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Informal Technical Information Report
For Analytical Data For
Plant 78

Prepared By: Environmental Science and Engineering, Inc.
Denver, CO
July 1990

AQM01-03-0517

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Environmental
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7 August 1990
Project No. 89946

Captain I. Atkins, Jr.
OEHL Technical Program Manager
USAF OEHL/TSS
Building 624
Brooks AFB, TX 78235-5501

Dear Captain Atkins:

Enclosed please find four copies of a Draft Information Technical Report (ITIR) for the surface sampling of Blue Creek of earlier this year. This ITIR was prepared using the USAFOEHL-TS Handbook version 2.0. If you have any questions concerning this report, please call.

Sincerely,

Robert H. Chesson
Project Manager

cc: L. Bilello
Project Files

Informal Technical Information Report
For Analytical Data For
Plant 78

Prepared By: Environmental Science and Engineering, Inc.
Denver, CO
July 1990

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Sample Identification Cross Reference Table

TABLE P783-W SAMPLE IDENTIFICATION CROSS REFERENCE FOR Plant 78 Water Samples

Lab Number	Field Number	Sample Description	Analytical Results	Analysis Date Report	Confirmation Sheets	Chain of Custody	QC Results
BCSW3	3	BCSW3-3					
BCSW3	4	GROUND WATER	11	34	NA	36	45
BCSW3	5	GROUND WATER	11	34	NA	36	45
BCSW3	6	GROUND WATER	11	34	NA	36	45
BCSW3	7	GROUND WATER	11	34	NA	36	45
BCSW3	8	GROUND WATER	11	34	NA	36	45
BCSW3	9	GROUND WATER	11	34	NA	36	45
BCSW3	10	GROUND WATER	11	34	NA	36	45
BCSW3	11	DUPLICATE	11	34	NA	36	45
BCSW3	12	TRIP BLANK	11	34	NA	36	45

TABLE P783-S SAMPLE IDENTIFICATION CROSS REFERENCE FOR Plant 78 Soil Samples

Initial Reference Page

Lab Number	Field Number	Sample Description	Analytical Results	Extraction/ Analysis Date		Second Column Confirmation		Chain of Custody	QC Results
				Report	Sheets	Report	Sheets		
BCSS3	3	BCSW3-3	22	35	NA	NA	38	58	
BCSS3	4	BCSW3-4	22	35	NA	NA	38	58	
BCSS3	5	BCSW3-5	22	35	NA	NA	38	58	
BCSS3	6	BCSW3-6	22	35	NA	NA	38	58	
BCSS3	7	BCSW3-7	22	35	NA	NA	38	58	
BCSS3	8	BCSW3-8	22	35	NA	NA	38	58	
BCSS3	9	BCSW3-9	22	35	NA	NA	38	58	
BCSS3	10	BCSW3-10	22	35	NA	NA	38	58	
BCSS3	11	BCSW3-DUPE	22	35	NA	NA	38	58	
BCSS3	13	TRIPBLANK	22	35	NA	NA	38	58	



Analytical Methods and Method Detection Limits

TABLE D-2A. Analytical Methodologies, Detection Limits, and Practical Quantitation Limits for Plant 78 - Aqueous Samples

Parameter	Method	Detection Limit (mg/L)	Practical Quantitation Limits (mg/L)
<u>COMMON ANIONS</u>			
HYDROCARBONS, PETROL.	E418.1	5.12	25.6
<u>FURNACE AND COLD VAPOR (C.V.)</u>			
MERCURY, TOTAL	E245.1	0.12	.6
<u>ICAP METAL SCREEN</u>			
ALUMINUM, TOTAL	E200.7	0.018	.09
ANTIMONY, TOTAL	E200.7	0.019	.095
ARSENIC, TOTAL	E200.7	0.028	.14
BARIUM, TOTAL	E200.7	0.001	.005
BERYLLIUM, TOTAL	E200.7	0.001	.005
CADMIUM, TOTAL	E200.7	0.002	.01
CALCIUM, TOTAL	E200.7	0.01	.05
CHROMIUM, TOTAL	E200.7	0.004	.02
COBALT, TOTAL	E200.7	0.007	.035
COPPER, TOTAL	E200.7	0.003	.015
IRON, TOTAL	E200.7	0.004	.02
LEAD, TOTAL	E200.7	0.026	.13
MAGNESIUM, TOTAL	E200.7	0.03	.15
MANGANESE, TOTAL	E200.7	0.001	.005
MOLYBDENUM, TOTAL	E200.7	0.004	.02
NICKEL, TOTAL	E200.7	0.008	.04
POTASSIUM, TOTAL	E200.7	0.46	2.3
SELENIUM, TOTAL	E200.7	0.042	.21
SILVER, TOTAL	E200.7	0.003	.015
SODIUM, TOTAL	E200.7	0.057	.285
THALLIUM, TOTAL	E200.7	0.15	.75
VANADIUM, TOTAL	E200.7	0.004	.02
ZINC, TOTAL	E200.7	0.002	.01
<u>PURGEABLE HALOCARBONS</u>			
1-CHLOROHEXANE	SW8010	0.005	0.025
1,1-DICHLOROETHANE	SW8010	0.0004	0.002
1,1,1-TRICHL'ETHANE	SW8010	0.0002	0.001
1,1,1,2-TETRACH'ETHANE	SW8010	0.005	0.025
1,1,2-TRICHL'ETHANE	SW8010	0.0001	0.0005
1,1,2,2-TETRACHLOROETHANE	SW8010	0.0002	0.001
1,2-DICHLOROETHANE	SW8010	0.0007	0.0035
1,2-DICHLOROPROPANE	SW8010	0.0002	0.001
2-CHLOROETHYL VINYLETHER	SW8010	0.0007	0.0035
BROMOBENZENE	SW8010	0.005	0.025
BROMODICHLOROMETHANE	SW8010	0.0005	0.0025
BROMOFORM	SW8010	0.001	0.005
BROMOMETHANE	SW8010	0.006	0.03
CARBON TETRACHLORIDE	SW8010	0.0006	0.003
CHLOROBENZENE	SW8010	0.0012	0.006

TABLE D-2A. Analytical Methodologies, Detection Limits, and Practical Quantitation Limits for Plant 78 - Aqueous Samples

Parameter	Method	Detection Limit (mg/L)	Practical Quantitation Limits (mg/L)
<u>PURGEABLE HALOCARBONS (Continued)</u>			
CHLOROETHANE	SW8010	0.003	0.015
CHLOROFORM	SW8010	0.0002	0.001
CHLOROMETHANE	SW8010	0.0004	0.002
CIS-1,3-DICHLOROPROPENE	SW8010	0.002	0.01
DIBROMOCHLOROMETHANE	SW8010	0.0005	0.0025
DIBROMOMETHANE	SW8010	0.005	0.025
DICHLORODIFLUOROMETHANE	SW8010	0.009	0.045
METHYLENE CHLORIDE	SW8010	0.002	0.01
TETRACHLOROETHENE	SW8010	0.0002	0.001
TRANS-1,3-DICHLOROPROPENE	SW8010	0.002	0.01
TRANS-1,2-DICHLOROETHENE	SW8010	0.0005	0.0025
TRICHL' FLUOROMETHANE	SW8010	0.005	0.025
TRICHLOROETHENE	SW8010	0.0006	0.003
VINYL CHLORIDE	SW8010	0.0002	0.001
<u>PURGEABLE AROMATICS</u>			
BENZENE	SW8020	0.0007	0.0035
CHLOROBENZENE	SW8020	0.001	0.005
DICHLOROBENZENE	SW8020	0.0012	0.006
ETHYLBENZENE	SW8020	0.001	0.005
TOLUENE	SW8020	0.001	0.005
XYLENES, TOTAL	SW8020	0.002	0.01
<u>SEMIVOLATILE ORGANIC COMPOUND</u>			
1-NAPHTHYLAMINE	SW8270	0.00481	0.02405
1-CHLORONAPHTHALENE	SW8270	0.00551	0.02755
1,2-DIPHEN' HYDRAZINE	SW8270	0.00771	0.03855
1,2-DICHLOROBENZENE	SW8270	0.0002	0.001
1,2,4-TRICH' BENZENE	SW8270	0.00026	0.0013
1,2,4,5-TETRACHLOROBENZENE	SW8270	0.00856	0.0428
1,3-DICHLOROBENZENE	SW8270	0.00108	0.0054
1,4-DICHLOROBENZENE	SW8270	0.00012	0.0006
2-CHLOROPHENOL	SW8270	0.00014	0.0007
2-METHYL PHENOL	SW8270	0.00042	0.0021
2-METHYLNAPHTHALENE	SW8270	0.00043	0.00215
2-NITROPHENOL	SW8270	0.00090	0.0045
2-NITROANILINE	SW8270	0.00114	0.0057
2-PICOLINE	SW8270	0.0162	0.081
2-CHLORONAPHTHALENE	SW8270	0.00023	0.00115
2-NAPHTHYLAMINE	SW8270	0.00376	0.0188
2,3,4,6 TETRACL' PHENOL	SW8270	0.00896	0.0448
2,4-DICHLOROPHENOL	SW8270	0.00018	0.0009
2,4-DINITROTOLUENE	SW8270	0.00122	0.0061
2,4-DINITROPHENOL	SW8270	0.00171	0.00855
2,4-DIMETHYLPHENOL	SW8270	0.00014	0.0007
2,4,5-TRICHL' PHENOL	SW8270	0.00046	0.0023
2,4,6-TRICHL' PHENOL	SW8270	0.00017	0.00085
2,6-DINITROTOLUENE	SW8270	0.00093	0.00465
2,6-DICHLOROPHENOL	SW8270	0.00915	0.04575
3-NITROANILINE	SW8270	0.00153	0.00765

TABLE D-2A. Analytical Methodologies, Detection Limits, and Practical Quantitation Limits for Plant 78 - Aqueous Samples

Parameter	Method	Detection Limit (mg/L)	Practical Quantitation Limits (mg/L)
<u>SEMIVOLATILE ORGANIC COMPOUND (Continued)</u>			
3-METHYLCHOLANTHRENE	SW8270	0.00550	0.0275
3,3'-DICHL'BENZIDINE	SW8270	0.00194	0.0097
4-BROMOPHENYLPHENYLETHER	SW8270	0.00029	0.00145
4-METHYL PHENOL	SW8270	0.00040	0.002
4-NITROANILINE	SW8270	0.00192	0.0096
4-CHLOROPHENYLPHENYLETHER	SW8270	0.0004	0.002
4-CHLORO-3-METHYLPHENOL	SW8270	0.00048	0.0024
4-CHLOROANILINE	SW8270	0.00034	0.0017
4-AMINOBIIPHENOL	SW8270	0.0325	0.1625
4-NITROPHENOL	SW8270	0.00188	0.0094
4,6-DINITRO-2-METHYLPHENOL	SW8270	0.00151	0.00755
7,12-DIMETHYLBENZ(A)ANTHRACEN	SW8270	0.00544	0.0272
A-,A-DIMETHYLPHENETHYLAMINE	SW8270	0.00712	0.0356
ACENAPHTHENE	SW8270	0.00018	0.0009
ACENAPHTHYLENE	SW8270	0.00016	0.0008
ACETOPHENONE	SW8270	0.00345	0.01725
ANILINE	SW8270	0.00522	0.0261
ANTHRACENE	SW8270	0.00031	0.00155
BENZIDINE	SW8270	0.0694	0.347
BENZO(A)ANTHRACENE	SW8270	0.00015	0.00075
BENZO(A)PYRENE	SW8270	0.00014	0.0007
BENZO(B)FLUORANTHENE	SW8270	0.0004	0.002
BENZO(GHI)PERYLENE	SW8270	0.0006	0.003
BENZO(K)FLUORANTHENE	SW8270	0.00083	0.00415
BENZOIC ACID	SW8270	0.00159	0.00795
BENZYL ALCOHOL	SW8270	0.00035	0.00175
BIS(2-ETHYLHEXYL)PHTHALATE	SW8270	0.00157	0.00785
BIS(2-CHL'ISOPROPYL)ETHER	SW8270	0.00053	0.00265
BIS(2-CHLOROETHYL)ETHER	SW8270	0.00014	0.0007
BIS(2-CHLOROETHOXY)METHANE	SW8270	0.00024	0.0012
BUTYLBENZYLPHTHALATE	SW8270	0.00106	0.0053
CHRYSENE	SW8270	0.00155	0.00775
DI-N-BUTYLPHTHALATE	SW8270	0.00086	0.0043
DI-N-OCTYLPHTHALATE	SW8270	0.00247	0.01235
DIBEN'(A,H)ANTH'CENE	SW8270	0.00082	0.0041
DIBENZ(A,J)ACRIDINE	SW8270	0.0327	0.1635
DIBENZOFURAN	SW8270	0.00017	0.00085
DIETHYLPHTHALATE	SW8270	0.00085	0.00425
DIMETHYLPHTHALATE	SW8270	0.00042	0.0021
DIPHENYLAMINE	SW8270	0.00415	0.02075
ETHYL METHANESULFONATE	SW8270	0.00778	0.0389
FLUORANTHENE	SW8270	0.00069	0.00345
FLUORENE	SW8270	0.00044	0.0022
HEXACHLOROBENZENE	SW8270	0.00034	0.0017
HEXACHLOROBUTADIENE	SW8270	0.00027	0.00135
HEXACHLOROCYCLOPENTADIENE	SW8270	0.00083	0.00415
HEXACHLOROETHANE	SW8270	0.00014	0.0007
INDENO(1,2,3-CD)PYRENE	SW8270	0.00081	0.00405
ISOPHORONE	SW8270	0.00018	0.0009
METHYL METHANESULFONATE	SW8270	0.00677	0.03385
N-NITROSODIPHE'AMINE	SW8270	0.00027	0.00135
N-NITROSO-DI-N-BUTYLAMINE	SW8270	0.00863	0.04315
N-NITROSODI-N-PROPYLAMINE	SW8270	0.00069	0.00345
N-NITROSOPIPERIDINE	SW8270	0.0155	0.0775

TABLE D-2A. Analytical Methodologies, Detection Limits, and Practical Quantitation Limits for Plant 78 - Aqueous Samples

Parameter	Method	Detection Limit (mg/L)	Practical Quantitation Limits (mg/L)
<u>SEMIVOLATILE ORGANIC COMPOUND (Continued)</u>			
N-NITROSODIMET'AMINE	SW8270	0.00715	0.03575
NAPHTHALENE	SW8270	0.00013	0.00065
NITROBENZENE	SW8270	0.00055	0.00275
P-DIMETHYLAMINOAZOBENZENE	SW8270	0.00359	0.01795
PENTACHLOROBENZENE	SW8270	0.00538	0.0269
PENTACHLORONITROBENZENE	SW8270	0.0198	0.099
PENTACHLOROPHENOL	SW8270	0.00091	0.00455
PHENACETIN	SW8270	0.0222	0.111
PHENANTHRENE	SW8270	0.00023	0.00115
PHENOL	SW8270	0.00051	0.00255
PRONAMIDE	SW8270	0.0105	0.0525
PYRENE	SW8270	0.00083	0.00415

TABLE D-2B. Analytical Methodologies, Detection Limits, and Practical Quantitation Limits for Plant 78 - Soil Samples

Parameter	Method	Detection Limit (mg/kg)	Practical Quantitation Limits (mg/kg)
<u>COMMON ANIONS IN SOIL</u>			
HYDROCARBONS, PETROL	E418.1	1.65	8.25
<u>COLD VAPOR (C.V.)</u>			
MERCURY	SW7471	0.06	.3
<u>ICAP METAL SCREEN</u>			
ALUMINUM, SED	SW6010	1.8	9
ANTIMONY, SED	SW6010	1.9	9.5
ARSENIC, SED	SW6010	2.8	14
BARIUM, SED	SW6010	0.1	.5
BERYLLIUM, SED	SW6010	0.1	.5
CADMIUM, SED	SW6010	0.2	1
CHROMIUM, SED	SW6010	0.4	2
COBALT, SED	SW6010	0.7	3.5
COPPER, SED	SW6010	0.3	1.5
IRON, SED	SW6010	0.4	2
LEAD, SED	SW6010	2.6	13
MAGNESIUM, SED	SW6010	3.0	15
MANGANESE, SED	SW6010	0.1	.5
MOLYBDENUM, SED	SW6010	0.4	2
NICKEL, SED	SW6010	0.8	4
POTASSIUM, SED	SW6010	45.5	227.5
SELENIUM, SED	SW6010	4.2	21
SILVER, SED	SW6010	0.3	1.5
SODIUM, SED	SW6010	5.7	28.5
THALLIUM, SED	SW6010	14.8	74
VANADIUM, SED	SW6010	0.4	2
ZINC, SED	SW6010	0.2	1
<u>SEMIVOLATILES</u>			
1-NAPHTHYLAMINE	SW8270	0.32	1.6
1,2-DIPHENYLHYDRAZIN, S	SW8270	0.51	2.55
1,2-DICHLOROBENZENE	SW8270	0.01	.05
1,2,4-TRICHLOROBENZENE	SW8270	0.02	.1
1,2,4,5-TETRACHLOROBENZENE	SW8270	0.57	2.85
1,3-DICHLOROBENZENE	SW8270	0.05	.25
1,4-DICHLOROBENZENE	SW8270	0.08	.4
2-CHLORONAPHTHALENE	SW8270	7.74	38.7
2-PICOLINE	SW8270	1.08	5.4
2-METHYLNAPHTHALENE	SW8270	0.03	.15
2-CHLOROPHENOL	SW8270	4.53	22.65
2-METHYLPHENOL	SW8270	0.03	.15
2-NITROPHENOL	SW8270	0.06	.3
2-NAPHTHYLAMINE	SW8270	0.25	1.25
2-NITROANILINE	SW8270	0.08	.4
2,3,4,6-TETRACHLOROPHENOL	SW8270	0.6	3
2,4-DINITROTOLUENE	SW8270	0.08	.4

TABLE D-2B. Analytical Methodologies, Detection Limits, and Practical Quantitation Limits for Plant 78 - Soil Samples

Parameter	Method	Detection Limit (mg/kg)	Practical Quantitation Limits (mg/kg)
<u>SEMIVOLATILES (Continued)</u>			
2,4-DIMETHYPHENOL	SW8270	0.01	.05
2,4-DINITROPHENOL	SW8270	0.11	.55
2,4-DICHLOROPHENOL	SW8270	5.86	29.3
2,4,5-TRICH'PHENOL	SW8270	0.03	.15
2,4,6-TRICHLRPHENOL	SW8270	0.01	.05
2,6-DICHLOROPHENOL	SW8270	0.61	3.05
2,6-DINITROTOLUENE	SW8270	0.06	.3
3-METHYLCHOLANTHRENE	SW8270	0.37	1.85
3-NITROANILINE	SW8270	0.10	.5
3,3-DICHLOROBENZIDINE	SW8270	0.13	.65
4-BROMOPHENYL PHENYL ETHER	SW8270	0.02	.1
4-CHLOROPHENYLPHENYL ETHER	SW8270	0.03	.15
4-CHLOROANILINE, SED	SW8270	0.02	.1
4-CHLORO-3-METHYLPHENOL	SW8270	0.03	.15
4-NITROPHENOL	SW8270	0.13	.65
4-METHYLPHENOL	SW8270	0.03	.15
4-NITROANILINE	SW8270	0.13	.65
4-AMINOBIIPHENYL	SW8270	2.16	10.8
4,6-DINITRO-2-METHYLPHENOL	SW8270	0.10	.5
7,12-DIMETHYLBENZ(A)ANTHRANCE	SW8270	0.36	1.8
A-,A-DIMETHYLPHENETHYLAMINE	SW8270	0.47	2.35
ACENAPHTHENE, SOIL	SW8270	0.01	.05
ACENAPHTHYLENE, SOIL	SW8270	0.01	.05
ACETOPHENONE	SW8270	0.23	1.15
ANILINE	SW8270	0.42	2.1
ANTHRACENE, SOIL	SW8270	0.02	.1
BENZIDINE	SW8270	5.52	27.6
BENZO(A)ANTHRACENE	SW8270	0.01	.05
BENZO(A)PYRENE	SW8270	0.01	.05
BENZO(B)FLUORANTHENE, S	SW8270	0.03	.15
BENZO(G,H,I,)PERYLENE	SW8270	0.04	.2
BENZO(K)FLUORANTHENE	SW8270	0.06	.3
BENZOIC ACID	SW8270	0.11	.55
BENZYL ALCOHOL	SW8270	0.02	.1
BIS(2-CHLOROETHOXY)METHANE	SW8270	7.93	39.65
BIS(2-CHL'ISOPROPYL) ETHER	SW8270	0.04	.2
BIS(2-CHLOROETHYL)ETHER	SW8270	0.01	.05
BIS(2-ETHYLHEXYL)PHTHALATE	SW8270	0.10	.5
BUTYL BENZYL PHTHALATE	SW8270	0.07	.35
CHRYSENE	SW8270	0.10	.5
DI-N-OCTYLPHTHALATE	SW8270	0.16	.8
DI-N-BUTYLPHTHALATE	SW8270	0.06	.3
DIBENZ(A,J)ACRIDINE	SW8270	2.60	13
DIBENZO(A,H)ANTHRACENE	SW8270	0.05	.25
DIBENZOFURAN	SW8270	0.01	.05
DIETHYLPHTHALATE	SW8270	0.06	.3
DIMETHYLPHTHALATE	SW8270	0.03	.15
DIPHENYLAMINE	SW8270	0.28	1.4
ETHYL METHANESULFONATE	SW8270	0.52	2.6
FLUORANTHENE	SW8270	0.05	.25
FLUORENE	SW8270	0.03	.15
HEXACHLOROBENZENE	SW8270	0.03	.15
HEXACHLOROBUTADIENE	SW8270	0.02	.1

TABLE D-2B. Analytical Methodologies, Detection Limits, and Practical Quantitation Limits for Plant 78 - Soil Samples

Parameter	Method	Detection Limit (mg/kg)	Practical Quantitation Limits (mg/kg)
<u>SEMIVOLATILES (Continued)</u>			
HEXACHLOROCYCLOPENTADIENE	SW8270	0.06	.3
HEXACHLOROETHANE	SW8270	0.01	.05
INDENO(1,2,3-CD)PYRENE	SW8270	0.05	.25
ISOPHORONE	SW8270	0.01	.05
METHYL METHANESULFONATE	SW8270	0.45	2.25
N-NITROSODI-N-PROPYLAMINE	SW8270	0.05	.25
N-NITROSODIPHE 'AMINE	SW8270	0.02	.1
N-NITROSODIMETHYLAMINE	SW8270	0.48	2.4
N-NITROSOPIPERIDINE	SW8270	1.04	5.2
N-NITRSO-DI-N-BUTYLAMINE	SW8270	0.58	2.9
NAPHTHALENE	SW8270	0.01	.05
NITROBENZENE	SW8270	0.04	.2
P-DIMETHYLAMINO BENZENE	SW8270	0.24	1.2
PENTACHLOROBENZENE	SW8270	0.36	1.8
PENTACHLORONITROBENZENE	SW8270	1.32	6.6
PENTACHLOROPHENOL	SW8270	0.06	.3
PHENACETIN	SW8270	1.48	7.4
PHENANTHRENE	SW8270	0.02	.1
PHENOL	SW8270	0.03	.15
PRONAMIDE	SW8270	0.7	3.5
PYRENE	SW8270	0.06	.3
<u>PURGEABLE HALOCARBONS</u>			
1,1,1,2-TETRACHLOROETHANE	SW8010	1.0489	5.2445
1,1,1-TRICHLOROETHANE	SW8010	0.042	0.21
1,1,2,2-TETRACHLOROETHANE	SW8010	0.042	0.21
1,1,2- TRICHLOROETHANE	SW8010	0.021	0.105
1,1 DICHLOROETHANE	SW8010	0.0839	0.4195
1,1-DICHLOROETHENE	SW8010	0.1468	0.734
1,2,-DICHLOROPROPANE	SW8010	0.042	0.21
1,2-DICHLOROETHANE	SW8010	0.042	0.21
1-CHLOROHEXANE	SW8010	1.0489	5.2445
2-CHLOROETHYL VINYL ETHER	SW8010	0.1468	0.734
BROMOBENZENE	SW8010	1.0489	5.2445
BROMODICHLOROMETHANE	SW8010	0.1049	0.5245
BROMOFORM	SW8010	0.2098	1.049
CARBON TETRACHLORIDE	SW8010	0.1259	0.6295
CHLORO BENZENE	SW8010	0.2517	1.2585
CHLOROETHANE	SW8010	0.6293	3.1465
CHLOROFORM	SW8010	0.042	0.21
CIS-1,3-DICHLOROPROPENE	SW8010	0.4195	2.0975
DIBROMOCHLOROMETHANE	SW8010	0.1049	0.5245
DIBROMOETHANE	SW8010	1.0489	5.2445
DICHLORO BENZENE, TOT.	SW8010	0.944	4.72
DICHLORO BENZENE, TOT.	SW8010	0.4195	2.0975
DICHLORODIFLUOROMETHANE	SW8010	1.888	9.44
METHYL BROMIDE	SW8010	1.2586	6.293
METHYLCHLORIDE	SW8010	0.0005	0.0025
METHYLENE CHLORIDE	SW8010	0.4195	2.0975
TETRACHLOROETHYLENE	SW8010	0.042	0.21
TRANS-1,2-DICHLOROETHENE	SW8010	0.1049	0.5245

TABLE D-2B. Analytical Methodologies, Detection Limits, and Practical Quantitation Limits for Plant 78 - Soil Samples

Parameter	Method	Detection Limit (mg/kg)	Practical Quantitation Limits (mg/kg)
<u>PURGEABLE HALOCARBONS (Continued)</u>			
TRICHLOROETHYLENE	SW8010	0.1259	0.6295
TRICHLOROFLUOROMETHANE	SW8010	1.0489	5.2445
TRICHLOROPROPANE	SW8010	1.0489	5.2445
T-1,3-DICHLOROPROPENE	SW8010	0.4195	2.0975
VINYL CHLORIDE	SW8010	0.0881	0.4405
<u>PURGEABLE AROMATICS</u>			
BENZENE	SW8020	0.1468	0.734
BROMOBENZENE	SW8020	1.0489	5.2445
CHLOROBENZENE	SW8020	0.2098	1.049
ETHYLBENZENE	SW8020	0.2098	1.049
TOLUENE	SW8020	0.2098	1.049
XYLENES, TOTAL	SW8020	0.4195	2.0975
<u>EPTOX</u>			
2,4,5-TP/SILVEX	SW1310	0.021	0.105
2,4-D	SW1310	0.0819	0.4095
BHC,G(LINDANE)	SW1310	*0.0105	*0.0525
CHLORDANE	SW1310	*0.021	*0.105
ENDRIN	SW1310	*0.021	*0.105
HEPTACHLOR	SW1310	*0.021	*0.105
MERCURY, TOTAL	SW1310	**0.0005	**0.0025
METHOXYCHLOR	SW1310	*0.21	*1.05
TOXAPHENE	SW1310	*2.1005	*10.5025

*These units are in terms of ug/l.

**These units are in term of mg/l.

Analytical Data

000011

04/25/90

Hunter/ESE, Inc.

PROJECT NAME PLANT 78 3-5-90
PROJECT MANAGER BOB CHESSON

PROJECT NUMBER BCSW3
FIELD GROUP

STORET CODE:	METHOD CODE:	PARAMETER:	UNITS:	#	SAMPLE ID	DATE	TIME	34030	34010	34301	34371	99634	81551	81524	34418	34413	39175	34311	34668	34423	34488
BCSW3	3	BCSW3-3	03/09/90	08:45	PI	BZ	UG/L	<0.70	<1.00	<1.00	<1.00	<5.00	<2.00	<4.50	<0.400	<6.00	<0.300	<3.00	<9.00	<2.00	<5.00
BCSW3	4	BCSW3-4	03/09/90	08:25	PI	CLBZ	UG/L	<0.70	<1.00	<1.00	<1.00	<5.00	<2.00	<4.50	<0.400	<6.00	<0.300	<3.00	<9.00	<2.00	<5.00
BCSW3	5	BCSW3-5	03/09/90	07:15	PI	CLBZ	UG/L	<0.70	<1.00	<1.00	<1.00	<5.00	<2.00	<4.50	<0.400	<6.00	<0.300	<3.00	<9.00	<2.00	<5.00
BCSW3	6	BCSW3-6	03/08/90	17:10	PI	CLBZ	UG/L	<0.70	<1.00	<1.00	<1.00	<5.00	<2.00	<4.50	<0.400	<6.00	<0.300	<3.00	<9.00	<2.00	<5.00
BCSW3	7	BCSW3-7	03/08/90	11:30	PI	CLBZ	UG/L	<0.70	<1.00	<1.00	<1.00	<5.00	<2.00	<4.50	<0.400	<6.00	<0.300	<3.00	<9.00	<2.00	<5.00
BCSW3	8	BCSW3-8	03/08/90	13:30	PI	CLBZ	UG/L	<0.70	<1.00	<1.00	<1.00	<5.00	<2.00	<4.50	<0.400	<6.00	<0.300	<3.00	<9.00	<2.00	<5.00
BCSW3	9	BCSW3-9	03/08/90	14:50	PI	CLBZ	UG/L	<0.70	<1.00	<1.00	<1.00	<5.00	<2.00	<4.50	<0.400	<6.00	<0.300	<3.00	<9.00	<2.00	<5.00
BCSW3	10	BCSW3-10	03/08/90	16:15	PI	CLBZ	UG/L	<0.70	<1.00	<1.00	<1.00	<5.00	<2.00	<4.50	<0.400	<6.00	<0.300	<3.00	<9.00	<2.00	<5.00
BCSW3	11	BCSW3-DUPE	03/09/90	07:15	PI	CLBZ	UG/L	<0.70	<1.00	<1.00	<1.00	<5.00	<2.00	<4.50	<0.400	<6.00	<0.300	<3.00	<9.00	<2.00	<5.00
BCSW3	14	TRPBLK	03/02/90	17:00	PI	CLBZ	UG/L	<0.70	<1.00	<1.00	<1.00	<5.00	<2.00	<4.50	<0.400	<6.00	<0.300	<3.00	<9.00	4.09	<5.00

04/25/90

Hunter/EST, Inc.

PROJECT NAME PLANT 78 3-5-90
PROJECT MANAGER BOB CHESSONPROJECT NUMBER BCSW3
FIELD GROUP

STORER CODE:	METHOD CODE:	PARAMETER:	UNITS:	#	SAMPLE ID	DATE	TIME	34501	34496	34546	32106	34531	81522	34506	32102	32101	34541	34699	34511	39180	32105
								HA	HA	HA	HA	HA	HA	HA	HA	HA	HA	HA	HA	HA	HA
								DCE11	DCA11	DCE12T	TCLME	DCA12	DEMA	TCA111	CTCL	BDCME	DCP12	DCP13T	TCA112	TCE	DBCME
								UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
BCSW3	3	BCSW3-3	03/09/90	08:45	<0.700	<0.400	<0.500	<0.200	<0.200	<0.200	<0.200	<0.200	<6.00	<0.200	<0.600	<0.500	<0.200	<2.00	<0.300	<0.600	<0.500
BCSW3	4	BCSW3-4	03/09/90	08:25	<0.700	<0.400	<0.500	<0.200	<0.200	<0.200	<0.200	<0.200	<6.00	<0.200	<0.600	<0.500	<0.200	<2.00	<0.300	<0.600	<0.500
BCSW3	5	BCSW3-5	03/09/90	07:15	<0.700	<0.400	<0.500	<0.200	<0.200	<0.200	<0.200	<0.200	<6.00	<0.200	<0.600	<0.500	<0.200	<2.00	<0.300	<0.600	<0.500
BCSW3	6	BCSW3-6	03/08/90	17:10	<0.700	<0.400	<0.500	<0.200	<0.200	<0.200	<0.200	<0.200	<6.00	<0.200	<0.600	<0.500	<0.200	<2.00	<0.300	<0.600	<0.500
BCSW3	7	BCSW3-7	03/08/90	11:30	<0.700	<0.400	<0.500	<0.200	<0.200	<0.200	<0.200	<0.200	<6.00	<0.200	<0.600	<0.500	<0.200	<2.00	<0.300	<0.600	<0.500
BCSW3	8	BCSW3-8	03/08/90	13:30	<0.700	<0.400	<0.500	<0.200	<0.200	<0.200	<0.200	<0.200	<6.00	<0.200	<0.600	<0.500	<0.200	<2.00	<0.300	<0.600	<0.500
BCSW3	9	BCSW3-9	03/08/90	14:50	<0.700	<0.400	<0.500	<0.200	<0.200	<0.200	<0.200	<0.200	<6.00	<0.200	<0.600	<0.500	<0.200	<2.00	<0.300	<0.600	<0.500
BCSW3	10	BCSW3-10	03/08/90	16:15	<0.700	<0.400	<0.500	<0.200	<0.200	<0.200	<0.200	<0.200	<6.00	<0.200	<0.600	<0.500	<0.200	<2.00	<0.300	<0.600	<0.500
BCSW3	11	BCSW3-DUPE	03/09/90	07:15	<0.700	<0.400	<0.500	<0.200	<0.200	<0.200	<0.200	<0.200	<6.00	<0.200	<0.600	<0.500	<0.200	<2.00	<0.300	<0.600	<0.500
BCSW3	14	TRPBLK	03/02/90	17:00	<0.700	<0.400	<0.500	<0.200	<0.200	<0.200	<0.200	<0.200	<6.00	<0.200	<0.600	<0.500	<0.200	<2.00	<0.300	<0.600	<0.500

04/25/90

Hunter/ESE, Inc.

PROJECT NAME PLANT 78 3-5-90
PROJECT MANAGER BOB CHESSON

PROJECT NUMBER	BCSW3
FIELD GROUP	

STORET CODE:

METHOD CODE:

PARAMETER:

UNITS:

FIELD GRP.	#	SAMPLE ID	DATE	TIME
BCSW3	3	BCSW3-3	03/09/90	08:45
BCSW3	4	BCSW3-4	03/09/90	08:25
BCSW3	5	BCSW3-5	03/09/90	07:15
BCSW3	6	BCSW3-6	03/08/90	17:10
BCSW3	7	BCSW3-7	03/08/90	11:30
BCSW3	8	BCSW3-8	03/08/90	13:30
BCSW3	9	BCSW3-9	03/08/90	14:50
BCSW3	10	BCSW3-10	03/08/90	16:15
BCSW3	11	BCSW3-DUPE	03/09/90	07:15
BCSW3	14	TRPBLK	03/02/90	17:00

[illegible]

06/27/20

Hunter/ESE, Inc.

PROJECT NAME PLANT 78 3-5-90
PROJECT MANAGER BOB CHESSON

PROJECT NUMBER	BCSW3
FIELD GROUP	

STORET CODE:

METHOD CODE:

PARAMETER:

UNITS:

FIELD GRP.	#	SAMPLE ID	DATE	TIME
BCSW3	3	BCSW3-3	03/09/90	08:45
BCSW3	4	BCSW3-4	03/09/90	08:25
BCSW3	5	BCSW3-5	03/09/90	07:15
BCSW3	6	BCSW3-6	03/08/90	17:10
BCSW3	7	BCSW3-7	03/08/90	11:30
BCSW3	8	BCSW3-8	03/08/90	13:30
BCSW3	9	BCSW3-9	03/08/90	14:50
BCSW3	10	BCSW3-10	03/08/90	16:15
BCSW3	11	11BCSW3-DUPE	03/09/90	07:15
BCSW3	14	TRPBK	03/02/90	17:00

[illegible]

PROJECT NUMBER
FIELD GROUP BCSW3

PROJECT NAME PLANT 78 3-5-90
PROJECT MANAGER BOB CHESSON

HUNTER/EST, INC.

04/25/90

STORE CODE:

METHOD CODE:

PARAMETER:

UNITS:

FLD.GRP.	#	SAMPLE ID	DATE	TIME
BCSW3	3	BCSW3-3	03/09/90	08:45
BCSW3	4	BCSW3-4	03/09/90	08:25
BCSW3	5	BCSW3-5	03/09/90	07:15
BCSW3	6	BCSW3-6	03/08/90	17:10
BCSW3	7	BCSW3-7	03/08/90	11:30
BCSW3	8	BCSW3-8	03/08/90	13:30
BCSW3	9	BCSW3-9	03/08/90	14:50
BCSW3	10	BCSW3-10	03/08/90	16:15
BCSW3	11	BCSW3-DUPE	03/09/90	07:15
BCSW3	14	TRPBLK	03/02/90	17:00

34278	ADMS	39100	ADMS	34283	ADMS	34636	ADMS	99075	ADMS	97694	ADMS	34581	ADMS	34586	ADMS	34452	ADMS	34641	ADMS	34320	ADMS	97695	ADMS	34556	ADMS	81302	ADMS
ADMS	BI2CEM	BI2EHP	BI2CEM	BI2CEM	BPPE4	CLANIL4	CLNPH1	CLNPH2	CLPH2	C3NP4	CPPE4	CPPE4	CPPE4	CPPE4	CPPE4	CPPE4	CPPE4	CPPE4	CPPE4	CPPE4	CPPE4	CPPE4	CPPE4	CPPE4	CPPE4	CPPE4	CPPE4
UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
<1.2	<1.2	<2.0	<1.2	<1.2	<0.99	<1.68	<1.37	<1.3	<1.1	<1.6	<1.2	<1.2	<1.2	<1.1	<1.1	<1.6	<1.6	<1.2	<1.2	<1.4	<1.4	<5.00	<5.00	<0.90	<0.90	<1.03	
NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ

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Hunter/ESE, Inc.

PROJECT NAME	PLANT 78 3-5-90
PROJECT MANAGER	BOB CHESSON

PROJECT NUMBER	BCSW3
FIELD GROUP	

METHOD CODE:

UNITS:

FLD.GRP

STORET CODE:	#	SAMPLE ID	DATE	TIME
FIELD GRP.	3	BCSW3-3	03/09/90	08:45
BCSW3	4	BCSW3-4	03/09/90	08:25
BCSW3	5	BCSW3-5	03/09/90	07:15
BCSW3	6	BCSW3-6	03/08/90	17:10
BCSW3	7	BCSW3-7	03/08/90	11:30
BCSW3	8	BCSW3-8	03/08/90	13:30
BCSW3	9	BCSW3-9	03/08/90	14:50
BCSW3	10	BCSW3-10	03/08/90	16:15
BCSW3	11	BCSW3-DUPE	03/09/90	07:15
BCSW3	14	TRPBLK	03/02/90	17:00

[illegible]

04/25/90

Hunter/ESF, Inc.

PROJECT NAME PLANT 78 3-5-90
PROJECT MANAGER BOB CHESSON

PROJECT NUMBER BCSW3
FIELD GROUP

STORET CODE:

METHOD CODE:

PARAMETER:

UNITS:

FLD.GRP.	#	SAMPLE ID	DATE	TIME
BCSW3	3	BCSW3-3	03/09/90	08:45
BCSW3	4	BCSW3-4	03/09/90	08:25
BCSW3	5	BCSW3-5	03/09/90	07:15
BCSW3	6	BCSW3-6	03/08/90	17:10
BCSW3	7	BCSW3-7	03/08/90	11:30
BCSW3	8	BCSW3-8	03/08/90	13:30
BCSW3	9	BCSW3-9	03/08/90	14:50
BCSW3	10	BCSW3-10	03/08/90	16:15
BCSW3	11	BCSW3-DUPE	03/09/90	07:15
BCSW3	14	TRPBLK	03/02/90	17:00

34616	ADMS	DNP24	UG/L	34611	ADMS	DNT24	UG/L	34626	ADMS	26DNT	UG/L	77579	ADMS	DPA	UG/L	34346	ADMS	DIP12	UG/L	34596	ADMS	DNOP	UG/L	97699	ADMS	EMSULFN	UG/L	34376	ADMS	FLA	UG/L	34381	ADMS	FLUORENE	UG/L	39700	ADMS	HCLBZ	UG/L	34391	ADMS	HCBU	UG/L	34386	ADMS	HCCP	UG/L	34396	ADMS	HCLCA	UG/L	34403	ADMS	INP123	UG/L
<3.0				<1.1				<1.7				<3.84				<5.0				<1.0			<2.5				<1.6			<1.5		<1.4		<3.5		<2.1		<4.5		<1.4															
<3.0				<1.1				<1.7				<3.84				<5.0				<1.0			<2.5				<1.6			<1.5		<1.4		<3.5		<2.1		<4.5		<1.4															
<3.0				<1.1				<1.7				<3.84				<5.0				<1.0			<2.5				<1.6			<1.5		<1.4		<3.5		<2.1		<4.5		<1.4															
<3.0				<1.1				<1.7				<3.84				<5.0				<1.0			<2.5				<1.6			<1.5		<1.4		<3.5		<2.1		<4.5		<1.4															
<3.0				<1.1				<1.7				<3.84				<5.0				<1.0			<2.5				<1.6			<1.5		<1.4		<3.5		<2.1		<4.5		<1.4															
<3.0				<1.1				<1.7				<3.84				<5.0				<1.0			<2.5				<1.6			<1.5		<1.4		<3.5		<2.1		<4.5		<1.4															
<3.0				<1.1				<1.7				<3.84				<5.0				<1.0			<2.5				<1.6			<1.5		<1.4		<3.5		<2.1		<4.5		<1.4															
<3.0				<1.1				<1.7				<3.84				<5.0				<1.0			<2.5				<1.6			<1.5		<1.4		<3.5		<2.1		<4.5		<1.4															
<3.0				<1.1				<1.7				<3.84				<5.0				<1.0			<2.5				<1.6			<1.5		<1.4		<3.5		<2.1		<4.5		<1.4															
<3.0				<1.1				<1.7				<3.84				<5.0				<1.0			<2.5				<1.6			<1.5		<1.4		<3.5		<2.1		<4.5		<1.4															
<3.0				<1.1				<1.7				<3.84				<5.0				<1.0			<2.5				<1.6			<1.5		<1.4		<3.5		<2.1		<4.5		<1.4															
<3.0				<1.1				<1.7				<3.84				<5.0				<1.0			<2.5				<1.6			<1.5		<1.4		<3.5		<2.1		<4.5		<1.4															
<3.0				<1.1				<1.7				<3.84				<5.0				<1.0			<2.5				<1.6			<1.5		<1.4		<3.5		<2.1		<4.5		<1.4															
<3.0				<1.1				<1.7				<3.84				<5.0				<1.0			<2.5				<1.6			<1.5		<1.4		<3.5		<2.1		<4.5		<1.4															
<3.0				<1.1				<1.7				<3.84				<5.0				<1.0			<2.5				<1.6			<1.5		<1.4		<3.5		<2.1		<4.5		<1.4															
<3.0				<1.1				<1.7				<3.84				<5.0				<1.0			<2.5				<1.6			<1.5		<1.4		<3.5		<2.1		<4.5		<1.4															
<3.0				<1.1				<1.7				<3.84				<5.0				<1.0			<2.5				<1.6			<1.5		<1.4		<3.5		<2.1		<4.5		<1.4															
<3.0				<1.1				<1.7				<3.84				<5.0				<1.0			<2.5				<1.6			<1.5		<1.4		<3.5		<2.1		<4.5		<1.4															
<3.0				<1.1				<1.7				<3.84				<5.0				<1.0			<2.5				<1.6			<1.5		<1.4		<3.5		<2.1		<4.5		<1.4															
<3.0				<1.1				<1.7				<3.84				<5.0				<1.0			<2.5				<1.6			<1.5		<1.4		<3.5		<2.1		<4.5		<1.4															
<3.0				<1.1				<1.7				<3.84				<5.0				<1.0			<2.5				<1.6			<1.5		<1.4		<3.5		<2.1		<4.5		<1.4															
<3.0				<1.1				<1.7				<3.84				<5.0				<1.0			<2.5				<1.6			<1.5		<1.4		<3.5		<2.1		<4.5		<1.4															
<3.0				<1.1				<1.7				<3.84				<5.0				<1.0			<2.5				<1.6			<1.5		<1.4		<3.5		<2.1		<4.5		<1.4															
<3.0				<1.1				<1.7				<3.84				<5.0				<1.0			<2.5				<1.6			<1.5		<1.4		<3.5		<2.1		<4.5		<1.4															
<3.0				<1.1				<1.7				<3.84				<5.0				<1.0			<2.5				<1.6			<1.5		<1.4		<3.5		<2.1		<4.5		<1.4															
<3.0				<1.1				<1.7				<3.84				<5.0				<1.0			<2.5				<1.6			<1.5		<1.4		<3.5		<2.1		<4.5		<1.4															
<3.0				<1.1				<1.7				<3.84				<5.0				<1.0			<2.5				<1.6			<1.5		<1.4		<3.5		<2.1		<4.5		<1.4															
<3.0				<1.1				<1.7				<3.84				<5.0				<1.0			<2.5				<1.6			<1.5		<1.4		<3.5		<2.1		<4.5		<1.4															
<3.0				<1.1				<1.7				<3.84				<5.0				<1.0			<2.5				<1.6			<1.5		<1.4		<3.5		<2.1		<4.5		<1.4															
<3.0				<1.1				<1.7				<3.84				<5.0				<1.0			<2.5				<1.6			<1.5		<1.4		<3.5		<2.1		<4.5		<1.4															
<3.0				<1.1				<1.7				<3.84				<5.0				<1.0			<2.5				<1.6			<1.5		<1.4		<3.5		<2.1		&																	

PROJECT NAME	PLANT 78 3-5-90
PROJECT MANAGER	BOB CHESSON

Hunter/ESE, Inc.

METHOD CODE:

UNITS:

FLD.GRP

BCSW3	3	BCSW3-3	03/09/90	08:45
BCSW3	4	BCSW3-4	03/09/90	08:15
BCSW3	5	BCSW3-5	03/09/90	07:25
BCSW3	6	BCSW3-6	03/08/90	17:10
BCSW3	7	BCSW3-7	03/08/90	11:30
BCSW3	8	BCSW3-8	03/08/90	13:30
BCSW3	9	BCSW3-9	03/08/90	14:50
BCSW3	10	BCSW3-10	03/08/90	16:15
BCSW3	11	BCSW3-DUPE	03/09/90	07:15
BCSW3	14	TRPBLK	03/02/90	17:00

[illegible]

04/25/90

Hunter/ESE, Inc.

PROJECT NAME PLANT 78 3-5-90
PROJECT MANAGER BOB CHESSON

PROJECT NUMBER BCSW3
FIELD GROUP

STORET CODE:
METHOD CODE:
PARAMETER:
UNITS:

FLD.GRP.	#	SAMPLE ID	DATE	TIME
BCSN3	3	BCSN3-3	03/09/90	08:45
BCSN3	4	BCSN3-4	03/09/90	08:25
BCSN3	5	BCSN3-5	03/09/90	07:15
BCSN3	6	BCSN3-6	03/08/90	17:10
BCSN3	7	BCSN3-7	03/08/90	11:30
BCSN3	8	BCSN3-8	03/08/90	13:30
BCSN3	9	BCSN3-9	03/08/90	14:50
BCSN3	10	BCSN3-10	03/08/90	16:15
BCSN3	11	BCSN3-DUPE	03/09/90	07:15
BCSN3	14	TRPBLK	03/02/90	17:00

34469	ADMS	97710	34551	97209	34621
PVR	ADMS	TCB1	ADMS	ADMS	ADMS
UG/L	TCB1	UG/L	TCB124	TCB245	TCB246
<1.0	UG/L	<1.4	UG/L	UG/L	UG/L
<1.0	<1.4	<1.4	<3.0	<1	<1.5
<1.0	<1.4	<1.4	<3.0	<1	<1.5
<1.0	<1.4	<1.4	<3.0	<1	<1.5
<1.0	<1.4	<1.4	<3.0	<1	<1.5
<1.0	<1.4	<1.4	<3.0	<1	<1.5
<1.0	<1.4	<1.4	<3.0	<1	<1.5
<1.0	<1.4	<1.4	<3.0	<1	<1.5
<1.0	<1.4	<1.4	<3.0	<1	<1.5
NRQ	NRQ	NRQ	NRQ	NRQ	NRQ

04/25/90

Hunter/ESE, Inc.

PROJECT NAME	PLANT 78 3-5-90
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PROJECT MANAGER BOB CHESON

PROJECT NUMBER	BCSS3
FIELD GROUP	

STORET CODE:

METHOD CODE:

PARAMETER:

UNITS:

FLD. GRP.	#	SAMPLE ID	DATE	TIME
BCSS3	3	BCSW3-3	03/09/90	08:45
BCSS3	4	BCSW3-4	03/09/90	08:25
BCSS3	5	BCSW3-5	03/09/90	07:15
BCSS3	6	BCSW3-6	03/08/90	17:10
BCSS3	7	BCSW3-7	03/08/90	11:30
BCSS3	8	BCSW3-8	03/08/90	13:30
BCSS3	9	BCSW3-9	03/08/90	14:50
BCSS3	10	BCSW3-10	03/08/90	16:15
BCSS3	11	BCSW3-DUPE	03/09/90	07:15
BCSS3	13	TRPBLK	03/02/90	17:00

[illegible]

Hunter/ESE, Inc.

PROJECT NAME PLANT 78 3-5-90
PROJECT MANAGER BOB CHESSON

PROJECT NUMBER	BCSS3
FIELD GROUP	

STORET CODE:

METHOD CODE:

PARAMETER:

UNITS:

FLD.GRP.	#	SAMPLE ID	DATE	TIME
BCSS3	3	BCSN3-3	03/09/90	08:45
BCSS3	4	BCSN3-4	03/09/90	08:25
BCSS3	5	BCSN3-5	03/09/90	07:15
BCSS3	6	BCSN3-6	03/08/90	17:10
BCSS3	7	BCSN3-7	03/08/90	11:30
BCSS3	8	BCSN3-8	03/08/90	13:30
BCSS3	9	BCSN3-9	03/08/90	14:50
BCSS3	10	BCSN3-10	03/08/90	16:15
BCSS3	11	11BCSN3-DUPE	03/09/90	07:15
BCSS3	13	TRPBLK	03/02/90	17:00

[illegible]

PROJECT NAME PLANT 78 3-5-90
PROJECT MANAGER BOB CHESON

PROJECT NUMBER	BCSS3
FIELD GROUP	

[illegible]

Hunter/ESF, Inc.

PROJECT NAME	PLANT 78 3-5-90
PROJECT MANAGER	BOB CHESSON

PROJECT NUMBER	BCSS3
FIELD GROUP	

STORET CODE:

METHOD CODE:

PARAMETER:

UNITS:

F.L.D. GRP.	#	SAMPLE ID	DATE	TIME
BCSS3	3	BCSN3-3	03/09/90	08:45
BCSS3	4	BCSN3-4	03/09/90	08:25
BCSS3	5	BCSN3-5	03/09/90	07:15
BCSS3	6	BCSN3-6	03/08/90	17:10
BCSS3	7	BCSN3-7	03/08/90	11:30
BCSS3	8	BCSN3-8	03/08/90	13:30
BCSS3	9	BCSN3-9	03/08/90	14:50
BCSS3	10	BCSN3-10	03/08/90	16:15
BCSS3		11BCSN3-DUPE	03/09/90	07:15
BCSS3	13	TRPBLK	03/02/90	17:00

[illegible]

Hunter/ESE, Inc.

PROJECT NAME PLANT 78 3-5-90
PROJECT MANAGER BOB CHESSON

[illegible]

FLD. GRP.	#	SAMPLE ID	DATE	TIME
BCSS3	3	BCSW3-3	03/09/90	08:45
BCSS3	4	BCSW3-4	03/09/90	08:25
BCSS3	5	BCSW3-5	03/09/90	07:15
BCSS3	6	BCSW3-6	03/08/90	17:10
BCSS3	7	BCSW3-7	03/08/90	11:30
BCSS3	8	BCSW3-8	03/08/90	13:30
BCSS3	9	BCSW3-9	03/08/90	14:50
BCSS3	10	BCSW3-10	03/08/90	16:15
BCSS3	11	BCSW3-3-DUPE	03/09/90	07:15
BCSS3	13	TRPBLK	03/02/90	17:00

04/25/90

Hunter/ESC, Inc.

PROJECT NAME PLANT 78 3-5-90
PROJECT MANAGER BOB CHESSON

PROJECT NUMBER BCSS3
FIELD GROUP

STORET CODE:	99483	97658	97659	97660	99696	97661	97717	97662	97663	97664	99485	97665	97666	97667
METHOD CODE:	ADMS	ADMS	ADMS	ADMS	ADMS	ADMS	ADMS	ADMS	ADMS	ADMS	ADMS	ADMS	ADMS	ADMS
PARAMETER:	ISOP	MECHLAN3	MMSULFN	MTNPH2	NAPHAMINONAPH2	NAPHAMINONAPH2	NONAPH2	NONAPH2	NONAPH2	NONAPH2	NONAPH2	NTSBN	NNSM	NNSPH
UNITS:	MG/KG-DRY	MG/KG-DRY	MG/KG-DRY	MG/KG-DRY	MG/KG-DRY	MG/KG-DRY	MG/KG-DRY	MG/KG-DRY	MG/KG-DRY	MG/KG-DRY	MG/KG-DRY	MG/KG-DRY	MG/KG-DRY	MG/KG-DRY
FLD.GRP.	#	SAMPLE	ID	DATE	TIME									
BCSS3	3	BCSW3-3	03/09/90	08:45										
BCSS3	4	BCSW3-4	03/09/90	08:25										
BCSS3	5	BCSW3-5	03/09/90	07:15										
BCSS3	6	BCSW3-6	03/08/90	17:10										
BCSS3	7	BCSW3-7	03/08/90	11:30										
BCSS3	8	BCSW3-8	03/08/90	13:30										
BCSS3	9	BCSW3-9	03/08/90	14:50										
BCSS3	10	BCSW3-10	03/08/90	16:15										
BCSS3	11	BCSW3-DUPE	03/09/90	07:15										
BCSS3	13	TRPBLK	03/02/90	17:00										

000028

04/25/90

Hunter/ESE, Inc.

PROJECT NAME PLANT 78 3-5-90
PROJECT MANAGER BOB CHESSON

PROJECT NUMBER BCSS3
FIELD GROUP

STORET CODE:

METHOD CODE:

PARAMETER:

UNITS:

FLD.GRP. # SAMPLE ID DATE TIME

BCSS3	3	BCSW3-3	03/09/90	08:45
BCSS3	4	BCSW3-4	03/09/90	08:25
BCSS3	5	BCSW3-5	03/09/90	07:15
BCSS3	6	BCSW3-6	03/08/90	17:10
BCSS3	7	BCSW3-7	03/08/90	11:30
BCSS3	8	BCSW3-8	03/08/90	13:30
BCSS3	9	BCSW3-9	03/08/90	14:50
BCSS3	10	BCSW3-10	03/08/90	16:15
BCSS3	11	BCSW3-DUPE	03/09/90	07:15
BCSS3	13	TRPBLK	03/02/90	17:00

99490	ADMS	97675	ADMS	99492	ADMS	97681	ADMS	99587	ADMS	99684	ADMS	34030	PI	34010	PI	34301	PI	34371	PI	99634	PI	81551	PI	81524	PI	34418	HA
MG/KG-DRY	PYR	TCB1	TCB1	TCB124	2346CP	MG/KG-DRY	MG/KG-DRY	MG/KG-DRY	MG/KG-DRY	TCP246	TCP245	BZ	BZME	BZME	CLBZ	EBZ	BRBZ	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	CHLORMTH	
<99	<100	<130	<140	<290	<110	<130	<140	<130	<140	<140	<150	<0.70	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	<2.00	<4.50	<0.400				

000030

04/25/90

Hunter/ESE, Inc.

PROJECT NAME PLANT 78 3-5-90
PROJECT MANAGER BOB CHESSONPROJECT NUMBER BCSS3
FIELD GROUP

STORET CODE:

METHOD CODE:

PARAMETER:

UNITS:

#	SAMPLE ID	DATE	TIME
3	BCSW3-3	03/09/90	08:45
4	BCSW3-4	03/09/90	08:25
5	BCSW3-5	03/09/90	07:15
6	BCSW3-6	03/08/90	17:10
7	BCSW3-7	03/08/90	11:30
8	BCSW3-8	03/08/90	13:30
9	BCSW3-9	03/08/90	14:50
10	BCSW3-10	03/08/90	16:15
11	BCSW3-DUPE	03/09/90	07:15
13	TRPBLK	03/02/90	17:00

PROJECT NUMBER	FIELD GROUP	DATE	TIME	PARAMETER	UNITS	VALUE
34413	HA	04/25/90	08:45	BROMMTH	UG/L	<6.00
39175	HA	04/25/90	08:25	MVC	UG/L	<0.300
34311	HA	04/25/90	07:15	CLEA	UG/L	<3.00
34668	HA	04/25/90	17:10	FCL2	UG/L	<9.00
34423	HA	04/25/90	11:30	MTHLENC	UG/L	4.39
34488	HA	04/25/90	13:30	FC11	UG/L	<5.00
34501	HA	04/25/90	14:50	DCE11	UG/L	<0.700
34496	HA	04/25/90	16:15	DCA11	UG/L	<0.400
34546	HA	04/25/90	07:15	DCE12T	UG/L	<0.500
32106	HA	04/25/90	08:45	TCLME	UG/L	<0.200
34531	HA	04/25/90	08:25	DCA12	UG/L	<0.200
81522	HA	04/25/90	07:10	DEMA	UG/L	<6.00
34506	HA	04/25/90	11:30	TCA111	UG/L	<0.200
32102	HA	04/25/90	13:30	CTCL	UG/L	<0.600

04/25/90

Hunter/ESE, Inc.

PROJECT NAME PLANT 78 3-5-90
PROJECT MANAGER BOB CHESSON

PROJECT NUMBER BCS3
FIELD GROUP

STORET CODE:	METHOD CODE:	PARAMETER:	UNITS:	FLD.GRP.	#	SAMPLE ID	DATE	TIME	PROJECT NAME	PROJECT MANAGER	BOB CHESSON	32101	34541	34699	34511	39180	32105	34704	34576	32104	77562	97758	34475	34516	34301	
BCSS3	3	BCSW3-3	03/09/90	08:45								HA	HA	HA	HA	HA	HA	HA	HA	HA	HA	HA	HA	HA	HA	HA
BCSS3	4	BCSW3-4	03/09/90	08:25								BDCME	DCP12	DCP13T	TCA112	TCE	D8CME	DCP13C	CEVETH	TBME	PCA	TCP	PCE	PCA	CLBZ	
BCSS3	5	BCSW3-5	03/09/90	07:15								UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	
BCSS3	6	BCSW3-6	03/08/90	17:10								NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	
BCSS3	7	BCSW3-7	03/08/90	11:30								NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	
BCSS3	8	BCSW3-8	03/08/90	13:30								NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	
BCSS3	9	BCSW3-9	03/08/90	14:50								NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	
BCSS3	10	BCSW3-10	03/08/90	16:15								NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	
BCSS3	11	BCSW3-DUPE	03/09/90	07:15								NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	NRQ	
BCSS3	13	TRPBLK	03/02/90	17:00								<0.500	<0.200	<2.00	<0.300	<0.600	<0.500	<2.00	<0.700	<1.00	<5.00	<5.0	<0.330	<0.330	<1.20	

SAMPLE ID	STATION ID	COLL. DATE	CLASSIFICATION	SAMPLE DATE	FOR	78	SAMP	COLL. TO EXTR.	EXTR. TO ANA.	COLL. TO ANA.	ESE Batch
BCSS3*3	BCSN3-3	03/09/90	PURGE. AROMATICSS-SW8020 PURGE. HALOCARBONS-SW8010 HYDROCARBONS-E418.1 SEMIVOLATILES-SW8270	03/14/90 03/14/90 03/14/90 03/20/90	03/15/90 03/15/90 03/16/90 03/24/90	5 5 5 11	1 1 2 4	6 6 7 15			D1749 D1749 D1737 D1759
BCSS3*4	BCSN3-4	03/09/90	PURGE. AROMATICSS-SW8020 PURGE. HALOCARBONS-SW8010 HYDROCARBONS-E418.1 SEMIVOLATILES-SW8270	03/14/90 03/14/90 03/14/90 03/20/90	03/15/90 03/15/90 03/16/90 03/24/90	5 5 5 11	1 1 2 4	6 6 7 15			D1749 D1749 D1737 D1759
BCSS3*5	BCSN3-5	03/09/90	PURGE. AROMATICSS-SW8020 PURGE. HALOCARBONS-SW8010 HYDROCARBONS-E418.1 SEMIVOLATILES-SW8270	03/14/90 03/14/90 03/14/90 03/20/90	03/15/90 03/15/90 03/16/90 03/24/90	5 5 5 11	1 1 2 4	6 6 7 15			D1749 D1749 D1737 D1759
BCSS3*6	BCSN3-6	03/08/90	PURGE. AROMATICSS-SW8020 PURGE. HALOCARBONS-SW8010 HYDROCARBONS-E418.1 SEMIVOLATILES-SW8270	03/14/90 03/14/90 03/14/90 03/20/90	03/15/90 03/15/90 03/16/90 03/24/90	6 6 6 12	1 1 2 4	7 7 8 16			D1749 D1749 D1737 D1759
BCSS3*7	BCSN3-7	03/08/90	PURGE. AROMATICSS-SW8020 PURGE. HALOCARBONS-SW8010 HYDROCARBONS-E418.1 SEMIVOLATILES-SW8270	03/14/90 03/14/90 03/14/90 03/20/90	03/15/90 03/15/90 03/16/90 03/24/90	6 6 6 12	1 1 2 4	7 7 8 16			D1749 D1749 D1737 D1759
BCSS3*8	BCSN3-8	03/08/90	PURGE. AROMATICSS-SW8020 PURGE. HALOCARBONS-SW8010 HYDROCARBONS-E418.1 SEMIVOLATILES-SW8270	03/14/90 03/14/90 03/14/90 03/20/90	03/15/90 03/15/90 03/16/90 03/24/90	6 6 6 12	1 1 2 4	7 7 8 16			D1749 D1749 D1737 D1759
BCSS3*9	BCSN3-9	03/08/90	PURGE. AROMATICSS-SW8020 PURGE. HALOCARBONS-SW8010 HYDROCARBONS-E418.1 SEMIVOLATILES-SW8270	03/14/90 03/14/90 03/14/90 03/20/90	03/15/90 03/15/90 03/16/90 03/24/90	6 6 6 12	1 1 2 4	7 7 8 16			D1749 D1749 D1737 D1759
BCSS3*10	BCSN3-10	03/08/90	PURGE. AROMATICSS-SW8020 PURGE. HALOCARBONS-SW8010 HYDROCARBONS-E418.1 SEMIVOLATILES-SW8270	03/14/90 03/14/90 03/14/90 03/20/90	03/15/90 03/15/90 03/16/90 03/24/90	6 6 6 12	1 1 2 4	7 7 8 16			D1749 D1749 D1737 D1759
BCSS3*11	BCSN3-DUPE	03/09/90	PURGE. AROMATICSS-SW8020 PURGE. HALOCARBONS-SW8010 HYDROCARBONS-E418.1 SEMIVOLATILES-SW8270	03/14/90 03/14/90 03/14/90 03/20/90	03/15/90 03/15/90 03/16/90 03/24/90	5 5 5 11	1 1 2 4	6 6 7 15			D1749 D1749 D1737 D1759
BCSS3*13	TRPBLK	03/02/90	PURGE. AROMATICSS-SW8020 PURGE. HALOCARBONS-SW8010	NA NA	03/14/90 03/14/90			12 12			D1740 D1740

Chain of Custody Forms

: P782-W
LAB COORD. ANGELA BURCH

APPENDIX
P782-W

P782-W

P782-W

P782-W

P782-W

P782-W

 L I N Q U I S H E D B Y : (N A M E / O R G A N I Z A T I O N / D A T E / T I M E)

 R E C ' D B Y (N A M E / O R G A N I Z A T I O N / D A T E / T I M E)

Time	Location	Weather	Wind	Temp	Humidity	Pressure	Visibility	Clouds	Remarks
0700	Offshore	Clear	10	20	70	1010	10	0	Start of observation
0800	Offshore	Clear	10	20	70	1010	10	0	
0900	Offshore	Clear	10	20	70	1010	10	0	
1000	Offshore	Clear	10	20	70	1010	10	0	
1100	Offshore	Clear	10	20	70	1010	10	0	
1200	Offshore	Clear	10	20	70	1010	10	0	
1300	Offshore	Clear	10	20	70	1010	10	0	
1400	Offshore	Clear	10	20	70	1010	10	0	
1500	Offshore	Clear	10	20	70	1010	10	0	
1600	Offshore	Clear	10	20	70	1010	10	0	
1700	Offshore	Clear	10	20	70	1010	10	0	
1800	Offshore	Clear	10	20	70	1010	10	0	
1900	Offshore	Clear	10	20	70	1010	10	0	
2000	Offshore	Clear	10	20	70	1010	10	0	
2100	Offshore	Clear	10	20	70	1010	10	0	
2200	Offshore	Clear	10	20	70	1010	10	0	
2300	Offshore	Clear	10	20	70	1010	10	0	
2400	Offshore	Clear	10	20	70	1010	10	0	End of observation

AMPLER: MORE SAMPLES TO BE SHIPPED? ND- IF YES, ANTICIPATED # --- TO SHIP ON --L---L---
 AMPLER CUSTODIAN: Custody Seals Intact? --- Samples Iced? --- Preservations Audited? --- Problems? ---

WF = plastic cubitainer filtered in field and preserved with nitric acid
collect 1 per site

000036

FIELD GROUP: P782-W
S LAB COORD. ANGELA BURCH

PARAMETER LIST
P782-W

P782-W

P782-W: 10 fractions preserved with nitric.
 10 fractions unfiltered & not preserved
 P782-W needs to be filtered & preserved
 in lab.

P782-W needs to be filtered & preserved in lab.

P782-W

~~P782-W~~

-CHARGE OK ENTER SITE ID AS NECESSARY; UP TO 9 ALPHANUMERIC CHARACTERS MAY BE USED
-CIRCLE FRACTIONS COLLECTED. ENTER DATE, TIME, FIELD DATA (IF REQUIRED), HAZARD CODE AND NOTES
-HAZARD CODES: ; #GNTABC-~~CR~~GV~~ER~~RE~~CTIVE~~1-~~FOC~~W~~ST~~H-~~CH~~R~~A~~C~~T~~E~~H~~Z~~A~~D IDENTIFY SPECIFICS IF KNOWN
-PLEASE RETURN COMPLETED LOGSHEETS WITH SAMPLES TO Hunter/ESE, Inc.

LLINQUISHED BY: (NAME/ORGANIZATION/DATE/TIME)

REC'D BY (NAME/ORGANIZATION/DATE/TIME)

Bob Green / Hunter Green 7-27-89 / 11:13

711118-17 / 347 sin ind x m n i t f a d

AMPLER: MORE SAMPLES TO BE SHIPPED? ~~NO~~ IF YES, ANTICIPATED #

AMPLE CUSTODIAN: Custody Seals Intact? --- Samples Iced? ---

$V =$ vials. (44ml) - collect 5 per site

$C = 950 \text{ ml glass jar} - \text{collect 1 per site}$

$W = 80 \text{ oz} \cdot \text{jug} - \text{collect} - 1 \text{ per site}$

N = plastic cubitainer preserved with nitric acid - collect 1 per site

NF = plastic container filtered in field and preserved with nitric acid
collect 1 per site

2027
(2)

000037

Hunter/ESE, Inc. 05-25-89
PROJECT NUMBER 99003-

*** FIELD LOGSHEET ***
PROJECT NAME: PLANT 78 SOILS

FIELD GROUP: P782-S
LAB COORD. ANGELA BURCH

E #	SITE/STA HAZ?	FRACTIONS(CIRCLE)	DATE	TIME	PARAMETER LIST
*1	~~WDE519B1-1~~ ~~E-5-5-~~ ~~82-1~~	~~(SS) (SV)~~	7-13-89	1502	P782-S * ~~11~~ ~~12~~
*2	~~E519B1-2~~ ~~E-5-5-B2-2~~	~~(SS) (SV)~~	7-14-89	0735	P782-S * ~~12~~ ~~13~~
*3	E519B1-3	SS SS SV			P782-S
*4	E519B1-4	SS SS SV			P782-S
*5	E519B1-5	SS SS SV			P782-S
*6	E516B1-1	SS SS SV			P782-S
*7	E516B1-2	SS SS SV			P782-S
*8	E516B1-3	SS SS SV			P782-S
*9	E516B1-4	SS SS SV			P782-S
*10	E516B1-5	SS SS SV			P782-S
*11	DUP	SS SS SV			P782-S

OTE -CHANGE OR ENTER SITE ID AS NECESSARY; UP TO 9 ALPHANUMERIC CHARACTERS MAY BE USED
-CIRCLE FRACTIONS COLLECTED. ENTER DATE, TIME, FIELD DATA (IF REQUIRED), HAZARD CODE AND NOTES
-HAZARD CODES: I-IGNITABLE C-CORROSIVE R-REACTIVE T-TOXIC WASTE H-OTHER ACUTE HAZARD; IDENTIFY SPECIFICS IF KNOWN
-PLEASE RETURN COMPLETED LOGSHEETS WITH SAMPLES TO Hunter/ESE, Inc.

LINQUISHED BY: (NAME/ORGANIZATION/DATE/TIME) VIA: REC'D BY (NAME/ORGANIZATION/DATE/TIME)

1 *Kemper Dandawati - Hunter - 7-14-89 1300 hours FedEx Hunter/H. 7/15/89 1030*

AMPLER: MORE SAMPLES TO BE SHIPPED? --- IF YES, ANTICIPATED # --- TO SHIP ON ---
AMPLE CUSTODIAN: Custody Seals Intact? --- Samples Iced? --- Preservations Audited? --- Problems? ---

SS = 250 ml jar, collect 2 per site
SV = 60 ml jar, collect 1 per site

000038

Hunter/ESE, Inc. 05-25-89 *** FIELD LOGSHEET ** FIELD GROUP: P782-S
PROJECT NUMBER 99003- PROJECT NAME: PLANT 78 SOILS LAB COORD. ANGELA BURCH

E #	SITE/STA HAZ?	FRACTIONS(CIRCLE)	DATE	TIME	PARAMETER LIST
*1	E519B1-1	SS SS SV			P782-S
*2	E519B1-2	SS SS SV			P782-S
*3	E519B1-3	SS SS SV	7/18/89	1105	P782-S *3-SS-KM 14
*4	E519B1-4	SS SS SV	7/18/89	1637	P782-S *4-SS-KM 15
*5	E519B1-5	SS SS SV			P782-S
*6	E516B1-1	SS SS SV			P782-S
*7	E516B1-2	SS SS SV			P782-S
*8	E516B1-3	SS SS SV			P782-S
*9	E516B1-4	SS SS SV			P782-S
*10	E516B1-5	SS SS SV			P782-S
*11	DUP	SS SS SV			P782-S

OTE - CHANGE OR ENTER SITE ID AS NECESSARY; UP TO 9 ALPHANUMERIC CHARACTERS MAY BE USED
-CIRCLE FRACTIONS COLLECTED. ENTER DATE, TIME, FIELD DATA (IF REQUIRED), HAZARD CODE AND NOTES
-HAZARD CODES: I-IGNITABLE C-CORROSIVE R-REACTIVE T-TOXIC WASTE H-OTHER ACUTE HAZARD; IDENTIFY SPECIFICS IF KNOWN
-PLEASE RETURN COMPLETED LOGSHEETS WITH SAMPLES TO Hunter/ESE, Inc.

LINQUISHED BY: (NAME/ORGANIZATION/DATE/TIME) VIA: REC'D BY (NAME/ORGANIZATION/DATE/TIME)

1 *Bob Hunter/Hunter* 7-20-89 10900 *Fed X* *Kim M. M. Hunter/E.S.E.* 7/21/89 10:20

2

3

AMPLER: MORE SAMPLES TO BE SHIPPED? IF YES, ANTICIPATED # TO SHIP ON
SAMPLE CUSTODIAN: Custody Seals Intact? Samples Iced? Preservations Audited? Problems?

SS = 250 ml jar, collect 2 per site

SV = 60 ml jar, collect 1 per site

Hunter/ESE, Inc. 05-25-89 *** FIELD LOGSHEET *** FIELD GROUP: P782-S
PROJECT NUMBER 99003- PROJECT NAME: PLANT 78 SOILS LAB COORD. ANGELA BURCH

E #	SITE/STA HAZ?	FRACTIONS (CIRCLE)	DATE	TIME	PARAMETER LIST
*1	E519B1-1	SS (SS) SV	6/2/89	1052	P782-S
*2	E519B1-2	SS SS SV	6/2/89	1104	P782-S
*3	E519B1-3	SS (SS) SV	6/2/89	1200	P782-S
*4	E519B1-4	SS SS SV			P782-S
*5	E519B1-5	SS SS SV			P782-S
*6	E516B1-1	SS SS SV			P782-S
*7	E516B1-2	SS SS SV			P782-S
*8	E516B1-3	SS SS SV			P782-S
*9	E516B1-4	SS SS SV			P782-S
*10	E516B1-5	SS SS SV			P782-S
*11	DUP	SS SS SV			P782-S

OTE -CHANGE OR ENTER SITE ID AS NECESSARY; UP TO 9 ALPHANUMERIC CHARACTERS MAY BE USED
-CIRCLE FRACTIONS COLLECTED. ENTER DATE, TIME, FIELD DATA (IF REQUIRED), HAZARD CODE AND NOTES
-HAZARD CODES: I=IGNITABLE C=CORROSIVE R=REACTIVE T=TOXIC WASTE H=OTHER ACUTE HAZARD: IDENTIFY SPECIFICS IF KNOWN
-PLEASE RETURN COMPLETED LOGSHEETS WITH SAMPLES TO Hunter/ESE, Inc.

LINQUISHED BY: (NAME/ORGANIZATION/DATE/TIME) VIA: REC'D BY (NAME/ORGANIZATION/DATE/TIME)

1 *A. Gans / Hunter Services Inc / 6-5-89 / 1035* *Kim 24/7/89 Hunter/ESE 6/6/89 0800*
2
3

AMPLER: MORE SAMPLES TO BE SHIPPED? ☒ YES IF YES, ANTICIPATED # 2 TO SHIP ON 6/7/89
AMPLE CUSTODIAN: Custody Seals Intact? ☒ Samples Iced? ☒ Preservations Audited? ☒ Problems? ☒

SS = 250 ml jar, collect 2 per site
SV = 60 ml jar, collect 1 per site

000040

Hunter/ESE, Inc. 05-25-89

*** FIELD LOGSHEET ***

FIELD GROUP: P782-S

PROJECT NUMBER 99003-

PROJECT NAME: PLANT 78 SOILS

LAB COORD. ANGELA BURCH

E #	SITE/STA HAZ?	FRACTIONS(CIRCLE)	DATE	TIME	PARAMETER LIST
*1	E519B1-1	SS SV	6-21-89	1445	P782-S
*2	E519B1-2	SS SV	6-22-89	0945	P782-S
*3	E519B1-3	SS SS SV			P782-S
*4	E519B1-4	SS SS SV			P782-S
*5	E519B1-5	SS SS SV			P782-S
*6	E516B1-1	SS SS SV			P782-S
*7	E516B1-2	SS SS SV			P782-S
*8	E516B1-3	SS SS SV			P782-S
*9	E516B1-4	SS SS SV			P782-S
*10	E516B1-5	SS SS SV			P782-S
*11	DUP	SS SS SV			P782-S

OTE -CHANGE OR ENTER SITE ID AS NECESSARY; UP TO 9 ALPHANUMERIC CHARACTERS MAY BE USED
-CIRCLE FRACTIONS COLLECTED. ENTER DATE, TIME, FIELD DATA (IF REQUIRED), HAZARD CODE AND NOTES
-HAZARD CODES: I-IGNITABLE C-CORROSIVE R-REACTIVE T-TOXIC WASTE H-OTHER ACUTE HAZARD; IDENTIFY SPECIFICS IF KNOWN
-PLEASE RETURN COMPLETED LOGSHEETS WITH SAMPLES TO Hunter/ESE, Inc.

LINQUISHED BY: (NAME/ORGANIZATION/DATE/TIME) VIA: REC'D BY (NAME/ORGANIZATION/DATE/TIME)

1 *Bob Winters / Hunter Services / 6-23-89 / 1330* *6-24-89 Hunter/ESE 6/26/89 1000*

2

3

AMPLER: MORE SAMPLES TO BE SHIPPED? *YES* IF YES, ANTICIPATED # --- TO SHIP ON *6-26-89* *Link*
AMPLE CUSTODIAN: Custody Seals Intact? --- Samples Iced? --- Preservations Audited? --- Problems? ---

SS = 250 ml jar, collect 2 per site
SV = 60 ml jar, collect 1 per site

990041

Hunter/ESE, Inc. 05-25-89
PROJECT NUMBER 99003-

*** FIELD LOGSHEET ***
PROJECT NAME: PLANT 78 SOILS

FIELD GROUP: P782-S
LAB COORD. ANGELA BURCH

SE #	SITE/STA HAZ?	FRACTIONS(CIRCLE)	DATE	TIME	PARAMETER LIST
*1	E519B1-1	SS SS SV			P782-S
*2	E519B1-2	SS SS SV			P782-S
*3	E519B1-3	SS (SS) (SV)			P782-S * 8-SS
*4	E519B1-4	SS (SS) (SV)			P782-S * 9-SS
*5	E519B1-5	SS (SS) (SV)			P782-S * 10-SS
*6	E516B1-1	SS SS SV			P782-S
*7	E516B1-2	SS SS SV			P782-S
*8	E516B1-3	SS SS SV			P782-S
*9	E516B1-4	SS SS SV			P782-S
*10	E516B1-5	SS SS SV			P782-S
*11	DUP	SS (SS) (SV)			P782-S * 11-SS

OTE - CHANGE OR ENTER SITE ID AS NECESSARY; UP TO 9 ALPHANUMERIC CHARACTERS MAY BE USED
-CIRCLE FRACTIONS COLLECTED. ENTER DATE, TIME, FIELD DATA (IF REQUIRED), HAZARD CODE AND NOTES
-HAZARD CODES: I-IGNITABLE C-CORROSIVE R-REACTIVE T-TOXIC WASTE H-OTHER ACUTE HAZARD. IDENTIFY SPECIFICS IF KNOWN
-PLEASE RETURN COMPLETED LOGSHEETS WITH SAMPLES TO Hunter/ESE, Inc.

LINQUISHED BY: (NAME/ORGANIZATION/DATE/TIME) VIA: REC'D BY (NAME/ORGANIZATION/DATE/TIME)

1 *Kemper DeWitt / Hunter Services / 7-10-89* *Fed Ex / Hunter Services / 7/11/89* 0940
2
3

AMPLER: MORE SAMPLES TO BE SHIPPED? YES IF YES, ANTICIPATED # 5 TO SHIP ON 7/13/89
AMPLE CUSTODIAN: Custody Seals Intact? --- Samples Iced? --- Preservations Audited? --- Problems? ---

SS = 250 ml jar, collect 2 per site
SV = 60 ml jar, collect 1 per site

000042

unter/ESE, Inc. 05-25-89 *** FIELD LOGSHEET *** FIELD GROUP: P782-S
 PROJECT NUMBER FREE PROJECT NAME: PLANT 78 SOILS LAB COORD. ANGELA BURCH

SITE/STA HAZ? FRACTIONS(CIRCLE) DATE TIME PARAMETER LIST
 12 ES/581/02 SS SS 84 7-20-89 0810 P782-S *12-SS-K-16
 13 ES/1961 TCPL SS SS 84 7-20-89 0810 P782-S *13-SS-K-17

NOTE -CHANGE OR ENTER SITE ID AS NECESSARY; UP TO 9 ALPHANUMERIC CHARACTERS MAY BE USED
 -CIRCLE FRACTIONS COLLECTED. ENTER DATE, TIME, FIELD DATA (IF REQUIRED), HAZARD CODE AND NOTES
 -HAZARD CODES: I=IGNITABLE C=CORROSIVE R=REACTIVE T=TOXIC WASTE H=OTHER ACUTE HAZARD. IDENTIFY SPECIFICS IF KNOWN
 -PLEASE RETURN COMPLETED LOGSHEETS WITH SAMPLES TO Hunter/ESE, Inc.

ACQUIRED BY: (NAME/ORGANIZATION/DATE/TIME) VIA: REC'D BY (NAME/ORGANIZATION/DATE/TIME)

1 301 Winters/Hunter 7-20-89/0900 Fed X Hunter/ESE 7/21/89 10:20

2

3

AMPLER: MORE SAMPLES TO BE SHIPPED? YES IF YES, ANTICIPATED # TO SHIP ON 7/24/89
 AMPLER CUSTODIAN: Custody Seals Intact? Samples Iced? Preservations Audited? Problems?

SS = 250 ml jar - collect 2 per site

Water

Hunter/ESE, Inc. 05-25-89 *** FIELD LOGSHEET *** FIELD GROUP: P782-S
PROJECT NUMBER FREE PROJECT NAME: PLANT 78 SOILS LAB COORD. ANGELA BURCH

E # SITE/STA HAZ? FRACTIONS(CIRCLE) DATE TIME PARAMETER LIST
*14 TRPBLK V V V V V P782-W

OTE -CHANGE OR ENTER SITE ID AS NECESSARY; UP TO 9 ALPHANUMERIC CHARACTERS MAY BE USED
-CIRCLE FRACTIONS COLLECTED. ENTER DATE, TIME, FIELD DATA (IF REQUIRED), HAZARD CODE AND NOTES
-HAZARD CODES: I=IGNITABLE C=CORROSIVE R=REACTIVE T=TOXIC WASTE H=OTHER ACUTE HAZARD; IDENTIFY SPECIFICS IF KNOWN
-PLEASE RETURN COMPLETED LOGSHEETS WITH SAMPLES TO Hunter/ESE, Inc.

LINQUISHED BY (NAME/ORGANIZATION/DATE/TIME) VIA: REC'D BY (NAME/ORGANIZATION/DATE/TIME)

1 *Steve Gans/Hunter Services* 7-27-89/11:13 *Kim-27-11/89 Hunter/ESE* 7/28/89 0900
2
3

AMPLER: MORE SAMPLES TO BE SHIPPED? *No* IF YES, ANTICIPATED # TO SHIP ON / /
AMPLE CUSTODIAN: Custody Seals Intact? Samples Iced? Preservations Audited? Problems? ---

000044

Quality Control Summary Sheets

04723730

Hunter/ESE, INC.

QUALITY CONTROL SUMMARY FOR PLANT 78 WATER SAMPLES

Method Blank Sample Summary

NAME	UNITS	STOR*WETH	BATCH	SAMPLE	DATE	FOUND	FOOTNOTE
BENZENE	UG/L	34030*PI	D1740	MB*D1740*1	02/14/90	0.0	
TOLUENE	UG/L	34010*PI		MB*D1740*1		0.0	
CHLOROBENZENE	UG/L	34301*PI		MB*D1740*1		0.0	
ETHYLBENZENE	UG/L	34371*PI		MB*D1740*1		0.0	
BROMOBENZENE	UG/L	99634*PI		MB*D1740*1		0.0	
XYLENES, TOTAL	UG/L	81551*PI		MB*D1740*1		0.0	
DICHLOROBENZENE, TOT.	UG/L	81524*PI		MB*D1740*1		0.0	
CHLOROMETHANE	UG/L	34418*HA		MB*D1740*1		0.0	
BROMOMETHANE	UG/L	34413*HA		MB*D1740*1		0.0	
VINYL CHLORIDE	UG/L	39175*HA		MB*D1740*1		0.0	
CHLOROETHANE	UG/L	34311*HA		MB*D1740*1		0.0	
DICHLORODIFLUOROMETHANE	UG/L	34668*HA		MB*D1740*1		0.0	
METHYLENE CHLORIDE	UG/L	34423*HA		MB*D1740*1		0.415	
TRICHL 'FLUOROMETHANE	UG/L	34488*HA		MB*D1740*1		0.0	
1, 1-DICHLOROETHYLENE	UG/L	34501*HA		MB*D1740*1		0.0	
1, 1-DICHLOROETHANE	UG/L	34496*HA		MB*D1740*1		0.0	
TRANS-1, 2-DICHLOROETHENE	UG/L	34546*HA		MB*D1740*1		0.0	
CHLOROFORM	UG/L	32106*HA		MB*D1740*1		0.0	
1, 2-DICHLOROETHANE	UG/L	34531*HA		MB*D1740*1		0.0	
DIBROMOMETHANE	UG/L	81522*HA		MB*D1740*1		0.0	
1, 1, 1-TRICHL 'ETHANE	UG/L	34506*HA		MB*D1740*1		0.0	
CARBON TETRACHLORIDE	UG/L	32102*HA		MB*D1740*1		0.0	
BROMODICHLOROMETHANE	UG/L	32101*HA		MB*D1740*1		0.0	
1, 2-DICHLOROPROPANE	UG/L	34541*HA		MB*D1740*1		0.0	
TRANS-1, 3-DICHLOROPROPENE	UG/L	34699*HA		MB*D1740*1		0.0	
1, 1, 2-TRICHL 'ETHANE	UG/L	34511*HA		MB*D1740*1		0.0	
TRICHLOROETHENE	UG/L	39180*HA		MB*D1740*1		0.0	
DIBROMOCHLOROMETHANE	UG/L	32105*HA		MB*D1740*1		0.0	
CIS-1, 3-DICHLOROPROPENE	UG/L	34704*HA		MB*D1740*1		0.0	
2-CHLOROETHYL VINYLETHER	UG/L	34576*HA		MB*D1740*1		0.0	
BROMOFORM	UG/L	32104*HA		MB*D1740*1		0.0	
1, 1, 1, 2-TETRACH 'ETHANE	UG/L	77562*HA		MB*D1740*1		0.0	
TRICHLOROPROPANE	UG/L	97758*HA		MB*D1740*1		0.0	
TETRACHLOROETHENE	UG/L	34475*HA		MB*D1740*1		0.0	
1, 1, 2, 2-TETRACHLORO ETHANE	UG/L	34516*HA		MB*D1740*1		0.0	
1-CHLOROHEXANE	UG/L	97761*HA		MB*D1740*1		0.0	
HYDROCARBONS, PETROL., TOT	UG/L	99388*DIR	D1738	MB*MBLK*1738	03/16/90	156	
ACENAPHTHENE	UG/L	34205*ADMS	D1735	MB*D1735*1	03/22/90	0.0	
ACENAPHTHYLENE	UG/L	34200*ADMS		MB*D1735*1		0.0	
ACETOPHENONE	UG/L	81553*ADMS		MB*D1735*1		0.0	
ANILINE	UG/L	77089*ADMS		MB*D1735*1		0.0	
ANTHRACENE	UG/L	34220*ADMS		MB*D1735*1		0.0	
4-AMINOBIPHENOL	UG/L	97693*ADMS		MB*D1735*1		0.0	
BENZIDINE	UG/L	39120*ADMS		MB*D1735*1		0.0	
BENZO(A)ANTHRACENE	UG/L	34526*ADMS		MB*D1735*1		0.0	
BENZO(B)FLUORANTHENE	UG/L	34230*ADMS		MB*D1735*1		0.0	
BENZO(K)FLUORANTHENE	UG/L	34242*ADMS		MB*D1735*1		0.0	
BENZO(A)PYRENE	UG/L	34247*ADMS		MB*D1735*1		0.0	
BENZO(GH)PERYLENE	UG/L	34521*ADMS		MB*D1735*1		0.0	
BENZYL ALCOHOL	UG/L	77147*ADMS		MB*D1735*1		0.0	
BENZOIC ACID	UG/L	77247*ADMS		MB*D1735*1		0.0	
BUTYLBENZYLPHTHALATE	UG/L	34292*ADMS		MB*D1735*1		0.0	
BIS(2-CHLOROETHYL)ETHER	UG/L	34273*ADMS		MB*D1735*1		0.0	
BIS(2-CHLOROETHOXY)METHANE	UG/L	34278*ADMS		MB*D1735*1		0.0	
BIS(2-ETHYLHEXYL)PHTHALATE	UG/L	39100*ADMS		MB*D1735*1		0.0	
BIS(2-CHL 'ISOPROPYL) ETHER	UG/L	34283*ADMS		MB*D1735*1		0.0	

QUALITY CONTROL SUMMARY FOR PLANT 78 WATER SAMPLES

Method Blank Sample Summary

000046

NAME	UNITS	STOR*METH	BATCH	SAMPLE	DATE	FOUND	FOOTNOTE
4-BROMOPHENYLPHENYL ETHER	UG/L	34636*ADMS	D1735	MB*D1735*1	03/22/90	0.0	
4-CHLOROANILINE	UG/L	99075*ADMS		MB*D1735*1		0.0	
1-CHLORONAPHTHALENE	UG/L	97694*ADMS		MB*D1735*1		0.0	
2-CHLORONAPHTHALENE	UG/L	34581*ADMS		MB*D1735*1		0.0	
2-CHLOROPHENOL	UG/L	34586*ADMS		MB*D1735*1		0.0	
4-CHLORO-3-METHYLPHENOL	UG/L	34452*ADMS		MB*D1735*1		0.0	
4-CHLOROPHENYLPHENYL ETHER	UG/L	34641*ADMS		MB*D1735*1		0.0	
CHRYSENE	UG/L	34320*ADMS		MB*D1735*1		0.0	
DIBENZ(A,J)ACRIDINE	UG/L	97695*ADMS		MB*D1735*1		0.0	
DIBEN'(A,H)ANTH'CENE	UG/L	34556*ADMS		MB*D1735*1		0.0	
DIBENZOFURAN	UG/L	81302*ADMS		MB*D1735*1		0.0	
DI-N-BUTYLPHTHALATE	UG/L	39110*ADMS		MB*D1735*1		0.0	
1,3-DICHLOROBENZENE	UG/L	34566*ADMS		MB*D1735*1		0.0	
1,2-DICHLOROBENZENE	UG/L	34536*ADMS		MB*D1735*1		0.0	
1,4-DICHLOROBENZENE	UG/L	34571*ADMS		MB*D1735*1		0.0	
3,3'-DICHL'BENZIDINE	UG/L	34631*ADMS		MB*D1735*1		0.0	
2,4-DICHLOROPHENOL	UG/L	34601*ADMS		MB*D1735*1		0.0	
2,6-DICHLOROPHENOL	UG/L	77541*ADMS		MB*D1735*1		0.0	
DIETHYLPHTHALATE	UG/L	34336*ADMS		MB*D1735*1		0.0	
P-DIMETHYLAMINOAZOBENZENE	UG/L	97696*ADMS		MB*D1735*1		0.0	
7,12-DIMETHYLBENZ(A)ANTHRACENUG/L		97697*ADMS		MB*D1735*1		0.0	
A-A-DIMETHYLPHENETHYLAMINE	UG/L	97698*ADMS		MB*D1735*1		0.0	
2,4-DIMETHYLPHENOL	UG/L	34606*ADMS		MB*D1735*1		0.0	
4,6-DINITRO-2-METHYLPHENOL	UG/L	97711*ADMS		MB*D1735*1		0.0	
DIMETHYLPHTHALATE	UG/L	34341*ADMS		MB*D1735*1		0.0	
2,4-DINITROPHENOL	UG/L	34616*ADMS		MB*D1735*1		0.0	
2,4-DINITROTOLUENE	UG/L	34611*ADMS		MB*D1735*1		0.0	
2,6-DINITROTOLUENE	UG/L	34626*ADMS		MB*D1735*1		0.0	
DIPHENYLAMINE	UG/L	77579*ADMS		MB*D1735*1		0.0	
1,2-DIPHEN'HYDRAZINE	UG/L	34346*ADMS		MB*D1735*1		0.0	
DI-N-OCTYLPHTHALATE	UG/L	34596*ADMS		MB*D1735*1		0.0	
ETHYL METHANESULFONATE	UG/L	97699*ADMS		MB*D1735*1		0.0	
FLUORANTHENE	UG/L	34376*ADMS		MB*D1735*1		0.0	
FLUORENE	UG/L	34381*ADMS		MB*D1735*1		0.0	
HEXACHLOROBENZENE	UG/L	39700*ADMS		MB*D1735*1		0.0	
HEXACHLOROBUTADIENE	UG/L	34391*ADMS		MB*D1735*1		0.0	
HEXACHLOROCYCLOPENTADIENE	UG/L	34386*ADMS		MB*D1735*1		0.0	
HEXACHLOROETHANE	UG/L	34396*ADMS		MB*D1735*1		0.0	
INDENO(1,2,3-CD)PYRENE	UG/L	34403*ADMS		MB*D1735*1		0.0	
ISOPHORONE	UG/L	34408*ADMS		MB*D1735*1		0.0	
2-METHYL PHENOL	UG/L	99073*ADMS		MB*D1735*1		0.0	
4-METHYL PHENOL	UG/L	99074*ADMS		MB*D1735*1		0.0	
3-METHYLCHOLANTHRENE	UG/L	97700*ADMS		MB*D1735*1		0.0	
METHYL METHANESULFONATE	UG/L	97701*ADMS		MB*D1735*1		0.0	
2-METHYLNAPHTHALENE	UG/L	77416*ADMS		MB*D1735*1		0.0	
NAPHTHALENE	UG/L	34696*ADMS		MB*D1735*1		0.0	
1-NAPHTHYLAMINE	UG/L	97702*ADMS		MB*D1735*1		0.0	
2-NAPHTHYLAMINE	UG/L	97703*ADMS		MB*D1735*1		0.0	
2-NITROANILINE	UG/L	99077*ADMS		MB*D1735*1		0.0	
3-NITROANILINE	UG/L	99078*ADMS		MB*D1735*1		0.0	
4-NITROANILINE	UG/L	99079*ADMS		MB*D1735*1		0.0	
NITROBENZENE	UG/L	34447*ADMS		MB*D1735*1		0.0	
N-NITROSOPICERIDINE	UG/L	97704*ADMS		MB*D1735*1		0.0	
2-NITROPHENOL	UG/L	34591*ADMS		MB*D1735*1		0.0	
4-NITROPHENOL	UG/L	34646*ADMS		MB*D1735*1		0.0	
N-NITROSO-DI-N-BUTYLAMINE	UG/L	97715*ADMS		MB*D1735*1		0.0	

04/25/90

HUNGERFELSE, INC.

QUALITY CONTROL SUMMARY FOR PLANT 78 WATER SAMPLES
Method Blank Sample Summary

NAME	UNITS	STOR*METH	BATCH	SAMPLE	DATE	FOUND	FOOTNOTE
N-NITROSODIMET'AMINE	UG/L	34438*ADMS	D1735	MB*D1735*1	03/22/90	0.0	
N-NITROSODI-N-PROPYLAMINE	UG/L	34428*ADMS		MB*D1735*1		0.0	
N-NITROSODIPHE'AMINE	UG/L	34433*ADMS		MB*D1735*1		0.0	
PENTACHLOROPHENOL	UG/L	39032*ADMS		MB*D1735*1		0.0	
PENTACHLOROBENZENE	UG/L	97705*ADMS		MB*D1735*1		0.0	
PENTACHLORONITROBENZENE	UG/L	97706*ADMS		MB*D1735*1		0.0	
PHENACETIN	UG/L	97707*ADMS		MB*D1735*1		0.0	
PHENANTHRENE	UG/L	34461*ADMS		MB*D1735*1		0.0	
PHENOL	UG/L	34694*ADMS		MB*D1735*1		0.0	
2-PICOLINE	UG/L	97708*ADMS		MB*D1735*1		0.0	
PRONAMIDE	UG/L	97709*ADMS		MB*D1735*1		0.0	
PYRENE	UG/L	34469*ADMS		MB*D1735*1		0.0	
1,2,4,5-TETRACHLOROBENZENE	UG/L	97710*ADMS		MB*D1735*1		0.0	
1,2,4-TRICH' BENZENE	UG/L	34551*ADMS		MB*D1735*1		0.0	
2,3,4,6 TETRACL' PHENOL	UG/L	97209*ADMS		MB*D1735*1		0.0	
2,4,5-TRICHL' PHENOL	UG/L	77687*ADMS		MB*D1735*1		0.0	
2,4,6-TRICHL' PHENOL	UG/L	34621*ADMS		MB*D1735*1		0.0	

04/25/90

Hunter/SE, INC.

QUALITY CONTROL SUMMARY FOR PLANT 78 WATER SAMPLES
Standard Matrix Spike Recovery and Replicate Summary

NAME	UNITS	STOR*METH	BATCH	SAMPLE	DATE	MB	TARGET	FOUND	%RECV	RECV CRIT	R.P.D.	R.P.D. CRIT.	FOOTNOTE
BENZENE	UG/L	34030*PI	D1740	SP1*D1740*1	02/14/90	0.03	4.08	3.87	94.9	39-150	30		
TOLUENE	UG/L	34010*PI		SP1*D1740*1		0.06	4.01	3.57	89.0	46-148	30		
CHLOROBENZENE	UG/L	34301*PI		SP1*D1740*1		0.064	0.0	T*1		85-115	15		
1,1-DICHLOROETHYLENE	UG/L	34501*HA		SP1*D1740*1		0.162	5.10	4.80	94.1	28-167	30		
TRICHLOROETHENE	UG/L	39180*HA		SP1*D1740*1		0.128	5.57	4.61	82.8	35-146	30		
HYDROCARBONS, PETROL., TOT	UG/L	99388*DIR	D1738	SP1*MBLK*1738	03/16/90	156	4220	3560	84.4	64-92	14		
HYDROCARBONS, PETROL., TOT	UG/L			SP2*MBLK*1738		156	4220	2850	67.5	64-92	14		
ACENAPHTHENE	UG/L	34205*ADMS	D1735	SP1*D1735*1	03/22/90	0.0	50	49	98	46-118	31		
2-CHLOROPHENOL	UG/L	34586*ADMS		SP1*D1735*1		0.0	100	92	92	27-123	40		
4-CHLORO-3-METHYLPHENOL	UG/L	34452*ADMS		SP1*D1735*1		0.0	100	92	92	23-97	42		
1,4-DICHLOROBENZENE	UG/L	34571*ADMS		SP1*D1735*1		0.0	50	35	70	36-97	28		
2,4-DINITROTOLUENE	UG/L	34611*ADMS		SP1*D1735*1		0.0	50	40	80	24-96	38		
4-NITROPHENOL	UG/L	34646*ADMS		SP1*D1735*1		0.0	100	49	49	10-80	50		
N-NITROSODI-N-PROPYLAMINE	UG/L	34428*ADMS		SP1*D1735*1		0.0	50	43	86	41-116	38		
PENTACHLOROPHENOL	UG/L	39032*ADMS		SP1*D1735*1		0.0	100	99	99	9-103	50		
PHENOL	UG/L	34694*ADMS		SP1*D1735*1		0.0	100	53	53	11.5-88.5	42		
PYRENE	UG/L	34469*ADMS		SP1*D1735*1		0.0	50	49	98	26-127	31		
1,2,4-TRICH' BENZENE	UG/L	34551*ADMS		SP1*D1735*1		0.0	50	38	76	39-98	28		

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QUALITY CONTROL SUMMARY FOR PLANT 78 WATER SAMPLES
Sample Matrix Spike Recovery Summary

HUNTER/LE, INC.

NAME	UNITS	STORMETH	BATCH	SAMPLE	DATE	MB	TARGET	FOUND	%RECV	RECV CRIT	UNSPIKED	R.P.D.	R.P.D. CRIT.	FOOTNOTE
BENZENE	UG/L	34030*PI	D1740	SPM1*BCSW3*3	02/14/90	0.03	1.82	1.66	91.3	39-150	0.0		30	
BENZENE	UG/L			SPM2*BCSW3*3		0.03	1.82	1.73	95.2	39-150	0.0	4.29	30	
TOLUENE	UG/L	34010*PI		SPM1*BCSW3*3		0.06	1.82	1.67	91.9	46-148	0.0		30	
TOLUENE	UG/L			SPM2*BCSW3*3		0.06	1.82	1.73	95.3	46-148	0.0	3.74	30	
CHLOROBENZENE	UG/L	34301*PI		SPM1*BCSW3*3		0.064	1.82	1.60	88.2	85-115	0.0		15	
CHLOROBENZENE	UG/L			SPM2*BCSW3*3		0.064	1.82	1.71	93.9	85-115	0.0	6.60	15	
1,1-DICHLOROETHYLENE	UG/L	34501*HA		SPM1*BCSW3*3		0.162	1.82	1.48	81.4	28-167	0.0		30	
1,1-DICHLOROETHYLENE	UG/L			SPM2*BCSW3*3		0.162	1.82	1.59	87.5	28-167	0.0	7.35	30	
TRICHLOROETHENE	UG/L	39180*HA		SPM1*BCSW3*3		0.128	1.82	1.61	88.7	35-146	0.0		30	
TRICHLOROETHENE	UG/L			SPM2*BCSW3*3		0.128	1.82	1.72	94.5	35-146	0.0	6.56	30	
HYDROCARBONS,PETROL.,TOT	UG/L	99388*DIR	D1738	SPM1*BCSW3*3	03/16/90	156	4220	2730	64.6	64-92	140	12.3	14	
HYDROCARBONS,PETROL.,TOT	UG/L			SPM2*BCSW3*3		156	4220	3090	73.2	64-92	140			
ACENAPHTHENE	UG/L	34205*ADMS	D1735	SPM1*BCSW3*7	03/22/90	0.0	50	47	93	46-118	0.0		31	
ACENAPHTHENE	UG/L			SPM2*BCSW3*7		0.0	50	46	92	46-118	0.0	2.2	31	
2-CHLOROPHENOL	UG/L	34586*ADMS		SPM1*BCSW3*7		0.0	100	99	99	27-123	0.0		40	
2-CHLOROPHENOL	UG/L			SPM2*BCSW3*7		0.0	100	97	97	27-123	0.0	2.0	40	
4-CHLORO-3-METHYLPHENOL	UG/L	34452*ADMS		SPM1*BCSW3*7		0.0	100	96	96	23-97	0.0		42	
4-CHLORO-3-METHYLPHENOL	UG/L			SPM2*BCSW3*7		0.0	100	94	94	23-97	0.0	2.1	42	
1,4-DICHLOROBENZENE	UG/L	34571*ADMS		SPM1*BCSW3*7		0.0	50	37	73	36-97	0.0		28	
1,4-DICHLOROBENZENE	UG/L			SPM2*BCSW3*7		0.0	50	38	75	36-97	0.0	1.3	28	
2,4-DINITROTOLUENE	UG/L	34611*ADMS		SPM1*BCSW3*7		0.0	50	37	74	24-96	0.0		38	
2,4-DINITROTOLUENE	UG/L			SPM2*BCSW3*7		0.0	50	37	73	24-96	0.0	1.4	38	
4-NITROPHENOL	UG/L	34646*ADMS		SPM1*BCSW3*7		0.0	100	77	77	10-80	0.0		50	
4-NITROPHENOL	UG/L			SPM2*BCSW3*7		0.0	100	77	77	10-80	0.0	0.0	50	
N-NITROSODI-N-PROPYLAMINE	UG/L	34428*ADMS		SPM1*BCSW3*7		0.0	50	47	95	41-116	0.0		38	
N-NITROSODI-N-PROPYLAMINE	UG/L			SPM2*BCSW3*7		0.0	50	45	91	41-116	0.0	3.2	38	
PENTACHLOROPHENOL	UG/L	39032*ADMS		SPM1*BCSW3*7		0.0	100	47	47	9-103	0.0		50	
PENTACHLOROPHENOL	UG/L			SPM2*BCSW3*7		0.0	100	46	46	9-103	0.0	2.2	50	
PHENOL	UG/L	34694*ADMS		SPM1*BCSW3*7		0.0	100	81	81	11.5-88.5	0.0		42	
PHENOL	UG/L			SPM2*BCSW3*7		0.0	100	76	76	11.5-88.5	0.0	6.4	42	
PYRENE	UG/L	34469*ADMS		SPM1*BCSW3*7		0.0	50	47	95	26-127	0.0		31	
PYRENE	UG/L			SPM2*BCSW3*7		0.0	50	43	85	26-127	0.0	10	31	
1,2,4-TRICHLOROBENZENE	UG/L	34551*ADMS		SPM1*BCSW3*7		0.0	50	41	82	39-98	0.0		28	
1,2,4-TRICHLOROBENZENE	UG/L			SPM2*BCSW3*7		0.0	50	39	78	39-98	0.0	5.0	28	

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Hunter/ESE, INC.
QUALITY CONTROL SUMMARY FOR PLANT 78 SOIL SAMPLES
Method Blank Sample Summary

04/25/90

NAME	UNITS	STOR* METH	BATCH	SAMPLE	DATE	FOUND	FOOTNOTE
BENZENE	MG/KG-DRY	34237*ADPI	D1749	MB*D1749*1	03/15/90	0.0	
TOLUENE	MG/KG-DRY	34483*ADPI		MB*D1749*1		0.0	
CHLOROBENZENE	MG/KG-DRY	34304*ADPI		MB*D1749*1		0.0	
ETHYLBENZENE	MG/KG-DRY	34374*ADPI		MB*D1749*1		0.0	
BROMOBENZENE	MG/KG-DRY	97036*ADPI		MB*D1749*1		0.0	
XYLENES, TOTAL	MG/KG-DRY	45510*ADPI		MB*D1749*1		0.0	
DICHLOROBENZENE, TOT.	MG/KG-DRY	98578*ADPI		MB*D1749*1		0.0	
METHYLCHLORIDE	MG/KG-DRY	34421*ADHA		MB*D1749*1		0.0	
METHYL BROMIDE	MG/KG-DRY	34416*ADHA		MB*D1749*1		0.0	
DICHLORODIFLUOROMETHANE	MG/KG-DRY	34334*ADHA		MB*D1749*1		0.0	
VINYL CHLORIDE	MG/KG-DRY	34495*ADHA		MB*D1749*1		0.0	
CHLOROETHANE	MG/KG-DRY	34314*ADHA		MB*D1749*1		0.0	
METHYLENE CHLORIDE	MG/KG-DRY	34426*ADHA		MB*D1749*1		0.0	
TRICHLOROFLUOROMETHANE	MG/KG-DRY	34491*ADHA		MB*D1749*1		0.0	
1,1-DICHLOROETHENE	MG/KG-DRY	34504*ADHA		MB*D1749*1		0.0	
1,1,1-DICHLOROETHANE	MG/KG-DRY	34499*ADHA		MB*D1749*1		0.0	
TRANS-1,2-DICHLOROETHENE	MG/KG-DRY	34549*ADHA		MB*D1749*1		0.0	
CHLOROFORM	MG/KG-DRY	34318*ADHA		MB*D1749*1		0.0	
1,2-DICHLOROETHANE	MG/KG-DRY	34534*ADHA		MB*D1749*1		0.0	
DIBROMOETHANE	MG/KG-DRY	78756*ADHA		MB*D1749*1		0.0	
1,1,1-TRICHLOROETHANE	MG/KG-DRY	34509*ADHA		MB*D1749*1		0.0	
BROMODICHLORIDE	MG/KG-DRY	34299*ADHA		MB*D1749*1		0.0	
BROMODICHLOROMETHANE	MG/KG-DRY	34330*ADHA		MB*D1749*1		0.0	
1,2-DICHLOROPROPANE	MG/KG-DRY	34544*ADHA		MB*D1749*1		0.0	
T-1,3-DICHLOROPROPENE	MG/KG-DRY	34697*ADHA		MB*D1749*1		0.0	
TRICHLOROETHYLENE	MG/KG-DRY	34487*ADHA		MB*D1749*1		0.0	
DIBROMOCHLOROMETHANE	MG/KG-DRY	34309*ADHA		MB*D1749*1		0.0	
CIS-1,3-DICHLOROPROPENE	MG/KG-DRY	34702*ADHA		MB*D1749*1		0.0	
1,1,2-TRICHLOROETHANE	MG/KG-DRY	34514*ADHA		MB*D1749*1		0.0	
2-CHLOROETHYL VINYL ETHER	MG/KG-DRY	34579*ADHA		MB*D1749*1		0.0	
BROMOFORM	MG/KG-DRY	34290*ADHA		MB*D1749*1		0.0	
1,1,1,2-TETRACHLOROETHANE	MG/KG-DRY	97042*ADHA		MB*D1749*1		0.0	
TRICHLOROPROPANE	MG/KG-DRY	97043*ADHA		MB*D1749*1		0.0	
1,1,2,2-TETRACHLOROETHANE	MG/KG-DRY	34519*ADHA		MB*D1749*1		0.0	
TRICHLOROETHYLENE	MG/KG-DRY	34478*ADHA		MB*D1749*1		0.0	
1-CHLOROHEXANE	MG/KG-DRY	97039*ADHA		MB*D1749*1		0.0	
HYDROCARBONS, PETROL	MG/KG-DRY	98233*AD	D1737	MB*MBLK*1737	03/16/90	0.0	
ACENAPHTHENE, SOIL	MG/KG-DRY	99450*ADMS	D1759	MB*D1759*1	03/24/90	0.0	
ACENAPHTHYLENE, SOIL	MG/KG-DRY	99451*ADMS		MB*D1759*1		0.0	
ACETOPHENONE	MG/KG-DRY	97643*ADMS		MB*D1759*1		0.0	
ANILINE	MG/KG-DRY	97644*ADMS		MB*D1759*1		0.0	
ANTHRACENE, SOIL	MG/KG-DRY	99452*ADMS		MB*D1759*1		0.0	
4-AMINOBIPHENYL	MG/KG-DRY	97645*ADMS		MB*D1759*1		0.0	
BENZIDINE	MG/KG-DRY	97646*ADMS		MB*D1759*1		0.0	
BENZO(A)ANTHRACENE	MG/KG-DRY	99453*ADMS		MB*D1759*1		0.0	
BENZO(B)FLUORANTHENE, S	MG/KG-DRY	99454*ADMS		MB*D1759*1		0.0	
BENZO(K)FLUORANTHENE	MG/KG-DRY	99455*ADMS		MB*D1759*1		0.0	
BENZO(A)PYRENE	MG/KG-DRY	99456*ADMS		MB*D1759*1		0.0	
BENZO(G, H, I, J)PERYLENE	MG/KG-DRY	99691*ADMS		MB*D1759*1		0.0	
BENZYL ALCOHOL	MG/KG-DRY	97647*ADMS		MB*D1759*1		0.0	
BENZOIC ACID	MG/KG-DRY	97676*ADMS		MB*D1759*1		0.0	
BUTYL BENZYL PHTHALATE	MG/KG-DRY	99463*ADMS		MB*D1759*1		0.0	
BIS(2-CHLOROETHYL)ETHER	MG/KG-DRY	99458*ADMS		MB*D1759*1		0.0	
BIS(2-CHLOROETHOXY)METHANE	MG/KG-DRY	97493*ADMS		MB*D1759*1		0.0	
BIS(2-ETHYLHEXYL)PHTHALATE	MG/KG-DRY	99460*ADMS		MB*D1759*1		660	
BIS(2-CHL'ISOPROPYL) ETHER	MG/KG-DRY	97547*ADMS		MB*D1759*1		0.0	

QUALITY CONTROL SUMMARY FOR PLANT 78 SOIL SAMPLES
Method Blank Sample Summary

NAME	UNITS	STOR*METH	BATCH	SAMPLE	DATE	FOUND	FOOTNOTE
4-BROMOPHENYL PHENYL ETHER	MG/KG-DRY	99462*ADMS	D1759	MB*D1759*1	03/24/90	0.0	
4-CHLOROANILINE SED	MG/KG-DRY	97648*ADMS		MB*D1759*1		0.0	
1-CHLORONAPHTHALENE	MG/KG-DRY	97649*ADMS		MB*D1759*1		0.0	
2-CHLORONAPHTHALENE	MG/KG-DRY	99464*ADMS		MB*D1759*1		0.0	
2-CHLOROPHENOL	MG/KG-DRY	99497*ADMS		MB*D1759*1		0.0	
4-CHLORO-3-METHYLPHENOL	MG/KG-DRY	99683*ADMS		MB*D1759*1		0.0	
4-CHLOROPHENYLPHENYL ETHER	MG/KG-DRY	99465*ADMS		MB*D1759*1		0.0	
CHRYSENE	MG/KG-DRY	99690*ADMS		MB*D1759*1		0.0	
DIBENZ(A,J)ACRIDINE	MG/KG-DRY	97650*ADMS		MB*D1759*1		0.0	
DIBENZO(A,H)ANTHRACENE	MG/KG-DRY	99466*ADMS		MB*D1759*1		0.0	
DIBENZOFURAN	MG/KG-DRY	97651*ADMS		MB*D1759*1		0.0	
DI-N-BUTYLPHTHALATE	MG/KG-DRY	99467*ADMS		MB*D1759*1		110	
1,3-DICHLOROBENZENE	MG/KG-DRY	99468*ADMS		MB*D1759*1		0.0	
1,2-DICHLOROBENZENE	MG/KG-DRY	99470*ADMS		MB*D1759*1		0.0	
1,4-DICHLOROBENZENE	MG/KG-DRY	99469*ADMS		MB*D1759*1		0.0	
3,3-DICHLOROBENZIDINE	MG/KG-DRY	99471*ADMS		MB*D1759*1		0.0	
2,4-DICHLOROPHENOL	MG/KG-DRY	99498*ADMS		MB*D1759*1		0.0	
DIETHYLPHTHALATE	MG/KG-DRY	99472*ADMS		MB*D1759*1		0.0	
P-DIMETHYLAMINOBENZENE	MG/KG-DRY	97652*ADMS		MB*D1759*1		0.0	
7,12-DIMETHYLBENZ(A)ANTHRACENE	MG/KG-DRY	97653*ADMS		MB*D1759*1		0.0	
A-A-DIMETHYLPHENETHYLAMINE	MG/KG-DRY	97654*ADMS		MB*D1759*1		0.0	
2,6-DICHLOROPHENOL	MG/KG-DRY	97677*ADMS		MB*D1759*1		0.0	
2,4-DIMETHYPHENOL	MG/KG-DRY	99499*ADMS		MB*D1759*1		0.0	
DIMETHYLPHTHALATE	MG/KG-DRY	99473*ADMS		MB*D1759*1		0.0	
4,6-DINITRO-2-METHYLPHENOL	MG/KG-DRY	97678*ADMS		MB*D1759*1		0.0	
2,4-DINITROPHENOL	MG/KG-DRY	99695*ADMS		MB*D1759*1		0.0	
2,4-DINITROTOLUENE	MG/KG-DRY	99474*ADMS		MB*D1759*1		0.0	
2,6-DINITROTOLUENE	MG/KG-DRY	99475*ADMS		MB*D1759*1		0.0	
DIPHENYLAMINE	MG/KG-DRY	97655*ADMS		MB*D1759*1		0.0	
1,2-DIPHENYLHYDRAZINE	MG/KG-DRY	99477*ADMS		MB*D1759*1		0.0	
ETHYL METHANESULFONATE	MG/KG-DRY	97656*ADMS		MB*D1759*1		0.0	
DI-N-OCTYLPHTHALATE	MG/KG-DRY	99476*ADMS		MB*D1759*1		0.0	
FLUORANTHENE	MG/KG-DRY	99689*ADMS		MB*D1759*1		0.0	
FLUORENE	MG/KG-DRY	99692*ADMS		MB*D1759*1		0.0	
HEXACHLOROBENZENE	MG/KG-DRY	99478*ADMS		MB*D1759*1		0.0	
HEXACHLOROBUTADIENE	MG/KG-DRY	99479*ADMS		MB*D1759*1		0.0	
HEXACHLOROCYCLOPENTADIENE	MG/KG-DRY	97657*ADMS		MB*D1759*1		0.0	
HEXACHLOROETHANE	MG/KG-DRY	99480*ADMS		MB*D1759*1		0.0	
INDENO(1,2,3-CD)PYRENE	MG/KG-DRY	99482*ADMS		MB*D1759*1		0.0	
ISOPHORONE	MG/KG-DRY	99483*ADMS		MB*D1759*1		0.0	
3-METHYLCHOLANTHRENE	MG/KG-DRY	97658*ADMS		MB*D1759*1		0.0	
METHYL METHANESULFONATE	MG/KG-DRY	97659*ADMS		MB*D1759*1		0.0	
2-METHYLNAPHTHALENE	MG/KG-DRY	97660*ADMS		MB*D1759*1		0.0	
NAPHTHALENE	MG/KG-DRY	99696*ADMS		MB*D1759*1		0.0	
1-NAPHTHYLAMINE	MG/KG-DRY	97661*ADMS		MB*D1759*1		0.0	
2-NAPHTHYLAMINE	MG/KG-DRY	97717*ADMS		MB*D1759*1		0.0	
2-NITROANILINE	MG/KG-DRY	97662*ADMS		MB*D1759*1		0.0	
3-NITROANILINE	MG/KG-DRY	97663*ADMS		MB*D1759*1		0.0	
4-NITROANILINE	MG/KG-DRY	97664*ADMS		MB*D1759*1		0.0	
NITROBENZENE	MG/KG-DRY	99485*ADMS		MB*D1759*1		0.0	
N-NITRO-DI-N-BUTYLAMINE	MG/KG-DRY	97665*ADMS		MB*D1759*1		0.0	
N-NITROSODIMETHYLAMINE	MG/KG-DRY	97666*ADMS		MB*D1759*1		0.0	
N-NITROSODIPHENYLAMINE	MG/KG-DRY	97667*ADMS		MB*D1759*1		0.0	
N-NITROSOPIPERIDINE	MG/KG-DRY	97669*ADMS		MB*D1759*1		0.0	
PENTACHLOROBENZENE	MG/KG-DRY	97670*ADMS		MB*D1759*1		0.0	
PENTACHLORONITROBENZENE	MG/KG-DRY	97671*ADMS		MB*D1759*1		0.0	

04/25/90

Hunter/LEE, INC.

QUALITY CONTROL SUMMARY FOR PLANT 78 SOIL SAMPLES
Method Blank Sample Summary

NAME	UNITS	STOR*METH	BATCH	SAMPLE	DATE	FOUND	FOOTNOTE
PHENACETIN	MG/KG-DRY	97672*ADMS	D1759	MB*D1759*1	03/24/90	0.0	
2-METHYLPHENOL	MG/KG-DRY	97679*ADMS		MB*D1759*1		0.0	
4-METHYLPHENOL	MG/KG-DRY	97680*ADMS		MB*D1759*1		0.0	
2-NITROPHENOL	MG/KG-DRY	99495*ADMS		MB*D1759*1		0.0	
4-NITROPHENOL	MG/KG-DRY	99496*ADMS		MB*D1759*1		0.0	
N-NITROSODI-N-PROPYLAMINE	MG/KG-DRY	99487*ADMS		MB*D1759*1		0.0	
PENTACHLOROPHENOL	MG/KG-DRY	99682*ADMS		MB*D1759*1		0.0	
PHENANTHRENE	MG/KG-DRY	99489*ADMS		MB*D1759*1		0.0	
2-PICOLINE	MG/KG-DRY	97673*ADMS		MB*D1759*1		0.0	
PRONAMIDE	MG/KG-DRY	97674*ADMS		MB*D1759*1		0.0	
PHENOL	MG/KG-DRY	99685*ADMS		MB*D1759*1		0.0	
PYRENE	MG/KG-DRY	99490*ADMS		MB*D1759*1		0.0	
1,2,4,5-TETRACHLOROBENZENE	MG/KG-DRY	97675*ADMS		MB*D1759*1		0.0	
1,2,4-TRICHLOROBENZENE	MG/KG-DRY	99492*ADMS		MB*D1759*1		0.0	
2,3,4,6-TETRACHLOROPHENOL	MG/KG-DRY	97681*ADMS		MB*D1759*1		0.0	
2,4,5-TRICH'PHENOL	MG/KG-DRY	98587*ADMS		MB*D1759*1		0.0	
2,4,6-TRICHLRPHENOL	MG/KG-DRY	99684*ADMS		MB*D1759*1		0.0	
BENZENE	UG/L	34030*PI	D1740	MB*D1740*1	02/14/90	0.0	
TOLUENE	UG/L	34010*PI		MB*D1740*1		0.0	
CHLOROBENZENE	UG/L	34301*PI		MB*D1740*1		0.0	
ETHYLBENZENE	UG/L	34371*PI		MB*D1740*1		0.0	
BROMOBENZENE	UG/L	99634*PI		MB*D1740*1		0.0	
XYLENES, TOTAL	UG/L	81551*PI		MB*D1740*1		0.0	
DICHLOROBENZENE, TOT.	UG/L	81524*PI		MB*D1740*1		0.0	
CHLOROMETHANE	UG/L	34418*HA		MB*D1740*1		0.0	
BROMOMETHANE	UG/L	34413*HA		MB*D1740*1		0.0	
VINYL CHLORIDE	UG/L	39175*HA		MB*D1740*1		0.0	
CHLOROETHANE	UG/L	34311*HA		MB*D1740*1		0.0	
DICHLORODIFLUOROMETHANE	UG/L	34668*HA		MB*D1740*1		0.0	
METHYLENE CHLORIDE	UG/L	34423*HA		MB*D1740*1		0.415	
TRICHL'FLUOROMETHANE	UG/L	34488*HA		MB*D1740*1		0.0	
1,1-DICHLOROETHYLENE	UG/L	34501*HA		MB*D1740*1		0.0	
1,1-DICHLOROETHANE	UG/L	34496*HA		MB*D1740*1		0.0	
TRANS-1,2-DICHLOROETHENE	UG/L	34546*HA		MB*D1740*1		0.0	
CHLOROFORM	UG/L	32106*HA		MB*D1740*1		0.0	
1,2-DICHLOROETHANE	UG/L	34531*HA		MB*D1740*1		0.0	
DIBROMOMETHANE	UG/L	81522*HA		MB*D1740*1		0.0	
1,1,1-TRICHL'ETHANE	UG/L	34506*HA		MB*D1740*1		0.0	
CARBON TETRACHLORIDE	UG/L	32102*HA		MB*D1740*1		0.0	
BROMODICHLOROMETHANE	UG/L	32101*HA		MB*D1740*1		0.0	
1,2-DICHLOROPROPANE	UG/L	34541*HA		MB*D1740*1		0.0	
TRANS-1,3-DICHLOROPROPENE	UG/L	34699*HA		MB*D1740*1		0.0	
1,1,2-TRICHL'ETHANE	UG/L	34511*HA		MB*D1740*1		0.0	
TRICHLOROETHENE	UG/L	39180*HA		MB*D1740*1		0.0	
DIBROMOCHLOROMETHANE	UG/L	32105*HA		MB*D1740*1		0.0	
CIS-1,3-DICHLOROPROPENE	UG/L	34704*HA		MB*D1740*1		0.0	
2-CHLOROETHYLVINYLETHET	UG/L	34576*HA		MB*D1740*1		0.0	
BROMOFORM	UG/L	32104*HA		MB*D1740*1		0.0	
1,1,1,2-TETRACH'ETHANE	UG/L	77562*HA		MB*D1740*1		0.0	
TRICHLOROPROPANE	UG/L	97758*HA		MB*D1740*1		0.0	
TETRACHLOROETHENE	UG/L	34475*HA		MB*D1740*1		0.0	
1,1,2,2-TETRACHLORO ETHANE	UG/L	34516*HA		MB*D1740*1		0.0	
1-CHLOROHEXANE	UG/L	97761*HA		MB*D1740*1		0.0	

Hunter/ESE, INC.

QUALITY CONTROL SUMMARY FOR PLANT 78 SOIL SAMPLES
Standard Matrix Spike Recovery and Replicate Summary

NAME	UNITS	STOR#METH	BATCH	SAMPLE	DATE	MB	TARGET	FOUND	%RECV	RECV CRIT	R.P.D.	R.P.D. CRIT.	FOOTNOTE
HYDROCARBONS, PETROL	MG/KG-DRY	98233*AD	D1737	SPI*MBLK*1737	03/16/90	7.66	422	401	95.0	70.2-124.8	20	20	
HYDROCARBONS, PETROL	MG/KG-DRY			SP2*MBLK*1737		7.66	422	416	98.6	70.2-124.83.72	20	20	
ACENAPHTHENE, SOIL	MG/KG-DRY	99450*ADMS	D1759	SPI*DI1759*1	03/24/90	0.0	6700	6700	100	31-137	19	19	
2-CHLOROPHENOL	MG/KG-DRY	99497*ADMS		SPI*DI1759*1		0.0	13000	13000	100	25-102	50	50	
4-CHLORO-3-METHYLPHENOL	MG/KG-DRY	99683*ADMS		SPI*DI1759*1		0.0	13000	13000	100	26-103	33	33	
1,4-DICHLOROBENZENE	MG/KG-DRY	99469*ADMS		SPI*DI1759*1		0.0	6700	5400	81	28-104	27	27	
2,4-DINITROTOLUENE	MG/KG-DRY	99474*ADMS		SPI*DI1759*1		0.0	6700	5500	82	28-89	47	47	
4-NITROPHENOL	MG/KG-DRY	99496*ADMS		SPI*DI1759*1		0.0	13000	15000	120	11-114	50	50	
N-NITROSODI-N-PROPYLAMINE	MG/KG-DRY	99487*ADMS		SPI*DI1759*1		0.0	6700	6000	90	41-126	38	38	
PENTACHLOROPHENOL	MG/KG-DRY	99682*ADMS		SPI*DI1759*1		0.0	13000	14000	110	17-109	47	47	1
PHENOL	MG/KG-DRY	99685*ADMS		SPI*DI1759*1		0.0	13000	11000	85	26-190	35	35	
PYRENE	MG/KG-DRY	99490*ADMS		SPI*DI1759*1		0.0	6700	6400	96	35-142	36	36	
1,2,4-TRICHLOROBENZENE	MG/KG-DRY	99492*ADMS		SPI*DI1759*1		0.0	6700	6000	90	38-107	23	23	

QUALITY CONTROL SUMMARY FOR PLANT 78 SOIL SAMPLES
Sample Matrix Spike Recovery Summary

NAME	UNITS	STOR METH	BATCH	SAMPLE	DATE	MB	TARGET	FOUND	%RECV	RECV	CRIT	UNSPIKED	R.P.D.	R.P.D.	CRIT.	FOOTNOTE
BENZENE	MG/KG-DRY	34237*ADPI	D1749	SPM1*BCSS3*3	03/15/90	6.40	1074	1290	120	66-142	0.0	0.0	21			
BENZENE	MG/KG-DRY			SPM2*BCSS3*3		6.40	1074	1050	97	66-142	0.0	20.5	21			
TOLUENE	MG/KG-DRY	34483*ADPI		SPM1*BCSS3*3		7.65	1074	1310	121	59-139	0.0	0.0	21			
TOLUENE	MG/KG-DRY			SPM2*BCSS3*3		7.65	1074	1050	97	59-139	0.0	21.6	21			
CHLOROBENZENE	MG/KG-DRY	34304*ADPI		SPM1*BCSS3*3		6.32	1074	1320	122	60-133	0.0	0.0	21			
CHLOROBENZENE	MG/KG-DRY			SPM2*BCSS3*3		6.32	1074	1060	98	60-133	0.0	22.2	21			
1,1-DICHLOROETHENE	MG/KG-DRY	34504*ADHA		SPM1*BCSS3*3		6.82	1074	1180	109	50-172	0.0	0.0	22			
1,1-DICHLOROETHENE	MG/KG-DRY			SPM2*BCSS3*3		6.82	1074	969	90	50-172	0.0	20.1	22			
TRICHLOROETHYLENE	MG/KG-DRY	34487*ADHA		SPM1*BCSS3*3		16.6	1074	1270	117	62-137	0.0	0.0	24			
TRICHLOROETHYLENE	MG/KG-DRY			SPM2*BCSS3*3		16.6	1074	993	91	62-137	0.0	24.7	24			
HYDROCARBONS, PETROL	MG/KG-DRY	98233*AD	D1737	SPM1*BCSS3*4	03/16/90	7.66	564	613	107	70.2-124.813.7	0.0	6.67	20			
HYDROCARBONS, PETROL	MG/KG-DRY			SPM2*BCSS3*4		7.66	564	654	115	70.2-124.813.7	0.0	6.67	20			
ACENAPHTHENE, SOIL	MG/KG-DRY	99450*ADMS	D1759	SPM1*BCSS3*7	03/24/90	0.0	8254	8500	103	31-137	0.0	0.0	19			
ACENAPHTHENE, SOIL	MG/KG-DRY			SPM2*BCSS3*7		0.0	8254	8800	107	31-137	0.0	0.0	19			
2-CHLOROPHENOL	MG/KG-DRY	99497*ADMS		SPM1*BCSS3*7		0.0	16016	17000	106	25-102	0.0	0.0	50			
2-CHLOROPHENOL	MG/KG-DRY			SPM2*BCSS3*7		0.0	16016	18000	112	25-102	0.0	7.4	50			
4-CHLORO-3-METHYLPHENOL	MG/KG-DRY	99683*ADMS		SPM1*BCSS3*7		0.0	16016	21000	131	26-103	0.0	0.0	33			
4-CHLORO-3-METHYLPHENOL	MG/KG-DRY			SPM2*BCSS3*7		0.0	16016	20000	125	26-103	0.0	6.5	33			
1,4-DICHLOROBENZENE	MG/KG-DRY	99469*ADMS		SPM1*BCSS3*7		0.0	8254	6300	76	28-104	0.0	0.0	27			
1,4-DICHLOROBENZENE	MG/KG-DRY			SPM2*BCSS3*7		0.0	8254	8254	81	28-104	0.0	6.2	27			
2,4-DINITROTOLUENE	MG/KG-DRY	99474*ADMS		SPM1*BCSS3*7		0.0	8254	8200	99	28-89	0.0	0.0	47			
2,4-DINITROTOLUENE	MG/KG-DRY			SPM2*BCSS3*7		0.0	8254	8600	104	28-89	0.0	8.0	47			
4-NITROPHENOL	MG/KG-DRY	99496*ADMS		SPM1*BCSS3*7		0.0	16016	25000	156	11-114	0.0	0.0	50			
4-NITROPHENOL	MG/KG-DRY			SPM2*BCSS3*7		0.0	16016	26000	162	11-114	0.0	5.1	50			
N-NITROSODI-N-PROPYLAMINE	MG/KG-DRY	99487*ADMS		SPM1*BCSS3*7		0.0	8254	8000	97	41-126	0.0	0.0	38			
N-NITROSODI-N-PROPYLAMINE	MG/KG-DRY			SPM2*BCSS3*7		0.0	8254	8400	102	41-126	0.0	8.0	38			
PENTACHLOROPHENOL	MG/KG-DRY	99682*ADMS		SPM1*BCSS3*7		0.0	16016	18000	112	17-109	0.0	0.0	47			
PENTACHLOROPHENOL	MG/KG-DRY			SPM2*BCSS3*7		0.0	16016	20000	125	17-109	0.0	6.9	47			
PHENOL	MG/KG-DRY	99685*ADMS		SPM1*BCSS3*7		0.0	16016	16000	100	26-190	0.0	0.0	35			
PHENOL	MG/KG-DRY			SPM2*BCSS3*7		0.0	16016	16000	100	26-190	0.0	0.0	35			
PYRENE	MG/KG-DRY	99490*ADMS		SPM1*BCSS3*7		0.0	8254	8300	101	35-142	0.0	0.0	36			
PYRENE	MG/KG-DRY			SPM2*BCSS3*7		0.0	8254	8100	98	35-142	0.0	0.0	36			
1,2,4-TRICHLOROBENZENE	MG/KG-DRY	99492*ADMS		SPM1*BCSS3*7		0.0	8254	7100	86	38-107	0.0	0.0	23			
1,2,4-TRICHLOROBENZENE	MG/KG-DRY			SPM2*BCSS3*7		0.0	8254	7100	86	38-107	0.0	0.0	23			

04/27/90

Environmental Science and Engineering, INC.
Table of Definitions for QC Report
Columnar Terms

Item	Title	Definition
FOUND	Sample Concentration	SPIKE SAMPLE CONC - UNSPIKED SAMPLE CONC
FOUND # 1	Concentration of UNSPIKED Sample	
FOUND # 2	Concentration of Replicate Sample	
%REC	Percent Recovery:	100 * (FOUND/ TARGET) displayed in appropriate significant figures
REC CRIT	Recovery Criteria	Criteria for Percent Recovery set in the parameter record.
UNSPIKED	Unspiked Sample Concentration	Concentration of the DA or UN sample
M*BLK	Concentration of Method Blank	
R.P.D.	Relative Percent Difference (Matrix Spikes)	100 * (ABS (%REC SPMn - %REC SPMn-1))/(%REC SPMn + %REC SPMn-1)/2)
R.P.D.	Replicate Percent Difference (Control Spikes)	100 * (ABS (%REC SPn - %REC SPI)/(%REC SPn + %REC SPI)/2)
R.P.D.	Replicate Percent Difference (Replicate Samples)	100 * (ABS (Conc Rep #2 - Conc Rep #1)/(Conc Rep #2 + Conc Rep #1)/2)
MAX % REPL DIFF	Maximum value of Replicate Difference	
C.D.L.	Calibration Curve Detection Limit	
NA	Not Analyzed	
N/A	Not Available	

Table of Definitions for QC Report

Special Terms

Item	Title	Definition
D*1		No analysis date.R*1
U*2		Raw sample or UN sample is null or does not exist.
RPD*1		SPI data is null or does not exist.
U*1		UN or DA parameter status is NR (NOT REQUESTED)
UNSPIKED = 0		If the parameter is reported as a "LESS THAN" the data is converted to 0 for calculation purposes
BLANK LINE		Sample status is either NA or NR. NA=NOT ANALYZED, NR=NOT REQUESTED
NC		No curve found.
NDL		No curve detection limit in the curve record.
MIN.REC	Minimum Recovery Limit	Average Recovery - Recovery Limit
MAX.REC	Maximum Recovery Limit	Average Recovery + Recovery Limit

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FOOTNOTES FOR THE EVALUATION OF THE PLANT 78 QUALITY CONTROL SUMMARIES:

1. This a computer rounding artifact. In fact the target is 13333 mg/kg, the found value is 14194 mg/kg, and the recovery is 106%. This is within acceptance criteria.

Table of Definitions for QC Report

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Item Title

FOUND	Sample Concentration	
FOUND #1	Concentration of UNSPIKED Sample	
FOUND #2	Concentration of Replicate Sample	
%RECV	Percent Recovery	
RECV CRIT	Criteria for Percent Recovery set in the parameter record.	
UNSPIKED	Unspiked Sample Concentration	
M*BLK	Concentration of Method Blank	
R.P.D.	Relative Percent Difference (Matrix Spikes)	
R.P.D.	Relative Percent Difference (Control Spikes)	
R.P.D.	Relative Percent Difference (Replicate Spikes)	
MAX % REPL DIFF	Maximum value of Replicate Difference	
ABS	Absolute value of calculation	
RPD CRIT	Relative Percent Difference Criteria	
TARGET	Amount of specific analyte added to the standard or sample matrix	
BATCH	File that contains sample and QC data.	
STOR*METH	STORET (Storage/Retrieval) system with Method Code. These codes are for internal ESE use only.	
T*1	Target value is null or 0 in the data batch.	
U*1	The parameter is not requested for that sample, so the concentration in the unspiked sample cannot be calculated.	
U*2	The unspiked sample data is not located in that data batch.	
RPD*1	The SP1 data is not located in that data batch.	
CVAA	Cold Vapor Atomic Absorption	
GFAA	Graphite Furnace Atomic Absorption	
AICP	Air Force project, using Inductively Coupled Argon Plasma	
GMS	Gainville Lab, using Gas Chromatography/Mass Spec.	
EC	Gas chromatography method with an Electron Capture Detector	
HA	Gas chromatography method with a Hall Detector	
IC	Ion chromatography	
A1 or 1	Air Force project, classical inorganic methods	
SAMPLE	ESE's sample designation	
DATE	Date of analysis	
UNITS	Method of expressing concentration	
MG/L	Milligrams per liter	
UG/L	Micrograms per liter	
NAME	Parameter	
NA	Not Available	
N/A	Not applicable	
MB*NONE*n	Method blank n can represent the number of method blanks in the batch or the date of preparation if more than one day of extractions are contained in the batch.	
RP*REF Id.	Reference material	
RP*FIELD GROUP*SEQ #	Replicate analysis; identifying the sample replicated	
SPn*NONE*n	Standard matrix spike of QC check sample	
LCS*NONE*n	Standard matrix spike of QC check sample for metals	
SPX*FIELD GROUP*SEQ#	For metals analysis only, this is an analytical or post digestion sample matrix spike.	
SPMn*FIELD GROUP*SEQ#	Sample matrix spike, identifying the sample spiked	
SUR*FIELD GROUP*SEQ#	Surrogate spike, identifying the sample or the laboratory sample spiked.	

For multiple spikes, all are compared to the first spike, when calculating the RPD value.

For values that are less than the detection limit, the detection limit is used for calculation purposes.

Calculations are performed using the number of significant figures specific to that analysis. Example: If target = 40, and found = 41; calculated % recovery = 102.5 reported % recovery = 100.

Definition

SPIKE SAMPLE CONC - UNSPIKED SAMPLE CONC.

100 x (FOUND/TARGET) (see note below)

100 x (ABS (%RECV SPMn - %RECV SPMn-1)/(%RECV SPMn + %RECV SPMn-1)/2 where n > or = 2

100 x (ABS (%RECV SPn - %RECV SP1)/(%RECV SPn + %RECV SP1), where n > or = 2

100 x (ABS (%RECV SPn - %RECV SP1)/(%RECV RPn + %RECV RP1), where n > or = 2

Criteria for RPD set in the parameter record.



Glossary of Terms and Symbols

DEFINITIONS

Trip Blank: A sample bottle is filled with ASTM Type II Reagent Water in the laboratory, transported to the site, handled like a sample, and returned to the laboratory for analysis (trip blanks are not to be opened in the field). The trip blank for soils is Type II Reagent Water just as in the case of water samples.

Ambient Conditions Blank: Type II Reagent Water is poured into a samples container at the site, the is handled like a sample and transported to laboratory for analysis.

Equipment Blank: Type II Reagent Water is poured into the sampling device, or pumped through it (in the case of sampling pumps), transferred to the sample bottle, and then transported to the laboratory for analysis.

Duplicate: Two samples collected independently at a sampling location during a single act of sampling. Field duplicates shall be disguised so that laboratory personnel performing the analyses are not able to determine which samples are duplicates.

Method Blank: Method blanks consist of analyte-free water or soil, processed in the exact manner as the samples within a batch, using identical reagents and solvents.

Sample Matrix Spike: For every 20 samples, a sample is selected that represents the matrix and is spiked in duplicate with analytes specified for each method.

Surrogate Spikes: Surrogate spikes are compounds that are added to every sample analyzed, including the standards, blanks, matrix spikes and QC check samples, to assess the recovery of the method.

Standard Matrix Spikes/QC Check Sample: A QC check sample consists of either an EPA reference, NBS-traceable reference, or an in-laboratory prepared spike into a standard matrix (typically deionized water) using stocks made independently of the calibration standards (i. e. same as a standard matrix spike). The QC check sample or standard matrix spike can serve one or two purposes depending on the method:

- 1) Verify the standard calibration using and independent standard. This occurs when the method involves direct analysis of the sample.
- 2) Differentiate between sample matrix interference and analytical procedural error. Sample matrix spikes that fall outside of precision and/or accuracy acceptance criteria indicate either a matrix interference or a problem with the standard analytical procedure. An acceptable QC check sample provides strong evidence that a matrix interference is present.