.07	R17895.D	0213
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COMMENTS:

4A
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK2

Sample Name: SWL-TULSA

Contract:

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 20772

Lab File ID: KM998.D

Lab Sample ID: K941208B

Date Analyzed: 12/08/94

Time Analyzed: 1045

Matrix: (soil/water) SOIL

Level: (low/med) LOW

Instrument ID: K

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
	=====	=====	=====	=====
01	16110-05	20772.01	KN012.D	1809
02	16110-05DUP	20772.02	KN013.D	1836
03	18110-05	20772.03	KN014.D	1902
04	18110-05MS	20772.04MS	KN015.D	1929
05	18110-05MSD	20772.05MSD	KN016.D	1956
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COMMENTS:

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: SWL-TULSA Contract:
 Lab Code: SWOK Case No.: WWENG-I SAS No.: SDG No.: 20772
 Lab File ID: KM846.D BFB Injection Date: 11/30/94
 Instrument ID: K BFB Injection Time: 1106
 Matrix:(soil/water) SOIL Level:(low/med) LOW Column:(pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.8
75	30.0 - 60.0% of mass 95	50.4
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.3
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	84.9
175	5.0 - 9.0% of mass 174	6.7 (7.8)1
176	Greater than 95.0%, but less than 101.0% of mass 174	84.8 (99.9)1
177	5.0 - 9.0% of mass 176	5.8 (6.9)2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD050	KM848.D	11/30/94	1205
02	VSTD100	VSTD100	KM850.D	11/30/94	1323
03	VSTD150	VSTD150	KM851.D	11/30/94	1350
04	VSTD200	VSTD200	KM852.D	11/30/94	1453
05	VSTD020	VSTD020	KM853.D	11/30/94	1518
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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: SWL-TULSA Contract:
 Lab Code: SWOK Case No.: WWENG-I SAS No.: SDG No.: 20772
 Lab File ID: KM996.D BFB Injection Date: 12/08/94
 Instrument ID: K BFB Injection Time: 0912
 Matrix:(soil/water) SOIL Level:(low/med) LOW Column:(pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.0
75	30.0 - 60.0% of mass 95	48.6
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.7
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	82.7
175	5.0 - 9.0% of mass 174	6.8 (8.2)1
176	Greater than 95.0%, but less than 101.0% of mass 174	81.2 (98.2)1
177	5.0 - 9.0% of mass 176	5.8 (7.1)2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD050	KM997.D	12/08/94	0930
02	VBLK2	K941208B	KM998.D	12/08/94	1045
03	16110-05	20772.01	KN012.D	12/08/94	1809
04	16110-05DUP	20772.02	KN013.D	12/08/94	1836
05	18110-05	20772.03	KN014.D	12/08/94	1902
06	18110-05MS	20772.04MS	KN015.D	12/08/94	1929
07	18110-05MSD	20772.05MSD	KN016.D	12/08/94	1956
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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: SWL-TULSA Contract:
 Lab Code: SWOK Case No.: WWENG-I SAS No.: SDG No.: 20772
 Lab File ID: R17540.D BFB Injection Date: 11/04/94
 Instrument ID: R BFB Injection Time: 0553
 Matrix:(soil/water) WATER Level:(low/med) LOW Column:(pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	25.5
75	30.0 - 60.0% of mass 95	45.5
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.4
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	61.8
175	5.0 - 9.0% of mass 174	4.4 (7.1)1
176	Greater than 95.0%, but less than 101.0% of mass 174	59.4 (96.2)1
177	5.0 - 9.0% of mass 176	4.2 (7.0)2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD020	VSTD020	R17541.D	11/04/94	0601
02	VSTD050	VSTD050	R17542.D	11/04/94	0626
03	VSTD100	VSTD100	R17543.D	11/04/94	0651
04	VSTD150	VSTD150	R17544.D	11/04/94	0715
05	VSTD200	VSTD200	R17545.D	11/04/94	0740
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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: SWL-TULSA Contract:
 Lab Code: SWOK Case No.: WWENG-I SAS No.: SDG No.: 20772
 Lab File ID: R17870.D BFB Injection Date: 12/06/94
 Instrument ID: R BFB Injection Time: 1429
 Matrix:(soil/water) WATER Level:(low/med) LOW Column:(pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	24.8
75	30.0 - 60.0% of mass 95	45.5
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	65.8
175	5.0 - 9.0% of mass 174	4.7 (7.2)1
176	Greater than 95.0%, but less than 101.0% of mass 174	63.2 (96.0)1
177	5.0 - 9.0% of mass 176	4.1 (6.5)2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD050	R17871.D	12/06/94	1437
02	VBLK1	R941206A	R17873.D	12/06/94	1652
03	LCS1	LCS1	R17874.D	12/06/94	1726
04	LCSD1	LCSD1	R17875.D	12/06/94	1750
05	FCRSL1605EB	20772.06	R17894.D	12/07/94	0149
06	FCRSL1805TB	20772.07	R17895.D	12/07/94	0213
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6A
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: SWL-TULSA

Contract:

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 20772

Instrument ID: K

Calibration Date(s): 11/30/94

Matrix:(soil/water) SOIL Level:(low/med) LOW Column:(pack/cap) CAP

Min RRF for SPCC(#) = 0.300 (0.250 for Bromoform) Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF20 =KM853.D RRF50 =KM848.D
RRF100 =KM850.D RRF150=KM851.D RRF200=KM852.D

COMPOUND	RRF20	RRF50	RRF100	RRF150	RRF200	RRF	% RSD
Chloromethane	0.473	0.385	0.342	0.287	0.505	0.398	22.7#
Bromomethane	0.950	0.842	0.529	0.524	0.527	0.674	30.5
Vinyl Chloride	* 0.534	0.465	0.441	0.394	0.570	0.481	14.7*
Chloroethane	0.433	0.389	0.302	0.276	0.253	0.331	23.2
Methylene Chloride	1.563	1.250	1.009	0.852	1.069	1.149	23.6
Acetone	0.292	0.264	0.257	0.175	0.177	0.233	23.1
Carbon Disulfide	2.741	2.687	2.301	1.918	2.757	2.481	14.7
1,1-Dichloroethene	* 1.193	1.143	1.035	0.842	1.145	1.072	13.1*
1,1-Dichloroethane	# 2.019	1.845	1.786	1.613	1.739	1.801	8.2#
1,2-Dichloroethene_(total)	# 1.415	1.363	1.267	1.135	1.348	1.306	8.3
Chloroform	* 3.026	2.627	2.549	2.397	2.432	2.606	9.6*
1,2-Dichloroethane	1.480	1.295	1.364	1.298	1.160	1.320	8.8
2-Pentanone	0.118	0.104	0.161	0.149	0.085	0.123	25.3
1,1-Trichloroethane	0.765	0.651	0.720	0.730	0.642	0.702	7.5
Carbon Tetrachloride	0.768	0.598	0.673	0.706	0.602	0.669	10.7
Vinyl Acetate	0.433	0.407	0.504	0.445	0.324	0.423	15.5
Bromodichloromethane	0.775	0.626	0.713	0.693	0.552	0.672	12.7
1,2-Dichloropropane	* 0.307	0.255	0.244	0.270	0.237	0.263	10.5*
cis-1,3-Dichloropropene	0.557	0.458	0.514	0.494	0.413	0.487	11.2
Trichloroethene	0.522	0.421	0.453	0.448	0.419	0.452	9.2
Dibromochloromethane	0.667	0.491	0.603	0.597	0.464	0.565	15.0
1,1,2-Trichloroethane	0.340	0.262	0.319	0.312	0.230	0.293	15.4
Benzene	0.756	0.654	0.701	0.679	0.598	0.678	8.6
trans-1,3-Dichloropropene	0.504	0.413	0.482	0.467	0.367	0.447	12.5
Bromoform	# 0.494	0.328	0.478	0.464	0.326	0.418	20.0#
4-Methyl-2-Pentanone	0.288	0.249	0.369	0.377	0.216	0.300	23.9
2-Hexanone	0.257	0.206	0.338	0.348	0.173	0.264	29.4
Tetrachloroethene	0.799	0.648	0.665	0.727	0.630	0.694	10.0
Toluene	* 0.824	0.747	0.722	0.726	0.686	0.741	6.9*
1,1,2,2-Tetrachloroethane	# 0.716	0.557	0.715	0.689	0.456	0.626	18.5#
Chlorobenzene	# 1.178	1.008	1.012	1.017	0.903	1.024	9.6#
Ethylbenzene	* 0.644	0.503	0.486	0.495	0.456	0.517	14.2*
Styrene	1.027	0.832	0.863	0.863	0.747	0.866	11.7
Xylene_(Total)	0.735	0.584	0.586	0.570	0.533	0.602	12.9
2-Chloroethyl_Vinyl_Ether	0.098	0.107	0.139	0.152	0.126	0.124	17.8

6A
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: SWL-TULSA

Contract:

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 20772

Instrument ID: K

Calibration Date(s): 11/30/94

Matrix:(soil/water) SOIL Level:(low/med) LOW Column:(pack/cap) CAP

Min \overline{RRF} for SPCC(#) = 0.300 (0.250 for Bromoform) Max %RSD for CCC(*) = 30.0%

LAB FILE ID:	RRF20 =KM853.D	RRF50 =KM848.D
RRF100 =KM850.D	RRF150=KM851.D	RRF200=KM852.D

COMPOUND	RRF20	RRF50	RRF100	RRF150	RRF200	RRF	RSD
Toluene-d8	1.193	1.055	0.987	1.008	0.990	1.047	8.2
Bromofluorobenzene	0.835	0.640	0.641	0.637	0.594	0.669	14.1
1,2-Dichloroethane-d4	1.212	1.040	1.063	1.015	0.964	1.059	8.7

6A
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: SWL-TULSA

Contract:

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 20772

Instrument ID: R

Calibration Date(s): 11/04/94

Matrix:(soil/water) WATER Level:(low/med) LOW Column:(pack/cap) CAP

Min RRF for SPCC(#) = 0.300 (0.250 for Bromoform) Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF20 =R17541.D RRF50 =R17542.D
RRF100 =R17543.D RRF150=R17544.D RRF200=R17545.D

COMPOUND	RRF20	RRF50	RRF100	RRF150	RRF200	RRF	% RSD
Chloromethane	# 1.493	1.649	1.498	1.501	1.448	1.518	5.0#
Bromomethane	1.374	1.179	0.787	0.817	0.807	0.993	27.0
Vinyl Chloride	* 1.349	1.438	1.325	1.351	1.296	1.352	3.9*
Chloroethane	0.958	0.973	0.629	0.645	0.620	0.765	23.9
Methylene Chloride	1.995	1.939	1.858	1.857	1.758	1.881	4.7
Acetone	0.777	0.674	0.660	0.632	0.572	0.663	11.2
Carbon Disulfide	5.713	5.795	5.673	5.706	5.400	5.657	2.6
1,1-Dichloroethene	* 1.761	1.765	1.671	1.709	1.575	1.696	4.6*
1,1-Dichloroethane	# 3.901	4.060	3.921	4.019	3.800	3.940	2.6#
1,2-Dichloroethene_(total)	# 1.861	1.887	1.840	1.890	1.792	1.854	2.1#
Chloroform	* 4.139	3.941	3.816	3.831	3.613	3.868	4.9*
1,2-Dichloroethane	2.249	2.285	2.185	2.177	2.041	2.187	4.2
2-Butanone	0.190	0.179	0.171	0.172	0.157	0.174	6.8
1,1-Trichloroethane	0.730	0.687	0.621	0.616	0.585	0.648	9.1
Carbon Tetrachloride	0.549	0.533	0.509	0.492	0.482	0.513	5.4
Vinyl Acetate	0.940	0.932	0.959	0.930	0.855	0.923	4.3
Bromodichloromethane	0.771	0.754	0.713	0.730	0.696	0.733	4.1
1,2-Dichloropropane	* 0.572	0.558	0.537	0.543	0.516	0.545	3.8*
cis-1,3-Dichloropropene	0.689	0.674	0.658	0.661	0.632	0.663	3.1
Trichloroethene	0.495	0.449	0.431	0.449	0.434	0.451	5.6
Dibromochloromethane	0.478	0.472	0.445	0.455	0.441	0.458	3.5
1,1,2-Trichloroethane	0.351	0.338	0.325	0.324	0.310	0.330	4.6
Benzene	1.296	1.216	1.162	1.138	1.077	1.178	7.0
trans-1,3-Dichloropropene	0.453	0.454	0.472	0.477	0.452	0.462	2.5
Bromoform	# 0.304	0.302	0.277	0.277	0.267	0.285	5.8#
4-Methyl-2-Pentanone	0.647	0.644	0.614	0.641	0.607	0.631	2.9
2-Hexanone	0.389	0.405	0.414	0.447	0.417	0.414	5.1
Tetrachloroethene	0.599	0.548	0.547	0.571	0.574	0.568	3.7
Toluene	* 1.071	1.006	0.974	0.975	0.961	0.997	4.4*
1,1,2,2-Tetrachloroethane	# 0.697	0.699	0.660	0.639	0.612	0.661	5.6#
Chlorobenzene	# 1.075	1.027	0.992	1.005	0.988	1.017	3.5#
Ethylbenzene	* 0.726	0.645	0.623	0.630	0.611	0.647	7.0*
Styrene	1.078	1.043	1.023	1.042	1.007	1.039	2.5
Xylene_(Total)	0.766	0.703	0.668	0.671	0.654	0.692	6.4
2-Chloroethyl_Vinyl_Ether	0.028	0.019	0.012	0.011	0.010	0.016	46.5

6A
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: SWL-TULSA

Contract:

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 20772

Instrument ID: R

Calibration Date(s): 11/04/94

Matrix:(soil/water) WATER Level:(low/med) LOW Column:(pack/cap) CAP

Min RRF for SPCC(#) = 0.300 (0.250 for Bromoform) Max %RSD for CCC(*) = 30.0%

LAB FILE ID:	RRF20 =R17541.D	RRF50 =R17542.D
RRF100 =R17543.D	RRF150=R17544.D	RRF200=R17545.D

COMPOUND	RRF20	RRF50	RRF100	RRF150	RRF200	RRF	RSD
Toluene-d8	1.325	1.257	1.226	1.233	1.229	1.254	3.3
Bromofluorobenzene	0.770	0.727	0.693	0.686	0.669	0.709	5.6
1,2-Dichloroethane-d4	1.617	1.719	1.615	1.578	1.478	1.601	5.4

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: SWL-TULSA

Contract:

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 20772

Instrument ID: K

Calibration Date: 12/08/94

Time: 0930

Lab File ID: KM997.D

Init. Calibration Date(s): 11/30/94

Matrix: (soil/water) SOIL

Level: (low/med) LOW

Column: (pack/cap) CAP

Min RRF50 for SPCC(#) = 0.300 (0.250 for Bromoform) Max %D for CCC(*) = 25.0%

COMPOUND	RRF	RRF50	%D
Chloromethane	#0.398	0.364	8.7#
Bromomethane	0.674	0.856	-26.9
Vinyl Chloride	*0.481	0.459	4.5*
Chloroethane	0.331	0.493	-49.1
Methylene Chloride	1.149	1.192	-3.8
Acetone	0.233	0.246	-5.8
Carbon Disulfide	2.481	2.821	-13.7
1,1-Dichloroethene	*1.072	1.160	-8.3*
1,1-Dichloroethane	#1.801	1.959	-8.8#
1,2-Dichloroethene (total)	1.306	1.393	-6.7
Chloroform	*2.606	2.655	-1.9*
1,2-Dichloroethane	1.320	1.369	-3.7
2-Butanone	0.123	0.101	18.3
1,1,1-Trichloroethane	0.702	0.640	8.8
Carbon Tetrachloride	0.669	0.550	17.8
Vinyl Acetate	0.423	0.219	48.1
Bromodichloromethane	0.672	0.634	5.6
1,2-Dichloropropane	*0.263	0.265	-0.8*
cis-1,3-Dichloropropene	0.487	0.457	6.3
Trichloroethene	0.452	0.390	13.8
Dibromochloromethane	0.565	0.486	14.0
1,1,2-Trichloroethane	0.293	0.276	5.6
Benzene	0.678	0.737	-8.8
trans-1,3-Dichloropropene	0.447	0.415	7.2
Bromoform	#0.418	0.318	24.1#
4-Methyl-2-Pentanone	0.300	0.228	23.9
2-Hexanone	0.264	0.184	30.4
Tetrachloroethene	0.694	0.609	12.2
Toluene	*0.741	0.754	-1.7*
1,1,2,2-Tetrachloroethane	#0.626	0.582	7.1#
Chlorobenzene	#1.024	0.947	7.5#
Ethylbenzene	*0.517	0.478	7.4*
Styrene	0.866	0.834	3.7
Xylene (Total)	0.602	0.597	0.9
2-Chloroethyl Vinyl Ether	0.124	0.082	33.8
Acrolein	0.019	0.019	-0.9
Methyl Iodide	4.356	3.417	21.5

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: SWL-TULSA

Contract:

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 20772

Instrument ID: K

Calibration Date: 12/08/94

Time: 0930

Lab File ID: KM997.D

Init. Calibration Date(s): 11/30/94

Matrix:(soil/water) SOIL

Level:(low/med) LOW

Column:(pack/cap) CAP

Min RRF50 for SPCC(%) = 0.300 (0.250 for Bromoform) Max %D for CCC(*) = 25.0%

COMPOUND	RRF	RRF50	%D
Allyl Chloride	0.590	0.585	0.9
Chloroprene	1.058	1.021	3.5
trans-1,4-Dichloro-2-Butene	0.108	0.088	19.2
Acetonitrile	0.060	0.067	-11.3
Acrylonitrile	0.122	0.121	0.8
Propionitrile	0.059	0.047	20.4
Methacrylonitrile	0.181	0.166	8.5
Isobutyl Alcohol	0.008	0.005	35.0
1,4-Dioxane	0.006	0.005	27.8
Methyl Methacrylate	0.186	0.138	25.7
Ethyl Methacrylate	0.424	0.332	21.7
1,2-Dibromoethane	0.782	0.646	17.5
1,1,1,2-Tetrachloroethane	0.553	0.464	16.1
Dichlorodifluoromethane	0.116	0.096	17.1
Trichlorofluoromethane	2.283	2.493	-9.2
Dibromomethane	0.504	0.408	19.0
1,2-Dibromo-3-Chloropropane	0.298	0.170	43.0
1,2,3-Trichloropropane	0.216	0.174	19.6
Toluene-d8	1.047	1.056	-0.8
Bromofluorobenzene	0.669	0.677	-1.2
1,2-Dichloroethane-d4	1.059	1.146	-8.3

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: SWL-TULSA Contract:
 Lab Code: SWOK Case No.: WWENG-I SAS No.: SDG No.: 20772
 Instrument ID: R Calibration Date: 12/06/94 Time: 1437
 Lab File ID: R17871.D Init. Calibration Date(s): 11/04/94
 Matrix:(soil/water) WATER Level:(low/med) LOW Column:(pack/cap) CAP
 Min RRF50 for SPCC(#) = 0.300 (0.250 for Bromoform) Max %D for CCC(*) = 25.0%

COMPOUND	RRF	RRF50	%D
Chloromethane	#1.518	1.118	26.4#
Bromomethane	0.993	0.866	12.8
Vinyl Chloride	*1.352	1.018	24.7*
Chloroethane	0.765	0.708	7.4
Methylene Chloride	1.881	1.754	6.8
Acetone	0.663	0.693	-4.5
Carbon Disulfide	5.657	4.972	12.1
1,1-Dichloroethene	*1.696	1.764	-4.0*
1,1-Dichloroethane	#3.940	3.637	7.7#
1,2-Dichloroethene (total)	1.854	1.778	4.1
Chloroform	*3.868	3.528	8.8*
1,2-Dichloroethane	2.187	2.001	8.5
2-Butanone	0.174	0.164	5.4
1,1,1-Trichloroethane	0.648	0.552	14.8
Carbon Tetrachloride	0.513	0.451	12.1
Vinyl Acetate	0.923	0.598	35.2
Bromodichloromethane	0.733	0.663	9.6
1,2-Dichloropropane	*0.545	0.485	11.0*
cis-1,3-Dichloropropene	0.663	0.597	10.0
Trichloroethene	0.451	0.464	-2.7
Dibromochloromethane	0.458	0.431	6.0
1,1,2-Trichloroethane	0.330	0.309	6.3
Benzene	1.178	1.181	-0.2
trans-1,3-Dichloropropene	0.462	0.429	7.1
Bromoform	#0.285	0.278	2.4#
4-Methyl-2-Pentanone	0.631	0.558	11.5
2-Hexanone	0.414	0.419	-1.2
Tetrachloroethene	0.568	0.647	-14.0
Toluene	*0.997	1.013	-1.6*
1,1,2,2-Tetrachloroethane	#0.661	0.609	7.9#
Chlorobenzene	#1.017	1.048	-3.0#
Ethylbenzene	*0.647	0.581	10.3*
Styrene	1.039	0.929	10.5
Xylene (Total)	0.692	0.618	10.7
2-Chloroethyl Vinyl Ether	0.016	0.026	-64.0
Toluene-d8	1.254	1.205	3.9
Bromofluorobenzene	0.709	0.669	5.6

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: SWL-TULSA

Contract:

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 20772

Instrument ID: R

Calibration Date: 12/06/94 Time: 1437

Lab File ID: R17871.D

Init. Calibration Date(s): 11/04/94

Matrix:(soil/water) WATER Level:(low/med) LOW Column:(pack/cap) CAP

Min RRF50 for SPCC(#) = 0.300 (0.250 for Bromoform) Max %D for CCC(*) = 25.0%

COMPOUND	RRF	RRF50	%D
1,2-Dichloroethane-d4	1.601	1.598	0.2

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA

Contract:

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 20772

Lab File ID (Standard): KM997.D

Date Analyzed: 12/08/94

Instrument ID: K

Time Analyzed: 0930

Matrix:(soil/water) SOIL Level:(low/med) LOW Column:(pack/cap) CAP

	IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	150943	4.95	547963	6.30	384015	10.77
=====	=====	=====	=====	=====	=====	=====
UPPER LIMIT	301886	5.45	1095926	6.80	768030	11.27
=====	=====	=====	=====	=====	=====	=====
LOWER LIMIT	75472	4.45	273982	5.80	192008	10.27
=====	=====	=====	=====	=====	=====	=====
EPA SAMPLE No.						
=====	=====	=====	=====	=====	=====	=====
01 VBLK2	177796	4.94	582788	6.28	419668	10.75
02 16110-05	104712	4.94	368932	6.29	231451	10.74
03 16110-05DUP	120170	4.94	347146	6.27	241328	10.76
04 18110-05	115161	4.93	349024	6.27	250627	10.75
05 18110-05MS	86447	4.93	266011*	6.28	194439	10.76
06 18110-05MSD	117412	4.94	403554	6.30	257378	10.76
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

IS1 (BCM) = Bromochloromethane
 IS2 (DFB) = 1,4-Difluorobenzene
 IS3 (CBZ) = Chlorobenzene-d5

UPPER LIMIT = + 100%
 of internal standard area
 LOWER LIMIT = - 50%
 of internal standard area

Column used to flag values outside QC limits with an asterisk.
 Page 01 of 01

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA Contract: WWENG-MI *see* FLSBSB0110001
 Lab Code: SWOK Case No.: WWEN1 SAS No.: _____ SDG No.: 8855
 Matrix: (soil/water) SOIL Lab Sample ID: 885512
 Sample wt/vol: 2.0 (g/mL) G Lab File ID: IC719
 Level: (low/med) LOW Date Received: 02/27/92
 % Moisture: not dec. 6 Date Analyzed: 03/02/92
 Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

74-87-3	-----Chloromethane	27	U
74-83-9	-----Bromomethane	27	U
75-01-4	-----Vinyl Chloride	27	U
75-00-3	-----Chloroethane	27	U
75-09-2	-----Methylene Chloride	64	
67-64-1	-----Acetone	27	U
75-15-0	-----Carbon Disulfide	13	U
75-35-4	-----1,1-Dichloroethene	13	U
75-34-3	-----1,1-Dichloroethane	13	U
540-59-0	-----1,2-Dichloroethene (total)	13	U
67-66-3	-----Chloroform	13	U
107-06-2	-----1,2-Dichloroethane	13	U
78-93-3	-----2-Butanone	27	U
71-55-6	-----1,1,1-Trichloroethane	29	
56-23-5	-----Carbon Tetrachloride	13	U
108-05-4	-----Vinyl Acetate	27	U
75-27-4	-----Bromodichloromethane	13	U
78-87-5	-----1,2-Dichloropropane	13	U
10061-01-5	-----cis-1,3-Dichloropropene	13	U
79-01-6	-----Trichloroethene	140	
124-48-1	-----Dibromochloromethane	13	U
79-00-5	-----1,1,2-Trichloroethane	13	U
71-43-2	-----Benzene	13	U
10061-02-6	-----Trans-1,3-Dichloropropene	13	U
75-25-2	-----Bromoform	13	U
108-10-1	-----4-Methyl-2-Pentanone	27	U
591-78-6	-----2-Hexanone	27	U
127-18-4	-----Tetrachloroethene	390	
79-34-5	-----1,1,2,2-Tetrachloroethane	13	U
108-88-3	-----Toluene	13	U
108-90-7	-----Chlorobenzene	13	U
100-41-4	-----Ethylbenzene	13	U
100-42-5	-----Styrene	13	U
1330-20-7	-----Xylene (total)	13	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA Contract: WWENG-MI W/FC/SBSB0112001
 Lab Code: SWOK Case No.: WWEN1 SAS No.: _____ SDG No.: 8855
 Matrix: (soil/water) SOIL Lab Sample ID: 885511
 Sample wt/vol: 2.0 (g/mL) G Lab File ID: IC718
 Level: (low/med) LOW Date Received: 02/27/92
 % Moisture: not dec. 6 Date Analyzed: 03/02/92
 Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/KG</u>	Q
74-87-3	Chloromethane	27	U
74-83-9	Bromomethane	27	U
75-01-4	Vinyl Chloride	27	U
75-00-3	Chloroethane	27	U
75-09-2	Methylene Chloride	77	
67-64-1	Acetone	27	U
75-15-0	Carbon Disulfide	13	U
75-35-4	1,1-Dichloroethene	13	U
75-34-3	1,1-Dichloroethane	13	U
540-59-0	1,2-Dichloroethene (total)	13	U
67-66-3	Chloroform	13	U
107-06-2	1,2-Dichloroethane	13	U
78-93-3	2-Butanone	27	U
71-55-6	1,1,1-Trichloroethane	23	
56-23-5	Carbon Tetrachloride	13	U
108-05-4	Vinyl Acetate	27	U
75-27-4	Bromodichloromethane	13	U
78-87-5	1,2-Dichloropropane	13	U
10061-01-5	cis-1,3-Dichloropropene	13	U
79-01-6	Trichloroethene	120	
124-48-1	Dibromochloromethane	13	U
79-00-5	1,1,2-Trichloroethane	13	U
71-43-2	Benzene	13	U
10061-02-6	Trans-1,3-Dichloropropene	13	U
75-25-2	Bromoform	13	U
108-10-1	4-Methyl-2-Pentanone	27	U
591-78-6	2-Hexanone	27	U
127-18-4	Tetrachloroethene	310	
79-34-5	1,1,2,2-Tetrachloroethane	13	U
108-88-3	Toluene	13	U
108-90-7	Chlorobenzene	13	U
100-41-4	Ethylbenzene	13	U
100-42-5	Styrene	13	U
1330-20-7	Xylene (total)	13	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA Contract: WWENG-MI *dec* SBSB02/100/01
 Lab Code: SWOK Case No.: WWEN1 SAS No.: _____ SDG No.: 8855
 Matrix: (soil/water) SOIL Lab Sample ID: 885513
 Sample wt/vol: 2.0 (g/mL) G Lab File ID: IC720
 Level: (low/med) LOW Date Received: 02/27/92
 % Moisture: not dec. 7 Date Analyzed: 03/02/92
 Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/KG</u>	Q
74-87-3	Chloromethane	27	U
74-83-9	Bromomethane	27	U
75-01-4	Vinyl Chloride	27	U
75-00-3	Chloroethane	27	U
75-09-2	Methylene Chloride	63	
67-64-1	Acetone	35	B
75-15-0	Carbon Disulfide	13	U
75-35-4	1,1-Dichloroethene	13	U
75-34-3	1,1-Dichloroethane	13	U
540-59-0	1,2-Dichloroethene (total)	13	U
67-66-3	Chloroform	13	U
107-06-2	1,2-Dichloroethane	13	U
78-93-3	2-Butanone	27	U
71-55-6	1,1,1-Trichloroethane	26	
56-23-5	Carbon Tetrachloride	13	U
108-05-4	Vinyl Acetate	27	U
75-27-4	Bromodichloromethane	13	U
78-87-5	1,2-Dichloropropane	13	U
10061-01-5	cis-1,3-Dichloropropene	13	U
79-01-6	Trichloroethene	140	
124-48-1	Dibromochloromethane	13	U
79-00-5	1,1,2-Trichloroethane	13	U
71-43-2	Benzene	13	U
10061-02-6	Trans-1,3-Dichloropropene	13	U
75-25-2	Bromoform	13	U
108-10-1	4-Methyl-2-Pentanone	27	U
591-78-6	2-Hexanone	27	U
127-18-4	Tetrachloroethene	370	
79-34-5	1,1,2,2-Tetrachloroethane	13	U
108-88-3	Toluene	13	U
108-90-7	Chlorobenzene	13	U
100-41-4	Ethylbenzene	13	U
100-42-5	Styrene	13	U
1330-20-7	Xylene (total)	13	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FL EBMW2112001 4

Lab Name: SWL-TULSA Contract: WWENG-MI

Lab Code: SWOK Case No.: WWENZ SAS No.: _____ SDB No.: 9821

Matrix: (soil/water) SOIL Lab Sample ID: 882107

Sample wt/vol: 1.0 (g/mL) g Lab File ID: IC667

Level: (low/med) LOW Date Received: 02/22/92

% Moisture: not dec. 5 Date Analyzed: 02/26/92

Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	53	1U
74-83-9	Bromomethane	53	1U
75-01-4	Vinyl Chloride	53	1U
75-00-3	Chloroethane	53	1U
75-09-2	Methylene Chloride	26	1U
67-64-1	Acetone	53	1U
75-15-0	Carbon Disulfide	26	1U
75-35-4	1,1-Dichloroethene	26	1U
75-34-3	1,1-Dichloroethane	26	1U
540-59-0	1,2-Dichloroethene (total)	26	1U
67-66-3	Chloroform	26	1U
107-06-2	1,2-Dichloroethane	26	1U
78-93-3	2-Butanone	53	1U
71-55-6	1,1,1-Trichloroethane	26	1U
56-23-5	Carbon Tetrachloride	26	1U
108-05-4	Vinyl Acetate	53	1U
75-27-4	Bromodichloromethane	26	1U
78-87-5	1,2-Dichloropropane	26	1U
10061-01-5	cis-1,3-Dichloropropene	26	1U
79-01-6	Trichloroethene	300	
124-48-1	Dibromochloromethane	26	1U
79-00-5	1,1,2-Trichloroethane	26	1U
71-43-2	Benzene	26	1U
10061-02-6	Trans-1,3-Dichloropropene	26	1U
75-25-2	Bromoform	26	1U
108-10-1	4-Methyl-2-Pentanone	53	1U
591-78-6	2-Hexanone	53	1U
127-18-4	Tetrachloroethene	780	
79-34-5	1,1,2,2-Tetrachloroethane	26	1U
108-88-3	Toluene	26	1U
108-90-7	Chlorobenzene	26	1U
100-41-4	Ethylbenzene	26	1U
100-42-5	Styrene	26	1U
1330-20-7	Xylene (total)	26	1U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RL SBMW2112001D

Lab Name: SWL-TULSA Contract: WWENB-MI
 Lab Code: SWOK Case No.: WWEN2 SAS No.: _____ SDG No.: 8821
 Matrix: (soil/water) SOIL Lab Sample ID: 882110
 Sample wt/vol: 1.0 (g/mL) G Lab File ID: IC698
 Level: (low/med) LDW Date Received: 02/22/92
 % Moisture: not dec. 5 Date Analyzed: 02/28/92
 Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG G

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/KG</u>	<u>G</u>
74-87-3	-----Chloromethane	53	1U
74-83-9	-----Bromomethane	53	1U
75-01-4	-----Vinyl Chloride	53	1U
75-00-3	-----Chloroethane	53	1U
75-09-2	-----Methylene Chloride	27	1U
67-64-1	-----Acetone	53	1U
75-15-0	-----Carbon Disulfide	27	1U
75-35-4	-----1,1-Dichloroethene	27	1U
75-34-3	-----1,1-Dichloroethane	27	1U
540-59-0	-----1,2-Dichloroethene (total)	27	1U
67-66-3	-----Chloroform	27	1U
107-06-2	-----1,2-Dichloroethane	27	1U
78-93-3	-----2-Butanone	53	1U
71-55-6	-----1,1,1-Trichloroethane	27	1U
56-23-5	-----Carbon Tetrachloride	27	1U
108-05-4	-----Vinyl Acetate	53	1U
75-27-4	-----Bromodichloromethane	27	1U
78-87-5	-----1,2-Dichloropropane	27	1U
10061-01-5	-----cis-1,3-Dichloropropene	27	1U
79-01-6	-----Trichloroethene	52	1
124-48-1	-----Dibromochloromethane	27	1U
79-00-5	-----1,1,2-Trichloroethane	27	1U
71-43-2	-----Benzene	27	1U
10061-02-6	-----Trans-1,3-Dichloropropene	27	1U
75-25-2	-----Bromoform	27	1U
108-10-1	-----4-Methyl-2-Pentanone	53	1U
591-78-6	-----2-Hexanone	53	1U
127-18-4	-----Tetrachloroethene	160	1
79-34-5	-----1,1,2,2-Tetrachloroethane	27	1U
108-88-3	-----Toluene	27	1U
108-90-7	-----Chlorobenzene	27	1U
100-41-4	-----Ethylbenzene	27	1U
100-42-5	-----Styrene	27	1U
1330-20-7	-----Xylene (total)	27	1U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO. _____

FL88MW2118001

Lab Name: BWL-TULSA Contract: WWENG-MI

Lab Code: BWOK Case No.: WWENG SAS No.: _____ SDG No.: 8821

Matrix: (soil/water) SOIL Lab Sample ID: 882111

Sample wt/vol: 4.0 (g/mL) g Lab File ID: IC687

Level: (low/med) MED Date Received: 02/22/92

% Moisture: not dec. is Date Analyzed: 02/27/92

Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/KG</u>	<u>g</u>
74-87-3	Chloromethane	1500	IU
74-83-9	Bromomethane	1500	IU
75-01-4	Vinyl Chloride	1500	IU
75-00-3	Chloroethane	1500	IU
75-09-2	Methylene Chloride	740	IU
67-64-1	Acetone	1500	IU
75-15-0	Carbon Disulfide	740	IU
75-35-4	1,1-Dichloroethene	740	IU
75-34-3	1,1-Dichloroethane	740	IU
540-59-0	1,2-Dichloroethene (total)	740	IU
67-66-3	Chloroform	740	IU
107-06-2	1,2-Dichloroethane	740	IU
78-93-3	2-Butanone	1500	IU
71-55-6	1,1,1-Trichloroethane	750	I
56-23-5	Carbon Tetrachloride	740	IU
108-05-4	Vinyl Acetate	1500	IU
75-27-4	Bromodichloromethane	740	IU
78-87-5	1,2-Dichloropropane	740	IU
10061-01-5	cis-1,3-Dichloropropene	740	IU
79-01-6	Trichloroethene	5300	I
124-48-1	Dibromochloromethane	740	IU
79-00-5	1,1,2-Trichloroethane	740	IU
71-43-2	Benzene	740	IU
10061-02-6	Trans-1,3-Dichloropropene	740	IU
75-25-2	Bromoform	740	IU
108-10-1	4-Methyl-2-Pentanone	1500	IU
591-78-6	2-Hexanone	1500	IU
127-18-4	Tetrachloroethene	25000	I
79-34-5	1,1,2,2-Tetrachloroethane	740	IU
108-88-3	Toluene	740	IU
108-90-7	Chlorobenzene	740	IU
100-41-4	Ethylbenzene	740	IU
100-42-5	Styrene	740	IU
1330-20-7	Xylene (total)	740	IU

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RL-5B6B70001E

Lab Name: SWL-TULSA Contract: WWENG-MI

Lab Code: SWOK Case No.: WWEN2 SAS No.: _____ SDG No.: 8621

Matrix: (soil/water) SOIL Lab Sample ID: 862102

Sample wt/vol: 5.0 (g/mL) G Lab File ID: IC656

Level: (low/med) LOW Date Received: 02/22/92

% Moisture: not dec. 0 Date Analyzed: 02/26/92

Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) <u>UG/KG</u>	<u>G</u>
74-87-3	Chloromethane	10	1U
74-83-9	Bromomethane	10	1U
75-01-4	Vinyl Chloride	10	1U
75-00-3	Chloroethane	10	1U
75-09-2	Methylene Chloride	5	1U
67-64-1	Acetone	10	1U
75-15-0	Carbon Disulfide	5	1U
75-35-4	1,1-Dichloroethene	5	1U
75-34-3	1,1-Dichloroethane	5	1U
540-59-0	1,2-Dichloroethene (total)	5	1U
67-66-3	Chloroform	5	1U
107-06-2	1,2-Dichloroethane	5	1U
78-93-3	2-Butanone	10	1U
71-55-6	1,1,1-Trichloroethane	5	1U
56-23-5	Carbon Tetrachloride	5	1U
108-05-4	Vinyl Acetate	10	1U
75-27-4	Bromodichloromethane	5	1U
78-87-5	1,2-Dichloropropane	5	1U
10061-01-5	cis-1,3-Dichloropropene	5	1U
79-01-6	Trichloroethene	5	1U
124-48-1	Dibromochloromethane	5	1U
79-00-5	1,1,2-Trichloroethane	5	1U
71-43-2	Benzene	5	1U
10061-02-6	Trans-1,3-Dichloropropene	5	1U
75-25-2	Bromoform	5	1U
108-10-1	4-Methyl-2-Pentanone	10	1U
591-78-6	2-Hexanone	10	1U
127-18-4	Tetrachloroethene	5	1U
79-34-5	1,1,2,2-Tetrachloroethane	5	1U
108-88-3	Toluene	5	1U
108-90-7	Chlorobenzene	5	1U
100-41-4	Ethylbenzene	5	1U
100-42-5	Styrene	5	1U
1330-20-7	Xylene (total)	5	1U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO. _____

RLS88EE718001

Lab Name: SWL-TULSA

Contract: WVENB-MI

Lab Code: SWDK

Case No.: WVEN2

SAS No.: _____

SDS No.: 8821

Matrix: (soil/water) SOIL

Lab Sample ID: 882105

Sample wt/vol: 4.0 (g/mL) g

Lab File ID: 10684

Level: (low/med) MED

Date Received: 02/22/92

% Moisture: not dec. 7

Date Analyzed: 02/27/92

Column: (pack/cap) GAF

Dilution Factor: 1.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/kg) ug/kg g

74-87-3	Chloromethane	1300	U
74-83-9	Bromomethane	1300	U
75-01-4	Vinyl Chloride	1300	U
75-00-3	Chloroethane	1300	U
75-09-2	Methylene Chloride	670	U
67-64-1	Acetone	1300	U
75-15-0	Carbon Disulfide	670	U
75-35-4	1,1-Dichloroethane	670	U
75-34-3	1,1-Dichloroethane	670	U
540-59-0	1,2-Dichloroethane (total)	670	U
67-66-3	Chloroform	670	U
107-06-2	1,2-Dichloroethane	670	U
78-93-3	2-Butanone	1300	U
71-55-6	1,1,1-Trichloroethane	670	U
56-23-5	Carbon Tetrachloride	670	U
108-05-4	Vinyl Acetate	1300	U
75-27-4	Bromodichloromethane	670	U
78-87-5	1,2-Dichloropropane	670	U
10061-01-5	cis-1,3-Dichloropropene	670	U
79-01-6	Trichloroethane	440	U
124-48-1	Dibromochloromethane	670	U
79-00-5	1,1,2-Trichloroethane	670	U
71-43-2	Benzene	670	U
10061-02-6	Trans-1,3-Dichloropropene	670	U
75-25-2	Bromoform	670	U
108-10-1	4-Methyl-2-Pentanone	1300	U
591-78-6	2-Hexanone	1300	U
127-18-4	Tetrachloroethene	17000	U
79-34-5	1,1,2,2-Tetrachloroethane	670	U
108-88-3	Toluene	670	U
108-90-7	Chlorobenzene	670	U
100-41-4	Ethylbenzene	670	U
100-42-5	Styrene	670	U
1330-20-7	Xylene (total)	670	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F02586678001

Lab Name: EWL-TULSA Contract: WWENG-MI
 Lab Code: SWOK Case No.: WWENZ SAS No.: _____ SDG No.: 8821
 Matrix: (soil/water) SOIL Lab Sample ID: 882101
 Sample wt/vol: 2.0 (g/mL) B Lab File ID: IC660
 Level: (low/med) LOW Date Received: 02/22/92
 % Moisture: not dec. 5 Date Analyzed: 02/26/92
 Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/KG</u>	Q
74-87-3	-----Chloromethane	26	U
74-83-9	-----Bromomethane	26	U
75-01-4	-----Vinyl Chloride	26	U
75-00-3	-----Chloroethane	26	U
75-09-2	-----Methylene Chloride	13	U
67-64-1	-----Acetone	26	U
75-15-0	-----Carbon Disulfide	13	U
75-35-4	-----1,1-Dichloroethene	13	U
75-34-3	-----1,1-Dichloroethane	13	U
540-59-0	-----1,2-Dichloroethene (total)	13	U
67-66-3	-----Chloroform	13	U
107-06-2	-----1,2-Dichloroethane	13	U
78-93-3	-----2-Butanone	26	U
71-55-6	-----1,1,1-Trichloroethane	13	U
56-23-5	-----Carbon Tetrachloride	13	U
108-05-4	-----Vinyl Acetate	26	U
75-27-4	-----Bromodichloromethane	13	U
78-87-5	-----1,2-Dichloropropane	13	U
10061-01-5	-----cis-1,3-Dichloropropene	13	U
79-01-6	-----Trichloroethene	19	
124-48-1	-----Dibromochloromethane	13	U
79-00-5	-----1,1,2-Trichloroethane	13	U
71-43-2	-----Benzene	13	U
10061-02-6	-----Trans-1,3-Dichloropropene	13	U
75-25-2	-----Bromoform	13	U
108-10-1	-----4-Methyl-2-Pentanone	26	U
591-78-6	-----2-Hexanone	26	U
127-18-4	-----Tetrachloroethene	330	
79-34-5	-----1,1,2,2-Tetrachloroethane	13	U
108-88-3	-----Toluene	13	U
108-90-7	-----Chlorobenzene	13	U
100-41-4	-----Ethylbenzene	13	U
100-42-5	-----Styrene	13	U
1330-20-7	-----Xylene (total)	13	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PCR225B912001

Lab Name: SWL-TULSA Contract: WWENG-MI
 Lab Code: SWOK Case No.: WWEN2 SAS No.: _____ SDG No.: 8821
 Matrix: (soil/water) SOIL Lab Sample ID: 882104
 Sample wt/vol: 1.0 (g/mL) g Lab File ID: IC666
 Level: (low/med) LOW Date Received: 02/22/92
 % Moisture: not dec. 7 Date Analyzed: 02/26/92
 Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	UG/KG
74-87-3	Chloromethane	54	U
74-83-9	Bromomethane	54	U
75-01-4	Vinyl Chloride	54	U
75-00-3	Chloroethane	54	U
75-09-2	Methylene Chloride	27	U
67-64-1	Acetone	54	U
75-15-0	Carbon Disulfide	27	U
75-35-4	1,1-Dichloroethene	27	U
75-34-3	1,1-Dichloroethane	27	U
540-59-0	1,2-Dichloroethene (total)	27	U
67-66-3	Chloroform	27	U
107-06-2	1,2-Dichloroethane	27	U
78-93-3	2-Butanone	54	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	27	U
108-05-4	Vinyl Acetate	54	U
75-27-4	Bromodichloromethane	27	U
78-87-5	1,2-Dichloropropane	27	U
10061-01-5	cis-1,3-Dichloropropene	27	U
79-01-6	Trichloroethene	150	U
124-48-1	Dibromochloromethane	27	U
79-00-5	1,1,2-Trichloroethane	27	U
71-43-2	Benzene	27	U
10061-02-6	Trans-1,3-Dichloropropene	27	U
75-25-2	Bromoform	27	U
108-10-1	4-Methyl-2-Pentanone	54	U
591-78-6	2-Hexanone	54	U
127-18-4	Tetrachloroethene	550	U
79-34-5	1,1,2,2-Tetrachloroethane	27	U
108-88-3	Toluene	27	U
108-90-7	Chlorobenzene	27	U
100-41-4	Ethylbenzene	27	U
100-42-5	Styrene	27	U
1330-20-7	Xylene (total)	27	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

108858918001

Lab Name: SWL-TULSA Contract: WWENG-MI
 Lab Code: SWOK Case No.: WWEN2 SAS No.: _____ SDG No.: 8821
 Matrix: (soil/water) SOIL Lab Sample ID: 882105
 Sample wt/vol: 4.0 (g/mL) g Lab File ID: 10685
 Level: (low/med) MED Date Received: 02/22/92
 % Moisture: not dec. 16 Date Analyzed: 02/27/92
 Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/KG</u>	<u>g</u>
74-87-3	Chloromethane	1500	IU
74-83-9	Bromomethane	1500	IU
75-01-4	Vinyl Chloride	1500	IU
75-00-3	Chloroethane	1500	IU
75-09-2	Methylene Chloride	740	IU
67-64-1	Acetone	1500	IU
75-15-0	Carbon Disulfide	740	IU
75-35-4	1,1-Dichloroethene	740	IU
75-34-3	1,1-Dichloroethane	740	IU
540-59-0	1,2-Dichloroethene (total)	740	IU
67-66-3	Chloroform	740	IU
107-06-2	1,2-Dichloroethane	740	IU
78-93-3	2-Butanone	1500	IU
71-55-6	1,1,1-Trichloroethane	650	IJ
56-23-5	Carbon Tetrachloride	740	IU
108-05-4	Vinyl Acetate	1500	IU
75-27-4	Bromodichloromethane	740	IU
78-87-5	1,2-Dichloropropane	740	IU
10061-01-5	cis-1,3-Dichloropropene	740	IU
79-01-6	Trichloroethene	3500	I
124-48-1	Dibromochloromethane	740	IU
79-00-5	1,1,2-Trichloroethane	740	IU
71-43-2	Benzene	740	IU
10061-02-6	Trans-1,3-Dichloropropene	740	IU
75-25-2	Bromoform	740	IU
108-10-1	4-Methyl-2-Pentanone	1500	IU
591-78-6	2-Hexanone	1500	IU
127-18-4	Tetrachloroethene	15000	I
79-34-5	1,1,2,2-Tetrachloroethane	740	IU
108-88-3	Toluene	740	IU
108-90-7	Chlorobenzene	740	IU
100-41-4	Ethylbenzene	740	IU
100-42-5	Styrene	740	IU
1330-20-7	Xylene (total)	740	IU

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCR5888918001D

Lab Name: SWL-TULSA Contract: WWENG-MI

Lab Code: SWOK Case No.: WWENZ SAS No.: _____ SDG No.: 8821

Matrix: (soil/water) SOIL Lab Sample ID: 882106

Sample wt/vol: 4.0 (g/mL) g Lab File ID: IC686

Level: (low/med) MED Date Received: 02/22/92

% Moisture: not dec. 10 Date Analyzed: 02/27/92

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/KG</u>	g
74-87-3	-----Chloromethane	1400	IU
74-83-9	-----Bromomethane	1400	IU
75-01-4	-----Vinyl Chloride	1400	IU
75-00-3	-----Chloroethane	1400	IU
75-09-2	-----Methylene Chloride	690	IU
67-64-1	-----Acetone	1400	IU
75-15-0	-----Carbon Disulfide	690	IU
75-35-4	-----1,1-Dichloroethene	690	IU
75-34-3	-----1,1-Dichloroethane	690	IU
540-59-0	-----1,2-Dichloroethene (total)	690	IU
67-66-3	-----Chloroform	690	IU
107-06-2	-----1,2-Dichloroethane	690	IU
78-93-3	-----2-Butanone	1400	IU
71-55-6	-----1,1,1-Trichloroethane	690	IU
56-23-5	-----Carbon Tetrachloride	690	IU
108-05-4	-----Vinyl Acetate	1400	IU
75-27-4	-----Bromodichloromethane	690	IU
78-87-5	-----1,2-Dichloropropane	690	IU
10061-01-5	-----cis-1,3-Dichloropropene	690	IU
79-01-6	-----Trichloroethene	2500	IU
124-48-1	-----Dibromochloromethane	690	IU
79-00-5	-----1,1,2-Trichloroethane	690	IU
71-43-2	-----Benzene	690	IU
10061-02-6	-----Trans-1,3-Dichloropropene	690	IU
75-25-2	-----Bromoform	690	IU
108-10-1	-----4-Methyl-2-Pentanone	1400	IU
591-78-6	-----2-Hexanone	1400	IU
127-18-4	-----Tetrachloroethene	10000	IU
79-34-5	-----1,1,2,2-Tetrachloroethane	690	IU
108-88-3	-----Toluene	690	IU
108-90-7	-----Chlorobenzene	690	IU
100-41-4	-----Ethylbenzene	690	IU
100-42-5	-----Styrene	690	IU
1330-20-7	-----Xylene (total)	690	IU

1A VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCR8EMW2210001 *da*

Site Name: EWL-TULSA Contract: WWENG-MI

Lab Code: EWOK Case No.: WWEN2 SAS No.: SDB No.: 8722

Matrix: (soil/water) SOIL Lab Sample ID: 872202

Sample wt/vol: 2.0 (g/mL) S Lab File ID: IC493

Level: (low/med) LOW Date Received: 02/13/92

% Moisture: not dec. s Date Analyzed: 02/18/92

Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO. COMPOUND

74-87-3	Chloromethane	27	U
74-83-9	Bromomethane	27	U
75-01-4	Vinyl Chloride	27	U
75-00-3	Chloroethane	27	U
75-09-2	Methylene Chloride	13	U
67-64-1	Acetone	27	U
75-15-0	Carbon Disulfide	13	U
75-35-4	1,1-Dichloroethene	13	U
75-34-3	1,1-Dichloroethane	13	U
540-59-0	1,2-Dichloroethene (total)	13	U
67-66-3	Chloroform	13	U
107-06-2	1,2-Dichloroethane	13	U
78-93-3	2-Butanone	27	U
71-55-6	1,1,1-Trichloroethane	13	U
56-23-5	Carbon Tetrachloride	13	U
108-05-4	Vinyl Acetate	27	U
75-27-4	Bromodichloromethane	13	U
78-87-5	1,2-Dichloropropane	13	U
10061-01-5	cis-1,3-Dichloropropene	13	U
79-01-6	Trichloroethene	43	
124-48-1	Dibromochloromethane	13	U
79-00-5	1,1,2-Trichloroethane	13	U
71-43-2	Benzene	13	U
10061-02-6	Trans-1,3-Dichloropropene	13	U
75-25-2	Bromoform	13	U
108-10-1	4-Methyl-2-Pentanone	27	U
591-78-6	2-Hexanone	27	U
127-18-4	Tetrachloroethene	300	
79-34-5	1,1,2,2-Tetrachloroethane	13	U
108-88-3	Toluene	13	U
108-90-7	Chlorobenzene	13	U
100-41-4	Ethylbenzene	13	U
100-42-5	Styrene	13	U
1330-20-7	Xylene (total)	13	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCR5BMW22A2001 *dlc*

Name: SWL-TULSA Contract: WWENG-MI
 Lab Code: SWDK Case No.: WWENZ SAS No.: _____ SDG No.: 8722
 Matrix: (soil/water) SOIL Lab Sample ID: 872201
 Sample wt/vol: 5.0 (g/mL) g Lab File ID: IC486
 Level: (low/med) LOW Date Received: 02/13/92
 Moisture: not dec. 10 Date Analyzed: 02/18/92
 Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG g

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/KG</u>	g
74-87-3	-----Chloromethane	11	IU
74-83-9	-----Bromomethane	11	IU
75-01-4	-----Vinyl Chloride	11	IU
75-00-3	-----Chloroethane	11	IU
75-09-2	-----Methylene Chloride	6	IU
67-64-1	-----Acetone	6	183
75-15-0	-----Carbon Disulfide	6	IU
75-35-4	-----1,1-Dichloroethene	6	IU
75-34-3	-----1,1-Dichloroethane	6	IU
540-59-0	-----1,2-Dichloroethene (total)	6	IU
67-66-3	-----Chloroform	6	IU
107-06-2	-----1,2-Dichloroethane	6	IU
78-93-3	-----2-Butanone	11	IU
71-55-6	-----1,1,1-Trichloroethane	6	IU
56-23-5	-----Carbon Tetrachloride	6	IU
108-05-4	-----Vinyl Acetate	11	IU
75-27-4	-----Bromodichloromethane	6	IU
78-87-5	-----1,2-Dichloropropane	6	IU
10061-01-5	-----cis-1,3-Dichloropropene	6	IU
79-01-6	-----Trichloroethene	2	13
124-48-1	-----Dibromochloromethane	6	IU
79-00-5	-----1,1,2-Trichloroethane	6	IU
71-43-2	-----Benzene	6	IU
10061-02-6	-----Trans-1,3-Dichloropropene	6	IU
75-25-2	-----Bromoform	6	IU
108-10-1	-----4-Methyl-2-Pentanone	11	IU
591-78-6	-----2-Hexanone	11	IU
127-18-4	-----Tetrachloroethene	36	IU
79-34-8	-----1,1,2,2-Tetrachloroethane	6	IU
108-88-3	-----Toluene	6	IU
108-90-7	-----Chlorobenzene	6	IU
100-41-4	-----Ethylbenzene	6	IU
100-42-5	-----Styrene	6	IU
1330-20-7	-----Xylene (total)	6	IU

12
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA

Contract: WVENB-M1

FORSEMAN21901 *de*

Lab Code: SWOR Case No.: WVEN2 SAS No.: SDS No.: 572203

Matrix: (soil/water) SOIL Lab Sample ID: 572203

Sample wt/vol: 4.2 (g/mL) 5 Lab File ID: 10550

Level: (low/med) MED Date Received: 02/13/92

% Moisture: not dec. Date Analyzed: 02/21/92

Column: (pack/cap) CAP Dilution Factor: 10

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg g

74-87-3	Chloromethane	12000	U
74-83-9	Bromomethane	12000	U
75-01-4	Vinyl Chloride	12000	U
75-00-3	Chloroethane	12000	U
75-09-2	Methylene Chloride	13000	U
67-64-1	Acetone	12000	U
75-15-0	Carbon Disulfide	6200	U
75-35-4	1,1-Dichloroethane	6200	U
75-34-3	1,1-Dichloroethane	6200	U
540-59-0	1,2-Dichloroethane (total)	6200	U
67-66-3	Chloroform	6200	U
107-06-2	1,2-Dichloroethane	6200	U
78-93-3	2-Butanone	12000	U
71-55-6	1,1,1-Trichloroethane	6200	U
56-23-5	Carbon Tetrachloride	6200	U
108-05-4	Vinyl Acetate	12000	U
75-27-4	Bromodichloromethane	6200	U
78-87-5	1,2-Dichloropropane	6200	U
10061-01-5	cis-1,3-Dichloropropene	6200	U
79-01-6	Trichloroethene	1600	U
124-48-1	Dibromochloromethane	6200	U
79-00-5	1,1,2-Trichloroethane	6200	U
71-43-2	Benzene	6200	U
10061-02-6	Trans-1,3-Dichloropropene	6200	U
75-25-2	Bromoform	6200	U
108-10-1	4-Methyl-2-Pentanone	12000	U
591-75-6	2-Hexanone	12000	U
127-18-4	Tetrachloroethene	120000	U
79-34-5	1,1,2,2-Tetrachloroethane	6200	U
108-88-3	Toluene	6200	U
108-90-7	Chlorobenzene	6200	U
100-41-4	Ethylbenzene	6200	U
100-42-5	Ethylene	6200	U
1330-20-7	Xylene (total)	6200	U

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PCRB88B52001

Lab Name: BWL-TULSA Contract: WWENG-MI

Code: BWCK Case No.: WWEN1 SAS No.: _____ SDG No.: 3701

Matrix: (soil/water) SOIL Lab Sample ID: 370101

Sample wt/vol: 3.0 (g/mL) g Lab File ID: 10468

Level: (low/med) LOW Date Received: 02/12/92

% Moisture: not dec. 15 Date Analyzed: 02/13/92

Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO. COMPOUND

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/KG</u>	<u>g</u>
74-87-3	Chloromethane	12	1U
74-83-9	Bromomethane	12	1U
75-01-4	Vinyl Chloride	12	1U
75-00-3	Chloroethane	12	1U
75-09-2	Methylene Chloride	6	1U
67-64-1	Acetone	4	1U
75-15-0	Carbon Disulfide	6	1U
75-35-4	1,1-Dichloroethene	6	1U
75-34-3	1,1-Dichloroethane	6	1U
540-59-0	1,2-Dichloroethene (total)	6	1U
67-66-3	Chloroform	6	1U
107-06-2	1,2-Dichloroethane	6	1U
78-93-3	2-Butanone	12	1U
71-55-6	1,1,1-Trichloroethane	6	1U
56-23-5	Carbon Tetrachloride	6	1U
108-05-4	Vinyl Acetate	12	1U
75-27-4	Bromodichloromethane	6	1U
78-87-5	1,2-Dichloropropane	6	1U
10061-01-5	cis-1,3-Dichloropropene	6	1U
79-01-6	Trichloroethene	6	1U
124-48-1	Dibromochloromethane	6	1U
79-00-5	1,1,2-Trichloroethane	6	1U
71-43-2	Benzene	6	1U
10061-02-6	Trans-1,3-Dichloropropene	6	1U
75-25-2	Bromoform	6	1U
108-10-1	4-Methyl-2-Pentanone	12	1U
591-78-6	2-Hexanone	12	1U
127-18-4	Tetrachloroethene	6	1U
79-34-5	1,1,2,2-Tetrachloroethane	6	1U
108-88-7	Toluene	6	1U
108-90-7	Chlorobenzene	6	1U
100-41-4	Ethylbenzene	6	1U
100-42-5	Styrene	6	1U
1330-20-7	Xylene (total)	6	1U

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

FDRSBBB82001

Lab Name: SWL-TULSA Contract: WWENG-MI
 Lab Code: SWCK Case No.: WWEN1 SAG No.: _____ SDG No.: 3701
 Matrix: (soil/water) SOIL Lab Sample ID: 370102
 Sample wt/vol: 5.0 (g/mL) g Lab File ID: IC469
 Level: (low/med) LOW Date Received: 02/12/92
 % Moisture: not dec. 13 Date Analyzed: 02/13/92
 Column: (pack/cap) DAF Dilution Factor: 1.0

CONCENTRATION UNITS:
 (ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/KG</u>	g
74-87-3	Chloromethane	11	1U
74-83-9	Bromomethane	11	1U
75-01-4	Vinyl Chloride	11	1U
75-00-3	Chloroethane	11	1U
75-09-2	Methylene Chloride	6	1U
67-64-1	Acetone	11	1U
75-15-0	Carbon Disulfide	6	1U
75-35-4	1,1-Dichloroethene	6	1U
75-34-3	1,1-Dichloroethane	6	1U
540-59-0	1,2-Dichloroethene (total)	6	1U
67-66-3	Chloroform	6	1U
107-06-2	1,2-Dichloroethane	6	1U
78-93-3	2-Butanone	11	1U
71-55-6	1,1,1-Trichloroethane	6	1U
56-23-5	Carbon Tetrachloride	6	1U
108-05-4	Vinyl Acetate	11	1U
75-27-4	Bromodichloromethane	6	1U
78-87-5	1,2-Dichloropropane	6	1U
10061-01-5	cis-1,3-Dichloropropene	6	1U
79-01-6	Trichloroethene	17	1U
124-48-1	Dibromochloromethane	6	1U
79-00-5	1,1,2-Trichloroethane	6	1U
71-43-2	Benzene	6	1U
10061-02-6	Trans-1,3-Dichloropropene	6	1U
75-25-2	Bromoform	6	1U
108-10-1	4-Methyl-2-Pentanone	11	1U
591-78-6	2-Hexanone	11	1U
127-18-4	Tetrachloroethene	53	1U
79-34-5	1,1,2,2-Tetrachloroethane	6	1U
108-88-3	Toluene	6	1U
108-90-7	Chlorobenzene	6	1U
100-41-4	Ethylbenzene	6	1U
100-42-5	Styrene	6	1U
1330-20-7	Xylene (total)	6	1U

FDRE8888819001

Lab Name: BWL-TULSA Contract: WWENG-MI
 Lab Code: BWDR Case No.: WWEN1 SAS No.: _____ SDG No.: 6701
 Matrix: (soil/water) SOI Lab Sample ID: 670103
 Sample wt/vol: 4.0 (g/mL): g Lab File ID: IC481
 Level: (low/med) MED Date Received: 02/12/92
 % Moisture: not dec. 13 Date Analyzed: 02/14/92
 Column: (pack/cap) CAP Dilution Factor: 2.0

CAS NO. COMPOUND CONCENTRATION UNITS:
 (ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	UG/KG
74-87-3	Chloromethane	2900	IU
74-83-9	Bromomethane	2900	IU
75-01-4	Vinyl Chloride	2900	IU
75-00-3	Chloroethane	2900	IU
75-09-2	Methylene Chloride	510	1BJ
67-64-1	Acetone	680	IJ
75-15-0	Carbon Disulfide	1400	IU
75-35-4	1,1-Dichloroethene	1400	IU
75-34-3	1,1-Dichloroethane	1400	IU
540-59-0	1,2-Dichloroethene (total)	1400	IU
67-66-3	Chloroform	1400	IU
107-06-2	1,2-Dichloroethane	1400	IU
78-93-3	2-Butanone	2900	IU
71-55-6	1,1,1-Trichloroethane	270	IJ
56-23-5	Carbon Tetrachloride	1400	IU
108-05-4	Vinyl Acetate	2900	IU
75-27-4	Bromodichloromethane	1400	IU
78-87-5	1,2-Dichloropropane	1400	IU
10061-01-5	cis-1,3-Dichloropropene	1400	IU
79-01-6	Trichloroethene	3100	IU
124-48-1	Dibromochloromethane	1400	IU
79-00-8	1,1,2-Trichloroethane	1400	IU
71-43-2	Benzene	1400	IU
10061-02-6	Trans-1,3-Dichloropropene	1400	IU
75-25-2	Bromoform	1400	IU
108-10-1	4-Methyl-2-Pentanone	2900	IU
591-78-6	2-Hexanone	2900	IU
127-18-4	Tetrachloroethene	36000	IU
79-34-5	1,1,2,2-Tetrachloroethane	1400	IU
108-88-3	Toluene	1400	IU
108-90-7	Chlorobenzene	1400	IU
100-41-4	Ethylbenzene	1400	IU
100-42-5	Styrene	1400	IU
1330-20-7	xylene (total)	1400	IU

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Name: EWL-TULLSA

Contract: WUENG-M1

we
FCF83/SEB00013

Lab Code: EWOK

Case No.: WUENG

SAS No.:

SOS No.: 8736

Matrix: soil/water SOIL

Lab Sample ID: 873604

Sample wt/vol: 5.0 (g/ml) 5

Lab File ID: 10505

Level: LOW (low/med)

Date Received: 02/14/92

Moisture: not dec. 0

Date Analyzed: 02/19/92

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/kg) ug/kg g

74-87-3	Chloromethane	10	10
74-83-9	Bromomethane	10	10
75-01-4	Vinyl Chloride	10	10
75-00-3	Chloroethane	10	10
75-09-2	Methylene Chloride	5	10
67-64-1	Acetone	10	10
75-15-0	Carbon Disulfide	5	10
75-35-4	1,1-Dichloroethene	5	10
75-34-3	1,1-Dichloroethane	5	10
540-59-0	1,2-Dichloroethene (total)	5	10
67-66-3	Chloroform	5	10
107-06-2	1,2-Dichloroethane	5	10
78-93-3	2-Butanone	10	10
71-55-6	1,1,1-Trichloroethane	5	10
56-23-5	Carbon Tetrachloride	5	10
108-05-4	Vinyl Acetate	10	10
75-27-4	Bromodichloromethane	5	10
78-87-5	1,2-Dichloropropane	5	10
10061-01-5	cis-1,3-Dichloropropene	5	10
79-01-6	Trichloroethene	5	10
124-48-1	Dibromochloromethane	5	10
79-00-5	1,1,2-Trichloroethane	5	10
71-43-2	Benzene	5	10
10061-02-6	Trans-1,3-Dichloropropene	5	10
75-25-2	Bromoform	5	10
108-10-1	4-Methyl-2-Pentanone	10	10
591-78-4	2-Hexanone	10	10
127-18-4	Tetrachloroethene	5	10
79-34-5	1,1,2,2-Tetrachloroethane	5	10
108-88-3	Toluene	5	10
108-90-7	Chlorobenzene	5	10
100-41-4	Ethylbenzene	5	10
100-42-5	Styrene	5	10
1330-20-7	Xylene (total)	5	10

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

see
FC R5868617001

Name: SWL-TULSA Contract: WWENG-MI
 Lab Code: SWDK Case No.: WWENG SAS No.: _____ SDG No.: 8736
 Matrix: (soil/water) SDIL Lab Sample ID: 873603
 Sample wt/vol: 1.0 (g/mL) G Lab File ID: 10569
 Level: (low/med) LOW Date Received: 02/14/92
 Moisture: not dec. 15 Date Analyzed: 02.21/92
 Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

DAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/KG</u>	D
74-87-3	-----Chloromethane	59	1U
74-83-9	-----Bromomethane	59	1U
75-01-4	-----Vinyl Chloride	59	1U
75-00-3	-----Chloroethane	59	1U
75-09-2	-----Methylene Chloride	84	
67-64-1	-----Acetone	59	1U
75-15-0	-----Carbon Disulfide	29	1U
75-35-4	-----1,1-Dichloroethene	29	1U
75-34-3	-----1,1-Dichloroethane	29	1U
540-59-0	-----1,2-Dichloroethene (total)	29	1U
67-66-3	-----Chloroform	29	1U
107-06-2	-----1,2-Dichloroethane	29	1U
78-93-3	-----2-Butanone	59	1U
71-55-6	-----1,1,1-Trichloroethane	140	
56-23-5	-----Carbon Tetrachloride	29	1U
108-05-4	-----Vinyl Acetate	59	1U
75-27-4	-----Bromodichloromethane	29	1U
78-87-5	-----1,2-Dichloropropane	29	1U
10061-01-5	-----cis-1,3-Dichloropropene	29	1U
79-01-6	-----Trichloroethene	720	
124-48-1	-----Dibromochloromethane	29	1U
79-00-5	-----1,1,2-Trichloroethane	29	1U
71-43-2	-----Benzene	29	1U
10061-02-6	-----Trans-1,3-Dichloropropene	29	1U
75-25-2	-----Bromoform	29	1U
108-10-1	-----4-Methyl-2-Pentanone	59	1U
591-78-6	-----2-Hexanone	59	1U
127-16-4	-----Tetrachloroethene	1100	
79-34-5	-----1,1,2,2-Tetrachloroethane	29	1U
108-88-3	-----Toluene	29	1U
108-90-7	-----Chlorobenzene	29	1U
100-41-4	-----Ethylbenzene	29	1U
100-42-5	-----Styrene	29	1U
1330-20-7	-----Xylene (total)	29	1U

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FDREEMW2012001

Site Name: BWL-TULEA Contract: WWENG-NI
 Lab Code: SWOK Case No.: WWENG2 SAS No.: _____ SDG No.: _____
 Matrix: (soil/water) SOIL Lab Sample ID: 866502
 Sample wt/vol: 5.0 (g/mL) 6 Lab File ID: K8209
 Level: (low/med) LOW Date Received: 02/07/92
 % Moisture: not dec. _____ Date Analyzed: 02/07/92
 Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG g

74-87-3	Chloromethane	10	1U
74-83-9	Bromomethane	10	1U
75-01-4	Vinyl Chloride	10	1U
75-00-3	Chloroethane	10	1U
75-09-2	Methylene Chloride	5	1U
67-64-1	Acetone	9	1J
75-15-0	Carbon Disulfide	5	1U
75-35-4	1,1-Dichloroethene	5	1U
75-34-3	1,1-Dichloroethane	5	1U
540-59-0	1,2-Dichloroethene (total)	5	1U
67-66-3	Chloroform	5	1U
107-06-2	1,2-Dichloroethane	5	1U
78-93-3	2-Butanone	10	1U
71-55-6	1,1,1-Trichloroethane	5	1U
56-23-5	Carbon Tetrachloride	5	1U
108-05-4	Vinyl Acetate	10	1U
75-27-4	Bromodichloromethane	5	1U
78-87-5	1,2-Dichloropropane	5	1U
10061-01-5	cis-1,3-Dichloropropene	5	1U
79-01-6	Trichloroethene	5	1U
124-48-1	Dibromochloromethane	5	1U
79-00-5	1,1,2-Trichloroethane	5	1U
71-43-2	Benzene	5	1U
10061-02-6	Trans-1,3-Dichloropropene	5	1U
75-25-2	Bromoform	5	1U
108-10-1	4-Methyl-2-Pentanone	10	1U
591-78-6	2-Hexanone	10	1U
127-18-4	Tetrachloroethene	5	1U
79-34-5	1,1,2,2-Tetrachloroethane	5	1U
108-88-3	Toluene	5	1
108-90-7	Chlorobenzene	5	1U
100-41-4	Ethylbenzene	5	1U
100-42-5	Styrene	5	1U
1330-20-7	Xylene (total)	5	1U

LA
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCRBBMW206001

7/10/92

Name: BWL-TULSA Contract: WENG-MI
 Code: SWOK Case No.: WENG2 SAS No.: _____ SDG No.: _____
 Matrix: (soil/water) SOIL Lab Sample ID: 866501
 Sample wt/vol: 5.0 (g/mL) g Lab File ID: K8208
 Level: (low/med) LOW Date Received: 02/07/92
 % Moisture: not sec. _____ Date Analyzed: 02/07/92
 Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/KG</u>	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	9	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	3	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCR/SEM/251001

dac

Lab Name: SWL-TULSA Contract: WWENG-MI
 Lab Code: SWOK Case No.: WWEN4 SAS No.: _____ SDG No.: 8783
 Matrix: (soil/water) SDIL Lab Sample ID: 878301
 Sample wt/vol: 5.0 (g/mL) g Lab File ID: IC638
 Level: (low/med) LOW Date Received: 02/20/92
 % Moisture: not dec. 4 Date Analyzed: 02/25/92
 Column: (pack/cap) CAF Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG g

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	g
74-87-3	Chloromethane	10	10	10
74-83-9	Bromomethane	10	10	10
75-01-4	Vinyl Chloride	10	10	10
75-00-3	Chloroethane	10	10	10
75-09-2	Methylene Chloride	5	5	5
67-64-1	Acetone	10	10	10
75-15-0	Carbon Disulfide	5	5	5
75-35-4	1,1-Dichloroethene	5	5	5
75-34-3	1,1-Dichloroethane	5	5	5
540-59-0	1,2-Dichloroethene (total)	5	5	5
67-66-3	Chloroform	5	5	5
107-06-2	1,2-Dichloroethane	5	5	5
78-93-3	2-Butanone	10	10	10
71-55-6	1,1,1-Trichloroethane	5	5	5
56-23-5	Carbon Tetrachloride	5	5	5
108-05-4	Vinyl Acetate	10	10	10
75-27-4	Bromodichloromethane	5	5	5
78-67-5	1,2-Dichloropropane	5	5	5
10061-01-5	cis-1,3-Dichloropropene	5	5	5
79-01-6	Trichloroethene	46	46	46
124-48-1	Dibromochloromethane	5	5	5
79-00-5	1,1,2-Trichloroethane	5	5	5
71-43-2	Benzene	5	5	5
10061-02-6	Trans-1,3-Dichloropropene	5	5	5
75-25-2	Bromoform	5	5	5
108-10-1	4-Methyl-2-Pentanone	10	10	10
591-78-6	2-Hexanone	10	10	10
127-18-4	Tetrachloroethene	44	44	44
79-34-5	1,1,2,2-Tetrachloroethane	5	5	5
108-88-3	Toluene	5	5	5
108-90-7	Chlorobenzene	5	5	5
100-41-4	Ethylbenzene	5	5	5
100-42-5	Styrene	5	5	5
1330-20-7	Xylene (total)	5	5	5

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

R05BMW2535001

Lab Name: SWL-TULSA Contract: WWENG-MI

Lab Code: SWOK Case No.: WWEN1 SAS No.: _____ SDB No.: 8811

Matrix: (soil/water) SOIL Lab Sample ID: 881101

Sample wt/vol: 5.0 (g/mL) g Lab File ID: IC639

Level: (low/med) LOW Date Received: 02/21/92

% Moisture: not dec. 9 Date Analyzed: 02/25/92

Column: (pack/cap) CAF Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/KG</u>	Q
74-87-3	-----Chloromethane	11	IU
74-83-9	-----Bromomethane	11	IU
75-01-4	-----Vinyl Chloride	11	IU
75-00-3	-----Chloroethane	11	IU
75-09-2	-----Methylene Chloride	41	IU
67-64-1	-----Acetone	20	IU
75-15-0	-----Carbon Disulfide	5	IU
75-35-4	-----1,1-Dichloroethene	5	IU
75-34-3	-----1,1-Dichloroethane	5	IU
540-59-0	-----1,2-Dichloroethene (total)	5	IU
67-66-3	-----Chloroform	5	IU
107-06-2	-----1,2-Dichloroethane	5	IU
78-93-3	-----2-Butanone	11	IU
71-55-6	-----1,1,1-Trichloroethane	5	IU
56-23-5	-----Carbon Tetrachloride	5	IU
108-05-4	-----Vinyl Acetate	11	IU
75-27-4	-----Bromodichloromethane	5	IU
78-87-5	-----1,2-Dichloropropane	5	IU
10061-01-5	-----cis-1,3-Dichloropropene	5	IU
79-01-6	-----Trichloroethene	5	IU
124-48-1	-----Dibromochloromethane	5	IU
79-00-5	-----1,1,2-Trichloroethane	5	IU
71-43-2	-----Benzene	5	IU
10061-02-6	-----Trans-1,3-Dichloropropene	5	IU
75-25-2	-----Bromoform	5	IU
108-10-1	-----4-Methyl-2-Pentanone	11	IU
591-78-6	-----2-Hexanone	11	IU
127-18-4	-----Tetrachloroethene	12	IU ✓
79-34-5	-----1,1,2,2-Tetrachloroethane	5	IU
108-88-3	-----Toluene	5	IU
108-90-7	-----Chlorobenzene	5	IU
100-41-4	-----Ethylbenzene	5	IU
100-42-5	-----Styrene	5	IU
1330-20-7	-----Xylene (total)	5	IU

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RLSBMW2535001RE

Lab Name: SWL-TULSA Contract: WWENG-MI
 Lab Code: SWDK Case No.: WWEN1 SAS No.: _____ SDG No.: 8811
 Matrix: (soil/water) BDIL Lab Sample ID: 881101
 Sample wt/vol: 5.0 (g/mL) g Lab File ID: IC658
 Level: (low/med) LOW Date Received: 02/21/92
 % Moisture: not dec. 9 Date Analyzed: 02/26/92
 Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

CAS NO. COMPOUND

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/KG</u>	<u>g</u>
74-87-3	Chloromethane	11	1U
74-83-9	Bromomethane	11	1U
75-01-4	Vinyl Chloride	11	1U
75-00-3	Chloroethane	11	1U
75-09-2	Methylene Chloride	36	1
67-64-1	Acetone	30	1
75-15-0	Carbon Disulfide	5	1U
75-35-4	1,1-Dichloroethene	5	1U
75-34-3	1,1-Dichloroethane	5	1U
540-59-0	1,2-Dichloroethene (total)	5	1U
67-66-3	Chloroform	5	1U
107-06-2	1,2-Dichloroethane	5	1U
78-93-3	2-Butanone	11	1U
71-55-6	1,1,1-Trichloroethane	5	1U
56-23-5	Carbon Tetrachloride	5	1U
108-05-4	Vinyl Acetate	11	1U
75-27-4	Bromodichloromethane	5	1U
78-87-5	1,2-Dichloropropane	5	1U
10061-01-5	cis-1,3-Dichloropropene	5	1U
79-01-6	Trichloroethene	5	1U
124-48-1	Dibromochloromethane	5	1U
79-00-5	1,1,2-Trichloroethane	5	1U
71-43-2	Benzene	5	1U
10061-02-6	Trans-1,3-Dichloropropene	5	1U
75-25-2	Bromoform	5	1U
108-10-1	4-Methyl-2-Pentanone	11	1U
591-78-6	3-Hexanone	11	1U
127-18-4	Tetrachloroethene	12	1
79-34-5	1,1,2,2-Tetrachloroethane	5	1U
108-88-3	Toluene	5	1U
108-90-7	Chlorobenzene	5	1U
100-41-4	Ethylbenzene	5	1U
100-42-5	Styrene	5	1U
1330-20-7	Xylene (total)	5	1U

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCRSEM2415001

Lab Name: SWL-TULSA Contract: WWENG-MI
 Lab Code: SWOK Case No.: WWENG3 SAS No.: _____ SDG No.: _____
 Matrix: (soil/water) SOIL Lab Sample ID: 867408
 Sample wt/vol: 5.0 (g/mL) 5 Lab File ID: IC460
 Level: (low/med) LOW Date Received: 02/08/92
 % Moisture: not dec. 6 Date Analyzed: 02/12/92
 Column: (pack/cap) CAF Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/KG</u>	
74-87-3	-----Chloromethane	11	IU
74-83-9	-----Bromomethane	11	IU
75-01-4	-----Vinyl Chloride	11	IU
75-00-3	-----Chloroethane	11	IU
75-09-2	-----Methylene Chloride	27	
67-64-1	-----Acetone	19	
75-15-0	-----Carbon Disulfide	5	IU
75-35-4	-----1,1-Dichloroethene	5	IU
75-34-3	-----1,1-Dichloroethane	5	IU
540-59-0	-----1,2-Dichloroethene (total)	5	IU
67-66-3	-----Chloroform	5	IU
107-06-2	-----1,2-Dichloroethane	5	IU
78-93-3	-----2-Butanone	11	IU
71-55-6	-----1,1,1-Trichloroethane	10	
56-23-5	-----Carbon Tetrachloride	5	IU
108-05-4	-----Vinyl Acetate	11	IU
75-27-4	-----Bromodichloromethane	5	IU
78-87-5	-----1,2-Dichloropropane	5	IU
10061-01-5	-----cis-1,3-Dichloropropene	5	IU
79-01-6	-----Trichloroethene	38	
124-48-1	-----Dibromochloromethane	5	IU
79-00-5	-----1,1,2-Trichloroethane	5	IU
71-43-2	-----Benzene	5	IU
10061-02-6	-----Trans-1,3-Dichloropropene	5	IU
75-25-2	-----Bromoform	5	IU
108-10-1	-----4-Methyl-2-Pentanone	11	IU
591-78-6	-----2-Hexanone	11	IU
127-18-4	-----Tetrachloroethene	6	
79-34-5	-----1,1,2,2-Tetrachloroethane	5	IU
108-88-3	-----Toluene	5	IU
108-90-7	-----Chlorobenzene	5	IU
100-41-4	-----Ethylbenzene	5	IU
100-42-5	-----Styrene	5	IU
1330-20-7	-----Xylene (total)	5	IU

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FOR25MW24B001

Name: SWL-TULLSA Contract: WVENB-M1

Lab Code: SWDK Case No.: WVENB2 SAS No.: SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 867407

Sample wt/vol: 5.0 (g/mL) 0 Lab File ID: 10442

Level: (low/med) LOW Date Received: 02/08/92

% Moisture: not dec. 2 Date Analyzed: 02/10/92

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO. COMPOUND CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg g

74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	2	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethane	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethane (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	2	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-7	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCR865630001

Lab Name: SWL-TULSA Contract: WWENG-MI
 Lab Code: EWOK Case No.: WWENG3 SAS No.: _____ SDG No.: _____
 Matrix: (soil/water) SOIL Lab Sample ID: 667406
 Sample wt/vol: 5.0 (g/mL) 9 Lab File ID: IC441
 Level: (low/med) LOW Date Received: 02/08/92
 % Moisture: not dec. 1 Date Analyzed: 02/10/92
 Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO. COMPOUND

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/KG</u>	<u>Q</u>
74-87-3	Chloromethane	10	IU
74-83-9	Bromomethane	10	IU
75-01-4	Vinyl Chloride	10	IU
75-00-3	Chloroethane	10	IU
75-09-2	Methylene Chloride	5	IU
67-64-1	Acetone	10	IJ
75-15-0	Carbon Disulfide	5	IU
75-35-4	1,1-Dichloroethene	5	IU
75-34-3	1,1-Dichloroethane	5	IU
540-59-0	1,2-Dichloroethene (total)	5	IU
67-66-3	Chloroform	5	IU
107-06-2	1,2-Dichloroethane	5	IU
78-93-3	2-Butanone	10	IU
71-55-6	1,1,1-Trichloroethane	5	IU
56-23-5	Carbon Tetrachloride	5	IU
108-05-4	Vinyl Acetate	10	IU
75-27-4	Bromodichloromethane	5	IU
78-87-5	1,2-Dichloropropane	5	IU
10061-01-5	cis-1,3-Dichloropropene	5	IU
79-01-6	Trichloroethene	5	IU
124-48-1	Dibromochloromethane	5	IU
79-00-5	1,1,2-Trichloroethane	5	IU
71-43-2	Benzene	5	IU
10061-02-6	Trans-1,3-Dichloropropene	5	IU
75-25-2	Bromoform	5	IU
108-10-1	4-Methyl-2-Pentanone	10	IJ
591-78-6	2-Hexanone	10	IU
127-18-4	Tetrachloroethene	5	IU
79-34-5	1,1,2,2-Tetrachloroethane	5	IU
108-88-3	Toluene	5	IU
108-90-7	Chlorobenzene	5	IU
100-41-4	Ethylbenzene	5	IU
100-42-5	Styrene	5	IU
1330-20-7	Xylene (total)	5	IU

1A
VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

FORSBBS310001

Lab Name: SWL-TULSA Contract: WWENG-MI

Lab Code: SWDK Case No.: WWENG3 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 867402

Sample wt/vol: 5.0 (g/mL) G Lab File ID: IC437

Level: (low/med) LOW Date Received: 02/08/92

% Moisture: not dec. 9 Date Analyzed: 02/10/92

Column: (pack/cap) CAF Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/KG</u>	<u>Q</u>
74-87-3	Chloromethane	11	1U
74-83-9	Bromomethane	11	1U
75-01-4	Vinyl Chloride	11	1U
75-00-3	Chloroethane	11	1U
75-09-2	Methylene Chloride	18	
67-64-1	Acetone	11	1U
75-15-0	Carbon Disulfide	5	1U
75-35-4	1,1-Dichloroethene	5	1U
75-34-3	1,1-Dichloroethane	5	1U
540-59-0	1,2-Dichloroethene (total)	5	1U
67-66-3	Chloroform	5	1U
107-06-2	1,2-Dichloroethane	5	1U
78-93-3	2-Butanone	11	1U
71-55-6	1,1,1-Trichloroethane	15	
56-23-5	Carbon Tetrachloride	5	1U
108-05-4	Vinyl Acetate	11	1U
75-27-4	Bromodichloromethane	5	1U
78-87-5	1,2-Dichloropropane	5	1U
10061-01-5	cis-1,3-Dichloropropene	5	1U
79-01-6	Trichloroethene	52	
124-48-1	Dibromochloromethane	5	1U
79-00-5	1,1,2-Trichloroethane	5	1U
71-43-2	Benzene	5	1U
10061-02-6	Trans-1,3-Dichloropropene	5	1U
75-25-2	Bromoform	5	1U
108-10-1	4-Methyl-2-Pentanone	11	1U
591-78-6	2-Hexanone	11	1U
127-18-4	Tetrachloroethene	60	
79-34-5	1,1,2,2-Tetrachloroethane	5	1U
108-88-3	Toluene	5	1U
108-90-7	Chlorobenzene	5	1U
100-41-4	Ethylbenzene	5	1U
100-42-5	Styrene	5	1U
1330-20-7	Xylylene (total)	5	1U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F0858/8B36001

Job Name: SWL-TULSA Contract: WWENG-MI
 Lab Code: SWCK Case No.: WWENG3 SAS No.: _____ SDG No.: _____
 Matrix: (soil/water) SOIL Lab Sample ID: 867401
 Sample wt/vol: 5.0 (g/mL) 5 Lab File ID: IC436
 Level: (low/med) LOW Date Received: 02/08/92
 % Moisture: not dec. 14 Date Analyzed: 02/10/92
 Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG g

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/KG</u>	g
74-87-3	Chloromethane	12	IU
74-83-9	Bromomethane	12	IU
75-01-4	Vinyl Chloride	12	IU
75-00-3	Chloroethane	12	IU
75-09-2	Methylene Chloride	8	IU
67-64-1	Acetone	23	IU
75-15-0	Carbon Disulfide	6	IU
75-35-4	1,1-Dichloroethene	6	IU
75-34-3	1,1-Dichloroethane	6	IU
540-59-0	1,2-Dichloroethene (total)	6	IU
67-66-3	Chloroform	6	IU
107-06-2	1,2-Dichloroethane	6	IU
78-93-3	2-Butanone	12	IU
71-55-6	1,1,1-Trichloroethane	6	IU
56-23-5	Carbon Tetrachloride	6	IU
108-05-4	Vinyl Acetate	12	IU
75-27-4	Bromodichloromethane	6	IU
78-87-5	1,2-Dichloropropane	6	IU
10061-01-5	cis-1,3-Dichloropropene	6	IU
79-01-6	Trichloroethene	6	IU
124-48-1	Dibromochloromethane	6	IU
79-00-5	1,1,2-Trichloroethane	6	IU
71-43-2	Benzene	6	IU
10061-02-6	Trans-1,3-Dichloropropene	6	IU
75-25-2	Bromoform	6	IU
108-10-1	4-Methyl-2-Pentanone	12	IU
591-78-6	2-Hexanone	12	IU
127-18-4	Tetrachloroethene	6	IU
79-34-5	1,1,2,2-Tetrachloroethane	6	IU
108-88-3	Toluene	6	IU
108-90-7	Chlorobenzene	6	IU
100-41-4	Ethylbenzene	6	IU
100-42-5	Styrene	6	IU
1330-20-7	Xylene (total)	6	IU

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCR/ES/55410001

Lab Name: SWL-TULSA Contract: WWENG-MI
 Lab Code: SWOK Case No.: WWENG3 SAS No.: _____ SIDG No.: _____
 Matrix: (soil/water) SOIL Lab Sample ID: 867404
 Sample wt/vol: 5.0 (g/mL) g Lab File ID: IC439
 Level: (low/med) LOW Date Received: 02/08/92
 % Moisture: not dec. 10 Date Analyzed: 02/10/92
 Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO. COMPOUND CONCENTRATION UNITS:
 (ug/L or ug/Kg) UG/KG g

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	g
74-87-3	Chloromethane	11	1U
74-83-9	Bromomethane	11	1U
75-01-4	Vinyl Chloride	11	1U
75-00-3	Chloroethane	11	1U
75-09-2	Methylene Chloride	18	1
67-64-1	Acetone	11	1J
75-15-0	Carbon Disulfide	6	1U
75-35-4	1,1-Dichloroethene	6	1U
75-34-3	1,1-Dichloroethane	6	1U
540-59-0	1,2-Dichloroethene (total)	6	1U
67-66-3	Chloroform	6	1U
107-06-2	1,2-Dichloroethane	6	1U
78-93-3	2-Butanone	11	1U
71-55-6	1,1,1-Trichloroethane	8	1
56-23-5	Carbon Tetrachloride	6	1U
108-05-4	Vinyl Acetate	11	1U
75-27-4	Bromodichloromethane	6	1U
78-87-5	1,2-Dichloropropane	6	1U
10061-01-5	cis-1,3-Dichloropropene	6	1U
79-01-6	Trichloroethene	10	1
124-48-1	Dibromochloromethane	6	1U
79-00-5	1,1,2-Trichloroethane	6	1U
71-43-2	Benzene	6	1U
10061-02-6	Trans-1,3-Dichloropropene	6	1U
75-25-2	Bromoform	6	1U
108-10-1	4-Methyl-2-Pentanone	11	1U
591-78-6	2-Hexanone	11	1U
127-18-4	Tetrachloroethene	16	1
79-34-5	1,1,2,2-Tetrachloroethane	6	1U
108-88-3	Toluene	6	1U
108-90-7	Chlorobenzene	6	1U
100-41-4	Ethylbenzene	6	1U
100-42-5	Styrene	6	1U
1330-20-7	Xylene (total)	6	1U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCR8584100018

Lab Name: SWL-TULSA Contract: WWENG-MI
 Lab Code: SWOK Case No.: WWENG SAS No.: _____ SDG No.: _____
 Matrix: (soil/water) SOIL Lab Sample ID: 567405
 Sample wt/vol: 5.0 (g/mL) 5 Lab File ID: IC459
 Level: (low/med) LOW Date Received: 02/06/92
 % Moisture: not dec. 11 Date Analyzed: 02/12/92
 Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO. COMPOUND CONCENTRATION UNITS:
 (ug/L or ug/Kg) UG/KG Q

74-87-3	Chloromethane	11	IU
74-83-9	Bromomethane	11	IU
75-01-4	Vinyl Chloride	11	IU
75-00-3	Chloroethane	11	IU
75-09-2	Methylene Chloride	2	IJ
67-64-1	Acetone	13	
75-15-0	Carbon Disulfide	6	IU
75-35-4	1,1-Dichloroethene	6	IU
75-34-3	1,1-Dichloroethane	6	IU
540-59-0	1,2-Dichloroethene (total)	6	IU
67-66-3	Chloroform	6	IU
107-06-2	1,2-Dichloroethane	6	IU
78-93-3	2-Butanone	11	IU
71-55-6	1,1,1-Trichloroethane	3	IJ
56-23-5	Carbon Tetrachloride	6	IU
108-05-4	Vinyl Acetate	11	IU
75-27-4	Bromodichloromethane	6	IU
78-87-5	1,2-Dichloropropane	6	IU
10061-01-5	cis-1,3-Dichloropropene	6	IU
79-01-6	Trichloroethene	5	IJ
124-48-1	Dibromochloromethane	6	IU
79-00-5	1,1,2-Trichloroethane	6	IU
71-43-2	Benzene	6	IU
10061-02-6	Trans-1,3-Dichloropropene	6	IU
75-25-2	Bromoform	6	IU
108-10-1	4-Methyl-2-Pentanone	11	IU
591-78-6	2-Hexanone	11	IU
127-18-4	Tetrachloroethene	6	
79-34-5	1,1,2,2-Tetrachloroethane	6	IU
108-88-0	Toluene	6	IU
108-90-7	Chlorobenzene	6	IU
100-41-4	Ethylbenzene	6	IU
100-42-5	Styrene	6	IU
1330-20-7	Xylene (total)	6	IU

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PCRB/SB46001

Lab Name: BWL-TULSA Contract: WWENG-MI

Lab Code: BWOK Case No.: WWENG3 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 867403

Sample wt/vol: 5.0 (g/mL) g Lab File ID: IC438

Level: (low/med) LOW Date Received: 02/08/92

% Moisture: not dec. 16 Date Analyzed: 02/10/92

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG g

74-87-3	-----Chloromethane	12	IU
74-83-9	-----Bromomethane	12	IU
75-01-4	-----Vinyl Chloride	12	IU
75-00-3	-----Chloroethane	12	IU
75-09-2	-----Methylene Chloride	11	IU
67-64-1	-----Acetone	21	IU
75-15-0	-----Carbon Disulfide	6	IU
75-35-4	-----1,1-Dichloroethene	6	IU
75-34-3	-----1,1-Dichloroethane	6	IU
540-59-0	-----1,2-Dichloroethene (total)	6	IU
67-66-3	-----Chloroform	6	IU
107-06-2	-----1,2-Dichloroethane	6	IU
78-93-3	-----2-Butanone	12	IU
71-55-6	-----1,1,1-Trichloroethane	6	IU
56-23-5	-----Carbon Tetrachloride	6	IU
108-05-4	-----Vinyl Acetate	12	IU
75-27-4	-----Bromodichloromethane	6	IU
78-87-5	-----1,2-Dichloropropane	6	IU
10061-01-5	-----cis-1,3-Dichloropropene	6	IU
79-01-6	-----Trichloroethene	6	IU
124-48-1	-----Dibromochloromethane	6	IU
79-00-5	-----1,1,2-Trichloroethane	6	IU
71-43-2	-----Benzene	6	IU
10061-02-6	-----Trans-1,3-Dichloropropene	6	IU
75-25-2	-----Bromoform	6	IU
108-10-1	-----4-Methyl-2-Pentanone	12	IU
591-78-6	-----2-Hexanone	12	IU
127-18-4	-----Tetrachloroethene	2	IU
79-34-5	-----1,1,2,2-Tetrachloroethane	6	IU
108-88-3	-----Toluene	6	IU
108-90-7	-----Chlorobenzene	6	IU
100-41-4	-----Ethylbenzene	6	IU
100-42-5	-----Styrene	6	IU
1330-20-7	-----Xylene (total)	6	IU

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ref/SE/1W2612001

Name: SWL-TULSA Contract: WWENG-MI
 Lab Code: SWOK Case No.: WWENG1 SAS No.: _____ SDG No.: _____
 Matrix: (soil/water) SOIL Lab Sample ID: 865202
 Sample wt/vol: 5.0 (g/mL) G Lab File ID: K8207
 Level: (low/med) LDW Date Received: 02/06/92
 % Moisture: not dec. 5 Date Analyzed: 02/07/92
 Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG G

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/KG</u>	G
74-87-3	Chloromethane	11	1U
74-83-9	Bromomethane	11	1U
75-01-4	Vinyl Chloride	11	1U
75-00-3	Chloroethane	11	1U
75-09-2	Methylene Chloride	5	1U
67-64-1	Acetone	28	
75-15-0	Carbon Disulfide	5	1U
75-35-4	1,1-Dichloroethene	5	1U
75-34-3	1,1-Dichloroethane	5	1U
540-59-0	1,2-Dichloroethene (total)	5	1U
67-66-3	Chloroform	5	1U
107-06-2	1,2-Dichloroethane	5	1U
78-93-3	2-Butanone	11	1U
71-55-6	1,1,1-Trichloroethane	5	1U
56-23-5	Carbon Tetrachloride	5	1U
108-05-4	Vinyl Acetate	11	1U
75-27-4	Bromodichloromethane	5	1U
78-87-5	1,2-Dichloropropane	5	1U
10061-01-5	cis-1,3-Dichloropropene	5	1U
79-01-6	Trichloroethene	5	1U
124-48-1	Dibromochloromethane	5	1U
79-00-5	1,1,2-Trichloroethane	5	1U
71-43-2	Benzene	5	1U
10061-02-6	Trans-1,3-Dichloropropene	5	1U
75-25-2	Bromoform	5	1U
108-10-1	4-Methyl-2-Pentanone	11	1U
591-78-6	2-Hexanone	11	1U
127-18-4	Tetrachloroethene	5	1U
79-34-5	1,1,2,2-Tetrachloroethane	5	1U
108-88-3	Toluene	5	1U
108-90-7	Chlorobenzene	5	1U
100-41-4	Ethylbenzene	5	1U
100-42-5	Styrene	5	1U
1330-20-7	Xylene (total)	5	1U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RRSBMW265001

Name: SWL-TULSA Contract: WWENG-MI *dec*

Lab Code: SWOK Case No.: WWENG1 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SSIL Lab Sample ID: 865201

Sample wt/vol: 5.0 (g/mL) g Lab File ID: KB206

Level: (low/med) LOW Date Received: 02/06/92

% Moisture: not dec. 12 Date Analyzed: 02/07/92

Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO. COMPOUND

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/KG</u>	<u>D</u>
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	6	U
67-64-1	Acetone	19	
75-15-0	Carbon Disulfide	6	U
75-35-4	1,1-Dichloroethene	6	U
75-34-3	1,1-Dichloroethane	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	11	U
75-27-4	Bromodichloromethane	6	U
78-87-5	1,2-Dichloropropane	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-02-6	Trans-1,3-Dichloropropene	6	U
75-25-2	Bromoform	6	U
108-10-1	4-Methyl-2-Pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	6	U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Xylene (total)	6	U

1
INORGANIC ANALYSIS DATA SHEET

MF1011

Lab Name: SOUTHWEST LABS OF OK Contract: 68-D9-0089
 Lab Code: SWOK Case No.: 8855 SAS No.: SDG No.: MF0101
 Matrix (soil/water): SOIL Lab Sample ID: 885512
 Level (low/med): LOW Date Received: 2/27/92
 % Solids: 90.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6850.00	*		F
7440-36-0	Antimony	7.30	U	N	F
7440-38-2	Arsenic	6.30			F
7440-39-3	Barium	34.00	B		F
7440-41-7	Beryllium	.81	B		F
7440-43-9	Cadmium	.66	U		F
7440-70-2	Calcium	51400.00	E		F
7440-47-3	Chromium	8.50			F
7440-48-4	Cobalt	3.90	B		F
7440-50-8	Copper	516.00			F
7439-89-6	Iron	11700.00	*		F
7439-92-1	Lead	9.30	S		F
7439-95-4	Magnesium	13200.00			F
7439-96-5	Manganese	417.00	*		F
7439-97-6	Mercury	.11	U		CV
7440-02-0	Nickel	12.90			F
7440-09-7	Potassium	1090.00	B		F
7782-49-2	Selenium	.66	U	N	F
7440-22-4	Silver	1.80	U		F
7440-23-5	Sodium	101.00	U		F
7440-28-0	Thallium	.44	U	W	F
7440-62-2	Vanadium	16.10			F
7440-66-6	Zinc	43.90	*		F
	Cyanide	21.60			CA

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts:

Comments:

MF1011 REFLECTS CLIENT ID FCR-SB-SR01-10.0-01

1
INORGANIC ANALYSIS DATA SHEET

MF1021

Lab Name: SOUTHWEST LABS OF OK

Contract: 68-D9-0089

Lab Code: SWOK

Case No.: 8855

SAS No.:

SDG No.: MF0101

Matrix (soil/water): SOIL

Lab Sample ID: 885513

Level (low/med): LOW

Date Received: 2/27/92

% Solids: 87.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3180.00	*		P
7440-36-0	Antimony	7.60	U	N	P
7440-38-2	Arsenic	5.90			F
7440-39-3	Barium	12.40	B		P
7440-41-7	Beryllium	1.10	B		P
7440-43-9	Cadmium	.69	U		P
7440-70-2	Calcium	99200.00	E		P
7440-47-3	Chromium	1.80	B		P
7440-48-4	Cobalt	3.60	B		P
7440-50-8	Copper	65.10			P
7439-89-6	Iron	8460.00	*		P
7439-92-1	Lead	5.90			F
7439-95-4	Magnesium	29100.00			P
7439-96-5	Manganese	267.00	*		P
7439-97-6	Mercury	.11	U		CV
7440-02-0	Nickel	9.70			P
7440-09-7	Potassium	622.00	B		P
7782-49-2	Selenium	.69	U	N	F
7440-22-4	Silver	1.80	U		P
7440-23-5	Sodium	104.00	U		P
7440-28-0	Thallium	.46	U	W	F
7440-62-2	Vanadium	10.80	B		P
7440-66-6	Zinc	31.80	*		P
	Cyanide	.94			CA

Color Before: BROWN

Clarity Before:

Texture: MEDIUM

Color After: COLORLESS

Clarity After:

Artifacts:

Comments:

MF1021 REFLECTS CLIENT ID FCR-SR-SB02-10.0-01

1
INORGANIC ANALYSIS DATA SHEET

MF1201

Lab Name: SOUTHWEST LABS OF OK Contract: 68-D9-0089

Lab Code: SWOK Case No.: 8855 SAS No.: SDG No.: MF0101

Matrix (soil/water): SOIL Lab Sample ID: 885511

Level (low/med): LOW Date Received: 2/27/92

% Solids: 94.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1860.00	*		P
7440-36-0	Antimony	12.30	B	N	P
7440-38-2	Arsenic	4.60			F
7440-39-3	Barium	8.60	B		P
7440-41-7	Beryllium	1.10			P
7440-43-9	Cadmium	.63	U		P
7440-70-2	Calcium	101000.00	E		P
7440-47-3	Chromium	1.10	U		P
7440-48-4	Cobalt	2.70	B		P
7440-50-8	Copper	1970.00			P
7439-89-6	Iron	6030.00	*		P
7439-92-1	Lead	5.10			F
7439-95-4	Magnesium	30000.00			P
7439-96-5	Manganese	225.00	*		P
7439-97-6	Mercury	.11	U		CV
7440-02-0	Nickel	5.50	B		P
7440-09-7	Potassium	412.00	B		P
7782-49-2	Selenium	.63	U	N	F
7440-22-4	Silver	1.70	U		P
7440-23-5	Sodium	96.20	U		P
7440-28-0	Thallium	.42	U	W	F
7440-62-2	Vanadium	6.90	B		P
7440-66-6	Zinc	27.70	*		P
	Cyanide	20.50			CA

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts:

Comments:

MF1201 REFLECTS CLIENT ID FCR-SB-SB01-12.0-01

1
INORGANIC ANALYSIS DATA SHEET

MF0502

Lab Name: SOUTHWEST LAB. OF OK Contract: 68-D9-0089
 Lab Code: SWOK Case No.: 6701 SAS No.: SDG No.: MF0502
 Matrix (soil/water): SOIL Lab Sample ID: 670101
 Level (low/med): LOW Date Received: 2/12/92
 % Solids: 85.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12400.00	*		P
7440-36-0	Antimony	7.70	U		P
7440-38-2	Arsenic	5.90	NS		P
7440-39-3	Barium	115.00			P
7440-41-7	Beryllium	.70	B		P
7440-43-9	Cadmium	.70	U		P
7440-70-2	Calcium	2540.00			P
7440-47-3	Chromium	14.40			P
7440-48-4	Cobalt	11.20	B		P
7440-50-8	Copper	14.60			P
7439-89-6	Iron	14700.00			P
7439-92-1	Lead	20.50			P
7439-95-4	Magnesium	1970.00			P
7439-96-5	Manganese	1000.00			P
7439-97-6	Mercury	.12	U		CV
7440-02-0	Nickel	14.80			P
7440-09-7	Potassium	1310.00			P
7782-49-2	Selenium	.47	U/N		P
7440-22-4	Silver	1.90	U		P
7440-23-5	Sodium	106.00	U		P
7440-28-0	Thallium	.47	U/W		P
7440-62-2	Vanadium	28.00			P
7440-66-6	Zinc	53.30			P
	Cyanide	.58	U		CA

Color Before: BROWN Clarity Before: Texture: FINE

Color After: COLORLESS Clarity After: Artifacts:

Comments:
 EPA SAMPLE ID MF0502 = CLIENT ID FCR-SR-SB5-2.0-01

INORGANIC ANALYSIS DATA SHEET

MF0608

Lab Name: SOUTHWEST LAB. OF OK

Contract: 68-D9-0089

Lab Code: SWDK

Case No.: S701

SAS No.:

SDG No.: MF0502

Matrix (soil/water): SOIL

Lab Sample ID: 873601

Level (low/med): LOW

Date Received: 2/14/92

% Solids:

96.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2760.00	*		P
7440-36-0	Antimony	6.80	U		P
7440-38-2	Arsenic	4.20	N		F
7440-39-3	Barium	12.10	B		P
7440-41-7	Beryllium	.49	B		P
7440-43-9	Cadmium	.62	U		P
7440-70-2	Calcium	35400.00			P
7440-47-3	Chromium	4.90			F
7440-48-4	Cobalt	3.80	B		P
7440-50-8	Copper	9.30			P
7439-89-6	Iron	7160.00			P
7439-92-1	Lead	4.20			F
7439-95-4	Magnesium	10900.00			P
7439-96-5	Manganese	235.00			P
7439-97-6	Mercury	.10	U		CV
7440-02-0	Nickel	8.20	B		P
7440-09-7	Potassium	370.00	B		P
7782-49-2	Selenium	.41	U	N	F
7440-22-4	Silver	1.70	U		P
7440-23-5	Sodium	94.10	U		P
7440-28-0	Thallium	.41	U		F
7440-62-2	Vanadium	7.50	B		P
7440-66-6	Zinc	23.30			P
	Cyanide	.52	U		CA

Color Before: BROWN

Clarity Before:

Texture: FINE

Color After: COLORLESS

Clarity After:

Artifacts:

Comments:

EPA SAMPLE ID MF0608 = CLIENT ID FDR-SB-SB6-B.0-01

INORGANIC ANALYSIS DATA SHEET

MF06B8

Lab Name: SOUTHWEST LAB. OF OK

Contract: 68-D9-0029

Lab Code: SWOK

Case No.: 8701

SAS No.:

SDS No.: MF0502

Matrix (soil/water): SOIL

Lab Sample ID: 873604

Level (low/med): LOW

Date Received: 2/14/92

% Solids: 100.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	37.40	B*		P
7440-36-0	Antimony	6.60	U		P
7440-38-2	Arsenic	.60	U/N		F
7440-39-3	Barium	2.00	U		P
7440-41-7	Beryllium	.20	U		P
7440-43-9	Cadmium	.60	U		P
7440-70-2	Calcium	100.00	U		P
7440-47-3	Chromium	1.00	U		P
7440-48-4	Cobalt	1.00	U		P
7440-50-8	Copper	1.40	U		P
7439-89-6	Iron	38.90			P
7439-92-1	Lead	.35	B		F
7439-95-4	Magnesium	55.80	U		P
7439-96-5	Manganese	.23	B		P
7439-97-6	Mercury	.10	U		CV
7440-02-0	Nickel	1.40	U		P
7440-09-7	Potassium	52.80	U		P
7782-49-2	Selenium	.40	U/N		F
7440-22-4	Silver	1.60	U		P
7440-23-5	Sodium	91.00	U		P
7440-28-0	Thallium	.40	U		F
7440-62-2	Vanadium	1.40	U		P
7440-66-6	Zinc	.40	U		P
	Cyanide	.50	U		CA

Color Before: WHITE

Clarity Before:

Texture: FINE

Color After: COLORLESS

Clarity After:

Artifacts:

Comments:

EPA SAMPLE ID MF06B8 = CLIENT ID FCR-SR-SB6-0.0-01B

INORGANIC ANALYSIS DATA SHEET

MF06D8

Lab Name: SOUTHWEST LAB. OF OK Contract: 68-D9-0089
 Lab Code: SWOK Case No.: 8701 SAS No.: SDG No.: MF0502
 Matrix (soil/water): SOIL Lab Sample ID: 873602
 Level (low/med): LOW Date Received: 2/14/92
 % Solids: 97.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	D	M
7429-90-5	Aluminum	4950.00	*		P
7440-36-0	Antimony	6.80	U		P
7440-38-2	Arsenic	5.40	NS		F
7440-39-3	Barium	21.80	B		P
7440-41-7	Beryllium	.29	B		P
7440-43-9	Cadmium	.62	U		P
7440-70-2	Calcium	1610.00			P
7440-47-3	Chromium	8.70			P
7440-48-4	Cobalt	4.10	B		P
7440-50-8	Copper	11.90			P
7439-89-6	Iron	9430.00			P
7439-92-1	Lead	6.00			F
7439-95-4	Magnesium	1800.00			P
7439-96-5	Manganese	325.00			P
7439-97-6	Mercury	.10	U		CV
7440-02-0	Nickel	11.30			P
7440-09-7	Potassium	710.00	B		P
7782-49-2	Selenium	.41	U	N	F
7440-22-4	Silver	1.60	U		P
7440-23-5	Sodium	93.80	U		P
7440-28-0	Thallium	.41	U		F
7440-62-2	Vanadium	11.40			P
7440-66-6	Zinc	31.40			P
	Cyanide	.52	U		CA

Color Before: BROWN

Clarity Before:

Texture: FINE

Color After: COLORLESS

Clarity After:

Artifacts:

Comments:

EPA SAMPLE ID MF06D8 = CLIENT ID FCR-SB-SB6-8.0-01D

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INORGANIC ANALYSIS DATA SHEET

MF0802

Lab Name: SOUTHWEST LAB. OF OK

Contract: 68-D9-0089

Lab Code: SWOK

Case No.: 8701

SAS No.:

SDG No.: MF0502

Matrix (soil/water): SOIL

Lab Sample ID: 870102

Level (low/med): LOW

Date Received: 2/12/92

% Solids: 87.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	g	M
7429-90-5	Aluminum	11000.00	*		P
7440-36-0	Antimony	7.60	U		P
7440-38-2	Arsenic	3.60	N		F
7440-39-3	Barium	105.00			P
7440-41-7	Beryllium	.62	R		P
7440-43-9	Cadmium	.69	U		P
7440-70-2	Calcium	1980.00			P
7440-47-3	Chromium	13.40			P
7440-48-4	Cobalt	8.60	R		P
7440-50-8	Copper	9.30			P
7439-89-6	Iron	13700.00			P
7439-92-1	Lead	15.20			F
7439-95-4	Magnesium	1990.00			P
7439-96-5	Manganese	754.00			P
7439-97-6	Mercury	2.30			CV
7440-02-0	Nickel	13.50			P
7440-09-7	Potassium	939.00	B		P
7782-49-2	Selenium	.46	U/N		F
7440-22-4	Silver	1.80	U		P
7440-23-5	Sodium	105.00	U		P
7440-28-0	Thallium	.46	U/W		F
7440-62-2	Vanadium	21.80			P
7440-66-6	Zinc	42.70			P
	Cyanide	.57	U		CA

Color Before: BROWN

Clarity Before:

Texture: FINE

Color After: COLORLESS

Clarity After:

Artifacts:

Comments:

EPA SAMPLE ID MF0802 = CLIENT ID FOR-55-588-2.0-01

INORGANIC ANALYSIS DATA SHEET

MF0819

Lab Name: SOUTHWEST LAB. OF OK

Contract: 68-D9-0089

Lab Code: SWOK

Case No.: 8701

SAS No.:

SDG No.: MF0502

Matrix (soil/water): SOIL

Lab Sample ID: 870103

Level (low/med): LOW

Date Received: 2/12/92

% Solids: 89.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	G	M
7429-90-5	Aluminum	2420.00	*		P
7440-36-0	Antimony	7.40	U		P
7440-38-2	Arsenic	2.60	M		F
7440-39-3	Barium	9.30	B		P
7440-41-7	Beryllium	1.20			P
7440-43-9	Cadmium	.67	U		P
7440-70-2	Calcium	115000.00			P
7440-47-3	Chromium	1.90	B		P
7440-48-4	Cobalt	3.00	B		P
7440-50-8	Copper	13.70			P
7439-89-6	Iron	6280.00			P
7439-92-1	Lead	5.50			F
7439-95-4	Magnesium	26400.00			P
7439-96-5	Manganese	188.00			P
7439-97-6	Mercury	.11	U		CV
7440-02-0	Nickel	8.30	B		P
7440-09-7	Potassium	510.00	B		P
7782-49-2	Selenium	.45	U	N	F
7440-22-4	Silver	1.80	U		P
7440-23-5	Sodium	102.00	U		P
7440-28-0	Thallium	.45	U		F
7440-62-2	Vanadium	8.00	B		P
7440-66-6	Zinc	33.90			P
	Cyanide	.56	U		CA

Color Before: BROWN

Clarity Before:

Texture: MEDIUM

Color After: COLORLESS

Clarity After:

Artifacts:

Comments:

EPA SAMPLE ID MF0819 = CLIENT ID FOR-SB-SRS-19.0-01

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INORGANIC ANALYSIS DATA SHEET

MF2202

Lab Name: SOUTHWEST LAB. OF OK

Contract: 68-D9-0089

Lab Code: SWOK

Case No.: 8701

SAS No.:

SDG No.: MF0502

Matrix (soil/water): SOIL

Lab Sample ID: 872201

Level (low/med): LOW

Date Received: 2/13/92

% Solids: 88.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6890.00	*		P
7440-36-0	Antimony	7.50	U		P
7440-38-2	Arsenic	7.40	N		F
7440-39-3	Barium	58.70			P
7440-41-7	Beryllium	.96	B		P
7440-43-9	Cadmium	.68	U		P
7440-70-2	Calcium	66300.00			P
7440-47-3	Chromium	6.20			P
7440-48-4	Cobalt	6.20	B		P
7440-50-8	Copper	14.20			P
7439-89-6	Iron	11800.00			P
7439-92-1	Lead	52.90	W		F
7439-95-4	Magnesium	17100.00			P
7439-96-5	Manganese	491.00			P
7439-97-6	Mercury	.11	U		CV
7440-02-0	Nickel	10.50			P
7440-09-7	Potassium	811.00	B		P
7782-49-2	Selenium	.45	U	N	F
7440-22-4	Silver	1.80	U		P
7440-23-5	Sodium	103.00	U		P
7440-28-0	Thallium	.45	U		F
7440-62-2	Vanadium	16.00			P
7440-66-6	Zinc	91.00			P
	Cyanide	.57	U		CA

Color Before: BROWN

Clarity Before:

Texture: MEDIUM

Color After: COLORLESS

Clarity After:

Artifacts:

Comments:

EPA SAMPLE ID MF2202 = CLIENT ID FCR-SR-MW-22A-2.0-01

INORGANIC ANALYSIS DATA SHEET

MF2210

Lab Name: SOUTHWEST LAB. OF OK

Contract: 68-D9-0089

Lab Code: SWOK

Case No.: 8701

SAS No.:

SDG No.: MF0502

Matrix (soil/water): SOIL

Lab Sample ID: 872202

Level (low/med): LOW

Date Received: 2/13/92

% Solids: 95.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2970.00	*		P
7440-36-0	Antimony	12.40	B		P
7440-38-2	Arsenic	6.80	H		F
7440-39-3	Barium	11.50	B		P
7440-41-7	Beryllium	1.50			P
7440-43-9	Cadmium	.63	U		P
7440-70-2	Calcium	163000.00			P
7440-47-3	Chromium	1.00	U		P
7440-48-4	Cobalt	5.50	B		P
7440-50-8	Copper	11.90			P
7439-89-6	Iron	10800.00			P
7439-92-1	Lead	11.20			F
7439-95-4	Magnesium	43500.00			P
7439-96-5	Manganese	290.00			P
7439-97-6	Mercury	.10	U		CV
7440-02-0	Nickel	8.20	B		P
7440-09-7	Potassium	721.00	B		P
7782-49-2	Selenium	.42	U	NW	F
7440-22-4	Silver	1.70	U		P
7440-23-5	Sodium	146.00	B		P
7440-28-0	Thallium	.42	U		F
7440-62-2	Vanadium	10.40	B		P
7440-66-6	Zinc	33.60			P
	Cyanide	.52	U		CA

Color Before: BROWN

Clarity Before:

Texture: FINE

Color After: COLORLESS

Clarity After:

Artifacts:

Comments:

EPA SAMPLE ID MF2210 = CLIENT ID FOR-SB-MW-22-10.0-01

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INORGANIC ANALYSIS DATA SHEET

MF2219

Lab Name: SOUTHWEST LAB. OF OK

Contract: 68-D9-0089

Lab Code: SWOK

Case No.: 8701

SAS No.:

SDG No.: MF0502

Matrix (soil/water): SOIL

Lab Sample ID: 872203

Level (low/med): LOW

Date Received: 2/13/92

% Solids: 87.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	D	M
7429-90-5	Aluminum	2300.00	*		F
7440-36-0	Antimony	7.50	U		F
7440-38-2	Arsenic	2.20	B	N	F
7440-39-3	Barium	8.20	B		F
7440-41-7	Beryllium	1.00	B		F
7440-43-9	Cadmium	.68	U		F
7440-70-2	Calcium	102000.00			F
7440-47-3	Chromium	1.10	U		F
7440-48-4	Cobalt	3.20	B		F
7440-50-8	Copper	15.70			F
7439-89-6	Iron	5450.00			F
7439-92-1	Lead	4.10	S		F
7439-95-4	Magnesium	28000.00			F
7439-96-5	Manganese	189.00			F
7439-97-6	Mercury	.11	U		CV
7440-02-0	Nickel	6.30	B		F
7440-09-7	Potassium	512.00	B		F
7782-49-2	Selenium	.46	U	NW	F
7440-22-4	Silver	1.80	U		F
7440-23-5	Sodium	104.00	U		F
7440-28-0	Thallium	.46	U		F
7440-62-2	Vanadium	7.10	B		F
7440-66-6	Zinc	22.90			F
	Cyanide	.57	U		CA

Color Before: BROWN

Clarity Before:

Texture: MEDIUM

Color After: COLORLESS

Clarity After:

Artifacts:

Comments:

EPA SAMPLE ID MF2219 = CLIENT ID FCR-SB-NW-22-19.0-01

INORGANIC ANALYSIS DATA SHEET

MF2321

Lab Name: SOUTHWEST LAB. OF OK

Contract: 68-D9-0089

Lab Code: SWOK

Case No.: 8701

SAS No.:

SDG No.: MF0502

Matrix (soil/water): SOIL

Lab Sample ID: 875701

Level (low/med): LOW

Date Received: 2/15/92

% Solids: 92.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	M
7429-90-5	Aluminum	5650.00	*	P
7440-36-0	Antimony	7.10	U	P
7440-38-2	Arsenic	5.00	N	F
7440-39-3	Barium	38.40	B	P
7440-41-7	Beryllium	1.10		P
7440-43-9	Cadmium	.65	U	P
7440-70-2	Calcium	93000.00		P
7440-47-3	Chromium	3.60		P
7440-48-4	Cobalt	6.20	B	P
7440-50-8	Copper	13.70		P
7439-89-6	Iron	9130.00		P
7439-92-1	Lead	11.10	S	F
7439-95-4	Magnesium	27500.00		P
7439-96-5	Manganese	292.00		P
7439-97-6	Mercury	.11	U	CV
7440-02-0	Nickel	13.20		P
7440-09-7	Potassium	1250.00		P
7782-49-2	Selenium	.43	U/NW	F
7440-22-4	Silver	1.70	U	P
7440-23-5	Sodium	98.20	U	P
7440-28-0	Thallium	.43	U	F
7440-62-2	Vanadium	13.40		P
7440-66-6	Zinc	35.00		P
	Cyanide	.54	U	CA

Color Before: GREY

Clarity Before:

Texture: FINE

Color After: COLORLESS

Clarity After:

Artifacts:

Comments:

EPA SAMPLE ID MF2321 = CLIENT ID FCR-SB-MW-23-21.5-01

INORGANIC ANALYSIS DATA SHEET

MF2510

Lab Name: SOUTHWEST LAB. OF OK

Contract: 68-D9-0089

Lab Code: SWOK

Case No.: B701

SAS No.:

SDG No.: MF0502

Matrix (soil/water): SOIL

Lab Sample ID: 878301

Level (low/med): LOW

Date Received: 2/20/92

% Solids: 95.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	M
7429-90-5	Aluminum	2580.00	*	F
7440-36-0	Antimony	8.50	B	F
7440-38-2	Arsenic	6.30	N	F
7440-39-3	Barium	10.60	B	F
7440-41-7	Beryllium	1.30		F
7440-43-9	Cadmium	.63	U	F
7440-70-2	Calcium	143000.00		F
7440-47-3	Chromium	1.10	U	F
7440-48-4	Cobalt	4.80	B	F
7440-50-8	Copper	10.10		F
7439-89-6	Iron	8400.00		F
7439-92-1	Lead	12.00		F
7439-95-4	Magnesium	39200.00		F
7439-96-5	Manganese	303.00		F
7439-97-6	Mercury	.11	U	CV
7440-02-0	Nickel	6.20	B	F
7440-09-7	Potassium	399.00	B	F
7782-49-2	Selenium	.44	B	MINW F
7440-22-4	Silver	1.70	U	F
7440-23-5	Sodium	95.60	U	F
7440-28-0	Thallium	.42	U	F
7440-62-2	Vanadium	9.50	B	F
7440-66-6	Zinc	30.00		F
	Cyanide	.53	U	CA

Color Before: BROWN

Clarity Before:

Texture: COARSE

Color After: COLORLESS

Clarity After:

Artifacts:

Comments:

EPA SAMPLE ID MF2510 = CLIENT ID FCR-SB-MW-25-10.0-01

INORGANIC ANALYSIS DATA SHEET

002
MF0300

Lab Name: SOUTHWEST LABS OF OK Contract: 68-D9-0089
 Lab Code: SWOK Case No.: 8652 SAS No.: SDG No.: MF0300
 Matrix (soil/water): SOIL Lab Sample ID: 867406
 Level (low/med): LOW Date Received: 2/08/92
 % Solids: 100.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	18.40	B		P
7440-36-0	Antimony	6.60	U		P
7440-38-2	Arsenic	.60	U	N	F
7440-39-3	Barium	2.00	U		P
7440-41-7	Beryllium	.20	U		P
7440-43-9	Cadmium	.60	U		P
7440-70-2	Calcium	100.00	U		P
7440-47-3	Chromium	1.00	U		P
7440-48-4	Cobalt	1.00	U		P
7440-50-8	Copper	1.40	U		P
7439-89-6	Iron	52.40			P
7439-92-1	Lead	.53	B	W	F
7439-95-4	Magnesium	55.80	U		P
7439-96-5	Manganese	.44	B		P
7439-97-6	Mercury	.10	U	N	CV
7440-02-0	Nickel	1.40	U		P
7440-09-7	Potassium	52.80	U		P
7782-49-2	Selenium	.40	U	N	F
7440-22-4	Silver	1.60	U		P
7440-23-5	Sodium	91.00	U		P
7440-28-0	Thallium	.60	U		F
7440-62-2	Vanadium	1.40	U		P
7440-66-6	Zinc	.40	U		P
	Cyanide	.50	U		CA

Color Before: WHITE Clarity Before: Texture: FINE
 Color After: COLORLESS Clarity After: Artifacts:

Comments:
 MF0300 REFLECTS CLIENT ID FCR-SB-SB3-0.0-01

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INORGANIC ANALYSIS DATA SHEET

003
MF0306

Lab Name: SOUTHWEST LABS OF OK

Contract: 68-D9-0089

Lab Code: SWOK

Case No.: 8652

SAS No.:

SDG No.: MF0300

Matrix (soil/water): SOIL

Lab Sample ID: 867401

Level (low/med): LOW

Date Received: 2/08/92

% Solids: 83.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	18200.00			P
7440-36-0	Antimony	9.20	B		P
7440-38-2	Arsenic	9.50		NS	F
7440-39-3	Barium	113.00			P
7440-41-7	Beryllium	.62	B		P
7440-43-9	Cadmium	.72	U		P
7440-70-2	Calcium	1980.00			P
7440-47-3	Chromium	19.40			P
7440-49-4	Cobalt	9.30	B		P
7440-50-8	Copper	12.70			P
7439-89-6	Iron	23000.00			P
7439-92-1	Lead	17.00			F
7439-95-4	Magnesium	3120.00			P
7439-96-5	Manganese	554.00			P
7439-97-6	Mercury	.12	U	N	CV
7440-02-0	Nickel	17.50			P
7440-09-7	Potassium	1470.00			P
7782-49-2	Selenium	.48	U	N	F
7440-22-4	Silver	1.90	U		P
7440-23-5	Sodium	109.00	U		P
7440-28-0	Thallium	.72	U		F
7440-62-2	Vanadium	33.80			P
7440-66-6	Zinc	58.30			F
	Cyanide	.60	U		CA

Color Before: BROWN

Clarity Before:

Texture: FINE

Color After: COLORLESS

Clarity After:

Artifacts:

Comments:

MF0306 REFLECTS CLIENT ID FCR-SB-SB3-6.0-01
CLAY

1
INORGANIC ANALYSIS DATA SHEET

004
MF0310

Lab Name: SOUTHWEST LABS OF OK

Contract: 68-D9-0089

Lab Code: SWOK

Case No.: 8652

SAS No.:

SDG No.: MF0300

Matrix (soil/water): SOIL

Lab Sample ID: 867402

Level (low/med): LOW

Date Received: 2/08/92

% Solids: 90.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6130.00			P
7440-36-0	Antimony	7.30	U		P
7440-38-2	Arsenic	7.30		NS	F
7440-39-3	Barium	29.60	R		P
7440-41-7	Beryllium	.45	R		P
7440-43-9	Cadmium	.67	U		P
7440-70-2	Calcium	19300.00			P
7440-47-3	Chromium	10.50			P
7440-48-4	Cobalt	5.20	R		P
7440-50-8	Copper	14.80			P
7439-89-6	Iron	12400.00			P
7439-92-1	Lead	11.90			F
7439-95-4	Magnesium	11900.00			P
7439-96-5	Manganese	574.00			P
7439-97-6	Mercury	.11	U	N	CV
7440-02-0	Nickel	20.90			P
7440-09-7	Potassium	748.00	R		P
7782-49-2	Selenium	.44	U	N	F
7440-22-4	Silver	1.80	U		P
7440-23-5	Sodium	102.00	R		P
7440-28-0	Thallium	.67	U		F
7440-62-2	Vanadium	14.30			P
7440-66-6	Zinc	44.90			P
	Cyanide	.56	U		CA

Color Before: BROWN

Clarity Before:

Texture: MEDIUM

Color After: COLORLESS

Clarity After:

Artifacts:

Comments:

MF0310 REFLECTS CLIENT ID FCR-SB-SB3-10.0-01

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INORGANIC ANALYSIS DATA SHEET

006
MF0410

Lab Name: SOUTHWEST LABS OF OK Contract: 68-D9-0089
 Lab Code: SWOK Case No.: 8652 SAS No.: SDG No.: MF0300
 Matrix (soil/water): SOIL Lab Sample ID: 867404
 Level (low/med): LOW Date Received: 2/08/92
 % Solids: 89.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4140.00			F
7440-36-0	Antimony	8.10	B		P
7440-38-2	Arsenic	4.30		N	F
7440-39-3	Barium	19.30	B		F
7440-41-7	Beryllium	.89	B		F
7440-43-9	Cadmium	.67	U		P
7440-70-2	Calcium	78400.00			F
7440-47-3	Chromium	10.70			P
7440-48-4	Cobalt	5.10	B		P
7440-50-8	Copper	12.60			P
7439-89-6	Iron	9100.00			P
7439-92-1	Lead	7.40			F
7439-95-4	Magnesium	31800.00			P
7439-96-5	Manganese	521.00			P
7439-97-6	Mercury	.11	U	N	CV
7440-02-0	Nickel	12.00			P
7440-09-7	Potassium	466.00	B		P
7782-49-2	Selenium	.45	U	N	F
7440-22-4	Silver	1.80	U		P
7440-23-5	Sodium	126.00	B		P
7440-28-0	Thallium	.67	U		F
7440-62-2	Vanadium	10.40	B		P
7440-66-6	Zinc	33.10			P
	Cyanide	.56	U		CA

Color Before: BROWN Clarity Before: Texture: MEDIUM
 Color After: COLORLESS Clarity After: Artifacts:

Comments:
 MF0410 REFLECTS CLIENT ID FCR-SR-SB4-10.0-01

1
INORGANIC ANALYSIS DATA SHEET

007
MF2006

Lab Name: SOUTHWEST LABS OF OK Contract: 68-D9-0089
 Lab Code: SWOK Case No.: 8652 SAS No.: SDG No.: MF0300
 Matrix (soil/water): SOIL Lab Sample ID: 866501
 Level (low/med): LOW Date Received: 2/07/92
 % Solids: 83.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	15200.00			P
7440-36-0	Antimony	7.90	U		P
7440-38-2	Arsenic	4.10		NS	F
7440-39-3	Barium	83.10			P
7440-41-7	Beryllium	.66	B		P
7440-43-9	Cadmium	.72	U		P
7440-70-2	Calcium	4180.00			P
7440-47-3	Chromium	20.70			P
7440-49-4	Cobalt	6.40	B		P
7440-50-8	Copper	14.00			P
7439-89-6	Iron	20100.00			P
7439-92-1	Lead	16.50			F
7439-95-4	Magnesium	3820.00			P
7439-96-5	Manganese	350.00			P
7439-97-6	Mercury	.11	U	N	CV
7440-02-0	Nickel	17.10			P
7440-09-7	Potassium	1120.00	B		P
7782-49-2	Selenium	.48	U	N	F
7440-22-4	Silver	1.90	U		P
7440-23-5	Sodium	109.00	U		P
7440-28-0	Thallium	.72	U		F
7440-62-2	Vanadium	27.80			P
7440-66-6	Zinc	77.30			P
	Cyanide	.60	U		CA

Color Before: BROWN Clarity Before: Texture: FINE
 Color After: COLORLESS Clarity After: Artifacts:

Comments:
 MF2006 REFLECTS CLIENT ID FCR-SR-MW20-6.0-01

1
INORGANIC ANALYSIS DATA SHEET

008
MF2012

Lab Name: SOUTHWEST LABS OF OK Contract: 68-D9-0089
 Lab Code: SWOK Case No.: 8652 SAS No.: SDG No.: MF0300
 Matrix (soil/water): SOIL Lab Sample ID: 866502
 Level (low/med): LOW Date Received: 2/07/92
 % Solids: 89.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2220.00			P
7440-36-0	Antimony	7.40	U		P
7440-38-2	Arsenic	2.60		NS	F
7440-39-3	Barium	26.60	B		P
7440-41-7	Beryllium	.49	B		P
7440-43-9	Cadmium	.67	U		P
7440-70-2	Calcium	37600.00			P
7440-47-3	Chromium	3.70			P
7440-48-4	Cobalt	3.40	B		P
7440-50-8	Copper	11.20			P
7439-89-6	Iron	6770.00			P
7439-92-1	Lead	6.70			F
7439-95-4	Magnesium	20100.00			P
7439-96-5	Manganese	266.00			P
7439-97-6	Mercury	.11	U	N	CV
7440-02-0	Nickel	9.10			P
7440-09-7	Potassium	400.00	B		P
7782-49-2	Selenium	.45	U	N	F
7440-22-4	Silver	1.80	U		P
7440-23-5	Sodium	117.00	B		P
7440-28-0	Thallium	.67	U		F
7440-62-2	Vanadium	7.60	B		P
7440-66-6	Zinc	25.00			P
	Cyanide	.56	U		CA

Color Before: BROWN Clarity Before: Texture: FINE
 Color After: COLORLESS Clarity After: Artifacts:

Comments:
 MF2012 REFLECTS CLIENT ID FCR-SB-MW20-12.0-01

1

INORGANIC ANALYSIS DATA SHEET

009

MF2406

Lab Name: SOUTHWEST LABS OF OK

Contract: 68-D9-0089

Lab Code: SWOK

Case No.: 8652

SAS No.:

SDG No.: MF0300

Matrix (soil/water): SOIL

Lab Sample ID: 867407

Level (low/med): LOW

Date Received: 2/08/92

% Solids: 96.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1400.00			P
7440-36-0	Antimony	6.80	U		P
7440-38-2	Arsenic	2.00	B	N	F
7440-39-3	Barium	5.90	B		P
7440-41-7	Beryllium	.69	B		P
7440-43-9	Cadmium	.62	U		P
7440-70-2	Calcium	66900.00			P
7440-47-3	Chromium	1.00	U		P
7440-48-4	Cobalt	2.10	B		P
7440-50-8	Copper	5.90			P
7439-89-6	Iron	4090.00			P
7439-92-1	Lead	4.70			F
7439-95-4	Magnesium	16900.00			P
7439-96-5	Manganese	145.00			P
7439-97-6	Mercury	.10	U	N	CV
7440-02-0	Nickel	4.40	B		P
7440-09-7	Potassium	238.00	B		P
7782-49-2	Selenium	.41	U	N	F
7440-22-4	Silver	1.70	U		P
7440-23-5	Sodium	94.00	U		P
7440-28-0	Thallium	.62	U		F
7440-62-2	Vanadium	3.80	B		P
7440-66-6	Zinc	16.50			P
	Cyanide	.52	U		CA

Color Before: BROWN

Clarity Before:

Texture: FINE

Color After: COLORLESS

Clarity After:

Artifacts:

Comments:

MF2406 REFLECTS CLIENT ID FCR-SB-MW24-6.0-01

1
INORGANIC ANALYSIS DATA SHEET

010
MF2415

Lab Name: SOUTHWEST LABS OF OK Contract: 68-D9-0089
 Lab Code: SWOK Case No.: 8652 SAS No.: SDG No.: MF0300
 Matrix (soil/water): SOIL Lab Sample ID: 867408
 Level (low/med): LOW Date Received: 2/08/92
 % Solids: 95.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2850.00			F
7440-36-0	Antimony	10.70	B		F
7440-38-2	Arsenic	1.90	B	NS	F
7440-39-3	Barium	13.30	B		F
7440-41-7	Beryllium	1.20			F
7440-43-9	Cadmium	.63	U		F
7440-70-2	Calcium	106000.00			F
7440-47-3	Chromium	1.60	B		F
7440-48-4	Cobalt	3.70	B		F
7440-50-8	Copper	15.30			F
7439-89-6	Iron	8360.00			F
7439-92-1	Lead	10.90			F
7439-95-4	Magnesium	29600.00			F
7439-96-5	Manganese	229.00			F
7439-97-6	Mercury	.10	U	N	CV
7440-02-0	Nickel	9.40			F
7440-09-7	Potassium	568.00	B		F
7782-49-2	Selenium	.42	U	N	F
7440-22-4	Silver	1.70	U		F
7440-23-5	Sodium	116.00	B		F
7440-28-0	Thallium	.63	U		F
7440-62-2	Vanadium	8.20	B		F
7440-66-6	Zinc	28.70			F
	Cyanide	.52	U		CA

Color Before: BROWN Clarity Before: Texture: MEDIUM
 Color After: COLORLESS Clarity After: Artifacts:

Comments:
 MF2415 REFLECTS CLIENT ID FCR-SB-MW24-15.0-01

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5555 GLENWOOD HILLS PARKWAY
GRAND RAPIDS, MI 49588-0874

Client ID: FCR-SB-SB9-18.0-01d Project ID: AMPHENOL FAC.-RFI

SWLO ID: 8821.06 Report: 8821.06

Collected: 02/21/1992 Report Date: 03-17-1992 Page: 1
Received: 02/22/1992 Last Modified: Matrix: Soil

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
TOTAL CYANIDE		0.5	mg/kg	18.4	02/27/92	SM 412D
AMENABLE CN		0.5	mg/kg	18.4	03/02/92	SM 412F

NOT DETECTED ABOVE QUANTITATION LIMIT

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
 5555 GLENWOOD HILLS PARKWAY
 GRAND RAPIDS, MI 49588-0874

Client ID: FCR-SB-MW21-12.0-01 **Project ID:** AMPHENOL FAC.-RFI

SWLO ID: 8821.07 **Report:** 8821.07

Collected: 02/20/1992 **Report Date:** 03-17-1992 **Page:** 1
Received: 02/22/1992 **Last Modified:** **Matrix:** Soil

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
TOTAL CYANIDE		0.5	mg/kg	1.0	02/27/92	SM 4120
AMENABLE CN		0.5	mg/kg	1.0	03/02/92	SM 412F

NOT DETECTED ABOVE QUANTITATION LIMIT

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
 5555 GLENWOOD HILLS PARKWAY
 GRAND RAPIDS, MI 49588-0874

Client ID: FCR-SB-MW21-12.0 MS **Project ID:** AMPHENOL FAC.-RFI
SWLO ID: 8821.08 **Report:** 8821.08

Collected: 02/20/1992 **Report Date:** 03-17-1992 **Page:** 1
Received: 02/22/1992 **Last Modified:** **Matrix:** Soil

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
TOTAL CYANIDE		0.5	mg/kg	5.2	02/27/92	SM 4120
AMENABLE CN		0.5	mg/kg	5.2	03/02/92	SM 412F

ND = NOT DETECTED ABOVE QUANTITATION LIMIT
 B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
 I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE
 NA = NOT APPLICABLE
 Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
 EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
 D = SURROGATES DILUTED OUT
 J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION
 SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

INORGANIC ANALYSES DATA SHEET

FW0202

Name: SOUTHWEST LAB. OF OK Contract: _____

Lab Code: SWOK Case No.: 10499 SAS No.: _____ SDG No.: FT0202

Matrix (soil/water): WATER Lab Sample ID: 1049901

Level (low/med): LOW Date Received: 07/29/92

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	196	B	N	P
7440-36-0	Antimony	39.0	U	N	P
7440-38-2	Arsenic	1.7	B		F
7440-39-3	Barium	93.6	B		P
7440-41-7	Beryllium	1.2	B		P
7440-43-9	Cadmium	3.0	U		P
7440-70-2	Calcium	101000			P
7440-47-3	Chromium	6.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	9.0	U		P
7439-89-6	Iron	251		*	F
7439-92-1	Lead	1.0	U	N	F
7439-95-4	Magnesium	27700			P
7439-96-5	Manganese	25.1			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	7.0	U		P
7440-09-7	Potassium	3440	B		P
7782-49-2	Selenium	2.0	U	N	F
7440-22-4	Silver	8.0	U		P
7440-23-5	Sodium	6580			P
7440-28-0	Thallium	2.0	U	WN	F
7440-62-2	Vanadium	5.0	U		P
7440-66-6	Zinc	81.4			P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:

EPA_SAMPLE_ID FW0202 = CLIENT_ID FCR-SW-SW02-02

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-SW-SW02-02 Project ID: FRANKLIN-RFI
SWLO ID: 10499.01 Report: 10499.01

Collected: 07/27/1992 Report Date: 08/19/1992 Page: 1
Received: 07/29/1992 Last Modified: Matrix: Water

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
AMENABLE CN		10	ug/l	ND	07/31/92	SM 412F

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986



1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCRSW0003eb

Lab Name: SWL-TULSA

Contract: WWENG-IN

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 12669

Matrix: (soil/water) WATER

Lab Sample ID: 12669.18

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: LF652.D

Level: (low/med) LOW

Date Received: 02/19/93

% Moisture: not dec. _____

Data Analyzed: 02/26/93

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 2.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND	UG/L	Q
74-87-3	Chloromethane	20	U
74-83-9	Bromomethane	20	U
75-01-4	Vinyl Chloride	20	U
75-00-3	Chloroethane	20	U
75-09-2	Methylene Chloride	20	U
67-64-1	Acetone	370	
75-15-0	Carbon Disulfide	20	U
75-35-4	1,1-Dichloroethene	20	U
75-34-3	1,1-Dichloroethane	20	U
540-59-0	1,2-Dichloroethene (total)	20	U
67-66-3	Chloroform	20	U
107-06-2	1,2-Dichloroethane	20	U
78-93-3	2-Butanone	20	U
71-55-6	1,1,1-Trichloroethane	20	U
56-23-5	Carbon Tetrachloride	20	U
75-27-4	Bromodichloromethane	20	U
78-87-5	1,2-Dichloropropane	24	
10061-01-5	cis-1,3-Dichloropropene	20	U
79-01-6	Trichloroethene	20	U
124-48-1	Dibromochloromethane	20	U
79-00-5	1,1,2-Trichloroethane	20	U
71-43-2	Benzene	20	U
10061-02-6	trans-1,3-Dichloropropene	20	U
75-25-2	Bromoform	20	U
108-10-1	4-Methyl-2-Pentanone	20	U
591-78-6	2-Hexanone	20	U
127-18-4	Tetrachloroethene	5	J
79-34-5	1,1,2,2-Tetrachloroethane	20	U
108-88-3	Toluene	20	U
108-90-7	Chlorobenzene	20	U
100-41-4	Ethylbenzene	20	U
100-42-5	Styrene	20	U
1330-20-7	Xylene (Total)	20	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RSWSW0203

Lab Name: SWL-TULSA Contract: WWENG-IN

Lab Code: SWOK Case No.: WWENG-I SAS No.: SDG No.: 12669

Matrix: (soil/water) WATER Lab Sample ID: 12669.13

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: LF644.D

Level: (low/med) LOW Date Received: 02/19/93

% Moisture: not dec. _____ Data Analyzed: 02/26/93

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	11	
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	3	J
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	33	
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	65	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	84	
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCRSWSW0203d

Lab Name: SWL-TULSA

Contract: WWENG-IN

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 12669

Matrix: (soil/water) WATER

Lab Sample ID: 12669.14

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: LF645.D

Level: (low/med) LOW

Date Received: 02/19/93

% Moisture: not dec. _____

Data Analyzed: 02/26/93

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	11	
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	3	J
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	35	
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	66	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	86	
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MFO2EB

Lab Name: SOUTHWEST LAB OF OK Contract: _____

Lab Code: SWOK Case No.: 12787 SAS No.: _____ SDG No.: MFO3EB

Matrix (soil/water): WATER Lab Sample ID: 1278713

Level (low/med): LOW Date Received: 03/02/93

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead				NR
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide	10.0	U	N	CA

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:

EPA_SAMPLE_MFO2EB = CLIENT_SAMPLE_ID_SW-SW02-03EB

INORGANIC ANALYSES DATA SHEET

MSWEB3

Lab Name: SOUTHWEST_LAB_OF_OK_____ Contract: _____

Lab Code: SWOK_____ Case No.: 12669_ SAS No.: _____ SDG No.: MGPOEB

Matrix (soil/water): WATER Lab Sample ID: 1266918_____

Level (low/med): LOW_____ Date Received: 02/19/93

% Solids: _____0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	_____	_____	_____	NR
7440-36-0	Antimony	_____	_____	_____	NR
7440-38-2	Arsenic	_____	_____	_____	NR
7440-39-3	Barium	_____	_____	_____	NR
7440-41-7	Beryllium	_____	_____	_____	NR
7440-43-9	Cadmium	_____	_____	_____	NR
7440-70-2	Calcium	_____	_____	_____	NR
7440-47-3	Chromium	_____	_____	_____	NR
7440-48-4	Cobalt	_____	_____	_____	NR
7440-50-8	Copper	_____	_____	_____	NR
7439-89-6	Iron	_____	_____	_____	NR
7439-92-1	Lead	_____	_____	_____	NR
7439-95-4	Magnesium	_____	_____	_____	NR
7439-96-5	Manganese	_____	_____	_____	NR
7439-97-6	Mercury	_____	_____	_____	NR
7440-02-0	Nickel	_____	_____	_____	NR
7440-09-7	Potassium	_____	_____	_____	NR
7782-49-2	Selenium	_____	_____	_____	NR
7440-22-4	Silver	_____	_____	_____	NR
7440-23-5	Sodium	_____	_____	_____	NR
7440-28-0	Thallium	_____	_____	_____	NR
7440-62-2	Vanadium	_____	_____	_____	NR
7440-66-6	Zinc	_____	_____	_____	NR
_____	Cyanide	_____	_____	_____	NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

EPA_SAMPLE_ID_MSWEB3_REFLECTS_CLIENT_ID_FCR-SW-00-03EB_____
 THE_SAMPLE_WAS_NOT_PRESERVED_AT_APPROPRIATE_PH_LEVEL,_THEREFORE_____
 CYANIDE_ANALYSIS_COULD_NOT_BE_DONE._____

INORGANIC ANALYSES DATA SHEET

MW02D3

Lab Name: SOUTHWEST_LAB_OF_OK_____ Contract: _____

Lab Code: SWOK___ Case No.: 12669_ SAS No.: _____ SDG No.: MGPOEB

Matrix (soil/water): WATER Lab Sample ID: 1266914___

Level (low/med): LOW___ Date Received: 02/19/93

% Solids: ___0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	_____	---	---	NR
7440-36-0	Antimony	_____	---	---	NR
7440-38-2	Arsenic	_____	---	---	NR
7440-39-3	Barium	_____	---	---	NR
7440-41-7	Beryllium	_____	---	---	NR
7440-43-9	Cadmium	_____	---	---	NR
7440-70-2	Calcium	_____	---	---	NR
7440-47-3	Chromium	_____	---	---	NR
7440-48-4	Cobalt	_____	---	---	NR
7440-50-8	Copper	_____	---	---	NR
7439-89-6	Iron	_____	---	---	NR
7439-92-1	Lead	_____	---	---	NR
7439-95-4	Magnesium	_____	---	---	NR
7439-96-5	Manganese	_____	---	---	NR
7439-97-6	Mercury	_____	---	---	NR
7440-02-0	Nickel	_____	---	---	NR
7440-09-7	Potassium	_____	---	---	NR
7782-49-2	Selenium	_____	---	---	NR
7440-22-4	Silver	_____	---	---	NR
7440-23-5	Sodium	_____	---	---	NR
7440-28-0	Thallium	_____	---	---	NR
7440-62-2	Vanadium	_____	---	---	NR
7440-66-6	Zinc	_____	---	---	NR
_____	Cyanide	_____10.0	U	---	CA

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

EPA_SAMPLE_ID_MW02D3_REFLECTS_CLIENT_ID_FCR-SW-SW02-03D_____

INORGANIC ANALYSES DATA SHEET

MW0203

Lab Name: SOUTHWEST_LAB_OF_OK_____ Contract: _____

Lab Code: SWOK___ Case No.: 12669_ SAS No.: _____ SDG No.: MGPOEB

Matrix (soil/water): WATER Lab Sample ID: 1266913___

Level (low/med): LOW___ Date Received: 02/19/93

% Solids: ___0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	_____	_____	_____	NR
7440-36-0	Antimony_	_____	_____	_____	NR
7440-38-2	Arsenic_	_____	_____	_____	NR
7440-39-3	Barium_	_____	_____	_____	NR
7440-41-7	Beryllium_	_____	_____	_____	NR
7440-43-9	Cadmium_	_____	_____	_____	NR
7440-70-2	Calcium_	_____	_____	_____	NR
7440-47-3	Chromium_	_____	_____	_____	NR
7440-48-4	Cobalt_	_____	_____	_____	NR
7440-50-8	Copper_	_____	_____	_____	NR
7439-89-6	Iron_	_____	_____	_____	NR
7439-92-1	Lead_	_____	_____	_____	NR
7439-95-4	Magnesium_	_____	_____	_____	NR
7439-96-5	Manganese_	_____	_____	_____	NR
7439-97-6	Mercury_	_____	_____	_____	NR
7440-02-0	Nickel_	_____	_____	_____	NR
7440-09-7	Potassium_	_____	_____	_____	NR
7782-49-2	Selenium_	_____	_____	_____	NR
7440-22-4	Silver_	_____	_____	_____	NR
7440-23-5	Sodium_	_____	_____	_____	NR
7440-28-0	Thallium_	_____	_____	_____	NR
7440-62-2	Vanadium_	_____	_____	_____	NR
7440-66-6	Zinc_	_____	_____	_____	NR
_____	Cyanide_	_____	10.0	U	CA

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

EPA_SAMPLE_ID_MW0203_REFLECTS_CLIENT_ID_FCR-SW-SW02-03_____

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
 5010 STONE MILL ROAD
 BLOOMINGTON, IN 47408

Client ID: SW-SW02-03eb

Project ID: FRANKLIN-RFI

SWLO ID: 12787.13

Report: 12787.13

Collected: 02/26/1993

Report Date: 03/23/1993

Page: 1

Received: 03/02/1993

Last Modified:

Matrix: Water

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
AMENABLE CN		10	ug/l	ND	03/05/93	SM 412F/SW 9010

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

I = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: **WW ENGINEERING & SCIENCE, INC.**
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: **FCR-SW-00-03eb**

Project ID: **FRANKLIN-RFI**

SWLO ID: **12669.18**

Report: **12669.18**

Collected: **02/17/1993**
Received: **02/19/1993**

Report Date: **03/12/1993**
Last Modified:

Page: **1**
Matrix: **Water**

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
AMENABLE CN		10	ug/L	NA	02/24/93	SM 412F/SW 9010

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

I = INABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: **WW ENGINEERING & SCIENCE, INC.**
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-SW-SW02-03

Project ID: FRANKLIN-RFI

SWLO ID: 12669.13

Report: 12669.13

Collected: 02/17/1993

Report Date: 03/12/1993

Page: 1

Received: 02/19/1993

Last Modified:

Matrix: Water

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
AMENABLE CN		10	ug/l	ND	02/24/93	SM 412F/SW 9010

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: **WW ENGINEERING & SCIENCE, INC.**
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-SW-SW02-03d

Project ID: FRANKLIN-RFI

SWLO ID: 12669.14

Report: 12669.14

Collected: 02/17/1993

Report Date: 03/12/1993

Page: 1

Received: 02/19/1993

Last Modified:

Matrix: Water

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
AMENABLE CN		10	ug/L	ND	02/24/93	SM 412F/SW 9010

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCR6W106EB

Lab Name: SWL-TLUSA

Contract: WWENG

Code: SWOK

Case No.: WWENG2

SAS No.: _____

SDG No.: 8943

Matrix: (soil/water) WATER

Lab Sample ID: 894310

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: LC033

Level: (low/med) LOW

Date Received: 03/05/92

% Moisture: not dec. _____

Date Analyzed: 03/11/92

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>		Q
74-87-3	Chloromethane	10	10	
74-83-9	Bromomethane	10	10	
75-01-4	Vinyl Chloride	10	10	
75-00-3	Chloroethane	10	10	
75-09-2	Methylene Chloride	5	10	
67-64-1	Acetone	10	10	
75-15-0	Carbon Disulfide	5	10	
75-35-4	1,1-Dichloroethene	5	10	
75-34-3	1,1-Dichloroethane	5	10	
540-59-0	1,2-Dichloroethene (total)	5	10	
67-66-3	Chloroform	5	10	
107-06-2	1,2-Dichloroethane	5	10	
78-93-3	2-Butanone	10	10	
71-55-6	1,1,1-Trichloroethane	5	10	
56-23-5	Carbon Tetrachloride	5	10	
75-27-4	Bromodichloromethane	5	10	
78-87-5	1,2-Dichloropropane	7		
10061-01-5	cis-1,3-Dichloropropene	5	10	
79-01-6	Trichloroethene	5	10	
124-48-1	Dibromochloromethane	5	10	
79-00-5	1,1,2-Trichloroethane	5	10	
71-43-2	Benzene	5	10	
10061-02-6	trans-1,3-Dichloropropene	5	10	
75-25-2	Bromoform	5	10	
108-10-1	4-Methyl-2-Pentanone	10	10	
591-78-6	2-Hexanone	10	10	
127-18-4	Tetrachloroethene	5	10	
79-34-5	1,1,2,2-Tetrachloroethane	5	10	
108-88-3	Toluene	5	10	
108-90-7	Chlorobenzene	5	10	
100-41-4	Ethylbenzene	5	10	
100-42-5	Styrene	5	10	
1330-20-7	Xylene (total)	5	10	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCRGWIT1A01

Lab Name: SWL-TULSA Contract: WWENG
 Lab Code: SWDK Case No.: WWENGZ SAS No.: _____ SDG No.: 6943
 Matrix: (soil/water) WATER Lab Sample ID: 694311
 Sample wt/vol: 5.0 (g/mL) ML Lab File ID: LC015
 Level: (low/med) LOW Date Received: 03/05/92
 % Moisture: not dec. Date Analyzed: 03/10/92
 Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	UG/L
74-87-3	Chloromethane	10	10
74-83-9	Bromomethane	10	10
75-01-4	Vinyl Chloride	10	10
75-00-3	Chloroethane	10	10
75-09-2	Methylene Chloride	5	10
67-64-1	Acetone	8	13
75-15-0	Carbon Disulfide	5	10
75-35-4	1,1-Dichloroethene	5	10
75-34-3	1,1-Dichloroethane	5	10
540-59-0	1,2-Dichloroethene (total)	5	10
67-66-3	Chloroform	5	10
107-06-2	1,2-Dichloroethane	5	10
78-93-3	2-Butanone	10	10
71-55-6	1,1,1-Trichloroethane	5	10
56-23-5	Carbon Tetrachloride	5	10
75-27-4	Bromodichloromethane	5	10
78-87-5	1,2-Dichloropropane	5	10
10061-01-5	cis-1,3-Dichloropropene	5	10
79-01-6	Trichloroethene	5	10
124-46-1	Dibromochloromethane	5	10
79-00-5	1,1,2-Trichloroethane	5	10
71-43-2	Benzene	5	10
10061-02-6	trans-1,3-Dichloropropene	5	10
75-25-2	Bromoform	5	10
108-10-1	4-Methyl-2-Pentanone	10	10
591-78-6	2-Hexanone	10	10
127-18-4	Tetrachloroethene	9	10
79-34-5	1,1,2,2-Tetrachloroethane	5	10
108-88-3	Toluene	5	10
108-90-7	Chlorobenzene	5	10
100-41-4	Ethylbenzene	5	10
100-42-5	Styrene	5	10
1330-20-7	Xylene (total)	5	10

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FORGWIT201

Lab Name: SWL-TULSA Contract: WWENG

Lab Code: SWOK Case No.: WWENG2 SAS No.: _____ SDG No.: 8943

Matrix: (soil/water) WATER Lab Sample ID: 894313

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: LC017

Level: (low/med) LOW Date Received: 03/05/92

% Moisture: not dec. _____ Date Analyzed: 03/10/92

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	UG/L
74-87-3	Chloromethane	10	IU
74-83-9	Bromomethane	10	IU
75-01-4	Vinyl Chloride	10	IU
75-00-3	Chloroethane	10	IU
75-09-2	Methylene Chloride	5	IU
67-64-1	Acetone	11	I
75-15-0	Carbon Disulfide	5	IU
75-35-4	1,1-Dichloroethene	5	IU
75-34-3	1,1-Dichloroethane	41	I
540-59-0	1,2-Dichloroethene (total)	78	I
67-66-3	Chloroform	5	IU
107-06-2	1,2-Dichloroethane	5	IU
78-93-3	2-Butanone	10	IU
71-55-6	1,1,1-Trichloroethane	25	I
56-23-5	Carbon Tetrachloride	5	IU
75-27-4	Bromodichloromethane	5	IU
78-87-5	1,2-Dichloropropane	5	IU
10061-01-5	cis-1,3-Dichloropropene	5	IU
79-01-6	Trichloroethene	16	I
124-48-1	Dibromochloromethane	5	IU
79-00-5	1,1,2-Trichloroethane	5	IU
71-43-2	Benzene	5	IU
10061-02-6	trans-1,3-Dichloropropene	5	IU
75-25-2	Bromoform	5	IU
108-10-1	4-Methyl-2-Pentanone	10	IU
591-78-6	2-Hexanone	10	IU
127-18-4	Tetrachloroethene	5	IU
79-34-5	1,1,2,2-Tetrachloroethane	5	IU
108-88-3	Toluene	5	IU
108-90-7	Chlorobenzene	5	IU
100-41-4	Ethylbenzene	5	IU
100-42-5	Styrene	5	IU
1330-20-7	Xylene (total)	5	IU

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCRGWIT301

Lab Name: SWL-TULSA Contract: WWENG
 Lab Code: SWOK Case No.: WWENG2 SAS No.: _____ SDG No.: 8943
 Matrix: (soil/water) WATER Lab Sample ID: 894301
 Sample wt/vol: 5.0 (g/mL) ML Lab File ID: LC005
 Level: (low/med) LOW Date Received: 03/05/92
 % Moisture: not dec. _____ Date Analyzed: 03/10/92
 Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L 0

74-87-3	-----Chloromethane	10	U
74-83-9	-----Bromomethane	10	U
75-01-4	-----Vinyl Chloride	10	U
75-00-3	-----Chloroethane	10	U
75-09-2	-----Methylene Chloride	5	U
67-64-1	-----Acetone	10	U
75-15-0	-----Carbon Disulfide	5	U
75-35-4	-----1,1-Dichloroethene	5	U
75-34-3	-----1,1-Dichloroethane	4	U
540-59-0	-----1,2-Dichloroethene (total)	5	U
67-66-3	-----Chloroform	5	U
107-06-2	-----1,2-Dichloroethane	5	U
78-93-3	-----2-Butanone	10	U
71-55-6	-----1,1,1-Trichloroethane	83	
56-23-5	-----Carbon Tetrachloride	5	U
75-27-4	-----Bromodichloromethane	5	U
78-87-5	-----1,2-Dichloropropane	5	U
10061-01-5	-----cis-1,3-Dichloropropene	5	U
79-01-6	-----Trichloroethene	34	
124-48-1	-----Dibromochloromethane	5	U
79-00-5	-----1,1,2-Trichloroethane	5	U
71-43-2	-----Benzene	5	U
10061-02-6	-----trans-1,3-Dichloropropene	5	U
75-25-2	-----Bromoform	5	U
108-10-1	-----4-Methyl-2-Pentanone	10	U
591-78-6	-----2-Hexanone	10	U
127-18-4	-----Tetrachloroethene	5	U
79-34-5	-----1,1,2,2-Tetrachloroethane	5	U
108-88-3	-----Toluene	5	U
108-90-7	-----Chlorobenzene	5	U
100-41-4	-----Ethylbenzene	5	U
100-42-5	-----Styrene	5	U
1330-20-7	-----Xylene (total)	5	U

19
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCRBMMW2001

Lab Name: SWL-TULSA Contract: WWENG
 Code: SWOK Case No.: WWENG2 SAS No.: _____ SDS No.: 8943
 Matrix: (soil/water) WATER Lab Sample ID: 894307
 Sample wt/vol: 5.0 (g/mL) ML Lab File ID: LC011
 Level: (low/med) LOW Date Received: 03/05/92
 % Moisture: not dec. _____ Date Analyzed: 03/10/92
 Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCRGWMW2101

Lab Name: SWL-TULSA Contract: WWENG
 Lab Code: SWOK Case No.: WWENG2 SAS No.: _____ SDG No.: 8943
 Matrix: (soil/water) WATER Lab Sample ID: 894309
 Sample wt/vol: 5.0 (g/mL) ML Lab File ID: LC035
 Level: (low/med) LOW Date Received: 03/05/92
 % Moisture: not dec. _____ Date Analyzed: 03/11/92
 Column: (pack/cap) CAF Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/L g

74-87-3	Chloromethane	10	10
74-83-9	Bromomethane	10	10
75-01-4	Vinyl Chloride	10	10
75-00-3	Chloroethane	10	10
75-09-2	Methylene Chloride	5	10
67-64-1	Acetone	10	10
75-15-0	Carbon Disulfide	5	10
75-35-4	1,1-Dichloroethene	5	10
75-34-3	1,1-Dichloroethane	5	10
540-59-0	1,2-Dichloroethene (total)	5	10
67-66-3	Chloroform	5	10
107-06-2	1,2-Dichloroethane	5	10
78-93-3	2-Butanone	10	10
71-55-6	1,1,1-Trichloroethane	5	10
56-23-5	Carbon Tetrachloride	5	10
75-27-4	Bromodichloromethane	5	10
78-87-5	1,2-Dichloropropane	5	10
10061-01-5	cis-1,3-Dichloropropene	5	10
79-01-6	Trichloroethene	10	10
124-48-1	Dibromochloromethane	5	10
79-00-5	1,1,2-Trichloroethane	5	10
71-43-2	Benzene	5	10
10061-02-6	trans-1,3-Dichloropropene	5	10
75-25-2	Bromoform	5	10
108-10-1	4-Methyl-2-Pentanone	10	10
591-78-6	2-Hexanone	10	10
127-18-4	Tetrachloroethene	5	10
79-34-5	1,1,2,2-Tetrachloroethane	5	10
108-88-3	Toluene	5	10
108-90-7	Chlorobenzene	5	10
100-41-4	Ethylbenzene	5	10
100-42-5	Styrene	5	10
1330-20-7	Xylene (total)	5	10

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FORGWMW210LD

Lab Name: SWL-TULSA Contract: WWENG 2101P
 Code: SWOK Case No.: WWENG2 SAS No.: _____ SDG No.: 8943
 Matrix: (soil/water) WATER Lab Sample ID: 894308
 Sample wt/vol: 5.0 (g/mL) ML Lab File ID: LC034
 Level: (low/med) LOW Date Received: 03/05/92
 % Moisture: not dec. _____ Date Analyzed: 03/11/92
 Column: (pack/cap) CAF Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	UG/L
74-87-3	Chloromethane	10	10
74-83-9	Bromomethane	10	10
75-01-4	Vinyl Chloride	10	10
75-00-3	Chloroethane	10	10
75-09-2	Methylene Chloride	5	10
67-64-1	Acetone	10	10
75-15-0	Carbon Disulfide	5	10
75-35-4	1,1-Dichloroethene	5	10
75-34-3	1,1-Dichloroethane	5	10
540-59-0	1,2-Dichloroethene (total)	5	10
67-66-3	Chloroform	5	10
107-06-2	1,2-Dichloroethane	5	10
78-93-3	2-Butanone	10	10
71-55-6	1,1,1-Trichloroethane	0.8	10
56-23-5	Carbon Tetrachloride	5	10
75-27-4	Bromodichloromethane	5	10
78-87-5	1,2-Dichloropropane	5	10
10061-01-5	cis-1,3-Dichloropropene	5	10
79-01-6	Trichloroethene	14	10
124-48-1	Dibromochloromethane	5	10
79-00-5	1,1,2-Trichloroethane	5	10
71-43-2	Benzene	5	10
10061-02-6	trans-1,3-Dichloropropene	5	10
75-25-2	Bromoform	5	10
108-10-1	4-Methyl-2-Pentanone	10	10
591-78-6	2-Hexanone	10	10
127-18-4	Tetrachloroethene	58	10
79-34-5	1,1,2,2-Tetrachloroethane	5	10
108-88-3	Toluene	5	10
108-90-7	Chlorobenzene	5	10
100-41-4	Ethylbenzene	5	10
100-42-5	Styrene	5	10
1330-20-7	Xylene (total)	5	10

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCRGWMW2301

Lab Name: SWL-TULSA Contract: WWENG
 Lab Code: SWOK Case No.: WWENG2 SAS No.: _____ SDG No.: 8943
 Matrix: (soil/water) WATER Lab Sample ID: 894303
 Sample wt/vol: 5.0 (g/mL) ML Lab File ID: LC007
 Level: (low/med) LOW Date Received: 03/05/92
 % Moisture: not dec. _____ Date Analyzed: 03/10/92
 Column: (pack/cap) CAF Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
74-87-3	-----Chloromethane	10	IU
74-83-9	-----Bromomethane	10	IU
75-01-4	-----Vinyl Chloride	10	IU
75-00-3	-----Chloroethane	10	IU
75-09-2	-----Methylene Chloride	5	IU
67-64-1	-----Acetone	10	IU
75-15-0	-----Carbon Disulfide	5	IU
75-35-4	-----1,1-Dichloroethene	5	IU
75-34-3	-----1,1-Dichloroethane	5	IU
540-59-0	-----1,2-Dichloroethene (total)	5	IU
67-66-3	-----Chloroform	5	IU
107-06-2	-----1,2-Dichloroethane	5	IU
78-93-3	-----2-Butanone	10	IU
71-55-6	-----1,1,1-Trichloroethane	5	IU
56-23-5	-----Carbon Tetrachloride	5	IU
75-27-4	-----Bromodichloromethane	5	IU
78-87-5	-----1,2-Dichloropropane	5	IU
10061-01-5	-----cis-1,3-Dichloropropene	5	IU
79-01-6	-----Trichloroethene	7	
124-48-1	-----Dibromochloromethane	5	IU
79-00-5	-----1,1,2-Trichloroethane	5	IU
71-43-2	-----Benzene	5	IU
10061-02-6	-----trans-1,3-Dichloropropene	5	IU
75-25-2	-----Bromoform	5	IU
108-10-1	-----4-Methyl-2-Pentanone	10	IU
591-78-6	-----2-Hexanone	10	IU
127-18-4	-----Tetrachloroethene	47	
79-34-5	-----1,1,2,2-Tetrachloroethane	5	IU
108-88-3	-----Toluene	5	IU
108-90-7	-----Chlorobenzene	5	IU
100-41-4	-----Ethylbenzene	5	IU
100-42-5	-----Styrene	5	IU
1330-20-7	-----Xylene (total)	5	IU

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCRGWMW230LD

Lab Name: SWL-TULSA Contract: WWENG
 Lab Code: SWOK Case No.: WWENG2 SAS No.: _____ SDG No.: 8943 ^{23 dup}
 Matrix: (soil/water) WATER Lab Sample ID: 894302
 Sample wt/vol: 5.0 (g/mL) ML Lab File ID: LC006
 Level: (low/med) LOW Date Received: 03/05/92
 % Moisture: not dec. _____ Date Analyzed: 03/10/92
 Column: (pack/cap) CAF Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	<u>Q</u>
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	40	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCRGWMW2601

Lab Name: SWL-TULSA Contract: WWENG

Code: SWOK Case No.: WWENG2 SAS No.: _____ SDG No.: 8943

Matrix: (soil/water) WATER Lab Sample ID: 894312

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: LC016

Level: (low/med) LOW Date Received: 03/05/92

% Moisture: not dec. _____ Date Analyzed: 03/10/92

Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND	G
74-87-3	-----Chloromethane_____	10 IU
74-83-9	-----Bromomethane_____	10 IU
75-01-4	-----Vinyl Chloride_____	10 IU
75-00-3	-----Chloroethane_____	10 IU
75-09-2	-----Methylene Chloride_____	5 IU
67-64-1	-----Acetone_____	10 IU
75-15-0	-----Carbon Disulfide_____	5 IU
75-35-4	-----1,1-Dichloroethene_____	5 IU
75-34-3	-----1,1-Dichloroethane_____	5 IU
540-59-0	-----1,2-Dichloroethene (total)_____	5 IU
67-66-3	-----Chloroform_____	5 IU
107-06-2	-----1,2-Dichloroethane_____	5 IU
78-93-3	-----2-Butanone_____	10 IU
71-55-6	-----1,1,1-Trichloroethane_____	5 IU
56-23-5	-----Carbon Tetrachloride_____	5 IU
75-27-4	-----Bromodichloromethane_____	5 IU
78-87-5	-----1,2-Dichloropropane_____	5 IU
10061-01-5	-----cis-1,3-Dichloropropene_____	5 IU
79-01-6	-----Trichloroethene_____	5 IU
124-48-1	-----Dibromochloromethane_____	5 IU
79-00-5	-----1,1,2-Trichloroethane_____	5 IU
71-43-2	-----Benzene_____	5 IU
10061-02-6	-----trans-1,3-Dichloropropene_____	5 IU
75-25-2	-----Bromoform_____	5 IU
108-10-1	-----4-Methyl-2-Pentanone_____	10 IU
591-78-6	-----2-Hexanone_____	10 IU
127-18-4	-----Tetrachloroethene_____	3 IU
79-34-5	-----1,1,2,2-Tetrachloroethane_____	5 IU
108-88-3	-----Toluene_____	5 IU
108-90-7	-----Chlorobenzene_____	5 IU
100-41-4	-----Ethylbenzene_____	5 IU
100-42-5	-----Styrene_____	5 IU
1330-20-7	-----Xylene (total)_____	5 IU

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TB-3

Lab Name: SWL-TULSA Contract: WWENG

Code: SWOK Case No.: WWENG2 SAS No.: _____ SDG No.: 8943

Matrix: (soil/water) WATER Lab Sample ID: 894314

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: LC018

Level: (low/med) LOW Date Received: 03/05/92

% Moisture: not dec. _____ Date Analyzed: 03/10/92

Column: (pack/cap) CAF Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	UG/L
74-87-3	Chloromethane	10	IU
74-83-9	Bromomethane	10	IU
75-01-4	Vinyl Chloride	10	IU
75-00-3	Chloroethane	10	IU
75-09-2	Methylene Chloride	5	IU
67-64-1	Acetone	14	
75-15-0	Carbon Disulfide	5	IU
75-35-4	1,1-Dichloroethene	5	IU
75-34-3	1,1-Dichloroethane	5	IU
540-59-0	1,2-Dichloroethene (total)	5	IU
67-66-3	Chloroform	5	IU
107-06-2	1,2-Dichloroethane	5	IU
78-93-3	2-Butanone	10	IU
71-55-6	1,1,1-Trichloroethane	5	IU
56-23-5	Carbon Tetrachloride	5	IU
75-27-4	Bromodichloromethane	5	IU
78-87-5	1,2-Dichloropropane	29	
10061-01-5	cis-1,3-Dichloropropene	5	IU
79-01-6	Trichloroethene	1	IJ
124-48-1	Dibromochloromethane	5	IU
79-00-5	1,1,2-Trichloroethane	5	IU
71-43-2	Benzene	5	IU
10061-02-6	trans-1,3-Dichloropropene	5	IU
75-25-2	Bromoform	5	IU
108-10-1	4-Methyl-2-Pentanone	10	IU
591-78-6	2-Hexanone	10	IU
127-18-4	Tetrachloroethene	9	
79-34-5	1,1,2,2-Tetrachloroethane	5	IU
108-88-3	Toluene	5	IU
108-90-7	Chlorobenzene	5	IU
100-41-4	Ethylbenzene	5	IU
100-42-5	Styrene	5	IU
1330-20-7	Xylene (total)	5	IU

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TB-2

Name: SWL-TULSA Contract: WWENG

Lab Code: SWOK Case No.: WWENG SAS No.: _____ SDG No.: 8929

Matrix: (soil/water) WATER Lab Sample ID: 892912

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CM183

Level: (low/med) LOW Date Received: 03/04/92

% moisture: not dec. _____ Date Analyzed: 03/08/92

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg) <u>UG/L</u>	<u>g</u>
74-87-3	-----Chloromethane	10	IU
74-83-9	-----Bromomethane	10	IU
75-01-4	-----Vinyl Chloride	10	IU
75-00-3	-----Chloroethane	10	IU
75-09-2	-----Methylene Chloride	5	IU
67-64-1	-----Acetone	10	IU
75-15-0	-----Carbon Disulfide	5	IU
75-35-4	-----1,1-Dichloroethene	5	IU
75-34-3	-----1,1-Dichloroethane	5	IU
540-59-0	-----1,2-Dichloroethene (total)	5	IU
67-66-3	-----Chloroform	5	IU
107-06-2	-----1,2-Dichloroethane	5	IU
78-93-3	-----2-Butanone	10	IU
71-55-6	-----1,1,1-Trichloroethane	5	IU
56-23-5	-----Carbon Tetrachloride	5	IU
75-27-4	-----Bromodichloromethane	5	IU
78-87-5	-----1,2-Dichloropropane	32	IU
10061-01-5	-----cis-1,3-Dichloropropene	5	IU
79-01-6	-----Trichloroethene	5	IU
124-48-1	-----Dibromochloromethane	5	IU
79-00-5	-----1,1,2-Trichloroethane	5	IU
71-43-2	-----Benzene	5	IU
10061-02-6	-----trans-1,3-Dichloropropene	5	IU
75-25-2	-----Bromoform	5	IU
108-10-1	-----4-Methyl-2-Pentanone	10	IU
591-78-6	-----2-Hexanone	10	IU
127-18-4	-----Tetrachloroethene	5	IU
79-34-5	-----1,1,2,2-Tetrachloroethane	5	IU
108-88-3	-----Toluene	5	IU
108-90-7	-----Chlorobenzene	5	IU
100-41-4	-----Ethylbenzene	5	IU
100-42-5	-----Styrene	5	IU
1330-20-7	-----Xylene (total)	5	IU

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCRGWMW301

Lab Name: SWL-TULSA Contract: WWENG
 Code: SWOK Case No.: WWENG SAS No.: _____ SDG No.: 8929
 Matrix: (soil/water) WATER Lab Sample ID: 892911
 Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CM195
 Level: (low/med) LOW Date Received: 03/04/92
 % Moisture: not dec. _____ Date Analyzed: 03/08/92
 Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q

74-87-3	-----Chloromethane	10	U
74-83-9	-----Bromomethane	10	U
75-01-4	-----Vinyl Chloride	10	U
75-00-3	-----Chloroethane	10	U
75-09-2	-----Methylene Chloride	5	U
67-64-1	-----Acetone	10	U
75-15-0	-----Carbon Disulfide	5	U
75-35-4	-----1,1-Dichloroethene	5	U
75-34-3	-----1,1-Dichloroethane	5	U
540-59-0	-----1,2-Dichloroethene (total)	5	U
67-66-3	-----Chloroform	5	U
107-06-2	-----1,2-Dichloroethane	5	U
78-93-3	-----2-Butanone	10	U
71-55-6	-----1,1,1-Trichloroethane	4	U
56-23-5	-----Carbon Tetrachloride	5	U
75-27-4	-----Bromodichloromethane	5	U
78-87-5	-----1,2-Dichloropropane	5	U
10061-01-5	-----cis-1,3-Dichloropropene	5	U
79-01-6	-----Trichloroethene	81	U
124-48-1	-----Dibromochloromethane	5	U
79-00-5	-----1,1,2-Trichloroethane	5	U
71-43-2	-----Benzene	5	U
10061-02-6	-----trans-1,3-Dichloropropene	5	U
75-25-2	-----Bromoform	5	U
108-10-1	-----4-Methyl-2-Pentanone	10	U
591-78-6	-----2-Hexanone	10	U
127-18-4	-----Tetrachloroethene	160	U
79-34-5	-----1,1,2,2-Tetrachloroethane	5	U
108-88-3	-----Toluene	5	U
108-90-7	-----Chlorobenzene	5	U
100-41-5	-----Ethylbenzene	5	U
100-42-5	-----Styrene	5	U
1330-20-7	-----Xylene (total)	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCRGWMW2401

Name: SWL-TULSA Contract: WWENG
 Lab Code: SWOK Case No.: WWENG SAS No.: _____ SDG No.: 8929
 Matrix: (soil/water) WATER Lab Sample ID: 892909
 Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CM174
 Level: (low/med) LOW Date Received: 03/04/92
 % Moisture: not dec. _____ Date Analyzed: 03/06/92
 Column: (pack/cap) CAF Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	<u>Q</u>
74-87-3	-----Chloromethane	10	IU
74-83-9	-----Bromomethane	10	IU
75-01-4	-----Vinyl Chloride	10	IU
75-00-3	-----Chloroethane	10	IU
75-09-2	-----Methylene Chloride	2	IJ
67-64-1	-----Acetone	10	IU
75-15-0	-----Carbon Disulfide	5	IU
75-35-4	-----1,1-Dichloroethene	5	IU
75-34-3	-----1,1-Dichloroethane	5	IU
540-59-0	-----1,2-Dichloroethene (total)	5	IU
67-66-3	-----Chloroform	5	IU
107-06-2	-----1,2-Dichloroethane	5	IU
78-93-3	-----2-Butanone	10	IU
71-55-6	-----1,1,1-Trichloroethane	44	
56-23-5	-----Carbon Tetrachloride	5	IU
75-27-4	-----Bromodichloromethane	5	IU
78-87-5	-----1,2-Dichloropropane	5	IU
10061-01-5	-----cis-1,3-Dichloropropene	5	IU
79-01-6	-----Trichloroethene	40	
124-48-1	-----Dibromochloromethane	5	IU
79-00-5	-----1,1,2-Trichloroethane	5	IU
71-43-2	-----Benzene	5	IU
10061-02-6	-----trans-1,3-Dichloropropene	5	IU
75-25-2	-----Bromoform	5	IU
108-10-1	-----4-Methyl-2-Pentanone	10	IU
591-78-6	-----2-Hexanone	10	IU
127-18-4	-----Tetrachloroethene	8	
79-34-5	-----1,1,2,2-Tetrachloroethane	5	IU
108-88-3	-----Toluene	1	IJ
108-90-7	-----Chlorobenzene	5	IU
100-41-4	-----Ethylbenzene	5	IU
100-42-5	-----Styrene	5	IU
1330-20-7	-----Xylene (total)	5	IU

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCRGWMW10201E

Lab Name: SWL-TULSA Contract: WWENG
 Lab Code: SWOK Case No.: WWENG SAS No.: _____ SDG No.: 8929
 Matrix: (soil/water) WATER Lab Sample ID: 892910
 Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CM190
 Level: (low/med) LOW Date Received: 03/04/92
 % Moisture: not dec. _____ Date Analyzed: 03/08/92
 Column: (pack/cap) CAF Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	<u>Q</u>
74-87-3	-----Chloromethane	10	U
74-83-9	-----Bromomethane	10	U
75-01-4	-----Vinyl Chloride	10	U
75-00-3	-----Chloroethane	10	U
75-09-2	-----Methylene Chloride	5	U
67-64-1	-----Acetone	10	U
75-15-0	-----Carbon Disulfide	5	U
75-35-4	-----1,1-Dichloroethene	5	U
75-34-3	-----1,1-Dichloroethane	5	U
540-59-0	-----1,2-Dichloroethene (total)	5	U
67-66-3	-----Chloroform	5	U
107-06-2	-----1,2-Dichloroethane	5	U
78-93-3	-----2-Butanone	10	U
71-55-6	-----1,1,1-Trichloroethane	5	U
56-23-5	-----Carbon Tetrachloride	5	U
75-27-4	-----Bromodichloromethane	5	U
78-87-5	-----1,2-Dichloropropane	12	
10061-01-5	-----cis-1,3-Dichloropropene	5	U
79-01-6	-----Trichloroethene	5	U
124-48-1	-----Dibromochloromethane	5	U
79-00-5	-----1,1,2-Trichloroethane	5	U
71-43-2	-----Benzene	5	U
10061-02-6	-----trans-1,3-Dichloropropene	5	U
75-25-2	-----Bromoform	5	U
108-10-1	-----4-Methyl-2-Pentanone	10	U
591-78-6	-----2-Hexanone	10	U
127-18-4	-----Tetrachloroethene	5	U
79-34-5	-----1,1,2,2-Tetrachloroethane	5	U
108-88-3	-----Toluene	5	U
108-90-7	-----Chlorobenzene	5	U
100-41-4	-----Ethylbenzene	5	U
100-42-5	-----Styrene	5	U
1330-20-7	-----Xylene (total)	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCRBWMW2501

Lab Name: SWL-TULSA Contract: WWENG
 Lab Code: SWOK Case No.: WWENG3 SAS No.: _____ SDG No.: 8979
 Matrix: (soil/water) WATER Lab Sample ID: 897901
 Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CM371
 Level: (low/med) LDW Date Received: 03/11/92
 % Moisture: not dec. _____ Date Analyzed: 03/19/92
 Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg) <u>UG/L</u>	<u>Q</u>
74-87-3	-----Chloromethane	10	1U
74-83-9	-----Bromomethane	10	1U
75-01-4	-----Vinyl Chloride	10	1U
75-00-3	-----Chloroethane	10	1U
75-09-2	-----Methylene Chloride	5	1U
67-64-1	-----Acetone	10	1U
75-15-0	-----Carbon Disulfide	5	1U
75-35-4	-----1,1-Dichloroethene	5	1U
75-34-3	-----1,1-Dichloroethane	5	1U
540-59-0	-----1,2-Dichloroethene (total)	5	1U
67-66-3	-----Chloroform	5	1U
107-06-2	-----1,2-Dichloroethane	5	1U
78-93-3	-----2-Butanone	10	1U
71-55-6	-----1,1,1-Trichloroethane	5	1U
56-23-5	-----Carbon Tetrachloride	5	1U
75-27-4	-----Bromodichloromethane	5	1U
78-87-5	-----1,2-Dichloropropane	5	1U
10061-01-5	-----cis-1,3-Dichloropropene	5	1U
79-01-6	-----Trichloroethene	5	1U
124-48-1	-----Dibromochloromethane	5	1U
79-00-5	-----1,1,2-Trichloroethane	5	1U
71-43-2	-----Benzene	5	1U
10061-02-6	-----trans-1,3-Dichloropropene	5	1U
75-25-2	-----Bromoform	5	1U
108-10-1	-----4-Methyl-2-Pentanone	10	1U
591-78-6	-----2-Hexanone	10	1U
127-18-4	-----Tetrachloroethene	2	1U
79-34-5	-----1,1,2,2-Tetrachloroethane	5	1U
108-88-3	-----Toluene	5	1U
108-90-7	-----Chlorobenzene	5	1U
100-41-4	-----Ethylbenzene	5	1U
100-42-5	-----Styrene	5	1U
1330-20-7	-----Xylene (total)	5	1U

INORGANIC ANALYSIS DATA SHEET

FC0031

Lab Name: SOUTHWEST LABS OF OK Contract: 68-D9-0089
 Lab Code: SWOK Case No.: 8929 SAS No.: SDG No.: FC0031
 Matrix (soil/water): WATER Lab Sample ID: 892911
 Level (low/med): LOW Date Received: 3/04/92
 % Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4860.00			F
7440-36-0	Antimony	17.00	U		F
7440-38-2	Arsenic	3.30	B		F
7440-39-3	Barium	269.00			F
7440-41-7	Beryllium	1.00	U		F
7440-43-9	Cadmium	2.00	U		F
7440-70-2	Calcium	340000.00			F
7440-47-3	Chromium	15.60			F
7440-48-4	Cobalt	8.00	B		F
7440-50-8	Copper	90.60			F
7439-89-6	Iron	8790.00			F
7439-92-1	Lead	29.50	S		F
7439-95-4	Magnesium	65700.00			F
7439-96-5	Manganese	982.00			F
7439-97-6	Mercury	.26			CV
7440-02-0	Nickel	58.80			F
7440-09-7	Potassium	3540.00	B		F
7782-49-2	Selenium	3.40	B		F
7440-22-4	Silver	12.10			F
7440-23-5	Sodium	8790.00			F
7440-28-0	Thallium	2.00	U		F
7440-62-2	Vanadium	20.00	B		F
7440-66-6	Zinc	94.40	E		F
	Cyanide	10.00	U		CA

Color Before: BROWN Clarity Before: CLOUDY Texture:
 Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
 FC0031 REFLECTS CLIENT ID FCR-GW-MW3-01

1
INORGANIC ANALYSIS DATA SHEET

FC0241

Lab Name: SOUTHWEST LABS OF OK

Contract: 68-D9-0089

Lab Code: SWOK

Case No.: 8929

SAS No.:

SDG No.: FC0031

Matrix (soil/water): WATER

Lab Sample ID: 892909

Level (low/med): LOW

Date Received: 3/04/92

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	R	M
7429-90-5	Aluminum	15600.00			P
7440-36-0	Antimony	17.00	U		P
7440-38-2	Arsenic	4.40	B		F
7440-39-3	Barium	505.00			P
7440-41-7	Beryllium	2.30	B		P
7440-43-9	Cadmium	2.00	U		P
7440-70-2	Calcium	774000.00			P
7440-47-3	Chromium	37.10			P
7440-48-4	Cobalt	23.10	B		F
7440-50-8	Copper	142.00			P
7439-89-6	Iron	18100.00			P
7439-92-1	Lead	89.40		W	F
7439-95-4	Magnesium	178000.00			P
7439-96-5	Manganese	2170.00			P
7439-97-6	Mercury	.67			CV
7440-02-0	Nickel	65.20			P
7440-09-7	Potassium	5530.00			P
7782-49-2	Selenium	4.90	B	S	F
7440-22-4	Silver	2.00	U		P
7440-23-5	Sodium	5840.00			P
7440-28-0	Thallium	2.00	U		F
7440-62-2	Vanadium	53.80			P
7440-66-6	Zinc	224.00		E	P
	Cyanide	10.00	U		CA

Color Before: BROWN

Clarity Before: CLOUDY

Texture:

Color After: COLORLESS

Clarity After: CLEAR

Artifacts:

Comments:

FC0241 REFLECTS CLIENT ID FCR-GW-MW24-01

1
INORGANIC ANALYSIS DATA SHEET

FC1021

Lab Name: SOUTHWEST LABS OF OK

Contract: 68-D9-0089

Lab Code: SWOK

Case No.: 8929

SAS No.:

SDG No.: FC0031

Matrix (soil/water): WATER

Lab Sample ID: 892910

Level (low/med): LDW

Date Received: 3/04/92

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	108.00	B		P
7440-36-0	Antimony	17.00	U		P
7440-38-2	Arsenic	2.00	U	W	F
7440-39-3	Barium	6.00	U		P
7440-41-7	Beryllium	1.00	U		P
7440-43-9	Cadmium	2.00	U		P
7440-70-2	Calcium	266.00	U		P
7440-47-3	Chromium	4.00	U		P
7440-48-4	Cobalt	4.00	U		P
7440-50-8	Copper	6.00	U		P
7439-89-6	Iron	40.00	U		P
7439-92-1	Lead	2.50	B		F
7439-95-4	Magnesium	112.00	U		P
7439-96-5	Manganese	2.00	U		P
7439-97-6	Mercury	.20	U		CV
7440-02-0	Nickel	7.00	U		P
7440-09-7	Potassium	402.00	U		P
7782-49-2	Selenium	2.00	U		F
7440-22-4	Silver	2.00	U		P
7440-23-5	Sodium	682.00	B		P
7440-28-0	Thallium	2.00	U	W	F
7440-62-2	Vanadium	4.00	U		P
7440-66-6	Zinc	6.50	B	E	P
	Cyanide	10.00	U		CA

Color Before: COLORLESS

Clarity Before: CLEAR

Texture:

Color After: COLORLESS

Clarity After: CLEAR

Artifacts:

Comments:

FC1021 REFLECTS CLIENT ID FCR-GW-MW102-01ER

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
 5555 GLENWOOD HILLS PARKWAY
 GRAND RAPIDS, MI 49588-0874

Client ID: FCR-SB-MW21-12.0 MSD **Project ID:** AMPHENOL FAC.-RFI

SWLO ID: 8821.09 **Report:** 8821.09

Collected: 02/20/1992 **Report Date:** 03-17-1992 **Page:** 1
Received: 02/22/1992 **Last Modified:** **Matrix:** Soil

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
TOTAL CYANIDE		0.5	mg/kg	ND	02/27/92	SM 4120
AMENABLE CN		0.5	mg/kg	ND	02/27/92	SM 412F

ND = NOT DETECTED ABOVE QUANTITATION LIMIT
 = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
 J = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE
 NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
 EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
 D = SURROGATES DILUTED OUT
 J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
 5555 GLENWOOD HILLS PARKWAY
 GRAND RAPIDS, MI 49588-0874

Client ID: FCR-SB-MW21-12.0-Old **Project ID:** AMPHENOL FAC.-RFI

SWLO ID: 8821.10 **Report:** 8821.10

Collected: 02/20/1992 **Report Date:** 03-17-1992 **Page:** 1
Received: 02/22/1992 **Last Modified:** **Matrix:** Soil

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
TOTAL CYANIDE		0.5	mg/kg	ND	02/27/92	SM 4120
AMENABLE CN		0.5	mg/kg	ND	02/27/92	SM 412F

* = NOT DETECTED ABOVE QUANTITATION LIMIT
 * = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
 I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE
 NA = NOT APPLICABLE
 Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
 EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
 D = SURROGATES DILUTED OUT
 J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION
 SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5555 GLENWOOD HILLS PARKWAY
GRAND RAPIDS, MI 49588-0874

Client ID: FCR-SB-MW21-18.0-01 **Project ID:** AMPHENOL FAC.-RFI
SWLO ID: 8821.11 **Report:** 8821.11

Collected: 02/20/1992 **Report Date:** 03-17-1992 **Page:** 1
Received: 02/22/1992 **Last Modified:** **Matrix:** Soil

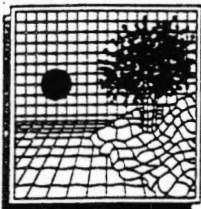
TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
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*** INORGANICS ***

TOTAL CYANIDE		0.5	mg/kg	ND	02/27/92	SM 412D
AMENABLE CN		0.5	mg/kg	ND	02/27/92	SM 412F

= NOT DETECTED ABOVE QUANTITATION LIMIT
 = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
 I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE
 NA = NOT APPLICABLE
 Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
 EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
 D = SURROGATES DILUTED OUT
 J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION
 SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

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CLIENT: WW ENGINEERING
5555 GLENWOOD HILLS PARKWAY
GRAND RAPIDS, MI. 49588-0874
ATTN: TIM CLOUD

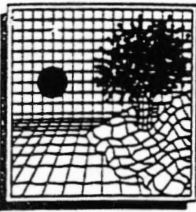
REPORT: 8783.01M

DATE: 03-10-92

SAMPLE MATRIX: SOIL
SWLO #: 8783.01
METHOD REFERENCE: SM 412F
DATE SUBMITTED: 02-20-92

<u>CLIENT ID</u>	<u>SWLO I.D</u>	<u>DET. LIMIT</u>	<u>UNIT</u>	<u>AMENABLE CYANIDE</u>	<u>DATE ANALYZED</u>
FCR-SB-mw25-10.0-01	8783.01	0.5	mg/kg	ND	02-24-92

ND = NOT DETECTED ABOVE QUANTITATION LIMIT
SM = STANDARD METHOD, 16TH EDITION



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CLIENT: WW ENGINEERING
5555 GLENWOOD HILLS PARKWAY
GRAND RAPIDS, MI. 49588-0874
ATTN: TIM CLOUD

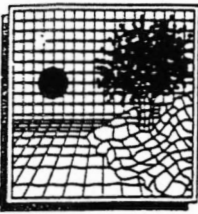
REPORT: 8736.01-04M

DATE: 03-10-92

SAMPLE MATRIX: SOIL
SWLO #: 8736.01 - 8736.04
METHOD REFERENCE: SM 412F
DATE SUBMITTED: 02-14-92

<u>CLIENT ID</u>	<u>SWLO I.D</u>	<u>DET. LIMIT</u>	<u>UNIT</u>	<u>AMENABLE CYANIDE</u>	<u>DATE ANALYZED</u>
FCR-SB-SB6-8.0-01	8736.01	0.5	mg/kg	ND	02-24-92
FCR-SB-SB6-8.0-01d	8736.02	0.5	mg/kg	ND	02-24-92
FCR-SB-SB6-17.0-01	8736.03	0.5	mg/kg	ND	02-24-92
FCR-SB-SB6-0.0-01b	8736.04	0.5	mg/kg	ND	02-24-92

ND = NOT DETECTED ABOVE QUANTITATION LIMIT
SM = STANDARD METHOD, 16TH EDITION



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2858

CLIENT: WW ENGINEERING
5555 GLENWOOD HILLS PARKWAY
GRAND RAPIDS, MI. 49588-0874
ATTN: TIM CLOUD

REPORT: 8757.01M

DATE: 03-10-92

SAMPLE MATRIX: SOIL
SWLO #: 8757.01
METHOD REFERENCE: SM 412F
DATE SUBMITTED: 02-15-92

<u>CLIENT ID</u>	<u>SWLO I.D</u>	<u>DET. LIMIT</u>	<u>UNIT</u>	<u>AMENABLE CYANIDE</u>	<u>DATE ANALYZED</u>
FCR-SB-MW-23-21.5-01	8757.01	0.5	mg/kg	ND	02-24-92

ND = NOT DETECTED ABOVE QUANTITATION LIMIT
SM = STANDARD METHOD, 16TH EDITION

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-SB-MW26-6.0-01 **Project ID:** AMPHENOL FACILITYRFI
SWLO ID: 8652.01 **Report:** 8652.01

Collected: 02/04/1992 **Report Date:** 03-02-1992 **Page:** 1
Received: 02/06/1992 **Last Modified:** **Matrix:** Soil

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
TOTAL CYANIDE		0.5	mg/kg	ND	02/11/92	SM 412D
AMENABLE CN		0.5	mg/kg	ND	02/11/92	SM 412F

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

I = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

J = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
 5010 STONE MILL ROAD
 BLOOMINGTON, IN 47408

Client ID: FCR-SB-MW26-12.0-01 Project ID: AMPHENOL FACILITYRFI
 SWLO ID: 8652.02 Report: 8652.02

Collected: 02/04/1992 Report Date: 03-02-1992 Page: 1
 Received: 02/06/1992 Last Modified: Matrix: Soil

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
TOTAL CYANIDE		0.5	mg/kg	ND	02/11/92	SM 412D
AMENABLE CN		0.5	mg/kg	ND	02/11/92	SM 412F

= NOT DETECTED ABOVE QUANTITATION LIMIT
 = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
 I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE
 NA = NOT APPLICABLE
 Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
 EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
 D = SURROGATES DILUTED OUT
 J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION
 SW = EPA METHCOOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-SB-SB3-0.0-01

Project ID: CURTIS-FRANKLIN RFI

SWLO ID: 8674.06

Report: 8674.06

Collected: 02/07/1992

Report Date: 03/02/1992

Page: 1

Received: 02/08/1992

Last Modified:

Matrix: Soil

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
TOTAL CYANIDE		0.5	mg/kg	ND	02/11/92	SM 412D
AMENABLE CN		0.5	mg/kg	ND	02/11/92	SM 412F

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

U = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: **WW ENGINEERING & SCIENCE, INC.**
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: **FCR-SB-MW24-6.0-01** Project ID: **CURTIS-FRANKLIN RFI**
 SWLO ID: **8674.07** Report: **8674.07**

Collected: **02/06/1992** Report Date: **03/02/1992** Page: **1**
 Received: **02/08/1992** Last Modified: Matrix: **Soil**

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
TOTAL CYANIDE		0.5	mg/kg	ND	02/11/92	SM 412D
AMENABLE CN		0.5	mg/kg	ND	02/11/92	SM 412F

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
 UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE; CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-SB-MW24-15.0-01 **Project ID:** CURTIS-FRANKLIN RFI

SWLO ID: 8674.08 **Report:** 8674.08

Collected: 02/06/1992 **Report Date:** 03/02/1992 **Page:** 1
Received: 02/08/1992 **Last Modified:** **Matrix:** Soil

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
TOTAL CYANIDE		0.5	mg/kg	ND	02/11/92	SM 412D
AMENABLE CN		0.5	mg/kg	ND	02/11/92	SM 412F

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

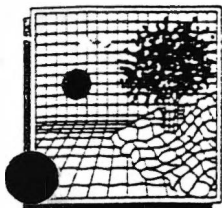
EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SU = EPA METHODOLOGY, "#SU846", THIRD EDITION, NOVEMBER 1986



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2858

CLIENT: WW ENGINEERING
5010 STONE MILL ROAD
BLOOMINGTON, ID 47408
ATTN: TIM CLOUD

REPORT: 8855.01-17M

DATE: 03-24-92

SAMPLE MATRIX: SOIL
SWLO #: 8855.01 - 8855.17
METHOD REFERENCE: SM 412F
DATE SUBMITTED: 02-27-92

<u>CLIENT ID</u>	<u>SWLO I.D.</u>	<u>DET. LIMIT</u>	<u>UNIT</u>	<u>AMENABLE CYANIDE</u>	<u>DATE ANALYZED</u>
\FCR-SS-SD04-01	8855.01	0.5	mg/kg	ND	03-02-92
\FCR-SS-SD03-01	8855.02	0.5	mg/kg	ND	03-02-92
\FCR-SW-SW01-01	8855.03	0.5	mg/kg	ND	03-02-92
\FCR-SS-SD01-01	8855.04	0.5	mg/kg	ND	03-02-92
\FCR-SW-SW02-01	8855.05	0.5	mg/kg	ND	03-02-92
\FCR-SW-SW02-01D	8855.06	0.5	mg/kg	ND	03-02-92
\FCR-SS-SD02-01	8855.09	0.5	mg/kg	ND	03-02-92
\FCR-SW-SW05-01	8855.10	0.5	mg/kg	ND	03-02-92
→ \FCR-SB-SB01-12.0-01	8855.11	0.5	mg/kg	17.4	03-02-92
→ \FCR-SB-SB01-10.0-01	8855.12	0.5	mg/kg	17.8	03-02-92
→ \FCR-SB-SB02-10.0-01	8855.13	0.5	mg/kg	0.8	03-02-92
\FCR-SS-SD05-01	8855.14	0.5	mg/kg	ND	03-02-92
\FCR-SS-SD0-01b	8855.16	0.5	mg/kg	ND	03-02-92
\FCR-SS-SD2-01D	8855.17	0.5	mg/kg	ND	03-02-92

ND = NOT DETECTED ABOVE QUANTITATION LIMIT
SM = STANDARD METHOD, 16TH EDITION

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-SB-MW-23-21.5-01

Project ID: CURTIS-FRANKLIN RFI

SWLO ID: 8757.01

Report: 8757.01

Collected: 02/13/1992

Report Date: 03/11/1992

Page: 1

Received: 02/15/1992

Last Modified:

Matrix: Soil

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
TOTAL CYANIDE		0.5	mg/kg	ND	02/24/92	SM 412D
AMENABLE CN		0.5	mg/kg	ND	02/24/92	SM 412F

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

I = INABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, #SW846, THIRD EDITION, NOVEMBER 1986

04-01-92

09:22

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SOUTHWEST LAB

ENV ENG & SCIENCE

004

1700 W. Albany • Suite "C" • Broken Arrow, Oklahoma 74012 • 918-251-2858 • FAX: 918-251-2599

CLIENT: WW ENGINEERING
5555 GLENWOOD HILLS PARKWAY
GRAND RAPIDS, MI. 49588-0874

REPORT: 8722.01-

DATE: 03-10-92

SAMPLE MATRIX: SOIL
SWLD #: 8722.01 - .03
METHOD REFERENCE: SM 412F
DATE SUBMITTED: 02-12-92

CLIENT ID	SWLD I.D	DET. LIMIT	UNIT	AMENABLE CYANIDE	DATE ANALYZED
FCR-SB-MW22A-2.0-01	8722.01	0.5	mg/kg	ND	02-21-92
FCR-SB-MW-22-10.0-01	8722.02	0.5	mg/kg	ND	02-21-92
FCR-SB-MW-22-19.0-01	8722.03	0.5	mg/kg	ND	02-21-92

ND = NOT DETECTED ABOVE QUANTITATION LIMIT
SM = STANDARD METHOD, 16TH EDITION

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-SB-MW22A-2.0-01 Project ID: CURTIS-FRANKLIN RFI

SWLO ID: 8722.01 Report: 8722.01

Collected: 02/11/1992 Report Date: 03/10/1992 Page: 1
Received: 02/13/1992 Last Modified: 03/09/1992 Matrix: Soil

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
TOTAL CYANIDE		10.0	ug/l	ND	01/21/92	SM 412D
AMENABLE CN		10	ug/l	ND	02/21/92	SM 412F

ND = NOT DETECTED ABOVE QUANTITATION LIMIT
= ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
= UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE
NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
D = SURROGATES DILUTED OUT
J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-SB-MW-22-10.0-01 Project ID: CURTIS-FRANKLIN RFI

SWLO ID: 8722.02 Report: 8722.02

Collected: 02/11/1992 Report Date: 03/10/1992 Page: 1
Received: 02/13/1992 Last Modified: 03/09/1992 Matrix: Soil

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
TOTAL CYANIDE		10.0	ug/L	ND	01/21/92	SM 412D
AMENABLE CN		10	ug/L	ND	02/21/92	SM 412F

ND = NOT DETECTED ABOVE QUANTITATION LIMIT
= ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
= UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE
NA = NOT APPLICABLE

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
D = SURROGATES DILUTED OUT
J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
EPA = #EPA600/4-79-020, MARCH 1985

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: **WW ENGINEERING & SCIENCE, INC.**
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: **FCR-SB-MW-22-19.0-01** Project ID: **CURTIS-FRANKLIN RFI**
 SWLO ID: **8722.03** Report: **8722.03**

Collected: **02/11/1992** Report Date: **03/10/1992** Page: **1**
 Received: **02/13/1992** Last Modified: **03/09/1992** Matrix: **Soil**

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
TOTAL CYANIDE		10.0	ug/l	ND	01/21/92	SM 412D
AMENABLE CN		10	ug/l	ND	02/21/92	SM 412F

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

● ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
 UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
 EPA = #EPA600/4-79-020, MARCH 1985

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D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-SB-MW20-6.0-01

Project ID: CURTIS-FRANKLIN RFI

SWLO ID: 8665.01

Report: 8665.01

Collected: 02/05/1992

Report Date: 03/02/1992

Page: 1

Received: 02/07/1992

Last Modified:

Matrix: Soil

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
TOTAL CYANIDE		0.5	mg/kg	ND	02/11/92	SM 412D
AMENABLE CN		0.5	mg/kg	ND	02/11/92	SM 412F

☐ = NOT DETECTED ABOVE QUANTITATION LIMIT

☐ = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

] = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

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D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-SB-MW20-12.0-01 Project ID: CURTIS-FRANKLIN RFI
SWLO ID: 8665.02 Report: 8665.02

Collected: 02/05/1992 Report Date: 03/02/1992 Page: 1
Received: 02/07/1992 Last Modified: Matrix: Soil

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
TOTAL CYANIDE		0.5	mg/kg	ND	02/11/92	SM 412D
AMENABLE CN		0.5	mg/kg	ND	02/11/92	SM 412F

= NOT DETECTED ABOVE QUANTITATION LIMIT
 = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
 I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE
 NA = NOT APPLICABLE
 Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
 EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
 D = SURROGATES DILUTED OUT
 J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION
 SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-SB-SB3-6.0-01

Project ID: CURTIS-FRANKLIN RFI

SWLO ID: 8674.01

Report: 8674.01

Collected: 02/07/1992

Report Date: 03/02/1992

Page: 1

Received: 02/08/1992

Last Modified:

Matrix: Soil

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
TOTAL CYANIDE		0.5	mg/kg	ND	02/11/92	SM 412D
AMEXABLE CN		0.5	mg/kg	ND	02/11/92	SM 412F

= NOT DETECTED ABOVE QUANTITATION LIMIT
 = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
 I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE
 NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF GC LIMITS
 D = SURROGATES DILUTED OUT
 J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: PCR-SB-SB3-10.0-01

Project ID: CURTIS-FRANKLIN RFI

SWLO ID: 8674.02

Report: 8674.02

Collected: 02/07/1992

Report Date: 03/02/1992

Page: 1

Received: 02/08/1992

Last Modified:

Matrix: Soil

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
TOTAL CYANIDE		0.5	mg/kg	ND	02/11/92	SM 412D
AMENABLE CN		0.5	mg/kg	ND	02/11/92	SM 412F

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NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

♦ = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-SB-SB4-6.0-01

Project ID: CURTIS-FRANKLIN RFI

SWLO ID: 8674.03

Report: 8674.03

Collected: 02/07/1992

Report Date: 03/02/1992

Page: 1

Received: 02/08/1992

Last Modified:

Matrix: Soil

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
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*** INORGANICS ***

TOTAL CYANIDE		0.5	mg/kg	ND	02/11/92	SM 412D
AMENABLE CN		0.5	mg/kg	ND	02/11/92	SM 412F

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

□ = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

⊥ = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

NA = NOT APPLICABLE

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#54846", THIRD EDITION, NOVEMBER 1986

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
EPA = #EPA600/4-79-020, MARCH 1985

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
 5010 STONE MILL ROAD
 BLOOMINGTON, IN 47408

Client ID: FCR-SB-SB4-10.0-01 **Project ID:** CURTIS-FRANKLIN RFI

SWLO ID: 8674.04 **Report:** 8674.04

Collected: 02/07/1992 **Report Date:** 03/02/1992 **Page:** 1
Received: 02/08/1992 **Last Modified:** **Matrix:** Soil

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
TOTAL CYANIDE		0.5	mg/kg	ND	02/11/92	SM 412D
AMENABLE CN		0.5	mg/kg	ND	02/11/92	SM 412F

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

I = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

J = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: NW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-SB-SB4-10.0-01d Project ID: CURTIS-FRANKLIN RFI
SWLO ID: 8674.05 Report: 8674.05

Collected: 02/07/1992 Report Date: 03/02/1992 Page: 1
Received: 02/08/1992 Last Modified: Matrix: Soil

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
TOTAL CYANIDE		0.5	mg/kg	ND	02/11/92	SM 412D
AMENABLE CN		0.5	mg/kg	ND	02/11/92	SM 412F

ND = NOT DETECTED ABOVE QUANTITATION LIMIT
B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE
NA = NOT APPLICABLE
Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
D = SURROGATES DILUTED OUT
J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION
SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW27150-03

Lab Name: SWL-TULSA Contract: WWENG

Lab Code: SWOK Case No.: WWENG SAS No.: _____ SDG No.: 12302

Matrix: (soil/water) SOIL Lab Sample ID: 1230201

Sample wt/vol: 4.0 (g/mL) G Lab File ID: KC105

Level: (low/med) MED Date Received: 01/15/93

% Moisture: not dec. 12 Date Analyzed: 01/20/93

GC Column: DB624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000 (uL) Soil Aliquot Volume: 100 (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO. COMPOUND Q

74-87-3	-----Chloromethane	1400	U
74-83-9	-----Bromomethane	1400	U
75-01-4	-----Vinyl Chloride	1400	U
75-00-3	-----Chloroethane	1400	U
75-09-2	-----Methylene Chloride	660	J
67-64-1	-----Acetone	680	BJ
75-15-0	-----Carbon Disulfide	1400	U
75-35-4	-----1,1-Dichloroethene	1400	U
75-34-3	-----1,1-Dichloroethane	1400	U
540-59-0	-----1,2-Dichloroethene (total)	1400	U
67-66-3	-----Chloroform	1400	U
107-06-2	-----1,2-Dichloroethane	1400	U
78-93-3	-----2-Butanone	1400	U
71-55-6	-----1,1,1-Trichloroethane	1400	U
56-23-5	-----Carbon Tetrachloride	1400	U
75-27-4	-----Bromodichloromethane	1400	U
78-87-5	-----1,2-Dichloropropane	1400	U
10061-01-5	-----cis-1,3-Dichloropropene	1400	U
79-01-6	-----Trichloroethene	1400	U
124-48-1	-----Dibromochloromethane	1400	U
79-00-5	-----1,1,2-Trichloroethane	1400	U
71-43-2	-----Benzene	1400	U
10061-02-6	-----Trans-1,3-Dichloropropene	1400	U
75-25-2	-----Bromoform	1400	U
108-10-1	-----4-Methyl-2-Pentanone	1400	U
591-78-6	-----2-Hexanone	1400	U
127-18-4	-----Tetrachloroethene	17000	
79-34-5	-----1,1,2,2-Tetrachloroethane	1400	U
108-88-3	-----Toluene	1400	U
108-90-7	-----Chlorobenzene	1400	U
100-41-4	-----Ethylbenzene	1400	U
100-42-5	-----Styrene	1400	U
1330-20-7	-----Xylene (total)	1400	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW27150-03D

Name: SWL-TULSA Contract: WWENG
 Lab Code: SWOK Case No.: WWENG SAS No.: _____ SDG No.: 12302
 Matrix: (soil/water) SOIL Lab Sample ID: 1230202
 Sample wt/vol: 4.0 (g/mL) G Lab File ID: KC107
 Level: (low/med) MED Date Received: 01/15/93
 % Moisture: not dec. 10 Date Analyzed: 01/20/93
 GC Column: DB624 ID: 0.530 (mm) Dilution Factor: 1.0
 Soil Extract Volume: 10000 (uL) Soil Aliquot Volume: 100 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/KG</u>	Q
74-87-3	-----Chloromethane	1300	U
74-83-9	-----Bromomethane	1300	U
75-01-4	-----Vinyl Chloride	1300	U
75-00-3	-----Chloroethane	1300	U
75-09-2	-----Methylene Chloride	1300	U
67-64-1	-----Acetone	500	BJ
75-15-0	-----Carbon Disulfide	1300	U
75-35-4	-----1,1-Dichloroethene	1300	U
75-34-3	-----1,1-Dichloroethane	1300	U
540-59-0	-----1,2-Dichloroethene (total)	1300	U
67-66-3	-----Chloroform	1300	U
107-06-2	-----1,2-Dichloroethane	1300	U
78-93-3	-----2-Butanone	390	J
71-55-6	-----1,1,1-Trichloroethane	1300	U
56-23-5	-----Carbon Tetrachloride	1300	U
75-27-4	-----Bromodichloromethane	1300	U
78-87-5	-----1,2-Dichloropropane	1300	U
10061-01-5	-----cis-1,3-Dichloropropene	1300	U
79-01-6	-----Trichloroethene	1300	U
124-48-1	-----Dibromochloromethane	1300	U
79-00-5	-----1,1,2-Trichloroethane	1300	U
71-43-2	-----Benzene	1300	U
10061-02-6	-----Trans-1,3-Dichloropropene	1300	U
75-25-2	-----Bromoform	1300	U
108-10-1	-----4-Methyl-2-Pentanone	1300	U
591-78-6	-----2-Hexanone	1300	U
127-18-4	-----Tetrachloroethene	25000	
79-34-5	-----1,1,2,2-Tetrachloroethane	1300	U
108-88-3	-----Toluene	1300	U
108-90-7	-----Chlorobenzene	1300	U
100-41-4	-----Ethylbenzene	1300	U
100-42-5	-----Styrene	1300	U
1330-20-7	-----Xylene (total)	1300	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW27230-03

Name: SWL-TULSA Contract: WWENG
 Lab Code: SWOK Case No.: WWENG SAS No.: _____ SDG No.: 12302
 Matrix: (soil/water) SOIL Lab Sample ID: 1230204
 Sample wt/vol: 5.0 (g/mL) G Lab File ID: KC073
 Level: (low/med) LOW Date Received: 01/15/93
 % Moisture: not dec. 15 Date Analyzed: 01/18/93
 GC Column: DB624 ID: 0.530 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO. COMPOUND Q

74-87-3	-----Chloromethane	12	U
74-83-9	-----Bromomethane	12	U
75-01-4	-----Vinyl Chloride	12	U
75-00-3	-----Chloroethane	12	U
75-09-2	-----Methylene Chloride	2	J
67-64-1	-----Acetone	59	B
75-15-0	-----Carbon Disulfide	12	U
75-35-4	-----1,1-Dichloroethene	12	U
75-34-3	-----1,1-Dichloroethane	12	U
540-59-0	-----1,2-Dichloroethene (total)	12	U
67-66-3	-----Chloroform	3	J
107-06-2	-----1,2-Dichloroethane	12	U
78-93-3	-----2-Butanone	7	J
71-55-6	-----1,1,1-Trichloroethane	3	J
56-23-5	-----Carbon Tetrachloride	12	U
75-27-4	-----Bromodichloromethane	12	U
78-87-5	-----1,2-Dichloropropane	12	U
10061-01-5	-----cis-1,3-Dichloropropene	12	U
79-01-6	-----Trichloroethene	12	U
124-48-1	-----Dibromochloromethane	12	U
79-00-5	-----1,1,2-Trichloroethane	12	U
71-43-2	-----Benzene	12	U
10061-02-6	-----Trans-1,3-Dichloropropene	12	U
75-25-2	-----Bromoform	12	U
108-10-1	-----4-Methyl-2-Pentanone	12	U
591-78-6	-----2-Hexanone	12	U
127-18-4	-----Tetrachloroethene	100	
79-34-5	-----1,1,2,2-Tetrachloroethane	12	U
108-88-3	-----Toluene	12	U
108-90-7	-----Chlorobenzene	12	U
100-41-4	-----Ethylbenzene	12	U
100-42-5	-----Styrene	12	U
1330-20-7	-----Xylene (total)	2	J

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW27EB-03

Lab Name: SWL-TULSA Contract: WWENG

Lab Code: SWOK Case No.: WWENG SAS No.: _____ SDG No.: 12302

Matrix: (soil/water) SOIL Lab Sample ID: 1230203

Sample wt/vol: 5.0 (g/mL) G Lab File ID: KC089

Level: (low/med) LOW Date Received: 01/15/93

% Moisture: not dec. 0 Date Analyzed: 01/19/93

GC Column: DB624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO. COMPOUND Q

74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	9	BJ
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	Trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

INORGANIC ANALYSES DATA SHEET

EB03

Lab Name: SOUTHWEST_LAB_OF_OK_____ Contract: _____

Lab Code: SWOK_____ Case No.: 12302_____ SAS No.: _____ SDG No.: EB03_____

Matrix (soil/water): SOIL_____ Lab Sample ID: 1230203_____

Level (low/med): LOW_____ Date Received: 01/15/93

% Solids: _____ 99.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	21.0	B		P
7440-36-0	Antimony	5.8	U	N	P
7440-38-2	Arsenic	0.40	U	WN	F
7440-39-3	Barium	1.4	U		P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	0.40	U		P
7440-70-2	Calcium	80.1	B		P
7440-47-3	Chromium	0.80	U		P
7440-48-4	Cobalt	1.0	U		P
7440-50-8	Copper	4.0	B	*	P
7439-89-6	Iron	26.9			P
7439-92-1	Lead	0.40	B	*	F
7439-95-4	Magnesium	37.8	B		P
7439-96-5	Manganese	0.22	B		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	1.2	U		P
7440-09-7	Potassium	62.1	U		P
7782-49-2	Selenium	0.20	U		F
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	101	U		P
7440-28-0	Thallium	0.60	U	N	F
7440-62-2	Vanadium	0.80	U		P
7440-66-6	Zinc	0.44	B	*	P
	Cyanide	0.50	U		CA

Color Before: WHITE_____ Clarity Before: _____ Texture: MEDIUM

Color After: COLORLESS_____ Clarity After: _____ Artifacts: _____

Comments:

EPA_SAMPLE_ID_EB03 = CLIENT_ID_FCR-SB-MW27-EB-03_____

INORGANIC ANALYSES DATA SHEET

1503

Lab Name: SOUTHWEST LAB OF OK Contract: _____
 Lab Code: SWOK Case No.: 12302 SAS No.: _____ SDG No.: EB03
 Matrix (soil/water): SOIL Lab Sample ID: 1230201
 Level (low/med): LOW Date Received: 01/15/93
 % Solids: 91.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1960			F
7440-36-0	Antimony	6.4	U	N	F
7440-38-2	Arsenic	0.65	B	WN	F
7440-39-3	Barium	7.9	B		F
7440-41-7	Beryllium	1.1			F
7440-43-9	Cadmium	0.44	U		F
7440-70-2	Calcium	91200			P
7440-47-3	Chromium	4.0			F
7440-48-4	Cobalt	1.8	B		F
7440-50-8	Copper	22.2		*	F
7439-89-6	Iron	4470			F
7439-92-1	Lead	3.6		*	F
7439-95-4	Magnesium	22400			F
7439-96-5	Manganese	149			F
7439-97-6	Mercury	0.11	U		AV
7440-02-0	Nickel	7.5	B		F
7440-09-7	Potassium	435	B		F
7782-49-2	Selenium	0.22	U	W	F
7440-22-4	Silver	1.4	B		F
7440-23-5	Sodium	111	U		F
7440-28-0	Thallium	0.66	U	N	F
7440-62-2	Vanadium	6.6	B		F
7440-66-6	Zinc	16.0		*	F
	Cyanide	0.55	U		CA

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM
 Color After: COLORLESS Clarity After: _____ Artifacts: _____

Comments:

EPA_SAMPLE_ID_1503 = CLIENT_ID_FCR-SB-MW27-15.0-03

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2303

Lab Name: SOUTHWEST LAB OF OK _____ Contract: _____

Lab Code: SWOK _____ Case No.: 12302 _____ SAS No.: _____ SDG No.: EB03 _____

Matrix (soil/water): SOIL _____ Lab Sample ID: 1230204 _____

Level (low/med): LOW _____ Date Received: 01/15/93

% Solids: 86.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2100			P
7440-36-0	Antimony	6.7	U	N	P
7440-38-2	Arsenic	0.85	B	N	F
7440-39-3	Barium	8.8	B		P
7440-41-7	Beryllium	1.6			P
7440-43-9	Cadmium	0.49	B		P
7440-70-2	Calcium	80600			P
7440-47-3	Chromium	3.5			P
7440-48-4	Cobalt	1.2	U		P
7440-50-8	Copper	70.7		*	P
7439-89-6	Iron	4490			P
7439-92-1	Lead	5.8		*	F
7439-95-4	Magnesium	21900			P
7439-96-5	Manganese	141			P
7439-97-6	Mercury	0.12	U		AV
7440-02-0	Nickel	14.6			P
7440-09-7	Potassium	411	B		P
7782-49-2	Selenium	0.27	B		F
7440-22-4	Silver	1.7	B		P
7440-23-5	Sodium	117	U		P
7440-28-0	Thallium	0.70	U	N	F
7440-62-2	Vanadium	6.4	B		P
7440-66-6	Zinc	30.9		*	P
	Cyanide	0.58	U		CA

Color Before: BROWN _____ Clarity Before: _____ Texture: MEDIUM

Color After: COLORLESS _____ Clarity After: _____ Artifacts: _____

Comments:

EPA_SAMPLE_ID_2303 = CLIENT_ID_FCR-SB-MW27-23.0-03 _____

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-SB-MW27 15.0-03

Project ID: FRANKLIN-CURTIS RFI

SWLO ID: 12302.01

Report: 12302.01

Collected: 01/03/1993

Report Date: 02/04/1993

Page: 1

Received: 01/15/1993

Last Modified:

Matrix: Soil

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
------	-------------------	--------------------	-------	---------	------------------	---------------------

*** INORGANICS ***

AMENABLE CN

0.5

mg/kg

ND

01/26/93

SM 412F

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

J = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-SB-MW27 15.0-03D Project ID: FRANKLIN-CURTIS RFI
SWLO ID: 12302.02 Report: 12302.02

Collected: 01/03/1993 Report Date: 02/04/1993 Page: 1
Received: 01/15/1993 Last Modified: Matrix: Soil

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
AMENABLE CN		0.5	mg/kg	ND	01/26/93	SM 412F

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: **WW ENGINEERING & SCIENCE, INC.**
 5010 STONE MILL ROAD
 BLOOMINGTON, IN 47408

Client ID: **FCR-SB-MW27 EB-03**

Project ID: **FRANKLIN-CURTIS RFI**

SWLO ID: **12302.03**

Report: **12302.03**

Collected: **01/03/1993**

Report Date: **02/04/1993**

Page: **1**

Received: **01/15/1993**

Last Modified:

Matrix: **Soil**

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
AMENABLE CN		0.5	mg/kg	ND	01/26/93	SM 412F

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

I = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

U = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-SB-MW27 23.0-03 Project ID: FRANKLIN-CURTIS RFI
SWLO ID: 12302.04 Report: 12302.04

Collected: 01/03/1993 Report Date: 02/04/1993 Page: 1
Received: 01/15/1993 Last Modified: Matrix: Soil

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
AMENABLE CN		0.5	mg/kg	ND	01/26/93	SM 412F

ND ABOVE QUANTITATION LIMIT
ND IN BLANK AS WELL AS SAMPLE
ND DUE TO MATRIX INTERFERENCE

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
D = SURROGATES DILUTED OUT
J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

METHODS, 16th EDITION, 1985
/4-79-020, MARCH 1985

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

VOLATILE ORGANICS ANALYSIS DATA SHEET

W RRSSSD0401B

b Name: SWL-TULSA

Contract: WWENG-MI

Lab Code: SWOK

Case No.: WWEN1

SAS No.: _____

SDG No.: 8855

Matrix: (soil/water) SOIL

Lab Sample ID: 885516

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: IC699

Level: (low/med) LOW

Date Received: 02/27/92

% Moisture: not dec. 1

Date Analyzed: 02/28/92

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

0069

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WFL SSSD01/01

Name: SWL-TULSA

Contract: WWENG-MI

Lab Code: SWOK

Case No.: WWEN1

SAS No.: _____

SDG No.: 8855

Matrix: (soil/water) SOIL

Lab Sample ID: 885504

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: IC714

Level: (low/med) LOW

Date Received: 02/27/92

% Moisture: not dec. 15

Date Analyzed: 03/02/92

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

74-87-3	-----Chloromethane	12	U
74-83-9	-----Bromomethane	12	U
75-01-4	-----Vinyl Chloride	12	U
75-00-3	-----Chloroethane	12	U
75-09-2	-----Methylene Chloride	35	
67-64-1	-----Acetone	12	U
75-15-0	-----Carbon Disulfide	6	U
75-35-4	-----1,1-Dichloroethene	6	U
75-34-3	-----1,1-Dichloroethane	6	U
540-59-0	-----1,2-Dichloroethene (total)	6	U
67-66-3	-----Chloroform	6	U
107-06-2	-----1,2-Dichloroethane	6	U
78-93-3	-----2-Butanone	12	U
71-55-6	-----1,1,1-Trichloroethane	6	U
56-23-5	-----Carbon Tetrachloride	6	U
108-05-4	-----Vinyl Acetate	12	U
75-27-4	-----Bromodichloromethane	6	U
78-87-5	-----1,2-Dichloropropane	6	U
10061-01-5	-----cis-1,3-Dichloropropene	6	U
79-01-6	-----Trichloroethene	6	U
124-48-1	-----Dibromochloromethane	6	U
79-00-5	-----1,1,2-Trichloroethane	6	U
71-43-2	-----Benzene	6	U
10061-02-6	-----Trans-1,3-Dichloropropene	6	U
75-25-2	-----Bromoform	6	U
108-10-1	-----4-Methyl-2-Pentanone	12	U
591-78-6	-----2-Hexanone	12	U
127-18-4	-----Tetrachloroethene	5	J
79-34-5	-----1,1,2,2-Tetrachloroethane	6	U
108-88-3	-----Toluene	6	U
108-90-7	-----Chlorobenzene	6	U
100-41-4	-----Ethylbenzene	6	U
100-42-5	-----Styrene	6	U
1330-20-7	-----Xylene (total)	6	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA

Contract: WWENG-MI

WVSSSD0201

Lab Code: SWOK

Case No.: WWEN1

SAS No.: _____

SDG No.: 8855

Matrix: (soil/water) SOIL

Lab Sample ID: 885509

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: IC715

Level: (low/med) LOW

Date Received: 02/27/92

% Moisture: not dec. 44

Date Analyzed: 03/02/92

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/KG</u>	Q
74-87-3	Chloromethane	18	U
74-83-9	Bromomethane	18	U
75-01-4	Vinyl Chloride	18	U
75-00-3	Chloroethane	18	U
75-09-2	Methylene Chloride	42	U
67-64-1	Acetone	33	B
75-15-0	Carbon Disulfide	9	U
75-35-4	1,1-Dichloroethane	9	U
75-34-3	1,1-Dichloroethane	9	U
540-59-0	1,2-Dichloroethene (total)	9	U
67-66-3	Chloroform	9	U
107-06-2	1,2-Dichloroethane	9	U
78-93-3	2-Butanone	18	U
71-55-6	1,1,1-Trichloroethane	9	U
56-23-5	Carbon Tetrachloride	9	U
108-05-4	Vinyl Acetate	18	U
75-27-4	Bromodichloromethane	9	U
78-87-5	1,2-Dichloropropane	9	U
10061-01-5	cis-1,3-Dichloropropene	9	U
79-01-6	Trichloroethene	9	U
124-48-1	Dibromochloromethane	9	U
79-00-5	1,1,2-Trichloroethane	9	U
71-43-2	Benzene	9	U
10061-02-6	Trans-1,3-Dichloropropene	9	U
75-25-2	Bromoform	9	U
108-10-1	4-Methyl-2-Pentanone	18	U
591-78-6	2-Hexanone	18	U
127-18-4	Tetrachloroethene	9	U
79-34-5	1,1,2,2-Tetrachloroethane	9	U
108-88-3	Toluene	9	U
108-90-7	Chlorobenzene	9	U
100-41-4	Ethylbenzene	9	U
100-42-5	Styrene	9	U
1330-20-7	Xylene (total)	9	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Name: SWL-TULSA Contract: WWENG-MI doc FILESSSD0301

Lab Code: SWOK Case No.: WWEN1 SAS No.: _____ SDG No.: 8855

Matrix: (soil/water) SOIL Lab Sample ID: 885502

Sample wt/vol: 5.0 (g/mL) G Lab File ID: IC701

Level: (low/med) LOW Date Received: 02/27/92

% Moisture: not dec. 16 Date Analyzed: 02/28/92

Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	CONCENTRATION	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	6	U
67-64-1	Acetone	12	U
75-15-0	Carbon Disulfide	6	U
75-35-4	1,1-Dichloroethene	6	U
75-34-3	1,1-Dichloroethane	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	12	U
75-27-4	Bromodichloromethane	6	U
78-87-5	1,2-Dichloropropane	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-02-6	Trans-1,3-Dichloropropene	6	U
75-25-2	Bromoform	6	U
108-10-1	4-Methyl-2-Pentanone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	6	U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Xylene (total)	6	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Job Name: SWL-TULSA Contract: WWENG-MI WVCLSSSD0401
 Lab Code: SWOK Case No.: WWEN1 SAS No.: _____ SDG No.: 8855
 Matrix: (soil/water) SOIL Lab Sample ID: 885501
 Sample wt/vol: 5.0 (g/mL) G Lab File ID: IC700
 Level: (low/med) LOW Date Received: 02/27/92
 % Moisture: not dec. 14 Date Analyzed: 02/28/92
 Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/KG</u>	Q
74-87-3	-----Chloromethane	12	U
74-83-9	-----Bromomethane	12	U
75-01-4	-----Vinyl Chloride	12	U
75-00-3	-----Chloroethane	12	U
75-09-2	-----Methylene Chloride	6	U
67-64-1	-----Acetone	12	U
75-15-0	-----Carbon Disulfide	6	U
75-35-4	-----1,1-Dichloroethene	6	U
75-34-3	-----1,1-Dichloroethane	6	U
540-59-0	-----1,2-Dichloroethene (total)	6	U
67-66-3	-----Chloroform	6	U
107-06-2	-----1,2-Dichloroethane	6	U
78-93-3	-----2-Butanone	12	U
71-55-6	-----1,1,1-Trichloroethane	6	U
56-23-5	-----Carbon Tetrachloride	6	U
108-05-4	-----Vinyl Acetate	12	U
75-27-4	-----Bromodichloromethane	6	U
78-87-5	-----1,2-Dichloropropane	6	U
10061-01-5	-----cis-1,3-Dichloropropene	6	U
79-01-6	-----Trichloroethene	6	U
124-48-1	-----Dibromochloromethane	6	U
79-00-5	-----1,1,2-Trichloroethane	6	U
71-43-2	-----Benzene	6	U
10061-02-6	-----Trans-1,3-Dichloropropene	6	U
75-25-2	-----Bromoform	6	U
108-10-1	-----4-Methyl-2-Pentanone	12	U
591-78-6	-----2-Hexanone	12	U
127-18-4	-----Tetrachloroethene	6	U
79-34-5	-----1,1,2,2-Tetrachloroethane	6	U
108-88-3	-----Toluene	6	U
108-90-7	-----Chlorobenzene	6	U
100-41-4	-----Ethylbenzene	6	U
100-42-5	-----Styrene	6	U
1330-20-7	-----Xylene (total)	6	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Name: SWL-TULSA

Contract: WWENG-MI

du FCR-SSD0001B
Blank

Lab Code: SWOK Case No.: WWEN1

SAS No.: _____

SDG No.: 8855

Matrix: (soil/water) SOIL

Lab Sample ID: 885516

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: IC699

Level: (low/med) LOW

Date Received: 02/27/92

% Moisture: not dec. 1

Date Analyzed: 02/28/92

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

FCR-50-SD0-017

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Name: SWL-TULSA Contract: WWENG-MI WVSSSD0501
 Lab Code: SWOK Case No.: WWEN1 SAS No.: _____ SDG No.: 8855
 Matrix: (soil/water) SOIL Lab Sample ID: 885514
 Sample wt/vol: 5.0 (g/mL) G Lab File ID: IC716
 Level: (low/med) LOW Date Received: 02/27/92
 % Moisture: not dec. 23 Date Analyzed: 03/02/92
 Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/KG</u>	Q
74-87-3	Chloromethane	13	U
74-83-9	Bromomethane	13	U
75-01-4	Vinyl Chloride	13	U
75-00-3	Chloroethane	13	U
75-09-2	Methylene Chloride	36	U
67-64-1	Acetone	13	U
75-15-0	Carbon Disulfide	6	U
75-35-4	1,1-Dichloroethene	6	U
75-34-3	1,1-Dichloroethane	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	13	U
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	13	U
75-27-4	Bromodichloromethane	6	U
78-87-5	1,2-Dichloropropane	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-02-6	Trans-1,3-Dichloropropene	6	U
75-25-2	Bromoform	6	U
108-10-1	4-Methyl-2-Pentanone	13	U
591-78-6	2-Hexanone	13	U
127-18-4	Tetrachloroethene	5	J
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	6	U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Xylene (total)	6	U

1

INORGANIC ANALYSIS DATA SHEET

MF0101

Lab Name: SOUTHWEST LABS OF OK

Contract: 68-D9-0089

Lab Code: SWOK

Case No.: 8855

SAS No.:

SDG No.: MF0101

Matrix (soil/water): SOIL

Lab Sample ID: 885504

Level (low/med): LOW

Date Received: 2/27/92

% Solids: 84.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	M
7429-90-5	Aluminum	3830.00	*	F
7440-36-0	Antimony	9.10	B/N	F
7440-38-2	Arsenic	3.60		F
7440-39-3	Barium	37.20	B	F
7440-41-7	Beryllium	1.20	B	F
7440-43-9	Cadmium	.71	U	F
7440-70-2	Calcium	97600.00	E	F
7440-47-3	Chromium	2.20	B	F
7440-48-4	Cobalt	4.10	B	F
7440-50-8	Copper	11.40		F
7439-89-6	Iron	7170.00	*	F
7439-92-1	Lead	12.40		F
7439-95-4	Magnesium	35400.00		F
7439-96-5	Manganese	308.00	*	F
7439-97-6	Mercury	.12	U	CV
7440-02-0	Nickel	8.20	B	F
7440-09-7	Potassium	455.00	B	F
7782-49-2	Selenium	.71	U/N	F
7440-22-4	Silver	1.90	U	F
7440-23-5	Sodium	108.00	U	F
7440-28-0	Thallium	.48	U/W	F
7440-62-2	Vanadium	9.90	B	F
7440-66-6	Zinc	36.00	*	F
	Cyanide	.59	U	CA

Color Before: BROWN

Clarity Before:

Texture: COARSE

Color After: COLORLESS

Clarity After:

Artifacts:

Comments:

MF0101 REFLECTS CLIENT ID FOR-SS-SD01-01

1
INORGANIC ANALYSIS DATA SHEET

MF0201

Lab Name: SOUTHWEST LABS OF OK

Contract: 68-D9-0089

Lab Code: SWOK

Case No.: 8855

SAS No.:

SDG No.: MF0101

Matrix (soil/water): SOIL

Lab Sample ID: 885509

Level (low/med): LDW

Date Received: 2/27/92

% Solids: 56.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8780.00	*		P
7440-36-0	Antimony	11.70	U	N	P
7440-38-2	Arsenic	3.60			F
7440-39-3	Barium	70.50	B		P
7440-41-7	Beryllium	.82	B		P
7440-43-9	Cadmium	1.10	U		P
7440-70-2	Calcium	31400.00	E		P
7440-47-3	Chromium	12.90			P
7440-48-4	Cobalt	6.20	B		P
7440-50-8	Copper	32.90			P
7439-89-6	Iron	13400.00	*		P
7439-92-1	Lead	40.70			F
7439-95-4	Magnesium	10900.00			P
7439-96-5	Manganese	400.00	*		P
7439-97-6	Mercury	.18	U		CV
7440-02-0	Nickel	14.70			P
7440-09-7	Potassium	1020.00	B		P
7782-49-2	Selenium	1.10	U	N	F
7440-22-4	Silver	2.80	U		P
7440-23-5	Sodium	162.00	U		P
7440-28-0	Thallium	.71	U	W	F
7440-62-2	Vanadium	20.70			P
7440-66-6	Zinc	194.00	*		P
	Cyanide	.89	U		CA

Color Before: GREY

Clarity Before:

Texture: MEDIUM

Color After: COLORLESS

Clarity After:

Artifacts:

Comments:

MF0201 REFLECTS CLIENT ID FCR-SS-SD02-01

1
INORGANIC ANALYSIS DATA SHEET

MF0301

Lab Name: SOUTHWEST LABS OF OK Contract: 68-D9-0089
 Lab Code: SWOK Case No.: 8855 SAS No.: SDG No.: MF0101
 Matrix (soil/water): SOIL Lab Sample ID: 885502
 Level (low/med): LOW Date Received: 2/27/92
 % Solids: 85.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1210.00	*		P
7440-36-0	Antimony	7.70	U	N	P
7440-38-2	Arsenic	2.90			F
7440-39-3	Barium	12.20	B		P
7440-41-7	Beryllium	1.30			P
7440-43-9	Cadmium	.70	U		P
7440-70-2	Calcium	128000.00	E		P
7440-47-3	Chromium	1.20	U		P
7440-48-4	Cobalt	3.10	B		P
7440-50-8	Copper	6.70			P
7439-89-6	Iron	5040.00	*		P
7439-92-1	Lead	4.20	S		F
7439-95-4	Magnesium	46900.00			P
7439-96-5	Manganese	306.00	*		P
7439-97-6	Mercury	.12	U		CV
7440-02-0	Nickel	4.80	B		P
7440-09-7	Potassium	220.00	B		P
7782-49-2	Selenium	.70	U	N	F
7440-22-4	Silver	1.90	U		P
7440-23-5	Sodium	107.00	U		P
7440-28-0	Thallium	.47	U	W	F
7440-62-2	Vanadium	6.80	B		P
7440-66-6	Zinc	20.40	*		P
	Cyanide	.59	U		CA

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: COLORLESS Clarity After: Artifacts:

Comments:

MF0301 REFLECTS CLIENT ID FCR-SS-SD03-01

1
INORGANIC ANALYSIS DATA SHEET

MF0401

Lab Name: SOUTHWEST LABS OF OK Contract: 68-D9-0089

Lab Code: SWOK Case No.: 8855 SAS No.: SDG No.: MF0101

Matrix (soil/water): SOIL Lab Sample ID: 885501

Level (low/med): LOW Date Received: 2/27/92

% Solids: 85.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1910.00	*		P
7440-36-0	Antimony	8.50	B	N	P
7440-38-2	Arsenic	2.90			F
7440-39-3	Barium	15.00	B		P
7440-41-7	Beryllium	1.50			P
7440-43-9	Cadmium	.70	U		P
7440-70-2	Calcium	180000.00	E		P
7440-47-3	Chromium	1.20	U		P
7440-48-4	Cobalt	3.50	B		P
7440-50-8	Copper	9.20			P
7439-89-6	Iron	5000.00	*		P
7439-92-1	Lead	5.90	W		F
7439-95-4	Magnesium	51500.00			P
7439-96-5	Manganese	299.00	*		P
7439-97-6	Mercury	.12	U		CV
7440-02-0	Nickel	5.50	B		P
7440-09-7	Potassium	276.00	B		P
7782-49-2	Selenium	.70	U	N	F
7440-22-4	Silver	1.90	U		P
7440-23-5	Sodium	106.00	U		P
7440-28-0	Thallium	.47	U	W	F
7440-62-2	Vanadium	6.70	B		P
7440-66-6	Zinc	27.20	*		P
	Cyanide	.58	U		CA

Color Before: GREY Clarity Before: Texture: COARSE

Color After: COLORLESS Clarity After: Artifacts:

Comments:

MF0401 REFLECTS CLIENT ID FCR-SS-SD04-01

1
INORGANIC ANALYSIS DATA SHEET

MF0501

Lab Name: SOUTHWEST LABS OF OK

Contract: 68-D9-0089

Lab Code: SWOK

Case No.: 8855

SAS No.:

SDG No.: MF0101

Matrix (soil/water): SOIL

Lab Sample ID: 885514

Level (low/med): LOW

Date Received: 2/27/92

% Solids: 74.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7900.00	*		P
7440-36-0	Antimony	8.90	U	N	P
7440-38-2	Arsenic	4.40			F
7440-39-3	Barium	63.70			P
7440-41-7	Beryllium	.70	B		P
7440-43-9	Cadmium	.81	U		P
7440-70-2	Calcium	23200.00	E		P
7440-47-3	Chromium	12.20			P
7440-48-4	Cobalt	5.60	B		P
7440-50-8	Copper	29.20			P
7439-89-6	Iron	16200.00	*		P
7439-92-1	Lead	72.40	W		F
7439-95-4	Magnesium	8730.00			P
7439-96-5	Manganese	368.00	*		P
7439-97-6	Mercury	.13	U		CV
7440-02-0	Nickel	14.30			P
7440-09-7	Potassium	802.00	B		P
7782-49-2	Selenium	.81	U	N	F
7440-22-4	Silver	2.20	U		P
7440-23-5	Sodium	123.00	U		P
7440-28-0	Thallium	.54	U	W	F
7440-62-2	Vanadium	20.70			P
7440-66-6	Zinc	119.00	*		P
	Cyanide	.67	U		CA

Color Before: GREY

Clarity Before:

Texture: MEDIUM

Color After: COLORLESS

Clarity After:

Artifacts:

Comments:

MF0501 REFLECTS CLIENT ID FCR-SS-SD05-01

1
INORGANIC ANALYSIS DATA SHEET

MFD001

Lab Name: SOUTHWEST LABS OF OK

Contract: 68-D9-0089

Lab Code: SWOK

Case No.: 8855

SAS No.:

SDG No.: MFO101

Matrix (soil/water): SOIL

Lab Sample ID: 885516

Level (low/med): LDW

Date Received: 2/27/92

% Solids: 100.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	22.30	B*		P
7440-36-0	Antimony	6.60	U	N	P
7440-38-2	Arsenic	1.40	U		F
7440-39-3	Barium	2.00	U		P
7440-41-7	Beryllium	.20	U		P
7440-43-9	Cadmium	.60	U		P
7440-70-2	Calcium	100.00	U	E	P
7440-47-3	Chromium	1.00	U		P
7440-48-4	Cobalt	1.00	U		P
7440-50-8	Copper	1.40	U		P
7439-89-6	Iron	54.40		*	P
7439-92-1	Lead	.44	B		F
7439-95-4	Magnesium	55.80	U		P
7439-96-5	Manganese	.26	B*		P
7439-97-6	Mercury	.10	U		CV
7440-02-0	Nickel	1.40	U		P
7440-09-7	Potassium	52.80	U		P
7782-49-2	Selenium	.60	U	N	F
7440-22-4	Silver	1.60	U		P
7440-23-5	Sodium	91.00	U		P
7440-28-0	Thallium	.40	U		F
7440-62-2	Vanadium	1.40	U		P
7440-66-6	Zinc	.80	B*		P
	Cyanide	.50	U		CA

Color Before: WHITE

Clarity Before:

Texture: MEDIUM

Color After: COLORLESS

Clarity After:

Artifacts:

Comments:

MFD001 REFLECTS CLIENT ID FOR-SS-SDO-016

1
INORGANIC ANALYSIS DATA SHEET

MFD201

Lab Name: SOUTHWEST LABS OF OK Contract: 68-D9-0089 ;
 Lab Code: SWOK Case No.: 8855 SAS No.: SDG No.: MFO101
 Matrix (soil/water): SOIL Lab Sample ID: 885517
 Level (low/med): LOW Date Received: 2/27/92
 % Solids: 54.2

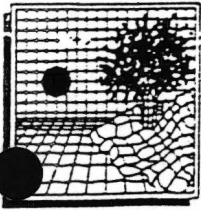
Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8080.00	*		P
7440-36-0	Antimony	12.20	U	N	P
7440-38-2	Arsenic	3.10	B		F
7440-39-3	Barium	64.80	B		P
7440-41-7	Beryllium	.74	B		P
7440-43-9	Cadmium	1.10	U		P
7440-70-2	Calcium	29000.00	E		P
7440-47-3	Chromium	11.60			P
7440-48-4	Cobalt	5.00	B		P
7440-50-8	Copper	23.70			P
7439-89-6	Iron	11800.00	*		P
7439-92-1	Lead	30.30			F
7439-95-4	Magnesium	9440.00			P
7439-96-5	Manganese	318.00	*		P
7439-97-6	Mercury	.51			CV
7440-02-0	Nickel	12.60	B		P
7440-09-7	Potassium	957.00	B		P
7782-49-2	Selenium	1.10	U	NW	F
7440-22-4	Silver	3.00	U		P
7440-23-5	Sodium	168.00	U		P
7440-28-0	Thallium	.74	U	W	F
7440-62-2	Vanadium	18.20	B		P
7440-66-6	Zinc	173.00	*		P
	Cyanide	.92	U		CA

Color Before: GREY Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts:

Comments:
 MFD201 REFLECTS CLIENT ID FCR-SS-SD02-01D



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2858

CLIENT: WW ENGINEERING
5010 STONE MILL ROAD
BLOOMINGTON, ID 47408
ATTN: TIM CLOUD

REPORT: 8855.01-17M

DATE: 03-24-92

SAMPLE MATRIX: SOIL
SWLO #: 8855.01 - 8855.17
METHOD REFERENCE: SM 412F
DATE SUBMITTED: 02-27-92

CLIENT ID	SWLO I.D	DET. LIMIT	UNIT	AMENABLE CYANIDE	DATE ANALYZED
→ FCR-SS-SD04-01	8855.01	0.5	mg/kg	ND	03-02-92
→ FCR-SS-SD03-01	8855.02	0.5	mg/kg	ND	03-02-92
→ FCR-SW-SW01-01	8855.03	0.5	mg/kg	ND	03-02-92
→ FCR-SS-SD01-01	8855.04	0.5	mg/kg	ND	03-02-92
→ FCR-SW-SW02-01	8855.05	0.5	mg/kg	ND	03-02-92
→ FCR-SW-SW02-01D	8855.06	0.5	mg/kg	ND	03-02-92
→ FCR-SS-SD02-01	8855.09	0.5	mg/kg	ND	03-02-92
→ FCR-SW-SW05-01	8855.10	0.5	mg/kg	ND	03-02-92
→ FCR-SB-SB01-12.0-01	8855.11	0.5	mg/kg	17.4	03-02-92
→ FCR-SB-SB01-10.0-01	8855.12	0.5	mg/kg	17.8	03-02-92
→ FCR-SB-SB02-10.0-01	8855.13	0.5	mg/kg	0.8	03-02-92
→ FCR-SS-SD05-01	8855.14	0.5	mg/kg	ND	03-02-92
→ FCR-SS-SD0-01b	8855.16	0.5	mg/kg	ND	03-02-92
→ FCR-SS-SD2-01D	8855.17	0.5	mg/kg	ND	03-02-92

ND = NOT DETECTED ABOVE QUANTITATION LIMIT
SM = STANDARD METHOD, 16TH EDITION

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SW0101

Lab Name: SWL-TULSA Contract: WWENG-MI
 Lab Code: SWOK Case No.: WWEN1 SAS No.: _____ SDG No.: 8855
 Matrix: (soil/water) WATER Lab Sample ID: 885503
 Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CM069
 Level: (low/med) LOW Date Received: 02/27/92
 % Moisture: not dec. _____ Date Analyzed: 03/02/92
 Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:
 CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q

74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	1	J
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA Contract: WWENG-MI *dec* FW SWSW0201D
 Lab Code: SWOK Case No.: WWEN1 SAS No.: _____ SDG No.: 8855
 Matrix: (soil/water) WATER Lab Sample ID: 885506
 Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CM071
 Level: (low/med) LOW Date Received: 02/27/92
 % Moisture: not dec. _____ Date Analyzed: 03/02/92
 Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:
 CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q

74-87-3-----	Chloromethane	10	U
74-83-9-----	Bromomethane	10	U
75-01-4-----	Vinyl Chloride	10	U
75-00-3-----	Chloroethane	10	U
75-09-2-----	Methylene Chloride	5	U
67-64-1-----	Acetone	10	U
75-15-0-----	Carbon Disulfide	5	U
75-35-4-----	1,1-Dichloroethene	5	U
75-34-3-----	1,1-Dichloroethane	5	U
540-59-0-----	1,2-Dichloroethene (total)	5	U
67-66-3-----	Chloroform	5	U
107-06-2-----	1,2-Dichloroethane	5	U
78-93-3-----	2-Butanone	10	U
71-55-6-----	1,1,1-Trichloroethane	5	U
56-23-5-----	Carbon Tetrachloride	5	U
108-05-4-----	Vinyl Acetate	10	U
75-27-4-----	Bromodichloromethane	5	U
78-87-5-----	1,2-Dichloropropane	5	U
10061-01-5-----	cis-1,3-Dichloropropene	5	U
79-01-6-----	Trichloroethene	5	U
124-48-1-----	Dibromochloromethane	5	U
79-00-5-----	1,1,2-Trichloroethane	5	U
71-43-2-----	Benzene	5	U
10061-02-6-----	Trans-1,3-Dichloropropene	5	U
75-25-2-----	Bromoform	5	U
108-10-1-----	4-Methyl-2-Pentanone	10	U
591-78-6-----	2-Hexanone	10	U
127-18-4-----	Tetrachloroethene	5	U
79-34-5-----	1,1,2,2-Tetrachloroethane	5	U
108-88-3-----	Toluene	5	U
108-90-7-----	Chlorobenzene	5	U
100-41-4-----	Ethylbenzene	5	U
100-42-5-----	Styrene	5	U
1330-20-7-----	Xylene (total)	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA Contract: WWENG-MI SWSW0201
 Lab Code: SWOK Case No.: WWEN1 SAS No.: _____ SDG No.: 8855
 Matrix: (soil/water) WATER Lab Sample ID: 885505
 Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CM070
 Level: (low/med) LOW Date Received: 02/27/92
 % Moisture: not dec. _____ Date Analyzed: 03/02/92
 Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NO. COMPOUND Q

74-87-3	-----Chloromethane	10	U
74-83-9	-----Bromomethane	10	U
75-01-4	-----Vinyl Chloride	10	U
75-00-3	-----Chloroethane	10	U
75-09-2	-----Methylene Chloride	5	U
67-64-1	-----Acetone	10	U
75-15-0	-----Carbon Disulfide	5	U
75-35-4	-----1,1-Dichloroethene	5	U
75-34-3	-----1,1-Dichloroethane	5	U
540-59-0	-----1,2-Dichloroethene (total)	5	U
67-66-3	-----Chloroform	5	U
107-06-2	-----1,2-Dichloroethane	5	U
78-93-3	-----2-Butanone	10	U
71-55-6	-----1,1,1-Trichloroethane	5	U
56-23-5	-----Carbon Tetrachloride	5	U
108-05-4	-----Vinyl Acetate	10	U
75-27-4	-----Bromodichloromethane	5	U
78-87-5	-----1,2-Dichloropropane	5	U
10061-01-5	-----cis-1,3-Dichloropropene	5	U
79-01-6	-----Trichloroethene	5	U
124-48-1	-----Dibromochloromethane	5	U
79-00-5	-----1,1,2-Trichloroethane	5	U
71-43-2	-----Benzene	5	U
10061-02-6	-----Trans-1,3-Dichloropropene	5	U
75-25-2	-----Bromoform	5	U
108-10-1	-----4-Methyl-2-Pentanone	10	U
591-78-6	-----2-Hexanone	10	U
127-18-4	-----Tetrachloroethene	5	U
79-34-5	-----1,1,2,2-Tetrachloroethane	5	U
108-88-3	-----Toluene	5	U
108-90-7	-----Chlorobenzene	5	U
100-41-4	-----Ethylbenzene	5	U
100-42-5	-----Styrene	5	U
1330-20-7	-----Xylene (total)	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WVCSWSW0501

Name: SWL-TULSA Contract: WWENG-MI
 Lab Code: SWOK Case No.: WWEN1 SAS No.: _____ SDG No.: 8855
 Matrix: (soil/water) WATER Lab Sample ID: 885510
 Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CM074
 Level: (low/med) LOW Date Received: 02/27/92
 % Moisture: not dec. _____ Date Analyzed: 03/02/92
 Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND	Q
74-87-3	Chloromethane	10 U
74-83-9	Bromomethane	10 U
75-01-4	Vinyl Chloride	10 U
75-00-3	Chloroethane	10 U
75-09-2	Methylene Chloride	5 U
67-64-1	Acetone	10 U
75-15-0	Carbon Disulfide	5 U
75-35-4	1,1-Dichloroethene	5 U
75-34-3	1,1-Dichloroethane	5 U
540-59-0	1,2-Dichloroethene (total)	5 U
67-66-3	Chloroform	5 U
107-06-2	1,2-Dichloroethane	5 U
78-93-3	2-Butanone	10 U
71-55-6	1,1,1-Trichloroethane	5 U
56-23-5	Carbon Tetrachloride	5 U
108-05-4	Vinyl Acetate	10 U
75-27-4	Bromodichloromethane	5 U
78-87-5	1,2-Dichloropropane	5 U
10061-01-5	cis-1,3-Dichloropropene	5 U
79-01-6	Trichloroethene	5 U
124-48-1	Dibromochloromethane	5 U
79-00-5	1,1,2-Trichloroethane	5 U
71-43-2	Benzene	5 U
10061-02-6	Trans-1,3-Dichloropropene	5 U
75-25-2	Bromoform	5 U
108-10-1	4-Methyl-2-Pentanone	10 U
591-78-6	2-Hexanone	10 U
127-18-4	Tetrachloroethene	5 U
79-34-5	1,1,2,2-Tetrachloroethane	5 U
108-88-3	Toluene	5 U
108-90-7	Chlorobenzene	5 U
100-41-4	Ethylbenzene	5 U
100-42-5	Styrene	5 U
1330-20-7	Xylene (total)	5 U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TB-1

Name: SWL-TULSA Contract: WWENG-MI

Lab Code: SWOK Case No.: WWEN1 SAS No.: _____ SDG No.: 8855

Matrix: (soil/water) WATER Lab Sample ID: 885515

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CM051

Level: (low/med) LOW Date Received: 02/27/92

% Moisture: not dec. _____ Date Analyzed: 02/28/92

Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NO. COMPOUND Q

74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

1
INORGANIC ANALYSIS DATA SHEET

MFW101

Lab Name: SOUTHWEST LABS OF OK Contract: 68-D9-0089
 Lab Code: SWOK Case No.: 8855 SAS No.: SDG No.: MFW101
 Matrix (soil/water): WATER Lab Sample ID: 885503
 Level (low/med): LOW Date Received: 2/27/92
 % Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead				NR
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide	10.00	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:
 Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
 MFW101 REFLECTS CLIENT ID FOR-SW-SW01-01

INORGANIC ANALYSIS DATA SHEET

MFW201

Lab Name: SOUTHWEST LABS OF OK Contract: 68-D9-0089
 Lab Code: SWOK Case No.: 8855 SAS No.: SDG No.: MFW0101
 Matrix (soil/water): WATER Lab Sample ID: 885505
 Level (low/med): LOW Date Received: 2/27/92
 % Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead				NR
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide	10.00	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:
 Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
 MFW201 REFLECTS CLIENT ID FCR-SW-SW02-01

1
INORGANIC ANALYSIS DATA SHEET

MFW2D1

Lab Name: SOUTHWEST LABS OF OK Contract: 68-D9-0089
 Lab Code: SWOK Case No.: 8855 SAS No.: SDG No.: MFO101
 Matrix (soil/water): WATER Lab Sample ID: 885506
 Level (low/med): LOW Date Received: 2/27/92
 % Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead				NR
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide	10.00	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:
 Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
 MFW2D1 REFLECTS CLIENT ID FCR-SW-SW02-01D

INORGANIC ANALYSIS DATA SHEET

MFW501

Lab Name: SOUTHWEST LABS OF OK Contract: 68-D9-0089

Lab Code: SWOK Case No.: 8855 SAS No.: SDG No.: MF0101

Matrix (soil/water): WATER Lab Sample ID: 885510

Level (low/med): LOW Date Received: 2/27/92

% Solids: 0.0

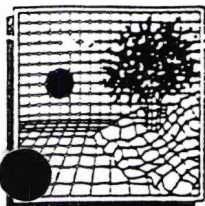
Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	U	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead				NR
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide	10.00	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
MFW501 REFLECTS CLIENT ID FCR-SW-SW05-01



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2858

CLIENT: WW ENGINEERING
5010 STONE MILL ROAD
BLOOMINGTON, ID 47408
ATTN: TIM CLOUD

REPORT: 8855.01-17M

DATE: 03-24-92

SAMPLE MATRIX: SOIL
SWLO #: 8855.01 - 8855.17
METHOD REFERENCE: SM 412F
DATE SUBMITTED: 02-27-92

<u>CLIENT ID</u>	<u>SWLO I.D</u>	<u>DET. LIMIT</u>	<u>UNIT</u>	<u>AMENABLE CYANIDE</u>	<u>DATE ANALYZED</u>
\FCR-SS-SD04-01	8855.01	0.5	mg/kg	ND	03-02-92
\FCR-SS-SD03-01	8855.02	0.5	mg/kg	ND	03-02-92
\FCR-SW-SW01-01	8855.03	0.5	mg/kg	ND	03-02-92
\FCR-SS-SD01-01	8855.04	0.5	mg/kg	ND	03-02-92
\FCR-SW-SW02-01	8855.05	0.5	mg/kg	ND	03-02-92
\FCR-SW-SW02-01D	8855.06	0.5	mg/kg	ND	03-02-92
\FCR-SS-SD02-01	8855.09	0.5	mg/kg	ND	03-02-92
\FCR-SW-SW05-01	8855.10	0.5	mg/kg	ND	03-02-92
\FCR-SB-SB01-12.0-01	8855.11	0.5	mg/kg	17.4	03-02-92
\FCR-SB-SB01-10.0-01	8855.12	0.5	mg/kg	17.8	03-02-92
\FCR-SB-SB02-10.0-01	8855.13	0.5	mg/kg	0.8	03-02-92
\FCR-SS-SD05-01	8855.14	0.5	mg/kg	ND	03-02-92
\FCR-SS-SD0-01b	8855.16	0.5	mg/kg	ND	03-02-92
\FCR-SS-SD2-01D	8855.17	0.5	mg/kg	ND	03-02-92

ND = NOT DETECTED ABOVE QUANTITATION LIMIT
SM = STANDARD METHOD, 16TH EDITION

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCRSWSW0202

Lab Name: SWL-TULSA Contract: WWENG-IN

Lab Code: SWOK Case No.: WWG1 SAS No.: _____ SDG No.: 10499

Matrix: (soil/water) WATER Lab Sample ID: 1049901

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: KA146

Level: (low/med) LOW Date Received: 07/29/92

% Moisture: not dec. _____ Date Analyzed: 07/30/92

Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
74-87-3	-----Chloromethane	10	U
74-83-9	-----Bromomethane	10	U
75-01-4	-----Vinyl Chloride	10	U
75-00-3	-----Chloroethane	10	U
75-09-2	-----Methylene Chloride	5	U
67-64-1	-----Acetone	11	U
75-15-0	-----Carbon Disulfide	5	U
75-35-4	-----1,1-Dichloroethene	5	U
75-34-3	-----1,1-Dichloroethane	5	U
540-59-0	-----1,2-Dichloroethene (total)	5	U
67-66-3	-----Chloroform	5	U
107-06-2	-----1,2-Dichloroethane	5	U
78-93-3	-----2-Butanone	10	U
71-55-6	-----1,1,1-Trichloroethane	9	U
56-23-5	-----Carbon Tetrachloride	5	U
108-05-4	-----Vinyl Acetate	10	U
75-27-4	-----Bromodichloromethane	5	U
78-87-5	-----1,2-Dichloropropane	5	U
10061-01-5	-----cis-1,3-Dichloropropene	5	U
79-01-6	-----Trichloroethene	17	U
124-48-1	-----Dibromochloromethane	5	U
79-00-5	-----1,1,2-Trichloroethane	5	U
71-43-2	-----Benzene	5	U
10061-02-6	-----trans-1,3-Dichloropropene	5	U
75-25-2	-----Bromoform	5	U
108-10-1	-----4-Methyl-2-Pentanone	10	U
591-78-6	-----2-Hexanone	10	U
127-18-4	-----Tetrachloroethene	35	U
79-34-5	-----1,1,2,2-Tetrachloroethane	5	U
108-88-3	-----Toluene	5	U
108-90-7	-----Chlorobenzene	5	U
100-41-4	-----Ethylbenzene	5	U
100-42-5	-----Styrene	5	U
1330-20-7	-----Xylene (total)	5	U

1
INORGANIC ANALYSIS DATA SHEET

MF0106

Lab Name: SOUTHWEST LAB. OF OK

Contract: 68-D9-0089

Lab Code: SWOK

Case No.: 8943

SAS No.:

SDG No.: MF0106

Matrix (soil/water): WATER

Lab Sample ID: 894310

Level (low/med): LOW

Date Received: 3/05/92

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	64.00	U		P
7440-36-0	Antimony	17.00	U	N	P
7440-38-2	Arsenic	6.00	U	N	F
7440-39-3	Barium	6.00	U		P
7440-41-7	Beryllium	1.00	U		P
7440-43-9	Cadmium	2.00	U		P
7440-70-2	Calcium	346.00	B		P
7440-47-3	Chromium	4.00	U		P
7440-48-4	Cobalt	4.00	U		P
7440-50-8	Copper	6.00	U		P
7439-89-6	Iron	40.00	U		P
7439-92-1	Lead	25.30		WKM	F
7439-95-4	Magnesium	112.00	U		P
7439-96-5	Manganese	3.70	B		P
7439-97-6	Mercury	.20	U		CV
7440-02-0	Nickel	7.00	U		P
7440-09-7	Potassium	402.00	U		P
7782-49-2	Selenium	3.00	U		F
7440-22-4	Silver	2.00	U		P
7440-23-5	Sodium	626.00	B		P
7440-28-0	Thallium	2.00	U	NW	F
7440-62-2	Vanadium	4.00	U		P
7440-66-6	Zinc	2.00	U	E	P
	Cyanide				NR

Color Before: COLORLESS

Clarity Before: CLEAR

Texture:

Color After: COLORLESS

Clarity After: CLEAR

Artifacts:

Comments:

EPA SAMPLE ID MF0106 = CLIENT ID FCR-GW-106EB

1
INORGANIC ANALYSIS DATA SHEET

MF0201

Lab Name: SOUTHWEST LAB. OF OK Contract: 68-D9-0089

Lab Code: SWOK Case No.: 8943 SAS No.: SDG No.: MF0106

Matrix (soil/water): WATER Lab Sample ID: 894313

Level (low/med): LOW Date Received: 3/05/92

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6020.00			F
7440-36-0	Antimony	17.00	U	N	F
7440-38-2	Arsenic	6.00	U	N	F
7440-39-3	Barium	694.00			F
7440-41-7	Beryllium	1.10	B		F
7440-43-9	Cadmium	2.00	U		F
7440-70-2	Calcium	394000.00			F
7440-47-3	Chromium	16.90			F
7440-48-4	Cobalt	15.30	B		F
7440-50-8	Copper	76.70			F
7439-89-6	Iron	21200.00			F
7439-92-1	Lead	41.70		S*	F
7439-95-4	Magnesium	123000.00			F
7439-96-5	Manganese	1730.00			F
7439-97-6	Mercury	.20			CV
7440-02-0	Nickel	50.10			F
7440-09-7	Potassium	3610.00	B		F
7782-49-2	Selenium	3.00	U		F
7440-22-4	Silver	2.00	U		F
7440-23-5	Sodium	20900.00			F
7440-28-0	Thallium	2.00	U	N	F
7440-62-2	Vanadium	23.00	B		F
7440-66-6	Zinc	110.00	E		F
	Cyanide				NR

Color Before: BROWN Clarity Before: CLOUDY Texture:

Color After: COLORLESS Clarity After: CLOUDY Artifacts:

Comments:
EPA SAMPLE ID MF0201 = CLIENT ID FCR-GW-IT2-01

1

INORGANIC ANALYSIS DATA SHEET

MF0301

Lab Name: SOUTHWEST LAB. OF OK

Contract: 68-D9-0089

Lab Code: SWOK

Case No.: 8943

SAS No.:

SDG No.: MF0106

Matrix (soil/water): WATER

Lab Sample ID: 894301

Level (low/med): LOW

Date Received: 3/05/92

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	11000.00			F
7440-36-0	Antimony	17.00	U	N	F
7440-38-2	Arsenic	6.00	U	NWM	F
7440-39-3	Barium	423.00			F
7440-41-7	Beryllium	1.80	B		F
7440-43-9	Cadmium	2.00	U		F
7440-70-2	Calcium	567000.00			F
7440-47-3	Chromium	32.80			F
7440-48-4	Cobalt	34.40	B		F
7440-50-8	Copper	94.90			F
7439-89-6	Iron	28400.00			F
7439-92-1	Lead	79.00		*	F
7439-95-4	Magnesium	187000.00			F
7439-96-5	Manganese	2800.00			F
7439-97-6	Mercury	.30			CV
7440-02-0	Nickel	64.60			F
7440-09-7	Potassium	3510.00	B		F
7782-49-2	Selenium	5.30			F
7440-22-4	Silver	2.00	U		F
7440-23-5	Sodium	7390.00			F
7440-28-0	Thallium	2.00	U	N	F
7440-62-2	Vanadium	36.90	B		F
7440-66-6	Zinc	177.00	E		F
	Cyanide	10.00	U		CA

Color Before: BROWN

Clarity Before: CLOUDY

Texture:

Color After: COLORLESS

Clarity After: CLOUDY

Artifacts:

Comments:

EPA SAMPLE ID MF0301 = CLIENT ID FCR-GW-IT3-01

1

INORGANIC ANALYSIS DATA SHEET

MF0901

Lab Name: SOUTHWEST LAB. OF OK

Contract: 68-D9-0089

Lab Code: SWDK

Case No.: 8943

SAS No.:

SDG No.: MF0106

Matrix (soil/water): WATER

Lab Sample ID: 894304

Level (low/med): LOW

Date Received: 3/05/92

% Solids:

0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8610.00			F
7440-36-0	Antimony	17.00	U	N	F
7440-38-2	Arsenic	6.00	U	N	F
7440-39-3	Barium	270.00			F
7440-41-7	Beryllium	1.40	B		F
7440-43-9	Cadmium	2.00	U		F
7440-70-2	Calcium	525000.00			F
7440-47-3	Chromium	27.00			F
7440-48-4	Cobalt	15.60	B		F
7440-50-8	Copper	72.70			F
7439-89-6	Iron	16700.00			F
7439-92-1	Lead	58.50		*	F
7439-95-4	Magnesium	158000.00			F
7439-96-5	Manganese	1030.00			F
7439-97-6	Mercury	.38			CV
7440-02-0	Nickel	47.60			F
7440-09-7	Potassium	3840.00	B		F
7782-49-2	Selenium	4.30	B		F
7440-22-4	Silver	2.00	U		F
7440-23-5	Sodium	9530.00			F
7440-28-0	Thallium	2.00	U	N	F
7440-62-2	Vanadium	42.10	B		F
7440-66-6	Zinc	198.00	E		F
	Cyanide	10.00	U		CA

Color Before: BROWN

Clarity Before: CLOUDY

Texture:

Color After: COLORLESS

Clarity After: CLOUDY

Artifacts:

Comments:

EPA SAMPLE ID MF0901 = CLIENT ID FCR-GW-MW9-01

1

INORGANIC ANALYSIS DATA SHEET

MF1A01

Lab Name: SOUTHWEST LAB. OF OK

Contract: 68-D9-0089

Lab Code: SWOK

Case No.: 8943

SAS No.:

SDG No.: MF0106

Matrix (soil/water): WATER

Lab Sample ID: 894311

Level (low/med): LOW

Date Received: 3/05/92

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	484.00			F
7440-36-0	Antimony	17.00	U	N	F
7440-38-2	Arsenic	77.00		N	F
7440-39-3	Barium	114.00	B		F
7440-41-7	Beryllium	1.00	U		F
7440-43-9	Cadmium	2.00	U		F
7440-70-2	Calcium	63000.00			F
7440-47-3	Chromium	4.00	U		F
7440-48-4	Cobalt	4.00	U		F
7440-50-8	Copper	6.00	U		F
7439-89-6	Iron	2920.00			F
7439-92-1	Lead	2.70	B	*	F
7439-95-4	Magnesium	30800.00			F
7439-96-5	Manganese	202.00			F
7439-97-6	Mercury	.20	U		CV
7440-02-0	Nickel	11.30	B		F
7440-09-7	Potassium	1830.00	B		F
7782-49-2	Selenium	3.00	U		F
7440-22-4	Silver	2.00	U		F
7440-23-5	Sodium	34800.00			F
7440-28-0	Thallium	2.00	U	N	F
7440-62-2	Vanadium	4.00	U		F
7440-66-6	Zinc	9.20	B	E	F
	Cyanide				NR

Color Before: COLORLESS

Clarity Before: CLEAR

Texture:

Color After: COLORLESS

Clarity After: CLEAR

Artifacts:

Comments:

EPA SAMPLE ID MF1A01 = CLIENT ID FCR-GW-IT1A-01

1
INORGANIC ANALYSIS DATA SHEET

MF2001

Lab Name: SOUTHWEST LAB. OF OK

Contract: 68-D9-0089

Lab Code: SWOK

Case No.: 8943

SAS No.:

SDG No.: MF0106

Matrix (soil/water): WATER

Lab Sample ID: 894307

Level (low/med): LOW

Date Received: 3/05/92

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5710.00			P
7440-36-0	Antimony	17.00	U	N	F
7440-38-2	Arsenic	6.00	U	N	F
7440-39-3	Barium	380.00			F
7440-41-7	Beryllium	1.10	B		P
7440-43-9	Cadmium	2.00	U		P
7440-70-2	Calcium	612000.00			P
7440-47-3	Chromium	20.10			P
7440-48-4	Cobalt	12.50	B		P
7440-50-8	Copper	67.40			P
7439-89-6	Iron	13200.00			P
7439-92-1	Lead	40.80		*	F
7439-95-4	Magnesium	232000.00			P
7439-96-5	Manganese	2840.00			F
7439-97-6	Mercury	.34			CV
7440-02-0	Nickel	40.90			P
7440-09-7	Potassium	4590.00	B		P
7782-49-2	Selenium	3.00	U		F
7440-22-4	Silver	2.00	U		P
7440-23-5	Sodium	10300.00			P
7440-28-0	Thallium	2.00	U	N	F
7440-62-2	Vanadium	35.40	B		P
7440-66-6	Zinc	1080.00	E		P
	Cyanide	10.00	U		CA

Color Before: BROWN

Clarity Before: CLOUDY

Texture:

Color After: COLORLESS

Clarity After: CLOUDY

Artifacts:

Comments:

EPA SAMPLE ID MF2001 = CLIENT ID FCR-GW-MW20-01

1
INORGANIC ANALYSIS DATA SHEET

MF2101

Lab Name: SOUTHWEST LAB. OF OK Contract: 68-D9-0089
 Lab Code: SWOK Case No.: 8943 SAS No.: SDG No.: MF0106
 Matrix (soil/water): WATER Lab Sample ID: 894309
 Level (low/med): LOW Date Received: 3/05/92
 % Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8500.00			P
7440-36-0	Antimony	17.00	U/N		P
7440-38-2	Arsenic	6.00	U/N		F
7440-39-3	Barium	472.00			P
7440-41-7	Beryllium	2.60	B		P
7440-43-9	Cadmium	2.50	B		P
7440-70-2	Calcium	1000000.00			F
7440-47-3	Chromium	58.50			P
7440-48-4	Cobalt	75.00			F
7440-50-8	Copper	510.00			P
7439-89-6	Iron	7670.00			F
7439-92-1	Lead	162.00		*	F
7439-95-4	Magnesium	342000.00			F
7439-96-5	Manganese	3520.00			P
7439-97-6	Mercury	.35			CV
7440-02-0	Nickel	538.00			P
7440-09-7	Potassium	3570.00	B		P
7782-49-2	Selenium	7.50			F
7440-22-4	Silver	46.70			P
7440-23-5	Sodium	6530.00			P
7440-28-0	Thallium	2.00	U/N		F
7440-62-2	Vanadium	63.80			P
7440-66-6	Zinc	256.00	E		P
	Cyanide				NR

Color Before: BROWN Clarity Before: CLOUDY Texture:
 Color After: COLORLESS Clarity After: CLOUDY Artifacts:

Comments:
 EPA SAMPLE ID MF2101 = CLIENT ID FCR-GW-MW21-01

1
INORGANIC ANALYSIS DATA SHEET

MF21D1

Lab Name: SOUTHWEST LAB. OF OK

Contract: 68-D9-0089

Lab Code: SWOK

Case No.: 8943

SAS No.:

SDG No.: MF0106

Matrix (soil/water): WATER

Lab Sample ID: 894308

Level (low/med): LOW

Date Received: 3/05/92

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	101.00	B		P
7440-36-0	Antimony	17.00	U	N	F
7440-38-2	Arsenic	6.00	U	N	F
7440-39-3	Barium	528.00			P
7440-41-7	Beryllium	1.00	U		F
7440-43-9	Cadmium	2.00	U		P
7440-70-2	Calcium	1170000.00			F
7440-47-3	Chromium	87.30			F
7440-48-4	Cobalt	11.00	B		F
7440-50-8	Copper	18.10	B		F
7439-89-6	Iron	407.00			F
7439-92-1	Lead	4.60		*	F
7439-95-4	Magnesium	323000.00			F
7439-96-5	Manganese	2440.00			P
7439-97-6	Mercury	.45			CV
7440-02-0	Nickel	122.00			F
7440-09-7	Potassium	3520.00	B		F
7782-49-2	Selenium	25.90		SM	F
7440-22-4	Silver	2.00	U		F
7440-23-5	Sodium	7530.00			F
7440-28-0	Thallium	2.00	U	N	F
7440-62-2	Vanadium	89.00			F
7440-66-6	Zinc	5.30	B	E	F
	Cyanide	10.00	U		CA

Color Before: BROWN

Clarity Before: CLOUDY

Texture:

Color After: COLORLESS

Clarity After: CLOUDY

Artifacts:

Comments:

EPA SAMPLE ID MF21D1 = CLIENT ID FCR-GW-MW21-01D

1

INORGANIC ANALYSIS DATA SHEET

MF2301

Lab Name: SOUTHWEST LAB. OF OK

Contract: 68-D9-0089

Lab Code: SWOK

Case No.: 8943

SAS No.:

SDG No.: MF0106

Matrix (soil/water): WATER

Lab Sample ID: 894303

Level (low/med): LOW

Date Received: 3/05/92

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS# No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	15800.00			P
7440-36-0	Antimony	17.00	U	N	P
7440-38-2	Arsenic	7.60	B	N	F
7440-39-3	Barium	500.00			P
7440-41-7	Beryllium	2.10	B		P
7440-43-9	Cadmium	2.00	U		P
7440-70-2	Calcium	193000.00			P
7440-47-3	Chromium	28.40			P
7440-48-4	Cobalt	13.60	B		P
7440-50-8	Copper	130.00			P
7439-89-6	Iron	26000.00			P
7439-92-1	Lead	69.30		*	F
7439-95-4	Magnesium	73300.00			P
7439-96-5	Manganese	3250.00			P
7439-97-6	Mercury	.20	U		CV
7440-02-0	Nickel	41.70			P
7440-09-7	Potassium	2870.00	B		P
7782-49-2	Selenium	3.00	U		F
7440-22-4	Silver	2.00	U		P
7440-23-5	Sodium	31200.00			P
7440-28-0	Thallium	2.00	U	N	F
7440-62-2	Vanadium	37.00	B		P
7440-66-6	Zinc	261.00		E	P
	Cyanide	10.00	U		CA

Color Before: BROWN

Clarity Before: CLOUDY

Texture:

Color After: COLORLESS

Clarity After: CLOUDY

Artifacts:

Comments:

EPA SAMPLE ID MF2301 = CLIENT ID FCR-GW-MW23-01

1

INORGANIC ANALYSIS DATA SHEET

MF23D1

Lab Name: SOUTHWEST LAB. OF OK

Contract: 68-D9-0089

Lab Code: SWOK

Case No.: 8943

SAS No.:

SDG No.: MF0106

Matrix (soil/water): WATER

Lab Sample ID: 894302

Level (low/med): LOW

Date Received: 3/05/92

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	14700.00			P
7440-36-0	Antimony	17.00	U	N	P
7440-38-2	Arsenic	7.40	B	N	F
7440-39-3	Barium	473.00			P
7440-41-7	Beryllium	1.90	B		F
7440-43-9	Cadmium	2.00	U		P
7440-70-2	Calcium	169000.00			P
7440-47-3	Chromium	25.60			P
7440-48-4	Cobalt	11.80	B		P
7440-50-8	Copper	121.00			P
7439-89-6	Iron	23100.00			P
7439-92-1	Lead	95.70		*	F
7439-95-4	Magnesium	63200.00			P
7439-96-5	Manganese	2900.00			P
7439-97-6	Mercury	.20	U		CV
7440-02-0	Nickel	34.60	B		P
7440-09-7	Potassium	2880.00	B		P
7782-49-2	Selenium	3.00	U		F
7440-22-4	Silver	2.00	U		F
7440-23-5	Sodium	30900.00			P
7440-28-0	Thallium	2.00	U	N	F
7440-62-2	Vanadium	35.70	B		P
7440-66-6	Zinc	234.00	E		P
	Cyanide	10.00	U		CA

Color Before: BROWN

Clarity Before: CLOUDY

Texture:

Color After: COLORLESS

Clarity After: CLOUDY

Artifacts:

Comments:

EPA SAMPLE ID MF23D1 = CLIENT ID FCR-GW-MW23-01D

1

INORGANIC ANALYSIS DATA SHEET

MF2601

Lab Name: SOUTHWEST LAB. OF OK

Contract: 68-D9-0089

Lab Code: SWOK

Case No.: 8943

SAS No.:

SDG No.: MF0106

Matrix (soil/water): WATER

Lab Sample ID: 894312

Level (low/med): LOW

Date Received: 3/05/92

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6020.00			P
7440-36-0	Antimony	17.00	U	N	P
7440-38-2	Arsenic	6.00	U	N	F
7440-39-3	Barium	223.00			P
7440-41-7	Beryllium	1.00	U		P
7440-43-9	Cadmium	2.00	U		P
7440-70-2	Calcium	345000.00			P
7440-47-3	Chromium	23.20			P
7440-48-4	Cobalt	11.00	B		P
7440-50-8	Copper	47.40			P
7439-89-6	Iron	16900.00			P
7439-92-1	Lead	32.40		S*	F
7439-95-4	Magnesium	114000.00			P
7439-96-5	Manganese	1020.00			P
7439-97-6	Mercury	.23			CV
7440-02-0	Nickel	43.40			P
7440-09-7	Potassium	7010.00			P
7782-49-2	Selenium	3.00	U	W	F
7440-22-4	Silver	2.00	U		P
7440-23-5	Sodium	10000.00			P
7440-28-0	Thallium	2.00	U	N	F
7440-62-2	Vanadium	22.70	B		P
7440-66-6	Zinc	89.90	E		P
	Cyanide				NR

Color Before: BROWN

Clarity Before: CLOUDY

Texture:

Color After: COLORLESS

Clarity After: CLOUDY

Artifacts:

Comments:

EPA SAMPLE ID MF2601 = CLIENT ID FCR-GW-MW26-01

1

INORGANIC ANALYSIS DATA SHEET

MW2501

Lab Name: SOUTHWEST LABS OF OK

Contract: 68-D9-0089

Lab Code: SWOK

Case No.: 8979

SAS No.:

SDG No.: MW2501

Matrix (soil/water): WATER

Lab Sample ID: 897901

Level (low/med):

LOW

Date Received: 3/11/92

% Solids:

0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	700.00			F
7440-36-0	Antimony	16.00	U		F
7440-38-2	Arsenic	6.00	U		F
7440-39-3	Barium	64.20	B		F
7440-41-7	Beryllium	1.00	U		F
7440-43-9	Cadmium	2.00	U		F
7440-70-2	Calcium	60000.00			F
7440-47-3	Chromium	3.00	U		F
7440-48-4	Cobalt	6.00	U		F
7440-50-8	Copper	4.00	U		F
7439-89-6	Iron	1220.00			F
7439-92-1	Lead	4.30		W	F
7439-95-4	Magnesium	26600.00			F
7439-96-5	Manganese	357.00			F
7439-97-6	Mercury	.20	U		CV
7440-02-0	Nickel	8.00	U		F
7440-09-7	Potassium	2250.00	B		F
7782-49-2	Selenium	2.00	U		F
7440-22-4	Silver	1.00	U		F
7440-23-5	Sodium	25700.00			F
7440-28-0	Thallium	2.00	U		F
7440-62-2	Vanadium	6.00	U		F
7440-66-6	Zinc	17.20	B		F
	Cyanide	10.00	U		CA

Color Before: COLORLESS

Clarity Before: CLOUDY

Texture:

Color After: COLORLESS

Clarity After: CLEAR

Artifacts:

Comments:

MW2501 = FCR-GW-MW25-01

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

PGP120

Lab Name: SOUTHWEST LAB OF OK _____ Contract: _____

Lab Code: SWOK _____ Case No.: 13862 _____ SAS No.: _____ SDG No.: PGF004

Matrix (soil/water): WATER _____ Lab Sample ID: 1386202 _____

Level (low/med): LOW _____ Date Received: 05/21/93

% Solids: _____ 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	D	M
7429-90-5	Aluminum	2660		E	P
7440-36-0	Antimony	23.0	U		P
7440-38-2	Arsenic	6.1	B		F
7440-39-3	Barium	918			P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	3.0	U		P
7440-70-2	Calcium	493000			P
7440-47-3	Chromium	23.7			P
7440-48-4	Cobalt	7.6	B		P
7440-50-8	Copper	31.2			P
7439-89-6	Iron	15800			P
7439-92-1	Lead	19.8		S	F
7439-95-4	Magnesium	64900			P
7439-96-5	Manganese	1740			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	31.4	B		P
7440-09-7	Potassium	6020			P
7782-49-2	Selenium	2.0	U	W	F
7440-22-4	Silver	7.0	U		P
7440-23-5	Sodium	15200		E	P
7440-28-0	Thallium	2.0	U	W	F
7440-62-2	Vanadium	8.4	B		P
7440-66-6	Zinc	160			P
	Cyanide	10.0	U		CA

Color Before: TAN _____ Clarity Before: CLOUDY _____ Texture: _____

Color After: COLORLESS _____ Clarity After: CLEAR _____ Artifacts: _____

Comments:

EPA_SAMPLE_PGP120 = CLIENT_SAMPLE_ID_FCR-GW-PGF-12-0

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

PGP130

Lab Name: SOUTHWEST LAB OF OK _____ Contract: _____

Lab Code: SWOK _____ Case No.: 13862 _____ SAS No.: _____ SDG No.: FGP004

Matrix (soil/water): WATER _____ Lab Sample ID: 1386203 _____

Level (low/med): LOW _____ Date Received: 05/21/93

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	330		E	P
7440-36-0	Antimony	23.0	U		P
7440-38-2	Arsenic	2.0	U		F
7440-39-3	Barium	79.2	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	3.0	U		P
7440-70-2	Calcium	197000			P
7440-47-3	Chromium	7.2	B		P
7440-48-4	Cobalt	9.5	B		P
7440-50-8	Copper	9.7	B		P
7439-89-6	Iron	2850			P
7439-92-1	Lead	2.7	B		F
7439-95-4	Magnesium	26100			P
7439-96-5	Manganese	754			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	20.9	B		F
7440-09-7	Potassium	1540	B		P
7782-49-2	Selenium	2.0	U	W	F
7440-22-4	Silver	7.0	U		P
7440-23-5	Sodium	16800		E	P
7440-28-0	Thallium	2.0	U	W	F
7440-62-2	Vanadium	5.0	U		P
7440-66-6	Zinc	377			P
	Cyanide	10.0	U		CA

Color Before: TAN _____ Clarity Before: CLOUDY _____ Texture: _____

Color After: COLORLESS _____ Clarity After: CLEAR _____ Artifacts: _____

Comments:

EPA_SAMPLE_PGP130 = CLIENT_SAMPLE_ID_FCR-GW-FGF-13-0 _____

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

PGP13D

Lab Name: SOUTHWEST LAB OF OK Contract: _____

Lab Code: SWOK Case No.: 13862 SAS No.: _____ SDG No.: PGP004

Matrix (soil/water): WATER Lab Sample ID: 1386204

Level (low/med): LOW Date Received: 05/21/93

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	595		E	F
7440-36-0	Antimony	23.0	U		F
7440-38-2	Arsenic	2.0	U		F
7440-39-3	Barium	67.9	B		F
7440-41-7	Beryllium	1.0	U		F
7440-43-9	Cadmium	3.0	U		F
7440-70-2	Calcium	149000			F
7440-47-3	Chromium	6.7	B		F
7440-48-4	Cobalt	6.0	U		F
7440-50-8	Copper	10.4	B		F
7439-89-6	Iron	2350			F
7439-92-1	Lead	3.5			F
7439-95-4	Magnesium	44400			F
7439-96-5	Manganese	180			F
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	7.0	U		F
7440-09-7	Potassium	2060	B		F
7782-49-2	Selenium	2.0	U		F
7440-22-4	Silver	7.0	U		F
7440-23-5	Sodium	27900		E	F
7440-28-0	Thallium	2.0	U	W	F
7440-62-2	Vanadium	5.0	U		F
7440-66-6	Zinc	63.0			F
	Cyanide	10.0	U		CA

Color Before: TAN Clarity Before: CLOUDY Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:

EPA_SAMPLE_PGP13D = CLIENT_SAMPLE_ID_FCR-GW-PGP-13-0

INORGANIC ANALYSES DATA SHEET

FGP140

Lab Name: SOUTHWEST LAB OF OK _____ Contract: _____
 Lab Code: SWOK _____ Case No.: 13862 _____ SAS No.: _____ SDG No.: FGP004
 Matrix (soil/water): WATER _____ Lab Sample ID: 1386205 _____
 Level (low/med): LOW _____ Date Received: 05/21/93
 % Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2750		E	P
7440-36-0	Antimony	23.0	U		F
7440-38-2	Arsenic	3.6	B		F
7440-39-3	Barium	125	B		F
7440-41-7	Beryllium	1.0	U		F
7440-43-9	Cadmium	3.0	U		P
7440-70-2	Calcium	213000			P
7440-47-3	Chromium	28.5			P
7440-48-4	Cobalt	6.0	U		P
7440-50-8	Copper	35.1			P
7439-89-6	Iron	8710			P
7439-92-1	Lead	16.9			F
7439-95-4	Magnesium	71400			P
7439-96-5	Manganese	1350			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	37.5	B		P
7440-09-7	Potassium	1820	B		P
7782-49-2	Selenium	2.0	U		F
7440-22-4	Silver	7.0	U		P
7440-23-5	Sodium	17800		E	P
7440-28-0	Thallium	2.0	U	W	F
7440-62-2	Vanadium	6.8	B		P
7440-66-6	Zinc	181			P
	Cyanide	10.0	U		CA

Color Before: TAN _____ Clarity Before: CLOUDY _____ Texture: _____
 Color After: COLORLESS _____ Clarity After: CLEAR _____ Artifacts: _____

Comments:

EPA_SAMPLE_FGP140 = CLIENT_SAMPLE_ID_FCR-GW-FGP-14-0 _____

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GWPGP1204

Lab Name: SWL-TULSA

Contract: WWENG-IN

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 13862

Matrix: (soil/water) WATER

Lab Sample ID: 13862.02

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R11477.D

Level: (low/med) LOW

Date Received: 05/22/93

% Moisture: not dec. _____

Data Analyzed: 05/25/93

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride ✓	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GWPGP1304

Lab Name: SWL-TULSA

Contract: WWENG-IN

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 13862

Matrix: (soil/water) WATER

Lab Sample ID: 13862.03

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R11478.D

Level: (low/med) LOW

Date Received: 05/22/93

% Moisture: not dec. _____

Data Analyzed: 05/25/93

GC Column:DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	7	J
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	22	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GWPGP1304D

Lab Name: SWL-TULSA

Contract: WWENG-IN

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 13862

Matrix: (soil/water) WATER

Lab Sample ID: 13862.04

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R11479.D

Level: (low/med) LOW

Date Received: 05/22/93

% Moisture: not dec. _____

Data Analyzed: 05/25/93

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	(11)	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	(29)	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GWPGP1404

Lab Name: SWL-TULSA

Contract: WWENG-IN

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 13862

Matrix: (soil/water) WATER

Lab Sample ID: 13862.05

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R11480.D

Level: (low/med) LOW

Date Received: 05/22/93

% Moisture: not dec. _____

Data Analyzed: 05/25/93

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-GW-PGP-12-04

Project ID: FRANKLIN-CURTIS RFI

SWLO ID: 13862.02

Report: 13862.02

Collected: 05/21/1993

Report Date: 06/11/1993

Page: 1

Received: 05/22/1993

Last Modified:

Matrix: Water

<u>TEST</u>	<u>DATE EXTRACTED</u>	<u>DETECTION LIMIT</u>	<u>UNITS</u>	<u>RESULTS</u>	<u>DATE ANALYZED</u>	<u>METHOD REFERENCE</u>
*** INORGANICS ***						
AMENABLE CN		10.0	UG/L	ND	05/28/93	SM 412F/SW 9010

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-GW-PGP-13-04

Project ID: FRANKLIN-CURTIS RFI

SWLO ID: 13862.03

Report: 13862.03

Collected: 05/21/1993

Report Date: 06/11/1993

Page: 1

Received: 05/22/1993

Last Modified:

Matrix: Water

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
AHENABLE CN		10.0	UG/L	ND	05/28/93	SM 412F/SW 9010

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE
NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
EPA = #EPA600/4-79-020, MARCH 1985

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D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: **WW ENGINEERING & SCIENCE, INC.**
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: **FCR-GW-PGP-13-04d**

Project ID: **FRANKLIN-CURTIS RFI**

SWLO ID: **13862.04**

Report: **13862.04**

Collected: **05/21/1993**

Report Date: **06/11/1993**

Page: **1**

Received: **05/22/1993**

Last Modified:

Matrix: **Water**

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
AMENABLE CN		10.0	UG/L	ND	05/28/93	SM 412F/SW 9010

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

J = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: **WW ENGINEERING & SCIENCE, INC.**
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: **FCR-GW-PGP-14-04**

Project ID: **FRANKLIN-CURTIS RFI**

SWLO ID: **13862.05**

Report: **13862.05**

Collected: **05/21/1993**

Report Date: **06/11/1993**

Page: **1**

Received: **05/22/1993**

Last Modified:

Matrix: **Water**

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
AMENABLE CN		10.0	UG/L	ND	05/28/93	SM 412F/SW 9010

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NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

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SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
 5010 STONE MILL ROAD
 BLOOMINGTON, IN 47408

Client ID: FCR-GW-IT2-01 (2)

Project ID: FRANKLIN, IN. RFI

SWLO ID: 8960.01

Report: 8960.01

Collected: 03/06/1992

Report Date: 03-25-1992

Page: 1

Received: 03/07/1992

Last Modified:

Matrix: Water

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
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*** INORGANICS ***

TOTAL CYANIDE		10	ug/l	ND	03/10/92	SM 412D
AMENABLE CN		10	ug/l	ND	03/10/92	SM 412F

• = NOT DETECTED ABOVE QUANTITATION LIMIT

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Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

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SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: **WW ENGINEERING & SCIENCE, INC.**
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: **FCR-GW-IT-1A-01 (2)** Project ID: **FRANKLIN, IN. RFI**

SWLO ID: **8960.02** Report: **8960.02**

Collected: **03/06/1992** Report Date: **03-25-1992** Page: **1**
Received: **03/07/1992** Last Modified: Matrix: **Water**

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
TOTAL CYANIDE		10	ug/l	ND	03/10/92	SM 412D
AMENABLE CN		10	ug/l	ND	03/10/92	SM 412F

= NOT DETECTED ABOVE QUANTITATION LIMIT

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

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Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

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* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

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SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: **WW ENGINEERING & SCIENCE, INC.**
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: **FCR-GW-MW21-01 (2)** Project ID: **FRANKLIN, IN. RFI**
SWLO ID: **8960.03** Report: **8960.03**

Collected: **03/06/1992** Report Date: **03-25-1992** Page: **1**
Received: **03/07/1992** Last Modified: Matrix: **Water**

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
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*** INORGANICS ***

TOTAL CYANIDE		10	ug/l	ND	03/10/92	SM 412D
AMENABLE CN		10	ug/l	ND	03/10/92	SM 412F

= NOT DETECTED ABOVE QUANTITATION LIMIT
= ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
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Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
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D = SURROGATES DILUTED OUT
J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
 5010 STONE MILL ROAD
 BLOOMINGTON, IN 47408

Client ID: FCR-GW-106-01eb (2) **Project ID:** FRANKLIN, IN. RFI
SWLO ID: 8960.04 **Report:** 8960.04

Collected: 03/06/1992 **Report Date:** 03-25-1992 **Page:** 1
Received: 03/07/1992 **Last Modified:** **Matrix:** Water

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
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*** INORGANICS ***

TOTAL CYANIDE		10	ug/l	ND	03/10/92	SM 412D
AMENABLE CN		10	ug/l	ND	03/10/92	SM 412F

= NOT DETECTED ABOVE QUANTITATION LIMIT
 = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
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Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
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 J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: **WW ENGINEERING & SCIENCE, INC.**
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: **MW-26**

Project ID: **FRANKLIN IN RFI**

SWLO ID: **9343.01**

Report: **9343.01**

Collected: **04/16/1992**

Report Date: **04-22-1992**

Page: **1**

Received: **04/17/1992**

Last Modified:

Matrix: **Water**

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
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*** INORGANICS ***

TOTAL CYANIDE		10	ug/l	ND	04/21/92	SM 412D
AMENABLE CN		10	ug/l	ND	04/21/92	SM 412F

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Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
EPA = #EPA600/4-79-020, MARCH 1985

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J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: MW-26

Project ID: FRANKLIN IN RFI

SWLO ID: 9343.01

Report: 9343.01

Collected: 04/16/1992

Report Date: 04-22-1992

Page: 1

Received: 04/17/1992

Last Modified:

Matrix: Water

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
TOTAL CYANIDE		10	ug/l	ND	04/21/92	SM 4120
AMENABLE CN		10	ug/l	ND	04/21/92	SM 412F

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

I = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

J = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.			
5010 STONE MILL ROAD BLOOMINGTON, IN 47408			
Client ID:	FCR-GW-IT2-01 (2)	Project ID:	FRANKLIN, IN. RFI
SWLO ID:	8960.01	Report:	8960.01
Collected:	03/06/1992	Report Date:	03-25-1992
Received:	03/07/1992	Last Modified:	Page: 1
			Matrix: Water

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
TOTAL CYANIDE		10	ug/l	ND	03/10/92	SM 412D
AMENABLE CN		10	ug/l	ND	03/10/92	SM 412F

D = NOT DETECTED ABOVE QUANTITATION LIMIT
 B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
 I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE
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 Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
 EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
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 J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION
 SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: **WW ENGINEERING & SCIENCE, INC.**
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: **FCR-GW-IT-1A-01 (2)** Project ID: **FRANKLIN, IN. RFI**

SWLO ID: **8960.02** Report: **8960.02**

Collected: **03/06/1992** Report Date: **03-25-1992** Page: **1**
Received: **03/07/1992** Last Modified: Matrix: **Water**

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
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*** INORGANICS ***

TOTAL CYANIDE		10	ug/l	ND	03/10/92	SM 412D
AMENABLE CN		10	ug/l	ND	03/10/92	SM 412F

• = NOT DETECTED ABOVE QUANTITATION LIMIT
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SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.			
5010 STONE MILL ROAD BLOOMINGTON, IN 47408			
Client ID:	FCR-GW-MW21-01 (2)	Project ID:	FRANKLIN, IN. RFI
SWLO ID:	8960.03	Report:	8960.03
Collected:	03/06/1992	Report Date:	03-25-1992
Received:	03/07/1992	Last Modified:	Page: 1
			Matrix: Water

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
TOTAL CYANIDE		10	ug/l	ND	03/10/92	SM 4120
AMENABLE CN		10	ug/l	ND	03/10/92	SM 412F

= NOT DETECTED ABOVE QUANTITATION LIMIT
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 I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE
 NA = NOT APPLICABLE
 Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
 EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
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 J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION
 SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: **WW ENGINEERING & SCIENCE, INC.**
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: **FCR-GW-106-01eb (2)** Project ID: **FRANKLIN, IN. RFI**

SWLO ID: **8960.04** Report: **8960.04**

Collected: **03/06/1992** Report Date: **03-25-1992** Page: **1**
Received: **03/07/1992** Last Modified: Matrix: **Water**

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
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*** INORGANICS ***

TOTAL CYANIDE		10	ug/l	ND	03/10/92	SM 412D
AMENABLE CN		10	ug/l	ND	03/10/92	SM 412F

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Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

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SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: **WW ENGINEERING & SCIENCE, INC.**
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: **FCR-GW-MW3-01**

Project ID: **AMPHENOL FACILITY**

SWLO ID: **8929.11**

Report: **8929.11**

Collected: **03/02/1992**

Report Date: **03-30-1992**

Page: **1**

Received: **03/04/1992**

Last Modified:

Matrix: **Water**

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
AMENABLE CN		10	ug/l	ND	03/10/92	SM 412F

= NOT DETECTED ABOVE QUANTITATION LIMIT

= ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

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Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

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J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: **WW ENGINEERING & SCIENCE, INC.**
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: **FCR-GW-MW102-01eb**

Project ID: **AMPHENOL FACILITY**

SWLO ID: **8929.10**

Report: **8929.10**

Collected: **03/02/1992**

Report Date: **03-30-1992**

Page: **1**

Received: **03/04/1992**

Last Modified:

Matrix: **Water**

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
AMENABLE CN		10	ug/l	ND	03/10/92	SM 412F

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

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Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

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SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-GW-MW24-01

Project ID: AMPHENOL FACILITY

SWLO ID: 8929.09

Report: 8929.09

Collected: 03/02/1992

Report Date: 03-30-1992

Page: 1

Received: 03/04/1992

Last Modified:

Matrix: Water

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
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*** INORGANICS ***

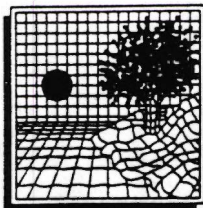
AMENABLE CN		10	ug/l	ND	03/10/92	SM 412F
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 J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2858

CLIENT: WW ENGINEERING
5010 STONE MILL ROAD
BLOOMINGTON, ID 47408
ATTN: JIM KEITH

REPORT: 8979.01M

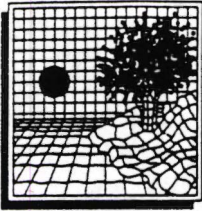
DATE: 04-03-92

SAMPLE MATRIX: WATER
SWLO #: 8979.01
METHOD REFERENCE: SM 412F
DATE SUBMITTED: 03-11-92

Handwritten: 4/13/92

<u>CLIENT ID</u>	<u>SWLO I.D</u>	<u>DET. LIMIT</u>	<u>UNIT</u>	<u>AMENABLE CYANIDE</u>	<u>DATE ANALYZED</u>
FCR-GW-MW25-01	8979.01	10	ug/l	ND	03-17-92

ND = NOT DETECTED ABOVE QUANTITATION LIMIT
SM = STANDARD METHOD, 16TH EDITION



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2858

CLIENT: WW ENGINEERING
5010 STONE MILL ROAD
BLOOMINGTON, ID 47408
ATTN: JIM KEITH

REPORT: 8943.01-08M

DATE: 04-03-92

SAMPLE MATRIX: WATER
SWLO #: 8943.01 - 8943.08
METHOD REFERENCE: SM 412F
DATE SUBMITTED: 03-05-92

*803
4/13/92*

<u>CLIENT ID</u>	<u>SWLO I.D</u>	<u>DET. LIMIT</u>	<u>UNIT</u>	<u>AMENABLE CYANIDE</u>	<u>DATE ANALYZED</u>
FCR-GW-IT3-01	8943.01	10	ug/l	ND	03-10-92
FCR-GW-MW23-01d	8943.02	10	ug/l	ND	03-10-92
FCR-GW-MW23-01	8943.03	10	ug/l	ND	03-10-92
FCR-GW-MW9-01	8943.04	10	ug/l	ND	03-10-92
FCR-GW-MW20-01	8943.07	10	ug/l	ND	03-10-92
FCR-GW-MW21-01d	8943.08	10	ug/l	ND	03-10-92

ND = NOT DETECTED ABOVE QUANTITATION LIMIT
SM = STANDARD METHOD, 16TH EDITION

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCRGW10302EB

Lab Name: SWL-TULSA Contract: WWENG-IN

Lab Code: SWOK Case No.: WWG1 SAS No.: _____ SDG No.: 10499

Matrix: (soil/water) WATER Lab Sample ID: 1049906

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN753

Level: (low/med) LOW Date Received: 07/29/92

% Moisture: not dec. _____ Date Analyzed: 08/04/92

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	U
74-87-3	-----Chloromethane	10	U
74-83-9	-----Bromomethane	10	U
75-01-4	-----Vinyl Chloride	10	U
75-00-3	-----Chloroethane	10	U
75-09-2	-----Methylene Chloride	2	J
67-64-1	-----Acetone	84	
75-15-0	-----Carbon Disulfide	5	U
75-35-4	-----1,1-Dichloroethene	5	U
75-34-3	-----1,1-Dichloroethane	5	U
540-59-0	-----1,2-Dichloroethene (total)	5	U
67-66-3	-----Chloroform	5	U
107-06-2	-----1,2-Dichloroethane	5	U
78-93-3	-----2-Butanone	41	
71-55-6	-----1,1,1-Trichloroethane	5	U
56-23-5	-----Carbon Tetrachloride	5	U
108-05-4	-----Vinyl Acetate	10	U
75-27-4	-----Bromodichloromethane	5	U
78-87-5	-----1,2-Dichloropropane	1	J
10061-01-5	-----cis-1,3-Dichloropropene	5	U
79-01-6	-----Trichloroethene	5	U
124-48-1	-----Dibromochloromethane	5	U
79-00-5	-----1,1,2-Trichloroethane	5	U
71-43-2	-----Benzene	5	U
10061-02-6	-----trans-1,3-Dichloropropene	5	U
75-25-2	-----Bromoform	5	U
108-10-1	-----4-Methyl-2-Pentanone	10	U
591-78-6	-----2-Hexanone	10	U
127-18-4	-----Tetrachloroethene	5	U
79-34-5	-----1,1,2,2-Tetrachloroethane	5	U
108-88-3	-----Toluene	2	J
108-90-7	-----Chlorobenzene	5	U
100-41-4	-----Ethylbenzene	5	U
100-42-5	-----Styrene	5	U
1330-20-7	-----Xylene (total)	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCRGWIT202

Lab Name: SWL-TULSA Contract: WWENG-IN

Lab Code: SWOK Case No.: WWG1 SAS No.: _____ SDG No.: 10499

Matrix: (soil/water) WATER Lab Sample ID: 1049905

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: KA150

Level: (low/med) LOW Date Received: 07/29/92

% Moisture: not dec. _____ Date Analyzed: 07/30/92

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
74-87-3	-----Chloromethane	10	U
74-83-9	-----Bromomethane	10	U
75-01-4	-----Vinyl Chloride	10	U
75-00-3	-----Chloroethane	10	U
75-09-2	-----Methylene Chloride	1	J
67-64-1	-----Acetone	12	
75-15-0	-----Carbon Disulfide	5	U
75-35-4	-----1,1-Dichloroethene	5	U
75-34-3	-----1,1-Dichloroethane	17	
540-59-0	-----1,2-Dichloroethene (total)	30	
67-66-3	-----Chloroform	5	U
107-06-2	-----1,2-Dichloroethane	5	U
78-93-3	-----2-Butanone	10	U
71-55-6	-----1,1,1-Trichloroethane	28	
56-23-5	-----Carbon Tetrachloride	5	U
108-05-4	-----Vinyl Acetate	10	U
75-27-4	-----Bromodichloromethane	5	U
78-87-5	-----1,2-Dichloropropane	5	U
10061-01-5	-----cis-1,3-Dichloropropene	5	U
79-01-6	-----Trichloroethene	39	
124-48-1	-----Dibromochloromethane	5	U
79-00-5	-----1,1,2-Trichloroethane	5	U
71-43-2	-----Benzene	5	U
10061-02-6	-----trans-1,3-Dichloropropene	5	U
75-25-2	-----Bromoform	5	U
108-10-1	-----4-Methyl-2-Pentanone	10	U
591-78-6	-----2-Hexanone	10	U
127-18-4	-----Tetrachloroethene	2	J
79-34-5	-----1,1,2,2-Tetrachloroethane	5	U
108-88-3	-----Toluene	5	U
108-90-7	-----Chlorobenzene	5	U
100-41-4	-----Ethylbenzene	5	U
100-42-5	-----Styrene	5	U
1330-20-7	-----Xylene (total)	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCRGWIT302

Lab Name: SWL-TULSA Contract: WWENG-IN

Lab Code: SWOK Case No.: WWG1 SAS No.: _____ SDG No.: 10499

Matrix: (soil/water) WATER Lab Sample ID: 1049904

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: KA149

Level: (low/med) LOW Date Received: 07/29/92

% Moisture: not dec. _____ Date Analyzed: 07/30/92

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	<u>Q</u>
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	11	
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	4	J
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	67	
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	22	
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	8	
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	1	J
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	1	J

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCRGWMW1202

Lab Name: SWL-TULSA Contract: WWENG-IN

Lab Code: SWOK Case No.: WWG1 SAS No.: _____ SDG No.: 10499

Matrix: (soil/water) WATER Lab Sample ID: 1049903

Sample wt/vol: 0.10 (g/mL) ML Lab File ID: CN768

Level: (low/med) LOW Date Received: 07/29/92

% Moisture: not dec. _____ Date Analyzed: 08/04/92

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
74-87-3	-----Chloromethane	500	U
74-83-9	-----Bromomethane	500	U
75-01-4	-----Vinyl Chloride	500	U
75-00-3	-----Chloroethane	500	U
75-09-2	-----Methylene Chloride	250	U
67-64-1	-----Acetone	500	U
75-15-0	-----Carbon Disulfide	250	U
75-35-4	-----1,1-Dichloroethene	250	U
75-34-3	-----1,1-Dichloroethane	190	J
540-59-0	-----1,2-Dichloroethene (total)	250	U
67-66-3	-----Chloroform	250	U
107-06-2	-----1,2-Dichloroethane	250	U
78-93-3	-----2-Butanone	500	U
71-55-6	-----1,1,1-Trichloroethane	5400	U
56-23-5	-----Carbon Tetrachloride	250	U
108-05-4	-----Vinyl Acetate	500	U
75-27-4	-----Bromodichloromethane	250	U
78-87-5	-----1,2-Dichloropropane	250	U
10061-01-5	-----cis-1,3-Dichloropropene	250	U
79-01-6	-----Trichloroethene	4700	U
124-48-1	-----Dibromochloromethane	250	U
79-00-5	-----1,1,2-Trichloroethane	250	U
71-43-2	-----Benzene	250	U
10061-02-6	-----trans-1,3-Dichloropropene	250	U
75-25-2	-----Bromoform	250	U
108-10-1	-----4-Methyl-2-Pentanone	150	J
591-78-6	-----2-Hexanone	500	U
127-18-4	-----Tetrachloroethene	5900	U
79-34-5	-----1,1,2,2-Tetrachloroethane	250	U
108-88-3	-----Toluene	250	U
108-90-7	-----Chlorobenzene	250	U
100-41-4	-----Ethylbenzene	250	U
100-42-5	-----Styrene	250	U
1330-20-7	-----Xylene (total)	250	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCRGWMW2202

Lab Name: SWL-TULSA Contract: WWENG-IN

Lab Code: SWOK Case No.: WWG1 SAS No.: _____ SDG No.: 10499

Matrix: (soil/water) WATER Lab Sample ID: 1049902

Sample wt/vol: 0.025 (g/mL) ML Lab File ID: CN769

Level: (low/med) LOW Date Received: 07/29/92

% Moisture: not dec. _____ Date Analyzed: 08/04/92

Column: (pack/cap) CAF Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	<u>Q</u>
74-87-3	-----Chloromethane	2000	U
74-83-9	-----Bromomethane	2000	U
75-01-4	-----Vinyl Chloride	2000	U
75-00-3	-----Chloroethane	2000	U
75-09-2	-----Methylene Chloride	1000	U
67-64-1	-----Acetone	2000	U
75-15-0	-----Carbon Disulfide	1000	U
75-35-4	-----1,1-Dichloroethene	1000	U
75-34-3	-----1,1-Dichloroethane	1000	U
540-59-0	-----1,2-Dichloroethene (total)	1000	U
67-66-3	-----Chloroform	1000	U
107-06-2	-----1,2-Dichloroethane	1000	U
78-93-3	-----2-Butanone	2000	U
71-55-6	-----1,1,1-Trichloroethane	1000	U
56-23-5	-----Carbon Tetrachloride	1000	U
108-05-4	-----Vinyl Acetate	2000	U
75-27-4	-----Bromodichloromethane	1000	U
78-87-5	-----1,2-Dichloropropane	1000	U
10061-01-5	-----cis-1,3-Dichloropropene	1000	U
79-01-6	-----Trichloroethene	2500	U
124-48-1	-----Dibromochloromethane	1000	U
79-00-5	-----1,1,2-Trichloroethane	1000	U
71-43-2	-----Benzene	1000	U
10061-02-6	-----trans-1,3-Dichloropropene	1000	U
75-25-2	-----Bromoform	1000	U
108-10-1	-----4-Methyl-2-Pentanone	2000	U
591-78-6	-----2-Hexanone	2000	U
127-18-4	-----Tetrachloroethene	21000	U
79-34-5	-----1,1,2,2-Tetrachloroethane	1000	U
108-88-3	-----Toluene	1000	U
108-90-7	-----Chlorobenzene	1000	U
100-41-4	-----Ethylbenzene	1000	U
100-42-5	-----Styrene	1000	U
1330-20-7	-----Xylene (total)	1000	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCRGWTE4

Lab Name: SWL-TULSA Contract: WWENG-IN

Lab Code: SWOK Case No.: WWG1 SAS No.: _____ SDG No.: 10499

Matrix: (soil/water) WATER Lab Sample ID: 1049907

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN754

Level: (low/med) LOW Date Received: 07/29/92

% Moisture: not dec. _____ Date Analyzed: 08/04/92

Column: (pack/cap) CAF. Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
74-87-3	-----Chloromethane	10	U
74-83-9	-----Bromomethane	10	U
75-01-4	-----Vinyl Chloride	10	U
75-00-3	-----Chloroethane	10	U
75-09-2	-----Methylene Chloride	7	
67-64-1	-----Acetone	37	
75-15-0	-----Carbon Disulfide	5	U
75-35-4	-----1,1-Dichloroethene	5	U
75-34-3	-----1,1-Dichloroethane	5	U
540-59-0	-----1,2-Dichloroethene (total)	5	U
67-66-3	-----Chloroform	5	U
107-06-2	-----1,2-Dichloroethane	5	U
78-93-3	-----2-Butanone	10	U
71-55-6	-----1,1,1-Trichloroethane	5	U
56-23-5	-----Carbon Tetrachloride	5	U
108-05-4	-----Vinyl Acetate	10	U
75-27-4	-----Bromodichloromethane	5	U
78-87-5	-----1,2-Dichloropropane	5	U
10061-01-5	-----cis-1,3-Dichloropropene	5	U
79-01-6	-----Trichloroethene	5	U
124-48-1	-----Dibromochloromethane	5	U
79-00-5	-----1,1,2-Trichloroethane	5	U
71-43-2	-----Benzene	5	U
10061-02-6	-----trans-1,3-Dichloropropene	5	U
75-25-2	-----Bromoform	5	U
108-10-1	-----4-Methyl-2-Pentanone	10	U
591-78-6	-----2-Hexanone	10	U
127-18-4	-----Tetrachloroethene	1	J
79-34-5	-----1,1,2,2-Tetrachloroethane	5	U
108-88-3	-----Toluene	5	U
108-90-7	-----Chlorobenzene	5	U
100-41-4	-----Ethylbenzene	5	U
100-42-5	-----Styrene	5	U
1330-20-7	-----Xylene (total)	2	J

I
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

FW1202

Lab Name: SOUTHWEST LAB. OF OK _____ Contract: _____
 Lab Code: SWOK _____ Case No.: 10499 _____ SAS No.: _____ SDG No.: FT0202
 Matrix (soil/water): WATER _____ Lab Sample ID: 1049903 _____
 Level (low/med): LOW _____ Date Received: 07/29/92 _____
 Solids: 0.0 _____

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	G	M
7429-90-5	Aluminum	8350		N	F
7440-36-0	Antimony	39.0	U	N	F
7440-38-2	Arsenic	7.0	B		F
7440-39-3	Barium	296			F
7440-41-7	Beryllium	5.1			F
7440-43-9	Cadmium	3.0	U		F
7440-70-2	Calcium	401000			F
7440-47-3	Chromium	12.7			F
7440-48-4	Cobalt	20.8	B		F
7440-50-8	Copper	53.3			F
7439-89-6	Iron	34200		*	F
7439-92-1	Lead	58.3		WN	F
7439-95-4	Magnesium	114000			F
7439-96-5	Manganese	2120			F
7439-97-6	Mercury	0.26			CV
7440-02-0	Nickel	52.0			F
7440-09-7	Potassium	3740	B		F
7782-49-2	Selenium	2.9	B	WN	F
7440-22-4	Silver	8.0	U		F
7440-23-5	Sodium	9130			F
7440-28-0	Thallium	2.0	U	WN	F
7440-62-2	Vanadium	26.7	B		F
7440-66-6	Zinc	165			F
	Cyanide	10.0	U		CA

Color Before: BROWN _____ Clarity Before: CLOUDY _____ Texture: _____
 Color After: COLORLESS _____ Clarity After: CLEAR _____ Artifacts: _____

Comments:

EPA_SAMPLE_ID_FW1202 = CLIENT_ID_FCR-GW-MW12-02

INORGANIC ANALYSES DATA SHEET

FW2202

Lab Name: SOUTHWEST LAB., OF OK _____ Contract: _____
 Lab. Code: SWOK _____ Case No.: 10499 _____ SAS No.: _____ SDG No.: FT0202
 Matrix (soil/water): WATER _____ Lab Sample ID: 1049902 _____
 Level (low/med): LOW _____ Date Received: 07/29/92
 % Solids: 0.0

Concentration Units. (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7590		N	P
7440-36-0	Antimony	39.0	U	N	P
7440-38-2	Arsenic	2.8	B		F
7440-39-3	Barium	216			P
7440-41-7	Beryllium	5.0	B		P
7440-43-9	Cadmium	3.0	U		P
7440-70-2	Calcium	387000			P
7440-47-3	Chromium	18.2			P
7440-48-4	Cobalt	19.7	B		P
7440-50-8	Copper	94.5			P
7439-89-6	Iron	17900		*	P
7439-92-1	Lead	33.3		WN	F
7439-95-4	Magnesium	128000			P
7439-96-5	Manganese	2100			P
7439-97-6	Mercury	0.39			CV
7440-02-0	Nickel	60.6			P
7440-09-7	Potassium	3660	B		P
7782-49-2	Selenium	2.0	U	WN	F
7440-22-4	Silver	23.3			P
7440-23-5	Sodium	8820			P
7440-28-0	Thallium	2.0	U	WN	F
7440-62-2	Vanadium	28.2	B		P
7440-66-6	Zinc	109			P
	Cyanide	10.0	U		CA

Color Before: BROWN _____ Clarity Before: CLOUDY _____ Texture: _____
 Color After: COLORLESS _____ Clarity After: CLEAR _____ Artifacts: _____

Comments:

EPA_SAMPLE_ID_FW2202 = CLIENT_ID_FCR-GW-MW22-02 _____

INORGANIC ANALYSES DATA SHEET

FT02EB

Lab Name: SOUTHWEST LAB. OF OK _____ Contract: _____

Lab Code: SWOK _____ Case No.: 10499 _____ SAS No.: _____ SDG No.: FT0202

Matrix (soil/water): WATER _____ Lab Sample ID: 1049906 _____

Level (low/med): LOW _____ Date Received: 07/29/92

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	R	M
7429-90-5	Aluminum	43.0	U	N	P
7440-36-0	Antimony	39.0	U	N	P
7440-38-2	Arsenic	1.0	U		F
7440-39-3	Barium	8.0	U		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	3.0	U		P
7440-70-2	Calcium	154	U		P
7440-47-3	Chromium	6.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	9.0	U		P
7439-89-6	Iron	24.1	B	*	P
7439-92-1	Lead	1.0	U	N	F
7439-95-4	Magnesium	138	U		P
7439-96-5	Manganese	1.4	B		P
7439-97-6	Mercury	0.53			CV
7440-02-0	Nickel	7.0	U		P
7440-09-7	Potassium	271	U		P
7782-49-2	Selenium	2.0	U	N	F
7440-22-4	Silver	8.0	U		P
7440-23-5	Sodium	822	U		P
7440-28-0	Thallium	2.0	U	N	F
7440-62-2	Vanadium	5.0	U		P
7440-66-6	Zinc	4.0	U		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS _____ Clarity Before: CLEAR _____ Texture: _____

Color After: COLORLESS _____ Clarity After: CLEAR _____ Artifacts: _____

Comments:

EPA_SAMPLE_ID_FT02EB = CLIENT_ID_FCR-GW-103-02EB _____

INORGANIC ANALYSES DATA SHEET

FT0202

Lab Name: SOUTHWEST LAB. OF OK _____ Contract: _____

Lab Code: SWOK _____ Case No.: 10499 _____ SAS No.: _____ SDG No.: FT0202

Matrix (soil/water): WATER _____ Lab Sample ID: 1049905 _____

Level (low/med): LDW _____ Date Received: 07/29/92

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-8	Aluminum	14200		N	F
7440-36-0	Antimony	39.0	U	N	F
7440-36-2	Arsenic	8.2	B		F
7440-39-3	Barium	815			F
7440-41-7	Beryllium	6.7			F
7440-43-9	Cadmium	3.0	U		F
7440-70-2	Calcium	523000			F
7440-47-3	Chromium	24.4			F
7440-48-4	Cobalt	20.7	B		F
7440-50-8	Copper	87.1			F
7439-89-6	Iron	37300		*	F
7439-92-1	Lead	51.0		SN	F
7439-95-4	Magnesium	180000			F
7439-96-5	Manganese	2250			F
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	135			F
7440-09-7	Potassium	4800	B		F
7782-49-2	Selenium	2.0	U	WN	F
7440-22-4	Silver	8.0	U		F
7440-23-5	Sodium	19800			F
7440-28-0	Thallium	2.0	U	WN	F
7440-62-2	Vanadium	37.2	B		F
7440-66-6	Zinc	197			F
	Cyanide	10.0	U		CA

Color Before: BROWN _____ Clarity Before: CLOUDY _____ Texture: _____

Color After: COLORLESS _____ Clarity After: CLEAR _____ Artifacts: _____

Comments:

EPA_SAMPLE_ID_FT0202 = CLIENT_ID_FCR-GW-IT2-02 _____

INORGANIC ANALYSES DATA SHEET

FT0302

Lab Name: SOUTHWEST LAB. OF OK _____ Contract: _____

Lab Code: SWOK _____ Case No.: 10499 _____ SAS No.: _____ SDG No.: FT0202

Matrix (soil/water): WATER _____ Lab Sample ID: 1049904 _____

Level (low/med): LOW _____ Date Received: 07/29/92

% Solids: 0.0

Concentration Units. (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	@	M
7429-90-5	Aluminum	16300		N	P
7440-36-0	Antimony	39.0	U	N	P
7440-38-2	Arsenic	11.6			F
7440-39-3	Barium	409			P
7440-41-7	Beryllium	6.5			P
7440-43-9	Cadmium	3.0	U		P
7440-70-2	Calcium	480000			P
7440-47-3	Chromium	33.9			P
7440-48-4	Cobalt	42.8	B		P
7440-50-8	Copper	72.4			P
7439-89-6	Iron	43900		*	P
7439-92-1	Lead	50.4		WN	F
7439-95-4	Magnesium	151000			P
7439-96-5	Manganese	3860			P
7439-97-6	Mercury	0.53			CV
7440-02-0	Nickel	81.3			P
7440-09-7	Potassium	4310	B		P
7782-49-2	Selenium	2.0	U	N	F
7440-22-4	Silver	8.0	U		P
7440-23-5	Sodium	7280			P
7440-28-0	Thallium	2.0	U	WN	F
7440-62-2	Vanadium	37.9	B		P
7440-66-6	Zinc	171			P
	Cyanide	10.0	U		CA

Color Before: BROWN _____ Clarity Before: CLOUDY _____ Texture: _____

Color After: COLORLESS _____ Clarity After: CLEAR _____ Artifacts: _____

Comments:

EPA_SAMPLE_ID_FT0302 = CLIENT_ID_FDR-GW-IT3-02 _____

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: **WW ENGINEERING & SCIENCE, INC.**
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: **FCR-GW-MW22-02**

Project ID: **FRANKLIN-RFI**

SWLO ID: **10499.02**

Report: **10499.02**

Collected: **07/27/1992**

Report Date: **08/19/1992**

Page: **1**

Received: **07/29/1992**

Last Modified:

Matrix: **Water**

<u>TEST</u>	<u>DATE EXTRACTED</u>	<u>DETECTION LIMIT</u>	<u>UNITS</u>	<u>RESULTS</u>	<u>DATE ANALYZED</u>	<u>METHOD REFERENCE</u>
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*** INORGANICS ***

AMENABLE CN		10	ug/l	ND	07/31/92	SM 412F
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ND = NOT DETECTED ABOVE QUANTITATION LIMIT

• = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

• = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: **WW ENGINEERING & SCIENCE, INC.**
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: **FCR-GW-MW12-02**

Project ID: **FRANKLIN-RFI**

SWLO ID: **10499.03**

Report: **10499.03**

Collected: **07/27/1992**

Report Date: **08/19/1992**

Page: **1**

Received: **07/29/1992**

Last Modified:

Matrix: **Water**

<u>TEST</u>	<u>DATE EXTRACTED</u>	<u>DETECTION LIMIT</u>	<u>UNITS</u>	<u>RESULTS</u>	<u>DATE ANALYZED</u>	<u>METHOD REFERENCE</u>
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*** INORGANICS ***

AMENABLE CN		10	ug/l	ND	07/31/92	SM 412F
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ND = NOT DETECTED ABOVE QUANTITATION LIMIT

! = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: **WW ENGINEERING & SCIENCE, INC.**
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: **FCR-GW-IT3-02** Project ID: **FRANKLIN-RFI**
BWLO ID: **10499.04** Report: **10499.04**

Collected: **07/27/1992** Report Date: **08/19/1992** Page: **1**
Received: **07/29/1992** Last Modified: Matrix: **Water**

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
AMENABLE CN		10	ug/l	ND	07/31/92	SM 412F

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: PCR-GW-103-02eb

Project ID: FRANKLIN-RFI

SWLO ID: 10499.06

Report: 10499.06

Collected: 07/27/1992

Report Date: 08/19/1992

Page: 1

Received: 07/29/1992

Last Modified:

Matrix: Water

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
AMENABLE CN		10	ug/l	ND	07/31/92	SM 412F

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SV846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-GW-IT2-02

Project ID: FRANKLIN-RFI

SWLO ID: 10499.05

Report: 10499.05

Collected: 07/27/1992

Report Date: 08/19/1992

Page: 1

Received: 07/29/1992

Last Modified:

Matrix: Water

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
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*** INORGANICS ***

AMENABLE CN		10	ug/l	ND	07/31/92	SM 412F
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ND = NOT DETECTED ABOVE QUANTITATION LIMIT

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

D = SURROGATES DILUTED OUT

UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

EPA = #EPA600/4-79-020, MARCH 1985

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCRGW-IT2-03

Lab Name: SWL-TULSA

Contract: WWENG-IN

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 12653

Matrix: (soil/water) WATER

Lab Sample ID: 12653.05

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: N10056.D

Level: (low/med) LOW

Date Received: 02/18/93

% Moisture: not dec. _____

Date Analyzed: 02/25/93

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	18	U
540-59-0	1,2-Dichloroethene (total)	51	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	29	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	29	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	J
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCRGW-IT3-03

Lab Name: SWL-TULSA

Contract: WWENG-IN

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 12653

Matrix: (soil/water) WATER

Lab Sample ID: 12653.02

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: N10030.D

Level: (low/med) LOW

Date Received: 02/18/93

% Moisture: not dec. _____

Date Analyzed: 02/23/93

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND	Q
74-87-3	Chloromethane	10 U
74-83-9	Bromomethane	10 U
75-01-4	Vinyl Chloride	10 U
75-00-3	Chloroethane	10 U
75-09-2	Methylene Chloride	10 U
67-64-1	Acetone	10 U
75-15-0	Carbon Disulfide	10 U
75-35-4	1,1-Dichloroethene	11
75-34-3	1,1-Dichloroethane	5 J
540-59-0	1,2-Dichloroethene (total)	10 U
67-66-3	Chloroform	10 U
107-06-2	1,2-Dichloroethane	10 U
78-93-3	2-Butanone	10 U
71-55-6	1,1,1-Trichloroethane	71
56-23-5	Carbon Tetrachloride	10 U
75-27-4	Bromodichloromethane	10 U
78-87-5	1,2-Dichloropropane	10 U
10061-01-5	cis-1,3-Dichloropropene	10 U
79-01-6	Trichloroethene	29
124-48-1	Dibromochloromethane	10 U
79-00-5	1,1,2-Trichloroethane	10 U
71-43-2	Benzene	10 U
10061-02-6	trans-1,3-Dichloropropene	10 U
75-25-2	Bromoform	10 U
108-10-1	4-Methyl-2-Pentanone	10 U
591-78-6	2-Hexanone	10 U
127-18-4	Tetrachloroethene	10 U
79-34-5	1,1,2,2-Tetrachloroethane	10 U
108-88-3	Toluene	10 U
108-90-7	Chlorobenzene	10 U
100-41-4	Ethylbenzene	10 U
100-42-5	Styrene	10 U
1330-20-7	Xylene (Total)	10 U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCRGWIT3-03d

Lab Name: SWL-TULSA

Contract: WWENG-IN

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 12653

Matrix: (soil/water) WATER

Lab Sample ID: 12653.03

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: N10031.D

Level: (low/med) LOW

Date Received: 02/18/93

% Moisture: not dec. _____

Date Analyzed: 02/23/93

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
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74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	11	
75-34-3	1,1-Dichloroethane	5	J
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	73	
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	23	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCRGMW12-03

Lab Name: SWL-TULSA

Contract: WWENG-IN

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 12653

Matrix: (soil/water) WATER

Lab Sample ID: 12653.10

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: N10107.D

Level: (low/med) LOW

Date Received: 02/18/93

% Moisture: not dec. _____

Date Analyzed: 02/27/93

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 100.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	1000	U
74-83-9	Bromomethane	1000	U
75-01-4	Vinyl Chloride	1000	U
75-00-3	Chloroethane	1000	U
75-09-2	Methylene Chloride	1000	U
67-64-1	Acetone	1000	U
75-15-0	Carbon Disulfide	1000	U
75-35-4	1,1-Dichloroethene	1000	U
75-34-3	1,1-Dichloroethane	136	J
540-59-0	1,2-Dichloroethene (total)	1000	U
67-66-3	Chloroform	1000	U
107-06-2	1,2-Dichloroethane	1000	U
78-93-3	2-Butanone	1000	U
71-55-6	1,1,1-Trichloroethane	2221	
56-23-5	Carbon Tetrachloride	1000	U
75-27-4	Bromodichloromethane	1000	U
78-87-5	1,2-Dichloropropane	1000	U
10061-01-5	cis-1,3-Dichloropropene	1000	U
79-01-6	Trichloroethene	4759	
124-48-1	Dibromochloromethane	1000	U
79-00-5	1,1,2-Trichloroethane	1000	U
71-43-2	Benzene	1000	U
10061-02-6	trans-1,3-Dichloropropene	1000	U
75-25-2	Bromoform	1000	U
108-10-1	4-Methyl-2-Pentanone	1000	U
591-78-6	2-Hexanone	1000	U
127-18-4	Tetrachloroethene	5695	
79-34-5	1,1,2,2-Tetrachloroethane	1000	U
108-88-3	Toluene	1000	U
108-90-7	Chlorobenzene	1000	U
100-41-4	Ethylbenzene	1000	U
100-42-5	Styrene	1000	U
1330-20-7	Xylene (Total)	1000	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RGWMW2203

Lab Name: SWL-TULSA

Contract: WWENG-IN

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 12653

Matrix: (soil/water) WATER

Lab Sample ID: 12653.07

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: N10084.D

Level: (low/med) LOW

Date Received: 02/18/93

% Moisture: not dec. _____

Date Analyzed: 02/26/93

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 100.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NO. COMPOUND Q

74-87-3-.....	Chloromethane	1000	U
74-83-9-.....	Bromomethane	1000	U
75-01-4-.....	Vinyl Chloride	1000	U
75-00-3-.....	Chloroethane	1000	U
75-09-2-.....	Methylene Chloride	1000	U
67-64-1-.....	Acetone	1000	U
75-15-0-.....	Carbon Disulfide	1000	U
75-35-4-.....	1,1-Dichloroethene	1000	U
75-34-3-.....	1,1-Dichloroethane	1000	U
540-59-0-.....	1,2-Dichloroethene (total)	1000	U
67-66-3-.....	Chloroform	1000	U
107-06-2-.....	1,2-Dichloroethane	1000	U
78-93-3-.....	2-Butanone	1000	U
71-55-6-.....	1,1,1-Trichloroethane	1000	U
56-23-5-.....	Carbon Tetrachloride	1000	U
75-27-4-.....	Bromodichloromethane	1000	U
78-87-5-.....	1,2-Dichloropropane	1000	U
10061-01-5-.....	cis-1,3-Dichloropropene	1000	U
79-01-6-.....	Trichloroethene	1956	
124-48-1-.....	Dibromochloromethane	1000	U
79-00-5-.....	1,1,2-Trichloroethane	1000	U
71-43-2-.....	Benzene	1000	U
10061-02-6-.....	trans-1,3-Dichloropropene	1000	U
75-25-2-.....	Bromoform	1000	U
108-10-1-.....	4-Methyl-2-Pentanone	1000	U
591-78-6-.....	2-Hexanone	1000	U
127-18-4-.....	Tetrachloroethene	19499	
79-34-5-.....	1,1,2,2-Tetrachloroethane	1000	U
108-88-3-.....	Toluene	1000	U
108-90-7-.....	Chlorobenzene	1000	U
100-41-4-.....	Ethylbenzene	1000	U
100-42-5-.....	Styrene	1000	U
1330-20-7-.....	Xylene (Total)	1000	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCRGMW24-03

Lab Name: SWL-TULSA

Contract: WWENG-IN

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 12653

Matrix: (soil/water) WATER

Lab Sample ID: 12653.01

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: N10083.D

Level: (low/med) LOW

Date Received: 02/18/93

% Moisture: not dec. _____

Date Analyzed: 02/26/93

GC Column:DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	5	J
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	53	
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	189	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCRGWIT1A03

Lab Name: SWL-TULSA

Contract: WWENG- IN

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 12669

Matrix: (soil/water) WATER

Lab Sample ID: 12669.09

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: LF655.D

Level: (low/med) LOW

Date Received: 02/19/93

% Moisture: not dec. _____

Data Analyzed: 02/26/93

GC Column:DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NO. COMPOUND Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	7	J
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	4	J
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCRGWMW2303

Lab Name: SWL-TULSA

Contract: WWENG-IN

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 12669

Matrix: (soil/water) WATER

Lab Sample ID: 12669.10

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: LF43.D

Level: (low/med) LOW

Date Received: 02/19/93

% Moisture: not dec. _____

Data Analyzed: 02/26/93

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	8	J
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	2	J
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	13	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	31	
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCRGMMW2303d

Lab Name: SWL-TULSA

Contract: WWENG-IN

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 12669

Matrix: (soil/water) WATER

Lab Sample ID: 12669.11

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: LF616.D

Level: (low/med) LOW

Date Received: 02/19/93

% Moisture: not dec. _____

Data Analyzed: 02/24/93

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	2	J
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	21	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	38	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCRGWMW2503

Lab Name: SWL-TULSA

Contract: WWENG-IN

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 12669

Matrix: (soil/water) WATER

Lab Sample ID: 12669.12

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: LF617.D

Level: (low/med) LOW

Date Received: 02/19/93

% Moisture: not dec. _____

Data Analyzed: 02/24/93

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NO.

COMPOUND

Q

74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	11	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	19	
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCRGMW2703

Lab Name: SWL-TULSA

Contract: WWENG-IN

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 12669

Matrix: (soil/water) WATER

Lab Sample ID: 12669.04

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: LF609.D

Level: (low/med) LOW

Date Received: 02/19/93

% Moisture: not dec. _____

Data Analyzed: 02/24/93

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 5.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND	UG/L	Q
74-87-3	Chloromethane	50	U
74-83-9	Bromomethane	50	U
75-01-4	Vinyl Chloride	50	U
75-00-3	Chloroethane	50	U
75-09-2	Methylene Chloride	50	U
67-64-1	Acetone	120	U
75-15-0	Carbon Disulfide	50	U
75-35-4	1,1-Dichloroethene	50	U
75-34-3	1,1-Dichloroethane	50	U
540-59-0	1,2-Dichloroethene (total)	50	U
67-66-3	Chloroform	50	U
107-06-2	1,2-Dichloroethane	50	U
78-93-3	2-Butanone	50	U
71-55-6	1,1,1-Trichloroethane	24	J
56-23-5	Carbon Tetrachloride	50	U
75-27-4	Bromodichloromethane	50	U
78-87-5	1,2-Dichloropropane	50	U
10061-01-5	cis-1,3-Dichloropropene	50	U
79-01-6	Trichloroethene	50	U
124-48-1	Dibromochloromethane	50	U
79-00-5	1,1,2-Trichloroethane	50	U
71-43-2	Benzene	50	U
10061-02-6	trans-1,3-Dichloropropene	50	U
75-25-2	Bromoform	50	U
108-10-1	4-Methyl-2-Pentanone	50	U
591-78-6	2-Hexanone	50	U
127-18-4	Tetrachloroethene	587	U
79-34-5	1,1,2,2-Tetrachloroethane	50	U
108-88-3	Toluene	50	U
108-90-7	Chlorobenzene	50	U
100-41-4	Ethylbenzene	50	U
100-42-5	Styrene	50	U
1330-20-7	Xylene (Total)	50	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCR 101-112803

Lab Name: SWL-TULSA

Contract: WWENG-IN

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 12669

Matrix: (soil/water) WATER

Lab Sample ID: 12669.03

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: LF608.D

Level: (low/med) LOW

Date Received: 02/19/93

% Moisture: not dec. _____

Data Analyzed: 02/24/93

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 5.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	50	U
74-83-9	Bromomethane	50	U
75-01-4	Vinyl Chloride	50	U
75-00-3	Chloroethane	50	U
75-09-2	Methylene Chloride	50	U
67-64-1	Acetone	50	U
75-15-0	Carbon Disulfide	50	U
75-35-4	1,1-Dichloroethene	6	J
75-34-3	1,1-Dichloroethane	50	U
540-59-0	1,2-Dichloroethene (total)	50	U
67-66-3	Chloroform	50	U
107-06-2	1,2-Dichloroethane	50	U
78-93-3	2-Butanone	50	U
71-55-6	1,1,1-Trichloroethane	415	U
56-23-5	Carbon Tetrachloride	52	U
75-27-4	Bromodichloromethane	50	U
78-87-5	1,2-Dichloropropane	50	U
10061-01-5	cis-1,3-Dichloropropene	50	U
79-01-6	Trichloroethene	230	U
124-48-1	Dibromochloromethane	50	U
79-00-5	1,1,2-Trichloroethane	50	U
71-43-2	Benzene	50	U
10061-02-6	trans-1,3-Dichloropropene	50	U
75-25-2	Bromoform	50	U
108-10-1	4-Methyl-2-Pentanone	50	U
591-78-6	2-Hexanone	50	U
127-18-4	Tetrachloroethene	318	U
79-34-5	1,1,2,2-Tetrachloroethane	50	U
108-88-3	Toluene	50	U
108-90-7	Chlorobenzene	50	U
100-41-4	Ethylbenzene	50	U
100-42-5	Styrene	50	U
1330-20-7	Xylene (Total)	50	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCRGWMW2903

Lab Name: SWL-TULSA

Contract: WWENG-IN

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 12669

Matrix: (soil/water) WATER

Lab Sample ID: 12669.06

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: LF611.D

Level: (low/med) LOW

Date Received: 02/19/93

% Moisture: not dec. _____

Data Analyzed: 02/24/93

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NO. COMPOUND Q

74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	18	
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	2	J
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	16	
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	14	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	98	
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCRGWMW3003

Lab Name: SWL-TULSA

Contract: WWENG-IN

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 12669

Matrix: (soil/water) WATER

Lab Sample ID: 12669.05

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: LF639.D

Level: (low/med) LOW

Date Received: 02/19/93

% Moisture: not dec. _____

Data Analyzed: 02/26/93

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 2.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	20	U
74-83-9	Bromomethane	20	U
75-01-4	Vinyl Chloride	20	U
75-00-3	Chloroethane	20	U
75-09-2	Methylene Chloride	20	U
67-64-1	Acetone	27	U
75-15-0	Carbon Disulfide	20	U
75-35-4	1,1-Dichloroethene	5	J
75-34-3	1,1-Dichloroethane	59	U
540-59-0	1,2-Dichloroethene (total)	20	U
67-66-3	Chloroform	20	U
107-06-2	1,2-Dichloroethane	20	U
78-93-3	2-Butanone	20	U
71-55-6	1,1,1-Trichloroethane	311	U
56-23-5	Carbon Tetrachloride	20	U
75-27-4	Bromodichloromethane	20	U
78-87-5	1,2-Dichloropropane	20	U
10061-01-5	cis-1,3-Dichloropropane	20	U
79-01-6	Trichloroethene	295	U
124-48-1	Dibromochloromethane	20	U
79-00-5	1,1,2-Trichloroethane	20	U
71-43-2	Benzene	20	U
10061-02-6	trans-1,3-Dichloropropane	20	U
75-25-2	Bromoform	20	U
108-10-1	4-Methyl-2-Pentanone	20	U
591-78-6	2-Hexanone	20	U
127-18-4	Tetrachloroethene	20	U
79-34-5	1,1,2,2-Tetrachloroethane	20	U
108-88-3	Toluene	20	U
108-90-7	Chlorobenzene	20	U
100-41-4	Ethylbenzene	20	U
100-42-5	Styrene	20	U
1330-20-7	Xylene (Total)	20	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCRGWPGPOEB

Lab Name: SWL-TULSA

Contract: WWENG-IN

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 12669

Matrix: (soil/water) WATER

Lab Sample ID: 12669.02

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: LF607.D

Level: (low/med) LOW

Date Received: 02/19/93

% Moisture: not dec. _____

Data Analyzed: 02/24/93

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	15	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	4	J
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCRGWPGP4D03

Lab Name: SWL-TULSA

Contract: WWENG-IN

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 12669

Matrix: (soil/water) WATER

Lab Sample ID: 12669.08

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: LF654.D

Level: (low/med) LOW

Date Received: 02/19/93

% Moisture: not dec. _____

Data Analyzed: 02/26/93

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 100.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	1000	U
74-83-9	Bromomethane	1000	U
75-01-4	Vinyl Chloride	1000	U
75-00-3	Chloroethane	1000	U
75-09-2	Methylene Chloride	1000	U
67-64-1	Acetone	1051	U
75-15-0	Carbon Disulfide	1000	U
75-35-4	1,1-Dichloroethene	1000	U
75-34-3	1,1-Dichloroethane	817	J
540-59-0	1,2-Dichloroethene (total)	1000	U
67-66-3	Chloroform	1000	U
107-06-2	1,2-Dichloroethane	1000	U
78-93-3	2-Butanone	1000	U
71-55-6	1,1,1-Trichloroethane	1159	U
56-23-5	Carbon Tetrachloride	1000	U
75-27-4	Bromodichloromethane	1000	U
78-87-5	1,2-Dichloropropane	1000	U
10061-01-5	cis-1,3-Dichloropropene	1000	U
79-01-6	Trichloroethene	4244	U
124-48-1	Dibromochloromethane	1000	U
79-00-5	1,1,2-Trichloroethane	1000	U
71-43-2	Benzene	1000	U
10061-02-6	trans-1,3-Dichloropropene	1000	U
75-25-2	Bromoform	1000	U
108-10-1	4-Methyl-2-Pentanone	1000	U
591-78-6	2-Hexanone	1000	U
127-18-4	Tetrachloroethene	6749	U
79-34-5	1,1,2,2-Tetrachloroethane	1000	U
108-88-3	Toluene	1000	U
108-90-7	Chlorobenzene	1000	U
100-41-4	Ethylbenzene	1000	U
100-42-5	Styrene	1000	U
1330-20-7	Xylene (Total)	1000	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCRGWPGP4S03

Lab Name: SWL-TULSA

Contract: WWENG-IN

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 12669

Matrix: (soil/water) WATER

Lab Sample ID: 12669.07

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: LF640.D

Level: (low/med) LOW

Date Received: 02/19/93

% Moisture: not dec. _____

Data Analyzed: 02/26/93

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 50.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND	UG/L	Q
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74-87-3	Chloromethane	500	U
74-83-9	Bromomethane	500	U
75-01-4	Vinyl Chloride	500	U
75-00-3	Chloroethane	500	U
75-09-2	Methylene Chloride	500	U
67-64-1	Acetone	500	U
75-15-0	Carbon Disulfide	500	U
75-35-4	1,1-Dichloroethene	500	U
75-34-3	1,1-Dichloroethane	138	J
540-59-0	1,2-Dichloroethene (total)	500	U
67-66-3	Chloroform	500	U
107-06-2	1,2-Dichloroethane	500	U
78-93-3	2-Butanone	500	U
71-55-6	1,1,1-Trichloroethane	1722	U
56-23-5	Carbon Tetrachloride	500	U
75-27-4	Bromodichloromethane	500	U
78-87-5	1,2-Dichloropropane	500	U
10061-01-5	cis-1,3-Dichloropropene	500	U
79-01-6	Trichloroethene	5957	U
124-48-1	Dibromochloromethane	500	U
79-00-5	1,1,2-Trichloroethane	500	U
71-43-2	Benzene	500	U
10061-02-6	trans-1,3-Dichloropropene	500	U
75-25-2	Bromoform	500	U
108-10-1	4-Methyl-2-Pentanone	500	U
591-78-6	2-Hexanone	500	U
127-18-4	Tetrachloroethene	3004	U
79-34-5	1,1,2,2-Tetrachloroethane	500	U
108-88-3	Toluene	500	U
108-90-7	Chlorobenzene	500	U
100-41-4	Ethylbenzene	500	U
100-42-5	Styrene	500	U
1330-20-7	Xylene (Total)	500	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCR-GW-03tb

Lab Name: SWL-TULSA

Contract: WWENG-IN

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 12669

Matrix: (soil/water) WATER

Lab Sample ID: 12669.19

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: LF653.D

Level: (low/med) LOW

Date Received: 02/19/93

% Moisture: not dec. _____

Data Analyzed: 02/26/93

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	12	
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	3	J
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RGW105EB03DL

Lab Name: SWL-TULSA

Contract: WWENG-IN

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 12669

Matrix: (soil/water) WATER

Lab Sample ID: 12669.01DL

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R10687.D

Level: (low/med) LOW

Date Received: 02/19/93

% Moisture: not dec. _____

Data Analyzed: 03/16/93

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 2.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	20	U
74-83-9	Bromomethane	20	U
75-01-4	Vinyl Chloride	20	U
75-00-3	Chloroethane	20	U
75-09-2	Methylene Chloride	20	U
67-64-1	Acetone	300	D
75-15-0	Carbon Disulfide	20	U
75-35-4	1,1-Dichloroethene	20	U
75-34-3	1,1-Dichloroethane	20	U
540-59-0	1,2-Dichloroethene (total)	20	U
67-66-3	Chloroform	20	U
107-06-2	1,2-Dichloroethane	20	U
78-93-3	2-Butanone	20	U
71-55-6	1,1,1-Trichloroethane	20	U
56-23-5	Carbon Tetrachloride	20	U
75-27-4	Bromodichloromethane	20	U
78-87-5	1,2-Dichloropropane	18	JD
10061-01-5	cis-1,3-Dichloropropene	20	U
79-01-6	Trichloroethene	20	U
124-48-1	Dibromochloromethane	20	U
79-00-5	1,1,2-Trichloroethane	20	U
71-43-2	Benzene	20	U
10061-02-6	trans-1,3-Dichloropropene	20	U
75-25-2	Bromoform	20	U
108-10-1	4-Methyl-2-Pentanone	20	U
591-78-6	2-Hexanone	20	U
127-18-4	Tetrachloroethene	20	U
79-34-5	1,1,2,2-Tetrachloroethane	20	U
108-88-3	Toluene	20	U
108-90-7	Chlorobenzene	20	U
100-41-4	Ethylbenzene	20	U
100-42-5	Styrene	20	U
1330-20-7	Xylene (Total)	20	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCRGW11003eb

Lab Name: SWL-TULSA

Contract: WWENG- IN

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 12669

Matrix: (soil/water) WATER

Lab Sample ID: 12669.17

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: LF651.D

Level: (low/med) LOW

Date Received: 02/19/93

% Moisture: not dec. _____

Data Analyzed: 02/26/93

GC Column:DB-624 ID: 0.53 (mm)

Dilution Factor: 2.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
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74-87-3	-----Chloromethane	20	U
74-83-9	-----Bromomethane	20	U
75-01-4	-----Vinyl Chloride	20	U
75-00-3	-----Chloroethane	20	U
75-09-2	-----Methylene Chloride	20	U
67-64-1	-----Acetone	373	U
75-15-0	-----Carbon Disulfide	20	U
75-35-4	-----1,1-Dichloroethene	20	U
75-34-3	-----1,1-Dichloroethane	20	U
540-59-0	-----1,2-Dichloroethene (total)	20	U
67-66-3	-----Chloroform	20	U
107-06-2	-----1,2-Dichloroethane	20	U
78-93-3	-----2-Butanone	20	U
71-55-6	-----1,1,1-Trichloroethane	20	U
56-23-5	-----Carbon Tetrachloride	20	U
75-27-4	-----Bromodichloromethane	20	U
78-87-5	-----1,2-Dichloropropane	23	U
10061-01-5	-----cis-1,3-Dichloropropene	20	U
79-01-6	-----Trichloroethene	20	U
124-48-1	-----Dibromochloromethane	20	U
79-00-5	-----1,1,2-Trichloroethane	20	U
71-43-2	-----Benzene	20	U
10061-02-6	-----trans-1,3-Dichloropropene	20	U
75-25-2	-----Bromoform	20	U
108-10-1	-----4-Methyl-2-Pentanone	20	U
591-78-6	-----2-Hexanone	20	U
127-18-4	-----Tetrachloroethene	6	J
79-34-5	-----1,1,2,2-Tetrachloroethane	20	U
108-88-3	-----Toluene	20	U
108-90-7	-----Chlorobenzene	20	U
100-41-4	-----Ethylbenzene	20	U
100-42-5	-----Styrene	20	U
1330-20-7	-----Xylene (Total)	20	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RGWPGP0003tb

Lab Name: SWL-TULSA

Contract: WWENG-IN

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 12681

Matrix: (soil/water) WATER

Lab Sample ID: 12681.05

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: N10105.D

Level: (low/med) LOW

Date Received: 02/20/93

% Moisture: not dec. _____

Data Analyzed: 02/27/93

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	4	J
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	2	J
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RGWPGP303

Lab Name: SWL-TULSA

Contract: WWENG-IN

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 12681

Matrix: (soil/water) WATER

Lab Sample ID: 12681.01

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: N10076.D

Level: (low/med) LOW

Date Received: 02/20/93

% Moisture: not dec. _____

Data Analyzed: 02/26/93

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	2	J
540-59-0	1,2-Dichloroethene (total)	2	J
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	1	J
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCRGWPGP303d

Lab Name: SWL-TULSA

Contract: WWENG-IN

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 12681

Matrix: (soil/water) WATER

Lab Sample ID: 12681.02

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: N10077.D

Level: (low/med) LOW

Date Received: 02/20/93

% Moisture: not dec. _____

Data Analyzed: 02/26/93

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	1	J
540-59-0	1,2-Dichloroethene (total)	2	J
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	1	J
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCRGWPGP1-03

Lab Name: SWL-TULSA

Contract: WWENG-IN

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 12653

Matrix: (soil/water) WATER

Lab Sample ID: 12653.04

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: N10098.D

Level: (low/med) LOW

Date Received: 02/18/93

% Moisture: not dec. _____

Date Analyzed: 02/27/93

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	7	J
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FCRGWPGP2-03

Lab Name: SWL-TULSA

Contract: WWENG-IN

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 12653

Matrix: (soil/water) WATER

Lab Sample ID: 12653.06

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: N10057.D

Level: (low/med) LOW

Date Received: 02/18/93

% Moisture: not dec. _____

Date Analyzed: 02/25/93

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	9	J
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GWPGP03EB

Lab Name: SWL-TULSA

Contract: WWENG-IN

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 12808

Matrix: (soil/water) WATER

Lab Sample ID: 12808.01

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R10557.D

Level: (low/med) LOW

Date Received: 03/03/93

% Moisture: not dec. _____

Data Analyzed: 03/05/93

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	26	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	2	J
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GWPGP1003

Lab Name: SWL-TULSA

Contract: WWENG-IN

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 12808

Matrix: (soil/water) WATER

Lab Sample ID: 12808.02

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R10558.D

Level: (low/med) LOW

Date Received: 03/03/93

% Moisture: not dec. _____

Data Analyzed: 03/05/93

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	15	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GWPGP1003D

Lab Name: SWL-TULSA

Contract: WWENG-IN

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 12808

Matrix: (soil/water) WATER

Lab Sample ID: 12808.05

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R10561.D

Level: (low/med) LOW

Date Received: 03/03/93

% Moisture: not dec. _____

Data Analyzed: 03/05/93

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	9	J
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	13	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GWPGP1003TB

Lab Name: SWL-TULSA

Contract: WWENG-IN

Lab Code: SWOK

Case No.: WWENG-I SAS No.:

SDG No.: 12808

Matrix: (soil/water) WATER

Lab Sample ID: 12808.06

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R10549.D

Level: (low/med) LOW

Date Received: 03/03/93

% Moisture: not dec. _____

Data Analyzed: 03/05/93

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

003EB

Lab Name: SWL-TULSA

Contract: WWENG-IN

Lab Code: SWOK

Case No.: WWENG

SAS No.:

SDG No.: 12787

Matrix: (soil/water) WATER

Lab Sample ID: 12787.09

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R10597.D

Level: (low/med) LOW

Date Received: 03/02/93

% Moisture: not dec. _____

Data Analyzed: 03/09/93

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	-----Chloromethane	10	U
74-83-9	-----Bromomethane	10	U
75-01-4	-----Vinyl Chloride	10	U
75-00-3	-----Chloroethane	10	U
75-09-2	-----Methylene Chloride	10	U
67-64-1	-----Acetone	10	U
75-15-0	-----Carbon Disulfide	10	U
75-35-4	-----1,1-Dichloroethene	10	U
75-34-3	-----1,1-Dichloroethane	10	U
540-59-0	-----1,2-Dichloroethene (total)	10	U
67-66-3	-----Chloroform	3	J
107-06-2	-----1,2-Dichloroethane	10	U
78-93-3	-----2-Butanone	10	U
71-55-6	-----1,1,1-Trichloroethane	10	U
56-23-5	-----Carbon Tetrachloride	10	U
75-27-4	-----Bromodichloromethane	10	U
78-87-5	-----1,2-Dichloropropane	10	U
10061-01-5	-----cis-1,3-Dichloropropene	10	U
79-01-6	-----Trichloroethene	10	U
124-48-1	-----Dibromochloromethane	10	U
79-00-5	-----1,1,2-Trichloroethane	10	U
71-43-2	-----Benzene	10	U
10061-02-6	-----trans-1,3-Dichloropropene	10	U
75-25-2	-----Bromoform	10	U
108-10-1	-----4-Methyl-2-Pentanone	10	U
591-78-6	-----2-Hexanone	10	U
127-18-4	-----Tetrachloroethene	10	U
79-34-5	-----1,1,2,2-Tetrachloroethane	10	U
108-88-3	-----Toluene	10	U
108-90-7	-----Chlorobenzene	10	U
100-41-4	-----Ethylbenzene	10	U
100-42-5	-----Styrene	10	U
1330-20-7	-----Xylene (Total)	10	U

324-03EB

TSF - 103EB

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

03TB

Lab Name: SWL-TULSA

Contract: WWENG-IN

Lab Code: SWOK

Case No.: WWENG

SAS No.:

SDG No.: 12787

Matrix: (soil/water) WATER

Lab Sample ID: 12787.14

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R10572.D

Level: (low/med) LOW

Date Received: 03/02/93

% Moisture: not dec. _____

Data Analyzed: 03/08/93

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

P-613015003

Lab Name: SWL-TULSA

Contract: WWENG-IN

Lab Code: SWOK

Case No.: WWENG

SAS No.:

SDG No.: 12787

Matrix: (soil/water) WATER

Lab Sample ID: 12787.01

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R10574.D

Level: (low/med) LOW

Date Received: 03/02/93

% Moisture: not dec. _____

Data Analyzed: 03/08/93

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	15	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	3	J
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	1	J

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

158-618020003

Lab Name: SWL-TULSA

Contract: WWENG-IN

Lab Code: SWOK

Case No.: WWENG

SAS No.:

SDG No.: 12787

Matrix: (soil/water) WATER

Lab Sample ID: 12787.02

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R10575.D

Level: (low/med) LOW

Date Received: 03/02/93

% Moisture: not dec. _____

Data Analyzed: 03/08/93

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	12	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	2	J
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	2	J
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	4	J
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	2	J

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

625027003

Lab Name: SWL-TULSA

Contract: WWENG-IN

Lab Code: SWOK

Case No.: WWENG

SAS No.:

SDG No.: 12787

Matrix: (soil/water) WATER

Lab Sample ID: 12787.03

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R10576.D

Level: (low/med) LOW

Date Received: 03/02/93

% Moisture: not dec. _____

Data Analyzed: 03/08/93

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	2	J
540-59-0	1,2-Dichloroethene (total)	42	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	11	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	3	J
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

713015003

Lab Name: SWL-TULSA

Contract: WWENG-IN

Lab Code: SWOK

Case No.: WWENG

SAS No.:

SDG No.: 12787

Matrix: (soil/water) WATER

Lab Sample ID: 12787.04

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R10577.D

Level: (low/med) LOW

Date Received: 03/02/93

% Moisture: not dec. _____

Data Analyzed: 03/08/93

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	16	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	2	J
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	1	J
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

719021003D

Lab Name: SWL-TULSA

Contract: WWENG-IN

Lab Code: SWOK

Case No.: WWENG

SAS No.:

SDG No.: 12787

Matrix: (soil/water) WATER

Lab Sample ID: 12787.07

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R10580.D

Level: (low/med) LOW

Date Received: 03/02/93

% Moisture: not dec. _____

Data Analyzed: 03/08/93

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	-----Chloromethane	10	U
74-83-9	-----Bromomethane	10	U
75-01-4	-----Vinyl Chloride	10	U
75-00-3	-----Chloroethane	10	U
75-09-2	-----Methylene Chloride	10	U
67-64-1	-----Acetone	13	U
75-15-0	-----Carbon Disulfide	10	U
75-35-4	-----1,1-Dichloroethene	10	U
75-34-3	-----1,1-Dichloroethane	10	U
540-59-0	-----1,2-Dichloroethene (total)	10	U
67-66-3	-----Chloroform	10	U
107-06-2	-----1,2-Dichloroethane	10	U
78-93-3	-----2-Butanone	10	U
71-55-6	-----1,1,1-Trichloroethane	14	U
56-23-5	-----Carbon Tetrachloride	10	U
75-27-4	-----Bromodichloromethane	10	U
78-87-5	-----1,2-Dichloropropane	10	U
10061-01-5	-----cis-1,3-Dichloropropene	10	U
79-01-6	-----Trichloroethene	14	U
124-48-1	-----Dibromochloromethane	10	U
79-00-5	-----1,1,2-Trichloroethane	10	U
71-43-2	-----Benzene	10	U
10061-02-6	-----trans-1,3-Dichloropropene	10	U
75-25-2	-----Bromoform	10	U
108-10-1	-----4-Methyl-2-Pentanone	10	U
591-78-6	-----2-Hexanone	10	U
127-18-4	-----Tetrachloroethene	10	U
79-34-5	-----1,1,2,2-Tetrachloroethane	10	U
108-88-3	-----Toluene	10	U
108-90-7	-----Chlorobenzene	10	U
100-41-4	-----Ethylbenzene	10	U
100-42-5	-----Styrene	10	U
1330-20-7	-----Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

724526503

Lab Name: SWL-TULSA

Contract: WWENG-IN

Lab Code: SWOK

Case No.: WWENG

SAS No.:

SDG No.: 12787

Matrix: (soil/water) WATER

Lab Sample ID: 12787.06

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R10579.D

Level: (low/med) LOW

Date Received: 03/02/93

% Moisture: not dec. _____

Data Analyzed: 03/08/93

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

74-87-3-----	Chloromethane	10	U
74-83-9-----	Bromomethane	10	U
75-01-4-----	Vinyl Chloride	10	U
75-00-3-----	Chloroethane	10	U
75-09-2-----	Methylene Chloride	10	U
67-64-1-----	Acetone	10	U
75-15-0-----	Carbon Disulfide	10	U
75-35-4-----	1,1-Dichloroethene	10	U
75-34-3-----	1,1-Dichloroethane	10	U
540-59-0-----	1,2-Dichloroethene (total)	10	U
67-66-3-----	Chloroform	10	U
107-06-2-----	1,2-Dichloroethane	10	U
78-93-3-----	2-Butanone	10	U
71-55-6-----	1,1,1-Trichloroethane	10	U
56-23-5-----	Carbon Tetrachloride	10	U
75-27-4-----	Bromodichloromethane	10	U
78-87-5-----	1,2-Dichloropropane	10	U
10061-01-5-----	cis-1,3-Dichloropropene	10	U
79-01-6-----	Trichloroethene	10	U
124-48-1-----	Dibromochloromethane	10	U
79-00-5-----	1,1,2-Trichloroethane	10	U
71-43-2-----	Benzene	10	U
10061-02-6-----	trans-1,3-Dichloropropene	10	U
75-25-2-----	Bromoform	10	U
108-10-1-----	4-Methyl-2-Pentanone	10	U
591-78-6-----	2-Hexanone	10	U
127-18-4-----	Tetrachloroethene	10	U
79-34-5-----	1,1,2,2-Tetrachloroethane	10	U
108-88-3-----	Toluene	10	U
108-90-7-----	Chlorobenzene	10	U
100-41-4-----	Ethylbenzene	10	U
100-42-5-----	Styrene	10	U
1330-20-7-----	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

820022003

Lab Name: SWL-TULSA

Contract: WWENG-IN

Lab Code: SWOK

Case No.: WWENG

SAS No.:

SDG No.: 12787

Matrix: (soil/water) WATER

Lab Sample ID: 12787.10

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R10582.D

Level: (low/med) LOW

Date Received: 03/02/93

% Moisture: not dec. _____

Data Analyzed: 03/08/93

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	82	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	120	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	51	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

913015003

Lab Name: SWL-TULSA

Contract: WWENG-IN

Lab Code: SWOK

Case No.: WWENG

SAS No.:

SDG No.: 12787

Matrix: (soil/water) WATER

Lab Sample ID: 12787.08

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R10581.D

Level: (low/med) LOW

Date Received: 03/02/93

% Moisture: not dec. _____

Data Analyzed: 03/08/93

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	-----Chloromethane	10	U
74-83-9	-----Bromomethane	10	U
75-01-4	-----Vinyl Chloride	10	U
75-00-3	-----Chloroethane	10	U
75-09-2	-----Methylene Chloride	2	J
67-64-1	-----Acetone	10	U
75-15-0	-----Carbon Disulfide	10	U
75-35-4	-----1,1-Dichloroethene	6	J
75-34-3	-----1,1-Dichloroethane	18	
540-59-0	-----1,2-Dichloroethene (total)	10	U
67-66-3	-----Chloroform	10	U
107-06-2	-----1,2-Dichloroethane	10	U
78-93-3	-----2-Butanone	10	U
71-55-6	-----1,1,1-Trichloroethane	340	E
56-23-5	-----Carbon Tetrachloride	10	U
75-27-4	-----Bromodichloromethane	10	U
78-87-5	-----1,2-Dichloropropane	10	U
10061-01-5	-----cis-1,3-Dichloropropene	10	U
79-01-6	-----Trichloroethene	1600	E
124-48-1	-----Dibromochloromethane	10	U
79-00-5	-----1,1,2-Trichloroethane	10	U
71-43-2	-----Benzene	10	U
10061-02-6	-----trans-1,3-Dichloropropene	10	U
75-25-2	-----Bromoform	10	U
108-10-1	-----4-Methyl-2-Pentanone	10	U
591-78-6	-----2-Hexanone	10	U
127-18-4	-----Tetrachloroethene	10	U
79-34-5	-----1,1,2,2-Tetrachloroethane	10	U
108-88-3	-----Toluene	10	U
108-90-7	-----Chlorobenzene	10	U
100-41-4	-----Ethylbenzene	10	U
100-42-5	-----Styrene	10	U
1330-20-7	-----Xylene (Total)	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

913015003DL

Lab Name: SWL-TULSA

Contract: WWENG-IN

Lab Code: SWOK

Case No.: WWENG

SAS No.:

SDG No.: 12787

Matrix: (soil/water) WATER

Lab Sample ID: 12787.08DL

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R10600.D

Level: (low/med) LOW

Date Received: 03/02/93

% Moisture: not dec. _____

Data Analyzed: 03/09/93

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 10.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	100	U
74-83-9	Bromomethane	100	U
75-01-4	Vinyl Chloride	100	U
75-00-3	Chloroethane	100	U
75-09-2	Methylene Chloride	100	U
67-64-1	Acetone	100	U
75-15-0	Carbon Disulfide	100	U
75-35-4	1,1-Dichloroethene	100	U
75-34-3	1,1-Dichloroethane	100	U
540-59-0	1,2-Dichloroethene (total)	100	U
67-66-3	Chloroform	100	U
107-06-2	1,2-Dichloroethane	100	U
78-93-3	2-Butanone	100	U
71-55-6	1,1,1-Trichloroethane	280	D
56-23-5	Carbon Tetrachloride	100	U
75-27-4	Bromodichloromethane	100	U
78-87-5	1,2-Dichloropropane	100	U
10061-01-5	cis-1,3-Dichloropropene	100	U
79-01-6	Trichloroethene	1400	D
124-48-1	Dibromochloromethane	100	U
79-00-5	1,1,2-Trichloroethane	100	U
71-43-2	Benzene	100	U
10061-02-6	trans-1,3-Dichloropropene	100	U
75-25-2	Bromoform	100	U
108-10-1	4-Methyl-2-Pentanone	100	U
591-78-6	2-Hexanone	100	U
127-18-4	Tetrachloroethene	100	U
79-34-5	1,1,2,2-Tetrachloroethane	100	U
108-88-3	Toluene	100	U
108-90-7	Chlorobenzene	100	U
100-41-4	Ethylbenzene	100	U
100-42-5	Styrene	100	U
1330-20-7	Xylene (Total)	100	U

INORGANIC ANALYSES DATA SHEET

MWEB03

Lab Name: SOUTHWEST_LAB_OF_OK_____ Contract: _____

Lab Code: SWOK_____ Case No.: 12669_ SAS No.: _____ SDG No.: MGPOEB

Matrix (soil/water): WATER Lab Sample ID: 1266901_____

Level (low/med): LOW_____ Date Received: 02/19/93

% Solids: _____0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	79.0	U		P_
7440-36-0	Antimony_	35.0	U	N	P_
7440-38-2	Arsenic_	2.0	U	N	F_
7440-39-3	Barium_	8.0	U		P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium_	2.0	U		P_
7440-70-2	Calcium_	246	U		P_
7440-47-3	Chromium	4.0	U		P_
7440-48-4	Cobalt_	5.0	U		P_
7440-50-8	Copper_	3.0	U		P_
7439-89-6	Iron_	9.6	B		P_
7439-92-1	Lead_	2.1	B		F_
7439-95-4	Magnesium	149	U		P_
7439-96-5	Manganese	2.0	U		P_
7439-97-6	Mercury_	0.20	U	N	CV
7440-02-0	Nickel_	18.0	U		P_
7440-09-7	Potassium	888	U		P_
7782-49-2	Selenium_	1.0	U		F_
7440-22-4	Silver_	3.0	U		P_
7440-23-5	Sodium_	442	U	E	P_
7440-28-0	Thallium_	2.0	U		F_
7440-62-2	Vanadium_	4.0	U		P_
7440-66-6	Zinc_	3.0	U		P_
	Cyanide_	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

EPA_SAMPLE_ID_MWEB03_REFLECTS_CLIENT_ID_FCR-GW-105EB-03_____

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW2303

Lab Name: SOUTHWEST_LAB_OF_OK_____ Contract: _____

Lab Code: SWOK_____ Case No.: 12669_ SAS No.: _____ SDG No.: MGP0EB

Matrix (soil/water): WATER Lab Sample ID: 1266910_____

Level (low/med): LOW_____ Date Received: 02/19/93

% Solids: _____0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	12700			P_
7440-36-0	Antimony_	35.0	U	N	P_
7440-38-2	Arsenic_	13.5		N	F_
7440-39-3	Barium_	442			P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium_	2.0	U		P_
7440-70-2	Calcium_	153000			P_
7440-47-3	Chromium_	13.3			P_
7440-48-4	Cobalt_	10.5	B		P_
7440-50-8	Copper_	82.1			P_
7439-89-6	Iron	22400			P_
7439-92-1	Lead	38.5			F_
7439-95-4	Magnesium	58900			P_
7439-96-5	Manganese	3340			P_
7439-97-6	Mercury_	0.54		N	CV
7440-02-0	Nickel_	40.2			P_
7440-09-7	Potassium	2760	B		P_
7782-49-2	Selenium_	1.0	U	W	F_
7440-22-4	Silver_	3.0	U		P_
7440-23-5	Sodium_	29300		E	P_
7440-28-0	Thallium_	2.0	U	W	F_
7440-62-2	Vanadium_	25.5	B		P_
7440-66-6	Zinc	107			P_
	Cyanide_	10.0	U		CA

Color Before: BROWN_____ Clarity Before: CLOUDY Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

EPA_SAMPLE_ID_MW2303_REFLECTS_CLIENT_ID_FCR-GW-MW23-03_____

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW23D3

Lab Name: SOUTHWEST_LAB_OF_OK_____ Contract: _____
 Lab Code: SWOK___ Case No.: 12669_ SAS No.: _____ SDG No.: MGPOEB
 Matrix (soil/water): WATER Lab Sample ID: 1266911___
 Level (low/med): LOW___ Date Received: 02/19/93
 % Solids: ___0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7140			P
7440-36-0	Antimony	35.0	U	N	P
7440-38-2	Arsenic	16.9		SN	F
7440-39-3	Barium	456			P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	2.0	U		P
7440-70-2	Calcium	164000			P
7440-47-3	Chromium	7.2	B		P
7440-48-4	Cobalt	8.4	B		P
7440-50-8	Copper	67.7			P
7439-89-6	Iron	21800			P
7439-92-1	Lead	29.4		W	F
7439-95-4	Magnesium	65800			P
7439-96-5	Manganese	3150			P
7439-97-6	Mercury	0.20	U	N	CV
7440-02-0	Nickel	26.1	B		P
7440-09-7	Potassium	2400	B		P
7782-49-2	Selenium	1.0	U	W	F
7440-22-4	Silver	3.0	U		P
7440-23-5	Sodium	28400		E	P
7440-28-0	Thallium	2.0	U		F
7440-62-2	Vanadium	20.7	B		P
7440-66-6	Zinc	86.3			P
	Cyanide	10.0	U		CA

Color Before: TAN_____ Clarity Before: CLOUDY Texture: _____
 Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:
 EPA_SAMPLE_ID_MW23D3_REFLECTS_CLIENT_ID_FCR-GW-MW23-03D_____

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW2803

Lab Name: SOUTHWEST_LAB_OF_OK_____ Contract: _____

Lab Code: SWOK___ Case No.: 12669_ SAS No.: _____ SDG No.: MGP0EB

Matrix (soil/water): WATER Lab Sample ID: 1266903___

Level (low/med): LOW___ Date Received: 02/19/93

% Solids: ___0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3990			P
7440-36-0	Antimony	35.0	U	N	P
7440-38-2	Arsenic	5.5	B	N	F
7440-39-3	Barium	127	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	2.0	U		P
7440-70-2	Calcium	202000			P
7440-47-3	Chromium	19.7			P
7440-48-4	Cobalt	14.8	B		P
7440-50-8	Copper	80.3			P
7439-89-6	Iron	12700			P
7439-92-1	Lead	41.6			F
7439-95-4	Magnesium	67400			P
7439-96-5	Manganese	803			P
7439-97-6	Mercury	0.20	U	N	CV
7440-02-0	Nickel	40.0			P
7440-09-7	Potassium	2360	B		P
7782-49-2	Selenium	1.0	U	W	F
7440-22-4	Silver	3.0	U		P
7440-23-5	Sodium	5440		E	P
7440-28-0	Thallium	2.0	U		F
7440-62-2	Vanadium	23.1	B		P
7440-66-6	Zinc	86.2			P
	Cyanide	10.0	U		CA

Color Before: BROWN___ Clarity Before: CLOUDY Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

EPA_SAMPLE_ID_MW2803_REFLECTS_CLIENT_ID_FCR-GW-MW28-03_____

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW2703

Lab Name: SOUTHWEST_LAB_OF_OK_____ Contract: _____

Lab Code: SWOK_____ Case No.: 12669_ SAS No.: _____ SDG No.: MGPOEB

Matrix (soil/water): WATER Lab Sample ID: 1266904_____

Level (low/med): LOW_____ Date Received: 02/19/93

% Solids: _____0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	13500			P
7440-36-0	Antimony	35.0	U	N	P
7440-38-2	Arsenic	6.8	B	N	F
7440-39-3	Barium	509			P
7440-41-7	Beryllium	1.9	B		P
7440-43-9	Cadmium	2.0	U		P
7440-70-2	Calcium	998000			P
7440-47-3	Chromium	35.4			P
7440-48-4	Cobalt	22.6	B		P
7440-50-8	Copper	233			P
7439-89-6	Iron	26000			P
7439-92-1	Lead	112			F
7439-95-4	Magnesium	172000			P
7439-96-5	Manganese	2270			P
7439-97-6	Mercury	0.20	U	N	CV
7440-02-0	Nickel	123			P
7440-09-7	Potassium	3800	B		P
7782-49-2	Selenium	6.8	B		F
7440-22-4	Silver	8.4	B		P
7440-23-5	Sodium	5810		E	P
7440-28-0	Thallium	2.0	U	W	F
7440-62-2	Vanadium	36.9	B		P
7440-66-6	Zinc	296			P
	Cyanide	10.0	U		CA

Color Before: BROWN_____ Clarity Before: CLOUDY Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:
EPA_SAMPLE_ID_MW2703_REFLECTS_CLIENT_ID_FCR-GW-MW27-03_____

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW3003

Lab Name: SOUTHWEST_LAB_OF_OK_____ Contract: _____
 Lab Code: SWOK_____ Case No.: 12669_ SAS No.: _____ SDG No.: MGP0EB
 Matrix (soil/water): WATER Lab Sample ID: 1266905_____
 Level (low/med): LOW_____ Date Received: 02/19/93
 % Solids: _____0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	8310			P_
7440-36-0	Antimony_	35.0	U	N	P_
7440-38-2	Arsenic_	16.2		N	F_
7440-39-3	Barium_	569			P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium_	2.0	U		P_
7440-70-2	Calcium_	936000			P_
7440-47-3	Chromium_	22.1			P_
7440-48-4	Cobalt_	22.9	B		P_
7440-50-8	Copper_	62.9			P_
7439-89-6	Iron_	24300			P_
7439-92-1	Lead_	37.4			F_
7439-95-4	Magnesium	98700			P_
7439-96-5	Manganese	4460			P_
7439-97-6	Mercury_	0.20	U	N	CV
7440-02-0	Nickel_	77.4			P_
7440-09-7	Potassium	4130	B		P_
7782-49-2	Selenium_	5.0	U		F_
7440-22-4	Silver_	3.0	U		P_
7440-23-5	Sodium_	6500		E	P_
7440-28-0	Thallium_	2.0	U	W	F_
7440-62-2	Vanadium_	23.8	B		P_
7440-66-6	Zinc_	151			P_
	Cyanide_	10.0	U		CA

Color Before: BROWN_____ Clarity Before: CLOUDY Texture: _____
 Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:
 EPA_SAMPLE_ID_MW3003_REFLECTS_CLIENT_ID_FCR-GW-MW30-03_____

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW2903

Lab Name: SOUTHWEST_LAB_OF_OK_____ Contract: _____

Lab Code: SWOK_____ Case No.: 12669_ SAS No.: _____ SDG No.: MGPOEB

Matrix (soil/water): WATER Lab Sample ID: 1266906_____

Level (low/med): LOW_____ Date Received: 02/19/93

% Solids: _____0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	11200			P
7440-36-0	Antimony	35.0	U	N	P
7440-38-2	Arsenic	6.2	B	N	F
7440-39-3	Barium	701			P
7440-41-7	Beryllium	1.0	B		P
7440-43-9	Cadmium	2.0	U		P
7440-70-2	Calcium	1100000			P
7440-47-3	Chromium	22.9			P
7440-48-4	Cobalt	41.0	B		P
7440-50-8	Copper	82.7			P
7439-89-6	Iron	30500			P
7439-92-1	Lead	109			F
7439-95-4	Magnesium	181000			P
7439-96-5	Manganese	4000			P
7439-97-6	Mercury	0.57		N	CV
7440-02-0	Nickel	95.8			P
7440-09-7	Potassium	5470			P
7782-49-2	Selenium	5.0	U		F
7440-22-4	Silver	3.0	U		P
7440-23-5	Sodium	7840		E	P
7440-28-0	Thallium	2.0	U	W	F
7440-62-2	Vanadium	36.0	B		P
7440-66-6	Zinc	458			P
	Cyanide	10.0	U		CA

Color Before: BROWN_____ Clarity Before: CLOUDY Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:
EPA_SAMPLE_ID_MW2903_REFLECTS_CLIENT_ID_FCR-GW-MW29-03_____

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MIT103

Lab Name: SOUTHWEST_LAB_OF_OK_____ Contract: _____

Lab Code: SWOK___ Case No.: 12669_ SAS No.: _____ SDG No.: MGPOEB

Matrix (soil/water): WATER Lab Sample ID: 1266909___

Level (low/med): LOW___ Date Received: 02/19/93

% Solids: ___0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3270			P
7440-36-0	Antimony	35.0	U	N	P
7440-38-2	Arsenic	40.8		SN	F
7440-39-3	Barium	120	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	5.4			P
7440-70-2	Calcium	66300			P
7440-47-3	Chromium	8.3	B		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	14.8	B		P
7439-89-6	Iron	7010			P
7439-92-1	Lead	6.3			F
7439-95-4	Magnesium	30400			P
7439-96-5	Manganese	333			P
7439-97-6	Mercury	0.33		N	CV
7440-02-0	Nickel	18.0	U		P
7440-09-7	Potassium	2130	B		P
7782-49-2	Selenium	1.0	U		F
7440-22-4	Silver	3.0	U		P
7440-23-5	Sodium	29300		E	P
7440-28-0	Thallium	2.0	U		F
7440-62-2	Vanadium	4.0	U		P
7440-66-6	Zinc	23.9			P
	Cyanide	10.0	U		CA

Color Before: TAN_____ Clarity Before: CLOUDY Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:
EPA_SAMPLE_ID_MIT103_REFLECTS_CLIENT_ID_FCR-GW-IT1A-03_____

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW2503

Lab Name: SOUTHWEST_LAB_OF_OK_____ Contract: _____

Lab Code: SWOK___ Case No.: 12669_ SAS No.: _____ SDG No.: MGPOEB

Matrix (soil/water): WATER Lab Sample ID: 1266912___

Level (low/med): LOW___ Date Received: 02/19/93

% Solids: ___0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6730			P
7440-36-0	Antimony	35.0	U	N	P
7440-38-2	Arsenic	4.2	B	N	F
7440-39-3	Barium	162	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	2.0	U		P
7440-70-2	Calcium	181000			P
7440-47-3	Chromium	16.3			P
7440-48-4	Cobalt	12.0	B		P
7440-50-8	Copper	41.2			P
7439-89-6	Iron	13000			P
7439-92-1	Lead	24.9			F
7439-95-4	Magnesium	62800			P
7439-96-5	Manganese	2070			P
7439-97-6	Mercury	0.20	U	N	CV
7440-02-0	Nickel	40.1			P
7440-09-7	Potassium	2640	B		P
7782-49-2	Selenium	1.0	U	W	F
7440-22-4	Silver	3.0	U		P
7440-23-5	Sodium	28000		E	P
7440-28-0	Thallium	2.0	U		F
7440-62-2	Vanadium	16.4	B		P
7440-66-6	Zinc	103			P
	Cyanide	10.0	U		CA

Color Before: BROWN___ Clarity Before: CLOUDY Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

EPA_SAMPLE_ID_MW2503_REFLECTS_CLIENT_ID_FCR-GW-MW25-03_____

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW03EB

Lab Name: SOUTHWEST_LAB_OF_OK_____ Contract: _____

Lab Code: SWOK_____ Case No.: 12669_ SAS No.: _____ SDG No.: MGPOEB

Matrix (soil/water): WATER Lab Sample ID: 1266917_____

Level (low/med): LOW_____ Date Received: 02/19/93

% Solids: _____0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	94.8	B		P_
7440-36-0	Antimony_	35.0	U	N	P_
7440-38-2	Arsenic_	2.0	U	N	F_
7440-39-3	Barium_	8.0	U		P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium_	2.0	U		P_
7440-70-2	Calcium_	246	U		P_
7440-47-3	Chromium_	4.0	U		P_
7440-48-4	Cobalt_	5.0	U		P_
7440-50-8	Copper_	3.0	B		P_
7439-89-6	Iron_	22.4	B		P_
7439-92-1	Lead_	1.6	B		F_
7439-95-4	Magnesium	149	U		P_
7439-96-5	Manganese	2.2	B		P_
7439-97-6	Mercury_	0.20	U	N	CV
7440-02-0	Nickel_	18.0	U		P_
7440-09-7	Potassium	888	U		P_
7782-49-2	Selenium_	1.0	U		F_
7440-22-4	Silver_	3.0	U		P_
7440-23-5	Sodium_	542	B	E	P_
7440-28-0	Thallium_	2.0	U		F_
7440-62-2	Vanadium_	4.0	U		P_
7440-66-6	Zinc_	3.0	U		P_
	Cyanide_	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

EPA_SAMPLE_ID_MW03EB_REFLECTS_CLIENT_ID_FCR-GW-110-03EB_____

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MIT203

Lab Name: SOUTHWEST LABORATORY _____ Contract: _____

Lab Code: SWOK _____ Case No.: 12653 _____ SAS No.: _____ SDG No.: MIT203

Matrix (soil/water): WATER _____ Lab Sample ID: 1265305 _____

Level (low/med): LOW _____ Date Received: 02/18/93

% Solids: _____ 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L _____

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	991		N	P
7440-36-0	Antimony	16.0	U	N	P
7440-38-2	Arsenic	2.4	B	N	F
7440-39-3	Barium	258			P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	3.0	U		P
7440-70-2	Calcium	123000			P
7440-47-3	Chromium	6.0	B		P
7440-48-4	Cobalt	6.0	U		P
7440-50-8	Copper	7.5	B		P
7439-89-6	Iron	2590			P
7439-92-1	Lead	2.5	B	N	F
7439-95-4	Magnesium	41000			P
7439-96-5	Manganese	382			P
7439-97-6	Mercury	0.20	U	N	CV
7440-02-0	Nickel	19.4	B		P
7440-09-7	Potassium	1680	B		P
7782-49-2	Selenium	1.0	U	WN	F
7440-22-4	Silver	2.0	U		P
7440-23-5	Sodium	18800			P
7440-28-0	Thallium	3.0	U	W	F
7440-62-2	Vanadium	6.0	U		P
7440-66-6	Zinc	15.3	B	E	P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:
12653.05 = CLIENT ID FCR-GW-IT2-03

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MIT303

Lab Name: SOUTHWEST LABORATORY _____ Contract: _____

Lab Code: SWOK__ Case No.: 12653_ SAS No.: _____ SDG No.: MIT203

Matrix (soil/water): WATER Lab Sample ID: 1265302__

Level (low/med): LOW__ Date Received: 02/18/93

% Solids: ___0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L__

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3200		N	P
7440-36-0	Antimony	16.0	U	N	P
7440-38-2	Arsenic	3.9	B	N	F
7440-39-3	Barium	201			P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	3.0	U		P
7440-70-2	Calcium	226000			P
7440-47-3	Chromium	13.2			P
7440-48-4	Cobalt	6.2	B		P
7440-50-8	Copper	23.4	B		P
7439-89-6	Iron	8230			P
7439-92-1	Lead	11.9		N	F
7439-95-4	Magnesium	67000			P
7439-96-5	Manganese	939			P
7439-97-6	Mercury	0.20	U	N	CV
7440-02-0	Nickel	24.8	B		P
7440-09-7	Potassium	2370	B		P
7782-49-2	Selenium	1.6	B	WN	F
7440-22-4	Silver	2.0	U		P
7440-23-5	Sodium	7490			P
7440-28-0	Thallium	3.0	U	W	F
7440-62-2	Vanadium	10.4	B		P
7440-66-6	Zinc	49.4		E	P
	Cyanide	10.0	U		CA

Color Before: BROWN__ Clarity Before: CLOUDY Texture: _____

Color After: COLORLESS Clarity After: CLEAR__ Artifacts: _____

Comments:
12653.01D = CLIENT_ID_FCR-GW-IT3-03

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW12D3

Lab Name: SOUTHWEST_LABORATORY_____ Contract: _____

Lab Code: SWOK__ Case No.: 12653_ SAS No.: _____ SDG No.: MIT203

Matrix (soil/water): WATER Lab Sample ID: 1265311__

Level (low/med): LOW___ Date Received: 02/18/93

% Solids: ___0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	129	B	N	P
7440-36-0	Antimony	16.0	U	N	P
7440-38-2	Arsenic	2.0	U	N	F
7440-39-3	Barium	79.6	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	3.0	U		P
7440-70-2	Calcium	90200			P
7440-47-3	Chromium	6.0	U		P
7440-48-4	Cobalt	6.0	U		P
7440-50-8	Copper	2.2	B		P
7439-89-6	Iron	34.3	B		P
7439-92-1	Lead	2.0	U	N	F
7439-95-4	Magnesium	27000			P
7439-96-5	Manganese	131			P
7439-97-6	Mercury	0.20	U	N	CV
7440-02-0	Nickel	15.0	U		P
7440-09-7	Potassium	1590	B		P
7782-49-2	Selenium	1.0	U	N	F
7440-22-4	Silver	2.0	U		P
7440-23-5	Sodium	8350			P
7440-28-0	Thallium	3.0	U	W	F
7440-62-2	Vanadium	6.0	U		P
7440-66-6	Zinc	3.4	B	E	P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEARY Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:
12653.11 = CLIENT_ID_FCR-GW-MW12-03DISS_____

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW1203

Lab Name: SOUTHWEST LABORATORY Contract: _____

Lab Code: SWOK Case No.: 12653 SAS No.: _____ SDG No.: MIT203

Matrix (soil/water): WATER Lab Sample ID: 1265310

Level (low/med): LOW Date Received: 02/18/93

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3510		N	P
7440-36-0	Antimony	16.0	U	N	P
7440-38-2	Arsenic	3.1	B	N	F
7440-39-3	Barium	159	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	3.0	U		P
7440-70-2	Calcium	193000			P
7440-47-3	Chromium	11.6			P
7440-48-4	Cobalt	6.3	B		P
7440-50-8	Copper	23.8	B		P
7439-89-6	Iron	12900			P
7439-92-1	Lead	22.3		N	F
7439-95-4	Magnesium	45000			P
7439-96-5	Manganese	762			P
7439-97-6	Mercury	0.20	U	N	CV
7440-02-0	Nickel	39.4	B		P
7440-09-7	Potassium	2490	B		P
7782-49-2	Selenium	2.1	B	WN	F
7440-22-4	Silver	2.0	U		P
7440-23-5	Sodium	8250			P
7440-28-0	Thallium	3.0	U	W	F
7440-62-2	Vanadium	9.6	B		P
7440-66-6	Zinc	69.6		E	P
	Cyanide	10.0	U		CA

Color Before: BROWN Clarity Before: CLOUDY Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:
12653.10 = CLIENT ID FCR-GW-MW12-03

INORGANIC ANALYSES DATA SHEET

MW22D3

Lab Name: SOUTHWEST LABORATORY Contract: _____

Lab Code: SWOK Case No.: 12653 SAS No.: _____ SDG No.: MIT203

Matrix (soil/water): WATER Lab Sample ID: 1265308

Level (low/med): LOW Date Received: 02/18/93

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	74.4	B	N	P
7440-36-0	Antimony	16.0	U	N	P
7440-38-2	Arsenic	2.0	U	N	F
7440-39-3	Barium	66.5	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	3.0	U		P
7440-70-2	Calcium	82200			P
7440-47-3	Chromium	6.0	U		P
7440-48-4	Cobalt	6.0	U		P
7440-50-8	Copper	2.0	U		P
7439-89-6	Iron	26.5	B		P
7439-92-1	Lead	2.0	U	N	F
7439-95-4	Magnesium	25400			P
7439-96-5	Manganese	387			P
7439-97-6	Mercury	0.20	U	N	CV
7440-02-0	Nickel	15.0	U		P
7440-09-7	Potassium	1590	B		P
7782-49-2	Selenium	1.9	B	WN	F
7440-22-4	Silver	2.0	U		P
7440-23-5	Sodium	5470			P
7440-28-0	Thallium	3.0	U	W	F
7440-62-2	Vanadium	6.0	U		P
7440-66-6	Zinc	3.2	B	E	P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:
 12653.08 = CLIENT_ID_FCR-GW-MW22-03DIS

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW2403

Lab Name: SOUTHWEST LABORATORY _____ Contract: _____

Lab Code: SWOK__ Case No.: 12653 SAS No.: _____ SDG No.: MIT203

Matrix (soil/water): WATER Lab Sample ID: 1265301

Level (low/med): LOW Date Received: 02/18/93

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	10600		N	F
7440-36-0	Antimony	16.0	U	N	F
7440-38-2	Arsenic	3.8	R	N	F
7440-39-3	Barium	266			F
7440-41-7	Beryllium	1.0	U		F
7440-43-9	Cadmium	3.0	U		F
7440-70-2	Calcium	390000			F
7440-47-3	Chromium	30.3			F
7440-48-4	Cobalt	22.9	R		F
7440-50-8	Copper	78.9			F
7439-89-6	Iron	20100			F
7439-92-1	Lead	75.4		SN	F
7439-95-4	Magnesium	125000			F
7439-96-5	Manganese	2010			F
7439-97-6	Mercury	0.20	U	N	CV
7440-02-0	Nickel	58.6			F
7440-09-7	Potassium	3050	R		F
7782-49-2	Selenium	2.2	R	WN	F
7440-22-4	Silver	2.0	U		F
7440-23-5	Sodium	6160			F
7440-28-0	Thallium	3.0	U		F
7440-62-2	Vanadium	34.6	R		F
7440-66-6	Zinc	164		E	F
	Cyanide	10.0	U		CA

Color Before: BROWN Clarity Before: CLOUDY Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:

12653.02 = CLIENT ID FCR-GW-MW24-03

Name: SOUTHWEST LAB OF OK Contract: _____

Code: SWOK Case No.: 12787 SAS No.: _____ SDG No.: MPO3ER

SOW No.: 3/90

EPA Sample No.	Lab Sample ID
MPO3ER SW-SW02-03eb	1278713
MPO3ER GW-PGP0-03eb	1278709
MPO3ER ECR-GW-PGP10-03D	1280805
MPO3ER ECR-GW-PGP10-03	1280802
MPO3ER ECR-GW-PGP03-EB	1280801
MPO3ER GW-PGP6-130-150-03	1278701
MPO3ER GW-PGP6-130-200-03	1278702
MPO3ER GW-PGP6-250-270-03	1278703
MPO3ER GW-PGP7-130-150-03	1278704
MPO3ER GW-PGP7-190-210-03	1278705
MPO3ER PGP7-190-210-03d	1278707
MPO3ER " " " "	1278707D
MPO3ER " " " "	1278707S
MPO3ER GW-PGP7-245-265-03	1278706
MPO3ER GW-PGP8-200-220-03	1278710
MPO3ER GW-PGP9-130-150-03	1278708

Were ICP interelement corrections applied ? Yes/No YES

Were ICP background corrections applied ? Yes/No YES

If yes - were raw data generated before application of background corrections ? Yes/No NO

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Steve L. Markham Name: Steve L. Markham

Date: March 23, 1993 Title: Inorganic Program Manager

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MPO3EB

Lab Name: SOUTHWEST LAB OF OK _____ Contract: _____

Lab Code: SWOK _____ Case No.: 12787 _____ SAS No.: _____ SDG No.: MPO3EB

Matrix (soil/water): WATER _____ Lab Sample ID: 1278709 _____

Level (low/med): LOW _____ Date Received: 03/02/93

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	270		*	F
7440-36-0	Antimony	24.0	U	N	F
7440-38-2	Arsenic	2.0	U	N	F
7440-39-3	Barium	8.0	U		F
7440-41-7	Beryllium	1.0	U		F
7440-43-9	Cadmium	2.0	U		F
7440-70-2	Calcium	1370	B		F
7440-47-3	Chromium	4.0	U		F
7440-48-4	Cobalt	5.0	U		F
7440-50-8	Copper	5.0	B		F
7439-89-6	Iron	664		*	F
7439-92-1	Lead	2.0	U	W	F
7439-95-4	Magnesium	183	B		F
7439-96-5	Manganese	7.8	B		F
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel	27.0	U		F
7440-09-7	Potassium	888	U		F
7782-49-2	Selenium	1.0	U	N	F
7440-22-4	Silver	3.0	U		F
7440-23-5	Sodium	1360	B		F
7440-28-0	Thallium	2.0	U	WN	F
7440-62-2	Vanadium	4.0	U		F
7440-66-6	Zinc	19.0	B	*	F
	Cyanide	10.0	U	N	CA

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:

EPA_SAMPLE_MPO3EB = CLIENT_SAMPLE_ID_GW-PGPO-10.3EB

MPO3EB

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MP10D3

Lab Name: SOUTHWEST LAB OF OK _____ Contract: _____

Lab Code: SWOK _____ Case No.: 12787 _____ SAS No.: _____ SDG No.: MP03EB

Matrix (soil/water): WATER _____ Lab Sample ID: 1280805 _____

Level (low/med): LOW _____ Date Received: 03/02/93

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4100		*	F
7440-36-0	Antimony	24.0	U	N	F
7440-38-2	Arsenic	2.0	U	N	F
7440-39-3	Barium	99.7	B		F
7440-41-7	Beryllium	1.0	U		F
7440-43-9	Cadmium	2.0	U		F
7440-70-2	Calcium	271000			F
7440-47-3	Chromium	10.7			F
7440-48-4	Cobalt	5.0	U		F
7440-50-8	Copper	27.8			F
7439-89-6	Iron	10100		*	F
7439-92-1	Lead	32.3			F
7439-95-4	Magnesium	97800			F
7439-96-5	Manganese	918			F
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel	30.8	B		F
7440-09-7	Potassium	2080	B		F
7782-49-2	Selenium	1.0	U	N	F
7440-22-4	Silver	3.0	U		F
7440-23-5	Sodium	15800			F
7440-28-0	Thallium	2.0	U	N	F
7440-62-2	Vanadium	14.4	B		F
7440-66-6	Zinc	76.7		*	F
	Cyanide	10.0	U	N	CA

Color Before: COLORLESS _____ Clarity Before: CLEAR _____ Texture: _____

Color After: COLORLESS _____ Clarity After: CLEAR _____ Artifacts: _____

Comments:

EPA_SAMPLE_MP10D3 = CLIENT_SAMPLE_ID_FCR-GW-FGF10-03D _____

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MP1003

Lab Name: SOUTHWEST LAB OF OK Contract: _____

Lab Code: SWOK Case No.: 12787 SAS No.: _____ SDG No.: MPO3ER

Matrix (soil/water): WATER Lab Sample ID: 1280802

Level (low/med): LOW Date Received: 03/02/93

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4250		*	P
7440-36-0	Antimony	24.0	U	N	F
7440-38-2	Arsenic	2.0	U	N	F
7440-39-3	Barium	111	B		F
7440-41-7	Beryllium	1.0	U		F
7440-43-9	Cadmium	2.0	U		F
7440-70-2	Calcium	329000			F
7440-47-3	Chromium	9.9	B		F
7440-48-4	Cobalt	7.4	B		F
7440-50-8	Copper	27.0			F
7439-89-6	Iron	9760		*	F
7439-92-1	Lead	32.7			F
7439-95-4	Magnesium	107000			F
7439-96-5	Manganese	960			F
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel	27.0	U		F
7440-09-7	Potassium	1740	B		F
7782-49-2	Selenium	1.0	U	WN	F
7440-22-4	Silver	3.0	U		F
7440-23-5	Sodium	15700			F
7440-28-0	Thallium	2.0	U	N	F
7440-62-2	Vanadium	16.1	B		F
7440-66-6	Zinc	71.2		*	F
	Cyanide	10.0	U	N	CA

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:
EPA SAMPLE MP1003 = CLIENT SAMPLE ID FCR-GW-PGP10-03

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MP13EB

Lab Name: SOUTHWEST LAB OF OK Contract: _____
 Lab Code: SWOK Case No.: 12787 SAS No.: _____ SDG No.: MP03EB
 Matrix (soil/water): WATER Lab Sample ID: 1280801
 Level (low/med): LOW Date Received: 03/02/93
 % Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	144	B	*	F
7440-36-0	Antimony	24.0	U	N	F
7440-38-2	Arsenic	2.0	U	WN	F
7440-39-3	Barium	8.0	U		F
7440-41-7	Beryllium	1.0	U		F
7440-43-9	Cadmium	2.0	U		F
7440-70-2	Calcium	246	U		F
7440-47-3	Chromium	4.0	U		F
7440-48-4	Cobalt	5.0	U		F
7440-50-8	Copper	8.7	B		F
7439-89-6	Iron	33.0	B	*	F
7439-92-1	Lead	5.3			F
7439-95-4	Magnesium	149	U		F
7439-96-5	Manganese	3.5	B		F
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel	27.0	U		F
7440-09-7	Potassium	888	U		F
7782-49-2	Selenium	1.0	U	N	F
7440-22-4	Silver	3.0	U		F
7440-23-5	Sodium	470	B		F
7440-28-0	Thallium	2.0	U	WN	F
7440-62-2	Vanadium	4.0	U		F
7440-66-6	Zinc	16.6	B	*	F
	Cyanide	10.0	U	N	CA

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____
 Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:
EPA_SAMPLE MP13EB = CLIENT_SAMPLE ID FCR-GW-PGP03-FR

INORGANIC ANALYSES DATA SHEET

MP6130

Lab Name: SOUTHWEST LAB OF OK Contract: _____

Lab Code: SWDK Case No.: 12787 SAS No.: _____ SDG No.: MP03EB

Matrix (soil/water): WATER Lab Sample ID: 1278701

Level (low/med): LOW Date Received: 03/02/93

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3540		*	P
7440-36-0	Antimony	24.0	U	N	P
7440-38-2	Arsenic	3.8	B	WN	F
7440-39-3	Barium	176	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	2.0	B		P
7440-70-2	Calcium	546000			P
7440-47-3	Chromium	18.6			P
7440-48-4	Cobalt	21.8	B		P
7440-50-8	Copper	28.4			P
7439-89-6	Iron	12100		*	P
7439-92-1	Lead	19.6			F
7439-95-4	Magnesium	135000			P
7439-96-5	Manganese	1860			F
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel	306			P
7440-09-7	Potassium	5940			P
7782-49-2	Selenium	1.2	B	WN	F
7440-22-4	Silver	3.0	U		P
7440-23-5	Sodium	16100			P
7440-28-0	Thallium	2.0	U	WN	F
7440-62-2	Vanadium	17.4	B		P
7440-66-6	Zinc	469		*	P
	Cyanide	10.0	U	N	CA

Color Before: TAN Clarity Before: CLOUDY Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:
EPA_SAMPLE_MP6130 = CLIENT_SAMPLE_ID_GW-FGP6-13.0

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MP6180

Lab Name: SOUTHWEST LAB OF OK _____ Contract: _____
 Lab Code: SWOK _____ Case No.: 12787 _____ SAS No.: _____ SDG No.: MPO3EB
 Matrix (soil/water): WATER _____ Lab Sample ID: 1278702 _____
 Level (low/med): LOW _____ Date Received: 03/02/93
 % Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3170		*	P
7440-36-0	Antimony	24.0	U	N	P
7440-38-2	Arsenic	3.8	B	WN	F
7440-39-3	Barium	124	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	2.0	U		P
7440-70-2	Calcium	380000			P
7440-47-3	Chromium	11.4			P
7440-48-4	Cobalt	10.6	B		P
7440-50-8	Copper	21.9	B		P
7439-89-6	Iron	11900		*	P
7439-92-1	Lead	19.8			F
7439-95-4	Magnesium	134000			P
7439-96-5	Manganese	825			P
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel	93.5			P
7440-09-7	Potassium	3400	B		P
7782-49-2	Selenium	1.0	U	WN	F
7440-22-4	Silver	3.0	U		P
7440-23-5	Sodium	11200			P
7440-28-0	Thallium	2.0	U	WN	F
7440-62-2	Vanadium	18.7	B		P
7440-66-6	Zinc	166		*	P
	Cyanide	10.0	U	N	CA

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____
 Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:
 EPA_SAMPLE_MP6180 = CLIENT_SAMPLE_ID_GW-FGP6-18.0

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MP6250

Lab Name: SOUTHWEST LAB OF OK _____ Contract: _____
 Lab Code: SWOK__ Case No.: 12787 SAS No.: _____ SDG No.: MP03EB
 Matrix (soil/water): WATER Lab Sample ID: 1278703
 Level (low/med): LOW__ Date Received: 03/02/93
 % Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3600		*	P
7440-36-0	Antimony	24.0	U	N	F
7440-38-2	Arsenic	3.7	B	N	F
7440-39-3	Barium	174	B		F
7440-41-7	Beryllium	1.0	U		F
7440-43-9	Cadmium	2.3	B		F
7440-70-2	Calcium	292000			F
7440-47-3	Chromium	28.3			F
7440-48-4	Cobalt	12.7	B		F
7440-50-8	Copper	30.9			F
7439-89-6	Iron	19100		*	F
7439-92-1	Lead	27.3		S	F
7439-95-4	Magnesium	96200			F
7439-96-5	Manganese	671			F
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel	153			F
7440-09-7	Potassium	7810			F
7782-49-2	Selenium	1.5	B	N	F
7440-22-4	Silver	3.0	U		F
7440-23-5	Sodium	9920			F
7440-28-0	Thallium	2.0	U	WN	F
7440-62-2	Vanadium	21.2	B		F
7440-66-6	Zinc	305		*	F
	Cyanide	10.0	U	N	CA

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____
 Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:
 EPA_SAMPLE_MP6250 = CLIENT_SAMPLE_ID_GW-PGP6-25.0

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MP7130

Lab Name: SOUTHWEST LAB OF OK Contract: _____
 Lab Code: SWOK Case No.: 12787 SAS No.: _____ SDG No.: MP03EB
 Matrix (soil/water): WATER Lab Sample ID: 1278704
 Level (low/med): LOW Date Received: 03/02/93
 % Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3640		*	F
7440-36-0	Antimony	24.0	U	N	F
7440-38-2	Arsenic	3.6	B	N	F
7440-39-3	Barium	142	B		F
7440-41-7	Beryllium	1.0	U		F
7440-43-9	Cadmium	2.0	U		F
7440-70-2	Calcium	381000			F
7440-47-3	Chromium	46.2			F
7440-48-4	Cobalt	26.8	B		F
7440-50-8	Copper	32.6			F
7439-89-6	Iron	19400		*	F
7439-92-1	Lead	33.8			F
7439-95-4	Magnesium	129000			F
7439-96-5	Manganese	1560			F
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel	160			F
7440-09-7	Potassium	3460	B		F
7782-49-2	Selenium	1.0	U	WN	F
7440-22-4	Silver	3.0	U		F
7440-23-5	Sodium	64500			F
7440-28-0	Thallium	2.0	U	WN	F
7440-62-2	Vanadium	18.2	B		F
7440-66-6	Zinc	224		*	F
	Cyanide	10.0	U	N	CA

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:
EPA SAMPLE MP7130 = CLIENT SAMPLE ID GW-PGF7-13.0

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

~~MP7190~~

Lab Name: SOUTHWEST LAB OF OK Contract: _____

Lab Code: SWOK Case No.: 12787 SAS No.: _____ SDG No.: MF03EB

Matrix (soil/water): WATER Lab Sample ID: 1278705

Level (low/med): LOW Date Received: 03/02/93

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2020		*	P
7440-36-0	Antimony	24.0	U	N	P
7440-38-2	Arsenic	4.0	B	WN	F
7440-39-3	Barium	131	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	2.0	U		P
7440-70-2	Calcium	232000			P
7440-47-3	Chromium	13.3			P
7440-48-4	Cobalt	21.2	B		P
7440-50-8	Copper	18.9	B		P
7439-89-6	Iron	12500		*	P
7439-92-1	Lead	32.9			F
7439-95-4	Magnesium	80700			P
7439-96-5	Manganese	1040			P
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel	39.2	B		P
7440-09-7	Potassium	2340	B		P
7782-49-2	Selenium	1.6	B	WN	F
7440-22-4	Silver	3.0	U		P
7440-23-5	Sodium	8790			P
7440-28-0	Thallium	2.0	U	WN	F
7440-62-2	Vanadium	16.3	B		P
7440-66-6	Zinc	83.5		*	P
	Cyanide	10.0	U	N	CA

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:
~~EPA_SAMPLE_MP7190 = CLIENT_SAMPLE_ID_GW-PXP7-19.0~~

~~NO~~

INORGANIC ANALYSES DATA SHEET

MP7190 *D*

Lab Name: SOUTHWEST LAB OF OK Contract: _____
 Lab Code: SWOK Case No.: 12787 SAS No.: _____ SDG No.: MP03EB
 Matrix (soil/water): WATER Lab Sample ID: 1278707
 Level (low/med): LOW Date Received: 03/02/93
 % Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1780		*	P
7440-36-0	Antimony	24.0	U	N	P
7440-38-2	Arsenic	2.8	B	N	F
7440-39-3	Barium	128	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	2.0	U		P
7440-70-2	Calcium	230000			P
7440-47-3	Chromium	7.6	B		P
7440-48-4	Cobalt	18.3	B		P
7440-50-8	Copper	17.4	B		P
7439-89-6	Iron	9980		*	P
7439-92-1	Lead	24.4			F
7439-95-4	Magnesium	73600			P
7439-96-5	Manganese	933			P
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel	34.8	B		P
7440-09-7	Potassium	2130	B		P
7782-49-2	Selenium	1.0	U	N	F
7440-22-4	Silver	3.0	U		P
7440-23-5	Sodium	8970			P
7440-28-0	Thallium	2.0	U	WN	F
7440-62-2	Vanadium	12.2	B		P
7440-66-6	Zinc	67.0		*	P
	Cyanide	10.0	U	N	CA

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____
 Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:
EPA_SAMPLE_MP1790 = CLIENT_SAMPLE_ID_PGF7-19.0 *D*

INORGANIC ANALYSES DATA SHEET

MP7245

Lab Name: SOUTHWEST LAB OF OK Contract: _____
 Lab Code: SWOK Case No.: 12787 SAS No.: _____ SDG No.: MP03EB
 Matrix (soil/water): WATER Lab Sample ID: 1278706
 Level (low/med): LOW Date Received: 03/02/93
 % Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	480		*	P
7440-36-0	Antimony	24.0	U	N	F
7440-38-2	Arsenic	2.0	U	N	F
7440-39-3	Barium	110	B		F
7440-41-7	Beryllium	1.0	U		F
7440-43-9	Cadmium	2.0	U		F
7440-70-2	Calcium	159000			F
7440-47-3	Chromium	5.7	B		F
7440-48-4	Cobalt	5.0	U		F
7440-50-8	Copper	7.3	B		F
7439-89-6	Iron	2360		*	F
7439-92-1	Lead	3.7			F
7439-95-4	Magnesium	49200			F
7439-96-5	Manganese	228			F
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel	27.0	U		F
7440-09-7	Potassium	3660	B		F
7782-49-2	Selenium	1.0	U	N	F
7440-22-4	Silver	3.0	U		F
7440-23-5	Sodium	10600			F
7440-28-0	Thallium	2.0	U	N	F
7440-62-2	Vanadium	4.0	U		F
7440-66-6	Zinc	35.1		*	F
	Cyanide	10.0	U	N	CA

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____
 Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:
EPA_SAMPLE_MP7245 = CLIENT_SAMPLE_ID_GW-FGP7-24.5

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MP8200

Lab Name: SOUTHWEST LAB OF OK _____ Contract: _____

Lab Code: SWOK _____ Case No.: 12787 SAS No.: _____ SDG No.: MPO3EB

Matrix (soil/water): WATER Lab Sample ID: 1278710 _____

Level (low/med): LOW _____ Date Received: 03/02/93

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2460		*	P
7440-36-0	Antimony	24.0	U	N	P
7440-38-2	Arsenic	2.0	U	N	F
7440-39-3	Barium	147	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	2.0	U		P
7440-70-2	Calcium	287000			P
7440-47-3	Chromium	13.0			P
7440-48-4	Cobalt	8.5	B		P
7440-50-8	Copper	20.0	B		P
7439-89-6	Iron	9680		*	P
7439-92-1	Lead	13.3		S	F
7439-95-4	Magnesium	89600			P
7439-96-5	Manganese	1530			P
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel	54.8			P
7440-09-7	Potassium	3350	B		P
7782-49-2	Selenium	1.3	B	N	F
7440-22-4	Silver	3.0	U		P
7440-23-5	Sodium	8330			P
7440-28-0	Thallium	2.0	U	N	F
7440-62-2	Vanadium	12.4	B		P
7440-66-6	Zinc	178		*	P
	Cyanide	10.0	U	N	CA

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:
EPA SAMPLE MP8200 = CLIENT SAMPLE ID GW-FGP8-20.0 _____

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MP9130

Lab Name: SOUTHWEST LAB OF OK Contract: _____

Lab Code: SWOK Case No.: 12787 SAS No.: _____ SDG No.: MF03EB

Matrix (soil/water): WATER Lab Sample ID: 1278708

Level (low/med): LOW Date Received: 03/02/93

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2230		*	P
7440-36-0	Antimony	24.0	U	N	P
7440-38-2	Arsenic	2.1	B	N	F
7440-39-3	Barium	118	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	2.0	U		P
7440-70-2	Calcium	269000			P
7440-47-3	Chromium	12.8			P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	14.8	B		P
7439-89-6	Iron	7550		*	P
7439-92-1	Lead	12.2		S	F
7439-95-4	Magnesium	89000			P
7439-96-5	Manganese	497			P
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel	27.0	U		P
7440-09-7	Potassium	1970	B		P
7782-49-2	Selenium	2.9	B	WN	F
7440-22-4	Silver	3.0	U		P
7440-23-5	Sodium	12400			P
7440-28-0	Thallium	2.0	U	N	F
7440-62-2	Vanadium	10.5	B		P
7440-66-6	Zinc	64.0		*	P
	Cyanide	10.0	U	N	CA

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:

EPA_SAMPLE_MP9130 = CLIENT_SAMPLE_ID_GW-FGP9-13.0

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

FGP103

Lab Name: SOUTHWEST LABORATORY Contract: _____
 Lab Code: SWOK Case No.: 12653 SAS No.: _____ SDG No.: MIT203
 Matrix (soil/water): WATER Lab Sample ID: 1265304
 Level (low/med): LOW Date Received: 02/18/93
 % Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	694		N	P
7440-36-0	Antimony	16.0	U	N	P
7440-38-2	Arsenic	2.0	U	N	F
7440-39-3	Barium	49.9	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	3.0	U		P
7440-70-2	Calcium	148000			P
7440-47-3	Chromium	6.0	U		P
7440-48-4	Cobalt	6.0	U		P
7440-50-8	Copper	9.0	B		P
7439-89-6	Iron	1170			P
7439-92-1	Lead	3.2		N	F
7439-95-4	Magnesium	46800			P
7439-96-5	Manganese	130			P
7439-97-6	Mercury	0.20	U	N	CV
7440-02-0	Nickel	82.2			P
7440-09-7	Potassium	892	B		P
7782-49-2	Selenium	1.0	B	N	F
7440-22-4	Silver	2.0	U		P
7440-23-5	Sodium	15100			P
7440-28-0	Thallium	3.0	U	W	F
7440-62-2	Vanadium	6.0	U		P
7440-66-6	Zinc	56.5		E	P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:

12653.04 = CLIENT_ID FCR-GW-PGP1-03

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

FGP203

Lab Name: SOUTHWEST LABORATORY Contract: _____

Lab Code: SWOK Case No.: 12653 SAS No.: _____ SDG No.: MIT203

Matrix (soil/water): WATER Lab Sample ID: 1265306

Level (low/med): LOW Date Received: 02/18/93

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2910		N	P
7440-36-0	Antimony	16.0	U	N	P
7440-38-2	Arsenic	4.6	B	N	F
7440-39-3	Barium	147	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	3.0	U		P
7440-70-2	Calcium	303000			P
7440-47-3	Chromium	20.0			P
7440-48-4	Cobalt	7.3	B		P
7440-50-8	Copper	37.0			P
7439-89-6	Iron	11900			P
7439-92-1	Lead	18.3		N	F
7439-95-4	Magnesium	81600			P
7439-96-5	Manganese	802			P
7439-97-6	Mercury	0.20	U	N	CV
7440-02-0	Nickel	693			P
7440-09-7	Potassium	2820	B		P
7782-49-2	Selenium	1.0	U	WN	F
7440-22-4	Silver	2.0	U		P
7440-23-5	Sodium	17900			P
7440-28-0	Thallium	3.0	U	W	F
7440-62-2	Vanadium	14.4	B		P
7440-66-6	Zinc	614		E	P
	Cyanide	10.0	U		CA

Color Before: BROWN Clarity Before: CLOUDY Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:
12653.06 = CLIENT ID FCR-GW-FGP2-03

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MIT3D3

Lab Name: SOUTHWEST LABORATORY _____ Contract: _____

Lab Code: SWOK__ Case No.: 12653 SAS No.: _____ SDG No.: MIT203

Matrix (soil/water): WATER Lab Sample ID: 1265303__

Level (low/med): LOW__ Date Received: 02/18/93

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L__

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5480		N	F
7440-36-0	Antimony	16.0	U	N	F
7440-38-2	Arsenic	7.0	B	N	F
7440-39-3	Barium	218			F
7440-41-7	Beryllium	1.0	U		F
7440-43-9	Cadmium	3.0	U		F
7440-70-2	Calcium	263000			F
7440-47-3	Chromium	18.1			F
7440-48-4	Cobalt	15.1	B		F
7440-50-8	Copper	32.1			F
7439-89-6	Iron	15100			F
7439-92-1	Lead	19.9		N	F
7439-95-4	Magnesium	90800			F
7439-96-5	Manganese	1720			F
7439-97-6	Mercury	0.20	U	N	CV
7440-02-0	Nickel	35.7	B		F
7440-09-7	Potassium	2510	B		F
7782-49-2	Selenium	1.5	B	WN	F
7440-22-4	Silver	2.0	U		F
7440-23-5	Sodium	7490			F
7440-28-0	Thallium	3.0	U		F
7440-62-2	Vanadium	17.4	B		F
7440-66-6	Zinc	76.9		E	F
	Cyanide	10.0	U		CA

Color Before: BROWN__ Clarity Before: CLOUDY Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:
1265.03_#_CLIENT_ID_FCR-GW-FGP1-03D_____

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MGP3D3

Lab Name: SOUTHWEST_LAB_OF_OK_____ Contract: _____

Lab Code: SWOK_____ Case No.: 12669_ SAS No.: _____ SDG No.: MGP0EB

Matrix (soil/water): WATER Lab Sample ID: 1268102_____

Level (low/med): LOW_____ Date Received: 02/20/93

% Solids: _____0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	168	B		P
7440-36-0	Antimony	35.0	U	N	P
7440-38-2	Arsenic	2.0	U	N	F
7440-39-3	Barium	94.2	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	2.0	U		P
7440-70-2	Calcium	128000			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	3.0	U		P
7439-89-6	Iron	633			P
7439-92-1	Lead	1.0	U		F
7439-95-4	Magnesium	38800			P
7439-96-5	Manganese	54.9			P
7439-97-6	Mercury	0.20	U	N	CV
7440-02-0	Nickel	18.0	U		P
7440-09-7	Potassium	2770	B		P
7782-49-2	Selenium	1.0	U		F
7440-22-4	Silver	3.0	U		P
7440-23-5	Sodium	5990		E	P
7440-28-0	Thallium	2.0	U	W	F
7440-62-2	Vanadium	4.0	U		P
7440-66-6	Zinc	23.4			P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

EPA_SAMPLE_ID_MGP3D3_REFLECTS_CLIENT_ID_FCR-GW-PGP3-03D_____

INORGANIC ANALYSES DATA SHEET

MGP303

Lab Name: SOUTHWEST_LAB_OF_OK_____ Contract: _____

Lab Code: SWOK_____ Case No.: 12669_ SAS No.: _____ SDG No.: MGPOEB

Matrix (soil/water): WATER Lab Sample ID: 1268101_____

Level (low/med): LOW_____ Date Received: 02/20/93

% Solids: _____0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	432			P
7440-36-0	Antimony	35.0	U	N	P
7440-38-2	Arsenic	2.0	U	N	F
7440-39-3	Barium	96.0	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	2.0	U		P
7440-70-2	Calcium	142000			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	7.8	B		P
7439-89-6	Iron	1450			P
7439-92-1	Lead	1.2	B		F
7439-95-4	Magnesium	44200			P
7439-96-5	Manganese	124			P
7439-97-6	Mercury	0.20	U	N	CV
7440-02-0	Nickel	18.0	U		P
7440-09-7	Potassium	3220	B		P
7782-49-2	Selenium	1.0	U		F
7440-22-4	Silver	3.0	U		P
7440-23-5	Sodium	6260		E	P
7440-28-0	Thallium	2.0	U	W	F
7440-62-2	Vanadium	4.0	U		P
7440-66-6	Zinc	56.6			P
	Cyanide	10.0	U		CA

Color Before: TAN_____ Clarity Before: CLOUDY Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:
 EPA_SAMPLE_ID_MGP303_REFLECTS_CLIENT_ID_FCR-GW-PGP3-03_____

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MGP4S3

Lab Name: SOUTHWEST_LAB_OF_OK_____ Contract: _____

Lab Code: SWOK_____ Case No.: 12669_ SAS No.: _____ SDG No.: MGPOEB

Matrix (soil/water): WATER Lab Sample ID: 1266907_____

Level (low/med): LOW_____ Date Received: 02/19/93

% Solids: _____0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	946			P
7440-36-0	Antimony	35.0	U	N	P
7440-38-2	Arsenic	2.5	B	N	F
7440-39-3	Barium	94.2	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	2.0	U		P
7440-70-2	Calcium	153000			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	6.2	B		P
7440-50-8	Copper	16.4	B		P
7439-89-6	Iron	4330			P
7439-92-1	Lead	6.1			F
7439-95-4	Magnesium	44100			P
7439-96-5	Manganese	394			P
7439-97-6	Mercury	0.33		N	CV
7440-02-0	Nickel	65.3			P
7440-09-7	Potassium	3090	B		P
7782-49-2	Selenium	1.0	U		F
7440-22-4	Silver	3.0	U		P
7440-23-5	Sodium	8000		E	P
7440-28-0	Thallium	2.0	U	W	F
7440-62-2	Vanadium	4.0	U		P
7440-66-6	Zinc	173			P
	Cyanide	10.0	U		CA

Color Before: TAN_____ Clarity Before: CLOUDY Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:
EPA_SAMPLE_ID_MGP4S3_REFLECTS_CLIENT_ID_FCR-GW-PGP4S-03_____

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MGP4D3

Lab Name: SOUTHWEST_LAB_OF_OK_____ Contract: _____

Lab Code: SWOK___ Case No.: 12669_ SAS No.: _____ SDG No.: MGP0EB

Matrix (soil/water): WATER Lab Sample ID: 1266908___

Level (low/med): LOW___ Date Received: 02/19/93

% Solids: ___0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	814			P
7440-36-0	Antimony	35.0	U	N	P
7440-38-2	Arsenic	4.7	B	N	F
7440-39-3	Barium	117	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	2.0	U		P
7440-70-2	Calcium	232000			P
7440-47-3	Chromium	5.4	B		P
7440-48-4	Cobalt	5.5	B		P
7440-50-8	Copper	10.7	B		P
7439-89-6	Iron	4660			P
7439-92-1	Lead	4.5			F
7439-95-4	Magnesium	40700			P
7439-96-5	Manganese	606			P
7439-97-6	Mercury	0.20	U	N	CV
7440-02-0	Nickel	400			P
7440-09-7	Potassium	3820	B		P
7782-49-2	Selenium	1.0	U	W	F
7440-22-4	Silver	3.0	U		P
7440-23-5	Sodium	9290		E	P
7440-28-0	Thallium	2.0	U	W	F
7440-62-2	Vanadium	4.0	U		P
7440-66-6	Zinc	289			P
	Cyanide	10.0	U		CA

Color Before: TAN_____ Clarity Before: CLOUDY Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:
EPA_SAMPLE_ID_MGP4D3_REFLECTS_CLIENT_ID_FCR-GW-PGP4D-03_____

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MGPOEB

Lab Name: SOUTHWEST_LAB_OF_OK_____ Contract: _____

Lab Code: SWOK___ Case No.: 12669_ SAS No.: _____ SDG No.: MGPOEB

Matrix (soil/water): WATER Lab Sample ID: 1266902___

Level (low/med): LOW___ Date Received: 02/19/93

% Solids: ___0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	79.0	U		P
7440-36-0	Antimony	35.0	U	N	P
7440-38-2	Arsenic	2.0	U	N	F
7440-39-3	Barium	8.0	U		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	2.0	U		P
7440-70-2	Calcium	246	U		P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	8.4	B		P
7439-89-6	Iron	22.5	B		P
7439-92-1	Lead	1.2	B		F
7439-95-4	Magnesium	149	U		P
7439-96-5	Manganese	2.0	U		P
7439-97-6	Mercury	0.20	U	N	CV
7440-02-0	Nickel	18.0	U		P
7440-09-7	Potassium	888	U		P
7782-49-2	Selenium	1.0	U		F
7440-22-4	Silver	3.0	U		P
7440-23-5	Sodium	1240	B	E	P
7440-28-0	Thallium	2.0	U		F
7440-62-2	Vanadium	4.0	U		P
7440-66-6	Zinc	3.0	U		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

EPA_SAMPLE_ID_MGPOEB_REFLECTS_CLIENT_ID_FCR-GW-PGPO-EB_____

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: **WW ENGINEERING & SCIENCE, INC.**
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: **FCR-GW-MW22-03**

Project ID: **FRANKLIN-RFI**

SWLO ID: **12653.07**

Report: **12653.07**

Collected: **02/16/1993**

Report Date: **03/11/1993**

Page: **1**

Received: **02/18/1993**

Last Modified:

Matrix: **Water**

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
AMENABLE CN		10	ug/l	ND	02/22/93	SM 412F/SW 9010

ND = NOT DETECTED ABOVE QUANTITATION LIMIT
I = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE
NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
D = SURROGATES DILUTED OUT
J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-GW-MW12-03

Project ID: FRANKLIN-RFI

SWLO ID: 12653.10

Report: 12653.10

Collected: 02/16/1993

Report Date: 03/11/1993

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Received: 02/18/1993

Last Modified:

Matrix: Water

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
AMENABLE CN		10	ug/l	ND	02/22/93	SM 412F/SW 9010

ND = NOT DETECTED ABOVE QUANTITATION LIMIT
NA = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE
NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
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* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
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J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION
SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-GW-IT2-03

Project ID: FRANKLIN-RFI

SWLO ID: 12653.05

Report: 12653.05

Collected: 02/16/1993

Report Date: 03/11/1993

Page: 1

Received: 02/18/1993

Last Modified:

Matrix: Water

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
AMENABLE CN		10	ug/l	ND	02/22/93	SM 412F/SW 9010

NOT DETECTED ABOVE QUANTITATION LIMIT
ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE
NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
D = SURROGATES DILUTED OUT
J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-GW-IT1A-03

Project ID: FRANKLIN-RFI

SWLO ID: 12669.09

Report: 12669.09

Collected: 02/17/1993
Received: 02/19/1993

Report Date: 03/12/1993
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Matrix: Water

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
AMENABLE CN		10	ug/L	ND	02/24/93	SM 412F/SW 9010

ND = NOT DETECTED ABOVE QUANTITATION LIMIT
I = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE
NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
EPA = #EPA600/4-79-020, MARCH 1985

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J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-GW-MW23-03

Project ID: FRANKLIN-RFI

SWLO ID: 12669.10

Report: 12669.10

Collected: 02/17/1993

Report Date: 03/12/1993

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Received: 02/19/1993

Last Modified:

Matrix: Water

<u>TEST</u>	<u>DATE EXTRACTED</u>	<u>DETECTION LIMIT</u>	<u>UNITS</u>	<u>RESULTS</u>	<u>DATE ANALYZED</u>	<u>METHOD REFERENCE</u>
*** INORGANICS ***						
AMENABLE CN		10	ug/L	ND	02/24/93	SM 412F/SW 9010

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

I = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

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NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

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J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: **WW ENGINEERING & SCIENCE, INC.**
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: **FCR-GW-MW23-03d**

Project ID: **FRANKLIN-RFI**

SWLO ID: **12669.11**

Report: **12669.11**

Collected: **02/17/1993**

Report Date: **03/12/1993**

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Received: **02/19/1993**

Last Modified:

Matrix: **Water**

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
		*** INORGANICS ***				
AMENABLE CN		10	ug/L	ND	02/24/93	SM 412F/SW 9010

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

I = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

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NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

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J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: **WW ENGINEERING & SCIENCE, INC.**
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: **FCR-GW-MW25-03**

Project ID: **FRANKLIN-RFI**

SWLO ID: **12669.12**

Report: **12669.12**

Collected: **02/17/1993**

Report Date: **03/12/1993**

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Received: **02/19/1993**

Last Modified:

Matrix: **Water**

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
AMENABLE CN		10	ug/l	ND	02/24/93	SM 412F/SW 9010

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

I = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

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NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

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D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: **WW ENGINEERING & SCIENCE, INC.**
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-GW-110-03eb

Project ID: FRANKLIN-RFI

SWLO ID: 12669.17

Report: 12669.17

Collected: 02/17/1993

Report Date: 03/12/1993

Page: 1

Received: 02/19/1993

Last Modified:

Matrix: Water

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
AMENABLE CN		10	ug/l	ND	02/24/93	SM 412F/SW 9010

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NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

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SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: **WW ENGINEERING & SCIENCE, INC.**
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-GW-MW24-03

Project ID: FRANKLIN-RFI

SWLO ID: 12653.01

Report: 12653.01

Collected: 02/16/1993

Report Date: 03/11/1993

Page: 1

Received: 02/18/1993

Last Modified:

Matrix: Water

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
AMENABLE CN		10	ug/l	ND	02/22/93	SM 412F/SW 9010

NOT DETECTED ABOVE QUANTITATION LIMIT
ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE
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Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
EPA = #EPA600/4-79-020, MARCH 1985

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SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-GW-IT3-03

Project ID: FRANKLIN-RFI

SWLO ID: 12653.02

Report: 12653.02

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Report Date: 03/11/1993

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Matrix: Water

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
AMENABLE CN		10	ug/l	ND	02/22/93	SM 412F/SW 9010

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

I = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

J = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

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D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-GW-IT3-03d

Project ID: FRANKLIN-RFI

SWLO ID: 12653.03

Report: 12653.03

Collected: 02/16/1993

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Matrix: Water

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
AMENABLE CN		10	ug/l	ND	02/22/93	SM 412F/SW 9010

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

= ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

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NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

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D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: **WV ENGINEERING & SCIENCE, INC.**
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: **FCR-GW-MW28-03**

Project ID: **FRANKLIN-RFI**

SWLO ID: **12669.03**

Report: **12669.03**

Collected: **02/17/1993**

Report Date: **03/12/1993**

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Received: **02/19/1993**

Last Modified:

Matrix: **Water**

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
AMENABLE CN		10	ug/l	ND	02/24/93	SM 412F/SW 9010

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

I = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

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NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

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D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-GW-MW27-03

Project ID: FRANKLIN-RFI

SWLO ID: 12669.04

Report: 12669.04

Collected: 02/17/1993

Report Date: 03/12/1993

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Received: 02/19/1993

Last Modified:

Matrix: Water

<u>TEST</u>	<u>DATE EXTRACTED</u>	<u>DETECTION LIMIT</u>	<u>UNITS</u>	<u>RESULTS</u>	<u>DATE ANALYZED</u>	<u>METHOD REFERENCE</u>
*** INORGANICS ***						
AMENABLE CN		10	ug/l	ND	02/24/93	SM 412F/SW 9010

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

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NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

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D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-GW-MW30-03

Project ID: FRANKLIN-RFI

SWLO ID: 12669.05

Report: 12669.05

Collected: 02/17/1993

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Page: 1

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Matrix: Water

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
AMENABLE CN		10	ug/L	ND	02/24/93	SM 412F/SW 9010

NOT DETECTED ABOVE QUANTITATION LIMIT
ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE
NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
EPA = #EPA600/4-79-020, MARCH 1985

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SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: **WW ENGINEERING & SCIENCE, INC.**
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-GW-MW29-03

Project ID: FRANKLIN-RFI

SWLO ID: 12669.06

Report: 12669.06

Collected: 02/17/1993

Report Date: 03/12/1993

Page: 1

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Matrix: Water

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
AMENABLE CN		10	ug/l	ND	02/24/93	SM 412F/SW 9010

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J = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

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D = SURROGATES DILUTED OUT

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SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-GW-105EB-03

Project ID: FRANKLIN-RFI

SWLO ID: 12669.01

Report: 12669.01

Collected: 02/17/1993

Report Date: 03/12/1993

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Received: 02/19/1993

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<u>TEST</u>	<u>DATE EXTRACTED</u>	<u>DETECTION LIMIT</u>	<u>UNITS</u>	<u>RESULTS</u>	<u>DATE ANALYZED</u>	<u>METHOD REFERENCE</u>
*** INORGANICS ***						
AMENABLE CN		10	ug/L	ND	02/24/93	SM 412F/SW 9010

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

I = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

D = SURROGATES DILUTED OUT

I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

EPA = #EPA600/4-79-020, MARCH 1985

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-GW-PGP2-03

Project ID: FRANKLIN-RFI

SWLO ID: 12653.06

Report: 12653.06

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Page: 1

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Matrix: Water

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
AMENABLE CN		10	ug/L	ND	02/22/93	SM 412F/SW 9010

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-GW-PGP1-03

Project ID: FRANKLIN-RFI

SWLO ID: 12653.04

Report: 12653.04

Collected: 02/16/1993

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TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
AMENABLE CN		10	ug/l	ND	02/22/93	SM 412F/SW 9010

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ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

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NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

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J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-GW-PGP4S-03

Project ID: FRANKLIN-RFI

SWLO ID: 12669.07

Report: 12669.07

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TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
AMENABLE CN		10	ug/l	ND	02/24/93	SM 412F/SW 9010

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NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

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J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-GW-PGP4D-03

Project ID: FRANKLIN-RFI

SWLO ID: 12669.08

Report: 12669.08

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Report Date: 03/12/1993
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<u>TEST</u>	<u>DATE EXTRACTED</u>	<u>DETECTION LIMIT</u>	<u>UNITS</u>	<u>RESULTS</u>	<u>DATE ANALYZED</u>	<u>METHOD REFERENCE</u>
*** INORGANICS ***						
AMENABLE CN		10	ug/l	ND	02/24/93	SM 412F/SW 9010

ND = NOT DETECTED ABOVE QUANTITATION LIMIT
I = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE
NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
D = SURROGATES DILUTED OUT
J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-GW-PGPO-EB

Project ID: FRANKLIN-RFI

SWLO ID: 12669.02

Report: 12669.02

Collected: 02/17/1993

Report Date: 03/12/1993

Page: 1

Received: 02/19/1993

Last Modified:

Matrix: Water

<u>TEST</u>	<u>DATE EXTRACTED</u>	<u>DETECTION LIMIT</u>	<u>UNITS</u>	<u>RESULTS</u>	<u>DATE ANALYZED</u>	<u>METHOD REFERENCE</u>
*** INORGANICS ***						
AHENABLE CN		10	ug/l	ND	02/24/93	SM 412F/SW 9010

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

J = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: **WW ENGINEERING & SCIENCE, INC.**
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: **FCR-GW-PGP3-03**

Project ID: **FRANKLIN-RFI**

SWLO ID: **12681.01**

Report: **12681.01**

Collected: **02/18/1993**
Received: **02/20/1993**

Report Date: **03/16/1993**
Last Modified:

Page: **1**
Matrix: **Water**

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
AMENABLE CN		10	ug/l	ND	02/24/93	SM 412F/SW 9010

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

I = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: **WV ENGINEERING & SCIENCE, INC.**
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: **FCR-GW-PGP3-03d**

Project ID: **FRANKLIN-RFI**

SWLO ID: **12681.02**

Report: **12681.02**

Collected: **12/18/1993**

Report Date: **03/16/1993**

Page: **1**

Received: **02/20/1993**

Last Modified:

Matrix: **Water**

<u>TEST</u>	<u>DATE EXTRACTED</u>	<u>DETECTION LIMIT</u>	<u>UNITS</u>	<u>RESULTS</u>	<u>DATE ANALYZED</u>	<u>METHOD REFERENCE</u>
*** INORGANICS ***						
AMENABLE CN		10	ug/l	ND	02/24/93	SM 412F/SW 9010

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

I = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

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NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: **WW ENGINEERING & SCIENCE, INC.**
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: **GW-PGP6-13.0-15.0-03** **Project ID:** **FRANKLIN-RFI**

SWLO ID: **12787.01** **Report:** **12787.01**

Collected: **02/24/1993** **Report Date:** **03/23/1993** **Page:** **1**
Received: **03/02/1993** **Last Modified:** **Matrix:** **Water**

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
AMENABLE CN		10	ug/l	ND	03/05/93	SM 412F/SW 9010

= NOT DETECTED ABOVE QUANTITATION LIMIT
 = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
 I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE
 NA = NOT APPLICABLE
 Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
 EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
 D = SURROGATES DILUTED OUT
 J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION
 SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.

**5010 STONE MILL ROAD
BLOOMINGTON, IN 47408**

Client ID: GW-PGP6-18.0-20.0-03

Project ID: FRANKLIN-RFI

SWLO ID: 12787.02

Report: 12787.02

Collected: 02/25/1993

Report Date: 03/23/1993

Page: 1

Received: 03/02/1993

Last Modified:

Matrix: Water

<u>TEST</u>	<u>DATE EXTRACTED</u>	<u>DETECTION LIMIT</u>	<u>UNITS</u>	<u>RESULTS</u>	<u>DATE ANALYZED</u>	<u>METHOD REFERENCE</u>
*** INORGANICS ***						
AMENABLE CN		10	ug/L	ND	03/05/93	SM 412F/SW 9010

• = NOT DETECTED ABOVE QUANTITATION LIMIT

• = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

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NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: **WW ENGINEERING & SCIENCE, INC.**
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: **GW-PGP6-25.0-27.0-03** Project ID: **FRANKLIN-RFI**

SWLO ID: **12787.03** Report: **12787.03**

Collected: **02/25/1993** Report Date: **03/23/1993** Page: **1**
Received: **03/02/1993** Last Modified: Matrix: **Water**

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
AMENABLE CN		10	ug/l	ND	03/05/93	SM 412F/SW 9010

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

I = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

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NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: GW-PGP7-13.0-15.0-03 **Project ID:** FRANKLIN-RFI

SWLO ID: 12787.04 **Report:** 12787.04

Collected: 02/25/1993 **Report Date:** 03/23/1993 **Page:** 1
Received: 03/02/1993 **Last Modified:** **Matrix:** Water

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
AMENABLE CN		10	ug/l	ND	03/05/93	SM 412F/SW 9010

○ = NOT DETECTED ABOVE QUANTITATION LIMIT
● = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE
NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
D = SURROGATES DILUTED OUT
J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: **WW ENGINEERING & SCIENCE, INC.**
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: **GW-PGP7-19.0-21.0-03** **Project ID:** **FRANKLIN-RFI**
SWLO ID: **12787.05** **Report:** **12787.05**

Collected: **02/25/1993** **Report Date:** **03/23/1993** **Page:** **1**
Received: **03/02/1993** **Last Modified:** **Matrix:** **Water**

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
AMENABLE CN		10	ug/L	ND	03/05/93	SM 412F/SW 9010

● = NOT DETECTED ABOVE QUANTITATION LIMIT
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Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
 EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
 D = SURROGATES DILUTED OUT
 J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: GW-PGP7-24.5-26.5-03 **Project ID:** FRANKLIN-RFI

SWLO ID: 12787.06 **Report:** 12787.06

Collected: 02/25/1993 **Report Date:** 03/23/1993 **Page:** 1
Received: 03/02/1993 **Last Modified:** **Matrix:** Water

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
AMENABLE CN		10	ug/l	ND	03/05/93	SM 412F/SW 9010

● = NOT DETECTED ABOVE QUANTITATION LIMIT
- = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
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NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
D = SURROGATES DILUTED OUT
J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: PGP7-19.0-21.0-03d **Project ID:** FRANKLIN-RFI

SWLO ID: 12787.07 **Report:** 12787.07

Collected: 02/25/1993 **Report Date:** 03/23/1993 **Page:** 1
Received: 03/02/1993 **Last Modified:** **Matrix:** Water

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
AMENABLE CN		10	ug/l	ND	03/05/93	SM 412F/SW 9010

ND = NOT DETECTED ABOVE QUANTITATION LIMIT
= ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
J = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE
NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
D = SURROGATES DILUTED OUT
J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: **WW ENGINEERING & SCIENCE, INC.**
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: **GW-PGP9-13.0-15.0-03** Project ID: **FRANKLIN-RFI**
SWLO ID: **12787.08** Report: **12787.08**

Collected: **02/26/1993** Report Date: **03/23/1993** Page: **1**
Received: **03/02/1993** Last Modified: Matrix: **Water**

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
		*** INORGANICS ***				
AMENABLE CN		10	ug/L	ND	03/05/93	SM 412F/SW 9010

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

1 = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

1 = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: GW-PGP0-03eb

Project ID: FRANKLIN-RFI

SWLO ID: 12787.09

Report: 12787.09

Collected: 02/26/1993

Report Date: 03/23/1993

Page: 1

Received: 03/02/1993

Last Modified:

Matrix: Water

<u>TEST</u>	<u>DATE EXTRACTED</u>	<u>DETECTION LIMIT</u>	<u>UNITS</u>	<u>RESULTS</u>	<u>DATE ANALYZED</u>	<u>METHOD REFERENCE</u>
*** INORGANICS ***						
AMENABLE CN		10	ug/l	ND	03/05/93	SM 412F/SW 9010

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

I = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: GW-PGP8-20.0-22.0-03 **Project ID:** FRANKLIN-RFI

SWLO ID: 12787.10 **Report:** 12787.10

Collected: 02/26/1993 **Report Date:** 03/23/1993 **Page:** 1
Received: 03/02/1993 **Last Modified:** **Matrix:** Water

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
AMENABLE CN		10	ug/l	ND	03/05/93	SM 412F/SW 9010

N = NOT DETECTED ABOVE QUANTITATION LIMIT
B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE
NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
D = SURROGATES DILUTED OUT
J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-GW-PGP03-EB

Project ID: FRANKLIN-RFI

SWLO ID: 12808.01

Report: 12808.01

Collected: 03/02/1993

Report Date: 03/23/1993

Page: 1

Received: 03/03/1993

Last Modified:

Matrix: Water

<u>TEST</u>	<u>DATE EXTRACTED</u>	<u>DETECTION LIMIT</u>	<u>UNITS</u>	<u>RESULTS</u>	<u>DATE ANALYZED</u>	<u>METHOD REFERENCE</u>
*** INORGANICS ***						
AMENABLE CN		10	ug/l	ND	03/12/93	SM 412F/SW 9010

ND = NOT DETECTED ABOVE QUANTITATION LIMIT
B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE
NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
D = SURROGATES DILUTED OUT
J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-GW-PGP10-03

Project ID: FRANKLIN-RFI

SWLO ID: 12808.02

Report: 12808.02

Collected: 03/02/1993

Report Date: 03/23/1993

Page: 1

Received: 03/03/1993

Last Modified:

Matrix: Water

<u>TEST</u>	<u>DATE EXTRACTED</u>	<u>DETECTION LIMIT</u>	<u>UNITS</u>	<u>RESULTS</u>	<u>DATE ANALYZED</u>	<u>METHOD REFERENCE</u>
*** INORGANICS ***						
AMENABLE CN		10	ug/l	ND	03/12/93	SM 412F/SW 9010

M = NOT DETECTED ABOVE QUANTITATION LIMIT

= ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: **WW ENGINEERING & SCIENCE, INC.**
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: **FCR-GW-PGP10-03D**

Project ID: **FRANKLIN-RFI**

SWLO ID: **12808.05**

Report: **12808.05**

Collected: **03/02/1993**

Report Date: **03/23/1993**

Page: **1**

Received: **03/03/1993**

Last Modified:

Matrix: **Water**

<u>TEST</u>	<u>DATE EXTRACTED</u>	<u>DETECTION LIMIT</u>	<u>UNITS</u>	<u>RESULTS</u>	<u>DATE ANALYZED</u>	<u>METHOD REFERENCE</u>
*** INORGANICS ***						
AMENABLE CN		10	ug/L	ND	03/12/93	SM 412F/SW 9010

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NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-GW-103-01eb

Project ID: AMPHENOL FACILITY

SWLO ID: 8929.01

Report: 8929.01 -P

Collected: 03/02/1992

Report Date: 03-31-1992

Page: 1

Received: 03/04/1992

Last Modified:

Matrix: Water

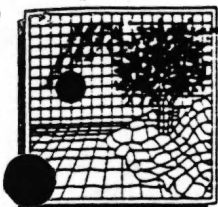
TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
TOTAL SULFIDE		1.0	mg/l	ND	03/06/92	SM 427D

ND = NOT DETECTED ABOVE QUANTITATION LIMIT
● ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE
NA = NOT APPLICABLE

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
D = SURROGATES DILUTED OUT
J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
EPA = #EPA600/4-79-020, MARCH 1985

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2858

CLIENT: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408
ATTN: JIM KEITH

REPORT: 8929.04DF

DATE: 04-02-92

SAMPLE MATRIX: WATER
SWLO # 8929.04
METHOD REFERENCE: SW846-8280
DATE SUBMITTED: 03-04-92
DATE EXTRACTED: 03-05-92
DATE ANALYZED: 03-11-92
SAMPLE ID: FCR-GW-MW22-01

RESULTS REPORTED IN Parts Per Trillion (ng/L)

<u>ANALYTE</u>	<u>EST. DETECTION LIMIT</u>	<u>CONCENTRATION</u>
<u>DIOXINS</u>		
TOTAL TETRA CDD	1.8	ND
TOTAL PENTA CDD	2.2	ND
TOTAL HEXA CDD	1.7	ND
TOTAL HEPTA CDD	2.5	ND
TOTAL OCTA CDD	5.5	ND

FURANS

TOTAL TETRA CDF	1.4	ND
TOTAL PENTA CDF	1.4	ND
TOTAL HEXA CDF	1.2	ND
TOTAL HEPTA CDF	1.4	ND
TOTAL OCTA CDF	3.2	ND

QA/QC SURROGATE RECOVERIES

13C-TCDD (25-150) 61%	88%	13C-HxCDD (25-150)	76%	13C-OCDD (25-150)
	13C-TCDF (25-150)	98%	13C-HpCDF (25-150)	58%

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

NA = NOT APPLICABLE

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2454

CLIENT: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408
ATTN: JIM KEITH

REPORT: 8929.06DF

DATE: 04-02-92

SAMPLE MATRIX: WATER
SWLO # 8929.06
METHOD REFERENCE: SW846-8280
DATE SUBMITTED: 03-04-92
DATE EXTRACTED: 03-05-92
DATE ANALYZED: 03-17-92
SAMPLE ID: FCR-GW-MW22-01d

RESULTS REPORTED IN Parts Per Trillion (ng/L)

<u>ANALYTE</u>	<u>EST. DETECTION LIMIT</u>	<u>CONCENTRATION</u>
<u>DIOXINS</u>		
TOTAL TETRA CDD	1.4	ND
TOTAL PENTA CDD	0.8	ND
TOTAL HEXA CDD	1.5	ND
TOTAL HEPTA CDD	2.9	ND
TOTAL OCTA CDD	4.8	ND

FURANS

TOTAL TETRA CDF	1.5	ND
TOTAL PENTA CDF	0.4	ND
TOTAL HEXA CDF	1.7	ND
TOTAL HEPTA CDF	1.5	ND
TOTAL OCTA CDF	2.5	ND

QA/QC SURROGATE RECOVERIES

13C-TCDD (25-150) 88% 13C-HxCDD (25-150) 150% 13C-OCDD (25-150)
123% 13C-TCDF (25-150) 100% 13C-HpCDF (25-150) 98%

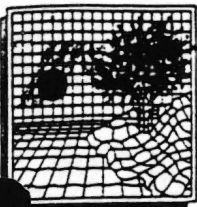
ND = NOT DETECTED ABOVE QUANTITATION LIMIT

NA = NOT APPLICABLE

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2858

CLIENT: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408
ATTN: JIM KEITH

REPORT: 8929.07DF

DATE: 04-02-92

SAMPLE MATRIX: WATER
SWLO # 8929.07
METHOD REFERENCE: SW846-8280
DATE SUBMITTED: 03-04-92
DATE EXTRACTED: 03-05-92
DATE ANALYZED: 03-17-92
SAMPLE ID: FCR-GW-MW22-01m (MS)

RESULTS REPORTED IN Parts Per Trillion (ng/L)

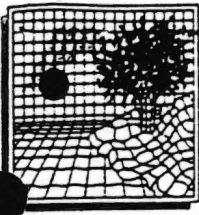
<u>ANALYTE</u>	<u>EST. DETECTION LIMIT</u>	<u>CONCENTRATION</u>
DIOXINS		
TOTAL TETRA CDD	N/A	47.4
TOTAL PENTA CDD	N/A	150.1
TOTAL HEXA CDD	N/A	150.5
TOTAL HEPTA CDD	N/A	186.9
TOTAL OCTA CDD	N/A	287.4
FURANS		
TOTAL TETRA CDF	N/A	50.6
TOTAL PENTA CDF	N/A	132.9
TOTAL HEXA CDF	N/A	111.7
TOTAL HEPTA CDF	N/A	132.1
TOTAL OCTA CDF	N/A	276.4

*Spike
Always*

QA/QC SURROGATE RECOVERIES

13C-TCDD (25-150) 94%	72%	13C-HxCDD (25-150) 80%	102%	13C-OCDD (25-150) 69%
			13C-HpCDF (25-150)	

- ND = NOT DETECTED ABOVE QUANTITATION LIMIT
- NA = NOT APPLICABLE
- J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION
- B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
- * = SURROGATE RECOVERY OUTSIDE OF QC LIMITS



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2858

CLIENT: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408
ATTN: JIM KEITH

REPORT: 8929.08DF

DATE: 04-02-92

SAMPLE MATRIX: WATER
SWLO # 8929.08
METHOD REFERENCE: SW846-8280
DATE SUBMITTED: 03-04-92
DATE EXTRACTED: 03-05-92
DATE ANALYZED: 03-17-92
SAMPLE ID: FCR-GW-MW22-01md (MSD)

RESULTS REPORTED IN Parts Per Trillion (ng/L)

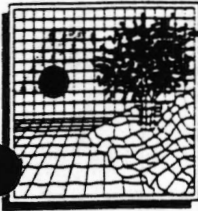
<u>ANALYTE</u>	<u>EST. DETECTION LIMIT</u>	<u>CONCENTRATION</u>
DIOXINS		
TOTAL TETRA CDD	N/A	51.2
TOTAL PENTA CDD	N/A	166.1
TOTAL HEXA CDD	N/A	148.8
TOTAL HEPTA CDD	N/A	178.7
TOTAL OCTA CDD	N/A	264.6
FURANS		
TOTAL TETRA CDF	N/A	49.9
TOTAL PENTA CDF	N/A	130.9
TOTAL HEXA CDF	N/A	117.1
TOTAL HEPTA CDF	N/A	135.9
TOTAL OCTA CDF	N/A	270.6

Spike Amounts

QA/QC SURROGATE RECOVERIES

13C-TCDD (25-150) 86%	60%	13C-HxCDD (25-150) 72%	98%	13C-OCDD (25-150) 64%
	13C-TCDF (25-150)		13C-HpCDF (25-150)	

- ND = NOT DETECTED ABOVE QUANTITATION LIMIT
- NA = NOT APPLICABLE
- J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION
- B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
- * = SURROGATE RECOVERY OUTSIDE OF QC LIMITS



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2858

CLIENT: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408
ATTN: JIM KEITH

REPORT: 8929.01H9

DATE: 03-30-92

SAMPLE MATRIX: WATER
SWLO # 8929.01
DATE SUBMITTED: 03-04-92
DATE EXTRACTED: 03-06-92
DATE ANALYZED : 03-24-92
METHOD REFERENCE: SW846-8150, EPA METHODOLOGY
PROJECT: AMPHENOL FACILITY
SAMPLE ID: FCR-GW-103-Oleb

APPENDIX IX HERBICIDES

RESULTS REPORTED IN ug/L OR Parts Per Billion (PPB)

<u>HERBICIDES</u>	<u>DETECTION LIMIT</u>	<u>RESULTS</u>
2,4-D	1.8	ND
2,4,5-T	0.3	ND
2,4,5-TP (SILVEX)	0.3	ND
DINOSEB	0.3	ND

QA/QC SURROGATE RECOVERY

DCAA

72%

ND = NOT DETECTED ABOVE QUANTITATION LIMIT
J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION
B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
D = SURROGATE OR MATRIX SPIKE DILUTED OUT
SAMPLE RUN AT SECONDARY DILUTION
I = NOT QUANTITATIBLE DUE TO MATRIX INTERFERENCE



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2858

CLIENT: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408
ATTN: JIM KEITH

REPORT: 8929.01P

DATE: 04-02-92

SAMPLE MATRIX: WATER
SWLO #: 8929.01
DATE SUBMITTED: 03-04-92
DATE EXTRACTED: 03-06-92
DATE ANALYZED : 03-31-92
METHOD REFERENCE: SW846-8080, EPA METHODOLOGY
SAMPLE ID: FCR-GW-103-01eb

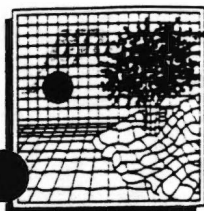
RESULTS REPORTED IN ug/L OR Parts Per Billion (PPB)

<u>PCB'S</u>	<u>DETECTION LIMIT</u>	<u>RESULTS</u>
AROCHLOR-1016	1.0	ND
AROCHLOR-1221	1.0	ND
AROCHLOR-1232	1.0	ND
AROCHLOR-1242	1.0	ND
AROCHLOR-1248	1.0	ND
AROCHLOR-1254	2.0	ND
AROCHLOR-1260	2.0	ND

QA/QC SURROGATE RECOVERIES

DIBUTYLCHLORENDATE (24-154) 75%

ND = NOT DETECTED ABOVE QUANTITATION LIMIT
D = SURROGATE OR MATRIX SPIKE DILUTED OUT
SAMPLE RUN AT SECONDARY DILUTION
J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION
B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2858

CLIENT: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408
ATTN: JIM KEITH

REPORT: 8929.01P9

DATE: 03-30-92

SAMPLE MATRIX: WATER
SWLO # 8929.01
DATE SUBMITTED: 03-04-92
DATE EXTRACTED: 03-10-92
DATE ANALYZED: 03-11-92
PROJECT: AMPHENOL FACILITY
SAMPLE ID: FCR-GW-103-01eb

RESULTS REPORTED IN (ug/L) or Parts Per Billion (PPB)

ORGANOPHOSPHOROUS PESTICIDES

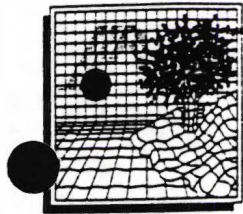
	<u>DETECTION LIMIT</u>	<u>RESULTS</u>
ZINPHOS METHYL (GUTHION)	1.50	ND
BOLSTAR	0.15	ND
CHLORPYRIFOS (DURSBAN)	0.30	ND
COUMAPHOS (CO-RAL)	1.50	ND
DEMETON-S (MERCAPTOS)	0.25	ND
DIAZINON	0.60	ND
DICHLORVOS (DDVP)	0.10	ND
DISULFOTON (DI-SYSTON)	0.20	ND
ETHOPROP (MOCAP)	0.25	ND
FENSULFOTHION (DASANIT)	1.50	ND
FENTHION (BAYCID)	0.10	ND
MERPHOS	0.25	ND
MEVINPHOS (PHOSDRIN)	0.30	ND
NALED	0.10	ND
METHYL PARATHION	0.03	ND
MALATHION	0.5(1)	ND
PHORATE	0.15	ND
RONNEL (FENCHLORPHOS)	0.30	ND
STIROPHOS (TETRACHLORVINPHOS)	5.0	ND

QA/QC SURROGATE RECOVERIES

ETION

96%

- 1) NO DETECTION LIMIT ESTABLISHED, VALUE GIVEN IS AT THE QUANTITATION LIMIT
- ND NOT DETECTED ABOVE QUANTITATION LIMIT
- J ESTIMATED VALUE (BELOW QUANTITATION LIMIT)
- B COMPOUND FOUND IN BLANK
- * SURROGATE RECOVERY OUTSIDE OF QC LIMITS



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2858

CLIENT: WW ENGINEERING & SCIENCE, INC.

REPORT: 8929.01B9

SAMPLE MATRIX: WATER

DATE REPORTED: 04-03-92

SWLO # 8929.01

DATE SUBMITTED: 03-04-92

METHOD REF.: SW846-8270, EPA METHODOLOGY

DATE EXTRACTED: 03-06-92

PROJECT: AMPHENOL FACILITY

DATE ANALYZED : 03-25-92

SAMPLE ID: FCR-GW-103-01eb

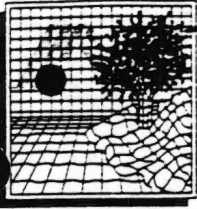
APPENDIX IX SEMIVOLATILES

<u>SEMIVOLATILES</u>	<u>DET.</u>	<u>RESULTS</u>	<u>SEMIVOLATILES</u>	<u>DET.</u>	<u>RESULTS</u>
	<u>LIMIT</u>	<u>(ug/L)</u>		<u>LIMIT</u>	<u>(ug/L)</u>
PHENOL	20	ND	ACENAPHTHENE	20	ND
BIS(2-CHLOROETHYL)ETHER	20	ND	2,4-DINITROPHENOL	100	ND
2-CHLOROPHENOL	20	ND	4-NITROPHENOL	100	ND
1,3-DICHLOROBENZENE	20	ND	DIBENZOFURAN	20	ND
1,4-DICHLOROBENZENE	20	ND	2,4-DINITROTOLUENE	20	ND
BENZYL ALCOHOL	20	ND	2,6-DINITROTOLUENE	20	ND
1,2-DICHLOROBENZENE	20	ND	DIETHYLPHTHALATE	20	ND
2-METHYLPHENOL	20	ND	4-CHLOROPHENYL-PHENYLETHER	20	ND
BIS(2-CHLOROISOPROPYL)ETHER	20	ND	FLUORENE	20	ND
4-/3-METHYLPHENOL (2)	20	ND	4-NITROANILINE	100	ND
N-NITROSO-DI-n-PROPYLAMINE	20	ND	4,6-DINITRO 2-METHYLPHENOL	100	ND
HEXACHLOROETHANE	20	ND	N-NITROSODIPHENYLAMINE (1)	20	ND
NITROBENZENE	20	ND	4-BROMOPHENYL-PHENYLETHER	20	ND
OPHORONE	20	ND	HEXACHLOROENZENE	20	ND
2-NITROPHENOL	20	ND	PENTACHLOROPHENOL	20	ND
2,4-DIMETHYLPHENOL	20	ND	PHENANTHRENE	20	ND
BENZOIC ACID	100	ND	ANTHRACENE	20	ND
BIS(2-CHLOROETHOXY)METHANE	20	ND	DI-N-BUTYLPHTEALATE	20	ND
2,4-DICHLOROPHENOL	20	ND	FLUORANTHENE	20	ND
1,2,4-TRICHLOROBENZENE	20	ND	PYRENE	20	ND
NAPHTHALENE	20	ND	BUTYLBENZYLPHTEALATE	20	ND
4-CHLOROANILINE	20	ND	3,3-DICHLOROBENZIDINE	40	ND
HEXACHLOROBTADIENE	20	ND	BENZO(A)ANTHRACENE	20	ND
4-CHLORO-3-METHYLPHENOL	20	ND	BIS(2-ETHYLHEXYL)PHTHALATE	20	ND
2-METHYLNAPHTHALENE	20	ND	CHRYSENE	20	ND
HEXACHLOROCYCLOPENTADIENE	20	ND	DI-N-OCTYL PHTHALATE	20	ND
2,4,6-TRICHLOROPHENOL	20	ND	BENZO(B)FLUORANTHENE	20	ND
2,4,5-TRICHLOROPHENOL	100	ND	BENZO(K)FLUORANTHENE	20	ND
2-CHLORONAPHTHALENE	20	ND	BENZO(A)PYRENE	20	ND
2-NITROANILINE	100	ND	INDENO(1,2,3-CD)PYRENE	20	ND
DIMETHYLPHTHALATE	20	ND	DIBENZ(A,H)ANTHRACENE	20	ND
ACENAPHTHYLENE	20	ND	BENZO(G,H,I)PERYLENE	20	ND
3-NITROANILINE	100	ND	Continued. . .		

QA/QC SURROGATE RECOVERIES

NITROBENZENE-d5(35-114)	42%	2-FLUOROBIPHENYL(43-116)	39%*	TERPHENYL-d14	(33-141)	147%*	
PHENOL-d5	(20-94)	40%	2-FLUOROPHENOL	(21-100)	38%	2,4,6-TRIBROMOPHENOL(20-123)	24%

- (1) = DETECTED AS DIPHENYLAMINE
- = COELUTE ON GC COLUMN
- ND = NOT DETECTED ABOVE QUANTITATION LIMIT
- J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION
- B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
- * = SURROGATE RECOVERY OUTSIDE OF QC LIMITS



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2858

CLIENT: WW ENGINEERING & SCIENCE, INC.

REPORT: 8929.01B9

SAMPLE MATRIX: WATER

DATE REPORTED: 04-03-92

SWLO # 8929.01

DATE SUBMITTED: 03-04-92

METHOD REF.: SW846-8270, EPA METHODOLOGY

DATE EXTRACTED: 03-06-92

PROJECT: AMPHENOL FACILITY

DATE ANALYZED: 03-25-92

SAMPLE ID: FCR-GW-103-01eb

APPENDIX IX SEMIVOLATILES (CONT.)

<u>SEMIVOLATILES</u>	<u>DET.</u>	<u>RESULTS</u>	<u>SEMIVOLATILES</u>	<u>DET.</u>	<u>RESULTS</u>
	<u>LIMIT</u>	<u>(ug/L)</u>		<u>LIMIT</u>	<u>(ug/L)</u>
PARATHION	40	ND	N-NITROSODIMETHYLAMINE	20	ND
ETHYL METHANESULFONATE	20	ND	2,3,4,6-TETRACHLOROPHENOL	20	ND
P-PHENYLENEDIAMINE	20	ND	CHLOROBENZILATE	20	ND
N-NITROSODIETHYLAMINE	20	ND	THIONAZIN	40	ND
N-NITROSOMETHYLETHYLAMINE	20	ND	DISULFOTON	20	ND
N-NITROSODIBUTYLAMINE	20	ND	ISODRIN	200	ND
N-NITROSOPIPERIDINE	20	ND	N-NITROSOMORPHOLINE	20	ND
5-NITRO-O-TOLUIDINE	20	ND	PENTACHLOROBENZENE	20	ND
METHYL YELLOW	20	ND	4-AMINOBIHENYL	20	ND
METHYL PARATHION	20	ND	HEXACHLOROPROPENE	20	ND
SAFROLE	40	ND	2,6-DICHLOROPHENOL	20	ND
ISOSAFROLE	40	ND	SULFOTEPP	20	ND
PICOLINE	20	ND	METHYL METHANESULFONATE	20	ND
PHENACETIN	20	ND	1,4-NAPHTHAQUINONE	20	ND
O-TOLUIDINE	20	ND	N-NITROSOPIROLLIDINE	20	ND
3,3-DIMETHYLBENZIDINE	100	ND	ACETOPHENONE	20	ND
1,3-DINITROBENZENE	20	ND	DIMETHOATE	20	ND
A,A-DIMETHYLPHENETHYLAMINE	20	ND	3-METHYL CHOLANTHRENE	20	ND
O,O,O-TRIETHYLPHOSPHOROTHIOATE	20	ND	2-ACETYLAMINOFLUORENE	20	ND
METHAPYRILENE HYDROCHLORIDE	40	ND	ANILINE	100	ND
DIALATE	40	ND	1,2-DIBROMO-3-CHLOROPROPANE	20	ND
1,3,5-TRINITROBENZENE	200	ND	HEXACHLOROPHENE	20	ND
FAMPHUR	20	ND	KEPONE	100	ND
4-NITROQUINOLINE-N-OXIDE	200	ND	1-NAPHTHYLAMINE	20	ND
1,2,4,5-TETRACHLOROBENZENE	20	ND	2-NAPHTHYLAMINE	20	ND
PENTACHLORONITROBENZENE	20	ND	PRONAMIDE	100	ND
PHORATE	20	ND	ARAMITE	200	ND
7,12-DIMETHYL BENZ(A)ANTHRACENE	20	ND			

(1) = DETECTED AS DIPHENYLAMINE

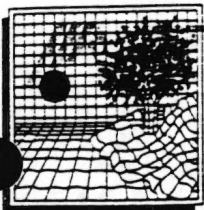
(2) = COELUTE ON GC COLUMN

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2858

CLIENT: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408
ATTN: JIM KEITH

REPORT: 8929.01DF

DATE: 04-02-92

SAMPLE MATRIX: WATER
SWLO # 8929.01
METHOD REFERENCE: SW846-8280
DATE SUBMITTED: 03-04-92
DATE EXTRACTED: 03-05-92
DATE ANALYZED: 03-11-92
SAMPLE ID: FCR-GW-103-01eb

RESULTS REPORTED IN Parts Per Trillion (ng/L)

<u>ANALYTE</u>	<u>EST. DETECTION LIMIT</u>	<u>CONCENTRATION</u>
<u>DIOXINS</u>		
TOTAL TETRA CDD	3.1	ND
TOTAL PENTA CDD	4.5	ND
TOTAL HEXA CDD	1.3	ND
TOTAL HEPTA CDD	5.8	ND
TOTAL OCTA CDD	6.3	ND

<u>FURANS</u>		
TOTAL TETRA CDF	0.6	ND
TOTAL PENTA CDF	1.8	ND
TOTAL HEXA CDF	1.8	ND
TOTAL HEPTA CDF	2.1	ND
TOTAL OCTA CDF	5.9	ND

QA/QC SURROGATE RECOVERIES

13C-TCDD (25-150) 47%	74%	13C-HxCDD (25-150)	74%	13C-OCDD (25-150)
13C-TCDF (25-150)	84%	13C-HpCDF (25-150)	46%	

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

NA = NOT APPLICABLE

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

● = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

● = SURROGATE RECOVERY OUTSIDE OF QC LIMITS



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: **WW ENGINEERING & SCIENCE, INC.**
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: **FCR-GW-MW12-01** Project ID: **AMPHENOL FACILITY**

SWLO ID: **8929.02** Report: **8929.02 -P**

Collected: **03/02/1992** Report Date: **03-31-1992** Page: **1**
Received: **03/04/1992** Last Modified: Matrix: **Water**

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
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*** INORGANICS ***

AMENABLE CN		10	ug/l	ND	03/10/92	SM 412F
TOTAL SULFIDE		1.0	mg/l	ND	03/06/92	SM 427D

*** METALS ***

METALS-APP9-ICP

ANTIMONY		60.0	ug/l	ND	03/13/92	
BARIUM		20.0	ug/l	559	03/13/92	
BERYLLIUM		5.0	ug/l	ND	03/13/92	
CADMIUM		5.0	ug/l	ND	03/13/92	
CHROMIUM		5.0	ug/l	24.7	03/13/92	
COBALT		10.0	ug/l	80.4	03/13/92	
COPPER		10.0	ug/l	160	03/13/92	
NICKEL		10.0	ug/l	118	03/13/92	
SILVER		10.0	ug/l	ND	03/13/92	
TIN		50.0	ug/l	ND	03/13/92	
VANADIUM		10.0	ug/l	28.9	03/13/92	
ZINC		10.0	ug/l	345	03/13/92	
ARSENIC		10.0	ug/l	ND	03/10/92	SW 7060
LEAD		3.0	ug/l	623.4	03/12/92	SW 7421
MERCURY		0.20	ug/l	0.49	03/18/92	SW 7470
SELENIUM		5.0	ug/l	7.75	03/15/92	SW 7740
THALLIUM		10.0	ug/l	ND	03/10/92	SW 7841

ICP

TOTAL

ND = NOT DETECTED ABOVE QUANTITATION LIMIT
 = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
 = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE
 NA = NOT APPLICABLE

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
 D = SURROGATES DILUTED OUT
 J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
 EPA = #EPA600/4-79-020, MARCH 1985

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2858

CLIENT: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408
ATTN: JIM KEITH

REPORT: 8929.02H9

DATE: 03-30-92

SAMPLE MATRIX: WATER
SWLO # 8929.02
DATE SUBMITTED: 03-04-92
DATE EXTRACTED: 03-06-92
DATE ANALYZED : 03-25-92
METHOD REFERENCE: SW846-8150, EPA METHODOLOGY
PROJECT: AMPHENOL FACILITY
SAMPLE ID: FCR-GW-MW12-01

APPENDIX IX HERBICIDES

RESULTS REPORTED IN ug/L OR Parts Per Billion (PPB)

<u>HERBICIDES</u>	<u>DETECTION LIMIT</u>	<u>RESULTS</u>
2,4-D	1.8	ND
2,4,5-T	0.3	ND
2,4,5-TP (SILVEX)	0.3	ND
DINOSEB	0.3	ND

QA/QC SURROGATE RECOVERY

DCAA

73%

ND = NOT DETECTED ABOVE QUANTITATION LIMIT
J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION
B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
D = SURROGATE OR MATRIX SPIKE DILUTED OUT
SAMPLE RUN AT SECONDARY DILUTION
I = NOT QUANTITATIBLE DUE TO MATRIX INTERFERENCE



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

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CLIENT: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408
ATTN: JIM KEITH

REPORT: 8929.02P9

DATE: 03-30-92

SAMPLE MATRIX: WATER
SWLO # 8929.02
DATE SUBMITTED: 03-04-92
DATE EXTRACTED: 03-10-92
DATE ANALYZED: 03-11-92
PROJECT: AMPHENOL FACILITY
SAMPLE ID: FCR-GW-MW12-01

RESULTS REPORTED IN (ug/L) or Parts Per Billion (PPB)

ORGANOPHOSPHOROUS PESTICIDES

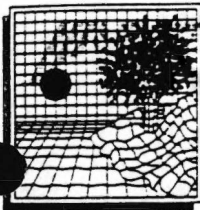
	<u>DETECTION LIMIT</u>	<u>RESULTS</u>
AZINPHOS METHYL (GUTHION)	1.60	ND
BOLSTAR	0.16	ND
CHLORPYRIFOS (DURSBAN)	0.33	ND
COUMAPHOS (CO-RAL)	1.60	ND
DEMETON-S (MERCAPTOS)	0.27	ND
DIAZINON	0.66	ND
DICHLORVOS (DDVP)	0.11	ND
DISULFOTON (DI-SYSTON)	0.22	ND
ETHOPROP (MOCAP)	0.27	ND
FENSULFOTHION (DASANIT)	1.60	ND
FENTHION (BAYCID)	0.11	ND
MERPPOS	0.27	ND
MEVINPHOS (PHOSDRIN)	0.33	ND
NALED	0.11	ND
METHYL PARATHION	0.033	ND
MALATHION	0.55(1)	ND
PHORATE	0.16	ND
RONNEL (FENCHLORPHOS)	0.33	ND
STIROPPOS (TETRACHLORVINPHOS)	5.50	ND

QA/QC SURROGATE RECOVERIES

ETION

82%

- (1) NO DETECTION LIMIT ESTABLISHED, VALUE GIVEN IS AT THE QUANTITATION LIMIT
- ND NOT DETECTED ABOVE QUANTITATION LIMIT
- J ESTIMATED VALUE (BELOW QUANTITATION LIMIT)
- B COMPOUND FOUND IN BLANK
- * SURROGATE RECOVERY OUTSIDE OF QC LIMITS



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2858

CLIENT: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408
ATTN: JIM KEITH

REPORT: 8929.02V9

DATE: 03-31-92

SAMPLE MATRIX: WATER
SWLO # 8929.02
DATE SUBMITTED: 03-04-92
DATE ANALYZED : 03-13-92
METHOD REFERENCE: SW846-8240, EPA METHODOLOGY
PROJECT: AMPHENOL FACILITY
SAMPLE ID: FCR-GW-MW12-01

APPENDIX IX VOLATILES

RESULTS REPORTED IN ug/L OR Parts Per Billion (PPB)

<u>VOLATILES</u>	<u>DET.</u>	<u>RESULTS</u>	<u>VOLATILES</u>	<u>DET.</u>	<u>RESULTS</u>
	<u>LIMIT</u>			<u>LIMIT</u>	
CHLOROMETHANE	500	ND	1,1,2,2-TETRACHLOROETHANE	250	ND
BROMOMETHANE	500	ND	1,2-DICHLOROPROPANE	250	ND
VINYL CHLORIDE	500	ND	TRANS-1,3-DICHLOROPROPENE	250	ND
CHLOROETHANE	500	ND	TRICHLOROETHENE	250	2641
METHYLENE CHLORIDE	250	ND	DIBROMOCHLOROMETHANE	250	ND
ACETONE	500	ND	1,1,2-TRICHLOROETHANE	250	ND
CARBON DISULFIDE	250	ND	BENZENE	250	ND
1,1-DICHLOROETHENE	250	ND	CIS-1,3-DICHLOROPROPENE	250	ND
1,1-DICHLOROETHANE	250	103 J	2-CHLOROETHYLVINYLEETHER	500	ND
TRANS-1,2-DICHLOROETHENE	250	ND	BROMOFORM	250	ND
CHLOROFORM	250	ND	2-HEXANONE	500	ND
1,2-DICHLOROETHANE	250	ND	4-METHYL-2-PENTANONE	500	ND
2-BUTANONE	500	ND	TETRACHLOROETHENE	250	3471
1,1,1-TRICHLOROETHANE	250	2041	TOLUENE	250	ND
CARBON TETRACHLORIDE	250	ND	CHLOROBENZENE	250	ND
VINYL ACETATE	500	ND	ETHYLBENZENE	250	ND
BROMODICHLOROMETHANE	250	ND	STYRENE	250	ND
			TOTAL XYLENES	250	ND

Continued. . .

QA/QC SURROGATE RECOVERIES

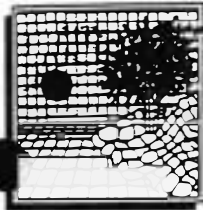
TOLUENE-d8(88-110) 94% BROMOFLUOROBENZENE(86-115) 95% 1,2-DICHLOROETHANE-d4(76-114) 104%

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2858

CLIENT: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408
ATTN: JIM KEITH

REPORT: 8929.02V9-2

DATE: 03-31-92

SAMPLE MATRIX: WATER
SWLO # 8929.02
DATE SUBMITTED: 03-04-92
DATE ANALYZED : 03-13-92
METHOD REFERENCE: SW846-8240, EPA METHODOLOGY
PROJECT: AMPHENOL FACILITY
SAMPLE ID: FCR-GW-MW12-01

APPENDIX IX VOLATILES (CONT.)

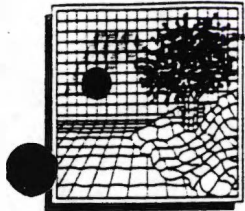
RESULTS REPORTED IN ug/L OR Parts Per Billion (PPB)

<u>VOLATILES</u>	<u>DET. LIMIT</u>	<u>RESULTS</u>
ACROLEIN	2500	ND
METHYL IODIDE	250	ND
ALKYL CHLORIDE	250	ND
CHLOROPRENE	250	ND
TRANS-1,4-DICHLORO-2-BUTENE	250	ND
PENTACHLOROETHANE	250	ND
ACETONITRILE	5000	ND
ACRYLONITRILE	2500	ND
PROPRONITRILE	500	ND
METHACRYLONITRILE	2500	ND
ISOBUTYL ALCOHOL	5000	ND
1,4-DIOXANE	25000	ND
METHYL METHACRYLATE	250	ND
PYRIDINE	5000	ND
ETHYL METHACRYLATE	250	ND
1,2-DIBROMOETHANE	250	ND
1,1,1,2-TETRACHLOROETHANE	250	ND
1,2,3-TRICHLOROPROPANE	250	ND
DICHLORODIFLUOROMETHANE	250	ND
TRICHLOROFLUOROMETHANE	250	ND
DIBROMOMETHANE	500	ND

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2858

CLIENT: **WV ENGINEERING & SCIENCE, INC.**

REPORT: **8929.02B9**

SAMPLE MATRIX: **WATER**

DATE REPORTED: **04-03-92**

SWLO # **8929.02**

DATE SUBMITTED: **03-04-92**

METHOD REF.: **SW846-8270, EPA METHODOLOGY**

DATE EXTRACTED: **03-06-92**

PROJECT: **AMPHENOL FACILITY**

DATE ANALYZED: **03-25-92**

SAMPLE ID: **FCR-GW-MW12-01**

APPENDIX IX SEMIVOLATILES

<u>SEMIVOLATILES</u>	<u>DET.</u>	<u>RESULTS</u>	<u>SEMIVOLATILES</u>	<u>DET.</u>	<u>RESULTS</u>
	<u>LIMIT</u>	<u>(ug/L)</u>		<u>LIMIT</u>	<u>(ug/L)</u>
PHENOL	20	ND	ACENAPHTHENE	20	ND
BIS(2-CHLOROETHYL)ETHER	20	ND	2,4-DINITROPHENOL	100	ND
2-CHLOROPHENOL	20	ND	4-NITROPHENOL	100	ND
1,3-DICHLOROBENZENE	20	ND	DIBENZOFURAN	20	ND
1,4-DICHLOROBENZENE	20	ND	2,4-DINITROTOLUENE	20	ND
BENZYL ALCOHOL	20	ND	2,6-DINITROTOLUENE	20	ND
1,2-DICHLOROBENZENE	20	ND	DIETHYLPHTHALATE	20	ND
2-METHYLPHENOL	20	ND	4-CHLOROPHENYL-PHENYLETHER	20	ND
BIS(2-CHLOROISOPROPYL)ETHER	20	ND	FLUORENE	20	ND
4-/3-METHYLPHENOL (2)	20	ND	4-NITROANILINE	100	ND
N-NITROSO-DI-n-PROPYLAMINE	20	ND	4,6-DINITRO 2-METHYLPHENOL	100	ND
HEXACHLOROETHANE	20	ND	N-NITROSODIPHENYLAMINE (1)	20	ND
NITROBENZENE	20	ND	4-BROMOPHENYL-PHENYLETHER	20	ND
PHORONE	20	ND	HEXACHLOROENZENE	20	ND
2-NITROPHENOL	20	ND	PENTACHLOROPHENOL	20	ND
2,4-DIMETHYLPHENOL	20	ND	PHENANTHRENE	20	ND
BENZOIC ACID	100	ND	ANTHRACENE	20	ND
BIS(2-CHLOROETHOXY)METHANE	20	ND	DI-N-BUTYLPHTHALATE	20	ND
2,4-DICHLOROPHENOL	20	ND	FLUORANTHENE	20	ND
1,2,4-TRICHLOROBENZENE	20	ND	PYRENE	20	ND
NAPHTHALENE	20	ND	BUTYLBENZYLPHTHALATE	20	ND
4-CHLOROANILINE	20	ND	3,3-DICHLOROENZIDINE	40	ND
HEXACHLOROBUTADIENE	20	ND	BENZO(A)ANTHRACENE	20	ND
4-CHLORO-3-METHYLPHENOL	20	ND	BIS(2-ETHYLHEXYL)PHTHALATE	20	ND
2-METHYLNAPHTHALENE	20	ND	CHRYSENE	20	ND
HEXACHLOROCYCLOPENTADIENE	20	ND	DI-N-OCTYL PHTHALATE	20	ND
2,4,6-TRICHLOROPHENOL	20	ND	BENZO(B)FLUORANTHENE	20	ND
2,4,5-TRICHLOROPHENOL	100	ND	BENZO(K)FLUORANTHENE	20	ND
2-CHLORONAPHTHALENE	20	ND	BENZO(A)PYRENE	20	ND
2-NITROANILINE	100	ND	INDENO(1,2,3-CD)PYRENE	20	ND
DIMETHYLPHTHALATE	20	ND	DIBENZ(A,H)ANTHRACENE	20	ND
ACENAPHTHYLENE	20	ND	BENZO(G,H,I)PERYLENE	20	ND
3-NITROANILINE	100	ND	Continued. . .		

QA/QC SURROGATE RECOVERIES

NITROBENZENE-d5(35-114)	67%	2-FLUOROBIPHENYL(43-116)	65%	TERPHENYL-d14	(33-141)	96%	
PHENOL-d5	(20-94)	63%	2-FLUOROPHENOL	(21-100)	64%	2,4,6-TRIBROMOPHENOL(20-123)	39%

(1) = DETECTED AS DIPHENYLAMINE

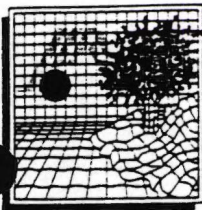
● = COELUTE ON GC COLUMN

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2858

CLIENT: WW ENGINEERING & SCIENCE, INC.

REPORT: 8929.02B9

SAMPLE MATRIX: WATER

DATE REPORTED: 04-03-92

SWLO # 8929.02

DATE SUBMITTED: 03-04-92

METHOD REF.: SW846-8270, EPA METHODOLOGY

DATE EXTRACTED: 03-06-92

PROJECT: AMPHENOL FACILITY

DATE ANALYZED: 03-25-92

SAMPLE ID: FCR-GW-MW12-01

APPENDIX IX SEMIVOLATILES (CONT.)

SEMIVOLATILES	DET.	RESULTS	SEMIVOLATILES	DET.	RESULTS
	LIMIT	(ug/L)		LIMIT	(ug/L)
PARATHION	40	ND	N-NITROSODIMETHYLAMINE	20	ND
ETHYL METHANESULFONATE	20	ND	2,3,4,6-TETRACHLOROPHENOL	20	ND
P-PHENYLENEDIAMINE	20	ND	CHLOROBENZILATE	20	ND
N-NITROSODIETHYLAMINE	20	ND	THIONAZIN	40	ND
N-NITROSOMETHYLETHYLAMINE	20	ND	DISULFOTON	20	ND
N-NITROSODIBUTYLAMINE	20	ND	ISODRIN	200	ND
N-NITROSOPIPERIDINE	20	ND	N-NITROSOMORPHOLINE	20	ND
5-NITRO-O-TOLUIDINE	20	ND	PENTACHLOROBENZENE	20	ND
METHYL YELLOW	20	ND	4-AMINOBIIPHENYL	20	ND
METHYL PARATHION	20	ND	HEXACHLOROPROPENE	20	ND
SAFROLE	40	ND	2,6-DICHLOROPHENOL	20	ND
ISOSAFROLE	40	ND	SULFOTEPP	20	ND
NICOLINE	20	ND	METHYL METHANESULFONATE	20	ND
PHENACETIN	20	ND	1,4-NAPHTHAQUINONE	20	ND
O-TOLUIDINE	20	ND	N-NITROSOPIRROLIDINE	20	ND
3,3-DIMETHYLBENZIDINE	100	ND	ACETOPHENONE	20	ND
1,3-DINITROBENZENE	20	ND	DIMETHOATE	20	ND
A,A-DIMETHYLPHENETHYLAMINE	20	ND	3-METHYL CHOLANTHRENE	20	ND
O,O,O-TRIETHYLPHOSPHOROTHIOATE	20	ND	2-ACETYLAMINOFLUORENE	20	ND
METHAPYRILENE HYDROCHLORIDE	40	ND	ANILINE	100	ND
DIALATE	40	ND	1,2-DIBROMO-3-CHLOROPROPANE	20	ND
1,3,5-TRINITROBENZENE	200	ND	HEXACHLOROPHENE	20	ND
FAMPUR	20	ND	KEPONE	100	ND
4-NITROQUINOLINE-N-OXIDE	200	ND	1-NAPHTHYLAMINE	20	ND
1,2,4,5-TETRACHLOROBENZENE	20	ND	2-NAPHTHYLAMINE	20	ND
PENTACHLORONITROBENZENE	20	ND	PRONAMIDE	100	ND
PHORATE	20	ND	ARAMITE	200	ND
7,12-DIMETHYL BENZ(A)ANTHRACENE	20	ND			

(1) = DETECTED AS DIPHENYLAMINE

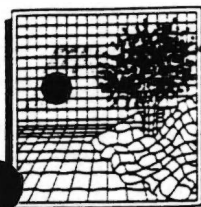
(2) = COELUTE ON GC COLUMN

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

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B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2858

CLIENT: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408
ATTN: JIM KEITH

REPORT: 8929.02DF

DATE: 04-02-92

SAMPLE MATRIX: WATER
SWLO # 8929.02
METHOD REFERENCE: SW846-8280
DATE SUBMITTED: 03-04-92
DATE EXTRACTED: 03-12-92
DATE ANALYZED: 03-17-92
SAMPLE ID: FCR-GW-MW12-01

RESULTS REPORTED IN Parts Per Trillion (ng/L)

<u>ANALYTE</u>	<u>EST. DETECTION LIMIT</u>	<u>CONCENTRATION</u>
<u>DIOXINS</u>		
TOTAL TETRA CDD	0.6	ND
TOTAL PENTA CDD	0.7	ND
TOTAL HEXA CDD	2.8	ND
TOTAL HEPTA CDD	3.0	ND
TOTAL OCTA CDD	7.9	ND

FURANS

TOTAL TETRA CDF	0.2	ND
TOTAL PENTA CDF	1.3	ND
TOTAL HEXA CDF	0.6	ND
TOTAL HEPTA CDF	0.8	ND
TOTAL OCTA CDF	5.6	ND

QA/QC SURROGATE RECOVERIES

13C-TCDD (25-150) 88%	64%	13C-HxCDD (25-150) 74%	104%	13C-OCDD (25-150) 68%
	13C-TCDF (25-150)		13C-HpCDF (25-150)	

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

NA = NOT APPLICABLE

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

○ = SURROGATE RECOVERY OUTSIDE OF QC LIMITS



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: **WW ENGINEERING & SCIENCE, INC.**
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: **FCR-GW-MW12-01 DISS.** Project ID: **AMPHENOL FACILITY**
SWLO ID: **8929.03** Report: **8929.03**

Collected: **03/02/1992** Report Date: **03-31-1992** Page: **1**
Received: **03/04/1992** Last Modified: Matrix: **Water**

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
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*** INORGANICS ***

AMENABLE CN		10	ug/l	ND	03/10/92	SM 412F
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*** METALS ***

APPENDIX IX

METALS-APP9-ICP

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
ANTIMONY		60.0	ug/l	ND	03/13/92	ICP
BARIUM		20.0	ug/l	101	03/13/92	
BERYLLIUM		5.0	ug/l	ND	03/13/92	
CADMIUM		5.0	ug/l	ND	03/13/92	
CHROMIUM		5.0	ug/l	ND	03/13/92	
COBALT		10.0	ug/l	ND	03/13/92	
COPPER		10.0	ug/l	ND	03/13/92	
NICKEL		10.0	ug/l	ND	03/13/92	
SILVER		10.0	ug/l	ND	03/13/92	
TIN		50.0	ug/l	511	03/13/92	
VANADIUM		10.0	ug/l	ND	03/13/92	
ZINC		10.0	ug/l	11.9	03/13/92	
ARSENIC		10.0	ug/l	ND	03/10/92	SW 7060
LEAD		3.0	ug/l	9.08	03/12/92	SW 7421
MERCURY		0.20	ug/l	ND	03/18/92	SW 7470
SELENIUM		5.0	ug/l	ND	03/10/92	SW 7740
THALLIUM		10.0	ug/l	ND	03/10/92	SW 7841

ND = NOT DETECTED ABOVE QUANTITATION LIMIT
 = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
 = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE
 NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
 EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
 D = SURROGATES DILUTED OUT
 J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-GW-MW22-01

Project ID: AMPHENOL FACILITY

SWLO ID: 8929.04

Report: 8929.04 -P

Collected: 03/02/1992

Report Date: 03-31-1992

Page: 1

Received: 03/04/1992

Last Modified:

Matrix: Water

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
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*** INORGANICS ***

AMENABLE CN		10	ug/l	ND	03/10/92	SM 412F
TOTAL SULFIDE		1.0	mg/l	ND	03/06/92	SM 427D

*** METALS ***

METALS-APP9-ICP

ICP

ANTIMONY		60.0	ug/l	ND	03/13/92	
BARIUM		20.0	ug/l	307	03/13/92	
BERYLLIUM		5.0	ug/l	ND	03/13/92	
CADMIUM		5.0	ug/l	ND	03/13/92	
CHROMIUM		5.0	ug/l	36.5	03/13/92	
COBALT		10.0	ug/l	34.3	03/13/92	
COPPER		10.0	ug/l	234	03/13/92	
NICKEL		10.0	ug/l	92.9	03/13/92	
SILVER		10.0	ug/l	62.2	03/13/92	
TIN		50.0	ug/l	ND	03/13/92	
VANADIUM		10.0	ug/l	70.5	03/13/92	
ZINC		10.0	ug/l	236	03/13/92	
ARSENIC		10.0	ug/l	ND	03/10/92	SW 7060
LEAD		3.0	ug/l	68.42	03/12/92	SW 7421
MERCURY		0.20	ug/l	0.26	03/18/92	SW 7470
SELENIUM		5.0	ug/l	ND	03/10/92	SW 7740
THALLIUM		10.0	ug/l	ND	03/10/92	SW 7841

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

= ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

= UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

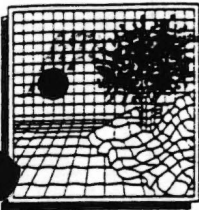
EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2858

CLIENT: **WW ENGINEERING & SCIENCE, INC.**
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408
ATTN: JIM KEITH

REPORT: 8929.04H9

DATE: 03-30-92

SAMPLE MATRIX: WATER
SWLO # 8929.04
DATE SUBMITTED: 03-04-92
DATE EXTRACTED: 03-06-92
DATE ANALYZED : 03-25-92
METHOD REFERENCE: SW846-8150, EPA METHODOLOGY
PROJECT: AMPHENOL FACILITY
SAMPLE ID: FCR-GW-MW22-01

APPENDIX IX HERBICIDES

RESULTS REPORTED IN ug/L OR Parts Per Billion (PPB)

<u>HERBICIDES</u>	<u>DETECTION LIMIT</u>	<u>RESULTS</u>
2,4-D	1.8	ND
2,4,5-T	0.3	ND
2,4,5-TP (SILVEX)	0.3	ND
DINOSEB	0.3	ND

QA/QC SURROGATE RECOVERY

DCAA

88%

ND = NOT DETECTED ABOVE QUANTITATION LIMIT
J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION
B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
D = SURROGATE OR MATRIX SPIKE DILUTED OUT
SAMPLE RUN AT SECONDARY DILUTION
I = NOT QUANTITATIBLE DUE TO MATRIX INTERFERENCE



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2858

CLIENT: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408
ATTN: JIM KEITH

REPORT: 8929.04P

DATE: 04-02-92

SAMPLE MATRIX: WATER
SWLO #: 8929.04
DATE SUBMITTED: 03-04-92
DATE EXTRACTED: 03-06-92
DATE ANALYZED : 03-31-92
METHOD REFERENCE: SW846-8080, EPA METHODOLOGY
SAMPLE ID: FCR-GW-MW22-01

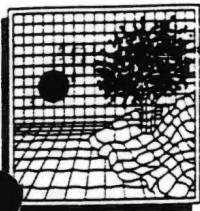
RESULTS REPORTED IN ug/L OR Parts Per Billion (PPB)

<u>PCB'S</u>	<u>DETECTION LIMIT</u>	<u>RESULTS</u>
AROCHLOR-1016	1.0	ND
AROCHLOR-1221	1.0	ND
AROCHLOR-1232	1.0	ND
AROCHLOR-1242	1.0	ND
AROCHLOR-1248	1.0	ND
AROCHLOR-1254	2.0	ND
AROCHLOR-1260	2.0	ND

QA/QC SURROGATE RECOVERIES

DIBUTYLCHLORENDATE (24-154) 48%

ND = NOT DETECTED ABOVE QUANTITATION LIMIT
D = SURROGATE OR MATRIX SPIKE DILUTED OUT
SAMPLE RUN AT SECONDARY DILUTION
J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION
B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2858

CLIENT: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408
ATTN: JIM KEITH

REPORT: 8929.04P9

DATE: 03-30-92

SAMPLE MATRIX: WATER
SWLO # 8929.04
DATE SUBMITTED: 03-04-92
DATE EXTRACTED: 03-10-92
DATE ANALYZED: 03-11-92
PROJECT: AMPHENOL FACILITY
SAMPLE ID: FCR-GW-MW22-01

RESULTS REPORTED IN (ug/L) or Parts Per Billion (PPB)

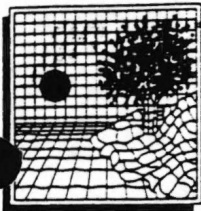
ORGANOPHOSPHOROUS PESTICIDES

	<u>DETECTION LIMIT</u>	<u>RESULTS</u>
DIAZINON METHYL (GUTHION)	1.50	ND
MONSTAR	0.15	ND
CHLORPYRIFOS (DURBAN)	0.30	ND
COUMAPHOS (CO-RAL)	1.50	ND
DEMETON-S (MERCAPTOS)	0.25	ND
DIAZINON	0.60	ND
DICHLORVOS (DDVP)	0.10	ND
DISULFOTON (DI-SYSTON)	0.20	ND
ETHOPROP (MOCAP)	0.25	ND
FENSULFOTHION (DASANIT)	1.50	ND
FENTHION (BAYCID)	0.10	ND
MERPHOS	0.25	ND
MEVINPHOS (PHOSDRIN)	0.30	ND
NALED	0.10	ND
METHYL PARATHION	0.03	ND
MALATHION	0.5(1)	ND
PHORATE	0.15	ND
RONNEL (FENCHLORPHOS)	0.30	ND
STIROPHOS (TETRACHLORVINPHOS)	5.00	ND

QA/QC SURROGATE RECOVERIES

ETION 79%

- (1) NO DETECTION LIMIT ESTABLISHED, VALUE GIVEN IS AT THE QUANTITATION LIMIT
D NOT DETECTED ABOVE QUANTITATION LIMIT
J ESTIMATED VALUE (BELOW QUANTITATION LIMIT)
B COMPOUND FOUND IN BLANK
* SURROGATE RECOVERY OUTSIDE OF QC LIMITS



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2858

CLIENT: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408
ATTN: JIM KEITH

REPORT: 8929.04V9

DATE: 03-31-92

SAMPLE MATRIX: WATER
SWLO # 8929.04
DATE SUBMITTED: 03-04-92
DATE ANALYZED : 03-13-92
METHOD REFERENCE: SW846-8240, EPA METHODOLOGY
PROJECT: AMPHENOL FACILITY
SAMPLE ID: FCR-GW-MW22-01

APPENDIX IX VOLATILES

RESULTS REPORTED IN ug/L OR Parts Per Billion (PPB)

<u>VOLATILES</u>	<u>DET. LIMIT</u>	<u>RESULTS</u>	<u>VOLATILES</u>	<u>DET. LIMIT</u>	<u>RESULTS</u>
CHLOROMETHANE	1000	ND	1,1,2,2-TETRACHLOROETHANE	500	ND
BROMOMETHANE	1000	ND	1,2-DICHLOROPROPANE	500	ND
VINYL CHLORIDE	1000	ND	TRANS-1,3-DICHLOROPROPENE	500	ND
CHLOROETHANE	1000	ND	TRICHLOROETHENE	500	3167
METHYLENE CHLORIDE	500	ND	DIBROMOCHLOROMETHANE	500	ND
ACETONE	1000	ND	1,1,2-TRICHLOROETHANE	500	ND
CARBON DISULFIDE	500	ND	BENZENE	500	ND
1,1-DICHLOROETHENE	500	ND	CIS-1,3-DICHLOROPROPENE	500	ND
1,1-DICHLOROETHANE	500	ND	2-CHLOROETHYLVINYLETHER	1000	ND
TRANS-1,2-DICHLOROETHENE	500	ND	BROMOFORM	500	ND
CHLOROFORM	500	ND	2-HEXANONE	1000	ND
1,2-DICHLOROETHANE	500	ND	4-METHYL-2-PENTANONE	1000	ND
2-BUTANONE	1000	ND	TETRACHLOROETHENE	500	16774
1,1,1-TRICHLOROETHANE	500	ND	TOLUENE	500	ND
CARBON TETRACHLORIDE	500	ND	CHLOROBENZENE	500	ND
VINYL ACETATE	1000	ND	ETHYLBENZENE	500	ND
BROMODICHLOROMETHANE	500	ND	STYRENE	500	ND
			TOTAL XYLENES	500	ND

Continued. . .

QA/QC SURROGATE RECOVERIES

TOLUENE-d8(88-110) 104% BROMOFLUOROBENZENE(86-115) 101% 1,2-DICHLOROETHANE-d4(76-114) 112%

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2858

CLIENT: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408
ATTN: JIM KEITH

REPORT: 8929.04V9-2

DATE: 03-31-92

SAMPLE MATRIX: WATER
SWLO # 8929.04
DATE SUBMITTED: 03-04-92
DATE ANALYZED : 03-13-92
METHOD REFERENCE: SW846-8240, EPA METHODOLOGY
PROJECT: AMPHENOL FACILITY
SAMPLE ID: FCR-GW-MW22-01

APPENDIX IX VOLATILES (CONT.)

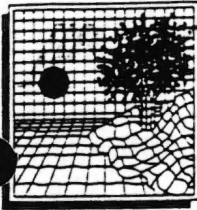
RESULTS REPORTED IN ug/L OR Parts Per Billion (PPB)

<u>VOLATILES</u>	<u>DET. LIMIT</u>	<u>RESULTS</u>
ACROLEIN	5000	ND
METHYL IODIDE	500	ND
ALKYL CHLORIDE	500	ND
CHLOROPRENE	500	ND
TRANS-1,4-DICHLORO-2-BUTENE	500	ND
PENTACHLOROETHANE	500	ND
ACETONITRILE	10000	ND
ACRYLONITRILE	5000	ND
PROPRONITRILE	1000	ND
METHACRYLONITRILE	5000	ND
ISOBUTYL ALCOHOL	10000	ND
1,4-DIOXANE	50000	ND
METHYL METHACRYLATE	500	ND
PYRIDINE	10000	ND
ETHYL METHACRYLATE	500	ND
1,2-DIBROMOETHANE	500	ND
1,1,1,2-TETRACHLOROETHANE	500	ND
1,2,3-TRICHLOROPROPANE	500	ND
DICHLORODIFLUOROMETHANE	500	ND
TRICHLOROFLUOROMETHANE	500	ND
DIBROMOMETHANE	1000	ND

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Alhany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2858

CLIENT: **WW ENGINEERING & SCIENCE, INC.**

REPORT: **8929.04B9**

SAMPLE MATRIX: **WATER**

DATE REPORTED: **04-03-92**

SWLO # **8929.04**

DATE SUBMITTED: **03-04-92**

METHOD REF.: **SW846-8270, EPA METHODOLOGY**

DATE EXTRACTED: **03-06-92**

PROJECT: **AMPHENOL FACILITY**

DATE ANALYZED: **03-25-92**

SAMPLE ID: **FCR-GW-MW22-01**

APPENDIX IX SEMIVOLATILES

<u>SEMIVOLATILES</u>	<u>DET.</u>	<u>RESULTS</u>	<u>SEMIVOLATILES</u>	<u>DET.</u>	<u>RESULTS</u>
	<u>LIMIT</u>	<u>(ug/L)</u>		<u>LIMIT</u>	<u>(ug/L)</u>
PHENOL	20	ND	ACENAPHTHENE	20	ND
BIS(2-CHLOROETHYL)ETHER	20	ND	2,4-DINITROPHENOL	100	ND
2-CHLOROPHENOL	20	ND	4-NITROPHENOL	100	ND
1,3-DICHLOROBENZENE	20	ND	DIBENZOFURAN	20	ND
1,4-DICHLOROBENZENE	20	ND	2,4-DINITROTOLUENE	20	ND
BENZYL ALCOHOL	20	ND	2,6-DINITROTOLUENE	20	ND
1,2-DICHLOROBENZENE	20	ND	DIETHYLPHTHALATE	20	ND
2-METHYLPHENOL	20	ND	4-CHLOROPHENYL-PHENYLETHER	20	ND
BIS(2-CHLOROISOPROPYL)ETHER	20	ND	FLUORENE	20	ND
4-/3-METHYLPHENOL (2)	20	ND	4-NITROANILINE	100	ND
N-NITROSO-DI-n-PROPYLAMINE	20	ND	4,6-DINITRO 2-METHYLPHENOL	100	ND
HEXACHLOROETHANE	20	ND	N-NITROSODIPHENYLAMINE (1)	20	ND
NITROBENZENE	20	ND	4-BROMOPHENYL-PHENYLETHER	20	ND
PHORONE	20	ND	HEXACHLOROENZENE	20	ND
2-NITROPHENOL	20	ND	PENTACHLOROPHENOL	20	ND
2,4-DIMETHYLPHENOL	20	ND	PHENANTHRENE	20	ND
BENZOIC ACID	100	ND	ANTHRACENE	20	ND
BIS(2-CHLOROETHOXY)METHANE	20	ND	DI-N-BUTYLPHTHALATE	20	ND
2,4-DICHLOROPHENOL	20	ND	FLUORANTHENE	20	ND
1,2,4-TRICHLOROBENZENE	20	ND	PYRENE	20	ND
NAPHTHALENE	20	ND	BUTYLBENZYLPHTHALATE	20	ND
4-CHLOROANILINE	20	ND	3,3-DICHLOROENZIDINE	40	ND
HEXACHLOROBUTADIENE	20	ND	BENZO(A)ANTHRACENE	20	ND
4-CHLORO-3-METHYLPHENOL	20	ND	BIS(2-ETHYLHEXYL)PHTHALATE	20	ND
2-METHYLNAPHTHALENE	20	ND	CHRYSENE	20	ND
HEXACHLOROCYCLOPENTADIENE	20	ND	DI-N-OCTYL PHTHALATE	20	ND
2,4,6-TRICHLOROPHENOL	20	ND	BENZO(B)FLUORANTHENE	20	ND
2,4,5-TRICHLOROPHENOL	100	ND	BENZO(K)FLUORANTHENE	20	ND
2-CHLORONAPHTHALENE	20	ND	BENZO(A)PYRENE	20	ND
2-NITROANILINE	100	ND	INDENO(1,2,3-CD)PYRENE	20	ND
DIMETHYLPHTHALATE	20	ND	DIBENZ(A,H)ANTHRACENE	20	ND
ACENAPHTHYLENE	20	ND	BENZO(G,H,I)PERYLENE	20	ND
3-NITROANILINE	100	ND	Continued. . .		

QA/QC SURROGATE RECOVERIES

NITROBENZENE-d5 (35-114)	71%	2-FLUOROBIPHENYL(43-116)	58%	TERPHENYL-d14	(33-141) 103%
PHENOL-d5 (20-94)	64%	2-FLUOROPHENOL (21-100)	69%	2,4,6-TRIBROMOPHENOL(20-123)	40%

(1) = DETECTED AS DIPHENYLAMINE

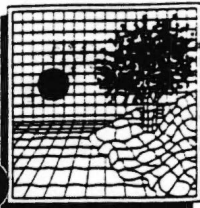
● = COELUTE ON GC COLUMN

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2858

CLIENT: WW ENGINEERING & SCIENCE, INC.

REPORT: 8929.04B9

SAMPLE MATRIX: WATER

DATE REPORTED: 04-03-92

SWLO # 8929.04

DATE SUBMITTED: 03-04-92

METHOD REF.: SW846-8270, EPA METHODOLOGY

DATE EXTRACTED: 03-06-92

PROJECT: AMPHENOL FACILITY

DATE ANALYZED: 03-25-92

SAMPLE ID: FCR-GW-MW22-01

APPENDIX IX SEMIVOLATILES (CONT.)

<u>SEMIVOLATILES</u>	DET.	RESULTS	<u>SEMIVOLATILES</u>	DET.	RESULTS
	LIMIT	(ug/L)		LIMIT	(ug/L)
PARATHION	40	ND	N-NITROSODIMETHYLAMINE	20	ND
ETHYL METHANESULFONATE	20	ND	2,3,4,6-TETRACHLOROPHENOL	20	ND
P-PHENYLENEDIAMINE	20	ND	CHLOROBENZILATE	20	ND
N-NITROSODIETHYLAMINE	20	ND	THIONAZIN	40	ND
N-NITROSOMETHYLETHYLAMINE	20	ND	DISULFOTON	20	ND
N-NITROSODIBUTYLAMINE	20	ND	ISODRIN	200	ND
N-NITROSOPIPERIDINE	20	ND	N-NITROSOMORPHOLINE	20	ND
5-NITRO-O-TOLUIDINE	20	ND	PENTACHLOROBENZENE	20	ND
METHYL YELLOW	20	ND	4-AMINOBIIPHENYL	20	ND
METHYL PARATHION	20	ND	HEXACHLOROPROPENE	20	ND
SAFROLE	40	ND	2,6-DICHLOROPHENOL	20	ND
ISOSAFROLE	40	ND	SULFOTEPP	20	ND
NICOLINE	20	ND	METHYL METHANESULFONATE	20	ND
PHENACETIN	20	ND	1,4-NAPHTHAQUINONE	20	ND
O-TOLUIDINE	20	ND	N-NITROSOPYROLLIDINE	20	ND
3,3-DIMETHYLBENZIDINE	100	ND	ACETOPHENONE	20	ND
1,3-DINITROBENZENE	20	ND	DIMETHOATE	20	ND
A,A-DIMETHYLPHENETHYLAMINE	20	ND	3-METHYL CHOLANTHRENE	20	ND
O,O,O-TRIETHYLPHOSPHOROTHIOATE	20	ND	2-ACETYLAMINOFLUORENE	20	ND
METHAPYRILENE HYDROCHLORIDE	40	ND	ANILINE	100	ND
DIALATE	40	ND	1,2-DIBROMO-3-CHLOROPROPANE	20	ND
1,3,5-TRINITROBENZENE	200	ND	HEXACHLOROPHENE	20	ND
FAMPHUR	20	ND	KEPONE	100	ND
4-NITROQUINOLINE-N-OXIDE	200	ND	1-NAPHTHYLAMINE	20	ND
1,2,4,5-TETRACHLOROBENZENE	20	ND	2-NAPHTHYLAMINE	20	ND
PENTACHLORONITROBENZENE	20	ND	PRONAMIDE	100	ND
PHORATE	20	ND	ARAMITE	200	ND
7,12-DIMETHYL BENZ(A)ANTHRACENE	20	ND			

(1) = DETECTED AS DIPHENYLAMINE

(2) = COELUTE ON GC COLUMN

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

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B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

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SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012 918 251-2858

Client Name: **WW ENGINEERING & SCIENCE, INC.**
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: **FCR-GW-MW22-01 DISS.** Project ID: **AMPHENOL FACILITY**

SWLO ID: **8929.05** Report: **8929.05**

Collected: **03/02/1992** Report Date: **03-31-1992** Page: **1**
Received: **03/04/1992** Last Modified: Matrix: **Water**

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
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*** INORGANICS ***

AMENABLE CN		10	ug/l	ND	03/10/92	SM 412F
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*** METALS ***

APPENDIX IX

METALS-APP9-ICP

ANTIMONY		60.0	ug/l	ND	03/13/92	ICP
BARIUM		20.0	ug/l	82.4	03/13/92	
BERYLLIUM		5.0	ug/l	ND	03/13/92	
CADMIUM		5.0	ug/l	ND	03/13/92	
CHROMIUM		5.0	ug/l	ND	03/13/92	
COBALT		10.0	ug/l	ND	03/13/92	
COPPER		10.0	ug/l	ND	03/13/92	
NICKEL		10.0	ug/l	ND	03/13/92	
SILVER		10.0	ug/l	ND	03/13/92	
TIN		50.0	ug/l	ND	03/13/92	
VANADIUM		10.0	ug/l	ND	03/13/92	
ZINC		10.0	ug/l	ND	03/13/92	
ARSENIC		10.0	ug/l	ND	03/10/92	SW 7060
LEAD		3.0	ug/l	ND	03/12/92	SW 7421
MERCURY		0.20	ug/l	ND	03/18/92	SW 7470
SELENIUM		5.0	ug/l	ND	03/10/92	SW 7740
THALLIUM		10.0	ug/l	ND	03/10/92	SW 7841

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

□ = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

U = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

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SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

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Client Name: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408

Client ID: FCR-GW-MW22-01d

Project ID: AMPHENOL FACILITY

SWLO ID: 8929.06

Report: 8929.06

Collected: 03/02/1992

Report Date: 03-30-1992

Page: 1

Received: 03/04/1992

Last Modified:

Matrix: Water

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
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*** INORGANICS ***

TOTAL SULFIDE		1.0	mg/l	ND	03/06/92	SM 427D
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ND = NOT DETECTED ABOVE QUANTITATION LIMIT

I = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

J = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE

NA = NOT APPLICABLE

Methodology: SM = STANDARD METHODS, 16th EDITION, 1985

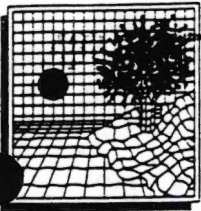
EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

D = SURROGATES DILUTED OUT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2858

CLIENT: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408
ATTN: JIM KEITH

REPORT: 8929.06H9

DATE: 03-30-92

SAMPLE MATRIX: WATER
SWLO # 8929.06
DATE SUBMITTED: 03-04-92
DATE EXTRACTED: 03-06-92
DATE ANALYZED : 03-25-92
METHOD REFERENCE: SW846-8150, EPA METHODOLOGY
PROJECT: AMPHENOL FACILITY
SAMPLE ID: FCR-GW-MW22-01d

APPENDIX IX HERBICIDES

RESULTS REPORTED IN ug/L OR Parts Per Billion (PPB)

<u>HERBICIDES</u>	<u>DETECTION LIMIT</u>	<u>RESULTS</u>
2,4-D	1.8	ND
2,4,5-T	0.3	ND
2,4,5-TP (SILVEX)	0.3	ND
DINOSEB	0.3	ND

QA/QC SURROGATE RECOVERY

DCAA

83%

ND = NOT DETECTED ABOVE QUANTITATION LIMIT
J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION
B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
D = SURROGATE OR MATRIX SPIKE DILUTED OUT
SAMPLE RUN AT SECONDARY DILUTION
I = NOT QUANTITATIBLE DUE TO MATRIX INTERFERENCE



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

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CLIENT: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408
ATTN: JIM KEITH

REPORT: 8929.06P

DATE: 04-02-92

SAMPLE MATRIX: WATER
SWLO #: 8929.06
DATE SUBMITTED: 03-04-92
DATE EXTRACTED: 03-06-92
DATE ANALYZED: 03-31-92
METHOD REFERENCE: SW846-8080, EPA METHODOLOGY
SAMPLE ID: FCR-GW-MW22-01d

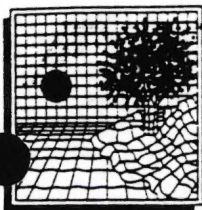
RESULTS REPORTED IN ug/L OR Parts Per Billion (PPB)

<u>PCB'S</u>	<u>DETECTION LIMIT</u>	<u>RESULTS</u>
AROCHLOR-1016	1.0	ND
AROCHLOR-1221	1.0	ND
AROCHLOR-1232	1.0	ND
AROCHLOR-1242	1.0	ND
AROCHLOR-1248	1.0	ND
AROCHLOR-1254	2.0	ND
AROCHLOR-1260	2.0	ND

QA/QC SURROGATE RECOVERIES

DIBUTYLCHLORENDATE (24-154) 38%

ND = NOT DETECTED ABOVE QUANTITATION LIMIT
D = SURROGATE OR MATRIX SPIKE DILUTED OUT
SAMPLE RUN AT SECONDARY DILUTION
J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION
B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2858

CLIENT: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408
ATTN: JIM KEITH

REPORT: 8929.06P9

DATE: 03-30-92

SAMPLE MATRIX: WATER
SWLO # 8929.06
DATE SUBMITTED: 03-04-92
DATE EXTRACTED: 03-10-92
DATE ANALYZED: 03-11-92
PROJECT: AMPHENOL FACILITY
SAMPLE ID: FCR-GW-MW22-01d

RESULTS REPORTED IN (ug/L) or Parts Per Billion (PPB)

ORGANOPHOSPHOROUS

PESTICIDES

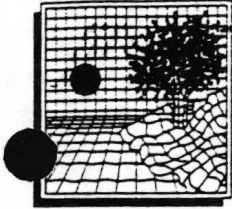
	<u>DETECTION LIMIT</u>	<u>RESULTS</u>
AZINPHOS METHYL (GUTHION)	1.50	ND
BOLSTAR	0.15	ND
CHLORPYRIFOS (DURSBAN)	0.30	ND
COUMAPHOS (CO-RAL)	1.50	ND
DEMETON-S (MERCAPTOS)	0.25	ND
DIAZINON	0.60	ND
DICHLORVOS (DDVP)	0.10	ND
DISULFOTON (DI-SYSTON)	0.20	ND
ETHOPROP (MOCAP)	0.25	ND
FENSULFOTHION (DASANIT)	1.50	ND
FENTHION (BAYCID)	0.10	ND
MERPHOS	0.25	ND
MEVINPHOS (PHOSDRIN)	0.30	ND
NALED	0.10	ND
METHYL PARATHION	0.03	ND
MALATHION	0.5(1)	ND
PHORATE	0.15	ND
RONNEL (FENCHLORPHOS)	0.30	ND
STIROPHOS (TETRACHLORVINPHOS)	5.00	ND

QA/QC SURROGATE RECOVERIES

ETION

85%

- 1) NO DETECTION LIMIT ESTABLISHED, VALUE GIVEN IS AT THE QUANTITATION LIMIT
- ND NOT DETECTED ABOVE QUANTITATION LIMIT
J ESTIMATED VALUE (BELOW QUANTITATION LIMIT)
B COMPOUND FOUND IN BLANK
* SURROGATE RECOVERY OUTSIDE OF QC LIMITS



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Alhany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2858

CLIENT: **WW ENGINEERING & SCIENCE, INC.**

REPORT: **8929.06B9**

SAMPLE MATRIX: **WATER**

DATE REPORTED: **04-03-92**

SWLO # **8929.06**

DATE SUBMITTED: **03-04-92**

METHOD REF.: **SW846-8270, EPA METHODOLOGY**

DATE EXTRACTED: **03-06-92**

PROJECT: **AMPHENOL FACILITY**

DATE ANALYZED: **03-25-92**

SAMPLE ID: **FCR-GW-MW22-01d**

APPENDIX IX SEMIVOLATILES

<u>SEMIVOLATILES</u>	<u>DET.</u>	<u>RESULTS</u>	<u>SEMIVOLATILES</u>	<u>DET.</u>	<u>RESULTS</u>
	<u>LIMIT</u>	<u>(ug/L)</u>		<u>LIMIT</u>	<u>(ug/L)</u>
PHENOL	20	ND	ACENAPHTHENE	20	ND
BIS(2-CHLOROETHYL) ETHER	20	ND	2,4-DINITROPHENOL	100	ND
2-CHLOROPHENOL	20	ND	4-NITROPHENOL	100	ND
1,3-DICHLOROBENZENE	20	ND	DIBENZOFURAN	20	ND
1,4-DICHLOROBENZENE	20	ND	2,4-DINITROTOLUENE	20	ND
BENZYL ALCOHOL	20	ND	2,6-DINITROTOLUENE	20	ND
1,2-DICHLOROBENZENE	20	ND	DIETHYLPHTHALATE	20	ND
2-METHYLPHENOL	20	ND	4-CHLOROPHENYL-PHENYLETHER	20	ND
BIS(2-CHLOROISOPROPYL) ETHER	20	ND	FLUORENE	20	ND
4-/3-METHYLPHENOL (2)	20	ND	4-NITROANILINE	100	ND
N-NITROSO-DI-n-PROPYLAMINE	20	ND	4,6-DINITRO 2-METHYLPHENOL	100	ND
HEXACHLOROETHANE	20	ND	N-NITROSODIPHENYLAMINE (1)	20	ND
NITROBENZENE	20	ND	4-BROMOPHENYL-PHENYLETHER	20	ND
PHORONE	20	ND	HEXACHLOROENZENE	20	ND
2-NITROPHENOL	20	ND	PENTACHLOROPHENOL	20	ND
2,4-DIMETHYLPHENOL	20	ND	PHENANTHRENE	20	ND
BENZOIC ACID	100	ND	ANTHRACENE	20	ND
BIS(2-CHLOROETHOXY) METHANE	20	ND	DI-N-BUTYLPHTHALATE	20	ND
2,4-DICHLOROPHENOL	20	ND	FLUORANTHENE	20	ND
1,2,4-TRICHLOROBENZENE	20	ND	PYRENE	20	ND
NAPHTHALENE	20	ND	BUTYLBENZYLPHTHALATE	20	ND
4-CHLOROANILINE	20	ND	3,3-DICHLOROBENZIDINE	40	ND
HEXACHLOROBTADIENE	20	ND	BENZO(A)ANTHRACENE	20	ND
4-CHLORO-3-METHYLPHENOL	20	ND	BIS(2-ETHYLHEXYL) PHTHALATE	20	ND
2-METHYLNAPHTHALENE	20	ND	CHRYSENE	20	ND
HEXACHLOROCYCLOPENTADIENE	20	ND	DI-N-OCTYL PHTHALATE	20	ND
2,4,6-TRICHLOROPHENOL	20	ND	BENZO(B)FLUORANTHENE	20	ND
2,4,5-TRICHLOROPHENOL	100	ND	BENZO(K)FLUORANTHENE	20	ND
2-CHLORONAPHTHALENE	20	ND	BENZO(A)PYRENE	20	ND
2-NITROANILINE	100	ND	INDENO(1,2,3-CD)PYRENE	20	ND
DIMETHYLPHTHALATE	20	ND	DIBENZ(A,H)ANTHRACENE	20	ND
ACENAPHTHYLENE	20	ND	BENZO(G,H,I)PERYLENE	20	ND
3-NITROANILINE	100	ND	Continued. . .		

QA/QC SURROGATE RECOVERIES

NITROBENZENE-d5 (35-114) 78% 2-FLUOROBIPHENYL(43-116) 68% TERPHENYL-d14 (33-141) 115%
 PHENOL-d5 (20-94) 73% 2-FLUOROPHENOL (21-100) 75% 2,4,6-TRIBROMOPHENOL(20-123) 42%

(1) = DETECTED AS DIPHENYLAMINE

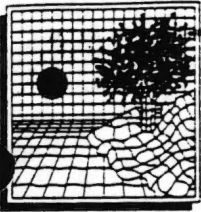
● = COELUTE ON GC COLUMN

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2858

CLIENT: WW ENGINEERING & SCIENCE, INC.

REPORT: 8929.06B9

SAMPLE MATRIX: WATER

DATE REPORTED: 04-03-92

SWLO # 8929.06

DATE SUBMITTED: 03-04-92

METHOD REF.: SW846-8270, EPA METHODOLOGY

DATE EXTRACTED: 03-06-92

PROJECT: AMPHENOL FACILITY

DATE ANALYZED: 03-25-92

SAMPLE ID: FCR-GW-MW22-01d

APPENDIX IX SEMIVOLATILES (CONT.)

<u>SEMIVOLATILES</u>	<u>DET.</u>	<u>RESULTS</u>	<u>SEMIVOLATILES</u>	<u>DET.</u>	<u>RESULTS</u>
	<u>LIMIT</u>	<u>(ug/L)</u>		<u>LIMIT</u>	<u>(ug/L)</u>
PARATHION	40	ND	N-NITROSODIMETHYLAMINE	20	ND
ETHYL METHANESULFONATE	20	ND	2,3,4,6-TETRACHLOROPHENOL	20	ND
P-PHENYLENEDIAMINE	20	ND	CHLOROBENZILATE	20	ND
N-NITROSODIETHYLAMINE	20	ND	THIONAZIN	40	ND
N-NITROSOMETHYLETHYLAMINE	20	ND	DISULFOTON	20	ND
N-NITROSODIBUTYLAMINE	20	ND	ISODRIN	200	ND
N-NITROSOPIPERIDINE	20	ND	N-NITROSOMORPHOLINE	20	ND
5-NITRO-O-TOLUIDINE	20	ND	PENTACHLOROBENZENE	20	ND
METHYL YELLOW	20	ND	4-AMINOBIIPHENYL	20	ND
METHYL PARATHION	20	ND	HEXACHLOROPROPENE	20	ND
SAFROLE	40	ND	2,6-DICHLOROPHENOL	20	ND
ISOSAFROLE	40	ND	SULFOTEPP	20	ND
ICOLINE	20	ND	METHYL METHANESULFONATE	20	ND
PHENACETIN	20	ND	1,4-NAPHTHAQUINONE	20	ND
O-TOLUIDINE	20	ND	N-NITROSOPYRROLLIDINE	20	ND
3,3-DIMETHYLBENZIDINE	100	ND	ACETOPHENONE	20	ND
1,3-DINITROBENZENE	20	ND	DIMETHOATE	20	ND
A,A-DIMETHYLPHENETHYLAMINE	20	ND	3-METHYL CHOLANTHRENE	20	ND
O,O,O-TRIETHYLPHOSPHOROTHIOATE	20	ND	2-ACETYLAMINOFLUORENE	20	ND
METHAPYRILENE HYDROCHLORIDE	40	ND	ANILINE	100	ND
DIALLATE	40	ND	1,2-DIBROMO-3-CHLOROPROPANE	20	ND
1,3,5-TRINITROBENZENE	200	ND	HEXACHLOROPHENE	20	ND
FAMPHUR	20	ND	KEPONE	100	ND
4-NITROQUINOLINE-N-OXIDE	200	ND	1-NAPHTHYLAMINE	20	ND
1,2,4,5-TETRACHLOROBENZENE	20	ND	2-NAPHTHYLAMINE	20	ND
PENTACHLORONITROBENZENE	20	ND	PRONAMIDE	100	ND
PHORATE	20	ND	ARAMITE	200	ND
7,12-DIMETHYL BENZ(A)ANTHRACENE	20	ND			

(1) = DETECTED AS DIPHENYLAMINE

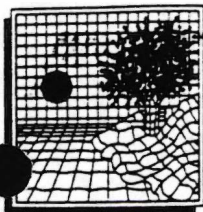
(2) = COELUTE ON GC COLUMN

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS



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CLIENT: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408
ATTN: JIM KEITH

REPORT: 8929.07H9

DATE: 03-30-92

SAMPLE MATRIX: WATER
SWLO # 8929.07
DATE SUBMITTED: 03-04-92
DATE EXTRACTED: 03-06-92
DATE ANALYZED : 03-25-92
METHOD REFERENCE: SW846-8150, EPA METHODOLOGY
PROJECT: AMPHENOL FACILITY
SAMPLE ID: FCR-GW-MW22-01m (MS)

APPENDIX IX HERBICIDES

RESULTS REPORTED IN ug/L OR Parts Per Billion (PPB)

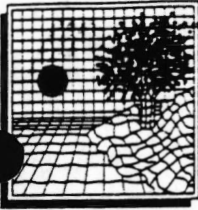
<u>HERBICIDES</u>	<u>DETECTION LIMIT</u>	<u>RESULTS</u>
2,4-D	1.8	ND
2,4,5-T	0.3	ND
2,4,5-TP (SILVEX)	0.3	ND
DINOSEB	0.3	ND

QA/QC SURROGATE RECOVERY

DCAA

85%

ND = NOT DETECTED ABOVE QUANTITATION LIMIT
J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION
B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
D = SURROGATE OR MATRIX SPIKE DILUTED OUT
SAMPLE RUN AT SECONDARY DILUTION
I = NOT QUANTITATIBLE DUE TO MATRIX INTERFERENCE



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CLIENT: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408
ATTN: JIM KEITH

REPORT: 8929.07PC

DATE: 04-03-92

SAMPLE MATRIX: WATER
SWLO #: 8929.07
DATE SUBMITTED: 03-04-92
DATE EXTRACTED: 03-23-92
DATE ANALYZED: 03-31-92
METHOD REFERENCE: SW846-8080, EPA METHODOLOGY
SAMPLE ID: FCR-GW-MW22-01m (MS)

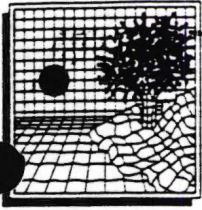
RESULTS REPORTED IN ug/L OR Parts Per Billion (PPB)

<u>PCB'S</u>	<u>DETECTION LIMIT</u>	<u>RESULTS</u>
AROCHLOR-1016	1.0	ND
AROCHLOR-1221	1.0	ND
AROCHLOR-1232	1.0	ND
AROCHLOR-1242	1.0	ND
AROCHLOR-1248	1.0	ND
AROCHLOR-1254	2.0	ND
AROCHLOR-1260	2.0	ND

QA/QC SURROGATE RECOVERIES

DIBUTYLCHLORENDATE (24-154) 67%

ND = NOT DETECTED ABOVE QUANTITATION LIMIT
D = SURROGATE OR MATRIX SPIKE DILUTED OUT
SAMPLE RUN AT SECONDARY DILUTION
J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION
B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS



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REPORT: 8929.07P9

DATE: 03-30-92

SAMPLE MATRIX: WATER
SWLO # 8929.07
DATE SUBMITTED: 03-04-92
DATE EXTRACTED: 03-10-92
DATE ANALYZED: 03-11-92
PROJECT: AMPHENOL FACILITY
SAMPLE ID: FCR-GW-MW22-01m (MS)

RESULTS REPORTED IN (ug/L) or Parts Per Billion (PPB)

ORGANOPHOSPHOROUS PESTICIDES

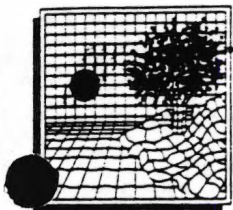
	<u>DETECTION LIMIT</u>	<u>RESULTS</u>
ZINPHOS METHYL (GUTHION)	1.50	ND
BOLSTAR	0.15	ND
CHLORPYRIFOS (DURSBAN)	0.30	ND
COUMAPHOS (CO-RAL)	1.50	ND
DEMETON-S (MERCAPTOSPHOS)	0.25	ND
DIAZINON	0.60	ND
DICHLORVOS (DDVP)	0.10	ND
DISULFOTON (DI-SYSTON)	0.20	ND
ETHOPROP (MOCAP)	0.25	ND
FENSULFOTHION (DASANIT)	1.50	ND
FENTHION (BAYCID)	0.10	ND
MERPHOS	0.25	ND
MEVINPHOS (PHOSDRIN)	0.30	ND
NALED	0.10	ND
METHYL PARATHION	0.03	ND
MALATHION	0.5(1)	ND
PHORATE	0.15	ND
RONNEL (FENCHLORPHOS)	0.30	ND
STIROPHOS (TETRACHLORVINPHOS)	5.00	ND

QA/QC SURROGATE RECOVERIES

ETION

90%

- 1) NO DETECTION LIMIT ESTABLISHED, VALUE GIVEN IS AT THE QUANTITATION LIMIT
- ND NOT DETECTED ABOVE QUANTITATION LIMIT
- J ESTIMATED VALUE (BELOW QUANTITATION LIMIT)
- B COMPOUND FOUND IN BLANK
- * SURROGATE RECOVERY OUTSIDE OF QC LIMITS



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2858

CLIENT: WW ENGINEERING & SCIENCE, INC.

REPORT: 8929.07B9

SAMPLE MATRIX: WATER

DATE REPORTED: 04-03-92

SWLO # 8929.07

DATE SUBMITTED: 03-04-92

METHOD REF.: SW846-8270, EPA METHODOLOGY

DATE EXTRACTED: 03-06-92

PROJECT: AMPHENOL FACILITY

DATE ANALYZED: 03-25-92

SAMPLE ID: FCR-GW-MW22-01m (MS)

APPENDIX IX SEMIVOLATILES

<u>SEMIVOLATILES</u>	<u>DET.</u>	<u>RESULTS</u>	<u>SEMIVOLATILES</u>	<u>DET.</u>	<u>RESULTS</u>
	<u>LIMIT</u>	<u>(ug/L)</u>		<u>LIMIT</u>	<u>(ug/L)</u>
PHENOL	20	ND	ACENAPHTHENE	20	ND
BIS(2-CHLOROETHYL) ETHER	20	ND	2,4-DINITROPHENOL	100	ND
2-CHLOROPHENOL	20	ND	4-NITROPHENOL	100	ND
1,3-DICHLOROBENZENE	20	ND	DIBENZOFURAN	20	ND
1,4-DICHLOROBENZENE	20	ND	2,4-DINITROTOLUENE	20	ND
BENZYL ALCOHOL	20	ND	2,6-DINITROTOLUENE	20	ND
1,2-DICHLOROBENZENE	20	ND	DIETHYLPHTHALATE	20	ND
2-METHYLPHENOL	20	ND	4-CHLOROPHENYL-PHENYLETHER	20	ND
BIS(2-CHLOROISOPROPYL) ETHER	20	ND	FLUORENE	20	ND
4-/3-METHYLPHENOL (2)	20	ND	4-NITROANILINE	100	ND
N-NITROSO-DI-n-PROPYLAMINE	20	ND	4,6-DINITRO 2-METHYLPHENOL	100	ND
HEXACHLOROETHANE	20	ND	N-NITROSODIPHENYLAMINE (1)	20	ND
NITROBENZENE	20	ND	4-BROMOPHENYL-PHENYLETHER	20	ND
CHLORONE	20	ND	HEXACHLOROENZENE	20	ND
2-NITROPHENOL	20	ND	PENTACHLOROPHENOL	20	ND
2,4-DIMETHYLPHENOL	20	ND	PHENANTHRENE	20	ND
BENZOIC ACID	100	ND	ANTHRACENE	20	ND
BIS(2-CHLOROETHOXY) METHANE	20	ND	DI-N-BUTYLPHTHALATE	20	ND
2,4-DICHLOROPHENOL	20	ND	FLUORANTHENE	20	ND
1,2,4-TRICHLOROBENZENE	20	ND	PYRENE	20	ND
NAPHTHALENE	20	ND	BUTYLBENZYLPHTHALATE	20	ND
4-CHLOROANILINE	20	ND	3,3-DICHLOROENZIDINE	40	ND
HEXACHLOROBUTADIENE	20	ND	BENZO(A)ANTHRACENE	20	ND
4-CHLORO-3-METHYLPHENOL	20	ND	BIS(2-ETHYLHEXYL) PHTHALATE	20	ND
2-METHYLNAPHTHALENE	20	ND	CHRYSENE	20	ND
HEXACHLOROCYCLOPENTADIENE	20	ND	DI-N-OCTYL PHTHALATE	20	3 J
2,4,6-TRICHLOROPHENOL	20	ND	BENZO(B)FLUORANTHENE	20	ND
2,4,5-TRICHLOROPHENOL	100	ND	BENZO(K)FLUORANTHENE	20	ND
2-CHLORONAPHTHALENE	20	ND	BENZO(A)PYRENE	20	ND
2-NITROANILINE	100	ND	INDENO(1,2,3-CD)PYRENE	20	ND
DIMETHYLPHTHALATE	20	ND	DIBENZ(A,H)ANTHRACENE	20	ND
ACENAPHTHYLENE	20	ND	BENZO(G,H,I)PERYLENE	20	ND
3-NITROANILINE	100	ND	Continued. . .		

QA/QC SURROGATE RECOVERIES

NITROBENZENE-d5(35-114)	86%	2-FLUOROBIPHENYL(43-116)	52%	TERPHENYL-d14	(33-141)	97%
PHENOL-d5	(20-94) 84%	2-FLUOROPHENOL	(21-100) 84%	2,4,6-TRIBROMOPHENOL(20-123)		55%

(1) = DETECTED AS DIPHENYLAMINE

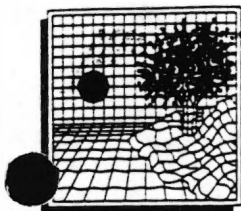
(2) = COELUTE ON GC COLUMN

N = NOT DETECTED ABOVE QUANTITATION LIMIT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2858

CLIENT: WW ENGINEERING & SCIENCE, INC.

REPORT: 8929.07B9

SAMPLE MATRIX: WATER

DATE REPORTED: 04-03-92

SWLO # 8929.07

DATE SUBMITTED: 03-04-92

METHOD REF.: SW846-8270, EPA METHODOLOGY

DATE EXTRACTED: 03-06-92

PROJECT: AMPHENOL FACILITY

DATE ANALYZED: 03-25-92

SAMPLE ID: FCR-GW-MW22-01m (MS)

APPENDIX IX SEMIVOLATILES (CONT.)

<u>SEMIVOLATILES</u>	<u>DET.</u>	<u>RESULTS</u>	<u>SEMIVOLATILES</u>	<u>DET.</u>	<u>RESULTS</u>
	<u>LIMIT</u>	<u>(ug/L)</u>		<u>LIMIT</u>	<u>(ug/L)</u>
PARATHION	40	ND	N-NITROSODIMETHYLAMINE	20	ND
ETHYL METHANESULFONATE	20	ND	2,3,4,6-TETRACHLOROPHENOL	20	ND
P-PHENYLENEDIAMINE	20	ND	CHLOROBENZILATE	20	ND
N-NITROSODIETHYLAMINE	20	ND	THIONAZIN	40	ND
N-NITROSOMETHYLETHYLAMINE	20	ND	DISULFOTON	20	ND
N-NITROSODIBUTYLAMINE	20	ND	ISODRIN	200	ND
N-NITROPIPERIDINE	20	ND	N-NITROSOMORPHOLINE	20	ND
5-NITRO-O-TOLUIDINE	20	ND	PENTACHLOROBENZENE	20	ND
METHYL YELLOW	20	ND	4-AMINOBIIPHENYL	20	ND
METHYL PARATHION	20	ND	HEXACHLOROPROPENE	20	ND
SAFROLE	40	ND	2,6-DICHLOROPHENOL	20	ND
ISOSAFROLE	40	ND	SULFOTEPP	20	ND
NICOLINE	20	ND	METHYL METHANESULFONATE	20	ND
PHENACETIN	20	ND	1,4-NAPHTHAQUINONE	20	ND
O-TOLUIDINE	20	ND	N-NITROSOPYROLLIDINE	20	ND
3,3-DIMETHYLBENZIDINE	100	ND	ACETOPHENONE	20	ND
1,3-DINITROBENZENE	20	ND	DIMETHOATE	20	ND
A,A-DIMETHYLPHENETHYLAMINE	20	ND	3-METHYL CHOLANTHRENE	20	ND
O,O,O-TRIETHYLPHOSPHOROTHIOATE	20	ND	2-ACETYLAMINOFLUORENE	20	ND
METHAPYRILENE HYDROCHLORIDE	40	ND	ANILINE	100	ND
DIALLATE	40	ND	1,2-DIBROMO-3-CHLOROPROPANE	20	ND
1,3,5-TRINITROBENZENE	200	ND	HEXACHLOROPHENE	20	ND
FAMPHUR	20	ND	KEPONE	100	ND
4-NITROQUINOLINE-N-OXIDE	200	ND	1-NAPHTHYLAMINE	20	ND
1,2,4,5-TETRACHLOROBENZENE	20	ND	2-NAPHTHYLAMINE	20	ND
PENTACHLORONITROBENZENE	20	ND	PRONAMIDE	100	ND
PHORATE	20	ND	ARAMITE	200	ND
7,12-DIMETHYL BENZ(A)ANTHRACENE	20	ND			

(1) = DETECTED AS DIPHENYLAMINE

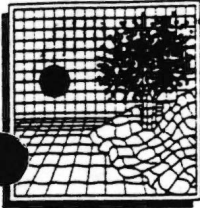
(2) = COELUTE ON GC COLUMN

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2458

CLIENT: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408
ATTN: JIM KEITH

REPORT: 8929.08H9

DATE: 03-30-92

SAMPLE MATRIX: WATER
SWLO # 8929.08
DATE SUBMITTED: 03-04-92
DATE EXTRACTED: 03-06-92
DATE ANALYZED : 03-25-92
METHOD REFERENCE: SW846-8150, EPA METHODOLOGY
PROJECT: AMPHENOL FACILITY
SAMPLE ID: FCR-GW-MW22-01md (MSD)

APPENDIX IX HERBICIDES

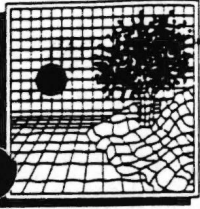
RESULTS REPORTED IN ug/L OR Parts Per Billion (PPB)

<u>HERBICIDES</u>	<u>DETECTION LIMIT</u>	<u>RESULTS</u>
2,4-D	1.8	ND
2,4,5-T	0.3	ND
2,4,5-TP (SILVEX)	0.3	ND
DINOSEB	0.3	ND

QA/QC SURROGATE RECOVERY

DCAA 83%

ND = NOT DETECTED ABOVE QUANTITATION LIMIT
J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION
B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
D = SURROGATE OR MATRIX SPIKE DILUTED OUT
SAMPLE RUN AT SECONDARY DILUTION
I = NOT QUANTITATIBLE DUE TO MATRIX INTERFERENCE



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Alhany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2858

CLIENT: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408
ATTN: JIM KEITH

REPORT: 8929.08PC

DATE: 04-03-92

SAMPLE MATRIX: WATER
SWLO #: 8929.08
DATE SUBMITTED: 03-04-92
DATE EXTRACTED: 03-23-92
DATE ANALYZED : 03-31-92
METHOD REFERENCE: SW846-8080, EPA METHODOLOGY
SAMPLE ID: FCR-GW-MW22-01md (MSD)

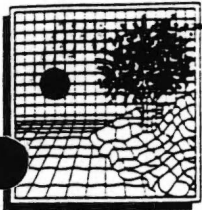
RESULTS REPORTED IN ug/L OR Parts Per Billion (PPB)

<u>PCB'S</u>	<u>DETECTION LIMIT</u>	<u>RESULTS</u>
AROCHLOR-1016	1.0	ND
AROCHLOR-1221	1.0	ND
AROCHLOR-1232	1.0	ND
AROCHLOR-1242	1.0	ND
AROCHLOR-1248	1.0	ND
AROCHLOR-1254	2.0	ND
AROCHLOR-1260	2.0	ND

QA/QC SURROGATE RECOVERIES

DIBUTYLCHLORENDATE (24-154) 63%

ND = NOT DETECTED ABOVE QUANTITATION LIMIT
D = SURROGATE OR MATRIX SPIKE DILUTED OUT
SAMPLE RUN AT SECONDARY DILUTION
J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION
B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2858

CLIENT: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408
ATTN: JIM KEITH

REPORT: 8929.08P9

DATE: 03-30-92

SAMPLE MATRIX: WATER
SWLO # 8929.08
DATE SUBMITTED: 03-04-92
DATE EXTRACTED: 03-10-92
DATE ANALYZED: 03-11-92
PROJECT: AMPHENOL FACILITY
SAMPLE ID: FCR-GW-MW22-01md (MSD)

RESULTS REPORTED IN (ug/L) or Parts Per Billion (PPB)

ORGANOPHOSPHOROUS

PESTICIDES

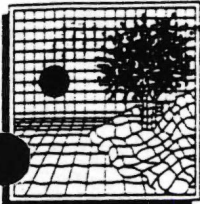
	<u>DETECTION LIMIT</u>	<u>RESULTS</u>
DZINPHOS METHYL (GUTHION)	1.50	ND
BOLSTAR	0.15	ND
CHLORPYRIFOS (DURSBAN)	0.30	ND
COUMAPHOS (CO-RAL)	1.50	ND
DEMETON-S (MERCAPTOS)	0.25	ND
DIAZINON	0.60	ND
DICHLORVOS (DDVP)	0.10	ND
DISULFOTON (DI-SYSTON)	0.20	ND
ETHOPROP (MOCAP)	0.25	ND
FENSULFOTHION (DASANIT)	1.50	ND
FENTHION (BAYCID)	0.10	ND
MERPHOS	0.25	ND
MEVINPHOS (PHOSDRIN)	0.30	ND
NALED	0.10	ND
METHYL PARATHION	0.03	ND
MALATHION	0.5(1)	ND
PHORATE	0.15	ND
RONNEL (FENCHLORPHOS)	0.30	ND
STIROPHOS (TETRACHLORVINPHOS)	5.00	ND

QA/QC SURROGATE RECOVERIES

ETION

90%

- 1) NO DETECTION LIMIT ESTABLISHED, VALUE GIVEN IS AT THE QUANTITATION LIMIT
- ND NOT DETECTED ABOVE QUANTITATION LIMIT
- J ESTIMATED VALUE (BELOW QUANTITATION LIMIT)
- B COMPOUND FOUND IN BLANK
- * SURROGATE RECOVERY OUTSIDE OF QC LIMITS



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2858

CLIENT: WW ENGINEERING & SCIENCE, INC.

REPORT: 8929.08B9

SAMPLE MATRIX: WATER

DATE REPORTED: 04-03-92

SWLO # 8929.08

DATE SUBMITTED: 03-04-92

METHOD REF.: SW846-8270, EPA METHODOLOGY

DATE EXTRACTED: 03-06-92

PROJECT: AMPHENOL FACILITY

DATE ANALYZED: 03-25-92

SAMPLE ID: FCR-GW-MW22-01md (MSD)

APPENDIX IX SEMIVOLATILES

SEMIVOLATILES	DET.	RESULTS	SEMIVOLATILES	DET.	RESULTS
	LIMIT	(ug/L)		LIMIT	(ug/L)
PHENOL	20	ND	ACENAPHTHENE	20	ND
BIS(2-CHLOROETHYL)ETHER	20	ND	2,4-DINITROPHENOL	100	ND
2-CHLOROPHENOL	20	ND	4-NITROPHENOL	100	ND
1,3-DICHLOROBENZENE	20	ND	DIBENZOFURAN	20	ND
1,4-DICHLOROBENZENE	20	ND	2,4-DINITROTOLUENE	20	ND
BENZYL ALCOHOL	20	ND	2,6-DINITROTOLUENE	20	ND
1,2-DICHLOROBENZENE	20	14 J	DIETHYLPHTHALATE	20	ND
2-METHYLPHENOL	20	ND	4-CHLOROPHENYL-PHENYLETHER	20	ND
BIS(2-CHLOROISOPROPYL)ETHER	20	ND	FLUORENE	20	ND
4-/3-METHYLPHENOL (2)	20	ND	4-NITROANILINE	100	ND
N-NITROSO-DI-n-PROPYLAMINE	20	ND	4,6-DINITRO 2-METHYLPHENOL	100	ND
HEXACHLOROETHANE	20	ND	N-NITROSODIPHENYLAMINE (1)	20	ND
NITROBENZENE	20	ND	4-BROMOPHENYL-PHENYLETHER	20	ND
PHORONE	20	ND	HEXACHLOROENZENE	20	ND
2-NITROPHENOL	20	ND	PENTACHLOROPHENOL	20	ND
2,4-DIMETHYLPHENOL	20	ND	PHENANTHRENE	20	ND
BENZOIC ACID	100	8 J	ANTHRACENE	20	ND
BIS(2-CHLOROETHOXY)METHANE	20	ND	DI-N-BUTYLPHTHALATE	20	ND
2,4-DICHLOROPHENOL	20	ND	FLUORANTHENE	20	ND
1,2,4-TRICHLOROBENZENE	20	ND	PYRENE	20	ND
NAPHTHALENE	20	ND	BUTYLBENZYLPHTHALATE	20	ND
4-CHLOROANILINE	20	ND	3,3-DICHLOROENZIDINE	40	ND
HEXACHLOROBUTADIENE	20	ND	BENZO(A)ANTHRACENE	20	ND
4-CHLORO-3-METHYLPHENOL	20	ND	BIS(2-ETHYLHEXYL)PHTHALATE	20	ND
2-METHYLNAPHTHALENE	20	ND	CHRYSENE	20	ND
HEXACHLOROCYCLOPENTADIENE	20	ND	DI-N-OCTYL PHTHALATE	20	ND
2,4,6-TRICHLOROPHENOL	20	ND	BENZO(B)FLUORANTHENE	20	ND
2,4,5-TRICHLOROPHENOL	100	ND	BENZO(K)FLUORANTHENE	20	ND
2-CHLORONAPHTHALENE	20	ND	BENZO(A)PYRENE	20	ND
2-NITROANILINE	100	ND	INDENO(1,2,3-CD)PYRENE	20	ND
DIMETHYLPHTHALATE	20	ND	DIBENZ(A,H)ANTHRACENE	20	ND
ACENAPHTHYLENE	20	ND	BENZO(G,H,I)PERYLENE	20	ND
3-NITROANILINE	100	ND	Continued. . .		

QA/QC SURROGATE RECOVERIES

NITROBENZENE-d5 (35-114)	68%	2-FLUOROBIPHENYL(43-116)	52%	TERPHENYL-d14 (33-141)	96%
PHENOL-d5 (20-94)	58%	2-FLUOROPHENOL (21-100)	64%	2,4,6-TRIBROMOPHENOL(20-123)	47%

(1) = DETECTED AS DIPHENYLAMINE

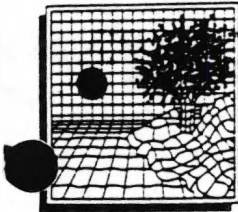
● = COELUTE ON GC COLUMN

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2858

CLIENT: WW ENGINEERING & SCIENCE, INC.

REPORT: 8929.08B9

SAMPLE MATRIX: WATER

DATE REPORTED: 04-03-92

SWLO # 8929.08

DATE SUBMITTED: 03-04-92

METHOD REF.: SW846-8270, EPA METHODOLOGY

DATE EXTRACTED: 03-06-92

PROJECT: AMPHENOL FACILITY

DATE ANALYZED: 03-25-92

SAMPLE ID: FCR-GW-MW22-01md (MSD)

APPENDIX IX SEMIVOLATILES (CONT.)

SEMIVOLATILES	DET.	RESULTS	SEMIVOLATILES	DET.	RESULTS
	LIMIT	(ug/L)		LIMIT	(ug/L)
PARATHION	40	ND	N-NITROSODIMETHYLAMINE	20	ND
ETHYL METHANESULFONATE	20	ND	2,3,4,6-TETRACHLOROPHENOL	20	ND
P-PHENYLENEDIAMINE	20	ND	CHLOROBENZILATE	20	ND
N-NITROSODIETHYLAMINE	20	ND	THIONAZIN	40	ND
N-NITROSOMETHYLETHYLAMINE	20	ND	DISULFOTON	20	ND
N-NITROSODIBUTYLAMINE	20	ND	ISODRIN	200	ND
N-NITROSOPIPERIDINE	20	ND	N-NITROSOMORPHOLINE	20	ND
5-NITRO-O-TOLUIDINE	20	ND	PENTACHLOROBENZENE	20	ND
METHYL YELLOW	20	ND	4-AMINOBIHENYL	20	ND
METHYL PARATHION	20	ND	HEXACHLOROPROPENE	20	ND
SAFROLE	40	ND	2,6-DICHLOROPHENOL	20	ND
7-O-SAFROLE	40	ND	SULFOTEPP	20	ND
NICOLINE	20	ND	METHYL METHANESULFONATE	20	ND
PHENACETIN	20	ND	1,4-NAPHTHAQUINONE	20	ND
O-TOLUIDINE	20	ND	N-NITROSOPYROLLIDINE	20	ND
3,3-DIMETHYLBENZIDINE	100	ND	ACETOPHENONE	20	ND
1,3-DINITROBENZENE	20	ND	DIMETHOATE	20	ND
A,A-DIMETHYLPHENETHYLAMINE	20	ND	3-METHYL CHOLANTHRENE	20	ND
O,O,O-TRIETHYLPHOSPHOROTHIOATE	20	ND	2-ACETYLAMINOFLUORENE	20	ND
METHAPYRILENE HYDROCHLORIDE	40	ND	ANILINE	100	ND
DIALLATE	40	ND	1,2-DIBROMO-3-CHLOROPROPANE	20	ND
1,3,5-TRINITROBENZENE	200	ND	HEXACHLOROPHENE	20	ND
FAMPHUR	20	ND	KEPONE	100	ND
4-NITROQUINOLINE-N-OXIDE	200	ND	1-NAPHTHYLAMINE	20	ND
1,2,4,5-TETRACHLOROBENZENE	20	ND	2-NAPHTHYLAMINE	20	ND
PENTACHLORONITROBENZENE	20	ND	PRONAMIDE	100	ND
PHORATE	20	ND	ARAMITE	200	ND
7,12-DIMETHYL BENZ(A)ANTHRACENE	20	ND			

(1) = DETECTED AS DIPHENYLAMINE

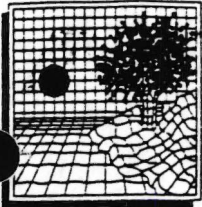
(2) = COELUTE ON GC COLUMN

ND = NOT DETECTED ABOVE QUANTITATION LIMIT

J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2858

CLIENT: WW ENGINEERING & SCIENCE, INC.
5010 STONE MILL ROAD
BLOOMINGTON, IN 47408
ATTN: JIM KEITH

REPORT: 8929.02P

DATE: 04-02-92

SAMPLE MATRIX: WATER
SWLO #: 8929.02
DATE SUBMITTED: 03-04-92
DATE EXTRACTED: 03-06-92
DATE ANALYZED : 03-31-92
METHOD REFERENCE: SW846-8080, EPA METHODOLOGY
SAMPLE ID: FCR-GW-MW12-01

RESULTS REPORTED IN ug/L OR Parts Per Billion (PPB)

<u>PCB'S</u>	<u>DETECTION LIMIT</u>	<u>RESULTS</u>
AROCHLOR-1016	1.0	ND
AROCHLOR-1221	1.0	ND
AROCHLOR-1232	1.0	ND
AROCHLOR-1242	1.0	ND
AROCHLOR-1248	1.0	ND
AROCHLOR-1254	2.0	ND
AROCHLOR-1260	2.0	ND

QA/QC SURROGATE RECOVERIES

DIBUTYLCHLORENDATE (24-154) 26%

ND = NOT DETECTED ABOVE QUANTITATION LIMIT
D = SURROGATE OR MATRIX SPIKE DILUTED OUT
SAMPLE RUN AT SECONDARY DILUTION
J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION
B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS

ADDENDUM FOR APPENDIX K

ADD TO END OF EXISTING APPENDIX K



HMM Associates, Inc.
A Summit Company

6908-401/HAZ/185260

June 8, 1994

Mr. James Keith
WW Engineering & Science, Inc.
5010 Stone Mill Road
Bloomington, IN 47408

RE: Franklin Curtis-RFI
Southwest Laboratory of Oklahoma
Organic Data Validation Report
VOCs: 7 aqueous samples
VOCs: 1 soil sample

Dear Mr. Keith:

Data validation was performed on the organic analytical data from 7 water samples and one soil sample collected by WW Engineering & Science, Inc. (WWES) at the Franklin Curtis site. The data were evaluated based on the following parameters according to the Laboratory Data Validation Functional Guidelines for Evaluating Organic Analyses, February 1988:

- data completeness
 - holding times
 - GC/MS tuning
calibration
laboratory, field, and trip blanks
surrogate spike recoveries
matrix spike/matrix spike duplicates
 - field duplicates
internal standard performance
 - sample quantitation
-
- All criteria was met for this parameter

Mr. James Keith

June 8, 1994

Page 2

Data Completeness

The data package was complete and legible.

Holding Times

All holding times were met for VOC analysis by the laboratory.

GC/MS Tuning

The GC/MS tuning results were reviewed and found to be acceptable.

Calibrations

The volatile calibration summaries were reviewed. All calibration check compound (CCC) and system performance check compound (SPCC) requirements were met. The only compound that did not meet the required criteria for percent relative standard deviation (% RSD) was chloroethane. However, none of the samples were affected.

The following compounds did not meet the required criteria for percent difference (% D): acetone, bromoethane, bromoform, 2-butanone, chloroethane, 2-chloroethyl vinyl ether, 1,2-dichloroethane, 2-hexanone, 1,1,2,2-tetrachloroethane, trichloroethene, and vinyl acetate.

Positive results for acetone and trichloroethene were estimated (J) in all samples.

Blanks

There was no contamination present in the laboratory blanks.

There were two field blanks and one trip blank collected at the site. The field blanks had detectable levels of methylene chloride as noted on the review sheet. The trip blank had detectable levels of methylene chloride and acetone. Action levels for methylene chloride and acetone are 220 and 80 ug/L, respectively. All positive results for these compounds less than the action level were reported not detected and qualified (U).

Surrogate Spike Recoveries

Surrogate spike recoveries were not met for sample SL1511004. As a result, all positive results were estimated (J) and all negative results were estimated (UJ).

Mr. James Keith

June 8, 1994

Page 3

Matrix Spike/Matrix Spike Duplicate

Matrix spike recoveries were not met for aqueous sample GW1604 and for soil sample SL1511004. As a result, trichloroethene was estimated (J) in sample GW1604. No action was taken on sample SL1511004.

Field Duplicates

All field duplicate results were reviewed and found to be acceptable.

Internal Standard Performance

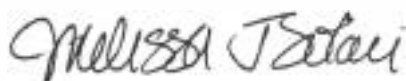
The criteria for internal standard performance was not met for bromochloromethane, 1,4-difluorobenzene, and chlorobenzene in sample SL1511004. All compounds quantitated using these standards were estimated (J) in sample SL1511004.

Sample Quantitation

The reported sample results were reviewed and found to be reported correctly by the laboratory.

Data tables have been provided that present the validated analytical results. If you have any questions, please call me at (508) 371-4376.

Sincerely,
HMM ASSOCIATES, INC.



Melissa J. Solari
Data Reviewer/Project Manager

EPA Sample No.	GWOEB04	GW04TB	GW1504	GW1604	GW1604D	GW1804	SLP0EB04
Lab Sample ID:	18526.05	18526.04	18526.06	18526.07	18526.08	18526.09	18526.01
Matrix:	Water	Water	Water	Water	Water	Water	Water
Level:	Low	Low	Low	Low	Low	Low	Low
Date Collected:	4/29/94	4/29/94	4/29/94	4/29/94	4/29/94	4/29/94	4/29/94
Date Analyzed:	5/5/94	5/6/94	5/6/94	5/6/94	5/6/94	5/6/94	5/5/94
Dilution Factor:	1	1	1	2.5	2.5	1	1
Units:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Compound							
Chloromethane	10 U	10 U	10 U	25 U	25 U	10 U	10 U
Bromomethane	10 U	10 U	10 U	25 U	25 U	10 U	10 U
Vinyl Chloride	10 U	10 U	10 U	25 U	25 U	10 U	10 U
Chloroethane	10 U	10 U	10 U	25 U	25 U	10 U	10 U
Methylene Chloride	8	7	6	22	32	12	5
Acetone	10 U	22	10 U	25 U	25 U	10 U	10 U
Carbon Disulfide	5 U	5 U	5 U	12 U	12 U	5 U	5 U
1,1-Dichloroethene	5 U	5 U	5 U	12 U	12 U	5 U	5 U
1,1-Dichloroethane	5 U	5 U	5 U	12 U	12 U	5 U	5 U
1,2-Dichloroethene (total)	5 U	5 U	5 U	12 U	12 U	5 U	5 U
Chloroform	5 U	5 U	5 U	12 U	12 U	5 U	5 U
1,2-Dichloroethane	5 U	5 U	5 U	12 U	12 U	5 U	5 U
2-Butanone	10 U	10 U	10 U	25 U	25 U	10 U	10 U
1,1,1-Trichloroethane	5 U	5 U	37	100	98	51	5 U
Carbon Tetrachloride	5 U	5 U	5 U	12 U	12 U	5 U	5 U
Ethyl Acetate	10 U	10 U	10 U	25 U	25 U	10 U	10 U
Bromodichloromethane	5 U	5 U	5 U	12 U	12 U	5 U	5 U
1,2-Dichloropropane	5 U	5 U	5 U	12 U	12 U	5 U	5 U
cis-1,3-Dichloropropene	5 U	5 U	5 U	12 U	12 U	5 U	5 U
Trichloroethene	5 U	5 U	75	400	380	170	5 U
Dibromochloromethane	5 U	5 U	5 U	12 U	12 U	5 U	5 U
1,1,2-Trichloroethane	5 U	5 U	5 U	12 U	12 U	5 U	5 U
Benzene	5 U	5 U	5 U	12 U	12 U	5 U	5 U
trans-1,3-Dichloropropene	5 U	5 U	5 U	12 U	12 U	5 U	5 U
Bromoform	5 U	5 U	5 U	12 U	12 U	5 U	5 U
4-Methyl-2-Pentanone	10 U	10 U	10 U	25 U	25 U	10 U	10 U
2-Hexanone	10 U	10 U	10 U	25 U	25 U	10 U	10 U
Tetrachloroethene	5 U	5 U	79	12 U	12 U	5 U	5 U
1,1,2,2-Tetrachloroethane	5 U	5 U	5 U	12 U	12 U	5 U	5 U
Toluene	5 U	5 U	5 U	12 U	12 U	5 U	5 U
Chlorobenzene	5 U	5 U	5 U	12 U	12 U	5 U	5 U
Ethylbenzene	5 U	5 U	5 U	12 U	12 U	5 U	5 U
Styrene	5 U	5 U	5 U	12 U	12 U	5 U	5 U
Xylene	5 U	5 U	5 U	12 U	12 U	5 U	5 U

Notes:

J = The reported value is an estimated quantity.

U = The analyte was analyzed for, but not detected.

ug/L = micrograms per liter

EPA Sample No.	SL1511004
Lab Sample ID:	18531.01
Matrix:	Soil
Level:	Low
Date Collected:	4/29/94
Date Analyzed:	5/4/94
Dilution Factor:	1
Units:	ug/kg
Compound	
Chloromethane	11 U
Bromomethane	11 U
Vinyl Chloride	11 U
Chloroethane	11 U
Methylene Chloride	18
Acetone	78
Carbon Disulfide	5 U
1,1-Dichloroethene	5 U
1,1-Dichloroethane	5 U
1,2-Dichloroethene (total)	5 U
Chloroform	5 U
1,2-Dichloroethane	5 U
2-Butanone	11 U
1,1,1-Trichloroethane	5 U
Carbon Tetrachloride	5 U
Bromodichloromethane	5 U
1,2-Dichloropropane	5 U
cis-1,3-Dichloropropene	5 U
Trichloroethene	10
Dibromochloromethane	5 U
1,1,2-Trichloroethane	5 U
Benzene	5 U
trans-1,3-Dichloropropene	5 U
Bromoform	5 U
4-Methyl-2-Pentanone	11 U
2-Hexanone	11 U
Tetrachloroethene	85
1,1,2,2-Tetrachloroethane	5 U
Toluene	7
Chlorobenzene	5 U
Ethylbenzene	4 J
Styrene	5 U
Xylene (total)	34
2-Chloroethyl vinyl ether	11 U

Notes:

J = The reported value is an estimated quantity.

U = The analyte was analyzed for, but not detected

ug/kg = micrograms per kilogram

EPA Sample No.	GWOEB04	GW04TB	GW1504	GW1604	GW1604D	GW1804	SLP0EB04
Lab Sample ID:	18526.05	18526.04	18526.06	18526.07	18526.08	18526.09	18526.01
Matrix:	Water	Water	Water	Water	Water	Water	Water
Level:	Low	Low	Low	Low	Low	Low	Low
Date Collected:	4/29/94	4/29/94	4/29/94	4/29/94	4/29/94	4/29/94	4/29/94
Date Analyzed:	5/5/94	5/6/94	5/6/94	5/6/94	5/6/94	5/6/94	5/5/94
Dilution Factor:	1	1	1	2.5	2.5	1	1
Units:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Compound							
Chloromethane	10 U	10 U	10 U	25 U	25 U	10 U	10 U
Bromomethane	10 U	10 U	10 U	25 U	25 U	10 U	10 U
Vinyl Chloride	10 U	10 U	10 U	25 U	25 U	10 U	10 U
Chloroethane	10 U	10 U	10 U	25 U	25 U	10 U	10 U
Methylene Chloride	8 U	7 U	6 U	22 UJ	32 UJ	12 U	5 U
Acetone	10 U	22 J	10 U	25 U	25 U	10 U	10 U
Carbon Disulfide	5 U	5 U	5 U	12 U	12 U	5 U	5 U
1,1-Dichloroethene	5 U	5 U	5 U	12 U	12 U	5 U	5 U
1,1-Dichloroethane	5 U	5 U	5 U	12 U	12 U	5 U	5 U
1,2-Dichloroethene (total)	5 U	5 U	5 U	12 U	12 U	5 U	5 U
Chloroform	5 U	5 U	5 U	12 U	12 U	5 U	5 U
1,2-Dichloroethane	5 U	5 U	5 U	12 U	12 U	5 U	5 U
2-Butanone	10 U	10 U	10 U	25 U	25 U	10 U	10 U
1,1,1-Trichloroethane	5 U	5 U	37	100	98	51	5 U
Carbon Tetrachloride	5 U	5 U	5 U	12 U	12 U	5 U	5 U
Ethyl Acetate	10 U	10 U	10 U	25 U	25 U	10 U	10 U
Bromodichloromethane	5 U	5 U	5 U	12 U	12 U	5 U	5 U
1,2-Dichloropropane	5 U	5 U	5 U	12 U	12 U	5 U	5 U
cis-1,3-Dichloropropene	5 U	5 U	5 U	12 U	12 U	5 U	5 U
Trichloroethene	5 U	5 U	75	400 J	380	170	5 U
Dibromochloromethane	5 U	5 U	5 U	12 U	12 U	5 U	5 U
1,1,2-Trichloroethane	5 U	5 U	5 U	12 U	12 U	5 U	5 U
Benzene	5 U	5 U	5 U	12 U	12 U	5 U	5 U
trans-1,3-Dichloropropene	5 U	5 U	5 U	12 U	12 U	5 U	5 U
Bromoform	5 U	5 U	5 U	12 U	12 U	5 U	5 U
4-Methyl-2-Pentanone	10 U	10 U	10 U	25 U	25 U	10 U	10 U
2-Hexanone	10 U	10 U	10 U	25 U	25 U	10 U	10 U
Tetrachloroethene	5 U	5 U	79	12 U	12 U	5 U	5 U
1,1,2,2-Tetrachloroethane	5 U	5 U	5 U	12 U	12 U	5 U	5 U
Toluene	5 U	5 U	5 U	12 U	12 U	5 U	5 U
Chlorobenzene	5 U	5 U	5 U	12 U	12 U	5 U	5 U
Ethylbenzene	5 U	5 U	5 U	12 U	12 U	5 U	5 U
Styrene	5 U	5 U	5 U	12 U	12 U	5 U	5 U
Xylene	5 U	5 U	5 U	12 U	12 U	5 U	5 U

Notes:

J = The reported value is an estimated quantity.

U = The analyte was analyzed for, but not detected.

ug/L = micrograms per liter

EPA Sample No.	SL1511004
Lab Sample ID:	18531.01
Matrix:	Soil
Level:	Low
Date Collected:	4/29/94
Date Analyzed:	5/4/94
Dilution Factor:	1
Units:	ug/kg
Compound	
Chloromethane	11 UJ
Bromomethane	11 UJ
Vinyl Chloride	11 UJ
Chloroethane	11 UJ
Methylene Chloride	18 UJ
Acetone	78 UJ
Carbon Disulfide	5 UJ
1,1-Dichloroethene	5 UJ
1,1-Dichloroethane	5 UJ
1,2-Dichloroethene (total)	5 UJ
Chloroform	5 UJ
1,2-Dichloroethane	5 UJ
2-Butanone	11 UJ
1,1,1-Trichloroethane	5 UJ
Carbon Tetrachloride	5 UJ
Bromodichloromethane	5 UJ
1,2-Dichloropropane	5 UJ
cis-1,3-Dichloropropene	5 UJ
Trichloroethene	10 J
Dibromochloromethane	5 UJ
1,1,2-Trichloroethane	5 UJ
Benzene	5 UJ
trans-1,3-Dichloropropene	5 UJ
Bromoform	5 UJ
4-Methyl-2-Pentanone	11 UJ
2-Hexanone	11 UJ
Tetrachloroethene	85 J
1,1,2,2-Tetrachloroethane	5 UJ
Toluene	7 J
Chlorobenzene	5 UJ
Ethylbenzene	4 J
Styrene	5 UJ
Xylene (total)	34 J
2-Chloroethyl vinyl ether	11 UJ

Notes:

J = The reported value is an estimated quantity.

U = The analyte was analyzed for, but not detected

ug/kg = micrograms per kilogram

REGION I
Data Review Worksheets

Site Name FRANKLIN CURTIS RFI
Reference Number _____

REGION I REVIEW OF ORGANIC
CONTRACT LABORATORY DATA PACKAGE
SOUTHWEST LABORATORY

The hardcopied (laboratory name) OF OKLAHOMA data package received at Region I has been reviewed and the quality assurance and performance data summarized. The data review included:

Case No. 18526 SAS No. - Sampling Date(s) 4/29/94
SDG No. - Matrix WATER/ Shipping Date(s) 4/29/94
No. of Samples 7 WATER SOIL Date Rec'd by Lab 4/30/94
1 SOIL

Traffic Report Nos: GW1504, GW1604, GW1804

Trip Blank No.: GW04TB
Equipment Blank No.: GW0EB04, SLPOEB04
Field Dup Nos: GW1604D

SOW No. 3/90 requires that specific analytical work be done and that associated reports be provided by the laboratory to the Regions, EMSL-LV, and SMO. The general criteria used to determine the performance were based on an examination of:

- Data Completeness
- Holding Times
- GC/MS Tuning
- Calibrations
- Blanks
- Surrogate Recoveries
- Matrix Spike/Matrix Spike Dup
- Field Duplicates
- Internal Standard Performance
- Pesticide Inst. Performance
- Compound Identification
- Compound Quantitation

Overall comments _____

Definitions and Qualifiers:

- A - Acceptable data.
- J - Approximate data due to quality control criteria.
- R - Reject data due to quality control criteria.
- U - Compound not detected.

Reviewer: Melissa Tolari Date: June 8, 1994

REGION I
Data Review Worksheets

II. HOLDING TIMES

Complete table for all samples and circle the fractions which are not within criteria.

SAMPLE ID	DATE SAMPLED	VOA DATE ANAL	BNA		PEST	
			DATE EXTR	DATE ANAL	DATE EXTR	DATE ANAL
GW06004	4/29/94	5/5/94 ⁶				
GW04TB	4/29/94	5/6/94 ⁷				
GW1504	4/29/94	5/6/94 ⁷				
GW1604	4/29/94	5/6/94 ⁷				
GW0604D	4/29/94	5/6/94 ⁷				
GW1804	4/29/94	5/6/94 ⁷				
SLP0504	4/29/94	5/5/94 ⁶				
SL151004	4/29/94	5/4/94 ⁹				

VOA - Unpreserved: Aromatic within 7 days, non-aromatic within 14 days of sample collection.
 Preserved : Both within 14 days of sample collection.
 Soils : Both within 14 days of sample collection.

BNA & PEST - Extracted within 7 days, analyzed within 40 days, soils and water.

- ACTION:
1. If holding times are exceeded all positive results are estimate (J) and non-detects are estimated (UJ).
 2. If holding times are grossly exceeded, the reviewer may determine that non-detects are unusable(*).

REGION I
Data Review Worksheets

III. GC/MS TUNING

X

The DFTPP performance results were reviewed and found to be within the specified criteria.

If no,

Samples affected: _____

X

The BFB performance results were reviewed and found to be within the specified criteria.

If no,

Samples affected: _____

If mass calibration is in error refer to the Region guidelines for expanded criteria. If necessary, all associated data as unusable (R).

REGION I
Data Review Worksheets

IV A. VOLATILE CALIBRATION VERIFICATION

Date of Initial Calibration : 4/11/94
 Dates of Continuing Calibrations: 5/5, 5/6, 5/9/94
 Instrument ID : C
 Matrix/Level : WATER/LOW

DATE	CRITERIA OUT RF, %RSD, RF, %D	COMPOUND (VALUE)
4/11/94	70 RSD	CHLOROETHANE (42.0)
	Samples Affected:	NONE
5/5/94	70 D	ACETONE (-44.09%), VINYL ACETATE (32.59%)
	Samples Affected:	GW04TB
5/6/94	70 D	BROMOETHANE (-28.5), CHLOROETHANE (-44.5)
	Samples Affected:	NONE
5/6/94	70 D	ACETONE (-37.1)
	Samples Affected:	GW04TB
5/9/94	70 D	BROMOETHANE (-29.1)
	Samples Affected:	NONE
5/9/94	70 D	CHLOROETHANE (-50.0)
	Samples Affected:	NONE
5/9/94	70 D	VINYL ACETATE (32.5)
	Samples Affected:	NONE
5/9/94	70 D	BROMOFORM (27.3)
	Samples Affected:	NONE
5/9/94	70 D	1,1,2,2-TETRACHLOROETHANE (25.9)
	Samples Affected:	NONE
5/9/94	70 D	2-CHLOROETHYL VINYL ETHER (25.1)
	Samples Affected:	NONE

- All RF's, and RF's must be >0.05
- All %RSD's must be <30%
- All %D's must be <25%

ACTION:

- If any compound has an initial RF or a continuing RF of <0.05:
 - Flag positive results for that compound as estimated (J).
 - Flag non-detects for that compound as unusable (R).
- If any compound has a %RSD >30% or a %D >25%:
 - Flag positive results for that compound as estimated (J).
 - Flag non-detects for that compound as estimated (UJ) if the %RSD or %D is >50%.

A separate worksheet should be filled out for each initial curve.

REGION I
Data Review Worksheets

IV A. VOLATILE CALIBRATION VERIFICATION

Date of Initial Calibration : 2/23/94
 Dates of Continuing Calibrations: 5/4/94
 Instrument ID : N
 Matrix/Level : SOIL/LOW

DATE	CRITERIA OUT RF, %RSD, RF, %D	COMPOUND (VALUE)
2/23/94	90% RSD	CHLOROETHANE (32.8)
	Samples Affected:	NONE
2/23/94	90% RSD	VINYL ACETATE (47.1)
	Samples Affected:	NONE
5/4/94	90% D	ACETONE (30.6)
	Samples Affected:	SL1511004
5/4/94	90% D	1,2-DCA (35.3), 2-BUTANONE (45.3)
	Samples Affected:	NONE
5/4/94	90% D	TCE (26.5)
	Samples Affected:	SL1511004
5/4/94	90% D	BROMOFORM (27.5)
	Samples Affected:	NONE
5/4/94	90% D	2-HEXANONE (34.1)
	Samples Affected:	NONE
5/4/94	90% D	2-CHLOROETHYL VINYL ETHER (32.9)
	Samples Affected:	NONE
	Samples Affected:	
	Samples Affected:	

- All RF's, and RF's must be >0.05
- All %RSD's must be <30%
- All %D's must be <25%

ACTION:

- If any compound has an initial RF or a continuing RF of <0.05:
 - Flag positive results for that compound as estimated (J).
 - Flag non-detects for that compound as unusable (R).
- If any compound has a %RSD >30% or a %D >25%:
 - Flag positive results for that compound as estimated (J).
 - Flag non-detects for that compound as estimated (UJ) if the %RSD or %D is >50%.

A separate worksheet should be filled out for each initial curve.

REGION I
Data Review Worksheets

V B. BLANK ANALYSIS RESULTS (Section 3)

3. Blank Actions

Action levels should be based upon the highest concentration of contaminant determined in any blank. The action level for samples which have been concentrated or diluted should be multiplied by the concentration/dilution factor. No positive sample result should be reported unless the concentration of the compound in the sample exceeds the action level of 10 x's the amount in the blank for the common contaminants, or 5 x's the amount for any other compound. Specific actions are as follows:

1. The concentration is less than the CRQL, report the CRQL.
2. The concentration is greater than the CRQL, but less than the action level, report the concentration found U.
3. The concentration is greater than the action level, report the concentration unqualified.

For examples refer to the Regional Guidelines.

Common contaminants = methylene chloride, acetone, 2-butanone, toluene, and phthalates.

LEVEL: LOW

<u>COMPOUND</u>	<u>MAX. CONC./</u> <u>UNITS</u>	<u>ACTION LEVEL/</u> <u>UNITS</u>	<u>CRQL</u>
METHYLENE CHLORIDE	8 ug/L	80 ug/L	5
ACETONE	22 ug/L	220 ug/L	10

A separate worksheet should be used for low and medium level blanks.

REGION I
Data Review Worksheets

VI. SURROGATE SPIKE RECOVERIES

List the percent recoveries which do not meet the criteria for surrogate recovery.

Matrix: WATER/SOIL

TR #'S	VOA			B/N			A			PEST*
	TOL	BFB	DCF	NBZ	FBP	TPH	PHL	2FP	TBP	DBC
SOIL) SL1511004	---	---	64	---	---	---	---	---	---	---
SOIL) SL1511004MS	---	72	---	---	---	---	---	---	---	---
---	---	---	---	---	---	---	---	---	---	---
---	---	---	---	---	---	---	---	---	---	---
---	---	---	---	---	---	---	---	---	---	---
---	---	---	---	---	---	---	---	---	---	---
---	---	---	---	---	---	---	---	---	---	---
---	---	---	---	---	---	---	---	---	---	---
---	---	---	---	---	---	---	---	---	---	---
QC Limits	81	74	70	---	---	---	---	---	---	---
	to	to	to	to	to	to	to	to	to	to
	117	121	121	---	---	---	---	---	---	---

Surrogate Actions:

*-Advisory only

PERCENT RECOVERY

	<10%	10%-CRR	>CRR
Positive sample results	J	J	J
Non-detected results	R	UJ	A

CRR = Contract Required Recovery Range.

Surrogate action should be applied:

1. If at least two surrogates in a B/N or A fraction or one surrogate in the VOA fraction are out of specification, but have recoveries of >10%.
2. If any one surrogate in a fraction shows <10% recovery.

REGION I
Data Review Worksheets

VII A. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

1. Matrix Spike/Matrix Spike Duplicate Recoveries and Precision

WATER: 0W1604MS, 0W1604MSD
 TR Nos. SOIL: SL1511004MSD, SL1511004MS Level: LOW Matrix: SOIL/WATER

List the percent recoveries and RPD's of compounds which do not meet the criteria stated on Form 3.

<u>MATRIX</u>	<u>FRACTION/ MS OR MSD</u>	<u>COMPOUND</u>	<u>%REC/ RPD</u>	<u>QC LIMITS</u>
WATER	VOA/MS	TRICHLOROETHENE	090 REC	71-120
WATER	VOA/MSD	TRICHLOROETHENE	33/200	71-120/14
WATER	VOA/MSD	TOLUENE	18	13
WATER	VOA/MSD	CHLOROBENZENE	18	13
SOIL	VOA/MSD	1,1-DICHLOROETHENE	45	22

QUALIFICATION IS LIMITED TO THE UNSPIKED SAMPLE ONLY.

- If any compound does not meet the Contract Required Recovery range (CRR) follow the actions stated below:

	<u>PERCENT RECOVERY</u>		
	<u><10%</u>	<u>10% - CRR</u>	<u>>CRR</u>
Positive Sample Results	J	J	J
Non-detected Results	R	A	A

- If any compound does not meet the RPD criteria, flag positive results for that compound as estimated (J).

A separate worksheet should be used for each MS/MSD pair.

REGION I
Data Review Worksheets

VII B. MATRIX SPIKE/MATRIX SPIKE DUPLICATE (Section 2)

3. Matrix Spike Duplicate - Unspiked Compounds

WATER: GW1604 MS, GW1604 MSD

TR Nos. SOIL: SL1511004 MS, SL1511004 MSD

List the concentrations of the unspiked compounds and determine the percent RSD's of the unspiked sample, matrix spike, and matrix spike duplicate. No limits have been developed for the RSD values of the unspiked compounds. .

<u>MATRIX</u>	<u>FRACTION</u>	<u>COMPOUND</u>	<u>SAMPLE, MS, MSD CONC</u>			<u>%RSD</u>
WATER	VOA	1,1,1- TCA	100	42	86	82,15
SOIL	VOA	METHYLENE CHLORIDE	18	12	7	40,88
SOIL	VOA	ACETONE	78	30	53	88,38
SOIL	VOA	TETRACHLOROETHENE	85	47	43	58,46

The reviewer must use professional judgement to determine if there is a need to qualify any of the unspiked compounds in the sample.

REGION I
Data Review Worksheets

VIII. FIELD DUPLICATE PRECISION

TR Nos. GW1604 , GW1604D

Matrix: WATER

List the concentrations of the compounds which do not meet the following RPD criteria:

1. An RPD of <30% for water duplicates.
2. An RPD of <50% for soil duplicates.

<u>FRACTION</u>	<u>COMPOUND</u>	<u>SAMPLE CONC</u>	<u>DUP SAMPLE CONC</u>	<u>RPD</u>
<u>VOC</u>	<u>METHYLENE CHLORIDE</u>	<u>22</u>	<u>32</u>	<u>37</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

* NO ACTION TAKEN - METHYLENE CHLORIDE WAS ALREADY
ACTIONS: QUALIFIED (U) DUE TO BLANK CONTAMINATION.

1. If the results for any compounds do not meet the RPD criteria, flag the positive results for that compound as estimated.
2. If one value is non-detected, and one is above the CRQL:
 - a. Flag the positive result as estimated (J).
 - b. Flag the non-detected result as estimated (UJ).

NOTE: Professional judgement may be utilized to apply duplicate actions to all samples of a similar matrix.

A separate worksheet should be filled out for each field duplicate pair.

REGION I
Data Review Worksheets

IX. INTERNAL STANDARD PERFORMANCE

List the internal standard areas of samples which do not meet the criteria of +100% or -50% of the internal standard area in the associated continuing calibration standard.

<u>SAMPLE ID</u>	<u>DATE</u>	<u>IS OUT</u>	<u>IS AREA/ RT</u>	<u>ACCEPTABLE RANGE</u>	<u>ACTION</u>
<u>SL1511004</u>	<u>5/4</u>	<u>BCM</u>	<u>15351</u>	<u>39708-158830</u>	<u>J, UJ</u>
<u>SL1511004MS</u>	<u>5/4</u>	<u>BCM</u>	<u>31257</u>	<u>39708-158830</u>	<u>J, UJ</u>
<u>SL1511004</u>	<u>5/4</u>	<u>DFB</u>	<u>20515</u>	<u>142867-571468</u>	<u>J, UJ</u>
<u>SL1511004MS</u>	<u>5/4</u>	<u>DFB</u>	<u>114308</u>	<u>142867-571468</u>	<u>J, UJ</u>
<u>SL1511004</u>	<u>5/4</u>	<u>CB2</u>	<u>16149</u>	<u>103732-414926</u>	<u>J, UJ</u>
<u>SL11004MS</u>	<u>5/4</u>	<u>CB2</u>	<u>67869</u>	<u>103732-414926</u>	<u>J, UJ</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

ACTION:

1. If an IS area count is outside the criteria -50% or +100% of the associated standard:
 - a. Positive results for compounds quantitated using that IS are flagged as estimated (J) for that sample fraction.
 - b. Non-detects for compounds quantitated using that IS are flagged as estimated (UJ) for that sample fraction.
 - c. If extremely low area counts are reported, or if performance exhibits a major drop-off, then a severe loss of sensitivity is indicated. Non-detects should then be flagged as unusable (R).

2. If an IS retention time varies more than 30 seconds, the chromatographic profile for that sample must be examined to determine if any false positives or negatives exist. For shifts of a large magnitude, the reviewer may consider partial or total rejection of the data for that sample fraction.

BCM = BROMOCHLOROMETHANE
DFB = 1,4-DIFLUOROBENZENE
CB2 = CHLOROBENZENE-d5

REGION I
Data Review Worksheets

XII. SAMPLE QUANTITATION

In the space below, please show a minimum of one sample calculation per fraction:

SAMPLE GW1604

VOA:

REPORTED RESULT : 1,1,1-TCA = 100 ug/L

RAW DATA RESULT : 1,1,1-TCA = 101.16 ug/L



ALL RESULTS WERE REPORTED CORRECTLY.

BNA:

NOT APPLICABLE

PEST/PCB:

NOT APPLICABLE



HMM Associates, Inc.
A Summit Company

6908-401/HAZ/18526i.doc

June 8, 1994

Mr. James Keith
WW Engineering & Science, Inc.
5010 Stone Mill Road
Bloomington, IN 47408

**RE: Franklin Curtis RFI
Inorganic Data Validation Report
Southwest Laboratory of Oklahoma
Metals: 5 aqueous samples
Mercury: 5 aqueous samples
Cyanide: 5 aqueous samples**

Dear Mr. Keith:

Data validation was performed on the inorganic analytical data from 5 water samples collected by WW Engineering & Science, Inc. (WWES) at the Franklin Curtis site. The data were evaluated based on the following parameters according to the Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses, February 1989.

- data completeness
 - holding times
 - calibration verification
 - field and laboratory blank results
 - ICP interference check sample results
 - matrix spike percent recovery results
 - laboratory and field duplicate results
 - laboratory control sample results
 - ICP serial dilution analysis
 - sample results
-
- All criteria was met for this parameter.
 - Not provided by the laboratory.

Mr. James Keith

June 8, 1994

Page 2

Data Completeness

The packages were complete and legible.

Holding Times

All holding times were met for metals, mercury, and cyanide analyses.

Calibration Verification

All calibration results were reviewed and found to be acceptable.

Field and Laboratory Blanks

The method blanks were prepared and analyzed at the required frequency. Aluminum and cadmium were detected in the calibration blanks at maximum concentrations of 98.8 ug/L and 4.3 ug/L, respectively. There was one field blank collected at the site. The following compounds were detected in the field blank: cadmium, copper, iron, lead, manganese, sodium, and zinc. All sample results were qualified based upon the action levels for blank contamination.

ICP Interference Check Sample Results

The ICP Interference Check Sample results were reviewed and found to be acceptable.

Matrix Spike/Matrix Spike Duplicate Results

The matrix spike/matrix spike duplicate results reported on CLP Form 5 were not provided by the laboratory.

Laboratory and Field Duplicates

All criteria was met for laboratory duplicate analysis. One field duplicate was collected. Review of the field duplicate results revealed the deficiencies which are summarized in the following table.

<u>Sample No.</u>	<u>Duplicate</u>	<u>Analyte</u>	<u>RPD</u>
PGP160	PGP16D	Aluminum	135%
PGP160	PGP16D	Barium	41.5%
PGP160	PGP16D	Calcium	53%
PGP160	PGP16D	Iron	135%
PGP160	PGP16D	Magnesium	63%
PGP160	PGP16D	Manganese	142%

Results for aluminum, barium, calcium, iron, magnesium, and manganese were estimated (J) in sample PGP160 and PGP16D.

Mr. James Keith

June 8, 1994

Page 3

Laboratory Control Sample Results

The Laboratory Control Sample results were reviewed and found to be acceptable.

ICP Serial Dilution Analysis

The ICP Serial Dilution results reported on CLP Form 9 were not provided by the laboratory.

Sample Results

Sample results were reviewed and found to be reported correctly by the laboratory.

Data tables have been provided that display the validated analytical results. If you have any questions, please call me at (508) 371-4376.

Sincerely,
HMM ASSOCIATES, INC.



Melissa J. Solari
Data Reviewer/Project Manager

EPA Sample No.	PGP0EB	PGP150	PGP16D	PGP160	PGP180
Lab Sample No.	1852605	1852606	1852608	1852607	1852609
Matrix	Water	Water	Water	Water	Water
Level	Low	Low	Low	Low	Low
Date Collected	4/29/94	4/29/94	4/29/94	4/29/94	4/29/94
Date Received:	4/30/94	4/30/94	4/30/94	4/30/94	4/30/94
Units	ug/L	ug/L	ug/L	ug/L	ug/L
Analyte					
Aluminum	73.0 U	23600	490	2560	12700
Antimony	53.0 U	53.0 U	53.0 U	53.0 U	53.0 U
Arsenic	2.0 U	5.4 B	2.0 U	4.1 B	6.5 B
Barium	19.0 U	430	78.7 B	120 B	187 B
Beryllium	1.0 U	1.7 B	1.0 U	1.0 U	1.0 B
Cadmium	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Calcium	564 B	871000	139000	239000	446000
Chromium	6.0 U	110	6.0 U	8.2 B	47.2
Cobalt	9.0 U	80	9.0 U	9.0 U	42 B
Copper	9.1 B	114	13.6 B	23.0 B	137
Iron	91.5 B	83600	2000	10400	61800
Lead	1.5 B	61.5	2.5 B	7.1	44
Magnesium	460 U	312000	39300	75500	157000
Manganese	3.3 B	5710	150	882	3330
Mercury	0.2 U	0.26	0.2 U	0.2 U	0.22
Nickel	12.0 U	162	12 U	14.6 B	124.0
Potassium	590 U	5730	2350 B	2830 B	3580 B
Selenium	2.0 U	2.0 U	3.4 B	2.8 B	2.0 U
Silver	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U
Sodium	877 B	30700	23500	23500	11800
Thallium	2.0 U	2.0 U	2.0 U	2.0 U	2.5 B
Vanadium	8.0 U	59.6	8.0 U	11.4 B	41.2 B
Zinc	8.5 B	891	14.5 B	39.7	359
Cyanide	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U

Notes:

B = The reported value is less than the CRDL, but greater than or equal to the IDL.

U = The analyte was analyzed for, but not detected.

EPA Sample No.	PGP0EB	PGP150	PGP16D	PGP160	PGP180
Lab Sample No.	1852605	1852606	1852608	1852607	1852609
Matrix	Water	Water	Water	Water	Water
Level	Low	Low	Low	Low	Low
Date Collected	4/29/94	4/29/94	4/29/94	4/29/94	4/29/94
Date Received:	4/30/94	4/30/94	4/30/94	4/30/94	4/30/94
Units	ug/L	ug/L	ug/L	ug/L	ug/L
Analyte					
Aluminum	73.0 U	23600	490 UJ	2560 J	12700
Antimony	53.0 U	53.0 U	53.0 U	53.0 U	53.0 U
Arsenic	2.0 U	5.4 B	2.0 U	4.1 B	6.5 B
Barium	19.0 U	430	78.7 J	120 J	187 B
Beryllium	1.0 U	1.7 B	1.0 U	1.0 U	1.0 B
Cadmium	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Calcium	564 B	871000	139000 J	239000 J	446000
Chromium	6.0 U	110	6.0 U	8.2 B	47.2
Cobalt	9.0 U	80	9.0 U	9.0 U	42 B
Copper	9.1 B	114	13.6 UJ	23.0 UJ	137
Iron	91.5 B	83600	2000 J	10400 J	61800
Lead	1.5 B	61.5	2.5 UJ	7.1 UJ	44
Magnesium	460 U	312000	39300 J	75500 J	157000
Manganese	3.3 B	5710	150 J	882 J	3330
Mercury	0.2 U	0.26	0.2 U	0.2 U	0.22
Nickel	12.0 U	162	12 U	14.6 B	124.0
Potassium	590 U	5730	2350 B	2830 B	3580 B
Selenium	2.0 U	2.0 U	3.4 B	2.8 B	2.0 U
Silver	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U
Sodium	877 B	30700	23500 J	23500 J	11800
Thallium	2.0 U	2.0 U	2.0 U	2.0 U	2.5 B
Vanadium	8.0 U	59.6	8.0 U	11.4 B	41.2 B
Zinc	8.5 B	891	14.5 UJ	39.7 UJ	359
Cyanide	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U

Notes:

B = The reported value is less than the CRDL, but greater than or equal to the IDL.

U = The analyte was analyzed for, but not detected.

REGION I REVIEW OF INORGANIC
CONTRACT LABORATORY DATA PACKAGE

SOUTHWEST LABORATORY

The hardcopied (laboratory name) OF OKLAHOMA data package received at Region I has been reviewed and the quality assurance and performance data summarized. The data review included:

Case No. 18526 SAS No. - Sampling Date(s) 4/29/94
SDG. No. 18526 Matrix WATER Shipping Date(s) 4/29/94
No. of Samples 5 Date Rec'd by Lab 4/30/94

Traffic Report Nos: PGP150, PGP160, PGP180

Trip Blank No.:

Equipment Blank No.: PGPOEB

Field Dup Nos: PGP16D

SOW No. 3/90 requires that specific analytical work be done and that associated reports be provided by the laboratory to the Regions, EMSL-LV, and SMO. The general criteria used to determine the performance were based on an examination of:

- Data Completeness
- Holding Times
- Calibrations
- Blanks
- ICP Interference Check Results
- Matrix Spike Recoveries
- Laboratory Duplicates
- Field Duplicates
- Lab Control Sample Results
- Furnace AA Results
- ICP Serial Dilution Results
- Detection Limit Results
- Sample Quantitation

Overall Comments: _____

Definitions and Qualifiers:

- A - Acceptable data.
- J - Approximate data due to quality control criteria.
- R - Reject data due to quality control criteria.
- U - Analyte not detected.

Reviewer: Missy J. Lewis Date: 6/8/94

REGION I
Data Review Worksheets

DATA COMPLETENESS

MISSING INFORMATION

DATE LAB CONTACTED

DATE REC'D

ALL INFORMATION WAS PROVIDED BY THE LABORATORY
EXCEPT FORMS V and IX.

REGION I
Data Review Worksheets

II. HOLDING TIMES

Complete table for all samples and circle the analysis date for samples not within criteria.

SAMPLE ID	DATE SAMPLED	HG DATE ANALYSIS	CYANIDE DATE ANALYSIS	OTHERS DATE ANALYSIS	pH	ACTION
PGPOEB	4/29/94	5/12/94 ¹³	5/4/94 ⁵	5/6/94 ⁷		
PGP150	4/29/94	5/12/94 ¹³	5/4/94 ⁵	5/6/94 ⁷		
PGP160	4/29/94	5/12/94 ¹³	5/4/94 ⁵	5/6/94 ⁷		
PGP160	4/29/94	5/12/94 ¹³	5/4/94 ⁵	5/6/94 ⁷		
PGP180	4/29/94	5/12/94 ¹³	5/4/94 ⁵	5/6/94 ⁷		

METALS - 180 DAYS FROM SAMPLE COLLECTION
MERCURY - 28 DAYS FROM SAMPLE COLLECTION
CYANIDE - 14 DAYS FROM SAMPLE COLLECTION

ACTION:

1. If holding times are exceeded all positive results are estimated (J) and non-detects are estimated (UJ).
2. If holding times are grossly exceeded, the reviewer may determine that non-detects are unusable (R).

REGION I
Data Review worksheets

II A. INSTRUMENT CALIBRATION (Section 1) - *all OK*

1. Recovery Criteria

List the analytes which did not meet the percent recovery (%R) criteria for Initial or Continuing Calibration.

<u>DATE</u>	<u>ICV/CCV%</u>	<u>ANALYTE</u>	<u>%R</u>	<u>ACTION</u>	<u>SAMPLES AFFECTED</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

ACTIONS:

If any analyte does not meet the %R criteria follow the actions stated below:

For Positive Results:

	<u>Accept</u>	<u>Estimate (J)</u>	<u>Reject (R)</u>
Metals	90-110%R	75-89%R, 111-125%R	<75%R, >125%R
Mercury	80-120%R	65-79%R, 121-135%R	<65%R, >135%R
Cyanide	85-115%R	70-84%R, 116-130%R	<70%R, >130%R

For Non-detected Results:

	<u>Accept</u>	<u>Estimate (UJ)</u>	<u>Reject (R)</u>
Metals	90-125%R	75-89%R	<75%R, >125%R
Mercury	80-135%R	65-79%R	<65%R, >135%R
Cyanide	85-130%R	70-84%R	<70%R, >130%R

REGION I
Data Review Worksheets

III B. INSTRUMENT CALIBRATION (Section 2)

2. Analytical Sequence

- A. Did the laboratory use the proper number of standards for calibration as described in the SOW? Yes or No
- B. Were calibrations performed at the beginning of each analysis? Yes or No
- C. Were calibration standards analyzed at the beginning of sample analysis and at a minimum frequency of ten percent or every two hours during analysis, whichever is more frequent? Yes or No
- D. Were the correlation coefficients for the calibration curves for AA, Hg, and CN ≥ 0.995 ? Yes or No
- E. Was a standard at 2xCRDL analyzed for all ICP analyses? Yes or No

If No,

The data may be affected. Use professional judgement to determine the severity of the effect and qualify the data accordingly. Discuss any actions below and list the samples affected.

REGION 1
Data Review Worksheet

IV A. BLANK ANALYSIS RESULTS (Sections 1-3)

List the blank contamination in Sections 1 & 2 below. A separate worksheet should be used for soil and water blanks.

1. Laboratory Blanks

MATRIX: WATER

<u>DATE</u>	<u>ICB/CCB#</u>	<u>PREP BL</u>	<u>ANALYTE</u>	<u>CONC./UNITS</u>
	<u>CCB#2</u>		<u>Al</u>	<u>80.3 ug/L</u>
	<u>CCB#3</u>		<u>Al</u>	<u>74.7 ug/L</u>
	<u>CCB#3</u>		<u>cd</u>	<u>-4.3 ug/L</u>
	<u>CCB#1</u>		<u>Al</u>	<u>98.8 ug/L</u>

2. Equipment/Trip Blanks

<u>DATE</u>	<u>EQUIP BL#</u>	<u>ANALYTE</u>	<u>CONC./UNITS</u>
<u>4/29/94</u>	<u>PGPOEB</u>	<u>Ca</u>	<u>564 ug/L</u>
<u>4/29/94</u>		<u>CU</u>	<u>9.1 ug/L</u>
		<u>Fe</u>	<u>91.5 ug/L</u>
		<u>Pb</u>	<u>1.5 ug/L</u>
		<u>Mn</u>	<u>3.3 ug/L</u>
<u>4/29/94</u>	<u>PGPOEB</u>	<u>NA</u>	<u>877 ug/L</u>
		<u>Zn</u>	<u>8.5 ug/L</u>

3. Frequency Requirements

A. Was a preparation blank analyzed for each matrix, for every 20 samples and for each digestion batch?

Yes or No

B. Was a calibration blank run every 10 samples or every 2 hours whichever is more frequent?

Yes or No

If No,

The data may be affected. Use professional judgement to determine the severity of the effect and qualify the data accordingly. Discuss any actions below, and list the samples affected.

IV B. BLANK ANALYSIS RESULTS (Section 4)

4. Blank Actions

The Action Levels for any analyte is equal to five times the highest concentration of that element's contamination in any blank. The action level for samples which have been concentrated or diluted should be multiplied by the concentration/dilution factor. No positive sample result should be reported unless the concentration of the analyte in the sample exceeds the Action Level (AL). Specific actions are as follows:

1. When the concentration is greater than the IDL, but less than the Action Level, report the sample concentration detected with a U.
2. When the sample concentration is greater than the Action Level, report the sample concentration unqualified.

MATRIX: WATER

MATRIX: WATER

ELEMENT	MAX. CONC./ UNITS ug/L	AL/ UNITS ug/L
Al	98.8	494
Ca	564	2820
Cd	4.3	21.5
Cu	9.1	45.5
Fe	91.5	457.5
Mn	3.3	16.5
Na	877	4385

ELEMENT	MAX. CONC./ UNITS ug/L	AL/ UNITS ug/L
Pb	1.5	7.5
Zn	8.5	42.5

NOTE: Blanks analyzed during a soil case must be converted to mg/kg in order to compare them with the sample results.

$$\text{Conc. in ug/L} \times \frac{\text{Volume diluted to (200ml)}}{\text{Weight digested (1gram)}} \times \frac{1\text{L}}{1000\text{ml}} \times \frac{1000\text{ug}}{1\text{mg}} \times \frac{1\text{mg}}{1000\text{ug}} = \text{mg/kg}$$

Multiplying this result by 5 to arrive at the action level gives a final result in mg/kg which can then be compared to sample results.

REGION I
Data Review Worksheets

A. ICP INTERFERENCE CHECK SAMPLE (Sections 1 & 2) - *all OK*

1. Recovery Criteria

List any elements in the ICS AB solution which did not meet the criteria for %R.

DATE	ELEMENT	%R	ACTION	SAMPLES AFFECTED
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

ACTIONS:

If an element does not meet the %R criteria, follow the actions stated below:

	<u>PERCENT RECOVERY</u>		
	<50%	50-79%	>120%
Positive Sample Results	R	J	J
Non-detected Sample Results	R	UJ	A

2. Frequency Requirements

Were Interference QC samples run at the beginning and end of each sample analysis run or a minimum of twice per 8 hour working shift, whichever is more frequent?

Yes or No

If no,

The data may be affected. Use professional judgement to determine the severity of the effect and qualify the data accordingly. Discuss any actions below and list the samples affected.

REGION I
Data Review Worksheets

V B. ICP INTERFERENCE CHECK SAMPLE (Section 3)

3. Report the concentration of any elements detected in the ICS A solution > 2xIDL that should not be present.

ELEMENT	CONC. DETECTED IN THE ICS	CONC. OF INTERFERENTS IN THE ICS			
		AL	CA	FE	MG
<u>Cu</u>	<u>13 ug/L</u>	<u>538543</u>	<u>533274</u>	<u>195399</u>	<u>579098</u>
<u>K</u>	<u>126 ug/L</u>	_____	_____	_____	_____
<u>Na</u>	<u>1008 ug/L</u>	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Estimate the concentration produced by the interfering element in all affected samples. See guidelines for examples. List the samples affected by interferences below:

SAMPLE AFFECTED	ELEMENT AFFECTED	SAMPLE CONC. (ug/L)	SAMPLE INTERFERENT CONC.				ESTIMATED INTERF. (ug/L)
			AL	CA	FE	MG	
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

ACTIONS:

- ① In general, the sample data can be accepted without qualification if the sample concentrations of Al, Ca, Fe, and Mg are less than 50% of their respective levels in the ICS solution.
2. Estimate (J) positive results for affected elements for samples with levels of interferents 50% or more of that in the ICS solution.
3. Reject (R) positive results if the reported concentration is due entirely to the interfering element.
4. Estimate (UJ) non-detected results for which false negatives are suspect.

Give explanations for any actions taken below:

REGION I
Data Review Worksheets

VI. MATRIX SPIKE - *not provided*

TR # _____

MATRIX: _____

1. Recovery Criteria

List the percent recoveries for analytes which did not meet the required criteria.

S - amount of spike added
SSR - spikes sample result
SR - sample result

Analyte	SSR	SR	S	%R	Action

Matrix Spike Actions apply to all samples of the same matrix.

ACTIONS:

- If the sample concentration exceeds the spike concentration by a factor of 4 or more, no action is taken.
- If any analyte does not meet the %R criteria follow the actions stated below:

	<u>PERCENT RECOVERY</u>		
	<u><30%</u>	<u>30%-74%</u>	<u>>125%</u>
Positive Sample Results	J	J	J
Non-detected Results	R	UJ	A

2. Frequency Criteria

- Was a matrix spike prepared at the required frequency? Yes or No
- Was a post digestion spike analyzed for elements that did not meet required criteria for matrix spike recovery? Yes or No

A separate worksheet should be used for each matrix spike pair.

REGION I
Data Review Worksheets

VII. LABORATORY DUPLICATES - all ok

List the concentrations of any analyte not meeting the criteria for duplicate precision. For soil duplicates, calculate the CRDL in mg/kg using the sample weight, volume and percent solids data for the sample. Indicate what criteria was used to evaluate precision by circling either the RPD or CRDL for each element.

MATRIX: WATER

Element	CRDL		Sample # <u>LCSWD</u>	Duplicate#		RPD	Action
	water ug/L	soil mg/kg		LCSWD	DJP		
Aluminum	200						
Antimony	50						
Arsenic	10						
Barium	200						
Beryllium	5						
Cadmium	5						
Calcium	5000						
Chromium	10						
Cobalt	50						
Copper	25						
Iron	100						
Lead	5						
Magnesium	5000						
Manganese	15						
Mercury	0.2						
Nickel	40						
Potassium	5000						
Selenium	5						
Silver	10						
Sodium	5000						
Thallium	10						
Vanadium	50						
Zinc	20						
Cyanide	10						

Laboratory Duplicate Actions should be applied to all other samples of the same matrix type.

ACTIONS:

1. Estimate (J) positive results for elements which have an RPD >20% for waters and >35% for soils.
2. If sample results are less than 5x the CRDL, estimate (J) positive results for elements whose absolute difference is >CRDL, (2xCRDL for soils). If both samples are non-detected, the RPD is not calculated (NC).

REGION I
Data Review Worksheets

VIII. FIELD DUPLICATES

List the concentrations of all analytes in the field duplicate pair. For soil duplicates, calculate the CRDL in mg/kg using the sample weight, volume and percent solids data for the sample. Indicate what criteria was used to evaluate the precision by circling either the RPD or CRDL for each element.

MATRIX: WATER

Element	CRDL		Sample #	Duplicate#	RPD	Action
	water ug/L	soil mg/kg				
Aluminum	200		PG160 490	PG160 2560	135	J
Antimony	60					
Arsenic	10		2.00	4.1	NC	
Barium	200		78.7	120	41.5	J
Beryllium	5					
Cadmium	5					
Calcium	5000		139000	23900	53	J
Chromium	10		6.00	8.2	NC	
Cobalt	50					
Copper	25					
Iron	100		2000	10400	135	J
Lead	5					
Magnesium	5000		39300	75500	63	J
Manganese	15		150	802	142	J
Mercury	0.2					
Nickel	40		120	14.6	NC	
Potassium	5000		2350	2830	18	
Selenium	5		3.4	2.8	19	
Silver	10					
Sodium	5000		23500	23500	0	
Thallium	10					
Vanadium	50		8.00	11.4	NC	
Zinc	20					
Cyanide	10					

Field Duplicate Actions should be applied to all other samples of the same matrix type.

ACTIONS:

1. Estimate (J) positive results for elements which have an RPD >30% for waters and >50% for soils.
2. If sample results are less than 5x the CRDL, estimate (J) positive results and ~~(NI) nondetected results~~ for elements whose absolute difference is >2xCRDL, (4xCRDL for soils). If both samples are non-detected, the RPD is not calculated (NC).

REGION I
Data Review Worksheets

IX. LABORATORY CONTROL SAMPLE - all OK

1. Aqueous LCS

List any LCS recoveries not within the 80-120% criteria and the samples affected.

<u>DATE</u>	<u>ELEMENT</u>	<u>IR</u>	<u>ACTION</u>	<u>SAMPLES AFFECTED</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

2. Solid LCS

List any analytes that were not within the control windows set by the EPA for the solid LCS sample. The 80-120% criteria is not used to evaluate solid LCS results.

<u>ELEMENT</u>	<u>LCS CONC.</u>	<u>CONTROL WINDOWS</u>	<u>ACTION</u>	<u>SAMPLES AFFECTED</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

ACTIONS:

<u>AQUEOUS LCS</u>	<u>Percent Recovery</u>		
	<u><50%</u>	<u>51-79%</u>	<u>>120%</u>
Positive Results	R	J	J
Non-detected Results	R	UJ	A

<u>SOLID LCS</u>	<u><EPA Control Windows</u>	<u>>EPA Control Windows</u>
Positive Results	J	J
Non-detected Results	UJ	A

3. Frequency Criteria

A. Was an LCS analyzed for every matrix, every digestion batch, and every 20 samples?

Yes or No

REGION I
Data Review Worksheets

X A. FURNACE ATOMIC ABSORPTION ANALYSIS

1. Duplicate Precision

Duplicate injections and one-point analytical spikes were performed for all samples: duplicate injections agreed within $\pm 20\%$.

Duplicate injections and/or spikes were not performed for the following samples/elements: _____

Duplicate injections did not agree within $\pm 20\%$ for samples/elements: _____

2. Post Digestion Spike Recoveries

Spike recoveries met the 85-115% recovery criteria for all samples.

Spike recoveries did not meet the 85-115% criteria but did not require MSA for the following samples/elements: _____

MSA was used to quantitate analytical results when contractually required.

_____ Correlation coefficients ≥ 0.995 , accept results.
_____ Correlation coefficients < 0.995 for sample numbers/elements: _____

Method of Standard Addition (MSA) was not performed as required for samples/elements: _____

ACTIONS:

1. Estimate (J) positive results if duplicate injections are outside $\pm 20\%$ RSD or CV.
2. If the sample absorbance is $< 50\%$ of post digestion spike absorbance the following actions should be applied:

	PERCENT RECOVERY		
	$< 10\%$	$11\% - 84\%$	$> 115\%$
Positive Sample Results	J or R	J	J
Non-detected Results	R	UJ	A

3. Estimate (J) sample results if MSA was required and not performed.
4. Estimate (J) sample results if correlation coefficient was < 0.995 .

XI. INDUCTIVELY COUPLED PLASMA (ICP) SERIAL DILUTION ANALYSIS - *not provided*

Serial Dilutions were performed for each matrix and results of the diluted sample analysis agreed within ten percent of the original undiluted analysis.

Serial Dilutions were not performed for the following:

Serial Dilutions were performed, but analytical results did not agree within 10% for analyte concentrations greater than 50x the IDL before dilution.

Report all results below that do not meet the required laboratory criteria for ICP serial dilution analysis.

MATRIX: _____

ELEMENT	IDL	50xIDL	SAMPLE RESULT	SERIAL DILUTION	%D	ACTION
Aluminum						
Barium						
Beryllium						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Magnesium						
Manganese						
Nickel						
Potassium						
Silver						
Sodium						
Vanadium						
Zinc						

Actions apply to all samples of the same matrix.

ACTIONS:

1. Estimate (J) positive results if %D >15.

XII. DETECTION LIMIT RESULTS

1. Instrument Detection Limits

- X Instrument Detection Limit results were present and found to be less than the Contract Required Detection Limits.
- IDLs were not included in the data package on Form XI.
- IDLs were present, but the criteria was not met for the following elements: _____

2. Reporting Requirements

- Were sample results on Form I reported down to the IDL not the CRDL for all analytes? Yes or No
- Were sample results that were analyzed by ICP for Se, Tl, As, or Pb at least 5x IDL. Yes or No
- Were sample weights, volumes, and dilutions taken into account when reporting detection limits on Form I. Yes or No

If No,

The reported results may be inaccurate. Make the necessary changes on the data summary tables and request that the laboratory resubmit the corrected data.

XIII. SAMPLE QUANTITATION

X

Sample results fall within the linear range for ICP and within the calibrated range for all other parameters.

Sample results were beyond the linear range/ calibration range of the instrument for the following samples/elements:

In the space below, please show a minimum of one sample calculation per method:

SAMPLE PGP16D

ICP

Aluminum reported @ 490 ug/L raw data result = 489.7770 ug/L ✓

FURNACE

Lead: reported result = 2.58 ug/L raw data result = 2.535 ug/L ✓

MERCURY

reported: 0.20 ug/L raw data result = ~~0.04~~ 0.030 ug/L ✓

CYANIDE

reported: 10.00 ug/L raw data result = 0.325 ug/L ✓

For soil samples, the following equation may be necessary to convert raw data values (usually reported in ug/L) to actual sample concentrations (mg/kg):

The lab is required to use 1 gram sample (wet weight) to 200 ml.

Wet weight concentration =

$$\text{digest conc. in } \frac{\text{ug}}{\text{L}} \times \frac{200\text{ml}}{1\text{ gm}} \times \frac{1\text{L}}{1000\text{ ml}} \times \frac{1000\text{gm}}{1\text{kg}} \times \frac{1\text{mg}}{1000\text{ug}} = \frac{\text{mg}}{\text{kg}}$$

In addition the sample results are converted to dry weight using the percent solids calculations:

$$\frac{\text{Wet weight conc.}}{\% \text{solids}} \times 100 = \text{final concentration, dry weight (mg/kg)}$$

Chain of Custody Record

Analytical Services

COC No.

No 30742

WWES Proj. Mgr.		Project Name										No's Correspond to Bottle Packing List	Analysis Required/Comments	Sample No.	Filtered Date/Time											
0702600		Franklin-Lewis																								
WWES Proj. No.		Sampler (Print)				Sampler Signature						No. of Containers	Container Type	Label #s	Sample No.	Filtered Date/Time										
Jim Keith		JD BRYAN				JD Bryan																				
Date Sampled	Time Sampled	Matrix*	Component	Is	Sample Identification										No. of Containers	Container Type	Label #s	Sample No.	Filtered Date/Time							
29 Apr 94	0825	WTR	X		FCR - SL - PGP	9 - EB - 04																				
	0855	WTR	X		FCR - GW - PGP	9 - EB - 04																4		(2) 40 VOA - 8240 VOC 503, 504 (1) 1000 Poly HN ₃ - Metals 505 (1) 1000 Poly NaOH - CN, CA, SEC.		
	0925	SL	X		FCR - SL - PGP	15 - 11 - 0 - 04																1		8240 VOC 507		
	1005	WTR	X		FCR - GW - PGP	15 - 04																4		(2) VOC, 508, 509 Metals 510 CN, CA 511		
	1025	SL	X		FCR - SL - PGP	16 - 11 - 0 - 04																1		8240 VOC 512		
	1110	WTR	X		FCR - GW - PGP	16 - 04																4		(2) 8240 VOC 513, 514 Metals 519 CN, CA 521		
	1110	WTR	X		FCR - GW - PGP	16 - 04																4		(2) 8240 VOC 515, 516 Metals 520 CN, CA 522		
	1110	WTR	X		FCR - GW - PGP	16 - 04 MS / MSW																2		VOC 517, 518		
HOLD SOL ANALYSIS																	PENDING REQUEST FROM WWES 5/2/94									
Relinquished By:		Date/Time			Received By:			Received to Lab By:			Date/Time		Logged in By:		Date/Time											
JD Bryan		4/27/94			JD Bryan			K Hollis			4/30/94 0845		K Hollis		4/30/94 1300											

* Matrix: Water (WTR), Wastewater (WW), Soil (SOIL), Sludge (SLG), Air, Oil, Waste (WASTE)

