N61165.AR.005779
CNC CHARLESTON
5090.3a

CONTAMINATION ASSESSMENT REPORT ZONE G FUEL DISTRIBUTION SYSTEM
VOLUME 3 (OF 3) APPENDIX C TO G CNC CHARLESTON SC
07/24/1998
ENSAFE INC

ZONE G
FUEL DISTRIBUTION SYSTEM CONTAMINATION ASSESSMENT REPORT
NAVBASE CHARLESTON
NORTH CHARLESTON, SOUTH CAROLINA

Volume III of III
Appendices C to G

CTO-029
Contract Number: N62467-89-D-0318

Prepared for:

Department of the Navy
Southern Division
Naval Facilities Engineering Command
North Charleston, South Carolina

Prepared by:

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July 24, 1998
Revision: 0

Release of this document requires prior notification of the Commanding Officer of the Southern Division, Naval Facilities Engineering Command, North Charleston, South Carolina.

C

Appendix C

Fuel Distribution System
Analytical Data Summary

DPT, Soil
and Groundwater

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

APX9 HERB

SAMPLE ID ------->	FDS-C-C067-01
ORIGINAL ID ----->	FDSCC06701
LAB SAMPLE ID --->	27867.01
ID FROM REPORT -->	FDSCC06701
SAMPLE DATE ----->	12/04/96
DATE EXTRACTED -->	12/09/96
DATE ANALYZED --->	12/18/96
MATRIX ---------->	Soil
UNITS ---------->	UG/KG

CAS #	Parameter	27869	VAL
94-75-7	2,4-D	81.	U
93-72-1	2,4,5-TP (Silvex)	18.	U
93-76-5	2,4,5-T	21.	U
88-85-7	Dinoseb	48.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

APX9 PEST

SAMPLE ID ------->	FDS-C-C067-01
ORIGINAL ID ----->	FDSCC06701
LAB SAMPLE ID --->	27867.01
ID FROM REPORT -->	FDSCC06701
SAMPLE DATE ----->	12/04/96
DATE EXTRACTED -->	12/09/96
DATE ANALYZED --->	12/16/96
MATRIX ---------->	Soil
UNITS ---------->	UG/KG

CAS #	Parameter	27869	VAL
319-84-6	alpha-BHC	1.7	UJ
319-85-7	beta-BHC	1.7	UJ
319-86-8	delta-BHC	1.7	UJ
58-89-9	gamma-BHC (Lindane)	2.2	J
76-44-8	Heptachlor	1.7	UJ
309-00-2	Aldrin	1.7	UJ
1024-57-3	Heptachlor epoxide	1.7	UJ
959-98-8	Endosulfan I	1.7	UJ
60-57-1	Dieldrin	3.2	UJ
72-55-9	4,4'-DDE	14.	UJ
72-20-8	Endrin	3.2	UJ
33213-65-9	Endosulfan II	3.2	UJ
72-54-8	4,4'-DDD	8.4	UJ
1031-07-8	Endosulfan sulfate	3.2	UJ
50-29-3	4,4'-DDT	3.2	UJ
72-43-5	Methoxychlor	17.	UJ
53494-70-5	Endrin ketone	3.2	UJ
7421-93-4	Endrin aldehyde	3.2	UJ
5103-71-9	alpha-Chlordane	1.7	UJ
5103-74-2	gamma-Chlordane	1.7	UJ
8001-35-2	Toxaphene	110.	UJ
12674-11-2	Aroclor-1016	43.	UJ
11104-28-2	Aroclor-1221	43.	UJ
11141-16-5	Aroclor-1232	43.	UJ
53469-21-9	Aroclor-1242	43.	UJ
12672-29-6	Aroclor-1248	43.	UJ
11097-69-1	Aroclor-1254	87.	UJ
11096-82-5	Aroclor-1260	87.	UJ

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

APX9 SVOA

SAMPLE ID ------->	FDS-C-C067-01
ORIGINAL ID ----->	FDSCC06701
LAB SAMPLE ID --->	27867.01
ID FROM REPORT -->	FDSCC06701
SAMPLE DATE ----->	12/04/96
DATE EXTRACTED -->	12/07/96
DATE ANALYZED --->	12/20/96
MATRIX ---------->	Soil
UNITS ---------->	UG/KG

CAS #	Parameter	27869	VAL
108-95-2	Phenol	430.	U
111-44-4	bis(2-Chloroethyl)ether	430.	U
95-57-8	2-Chlorophenol	430.	U
541-73-1	1,3-Dichlorobenzene	430.	U
106-46-7	1,4-Dichlorobenzene	430.	U
100-51-6	Benzyl alcohol	430.	U
95-50-1	1,2-Dichlorobenzene	430.	U
95-48-7	2-Methylphenol (o-Cresol)	430.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	430.	U
106-44-5	4-Methylphenol (p-Cresol)	430.	U
621-64-7	N-Nitroso-di-n-propylamine	430.	U
67-72-1	Hexachloroethane	430.	U
98-95-3	Nitrobenzene	430.	U
78-59-1	Isophorone	430.	U
88-75-5	2-Nitrophenol	430.	U
105-67-9	2,4-Dimethylphenol	430.	U
111-91-1	bis(2-Chloroethoxy)methane	430.	U
120-83-2	2,4-Dichlorophenol	430.	U
120-82-1	1,2,4-Trichlorobenzene	430.	U
91-20-3	Naphthalene	430.	U
106-47-8	4-Chloroaniline	430.	U
87-68-3	Hexachlorobutadiene	430.	U
59-50-7	4-Chloro-3-methylphenol	430.	U
91-57-6	2-Methylnaphthalene	4100.	
77-47-4	Hexachlorocyclopentadiene	430.	U
88-06-2	2,4,6-Trichlorophenol	430.	U
95-95-4	2,4,5-Trichlorophenol	2100.	U
91-58-7	2-Chloronaphthalene	430.	U
88-74-4	2-Nitroaniline	2100.	U
131-11-3	Dimethyl phthalate	430.	U
208-96-8	Acenaphthylene	430.	U
606-20-2	2,6-Dinitrotoluene	430.	U
99-09-2	3-Nitroaniline	2100.	U
83-32-9	Acenaphthene	1200.	
51-28-5	2,4-Dinitrophenol	2100.	U
100-02-7	4-Nitrophenol	2100.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

APX9 SVOA

SAMPLE ID ------->	FDS-C-C067-01
ORIGINAL ID ----->	FDSCC06701
LAB SAMPLE ID --->	27867.01
ID FROM REPORT -->	FDSCC06701
SAMPLE DATE ----->	12/04/96
DATE EXTRACTED -->	12/07/96
DATE ANALYZED --->	12/20/96
MATRIX ---------->	Soil
UNITS ---------->	UG/KG

CAS #	Parameter	27869	VAL
132-64-9	Dibenzofuran	970.	
121-14-2	2,4-Dinitrotoluene	430.	U
84-66-2	Diethylphthalate	430.	U
7005-72-3	4-Chlorophenylphenylether	430.	U
86-73-7	Fluorene	2000.	
100-01-6	4-Nitroaniline	2100.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	2100.	U
86-30-6	N-Nitrosodiphenylamine	430.	U
101-55-3	4-Bromophenyl-phenylether	430.	U
118-74-1	Hexachlorobenzene	430.	U
87-86-5	Pentachlorophenol	2100.	U
85-01-8	Phenanthrene	4900.	
120-12-7	Anthracene	1200.	
86-74-8	Carbazole	430.	UR
84-74-2	Di-n-butylphthalate	430.	U
206-44-0	Fluoranthene	1200.	J
129-00-0	Pyrene	3500.	
85-68-7	Butylbenzylphthalate	430.	U
91-94-1	3,3'-Dichlorobenzidine	860.	U
56-55-3	Benzo(a)anthracene	610.	J
218-01-9	Chrysene	720.	J
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	430.	U
117-84-0	Di-n-octyl phthalate	45.	J
205-99-2	Benzo(b)fluoranthene	230.	J
207-08-9	Benzo(k)fluoranthene	140.	J
50-32-8	Benzo(a)pyrene	370.	J
193-39-5	Indeno(1,2,3-cd)pyrene	130.	J
53-70-3	Dibenz(a,h)anthracene	110.	J
191-24-2	Benzo(g,h,i)perylene	450.	J
110-86-1	Pyridine	430.	U
62-75-9	N-Nitrosodimethylamine	430.	U
66-27-3	Methyl methanesulfonate	2100.	U
62-53-3	Aniline	430.	U
10595-95-6	N-Nitrosomethylethylamine	430.	U
55-18-5	N-Nitrosodiethylamine	430.	U
62-50-0	Ethyl methanesulfonate	430.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

APX9 SVOA

SAMPLE ID ------->	FDS-C-C067-01
ORIGINAL ID ----->	FDSCC06701
LAB SAMPLE ID --->	27867.01
ID FROM REPORT -->	FDSCC06701
SAMPLE DATE ----->	12/04/96
DATE EXTRACTED -->	12/07/96
DATE ANALYZED --->	12/20/96
MATRIX ---------->	Soil
UNITS ---------->	UG/KG

CAS #	Parameter	27869	VAL
109-06-8	2-Picoline	430.	U
98-86-2	Acetophenone	430.	U
930-55-2	N-Nitrosopyrrolidine	430.	U
108-39-4	3-Methylphenol (m-Cresol)	430.	UJ
59-89-2	N-Nitrosomorpholine	430.	U
95-53-4	o-Toluidine	430.	UJ
96-12-8	1,2-Dibromo-3-Chloropropane	430.	UR
100-75-4	N-Nitrosopiperidine	430.	U
126-68-1	O,O,O-Triethylphosphorothioate	430.	U
122-09-8	a,a-Dimethylphenethylamine	430.	UR
87-65-0	2,6-Dichlorophenol	430.	U
1888-71-7	Hexachloropropene	430.	U
106-50-3	p-Phenylenediamine	2100.	UJ
924-16-3	N-Nitroso-di-n-butylamine	430.	U
95-94-3	1,2,4,5-Tetrachlorobenzene	430.	U
94-59-7	Safrole	430.	U
120-58-1	Isosafrole	430.	U
130-15-4	1,4-Naphthoquinone	430.	U
99-65-0	1,3-Dinitrobenzene	430.	U
58-90-2	2,3,4,6-Tetrachlorophenol	430.	U
608-93-5	Pentachlorobenzene	430.	U
134-32-7	1-Naphthylamine	430.	U
56-57-5	4-Nitroquinoline 1-oxide	2100.	U
91-59-8	2-Naphthylamine	430.	U
297-97-2	Thionazin	860.	U
99-55-8	5-Nitro-o-toluidine	430.	U
122-39-4	Diphenylamine	430.	UJ
3689-24-5	Sulfotep	860.	UR
99-35-4	1,3,5-Trinitrobenzene	430.	U
298-02-2	Phorate	430.	U
62-44-2	Phenacetin	430.	U
2303-16-4	Diallate	430.	U
60-51-5	Dimethoate	430.	U
92-67-1	4-Aminobiphenyl	430.	U
23950-58-5	Pronamide	430.	U
82-68-8	Pentachloronitrobenzene	2100.	UJ

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

APX9 SVOA

SAMPLE ID ------->	FDS-C-C067-01
ORIGINAL ID ----->	FDSCC06701
LAB SAMPLE ID --->	27867.01
ID FROM REPORT -->	FDSCC06701
SAMPLE DATE ----->	12/04/96
DATE EXTRACTED -->	12/07/96
DATE ANALYZED --->	12/20/96
MATRIX ---------->	Soil
UNITS ----------->	UG/KG

CAS #	Parameter	27869	VAL
298-04-4	Disulfoton	430.	U
88-85-7	Dinoseb	430.	U
298-00-0	Methyl parathion	860.	U
56-38-2	Parathion	860.	U
91-80-5	Methapyrilene	860.	U
465-73-6	Isodrin	860.	U
140-57-8	Aramite	2100.	U
60-11-7	p-(Dimethylamino)azobenzene	430.	U
510-15-6	Chlorobenzilate	430.	U
119-93-7	3,3-Dimethylbenzidine	430.	UJ
143-50-0	Kepone	2100.	U
52-85-7	Famphur	430.	UR
53-96-3	Acetamidofluorene	430.	U
57-97-6	7,12-Dimethylbenz(a)anthracene	2100.	U
70-30-4	Hexachlorophene	8600.	UR
56-49-5	3-Methyl cholanthrene	430.	UR

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

APX9 VOA

SAMPLE ID -------> FDS-C-C067-01 RE
ORIGINAL ID -----> FDSCC06701
LAB SAMPLE ID ---> 27867.01
ID FROM REPORT --> FDSCC06701
SAMPLE DATE -----> 12/04/96
DATE ANALYZED ---> 12/11/96
MATRIX ----------> Soil
UNITS -----------> UG/KG

CAS #	Parameter	27869	VAL
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	4.	U
67-64-1	Acetone	220.	U
75-15-0	Carbon disulfide	1.	J
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 (MEK)	10.	U
71-55-6	1,1,1-Trichloroethane	6.	UJ
56-23-5	Carbon tetrachloride	6.	UJ
75-27-4	Bromodichloromethane	6.	UJ
78-87-5	1,2-Dichloropropane	6.	UJ
10061-01-5	cis-1,3-Dichloropropene	6.	UJ
79-01-6	Trichloroethene	6.	UJ
124-48-1	Dibromochloromethane	6.	UJ
79-00-5	1,1,2-Trichloroethane	6.	UJ
71-43-2	Benzene	6.	UJ
10061-02-6	trans-1,3-Dichloropropene	6.	UJ
75-25-2	Bromoform	6.	UJ
108-10-1	4-Methyl-2-Pentanone (MIBK)	13.	UJ
591-78-6	2-Hexanone	13.	UJ
127-18-4	Tetrachloroethene	6.	UJ
79-34-5	1,1,2,2-Tetrachloroethane	6.	UJ
108-88-3	Toluene	12.	J
108-90-7	Chlorobenzene	6.	UJ
100-41-4	Ethylbenzene	6.	UJ
100-42-5	Styrene	6.	UJ
1330-20-7	Xylene (Total)	3.	J
108-05-4	Vinyl acetate	13.	U
110-75-8	2-Chloroethyl vinyl ether	13.	UJ
107-02-8	Acrolein	65.	UR
74-88-4	Methyl iodide	6.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

APX9 VOA

SAMPLE ID ------->	FDS-C-C067-01 RE
ORIGINAL ID ----->	FDSCC06701
LAB SAMPLE ID --->	27867.01
ID FROM REPORT -->	FDSCC06701
SAMPLE DATE ----->	12/04/96
DATE ANALYZED --->	12/11/96
MATRIX ---------->	Soil
UNITS ---------->	UG/KG

CAS #	Parameter	27869	VAL
76-01-7	Pentachloroethane	6.	U
107-05-1	3-Chloropropene	6.	U
126-99-8	Chloroprene	6.	U
110-57-6	trans-1,4-Dichloro-2-butene	6.	U
75-05-8	Acetonitrile	260.	UR
107-13-1	Acrylonitrile	65.	U
107-12-0	Propionitrile	130.	U
126-98-7	Methacrylonitrile	130.	U
78-83-1	Isobutyl alcohol	260.	UR
123-91-1	1,4-Dioxane	650.	UR
80-62-6	Methyl methacrylate	6.	UJ
97-63-2	Ethyl methacrylate	6.	UJ
106-93-4	1, 2-Dibromoethane	6.	UJ
630-20-6	1,1,1,2-Tetrachloroethane	6.	UJ
96-18-4	1,2,3-Trichloropropane	6.	UJ
75-71-8	Dichlorodifluoromethane	6.	U
75-69-4	Trichlorofluoromethane	6.	UJ
74-95-3	Methylene bromide	13.	UJ
96-12-8	1,2-Dibromo-3-Chloropropane	13.	UJ

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

CYANIDE	SAMPLE ID ------->	FDS-S-C002-01		FDS-S-C011-01		FDS-S-C012-01		FDS-S-C013-01		FDS-S-C014-01		FDS-S-C016-01	
	ORIGINAL ID ----->	FDSSC00201		FDSSC01101		FDSSC01201		FDSSC01301		FDSSC01401		FDSSC01601	
	LAB SAMPLE ID --->	27869.01		27869.02		27869.05		27869.06		27869.07		27869.08	
	ID FROM REPORT -->	FDSSC00201		FDSSC01101		FDSSC01201		FDSSC01301		FDSSC01401		FDSSC01601	
	SAMPLE DATE ----->	12/04/96		12/04/96		12/04/96		12/04/96		12/05/96		12/04/96	
	DATE EXTRACTED -->	12/12/96		12/12/96		12/12/96		12/12/96		12/12/96		12/12/96	
	DATE ANALYZED --->	12/17/96		12/17/96		12/17/96		12/17/96		12/17/96		12/17/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
CAS #	Parameter	27869	VAL	27869	VAL	27869	VAL	27869	VAL	27869	VAL	27869	VAL
57-12-5	Cyanide (CN)	0.21	U	0.16	U	0.75	U	0.26	U	0.19	U	0.32	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

CYANIDE	SAMPLE ID ------>	FDS-S-C030-01		FDS-S-C051-01		FDS-S-C055-01		FDS-S-C062-01		FDS-S-C066-01		FDS-S-C067-01	
	ORIGINAL ID ---->	FDSSC03001		FDSSC05101		FDSSC05501		FDSSC06201		FDSSC06601		FDSSC06701	
	LAB SAMPLE ID --->	27869.09		28157.01		27869.10		27934.01		27869.11		27869.12	
	ID FROM REPORT -->	FDSSC03001		FDSSC05101		FDSSC05501		FDSSC06201		FDSSC06601		FDSSC06701	
	SAMPLE DATE ----->	12/04/96		01/13/97		12/05/96		12/10/96		12/04/96		12/04/96	
	DATE EXTRACTED -->	12/12/96		01/20/97		12/12/96		12/12/96		12/12/96		12/12/96	
	DATE ANALYZED --->	12/17/96		01/20/97		12/17/96		12/17/96		12/17/96		12/17/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
CAS #	Parameter	27869	VAL	28134	VAL	27869	VAL	27934	VAL	27869	VAL	27869	VAL
57-12-5	Cyanide (CN)	0.35	U	0.12	U	0.15	U	0.34	U	0.21	U	0.2	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

CYANIDE	SAMPLE ID ------>	FDS-C-C067-01	FDS-S-C084-01	FDS-S-C094-01	FDS-S-C114-01	FDS-S-H023-01	FDS-S-H024-01
	ORIGINAL ID ----->	FDSCC06701	FDSSC08401	FDSSC09401	FDSSC11401	FDSSH02301	FDSSH02401
	LAB SAMPLE ID --->	27867.01	27178.21	27212.07	27869.14	27355.10	27377.09
	ID FROM REPORT -->	FDSCC06701	FDSSC08401	FDSSC09401	FDSSC11401	FDSSH02301	FDSSH02401
	SAMPLE DATE ----->	12/04/96	10/02/96	10/04/96	12/05/96	10/17/96	10/21/96
	DATE EXTRACTED -->	12/12/96	10/07/96		12/12/96	10/21/96	10/23/96
	DATE ANALYZED --->	12/17/96	10/09/96		12/17/96	10/24/96	10/24/96
	MATRIX ---------->	Soil	Soil	Soil	Soil	Soil	Soil
	UNITS ---------->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
CAS #	Parameter	27869 VAL	27178 VAL	27212 VAL	27869 VAL	27339 VAL	27377 VAL
57-12-5	Cyanide (CN)	0.21 U	0.12 U	0.15 J	0.95	0.53 U	0.24 U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

CYANIDE	SAMPLE ID ------->	FDS-S-H026-01					
	ORIGINAL ID ----->	FDSSH02601					
	LAB SAMPLE ID --->	27377.06					
	ID FROM REPORT -->	FDSSH02601					
	SAMPLE DATE ----->	10/21/96					
	MATRIX ---------->	Soil					
	UNITS ---------->	MG/KG					
CAS #	Parameter	27377	VAL				
57-12-5	Cyanide (CN)	0.21	U				

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

HEXACHROME

SAMPLE ID ------->	FDS-C-C067-01
ORIGINAL ID ----->	FDSCC06701
LAB SAMPLE ID --->	27867.01
ID FROM REPORT -->	FDSCC06701
SAMPLE DATE ----->	12/04/96
DATE EXTRACTED -->	12/18/96
DATE ANALYZED --->	12/18/96
MATRIX ---------->	Soil
UNITS ----------->	MG/KG

CAS #	Parameter	27869	VAL
18540-29-9	Chromium (Hexavalent)	0.325	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

SW846-DIOX

SAMPLE ID -------> FDS-C-C067-01
ORIGINAL ID -----> FDSCC06701
LAB SAMPLE ID ---> 27867.01
ID FROM REPORT --> FDSCC06701
SAMPLE DATE -----> 12/04/96
DATE EXTRACTED --> 12/09/96
DATE ANALYZED ---> 12/15/96
MATRIX ----------> Soil
UNITS -----------> NG/KG

CAS #	Parameter	27869	VAL
1746-01-6	2378-TCDD	0.254	U
40321-76-4	12378-PeCDD	0.245	U
39227-28-6	123478-HxCDD	0.672	U
57653-85-7	123678-HxCDD	0.559	U
19408-74-3	123789-HxCDD	0.564	U
35822-46-9	1234678-HpCDD	2.55	
3268-87-9	OCDD	57.8	
51207-31-9	2378-TCDF	0.313	U
57117-41-6	12378-PeCDF	0.246	U
57117-31-4	23478-PeCDF	0.262	U
70648-26-9	123478-HxCDF	0.382	U
57117-44-9	123678-HxCDF	0.311	U
72918-21-9	123789-HxCDF	0.415	U
60851-34-5	234678-HxCDF	0.381	U
67562-39-4	1234678-HpCDF	0.427	U
55673-89-7	1234789-HpCDF	0.509	U
39001-02-0	OCDF	1.36	J
41903-57-5	Total Tetra-Dioxins	0.254	U
36088-22-9	Total Penta-Dioxins	0.245	U
34465-46-8	Total Hexa-Dioxins	4.17	
37871-00-4	Total Hepta-Dioxins	10.5	
55722-27-5	Total Tetra-Furans	0.313	U
30602-15-4	Total Penta-Furans	0.262	U
55684-94-1	Total Hexa-Furans	0.311	U
38998-75-3	Total Hepta-Furans	0.427	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

SW846-META													
		SAMPLE ID ------->	FDS-S-C002-01		FDS-S-C011-01		FDS-S-C012-01		FDS-S-C013-01		FDS-S-C014-01		FDS-S-C016-01	
		ORIGINAL ID ----->	FDSSC00201		FDSSC01101		FDSSC01201		FDSSC01301		FDSSC01401		FDSSC01601	
		LAB SAMPLE ID --->	27869.01		27869.02		27869.05		27869.06		27869.07		27869.08	
		ID FROM REPORT -->	FDSSC00201		FDSSC01101		FDSSC01201		FDSSC01301		FDSSC01401		FDSSC01601	
		SAMPLE DATE ----->	12/04/96		12/04/96		12/04/96		12/04/96		12/05/96		12/04/96	
		DATE EXTRACTED -->	12/16/96		12/16/96		12/16/96		12/16/96		12/16/96		12/16/96	
		DATE ANALYZED --->	12/17/96		12/17/96		12/17/96		12/17/96		12/17/96		12/17/96	
		MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
		UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
CAS #	Parameter		27869	VAL	27869	VAL	27869	VAL	27869	VAL	27869	VAL	27869	VAL
7439-97-6	Mercury (Hg)		0.04	U	0.19	J	0.21	J	0.17	J	0.45	J	0.67	J
7429-90-5	Aluminum (Al)		9080.		12700.		9000.		18800.		16300.		21700.	
7439-92-1	Lead (Pb)		6.8	J	17.3	J	44.5	J	38.7	J	46.5	J	58.	J
7440-36-0	Antimony (Sb)		0.39	UJ	0.47	UJ	0.62	UJ	0.5	UJ	0.49	UJ	0.71	UJ
7439-95-4	Magnesium (Mg)		1880.	J	3440.	J	4850.	J	4570.	J	4620.	J	6860.	J
7440-38-2	Arsenic (As)		10.8		13.4		4.1		27.5		15.3		28.8	
7782-49-2	Selenium (Se)		0.39	U	1.4		0.62	U	0.5	U	0.65	J	0.71	U
7440-39-3	Barium (Ba)		17.2		37.2		77.1		31.5		29.4		34.5	
7440-41-7	Beryllium (Be)		0.78		0.91		0.5		1.2		0.97		1.4	
7440-43-9	Cadmium (Cd)		0.05	U	0.32	J	0.56	J	0.07	U	0.07	U	0.1	U
7440-70-2	Calcium (Ca)		10300.	J	31500.	J	122000.	J	9130.	J	14100.	J	10200.	J
7440-47-3	Chromium (Cr)		17.7	J	38.3	J	25.5	J	34.8	J	30.8	J	40.8	J
7440-48-4	Cobalt (Co)		2.8		4.1		2.4	J	6.		5.3		7.6	
7440-50-8	Copper (Cu)		3.7		12.6		35.2		32.1		23.4		37.2	
7439-89-6	Iron (Fe)		13100.		15100.		11700.		29400.		25400.		34200.	
7439-96-5	Manganese (Mn)		124.	J	152.	J	263.	J	506.	J	385.	J	526.	J
7440-02-0	Nickel (Ni)		5.5	J	15.2	J	10.	J	11.3	J	9.4	J	12.2	J
7440-09-7	Potassium (K)		952.		1680.		417.	U	2450.		2140.		3370.	
7440-22-4	Silver (Ag)		0.25	U	0.3	U	0.4	U	0.32	U	0.31	U	0.45	U
7440-23-5	Sodium (Na)		391.		1380.		1450.		3090.		2380.		10600.	
7440-28-0	Thallium (Tl)		0.45	U	0.53	U	0.71	U	0.57	U	0.56	U	0.81	U
7440-31-5	Tin (Sn)		1.6	U	2.2	U	4.2	U	3.4	U	3.2	U	4.4	U
7440-62-2	Vanadium (V)		32.2		36.7		16.8		60.1		52.2		74.3	
7440-66-6	Zinc (Zn)		19.	J	69.4	J	264.	J	92.5	J	91.5	J	150.	J

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

SW846-META	SAMPLE ID ------->	FDS-S-C030-01		FDS-S-C051-01		FDS-S-C055-01		FDS-S-C058-01		FDS-S-C062-01		FDS-S-C065-01	
	ORIGINAL ID ----->	FDSSC03001		FDSSC05101		FDSSC05501		FDSSC05801		FDSSC06201		FDSSC06501	
	LAB SAMPLE ID --->	27869.09		28157.01		27869.10		27065.10		27934.01		27090.19	
	ID FROM REPORT -->	FDSSC03001		FDSSC05101		FDSSC05501		FDSSC05801		FDSSC06201		FDSSC06501	
	SAMPLE DATE ----->	12/04/96		01/13/97		12/05/96		09/24/96		12/10/96		09/25/96	
	DATE EXTRACTED -->	12/16/96		01/16/97		12/16/96				12/16/96			
	DATE ANALYZED --->	12/17/96		01/20/97		12/17/96				12/17/96			
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
CAS #	Parameter	27869	VAL	28134	VAL	27869	VAL	27065	VAL	27934	VAL	27090	VAL
7439-97-6	Mercury (Hg)	0.31	J	0.25		0.04	U	0.05	U	0.06		0.22	
7429-90-5	Aluminum (Al)	26300.		5690.		3830.		6110.		5000.		28400.	
7439-92-1	Lead (Pb)	55.1	J	8.8		3.2	J	11.2		29.4		42.9	
7440-36-0	Antimony (Sb)	0.64	UJ	0.35	U	0.37	UJ	0.43	U	0.36	U	0.51	J
7439-95-4	Magnesium (Mg)	7060.	J	269.		534.	J	1670.		1100.		4840.	
7440-38-2	Arsenic (As)	33.5		2.5	U	1.3		5.4		4.9		17.	
7782-49-2	Selenium (Se)	1.5		0.35	U	0.37	U	0.43	U	0.36	U	1.1	J
7440-39-3	Barium (Ba)	38.5		23.3		5.9		10.1		10.4		40.6	
7440-41-7	Beryllium (Be)	1.4		0.24		0.09	J	0.45		0.25		1.3	
7440-43-9	Cadmium (Cd)	0.09	U	0.05	J	0.09	J	0.06	U	0.16	J	0.07	U
7440-70-2	Calcium (Ca)	13100.	J	1770.		22100.	J	15500.		55900.		14500.	
7440-47-3	Chromium (Cr)	47.3	J	6.1		7.3	J	12.8	J	8.3		42.9	J
7440-48-4	Cobalt (Co)	9.1		0.67	J	0.71	J	1.8	J	1.6	J	6.3	
7440-50-8	Copper (Cu)	34.6		2.6		1.8	J	5.9	U	6.7		24.8	
7439-89-6	Iron (Fe)	36800.		4300.		2560.		6960.		4750.		30700.	
7439-96-5	Manganese (Mn)	602.	J	27.1		18.2	J	87.8		95.3		582.	
7440-02-0	Nickel (Ni)	15.1	J	2.8	J	2.4	J	4.2	U	4.5	J	13.9	
7440-09-7	Potassium (K)	3380.		233.	U	247.	U	767.		326.	J	2580.	
7440-22-4	Silver (Ag)	0.41	U	0.22	U	0.23	U	0.27	U	0.23	U	0.32	U
7440-23-5	Sodium (Na)	11000.		175.	J	478.		2370.		466.		2380.	U
7440-28-0	Thallium (Tl)	0.73	U	0.41	J	0.42	U	0.49	UJ	0.41	U	0.57	J
7440-31-5	Tin (Sn)	4.7	U	0.58	U	1.5	U	1.5	U	1.8	U	3.4	U
7440-62-2	Vanadium (V)	92.4		15.5		5.2		15.2		9.4		69.1	
7440-66-6	Zinc (Zn)	126.	J	9.9		5.5	J	26.3	U	40.6		97.	

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

SW846-META																	
	SAMPLE ID ------->	FDS-S-C066-01		FDS-S-C067-01		FDS-C-C067-01		FDS-S-C084-01		FDS-S-C094-01		FDS-S-C114-01	
	ORIGINAL ID ----->	FDSSC06601		FDSSC06701		FDSSC06701		FDSSC08401		FDSSC09401		FDSSC11401	
	LAB SAMPLE ID --->	27869.11		27869.12		27867.01		27178.21		27212.07		27869.14	
	ID FROM REPORT -->	FDSSC06601		FDSSC06701		FDSSC06701		FDSSC08401		FDSSC09401		FDSSC11401	
	SAMPLE DATE ----->	12/04/96		12/04/96		12/04/96		10/02/96		10/04/96		12/05/96	
	DATE EXTRACTED -->	12/16/96		12/16/96		12/16/96		10/09/96				12/16/96	
	DATE ANALYZED --->	12/17/96		12/17/96		12/17/96		10/17/96				12/17/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
CAS #	Parameter	27869	VAL	27869	VAL	27869	VAL	27178	VAL	27212	VAL	27869	VAL
7439-97-6	Mercury (Hg)	0.2	J	0.11	J	0.24		0.04	U	0.04	U	0.04	U
7429-90-5	Aluminum (Al)	15400.		12600.		11500.		5060.		10200.		9220.	
7439-92-1	Lead (Pb)	28.2	J	37.9	J	17.3	J	5.6		4.2		9.9	J
7440-36-0	Antimony (Sb)	0.41	UJ	0.41	UJ	0.39	U	0.36	U	0.36	U	0.4	UJ
7439-95-4	Magnesium (Mg)	6460.	J	2920.	J	2250.		1150.		452.		680.	J
7440-38-2	Arsenic (As)	10.2		11.		9.7		2.2		2.8		1.7	
7782-49-2	Selenium (Se)	0.41	U	0.41	U	0.87		0.36	U	0.36	U	0.4	U
7440-39-3	Barium (Ba)	33.9		29.9		21.4		19.4		21.8		23.2	
7440-41-7	Beryllium (Be)	0.76		0.76		0.48		0.31		0.39	U	0.39	
7440-43-9	Cadmium (Cd)	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U
7440-70-2	Calcium (Ca)	40000.	J	32200.	J	16000.	J	1560.		689.		29100.	J
7440-47-3	Chromium (Cr)	28.7	J	25.6	J	23.5		8.1		8.5		12.5	J
7440-48-4	Cobalt (Co)	3.4		3.7		2.5	J	0.71	J	4.7		1.4	J
7440-50-8	Copper (Cu)	18.5		18.7	J	9.8	J	0.56	U	0.6	U	7.3	
7439-89-6	Iron (Fe)	17800.		34100.	J	13700.	J	6050.		5470.		4850.	
7439-96-5	Manganese (Mn)	163.	J	302.	J	175.	J	8.3		19.3		51.	J
7440-02-0	Nickel (Ni)	10.1	J	9.2	J	7.1		4.7		7.8		4.8	J
7440-09-7	Potassium (K)	2260.		1460.		1450.		440.	J	260.	U	443.	J
7440-22-4	Silver (Ag)	0.26	U	0.26	U	0.25	U	0.23	U	0.23	U	0.26	U
7440-23-5	Sodium (Na)	5770.		2370.		2310.		1830.	U	350.	U	450.	
7440-28-0	Thallium (Tl)	0.47	U	0.47	U	0.44	U	0.41	UJ	0.43	U	0.46	U
7440-31-5	Tin (Sn)	2.8	U	2.1	U	2.4	U	0.61	U	0.71	U	2.	U
7440-62-2	Vanadium (V)	30.2		35.6		34.		10.5		13.		13.2	
7440-66-6	Zinc (Zn)	69.	J	77.8	J	39.3	J	9.		2304.		16.5	J

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

SW846-META											
		SAMPLE ID ------->	FDS-S-C47A-01		FDS-S-H023-01		FDS-S-H024-01		FDS-S-H026-01		
		ORIGINAL ID ----->	FDSSC47A01		FDSSH02301		FDSSH02401		FDSSH02601		
		LAB SAMPLE ID --->	27065.12		27355.10		27377.09		27377.06		
		ID FROM REPORT -->	FDSSC47A01		FDSSH02301		FDSSH02401		FDSSH02601		
		SAMPLE DATE ----->	09/24/96		10/17/96		10/21/96		10/21/96		
		DATE EXTRACTED -->			10/22/96		10/24/96				
		DATE ANALYZED --->			10/24/96		10/30/96				
		MATRIX ---------->	Soil		Soil		Soil		Soil		
		UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		
CAS #	Parameter		27065	VAL	27339	VAL	27377	VAL	27377	VAL	
7439-97-6	Mercury (Hg)		0.09		0.07		0.06		0.04	U	
7429-90-5	Aluminum (Al)		15000.		2820.		7850.		4500.		
7439-92-1	Lead (Pb)		30.3		29.5		350.		381.		
7440-36-0	Antimony (Sb)		0.4	U	0.33	U	0.33	U	0.33	U	
7439-95-4	Magnesium (Mg)		4270.		499.		631.		432.		
7440-38-2	Arsenic (As)		16.		1.8		3.9		2.4	U	
7782-49-2	Selenium (Se)		1.		0.33	U	0.33	U	0.47	J	
7440-39-3	Barium (Ba)		27.3		13.1		41.5		28.3		
7440-41-7	Beryllium (Be)		1.		0.23	U	0.52		0.36		
7440-43-9	Cadmium (Cd)		0.08	J	0.19	J	0.04	U	0.04	J	
7440-70-2	Calcium (Ca)		30800.		13100.		10300.		11200.		
7440-47-3	Chromium (Cr)		29.6	J	9.3		12.5		6.7		
7440-48-4	Cobalt (Co)		5.6		1.3	J	2.1	J	1.4	J	
7440-50-8	Copper (Cu)		18.9		10.6	U	6.5	U	3.9	U	
7439-89-6	Iron (Fe)		19600.		4860.		8180.		4180.		
7439-96-5	Manganese (Mn)		186.		29.6		109.		38.9		
7440-02-0	Nickel (Ni)		11.1	U	4.2	J	4.2	U	3.5	U	
7440-09-7	Potassium (K)		1870.		240.	J	267.	J	218.	U	
7440-22-4	Silver (Ag)		0.25	U	0.21	U	0.21	U	0.21	U	
7440-23-5	Sodium (Na)		2300.		164.	U	90.9	U	107.	U	
7440-28-0	Thallium (Tl)		0.46	UJ	0.47	J	0.38	U	0.37	U	
7440-31-5	Tin (Sn)		2.3	U	2.	U	1.3	U	1.4	U	
7440-62-2	Vanadium (V)		42.7		10.6		15.5		8.		
7440-66-6	Zinc (Zn)		77.9		66.8		30.7		30.5		

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

SW846-OP P

SAMPLE ID ------->	FDS-C-C067-01
ORIGINAL ID ----->	FDSCC06701
LAB SAMPLE ID --->	27867.01
ID FROM REPORT -->	FDSCC06701
SAMPLE DATE ----->	12/04/96
DATE EXTRACTED -->	12/07/96
DATE ANALYZED --->	12/13/96
MATRIX ---------->	Soil
UNITS ----------->	UG/KG

CAS #	Parameter	27869	VAL
298-02-2	Phorate	87.	UJ
298-04-4	Disulfoton	156.	UJ
298-00-0	Methyl parathion	22.	UJ

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

SW846-PEST	SAMPLE ID ------->	FDS-S-C002-01		FDS-S-C011-01		FDS-S-C012-01		FDS-S-C013-01		FDS-S-C014-01		FDS-S-C016-01	
	ORIGINAL ID ----->	FDSSC00201		FDSSC01101		FDSSC01201		FDSSC01301		FDSSC01401		FDSSC01601	
	LAB SAMPLE ID --->	27869.01		27869.02		27869.05		27869.06		27869.07		27869.08	
	ID FROM REPORT -->	FDSSC00201		FDSSC01101		FDSSC01201		FDSSC01301		FDSSC01401		FDSSC01601	
	SAMPLE DATE ----->	12/04/96		12/04/96		12/04/96		12/04/96		12/05/96		12/04/96	
	DATE EXTRACTED -->	12/08/96		12/08/96		12/08/96		12/08/96		12/08/96		12/08/96	
	DATE ANALYZED --->	12/18/96		12/18/96		12/18/96		12/19/96		12/19/96		12/19/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	27869	VAL	27869	VAL	27869	VAL	27869	VAL	27869	VAL	27869	VAL
319-84-6	alpha-BHC	1.7	U	2.	U	2.7	UJ	2.2	U	2.5	U	3.1	U
319-85-7	beta-BHC	1.7	U	2.	U	2.7	UJ	2.2	U	2.5	U	3.1	U
319-86-8	delta-BHC	1.7	U	2.	U	2.7	UJ	2.2	U	2.5	U	3.1	U
58-89-9	gamma-BHC (Lindane)	1.7	U	2.	U	2.7	UJ	2.2	U	2.5	U	3.1	U
76-44-8	Heptachlor	1.7	U	2.	U	2.7	UJ	2.2	U	2.5	U	3.1	U
309-00-2	Aldrin	1.7	U	2.	U	2.7	UJ	2.2	U	2.5	U	3.1	U
1024-57-3	Heptachlor epoxide	1.7	U	2.	U	2.7	UJ	2.2	U	2.5	U	3.1	U
959-98-8	Endosulfan I	1.7	U	2.	U	2.7	UJ	2.2	U	2.5	U	3.1	U
60-57-1	Dieldrin	3.3	U	3.9	U	5.2	UJ	4.2	U	4.9	U	6.	U
72-55-9	4,4'-DDE	3.3	U	3.9	U	8.2	UJ	4.2	U	4.9	U	6.	U
72-20-8	Endrin	3.3	U	3.9	U	5.2	UJ	4.2	U	4.9	U	6.	U
33213-65-9	Endosulfan II	3.3	U	3.9	U	14.	UJ	4.2	U	4.9	U	6.	U
72-54-8	4,4'-DDD	3.3	U	3.9	U	5.2	UJ	4.2	U	4.9	U	6.	U
1031-07-8	Endosulfan sulfate	3.3	U	3.9	U	7.2	UJ	4.2	U	4.9	U	6.	U
50-29-3	4,4'-DDT	3.3	U	3.9	U	5.2	UJ	4.2	U	4.9	U	6.	U
72-43-5	Methoxychlor	17.	U	20.	U	27.	UJ	22.	U	25.	U	31.	U
53494-70-5	Endrin ketone	3.3	U	3.9	U	5.2	UJ	4.2	U	4.9	U	6.	U
7421-93-4	Endrin aldehyde	3.3	U	3.9	U	5.2	UJ	4.2	U	4.9	U	6.	U
5103-71-9	alpha-Chlordane	1.7	U	2.	U	2.7	UJ	2.2	U	2.5	U	3.1	U
5103-74-2	gamma-Chlordane	1.7	U	2.	U	2.7	UJ	2.2	U	2.5	U	3.1	U
8001-35-2	Toxaphene	110.	U	130.	U	170.	UJ	140.	U	160.	U	200.	U
12674-11-2	Aroclor-1016	43.	U	52.	U	69.	UJ	55.	U	65.	U	78.	U
11104-28-2	Aroclor-1221	43.	U	52.	U	69.	UJ	55.	U	65.	U	78.	U
11141-16-5	Aroclor-1232	43.	U	52.	U	69.	UJ	55.	U	65.	U	78.	U
53469-21-9	Aroclor-1242	43.	U	52.	U	69.	UJ	55.	U	65.	U	78.	U
12672-29-6	Aroclor-1248	43.	U	52.	U	69.	UJ	55.	U	65.	U	78.	U
11097-69-1	Aroclor-1254	88.	U	100.	U	140.	UJ	110.	U	130.	U	160.	U
11096-82-5	Aroclor-1260	88.	U	100.	U	840.	J	110.	U	130.	U	160.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

SW846-PEST																	
		SAMPLE ID ------->	FDS-S-C030-01		FDS-S-C051-01		FDS-S-C055-01		FDS-S-C058-01		FDS-S-C062-01		FDS-S-C065-01	
		ORIGINAL ID ----->	FDSSC03001		FDSSC05101		FDSSC05501		FDSSC05801		FDSSC06201		FDSSC06501	
		LAB SAMPLE ID --->	27869.09		28157.01		27869.10		27065.1		27934.01		27090.19	
		ID FROM REPORT -->	FDSSC03001		FDSSC05101		FDSSC05501		FDSSC05801		FDSSC06201		FDSSC06501	
		SAMPLE DATE ----->	12/04/96		01/13/97		12/05/96		09/24/96		12/10/96		09/25/96	
		DATE EXTRACTED -->	12/08/96		01/16/97		12/08/96		10/02/96		12/12/96		09/22/96	
		DATE ANALYZED --->	12/19/96		01/18/97		12/18/96		10/22/96		12/27/96		10/17/96	
		MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
		UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter		27869	VAL	28134	VAL	27869	VAL	27065	VAL	27934	VAL	27090	VAL
319-84-6	alpha-BHC		2.8	U	1.5	U	1.6	U	1.8	U	1.5	U	2.2	UJ
319-85-7	beta-BHC		2.8	U	1.5	U	1.6	U	1.8	U	1.5	U	2.2	UJ
319-86-8	delta-BHC		2.8	U	1.5	U	1.6	U	1.8	U	1.5	U	2.2	UJ
58-89-9	gamma-BHC (Lindane)		2.8	U	1.5	U	1.6	U	1.8	U	1.5	U	2.2	UJ
76-44-8	Heptachlor		2.8	U	1.5	U	1.6	U	1.8	U	1.5	U	2.2	UJ
309-00-2	Aldrin		2.8	U	1.5	U	1.6	U	1.8	U	1.5	U	2.2	UJ
1024-57-3	Heptachlor epoxide		2.8	U	1.5	U	1.6	U	1.8	U	1.5	U	2.2	UJ
959-98-8	Endosulfan I		2.8	U	1.5	U	1.6	U	1.8	U	1.5	U	2.2	UJ
60-57-1	Dieldrin		5.3	U	2.9	U	3.1	U	3.6	U	3.	U	4.2	UJ
72-55-9	4,4'-DDE		5.3	U	2.9	U	3.1	U	4.2	J	3.	U	4.2	UJ
72-20-8	Endrin		5.3	U	2.9	U	3.1	U	3.6	U	3.	U	4.2	UJ
33213-65-9	Endosulfan II		5.3	U	2.9	U	3.1	U	3.6	U	3.	U	4.2	UJ
72-54-8	4,4'-DDD		5.3	U	2.9	U	3.1	U	3.6	U	3.	U	4.2	UJ
1031-07-8	Endosulfan sulfate		5.3	U	2.9	U	3.1	U	3.6	U	3.	U	4.2	UJ
50-29-3	4,4'-DDT		5.3	U	2.9	U	3.1	U	3.6	U	3.	U	4.2	UJ
72-43-5	Methoxychlor		28.	U	15.	U	16.	U	18.	U	15.	U	22.	UJ
53494-70-5	Endrin ketone		5.3	U	2.9	U	3.1	U	3.6	U	3.	U	4.2	UJ
7421-93-4	Endrin aldehyde		5.3	U	2.9	U	3.1	U	3.6	U	3.	U	4.2	UJ
5103-71-9	alpha-Chlordane		2.8	U	1.5	U	1.6	U	3.4		1.5	U	2.2	UJ
5103-74-2	gamma-Chlordane		2.8	U	1.5	U	1.6	U	5.4		1.5	U	2.2	UJ
8001-35-2	Toxaphene		180.	U	96.	U	100.	U	120.	U	99.	U	140.	UJ
12674-11-2	Aroclor-1016		70.	U	38.	U	41.	U	47.	U	39.	U	56.	UJ
11104-28-2	Aroclor-1221		70.	U	38.	U	41.	U	47.	U	39.	U	56.	UJ
11141-16-5	Aroclor-1232		70.	U	38.	U	41.	U	47.	U	39.	U	56.	UJ
53469-21-9	Aroclor-1242		70.	U	38.	U	41.	U	47.	U	39.	U	56.	UJ
12672-29-6	Aroclor-1248		70.	U	38.	U	41.	U	47.	U	39.	U	56.	UJ
11097-69-1	Aroclor-1254		140.	U	78.	U	83.	U	96.	U	30.	J	110.	UJ
11096-82-5	Aroclor-1260		140.	U	78.	U	83.	U	96.	U	80.	U	110.	UJ

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

SW846-PEST																	
		SAMPLE ID ------->	FDS-S-C066-01		FDS-S-C067-01		FDS-S-C084-01		FDS-S-C094-01		FDS-S-C114-01		FDS-S-C47A-01	
		ORIGINAL ID ----->	FDSSC06601		FDSSC06701		FDSSC08401		FDSSC09401		FDSSC11401		FDSSC47A01	
		LAB SAMPLE ID --->	27869.11		27869.12		27178.209999		27212.07		27869.14		27065.12	
		ID FROM REPORT -->	FDSSC06601		FDSSC06701		FDSSC08401		FDSSC09401		FDSSC11401		FDSSC47A01	
		SAMPLE DATE ----->	12/04/96		12/04/96		10/02/09		10/04/96		12/05/96		09/24/96	
		DATE EXTRACTED -->	12/08/96		12/08/96		10/08/96				12/08/96		09/26/96	
		DATE ANALYZED --->	12/18/96		12/19/96		10/29/96				12/18/96		10/08/96	
		MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
		UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter		27869	VAL	27869	VAL	27178	VAL	27212	VAL	27869	VAL	27065	VAL
319-84-6	alpha-BHC		1.8	U	1.8	U	1.6	U	1.6	U	1.8	U	1.7	U
319-85-7	beta-BHC		1.8	U	1.8	U	1.6	U	1.6	U	1.8	U	1.7	U
319-86-8	delta-BHC		1.8	U	1.8	U	1.6	U	1.6	U	1.8	U	1.7	U
58-89-9	gamma-BHC (Lindane)		1.8	U	1.8	U	1.6	U	1.6	U	1.8	U	1.7	U
76-44-8	Heptachlor		1.8	U	1.8	UJ	1.6	U	1.6	U	1.8	U	1.7	U
309-00-2	Aldrin		1.8	U	1.8	U	1.6	U	1.6	U	1.8	U	1.7	U
1024-57-3	Heptachlor epoxide		1.8	U	1.8	U	1.6	U	1.6	U	1.8	U	1.7	U
959-98-8	Endosulfan I		1.8	U	1.8	U	1.6	U	1.6	U	1.8	U	1.7	U
60-57-1	Dieldrin		6.7	U	3.4	U	3.2	U	3.	U	3.4	U	3.3	U
72-55-9	4,4'-DDE		82.	DJ	10.	J	3.2	U	3.	U	3.4	U	3.3	U
72-20-8	Endrin		3.4	U	3.4	U	3.2	U	3.	U	3.4	U	3.3	U
33213-65-9	Endosulfan II		3.4	U	3.4	U	3.2	U	3.	U	3.4	U	3.3	U
72-54-8	4,4'-DDD		3.4	U	9.9	J	3.2	U	3.	U	3.4	U	3.3	U
1031-07-8	Endosulfan sulfate		3.4	U	3.4	U	3.2	U	3.	U	3.4	U	3.3	U
50-29-3	4,4'-DDT		3.4	U	3.4	U	3.2	U	3.	U	3.4	U	3.3	U
72-43-5	Methoxychlor		18.	U	18.	U	16.	U	16.	U	18.	U	17.	U
53494-70-5	Endrin ketone		3.4	U	3.4	U	3.2	U	3.	U	3.4	U	3.3	U
7421-93-4	Endrin aldehyde		3.4	U	3.4	U	3.2	U	3.	U	3.4	U	3.3	U
5103-71-9	alpha-Chlordane		1.8	U	1.8	U	1.6	U	1.6	U	1.8	U	1.7	U
5103-74-2	gamma-Chlordane		1.8	U	1.8	U	1.6	U	1.6	U	1.8	U	1.7	U
8001-35-2	Toxaphene		110.	U	110.	U	100.	U	100.	U	110.	U	110.	U
12674-11-2	Aroclor-1016		45.	U	45.	U	42.	U	40.	U	44.	U	44.	U
11104-28-2	Aroclor-1221		45.	U	45.	U	42.	U	40.	U	44.	U	44.	U
11141-16-5	Aroclor-1232		45.	U	45.	U	42.	U	40.	U	44.	U	44.	U
53469-21-9	Aroclor-1242		45.	U	45.	U	42.	U	40.	U	44.	U	44.	U
12672-29-6	Aroclor-1248		45.	U	45.	U	42.	U	40.	U	44.	U	44.	U
11097-69-1	Aroclor-1254		92.	U	92.	U	85.	U	82.	U	90.	U	89.	U
11096-82-5	Aroclor-1260		92.	U	92.	U	85.	U	82.	U	90.	U	89.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

SW846-PEST										
	SAMPLE ID ------->	FDS-S-H023-01		FDS-S-H024-01		FDS-S-H026-01				
	ORIGINAL ID ----->	FDSSH02301		FDSSH02401		FDSSH02601				
	LAB SAMPLE ID --->	FDSSH02301		27377.09		27377.06				
	ID FROM REPORT -->	FDSSH02301		FDSSH02401		FDSSH02601				
	SAMPLE DATE ----->	10/17/96		10/21/96		10/21/96				
	DATE EXTRACTED -->	10/20/96		10/22/96		10/22/96				
	DATE ANALYZED --->	10/28/96		11/01/96		11/01/96				
	MATRIX ---------->	Soil		Soil		Soil				
	UNITS ---------->	UG/KG		UG/KG		UG/KG				
CAS #	Parameter	27339	VAL	27377	VAL	27377	VAL			
319-84-6	alpha-BHC	1.4	U	1.4	U	1.4	U			
319-85-7	beta-BHC	1.4	U	1.4	U	1.4	U			
319-86-8	delta-BHC	1.4	U	1.4	U	1.4	U			
58-89-9	gamma-BHC (Lindane)	1.4	U	1.4	U	1.4	U			
76-44-8	Heptachlor	5.3	J	1.4	U	1.4	U			
309-00-2	Aldrin	1.4	U	1.4	U	1.4	U			
1024-57-3	Heptachlor epoxide	1.4	U	1.4	U	1.4	U			
959-98-8	Endosulfan I	1.4	U	1.4	U	1.4	U			
60-57-1	Dieldrin	2.8	U	2.8	U	2.7	U			
72-55-9	4,4'-DDE	2.8	U	2.8	U	2.7	U			
72-20-8	Endrin	20.		2.8	U	2.7	U			
33213-65-9	Endosulfan II	2.8	U	2.8	U	2.7	U			
72-54-8	4,4'-DDD	2.8	U	2.8	U	2.7	U			
1031-07-8	Endosulfan sulfate	2.8	U	2.8	U	2.7	U			
50-29-3	4,4'-DDT	11.	U	2.8	U	2.7	U			
72-43-5	Methoxychlor	14.	U	14.	U	14.	U			
53494-70-5	Endrin ketone	2.8	U	2.8	U	2.7	U			
7421-93-4	Endrin aldehyde	2.8	U	2.8	U	2.7	U			
5103-71-9	alpha-Chlordane	1.4	U	1.4	U	1.4	U			
5103-74-2	gamma-Chlordane	3.4		1.4	U	1.4	U			
8001-35-2	Toxaphene	92.	U	92.	U	90.	U			
12674-11-2	Aroclor-1016	37.	U	37.	U	36.	U			
11104-28-2	Aroclor-1221	37.	U	37.	U	36.	U			
11141-16-5	Aroclor-1232	37.	U	37.	U	36.	U			
53469-21-9	Aroclor-1242	37.	U	37.	U	36.	U			
12672-29-6	Aroclor-1248	37.	U	37.	U	36.	U			
11097-69-1	Aroclor-1254	74.	U	74.	U	73.	U			
11096-82-5	Aroclor-1260	170.	U	74.	U	73.	U			

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

SW846-SVOA	SAMPLE ID ------->	FDS-S-C002-01		FDS-S-C011-01		FDS-S-C012-01		FDS-S-C013-01		FDS-S-C014-01		FDS-S-C016-01	
	ORIGINAL ID ----->	FDSSC00201		FDSSC01101		FDSSC01201		FDSSC01301		FDSSC01401		FDSSC01601	
	LAB SAMPLE ID --->	27869.01		27869.02		27869.05		27869.06		27869.07		27869.08	
	ID FROM REPORT -->	FDSSC00201		FDSSC01101		FDSSC01201		FDSSC01301		FDSSC01401		FDSSC01601	
	SAMPLE DATE ----->	12/04/96		12/04/96		12/04/96		12/04/96		12/05/96		12/04/96	
	DATE EXTRACTED -->	12/08/96		12/08/96		12/08/96		12/08/96		12/08/96		12/08/96	
	DATE ANALYZED --->	12/13/96		12/13/96		12/20/96		12/14/96		12/19/96		12/14/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	27869	VAL	27869	VAL	27869	VAL	27869	VAL	27869	VAL	27869	VAL
108-95-2	Phenol	430.	U	520.	U	10000.	U	550.	U	650.	UJ	780.	U
111-44-4	bis(2-Chloroethyl)ether	430.	U	520.	U	10000.	U	550.	U	650.	UJ	780.	U
95-57-8	2-Chlorophenol	430.	U	520.	U	10000.	U	550.	U	650.	UJ	780.	U
541-73-1	1,3-Dichlorobenzene	430.	U	520.	U	10000.	U	550.	U	650.	UJ	780.	U
106-46-7	1,4-Dichlorobenzene	430.	U	520.	U	10000.	U	550.	U	650.	UJ	780.	U
100-51-6	Benzyl alcohol	430.	U	520.	U	10000.	U	550.	U	650.	UJ	780.	U
95-50-1	1,2-Dichlorobenzene	430.	U	520.	U	10000.	U	550.	U	650.	UJ	780.	U
95-48-7	2-Methylphenol (o-Cresol)	430.	U	520.	U	10000.	U	550.	U	650.	UJ	780.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	430.	U	520.	U	10000.	U	550.	U	650.	UJ	780.	U
106-44-5	4-Methylphenol (p-Cresol)	430.	U	520.	U	10000.	U	550.	U	650.	UJ	780.	U
621-64-7	N-Nitroso-di-n-propylamine	430.	U	520.	U	10000.	U	550.	U	650.	UJ	780.	U
67-72-1	Hexachloroethane	430.	U	520.	U	10000.	U	550.	U	650.	UJ	780.	U
98-95-3	Nitrobenzene	430.	U	520.	U	10000.	U	550.	U	650.	UJ	780.	U
78-59-1	Isophorone	430.	U	520.	U	10000.	U	550.	U	650.	UJ	780.	U
88-75-5	2-Nitrophenol	430.	U	520.	U	10000.	U	550.	U	200.	J	780.	U
105-67-9	2,4-Dimethylphenol	430.	U	520.	U	10000.	U	550.	U	650.	UJ	780.	U
65-85-0	Benzoic acid	2100.	U	78.	J	50000.	U	2700.	U	120.	J	130.	J
111-91-1	bis(2-Chloroethoxy)methane	430.	U	520.	U	10000.	U	550.	U	650.	UJ	780.	U
120-83-2	2,4-Dichlorophenol	430.	U	520.	U	10000.	U	550.	U	650.	UJ	780.	U
120-82-1	1,2,4-Trichlorobenzene	430.	U	520.	U	10000.	U	550.	U	650.	UJ	780.	U
91-20-3	Naphthalene	420.	J	520.	U	39000.		290.	J	650.	UJ	780.	U
106-47-8	4-Chloroaniline	430.	U	520.	U	10000.	U	550.	U	650.	UJ	780.	U
87-68-3	Hexachlorobutadiene	430.	U	520.	U	10000.	U	550.	U	650.	UJ	780.	U
59-50-7	4-Chloro-3-methylphenol	430.	U	520.	U	10000.	U	550.	U	650.	UJ	780.	U
91-57-6	2-Methylnaphthalene	940.		520.	U	120000.		5200.		650.	UJ	780.	U
77-47-4	Hexachlorocyclopentadiene	430.	U	520.	U	10000.	U	550.	U	650.	UJ	780.	U
88-06-2	2,4,6-Trichlorophenol	430.	U	520.	U	10000.	U	550.	U	650.	UJ	780.	U
95-95-4	2,4,5-Trichlorophenol	2100.	U	2500.	U	50000.	U	2700.	U	3100.	UJ	3800.	U
91-58-7	2-Chloronaphthalene	430.	U	520.	U	10000.	U	550.	U	650.	UJ	780.	U
88-74-4	2-Nitroaniline	2100.	U	2500.	U	50000.	U	2700.	U	3100.	UJ	3800.	U
131-11-3	Dimethyl phthalate	430.	U	520.	U	10000.	U	550.	U	650.	UJ	780.	U
208-96-8	Acenaphthylene	430.	U	520.	U	10000.	U	550.	U	650.	UJ	780.	U
606-20-2	2,6-Dinitrotoluene	430.	U	520.	U	10000.	U	550.	U	650.	UJ	780.	U
99-09-2	3-Nitroaniline	2100.	U	2500.	U	50000.	U	2700.	U	3100.	UJ	3800.	U
83-32-9	Acenaphthene	430.	U	520.	U	10000.	U	2600.		650.	UJ	780.	U
51-28-5	2,4-Dinitrophenol	2100.	UJ	2500.	UJ	50000.	U	2700.	U	3100.	UJ	3800.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

SW846-SVOA	SAMPLE ID ------->	FDS-S-C002-01		FDS-S-C011-01		FDS-S-C012-01		FDS-S-C013-01		FDS-S-C014-01		FDS-S-C016-01	
	ORIGINAL ID ----->	FDSSC00201		FDSSC01101		FDSSC01201		FDSSC01301		FDSSC01401		FDSSC01601	
	LAB SAMPLE ID --->	27869.01		27869.02		27869.05		27869.06		27869.07		27869.08	
	ID FROM REPORT -->	FDSSC00201		FDSSC01101		FDSSC01201		FDSSC01301		FDSSC01401		FDSSC01601	
	SAMPLE DATE ----->	12/04/96		12/04/96		12/04/96		12/04/96		12/05/96		12/04/96	
	DATE EXTRACTED -->	12/08/96		12/08/96		12/08/96		12/08/96		12/08/96		12/08/96	
	DATE ANALYZED --->	12/13/96		12/13/96		12/20/96		12/14/96		12/19/96		12/14/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	27869	VAL	27869	VAL	27869	VAL	27869	VAL	27869	VAL	27869	VAL
100-02-7	4-Nitrophenol	2100.	U	2500.	U	50000.	U	2700.	U	3100.	UJ	3800.	U
132-64-9	Dibenzofuran	460.		520.	U	6200.	J	1500.		650.	UJ	780.	U
121-14-2	2,4-Dinitrotoluene	430.	U	520.	U	10000.	U	550.	U	650.	UJ	780.	U
84-66-2	Diethylphthalate	430.	U	520.	U	10000.	U	550.	U	650.	UJ	780.	U
7005-72-3	4-Chlorophenylphenylether	430.	U	520.	U	10000.	U	550.	U	650.	UJ	780.	U
86-73-7	Fluorene	1200.		520.	U	12000.		2700.		650.	UJ	780.	U
100-01-6	4-Nitroaniline	2100.	U	2500.	U	50000.	U	2700.	U	3100.	UJ	3800.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	2100.	U	2500.	U	50000.	U	2700.	U	3100.	UJ	3800.	U
86-30-6	N-Nitrosodiphenylamine	430.	U	520.	U	10000.	U	550.	U	650.	UJ	780.	U
101-55-3	4-Bromophenyl-phenylether	430.	U	520.	U	10000.	U	550.	U	650.	UJ	780.	U
118-74-1	Hexachlorobenzene	430.	U	520.	U	10000.	U	550.	U	650.	UJ	780.	U
87-86-5	Pentachlorophenol	2100.	U	2500.	U	50000.	U	2700.	U	3100.	UJ	3800.	U
85-01-8	Phenanthrene	980.		520.	U	22000.		7700.		650.	UJ	780.	U
120-12-7	Anthracene	430.	U	520.	U	10000.	U	950.		650.	UJ	780.	U
84-74-2	Di-n-butylphthalate	430.	U	520.	U	10000.	U	550.	U	650.	UJ	780.	U
206-44-0	Fluoranthene	310.	J	150.	J	10000.	U	2000.		650.	UJ	780.	U
129-00-0	Pyrene	360.	J	230.	J	2200.	J	3300.	J	210.	J	190.	J
85-68-7	Butylbenzylphthalate	430.	U	520.	U	10000.	U	84.	J	650.	UJ	780.	UJ
91-94-1	3,3'-Dichlorobenzidine	870.	U	1000.	U	21000.	U	1100.	UJ	1300.	UJ	1600.	UJ
56-55-3	Benzo(a)anthracene	430.	U	74.	J	10000.	U	730.	J	650.	UJ	780.	UJ
218-01-9	Chrysene	50.	J	98.	J	1200.	J	1200.	J	650.	UJ	780.	UJ
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	430.	U	520.	U	10000.	U	550.	UJ	650.	UJ	780.	UJ
117-84-0	Di-n-octyl phthalate	430.	U	520.	U	10000.	U	550.	UJ	650.	UJ	780.	UJ
205-99-2	Benzo(b)fluoranthene	430.	U	66.	J	10000.	U	560.	J	120.	J	84.	J
207-08-9	Benzo(k)fluoranthene	430.	U	61.	J	10000.	U	410.	J	88.	J	86.	J
50-32-8	Benzo(a)pyrene	430.	U	65.	J	10000.	U	490.	J	130.	J	780.	UJ
193-39-5	Indeno(1,2,3-cd)pyrene	430.	U	72.	J	10000.	U	320.	J	130.	J	780.	UJ
53-70-3	Dibenz(a,h)anthracene	430.	U	520.	U	10000.	U	110.	J	650.	UJ	780.	UJ
191-24-2	Benzo(g,h,i)perylene	430.	U	520.	U	10000.	U	370.	J	110.	J	780.	UJ

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

SW846-SVOA	SAMPLE ID ------->	FDS-S-C030-01		FDS-S-C051-01		FDS-S-C055-01		FDS-S-C058-01		FDS-S-C062-01		FDS-S-C065-01	
	ORIGINAL ID ----->	FDSSC03001		FDSSC05101		FDSSC05501		FDSSC05801		FDSSC06201		FDSSC06501	
	LAB SAMPLE ID --->	27869.09		28157.01		27869.10		27065.10		27934.01		27090.19	
	ID FROM REPORT -->	FDSSC03001		FDSSC05101		FDSSC05501		FDSSC05801		FDSSC06201		FDSSC06501	
	SAMPLE DATE ----->	12/04/96		01/13/97		12/05/96		09/24/96		12/10/96		09/25/96	
	DATE EXTRACTED -->	12/08/96		01/14/97		12/08/96		09/26/96		12/12/96		09/27/96	
	DATE ANALYZED --->	12/19/96		01/16/97		12/19/96		10/16/96		01/06/97		10/17/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/L		UG/KG	
CAS #	Parameter	27869	VAL	28314	VAL	27869	VAL	27065	VAL	27934	VAL	27090	VAL
108-95-2	Phenol	700.	UJ	770.	U	410.	U	470.	U	390.	U	560.	U
111-44-4	bis(2-Chloroethyl)ether	700.	UJ	770.	U	410.	U	470.	U	390.	U	560.	U
95-57-8	2-Chlorophenol	700.	UJ	770.	U	410.	U	470.	U	390.	U	560.	U
541-73-1	1,3-Dichlorobenzene	700.	UJ	770.	U	410.	U	470.	U	390.	U	560.	U
106-46-7	1,4-Dichlorobenzene	700.	UJ	770.	U	410.	U	470.	U	390.	U	560.	U
100-51-6	Benzyl alcohol	700.	UJ	770.	U	410.	U	470.	U	390.	U	560.	U
95-50-1	1,2-Dichlorobenzene	700.	UJ	770.	U	410.	U	470.	U	390.	U	560.	U
95-48-7	2-Methylphenol (o-Cresol)	700.	UJ	770.	U	410.	U	470.	U	390.	U	560.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	700.	UJ	770.	U	410.	U	470.	U	390.	U	560.	U
106-44-5	4-Methylphenol (p-Cresol)	700.	UJ	770.	U	410.	U	470.	U	390.	U	560.	U
621-64-7	N-Nitroso-di-n-propylamine	700.	UJ	770.	U	410.	U	470.	U	390.	U	560.	U
67-72-1	Hexachloroethane	700.	UJ	770.	U	410.	U	470.	U	390.	U	560.	U
98-95-3	Nitrobenzene	700.	UJ	770.	U	410.	U	470.	U	390.	U	560.	U
78-59-1	Isophorone	700.	UJ	770.	U	410.	U	470.	U	390.	U	560.	U
88-75-5	2-Nitrophenol	700.	UJ	770.	U	410.	U	470.	U	390.	U	560.	U
105-67-9	2,4-Dimethylphenol	700.	UJ	770.	U	410.	U	470.	U	390.	U	560.	U
65-85-0	Benzoic acid	94.	J	3700.	U	61.	J	2300.	U	1900.	U	2700.	U
111-91-1	bis(2-Chloroethoxy)methane	700.	UJ	770.	U	410.	U	470.	U	390.	U	560.	U
120-83-2	2,4-Dichlorophenol	700.	UJ	770.	U	410.	U	470.	U	390.	U	560.	U
120-82-1	1,2,4-Trichlorobenzene	700.	UJ	770.	U	410.	U	470.	U	390.	U	560.	U
91-20-3	Naphthalene	700.	UJ	770.	U	410.	U	470.	U	390.	U	560.	U
106-47-8	4-Chloroaniline	700.	UJ	770.	U	410.	U	470.	U	390.	U	560.	U
87-68-3	Hexachlorobutadiene	700.	UJ	770.	U	410.	U	470.	U	390.	U	560.	U
59-50-7	4-Chloro-3-methylphenol	700.	UJ	770.	U	410.	U	470.	U	390.	U	560.	U
91-57-6	2-Methylnaphthalene	700.	UJ	770.	U	410.	U	250.	J	390.	U	62.	J
77-47-4	Hexachlorocyclopentadiene	700.	UJ	770.	U	410.	UJ	470.	U	390.	U	560.	U
88-06-2	2,4,6-Trichlorophenol	700.	UJ	770.	U	410.	UJ	470.	U	390.	U	560.	U
95-95-4	2,4,5-Trichlorophenol	3400.	UJ	3700.	U	2000.	UJ	2300.	U	1900.	U	2700.	U
91-58-7	2-Chloronaphthalene	700.	UJ	770.	U	410.	UJ	470.	U	390.	U	560.	U
88-74-4	2-Nitroaniline	3400.	UJ	3700.	U	2000.	UJ	2300.	U	1900.	U	2700.	U
131-11-3	Dimethyl phthalate	700.	UJ	770.	U	410.	UJ	470.	U	390.	U	560.	U
208-96-8	Acenaphthylene	700.	UJ	770.	U	410.	UJ	470.	U	390.	U	560.	U
606-20-2	2,6-Dinitrotoluene	700.	UJ	770.	U	410.	UJ	470.	U	390.	U	560.	U
99-09-2	3-Nitroaniline	3400.	UJ	3700.	U	2000.	UJ	2300.	U	1900.	U	2700.	U
83-32-9	Acenaphthene	700.	UJ	770.	U	410.	UJ	470.	U	390.	U	130.	J
51-28-5	2,4-Dinitrophenol	3400.	UJ	3700.	U	2000.	UJ	2300.	U	1900.	U	2700.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

SW846-SVOA															
		SAMPLE ID ------->	FDS-S-C030-01		FDS-S-C051-01		FDS-S-C055-01		FDS-S-C058-01		FDS-S-C062-01		FDS-S-C065-01		
		ORIGINAL ID ----->	FDSSC03001		FDSSC05101		FDSSC05501		FDSSC05801		FDSSC06201		FDSSC06501		
		LAB SAMPLE ID --->	27869.09		28157.01		27869.10		27065.10		27934.01		27090.19		
		ID FROM REPORT -->	FDSSC03001		FDSSC05101		FDSSC05501		FDSSC05801		FDSSC06201		FDSSC06501		
		SAMPLE DATE ----->	12/04/96		01/13/97		12/05/96		09/24/96		12/10/96		09/25/96		
		DATE EXTRACTED -->	12/08/96		01/14/97		12/08/96		09/26/96		12/12/96		09/27/96		
		DATE ANALYZED --->	12/19/96		01/16/97		12/19/96		10/16/96		01/06/97		10/17/96		
		MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil		
		UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/L		UG/KG		
CAS #	Parameter		27869	VAL	28314	VAL	27869	VAL	27065	VAL	27934	VAL	27090	VAL	
100-02-7	4-Nitrophenol		3400.	UJ	3700.	U	2000.	UJ	2300.	U	1900.	U	2700.	U	
132-64-9	Dibenzofuran		700.	UJ	770.	U	410.	UJ	64.	J	390.	U	560.	U	
121-14-2	2,4-Dinitrotoluene		700.	UJ	770.	U	410.	UJ	470.	U	390.	U	560.	U	
84-66-2	Diethylphthalate		700.	UJ	770.	U	410.	UJ	470.	U	390.	U	560.	U	
7005-72-3	4-Chlorophenylphenylether		700.	UJ	770.	U	410.	UJ	470.	U	390.	U	560.	U	
86-73-7	Fluorene		700.	UJ	770.	U	410.	UJ	70.	J	390.	U	140.	J	
100-01-6	4-Nitroaniline		3400.	UJ	3700.	U	2000.	UJ	2300.	U	1900.	U	2700.	U	
534-52-1	2-Methyl-4,6-Dinitrophenol		3400.	UJ	3700.	U	2000.	UJ	2300.	U	1900.	U	2700.	U	
86-30-6	N-Nitrosodiphenylamine		700.	UJ	770.	U	410.	UJ	470.	U	390.	U	560.	U	
101-55-3	4-Bromophenyl-phenylether		700.	UJ	770.	U	410.	UJ	470.	U	390.	U	560.	U	
118-74-1	Hexachlorobenzene		700.	UJ	770.	U	410.	UJ	470.	U	390.	U	560.	U	
87-86-5	Pentachlorophenol		3400.	UJ	3700.	U	2000.	UJ	2300.	U	1900.	U	2700.	U	
85-01-8	Phenanthrene		700.	UJ	770.	U	410.	UJ	160.	J	390.	U	240.	J	
120-12-7	Anthracene		700.	UJ	770.	U	410.	UJ	470.	U	390.	U	110.	J	
84-74-2	Di-n-butylphthalate		700.	UJ	770.	U	410.	UJ	470.	U	390.	U	560.	U	
206-44-0	Fluoranthene		180.	J	770.	U	410.	UJ	88.	J	390.	U	120.	J	
129-00-0	Pyrene		180.	J	770.	U	45.	J	160.	J	390.	U	290.	J	
85-68-7	Butylbenzylphthalate		700.	UJ	770.	U	410.	UJ	470.	U	390.	U	560.	U	
91-94-1	3,3'-Dichlorobenzidine		1400.	UJ	1500.	U	810.	UJ	940.	U	780.	U	1100.	U	
56-55-3	Benzo(a)anthracene		96.	J	770.	U	74.	J	470.	U	390.	U	86.	J	
218-01-9	Chrysene		94.	J	80.	J	150.	J	140.	J	390.	U	70.	J	
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)		86.	J	1500.		410.	UJ	470.	U	390.	U	560.	U	
117-84-0	Di-n-octyl phthalate		700.	U	770.	U	410.	U	470.	U	390.	U	560.	U	
205-99-2	Benzo(b)fluoranthene		76.	J	770.	U	53.	J	470.	U	43.	J	72.	J	
207-08-9	Benzo(k)fluoranthene		87.	J	770.	U	410.	U	470.	U	390.	U	560.	U	
50-32-8	Benzo(a)pyrene		91.	J	770.	U	68.	J	470.	U	390.	U	560.	U	
193-39-5	Indeno(1,2,3-cd)pyrene		74.	J	770.	U	410.	U	470.	U	390.	U	560.	U	
53-70-3	Dibenz(a,h)anthracene		700.	U	770.	U	410.	U	470.	U	390.	U	560.	U	
191-24-2	Benzo(g,h,i)perylene		79.	J	770.	U	65.	J	470.	U	390.	U	560.	U	

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

SW846-SVOA	SAMPLE ID ------->	FDS-S-C066-01		FDS-S-C067-01		FDS-S-C084-01		FDS-S-C094-01		FDS-S-C114-01		FDS-S-C47A-01	
	ORIGINAL ID ----->	FDSSC06601		FDSSC06701		FDSSC08401		FDSSC09401		FDSSC11401		FDSSC47A01	
	LAB SAMPLE ID --->	27869.11		27869.12		27178.21		27212.07		27869.14		27065.12	
	ID FROM REPORT -->	FDSSC06601		FDSSC06701		FDSSC08401		FDSSC09401		FDSSC11401		FDSSC47A01	
	SAMPLE DATE ----->	12/04/96		12/04/96		10/02/96		10/03/96		12/05/96		09/24/96	
	DATE EXTRACTED -->	12/08/96		12/08/96		10/08/96		10/09/96		12/08/96		09/26/96	
	DATE ANALYZED --->	12/19/96		12/19/96		10/23/96		10/28/96		12/20/96		10/16/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	27869	VAL	27869	VAL	27178	VAL	27212	VAL	27869	VAL	27065	VAL
108-95-2	Phenol	900.	U	900.	U	420.	U	400.	U	440.	U	440.	U
111-44-4	bis(2-Chloroethyl)ether	900.	U	900.	U	420.	U	400.	U	440.	U	440.	U
95-57-8	2-Chlorophenol	900.	U	900.	U	420.	U	400.	U	440.	U	440.	U
541-73-1	1,3-Dichlorobenzene	900.	U	900.	U	420.	U	400.	U	440.	U	440.	U
106-46-7	1,4-Dichlorobenzene	900.	U	900.	U	420.	U	400.	U	440.	U	440.	U
100-51-6	Benzyl alcohol	900.	U	900.	U	420.	U	400.	U	440.	U	440.	U
95-50-1	1,2-Dichlorobenzene	900.	U	900.	U	420.	U	400.	U	440.	U	440.	U
95-48-7	2-Methylphenol (o-Cresol)	900.	U	900.	U	420.	U	400.	U	440.	U	440.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	900.	U	900.	U	420.	U	400.	U	440.	U	440.	U
106-44-5	4-Methylphenol (p-Cresol)	900.	U	900.	U	420.	U	400.	U	440.	U	440.	U
621-64-7	N-Nitroso-di-n-propylamine	900.	U	900.	U	420.	U	400.	U	440.	U	440.	U
67-72-1	Hexachloroethane	900.	U	900.	U	420.	U	400.	U	440.	U	440.	U
98-95-3	Nitrobenzene	900.	U	900.	U	420.	U	400.	U	440.	U	440.	U
78-59-1	Isophorone	900.	U	900.	U	420.	U	400.	U	440.	U	440.	U
88-75-5	2-Nitrophenol	900.	U	900.	U	420.	U	400.	U	440.	U	440.	U
105-67-9	2,4-Dimethylphenol	900.	U	900.	U	420.	U	400.	U	440.	U	440.	U
65-85-0	Benzoic acid	4400.	U	4400.	U	2000.	U	2000.	U	86.	J	2100.	U
111-91-1	bis(2-Chloroethoxy)methane	900.	U	900.	U	420.	U	400.	U	440.	U	440.	U
120-83-2	2,4-Dichlorophenol	900.	U	900.	U	420.	U	400.	U	440.	U	440.	U
120-82-1	1,2,4-Trichlorobenzene	900.	U	900.	U	420.	U	400.	U	440.	U	440.	U
91-20-3	Naphthalene	3400.		900.	U	420.	U	400.	U	440.	U	110.	J
106-47-8	4-Chloroaniline	900.	U	900.	U	420.	U	400.	U	440.	U	440.	U
87-68-3	Hexachlorobutadiene	900.	U	900.	U	420.	U	400.	U	440.	U	440.	U
59-50-7	4-Chloro-3-methylphenol	900.	U	900.	U	420.	U	400.	U	440.	U	440.	U
91-57-6	2-Methylnaphthalene	3100.		5300.		420.	U	400.	U	440.	U	5100.	
77-47-4	Hexachlorocyclopentadiene	900.	U	900.	UJ	420.	U	400.	U	440.	UJ	440.	U
88-06-2	2,4,6-Trichlorophenol	900.	U	900.	UJ	420.	U	400.	U	440.	UJ	440.	U
95-95-4	2,4,5-Trichlorophenol	4400.	U	4400.	UJ	2000.	U	2000.	U	2200.	UJ	2100.	U
91-58-7	2-Chloronaphthalene	900.	U	900.	UJ	420.	U	400.	U	440.	UJ	440.	U
88-74-4	2-Nitroaniline	4400.	U	4400.	UJ	2000.	U	2000.	U	2200.	UJ	2100.	U
131-11-3	Dimethyl phthalate	900.	U	900.	UJ	420.	U	400.	U	440.	UJ	440.	U
208-96-8	Acenaphthylene	900.	U	900.	UJ	420.	U	400.	U	440.	UJ	440.	U
606-20-2	2,6-Dinitrotoluene	900.	U	900.	UJ	420.	U	400.	U	440.	UJ	440.	U
99-09-2	3-Nitroaniline	4400.	U	4400.	UJ	2000.	U	2000.	U	2200.	UJ	2100.	U
83-32-9	Acenaphthene	3000.		1600.	J	420.	U	400.	U	440.	UJ	430.	J
51-28-5	2,4-Dinitrophenol	4400.	U	4400.	UJ	2000.	U	2000.	U	2200.	UJ	2100.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

SW846-SVOA															
		SAMPLE ID ------->	FDS-S-C066-01		FDS-S-C067-01		FDS-S-C084-01		FDS-S-C094-01		FDS-S-C114-01		FDS-S-C47A-01		
		ORIGINAL ID ----->	FDSSC06601		FDSSC06701		FDSSC08401		FDSSC09401		FDSSC11401		FDSSC47A01		
		LAB SAMPLE ID --->	27869.11		27869.12		27178.21		27212.07		27869.14		27065.12		
		ID FROM REPORT -->	FDSSC06601		FDSSC06701		FDSSC08401		FDSSC09401		FDSSC11401		FDSSC47A01		
		SAMPLE DATE ----->	12/04/96		12/04/96		10/02/96		10/03/96		12/05/96		09/24/96		
		DATE EXTRACTED -->	12/08/96		12/08/96		10/08/96		10/09/96		12/08/96		09/26/96		
		DATE ANALYZED --->	12/19/96		12/19/96		10/23/96		10/28/96		12/20/96		10/16/96		
		MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil		
		UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		
CAS #	Parameter		27869	VAL	27869	VAL	27178	VAL	27212	VAL	27869	VAL	27065	VAL	
100-02-7	4-Nitrophenol		4400.	U	4400.	UJ	2000.	U	2000.	U	2200.	UJ	2100.	U	
132-64-9	Dibenzofuran		2700.		1200.	J	420.	U	400.	U	440.	UJ	330.	J	
121-14-2	2,4-Dinitrotoluene		900.	U	900.	UJ	420.	U	400.	U	440.	UJ	440.	U	
84-66-2	Diethylphthalate		900.	U	900.	UJ	420.	U	400.	U	74.	J	440.	U	
7005-72-3	4-Chlorophenylphenylether		900.	U	900.	UJ	420.	U	400.	U	440.	UJ	440.	U	
86-73-7	Fluorene		4400.		2000.	J	420.	U	400.	U	440.	UJ	570.		
100-01-6	4-Nitroaniline		4400.	U	4400.	UJ	2000.	U	2000.	U	2200.	UJ	2100.	U	
534-52-1	2-Methyl-4,6-Dinitrophenol		4400.	U	4400.	UJ	2000.	U	2000.	U	2200.	UJ	2100.	U	
86-30-6	N-Nitrosodiphenylamine		900.	U	900.	UJ	420.	U	400.	U	440.	UJ	440.	U	
101-55-3	4-Bromophenyl-phenylether		900.	U	900.	UJ	420.	U	400.	U	440.	UJ	440.	U	
118-74-1	Hexachlorobenzene		900.	U	900.	UJ	420.	U	400.	U	440.	UJ	440.	U	
87-86-5	Pentachlorophenol		4400.	U	4400.	UJ	2000.	U	2000.	U	2200.	UJ	2100.	U	
85-01-8	Phenanthrene		15000.	DJ	7400.	J	100.	J	400.	U	130.	J	1600.		
120-12-7	Anthracene		3900.		1700.	J	420.	U	400.	U	49.	J	280.	J	
84-74-2	Di-n-butylphthalate		900.	U	900.	UJ	420.	U	400.	U	440.	UJ	440.	U	
206-44-0	Fluoranthene		6000.		4200.	J	75.	J	400.	U	520.	J	190.	J	
129-00-0	Pyrene		5300.		3900.		54.	J	240.	J	470.	J	710.		
85-68-7	Butylbenzylphthalate		900.	U	900.	U	420.	U	400.	U	440.	UJ	440.	U	
91-94-1	3,3'-Dichlorobenzidine		1800.	U	1800.	U	840.	U	800.	U	890.	UJ	880.	U	
56-55-3	Benzo(a)anthracene		1800.		2100.	J	420.	U	49.	J	260.	J	300.	J	
218-01-9	Chrysene		2000.		2300.	J	420.	U	62.	J	380.	J	440.	U	
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)		900.	U	900.	U	420.	U	400.	U	46.	J	440.	U	
117-84-0	Di-n-octyl phthalate		900.	U	900.	U	420.	U	400.	U	440.	UJ	440.	U	
205-99-2	Benzo(b)fluoranthene		630.	J	1000.	J	420.	U	400.	U	120.	J	440.	U	
207-08-9	Benzo(k)fluoranthene		710.	J	1200.	J	420.	U	400.	U	87.	J	440.	U	
50-32-8	Benzo(a)pyrene		930.		1500.	J	420.	U	400.	U	60.	J	440.	U	
193-39-5	Indeno(1,2,3-cd)pyrene		460.	J	790.	J	420.	U	400.	U	440.	UJ	440.	U	
53-70-3	Dibenz(a,h)anthracene		120.	J	230.	J	420.	U	400.	U	440.	UJ	440.	U	
191-24-2	Benzo(g,h,i)perylene		550.	J	860.	J	420.	U	400.	U	55.	J	440.	U	

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

SW846-SVOA										
	SAMPLE ID ------->	FDS-S-H023-01		FDS-S-H024-01		FDS-S-H026-01				
	ORIGINAL ID ----->	FDSSH02301		FDSSH02401		FDSSH02601				
	LAB SAMPLE ID --->	27355.10		27377.09		27377.06				
	ID FROM REPORT -->	FDSSH02301		FDSSH02401		FDSSH02601				
	SAMPLE DATE ----->	10/17/96		10/21/96		10/21/96				
	DATE EXTRACTED -->	10/20/96		10/22/96		10/22/96				
	DATE ANALYZED --->	11/01/96		11/05/96		11/06/96				
	MATRIX ---------->	Soil		Soil		Soil				
	UNITS ---------->	UG/KG		UG/KG		UG/KG				
CAS #	Parameter	27339	VAL	27377	VAL	27377	VAL			
108-95-2	Phenol	1800.	U	370.	U	720.	U			
111-44-4	bis(2-Chloroethyl)ether	1800.	U	370.	U	720.	U			
95-57-8	2-Chlorophenol	1800.	U	370.	U	720.	U			
541-73-1	1,3-Dichlorobenzene	1800.	U	370.	U	720.	U			
106-46-7	1,4-Dichlorobenzene	1800.	U	370.	U	720.	U			
100-51-6	Benzyl alcohol	1800.	U	370.	U	720.	U			
95-50-1	1,2-Dichlorobenzene	1800.	U	370.	U	720.	U			
95-48-7	2-Methylphenol (o-Cresol)	1800.	U	370.	U	720.	U			
108-60-1	2,2'-oxybis(1-Chloropropane)	1800.	U	370.	U	720.	U			
106-44-5	4-Methylphenol (p-Cresol)	1800.	U	370.	U	720.	U			
621-64-7	N-Nitroso-di-n-propylamine	1800.	U	370.	U	720.	U			
67-72-1	Hexachloroethane	1800.	U	370.	U	720.	U			
98-95-3	Nitrobenzene	1800.	U	370.	U	720.	U			
78-59-1	Isophorone	1800.	U	370.	U	720.	U			
88-75-5	2-Nitrophenol	1800.	U	370.	U	720.	U			
105-67-9	2,4-Dimethylphenol	1800.	U	370.	U	720.	U			
65-85-0	Benzoic acid	8900.	U	1800.	U	3500.	U			
111-91-1	bis(2-Chloroethoxy)methane	1800.	U	370.	U	720.	U			
120-83-2	2,4-Dichlorophenol	1800.	U	370.	U	720.	U			
120-82-1	1,2,4-Trichlorobenzene	1800.	U	370.	U	720.	U			
91-20-3	Naphthalene	1700.	J	370.	U	700.	J			
106-47-8	4-Chloroaniline	1800.	U	370.	U	720.	U			
87-68-3	Hexachlorobutadiene	1800.	U	370.	U	720.	U			
59-50-7	4-Chloro-3-methylphenol	1800.	U	370.	U	720.	U			
91-57-6	2-Methylnaphthalene	6800.		370.	U	890.	J			
77-47-4	Hexachlorocyclopentadiene	1800.	U	370.	U	720.	U			
88-06-2	2,4,6-Trichlorophenol	1800.	U	370.	U	720.	U			
95-95-4	2,4,5-Trichlorophenol	8900.	U	1800.	U	3500.	U			
91-58-7	2-Chloronaphthalene	1800.	U	370.	U	720.	U			
88-74-4	2-Nitroaniline	8900.	U	1800.	U	3500.	U			
131-11-3	Dimethyl phthalate	1800.	U	370.	U	720.	U			
208-96-8	Acenaphthylene	1800.	U	370.	U	720.	U			
606-20-2	2,6-Dinitrotoluene	1800.	U	370.	U	720.	U			
99-09-2	3-Nitroaniline	8900.	U	1800.	U	3500.	U			
83-32-9	Acenaphthene	1800.	U	370.	U	200.	J			
51-28-5	2,4-Dinitrophenol	8900.	U	1800.	U	3500.	U			

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

SW846-SVOA	SAMPLE ID ------->	FDS-S-H023-01		FDS-S-H024-01		FDS-S-H026-01				
	ORIGINAL ID ----->	FDSSH02301		FDSSH02401		FDSSH02601				
	LAB SAMPLE ID --->	27355.10		27377.09		27377.06				
	ID FROM REPORT -->	FDSSH02301		FDSSH02401		FDSSH02601				
	SAMPLE DATE ----->	10/17/96		10/21/96		10/21/96				
	DATE EXTRACTED -->	10/20/96		10/22/96		10/22/96				
	DATE ANALYZED --->	11/01/96		11/05/96		11/06/96				
	MATRIX ---------->	Soil		Soil		Soil				
	UNITS ---------->	UG/KG		UG/KG		UG/KG				
CAS #	Parameter	27339	VAL	27377	VAL	27377	VAL			
100-02-7	4-Nitrophenol	8900.	U	1800.	U	3500.	U			
132-64-9	Dibenzofuran	1800.	U	370.	U	720.	U			
121-14-2	2,4-Dinitrotoluene	1800.	U	370.	U	720.	U			
84-66-2	Diethylphthalate	1800.	U	370.	U	720.	U			
7005-72-3	4-Chlorophenylphenylether	1800.	U	370.	U	720.	U			
86-73-7	Fluorene	1900.		370.	U	190.	J			
100-01-6	4-Nitroaniline	8900.	U	1800.	U	3500.	U			
534-52-1	2-Methyl-4,6-Dinitrophenol	8900.	U	1800.	U	3500.	UJ			
86-30-6	N-Nitrosodiphenylamine	1800.	U	370.	U	720.	UJ			
101-55-3	4-Bromophenyl-phenylether	1800.	U	370.	U	720.	UJ			
118-74-1	Hexachlorobenzene	1800.	U	370.	U	720.	UJ			
87-86-5	Pentachlorophenol	8900.	U	1800.	U	3500.	UJ			
85-01-8	Phenanthrene	1900.		370.	U	2500.	J			
120-12-7	Anthracene	1800.	U	370.	U	640.	J			
84-74-2	Di-n-butylphthalate	1800.	U	64.	J	720.	UJ			
206-44-0	Fluoranthene	1800.	U	74.	J	3400.	J			
129-00-0	Pyrene	590.	J	96.	J	7500.	J			
85-68-7	Butylbenzylphthalate	1800.	U	370.	U	720.	UJ			
91-94-1	3,3'-Dichlorobenzidine	3700.	U	730.	U	1400.	UJ			
56-55-3	Benzo(a)anthracene	1800.	U	38.	J	2500.	J			
218-01-9	Chrysene	240.	J	57.	J	3200.	J			
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	1800.	U	55.	J	720.	UJ			
117-84-0	Di-n-octyl phthalate	1800.	U	370.	UJ	720.	UJ			
205-99-2	Benzo(b)fluoranthene	1800.	U	51.	J	1600.	J			
207-08-9	Benzo(k)fluoranthene	1800.	U	58.	J	1700.	J			
50-32-8	Benzo(a)pyrene	1800.	U	42.	J	1700.	J			
193-39-5	Indeno(1,2,3-cd)pyrene	1800.	U	370.	UJ	810.	J			
53-70-3	Dibenz(a,h)anthracene	1800.	U	370.	UJ	290.	J			
191-24-2	Benzo(g,h,i)perylene	1800.	U	370.	UJ	860.	J			

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

SW846-VOA	SAMPLE ID ------->	FDS-S-C002-01		FDS-S-C011-01		FDS-S-C012-01		FDS-S-C013-01		FDS-S-C014-01		FDS-S-C016-01 RE	
	ORIGINAL ID ----->	FDSSC00201		FDSSC01101		FDSSC01201		FDSSC01301		FDSSC01401		FDSSC01601	
	LAB SAMPLE ID --->	27869.01		27869.02		27869.05		27869.06		27869.07		27869.08	
	ID FROM REPORT -->	FDSSC00201		FDSSC01101		FDSSC01201		FDSSC01301		FDSSC01401		FDSSC01601	
	SAMPLE DATE ----->	12/04/96		12/04/96		12/04/96		12/04/96		12/05/96		12/04/96	
	DATE ANALYZED --->	12/13/96		12/13/96		12/13/96		12/12/96		12/12/96		12/13/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	27869	VAL	27869	VAL	27869	VAL	27869	VAL	27869	VAL	27869	VAL
74-87-3	Chloromethane	13.	U	16.	U	100.	U	17.	UJ	16.	UJ	24.	U
74-83-9	Bromomethane	13.	U	16.	U	100.	U	17.	UJ	16.	UJ	24.	U
75-01-4	Vinyl chloride	13.	U	16.	U	100.	U	17.	UJ	16.	UJ	24.	U
75-00-3	Chloroethane	13.	U	16.	U	100.	U	17.	UJ	16.	UJ	24.	U
75-09-2	Methylene chloride	6.	U	26.	U	52.	U	16.	U	17.	U	12.	U
67-64-1	Acetone	25.	U	22.	U	10.	U	390.	U	390.	U	410.	U
75-15-0	Carbon disulfide	4.	J	8.	U	52.	U	7.	J	5.	J	7.	J
75-35-4	1,1-Dichloroethene	6.	U	8.	U	52.	U	8.	UJ	8.	UJ	12.	U
75-34-3	1,1-Dichloroethane	6.	U	8.	U	52.	U	8.	UJ	8.	UJ	12.	U
540-59-0	1,2-Dichloroethene (total)	6.	U	8.	U	52.	U	8.	UJ	8.	UJ	12.	U
67-66-3	Chloroform	6.	U	8.	U	52.	U	8.	UJ	8.	UJ	12.	U
107-06-2	1,2-Dichloroethane	6.	U	8.	U	52.	U	8.	UJ	8.	UJ	12.	U
78-93-3	2-Butanone (MEK)	13.	U	16.	U	100.	U	87.	UJ	99.	U	12.	U
71-55-6	1,1,1-Trichloroethane	6.	U	8.	U	52.	U	8.	UJ	8.	UJ	12.	U
56-23-5	Carbon tetrachloride	6.	U	8.	U	52.	U	8.	UJ	8.	UJ	12.	U
75-27-4	Bromodichloromethane	6.	U	8.	U	52.	U	8.	UJ	8.	UJ	12.	U
78-87-5	1,2-Dichloropropane	6.	U	8.	U	52.	U	8.	UJ	8.	UJ	12.	U
10061-01-5	cis-1,3-Dichloropropene	6.	U	8.	U	52.	U	8.	UJ	8.	UJ	12.	U
79-01-6	Trichloroethene	6.	U	8.	U	52.	U	8.	UJ	8.	UJ	12.	U
124-48-1	Dibromochloromethane	6.	U	8.	U	52.	U	8.	UJ	8.	UJ	12.	U
79-00-5	1,1,2-Trichloroethane	6.	U	8.	U	52.	U	8.	UJ	8.	UJ	12.	U
71-43-2	Benzene	6.	U	8.	U	100.		8.	UJ	8.	UJ	12.	U
10061-02-6	trans-1,3-Dichloropropene	6.	U	8.	U	52.	U	8.	UJ	8.	UJ	12.	U
75-25-2	Bromoform	6.	U	8.	U	52.	U	8.	UJ	8.	UJ	12.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	13.	U	16.	U	100.	U	17.	UJ	16.	UJ	24.	UJ
591-78-6	2-Hexanone	13.	U	16.	U	100.	U	17.	UJ	16.	UJ	24.	UJ
127-18-4	Tetrachloroethene	6.	U	8.	U	52.	U	8.	UJ	8.	UJ	12.	UJ
79-34-5	1,1,2,2-Tetrachloroethane	6.	U	8.	U	52.	U	8.	UJ	8.	UJ	12.	UJ
108-88-3	Toluene	7.		8.	U	430.		15.	J	17.	J	12.	UJ
108-90-7	Chlorobenzene	6.	U	8.	U	52.	U	8.	UJ	8.	UJ	12.	UJ
100-41-4	Ethylbenzene	4.	J	8.	U	740.		8.	UJ	8.	UJ	12.	UJ
100-42-5	Styrene	6.	U	8.	U	52.	U	8.	UJ	8.	UJ	12.	UJ
1330-20-7	Xylene (Total)	36.		8.	U	3700.		2.	J	8.	UJ	12.	UJ
108-05-4	Vinyl acetate	13.	U	16.	U	100.	U	17.	UJ	16.	UJ	24.	UJ
110-75-8	2-Chloroethyl vinyl ether	13.	UJ	16.	UJ	100.	UJ	17.	UJ	16.	UJ	24.	UJ

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

SW846-VOA																	
		SAMPLE ID ------->	FDS-S-C030-01		FDS-S-C051-01		FDS-S-C055-01		FDS-S-C058-01		FDS-S-C062-01		FDS-S-C065-01	
		ORIGINAL ID ----->	FDSSC03001		FDSSC05101		FDSSC05501		FDSSC05801		FDSSC06201		FDSSC06501	
		LAB SAMPLE ID --->	27869.09		28157.01		27869.10		27065.10		27934.01		27090.19	
		ID FROM REPORT -->	FDSSC03001		FDSSC05101		FDSSC05501		FDSSC05801		FDSSC06201		FDSSC06501	
		SAMPLE DATE ----->	12/04/96		01/13/97		12/05/96		09/24/96		12/10/96		09/25/96	
		DATE ANALYZED --->	12/13/96		01/15/97		12/12/96		09/27/96		12/17/96		10/03/96	
		MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
		UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter		27869	VAL	28134	VAL	27869	VAL	27065	VAL	27934	VAL	27090	VAL
74-87-3	Chloromethane		21.	U	12.	U	12.	U	14.	U	12.	U	17.	U
74-83-9	Bromomethane		21.	U	12.	U	12.	U	14.	U	12.	U	17.	U
75-01-4	Vinyl chloride		21.	U	12.	U	12.	U	14.	U	12.	U	17.	U
75-00-3	Chloroethane		21.	U	12.	U	12.	U	14.	U	12.	U	17.	U
75-09-2	Methylene chloride		11.	U	6.	U	10.	U	7.	U	5.	U	8.	U
67-64-1	Acetone		1700.	U	94.	UJ	140.	U	100.	U	18.	U	92.	U
75-15-0	Carbon disulfide		11.	U	6.	U	6.	U	7.	U	6.	U	8.	U
75-35-4	1,1-Dichloroethene		11.	U	6.	U	6.	U	7.	U	6.	U	8.	U
75-34-3	1,1-Dichloroethane		11.	U	6.	U	6.	U	7.	U	6.	U	8.	U
540-59-0	1,2-Dichloroethene (total)		11.	U	6.	U	6.	U	7.	U	6.	U	8.	U
67-66-3	Chloroform		11.	U	6.	U	6.	U	7.	U	6.	U	8.	U
107-06-2	1,2-Dichloroethane		11.	U	6.	U	6.	U	7.	U	6.	U	8.	U
78-93-3	2-Butanone (MEK)		22.	U	12.	U	12.	U	14.	U	12.	U	14.	U
71-55-6	1,1,1-Trichloroethane		11.	U	6.	U	6.	U	7.	U	6.	U	8.	U
56-23-5	Carbon tetrachloride		11.	U	6.	U	6.	U	7.	U	6.	U	8.	U
75-27-4	Bromodichloromethane		11.	U	6.	U	6.	U	7.	U	6.	U	8.	U
78-87-5	1,2-Dichloropropane		11.	U	6.	U	6.	U	7.	U	6.	U	8.	U
10061-01-5	cis-1,3-Dichloropropene		11.	U	6.	U	6.	U	7.	U	6.	U	8.	U
79-01-6	Trichloroethene		11.	U	6.	U	6.	U	7.	U	6.	U	8.	U
124-48-1	Dibromochloromethane		11.	U	6.	U	6.	U	7.	U	6.	U	8.	U
79-00-5	1,1,2-Trichloroethane		11.	U	6.	U	6.	U	7.	U	6.	U	8.	U
71-43-2	Benzene		11.	U	6.	U	6.	U	7.	U	6.	U	8.	U
10061-02-6	trans-1,3-Dichloropropene		11.	U	6.	U	6.	U	7.	U	6.	U	8.	U
75-25-2	Bromoform		11.	U	6.	U	6.	U	7.	U	6.	U	8.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)		21.	U	12.	U	12.	U	14.	U	12.	U	17.	U
591-78-6	2-Hexanone		21.	U	12.	U	12.	U	14.	U	12.	U	17.	U
127-18-4	Tetrachloroethene		11.	U	6.	U	6.	U	7.	U	6.	U	8.	U
79-34-5	1,1,2,2-Tetrachloroethane		11.	U	6.	U	6.	U	7.	U	6.	U	8.	U
108-88-3	Toluene		11.	U	6.	U	2.	J	7.	U	67.		47.	
108-90-7	Chlorobenzene		11.	U	6.	U	6.	U	7.	U	6.	U	8.	U
100-41-4	Ethylbenzene		11.	U	6.	U	6.	U	7.	U	6.	U	8.	U
100-42-5	Styrene		11.	U	6.	U	6.	U	7.	U	6.	U	8.	U
1330-20-7	Xylene (Total)		11.	U	6.	U	6.	U	7.	U	6.	U	8.	U
108-05-4	Vinyl acetate		21.	U	12.	U	12.	U	14.	U	12.	U	17.	UJ
110-75-8	2-Chloroethyl vinyl ether		21.	UJ	12.	U	12.	U	14.	U	12.	U	17.	UR

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

SW846-VOA	SAMPLE ID ------>	FDS-S-C066-01		FDS-S-C067-01		FDS-S-C084-01		FDS-S-C094-01		FDS-S-C114-01		FDS-S-C47A-01	
	ORIGINAL ID ---->	FDSSC06601		FDSSC06701		FDSSC08401		FDSSC09401		FDSSC11401		FDSSC47A01	
	LAB SAMPLE ID --->	27869.11		27869.12		27178.21		27212.07		27869.14		27065.12	
	ID FROM REPORT -->	FDSSC06601		FDSSC06701		FDSSC08401		FDSSC09401		FDSSC11401		FDSSC47A01	
	SAMPLE DATE ----->	12/04/96		12/04/96		10/02/96		10/03/96		12/05/96		09/24/96	
	DATE ANALYZED --->	12/13/96		12/13/96		10/14/96		10/13/96		12/13/96		09/27/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	27869	VAL	27869	VAL	27178	VAL	27212	VAL	27869	VAL	27065	VAL
74-87-3	Chloromethane	14.	U	68.	U	12.	U	12.	U	14.	U	13.	U
74-83-9	Bromomethane	14.	U	68.	U	12.	U	12.	U	14.	U	13.	U
75-01-4	Vinyl chloride	14.	U	68.	U	12.	U	12.	U	14.	U	13.	U
75-00-3	Chloroethane	14.	U	68.	U	12.	U	12.	U	14.	U	13.	U
75-09-2	Methylene chloride	16.	U	34.	U	6.	U	10.	U	16.	U	7.	U
67-64-1	Acetone	14.	U	420.	U	110.	U	34.	U	13000.	U	33.	U
75-15-0	Carbon disulfide	2.	J	34.	U	6.	U	6.	U	7.	U	7.	U
75-35-4	1,1-Dichloroethene	7.	U	34.	U	6.	U	6.	U	7.	U	7.	U
75-34-3	1,1-Dichloroethane	7.	U	34.	U	6.	U	6.	U	7.	U	7.	U
540-59-0	1,2-Dichloroethene (total)	7.	U	34.	U	6.	U	6.	U	7.	U	7.	U
67-66-3	Chloroform	7.	U	34.	U	6.	U	6.	U	7.	U	7.	U
107-06-2	1,2-Dichloroethane	7.	U	34.	U	6.	U	6.	U	7.	U	7.	U
78-93-3	2-Butanone (MEK)	14.	U	68.	U	6.	U	12.	U	3.	U	13.	U
71-55-6	1,1,1-Trichloroethane	7.	U	34.	U	6.	U	6.	U	7.	U	7.	U
56-23-5	Carbon tetrachloride	7.	U	34.	U	6.	U	6.	U	7.	U	7.	U
75-27-4	Bromodichloromethane	7.	U	34.	U	6.	U	6.	U	7.	U	7.	U
78-87-5	1,2-Dichloropropane	7.	U	34.	U	6.	U	6.	U	7.	U	7.	U
10061-01-5	cis-1,3-Dichloropropene	7.	U	34.	U	6.	U	6.	U	7.	U	7.	U
79-01-6	Trichloroethene	7.	U	34.	U	6.	U	6.	U	7.	U	7.	U
124-48-1	Dibromochloromethane	7.	U	34.	U	6.	U	6.	U	7.	U	7.	U
79-00-5	1,1,2-Trichloroethane	7.	U	34.	U	6.	U	6.	U	7.	U	7.	U
71-43-2	Benzene	7.	U	34.	U	6.	U	6.	U	7.	U	7.	U
10061-02-6	trans-1,3-Dichloropropene	7.	U	34.	U	6.	U	6.	U	7.	U	7.	U
75-25-2	Bromoform	7.	U	34.	U	6.	U	6.	U	7.	U	7.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	14.	U	68.	U	12.	U	2.	J	14.	U	13.	U
591-78-6	2-Hexanone	14.	U	68.	U	12.	U	12.	U	14.	U	13.	U
127-18-4	Tetrachloroethene	7.	U	34.	U	6.	U	6.	U	7.	U	7.	U
79-34-5	1,1,2,2-Tetrachloroethane	7.	U	34.	U	6.	U	6.	U	7.	U	7.	U
108-88-3	Toluene	4.	J	34.	UJ	6.	U	6.	U	7.	U	4.	J
108-90-7	Chlorobenzene	7.	U	34.	U	6.	U	6.	U	7.	U	7.	U
100-41-4	Ethylbenzene	7.	U	34.	U	6.	U	6.	U	7.	U	7.	U
100-42-5	Styrene	7.	U	34.	U	6.	U	6.	U	7.	U	7.	U
1330-20-7	Xylene (Total)	45.		34.	U	6.	U	6.	U	7.	U	7.	U
108-05-4	Vinyl acetate	14.	U	68.	U	12.	U	12.	U	14.	U	13.	U
110-75-8	2-Chloroethyl vinyl ether	14.	UJ	68.	UJ	12.	UJ	12.	U	14.	UJ	13.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

SW846-VOA	SAMPLE ID ------->	FDS-S-H023-01		FDS-S-H024-01		FDS-S-H026-01	
	ORIGINAL ID ----->	FDSSH02301		FDSSH02401		FDSSH02601	
	LAB SAMPLE ID --->	27355.10		27377.09		27377.06	
	ID FROM REPORT -->	FDSSH02301		FDSSH02401		FDSSH02601	
	SAMPLE DATE ----->	10/17/96		10/21/96		10/21/96	
	DATE ANALYZED --->	10/22/96		10/30/96		10/30/96	
	MATRIX ---------->	Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG	
CAS #	Parameter	27339	VAL	27377	VAL	27377	VAL
74-87-3	Chloromethane	56.	U	11.	U	11.	U
74-83-9	Bromomethane	56.	U	11.	U	11.	U
75-01-4	Vinyl chloride	56.	U	11.	U	11.	U
75-00-3	Chloroethane	56.	U	11.	U	11.	U
75-09-2	Methylene chloride	28.	U	6.	U	5.	U
67-64-1	Acetone	56.	U	69.	U	23.	U
75-15-0	Carbon disulfide	28.	U	6.	U	5.	U
75-35-4	1,1-Dichloroethene	28.	U	6.	U	5.	U
75-34-3	1,1-Dichloroethane	85.	J	6.	U	5.	U
540-59-0	1,2-Dichloroethene (total)	28.	U	6.	U	5.	U
67-66-3	Chloroform	28.	U	6.	U	5.	U
107-06-2	1,2-Dichloroethane	28.	U	6.	U	5.	U
78-93-3	2-Butanone (MEK)	56.	U	13.	U	11.	U
71-55-6	1,1,1-Trichloroethane	48.	J	6.	U	5.	U
56-23-5	Carbon tetrachloride	28.	U	6.	U	5.	U
75-27-4	Bromodichloromethane	28.	U	6.	U	5.	U
78-87-5	1,2-Dichloropropane	28.	U	6.	U	5.	U
10061-01-5	cis-1,3-Dichloropropene	28.	U	6.	U	5.	U
79-01-6	Trichloroethene	28.	U	6.	U	5.	U
124-48-1	Dibromochloromethane	28.	U	6.	U	5.	U
79-00-5	1,1,2-Trichloroethane	28.	U	6.	U	5.	U
71-43-2	Benzene	28.	U	6.	U	5.	U
10061-02-6	trans-1,3-Dichloropropene	28.	U	6.	U	5.	U
75-25-2	Bromoform	28.	U	6.	U	5.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	56.	U	11.	U	11.	U
591-78-6	2-Hexanone	56.	UJ	11.	U	11.	U
127-18-4	Tetrachloroethene	13.	J	6.	U	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	28.	UJ	6.	U	5.	U
108-88-3	Toluene	22.	J	6.	U	5.	U
108-90-7	Chlorobenzene	28.	UJ	6.	U	5.	U
100-41-4	Ethylbenzene	130.	J	6.	U	3.	J
100-42-5	Styrene	28.	UJ	6.	U	5.	U
1330-20-7	Xylene (Total)	1800.	J	6.	U	1.	J
108-05-4	Vinyl acetate	56.	UJ	11.	U	11.	U
110-75-8	2-Chloroethyl vinyl ether	56.	UR	11.	U	11.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-DRO													
		SAMPLE ID ------->	FDS-S-C001-01		FDS-S-C002-01		FDS-S-C003-01		FDS-S-C004-01		FDS-S-C005-01		FDS-S-C006-01
		ORIGINAL ID ----->	FDSSC00101		FDSSC00201		FDSSC00301		FDSSC00401		FDSSC00501		FDSSC00601
		LAB SAMPLE ID --->	26915.10		26915.11		26915.12		26915.13		26915.14		26915.15
		ID FROM REPORT -->	FDSSC00101		FDSSC00201		FDSSC00301		FDSSC00401		FDSSC00501		FDSSC00601
		SAMPLE DATE ----->	09/12/96		09/12/96		09/12/96		09/12/96		09/12/96		09/12/96
		DATE EXTRACTED -->	09/19/96		09/19/96		09/19/96		09/19/96		09/19/96		09/19/96
		DATE ANALYZED --->	09/25/96		09/25/96		09/25/96		09/25/96		09/25/96		09/25/96
		MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil
		UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG
CAS #	Parameter		26915	VAL	26915	VAL	26915	VAL	26915	VAL	26915	VAL	26915	VAL
68334-30-5	Diesel		2.65	U	62.6	U	2.63	U	2.43	U	2.04	U	2.47	U
8008-20-6	Kerosene		2.65	U	62.6	U	2.63	U	2.43	U	2.04	U	2.47	U
9999000-35-1	JP-4 C6-C14		2.65	U	62.6	U	2.63	U	2.43	U	2.04	U	2.47	U
9999000-48-6	NAPHTHA C6-C12		2.65	U	62.6	U	2.63	U	2.43	U	2.04	U	2.47	U
68553-00-4	Fuel oil no. 6		2.65	U	62.6	U	2.63	U	2.43	U	2.04	U	2.47	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-DRO													
	SAMPLE ID ------->	FDS-S-C007-01		FDS-S-C008-01		FDS-S-C009-01		FDS-S-C010-01		FDS-S-C011-01		FDS-C-C011-01	
	ORIGINAL ID ----->	FDSSC00701		FDSSC00801		FDSSC00901		FDSSC01001		FDSSC01101		FDSCC01101	
	LAB SAMPLE ID --->	26915.16		26938.09		26938.10		26958.05		26958.06		26959.01	
	ID FROM REPORT -->	FDSSC00701		FDSSC00801		FDSSC00901		FDSSC01001		FDSSC01101		FDSCC01101	
	SAMPLE DATE ----->	09/12/96		09/13/96		09/13/96		09/16/96		09/16/96		09/13/96	
	DATE EXTRACTED -->	09/19/96		09/19/96		09/19/96		09/19/96		09/19/96		09/19/96	
	DATE ANALYZED --->	09/25/96		09/25/96		09/25/96		09/27/96		09/27/96		09/27/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
CAS #	Parameter	26915	VAL	26938	VAL	26938	VAL	26938	VAL	26938	VAL	26938	VAL
68334-30-5	Diesel	2.82	U	2.75	U	2.45	U	2.51	U	3.16	U	3.18	U
8008-20-6	Kerosene	2.82	U	2.75	U	2.45	U	2.51	U	3.16	U	3.18	U
9999000-35-1	JP-4 C6-C14	2.82	U	2.75	U	2.45	U	2.51	U	3.16	U	3.18	U
9999000-48-6	NAPHTHA C6-C12	2.82	U	2.75	U	2.45	U	2.51	U	3.16	U	3.18	U
68553-00-4	Fuel oil no. 6	2.82	U	2.75	U	2.45	U	2.51	U	3.16	U	3.18	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-DRO	SAMPLE ID ------->	FDS-S-C012-01		FDS-S-C013-01		FDS-S-C014-01		FDS-S-C015-01		FDS-S-C016-01		FDS-S-C017-01	
	ORIGINAL ID ----->	FDSSC01201		FDSSC01301		FDSSC01401		FDSSC01501		FDSSC01601		FDSSC01701	
	LAB SAMPLE ID --->	26989.01		26958.07		26958.08		26989.02		26958.09		26989.03	
	ID FROM REPORT -->	FDSSC01201		FDSSC01301		FDSSC01401		FDSSC01501		FDSSC01601		FDSSC01701	
	SAMPLE DATE ----->	09/17/96		09/16/96		09/16/96		09/17/96		09/16/96		09/17/96	
	DATE EXTRACTED -->	09/24/96		09/19/96		09/19/96		09/24/96		09/19/96		09/24/96	
	DATE ANALYZED --->	10/01/96		09/27/96		09/27/96		10/01/96		09/27/96		10/03/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
CAS #	Parameter	26988	VAL	26938	VAL	26938	VAL	26988	VAL	26938	VAL	26988	VAL
68334-30-5	Diesel	140.	U	2.74	U	2.46	U	2.35	U	4.49	U	3.48	U
8008-20-6	Kerosene	140.	U	2.74	U	2.46	U	2.35	U	4.49	U	3.48	U
9999000-35-1	JP-4 C6-C14	140.	U	2.74	U	2.46	U	2.35	U	4.49	U	3.48	U
9999000-48-6	NAPHTHA C6-C12	140.	U	2.74	U	2.46	U	2.35	U	4.49	U	3.48	U
68553-00-4	Fuel oil no. 6	140.	U	2.74	U	2.46	U	2.35	U	4.49	U	3.48	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-DRO													
		SAMPLE ID ------->	FDS-S-C018-01		FDS-S-C019-01		FDS-C-C019-01		FDS-S-C020-01		FDS-S-C021-01		FDS-S-C022-01
		ORIGINAL ID ----->	FDSSC01801		FDSSC01901		FDSCC01901		FDSSC02001		FDSSC02101		FDSSC02201
		LAB SAMPLE ID --->	26997.18		26989.06		26988.01		26989.07		26989.08		26997.17
		ID FROM REPORT -->	FDSSC01801		FDSSC01901		FDSCC01901		FDSSC02001		FDSSC02101		FDSSC02201
		SAMPLE DATE ----->	09/18/96		09/17/96		09/17/96		09/17/96		09/17/96		09/18/96
		DATE EXTRACTED -->	09/24/96		09/24/96		09/24/96		09/24/96		09/24/96		09/24/96
		DATE ANALYZED --->	10/01/96		10/01/96		10/01/96		10/01/96		10/01/96		10/01/96
		MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil
		UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG
CAS #	Parameter		26997	VAL	26988	VAL	26988	VAL	26988	VAL	26988	VAL	26997	VAL
68334-30-5	Diesel		3.36	U	3.49	U	3.37	U	3.79	U	2.43	U	3.3	U
8008-20-6	Kerosene		3.36	U	3.49	U	3.37	U	3.79	U	2.43	U	3.3	U
9999000-35-1	JP-4 C6-C14		3.36	U	3.49	U	3.37	U	3.79	U	2.43	U	3.3	U
9999000-48-6	NAPHTHA C6-C12		3.36	U	3.49	U	3.37	U	3.79	U	2.43	U	3.3	U
68553-00-4	Fuel oil no. 6		3.36	U	3.49	U	3.37	U	3.79	U	2.43	U	3.3	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-DRO	SAMPLE ID ------->	FDS-S-C023-01		FDS-S-C024-01		FDS-S-C025-01		FDS-S-C026-01		FDS-S-C027-01		FDS-S-C028-01	
	ORIGINAL ID ----->	FDSSC02301		FDSSC02401		FDSSC02501		FDSSC02601		FDSSC02701		FDSSC02801	
	LAB SAMPLE ID --->	26997.15		26989.11		26997.16		26997.14		26997.19		26997.20	
	ID FROM REPORT -->	FDSSC02301		FDSSC02401		FDSSC02501		FDSSC02601		FDSSC02701		FDSSC02801	
	SAMPLE DATE ----->	09/18/96		09/17/96		09/18/96		09/18/96		09/18/96		09/18/96	
	DATE EXTRACTED -->	09/24/96		09/24/96		09/24/96		09/24/96		09/24/96		09/24/96	
	DATE ANALYZED --->	10/01/96		10/01/96		10/01/96		10/01/96		10/01/96		10/01/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
CAS #	Parameter	26997	VAL	26988	VAL	26997	VAL	26997	VAL	26997	VAL	26997	VAL
68334-30-5	Diesel	2.74	U	3.63	U	2.49	U	5.14	U	30.2		3.58	U
8008-20-6	Kerosene	2.74	U	3.63	U	2.49	U	5.14	U	2.88	U	3.58	U
9999000-35-1	JP-4 C6-C14	2.74	U	3.63	U	2.49	U	5.14	U	2.88	U	3.58	U
9999000-48-6	NAPHTHA C6-C12	2.74	U	3.63	U	2.49	U	5.14	U	2.88	U	3.58	U
68553-00-4	Fuel oil no. 6	2.74	U	3.63	U	2.49	U	5.14	U	2.88	U	3.58	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-DRO													
	SAMPLE ID ------->	FDS-C-C028-01		FDS-S-C029-01		FDS-S-C030-01		FDS-S-C031-01		FDS-S-C032-01		FDS-S-C033-01	
	ORIGINAL ID ----->	FDSCC02801		FDSSC02901		FDSSC03001		FDSSC03101		FDSSC03201		FDSSC03301	
	LAB SAMPLE ID --->	26998.02		26997.21		27016.13		27016.12		27016.16		27016.14	
	ID FROM REPORT -->	FDSCC02801		FDSSC02901		FDSSC03001		FDSSC03101		FDSSC03201		FDSSC03301	
	SAMPLE DATE ----->	09/18/96		09/18/96		09/19/96		09/19/96		09/19/96		09/19/96	
	DATE EXTRACTED -->	09/24/96		09/24/96		09/24/96		09/24/96		09/24/96		09/24/96	
	DATE ANALYZED --->	10/01/96		10/01/96		10/01/96		10/01/96		10/02/96		10/01/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
CAS #	Parameter	26997	VAL	26997	VAL	27016	VAL	27016	VAL	27016	VAL	27016	VAL
68334-30-5	Diesel	3.76	U	2.46	U	102.		2.43	U	2.33	U	3.26	U
8008-20-6	Kerosene	3.76	U	2.46	U	2.87	U	2.43	U	2.33	U	3.26	U
9999000-35-1	JP-4 C6-C14	3.76	U	2.46	U	2.87	U	2.43	U	2.33	U	3.26	U
9999000-48-6	NAPHTHA C6-C12	3.76	U	2.46	U	2.87	U	2.43	U	2.33	U	3.26	U
68553-00-4	Fuel oil no. 6	3.76	U	2.46	U	2.87	U	2.43	U	2.33	U	3.26	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-DRO	SAMPLE ID ------->	FDS-S-C034-01		FDS-S-C035-01		FDS-S-C036-01		FDS-S-C036-02		FDS-S-C037-01		FDS-S-C037-02	
	ORIGINAL ID ----->	FDSSC03401		FDSSC03501		FDSSC03601		FDSSC03602		FDSSC03701		FDSSC03702	
	LAB SAMPLE ID --->	27016.15		27016.17		27016.18		27016.19		27034.08		27034.09	
	ID FROM REPORT -->	FDSSC03401		FDSSC03501		FDSSC03601		FDSSC03602		FDSSC03701		FDSSC03702	
	SAMPLE DATE ----->	09/19/96		09/19/96		09/19/96		09/19/96		09/20/96		09/20/96	
	DATE EXTRACTED -->	09/24/96		09/24/96		09/24/96		09/24/96		09/24/96		09/24/96	
	DATE ANALYZED --->	10/01/96		10/01/96		10/02/96		10/02/96		10/02/96		10/02/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
CAS #	Parameter	27016	VAL	27016	VAL	27016	VAL	27016	VAL	27034	VAL	27034	VAL
68334-30-5	Diesel	2.39	U	2.67	U	2.85	U	3.77	U	2.69	U	4.18	U
8008-20-6	Kerosene	2.39	U	2.67	U	2.85	U	3.77	U	2.69	U	4.18	U
9999000-35-1	JP-4 C6-C14	2.39	U	2.67	U	2.85	U	3.77	U	2.69	U	4.18	U
9999000-48-6	NAPHTHA C6-C12	2.39	U	2.67	U	2.85	U	3.77	U	2.69	U	4.18	U
68553-00-4	Fuel oil no. 6	2.39	U	2.67	U	2.85	U	3.77	U	2.69	U	4.18	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-DRO																	
	SAMPLE ID ------->	FDS-S-C038-01		FDS-S-C038-02		FDS-S-C039-01		FDS-S-C039-02		FDS-S-C040-01		FDS-S-C040-02	
	ORIGINAL ID ----->	FDSSC03801		FDSSC03802		FDSSC03901		FDSSC03902		FDSSC04001		FDSSC04002	
	LAB SAMPLE ID --->	27034.14		27034.15		27034.12		27034.13		27034.10		27034.11	
	ID FROM REPORT -->	FDSSC03801		FDSSC03802		FDSSC03901		FDSSC03902		FDSSC04001		FDSSC04002	
	SAMPLE DATE ----->	09/20/96		09/20/96		09/20/96		09/20/96		09/20/96		09/20/96	
	DATE EXTRACTED -->	09/24/96		09/24/96		09/24/96		09/24/96		09/24/96		09/24/96	
	DATE ANALYZED --->	10/02/96		10/02/96		10/02/96		10/02/96		10/02/96		10/02/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
CAS #	Parameter	27034	VAL	27034	VAL	27034	VAL	27034	VAL	27034	VAL	27034	VAL
68334-30-5	Diesel	4.52	U	4.33	U	3.05	U	2.81	U	2.66	U	4.42	U
8008-20-6	Kerosene	4.52	U	4.33	U	3.05	U	2.81	U	2.66	U	4.42	U
9999000-35-1	JP-4 C6-C14	4.52	U	4.33	U	3.05	U	2.81	U	2.66	U	4.42	U
9999000-48-6	NAPHTHA C6-C12	4.52	U	4.33	U	3.05	U	2.81	U	2.66	U	4.42	U
68553-00-4	Fuel oil no. 6	4.52	U	4.33	U	3.05	U	2.81	U	2.66	U	4.42	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-DRO																	
	SAMPLE ID ------->	FDS-C-C040-02		FDS-S-C041-01		FDS-S-C041-02		FDS-S-C042-01		FDS-S-C042-02		FDS-S-C043-01	
	ORIGINAL ID ----->	FDSCC04002		FDSSC04101		FDSSC04102		FDSSC04201		FDSSC04202		FDSSC04301	
	LAB SAMPLE ID --->	27035.01		27034.16		27034.17		27045.01		27045.02		27045.03	
	ID FROM REPORT -->	FDSCC04002		FDSSC04101		FDSSC04102		FDSSC04201		FDSSC04202		FDSSC04301	
	SAMPLE DATE ----->	09/20/96		09/20/96		09/20/96		09/22/96		09/22/96		09/22/96	
	DATE EXTRACTED -->	09/24/96		09/24/96		09/24/96		09/30/96		09/30/96		09/30/96	
	DATE ANALYZED --->	10/02/96		10/02/96		10/02/96		10/10/96		10/10/96		10/10/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
CAS #	Parameter	27034	VAL	27034	VAL	27034	VAL	27045	VAL	27045	VAL	27045	VAL
68334-30-5	Diesel	4.42	U	2.89	U	4.24	U	2.66	U	2.53	U	2.55	U
8008-20-6	Kerosene	4.42	U	2.89	U	4.24	U	2.66	U	2.53	U	2.55	U
9999000-35-1	JP-4 C6-C14	4.42	U	2.89	U	4.24	U	2.66	U	2.53	U	2.55	U
9999000-48-6	NAPHTHA C6-C12	4.42	U	2.89	U	4.24	U	2.66	U	2.53	U	2.55	U
68553-00-4	Fuel oil no. 6	4.42	U	2.89	U	4.24	U	2.66	U	2.53	U	2.55	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-DRO													
	SAMPLE ID ------->	FDS-S-C044-01		FDS-S-C045-01		FDS-S-C046-01		FDS-S-C047-01		FDS-S-C048-01		FDS-S-C049-01	
	ORIGINAL ID ----->	FDSSC04401		FASSC04501		FDSSC04601		FDSSC04701		FDSSC04801		FDSSC04901	
	LAB SAMPLE ID --->	27045.04		27045.18		27045.10		27045.09		27045.08		27045.07	
	ID FROM REPORT -->	FDSSC04401		FASSC04501		FDSSC04601		FDSSC04701		FDSSC04801		FDSSC04901	
	SAMPLE DATE ----->	09/22/96		09/22/96		09/22/96		09/22/96		09/22/96		09/22/96	
	DATE EXTRACTED -->	09/30/96		09/30/96		09/30/96		09/30/96		09/30/96		09/30/96	
	DATE ANALYZED --->	10/10/96		10/11/96		10/10/96		10/11/96		10/10/96		10/10/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
CAS #	Parameter	27045	VAL	27045	VAL	27045	VAL	27045	VAL	27045	VAL	27045	VAL
68334-30-5	Diesel	2.28	U	2.46	U	2.54	U	125.	U	2.57	U	2.64	U
8008-20-6	Kerosene	2.28	U	2.46	U	2.54	U	125.	U	2.57	U	2.64	U
9999000-35-1	JP-4 C6-C14	2.28	U	2.46	U	2.54	U	125.	U	2.57	U	2.64	U
9999000-48-6	NAPHTHA C6-C12	2.28	U	2.46	U	2.54	U	125.	U	2.57	U	2.64	U
68553-00-4	Fuel oil no. 6	2.28	U	2.46	U	2.54	U	125.	U	2.57	U	2.64	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-DRO																	
		SAMPLE ID ------->	FDS-S-C050-01		FDS-S-C051-01		FDS-C-C051-01		FDS-S-C052-01		FDS-S-C053-01		FDS-S-C054-01	
		ORIGINAL ID ----->	FDSSC05001		FDSSC05101		FDSCC05101		FDSSC05201		FDSSC05301		FDSSC05401	
		LAB SAMPLE ID --->	27045.11		27045.12		27046.01		27045.13		27045.14		27045.15	
		ID FROM REPORT -->	FDSSC05001		FDSSC05101		FDSCC05101		FDSSC05201		FDSSC05301		FDSSC05401	
		SAMPLE DATE ----->	09/23/96		09/23/96		09/22/96		09/23/96		09/23/96		09/23/96	
		DATE EXTRACTED -->	09/30/96		09/30/96		09/30/96		09/30/96		09/30/96		09/30/96	
		DATE ANALYZED --->	10/10/96		10/11/96		10/10/96		10/10/96		10/10/96		10/11/96	
		MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
		UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
CAS #	Parameter		27045	VAL	27045	VAL	27045	VAL	27045	VAL	27045	VAL	27045	VAL
68334-30-5	Diesel		2.29	U	9.6	UJ	11.8	UJ	2.32	U	2.31	U	2.53	U
8008-20-6	Kerosene		2.29	U	9.6	UJ	11.8	UJ	2.32	U	2.31	U	2.53	U
9999000-35-1	JP-4 C6-C14		2.29	U	9.6	UJ	11.8	UJ	2.32	U	2.31	U	2.53	U
9999000-48-6	NAPHTHA C6-C12		2.29	U	9.6	UJ	11.8	UJ	2.32	U	2.31	U	2.53	U
68553-00-4	Fuel oil no. 6		2.29	U	9.6	UJ	11.8	UJ	2.32	U	2.31	U	2.53	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-DRO													
	SAMPLE ID ------->	FDS-S-C055-01		FDS-S-C056-01		FDS-S-C057-01		FDS-S-C058-01		FDS-S-C059-01		FDS-S-C060-01	
	ORIGINAL ID ----->	FDSSC05501		FDSSC05601		FDSSC05701		FDSSC05801		FDSSC05901		FDSSC06001	
	LAB SAMPLE ID --->	27045.16		27045.17		27065.09		27065.10		27065.11		27065.17	
	ID FROM REPORT -->	FDSSC05501		FDSSC05601		FDSSC05701		FDSSC05801		FDSSC05901		FDSSC06001	
	SAMPLE DATE ----->	09/23/96		09/23/96		09/24/96		09/24/96		09/24/96		09/24/96	
	DATE EXTRACTED -->	09/30/96		09/30/96		09/30/96		09/30/96		09/30/96		09/30/96	
	DATE ANALYZED --->	10/11/96		10/11/96		10/11/96		10/11/96		10/11/96		10/11/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
CAS #	Parameter	27045	VAL	27045	VAL	27065	VAL	27065	VAL	27065	VAL	27065	VAL
68334-30-5	Diesel	2.59	U	2.59	U	4.24	U	2.55	U	2.22	U	4.19	U
8008-20-6	Kerosene	2.59	U	2.59	U	4.24	U	2.55	U	2.22	U	4.19	U
9999000-35-1	JP-4 C6-C14	2.59	U	2.59	U	4.24	U	2.55	U	2.22	U	4.19	U
9999000-48-6	NAPHTHA C6-C12	2.59	U	2.59	U	4.24	U	2.55	U	2.22	U	4.19	U
68553-00-4	Fuel oil no. 6	2.59	U	2.59	U	4.24	U	2.55	U	2.22	U	4.19	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-DRO													
		SAMPLE ID ------->	FDS-S-C061-01		FDS-C-C061-01		FDS-S-C063-01		FDS-S-C064-01		FDS-S-C065-01		FDS-S-C066-01
		ORIGINAL ID ----->	FDSSC06101		FDSCC06101		FDSSC06301		FDSSC06401		FDSSC06501		FDSSC06601
		LAB SAMPLE ID --->	27065.13		27066.01		27090.15		27090.16		27090.19		27090.20
		ID FROM REPORT -->	FDSSC06101		FDSCC06101		FDSSC06301		FDSSC06401		FDSSC06501		FDSSC06601
		SAMPLE DATE ----->	09/24/96		09/24/96		09/25/96		09/25/96		09/25/96		09/25/96
		DATE EXTRACTED -->	09/30/96		09/30/96		09/30/96		09/30/96		09/30/96		09/30/96
		DATE ANALYZED --->	10/11/96		10/11/96		10/16/96		10/16/96		10/16/96		10/16/96
		MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil
		UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG
CAS #	Parameter		27065	VAL	27065	VAL	27090	VAL	27090	VAL	27090	VAL	27090	VAL
68334-30-5	Diesel		2.35	U	2.5	U	2.32	U	2.45	U	6.76	U	5.5	U
8008-20-6	Kerosene		2.35	U	2.5	U	2.32	U	2.45	U	6.76	U	5.5	U
9999000-35-1	JP-4 C6-C14		2.35	U	2.5	U	2.32	U	2.45	U	6.76	U	5.5	U
9999000-48-6	NAPHTHA C6-C12		2.35	U	2.5	U	2.32	U	2.45	U	6.76	U	5.5	U
68553-00-4	Fuel oil no. 6		2.35	U	2.5	U	2.32	U	2.45	U	6.76	U	5.5	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-DRO																	
		SAMPLE ID ------->	FDS-S-C067-01		FDS-S-C068-01		FDS-S-C069-01		FDS-S-C070-01		FDS-S-C071-01		FDS-S-C072-01	
		ORIGINAL ID ----->	FDSSC06701		FDSSC06801		FDSSC06901		FDSSC07001		FDSSC07101		FDSSC07201	
		LAB SAMPLE ID --->	27090.21		27166.01		27166.02		27166.03		27166.04		27166.05	
		ID FROM REPORT -->	FDSSC06701		FDSSC06801		FDSSC06901		FDSSC07001		FDSSC07101		FDSSC07201	
		SAMPLE DATE ----->	09/25/96		09/30/96		09/30/96		09/30/96		09/30/96		10/01/96	
		DATE EXTRACTED -->	09/30/96		10/09/96		10/09/96		10/09/96		10/09/96		10/09/96	
		DATE ANALYZED --->	10/16/96		10/15/96		10/15/96		10/15/96		10/15/96		10/15/96	
		MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
		UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
CAS #	Parameter		27090	VAL	27166	VAL	27166	VAL	27166	VAL	27166	VAL	27166	VAL
68334-30-5	Diesel		5.65	U	4.67	U	2.42	U	2.4	U	2.44	U	2.4	U
8008-20-6	Kerosene		5.65	U	4.67	U	2.42	U	2.4	U	2.44	U	2.4	U
9999000-35-1	JP-4 C6-C14		5.65	U	4.67	U	2.42	U	2.4	U	2.44	U	2.4	U
9999000-48-6	NAPHTHA C6-C12		5.65	U	4.67	U	2.42	U	2.4	U	2.44	U	2.4	U
68553-00-4	Fuel oil no. 6		5.65	U	4.67	U	2.42	U	2.4	U	2.44	U	2.4	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-DRO	SAMPLE ID ------->	FDS-S-C073-01		FDS-S-C074-01		FDS-S-C075-01		FDS-S-C076-01		FDS-S-C077-01		FDS-C-C077-01	
	ORIGINAL ID ----->	FDSSC07301		FDSSC07401		FDSSC07501		FDSSC07601		FDSSC07701		FDSCC07701	
	LAB SAMPLE ID --->	27166.06		27166.07		27166.08		27166.09		27166.10		27167.01	
	ID FROM REPORT -->	FDSSC07301		FDSSC07401		FDSSC07501		FDSSC07601		FDSSC07701		FDSCC07701	
	SAMPLE DATE ----->	10/01/96		10/01/96		10/01/96		10/01/96		10/01/96		10/01/96	
	DATE EXTRACTED -->	10/09/96		10/09/96		10/09/96		10/09/96		10/09/96		10/09/96	
	DATE ANALYZED --->	10/15/96		10/15/96		10/15/96		10/15/96		10/15/96		10/15/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
CAS #	Parameter	27166	VAL	27166	VAL	27166	VAL	27166	VAL	27166	VAL	27166	VAL
68334-30-5	Diesel	2.46	U	2.44	U	2.39	U	2.39	U	2.48	U	3.77	U
8008-20-6	Kerosene	2.46	U	2.44	U	2.39	U	2.39	U	2.48	U	3.77	U
9999000-35-1	JP-4 C6-C14	2.46	U	2.44	U	2.39	U	2.39	U	2.48	U	3.77	U
9999000-48-6	NAPHTHA C6-C12	2.46	U	2.44	U	2.39	U	2.39	U	2.48	U	3.77	U
68553-00-4	Fuel oil no. 6	2.46	U	2.44	U	2.39	U	2.39	U	2.48	U	3.77	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-DRO													
	SAMPLE ID ------->	FDS-S-C078-01		FDS-S-C079-01		FDS-S-C080-01		FDS-C-C080-01		FDS-S-C081-01		FDS-S-C082-01	
	ORIGINAL ID ----->	FDSSC07801		FDSSC07901		FDSSC08001		FDSCC08001		FDSSC08101		FDSSC08201	
	LAB SAMPLE ID --->	27166.11		27166.12		27166.13		27167.02		27178.16		27178.17	
	ID FROM REPORT -->	FDSSC07801		FDSSC07901		FDSSC08001		FDSCC08001		FDSSC08101		FDSSC08201	
	SAMPLE DATE ----->	10/01/96		10/01/96		10/01/96		10/01/96		10/02/96		10/02/96	
	DATE EXTRACTED -->	10/09/96		10/09/96		10/09/96		10/09/96		10/11/96		10/11/96	
	DATE ANALYZED --->	10/15/96		10/15/96		10/15/96		10/15/96		10/17/96		10/16/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
CAS #	Parameter	27166	VAL	27166	VAL	27166	VAL	27166	VAL	27178	VAL	27178	VAL
68334-30-5	Diesel	2.32	U	2.44	U	2.42	U	2.45	U	2.37	U	2.41	U
8008-20-6	Kerosene	2.32	U	2.44	U	2.42	U	2.45	U	2.37	U	2.41	U
9999000-35-1	JP-4 C6-C14	2.32	U	2.44	U	2.42	U	2.45	U	2.37	U	2.41	U
9999000-48-6	NAPHTHA C6-C12	2.32	U	2.44	U	2.42	U	2.45	U	2.37	U	2.41	U
68553-00-4	Fuel oil no. 6	2.32	U	2.44	U	2.42	U	2.45	U	2.37	U	2.41	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-DRO													
	SAMPLE ID ------->	FDS-S-C083-01		FDS-S-C084-01		FDS-S-C085-01		FDS-S-C086-01		FDS-C-C086-01		FDS-S-C087-01	
	ORIGINAL ID ----->	FDSSC08301		FDSSC08401		FDSSC08501		FDSSC08601		FDSCC08601		FDSSC08701	
	LAB SAMPLE ID --->	27178.20		27178.21		27178.22		27178.23		27179.01		27178.24	
	ID FROM REPORT -->	FDSSC08301		FDSSC08401		FDSSC08501		FDSSC08601		FDSCC08601		FDSSC08701	
	SAMPLE DATE ----->	10/02/96		10/02/96		10/02/96		10/02/96		10/02/96		10/02/96	
	DATE EXTRACTED -->	10/11/96		10/11/96		10/11/96		10/11/96		10/09/96		10/11/96	
	DATE ANALYZED --->	10/17/96		10/17/96		10/17/96		10/17/96		10/15/96		10/17/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
CAS #	Parameter	27178	VAL	27178	VAL	27178	VAL	27178	VAL	27178	VAL	27178	VAL
68334-30-5	Diesel	2.39	U	2.42	U	4.15	U	2.43	U	2.43	U	2.41	U
8008-20-6	Kerosene	2.39	U	2.42	U	4.15	U	2.43	U	2.43	U	2.41	U
9999000-35-1	JP-4 C6-C14	2.39	U	2.42	U	4.15	U	2.43	U	2.43	U	2.41	U
9999000-48-6	NAPHTHA C6-C12	2.39	U	2.42	U	4.15	U	2.43	U	2.43	U	2.41	U
68553-00-4	Fuel oil no. 6	2.39	U	2.42	U	4.15	U	2.43	U	2.43	U	2.41	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-DRO													
		SAMPLE ID ------->	FDS-S-C088-01		FDS-S-C089-01		FDS-S-C090-01		FDS-S-C091-01		FDS-C-C091-01		FDS-S-C092-01
		ORIGINAL ID ----->	FDSSC08801		FDSSC08901		FDSSC09001		FDSSC09101		FDSCC09101		FDSSC09201
		LAB SAMPLE ID -->	27178.25		27178.26		27212.01		27212.02		27213.01		27212.03
		ID FROM REPORT -->	FDSSC08801		FDSSC08901		FDSSC09001		FDSSC09101		FDSCC09101		FDSSC09201
		SAMPLE DATE ----->	10/02/96		10/02/96		10/03/96		10/03/96		10/03/96		10/03/96
		DATE EXTRACTED -->	10/11/96		10/11/96		10/09/96		10/09/96		10/09/96		10/09/96
		DATE ANALYZED --->	10/17/96		10/17/96		10/18/96		10/18/96		10/18/96		10/18/96
		MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil
		UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG
CAS #	Parameter		27178	VAL	27178	VAL	27212	VAL	27212	VAL	27212	VAL	27212	VAL
68334-30-5	Diesel		2.52	U	2.43	U	2.48	U	2.63	U	2.5	U	2.8	U
8008-20-6	Kerosene		2.52	U	2.43	U	2.48	U	2.63	U	2.5	U	2.8	U
9999000-35-1	JP-4 C6-C14		2.52	U	2.43	U	2.48	U	2.63	U	2.5	U	2.8	U
9999000-48-6	NAPHTHA C6-C12		2.52	U	2.43	U	2.48	U	2.63	U	2.5	U	2.8	U
68553-00-4	Fuel oil no. 6		2.52	U	2.43	U	2.48	U	2.63	U	2.5	U	2.8	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-DRO													
		SAMPLE ID ------->	FDS-S-C093-01		FDS-S-C094-01		FDS-S-C096-01		FDS-S-C098-01		FDS-S-C099-01		FDS-S-C100-01	
		ORIGINAL ID ----->	FDSSC09301		FDSSC09401		FDSSC09601		FDSSC09801		FDSSC09901		FDSSC10001	
		LAB SAMPLE ID --->	27212.04		27212.07		27212.09		27212.12		27212.13		27212.14	
		ID FROM REPORT -->	FDSSC09301		FDSSC09401		FDSSC09601		FDSSC09801		FDSSC09901		FDSSC10001	
		SAMPLE DATE ----->	10/03/96		10/03/96		10/03/96		10/03/96		10/03/96		10/03/96	
		DATE EXTRACTED -->	10/09/96		10/09/96		10/09/96		10/09/96		10/09/96		10/09/96	
		DATE ANALYZED --->	10/18/96		10/18/96		10/18/96		10/18/96		10/18/96		10/18/96	
		MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
		UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
CAS #	Parameter		27212	VAL	27212	VAL	27212	VAL	27212	VAL	27212	VAL	27212	VAL
68334-30-5	Diesel		2.35	U	2.38	U	2.44	U	2.48	U	2.58	U	3.82	U
8008-20-6	Kerosene		2.35	U	2.38	U	2.44	U	2.48	U	2.58	U	3.82	U
9999000-35-1	JP-4 C6-C14		2.35	U	2.38	U	2.44	U	2.48	U	2.58	U	3.82	U
9999000-48-6	NAPHTHA C6-C12		2.35	U	2.38	U	2.44	U	2.48	U	2.58	U	3.82	U
68553-00-4	Fuel oil no. 6		2.35	U	2.38	U	2.44	U	2.48	U	2.58	U	3.82	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-DRO													
		SAMPLE ID ------->	FDS-C-C100-01		FDS-S-C101-01		FDS-S-C102-01		FDS-S-C103-01		FDS-S-C104-01		FDS-S-C104-02
		ORIGINAL ID ----->	FDSCC10001		FDSSC10101		FDSSC10201		FDSSC10301		FDSSC10401		FDSSC10402
		LAB SAMPLE ID --->	27213.03		27212.15		27212.16		27212.17		27212.18		27212.19
		ID FROM REPORT -->	FDSCC10001		FDSSC10101		FDSSC10201		FDSSC10301		FDSSC10401		FDSSC10402
		SAMPLE DATE ----->	10/04/96		10/03/96		10/03/96		10/03/96		10/04/96		10/04/96
		DATE EXTRACTED -->	10/09/96		10/09/96		10/09/96		10/09/96		10/09/96		10/09/96
		DATE ANALYZED --->	10/19/96		10/18/96		10/18/96		10/18/96		10/18/96		10/18/96
		MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil
		UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG
CAS #	Parameter		27212	VAL	27212	VAL	27212	VAL	27212	VAL	27212	VAL	27212	VAL
68334-30-5	Diesel		4.29	U	2.51	U	3.63	U	2.52	U	2.36	U	2.82	U
8008-20-6	Kerosene		4.29	U	2.51	U	3.63	U	2.52	U	2.36	U	2.82	U
9999000-35-1	JP-4 C6-C14		4.29	U	2.51	U	3.63	U	2.52	U	2.36	U	2.82	U
9999000-48-6	NAPHTHA C6-C12		4.29	U	2.51	U	3.63	U	2.52	U	2.36	U	2.82	U
68553-00-4	Fuel oil no. 6		4.29	U	2.51	U	3.63	U	2.52	U	2.36	U	2.82	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-DRO																	
		SAMPLE ID ------->	FDS-S-C105-01		FDS-S-C106-01		FDS-S-C107-01		FDS-C-C107-01		FDS-S-C108-01		FDS-S-C109-01	
		ORIGINAL ID ----->	FDSSC10501		FDSSC10601		FDSSC10701		FDSCC10701		FDSSC10801		FDSSC10901	
		LAB SAMPLE ID --->	27232.01		27232.02		27232.03		27233.01		27232.04		27232.05	
		ID FROM REPORT -->	FDSSC10501		FDSSC10601		FDSSC10701		FDSCC10701		FDSSC10801		FDSSC10901	
		SAMPLE DATE ----->	10/04/96		10/04/96		10/04/96		10/04/96		10/04/96		10/05/96	
		DATE EXTRACTED -->	10/11/96		10/11/96		10/11/96		10/11/96		10/11/96		10/11/96	
		DATE ANALYZED --->	10/19/96		10/24/96		10/19/96		10/24/96		10/19/96		10/19/96	
		MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
		UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
CAS #	Parameter		27232	VAL	27232	VAL	27232	VAL	27232	VAL	27232	VAL	27232	VAL
68334-30-5	Diesel		2.52	U	2.8	U	3.08	U	2.75	U	5.02	U	3.37	U
8008-20-6	Kerosene		2.52	U	2.8	U	3.08	U	2.75	U	5.02	U	3.37	U
9999000-35-1	JP-4 C6-C14		2.52	U	2.8	U	3.08	U	2.75	U	5.02	U	3.37	U
9999000-48-6	NAPHTHA C6-C12		2.52	U	2.8	U	3.08	U	2.75	U	5.02	U	3.37	U
68553-00-4	Fuel oil no. 6		2.52	U	2.8	U	3.08	U	2.75	U	5.02	U	3.37	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-DRO													
	SAMPLE ID ------>	FDS-S-C110-01		FDS-S-C111-01		FDS-S-C112-01		FDS-S-C113-01		FDS-S-C114-01		FDS-C-C114-01	
	ORIGINAL ID ----->	FDSSC11001		FDSSC11101		FDSSC11201		FDSSC11301		FDSSC11401		FDSCC11401	
	LAB SAMPLE ID --->	27232.06		27232.07		27232.08		27232.09		27232.10		27233.02	
	ID FROM REPORT -->	FDSSC11001		FDSSC11101		FDSSC11201		FDSSC11301		FDSSC11401		FDSCC11401	
	SAMPLE DATE ----->	10/05/96		10/05/96		10/05/96		10/05/96		10/05/96		10/05/96	
	DATE EXTRACTED -->	10/11/96		10/11/96		10/11/96		10/11/96		10/11/96		10/11/96	
	DATE ANALYZED --->	10/19/96		10/19/96		10/19/96		10/19/96		10/19/96		10/24/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
CAS #	Parameter	27232	VAL	27232	VAL	27232	VAL	27232	VAL	27232	VAL	27232	VAL
68334-30-5	Diesel	2.65	U	2.73	U	2.62	U	2.49	U	336.	J	2.49	UJ
8008-20-6	Kerosene	2.65	U	2.73	U	2.62	U	2.49	U	2.19	U	2.49	U
9999000-35-1	JP-4 C6-C14	2.65	U	2.73	U	2.62	U	2.49	U	2.19	U	2.49	U
9999000-48-6	NAPHTHA C6-C12	2.65	U	2.73	U	2.62	U	2.49	U	2.19	U	2.49	U
68553-00-4	Fuel oil no. 6	2.65	U	2.73	U	2.62	U	2.49	U	2.19	U	2.49	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-DRO													
	SAMPLE ID ------->	FDS-S-C115-01		FDS-S-C47A-01		FDS-S-H001-01		FDS-S-H002-01		FDS-S-H003-01		FDS-S-H004-01	
	ORIGINAL ID ----->	FDSSC11501		FDSSC47A01		FDSSH00101		FDSSH00201		FDSSH00301		FDSSH00401	
	LAB SAMPLE ID --->	27232.11		27065.12		27367.01		27355.01		27355.02		27355.03	
	ID FROM REPORT -->	FDSSC11501		FDSSC47A01		FDSSH00101		FDSSH00201		FDSSH00301		FDSSH00401	
	SAMPLE DATE ----->	10/05/96		09/24/96		10/18/96		10/17/96		10/17/96		10/17/96	
	DATE EXTRACTED -->	10/11/96		09/30/96		10/24/96		10/24/96		10/24/96		10/24/96	
	DATE ANALYZED --->	10/19/96		10/11/96		11/04/96		11/01/96		11/01/96		11/01/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
CAS #	Parameter	27232	VAL	27065	VAL	27367	VAL	27339	VAL	27339	VAL	27339	VAL
68334-30-5	Diesel	2.17	U	2.66	U	2.52	U	2.41	U	2.34	U	2.38	U
8008-20-6	Kerosene	2.17	U	2.66	U	2.52	U	2.41	U	2.34	U	2.38	U
9999000-35-1	JP-4 C6-C14	2.17	U	2.66	U	2.52	U	2.41	U	2.34	U	2.38	U
9999000-48-6	NAPHTHA C6-C12	2.17	U	2.66	U	2.52	U	2.41	U	2.34	U	2.38	U
68553-00-4	Fuel oil no. 6	2.17	U	2.66	U	2.52	U	2.41	U	2.34	U	2.38	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-DRO																			
		SAMPLE ID ------->	FDS-S-H005-01		FDS-S-H006-01		FDS-S-H007-01		FDS-S-H008-01		FDS-S-H009-01		FDS-S-H010-01	
		ORIGINAL ID ----->	FDSSH00501		FDSSH00601		FDSSH00701		FDSSH00801		FDSSH00901		FDSSH01001	
		LAB SAMPLE ID --->	27355.04		27377.01		27355.05		27377.02		27377.03		27377.04	
		ID FROM REPORT -->	FDSSH00501		FDSSH00601		FDSSH00701		FDSSH00801		FDSSH00901		FDSSH01001	
		SAMPLE DATE ----->	10/17/96		10/21/96		10/17/96		10/21/96		10/21/96		10/21/96	
		DATE EXTRACTED -->	10/24/96		10/24/96		10/24/96		10/24/96		10/24/96		10/24/96	
		DATE ANALYZED --->	11/01/96		11/02/96		11/01/96		11/02/96		11/02/96		11/02/96	
		MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
		UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
CAS #	Parameter		27339	VAL	27377	VAL	27339	VAL	27377	VAL	27377	VAL	27377	VAL
68334-30-5	Diesel		2.65	U	2.47	U	2.34	U	2.35	U	2.46	U	2.22	U
8008-20-6	Kerosene		2.65	U	2.47	U	2.34	U	2.35	U	2.46	U	2.22	U
9999000-35-1	JP-4 C6-C14		2.65	U	2.47	U	2.34	U	2.35	U	2.46	U	2.22	U
9999000-48-6	NAPHTHA C6-C12		2.65	U	2.47	U	2.34	U	2.35	U	2.46	U	2.22	U
68553-00-4	Fuel oil no. 6		2.65	U	2.47	U	2.34	U	2.35	U	2.46	U	2.22	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-DRO													
	SAMPLE ID ------->	FDS-S-H011-01		FDS-S-H012-01		FDS-S-H013-01		FDS-S-H014-01		FDS-S-H015-01		FDS-S-H016-01	
	ORIGINAL ID ----->	FDSSH01101		FDSSH01201		FDSSH01301		FDSSH01401		FDSSH01501		FDSSH01601	
	LAB SAMPLE ID --->	27355.06		27367.03		27355.07		27355.08		27355.09		27367.04	
	ID FROM REPORT -->	FDSSH01101		FDSSH01201		FDSSH01301		FDSSH01401		FDSSH01501		FDSSH01601	
	SAMPLE DATE ----->	10/17/96		10/18/96		10/17/96		10/17/96		10/17/96		10/18/96	
	DATE EXTRACTED -->	10/24/96		10/24/96		10/24/96		10/24/96		10/24/96		10/24/96	
	DATE ANALYZED --->	11/01/96		11/01/96		11/04/96		11/01/96		11/01/96		11/01/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
CAS #	Parameter	27339	VAL	27367	VAL	27339	VAL	27339	VAL	27339	VAL	27367	VAL
68334-30-5	Diesel	2.44	U	2.34	U	2.4	U	2.71	U	2.38	U	2.53	U
8008-20-6	Kerosene	2.44	U	2.34	U	2.4	U	2.71	U	2.38	U	2.53	U
9999000-35-1	JP-4 C6-C14	2.44	U	2.34	U	2.4	U	2.71	U	2.38	U	2.53	U
9999000-48-6	NAPHTHA C6-C12	2.44	U	2.34	U	2.4	U	2.71	U	2.38	U	2.53	U
68553-00-4	Fuel oil no. 6	2.44	U	2.34	U	2.4	U	2.71	U	2.38	U	2.53	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-DRO													
	SAMPLE ID ------->	FDS-S-H017-01		FDS-S-H018-01		FDS-S-H019-01		FDS-S-H020-01		FDS-C-H020-01		FDS-S-H021-01	
	ORIGINAL ID ----->	FDSSH01701		FDSSH01801		FDSSH01901		FDSSH02001		FDSCH02001		FDSSH02101	
	LAB SAMPLE ID --->	27367.05		27367.06		27367.07		27367.02		27368.01		27367.10	
	ID FROM REPORT -->	FDSSH01701		FDSSH01801		FDSSH01901		FDSSH02001		FDSCH02001		FDSSH02101	
	SAMPLE DATE ----->	10/18/96		10/18/96		10/18/96		10/18/96		10/18/96		10/18/96	
	DATE EXTRACTED -->	10/24/96		10/24/96		10/24/96		10/24/96		10/24/96		10/24/96	
	DATE ANALYZED --->	11/02/96		11/02/96		11/02/96		11/01/96		11/02/96		11/02/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
CAS #	Parameter	27367	VAL	27367	VAL	27367	VAL	27367	VAL	27367	VAL	27367	VAL
68334-30-5	Diesel	2.4	U	2.44	U	2.46	U	2.36	U	2.38	U	2.57	U
8008-20-6	Kerosene	2.4	U	2.44	U	2.46	U	2.36	U	2.38	U	2.57	U
9999000-35-1	JP-4 C6-C14	2.4	U	2.44	U	2.46	U	2.36	U	2.38	U	2.57	U
9999000-48-6	NAPHTHA C6-C12	2.4	U	2.44	U	2.46	U	2.36	U	2.38	U	2.57	U
68553-00-4	Fuel oil no. 6	2.4	U	2.44	U	2.46	U	2.36	U	2.38	U	2.57	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-DRO													
	SAMPLE ID ------->	FDS-S-H022-01		FDS-S-H023-01		FDS-S-H024-01		FDS-C-H024-01		FDS-S-H025-01		FDS-S-H026-01	
	ORIGINAL ID ----->	FDSSH02201		FDSSH02301		FDSSH02401		FDSCH02401		FDSSH02501		FDSSH02601	
	LAB SAMPLE ID --->	27367.11		27355.10		27377.09		27378.01		27377.08		27377.06	
	ID FROM REPORT -->	FDSSH02201		FDSSH02301		FDSSH02401		FDSCH02401		FDSSH02501		FDSSH02601	
	SAMPLE DATE ----->	10/18/96		10/17/96		10/21/96		10/21/96		10/21/96		10/21/96	
	DATE EXTRACTED -->	10/24/96		10/24/96		10/24/96		10/24/96		10/24/96		10/24/96	
	DATE ANALYZED --->	11/02/96		11/04/96		11/02/96		11/02/96		11/02/96		11/04/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
CAS #	Parameter	27367	VAL	27339	VAL	27377	VAL	27377	VAL	27377	VAL	27377	VAL
68334-30-5	Diesel	2.28	U	55.6	U	2.25	U	2.25	U	2.26	U	2.26	U
8008-20-6	Kerosene	2.28	U	55.6	U	2.25	U	2.25	U	2.26	U	2.26	U
9999000-35-1	JP-4 C6-C14	2.28	U	55.6	U	2.25	U	2.25	U	2.26	U	2.26	U
9999000-48-6	NAPHTHA C6-C12	2.28	U	55.6	U	2.25	U	2.25	U	2.26	U	2.26	U
68553-00-4	Fuel oil no. 6	2.28	U	55.6	U	2.25	U	2.25	U	2.26	U	2.26	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-DRO							
	SAMPLE ID ------->	FDS-S-H027-01					
	ORIGINAL ID ----->	FDSSH02701					
	LAB SAMPLE ID --->	27377.05					
	ID FROM REPORT -->	FDSSH02701					
	SAMPLE DATE ----->	10/21/96					
	DATE EXTRACTED -->	10/24/96					
	DATE ANALYZED --->	11/02/96					
	MATRIX ---------->	Soil					
	UNITS ---------->	MG/KG					
CAS #	Parameter	27377	VAL				
68334-30-5	Diesel	2.44	U				
8008-20-6	Kerosene	2.44	U				
9999000-35-1	JP-4 C6-C14	2.44	U				
9999000-48-6	NAPHTHA C6-C12	2.44	U				
68553-00-4	Fuel oil no. 6	2.44	U				

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-GRO	SAMPLE ID ------>	FDS-S-C001-01		FDS-S-C002-01		FDS-S-C003-01		FDS-S-C004-01		FDS-S-C005-01		FDS-S-C006-01	
	ORIGINAL ID ----->	FDSSC00101		FDSSC00201		FDSSC00301		FDSSC00401		FDSSC00501		FDSSC00601	
	LAB SAMPLE ID --->	26915.10		26915.11		26915.12		26915.13		26915.14		26915.15	
	ID FROM REPORT -->	FDSSC00101		FDSSC00201		FDSSC00301		FDSSC00401		FDSSC00501		FDSSC00601	
	SAMPLE DATE ----->	09/12/96		09/12/96		09/12/96		09/12/96		09/12/96		09/12/96	
	DATE ANALYZED --->	09/18/96		09/18/96		09/18/96		09/18/96		09/18/96		09/18/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	26915	VAL	26915	VAL	26915	VAL	26915	VAL	26915	VAL	26915	VAL
86290-81-5	Gasoline	14.		16300.	J	24.		13.		11.	J	9.	J

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-GRO	SAMPLE ID ------->	FDS-S-C007-01		FDS-S-C008-01		FDS-S-C009-01		FDS-S-C010-01		FDS-S-C011-01		FDS-C-C011-01	
	ORIGINAL ID ----->	FDSSC00701		FDSSC00801		FDSSC00901		FDSSC01001		FDSSC01101		FDSCC01101	
	LAB SAMPLE ID --->	26915.16		26938.09		26938.10		26958.05		26958.06		26959.01	
	ID FROM REPORT -->	FDSSC00701		FDSSC00801		FDSSC00901		FDSSC01001		FDSSC01101		FDSCC01101	
	SAMPLE DATE ----->	09/12/96		09/13/96		09/13/96		09/16/96		09/16/96		09/13/96	
	DATE ANALYZED --->	09/18/96		09/18/96		09/18/96		09/23/96		09/23/96		09/23/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	26915	VAL	26938	VAL	26938	VAL	26938	VAL	26938	VAL	26938	VAL
86290-81-5	Gasoline	35.		24.8		13.5	J	22.6		96.3	J	27.3	J

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-GRO	SAMPLE ID ------->	FDS-S-C012-01		FDS-S-C013-01		FDS-S-C014-01		FDS-S-C015-01		FDS-S-C016-01		FDS-S-C017-01	
	ORIGINAL ID ----->	FDSSC01201		FDSSC01301		FDSSC01401		FDSSC01501		FDSSC01601		FDSSC01701	
	LAB SAMPLE ID --->	26989.01		26958.07		26958.08		26989.02		26958.09		26989.03	
	ID FROM REPORT -->	FDSSC01201		FDSSC01301		FDSSC01401		FDSSC01501		FDSSC01601		FDSSC01701	
	SAMPLE DATE ----->	09/17/96		09/16/96		09/16/96		09/17/96		09/16/96		09/17/96	
	DATE ANALYZED --->	09/24/96		09/23/96		09/23/96		09/24/96		09/23/96		09/24/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	26988	VAL	26938	VAL	26938	VAL	26988	VAL	26938	VAL	26988	VAL
86290-81-5	Gasoline	124000.		77.6		67.5		25.5		65.		32.7	

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-GRO	SAMPLE ID ------->	FDS-S-C018-01		FDS-S-C019-01		FDS-C-C019-01		FDS-S-C020-01		FDS-S-C021-01		FDS-S-C022-01	
	ORIGINAL ID ----->	FDSSC01801		FDSSC01901		FDSCC01901		FDSSC02001		FDSSC02101		FDSSC02201	
	LAB SAMPLE ID --->	26997.18		26989.06		26988.01		26989.07		26989.08		26997.17	
	ID FROM REPORT -->	FDSSC01801		FDSSC01901		FDSCC01901		FDSSC02001		FDSSC02101		FDSSC02201	
	SAMPLE DATE ----->	09/18/96		09/17/96		09/17/96		09/17/96		09/17/96		09/18/96	
	DATE ANALYZED --->	09/23/96		09/25/96		09/24/96		09/24/96		09/24/96		09/23/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	26997	VAL	26988	VAL	26988	VAL	26988	VAL	26988	VAL	26997	VAL
86290-81-5	Gasoline	16.8	U	30.5		45.4		23.6		12.4		10.	J

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-GRO	SAMPLE ID ------->	FDS-S-C023-01		FDS-S-C024-01		FDS-S-C025-01		FDS-S-C026-01		FDS-S-C027-01		FDS-S-C028-01	
	ORIGINAL ID ----->	FDSSC02301		FDSSC02401		FDSSC02501		FDSSC02601		FDSSC02701		FDSSC02801	
	LAB SAMPLE ID --->	26997.15		26989.11		26997.16		26997.14		26997.19		26997.20	
	ID FROM REPORT -->	FDSSC02301		FDSSC02401		FDSSC02501		FDSSC02601		FDSSC02701		FDSSC02801	
	SAMPLE DATE ----->	09/18/96		09/17/96		09/18/96		09/18/96		09/18/96		09/18/96	
	DATE ANALYZED --->	09/23/96		09/24/96		09/23/96		09/23/96		09/23/96		09/23/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	26997	VAL	26988	VAL	26997	VAL	26997	VAL	26997	VAL	26997	VAL
86290-81-5	Gasoline	14.	J	18.1	U	10.	J	29.	J	14.4	U	18.	J

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-GRO	SAMPLE ID ------->	FDS-C-C028-01		FDS-S-C029-01		FDS-S-C030-01		FDS-S-C031-01		FDS-S-C032-01		FDS-S-C033-01	
	ORIGINAL ID ----->	FDSCC02801		FDSSC02901		FDSSC03001		FDSSC03101		FDSSC03201		FDSSC03301	
	LAB SAMPLE ID --->	26998.02		26997.21		27016.13		27016.12		27016.16		27016.14	
	ID FROM REPORT -->	FDSCC02801		FDSSC02901		FDSSC03001		FDSSC03101		FDSSC03201		FDSSC03301	
	SAMPLE DATE ----->	09/18/96		09/18/96		09/19/96		09/19/96		09/19/96		09/19/96	
	DATE ANALYZED --->	09/23/96		09/25/96		09/30/96		09/30/96		09/30/96		09/30/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	26997	VAL	26997	VAL	27016	VAL	27016	VAL	27016	VAL	27016	VAL
86290-81-5	Gasoline	33.	J	13.		9.	J	8.	J	27.		18.	

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-GRO	SAMPLE ID ------->	FDS-S-C034-01		FDS-S-C035-01		FDS-S-C036-01		FDS-S-C036-02		FDS-S-C037-01		FDS-S-C037-02	
	ORIGINAL ID ----->	FDSSC03401		FDSSC03501		FDSSC03601		FDSSC03602		FDSSC03701		FDSSC03702	
	LAB SAMPLE ID --->	27016.15		27016.17		27016.18		27016.19		27034.08		27034.09	
	ID FROM REPORT -->	FDSSC03401		FDSSC03501		FDSSC03601		FDSSC03602		FDSSC03701		FDSSC03702	
	SAMPLE DATE ----->	09/19/96		09/19/96		09/19/96		09/19/96		09/20/96		09/20/96	
	DATE ANALYZED --->	09/30/96		09/30/96		09/30/96		09/30/96		09/26/96		09/26/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	27016	VAL	27016	VAL	27016	VAL	27016	VAL	27034	VAL	27034	VAL
86290-81-5	Gasoline	12.	U	13.4	U	14.2	U	15.	J	23.8		20.3	J

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-GRO													
	SAMPLE ID ------->	FDS-S-C038-01		FDS-S-C038-02		FDS-S-C039-01		FDS-S-C039-02		FDS-S-C040-01		FDS-S-C040-02	
	ORIGINAL ID ----->	FDSSC03801		FDSSC03802		FDSSC03901		FDSSC03902		FDSSC04001		FDSSC04002	
	LAB SAMPLE ID --->	27034.14		27034.15		27034.12		27034.13		27034.10		27034.11	
	ID FROM REPORT -->	FDSSC03801		FDSSC03802		FDSSC03901		FDSSC03902		FDSSC04001		FDSSC04002	
	SAMPLE DATE ----->	09/20/96		09/20/96		09/20/96		09/20/96		09/20/96		09/20/96	
	DATE ANALYZED --->	09/26/96		09/26/96		09/26/96		09/26/96		09/26/96		09/26/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	27034	VAL	27034	VAL	27034	VAL	27034	VAL	27034	VAL	27034	VAL
86290-81-5	Gasoline	22.6	U	21.6	U	17.2		24.		16.4		22.1	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-GRO	SAMPLE ID ------->	FDS-C-C040-02		FDS-S-C041-01		FDS-S-C041-02		FDS-S-C042-01		FDS-S-C042-02		FDS-S-C043-01	
	ORIGINAL ID ----->	FDSCC04002		FDSSC04101		FDSSC04102		FDSSC04201		FDSSC04202		FDSSC04301	
	LAB SAMPLE ID --->	27035.01		27034.16		27034.17		27045.01		27045.02		27045.03	
	ID FROM REPORT -->	FDSCC04002		FDSSC04101		FDSSC04102		FDSSC04201		FDSSC04202		FDSSC04301	
	SAMPLE DATE ----->	09/20/96		09/20/96		09/20/96		09/22/96		09/22/96		09/22/96	
	DATE ANALYZED --->	09/26/96		09/27/96		09/26/96		09/27/96		09/27/96		09/27/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	27034	VAL	27034	VAL	27034	VAL	27045	VAL	27045	VAL	27045	VAL
86290-81-5	Gasoline	15.4	J	14.6	J	14.	J	8.51	J	21.5		23.7	

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-GRO	SAMPLE ID ------->	FDS-S-C044-01		FDS-S-C045-01		FDS-S-C046-01		FDS-S-C047-01		FDS-S-C048-01		FDS-S-C049-01	
	ORIGINAL ID ----->	FDSSC04401		FASSC04501		FDSSC04601		FDSSC04701		FDSSC04801		FDSSC04901	
	LAB SAMPLE ID -->	27045.04		27045.18		27045.10		27045.09		27045.08		27045.07	
	ID FROM REPORT -->	FDSSC04401		FASSC04501		FDSSC04601		FDSSC04701		FDSSC04801		FDSSC04901	
	SAMPLE DATE ----->	09/22/96		09/22/96		09/22/96		09/22/96		09/22/96		09/22/96	
	DATE ANALYZED --->	09/27/96		09/27/96		09/27/96		09/30/96		09/27/96		09/27/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	27045	VAL	27045	VAL	27045	VAL	27045	VAL	27045	VAL	27045	VAL
86290-81-5	Gasoline	35.8		12.3	U	11.1	J	19000.		8.88	J	7.12	J

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-GRO													
		SAMPLE ID ------->	FDS-S-C050-01		FDS-S-C051-01		FDS-C-C051-01		FDS-S-C052-01		FDS-S-C053-01		FDS-S-C054-01
		ORIGINAL ID ----->	FDSSC05001		FDSSC05101		FDSCC05101		FDSSC05201		FDSSC05301		FDSSC05401
		LAB SAMPLE ID --->	27045.11		27045.12		27046.01		27045.13		27045.14		27045.15
		ID FROM REPORT -->	FDSSC05001		FDSSC05101		FDSCC05101		FDSSC05201		FDSSC05301		FDSSC05401
		SAMPLE DATE ----->	09/23/96		09/23/96		09/22/96		09/23/96		09/23/96		09/23/96
		DATE ANALYZED --->	09/27/96		09/27/96		10/01/96		09/27/96		09/27/96		09/27/96
		MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil
		UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG
CAS #	Parameter		27045	VAL	27045	VAL	27045	VAL	27045	VAL	27045	VAL	27045	VAL
86290-81-5	Gasoline		15.3		77.6	J	7.9	J	8.56	J	24.6		16.8	

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-GRO	SAMPLE ID ------->	FDS-S-C055-01		FDS-S-C056-01		FDS-S-C057-01		FDS-S-C058-01		FDS-S-C059-01		FDS-S-C060-01	
	ORIGINAL ID ----->	FDSSC05501		FDSSC05601		FDSSC05701		FDSSC05801		FDSSC05901		FDSSC06001	
	LAB SAMPLE ID --->	27045.16		27045.17		27065.09		27065.10		27065.11		27065.17	
	ID FROM REPORT -->	FDSSC05501		FDSSC05601		FDSSC05701		FDSSC05801		FDSSC05901		FDSSC06001	
	SAMPLE DATE ----->	09/23/96		09/23/96		09/24/96		09/24/96		09/24/96		09/24/96	
	DATE ANALYZED --->	09/27/96		09/27/96		10/01/96		10/01/96		10/01/96		09/30/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	27045	VAL	27045	VAL	27065	VAL	27065	VAL	27065	VAL	27065	VAL
86290-81-5	Gasoline	63.7		37.6		17.	J	10.	J	10.	J	21.	J

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-GRO	SAMPLE ID ------->	FDS-S-C061-01		FDS-C-C061-01		FDS-S-C063-01		FDS-S-C064-01		FDS-S-C065-01		FDS-S-C066-01	
	ORIGINAL ID ----->	FDSSC06101		FDSCC06101		FDSSC06301		FDSSC06401		FDSSC06501		FDSSC06601	
	LAB SAMPLE ID --->	27065.13		27066.01		27090.15		27090.16		27090.19		27090.20	
	ID FROM REPORT -->	FDSSC06101		FDSCC06101		FDSSC06301		FDSSC06401		FDSSC06501		FDSSC06601	
	SAMPLE DATE ----->	09/24/96		09/24/96		09/25/96		09/25/96		09/25/96		09/25/96	
	DATE ANALYZED --->	09/30/96		09/30/96		10/01/96		10/01/96		10/01/96		10/01/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	27065	VAL	27065	VAL	27090	VAL	27090	VAL	27090	VAL	27090	VAL
86290-81-5	Gasoline	8.	J	8.	J	11.6	U	8.	J	147.		67.	J

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-GRO	SAMPLE ID ------>	FDS-S-C067-01		FDS-S-C068-01		FDS-S-C069-01		FDS-S-C070-01		FDS-S-C071-01		FDS-S-C072-01	
	ORIGINAL ID ----->	FDSSC06701		FDSSC06801		FDSSC06901		FDSSC07001		FDSSC07101		FDSSC07201	
	LAB SAMPLE ID --->	27090.21		27166.01		27166.02		27166.03		27166.04		27166.05	
	ID FROM REPORT -->	FDSSC06701		FDSSC06801		FDSSC06901		FDSSC07001		FDSSC07101		FDSSC07201	
	SAMPLE DATE ----->	09/25/96		09/30/96		09/30/96		09/30/96		09/30/96		10/01/96	
	DATE ANALYZED --->	10/01/96		10/03/96		10/03/96		10/03/96		10/03/96		10/03/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	27090	VAL	27166	VAL	27166	VAL	27166	VAL	27166	VAL	27166	VAL
86290-81-5	Gasoline	106.		18.	J	8.	J	15.		12.2	U	8.	J

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-GRO	SAMPLE ID ------->	FDS-S-C073-01		FDS-S-C074-01		FDS-S-C075-01		FDS-S-C076-01		FDS-S-C077-01		FDS-C-C077-01	
	ORIGINAL ID ----->	FDSSC07301		FDSSC07401		FDSSC07501		FDSSC07601		FDSSC07701		FDSCC07701	
	LAB SAMPLE ID --->	27166.06		27166.07		27166.08		27166.09		27166.10		27167.01	
	ID FROM REPORT -->	FDSSC07301		FDSSC07401		FDSSC07501		FDSSC07601		FDSSC07701		FDSCC07701	
	SAMPLE DATE ----->	10/01/96		10/01/96		10/01/96		10/01/96		10/01/96		10/01/96	
	DATE ANALYZED --->	10/03/96		10/03/96		10/03/96		10/03/96		10/03/96		10/04/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	27166	VAL	27166	VAL	27166	VAL	27166	VAL	27166	VAL	27166	VAL
86290-81-5	Gasoline	15.		8.	J	11.9	U	11.9	U	7.	J	16.	J

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-GRO	SAMPLE ID ------>	FDS-S-C078-01		FDS-S-C079-01		FDS-S-C080-01		FDS-C-C080-01		FDS-S-C081-01		FDS-S-C082-01	
	ORIGINAL ID ----->	FDSSC07801		FDSSC07901		FDSSC08001		FDSCC08001		FDSSC08101		FDSSC08201	
	LAB SAMPLE ID --->	27166.11		27166.12		27166.13		27167.02		27178.16		27178.17	
	ID FROM REPORT -->	FDSSC07801		FDSSC07901		FDSSC08001		FDSCC08001		FDSSC08101		FDSSC08201	
	SAMPLE DATE ----->	10/01/96		10/01/96		10/01/96		10/01/96		10/02/96		10/02/96	
	DATE ANALYZED --->	10/03/96		10/03/96		10/03/96		10/04/96		10/04/96		10/04/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	27166	VAL	27166	VAL	27166	VAL	27166	VAL	27178	VAL	27178	VAL
86290-81-5	Gasoline	11.6	U	12.2	U	12.1	U	12.3	U	9.	J	8.	J

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-GRO	SAMPLE ID ------->	FDS-S-C083-01		FDS-S-C084-01		FDS-S-C085-01		FDS-S-C086-01		FDS-C-C086-01		FDS-S-C087-01	
	ORIGINAL ID ----->	FDSSC08301		FDSSC08401		FDSSC08501		FDSSC08601		FDSCC08601		FDSSC08701	
	LAB SAMPLE ID --->	27178.20		27178.21		27178.22		27178.23		27179.01		27178.24	
	ID FROM REPORT -->	FDSSC08301		FDSSC08401		FDSSC08501		FDSSC08601		FDSCC08601		FDSSC08701	
	SAMPLE DATE ----->	10/02/96		10/02/96		10/02/96		10/02/96		10/02/96		10/02/96	
	DATE ANALYZED --->	10/04/96		10/04/96		10/04/96		10/04/96		10/04/96		10/04/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	27178	VAL	27178	VAL	27178	VAL	27178	VAL	27178	VAL	27178	VAL
86290-81-5	Gasoline	8.	J	7.	J	20.8	U	12.2	U	12.2	U	12.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-GRO	SAMPLE ID ------->	FDS-S-C088-01		FDS-S-C089-01		FDS-S-C090-01		FDS-S-C091-01		FDS-C-C091-01		FDS-S-C092-01	
	ORIGINAL ID ----->	FDSSC08801		FDSSC08901		FDSSC09001		FDSSC09101		FDSCC09101		FDSSC09201	
	LAB SAMPLE ID --->	27178.25		27178.26		27212.01		27212.02		27213.01		27212.03	
	ID FROM REPORT -->	FDSSC08801		FDSSC08901		FDSSC09001		FDSSC09101		FDSCC09101		FDSSC09201	
	SAMPLE DATE ----->	10/02/96		10/02/96		10/03/96		10/03/96		10/03/96		10/03/96	
	DATE ANALYZED --->	10/04/96		10/04/96		10/10/96		10/09/96		10/07/96		10/09/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	27178	VAL	27178	VAL	27212	VAL	27212	VAL	27212	VAL	27212	VAL
86290-81-5	Gasoline	9.	J	35.		12.4	U	13.2	U	12.5	U	14.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-GRO																	
		SAMPLE ID ------->	FDS-S-C093-01		FDS-S-C094-01		FDS-S-C096-01		FDS-S-C098-01		FDS-S-C099-01		FDS-S-C100-01	
		ORIGINAL ID ----->	FDSSC09301		FDSSC09401		FDSSC09601		FDSSC09801		FDSSC09901		FDSSC10001	
		LAB SAMPLE ID --->	27212.04		27212.07		27212.09		27212.12		27212.13		27212.14	
		ID FROM REPORT -->	FDSSC09301		FDSSC09401		FDSSC09601		FDSSC09801		FDSSC09901		FDSSC10001	
		SAMPLE DATE ----->	10/03/96		10/04/96		10/03/96		10/03/96		10/03/96		10/03/96	
		DATE ANALYZED --->	10/09/96		10/09/96		10/09/96		10/09/96		10/09/96		10/09/96	
		MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
		UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter		27212	VAL	27212	VAL	27212	VAL	27212	VAL	27212	VAL	27212	VAL
86290-81-5	Gasoline		11.7	U	11.9	U	12.2	U	12.4	U	12.9	U	19.1	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-GRO													
		SAMPLE ID ------->	FDS-C-C100-01		FDS-S-C101-01		FDS-S-C102-01		FDS-S-C103-01		FDS-S-C104-01		FDS-S-C104-02
		ORIGINAL ID ----->	FDSCC10001		FDSSC10101		FDSSC10201		FDSSC10301		FDSSC10401		FDSSC10402
		LAB SAMPLE ID --->	27213.03		27212.15		27212.16		27212.17		27212.18		27212.19
		ID FROM REPORT -->	FDSCC10001		FDSSC10101		FDSSC10201		FDSSC10301		FDSSC10401		FDSSC10402
		SAMPLE DATE ----->	10/04/96		10/03/96		10/03/96		10/03/96		10/04/96		10/04/96
		DATE ANALYZED --->	10/07/96		10/09/96		10/09/96		10/09/96		10/09/96		10/09/96
		MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil
		UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG
CAS #	Parameter		27212	VAL	27212	VAL	27212	VAL	27212	VAL	27212	VAL	27212	VAL
86290-81-5	Gasoline		17.	J	12.6	U	18.1	U	12.6	U	11.8	U	14.1	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-GRO	SAMPLE ID ------->	FDS-S-C105-01		FDS-S-C106-01		FDS-S-C107-01		FDS-C-C107-01		FDS-S-C108-01		FDS-S-C109-01	
	ORIGINAL ID ----->	FDSSC10501		FDSSC10601		FDSSC10701		FDSCC10701		FDSSC10801		FDSSC10901	
	LAB SAMPLE ID --->	27232.01		27232.02		27232.03		27233.01		27232.04		27232.05	
	ID FROM REPORT -->	FDSSC10501		FDSSC10601		FDSSC10701		FDSCC10701		FDSSC10801		FDSSC10901	
	SAMPLE DATE ----->	10/04/96		10/04/96		10/04/96		10/04/96		10/04/96		10/05/96	
	DATE ANALYZED --->	10/10/96		10/10/96		10/10/96		10/11/96		10/10/96		10/10/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	27232	VAL	27232	VAL	27232	VAL	27232	VAL	27232	VAL	27232	VAL
86290-81-5	Gasoline	42.		7.	J	11.	J	8.	J	25.1	U	16.9	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-GRO																	
	SAMPLE ID ------->	FDS-S-C110-01		FDS-S-C111-01		FDS-S-C112-01		FDS-S-C113-01		FDS-S-C114-01		FDS-C-C114-01	
	ORIGINAL ID ----->	FDSSC11001		FDSSC11101		FDSSC11201		FDSSC11301		FDSSC11401		FDSCC11401	
	LAB SAMPLE ID --->	27232.06		27232.07		27232.08		27232.09		27232.10		27233.02	
	ID FROM REPORT -->	FDSSC11001		FDSSC11101		FDSSC11201		FDSSC11301		FDSSC11401		FDSCC11401	
	SAMPLE DATE ----->	10/05/96		10/05/96		10/05/96		10/05/96		10/05/96		10/05/96	
	DATE ANALYZED --->	10/10/96		10/10/96		10/10/96		10/10/96		10/10/96		10/11/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	27232	VAL	27232	VAL	27232	VAL	27232	VAL	27232	VAL	27232	VAL
86290-81-5	Gasoline	13.2	U	13.6	U	9.	J	15.		10.9	U	12.4	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-GRO																			
		SAMPLE ID ------->	FDS-S-C115-01		FDS-S-C47A-01		FDS-S-H001-01		FDS-S-H002-01		FDS-S-H003-01		FDS-S-H004-01	
		ORIGINAL ID ----->	FDSSC11501		FDSSC47A01		FDSSH00101		FDSSH00201		FDSSH00301		FDSSH00401	
		LAB SAMPLE ID --->	27232.11		27066.12		27367.01		27355.01		FDSSH00301		27355.03	
		ID FROM REPORT -->	FDSSC11501		FDSSC47A01		FDSSH00101		FDSSH00201		FDSSH00301		FDSSH00401	
		SAMPLE DATE ----->	10/05/96		09/24/96		10/18/96		10/17/96		10/17/96		10/17/96	
		DATE ANALYZED --->	10/10/96		09/30/96		10/24/96		10/22/96		10/22/96		10/22/96	
		MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
		UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter		27232	VAL	27065	VAL	27367	VAL	27339	VAL	27339	VAL	27339	VAL
86290-81-5	Gasoline		7.	J	1250.	U	10.	J	12.1	U	11.7	U	11.9	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-GRO	SAMPLE ID ------->	FDS-S-H005-01		FDS-S-H006-01		FDS-S-H007-01		FDS-S-H008-01		FDS-S-H009-01		FDS-S-H010-01	
	ORIGINAL ID ----->	FDSSH00501		FDSSH00601		FDSSH00701		FDSSH00801		FDSSH00901		FDSSH01001	
	LAB SAMPLE ID --->	FDSSH00501		27377.01		FDSSH00701		27377.02		27377.03		27377.04	
	ID FROM REPORT -->	FDSSH00501		FDSSH00601		FDSSH00701		FDSSH00801		FDSSH00901		FDSSH01001	
	SAMPLE DATE ----->	10/17/96		10/21/96		10/17/96		10/21/96		10/21/96		10/21/96	
	DATE ANALYZED --->	10/22/96		10/25/96		10/22/96		10/25/96		10/25/96		10/25/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG.KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	27339	VAL	27377	VAL	27339	VAL	27377	VAL	27377	VAL	27377	VAL
86290-81-5	Gasoline	13.2	U	9.	J	11.7	U	11.8	U	12.3	U	11.1	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-GRO	SAMPLE ID ------->	FDS-S-H011-01		FDS-S-H012-01		FDS-S-H013-01		FDS-S-H014-01		FDS-S-H015-01		FDS-S-H016-01	
	ORIGINAL ID ----->	FDSSH01101		FDSSH01201		FDSSH01301		FDSSH01401		FDSSH01501		FDSSH01601	
	LAB SAMPLE ID --->	FDSSH01101		27367.03		FDSSH01301		FDSSH01401		FDSSH01501		27367.04	
	ID FROM REPORT -->	FDSSH01101		FDSSH01201		FDSSH01301		FDSSH01401		FDSSH01501		FDSSH01601	
	SAMPLE DATE ----->	10/17/96		10/18/96		10/17/96		10/17/96		10/17/96		10/18/96	
	DATE ANALYZED --->	10/23/96		10/24/96		10/22/96		10/22/96		10/22/96		10/24/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	27339	VAL	27367	VAL	27339	VAL	27339	VAL	27339	VAL	27367	VAL
86290-81-5	Gasoline	12.2	U	9.	J	12.	U	10.	U	11.9	U	32.	

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-GRO	SAMPLE ID ------->	FDS-S-H017-01		FDS-S-H018-01		FDS-S-H019-01		FDS-S-H020-01		FDS-C-H020-01		FDS-S-H021-01	
	ORIGINAL ID ----->	FDSSH01701		FDSSH01801		FDSSH01901		FDSSH02001		FDSCH02001		FDSSH02101	
	LAB SAMPLE ID --->	27367.05		27367.06		27367.07		27367.02		27368.01		27367.10	
	ID FROM REPORT -->	FDSSH01701		FDSSH01801		FDSSH01901		FDSSH02001		FDSCH02001		FDSSH02101	
	SAMPLE DATE ----->	10/18/96		10/18/96		10/18/96		10/18/96		10/18/96		10/18/96	
	DATE ANALYZED --->	10/24/96		10/24/96		10/25/96		10/24/96		10/25/96		10/29/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	27367	VAL	27367	VAL	27367	VAL	27367	VAL	27367	VAL	27367	VAL
86290-81-5	Gasoline	12.	U	10.	J	12.3	U	11.8	U	11.9	U	10.	J

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-GRO																	
		SAMPLE ID ------->	FDS-S-H022-01		FDS-S-H023-01		FDS-S-H024-01		FDS-C-H024-01		FDS-S-H025-01		FDS-S-H026-01	
		ORIGINAL ID ----->	FDSSH02201		FDSSH02301		FDSSH02401		FDSCH02401		FDSSH02501		FDSSH02601	
		LAB SAMPLE ID --->	27367.11		FDSSH02301		27377.09		27378.01		27377.08		27377.06	
		ID FROM REPORT -->	FDSSH02201		FDSSH02301		FDSSH02401		FDSCH02401		FDSSH02501		FDSSH02601	
		SAMPLE DATE ----->	10/18/96		10/17/96		10/21/96		10/21/96		10/21/96		10/21/96	
		DATE ANALYZED --->	10/29/96		10/22/96		10/25/96		10/30/96		10/25/96		10/25/96	
		MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
		UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter		27367	VAL	27339	VAL	27377	VAL	27377	VAL	27377	VAL	27377	VAL
86290-81-5	Gasoline		10.	J	501.	J	11.2	U	11.2	U	11.3	U	20.	

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G DPT SOIL AND GW
Fuel Distribution System CAR

TPH-GRO							
	SAMPLE ID ------->	FDS-S-H027-01					
	ORIGINAL ID ----->	FDSSH02701					
	LAB SAMPLE ID --->	27377.05					
	ID FROM REPORT -->	FDSSH02701					
	SAMPLE DATE ----->	10/21/96					
	DATE ANALYZED --->	10/25/96					
	MATRIX ---------->	Soil					
	UNITS ---------->	UG/KG					
CAS #	Parameter	27377 VAL					
86290-81-5	Gasoline	12.2 U					

*** Validation Complete ***

Quarterly Groundwater

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

CYANIDE								
	SAMPLE ID ------->	638-G-W001-01		GDG-G-W002-01		GDG-G-W002-02		
	ORIGINAL ID ----->	638GW00101		GDGGW00201		GDGGW00202		
	LAB SAMPLE ID --->	27755.01		27675.03		29767.06		
	ID FROM REPORT -->	638GW00101		GDGGW00201		GDGGW00202		
	SAMPLE DATE ----->	11/22/96		11/17/96		06/18/97		
	DATE EXTRACTED -->	12/03/96		11/22/96		06/25/97		
	DATE ANALYZED --->	12/04/96		11/23/96		06/26/97		
	MATRIX ---------->	Water		Water		Water		
	UNITS ---------->	UG/L		UG/L		UG/L		
CAS #	Parameter	27715	VAL	27651	VAL	29767	VAL	
57-12-5	Cyanide (CN)	2.	U	2.	U	2.	U	

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-META													
	SAMPLE ID ------->	011-G-W001-01		011-G-W001-02		638-G-W001-01		638-G-W001-02		GDG-G-W002-01		GDG-G-W002-02	
	ORIGINAL ID ----->	011GW00101		011GW00102		638GW00101		638GW00102		GDGGW00201		GDGGW00202	
	LAB SAMPLE ID --->	27581.03		29403.01		27755.01		29487.02		27675.03		29767.06	
	ID FROM REPORT -->	011GW00101		011GW00102		638GW00101		638GW00102		GDGGW00201		GDGGW00202	
	SAMPLE DATE ----->	11/11/96		05/16/97		11/22/96		05/23/97		11/17/96		06/18/97	
	DATE EXTRACTED -->	11/19/96		05/19/97		12/04/96		05/28/97		11/22/96		06/26/97	
	DATE ANALYZED --->	11/21/96		05/28/97		12/08/96		06/05/97		11/23/96		07/09/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	27581	VAL	29360	VAL	27715	VAL	29437	VAL	27651	VAL	29767	VAL
7429-90-5	Aluminum (Al)	60.2	J	48.3	U	26.7	J	14.	UJ	176.	J	8.	UJ
7440-36-0	Antimony (Sb)	2.1	U	2.9	U	2.1	U	3.4	U	2.1	U	3.8	J
7440-38-2	Arsenic (As)	4.4	J	2.1	U	5.1	J	5.	J	7.8	J	10.	J
7440-39-3	Barium (Ba)	21.8	J	18.1		23.8	J	16.4	J	13.6		17.4	
7440-41-7	Beryllium (Be)	0.3	U	0.2	J	0.3	U	0.2	UJ	0.76	U	0.38	U
7440-43-9	Cadmium (Cd)	2.2	U	0.3	U	0.5	U	0.3	U	0.5	U	0.4	J
7440-70-2	Calcium (Ca)	63400.		60900.		89500.		69000.	J	91400.		90700.	
7440-47-3	Chromium (Cr)	0.8	U	1.	U	0.8	U	1.	U	2.3	U	1.	U
7440-48-4	Cobalt (Co)	1.2	J	1.4	J	0.9	U	2.6	U	0.9	U	0.8	U
7440-50-8	Copper (Cu)	1.5	U	1.4	U	0.6	U	1.4	U	0.6	U	1.4	U
7439-89-6	Iron (Fe)	487.		1220.		6680.		5870.	J	28200.		35700.	
7439-92-1	Lead (Pb)	1.7	U	0.9	U	1.7	UJ	0.9	UJ	1.7	UJ	0.9	U
7439-95-4	Magnesium (Mg)	34300.		30700.		259000.		224000.	J	100000.		81000.	
7439-96-5	Manganese (Mn)	194.		186.		196.		116.	J	2630.		2820.	
7439-97-6	Mercury (Hg)	0.1	U	0.1	U	0.2	U	0.1	U	0.14	U	0.1	U
7440-02-0	Nickel (Ni)	2.4	U	0.7	U	0.8	U	0.83	J	2.	J	0.7	UJ
7440-09-7	Potassium (K)	12100.		10500.		109000.		146000.		46400.		49800.	
7782-49-2	Selenium (Se)	2.8	U	3.4	U	2.8	UJ	3.4	U	2.8	U	4.1	J
7440-22-4	Silver (Ag)	1.2	U	1.3	U	1.2	U	1.	U	1.7	J	1.	U
7440-23-5	Sodium (Na)	162000.		128000.		2520000.		2620000.		694000.		576000.	J
7440-28-0	Thallium (Tl)	2.7	U	5.	U	2.7	U	6.4	J	2.7	U	8.1	U
7440-31-5	Tin (Sn)	3.6	U	14.	U	2.9	U	14.	U	2.6	U	14.	U
7440-62-2	Vanadium (V)	4.2	J	2.6	J	0.67	U	1.1	U	2.7	J	3.1	J
7440-66-6	Zinc (Zn)	5.3	U	5.8	U	5.3	U	5.8	U	5.3	U	5.8	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-PEST											
		SAMPLE ID ------->	638-G-W001-01		638-G-W001-02		GDG-G-W002-01		GDG-G-W002-02		
		ORIGINAL ID ----->	638GW00101		638GW00102		GDGGW00201		GDGGW00202		
		LAB SAMPLE ID --->	27755.01		29487.02		27675.03		29767.06		
		ID FROM REPORT -->	638GW00101		638GW00102		GDGGW00201		GDGGW00202		
		SAMPLE DATE ----->	11/22/96		05/23/97		11/17/96		06/18/97		
		DATE EXTRACTED -->	11/24/96		05/24/97		11/20/96		06/20/97		
		DATE ANALYZED --->	12/02/96		06/04/97		11/27/96		06/25/97		
		MATRIX ---------->	Water		Water		Water		Water		
		UNITS ---------->	UG/L		UG/L		UG/L		UG/L		
CAS #	Parameter		27715	VAL	29437	VAL	27651	VAL	29767	VAL	
319-84-6	alpha-BHC		0.04	U	0.04	U	0.04	UJ	0.04	U	
319-85-7	beta-BHC		0.04	U	0.04	U	0.04	UJ	0.04	U	
319-86-8	delta-BHC		0.04	U	0.04	U	0.04	UJ	0.04	U	
58-89-9	gamma-BHC (Lindane)		0.04	U	0.04	U	0.04	UJ	0.04	U	
76-44-8	Heptachlor		0.04	U	0.04	U	0.04	UJ	0.04	U	
309-00-2	Aldrin		0.04	U	0.04	U	0.04	UJ	0.04	U	
1024-57-3	Heptachlor epoxide		0.04	U	0.04	U	0.04	UJ	0.04	U	
959-98-8	Endosulfan I		0.04	U	0.04	U	0.04	UJ	0.04	U	
60-57-1	Dieldrin		0.08	U	0.08	U	0.08	UJ	0.08	U	
72-55-9	4,4'-DDE		0.08	U	0.08	U	0.08	UJ	0.08	U	
72-20-8	Endrin		0.08	U	0.08	U	0.08	UJ	0.08	U	
33213-65-9	Endosulfan II		0.08	U	0.08	U	0.08	UJ	0.08	U	
72-54-8	4,4'-DDD		0.08	U	0.08	U	0.08	UJ	0.08	U	
1031-07-8	Endosulfan sulfate		0.08	U	0.08	U	0.08	UJ	0.08	U	
50-29-3	4,4'-DDT		0.08	U	0.08	U	0.08	UJ	0.08	U	
72-43-5	Methoxychlor		0.38	U	0.38	U	0.38	UJ	0.38	U	
53494-70-5	Endrin ketone		0.08	U	0.08	U	0.08	UJ	0.08	U	
7421-93-4	Endrin aldehyde		0.08	U	0.08	U	0.08	UJ	0.08	U	
5103-71-9	alpha-Chlordane		0.04	U	0.04	U	0.04	UJ	0.04	U	
5103-74-2	gamma-Chlordane		0.04	U	0.04	U	0.04	UJ	0.04	U	
8001-35-2	Toxaphene		2.5	U	2.5	U	2.5	UJ	2.5	U	
12674-11-2	Aroclor-1016		1.	U	1.	U	1.	UJ	1.	U	
11104-28-2	Aroclor-1221		1.	U	1.	U	1.	UJ	1.	U	
11141-16-5	Aroclor-1232		1.	U	1.	U	1.	UJ	1.	U	
53469-21-9	Aroclor-1242		1.	U	1.	U	1.	UJ	1.	U	
12672-29-6	Aroclor-1248		1.	U	1.	U	1.	UJ	1.	U	
11097-69-1	Aroclor-1254		2.	U	2.	U	2.	UJ	2.	U	
11096-82-5	Aroclor-1260		2.	U	2.	U	2.	UJ	2.	U	

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-SVOA											
	SAMPLE ID ------->	638-G-W001-01		638-G-W001-02		GDG-G-W002-01		GDG-G-W002-02			
	ORIGINAL ID ----->	638GW00101		638GW00102		GDGGW00201		GDGGW00202			
	LAB SAMPLE ID --->	27755.01		29487.02		27675.03		29767.06			
	ID FROM REPORT -->	638GW00101		638GW00102		GDGGW00201		GDGGW00202			
	SAMPLE DATE ----->	11/22/96		05/23/97		11/17/96		06/18/97			
	DATE EXTRACTED -->	11/25/96		05/27/97		11/20/96		07/01/97			
	DATE ANALYZED --->	12/08/96		06/01/97		12/04/96		06/27/97			
	MATRIX ---------->	Water		Water		Water		Water			
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L			
CAS #	Parameter	27715	VAL	29437	VAL	27651	VAL	29767	VAL		
108-95-2	Phenol	10.	U	10.	U	10.	U	10.	U		
111-44-4	bis(2-Chloroethyl)ether	10.	U	10.	U	10.	U	10.	U		
95-57-8	2-Chlorophenol	10.	U	10.	U	10.	U	10.	U		
541-73-1	1,3-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U		
106-46-7	1,4-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U		
100-51-6	Benzyl alcohol	10.	U	10.	U	10.	U	10.	U		
95-50-1	1,2-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U		
95-48-7	2-Methylphenol (o-Cresol)	10.	U	10.	U	10.	U	10.	U		
108-60-1	2,2'-oxybis(1-Chloropropane)	10.	U	10.	U	10.	U	10.	U		
106-44-5	4-Methylphenol (p-Cresol)	10.	U	10.	U	10.	U	10.	U		
621-64-7	N-Nitroso-di-n-propylamine	10.	U	10.	U	10.	U	10.	U		
67-72-1	Hexachloroethane	10.	U	10.	U	10.	U	10.	U		
98-95-3	Nitrobenzene	10.	U	10.	U	10.	U	10.	U		
78-59-1	Isophorone	10.	U	10.	U	10.	U	10.	U		
88-75-5	2-Nitrophenol	10.	U	10.	U	10.	U	10.	U		
105-67-9	2,4-Dimethylphenol	10.	U	10.	U	10.	U	10.	U		
65-85-0	Benzoic acid	50.	U	50.	U	50.	U	50.	U		
111-91-1	bis(2-Chloroethoxy)methane	10.	U	10.	U	10.	U	10.	U		
120-83-2	2,4-Dichlorophenol	10.	U	10.	U	10.	U	10.	U		
120-82-1	1,2,4-Trichlorobenzene	10.	U	10.	U	10.	U	10.	U		
91-20-3	Naphthalene	10.	U	10.	U	10.	U	10.	U		
106-47-8	4-Chloroaniline	10.	U	10.	U	10.	U	10.	U		
87-68-3	Hexachlorobutadiene	10.	U	10.	U	10.	U	10.	U		
59-50-7	4-Chloro-3-methylphenol	10.	U	10.	U	10.	U	10.	U		
91-57-6	2-Methylnaphthalene	10.	U	10.	U	10.	U	10.	U		
77-47-4	Hexachlorocyclopentadiene	10.	U	10.	U	10.	U	10.	U		
88-06-2	2,4,6-Trichlorophenol	10.	U	10.	U	10.	U	10.	U		
95-95-4	2,4,5-Trichlorophenol	50.	U	50.	U	50.	U	50.	U		
91-58-7	2-Chloronaphthalene	10.	U	10.	U	10.	U	10.	U		
88-74-4	2-Nitroaniline	50.	U	50.	U	50.	U	50.	U		
131-11-3	Dimethyl phthalate	10.	U	10.	U	10.	U	10.	U		
208-96-8	Acenaphthylene	10.	U	10.	U	10.	U	10.	U		
606-20-2	2,6-Dinitrotoluene	10.	U	10.	U	10.	U	10.	U		
99-09-2	3-Nitroaniline	50.	U	50.	U	50.	U	50.	U		
83-32-9	Acenaphthene	10.	U	10.	U	10.	U	10.	U		
51-28-5	2,4-Dinitrophenol	50.	U	50.	U	50.	U	50.	U		

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-SVOA											
	SAMPLE ID ------->	638-G-W001-01		638-G-W001-02		GDG-G-W002-01		GDG-G-W002-02			
	ORIGINAL ID ----->	638GW00101		638GW00102		GDGGW00201		GDGGW00202			
	LAB SAMPLE ID --->	27755.01		29487.02		27675.03		29767.06			
	ID FROM REPORT -->	638GW00101		638GW00102		GDGGW00201		GDGGW00202			
	SAMPLE DATE ----->	11/22/96		05/23/97		11/17/96		06/18/97			
	DATE EXTRACTED -->	11/25/96		05/27/97		11/20/96		07/01/97			
	DATE ANALYZED --->	12/08/96		06/01/97		12/04/96		06/27/97			
	MATRIX ---------->	Water		Water		Water		Water			
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L			
CAS #	Parameter	27715	VAL	29437	VAL	27651	VAL	29767	VAL		
100-02-7	4-Nitrophenol	50.	U	50.	U	50.	U	50.	U		
132-64-9	Dibenzofuran	10.	U	10.	U	10.	U	10.	U		
121-14-2	2,4-Dinitrotoluene	10.	U	10.	U	10.	U	10.	U		
84-66-2	Diethylphthalate	10.	U	10.	U	10.	U	10.	U		
7005-72-3	4-Chlorophenylphenylether	10.	U	10.	U	10.	U	10.	U		
86-73-7	Fluorene	10.	U	10.	U	10.	U	10.	U		
100-01-6	4-Nitroaniline	50.	U	50.	U	50.	U	50.	U		
534-52-1	2-Methyl-4,6-Dinitrophenol	50.	U	50.	U	50.	U	50.	U		
86-30-6	N-Nitrosodiphenylamine	10.	U	10.	U	10.	U	10.	U		
101-55-3	4-Bromophenyl-phenylether	10.	U	10.	U	10.	U	10.	U		
118-74-1	Hexachlorobenzene	10.	U	10.	U	10.	U	10.	U		
87-86-5	Pentachlorophenol	50.	U	50.	U	50.	U	50.	U		
85-01-8	Phenanthrene	10.	U	10.	U	10.	U	10.	U		
120-12-7	Anthracene	10.	U	10.	U	10.	U	10.	U		
84-74-2	Di-n-butylphthalate	10.	U	10.	U	10.	U	10.	U		
206-44-0	Fluoranthene	10.	U	10.	U	10.	U	10.	U		
129-00-0	Pyrene	10.	U	10.	U	10.	U	10.	U		
85-68-7	Butylbenzylphthalate	10.	U	10.	U	10.	U	10.	U		
91-94-1	3,3'-Dichlorobenzidine	20.	U	20.	U	20.	U	20.	U		
56-55-3	Benzo(a)anthracene	10.	U	10.	U	10.	U	10.	U		
218-01-9	Chrysene	10.	U	10.	U	10.	U	10.	U		
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	10.	U	10.	U	10.	U	10.	U		
117-84-0	Di-n-octyl phthalate	10.	U	10.	U	10.	U	10.	U		
205-99-2	Benzo(b)fluoranthene	10.	U	10.	U	10.	U	10.	U		
207-08-9	Benzo(k)fluoranthene	10.	U	10.	U	10.	U	10.	U		
50-32-8	Benzo(a)pyrene	10.	U	10.	U	10.	U	10.	U		
193-39-5	Indeno(1,2,3-cd)pyrene	10.	U	10.	U	10.	U	10.	U		
53-70-3	Dibenz(a,h)anthracene	10.	U	10.	U	10.	U	10.	U		
191-24-2	Benzo(g,h,i)perylene	10.	U	10.	U	10.	U	10.	U		

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-VOA	SAMPLE ID ------->	638-G-W001-01		638-G-W001-02		GDG-G-W002-01		GDG-G-W002-02			
	ORIGINAL ID ----->	638GW00101		638GW00102		GDGGW00201		GDGGW00202			
	LAB SAMPLE ID --->	27755.01		29487.02		27675.03		29767.06			
	ID FROM REPORT -->	638GW00101		638GW00102		GDGGW00201		GDGGW00202			
	SAMPLE DATE ----->	11/22/96		05/23/97		11/17/96		06/18/97			
	DATE ANALYZED --->	12/02/96		05/29/97		11/20/96		06/20/97			
	MATRIX ---------->	Water		Water		Water		Water			
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L			
CAS #	Parameter	27715	VAL	29437	VAL	27651	VAL	29767	VAL		
74-87-3	Chloromethane	10.	U	10.	U	10.	U	10.	U		
74-83-9	Bromomethane	10.	U	10.	U	10.	U	10.	U		
75-01-4	Vinyl chloride	10.	U	10.	U	10.	U	10.	U		
75-00-3	Chloroethane	10.	U	10.	U	10.	U	10.	U		
75-09-2	Methylene chloride	5.	U	5.	U	7.	U	5.	U		
67-64-1	Acetone	10.	UJ	10.	U	10.	U	10.	U		
75-15-0	Carbon disulfide	5.	U	5.	U	5.	U	5.	U		
75-35-4	1,1-Dichloroethene	5.	U	5.	U	5.	U	5.	U		
75-34-3	1,1-Dichloroethane	5.	U	5.	U	5.	U	5.	U		
540-59-0	1,2-Dichloroethene (total)	5.	U	5.	U	5.	U	5.	U		
67-66-3	Chloroform	5.	U	5.	U	5.	U	5.	U		
107-06-2	1,2-Dichloroethane	5.	U	5.	U	5.	U	5.	U		
78-93-3	2-Butanone (MEK)	10.	U	10.	U	10.	U	10.	U		
71-55-6	1,1,1-Trichloroethane	5.	U	5.	U	5.	U	5.	U		
56-23-5	Carbon tetrachloride	5.	U	5.	U	5.	U	5.	U		
75-27-4	Bromodichloromethane	5.	U	5.	U	5.	U	5.	U		
78-87-5	1,2-Dichloropropane	5.	U	5.	U	5.	U	5.	U		
10061-01-5	cis-1,3-Dichloropropene	5.	U	5.	U	5.	U	5.	U		
79-01-6	Trichloroethene	5.	U	5.	U	5.	U	5.	U		
124-48-1	Dibromochloromethane	5.	U	5.	U	5.	U	5.	U		
79-00-5	1,1,2-Trichloroethane	5.	U	5.	U	5.	U	5.	U		
71-43-2	Benzene	5.	U	5.	U	5.	U	5.	U		
10061-02-6	trans-1,3-Dichloropropene	5.	U	5.	U	5.	U	5.	U		
75-25-2	Bromoform	5.	U	5.	U	5.	U	5.	U		
108-10-1	4-Methyl-2-Pentanone (MIBK)	10.	U	10.	U	10.	U	10.	U		
591-78-6	2-Hexanone	10.	U	10.	U	10.	U	10.	U		
127-18-4	Tetrachloroethene	5.	U	5.	U	5.	U	5.	U		
79-34-5	1,1,2,2-Tetrachloroethane	5.	U	5.	U	5.	U	5.	U		
108-88-3	Toluene	5.	U	5.	U	5.	U	5.	U		
108-90-7	Chlorobenzene	5.	U	5.	U	5.	U	5.	U		
100-41-4	Ethylbenzene	5.	U	5.	U	5.	U	5.	U		
100-42-5	Styrene	5.	U	5.	U	5.	U	5.	U		
1330-20-7	Xylene (Total)	5.	U	5.	U	5.	U	5.	U		
108-05-4	Vinyl acetate	10.	U	10.	U	10.	U	10.	U		
110-75-8	2-Chloroethyl vinyl ether	10.	UR	10.	U	10.	U	10.	U		

*** Validation Complete ***

CHARLESTON - ZONE F
CHARLESTON ZONE F GW (ONLY)
Fuel Distribution System CAR

PH		SAMPLE ID ------->	620-G-W003-A1					
		ORIGINAL ID ----->	620GW003A1					
		LAB SAMPLE ID --->	29237.06					
		ID FROM REPORT -->	620GW003A1					
		SAMPLE DATE ----->	05/01/97					
		DATE ANALYZED --->	05/02/97					
		MATRIX ---------->	Water					
		UNITS ---------->	SU					
CAS #	Parameter		29230					
9999900-09-4	pH		7.02					

CHARLESTON - ZONE F
CHARLESTON ZONE F GW (ONLY)
Fuel Distribution System CAR

SW846-META											
	SAMPLE ID ------->	619-G-W003-01		619-G-W003-02		620-G-W003-A1		620-G-W003-A2			
	ORIGINAL ID ----->	619GW00301		619GW00302		620GW003A1		620GW003A2			
	LAB SAMPLE ID --->	27583.01		29306.01		29237.06		30849.01			
	ID FROM REPORT -->	619GW00301		619GW00302		620GW003A1		620GW003A2			
	SAMPLE DATE ----->	11/09/96		05/08/97		05/01/97		09/02/97			
	DATE EXTRACTED -->	11/18/96		05/12/97		05/07/97		09/11/97			
	DATE ANALYZED --->	11/20/96		05/16/97		05/13/97		09/26/97			
	MATRIX ---------->	Water		Water		Water		Water			
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L			
CAS #	Parameter	27502	VAL	29306	VAL	29230	VAL	30849	VAL		
7429-90-5	Aluminum (Al)	233.		10.3	J	8.	U	182.			
7440-36-0	Antimony (Sb)	2.1	U	4.9	J	1.6	U	2.7	U		
7440-38-2	Arsenic (As)	3.	J	8.	J	2.1	UJ	11.1			
7440-39-3	Barium (Ba)	92.2		69.2		32.9		67.2			
7440-41-7	Beryllium (Be)	0.7	U	0.39	J	0.43	U	0.3	U		
7440-43-9	Cadmium (Cd)	0.5	U	0.3	U	0.3	J	0.3	U		
7440-70-2	Calcium (Ca)	205000.		200000.		129000.		134000.			
7440-47-3	Chromium (Cr)	1.	J	1.5	J	1.	U	1.4	J		
7440-48-4	Cobalt (Co)	1.	U	1.4	J	0.8	U	0.6	U		
7440-50-8	Copper (Cu)	0.6	U	1.4	U	2.5	J	2.6	U		
7439-89-6	Iron (Fe)	32000.		17000.		6880.		11700.			
7439-92-1	Lead (Pb)	1.7	U	0.9	U	0.9	U	1.1	U		
7439-95-4	Magnesium (Mg)	356000.		497000.		23100.		18800.			
7439-96-5	Manganese (Mn)	1420.		702.		749.		604.			
7439-97-6	Mercury (Hg)	0.1	U	0.12	U	0.1	U	0.2	U		
7440-02-0	Nickel (Ni)	0.83	U	1.5	J	0.7	U	1.3	U		
7440-09-7	Potassium (K)	163000.		158000.		16800.		19200.			
7782-49-2	Selenium (Se)	3.1	U	3.4	UJ	3.4	U	3.4	U		
7440-22-4	Silver (Ag)	1.2	U	1.	UJ	1.	U	1.	U		
7440-23-5	Sodium (Na)	3840000.		4600000.		75900.		71400.			
7440-28-0	Thallium (Tl)	6.6	J	7.	U	5.2	J	4.6	U		
7440-31-5	Tin (Sn)	12.4	U	14.	U	14.	U	4.5	U		
7440-62-2	Vanadium (V)	0.5	U	7.5	J	1.1	U	1.3	U		
7440-66-6	Zinc (Zn)	5.3	U	5.8	U	5.8	U	11.	U		

*** Validation Complete ***

CHARLESTON - ZONE F
CHARLESTON ZONE F GW (ONLY)
Fuel Distribution System CAR

SW846-OP P

SAMPLE ID ------->	619-G-W003-01
ORIGINAL ID ----->	619GW00301
LAB SAMPLE ID --->	27583.01
ID FROM REPORT -->	619GW00301
SAMPLE DATE ----->	11/09/96
DATE EXTRACTED -->	11/13/96
DATE ANALYZED --->	11/26/96
MATRIX ---------->	Water
UNITS ---------->	UG/L

CAS #	Parameter	27502	VAL
298-02-2	Phorate	2.	U
298-04-4	Disulfoton	3.7	U
298-00-0	Methyl parathion	0.5	U

*** Validation Complete ***

CHARLESTON - ZONE F
CHARLESTON ZONE F GW (ONLY)
Fuel Distribution System CAR

SW846-PEST									
		SAMPLE ID ------->	619-G-W003-01		619-G-W003-02				
		ORIGINAL ID ----->	619GW00301		619GW00302				
		LAB SAMPLE ID --->	27583.01		29306.01				
		ID FROM REPORT -->	619GW00301		619GW00302				
		SAMPLE DATE ----->	11/09/96		05/08/97				
		DATE EXTRACTED -->	11/13/96		05/09/97				
		DATE ANALYZED --->	11/18/96		05/15/97				
		MATRIX ---------->	Water		Water				
		UNITS ---------->	UG/L		UG/L				
CAS #	Parameter		27502	VAL	29306	VAL			
319-84-6	alpha-BHC		0.04	U	0.04	UJ			
319-85-7	beta-BHC		0.04	U	0.04	UJ			
319-86-8	delta-BHC		0.04	U	0.04	UJ			
58-89-9	gamma-BHC (Lindane)		0.04	U	0.04	UJ			
76-44-8	Heptachlor		0.04	U	0.04	UJ			
309-00-2	Aldrin		0.04	U	0.04	UJ			
1024-57-3	Heptachlor epoxide		0.04	U	0.04	UJ			
959-98-8	Endosulfan I		0.04	U	0.04	UJ			
60-57-1	Dieldrin		0.08	U	0.08	UJ			
72-55-9	4,4'-DDE		0.08	U	0.08	UJ			
72-20-8	Endrin		0.08	U	0.08	UJ			
33213-65-9	Endosulfan II		0.08	U	0.08	UJ			
72-54-8	4,4'-DDD		0.08	U	0.08	UJ			
1031-07-8	Endosulfan sulfate		0.08	U	0.08	UJ			
50-29-3	4,4'-DDT		0.08	U	0.08	UJ			
72-43-5	Methoxychlor		0.38	U	0.38	UJ			
53494-70-5	Endrin ketone		0.08	U	0.08	UJ			
7421-93-4	Endrin aldehyde		0.08	U	0.08	UJ			
5103-71-9	alpha-Chlordane		0.04	U	0.04	UJ			
5103-74-2	gamma-Chlordane		0.04	U	0.04	UJ			
8001-35-2	Toxaphene		2.5	U	2.5	UJ			
12674-11-2	Aroclor-1016		1.	U	1.	UJ			
11104-28-2	Aroclor-1221		1.	U	1.	UJ			
11141-16-5	Aroclor-1232		1.	U	1.	UJ			
53469-21-9	Aroclor-1242		1.	U	1.	UJ			
12672-29-6	Aroclor-1248		1.	U	1.	UJ			
11097-69-1	Aroclor-1254		2.	U	2.	UJ			
11096-82-5	Aroclor-1260		2.	U	2.	UJ			

*** Validation Complete ***

CHARLESTON - ZONE F
CHARLESTON ZONE F GW (ONLY)
Fuel Distribution System CAR

SW846-SVOA												
		SAMPLE ID ------->	619-G-W003-01		619-G-W003-02		620-G-W003-A2					
		ORIGINAL ID ----->	619GW00301		619GW00302		620GW003A2					
		LAB SAMPLE ID --->	27583.01		29306.01		30849.01					
		ID FROM REPORT -->	619GW00301		619GW00302		620GW003A2					
		SAMPLE DATE ----->	11/09/96		05/08/97		09/02/97					
		DATE EXTRACTED -->	11/13/96		05/10/97		09/04/97					
		DATE ANALYZED --->	12/03/96		05/15/97		09/22/97					
		MATRIX ---------->	Water		Water		Water					
		UNITS ---------->	UG/L		UG/L		UG/L					
CAS #	Parameter		27502	VAL	29306	VAL	30849	VAL				
108-95-2	Phenol		10.	U	10.	U	10.	U				
111-44-4	bis(2-Chloroethyl)ether		10.	U	10.	U	10.	U				
95-57-8	2-Chlorophenol		10.	U	10.	U	10.	U				
541-73-1	1,3-Dichlorobenzene		10.	U	10.	U	10.	U				
106-46-7	1,4-Dichlorobenzene		10.	U	10.	U	10.	U				
100-51-6	Benzyl alcohol		10.	U	10.	U	10.	U				
95-50-1	1,2-Dichlorobenzene		10.	U	10.	U	10.	U				
95-48-7	2-Methylphenol (o-Cresol)		10.	U	10.	U	10.	U				
108-60-1	2,2'-oxybis(1-Chloropropane)		10.	U	10.	U	10.	U				
106-44-5	4-Methylphenol (p-Cresol)		6.	J	10.	U	10.	U				
621-64-7	N-Nitroso-di-n-propylamine		10.	U	10.	U	10.	U				
67-72-1	Hexachloroethane		10.	U	10.	U	10.	U				
98-95-3	Nitrobenzene		10.	U	10.	U	10.	U				
78-59-1	Isophorone		10.	U	10.	U	10.	U				
88-75-5	2-Nitrophenol		10.	U	10.	U	10.	U				
105-67-9	2,4-Dimethylphenol		10.	U	10.	U	10.	U				
65-85-0	Benzoic acid		50.	U	50.	U	4.	J				
111-91-1	bis(2-Chloroethoxy)methane		10.	U	10.	U	10.	U				
120-83-2	2,4-Dichlorophenol		10.	U	10.	U	10.	U				
120-82-1	1,2,4-Trichlorobenzene		10.	U	10.	U	10.	U				
91-20-3	Naphthalene		2.	J	1.	J	10.	U				
106-47-8	4-Chloroaniline		10.	U	10.	U	10.	U				
87-68-3	Hexachlorobutadiene		10.	U	10.	U	10.	U				
59-50-7	4-Chloro-3-methylphenol		10.	U	10.	U	1.	J				
91-57-6	2-Methylnaphthalene		3.	J	10.	U	10.	U				
77-47-4	Hexachlorocyclopentadiene		10.	U	10.	U	10.	UJ				
88-06-2	2,4,6-Trichlorophenol		10.	U	10.	U	10.	U				
95-95-4	2,4,5-Trichlorophenol		50.	U	50.	U	50.	U				
91-58-7	2-Chloronaphthalene		10.	U	10.	U	10.	U				
88-74-4	2-Nitroaniline		50.	U	50.	U	50.	U				
131-11-3	Dimethyl phthalate		10.	U	10.	U	10.	U				
208-96-8	Acenaphthylene		10.	U	10.	U	10.	U				
99-09-2	3-Nitroaniline		50.	U	50.	U	50.	U				
83-32-9	Acenaphthene		2.	J	10.	U	2.	J				
51-28-5	2,4-Dinitrophenol		50.	U	50.	U	50.	U				
100-02-7	4-Nitrophenol		50.	U	50.	U	50.	U				

*** Validation Complete ***

CHARLESTON - ZONE F
CHARLESTON ZONE F GW (ONLY)
Fuel Distribution System CAR

SW846-SVOA											
		SAMPLE ID ------->	619-G-W003-01		619-G-W003-02		620-G-W003-A2				
		ORIGINAL ID ----->	619GW00301		619GW00302		620GW003A2				
		LAB SAMPLE ID --->	27583.01		29306.01		30849.01				
		ID FROM REPORT -->	619GW00301		619GW00302		620GW003A2				
		SAMPLE DATE ----->	11/09/96		05/08/97		09/02/97				
		DATE EXTRACTED -->	11/13/96		05/10/97		09/04/97				
		DATE ANALYZED --->	12/03/96		05/15/97		09/22/97				
		MATRIX ---------->	Water		Water		Water				
		UNITS ---------->	UG/L		UG/L		UG/L				
CAS #	Parameter		27502	VAL	29306	VAL	30849	VAL			
132-64-9	Dibenzofuran		2.	J	10.	U	10.	U			
121-14-2	2,4-Dinitrotoluene		10.	U	10.	U	10.	U			
606-20-2	2,6-Dinitrotoluene		10.	U	10.	U	10.	U			
84-66-2	Diethylphthalate		10.	U	10.	U	10.	U			
7005-72-3	4-Chlorophenylphenylether		10.	U	10.	U	10.	U			
86-73-7	Fluorene		4.	J	10.	U	10.	U			
100-01-6	4-Nitroaniline		50.	U	50.	U	50.	U			
534-52-1	2-Methyl-4,6-Dinitrophenol		50.	U	50.	U	50.	U			
86-30-6	N-Nitrosodiphenylamine		10.	U	10.	U	10.	U			
101-55-3	4-Bromophenyl-phenylether		10.	U	10.	U	10.	U			
118-74-1	Hexachlorobenzene		10.	U	10.	U	10.	U			
87-86-5	Pentachlorophenol		50.	U	50.	U	50.	U			
85-01-8	Phenanthrene		2.	J	10.	U	10.	U			
120-12-7	Anthracene		10.	U	10.	U	10.	U			
84-74-2	Di-n-butylphthalate		10.	U	10.	U	10.	U			
206-44-0	Fluoranthene		10.	U	10.	U	10.	U			
129-00-0	Pyrene		10.	U	10.	U	10.	U			
85-68-7	Butylbenzylphthalate		10.	U	10.	U	10.	U			
91-94-1	3,3'-Dichlorobenzidine		20.	U	20.	U	20.	U			
56-55-3	Benzo(a)anthracene		10.	U	10.	U	10.	U			
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)		10.	U	10.	U	10.	U			
218-01-9	Chrysene		10.	U	10.	U	10.	U			
117-84-0	Di-n-octyl phthalate		10.	U	10.	U	10.	U			
205-99-2	Benzo(b)fluoranthene		10.	U	10.	U	10.	U			
207-08-9	Benzo(k)fluoranthene		10.	U	10.	U	10.	U			
50-32-8	Benzo(a)pyrene		10.	U	10.	U	10.	U			
193-39-5	Indeno(1,2,3-cd)pyrene		10.	U	10.	U	10.	U			
53-70-3	Dibenz(a,h)anthracene		10.	U	10.	U	10.	U			
191-24-2	Benzo(g,h,i)perylene		10.	U	10.	U	10.	U			

*** Validation Complete ***

CHARLESTON - ZONE F
CHARLESTON ZONE F GW (ONLY)
Fuel Distribution System CAR

SW846-VOA											
		SAMPLE ID ------->	619-G-W003-01		619-G-W003-02		620-G-W003-A2				
		ORIGINAL ID ----->	619GW00301		619GW00302		620GW003A2				
		LAB SAMPLE ID --->	27583.01		29306.01		30849.01				
		ID FROM REPORT -->	619GW00301		619GW00302		620GW003A2				
		SAMPLE DATE ----->	11/09/96		05/08/97		09/02/97				
		DATE ANALYZED --->	11/14/96		05/12/97		09/12/97				
		MATRIX ---------->	Water		Water		Water				
		UNITS ---------->	UG/L		UG/L		UG/L				
CAS #	Parameter		27502	VAL	29306	VAL	30849	VAL			
74-87-3	Chloromethane		8.	J	10.	U	10.	U			
74-83-9	Bromomethane		10.	U	10.	U	10.	U			
75-01-4	Vinyl chloride		10.	U	10.	U	10.	U			
75-00-3	Chloroethane		10.	U	10.	U	10.	U			
75-09-2	Methylene chloride		5.	U	5.	U	5.	U			
67-64-1	Acetone		29.	U	10.	U	10.	U			
75-15-0	Carbon disulfide		5.	U	5.	U	5.	U			
75-35-4	1,1-Dichloroethene		5.	U	5.	U	5.	U			
75-34-3	1,1-Dichloroethane		5.	U	5.	U	5.	U			
540-59-0	1,2-Dichloroethene (total)		5.	U	5.	U	5.	U			
67-66-3	Chloroform		5.	U	5.	U	5.	U			
107-06-2	1,2-Dichloroethane		5.	U	5.	U	5.	U			
78-93-3	2-Butanone (MEK)		10.	U	10.	U	10.	U			
71-55-6	1,1,1-Trichloroethane		5.	U	5.	U	5.	U			
56-23-5	Carbon tetrachloride		5.	U	5.	U	5.	U			
108-05-4	Vinyl acetate		10.	U	10.	U	10.	U			
75-27-4	Bromodichloromethane		5.	U	5.	U	5.	U			
79-34-5	1,1,2,2-Tetrachloroethane		5.	U	5.	U	5.	U			
78-87-5	1,2-Dichloropropane		5.	U	5.	U	5.	U			
10061-02-6	trans-1,3-Dichloropropene		5.	U	5.	U	5.	U			
79-01-6	Trichloroethene		5.	U	5.	U	5.	U			
124-48-1	Dibromochloromethane		5.	U	5.	U	5.	U			
79-00-5	1,1,2-Trichloroethane		5.	U	5.	U	5.	U			
71-43-2	Benzene		5.	U	5.	U	5.	U			
10061-01-5	cis-1,3-Dichloropropene		5.	U	5.	U	5.	U			
110-75-8	2-Chloroethyl vinyl ether		10.	UR	10.	U	10.	U			
75-25-2	Bromoform		5.	U	5.	U	5.	U			
591-78-6	2-Hexanone		10.	U	10.	U	10.	U			
108-10-1	4-Methyl-2-Pentanone (MIBK)		10.	U	10.	U	10.	U			
127-18-4	Tetrachloroethene		5.	U	5.	U	5.	U			
108-88-3	Toluene		5.	U	5.	U	5.	U			
108-90-7	Chlorobenzene		5.	U	5.	U	5.	U			
100-41-4	Ethylbenzene		5.	U	5.	U	5.	U			
100-42-5	Styrene		5.	U	5.	U	5.	U			
1330-20-7	Xylene (Total)		5.	U	5.	U	5.	U			

*** Validation Complete ***

NAVAL BASE CHARLESTON, SOUTH CAROLINA
CHARLESTON ZONE E - QUARTERLY SAMPLING
Fuel Distribution System CAR

CYANIDE	SAMPLE ID ------->	GDE-G-W012-03		GDE-G-W012-04					
	ORIGINAL ID ----->	GDEGW01203		GDEGW01204					
	LAB SAMPLE ID --->	27618.04		28262.10					
	ID FROM REPORT -->	GDEGW01203		GDEGW01204					
	SAMPLE DATE ----->	11/13/96		01/23/97					
	DATE EXTRACTED -->	11/21/96		01/28/97					
	DATE ANALYZED --->	11/23/96		01/29/97					
	MATRIX ---------->	Water		Water					
	UNITS ---------->	UG/L		UG/L					
CAS #	Parameter	27551	VAL	28253	VAL				
57-12-5	Cyanide (CN)	2.	UJ	2.	U				

*** Validation Complete ***

NAVAL BASE CHARLESTON, SOUTH CAROLINA
CHARLESTON ZONE E - QUARTERLY SAMPLING
Fuel Distribution System CAR

SW846-META									
	SAMPLE ID ------>	GDE-G-W012-03		GDE-G-W012-04					
	ORIGINAL ID ----->	GDEGW01203		GDEGW01204					
	LAB SAMPLE ID --->	27618.04		28262.10					
	ID FROM REPORT -->	GDEGW01203		GDEGW01204					
	SAMPLE DATE ----->	11/13/96		01/23/97					
	DATE EXTRACTED -->	11/16/96		02/12/97					
	DATE ANALYZED --->	11/19/96		02/14/97					
	MATRIX ---------->	Water		Water					
	UNITS ---------->	UG/L		UG/L					
CAS #	Parameter	27551	VAL	28253	VAL				
7429-90-5	Aluminum (Al)	1620.		2020.					
7440-36-0	Antimony (Sb)	3.3	U	2.1	U				
7440-38-2	Arsenic (As)	2.5	U	2.5	U				
7440-39-3	Barium (Ba)	214.		134.	J				
7440-41-7	Beryllium (Be)	0.79	U	0.51	J				
7440-43-9	Cadmium (Cd)	0.5	U	0.5	U				
7440-70-2	Calcium (Ca)	152000.		103000.	J				
7440-47-3	Chromium (Cr)	2.4	J	4.	U				
7440-48-4	Cobalt (Co)	0.9	U	0.9	U				
7440-50-8	Copper (Cu)	1.4	UJ	1.9	J				
7439-89-6	Iron (Fe)	7610.		4600.					
7439-92-1	Lead (Pb)	1.7	U	1.9	J				
7439-95-4	Magnesium (Mg)	149000.		103000.	J				
7439-96-5	Manganese (Mn)	216.		127.	J				
7439-97-6	Mercury (Hg)	0.1	U	0.1	U				
7440-02-0	Nickel (Ni)	1.4	J	5.3	UJ				
7440-09-7	Potassium (K)	47400.	J	45100.					
7782-49-2	Selenium (Se)	2.8	U	2.8	U				
7440-22-4	Silver (Ag)	1.2	U	1.2	U				
7440-23-5	Sodium (Na)	1760000.		1140000.					
7440-28-0	Thallium (Tl)	4.3	UJ	2.7	U				
7440-31-5	Tin (Sn)	2.6	UJ	2.6	U				
7440-62-2	Vanadium (V)	3.4	J	4.2	J				
7440-66-6	Zinc (Zn)	5.3	U	17.1	J				

*** Validation Complete ***

NAVAL BASE CHARLESTON, SOUTH CAROLINA
CHARLESTON ZONE E - QUARTERLY SAMPLING
Fuel Distribution System CAR

SW846-PEST											
		SAMPLE ID ------->	GDE-G-W012-03		GDE-G-W012-04						
		ORIGINAL ID ----->	GDEGW01203		GDEGW01204						
		LAB SAMPLE ID -->	27618.04		28262.10						
		ID FROM REPORT -->	GDEGW01203		GDEGW01204						
		SAMPLE DATE ----->	11/13/96		01/23/97						
		DATE EXTRACTED -->	11/15/96		01/24/97						
		DATE ANALYZED --->	11/21/96		01/28/97						
		MATRIX ---------->	Water		Water						
		UNITS ---------->	UG/L		UG/L						
CAS #	Parameter		27551	VAL	28253	VAL					
319-84-6	alpha-BHC		0.04	U	0.04	U					
319-85-7	beta-BHC		0.04	U	0.04	U					
319-86-8	delta-BHC		0.04	U	0.04	U					
58-89-9	gamma-BHC (Lindane)		0.04	U	0.04	U					
76-44-8	Heptachlor		0.04	U	0.04	U					
309-00-2	Aldrin		0.04	U	0.04	U					
1024-57-3	Heptachlor epoxide		0.04	U	0.04	U					
959-98-8	Endosulfan I		0.04	U	0.04	U					
60-57-1	Dieldrin		0.08	U	0.08	U					
72-55-9	4,4'-DDE		0.08	U	0.08	U					
72-20-8	Endrin		0.08	U	0.08	UJ					
33213-65-9	Endosulfan II		0.08	U	0.08	U					
72-54-8	4,4'-DDD		0.08	U	0.08	U					
1031-07-8	Endosulfan sulfate		0.08	U	0.08	U					
50-29-3	4,4'-DDT		0.08	U	0.08	U					
72-43-5	Methoxychlor		0.38	U	0.38	U					
53494-70-5	Endrin ketone		0.08	U	0.08	U					
7421-93-4	Endrin aldehyde		0.08	U	0.08	U					
5103-71-9	alpha-Chlordane		0.04	U	0.04	U					
5103-74-2	gamma-Chlordane		0.04	U	0.04	U					
8001-35-2	Toxaphene		2.5	U	2.5	U					
12674-11-2	Aroclor-1016		1.	U	1.	U					
11104-28-2	Aroclor-1221		1.	U	1.	U					
11141-16-5	Aroclor-1232		1.	U	1.	U					
53469-21-9	Aroclor-1242		1.	U	1.	U					
12672-29-6	Aroclor-1248		1.	U	1.	U					
11097-69-1	Aroclor-1254		2.	U	2.	U					
11096-82-5	Aroclor-1260		2.	U	2.	U					

*** Validation Complete ***

NAVAL BASE CHARLESTON, SOUTH CAROLINA
CHARLESTON ZONE E - QUARTERLY SAMPLING
Fuel Distribution System CAR

SW846-SVOA									
		SAMPLE ID ------->	GDE-G-W012-03		GDE-G-W012-04				
		ORIGINAL ID ----->	GDEGW01203		GDEGW01204				
		LAB SAMPLE ID --->	27618.04		28262.10				
		ID FROM REPORT -->	GDEGW01203		GDEGW01204				
		SAMPLE DATE ----->	11/13/96		01/23/97				
		DATE EXTRACTED -->	11/15/96		01/24/97				
		DATE ANALYZED --->	12/04/96		01/29/97				
		MATRIX ---------->	Water		Water				
		UNITS ---------->	UG/L		UG/L				
CAS #	Parameter		27551	VAL	28253	VAL			
108-95-2	Phenol		10.	U	10.	U			
111-44-4	bis(2-Chloroethyl)ether		10.	U	10.	U			
95-57-8	2-Chlorophenol		10.	U	10.	U			
541-73-1	1,3-Dichlorobenzene		10.	U	10.	U			
106-46-7	1,4-Dichlorobenzene		10.	U	10.	U			
100-51-6	Benzyl alcohol		10.	U	10.	U			
95-50-1	1,2-Dichlorobenzene		10.	U	10.	U			
95-48-7	2-Methylphenol (o-Cresol)		10.	U	10.	U			
108-60-1	2,2'-oxybis(1-Chloropropane)		10.	U	10.	U			
106-44-5	4-Methylphenol (p-Cresol)		10.	U	10.	U			
621-64-7	N-Nitroso-di-n-propylamine		10.	U	10.	U			
67-72-1	Hexachloroethane		10.	U	10.	U			
98-95-3	Nitrobenzene		10.	U	10.	U			
78-59-1	Isophorone		10.	U	10.	U			
88-75-5	2-Nitrophenol		10.	U	10.	U			
105-67-9	2,4-Dimethylphenol		10.	U	10.	U			
65-85-0	Benzoic acid		50.	UJ	50.	U			
111-91-1	bis(2-Chloroethoxy)methane		10.	U	10.	U			
120-83-2	2,4-Dichlorophenol		10.	U	10.	U			
120-82-1	1,2,4-Trichlorobenzene		10.	U	10.	U			
91-20-3	Naphthalene		10.	U	10.	U			
106-47-8	4-Chloroaniline		10.	U	10.	U			
87-68-3	Hexachlorobutadiene		10.	U	10.	U			
59-50-7	4-Chloro-3-methylphenol		10.	U	10.	U			
91-57-6	2-Methylnaphthalene		10.	U	10.	U			
77-47-4	Hexachlorocyclopentadiene		10.	U	10.	U			
88-06-2	2,4,6-Trichlorophenol		10.	U	10.	U			
95-95-4	2,4,5-Trichlorophenol		50.	U	50.	U			
91-58-7	2-Chloronaphthalene		10.	U	10.	U			
88-74-4	2-Nitroaniline		50.	U	50.	U			
131-11-3	Dimethyl phthalate		10.	U	10.	U			
208-96-8	Acenaphthylene		10.	U	10.	U			
99-09-2	3-Nitroaniline		50.	U	50.	U			
83-32-9	Acenaphthene		10.	UJ	10.	U			
51-28-5	2,4-Dinitrophenol		50.	U	50.	UJ			
100-02-7	4-Nitrophenol		50.	U	50.	U			

*** Validation Complete ***

NAVAL BASE CHARLESTON, SOUTH CAROLINA
CHARLESTON ZONE E - QUARTERLY SAMPLING
Fuel Distribution System CAR

SW846-SVOA									
		SAMPLE ID ------->	GDE-G-W012-03		GDE-G-W012-04				
		ORIGINAL ID ----->	GDEGW01203		GDEGW01204				
		LAB SAMPLE ID --->	27618.04		28262.10				
		ID FROM REPORT -->	GDEGW01203		GDEGW01204				
		SAMPLE DATE ----->	11/13/96		01/23/97				
		DATE EXTRACTED -->	11/15/96		01/24/97				
		DATE ANALYZED --->	12/04/96		01/29/97				
		MATRIX ---------->	Water		Water				
		UNITS ---------->	UG/L		UG/L				
CAS #	Parameter		27551	VAL	28253	VAL			
132-64-9	Dibenzofuran		10.	U	10.	U			
121-14-2	2,4-Dinitrotoluene		10.	U	10.	U			
606-20-2	2,6-Dinitrotoluene		10.	U	10.	U			
84-66-2	Diethylphthalate		10.	U	10.	U			
7005-72-3	4-Chlorophenylphenylether		10.	U	10.	U			
86-73-7	Fluorene		10.	U	10.	U			
100-01-6	4-Nitroaniline		50.	U	50.	U			
534-52-1	2-Methyl-4,6-Dinitrophenol		50.	U	50.	U			
86-30-6	N-Nitrosodiphenylamine		10.	U	10.	U			
101-55-3	4-Bromophenyl-phenylether		10.	U	10.	U			
118-74-1	Hexachlorobenzene		10.	U	10.	U			
87-86-5	Pentachlorophenol		50.	U	50.	U			
85-01-8	Phenanthrene		10.	U	10.	U			
120-12-7	Anthracene		10.	U	10.	U			
84-74-2	Di-n-butylphthalate		10.	U	10.	U			
206-44-0	Fluoranthene		10.	U	10.	U			
129-00-0	Pyrene		10.	U	10.	U			
85-68-7	Butylbenzylphthalate		10.	U	10.	U			
91-94-1	3,3'-Dichlorobenzidine		20.	U	20.	U			
56-55-3	Benzo(a)anthracene		10.	U	10.	U			
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)		10.	U	10.	U			
218-01-9	Chrysene		10.	U	10.	U			
117-84-0	Di-n-octyl phthalate		10.	U	10.	U			
205-99-2	Benzo(b)fluoranthene		10.	U	10.	U			
207-08-9	Benzo(k)fluoranthene		10.	U	10.	U			
50-32-8	Benzo(a)pyrene		10.	U	10.	U			
193-39-5	Indeno(1,2,3-cd)pyrene		10.	U	10.	U			
53-70-3	Dibenz(a,h)anthracene		10.	U	10.	U			
191-24-2	Benzo(g,h,i)perylene		10.	U	10.	U			

*** Validation Complete ***

NAVAL BASE CHARLESTON, SOUTH CAROLINA
CHARLESTON ZONE E - QUARTERLY SAMPLING
Fuel Distribution System CAR

SW846-VOA									
		SAMPLE ID ------>	GDE-G-W012-03		GDE-G-W012-04				
		ORIGINAL ID ----->	GDEGW01203		GDEGW01204				
		LAB SAMPLE ID --->	27618.04		28262.10				
		ID FROM REPORT -->	GDEGW01203		GDEGW01204				
		SAMPLE DATE ----->	11/13/96		01/23/97				
		DATE ANALYZED --->	11/15/96		01/27/97				
		MATRIX ---------->	Water		Water				
		UNITS ---------->	UG/L		UG/L				
CAS #	Parameter		27551	VAL	28253	VAL			
74-87-3	Chloromethane		10.	U	10.	U			
74-83-9	Bromomethane		10.	U	10.	U			
75-01-4	Vinyl chloride		10.	U	10.	U			
75-00-3	Chloroethane		10.	U	10.	U			
75-09-2	Methylene chloride		5.	U	5.	U			
67-64-1	Acetone		17.	U	10.	U			
75-15-0	Carbon disulfide		5.	U	5.	U			
75-35-4	1,1-Dichloroethene		5.	U	5.	U			
75-34-3	1,1-Dichloroethane		5.	U	5.	U			
540-59-0	1,2-Dichloroethene (total)		5.	U	5.	U			
67-66-3	Chloroform		5.	U	5.	U			
107-06-2	1,2-Dichloroethane		5.	U	5.	U			
78-93-3	2-Butanone (MEK)		10.	U	10.	U			
71-55-6	1,1,1-Trichloroethane		5.	U	5.	U			
56-23-5	Carbon tetrachloride		5.	U	5.	U			
108-05-4	Vinyl acetate		10.	UJ	10.	UJ			
75-27-4	Bromodichloromethane		5.	U	5.	U			
79-34-5	1,1,2,2-Tetrachloroethane		5.	U	5.	U			
78-87-5	1,2-Dichloropropane		5.	U	5.	U			
10061-02-6	trans-1,3-Dichloropropene		5.	U	5.	U			
79-01-6	Trichloroethene		5.	U	5.	U			
124-48-1	Dibromochloromethane		5.	U	5.	U			
79-00-5	1,1,2-Trichloroethane		5.	U	5.	U			
71-43-2	Benzene		5.	U	5.	U			
10061-01-5	cis-1,3-Dichloropropene		5.	U	5.	U			
110-75-8	2-Chloroethyl vinyl ether		10.	UR	10.	U			
75-25-2	Bromoform		5.	U	5.	U			
591-78-6	2-Hexanone		10.	U	10.	U			
108-10-1	4-Methyl-2-Pentanone (MIBK)		10.	U	10.	U			
127-18-4	Tetrachloroethene		5.	U	5.	U			
108-88-3	Toluene		5.	U	5.	U			
108-90-7	Chlorobenzene		5.	U	5.	U			
100-41-4	Ethylbenzene		5.	U	5.	U			
100-42-5	Styrene		5.	U	5.	U			
1330-20-7	Xylene (Total)		5.	U	5.	U			

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

APX9 HERB													
	SAMPLE ID ------->	FDS-H-W01D-01		FDS-H-W02A-01		FDS-H-W08C-01		FDS-H-W09B-01		FDS-H-W11C-01		FDS-H-W12A-01	
	ORIGINAL ID ----->	FDSHW01D01		FDSHW02A01		FDSHW08C01		FDSHW09B01		FDSHW11C01		FDSHW12A01	
	LAB SAMPLE ID --->	28186.01		28189.01		28280.01		28228.02		28309.01		28296.02	
	ID FROM REPORT -->	FDSHW01D01		FDSHW02A01		FDSHW08C01		FDSHW09B01		FDSHW11C01		FDSHW12A01	
	SAMPLE DATE ----->	01/14/97		01/16/97		01/24/97		01/21/97		01/28/97		01/27/97	
	DATE EXTRACTED -->	01/17/97		01/17/97		01/27/97		01/23/97		01/29/97		01/29/97	
	DATE ANALYZED --->	01/21/97		01/21/97		01/29/97		01/24/97		01/31/97		01/31/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28185	VAL	28185	VAL	28249	VAL	28217	VAL	28308	VAL	28249	VAL
94-75-7	2,4-D	2.9	U	2.9	U	2.9	U	2.9	U	2.9	U	2.9	U
93-72-1	2,4,5-TP (Silvex)	0.97	U	0.97	U	0.97	U	0.97	U	0.97	U	0.97	U
93-76-5	2,4,5-T	1.3	U	1.3	U	1.3	U	1.3	U	1.3	U	1.3	U
88-85-7	Dinoseb	1.7	U	1.7	U	1.7	U	1.7	U	1.7	U	1.7	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

APX9 PEST													
	SAMPLE ID ------->	FDS-H-W01D-01		FDS-H-W02A-01		FDS-H-W08C-01		FDS-H-W09B-01		FDS-H-W11C-01		FDS-H-W12A-01	
	ORIGINAL ID ----->	FDSHW01D01		FDSHW02A01		FDSHW08C01		FDSHW09B01		FDSHW11C01		FDSHW12A01	
	LAB SAMPLE ID --->	28186.01		28189.01		28280.01		28228.02		28309.01		28296.02	
	ID FROM REPORT -->	FDSHW01D01		FDSHW02A01		FDSHW08C01		FDSHW09B01		FDSHW11C01		FDSHW12A01	
	SAMPLE DATE ----->	01/14/97		01/16/97		01/24/97		01/21/97		01/28/97		01/27/97	
	DATE EXTRACTED -->	01/18/97		01/18/97		01/27/97		01/22/97		01/29/97		01/28/97	
	DATE ANALYZED --->	01/22/97		01/22/97		01/28/97		01/25/97		01/31/97		01/29/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28185	VAL	28185	VAL	28249	VAL	28217	VAL	28308	VAL	28249	VAL
319-84-6	alpha-BHC	0.04	U	0.04	UJ	0.04	UJ	0.04	U	0.04	U	0.04	U
319-85-7	beta-BHC	0.04	U	0.04	UJ	0.04	UJ	0.04	U	0.04	U	0.04	U
319-86-8	delta-BHC	0.04	U	0.04	UJ	0.04	UJ	0.04	U	0.04	U	0.04	U
58-89-9	gamma-BHC (Lindane)	0.04	U	0.04	UJ	0.04	UJ	0.04	U	0.04	U	0.04	U
76-44-8	Heptachlor	0.04	U	0.04	UJ	0.04	UJ	0.04	U	0.04	U	0.04	U
309-00-2	Aldrin	0.04	U	0.04	UJ	0.04	UJ	0.04	U	0.04	U	0.04	U
1024-57-3	Heptachlor epoxide	0.04	U	0.04	UJ	0.04	UJ	0.04	U	0.04	U	0.04	U
959-98-8	Endosulfan I	0.04	U	0.04	UJ	0.04	UJ	0.04	U	0.04	U	0.04	U
60-57-1	Dieldrin	0.08	U	0.08	UJ	0.08	UJ	0.08	U	0.08	U	0.08	U
72-55-9	4,4'-DDE	0.08	U	0.08	UJ	0.08	UJ	0.08	U	0.08	U	0.08	U
72-20-8	Endrin	0.08	U	0.08	UJ	0.08	UJ	0.08	U	0.08	U	0.08	U
33213-65-9	Endosulfan II	0.08	U	0.08	UJ	0.08	UJ	0.08	U	0.08	U	0.08	U
72-54-8	4,4'-DDD	0.08	U	0.08	UJ	0.08	UJ	0.08	U	0.08	U	0.08	U
1031-07-8	Endosulfan sulfate	0.08	U	0.08	UJ	0.08	UJ	0.08	U	0.08	U	0.08	U
50-29-3	4,4'-DDT	0.08	U	0.08	UJ	0.08	UJ	0.08	U	0.08	U	0.08	U
72-43-5	Methoxychlor	0.38	U	0.38	UJ	0.38	UJ	0.38	U	0.38	U	0.38	U
53494-70-5	Endrin ketone	0.08	U	0.08	UJ	0.08	UJ	0.08	U	0.08	U	0.08	U
7421-93-4	Endrin aldehyde	0.08	U	0.08	UJ	0.08	UJ	0.08	U	0.08	U	0.08	U
5103-71-9	alpha-Chlordane	0.04	U	0.04	UJ	0.04	UJ	0.04	U	0.04	U	0.04	U
5103-74-2	gamma-Chlordane	0.04	U	0.04	UJ	0.04	UJ	0.04	U	0.04	U	0.04	U
8001-35-2	Toxaphene	2.5	U	2.5	UJ	2.5	UJ	2.5	U	2.5	U	2.5	U
12674-11-2	Aroclor-1016	1.	U	1.	UJ	1.	UJ	1.	U	1.	U	1.	U
11104-28-2	Aroclor-1221	1.	U	1.	UJ	1.	UJ	1.	U	1.	U	1.	U
11141-16-5	Aroclor-1232	1.	U	1.	UJ	1.	UJ	1.	U	1.	U	1.	U
53469-21-9	Aroclor-1242	1.	U	1.	UJ	1.	UJ	1.	U	1.	U	1.	U
12672-29-6	Aroclor-1248	1.	U	1.	UJ	1.	UJ	1.	U	1.	U	1.	U
11097-69-1	Aroclor-1254	2.	U	2.	UJ	2.	UJ	2.	U	2.	U	2.	U
11096-82-5	Aroclor-1260	2.	U	2.	UJ	2.	UJ	2.	U	2.	U	2.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

APX9 SVOA																	
		SAMPLE ID ------->	FDS-H-W01D-01		FDS-H-W02A-01		FDS-H-W08C-01		FDS-H-W09B-01		FDS-H-W11C-01		FDS-H-W12A-01	
		ORIGINAL ID ----->	FDSHW01D01		FDSHW02A01		FDSHW08C01		FDSHW09B01		FDSHW11C01		FDSHW12A01	
		LAB SAMPLE ID --->	28186.01		28189.01		28280.01		28228.02		28309.01		28296.02	
		ID FROM REPORT -->	FDSHW01D01		FDSHW02A01		FDSHW08C01		FDSHW09B01		FDSHW11C01		FDSHW12A01	
		SAMPLE DATE ----->	01/14/97		01/16/97		01/24/97		01/21/97		01/28/97		01/27/97	
		DATE EXTRACTED -->	01/18/97		01/18/97		01/27/97		01/22/97		01/29/97		02/03/97	
		DATE ANALYZED --->	01/21/97		01/21/97		01/28/97		01/24/97		01/30/97		02/04/97	
		MATRIX ---------->	Water		Water		Water		Water		Water		Water	
		UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter		28185	VAL	28185	VAL	28249	VAL	28217	VAL	28308	VAL	28249	VAL
108-95-2	Phenol		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
111-44-4	bis(2-Chloroethyl)ether		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-57-8	2-Chlorophenol		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
541-73-1	1,3-Dichlorobenzene		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-46-7	1,4-Dichlorobenzene		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
100-51-6	Benzyl alcohol		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-50-1	1,2-Dichlorobenzene		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-48-7	2-Methylphenol (o-Cresol)		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
108-60-1	2,2'-oxybis(1-Chloropropane)		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-44-5	4-Methylphenol (p-Cresol)		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
621-64-7	N-Nitroso-di-n-propylamine		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
67-72-1	Hexachloroethane		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
98-95-3	Nitrobenzene		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
78-59-1	Isophorone		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-75-5	2-Nitrophenol		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
105-67-9	2,4-Dimethylphenol		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
111-91-1	bis(2-Chloroethoxy)methane		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
120-83-2	2,4-Dichlorophenol		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
120-82-1	1,2,4-Trichlorobenzene		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-20-3	Naphthalene		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-47-8	4-Chloroaniline		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
87-68-3	Hexachlorobutadiene		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
59-50-7	4-Chloro-3-methylphenol		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-57-6	2-Methylnaphthalene		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
77-47-4	Hexachlorocyclopentadiene		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-06-2	2,4,6-Trichlorophenol		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-95-4	2,4,5-Trichlorophenol		50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
91-58-7	2-Chloronaphthalene		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-74-4	2-Nitroaniline		50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
131-11-3	Dimethyl phthalate		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
208-96-8	Acenaphthylene		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
606-20-2	2,6-Dinitrotoluene		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
99-09-2	3-Nitroaniline		50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
83-32-9	Acenaphthene		4.	J	10.	U	10.	U	10.	U	10.	U	10.	U
51-28-5	2,4-Dinitrophenol		50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
100-02-7	4-Nitrophenol		50.	U	50.	U	50.	U	50.	U	50.	U	50.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

APX9 SVOA															
	SAMPLE ID ------->	FDS-H-W01D-01		FDS-H-W02A-01		FDS-H-W08C-01		FDS-H-W09B-01		FDS-H-W11C-01		FDS-H-W12A-01	
	ORIGINAL ID ----->	FDSHW01D01		FDSHW02A01		FDSHW08C01		FDSHW09B01		FDSHW11C01		FDSHW12A01	
	LAB SAMPLE ID --->	28186.01		28189.01		28280.01		28228.02		28309.01		28296.02	
	ID FROM REPORT -->	FDSHW01D01		FDSHW02A01		FDSHW08C01		FDSHW09B01		FDSHW11C01		FDSHW12A01	
	SAMPLE DATE ----->	01/14/97		01/16/97		01/24/97		01/21/97		01/28/97		01/27/97	
	DATE EXTRACTED -->	01/18/97		01/18/97		01/27/97		01/22/97		01/29/97		02/03/97	
	DATE ANALYZED --->	01/21/97		01/21/97		01/28/97		01/24/97		01/30/97		02/04/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28185	VAL	28185	VAL	28249	VAL	28217	VAL	28308	VAL	28249	VAL
132-64-9	Dibenzofuran	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
84-66-2	Diethylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
7005-72-3	4-Chlorophenylphenylether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
86-73-7	Fluorene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
100-01-6	4-Nitroaniline	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
86-30-6	N-Nitrosodiphenylamine	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
118-74-1	Hexachlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
87-86-5	Pentachlorophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
85-01-8	Phenanthrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
120-12-7	Anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
86-74-8	Carbazole	10.	UR	10.	UR	10.	UR	10.	UR	10.	UR	10.	UR
84-74-2	Di-n-butylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
206-44-0	Fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
129-00-0	Pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
85-68-7	Butylbenzylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U	20.	U	20.	U	20.	U	20.	U	20.	U
56-55-3	Benzo(a)anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
218-01-9	Chrysene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	10.	U	1.	J	10.	U	10.	U	10.	U	10.	U
117-84-0	Di-n-octyl phthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
50-32-8	Benzo(a)pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
193-39-5	Indeno(1,2,3-cd)pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
53-70-3	Dibenz(a,h)anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
191-24-2	Benzo(g,h,i)perylene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
110-86-1	Pyridine	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
62-75-9	N-Nitrosodimethylamine	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
66-27-3	Methyl methanesulfonate	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
62-53-3	Aniline	10.	U	10.	U	10.	U	10.	U	5.	J	10.	U
10595-95-6	N-Nitrosomethylethylamine	10.	U	10.	U	10.	U	10.	U	10.	UJ	10.	U
924-16-3	N-Nitroso-di-n-butylamine	10.	U	10.	U	10.	U	10.	U	10.	UJ	10.	UJ
55-18-5	N-Nitrosodiethylamine	10.	U	10.	U	10.	UJ	10.	U	10.	UJ	10.	UJ

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

APX9 SVOA																	
		SAMPLE ID ------->	FDS-H-W01D-01		FDS-H-W02A-01		FDS-H-W08C-01		FDS-H-W09B-01		FDS-H-W11C-01		FDS-H-W12A-01	
		ORIGINAL ID ----->	FDSHW01D01		FDSHW02A01		FDSHW08C01		FDSHW09B01		FDSHW11C01		FDSHW12A01	
		LAB SAMPLE ID --->	28186.01		28189.01		28280.01		28228.02		28309.01		28296.02	
		ID FROM REPORT -->	FDSHW01D01		FDSHW02A01		FDSHW08C01		FDSHW09B01		FDSHW11C01		FDSHW12A01	
		SAMPLE DATE ----->	01/14/97		01/16/97		01/24/97		01/21/97		01/28/97		01/27/97	
		DATE EXTRACTED -->	01/18/97		01/18/97		01/27/97		01/22/97		01/29/97		02/03/97	
		DATE ANALYZED --->	01/21/97		01/21/97		01/28/97		01/24/97		01/30/97		02/04/97	
		MATRIX ---------->	Water		Water		Water		Water		Water		Water	
		UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter		28185	VAL	28185	VAL	28249	VAL	28217	VAL	28308	VAL	28249	VAL
62-50-0	Ethyl methanesulfonate		10.	U	10.	U	10.	UJ	10.	U	10.	U	10.	U
109-06-8	2-Picoline		10.	UJ	10.	UJ	10.	UJ	10.	UJ	10.	U	10.	UJ
98-86-2	Acetophenone		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
930-55-2	N-Nitrosopyrrolidine		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
108-39-4	3-Methylphenol (m-Cresol)		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
59-89-2	N-Nitrosomorpholine		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-53-4	o-Toluidine		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
119-93-7	3,3-Dimethylbenzidine		10.	UJ	10.	UJ	10.	U	10.	UJ	10.	U	10.	U
96-12-8	1,2-Dibromo-3-Chloropropane		10.	UR	10.	UR	10.	UR	10.	UR	10.	UR	10.	UR
100-75-4	N-Nitrosopiperidine		10.	U	10.	U	10.	UJ	10.	U	10.	UJ	10.	UJ
126-68-1	O,O,O-Triethylphosphorothioate		10.	UJ	10.	UJ	10.	UJ	10.	U	10.	UJ	10.	U
122-09-8	a,a-Dimethylphenethylamine		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
87-65-0	2,6-Dichlorophenol		10.	U	10.	U	10.	UJ	10.	U	10.	UJ	10.	U
1888-71-7	Hexachloropropene		10.	UJ	10.	UJ	10.	UJ	10.	UJ	10.	U	10.	U
106-50-3	p-Phenylenediamine		50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
95-94-3	1,2,4,5-Tetrachlorobenzene		10.	UJ	10.	UJ	10.	UJ	10.	UJ	10.	UJ	10.	U
94-59-7	Safrole		10.	UJ	10.	UJ	10.	UJ	10.	UJ	10.	UJ	10.	UJ
120-58-1	Isosafrole		10.	UJ	10.	UJ	10.	UJ	10.	UJ	10.	UJ	10.	U
130-15-4	1,4-Naphthoquinone		10.	U	10.	U	10.	U	10.	U	10.	UJ	10.	U
99-65-0	1,3-Dinitrobenzene		10.	UJ	10.	UJ	10.	U	10.	U	10.	U	10.	UJ
58-90-2	2,3,4,6-Tetrachlorophenol		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
608-93-5	Pentachlorobenzene		10.	UJ	10.	UJ	10.	UJ	10.	UJ	10.	UJ	10.	U
134-32-7	1-Naphthylamine		10.	UJ	10.	UJ	10.	UJ	10.	UJ	10.	UJ	10.	UJ
56-57-5	4-Nitroquinoline 1-oxide		50.	U	50.	U	50.	UJ	50.	U	50.	U	50.	UR
91-59-8	2-Naphthylamine		10.	UJ	10.	UJ	10.	UJ	10.	UJ	10.	UJ	10.	UJ
297-97-2	Thionazin		20.	UJ	20.	UJ	20.	UJ	20.	U	20.	U	20.	U
99-55-8	5-Nitro-o-toluidine		10.	UJ	10.	UJ	10.	UJ	10.	UJ	10.	UJ	10.	UJ
122-39-4	Diphenylamine		10.	UJ	10.	UJ	10.	UJ	10.	UJ	10.	UJ	10.	UJ
3689-24-5	Sulfotep		20.	UR	20.	UR	20.	UJ	20.	U	20.	U	20.	UJ
99-35-4	1,3,5-Trinitrobenzene		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
298-02-2	Phorate		10.	UJ	10.	UJ	10.	UJ	10.	U	10.	U	10.	UJ
62-44-2	Phenacetin		10.	UJ	10.	UJ	10.	U	10.	UJ	10.	U	10.	UJ
2303-16-4	Diallate		10.	U	10.	U	10.	U	10.	U	10.	U	10.	UJ
60-51-5	Dimethoate		10.	UJ	10.	UJ	10.	UJ	10.	U	10.	U	10.	UJ
92-67-1	4-Aminobiphenyl		10.	UJ	10.	UJ	10.	UJ	10.	UJ	10.	UJ	10.	UJ
23950-58-5	Pronamide		10.	UJ	10.	UJ	10.	UJ	10.	UJ	10.	UJ	10.	UJ

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

APX9 SVOA													
	SAMPLE ID ------->	FDS-H-W01D-01		FDS-H-W02A-01		FDS-H-W08C-01		FDS-H-W09B-01		FDS-H-W11C-01		FDS-H-W12A-01	
	ORIGINAL ID ----->	FDSHW01D01		FDSHW02A01		FDSHW08C01		FDSHW09B01		FDSHW11C01		FDSHW12A01	
	LAB SAMPLE ID --->	28186.01		28189.01		28280.01		28228.02		28309.01		28296.02	
	ID FROM REPORT -->	FDSHW01D01		FDSHW02A01		FDSHW08C01		FDSHW09B01		FDSHW11C01		FDSHW12A01	
	SAMPLE DATE ----->	01/14/97		01/16/97		01/24/97		01/21/97		01/28/97		01/27/97	
	DATE EXTRACTED -->	01/18/97		01/18/97		01/27/97		01/22/97		01/29/97		02/03/97	
	DATE ANALYZED --->	01/21/97		01/21/97		01/28/97		01/24/97		01/30/97		02/04/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28185	VAL	28185	VAL	28249	VAL	28217	VAL	28308	VAL	28249	VAL
82-68-8	Pentachloronitrobenzene	50.	UR	50.	UR	50.	UJ	50.	UJ	50.	UJ	50.	UJ
298-04-4	Disulfoton	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-85-7	Dinoseb	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
298-00-0	Methyl parathion	20.	UJ	20.	UJ	20.	UJ	20.	U	20.	U	20.	UJ
56-38-2	Parathion	20.	UJ	20.	UJ	20.	UJ	20.	U	20.	UJ	20.	UJ
91-80-5	Methapyrilene	20.	U	20.	U	20.	U	20.	U	20.	U	20.	U
465-73-6	Isodrin	20.	U	20.	U	20.	UJ	20.	U	20.	UJ	20.	U
140-57-8	Aramite	50.	UR	50.	UR	50.	UR	50.	UR	50.	UR	50.	UR
60-11-7	p-(Dimethylamino)azobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
510-15-6	Chlorobenzilate	10.	UJ	10.	UJ	10.	U	10.	U	10.	U	10.	U
143-50-0	Kepone	50.	U	50.	U	50.	UJ	50.	U	50.	UJ	50.	U
52-85-7	Famphur	10.	UR	10.	UR	10.	UJ	10.	UR	10.	U	10.	UJ
53-96-3	Acetamidofluorene	10.	UJ	10.	UJ	10.	U	10.	UJ	10.	U	10.	U
57-97-6	7,12-Dimethylbenz(a)anthracene	50.	UJ	50.	UJ	10.	U	10.	UJ	10.	U	10.	U
70-30-4	Hexachlorophene	200.	U	200.	U	200.	UR	200.	UR	200.	UR	200.	UR
56-49-5	3-Methyl cholanthrene	10.	UR	10.	UR	10.	UR	10.	UR	10.	UR	10.	UR

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

APX9 VOA															
		SAMPLE ID ------->	FDS-H-W01D-01		FDS-H-W02A-01		FDS-H-W08C-01		FDS-H-W09B-01		FDS-H-W11C-01		FDS-H-W12A-01		
		ORIGINAL ID ----->	FDSHW01D01		FDSHW02A01		FDSHW08C01		FDSHW09B01		FDSHW11C01		FDSHW12A01		
		LAB SAMPLE ID --->	28186.01		28189.01		28280.01		28228.02		28309.01		28296.02		
		ID FROM REPORT -->	FDSHW01D01		FDSHW02A01		FDSHW08C01		FDSHW09B01		FDSHW11C01		FDSHW12A01		
		SAMPLE DATE ----->	01/14/97		01/16/97		01/24/97		01/21/97		01/28/97		01/27/97		
		DATE ANALYZED --->	01/21/97		01/21/97		01/27/97		01/23/97		01/30/97		01/29/97		
		MATRIX ---------->	Water		Water		Water		Water		Water		Water		
		UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L		
CAS #	Parameter		28185	VAL	28185	VAL	28249	VAL	28217	VAL	28308	VAL	28249	VAL	
74-87-3	Chloromethane		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U	
74-83-9	Bromomethane		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U	
75-01-4	Vinyl chloride		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U	
75-00-3	Chloroethane		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U	
75-09-2	Methylene chloride		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
67-64-1	Acetone		5.	U	8.	U	14.	U	10.	U	11.	U	7.	U	
75-15-0	Carbon disulfide		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
75-35-4	1,1-Dichloroethene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
75-34-3	1,1-Dichloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
540-59-0	1,2-Dichloroethene (total)		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
67-66-3	Chloroform		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
107-06-2	1,2-Dichloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
78-93-3	2-Butanone (MEK)		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U	
71-55-6	1,1,1-Trichloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
56-23-5	Carbon tetrachloride		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
75-27-4	Bromodichloromethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
78-87-5	1,2-Dichloropropane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
10061-01-5	cis-1,3-Dichloropropene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
79-01-6	Trichloroethene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
124-48-1	Dibromochloromethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
79-00-5	1,1,2-Trichloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
71-43-2	Benzene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
10061-02-6	trans-1,3-Dichloropropene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
75-25-2	Bromoform		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
108-10-1	4-Methyl-2-Pentanone (MIBK)		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U	
591-78-6	2-Hexanone		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U	
127-18-4	Tetrachloroethene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
79-34-5	1,1,2,2-Tetrachloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
108-88-3	Toluene		5.	U	5.	U	5.	U	5.	U	1.	J	5.	U	
108-90-7	Chlorobenzene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
100-41-4	Ethylbenzene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
100-42-5	Styrene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
1330-20-7	Xylene (Total)		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
108-05-4	Vinyl acetate		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U	
110-75-8	2-Chloroethyl vinyl ether		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U	
107-02-8	Acrolein		50.	U	50.	U	50.	UR	50.	U	50.	UJ	50.	U	
74-88-4	Methyl iodide		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

APX9 VOA													
		SAMPLE ID ------->	FDS-H-W01D-01		FDS-H-W02A-01		FDS-H-W08C-01		FDS-H-W09B-01		FDS-H-W11C-01		FDS-H-W12A-01
		ORIGINAL ID ----->	FDSHW01D01		FDSHW02A01		FDSHW08C01		FDSHW09B01		FDSHW11C01		FDSHW12A01
		LAB SAMPLE ID --->	28186.01		28189.01		28280.01		28228.02		28309.01		28296.02
		ID FROM REPORT -->	FDSHW01D01		FDSHW02A01		FDSHW08C01		FDSHW09B01		FDSHW11C01		FDSHW12A01
		SAMPLE DATE ----->	01/14/97		01/16/97		01/24/97		01/21/97		01/28/97		01/27/97
		DATE ANALYZED --->	01/21/97		01/21/97		01/27/97		01/23/97		01/30/97		01/29/97
		MATRIX ---------->	Water		Water		Water		Water		Water		Water
		UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L
CAS #	Parameter		28185	VAL	28185	VAL	28249	VAL	28217	VAL	28308	VAL	28249	VAL
76-01-7	Pentachloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
107-05-1	3-Chloropropene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
126-99-8	Chloroprene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
110-57-6	trans-1,4-Dichloro-2-butene		5.	U	5.	U	5.	U	5.	UJ	5.	U	5.	UR
75-05-8	Acetonitrile		200.	UR	200.	UR	200.	UR	200.	UR	200.	UR	200.	UR
107-13-1	Acrylonitrile		50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
107-12-0	Propionitrile		100.	U	100.	U	100.	U	100.	U	100.	U	100.	U
126-98-7	Methacrylonitrile		100.	U	100.	U	100.	U	100.	U	100.	U	100.	U
78-83-1	Isobutyl alcohol		200.	UR	200.	UR	200.	UR	200.	UR	200.	UR	200.	UR
123-91-1	1,4-Dioxane		500.	UR	500.	UR	500.	UR	500.	UR	500.	UR	500.	UR
80-62-6	Methyl methacrylate		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
97-63-2	Ethyl methacrylate		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
106-93-4	1, 2-Dibromoethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
630-20-6	1,1,1,2-Tetrachloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
96-18-4	1,2,3-Trichloropropane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-71-8	Dichlorodifluoromethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-69-4	Trichlorofluoromethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
74-95-3	Methylene bromide		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
96-12-8	1,2-Dibromo-3-Chloropropane		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

CYANIDE																	
	SAMPLE ID ------->	FDS-G-W01A-01		FDS-G-W01B-01		FDS-G-W01C-01		FDS-G-W01D-01		FDS-H-W01D-01		FDS-G-W01E-01	
	ORIGINAL ID ----->	FDSGW01A01		FDSGW01B01		FDSGW01C01		FDSGW01D01		FDSHW01D01		FDSGW01E01	
	LAB SAMPLE ID --->	28174.01		28174.02		28174.05		28185.02		28186.01		28328.01	
	ID FROM REPORT -->	FDSGW01A01		FDSGW01B01		FDSGW01C01		FDSGW01D01		FDSHW01D01		FDSGW01E01	
	SAMPLE DATE ----->	01/14/97		01/14/97		01/14/97		01/14/97		01/14/97		01/29/97	
	DATE EXTRACTED -->	01/16/97		01/16/97		01/16/97		01/20/97		01/20/97		01/31/97	
	DATE ANALYZED --->	01/16/97		01/20/97		01/16/97		01/21/97		01/21/97		02/01/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28134	VAL	28134	VAL	28134	VAL	28185	VAL	28185	VAL	28308	VAL
57-12-5	Cyanide (CN)	6.	J	2.	UJ	3.1	UJ	2.	U	3.6	J	3.9	J

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

CYANIDE													
	SAMPLE ID ------->	FDS-G-W02A-01		FDS-H-W02A-01		FDS-G-W02B-01		FDS-G-W02C-01		FDS-G-W03A-01		FDS-G-W03B-01	
	ORIGINAL ID ----->	FDSGW02A01		FDSHW02A01		FDSGW02B01		FDSGW02C01		FDSGW03A01		FDSGW03B01	
	LAB SAMPLE ID --->	28190.02		28189.01		28223.10		28190.01		28223.01		28185.05	
	ID FROM REPORT -->	FDSGW02A01		FDSHW02A01		FDSGW02B01		FDSGW02C01		FDSGW03A01		FDSGW03B01	
	SAMPLE DATE ----->	01/16/97		01/16/97		01/19/97		01/16/97		01/19/97		01/15/97	
	DATE EXTRACTED -->	01/20/97		01/20/97		01/24/97		01/20/97		01/24/97		01/20/97	
	DATE ANALYZED --->	01/21/97		01/21/97		01/26/97		01/21/97		01/26/97		01/21/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28185	VAL	28185	VAL	28217	VAL	28185	VAL	28217	VAL	28185	VAL
57-12-5	Cyanide (CN)	2.	U	2.	U	2.	U	2.5	J	2.	U	2.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

CYANIDE																	
	SAMPLE ID ------->	FDS-G-W03C-01		FDS-G-W04A-01		FDS-G-W04B-01		FDS-G-W04C-01		FDS-G-W05A-01		FDS-G-W05B-01	
	ORIGINAL ID ----->	FDSGW03C01		FDSGW04A01		FDSGW04B01		FDSGW04C01		FDSGW05A01		FDSGW05B01	
	LAB SAMPLE ID --->	28185.04		28223.07		28223.08		28223.09		28223.03		28209.04	
	ID FROM REPORT -->	FDSGW03C01		FDSGW04A01		FDSGW04B01		FDSGW04C01		FDSGW05A01		FDSGW05B01	
	SAMPLE DATE ----->	01/15/97		01/20/97		01/20/97		01/20/97		01/19/97		01/17/97	
	DATE EXTRACTED -->	01/20/97		01/24/97		01/24/97		01/24/97		01/24/97		01/20/97	
	DATE ANALYZED --->	01/21/97		01/26/97		01/26/97		01/26/97		01/26/97		01/21/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28185	VAL	28217	VAL	28217	VAL	28217	VAL	28217	VAL	28185	VAL
57-12-5	Cyanide (CN)	2.7	J	2.8	J	3.3	J	2.	U	2.5	J	3.	J

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

CYANIDE													
	SAMPLE ID ------->	FDS-G-W06A-01		FDS-G-W06B-01		FDS-G-W06C-01		FDS-G-W07A-01		FDS-G-W07B-01		FDS-G-W07C-01	
	ORIGINAL ID ----->	FDSGW06A01		FDSGW06B01		FDSGW06C01		FDSGW07A01		FDSGW07B01		FDSGW07C01	
	LAB SAMPLE ID --->	28223.02		28223.05		28223.06		28343.01		28209.01		28209.02	
	ID FROM REPORT -->	FDSGW06A01		FDSGW06B01		FDSGW06C01		FDSGW07A01		FDSGW07B01		FDSGW07C01	
	SAMPLE DATE ----->	01/18/97		01/20/97		01/20/97		01/29/97		01/17/97		01/17/97	
	DATE EXTRACTED -->	01/24/97		01/24/97		01/24/97		02/05/97		01/20/97		01/20/97	
	DATE ANALYZED --->	01/26/97		01/26/97		01/26/97		02/06/97		01/21/97		01/21/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28217	VAL	28217	VAL	28217	VAL	28308	VAL	28185	VAL	28185	VAL
57-12-5	Cyanide (CN)	4.3	J	4.	J	10.1		2.5	J	2.8	J	2.	J

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

CYANIDE																	
	SAMPLE ID ------->	FDS-G-W07D-01		FDS-G-W08A-01		FDS-G-W08B-01		FDS-G-W08C-01		FDS-H-W08C-01		FDS-G-W09A-01	
	ORIGINAL ID ----->	FDSGW07D01		FDSGW08A01		FDSGW08B01		FDSGW08C01		FDSHW08C01		FDSGW09A01	
	LAB SAMPLE ID --->	28279.01		28279.02		28295.10		28279.03		28280.01		28227.06	
	ID FROM REPORT -->	FDSGW07D01		FDSGW08A01		FDSGW08B01		FDSGW08C01		FDSHW08C01		FDSGW09A01	
	SAMPLE DATE ----->	01/24/97		01/24/97		01/25/97		01/24/97		01/24/97		01/21/97	
	DATE EXTRACTED -->	01/28/97		01/28/97		01/29/97		01/28/97		01/28/97		01/24/97	
	DATE ANALYZED --->	01/29/97		01/29/97		01/30/97		01/29/97		01/29/97		01/26/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28249	VAL	28249	VAL	28249	VAL	28249	VAL	28249	VAL	28217	VAL
57-12-5	Cyanide (CN)	2.4	J	2.	U	2.	U	2.	U	2.	U	10.9	

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

CYANIDE	SAMPLE ID ------->	FDS-G-W09B-01		FDS-H-W09B-01		FDS-G-W09C-01		FDS-G-W10A-01		FDS-G-W10B-01		FDS-G-W10C-01	
	ORIGINAL ID ----->	FDSGW09B01		FDSHW09B01		FDSGW09C01		FDSGW10A01		FDSGW10B01		FDSGW10C01	
	LAB SAMPLE ID --->	28227.08		28228.02		28227.07		28227.01		28227.02		28227.03	
	ID FROM REPORT -->	FDSGW09B01		FDSHW09B01		FDSGW09C01		FDSGW10A01		FDSGW10B01		FDSGW10C01	
	SAMPLE DATE ----->	01/21/97		01/21/97		01/21/97		01/21/97		01/21/97		01/21/97	
	DATE EXTRACTED -->	01/24/97		01/24/97		01/24/97		01/24/97		01/24/97		01/24/97	
	DATE ANALYZED --->	01/26/97		01/26/97		01/26/97		01/26/97		01/26/97		01/26/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28217	VAL	28217	VAL	28217	VAL	28217	VAL	28217	VAL	28217	VAL
57-12-5	Cyanide (CN)	2.	U	2.	U	16.7		2.	U	3.8	J	8.1	J

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

CYANIDE													
	SAMPLE ID ------->	FDS-G-W11A-01		FDS-G-W11B-01		FDS-G-W11C-01		FDS-H-W11C-01		FDS-G-W12A-01		FDS-H-W12A-01	
	ORIGINAL ID ----->	FDSGW11A01		FDSGW11B01		FDSGW11C01		FDSHW11C01		FDSGW12A01		FDSHW12A01	
	LAB SAMPLE ID --->	28308.07		28308.08		28308.09		28309.01		28295.05		28296.02	
	ID FROM REPORT -->	FDSGW11A01		FDSGW11B01		FDSGW11C01		FDSHW11C01		FDSGW12A01		FDSHW12A01	
	SAMPLE DATE ----->	01/28/97		01/28/97		01/28/97		01/28/97		01/27/97		01/27/97	
	DATE EXTRACTED -->	01/31/97		01/31/97		01/31/97		01/31/97		01/29/97		01/29/97	
	DATE ANALYZED --->	02/01/97		02/01/97		02/01/97		02/01/97		01/30/97		01/30/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28308	VAL	28308	VAL	28308	VAL	28308	VAL	28249	VAL	28249	VAL
57-12-5	Cyanide (CN)	2.	U	3.2	J	2.2	J	2.	U	2.	U	2.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

CYANIDE	SAMPLE ID ------->	FDS-G-W12B-01		FDS-G-W13A-01		FDS-G-W13B-01		FDS-G-W13C-01		FDS-G-W13D-01		FDS-G-W13E-01	
	ORIGINAL ID ----->	FDSGW12B01		FDSGW13A01		FDSGW13B01		FDSGW13C01		FDSGW13D01		FDSGW13E01	
	LAB SAMPLE ID --->	28295.07		28295.04		28295.03		28295.01		28295.08		28308.04	
	ID FROM REPORT -->	FDSGW12B01		FDSGW13A01		FDSGW13B01		FDSGW13C01		FDSGW13D01		FDSGW13E01	
	SAMPLE DATE ----->	01/27/97		01/27/97		01/27/97		01/27/97		01/27/97		01/28/97	
	DATE EXTRACTED -->	01/29/97		01/29/97		01/29/97		01/29/97		01/29/97		01/31/97	
	DATE ANALYZED --->	01/30/97		01/30/97		01/30/97		01/30/97		01/30/97		02/01/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28249	VAL	28249	VAL	28249	VAL	28249	VAL	28249	VAL	28308	VAL
57-12-5	Cyanide (CN)	2.	U	2.	U	2.	U	2.	U	2.	U	2.6	J

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

CYANIDE	SAMPLE ID ------>	FDS-G-W14A-01		FDS-G-W14B-01		FDS-G-W14C-01		FDS-G-W15A-01		FDS-G-W15B-01		FDS-G-W15C-01	
	ORIGINAL ID ----->	FDSGW14A01		FDSGW14B01		FDSGW14C01		FDSGW15A01		FDSGW15B01		FDSGW15C01	
	LAB SAMPLE ID --->	28295.02		28295.06		28249.01		28308.01		28308.02		28308.03	
	ID FROM REPORT -->	FDSGW14A01		FDSGW14B01		FDSGW14C01		FDSGW15A01		FDSGW15B01		FDSGW15C01	
	SAMPLE DATE ----->	01/27/97		01/27/97		01/22/97		01/28/97		01/28/97		01/28/97	
	DATE EXTRACTED -->	01/29/97		01/29/97		01/24/97		01/31/97		01/31/97		01/31/97	
	DATE ANALYZED --->	01/30/97		01/30/97		01/26/97		02/01/97		02/01/97		02/01/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28249	VAL	28249	VAL	28249	VAL	28308	VAL	28308	VAL	28308	VAL
57-12-5	Cyanide (CN)	2.	U	2.2	J	8.4	J	3.	J	7.	J	2.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

CYANIDE

SAMPLE ID ------->	FDS-G-W18A-01
ORIGINAL ID ----->	FDSGW18A01
LAB SAMPLE ID --->	28328.05
ID FROM REPORT -->	FDSGW18A01
SAMPLE DATE ----->	01/29/97
DATE EXTRACTED -->	01/31/97
DATE ANALYZED --->	02/01/97
MATRIX ---------->	Water
UNITS ----------->	UG/L

CAS #	Parameter	28308	VAL
57-12-5	Cyanide (CN)	10.1	

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

HEXACHROME																	
	SAMPLE ID ------->	FDS-H-W01D-01		FDS-H-W02A-01		FDS-H-W08C-01		FDS-H-W09B-01		FDS-H-W11C-01		FDS-H-W12A-01	
	ORIGINAL ID ----->	FDSHW01D01		FDSHW02A01		FDSHW08C01		FDSHW09B01		FDSHW11C01		FDSHW12A01	
	LAB SAMPLE ID --->	28186.01		28189.01		28280.01		28228.02		28309.01		28296.02	
	ID FROM REPORT -->	FDSHW01D01		FDSHW02A01		FDSHW08C01		FDSHW09B01		FDSHW11C01		FDSHW12A01	
	SAMPLE DATE ----->	01/14/97		01/16/97		01/24/97		01/21/97		01/28/97		01/27/97	
	DATE EXTRACTED -->	01/16/97		01/17/97		01/25/97		01/22/97		01/29/97		01/28/97	
	DATE ANALYZED --->	01/16/97		01/17/97		01/25/97		01/22/97		01/29/97		01/28/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ----------->	MG/L		MG/L		MG/L		MG/L		MG/L		MG/L	
CAS #	Parameter	28185	VAL	28185	VAL	28249	VAL	28217	VAL	28308	VAL	28249	VAL
18540-29-9	Chromium (Hexavalent)	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-DIOX																	
		SAMPLE ID ------>	FDS-H-W01D-01		FDS-H-W02A-01		FDS-H-W08C-01		FDS-H-W09B-01		FDS-H-W11C-01		FDS-H-W12A-01	
		ORIGINAL ID ----->	FDSHW01D01		FDSHW02A01		FDSHW08C01		FDSHW09B01		FDSHW11C01		FDSHW12A01	
		LAB SAMPLE ID --->	28186.01		28189.01		28280.01		28228.02		28309.01		28296.02	
		ID FROM REPORT -->	FDSHW01D01		FDSHW02A01		FDSHW08C01		FDSHW09B01		FDSHW11C01		FDSHW12A01	
		SAMPLE DATE ----->	01/14/97		01/16/97		01/24/97		01/21/97		01/28/97		01/27/97	
		DATE EXTRACTED -->	01/20/97		01/20/97		01/27/97		01/22/97		01/29/97		01/29/97	
		DATE ANALYZED --->	01/22/97		01/23/97		01/29/97		01/24/97		02/03/97		02/03/97	
		MATRIX ---------->	Water		Water		Water		Water		Water		Water	
		UNITS ---------->	PG/L		PG/L		PG/L		PG/L		PG/L		PG/L	
CAS #	Parameter		28185	VAL	28185	VAL	28249	VAL	28217	VAL	28308	VAL	28249	VAL
1746-01-6	2378-TCDD		4.07	U	3.57	U	5.78	U	3.38	U	4.72	U	4.26	U
40321-76-4	12378-PeCDD		7.61	U	6.47	U	5.32	U	4.25	U	4.75	U	4.86	U
39227-28-6	123478-HxCDD		8.01	U	6.71	U	6.75	U	3.67	U	4.11	U	7.49	U
57653-85-7	123678-HxCDD		5.16	U	4.32	U	4.34	U	2.36	U	2.64	U	4.82	U
19408-74-3	123789-HxCDD		5.62	U	4.71	U	4.73	U	2.57	U	2.88	U	5.25	U
35822-46-9	1234678-HpCDD		6.33	U	12.2	U	4.82	U	3.64	U	6.64		3.52	U
3268-87-9	OCDD		50.7	U	11.3	U	5.37	U	3.95	J	103.		3.15	U
51207-31-9	2378-TCDF		3.9	U	4.15	U	4.11	U	1.76	U	3.46	U	2.86	U
57117-41-6	12378-PeCDF		3.83	U	5.62	U	3.35	U	2.53	U	2.28	U	2.26	U
57117-31-4	23478-PeCDF		3.84	U	5.63	U	3.35	U	2.53	U	2.29	U	2.27	U
70648-26-9	123478-HxCDF		4.48	U	5.69	U	3.74	U	2.08	U	3.25	U	3.46	U
57117-44-9	123678-HxCDF		3.51	U	4.46	U	2.93	U	1.63	U	2.54	U	2.71	U
72918-21-9	123789-HxCDF		5.08	U	6.45	U	4.24	U	2.35	U	3.68	U	3.92	U
60851-34-5	234678-HxCDF		4.59	U	5.83	U	3.83	U	2.13	U	3.33	U	3.54	U
67562-39-4	1234678-HpCDF		4.56	U	10.	U	4.16	U	2.31	U	2.45	U	2.54	U
55673-89-7	1234789-HpCDF		5.44	U	12.	U	4.97	U	2.75	U	2.92	U	3.04	U
39001-02-0	OCDF		6.38	U	10.3	U	4.13	U	2.55	U	4.83	U	2.85	U
41903-57-5	Total Tetra-Dioxins		4.07	U	3.57	U	5.78	U	3.38	U	4.72	U	4.26	U
36088-22-9	Total Penta-Dioxins		7.61	U	6.47	U	5.32	U	4.25	U	4.75	U	4.86	U
34465-46-8	Total Hexa-Dioxins		5.16	U	4.32	U	4.34	U	2.36	U	7.86		4.82	U
37871-00-4	Total Hepta-Dioxins		6.33	U	12.2	U	4.82	U	3.64	U	17.2		3.52	U
55722-27-5	Total Tetra-Furans		3.9	U	4.15	U	4.11	U	1.76	U	3.46	U	2.86	U
30602-15-4	Total Penta-Furans		3.84	U	5.63	U	3.35	U	2.53	U	2.29	U	2.27	U
55684-94-1	Total Hexa-Furans		3.51	U	4.46	U	2.93	U	1.63	U	2.54	U	2.71	U
38998-75-3	Total Hepta-Furans		4.56	U	10.	U	4.16	U	2.31	U	2.45	U	2.54	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-META													
		SAMPLE ID ------->	FDS-G-W01A-01		FDS-G-W01A-02		FDS-G-W01B-01		FDS-G-W01B-02		FDS-G-W01C-01		FDS-G-W01C-02
		ORIGINAL ID ----->	FDSGW01A01		FDSGW01A02		FDSGW01B01		FDSGW01B02		FDSGW01C01		FDSGW01C02
		LAB SAMPLE ID --->	28174.01		29610.04		28174.02		29560.05		28174.05		29560.06
		ID FROM REPORT -->	FDSGW01A01		FDSGW01A02		FDSGW01B01		FDSGW01B02		FDSGW01C01		FDSGW01C02
		SAMPLE DATE ----->	01/14/97		06/05/97		01/14/97		06/02/97		01/14/97		06/02/97
		DATE EXTRACTED -->	01/16/97		06/11/97		01/16/97		06/09/97		01/16/97		06/09/97
		DATE ANALYZED --->	01/17/97		06/18/97		01/17/97		06/14/97		01/17/97		06/14/97
		MATRIX ---------->	Water		Water		Water		Water		Water		Water
		UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L
CAS #	Parameter		28134	VAL	29591	VAL	28134	VAL	29515	VAL	28134	VAL	29515	VAL
7429-90-5	Aluminum (Al)		315.		335.		30.4	J	244.		52.8	J	136.	
7440-36-0	Antimony (Sb)		2.1	U	2.	U	2.1	U	1.6	U	2.1	U	1.9	U
7440-38-2	Arsenic (As)		6.9	J	2.2	J	5.7	J	9.9	J	9.8	J	4.3	J
7440-39-3	Barium (Ba)		21.1		10.6		14.8		7.3	J	31.		36.1	
7440-41-7	Beryllium (Be)		0.34	J	0.31	U	0.36	J	0.37	J	0.34	J	0.35	J
7440-43-9	Cadmium (Cd)		0.5	U	0.3	U	0.5	U	0.41	J	0.5	U	0.3	U
7440-70-2	Calcium (Ca)		101000.		116000.		166000.		160000.		238000.		117000.	
7440-47-3	Chromium (Cr)		1.	J	1.5	J	0.8	U	1.2	J	0.8	U	1.	U
7440-48-4	Cobalt (Co)		0.9	U	0.8	U	0.9	U	0.8	U	0.9	U	0.8	U
7440-50-8	Copper (Cu)		2.8	J	2.7	J	0.61	J	1.4	U	0.6	U	1.4	U
7439-89-6	Iron (Fe)		2670.		2230.		4670.		6070.		11900.		7110.	
7439-92-1	Lead (Pb)		1.7	U	0.9	U	1.7	U	1.5	J	1.7	U	0.9	U
7439-95-4	Magnesium (Mg)		22800.		15800.		17500.		12500.		34700.		37500.	
7439-96-5	Manganese (Mn)		229.		193.		323.		213.		626.		258.	
7439-97-6	Mercury (Hg)		0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
7440-02-0	Nickel (Ni)		1.5	J	2.2	J	1.9	J	1.8	J	0.8	U	0.7	U
7440-09-7	Potassium (K)		17200.		8810.		29800.		27200.		20100.		33700.	
7782-49-2	Selenium (Se)		2.9	U	3.4	U	2.8	U	3.4	U	4.3	U	3.4	U
7440-22-4	Silver (Ag)		1.2	U	1.2	J	1.2	U	1.	U	1.2	U	1.	U
7440-23-5	Sodium (Na)		161000.		63300.		116000.		96500.	J	170000.		325000.	J
7440-28-0	Thallium (Tl)		2.7	U	5.	U	2.7	U	5.	U	2.7	U	5.	U
7440-31-5	Tin (Sn)		2.6	U	14.	U	2.6	U	14.	U	2.6	U	14.	U
7440-62-2	Vanadium (V)		4.7	J	5.4	J	2.7	J	2.5	J	1.3	J	2.	J
7440-66-6	Zinc (Zn)		8.3	U	5.8	U	5.3	U	5.8	U	5.3	U	5.8	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-META																			
		SAMPLE ID ------->	FDS-G-W01D-01		FDS-H-W01D-01		FDS-G-W01D-02		FDS-H-W01D-02		FDS-G-W01E-01		FDS-G-W01E-02	
		ORIGINAL ID ----->	FDSGW01D01		FDSHW01D01		FDSGW01D02		FDSHW01D02		FDSGW01E01		FDSGW01E02	
		LAB SAMPLE ID --->	28185.02		28186.01		29591.03		29591.04		28328.01		29560.07	
		ID FROM REPORT -->	FDSGW01D01		FDSHW01D01		FDSGW01D02		FDSHW01D02		FDSGW01E01		FDSGW01E02	
		SAMPLE DATE ----->	01/14/97		01/14/97		06/04/97		06/04/97		01/29/97		06/02/97	
		DATE EXTRACTED -->	01/21/97		01/21/97		06/11/97		06/11/97		01/31/97		06/09/97	
		DATE ANALYZED --->	01/21/97		01/21/97		06/17/97		06/17/97		01/31/97		06/14/97	
		MATRIX ---------->	Water		Water		Water		Water		Water		Water	
		UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter		28185	VAL	28185	VAL	29591	VAL	29591	VAL	28308	VAL	29515	VAL
7429-90-5	Aluminum (Al)		1170.		1160.		107.	J	115.	J	358.		51.	U
7440-36-0	Antimony (Sb)		2.1	U	2.1	U	3.3	U	2.4	U	4.2	J	1.6	U
7440-38-2	Arsenic (As)		4.8	J	6.	J	2.1	U	4.6	J	5.9	J	2.1	UJ
7440-39-3	Barium (Ba)		26.9	J	27.5		20.2		19.4		11.5	J	3.1	J
7440-41-7	Beryllium (Be)		0.3	U	0.3	U	0.31	U	0.34	U	0.5	U	0.35	J
7440-43-9	Cadmium (Cd)		0.5	U	0.5	U	0.3	U	0.3	U	0.5	U	0.3	U
7440-70-2	Calcium (Ca)		93600.	J	96800.		90100.		87000.		50800.	J	73800.	
7440-47-3	Chromium (Cr)		3.7	J	3.8	J	1.	U	1.	U	1.6	J	1.	U
7440-48-4	Cobalt (Co)		0.9	U	0.9	U	0.8	U	1.	J	0.9	U	0.8	U
7440-50-8	Copper (Cu)		5.	J	6.1	J	1.4	U	1.4	U	2.4	U	1.4	U
7439-89-6	Iron (Fe)		7530.	J	7840.		6910.		6650.		1410.	J	930.	
7439-92-1	Lead (Pb)		1.7	U	1.7	U	0.9	U	0.9	U	1.7	U	0.9	U
7439-95-4	Magnesium (Mg)		78300.		80700.		75900.		73100.		9960.	J	9080.	
7439-96-5	Manganese (Mn)		779.		804.		673.		647.		123.	J	129.	
7439-97-6	Mercury (Hg)		0.1	J	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
7440-02-0	Nickel (Ni)		3.4	J	4.5	J	0.7	J	1.7	J	3.	J	0.7	U
7440-09-7	Potassium (K)		47200.		49400.		46500.		44400.		8780.		8120.	
7782-49-2	Selenium (Se)		2.8	U	2.8	U	3.4	U	3.4	U	2.8	U	3.4	U
7440-22-4	Silver (Ag)		1.2	U	1.2	U	1.7	J	1.	UJ	1.2	U	1.	U
7440-23-5	Sodium (Na)		330000.		346000.		366000.		349000.		114000.		79800.	J
7440-28-0	Thallium (Tl)		8.7	J	9.6	J	5.	U	6.7	J	2.7	U	5.	U
7440-31-5	Tin (Sn)		2.8	J	2.6	J	14.	U	14.	U	2.6	U	14.	U
7440-62-2	Vanadium (V)		5.2	J	5.2	J	1.8	J	2.1	J	6.1	J	1.1	U
7440-66-6	Zinc (Zn)		12.1	U	18.3	U	5.8	U	5.8	U	25.5	U	5.8	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-META																	
		SAMPLE ID ------->	FDS-G-W02A-01		FDS-H-W02A-01		FDS-G-W02A-02		FDS-H-W02A-02		FDS-G-W02B-01		FDS-G-W02B-02	
		ORIGINAL ID ----->	FDSGW02A01		FDSHW02A01		FDSGW02A02		FDSHW02A02		FDSGW02B01		FDSGW02B02	
		LAB SAMPLE ID --->	28190.02		28189.01		29538.03		29538.04		28223.10		29523.03	
		ID FROM REPORT -->	FDSGW02A01		FDSHW02A01		FDSGW02A02		FDSHW02A02		FDSGW02B01		FDSGW02B02	
		SAMPLE DATE ----->	01/16/97		01/16/97		05/30/97		05/30/97		01/19/97		05/20/97	
		DATE EXTRACTED -->	01/21/97		01/21/97		06/09/97		06/09/97		01/23/97		06/09/97	
		DATE ANALYZED --->	01/21/97		01/21/97		06/13/97		06/13/97		01/24/97		06/13/97	
		MATRIX ---------->	Water		Water		Water		Water		Water		Water	
		UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter		28185	VAL	28185	VAL	29515	VAL	29515	VAL	28217	VAL	29515	VAL
7429-90-5	Aluminum (Al)		1450.	J	4990.	J	880.		734.		141.		55.8	U
7440-36-0	Antimony (Sb)		2.1	U	2.1	U	1.6	U	1.6	U	2.4	J	1.6	U
7440-38-2	Arsenic (As)		18.3		4.8	J	4.1	J	4.4	J	8.9	J	8.3	J
7440-39-3	Barium (Ba)		40.	J	148.	J	115.		141.		83.1	J	33.7	
7440-41-7	Beryllium (Be)		0.3	U	0.55	J	0.54	J	0.47	J	0.3	U	0.34	J
7440-43-9	Cadmium (Cd)		0.5	U	0.5	U	0.3	U	0.38	J	0.5	U	0.3	U
7440-70-2	Calcium (Ca)		90800.	J	160000.	J	128000.		138000.		109000.	J	91100.	
7440-47-3	Chromium (Cr)		11.7		14.8		4.6	J	4.2	J	3.	U	1.	U
7440-48-4	Cobalt (Co)		1.4	U	2.7	U	1.2	U	0.85	U	1.8	J	0.8	U
7440-50-8	Copper (Cu)		5.5	J	7.1	J	1.4	U	3.3	J	3.4	U	1.4	U
7439-89-6	Iron (Fe)		2630.	J	3590.		2120.	J	1110.	J	2870.		5930.	
7439-92-1	Lead (Pb)		1.7	U	2.9	J	0.9	U	4.		1.7	U	0.9	U
7439-95-4	Magnesium (Mg)		109000.	J	322000.	J	264000.		120000.		181000.		123000.	
7439-96-5	Manganese (Mn)		307.	J	578.	J	329.		468.		139.		54.8	
7439-97-6	Mercury (Hg)		0.16	J	0.1	U	1.	J	0.2	U	0.1	U	0.1	U
7440-02-0	Nickel (Ni)		9.2	J	12.6	J	6.7	J	6.2	J	5.3	J	0.7	U
7440-09-7	Potassium (K)		64700.	J	164000.	J	156000.		136000.		74100.		58400.	
7782-49-2	Selenium (Se)		3.1	J	2.8	U	3.4	U	3.4	U	2.8	U	3.4	U
7440-22-4	Silver (Ag)		1.2	U	1.2	U	1.	U	1.	U	1.2	U	1.	U
7440-23-5	Sodium (Na)		1190000.	J	4270000.	J	3800000.	J	2890000.	J	1480000.		1050000.	J
7440-28-0	Thallium (Tl)		5.8	J	7.7	J	5.	U	5.	U	2.7	U	5.	U
7440-31-5	Tin (Sn)		2.6	U	2.6	U	14.	U	14.	U	7.1	U	14.	U
7440-62-2	Vanadium (V)		9.5	J	13.2	J	11.2	J	10.9	J	2.2	J	1.1	U
7440-66-6	Zinc (Zn)		16.9	U	21.2	U	5.8	U	5.8	U	8.8	J	5.8	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-META													
		SAMPLE ID ------->	FDS-G-W02C-01		FDS-G-W02C-02		FDS-G-W03A-01		FDS-G-W03A-02		FDS-G-W03B-01		FDS-G-W03B-02	
		ORIGINAL ID ----->	FDSGW02C01		FDSGW02C02		FDSGW03A01		FDSGW03A02		FDSGW03B01		FDSGW03B02	
		LAB SAMPLE ID --->	28190.01		29538.02		28223.01		29591.01		28185.05		29560.01	
		ID FROM REPORT -->	FDSGW02C01		FDSGW02C02		FDSGW03A01		FDSGW03A02		FDSGW03B01		FDSGW03B02	
		SAMPLE DATE ----->	01/16/97		05/30/97		01/19/97		06/04/97		01/15/97		06/02/97	
		DATE EXTRACTED -->	01/21/97		06/09/97		01/23/97		06/11/97		01/21/97		06/09/97	
		DATE ANALYZED --->	01/23/97		06/13/97		01/24/97		06/17/97		01/21/97		06/14/97	
		MATRIX ---------->	Water		Water		Water		Water		Water		Water	
		UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter		28185	VAL	29515	VAL	28217	VAL	29591	VAL	28185	VAL	29515	VAL
7429-90-5	Aluminum (Al)		521.		40.1	U	144.		17.4	J	100.	J	10.3	U
7440-36-0	Antimony (Sb)		2.1	J	1.6	U	2.1	U	1.6	U	2.1	U	1.6	U
7440-38-2	Arsenic (As)		18.1		8.2	J	8.	J	2.1	U	9.2	J	2.1	UJ
7440-39-3	Barium (Ba)		38.	J	24.8		32.3	J	30.3		36.3	J	25.	
7440-41-7	Beryllium (Be)		0.3	U	0.37	J	0.3	U	0.23	U	0.3	U	0.33	J
7440-43-9	Cadmium (Cd)		0.5	U	0.33	J	0.5	U	0.3	U	0.5	U	0.3	U
7440-70-2	Calcium (Ca)		88200.	J	50900.		58400.	J	86500.		52500.	J	46700.	
7440-47-3	Chromium (Cr)		4.7	J	1.2	J	2.8	U	1.	U	1.5	J	1.	U
7440-48-4	Cobalt (Co)		1.6	U	0.8	U	1.1	J	0.8	U	0.9	U	0.8	U
7440-50-8	Copper (Cu)		4.7	J	1.4	U	0.6	U	1.4	U	2.6	J	1.4	U
7439-89-6	Iron (Fe)		2130.	J	5410.		1450.		11700.		974.	J	4340.	
7439-92-1	Lead (Pb)		7.		1.7	J	1.7	U	0.9	U	1.7	U	1.2	J
7439-95-4	Magnesium (Mg)		106000.		160000.		148000.		87600.		163000.		161000.	
7439-96-5	Manganese (Mn)		296.		105.		91.4		355.		90.5		74.5	
7439-97-6	Mercury (Hg)		0.13	J	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
7440-02-0	Nickel (Ni)		7.8	J	0.7	U	3.5	J	0.7	U	3.8	J	0.7	U
7440-09-7	Potassium (K)		61900.		82200.		81800.		47600.		81200.		80900.	
7782-49-2	Selenium (Se)		2.8	U	3.4	U	2.8	U	3.4	U	2.8	U	3.4	U
7440-22-4	Silver (Ag)		1.2	U	1.	U	1.2	U	1.	UJ	1.2	U	1.	U
7440-23-5	Sodium (Na)		1140000.		1780000.	J	1430000.		758000.		1460000.		1350000.	J
7440-28-0	Thallium (Tl)		5.1	J	5.	U	4.4	U	5.	U	3.	J	5.	U
7440-31-5	Tin (Sn)		2.6	U	14.	U	6.3	U	14.	U	2.6	U	14.	U
7440-62-2	Vanadium (V)		4.4	J	1.1	U	1.8	J	1.1	U	2.7	J	1.1	U
7440-66-6	Zinc (Zn)		21.9	U	5.8	U	6.3	J	5.8	U	7.4	U	5.8	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-META																	
		SAMPLE ID ------->	FDS-G-W03C-01		FDS-G-W03C-02		FDS-G-W04A-01		FDS-G-W04A-02		FDS-G-W04B-01		FDS-G-W04B-02	
		ORIGINAL ID ----->	FDSGW03C01		FDSGW03C02		FDSGW04A01		FDSGW04A02		FDSGW04B01		FDSGW04B02	
		LAB SAMPLE ID --->	28185.04		29591.02		28223.07		29487.03		28223.08		29515.01	
		ID FROM REPORT -->	FDSGW03C01		FDSGW03C02		FDSGW04A01		FDSGW04A02		FDSGW04B01		FDSGW04B02	
		SAMPLE DATE ----->	01/15/97		06/04/97		01/20/97		05/23/97		01/20/97		05/28/97	
		DATE EXTRACTED -->	01/21/97		06/11/97		01/23/97		05/28/97		01/23/97		05/30/97	
		DATE ANALYZED --->	01/21/97		06/17/97		01/24/97		06/05/97		01/24/97		06/13/97	
		MATRIX ---------->	Water		Water		Water		Water		Water		Water	
		UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter		28185	VAL	29591	VAL	28217	VAL	29437	VAL	28217	VAL	29515	VAL
7429-90-5	Aluminum (Al)		722.		38.	J	50.8	J	14.	UJ	193.		80.6	U
7440-36-0	Antimony (Sb)		2.1	U	3.1	U	2.1	U	23.4	J	2.5	J	3.6	U
7440-38-2	Arsenic (As)		5.8	J	3.4	J	6.5	J	2.1	U	3.1	J	2.1	UJ
7440-39-3	Barium (Ba)		38.4	J	23.8		32.5	J	14.6	J	23.3	J	21.3	
7440-41-7	Beryllium (Be)		0.3	U	0.32	U	0.3	U	0.2	UJ	0.3	U	0.2	UJ
7440-43-9	Cadmium (Cd)		0.5	U	0.3	U	0.5	U	0.3	U	0.5	U	0.3	U
7440-70-2	Calcium (Ca)		62800.	J	63900.		61400.	J	60200.	J	80200.	J	118000.	
7440-47-3	Chromium (Cr)		3.1	J	1.	U	3.5	U	1.	U	2.6	U	1.2	J
7440-48-4	Cobalt (Co)		0.9	U	1.2	J	1.2	J	1.9	U	0.9	U	0.8	U
7440-50-8	Copper (Cu)		3.7	J	1.4	U	4.4	J	1.4	U	1.8	U	1.4	U
7439-89-6	Iron (Fe)		2540.	J	3600.		4030.		6330.	J	3400.		3880.	
7439-92-1	Lead (Pb)		1.7	U	0.9	U	1.7	U	4.4	J	1.7	U	0.9	U
7439-95-4	Magnesium (Mg)		182000.		185000.		83600.		70900.	J	87200.		104000.	
7439-96-5	Manganese (Mn)		93.2		57.8		286.		250.	J	163.		169.	
7439-97-6	Mercury (Hg)		0.1	J	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
7440-02-0	Nickel (Ni)		2.8	J	1.5	J	3.2	J	1.4	J	2.6	J	3.3	J
7440-09-7	Potassium (K)		91200.		86200.		55000.		51300.		46200.		55400.	
7782-49-2	Selenium (Se)		2.8	U	3.4	U	2.8	U	3.4	U	2.8	U	3.4	U
7440-22-4	Silver (Ag)		1.2	U	1.	UJ	1.2	U	1.	U	1.2	U	1.	U
7440-23-5	Sodium (Na)		1730000.		1760000.		690000.		475000.		416000.		363000.	J
7440-28-0	Thallium (Tl)		5.7	J	5.	U	4.3	U	5.3	J	2.7	U	5.	U
7440-31-5	Tin (Sn)		2.6	U	14.	U	8.5	U	14.	U	7.6	U	14.	U
7440-62-2	Vanadium (V)		5.	J	2.	J	2.4	J	1.4	J	2.1	J	1.1	J
7440-66-6	Zinc (Zn)		9.	U	5.8	U	5.4	J	5.8	U	5.3	U	5.8	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-META													
		SAMPLE ID ------->	FDS-G-W04C-01		FDS-G-W04C-02		FDS-G-W05A-01		FDS-G-W05A-02		FDS-G-W05B-01		FDS-G-W05B-02
		ORIGINAL ID ----->	FDSGW04C01		FDSGW04C02		FDSGW05A01		FDSGW05A02		FDSGW05B01		FDSGW05B02
		LAB SAMPLE ID --->	28223.09		29515.05		28223.03		29610.01		28209.04		29610.02
		ID FROM REPORT -->	FDSGW04C01		FDSGW04C02		FDSGW05A01		FDSGW05A02		FDSGW05B01		FDSGW05B02
		SAMPLE DATE ----->	01/20/97		05/28/97		01/19/97		06/05/97		01/17/97		06/05/97
		DATE EXTRACTED -->	01/23/97		05/30/97		01/23/97		06/11/97		01/21/97		06/11/97
		DATE ANALYZED --->	01/24/97		06/13/97		01/24/97		06/17/97		01/21/97		06/17/97
		MATRIX ---------->	Water		Water		Water		Water		Water		Water
		UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L
CAS #	Parameter		28217	VAL	29515	VAL	28217	VAL	29591	VAL	28185	VAL	29591	VAL
7429-90-5	Aluminum (Al)		69.9	J	37.7	U	114.	J	57.	J	38.7	J	17.1	J
7440-36-0	Antimony (Sb)		2.5	J	2.6	U	4.2	J	1.8	U	2.7	J	1.6	U
7440-38-2	Arsenic (As)		2.5	U	2.1	UJ	6.5	J	2.7	J	2.5	U	2.1	U
7440-39-3	Barium (Ba)		28.2	J	17.		30.9	J	45.3		37.7	J	33.1	
7440-41-7	Beryllium (Be)		0.3	U	0.2	UJ	0.3	U	0.25	U	0.47	J	0.46	U
7440-43-9	Cadmium (Cd)		0.5	U	0.3	U	0.5	U	0.3	U	0.5	U	0.3	U
7440-70-2	Calcium (Ca)		46900.	J	52200.		73500.	J	82100.		136000.	J	128000.	
7440-47-3	Chromium (Cr)		4.6	U	1.	U	2.6	U	1.4	J	1.3	J	11.	
7440-48-4	Cobalt (Co)		1.	J	0.92	U	1.5	J	0.8	U	0.9	U	1.1	J
7440-50-8	Copper (Cu)		2.	U	1.4	U	1.6	U	3.3	J	0.77	J	1.4	U
7439-89-6	Iron (Fe)		3370.		2810.		13600.		25600.		7590.	J	7970.	
7439-92-1	Lead (Pb)		1.7	U	0.9	U	1.7	U	0.9	U	1.7	U	0.9	U
7439-95-4	Magnesium (Mg)		112000.		106000.		171000.		69100.		395000.		382000.	
7439-96-5	Manganese (Mn)		176.		171.		232.		269.		247.		237.	
7439-97-6	Mercury (Hg)		0.1	U	0.1	U	0.1	U	0.1	U	0.18	J	0.1	U
7440-02-0	Nickel (Ni)		8.4	J	1.2	J	1.8	J	1.1	J	1.7	J	5.1	J
7440-09-7	Potassium (K)		68500.		73200.		89700.		46600.		178000.		149000.	
7782-49-2	Selenium (Se)		2.8	U	3.4	U	2.8	U	3.4	U	2.8	U	3.4	U
7440-22-4	Silver (Ag)		1.2	U	1.	U	1.2	J	1.3	J	1.2	U	1.	UJ
7440-23-5	Sodium (Na)		1040000.		709000.	J	1720000.		765000.		4300000.		4070000.	
7440-28-0	Thallium (Tl)		4.8	U	6.4	J	4.1	U	5.	U	5.6	J	5.	U
7440-31-5	Tin (Sn)		8.8	U	14.	U	5.7	U	14.	U	3.	J	14.	U
7440-62-2	Vanadium (V)		2.3	J	1.1	U	3.	J	1.4	J	1.9	J	1.3	J
7440-66-6	Zinc (Zn)		6.9	J	5.8	U	5.3	U	5.8	U	5.3	U	5.8	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-META													
	SAMPLE ID ------->	FDS-G-W06A-01		FDS-G-W06A-02		FDS-G-W06B-01		FDS-G-W06B-02		FDS-G-W06C-01		FDS-G-W06C-02	
	ORIGINAL ID ----->	FDSGW06A01		FDSGW06A02		FDSGW06B01		FDSGW06B02		FDSGW06C01		FDSGW06C02	
	LAB SAMPLE ID --->	28223.02		29523.01		28223.05		29523.02		28223.06		29538.01	
	ID FROM REPORT -->	FDSGW06A01		FDSGW06A02		FDSGW06B01		FDSGW06B02		FDSGW06C01		FDSGW06C02	
	SAMPLE DATE ----->	01/18/97		05/20/97		01/20/97		05/20/97		01/20/97		05/30/97	
	DATE EXTRACTED -->	01/23/97		06/09/97		01/23/97		06/09/97		01/23/97		06/09/97	
	DATE ANALYZED --->	01/24/97		06/13/97		01/24/97		06/13/97		01/24/97		06/13/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28217	VAL	29515	VAL	28217	VAL	29515	VAL	28217	VAL	29515	VAL
7429-90-5	Aluminum (Al)	243.		481.		173.		77.4	U	2790.		347.	
7440-36-0	Antimony (Sb)	2.1	U	1.6	U	2.1	U	1.6	U	3.1	J	2.6	U
7440-38-2	Arsenic (As)	2.5	U	16.1	J	2.6	J	2.1	UJ	37.1		19.	J
7440-39-3	Barium (Ba)	35.1	J	19.7		28.9	J	38.2		103.	J	30.7	
7440-41-7	Beryllium (Be)	0.3	U	0.28	J	0.3	U	0.31	J	0.3	U	0.33	J
7440-43-9	Cadmium (Cd)	0.5	U	0.3	U	0.5	U	0.3	U	0.5	U	0.31	J
7440-70-2	Calcium (Ca)	58000.	J	63200.		110000.	J	137000.		90900.	J	68100.	
7440-47-3	Chromium (Cr)	3.5	U	4.8	J	2.7	U	1.2	J	7.	J	2.1	J
7440-48-4	Cobalt (Co)	1.3	J	0.8	U	1.2	J	0.8	U	1.7	J	0.8	U
7440-50-8	Copper (Cu)	3.8	J	3.8	J	2.9	U	1.4	U	8.1	J	2.6	J
7439-89-6	Iron (Fe)	189.		6270.		3550.		1240.		3940.		4140.	
7439-92-1	Lead (Pb)	1.7	U	0.9	U	1.7	U	0.9	U	3.8		2.	J
7439-95-4	Magnesium (Mg)	84900.		52100.		44700.		38100.		168000.		134000.	
7439-96-5	Manganese (Mn)	77.9		119.		311.		249.		569.		736.	
7439-97-6	Mercury (Hg)	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
7440-02-0	Nickel (Ni)	6.4	J	6.6	J	1.4	J	0.7	U	4.8	J	2.6	J
7440-09-7	Potassium (K)	52300.		44100.		33200.		35300.		95800.		72100.	
7782-49-2	Selenium (Se)	2.8	U	3.4	U	2.8	U	3.4	U	2.8	U	3.4	U
7440-22-4	Silver (Ag)	1.2	U	1.	U	1.2	U	1.	U	1.2	U	1.	U
7440-23-5	Sodium (Na)	773000.		433000.	J	246000.		503000.	J	1670000.		1130000.	J
7440-28-0	Thallium (Tl)	2.8	U	5.	U	4.	U	5.	U	4.1	U	5.	U
7440-31-5	Tin (Sn)	4.1	U	14.	U	3.5	U	14.	U	9.3	U	14.	U
7440-62-2	Vanadium (V)	6.1	J	4.2	J	2.	J	1.7	J	11.4	J	21.4	
7440-66-6	Zinc (Zn)	6.7	J	5.8	U	8.	J	5.8	U	16.	J	5.8	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-META													
	SAMPLE ID ------->	FDS-G-W07A-01		FDS-G-W07A-02		FDS-G-W07B-01		FDS-G-W07B-02		FDS-G-W07C-01		FDS-G-W07C-02	
	ORIGINAL ID ----->	FDSGW07A01		FDSGW07A02		FDSGW07B01		FDSGW07B02		FDSGW07C01		FDSGW07C02	
	LAB SAMPLE ID --->	28343.01		29610.05		28209.01		29636.01		28209.02		29636.05	
	ID FROM REPORT -->	FDSGW07A01		FDSGW07A02		FDSGW07B01		FDSGW07B02		FDSGW07C01		FDSGW07C02	
	SAMPLE DATE ----->	01/29/97		06/05/97		01/17/97		06/09/97		01/17/97		06/09/97	
	DATE EXTRACTED -->	02/03/97		06/11/97		01/21/97		06/11/97		01/21/97		06/11/97	
	DATE ANALYZED --->	02/05/97		06/18/97		01/21/97		06/17/97		01/21/97		06/17/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28308	VAL	29591	VAL	28185	VAL	29591	VAL	28185	VAL	29591	VAL
7429-90-5	Aluminum (Al)	77.8	J	17.	J	444.		610.		2280.		6280.	
7440-36-0	Antimony (Sb)	2.1	U	1.7	U	2.1	U	4.1	U	2.1	U	5.4	U
7440-38-2	Arsenic (As)	9.7	J	8.3	J	3.6	J	5.5	J	7.6	J	8.	J
7440-39-3	Barium (Ba)	132.	J	67.8		187.	J	203.		229.	J	311.	
7440-41-7	Beryllium (Be)	0.68	U	0.8	U	0.45	J	0.48	U	0.59	J	0.64	U
7440-43-9	Cadmium (Cd)	0.5	U	0.3	U	0.5	U	1.4	J	0.5	U	1.3	J
7440-70-2	Calcium (Ca)	165000.	J	251000.		220000.	J	204000.		218000.	J	221000.	
7440-47-3	Chromium (Cr)	2.4	J	7.9	J	0.8	U	1.9	J	2.9	J	7.9	J
7440-48-4	Cobalt (Co)	1.5	J	1.7	J	2.4	U	1.1	J	1.6	U	1.4	J
7440-50-8	Copper (Cu)	1.9	U	1.4	U	0.6	U	1.4	U	0.6	U	1.4	U
7439-89-6	Iron (Fe)	1820.	J	4960.		68700.	J	74600.		66600.	J	68700.	
7439-92-1	Lead (Pb)	1.7	U	0.9	U	1.7	U	0.9	U	1.7	U	8.5	
7439-95-4	Magnesium (Mg)	503000.	J	889000.		440000.		409000.		586000.		497000.	
7439-96-5	Manganese (Mn)	170.	J	222.		1240.		1120.		991.		820.	
7439-97-6	Mercury (Hg)	0.1	U	0.29		0.14	J	0.1	U	0.16	J	0.1	J
7440-02-0	Nickel (Ni)	6.4	J	2.6	J	2.9	J	0.7	U	0.8	U	0.7	U
7440-09-7	Potassium (K)	206000.		242000.		119000.		108000.		153000.		128000.	
7782-49-2	Selenium (Se)	2.8	U	3.4	U	2.8	U	3.4	U	2.8	U	3.4	U
7440-22-4	Silver (Ag)	1.2	U	1.7	J	1.2	U	1.4	J	1.2	U	1.	UJ
7440-23-5	Sodium (Na)	5790000.		7890000.		4620000.		4440000.		5500000.		4810000.	
7440-28-0	Thallium (Tl)	2.7	U	7.3	J	8.	J	5.	U	9.9	J	6.8	J
7440-31-5	Tin (Sn)	3.7	U	14.	U	4.5	J	14.	U	4.2	J	14.	U
7440-62-2	Vanadium (V)	8.9	J	10.5	J	2.	J	2.2	J	3.5	J	7.6	J
7440-66-6	Zinc (Zn)	5.3	U	5.8	U	5.3	U	5.8	U	5.3	U	8.2	J

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-META																	
		SAMPLE ID ------->	FDS-G-W07D-01		FDS-G-W07D-02		FDS-G-W08A-01		FDS-G-W08A-02		FDS-G-W08B-01		FDS-G-W08B-02	
		ORIGINAL ID ----->	FDSGW07D01		FDSGW07D02		FDSGW08A01		FDSGW08A02		FDSGW08B01		FDSGW08B02	
		LAB SAMPLE ID --->	28279.01		29744.01		28279.02		29610.03		28295.10		29636.06	
		ID FROM REPORT -->	FDSGW07D01		FDSGW07D02		FDSGW08A01		FDSGW08A02		FDSGW08B01		FDSGW08B02	
		SAMPLE DATE ----->	01/24/97		06/17/97		01/24/97		06/05/97		01/25/97		06/09/97	
		DATE EXTRACTED -->	01/27/97		06/20/97		01/27/97		06/11/97		01/29/97		06/11/97	
		DATE ANALYZED --->	01/29/97		07/02/97		01/29/97		06/18/97		01/29/97		06/17/97	
		MATRIX ---------->	Water		Water		Water		Water		Water		Water	
		UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter		28249	VAL	29707	VAL	28249	VAL	29591	VAL	28249	VAL	29591	VAL
7429-90-5	Aluminum (Al)		118.	U	390.		8900.		381.		682.		116.	J
7440-36-0	Antimony (Sb)		2.1	U	1.6	U	2.1	U	1.6	U	2.1	U	2.7	J
7440-38-2	Arsenic (As)		5.1	J	11.1		20.6		16.4		6.5	J	6.6	J
7440-39-3	Barium (Ba)		328.		587.		54.4		22.2		179.		89.8	
7440-41-7	Beryllium (Be)		0.91	J	0.65	U	1.3	J	0.29	U	0.3	U	0.25	U
7440-43-9	Cadmium (Cd)		0.5	U	0.96	J	0.5	U	0.3	U	0.5	U	0.3	U
7440-70-2	Calcium (Ca)		281000.		307000.		88100.		76500.		83800.		90000.	
7440-47-3	Chromium (Cr)		0.8	U	1.	U	18.9		1.	U	4.8	J	2.3	J
7440-48-4	Cobalt (Co)		3.	J	1.	J	3.1	J	0.8	U	3.5	J	2.8	J
7440-50-8	Copper (Cu)		2.3	U	1.4	U	6.4	J	2.3	J	5.2	U	1.4	U
7439-89-6	Iron (Fe)		7790.	J	73800.		15500.	J	8630.		3040.	J	23800.	
7439-92-1	Lead (Pb)		1.7	U	4.1		8.4		0.9	U	1.7	U	0.9	U
7439-95-4	Magnesium (Mg)		562000.		474000.		41900.		37600.		160000.		157000.	
7439-96-5	Manganese (Mn)		835.		1080.		304.		275.		386.		561.	
7439-97-6	Mercury (Hg)		0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
7440-02-0	Nickel (Ni)		4.4	J	0.7	U	8.	J	1.	J	13.	J	1.6	J
7440-09-7	Potassium (K)		140000.	J	148000.		20500.	J	20900.		71500.	J	63800.	
7782-49-2	Selenium (Se)		2.8	U	3.4	U	2.8	U	3.4	U	2.8	U	3.4	U
7440-22-4	Silver (Ag)		1.2	U	1.	U	1.2	U	1.	UJ	1.2	U	1.	UJ
7440-23-5	Sodium (Na)		4700000.		4820000.		114000.		59000.		1960000.		1850000.	
7440-28-0	Thallium (Tl)		7.1	J	7.2	U	4.1	J	5.	U	5.8	J	7.8	J
7440-31-5	Tin (Sn)		2.9	U	14.	U	2.6	U	14.	U	5.	U	14.	U
7440-62-2	Vanadium (V)		2.3	J	5.2	J	22.9		4.5	J	13.1	J	6.6	J
7440-66-6	Zinc (Zn)		19.5	U	5.8	U	36.		5.8	U	11.4	U	5.8	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-META													
	SAMPLE ID ------->	FDS-G-W08C-01		FDS-H-W08C-01		FDS-G-W08C-02		FDS-H-W08C-02		FDS-G-W09A-01		FDS-G-W09A-02	
	ORIGINAL ID ----->	FDSGW08C01		FDSHW08C01		FDSGW08C02		FDSHW08C02		FDSGW09A01		FDSGW09A02	
	LAB SAMPLE ID --->	28279.03		28280.01		29636.07		29636.08		28227.06		29656.04	
	ID FROM REPORT -->	FDSGW08C01		FDSHW08C01		FDSGW08C02		FDSHW08C02		FDSGW09A01		FDSGW09A02	
	SAMPLE DATE ----->	01/24/97		01/24/97		06/09/97		06/09/97		01/21/97		06/10/97	
	DATE EXTRACTED -->	01/27/97		01/27/97		06/11/97		06/11/97		01/23/97		06/12/97	
	DATE ANALYZED --->	01/29/97		01/29/97		06/17/97		06/17/97		01/24/97		06/19/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28249	VAL	28249	VAL	29591	VAL	29591	VAL	28217	VAL	29656	VAL
7429-90-5	Aluminum (Al)	172.	U	155.	U	67.4	J	76.5	J	273.		39.9	J
7440-36-0	Antimony (Sb)	2.1	U	2.1	U	3.2	U	3.7	U	2.1	U	1.6	U
7440-38-2	Arsenic (As)	3.4	J	2.5	U	2.1	U	3.8	J	4.	J	3.3	J
7440-39-3	Barium (Ba)	149.		112.		71.8		73.4		45.4	J	37.6	
7440-41-7	Beryllium (Be)	0.65	J	0.66	J	0.3	U	0.35	U	0.38	J	0.49	U
7440-43-9	Cadmium (Cd)	0.5	U	0.5	U	0.3	U	0.3	U	0.5	U	0.3	U
7440-70-2	Calcium (Ca)	165000.		175000.		241000.		246000.		144000.	J	138000.	
7440-47-3	Chromium (Cr)	0.8	U	0.8	U	1.	U	1.	U	3.1	U	1.3	U
7440-48-4	Cobalt (Co)	2.5	J	1.5	J	0.8	U	0.85	J	2.9	J	0.9	U
7440-50-8	Copper (Cu)	3.6	U	2.5	U	1.4	U	1.4	U	0.6	U	1.4	U
7439-89-6	Iron (Fe)	966.	J	690.		1430.		1460.		13000.		15200.	
7439-92-1	Lead (Pb)	1.7	U	1.7	U	0.9	U	0.9	U	1.7	U	0.9	U
7439-95-4	Magnesium (Mg)	174000.		164000.		126000.		129000.		574000.		462000.	
7439-96-5	Manganese (Mn)	356.		307.		430.		439.		694.		992.	
7439-97-6	Mercury (Hg)	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
7440-02-0	Nickel (Ni)	7.	J	4.6	J	0.97	J	0.79	J	0.8	U	0.7	U
7440-09-7	Potassium (K)	71800.	J	65400.		51300.		52200.		195000.		164000.	
7782-49-2	Selenium (Se)	2.8	U	2.8	U	3.4	U	3.4	U	2.8	U	3.4	U
7440-22-4	Silver (Ag)	1.2	U	1.2	U	1.	UJ	1.4	J	1.2	U	1.	UJ
7440-23-5	Sodium (Na)	1320000.		1100000.		587000.		608000.		5320000.		4380000.	
7440-28-0	Thallium (Tl)	9.	J	7.7	J	5.	U	5.	U	9.2	U	5.6	J
7440-31-5	Tin (Sn)	3.	U	2.6	U	14.	U	14.	U	9.8	U	14.	U
7440-62-2	Vanadium (V)	2.8	J	2.7	J	17.8	J	18.3	J	4.7	J	3.6	J
7440-66-6	Zinc (Zn)	9.	U	13.9	U	5.8	U	5.8	U	5.3	U	5.8	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-META															
	SAMPLE ID ------->	FDS-G-W09B-01		FDS-H-W09B-01		FDS-G-W09B-02		FDS-H-W09B-02		FDS-G-W09C-01		FDS-G-W09C-02	
	ORIGINAL ID ----->	FDSGW09B01		FDSHW09B01		FDSGW09B02		FDSHW09B02		FDSGW09C01		FDSGW09C02	
	LAB SAMPLE ID --->	28227.08		28228.02		29656.06		29656.07		28227.07		29656.05	
	ID FROM REPORT -->	FDSGW09B01		FDSHW09B01		FDSGW09B02		FDSHW09B02		FDSGW09C01		FDSGW09C02	
	SAMPLE DATE ----->	01/21/97		01/21/97		06/10/97		06/10/97		01/21/97		06/10/97	
	DATE EXTRACTED -->	01/23/97		01/23/97		06/12/97		06/12/97		01/23/97		06/12/97	
	DATE ANALYZED --->	01/24/97		01/24/97		06/19/97		06/19/97		01/24/97		06/19/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28217	VAL	28217	VAL	29656	VAL	29656	VAL	28217	VAL	29656	VAL
7429-90-5	Aluminum (Al)	191.		204.		97.2	J	123.		136.		8.	UJ
7440-36-0	Antimony (Sb)	4.1	J	2.1	U	3.2	U	2.1	U	2.1	U	3.2	U
7440-38-2	Arsenic (As)	3.8	J	4.5	J	5.3	J	6.9	J	4.4	J	3.5	J
7440-39-3	Barium (Ba)	199.	J	206.		236.		238.		37.8	J	33.7	
7440-41-7	Beryllium (Be)	0.3	U	0.3	U	0.28	U	0.27	U	0.3	U	0.52	U
7440-43-9	Cadmium (Cd)	0.5	U	0.5	U	0.3	U	0.3	U	0.5	U	0.3	U
7440-70-2	Calcium (Ca)	233000.	J	241000.		235000.		238000.		143000.	J	131000.	
7440-47-3	Chromium (Cr)	2.2	U	2.	U	1.	U	1.	U	2.7	U	1.	U
7440-48-4	Cobalt (Co)	1.1	J	0.9	U	0.8	UJ	0.8	UJ	1.9	J	0.8	UJ
7440-50-8	Copper (Cu)	0.6	U	0.6	U	1.4	U	1.4	U	0.6	U	1.4	U
7439-89-6	Iron (Fe)	23200.		24000.		14600.		14800.		10400.		12400.	
7439-92-1	Lead (Pb)	1.7	U	1.7	U	0.9	U	0.9	U	1.7	U	0.9	U
7439-95-4	Magnesium (Mg)	69000.		71900.		53000.		54100.		583000.		485000.	
7439-96-5	Manganese (Mn)	1450.		1500.		1240.		1250.		561.		576.	
7439-97-6	Mercury (Hg)	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
7440-02-0	Nickel (Ni)	0.8	U	0.8	U	0.7	U	0.7	U	1.	J	0.7	U
7440-09-7	Potassium (K)	46300.		48300.		38700.		39000.		190000.		168000.	
7782-49-2	Selenium (Se)	2.8	U	2.8	U	3.4	U	3.4	U	2.8	U	3.4	U
7440-22-4	Silver (Ag)	1.2	U	1.2	U	1.	UJ	1.9	J	1.2	U	1.	UJ
7440-23-5	Sodium (Na)	465000.		479000.		393000.		395000.		5260000.		4710000.	
7440-28-0	Thallium (Tl)	2.7	U	2.7	U	5.	U	6.7	J	4.2	U	5.8	J
7440-31-5	Tin (Sn)	7.7	U	5.3	U	14.	U	14.	U	6.6	U	14.	U
7440-62-2	Vanadium (V)	1.9	J	2.2	J	1.1	U	1.7	J	3.4	J	1.7	J
7440-66-6	Zinc (Zn)	5.3	U	5.3	U	5.8	U	5.8	U	5.3	U	5.8	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-META													
	SAMPLE ID ------->	FDS-G-W10A-01		FDS-G-W10A-02		FDS-G-W10B-01		FDS-G-W10B-02		FDS-G-W10C-01		FDS-G-W10C-02	
	ORIGINAL ID ----->	FDSGW10A01		FDSGW10A02		FDSGW10B01		FDSGW10B02		FDSGW10C01		FDSGW10C02	
	LAB SAMPLE ID --->	28227.01		29656.01		28227.02		29656.02		28227.03		29656.03	
	ID FROM REPORT -->	FDSGW10A01		FDSGW10A02		FDSGW10B01		FDSGW10B02		FDSGW10C01		FDSGW10C02	
	SAMPLE DATE ----->	01/21/97		06/10/97		01/21/97		06/10/97		01/21/97		06/10/97	
	DATE EXTRACTED -->	01/23/97		06/12/97		01/23/97		06/12/97		01/23/97		06/12/97	
	DATE ANALYZED --->	01/24/97		06/19/97		01/24/97		06/19/97		01/24/97		06/19/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28217	VAL	29656	VAL	28217	VAL	29656	VAL	28217	VAL	29656	VAL
7429-90-5	Aluminum (Al)	230.		8.	UJ	379.		10.7	J	93.1	J	77.	J
7440-36-0	Antimony (Sb)	2.6	J	2.2	U	2.8	J	3.	U	2.4	J	2.9	U
7440-38-2	Arsenic (As)	6.5	J	5.2	J	2.5	U	2.1	U	2.5	U	2.1	U
7440-39-3	Barium (Ba)	411.	J	247.		182.	J	200.		42.6	J	33.	
7440-41-7	Beryllium (Be)	0.3	U	0.36	U	0.3	U	0.47	U	0.3	U	0.45	U
7440-43-9	Cadmium (Cd)	0.5	U	0.3	U	0.5	U	0.3	U	0.5	U	0.32	J
7440-70-2	Calcium (Ca)	133000.	J	133000.		191000.	J	203000.		170000.	J	155000.	
7440-47-3	Chromium (Cr)	3.7	U	2.2	J	2.4	U	1.	U	2.7	U	2.5	J
7440-48-4	Cobalt (Co)	1.8	J	0.8	UJ	0.96	J	0.8	UJ	1.	J	0.8	UJ
7440-50-8	Copper (Cu)	2.6	U	1.4	U	0.6	U	1.4	U	0.6	U	1.4	U
7439-89-6	Iron (Fe)	7590.		8390.		5560.		4650.		13300.		10600.	
7439-92-1	Lead (Pb)	2.	J	0.9	U	1.7	U	0.9	U	1.7	U	0.9	U
7439-95-4	Magnesium (Mg)	245000.		199000.		382000.		280000.		343000.		297000.	
7439-96-5	Manganese (Mn)	156.		137.		275.		263.		790.		707.	
7439-97-6	Mercury (Hg)	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
7440-02-0	Nickel (Ni)	3.7	J	2.4	J	1.2	J	0.7	U	0.92	J	0.7	U
7440-09-7	Potassium (K)	85800.		74900.		131000.		107000.		137000.		120000.	
7782-49-2	Selenium (Se)	2.8	U	3.4	U	2.8	U	3.4	U	2.8	U	3.4	U
7440-22-4	Silver (Ag)	1.3	J	1.	UJ	1.2	U	1.1	J	1.2	U	1.	UJ
7440-23-5	Sodium (Na)	2370000.		2150000.		3550000.		2940000.		3050000.		2920000.	
7440-28-0	Thallium (Tl)	6.7	U	7.1	J	2.7	U	5.	U	2.7	U	5.	U
7440-31-5	Tin (Sn)	6.6	U	14.	U	5.3	U	14.	U	5.5	U	14.	U
7440-62-2	Vanadium (V)	2.6	J	1.1	U	3.6	J	1.8	J	3.3	J	2.7	J
7440-66-6	Zinc (Zn)	2790.		2340.		5.3	U	5.8	U	5.3	U	5.8	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-META																	
		SAMPLE ID ------->	FDS-G-W11A-01		FDS-G-W11A-02		FDS-G-W11B-01		FDS-G-W11B-02		FDS-G-W11C-01		FDS-H-W11C-01	
		ORIGINAL ID ----->	FDSGW11A01		FDSGW11A02		FDSGW11B01		FDSGW11B02		FDSGW11C01		FDSHW11C01	
		LAB SAMPLE ID --->	28308.07		29678.01		28308.08		29678.02		28308.09		28309.01	
		ID FROM REPORT -->	FDSGW11A01		FDSGW11A02		FDSGW11B01		FDSGW11B02		FDSGW11C01		FDSHW11C01	
		SAMPLE DATE ----->	01/28/97		06/11/97		01/28/97		06/11/97		01/28/97		01/28/97	
		DATE EXTRACTED -->	01/31/97		06/19/97		01/31/97		06/19/97		01/31/97		01/31/97	
		DATE ANALYZED --->	01/31/97		06/26/97		01/31/97		06/26/97		01/31/97		01/31/97	
		MATRIX ---------->	Water		Water		Water		Water		Water		Water	
		UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter		28308	VAL	29656	VAL	28308	VAL	29656	VAL	28308	VAL	28308	VAL
7429-90-5	Aluminum (Al)		209.		395.		174.		86.2	J	476.		456.	
7440-36-0	Antimony (Sb)		5.1	J	2.1	U	4.2	J	2.	U	3.1	J	4.8	J
7440-38-2	Arsenic (As)		2.9	J	2.1	U	2.5	U	2.1	U	3.2	J	2.5	U
7440-39-3	Barium (Ba)		39.8	J	27.9		68.9	J	54.		57.1	J	58.5	
7440-41-7	Beryllium (Be)		0.36	U	0.33	U	0.44	U	0.31	U	0.45	U	0.49	U
7440-43-9	Cadmium (Cd)		0.5	U	0.3	U	0.5	U	0.3	U	0.5	U	0.5	U
7440-70-2	Calcium (Ca)		101000.	J	105000.		93200.	J	84500.		125000.	J	126000.	
7440-47-3	Chromium (Cr)		0.96	J	1.	J	0.92	J	1.	U	1.	J	1.1	J
7440-48-4	Cobalt (Co)		0.9	U	0.8	UJ	0.9	U	0.8	UJ	0.9	U	0.9	U
7440-50-8	Copper (Cu)		3.	U	1.4	U	1.9	U	1.4	U	1.2	U	2.	U
7439-89-6	Iron (Fe)		2260.	J	2920.		15800.	J	17300.		7630.	J	7750.	
7439-92-1	Lead (Pb)		1.7	U	0.9	U	1.7	U	0.9	U	1.7	U	1.7	U
7439-95-4	Magnesium (Mg)		34000.	J	28500.		67900.	J	54100.		190000.	J	193000.	
7439-96-5	Manganese (Mn)		300.	J	348.		913.	J	814.		523.	J	530.	
7439-97-6	Mercury (Hg)		0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
7440-02-0	Nickel (Ni)		0.96	J	0.7	U	3.	J	0.7	U	0.88	J	1.2	J
7440-09-7	Potassium (K)		27300.		18300.		38200.		31200.		53700.		54400.	
7782-49-2	Selenium (Se)		2.8	U	3.4	U	2.8	U	3.4	U	2.8	U	2.8	U
7440-22-4	Silver (Ag)		1.2	U	1.	UJ	1.2	U	1.	UJ	1.2	U	1.2	U
7440-23-5	Sodium (Na)		380000.		185000.		587000.		433000.		1510000.		306000.	
7440-28-0	Thallium (Tl)		2.7	U	5.	U	2.7	U	5.	U	2.7	U	2.7	U
7440-31-5	Tin (Sn)		2.6	U	14.	U	2.6	U	14.	U	2.6	U	3.3	J
7440-62-2	Vanadium (V)		0.67	J	1.1	U	0.5	U	1.1	U	0.67	J	0.67	J
7440-66-6	Zinc (Zn)		29.4	U	5.8	U	28.1	U	5.8	U	18.7	U	23.7	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-META													
		SAMPLE ID ------->	FDS-G-W11C-02		FDS-H-W11C-02		FDS-G-W12A-01		FDS-H-W12A-01		FDS-G-W12A-02		FDS-H-W12A-02
		ORIGINAL ID ----->	FDSGW11C02		FDSHW11C02		FDSGW12A01		FDSHW12A01		FDSGW12A02		FDSHW12A02
		LAB SAMPLE ID --->	29678.03		29678.04		28295.05		28296.02		29678.07		29678.08
		ID FROM REPORT -->	FDSGW11C02		FDSHW11C02		FDSGW12A01		FDSHW12A01		FDSGW12A02		FDSHW12A02
		SAMPLE DATE ----->	06/11/97		06/11/97		01/27/97		01/27/97		06/11/97		06/11/97
		DATE EXTRACTED -->	06/19/97		06/19/97		01/29/97		01/29/97		06/19/97		06/19/97
		DATE ANALYZED --->	06/26/97		06/26/97		01/29/97		01/29/97		06/27/97		06/27/97
		MATRIX ---------->	Water		Water		Water		Water		Water		Water
		UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L
CAS #	Parameter		29656	VAL	29656	VAL	28249	VAL	28249	VAL	29656	VAL	29656	VAL
7429-90-5	Aluminum (Al)		157.		180.		705.	J	323.	J	275.		301.	
7440-36-0	Antimony (Sb)		2.4	U	3.6	U	2.3	U	2.3	U	4.3	U	3.1	U
7440-38-2	Arsenic (As)		2.1	U	2.9	J	6.4	J	6.7	J	22.8		23.1	
7440-39-3	Barium (Ba)		51.3		50.9		263.		273.		196.		197.	
7440-41-7	Beryllium (Be)		0.34	U	0.31	U	0.3	U	0.3	U	0.45	U	0.45	U
7440-43-9	Cadmium (Cd)		0.3	U	0.3	U	0.5	U	0.5	U	0.38	J	0.54	J
7440-70-2	Calcium (Ca)		78000.		77600.		271000.		278000.		215000.		216000.	
7440-47-3	Chromium (Cr)		1.	U	1.	U	1.4	J	1.	J	1.	U	1.	U
7440-48-4	Cobalt (Co)		0.8	UJ	0.8	UJ	17.5	J	18.2	J	18.7	J	18.7	J
7440-50-8	Copper (Cu)		1.4	U	1.4	U	1.6	U	0.6	U	1.4	U	1.4	U
7439-89-6	Iron (Fe)		7130.		7110.		11100.	J	10500.		19800.		19900.	
7439-92-1	Lead (Pb)		0.9	U	0.9	U	1.7	U	1.7	U	0.9	U	0.9	U
7439-95-4	Magnesium (Mg)		99900.		99400.		57800.		58200.		53300.		53500.	
7439-96-5	Manganese (Mn)		501.		498.		3590.		3710.		3170.		3190.	
7439-97-6	Mercury (Hg)		0.11	J	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
7440-02-0	Nickel (Ni)		0.7	U	0.7	U	8.8	J	9.6	J	4.9	J	4.8	J
7440-09-7	Potassium (K)		40300.		39000.		7170.	J	7110.		5890.		5980.	
7782-49-2	Selenium (Se)		3.4	U	3.4	U	2.8	U	2.8	U	3.4	U	3.4	U
7440-22-4	Silver (Ag)		1.	UJ	1.	UJ	1.2	U	1.2	U	1.	UJ	1.	UJ
7440-23-5	Sodium (Na)		1030000.		1030000.		428000.		426000.		388000.		388000.	
7440-28-0	Thallium (Tl)		5.	U	5.	U	4.3	J	4.7	J	5.	U	5.	U
7440-31-5	Tin (Sn)		14.	U	14.	U	2.7	U	2.6	U	14.	U	14.	U
7440-62-2	Vanadium (V)		1.1	U	1.1	U	1.5	J	1.2	J	1.1	U	1.1	U
7440-66-6	Zinc (Zn)		5.8	U	5.8	U	21.	U	20.1	U	5.8	U	8.4	J

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-META													
		SAMPLE ID ------->	FDS-G-W12B-01		FDS-G-W12B-02		FDS-G-W13A-01		FDS-G-W13A-02		FDS-G-W13B-01		FDS-G-W13B-02	
		ORIGINAL ID ----->	FDSGW12B01		FDSGW12B02		FDSGW13A01		FDSGW13A02		FDSGW13B01		FDSGW13B02	
		LAB SAMPLE ID --->	28295.07		29678.06		28295.04		29678.05		28295.03		29707.01	
		ID FROM REPORT -->	FDSGW12B01		FDSGW12B02		FDSGW13A01		FDSGW13A02		FDSGW13B01		FDSGW13B02	
		SAMPLE DATE ----->	01/27/97		06/11/97		01/27/97		06/11/97		01/27/97		06/13/97	
		DATE EXTRACTED -->	01/29/97		06/19/97		01/29/97		06/19/97		01/29/97		06/20/97	
		DATE ANALYZED --->	01/29/97		06/27/97		01/29/97		06/26/97		01/29/97		07/02/97	
		MATRIX ---------->	Water		Water		Water		Water		Water		Water	
		UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter		28249	VAL	29656	VAL	28249	VAL	29656	VAL	28249	VAL	29707	VAL
7429-90-5	Aluminum (Al)		111.	U	213.		1360.		692.		787.		74.4	J
7440-36-0	Antimony (Sb)		2.1	U	3.5	U	2.1	U	4.2	U	3.9	U	1.9	U
7440-38-2	Arsenic (As)		28.		49.3		27.		210.		5.2	J	16.8	
7440-39-3	Barium (Ba)		78.9		70.4		138.		28.1		144.		29.8	
7440-41-7	Beryllium (Be)		0.3	U	0.44	U	0.3	U	0.38	U	0.45	J	0.39	U
7440-43-9	Cadmium (Cd)		0.5	U	0.52	J	0.5	U	0.44	J	0.5	U	0.3	U
7440-70-2	Calcium (Ca)		172000.		160000.		161000.		155000.		197000.		185000.	
7440-47-3	Chromium (Cr)		0.82	J	1.	U	4.2	J	1.9	J	2.6	J	1.9	J
7440-48-4	Cobalt (Co)		31.		29.6	J	4.1	J	0.8	UJ	3.1	J	1.9	J
7440-50-8	Copper (Cu)		0.6	U	1.4	U	5.2	J	1.4	U	2.2	U	2.2	J
7439-89-6	Iron (Fe)		18500.	J	32200.		14700.	J	37200.		2110.	J	9150.	
7439-92-1	Lead (Pb)		1.7	U	0.9	U	1.7	U	1.	J	1.7	U	0.9	U
7439-95-4	Magnesium (Mg)		106000.		112000.		203000.		75700.		428000.		214000.	
7439-96-5	Manganese (Mn)		3370.		3240.		1370.		2480.		286.		292.	
7439-97-6	Mercury (Hg)		0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
7440-02-0	Nickel (Ni)		9.6	J	6.2	J	11.	J	0.7	U	7.7	J	4.	J
7440-09-7	Potassium (K)		41200.	J	43900.		75200.	J	42100.		123000.	J	86500.	
7782-49-2	Selenium (Se)		2.8	U	3.4	U	2.8	U	3.4	U	2.8	U	3.4	U
7440-22-4	Silver (Ag)		1.2	U	1.	UJ	1.2	U	1.	UJ	1.2	U	1.	U
7440-23-5	Sodium (Na)		876000.		1010000.		1850000.		425000.		3860000.		2080000.	
7440-28-0	Thallium (Tl)		3.2	J	5.	U	5.7	J	5.	U	7.1	J	6.4	U
7440-31-5	Tin (Sn)		3.2	U	14.	U	3.2	U	14.	U	2.6	U	14.	U
7440-62-2	Vanadium (V)		0.5	U	1.1	U	4.7	J	5.1	J	9.1	J	20.5	
7440-66-6	Zinc (Zn)		13.2	U	16.3	J	8.4	U	7.8	J	5.3	U	5.8	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-META	SAMPLE ID ------->	FDS-G-W13C-01		FDS-G-W13C-02		FDS-G-W13D-01		FDS-G-W13D-02		FDS-G-W13E-01		FDS-G-W13E-02	
	ORIGINAL ID ----->	FDSGW13C01		FDSGW13C02		FDSGW13D01		FDSGW13D02		FDSGW13E01		FDSGW13E02	
	LAB SAMPLE ID --->	28295.01		29697.03		28295.08		29697.04		28308.04		29707.02	
	ID FROM REPORT -->	FDSGW13C01		FDSGW13C02		FDSGW13D01		FDSGW13D02		FDSGW13E01		FDSGW13E02	
	SAMPLE DATE ----->	01/27/97		06/12/97		01/27/97		06/12/97		01/28/97		06/13/97	
	DATE EXTRACTED -->	01/29/97		06/19/97		01/29/97		06/19/97		01/31/97		06/20/97	
	DATE ANALYZED --->	01/29/97		06/27/97		01/29/97		06/26/97		01/31/97		07/02/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28249	VAL	29656	VAL	28249	VAL	29656	VAL	28308	VAL	29707	VAL
7429-90-5	Aluminum (Al)	1730.		1600.		1850.		2820.		215.		1290.	
7440-36-0	Antimony (Sb)	2.6	U	4.8	U	2.5	U	2.	U	3.4	J	1.6	U
7440-38-2	Arsenic (As)	3.9	J	6.	J	2.5	U	16.7		22.5		29.9	
7440-39-3	Barium (Ba)	27.3		17.		35.6		31.9		32.9	J	30.4	
7440-41-7	Beryllium (Be)	0.53	J	0.75	U	0.3	U	0.4	U	0.39	U	0.37	U
7440-43-9	Cadmium (Cd)	0.5	U	0.68	J	0.5	U	0.3	U	0.5	U	0.3	U
7440-70-2	Calcium (Ca)	69800.		49400.		8930.		3580.		155000.	J	161000.	
7440-47-3	Chromium (Cr)	1.3	J	2.9	J	3.6	J	5.3	J	0.8	U	3.3	J
7440-48-4	Cobalt (Co)	29.		23.4		3.4	J	1.4	J	0.9	U	0.8	U
7440-50-8	Copper (Cu)	0.6	U	1.4	U	1.5	U	1.8	J	1.1	U	1.4	U
7439-89-6	Iron (Fe)	73800.	J	64500.		4640.	J	8280.		10700.	J	19000.	
7439-92-1	Lead (Pb)	1.7	U	0.9	U	1.7	U	1.9	J	1.7	U	1.3	J
7439-95-4	Magnesium (Mg)	153000.		113000.		6130.		2730.		131000.	J	137000.	
7439-96-5	Manganese (Mn)	1680.		1300.		163.		73.7		1540.	J	1660.	
7439-97-6	Mercury (Hg)	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
7440-02-0	Nickel (Ni)	10.5	J	7.9	J	4.8	J	2.2	J	0.94	J	0.82	J
7440-09-7	Potassium (K)	40300.	J	30300.		3610.	J	2910.	J	57400.		67000.	
7782-49-2	Selenium (Se)	2.8	U	3.4	U	2.8	U	3.4	U	2.8	U	3.4	U
7440-22-4	Silver (Ag)	1.2	U	1.	UJ	1.2	U	1.	UJ	1.2	U	1.	U
7440-23-5	Sodium (Na)	1620000.		1260000.		163000.		104000.		538000.		795000.	
7440-28-0	Thallium (Tl)	2.7	UJ	5.	U	4.2	J	5.	U	2.7	U	6.3	U
7440-31-5	Tin (Sn)	3.9	U	14.	U	2.8	U	14.	U	2.6	U	14.	U
7440-62-2	Vanadium (V)	1.6	J	2.9	J	3.7	J	6.1	J	3.7	J	5.3	J
7440-66-6	Zinc (Zn)	26.3	U	21.7		16.5	U	12.9	J	18.	U	5.8	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-META	SAMPLE ID ------->	FDS-G-W14A-01		FDS-G-W14A-02		FDS-G-W14B-01		FDS-G-W14B-02		FDS-G-W14C-01		FDS-G-W14C-02	
	ORIGINAL ID ----->	FDSGW14A01		FDSGW14A02		FDSGW14B01		FDSGW14B02		FDSGW14C01		FDSGW14C02	
	LAB SAMPLE ID --->	28295.02		29697.01		28295.06		29697.02		28249.01		29707.03	
	ID FROM REPORT -->	FDSGW14A01		FDSGW14A02		FDSGW14B01		FDSGW14B02		FDSGW14C01		FDSGW14C02	
	SAMPLE DATE ----->	01/27/97		06/12/97		01/27/97		06/12/97		01/22/97		06/13/97	
	DATE EXTRACTED -->	01/29/97		06/19/97		01/29/97		06/19/97		01/27/97		06/20/97	
	DATE ANALYZED --->	01/29/97		06/27/97		01/29/97		06/27/97		01/29/97		07/02/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28249	VAL	29656	VAL	28249	VAL	29656	VAL	28249	VAL	29707	VAL
7429-90-5	Aluminum (Al)	138.	U	2940.		147.	U	201.		738.		250.	
7440-36-0	Antimony (Sb)	3.8	U	6.3	U	2.9	U	3.	U	2.1	U	3.1	U
7440-38-2	Arsenic (As)	50.3		21.8		6.9	J	22.5		14.		24.9	
7440-39-3	Barium (Ba)	45.2		59.6		52.		46.2		51.5		33.1	
7440-41-7	Beryllium (Be)	0.3	U	0.68	U	0.3	U	0.44	U	0.64	J	0.33	U
7440-43-9	Cadmium (Cd)	0.5	U	0.31	J	0.5	U	0.41	J	0.5	U	0.3	U
7440-70-2	Calcium (Ca)	177000.		137000.		127000.		137000.		201000.		151000.	
7440-47-3	Chromium (Cr)	2.	J	9.6	J	4.3	J	2.8	J	1.4	J	2.4	J
7440-48-4	Cobalt (Co)	1.9	J	2.1	J	3.	J	1.6	J	1.6	J	0.98	J
7440-50-8	Copper (Cu)	2.1	U	3.7	J	3.8	J	1.4	U	5.	J	1.4	U
7439-89-6	Iron (Fe)	20100.	J	15600.		4240.	J	25600.		2830.	J	4930.	
7439-92-1	Lead (Pb)	1.7	U	3.5		1.7	U	0.9	U	1.7	U	0.9	U
7439-95-4	Magnesium (Mg)	257000.		281000.		266000.		217000.		170000.		197000.	
7439-96-5	Manganese (Mn)	607.		354.		329.		405.		3360.		1510.	
7439-97-6	Mercury (Hg)	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
7440-02-0	Nickel (Ni)	3.6	U	4.8	J	7.7	J	1.4	J	2.7	U	2.3	J
7440-09-7	Potassium (K)	91500.	J	109000.		90000.	J	81600.		63100.	J	94300.	
7782-49-2	Selenium (Se)	2.8	U	3.4	U	2.8	U	3.4	U	2.8	U	3.4	U
7440-22-4	Silver (Ag)	1.2	U	1.	UJ	1.2	U	1.	UJ	1.2	U	1.	U
7440-23-5	Sodium (Na)	1970000.		2510000.		2240000.		2020000.		1030000.		1750000.	
7440-28-0	Thallium (Tl)	3.5	J	5.	U	3.2	J	5.	U	5.3	J	5.	U
7440-31-5	Tin (Sn)	3.9	U	14.	U	5.7	U	14.	U	2.6	U	14.	U
7440-62-2	Vanadium (V)	5.	J	20.2		8.4	J	13.2	J	5.4	J	17.3	J
7440-66-6	Zinc (Zn)	5.3	U	10.4	J	5.3	U	5.8	U	8.	U	5.8	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-META	SAMPLE ID ------->	FDS-G-W15A-01		FDS-G-W15A-02		FDS-G-W15B-01		FDS-G-W15B-02		FDS-G-W15C-01		FDS-G-W15C-02	
	ORIGINAL ID ----->	FDSGW15A01		FDSGW15A02		FDSGW15B01		FDSGW15B02		FDSGW15C01		FDSGW15C02	
	LAB SAMPLE ID --->	28308.01		29707.04		28308.02		29730.06		28308.03		29730.07	
	ID FROM REPORT -->	FDSGW15A01		FDSGW15A02		FDSGW15B01		FDSGW15B02		FDSGW15C01		FDSGW15C02	
	SAMPLE DATE ----->	01/28/97		06/13/97		01/28/97		06/16/97		01/28/97		06/16/97	
	DATE EXTRACTED -->	01/31/97		06/20/97		01/31/97		06/20/97		01/31/97		06/20/97	
	DATE ANALYZED --->	01/31/97		07/02/97		01/31/97		07/02/97		01/31/97		07/02/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28308	VAL	29707	VAL	28308	VAL	29707	VAL	28308	VAL	29707	VAL
7429-90-5	Aluminum (Al)	100.	J	503.		3010.		209.		962.		474.	
7440-36-0	Antimony (Sb)	2.1	U	1.6	U	2.1	U	1.6	U	3.5	J	1.6	U
7440-38-2	Arsenic (As)	19.4		26.7		4.1	J	4.6	J	2.5	U	2.1	U
7440-39-3	Barium (Ba)	55.2	J	94.5		68.6	J	70.6		159.	J	153.	
7440-41-7	Beryllium (Be)	0.34	U	0.35	U	0.59	U	0.29	U	0.59	U	0.42	U
7440-43-9	Cadmium (Cd)	0.5	U	0.3	U	0.5	U	0.3	U	0.5	U	0.3	U
7440-70-2	Calcium (Ca)	126000.	J	235000.		98800.	J	119000.		268000.	J	284000.	
7440-47-3	Chromium (Cr)	0.92	J	1.5	J	4.7	J	1.	U	1.9	J	1.	U
7440-48-4	Cobalt (Co)	0.9	U	0.8	U	8.1	J	6.8	J	1.3	J	0.8	U
7440-50-8	Copper (Cu)	3.6	J	1.4	U	1.2	U	1.4	U	0.6	U	1.4	U
7439-89-6	Iron (Fe)	4920.	J	6620.		2060.	J	675.		1920.	J	3040.	
7439-92-1	Lead (Pb)	1.7	U	0.9	U	1.7	U	0.9	U	1.7	U	0.9	U
7439-95-4	Magnesium (Mg)	12200.	J	15800.		26200.	J	22800.		19300.	J	14000.	
7439-96-5	Manganese (Mn)	721.	J	515.		1050.	J	813.		806.	J	465.	
7439-97-6	Mercury (Hg)	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
7440-02-0	Nickel (Ni)	3.7	J	0.84	J	3.2	J	1.6	J	1.7	J	0.9	J
7440-09-7	Potassium (K)	10800.		5130.		7410.		8050.		3440.	J	3450.	J
7782-49-2	Selenium (Se)	2.8	U	3.4	U	2.8	U	3.4	U	2.8	U	3.4	U
7440-22-4	Silver (Ag)	1.2	U	1.	U	1.2	U	1.	U	1.2	U	1.	U
7440-23-5	Sodium (Na)	78300.		157000.		92400.		158000.		117000.		114000.	
7440-28-0	Thallium (Tl)	2.7	U	5.3	U	2.7	U	5.1	U	3.3	J	5.7	U
7440-31-5	Tin (Sn)	2.6	U	14.	U	2.6	U	14.	U	2.6	U	14.	U
7440-62-2	Vanadium (V)	1.3	J	1.6	J	6.	J	1.1	J	1.9	J	1.6	J
7440-66-6	Zinc (Zn)	35.6	U	5.8	U	7.1	U	11.9	U	5.3	U	9.8	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-META									
		SAMPLE ID ------->	FDS-G-W18A-01		FDS-G-W18A-02				
		ORIGINAL ID ----->	FDSGW18A01		FDSGW18A02				
		LAB SAMPLE ID --->	28328.05		29767.03				
		ID FROM REPORT -->	FDSGW18A01		FDSGW18A02				
		SAMPLE DATE ----->	01/29/97		06/18/97				
		DATE EXTRACTED -->	01/31/97		06/26/97				
		DATE ANALYZED --->	01/31/97		07/08/97				
		MATRIX ---------->	Water		Water				
		UNITS ---------->	UG/L		UG/L				
CAS #	Parameter		28308	VAL	29767	VAL			
7429-90-5	Aluminum (Al)		2070.		15.5	J			
7440-36-0	Antimony (Sb)		5.3	J	5.	J			
7440-38-2	Arsenic (As)		6.2	J	3.7	J			
7440-39-3	Barium (Ba)		102.	J	60.9				
7440-41-7	Beryllium (Be)		0.64	U	0.28	U			
7440-43-9	Cadmium (Cd)		0.5	U	0.3	U			
7440-70-2	Calcium (Ca)		110000.	J	149000.				
7440-47-3	Chromium (Cr)		4.5	J	1.5	J			
7440-48-4	Cobalt (Co)		2.	J	2.4	J			
7440-50-8	Copper (Cu)		7.6	J	3.6	J			
7439-89-6	Iron (Fe)		1720.	J	3970.				
7439-92-1	Lead (Pb)		1.7	U	0.9	U			
7439-95-4	Magnesium (Mg)		234000.	J	186000.				
7439-96-5	Manganese (Mn)		257.	J	317.				
7439-97-6	Mercury (Hg)		0.1	U	0.1	U			
7440-02-0	Nickel (Ni)		7.	J	5.6	J			
7440-09-7	Potassium (K)		111000.		113000.				
7782-49-2	Selenium (Se)		2.8	U	3.4	U			
7440-22-4	Silver (Ag)		1.2	U	1.	U			
7440-23-5	Sodium (Na)		2200000.		1750000.	J			
7440-28-0	Thallium (Tl)		2.7	U	6.4	U			
7440-31-5	Tin (Sn)		3.4	U	14.	U			
7440-62-2	Vanadium (V)		44.1		37.				
7440-66-6	Zinc (Zn)		41.9		5.8	U			

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-OP P															
	SAMPLE ID ------->	FDS-H-W01D-01		FDS-H-W02A-01		FDS-H-W08C-01		FDS-H-W09B-01		FDS-H-W11C-01		FDS-H-W12A-01	
	ORIGINAL ID ----->	FDSHW01D01		FDSHW02A01		FDSHW08C01		FDSHW09B01		FDSHW11C01		FDSHW12A01	
	LAB SAMPLE ID --->	28186.01		28189.01		28280.01		28228.02		28309.01		28296.02	
	ID FROM REPORT -->	FDSHW01D01		FDSHW02A01		FDSHW08C01		FDSHW09B01		FDSHW11C01		FDSHW12A01	
	SAMPLE DATE ----->	01/14/97		01/16/97		01/24/97		01/21/97		01/28/97		01/27/97	
	DATE EXTRACTED -->	01/18/97		01/18/97		01/27/97		01/22/97		01/30/97		01/28/97	
	DATE ANALYZED --->	01/20/97		01/20/97		01/29/97		01/25/97		01/31/97		01/29/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28185	VAL	28185	VAL	28249	VAL	28217	VAL	28308	VAL	28249	VAL
298-02-2	Phorate	2.	U	2.	U	2.	U	2.	U	2.	U	2.	U
298-04-4	Disulfoton	3.7	U	3.7	U	3.7	U	3.7	U	3.7	U	3.7	U
298-00-0	Methyl parathion	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-PEST													
		SAMPLE ID ------->	FDS-G-W01A-01		FDS-G-W01A-02		FDS-G-W01B-01		FDS-G-W01B-02		FDS-G-W01C-01		FDS-G-W01C-02	
		ORIGINAL ID ----->	FDSGW01A01		FDSGW01A02		FDSGW01B01		FDSGW01B02		FDSGW01C01		FDSGW01C02	
		LAB SAMPLE ID --->	28174.01		29610.04		28174.02		29560.05		28174.05		29560.06	
		ID FROM REPORT -->	FDSGW01A01		FDSGW01A02		FDSGW01B01		FDSGW01B02		FDSGW01C01		FDSGW01C02	
		SAMPLE DATE ----->	01/14/97		06/05/97		01/14/97		06/02/97		01/14/97		06/02/97	
		DATE EXTRACTED -->	01/16/97		06/06/97		01/16/97		06/04/97		01/16/97		06/04/97	
		DATE ANALYZED --->	01/18/97		06/12/97		01/18/97		06/08/97		01/18/97		06/08/97	
		MATRIX ---------->	Water		Water		Water		Water		Water		Water	
		UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter		28134	VAL	29591	VAL	28134	VAL	29515	VAL	28134	VAL	29515	VAL
319-84-6	alpha-BHC		0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
319-85-7	beta-BHC		0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
319-86-8	delta-BHC		0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
58-89-9	gamma-BHC (Lindane)		0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
76-44-8	Heptachlor		0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
309-00-2	Aldrin		0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
1024-57-3	Heptachlor epoxide		0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
959-98-8	Endosulfan I		0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
60-57-1	Dieldrin		0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
72-55-9	4,4'-DDE		0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
72-20-8	Endrin		0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
33213-65-9	Endosulfan II		0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
72-54-8	4,4'-DDD		0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
1031-07-8	Endosulfan sulfate		0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
50-29-3	4,4'-DDT		0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
72-43-5	Methoxychlor		0.38	U	0.38	U	0.38	U	0.38	U	0.38	U	0.38	U
53494-70-5	Endrin ketone		0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
7421-93-4	Endrin aldehyde		0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
5103-71-9	alpha-Chlordane		0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
5103-74-2	gamma-Chlordane		0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
8001-35-2	Toxaphene		2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
12674-11-2	Aroclor-1016		1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
11104-28-2	Aroclor-1221		1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
11141-16-5	Aroclor-1232		1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
53469-21-9	Aroclor-1242		1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
12672-29-6	Aroclor-1248		1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
11097-69-1	Aroclor-1254		2.	U	2.	U	2.	U	2.	U	2.	U	2.	U
11096-82-5	Aroclor-1260		2.	U	2.	U	2.	U	2.	U	2.	U	2.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-PEST															
	SAMPLE ID ------>	FDS-G-W01D-01		FDS-G-W01D-02		FDS-H-W01D-02		FDS-G-W01E-01		FDS-G-W01E-02		FDS-G-W02A-01	
	ORIGINAL ID ----->	FDSGW01D01		FDSGW01D02		FDSHW01D02		FDSGW01E01		FDSGW01E02		FDSGW02A01	
	LAB SAMPLE ID --->	28185.02		29591.03		29591.04		28328.01		29560.07		28190.02	
	ID FROM REPORT -->	FDSGW01D01		FDSGW01D02		FDSHW01D02		FDSGW01E01		FDSGW01E02		FDSGW02A01	
	SAMPLE DATE ----->	01/14/97		06/04/97		06/04/97		01/29/97		06/02/97		01/16/97	
	DATE EXTRACTED -->	01/20/97		06/06/97		06/06/97		01/31/97		06/04/97		01/17/97	
	DATE ANALYZED --->	01/22/97		06/11/97		06/11/97		02/03/97		06/08/97		01/21/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28185	VAL	29591	VAL	29591	VAL	28308	VAL	29515	VAL	28185	VAL
319-84-6	alpha-BHC	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
319-85-7	beta-BHC	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
319-86-8	delta-BHC	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
58-89-9	gamma-BHC (Lindane)	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
76-44-8	Heptachlor	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
309-00-2	Aldrin	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
1024-57-3	Heptachlor epoxide	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
959-98-8	Endosulfan I	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
60-57-1	Dieldrin	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
72-55-9	4,4'-DDE	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
72-20-8	Endrin	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
33213-65-9	Endosulfan II	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
72-54-8	4,4'-DDD	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
1031-07-8	Endosulfan sulfate	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
50-29-3	4,4'-DDT	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
72-43-5	Methoxychlor	0.38	U	0.38	U	0.38	U	0.38	U	0.38	U	0.38	U
53494-70-5	Endrin ketone	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
7421-93-4	Endrin aldehyde	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
5103-71-9	alpha-Chlordane	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
5103-74-2	gamma-Chlordane	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
8001-35-2	Toxaphene	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
12674-11-2	Aroclor-1016	1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
11104-28-2	Aroclor-1221	1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
11141-16-5	Aroclor-1232	1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
53469-21-9	Aroclor-1242	1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
12672-29-6	Aroclor-1248	1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
11097-69-1	Aroclor-1254	2.	U	2.	U	2.	U	2.	U	2.	U	2.	U
11096-82-5	Aroclor-1260	2.	U	2.	U	2.	U	2.	U	2.	U	2.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-PEST													
	SAMPLE ID ------->	FDS-G-W02A-02		FDS-H-W02A-02		FDS-G-W02B-01		FDS-G-W02B-02		FDS-G-W02C-01		FDS-G-W02C-02	
	ORIGINAL ID ----->	FDSGW02A02		FDSHW02A02		FDSGW02B01		FDSGW02B02		FDSGW02C01		FDSGW02C02	
	LAB SAMPLE ID --->	29538.03		29538.04		28223.10		29523.03		28190.01		29538.02	
	ID FROM REPORT -->	FDSGW02A02		FDSHW02A02		FDSGW02B01		FDSGW02B02		FDSGW02C01		FDSGW02C02	
	SAMPLE DATE ----->	05/30/97		05/30/97		01/19/97		05/20/97		01/16/97		05/30/97	
	DATE EXTRACTED -->	06/02/97		06/02/97		01/22/97		05/30/97		01/17/97		06/02/97	
	DATE ANALYZED --->	06/07/97		06/07/97		01/24/97		06/06/97		01/21/97		06/07/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	29515	VAL	29515	VAL	28217	VAL	29515	VAL	28185	VAL	29515	VAL
319-84-6	alpha-BHC	0.04	U	0.04	U	0.	U	0.04	U	0.04	U	0.04	U
319-85-7	beta-BHC	0.04	U	0.04	U	0.	U	0.04	U	0.04	U	0.04	U
319-86-8	delta-BHC	0.04	U	0.04	U	0.	U	0.04	U	0.04	U	0.04	U
58-89-9	gamma-BHC (Lindane)	0.04	U	0.04	U	0.	U	0.04	U	0.04	U	0.04	U
76-44-8	Heptachlor	0.04	U	0.04	U	0.	U	0.04	U	0.04	U	0.04	U
309-00-2	Aldrin	0.04	U	0.04	U	0.	U	0.04	U	0.04	U	0.04	U
1024-57-3	Heptachlor epoxide	0.04	U	0.04	U	0.	U	0.04	U	0.04	U	0.04	U
959-98-8	Endosulfan I	0.04	U	0.04	U	0.	U	0.04	U	0.04	U	0.04	U
60-57-1	Dieldrin	0.08	U	0.08	U	0.	U	0.08	U	0.08	U	0.08	U
72-55-9	4,4'-DDE	0.08	U	0.08	U	0.	U	0.08	U	0.08	U	0.08	U
72-20-8	Endrin	0.08	U	0.08	U	0.	U	0.08	U	0.08	U	0.08	U
33213-65-9	Endosulfan II	0.08	U	0.08	U	0.	U	0.08	U	0.08	U	0.08	U
72-54-8	4,4'-DDD	0.08	U	0.08	U	0.	U	0.08	U	0.08	U	0.08	U
1031-07-8	Endosulfan sulfate	0.08	U	0.08	U	0.	U	0.08	U	0.08	U	0.08	U
50-29-3	4,4'-DDT	0.08	U	0.08	U	0.	U	0.08	U	0.08	U	0.08	U
72-43-5	Methoxychlor	0.38	U	0.38	U	0.	U	0.38	U	0.38	U	0.38	U
53494-70-5	Endrin ketone	0.08	U	0.08	U	0.	U	0.08	U	0.08	U	0.08	U
7421-93-4	Endrin aldehyde	0.08	U	0.08	U	0.	U	0.08	U	0.08	U	0.08	U
5103-71-9	alpha-Chlordane	0.04	U	0.04	U	0.	U	0.04	U	0.04	U	0.04	U
5103-74-2	gamma-Chlordane	0.04	U	0.04	U	0.	U	0.04	U	0.04	U	0.04	U
8001-35-2	Toxaphene	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
12674-11-2	Aroclor-1016	1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
11104-28-2	Aroclor-1221	1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
11141-16-5	Aroclor-1232	1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
53469-21-9	Aroclor-1242	1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
12672-29-6	Aroclor-1248	1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
11097-69-1	Aroclor-1254	2.	U	2.	U	2.	U	2.	U	2.	U	2.	U
11096-82-5	Aroclor-1260	2.	U	2.	U	2.	U	2.	U	2.	U	2.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-PEST																	
		SAMPLE ID ------->	FDS-G-W03A-01		FDS-G-W03A-02		FDS-G-W03B-01		FDS-G-W03B-02		FDS-G-W03C-01		FDS-G-W03C-02	
		ORIGINAL ID ----->	FDSGW03A01		FDSGW03A02		FDSGW03B01		FDSGW03B02		FDSGW03C01		FDSGW03C02	
		LAB SAMPLE ID --->	28223.01		29591.01		28185.05		29560.01		28185.04		29591.02	
		ID FROM REPORT -->	FDSGW03A01		FDSGW03A02		FDSGW03B01		FDSGW03B02		FDSGW03C01		FDSGW03C02	
		SAMPLE DATE ----->	01/19/97		06/04/97		01/15/97		06/02/97		01/15/97		06/04/97	
		DATE EXTRACTED -->	01/22/97		06/06/97		01/20/97		06/04/97		01/20/97		06/06/97	
		DATE ANALYZED --->	01/23/97		06/11/97		01/22/97		06/08/97		01/22/97		06/11/97	
		MATRIX ---------->	Water		Water		Water		Water		Water		Water	
		UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter		28217	VAL	29591	VAL	28185	VAL	29515	VAL	28185	VAL	29591	VAL
319-84-6	alpha-BHC		0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
319-85-7	beta-BHC		0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
319-86-8	delta-BHC		0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
58-89-9	gamma-BHC (Lindane)		0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
76-44-8	Heptachlor		0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
309-00-2	Aldrin		0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
1024-57-3	Heptachlor epoxide		0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
959-98-8	Endosulfan I		0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
60-57-1	Dieldrin		0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
72-55-9	4,4'-DDE		0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
72-20-8	Endrin		0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
33213-65-9	Endosulfan II		0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
72-54-8	4,4'-DDD		0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
1031-07-8	Endosulfan sulfate		0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
50-29-3	4,4'-DDT		0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
72-43-5	Methoxychlor		0.38	U	0.38	U	0.38	U	0.38	U	0.38	U	0.38	U
53494-70-5	Endrin ketone		0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
7421-93-4	Endrin aldehyde		0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
5103-71-9	alpha-Chlordane		0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
5103-74-2	gamma-Chlordane		0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
8001-35-2	Toxaphene		2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
12674-11-2	Aroclor-1016		1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
11104-28-2	Aroclor-1221		1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
11141-16-5	Aroclor-1232		1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
53469-21-9	Aroclor-1242		1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
12672-29-6	Aroclor-1248		1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
11097-69-1	Aroclor-1254		2.	U	2.	U	2.	U	2.	U	2.	U	2.	U
11096-82-5	Aroclor-1260		2.	U	2.	U	2.	U	2.	U	2.	U	2.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-PEST	SAMPLE ID ------->	FDS-G-W04A-01		FDS-G-W04A-02		FDS-G-W04B-01		FDS-G-W04B-02		FDS-G-W04C-01		FDS-G-W04C-02	
	ORIGINAL ID ----->	FDSGW04A01		FDSGW04A02		FDSGW04B01		FDSGW04B02		FDSGW04C01		FDSGW04C02	
	LAB SAMPLE ID --->	28223.07		29487.03		28223.08		29515.01		28223.09		29515.05	
	ID FROM REPORT -->	FDSGW04A01		FDSGW04A02		FDSGW04B01		FDSGW04B02		FDSGW04C01		FDSGW04C02	
	SAMPLE DATE ----->	01/20/97		05/23/97		01/20/97		05/28/97		01/20/97		05/28/97	
	DATE EXTRACTED -->	01/22/97		05/24/97		01/22/97		05/30/97		01/22/97		05/30/97	
	DATE ANALYZED --->	01/24/97		06/04/97		01/24/97		06/06/97		01/24/97		06/06/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28217	VAL	29437	VAL	28217	VAL	29515	VAL	28217	VAL	29515	VAL
319-84-6	alpha-BHC	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
319-85-7	beta-BHC	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
319-86-8	delta-BHC	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
58-89-9	gamma-BHC (Lindane)	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
76-44-8	Heptachlor	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
309-00-2	Aldrin	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
1024-57-3	Heptachlor epoxide	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
959-98-8	Endosulfan I	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
60-57-1	Dieldrin	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
72-55-9	4,4'-DDE	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
72-20-8	Endrin	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
33213-65-9	Endosulfan II	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
72-54-8	4,4'-DDD	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
1031-07-8	Endosulfan sulfate	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
50-29-3	4,4'-DDT	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
72-43-5	Methoxychlor	0.38	U	0.38	U	0.38	U	0.38	U	0.38	U	0.38	U
53494-70-5	Endrin ketone	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
7421-93-4	Endrin aldehyde	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
5103-71-9	alpha-Chlordane	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
5103-74-2	gamma-Chlordane	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
8001-35-2	Toxaphene	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
12674-11-2	Aroclor-1016	1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
11104-28-2	Aroclor-1221	1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
11141-16-5	Aroclor-1232	1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
53469-21-9	Aroclor-1242	1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
12672-29-6	Aroclor-1248	1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
11097-69-1	Aroclor-1254	2.	U	2.	U	2.	U	2.	U	2.	U	2.	U
11096-82-5	Aroclor-1260	2.	U	2.	U	2.	U	2.	U	2.	U	2.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-PEST													
	SAMPLE ID ------->	FDS-G-W05A-01		FDS-G-W05A-02		FDS-G-W05B-01		FDS-G-W05B-02		FDS-G-W06A-01		FDS-G-W06A-02	
	ORIGINAL ID ----->	FDSGW05A01		FDSGW05A02		FDSGW05B01		FDSGW05B02		FDSGW06A01		FDSGW06A02	
	LAB SAMPLE ID --->	28223.03		29610.01		28209.04		29610.02		28223.02		29523.01	
	ID FROM REPORT -->	FDSGW05A01		FDSGW05A02		FDSGW05B01		FDSGW05B02		FDSGW06A01		FDSGW06A02	
	SAMPLE DATE ----->	01/19/97		06/05/97		01/17/97		06/05/97		01/18/97		05/20/97	
	DATE EXTRACTED -->	01/22/97		06/06/97		01/19/97		06/06/97		01/22/97		05/30/97	
	DATE ANALYZED --->	01/23/97		06/11/97		01/21/97		06/11/97		01/23/97		06/06/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28217	VAL	29591	VAL	28185	VAL	29591	VAL	28217	VAL	29515	VAL
319-84-6	alpha-BHC	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
319-85-7	beta-BHC	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
319-86-8	delta-BHC	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
58-89-9	gamma-BHC (Lindane)	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
76-44-8	Heptachlor	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
309-00-2	Aldrin	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
1024-57-3	Heptachlor epoxide	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
959-98-8	Endosulfan I	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
60-57-1	Dieldrin	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
72-55-9	4,4'-DDE	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
72-20-8	Endrin	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
33213-65-9	Endosulfan II	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
72-54-8	4,4'-DDD	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
1031-07-8	Endosulfan sulfate	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
50-29-3	4,4'-DDT	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
72-43-5	Methoxychlor	0.38	U	0.38	U	0.38	U	0.38	U	0.38	U	0.38	U
53494-70-5	Endrin ketone	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
7421-93-4	Endrin aldehyde	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
5103-71-9	alpha-Chlordane	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
5103-74-2	gamma-Chlordane	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
8001-35-2	Toxaphene	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
12674-11-2	Aroclor-1016	1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
11104-28-2	Aroclor-1221	1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
11141-16-5	Aroclor-1232	1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
53469-21-9	Aroclor-1242	1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
12672-29-6	Aroclor-1248	1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
11097-69-1	Aroclor-1254	2.	U	2.	U	2.	U	2.	U	2.	U	2.	U
11096-82-5	Aroclor-1260	2.	U	2.	U	2.	U	2.	U	2.	U	2.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-PEST	SAMPLE ID ------->	FDS-G-W06B-01		FDS-G-W06B-02		FDS-G-W06C-01		FDS-G-W06C-02		FDS-G-W07A-01		FDS-G-W07A-02	
	ORIGINAL ID ----->	FDSGW06B01		FDSGW06B02		FDSGW06C01		FDSGW06C02		FDSGW07A01		FDSGW07A02	
	LAB SAMPLE ID --->	28223.05		29523.02		28223.06		29538.01		28343.01		29610.05	
	ID FROM REPORT -->	FDSGW06B01		FDSGW06B02		FDSGW06C01		FDSGW06C02		FDSGW07A01		FDSGW07A02	
	SAMPLE DATE ----->	01/20/97		05/20/97		01/20/97		05/30/97		01/29/97		06/05/97	
	DATE EXTRACTED -->	01/22/97		05/30/97		01/22/97		06/02/97		02/03/97		06/06/97	
	DATE ANALYZED --->	01/23/97		06/06/97		01/23/97		06/07/97		02/05/97		06/12/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28217	VAL	29515	VAL	28217	VAL	29515	VAL	28308	VAL	29591	VAL
319-84-6	alpha-BHC	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
319-85-7	beta-BHC	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
319-86-8	delta-BHC	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
58-89-9	gamma-BHC (Lindane)	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
76-44-8	Heptachlor	0.04	U	0.04	U	0.04	U	0.04	U	0.046	U	0.04	U
309-00-2	Aldrin	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
1024-57-3	Heptachlor epoxide	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
959-98-8	Endosulfan I	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
60-57-1	Dieldrin	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
72-55-9	4,4'-DDE	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
72-20-8	Endrin	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
33213-65-9	Endosulfan II	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
72-54-8	4,4'-DDD	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
1031-07-8	Endosulfan sulfate	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
50-29-3	4,4'-DDT	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
72-43-5	Methoxychlor	0.38	U	0.38	U	0.38	U	0.38	U	0.38	U	0.38	U
53494-70-5	Endrin ketone	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
7421-93-4	Endrin aldehyde	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
5103-71-9	alpha-Chlordane	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
5103-74-2	gamma-Chlordane	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
8001-35-2	Toxaphene	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
12674-11-2	Aroclor-1016	1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
11104-28-2	Aroclor-1221	1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
11141-16-5	Aroclor-1232	1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
53469-21-9	Aroclor-1242	1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
12672-29-6	Aroclor-1248	1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
11097-69-1	Aroclor-1254	2.	U	2.	U	2.	U	2.	U	2.	U	2.	U
11096-82-5	Aroclor-1260	2.	U	2.	U	2.	U	2.	U	2.	U	2.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-PEST													
	SAMPLE ID ------->	FDS-G-W07B-01		FDS-G-W07B-02		FDS-G-W07C-01		FDS-G-W07C-02		FDS-G-W07D-01		FDS-G-W07D-02	
	ORIGINAL ID ----->	FDSGW07B01		FDSGW07B02		FDSGW07C01		FDSGW07C02		FDSGW07D01		FDSGW07D02	
	LAB SAMPLE ID --->	28209.01		29636.01		28209.02		29636.05		28279.01		29744.01	
	ID FROM REPORT -->	FDSGW07B01		FDSGW07B02		FDSGW07C01		FDSGW07C02		FDSGW07D01		FDSGW07D02	
	SAMPLE DATE ----->	01/17/97		06/09/97		01/17/97		06/09/97		01/24/97		06/17/97	
	DATE EXTRACTED -->	01/19/97		06/10/97		01/19/97		06/10/97		01/27/97		06/20/97	
	DATE ANALYZED --->	01/21/97		06/12/97		01/21/97		06/13/97		01/28/97		06/27/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28185	VAL	29591	VAL	28185	VAL	29591	VAL	28249	VAL	29707	VAL
319-84-6	alpha-BHC	0.04	U	0.04	U	0.04	U	0.04	U	0.04	UJ	0.04	U
319-85-7	beta-BHC	0.04	U	0.04	U	0.04	U	0.04	U	0.04	UJ	0.04	U
319-86-8	delta-BHC	0.04	U	0.04	U	0.04	U	0.04	U	0.04	UJ	0.04	U
58-89-9	gamma-BHC (Lindane)	0.04	U	0.04	U	0.04	U	0.04	U	0.04	UJ	0.04	U
76-44-8	Heptachlor	0.04	U	0.04	U	0.04	U	0.04	U	0.04	UJ	0.04	U
309-00-2	Aldrin	0.04	U	0.04	U	0.04	U	0.04	U	0.04	UJ	0.04	U
1024-57-3	Heptachlor epoxide	0.04	U	0.04	U	0.04	U	0.04	U	0.04	UJ	0.04	U
959-98-8	Endosulfan I	0.04	U	0.04	U	0.04	U	0.04	U	0.04	UJ	0.04	U
60-57-1	Dieldrin	0.08	U	0.08	U	0.08	U	0.08	U	0.08	UJ	0.08	U
72-55-9	4,4'-DDE	0.08	U	0.08	U	0.08	U	0.08	U	0.08	UJ	0.08	U
72-20-8	Endrin	0.08	U	0.08	U	0.08	U	0.08	U	0.08	UJ	0.08	U
33213-65-9	Endosulfan II	0.08	U	0.08	U	0.08	U	0.08	U	0.08	UJ	0.08	U
72-54-8	4,4'-DDD	0.08	U	0.08	U	0.08	U	0.08	U	0.08	UJ	0.08	U
1031-07-8	Endosulfan sulfate	0.08	U	0.08	U	0.08	U	0.08	U	0.08	UJ	0.08	U
50-29-3	4,4'-DDT	0.08	U	0.08	U	0.08	U	0.08	U	0.08	UJ	0.08	U
72-43-5	Methoxychlor	0.38	U	0.38	U	0.38	U	0.38	U	0.38	UJ	0.38	U
53494-70-5	Endrin ketone	0.08	U	0.08	U	0.08	U	0.08	U	0.08	UJ	0.08	U
7421-93-4	Endrin aldehyde	0.08	U	0.08	U	0.08	U	0.08	U	0.08	UJ	0.08	U
5103-71-9	alpha-Chlordane	0.04	U	0.04	U	0.04	U	0.04	U	0.04	UJ	0.04	U
5103-74-2	gamma-Chlordane	0.04	U	0.04	U	0.04	U	0.04	U	0.04	UJ	0.04	U
8001-35-2	Toxaphene	2.5	U	2.5	U	2.5	U	2.5	U	2.5	UJ	2.5	U
12674-11-2	Aroclor-1016	1.	U	1.	U	1.	U	1.	U	1.	UJ	1.	U
11104-28-2	Aroclor-1221	1.	U	1.	U	1.	U	1.	U	1.	UJ	1.	U
11141-16-5	Aroclor-1232	1.	U	1.	U	1.	U	1.	U	1.	UJ	1.	U
53469-21-9	Aroclor-1242	1.	U	1.	U	1.	U	1.	U	1.	UJ	1.	U
12672-29-6	Aroclor-1248	1.	U	1.	U	1.	U	1.	U	1.	UJ	1.	U
11097-69-1	Aroclor-1254	2.	U	2.	U	2.	U	2.	U	2.	UJ	2.	U
11096-82-5	Aroclor-1260	2.	U	2.	U	2.	U	2.	U	2.	UJ	2.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-PEST	SAMPLE ID ------->	FDS-G-W08A-01		FDS-G-W08A-02		FDS-G-W08B-01		FDS-G-W08B-02		FDS-G-W08C-01		FDS-G-W08C-02	
	ORIGINAL ID ----->	FDSGW08A01		FDSGW08A02		FDSGW08B01		FDSGW08B02		FDSGW08C01		FDSGW08C02	
	LAB SAMPLE ID --->	28279.02		29610.03		28295.10		29636.06		28279.03		29636.07	
	ID FROM REPORT -->	FDSGW08A01		FDSGW08A02		FDSGW08B01		FDSGW08B02		FDSGW08C01		FDSGW08C02	
	SAMPLE DATE ----->	01/24/97		06/05/97		01/25/97		06/09/97		01/24/97		06/09/97	
	DATE EXTRACTED -->	01/27/97		06/06/97		01/28/97		06/10/97		01/27/97		06/10/97	
	DATE ANALYZED --->	01/28/97		06/11/97		01/30/97		06/13/97		01/28/97		06/13/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28249	VAL	29591	VAL	28249	VAL	29591	VAL	28249	VAL	29591	VAL
319-84-6	alpha-BHC	0.04	UJ	0.04	U	0.04	UJ	0.04	U	0.04	UJ	0.04	U
319-85-7	beta-BHC	0.04	UJ	0.04	U	0.04	UJ	0.04	U	0.04	UJ	0.04	U
319-86-8	delta-BHC	0.04	UJ	0.04	U	0.04	UJ	0.04	U	0.04	UJ	0.04	U
58-89-9	gamma-BHC (Lindane)	0.04	UJ	0.04	U	0.04	UJ	0.04	U	0.04	UJ	0.04	U
76-44-8	Heptachlor	0.04	UJ	0.04	U	0.04	UJ	0.04	U	0.04	UJ	0.04	U
309-00-2	Aldrin	0.04	UJ	0.04	U	0.04	UJ	0.04	U	0.04	UJ	0.04	U
1024-57-3	Heptachlor epoxide	0.04	UJ	0.04	U	0.04	UJ	0.04	U	0.04	UJ	0.04	U
959-98-8	Endosulfan I	0.04	UJ	0.04	U	0.04	UJ	0.04	U	0.04	UJ	0.04	U
60-57-1	Dieldrin	0.08	UJ	0.08	U	0.08	UJ	0.08	U	0.08	UJ	0.08	U
72-55-9	4,4'-DDE	0.08	UJ	0.08	U	0.08	UJ	0.08	U	0.08	UJ	0.08	U
72-20-8	Endrin	0.08	UJ	0.08	U	0.08	UJ	0.08	U	0.08	UJ	0.08	U
33213-65-9	Endosulfan II	0.08	UJ	0.08	U	0.08	UJ	0.08	U	0.08	UJ	0.08	U
72-54-8	4,4'-DDD	0.08	UJ	0.08	U	0.08	UJ	0.08	U	0.08	UJ	0.08	U
1031-07-8	Endosulfan sulfate	0.08	UJ	0.08	U	0.08	UJ	0.08	U	0.08	UJ	0.08	U
50-29-3	4,4'-DDT	0.08	UJ	0.08	U	0.08	UJ	0.08	U	0.08	UJ	0.08	U
72-43-5	Methoxychlor	0.38	UJ	0.38	U	0.38	UJ	0.38	U	0.38	UJ	0.38	U
53494-70-5	Endrin ketone	0.08	UJ	0.08	U	0.08	UJ	0.08	U	0.08	UJ	0.08	U
7421-93-4	Endrin aldehyde	0.08	UJ	0.08	U	0.08	UJ	0.08	U	0.08	UJ	0.08	U
5103-71-9	alpha-Chlordane	0.04	UJ	0.04	U	0.04	UJ	0.04	U	0.04	UJ	0.04	U
5103-74-2	gamma-Chlordane	0.04	UJ	0.04	U	0.04	UJ	0.04	U	0.04	UJ	0.04	U
8001-35-2	Toxaphene	2.5	UJ	2.5	U	2.5	UJ	2.5	U	2.5	UJ	2.5	U
12674-11-2	Aroclor-1016	1.	UJ	1.	U	1.	UJ	1.	U	1.	UJ	1.	U
11104-28-2	Aroclor-1221	1.	UJ	1.	U	1.	UJ	1.	U	1.	UJ	1.	U
11141-16-5	Aroclor-1232	1.	UJ	1.	U	1.	UJ	1.	U	1.	UJ	1.	U
53469-21-9	Aroclor-1242	1.	UJ	1.	U	1.	UJ	1.	U	1.	UJ	1.	U
12672-29-6	Aroclor-1248	1.	UJ	1.	U	1.	UJ	1.	U	1.	UJ	1.	U
11097-69-1	Aroclor-1254	2.	UJ	2.	U	2.	UJ	2.	U	2.	UJ	2.	U
11096-82-5	Aroclor-1260	2.	UJ	2.	U	2.	UJ	2.	U	2.	UJ	2.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-PEST															
		SAMPLE ID ------->	FDS-H-W08C-02		FDS-G-W09A-01		FDS-G-W09A-02		FDS-G-W09B-01		FDS-G-W09B-02		FDS-H-W09B-02		
		ORIGINAL ID ----->	FDSHW08C02		FDSGW09A01		FDSGW09A02		FDSGW09B01		FDSGW09B02		FDSHW09B02		
		LAB SAMPLE ID --->	29636.08		28227.06		29656.04		28227.08		29656.06		29656.07		
		ID FROM REPORT -->	FDSHW08C02		FDSGW09A01		FDSGW09A02		FDSGW09B01		FDSGW09B02		FDSHW09B02		
		SAMPLE DATE ----->	06/09/97		01/21/97		06/10/97		01/21/97		06/10/97		06/10/97		
		DATE EXTRACTED -->	06/10/97		01/22/97		06/11/97		01/22/97		06/11/97		06/11/97		
		DATE ANALYZED --->	06/13/97		01/24/97		06/14/97		01/27/97		06/14/97		06/14/97		
		MATRIX ---------->	Water		Water		Water		Water		Water		Water		
		UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L		
CAS #	Parameter		29591	VAL	28217	VAL	29656	VAL	28217	VAL	29656	VAL	29656	VAL	
319-84-6	alpha-BHC		0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	
319-85-7	beta-BHC		0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	
319-86-8	delta-BHC		0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	
58-89-9	gamma-BHC (Lindane)		0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	
76-44-8	Heptachlor		0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	
309-00-2	Aldrin		0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	
1024-57-3	Heptachlor epoxide		0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	
959-98-8	Endosulfan I		0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	
60-57-1	Dieldrin		0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	
72-55-9	4,4'-DDE		0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	
72-20-8	Endrin		0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	
33213-65-9	Endosulfan II		0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	
72-54-8	4,4'-DDD		0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	
1031-07-8	Endosulfan sulfate		0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	
50-29-3	4,4'-DDT		0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	
72-43-5	Methoxychlor		0.38	U	0.38	U	0.38	U	0.38	U	0.38	U	0.38	U	
53494-70-5	Endrin ketone		0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	
7421-93-4	Endrin aldehyde		0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	
5103-71-9	alpha-Chlordane		0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	
5103-74-2	gamma-Chlordane		0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	
8001-35-2	Toxaphene		2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	
12674-11-2	Aroclor-1016		1.	U	1.	U	1.	U	1.	U	1.	U	1.	U	
11104-28-2	Aroclor-1221		1.	U	1.	U	1.	U	1.	U	1.	U	1.	U	
11141-16-5	Aroclor-1232		1.	U	1.	U	1.	U	1.	U	1.	U	1.	U	
53469-21-9	Aroclor-1242		1.	U	1.	U	1.	U	1.	U	1.	U	1.	U	
12672-29-6	Aroclor-1248		1.	U	1.	U	1.	U	1.	U	1.	U	1.	U	
11097-69-1	Aroclor-1254		2.	U	2.	U	2.	U	2.	U	2.	U	2.	U	
11096-82-5	Aroclor-1260		2.	U	2.	U	2.	U	2.	U	2.	U	2.	U	

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-PEST													
		SAMPLE ID ------->	FDS-G-W09C-01		FDS-G-W09C-02		FDS-G-W10A-01		FDS-G-W10A-02		FDS-G-W10B-01		FDS-G-W10B-02
		ORIGINAL ID ----->	FDSGW09C01		FDSGW09C02		FDSGW10A01		FDSGW10A02		FDSGW10B01		FDSGW10B02
		LAB SAMPLE ID --->	28227.07		29656.05		28227.01		29656.01		28227.02		29656.02
		ID FROM REPORT -->	FDSGW09C01		FDSGW09C02		FDSGW10A01		FDSGW10A02		FDSGW10B01		FDSGW10B02
		SAMPLE DATE ----->	01/21/97		06/10/97		01/21/97		06/10/97		01/21/97		06/10/97
		DATE EXTRACTED -->	01/22/97		06/11/97		01/22/97		06/11/97		01/22/97		06/11/97
		DATE ANALYZED --->	01/24/97		06/14/97		01/24/97		06/14/97		01/24/97		06/18/97
		MATRIX ---------->	Water		Water		Water		Water		Water		Water
		UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L
CAS #	Parameter		28217	VAL	29656	VAL	28217	VAL	29656	VAL	28217	VAL	29656	VAL
319-84-6	alpha-BHC		0.04	U	0.04	U	0.04	UJ	0.04	U	0.04	U	0.04	U
319-85-7	beta-BHC		0.04	U	0.04	U	0.04	UJ	0.04	U	0.04	U	0.04	U
319-86-8	delta-BHC		0.04	U	0.04	U	0.04	UJ	0.04	U	0.04	U	0.04	U
58-89-9	gamma-BHC (Lindane)		0.04	U	0.04	U	0.04	UJ	0.04	U	0.04	U	0.04	U
76-44-8	Heptachlor		0.04	U	0.04	U	0.04	UJ	0.04	U	0.04	U	0.04	U
309-00-2	Aldrin		0.04	U	0.04	U	0.04	UJ	0.04	U	0.04	U	0.04	U
1024-57-3	Heptachlor epoxide		0.04	U	0.04	U	0.04	UJ	0.04	U	0.04	U	0.04	U
959-98-8	Endosulfan I		0.04	U	0.04	U	0.04	UJ	0.04	U	0.04	U	0.04	U
60-57-1	Dieldrin		0.08	U	0.08	U	0.08	UJ	0.08	U	0.08	U	0.08	U
72-55-9	4,4'-DDE		0.08	U	0.08	U	0.08	UJ	0.08	U	0.08	U	0.08	U
72-20-8	Endrin		0.08	U	0.08	U	0.08	UJ	0.08	U	0.08	U	0.08	U
33213-65-9	Endosulfan II		0.08	U	0.08	U	0.08	UJ	0.08	U	0.08	U	0.08	U
72-54-8	4,4'-DDD		0.08	U	0.08	U	0.08	UJ	0.08	U	0.08	U	0.08	U
1031-07-8	Endosulfan sulfate		0.08	U	0.08	U	0.08	UJ	0.08	U	0.08	U	0.08	U
50-29-3	4,4'-DDT		0.08	U	0.08	U	0.08	UJ	0.08	U	0.08	U	0.08	U
72-43-5	Methoxychlor		0.38	U	0.38	U	0.38	UJ	0.38	U	0.38	U	0.38	U
53494-70-5	Endrin ketone		0.08	U	0.08	U	0.08	UJ	0.08	U	0.08	U	0.08	U
7421-93-4	Endrin aldehyde		0.08	U	0.08	U	0.08	UJ	0.08	U	0.08	U	0.08	U
5103-71-9	alpha-Chlordane		0.04	U	0.04	U	0.04	UJ	0.04	U	0.04	U	0.04	U
5103-74-2	gamma-Chlordane		0.04	U	0.04	U	0.04	UJ	0.04	U	0.04	U	0.04	U
8001-35-2	Toxaphene		2.5	U	2.5	U	2.5	UJ	2.5	U	2.5	U	2.5	U
12674-11-2	Aroclor-1016		1.	U	1.	U	1.	UJ	1.	U	1.	U	1.	U
11104-28-2	Aroclor-1221		1.	U	1.	U	1.	UJ	1.	U	1.	U	1.	U
11141-16-5	Aroclor-1232		1.	U	1.	U	1.	UJ	1.	U	1.	U	1.	U
53469-21-9	Aroclor-1242		1.	U	1.	U	1.	UJ	1.	U	1.	U	1.	U
12672-29-6	Aroclor-1248		1.	U	1.	U	1.	UJ	1.	U	1.	U	1.	U
11097-69-1	Aroclor-1254		2.	U	2.	U	2.	UJ	2.	U	2.	U	2.	U
11096-82-5	Aroclor-1260		2.	U	2.	U	2.	UJ	2.	U	2.	U	2.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-PEST																	
		SAMPLE ID ------->	FDS-G-W10C-01		FDS-G-W10C-02		FDS-G-W11A-01		FDS-G-W11A-02		FDS-G-W11B-01		FDS-G-W11B-02	
		ORIGINAL ID ----->	FDSGW10C01		FDSGW10C02		FDSGW11A01		FDSGW11A02		FDSGW11B01		FDSGW11B02	
		LAB SAMPLE ID --->	28227.03		29656.03		28308.07		29678.01		28308.08		29678.02	
		ID FROM REPORT -->	FDSGW10C01		FDSGW10C02		FDSGW11A01		FDSGW11A02		FDSGW11B01		FDSGW11B02	
		SAMPLE DATE ----->	01/21/97		06/10/97		01/28/97		06/11/97		01/28/97		06/11/97	
		DATE EXTRACTED -->	01/22/97		06/11/97		01/29/97		06/13/97		01/29/97		06/13/97	
		DATE ANALYZED --->	01/24/97		06/14/97		01/31/97		06/19/97		01/31/97		06/19/97	
		MATRIX ---------->	Water		Water		Water		Water		Water		Water	
		UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter		28217	VAL	29656	VAL	28308	VAL	29656	VAL	28308	VAL	29656	VAL
319-84-6	alpha-BHC		0.04	UJ	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
319-85-7	beta-BHC		0.04	UJ	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
319-86-8	delta-BHC		0.04	UJ	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
58-89-9	gamma-BHC (Lindane)		0.04	UJ	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
76-44-8	Heptachlor		0.04	UJ	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
309-00-2	Aldrin		0.04	UJ	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
1024-57-3	Heptachlor epoxide		0.04	UJ	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
959-98-8	Endosulfan I		0.04	UJ	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
60-57-1	Dieldrin		0.08	UJ	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
72-55-9	4,4'-DDE		0.08	UJ	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
72-20-8	Endrin		0.08	UJ	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
33213-65-9	Endosulfan II		0.08	UJ	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
72-54-8	4,4'-DDD		0.08	UJ	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
1031-07-8	Endosulfan sulfate		0.08	UJ	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
50-29-3	4,4'-DDT		0.08	UJ	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
72-43-5	Methoxychlor		0.38	UJ	0.38	U	0.38	U	0.38	U	0.38	U	0.38	U
53494-70-5	Endrin ketone		0.08	UJ	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
7421-93-4	Endrin aldehyde		0.08	UJ	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
5103-71-9	alpha-Chlordane		0.04	UJ	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
5103-74-2	gamma-Chlordane		0.04	UJ	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
8001-35-2	Toxaphene		2.5	UJ	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
12674-11-2	Aroclor-1016		1.	UJ	1.	U	1.	U	1.	U	1.	U	1.	U
11104-28-2	Aroclor-1221		1.	UJ	1.	U	1.	U	1.	U	1.	U	1.	U
11141-16-5	Aroclor-1232		1.	UJ	1.	U	1.	U	1.	U	1.	U	1.	U
53469-21-9	Aroclor-1242		1.	UJ	1.	U	1.	U	1.	U	1.	U	1.	U
12672-29-6	Aroclor-1248		1.	UJ	1.	U	1.	U	1.	U	1.	U	1.	U
11097-69-1	Aroclor-1254		2.	UJ	2.	U	2.	U	2.	U	2.	U	2.	U
11096-82-5	Aroclor-1260		2.	UJ	2.	U	2.	U	2.	U	2.	U	2.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-PEST													
		SAMPLE ID ------->	FDS-G-W11C-01		FDS-G-W11C-02		FDS-H-W11C-02		FDS-G-W12A-01		FDS-G-W12A-02		FDS-H-W12A-02
		ORIGINAL ID ----->	FDSGW11C01		FDSGW11C02		FDSHW11C02		FDSGW12A01		FDSGW12A02		FDSHW12A02
		LAB SAMPLE ID --->	28308.09		29678.03		29678.04		28295.05		29678.07		29678.08
		ID FROM REPORT -->	FDSGW11C01		FDSGW11C02		FDSHW11C02		FDSGW12A01		FDSGW12A02		FDSHW12A02
		SAMPLE DATE ----->	01/28/97		06/11/97		06/11/97		01/27/97		06/11/97		06/11/97
		DATE EXTRACTED -->	01/29/97		06/13/97		06/13/97		01/28/97		06/13/97		06/13/97
		DATE ANALYZED --->	01/31/97		06/19/97		06/19/97		01/30/97		06/19/97		06/19/97
		MATRIX ---------->	Water		Water		Water		Water		Water		Water
		UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L
CAS #	Parameter		28308	VAL	29656	VAL	29656	VAL	28249	VAL	29656	VAL	29656	VAL
319-84-6	alpha-BHC		0.04	U	0.04	U	0.04	UJ	0.04	U	0.04	U	0.04	U
319-85-7	beta-BHC		0.04	U	0.04	U	0.04	UJ	0.04	U	0.04	U	0.04	U
319-86-8	delta-BHC		0.04	U	0.04	U	0.04	UJ	0.04	U	0.04	U	0.04	U
58-89-9	gamma-BHC (Lindane)		0.04	U	0.04	U	0.04	UJ	0.04	U	0.04	U	0.04	U
76-44-8	Heptachlor		0.04	U	0.04	U	0.04	UJ	0.04	U	0.04	U	0.04	U
309-00-2	Aldrin		0.04	U	0.04	U	0.04	UJ	0.04	U	0.04	U	0.04	U
1024-57-3	Heptachlor epoxide		0.04	U	0.04	U	0.04	UJ	0.04	U	0.04	U	0.04	U
959-98-8	Endosulfan I		0.04	U	0.04	U	0.04	UJ	0.04	U	0.04	U	0.04	U
60-57-1	Dieldrin		0.08	U	0.08	U	0.08	UJ	0.08	U	0.08	U	0.08	U
72-55-9	4,4'-DDE		0.08	U	0.08	U	0.08	UJ	0.08	U	0.08	U	0.08	U
72-20-8	Endrin		0.08	U	0.08	U	0.08	UJ	0.08	U	0.08	U	0.08	U
33213-65-9	Endosulfan II		0.08	U	0.08	U	0.08	UJ	0.08	U	0.08	U	0.08	U
72-54-8	4,4'-DDD		0.08	U	0.08	U	0.08	UJ	0.08	U	0.08	U	0.08	U
1031-07-8	Endosulfan sulfate		0.08	U	0.08	U	0.08	UJ	0.08	U	0.08	U	0.08	U
50-29-3	4,4'-DDT		0.08	U	0.08	U	0.08	UJ	0.08	U	0.08	U	0.08	U
72-43-5	Methoxychlor		0.38	U	0.38	U	0.38	UJ	0.38	U	0.38	U	0.38	U
53494-70-5	Endrin ketone		0.08	U	0.08	U	0.08	UJ	0.08	U	0.08	U	0.08	U
7421-93-4	Endrin aldehyde		0.08	U	0.08	U	0.08	UJ	0.08	U	0.08	U	0.08	U
5103-71-9	alpha-Chlordane		0.04	U	0.04	U	0.04	UJ	0.04	U	0.04	U	0.04	U
5103-74-2	gamma-Chlordane		0.04	U	0.04	U	0.04	UJ	0.04	U	0.04	U	0.04	U
8001-35-2	Toxaphene		2.5	U	2.5	U	2.5	UJ	2.5	U	2.5	U	2.5	U
12674-11-2	Aroclor-1016		1.	U	1.	U	1.	UJ	1.	U	1.	U	1.	U
11104-28-2	Aroclor-1221		1.	U	1.	U	1.	UJ	1.	U	1.	U	1.	U
11141-16-5	Aroclor-1232		1.	U	1.	U	1.	UJ	1.	U	1.	U	1.	U
53469-21-9	Aroclor-1242		1.	U	1.	U	1.	UJ	1.	U	1.	U	1.	U
12672-29-6	Aroclor-1248		1.	U	1.	U	1.	UJ	1.	U	1.	U	1.	U
11097-69-1	Aroclor-1254		2.	U	2.	U	2.	UJ	2.	U	2.	U	2.	U
11096-82-5	Aroclor-1260		2.	U	2.	U	2.	UJ	2.	U	2.	U	2.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-PEST													
		SAMPLE ID ------->	FDS-G-W12B-01		FDS-G-W12B-02		FDS-G-W13A-01		FDS-G-W13A-02		FDS-G-W13B-01		FDS-G-W13B-02
		ORIGINAL ID ----->	FDSGW12B01		FDSGW12B02		FDSGW13A01		FDSGW13A02		FDSGW13B01		FDSGW13B02
		LAB SAMPLE ID --->	28295.07		29678.06		28295.04		29678.05		28295.03		29707.01
		ID FROM REPORT -->	FDSGW12B01		FDSGW12B02		FDSGW13A01		FDSGW13A02		FDSGW13B01		FDSGW13B02
		SAMPLE DATE ----->	01/27/97		06/11/97		01/27/97		06/11/97		01/27/97		06/13/97
		DATE EXTRACTED -->	01/28/97		06/13/97		01/28/97		06/13/97		01/28/97		06/16/97
		DATE ANALYZED --->	01/30/97		06/19/97		01/30/97		06/19/97		01/30/97		06/19/97
		MATRIX ---------->	Water		Water		Water		Water		Water		Water
		UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L
CAS #	Parameter		28249	VAL	29656	VAL	28249	VAL	29656	VAL	28249	VAL	29707	VAL
319-84-6	alpha-BHC		0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
319-85-7	beta-BHC		0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
319-86-8	delta-BHC		0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
58-89-9	gamma-BHC (Lindane)		0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
76-44-8	Heptachlor		0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
309-00-2	Aldrin		0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
1024-57-3	Heptachlor epoxide		0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
959-98-8	Endosulfan I		0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
60-57-1	Dieldrin		0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
72-55-9	4,4'-DDE		0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
72-20-8	Endrin		0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
33213-65-9	Endosulfan II		0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
72-54-8	4,4'-DDD		0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
1031-07-8	Endosulfan sulfate		0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
50-29-3	4,4'-DDT		0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
72-43-5	Methoxychlor		0.38	U	0.38	U	0.38	U	0.38	U	0.38	U	0.38	U
53494-70-5	Endrin ketone		0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
7421-93-4	Endrin aldehyde		0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
5103-71-9	alpha-Chlordane		0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
5103-74-2	gamma-Chlordane		0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
8001-35-2	Toxaphene		2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
12674-11-2	Aroclor-1016		1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
11104-28-2	Aroclor-1221		1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
11141-16-5	Aroclor-1232		1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
53469-21-9	Aroclor-1242		1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
12672-29-6	Aroclor-1248		1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
11097-69-1	Aroclor-1254		2.	U	2.	U	2.	U	2.	U	2.	U	2.	U
11096-82-5	Aroclor-1260		2.	U	2.	U	2.	U	2.	U	2.	U	2.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-PEST													
	SAMPLE ID ------->	FDS-G-W13C-01		FDS-G-W13C-02		FDS-G-W13D-01		FDS-G-W13D-02		FDS-G-W13E-01		FDS-G-W13E-02	
	ORIGINAL ID ----->	FDSGW13C01		FDSGW13C02		FDSGW13D01		FDSGW13D02		FDSGW13E01		FDSGW13E02	
	LAB SAMPLE ID --->	28295.01		29697.03		28295.08		29697.04		28308.04		29707.02	
	ID FROM REPORT -->	FDSGW13C01		FDSGW13C02		FDSGW13D01		FDSGW13D02		FDSGW13E01		FDSGW13E02	
	SAMPLE DATE ----->	01/27/97		06/12/97		01/27/97		06/12/97		01/28/97		06/13/97	
	DATE EXTRACTED -->	01/28/97		06/16/97		01/28/97		06/16/97		01/29/97		06/16/97	
	DATE ANALYZED --->	01/30/97		06/19/97		01/30/97		06/19/97		01/31/97		06/19/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28249	VAL	29656	VAL	28249	VAL	29656	VAL	28308	VAL	29707	VAL
319-84-6	alpha-BHC	0.04	U	0.04	U	0.04	U	0.04	UJ	0.04	U	0.04	U
319-85-7	beta-BHC	0.04	U	0.04	U	0.04	U	0.04	UJ	0.04	U	0.04	U
319-86-8	delta-BHC	0.04	U	0.04	U	0.04	U	0.04	UJ	0.04	U	0.04	U
58-89-9	gamma-BHC (Lindane)	0.04	U	0.04	U	0.04	U	0.04	UJ	0.04	U	0.04	U
76-44-8	Heptachlor	0.04	U	0.04	U	0.04	U	0.04	UJ	0.04	U	0.04	U
309-00-2	Aldrin	0.04	U	0.04	U	0.04	U	0.04	UJ	0.04	U	0.04	U
1024-57-3	Heptachlor epoxide	0.04	U	0.04	U	0.04	U	0.04	UJ	0.04	U	0.04	U
959-98-8	Endosulfan I	0.04	U	0.04	U	0.04	U	0.04	UJ	0.04	U	0.04	U
60-57-1	Dieldrin	0.08	U	0.08	U	0.08	U	0.08	UJ	0.08	U	0.08	U
72-55-9	4,4'-DDE	0.08	U	0.08	U	0.08	U	0.08	UJ	0.08	U	0.08	U
72-20-8	Endrin	0.08	U	0.08	U	0.08	U	0.08	UJ	0.08	U	0.08	U
33213-65-9	Endosulfan II	0.08	U	0.08	U	0.08	U	0.08	UJ	0.08	U	0.08	U
72-54-8	4,4'-DDD	0.08	U	0.08	U	0.08	U	0.08	UJ	0.08	U	0.08	U
1031-07-8	Endosulfan sulfate	0.08	U	0.08	U	0.08	U	0.08	UJ	0.08	U	0.08	U
50-29-3	4,4'-DDT	0.08	U	0.08	U	0.08	U	0.08	UJ	0.08	U	0.08	U
72-43-5	Methoxychlor	0.38	U	0.38	U	0.38	U	0.38	UJ	0.38	U	0.38	U
53494-70-5	Endrin ketone	0.08	U	0.08	U	0.08	U	0.08	UJ	0.08	U	0.08	U
7421-93-4	Endrin aldehyde	0.08	U	0.08	U	0.08	U	0.08	UJ	0.08	U	0.08	U
5103-71-9	alpha-Chlordane	0.04	U	0.04	U	0.04	U	0.04	UJ	0.04	U	0.04	U
5103-74-2	gamma-Chlordane	0.04	U	0.04	U	0.04	U	0.04	UJ	0.04	U	0.04	U
8001-35-2	Toxaphene	2.5	U	2.5	U	2.5	U	2.5	UJ	2.5	U	2.5	U
12674-11-2	Aroclor-1016	1.	U	1.	U	1.	U	1.	UJ	1.	U	1.	U
11104-28-2	Aroclor-1221	1.	U	1.	U	1.	U	1.	UJ	1.	U	1.	U
11141-16-5	Aroclor-1232	1.	U	1.	U	1.	U	1.	UJ	1.	U	1.	U
53469-21-9	Aroclor-1242	1.	U	1.	U	1.	U	1.	UJ	1.	U	1.	U
12672-29-6	Aroclor-1248	1.	U	1.	U	1.	U	1.	UJ	1.	U	1.	U
11097-69-1	Aroclor-1254	2.	U	2.	U	2.	U	2.	UJ	2.	U	2.	U
11096-82-5	Aroclor-1260	2.	U	2.	U	2.	U	2.	UJ	2.	U	2.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-PEST																	
	SAMPLE ID ------->	FDS-G-W14A-01		FDS-G-W14A-02		FDS-G-W14B-01		FDS-G-W14B-02		FDS-G-W14C-01		FDS-G-W14C-02	
	ORIGINAL ID ----->	FDSGW14A01		FDSGW14A02		FDSGW14B01		FDSGW14B02		FDSGW14C01		FDSGW14C02	
	LAB SAMPLE ID --->	28295.02		29697.01		28295.06		29697.02		28249.01		29707.03	
	ID FROM REPORT -->	FDSGW14A01		FDSGW14A02		FDSGW14B01		FDSGW14B02		FDSGW14C01		FDSGW14C02	
	SAMPLE DATE ----->	01/27/97		06/12/97		01/27/97		06/12/97		01/22/97		06/13/97	
	DATE EXTRACTED -->	01/28/97		06/16/97		01/28/97		06/16/97		01/23/97		06/16/97	
	DATE ANALYZED --->	01/30/97		06/20/97		01/30/97		06/19/97		01/27/97		06/19/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28249	VAL	29656	VAL	28249	VAL	29656	VAL	28249	VAL	29707	VAL
319-84-6	alpha-BHC	0.04	U	0.04	UJ	0.04	U	0.04	UJ	0.04	UJ	0.04	U
319-85-7	beta-BHC	0.04	U	0.04	UJ	0.04	U	0.04	UJ	0.04	UJ	0.04	U
319-86-8	delta-BHC	0.04	U	0.04	UJ	0.04	U	0.04	UJ	0.04	UJ	0.04	U
58-89-9	gamma-BHC (Lindane)	0.04	U	0.04	UJ	0.04	U	0.04	UJ	0.04	UJ	0.04	U
76-44-8	Heptachlor	0.04	U	0.04	UJ	0.04	U	0.04	UJ	0.04	UJ	0.04	U
309-00-2	Aldrin	0.04	U	0.04	UJ	0.04	U	0.04	UJ	0.04	UJ	0.04	U
1024-57-3	Heptachlor epoxide	0.04	U	0.04	UJ	0.04	U	0.04	UJ	0.04	UJ	0.04	U
959-98-8	Endosulfan I	0.04	U	0.04	UJ	0.04	U	0.04	UJ	0.04	UJ	0.04	U
60-57-1	Dieldrin	0.08	U	0.08	UJ	0.08	U	0.08	UJ	0.08	UJ	0.08	U
72-55-9	4,4'-DDE	0.08	U	0.08	UJ	0.08	U	0.08	UJ	0.08	UJ	0.08	U
72-20-8	Endrin	0.08	U	0.08	UJ	0.08	U	0.08	UJ	0.08	UJ	0.08	U
33213-65-9	Endosulfan II	0.08	U	0.08	UJ	0.08	U	0.08	UJ	0.08	UJ	0.08	U
72-54-8	4,4'-DDD	0.08	U	0.08	UJ	0.08	U	0.08	UJ	0.08	UJ	0.08	U
1031-07-8	Endosulfan sulfate	0.08	U	0.08	UJ	0.08	U	0.08	UJ	0.08	UJ	0.08	U
50-29-3	4,4'-DDT	0.08	U	0.08	UJ	0.08	U	0.08	UJ	0.08	UJ	0.08	U
72-43-5	Methoxychlor	0.38	U	0.38	UJ	0.38	U	0.38	UJ	0.38	UJ	0.38	U
53494-70-5	Endrin ketone	0.08	U	0.08	UJ	0.08	U	0.08	UJ	0.08	UJ	0.08	U
7421-93-4	Endrin aldehyde	0.08	U	0.08	UJ	0.08	U	0.08	UJ	0.08	UJ	0.08	U
5103-71-9	alpha-Chlordane	0.04	U	0.04	UJ	0.04	U	0.04	UJ	0.04	UJ	0.04	U
5103-74-2	gamma-Chlordane	0.04	U	0.04	UJ	0.04	U	0.04	UJ	0.04	UJ	0.04	U
8001-35-2	Toxaphene	2.5	U	2.5	UJ	2.5	U	2.5	UJ	2.5	UJ	2.5	U
12674-11-2	Aroclor-1016	1.	U	1.	UJ	1.	U	1.	UJ	1.	UJ	1.	U
11104-28-2	Aroclor-1221	1.	U	1.	UJ	1.	U	1.	UJ	1.	UJ	1.	U
11141-16-5	Aroclor-1232	1.	U	1.	UJ	1.	U	1.	UJ	1.	UJ	1.	U
53469-21-9	Aroclor-1242	1.	U	1.	UJ	1.	U	1.	UJ	1.	UJ	1.	U
12672-29-6	Aroclor-1248	1.	U	1.	UJ	1.	U	1.	UJ	1.	UJ	1.	U
11097-69-1	Aroclor-1254	2.	U	2.	UJ	2.	U	2.	UJ	2.	UJ	2.	U
11096-82-5	Aroclor-1260	2.	U	2.	UJ	2.	U	2.	UJ	2.	UJ	2.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-PEST															
	SAMPLE ID ------->	FDS-G-W15A-01		FDS-G-W15A-02		FDS-G-W15B-01		FDS-G-W15B-02		FDS-G-W15C-01		FDS-G-W15C-02	
	ORIGINAL ID ----->	FDSGW15A01		FDSGW15A02		FDSGW15B01		FDSGW15B02		FDSGW15C01		FDSGW15C02	
	LAB SAMPLE ID --->	28308.01		29707.04		28308.02		29730.06		28308.03		29730.07	
	ID FROM REPORT -->	FDSGW15A01		FDSGW15A02		FDSGW15B01		FDSGW15B02		FDSGW15C01		FDSGW15C02	
	SAMPLE DATE ----->	01/28/97		06/13/97		01/28/97		06/16/97		01/28/97		06/16/97	
	DATE EXTRACTED -->	01/29/97		06/16/97		01/29/97		06/18/97		01/29/97		06/18/97	
	DATE ANALYZED --->	01/31/97		06/19/97		01/31/97		06/20/97		01/31/97		06/20/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28308	VAL	29707	VAL	28308	VAL	29707	VAL	28308	VAL	29707	VAL
319-84-6	alpha-BHC	0.04	UJ	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
319-85-7	beta-BHC	0.057	J	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
319-86-8	delta-BHC	0.04	UJ	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
58-89-9	gamma-BHC (Lindane)	0.04	UJ	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
76-44-8	Heptachlor	0.04	UJ	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
309-00-2	Aldrin	0.04	UJ	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
1024-57-3	Heptachlor epoxide	0.04	UJ	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
959-98-8	Endosulfan I	0.04	UJ	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
60-57-1	Dieldrin	0.08	UJ	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
72-55-9	4,4'-DDE	0.08	UJ	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
72-20-8	Endrin	0.08	UJ	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
33213-65-9	Endosulfan II	0.08	UJ	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
72-54-8	4,4'-DDD	0.08	UJ	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
1031-07-8	Endosulfan sulfate	0.08	UJ	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
50-29-3	4,4'-DDT	0.08	UJ	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
72-43-5	Methoxychlor	0.38	UJ	0.38	U	0.38	U	0.38	U	0.38	U	0.38	U
53494-70-5	Endrin ketone	0.08	UJ	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
7421-93-4	Endrin aldehyde	0.08	UJ	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
5103-71-9	alpha-Chlordane	0.04	UJ	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
5103-74-2	gamma-Chlordane	0.04	UJ	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
8001-35-2	Toxaphene	2.5	UJ	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
12674-11-2	Aroclor-1016	1.	UJ	1.	U	1.	U	1.	U	1.	U	1.	U
11104-28-2	Aroclor-1221	1.	UJ	1.	U	1.	U	1.	U	1.	U	1.	U
11141-16-5	Aroclor-1232	1.	UJ	1.	U	1.	U	1.	U	1.	U	1.	U
53469-21-9	Aroclor-1242	1.	UJ	1.	U	1.	U	1.	U	1.	U	1.	U
12672-29-6	Aroclor-1248	1.	UJ	1.	U	1.	U	1.	U	1.	U	1.	U
11097-69-1	Aroclor-1254	2.	UJ	2.	U	2.	U	2.	U	2.	U	2.	U
11096-82-5	Aroclor-1260	2.	UJ	2.	U	2.	U	2.	U	2.	U	2.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-PEST									
		SAMPLE ID ------->	FDS-G-W18A-01		FDS-G-W18A-02				
		ORIGINAL ID ----->	FDSGW18A01		FDSGW18A02				
		LAB SAMPLE ID --->	28328.05		29767.03				
		ID FROM REPORT -->	FDSGW18A01		FDSGW18A02				
		SAMPLE DATE ----->	01/29/97		06/18/97				
		DATE EXTRACTED -->	01/31/97		06/20/97				
		DATE ANALYZED --->	02/03/97		06/25/97				
		MATRIX ---------->	Water		Water				
		UNITS ---------->	UG/L		UG/L				
CAS #	Parameter		28308	VAL	29767	VAL			
319-84-6	alpha-BHC		0.04	U	0.04	U			
319-85-7	beta-BHC		0.04	U	0.04	U			
319-86-8	delta-BHC		0.04	U	0.04	U			
58-89-9	gamma-BHC (Lindane)		0.04	U	0.04	U			
76-44-8	Heptachlor		0.04	U	0.04	U			
309-00-2	Aldrin		0.04	U	0.04	U			
1024-57-3	Heptachlor epoxide		0.04	U	0.04	U			
959-98-8	Endosulfan I		0.04	U	0.04	U			
60-57-1	Dieldrin		0.08	U	0.08	U			
72-55-9	4,4'-DDE		0.08	U	0.08	U			
72-20-8	Endrin		0.08	U	0.08	U			
33213-65-9	Endosulfan II		0.08	U	0.08	U			
72-54-8	4,4'-DDD		0.08	U	0.08	U			
1031-07-8	Endosulfan sulfate		0.08	U	0.08	U			
50-29-3	4,4'-DDT		0.08	U	0.08	U			
72-43-5	Methoxychlor		0.38	U	0.38	U			
53494-70-5	Endrin ketone		0.08	U	0.08	U			
7421-93-4	Endrin aldehyde		0.08	U	0.08	U			
5103-71-9	alpha-Chlordane		0.04	U	0.04	U			
5103-74-2	gamma-Chlordane		0.04	U	0.04	U			
8001-35-2	Toxaphene		2.5	U	2.5	U			
12674-11-2	Aroclor-1016		1.	U	1.	U			
11104-28-2	Aroclor-1221		1.	U	1.	U			
11141-16-5	Aroclor-1232		1.	U	1.	U			
53469-21-9	Aroclor-1242		1.	U	1.	U			
12672-29-6	Aroclor-1248		1.	U	1.	U			
11097-69-1	Aroclor-1254		2.	U	2.	U			
11096-82-5	Aroclor-1260		2.	U	2.	U			

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-SVOA	SAMPLE ID ------->	FDS-G-W01A-01		FDS-G-W01A-02		FDS-G-W01B-01		FDS-G-W01B-02		FDS-G-W01C-01		FDS-G-W01C-02	
	ORIGINAL ID ----->	FDSGW01A01		FDSGW01A02		FDSGW01B01		FDSGW01B02		FDSGW01C01		FDSGW01C02	
	LAB SAMPLE ID --->	28174.01		29610.04		28174.02		29560.05		28174.05		29560.06	
	ID FROM REPORT -->	FDSGW01A01		FDSGW01A02		FDSGW01B01		FDSGW01B02		FDSGW01C01		FDSGW01C02	
	SAMPLE DATE ----->	01/14/97		06/05/97		01/14/97		06/02/97		01/14/97		06/02/97	
	DATE EXTRACTED -->	01/16/97		06/06/97		01/16/97		06/04/96		01/16/97		06/04/96	
	DATE ANALYZED --->	01/20/97		06/11/97		01/20/97		06/09/97		01/22/97		06/09/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28134	VAL	29591	VAL	28134	VAL	29515	VAL	28134	VAL	29515	VAL
108-95-2	Phenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-57-8	2-Chlorophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
100-51-6	Benzyl alcohol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-48-7	2-Methylphenol (o-Cresol)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-44-5	4-Methylphenol (p-Cresol)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
67-72-1	Hexachloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
98-95-3	Nitrobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
78-59-1	Isophorone	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-75-5	2-Nitrophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
105-67-9	2,4-Dimethylphenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
65-85-0	Benzoic acid	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
120-83-2	2,4-Dichlorophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-20-3	Naphthalene	39.		10.	U	10.	U	23.		10.	U	10.	U
106-47-8	4-Chloroaniline	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
87-68-3	Hexachlorobutadiene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-57-6	2-Methylnaphthalene	130.		71.		10.	U	10.	U	10.	U	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
91-58-7	2-Chloronaphthalene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-74-4	2-Nitroaniline	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
131-11-3	Dimethyl phthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
208-96-8	Acenaphthylene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
99-09-2	3-Nitroaniline	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
83-32-9	Acenaphthene	47.		37.		19.		25.		10.	U	2.	J
51-28-5	2,4-Dinitrophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-SVOA	SAMPLE ID ------->	FDS-G-W01A-01		FDS-G-W01A-02		FDS-G-W01B-01		FDS-G-W01B-02		FDS-G-W01C-01		FDS-G-W01C-02	
	ORIGINAL ID ----->	FDSGW01A01		FDSGW01A02		FDSGW01B01		FDSGW01B02		FDSGW01C01		FDSGW01C02	
	LAB SAMPLE ID --->	28174.01		29610.04		28174.02		29560.05		28174.05		29560.06	
	ID FROM REPORT -->	FDSGW01A01		FDSGW01A02		FDSGW01B01		FDSGW01B02		FDSGW01C01		FDSGW01C02	
	SAMPLE DATE ----->	01/14/97		06/05/97		01/14/97		06/02/97		01/14/97		06/02/97	
	DATE EXTRACTED -->	01/16/97		06/06/97		01/16/97		06/04/96		01/16/97		06/04/96	
	DATE ANALYZED --->	01/20/97		06/11/97		01/20/97		06/09/97		01/22/97		06/09/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28134	VAL	29591	VAL	28134	VAL	29515	VAL	28134	VAL	29515	VAL
100-02-7	4-Nitrophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
132-64-9	Dibenzofuran	32.		25.		10.	U	10.	U	10.	U	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
84-66-2	Diethylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
7005-72-3	4-Chlorophenylphenylether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
86-73-7	Fluorene	41.		44.		10.	U	10.	U	10.	U	10.	U
100-01-6	4-Nitroaniline	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
86-30-6	N-Nitrosodiphenylamine	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
118-74-1	Hexachlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
87-86-5	Pentachlorophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
85-01-8	Phenanthrene	120.		91.		1.	J	10.	U	10.	U	10.	U
120-12-7	Anthracene	16.		13.		10.	U	10.	U	10.	U	10.	U
84-74-2	Di-n-butylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
206-44-0	Fluoranthene	50.		34.		10.	U	10.	U	10.	U	10.	U
129-00-0	Pyrene	27.		22.		10.	U	10.	U	10.	U	10.	U
85-68-7	Butylbenzylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U	20.	U	20.	U	20.	U	20.	U	20.	U
56-55-3	Benzo(a)anthracene	7.	J	6.	J	10.	U	10.	U	10.	U	10.	U
218-01-9	Chrysene	7.	J	6.	J	10.	U	10.	U	10.	U	10.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
117-84-0	Di-n-octyl phthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
205-99-2	Benzo(b)fluoranthene	6.	J	2.	J	10.	U	10.	U	10.	U	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U	3.	J	10.	U	10.	U	10.	U	10.	U
50-32-8	Benzo(a)pyrene	3.	J	2.	J	10.	U	10.	U	10.	U	10.	U
193-39-5	Indeno(1,2,3-cd)pyrene	1.	J	1.	J	10.	U	10.	U	10.	U	10.	U
53-70-3	Dibenz(a,h)anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
191-24-2	Benzo(g,h,i)perylene	1.	J	1.	J	10.	U	10.	U	10.	U	10.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-SVOA	SAMPLE ID ------->	FDS-G-W01D-01		FDS-G-W01D-02		FDS-H-W01D-02		FDS-G-W01E-01		FDS-G-W01E-02		FDS-G-W02A-01	
	ORIGINAL ID ----->	FDSGW01D01		FDSGW01D02		FDSHW01D02		FDSGW01E01		FDSGW01E02		FDSGW02A01	
	LAB SAMPLE ID --->	28185.02		29591.03		29591.04		28328.01		29560.07		28190.02	
	ID FROM REPORT -->	FDSGW01D01		FDSGW01D02		FDSHW01D02		FDSGW01E01		FDSGW01E02		FDSGW02A01	
	SAMPLE DATE ----->	01/14/97		06/04/97		06/04/97		01/29/97		06/02/97		01/16/97	
	DATE EXTRACTED -->	01/20/97		06/06/97		06/06/97		01/31/97		06/04/96		01/17/97	
	DATE ANALYZED --->	01/21/97		06/10/97		06/10/97		02/03/97		06/09/97		01/20/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28185	VAL	29591	VAL	29591	VAL	28308	VAL	29515	VAL	28185	VAL
108-95-2	Phenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-57-8	2-Chlorophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
100-51-6	Benzyl alcohol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-48-7	2-Methylphenol (o-Cresol)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-44-5	4-Methylphenol (p-Cresol)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
67-72-1	Hexachloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
98-95-3	Nitrobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
78-59-1	Isophorone	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-75-5	2-Nitrophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
105-67-9	2,4-Dimethylphenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
65-85-0	Benzoic acid	1.	J	50.	U	50.	U	50.	U	50.	U	1.	J
111-91-1	bis(2-Chloroethoxy)methane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
120-83-2	2,4-Dichlorophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-20-3	Naphthalene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-47-8	4-Chloroaniline	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
87-68-3	Hexachlorobutadiene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-57-6	2-Methylnaphthalene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
91-58-7	2-Chloronaphthalene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-74-4	2-Nitroaniline	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
131-11-3	Dimethyl phthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
208-96-8	Acenaphthylene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
99-09-2	3-Nitroaniline	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
83-32-9	Acenaphthene	2.	J	4.	J	4.	J	10.	U	10.	U	10.	U
51-28-5	2,4-Dinitrophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-SVOA	SAMPLE ID ------->	FDS-G-W01D-01		FDS-G-W01D-02		FDS-H-WD1D-D2		FDS-G-W01E-01		FDS-G-W01E-02		FDS-G-W02A-01	
	ORIGINAL ID ----->	FDSGW01D01		FDSGW01D02		FDSHW01D02		FDSGW01E01		FDSGW01E02		FDSGW02A01	
	LAB SAMPLE ID --->	28185.02		29591.03		29591.04		28328.01		29560.07		28190.02	
	ID FROM REPORT -->	FDSGW01D01		FDSGW01D02		FDSHW01D02		FDSGW01E01		FDSGW01E02		FDSGW02A01	
	SAMPLE DATE ----->	01/14/97		06/04/97		06/04/97		01/29/97		06/02/97		01/16/97	
	DATE EXTRACTED -->	01/20/97		06/06/97		06/06/97		01/31/97		06/04/96		01/17/97	
	DATE ANALYZED --->	01/21/97		06/10/97		06/10/97		02/03/97		06/09/97		01/20/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28185	VAL	29591	VAL	29591	VAL	28308	VAL	29515	VAL	28185	VAL
100-02-7	4-Nitrophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
132-64-9	Dibenzofuran	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
84-66-2	Diethylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
7005-72-3	4-Chlorophenylphenylether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
86-73-7	Fluorene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
100-01-6	4-Nitroaniline	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
86-30-6	N-Nitrosodiphenylamine	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
118-74-1	Hexachlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
87-86-5	Pentachlorophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
85-01-8	Phenanthrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
120-12-7	Anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
84-74-2	Di-n-butylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
206-44-0	Fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
129-00-0	Pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
85-68-7	Butylbenzylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U	20.	U	20.	U	20.	U	20.	U	20.	U
56-55-3	Benzo(a)anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
218-01-9	Chrysene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	10.	U	10.	U	10.	U	10.	U	10.	U	2.	J
117-84-0	Di-n-octyl phthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
50-32-8	Benzo(a)pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
193-39-5	Indeno(1,2,3-cd)pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
53-70-3	Dibenz(a,h)anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
191-24-2	Benzo(g,h,i)perylene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-SVOA	SAMPLE ID ------->	FDS-G-W02A-02		FDS-H-W02A-02		FDS-G-W02B-01		FDS-G-W02B-02		FDS-G-W02C-01		FDS-G-W02C-02	
	ORIGINAL ID ----->	FDSGW02A02		FDSHW02A02		FDSGW02B01		FDSGW02B02		FDSGW02C01		FDSGW02C02	
	LAB SAMPLE ID --->	29538.03		29538.04		28223.10		29523.03		28190.01		29538.02	
	ID FROM REPORT -->	FDSGW02A02		FDSHW02A02		FDSGW02B01		FDSGW02B02		FDSGW02C01		FDSGW02C02	
	SAMPLE DATE ----->	05/30/97		05/30/97		01/19/97		05/20/97		01/16/97		05/30/97	
	DATE EXTRACTED -->	06/02/97		06/02/97		01/22/97		05/30/97		01/17/97		06/02/97	
	DATE ANALYZED --->	06/06/97		06/06/97		01/23/97		06/05/97		01/20/97		06/06/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	29515	VAL	29515	VAL	28217	VAL	29515	VAL	28185	VAL	29515	VAL
108-95-2	Phenol	1.	J	4.	J	10.	U	12.	U	10.	U	11.	U
111-44-4	bis(2-Chloroethyl)ether	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
95-57-8	2-Chlorophenol	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
541-73-1	1,3-Dichlorobenzene	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
106-46-7	1,4-Dichlorobenzene	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
100-51-6	Benzyl alcohol	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
95-50-1	1,2-Dichlorobenzene	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
95-48-7	2-Methylphenol (o-Cresol)	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
106-44-5	4-Methylphenol (p-Cresol)	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
621-64-7	N-Nitroso-di-n-propylamine	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
67-72-1	Hexachloroethane	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
98-95-3	Nitrobenzene	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
78-59-1	Isophorone	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
88-75-5	2-Nitrophenol	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
105-67-9	2,4-Dimethylphenol	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
65-85-0	Benzoic acid	60.	U	1.	J	50.	U	58.	U	50.	U	57.	U
111-91-1	bis(2-Chloroethoxy)methane	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
120-83-2	2,4-Dichlorophenol	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
120-82-1	1,2,4-Trichlorobenzene	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
91-20-3	Naphthalene	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
106-47-8	4-Chloroaniline	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
87-68-3	Hexachlorobutadiene	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
59-50-7	4-Chloro-3-methylphenol	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
91-57-6	2-Methylnaphthalene	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
77-47-4	Hexachlorocyclopentadiene	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
88-06-2	2,4,6-Trichlorophenol	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
95-95-4	2,4,5-Trichlorophenol	60.	U	57.	U	50.	U	58.	U	50.	U	57.	U
91-58-7	2-Chloronaphthalene	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
88-74-4	2-Nitroaniline	60.	U	57.	U	50.	U	58.	U	50.	U	57.	U
131-11-3	Dimethyl phthalate	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
208-96-8	Acenaphthylene	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
606-20-2	2,6-Dinitrotoluene	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
99-09-2	3-Nitroaniline	60.	U	57.	U	50.	U	58.	U	50.	U	57.	U
83-32-9	Acenaphthene	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
51-28-5	2,4-Dinitrophenol	60.	U	57.	U	50.	U	58.	U	50.	U	57.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-SVOA	SAMPLE ID ------->	FDS-G-W02A-02		FDS-H-W02A-02		FDS-G-W02B-01		FDS-G-W02B-02		FDS-G-W02C-01		FDS-G-W02C-02	
	ORIGINAL ID ----->	FDSGW02A02		FDSHW02A02		FDSGW02B01		FDSGW02B02		FDSGW02C01		FDSGW02C02	
	LAB SAMPLE ID --->	29538.03		29538.04		28223.10		29523.03		28190.01		29538.02	
	ID FROM REPORT -->	FDSGW02A02		FDSHW02A02		FDSGW02B01		FDSGW02B02		FDSGW02C01		FDSGW02C02	
	SAMPLE DATE ----->	05/30/97		05/30/97		01/19/97		05/20/97		01/16/97		05/30/97	
	DATE EXTRACTED -->	06/02/97		06/02/97		01/22/97		05/30/97		01/17/97		06/02/97	
	DATE ANALYZED --->	06/06/97		06/06/97		01/23/97		06/05/97		01/20/97		06/06/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	29515	VAL	29515	VAL	28217	VAL	29515	VAL	28185	VAL	29515	VAL
100-02-7	4-Nitrophenol	60.	U	57.	U	50.	U	58.	U	50.	U	57.	U
132-64-9	Dibenzofuran	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
121-14-2	2,4-Dinitrotoluene	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
84-66-2	Diethylphthalate	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
7005-72-3	4-Chlorophenylphenylether	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
86-73-7	Fluorene	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
100-01-6	4-Nitroaniline	60.	U	57.	U	50.	U	58.	U	50.	U	57.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	60.	U	57.	U	50.	U	58.	U	50.	U	57.	U
86-30-6	N-Nitrosodiphenylamine	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
101-55-3	4-Bromophenyl-phenylether	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
118-74-1	Hexachlorobenzene	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
87-86-5	Pentachlorophenol	60.	U	57.	U	50.	U	58.	U	50.	U	57.	U
85-01-8	Phenanthrene	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
120-12-7	Anthracene	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
84-74-2	Di-n-butylphthalate	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
206-44-0	Fluoranthene	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
129-00-0	Pyrene	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
85-68-7	Butylbenzylphthalate	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
91-94-1	3,3'-Dichlorobenzidine	24.	U	23.	U	20.	U	23.	U	20.	U	23.	U
56-55-3	Benzo(a)anthracene	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
218-01-9	Chrysene	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	12.	U	11.	U	10.	U	12.	U	1.	J	11.	U
117-84-0	Di-n-octyl phthalate	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
205-99-2	Benzo(b)fluoranthene	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
207-08-9	Benzo(k)fluoranthene	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
50-32-8	Benzo(a)pyrene	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
193-39-5	Indeno(1,2,3-cd)pyrene	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
53-70-3	Dibenz(a,h)anthracene	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U
191-24-2	Benzo(g,h,i)perylene	12.	U	11.	U	10.	U	12.	U	10.	U	11.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-SVOA	SAMPLE ID ------->	FDS-G-W03A-01		FDS-G-W03A-02		FDS-G-W03B-01		FDS-G-W03B-02		FDS-G-W03C-01		FDS-G-W03C-02	
	ORIGINAL ID ----->	FDSGW03A01		FDSGW03A02		FDSGW03B01		FDSGW03B02		FDSGW03C01		FDSGW03C02	
	LAB SAMPLE ID --->	28223.01		29591.01		28185.05		29560.01		28185.04		29591.02	
	ID FROM REPORT -->	FDSGW03A01		FDSGW03A02		FDSGW03B01		FDSGW03B02		FDSGW03C01		FDSGW03C02	
	SAMPLE DATE ----->	01/19/97		06/04/97		01/15/97		06/02/97		01/15/97		06/04/97	
	DATE EXTRACTED -->	01/22/97		06/06/97		01/20/97		06/04/96		01/20/97		06/06/97	
	DATE ANALYZED --->	01/23/97		06/10/97		01/21/97		06/09/97		01/21/97		06/10/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28217	VAL	29591	VAL	28185	VAL	29515	VAL	28185	VAL	29591	VAL
108-95-2	Phenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-57-8	2-Chlorophenol	10.	U	1.	J	10.	U	10.	U	10.	U	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
100-51-6	Benzyl alcohol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-48-7	2-Methylphenol (o-Cresol)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-44-5	4-Methylphenol (p-Cresol)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
67-72-1	Hexachloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
98-95-3	Nitrobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
78-59-1	Isophorone	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-75-5	2-Nitrophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
105-67-9	2,4-Dimethylphenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
65-85-0	Benzoic acid	1.	J	50.	U	50.	U	50.	U	50.	U	50.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
120-83-2	2,4-Dichlorophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-20-3	Naphthalene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-47-8	4-Chloroaniline	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
87-68-3	Hexachlorobutadiene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-57-6	2-Methylnaphthalene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
91-58-7	2-Chloronaphthalene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-74-4	2-Nitroaniline	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
131-11-3	Dimethyl phthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
208-96-8	Acenaphthylene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
99-09-2	3-Nitroaniline	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
83-32-9	Acenaphthene	10.	U	2.	J	10.	U	10.	U	10.	U	10.	U
51-28-5	2,4-Dinitrophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-SVOA	SAMPLE ID ------->	FDS-G-W03A-01		FDS-G-W03A-02		FDS-G-W03B-01		FDS-G-W03B-02		FDS-G-W03C-01		FDS-G-W03C-02	
	ORIGINAL ID ----->	FDSGW03A01		FDSGW03A02		FDSGW03B01		FDSGW03B02		FDSGW03C01		FDSGW03C02	
	LAB SAMPLE ID --->	28223.01		29591.01		28185.05		29560.01		28185.04		29591.02	
	ID FROM REPORT -->	FDSGW03A01		FDSGW03A02		FDSGW03B01		FDSGW03B02		FDSGW03C01		FDSGW03C02	
	SAMPLE DATE ----->	01/19/97		06/04/97		01/15/97		06/02/97		01/15/97		06/04/97	
	DATE EXTRACTED -->	01/22/97		06/06/97		01/20/97		06/04/96		01/20/97		06/06/97	
	DATE ANALYZED --->	01/23/97		06/10/97		01/21/97		06/09/97		01/21/97		06/10/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28217	VAL	29591	VAL	28185	VAL	29515	VAL	28185	VAL	29591	VAL
100-02-7	4-Nitrophenol	50.	U	2.	J	50.	U	50.	U	50.	U	50.	U
132-64-9	Dibenzofuran	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
84-66-2	Diethylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
7005-72-3	4-Chlorophenylphenylether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
86-73-7	Fluorene	10.	U	2.	J	10.	U	10.	U	10.	U	10.	U
100-01-6	4-Nitroaniline	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
86-30-6	N-Nitrosodiphenylamine	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
118-74-1	Hexachlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
87-86-5	Pentachlorophenol	50.	U	1.	J	50.	U	50.	U	50.	U	50.	U
85-01-8	Phenanthrene	10.	U	1.	J	10.	U	10.	U	10.	U	10.	U
120-12-7	Anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
84-74-2	Di-n-butylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
206-44-0	Fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
129-00-0	Pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
85-68-7	Butylbenzylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U	20.	U	20.	U	20.	U	20.	U	20.	U
56-55-3	Benzo(a)anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
218-01-9	Chrysene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
117-84-0	Di-n-octyl phthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
50-32-8	Benzo(a)pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
193-39-5	Indeno(1,2,3-cd)pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
53-70-3	Dibenz(a,h)anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
191-24-2	Benzo(g,h,i)perylene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-SVOA													
	SAMPLE ID ------->	FDS-G-W04A-01		FDS-G-W04A-02		FDS-G-W04B-01		FDS-G-W04B-02		FDS-G-W04C-01		FDS-G-W04C-02	
	ORIGINAL ID ----->	FDSGW04A01		FDSGW04A02		FDSGW04B01		FDSGW04B02		FDSGW04C01		FDSGW04C02	
	LAB SAMPLE ID --->	28223.07		29487.03		28223.08		29515.01		28223.09		29515.05	
	ID FROM REPORT -->	FDSGW04A01		FDSGW04A02		FDSGW04B01		FDSGW04B02		FDSGW04C01		FDSGW04C02	
	SAMPLE DATE ----->	01/20/97		05/23/97		01/20/97		05/28/97		01/20/97		05/28/97	
	DATE EXTRACTED -->	01/22/97		05/27/97		01/22/97		05/30/97		01/22/97		05/30/97	
	DATE ANALYZED --->	01/23/97		06/01/97		01/23/97		06/05/97		01/23/97		06/05/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28217	VAL	29437	VAL	28217	VAL	29515	VAL	28217	VAL	29515	VAL
108-95-2	Phenol	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
95-57-8	2-Chlorophenol	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
541-73-1	1,3-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
106-46-7	1,4-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
100-51-6	Benzyl alcohol	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
95-50-1	1,2-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
95-48-7	2-Methylphenol (o-Cresol)	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
106-44-5	4-Methylphenol (p-Cresol)	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
67-72-1	Hexachloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
98-95-3	Nitrobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
78-59-1	Isophorone	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
88-75-5	2-Nitrophenol	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
105-67-9	2,4-Dimethylphenol	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
65-85-0	Benzoic acid	1.	J	50.	U	1.	J	53.	U	1.	J	59.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
120-83-2	2,4-Dichlorophenol	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
91-20-3	Naphthalene	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
106-47-8	4-Chloroaniline	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
87-68-3	Hexachlorobutadiene	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
59-50-7	4-Chloro-3-methylphenol	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
91-57-6	2-Methylnaphthalene	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
77-47-4	Hexachlorocyclopentadiene	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
88-06-2	2,4,6-Trichlorophenol	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
95-95-4	2,4,5-Trichlorophenol	50.	U	50.	U	50.	U	53.	U	50.	U	59.	U
91-58-7	2-Chloronaphthalene	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
88-74-4	2-Nitroaniline	50.	U	50.	U	50.	U	53.	U	50.	U	59.	U
131-11-3	Dimethyl phthalate	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
208-96-8	Acenaphthylene	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
606-20-2	2,6-Dinitrotoluene	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
99-09-2	3-Nitroaniline	50.	U	50.	U	50.	U	53.	U	50.	U	59.	U
83-32-9	Acenaphthene	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
51-28-5	2,4-Dinitrophenol	50.	U	50.	U	50.	U	53.	U	50.	U	59.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-SVOA													
	SAMPLE ID ------->	FDS-G-W04A-01		FDS-G-W04A-02		FDS-G-W04B-01		FDS-G-W04B-02		FDS-G-W04C-01		FDS-G-W04C-02	
	ORIGINAL ID ----->	FDSGW04A01		FDSGW04A02		FDSGW04B01		FDSGW04B02		FDSGW04C01		FDSGW04C02	
	LAB SAMPLE ID --->	28223.07		29487.03		28223.08		29515.01		28223.09		29515.05	
	ID FROM REPORT -->	FDSGW04A01		FDSGW04A02		FDSGW04B01		FDSGW04B02		FDSGW04C01		FDSGW04C02	
	SAMPLE DATE ----->	01/20/97		05/23/97		01/20/97		05/28/97		01/20/97		05/28/97	
	DATE EXTRACTED --->	01/22/97		05/27/97		01/22/97		05/30/97		01/22/97		05/30/97	
	DATE ANALYZED --->	01/23/97		06/01/97		01/23/97		06/05/97		01/23/97		06/05/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28217	VAL	29437	VAL	28217	VAL	29515	VAL	28217	VAL	29515	VAL
100-02-7	4-Nitrophenol	50.	U	50.	U	50.	U	53.	U	50.	U	59.	U
132-64-9	Dibenzofuran	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
121-14-2	2,4-Dinitrotoluene	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
84-66-2	Diethylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
7005-72-3	4-Chlorophenylphenylether	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
86-73-7	Fluorene	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
100-01-6	4-Nitroaniline	50.	U	50.	U	50.	U	53.	U	50.	U	59.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	50.	U	50.	U	50.	U	53.	U	50.	U	59.	U
86-30-6	N-Nitrosodiphenylamine	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
101-55-3	4-Bromophenyl-phenylether	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
118-74-1	Hexachlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
87-86-5	Pentachlorophenol	50.	U	50.	U	50.	U	53.	U	50.	U	59.	U
85-01-8	Phenanthrene	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
120-12-7	Anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
84-74-2	Di-n-butylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
206-44-0	Fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
129-00-0	Pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
85-68-7	Butylbenzylphthalate	10.	U	10.	U	10.	U	1.	J	10.	U	12.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U	20.	U	20.	U	21.	U	20.	U	24.	U
56-55-3	Benzo(a)anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
218-01-9	Chrysene	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
117-84-0	Di-n-octyl phthalate	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
205-99-2	Benzo(b)fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
207-08-9	Benzo(k)fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
50-32-8	Benzo(a)pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
193-39-5	Indeno(1,2,3-cd)pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
53-70-3	Dibenz(a,h)anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U
191-24-2	Benzo(g,h,i)perylene	10.	U	10.	U	10.	U	10.	U	10.	U	12.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-SVOA															
		SAMPLE ID ------->	FDS-G-W05A-01		FDS-G-W05A-02		FDS-G-W05B-01		FDS-G-W05B-02		FDS-G-W06A-01		FDS-G-W06A-02	
		ORIGINAL ID ----->	FDSGW05A01		FDSGW05A02		FDSGW05B01		FDSGW05B02		FDSGW06A01		FDSGW06A02	
		LAB SAMPLE ID --->	28223.03		29610.01		28209.04		29610.02		28223.02		29523.01	
		ID FROM REPORT -->	FDSGW05A01		FDSGW05A02		FDSGW05B01		FDSGW05B02		FDSGW06A01		FDSGW06A02	
		SAMPLE DATE ----->	01/19/97		06/05/97		01/17/97		06/05/97		01/18/97		05/20/97	
		DATE EXTRACTED -->	01/22/97		06/06/97		01/19/97		06/06/97		01/22/97		05/30/97	
		DATE ANALYZED --->	01/23/97		06/11/97		01/20/97		06/11/97		01/23/97		06/04/97	
		MATRIX ---------->	Water		Water		Water		Water		Water		Water	
		UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter		28217	VAL	29591	VAL	28185	VAL	29591	VAL	28217	VAL	29515	VAL
108-95-2	Phenol		10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
111-44-4	bis(2-Chloroethyl)ether		10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
95-57-8	2-Chlorophenol		10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
541-73-1	1,3-Dichlorobenzene		10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
106-46-7	1,4-Dichlorobenzene		10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
100-51-6	Benzyl alcohol		10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
95-50-1	1,2-Dichlorobenzene		10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
95-48-7	2-Methylphenol (o-Cresol)		10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
108-60-1	2,2'-oxybis(1-Chloropropane)		10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
106-44-5	4-Methylphenol (p-Cresol)		10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
621-64-7	N-Nitroso-di-n-propylamine		10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
67-72-1	Hexachloroethane		10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
98-95-3	Nitrobenzene		10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
78-59-1	Isophorone		10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
88-75-5	2-Nitrophenol		10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
105-67-9	2,4-Dimethylphenol		10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
65-85-0	Benzoic acid		2.	J	50.	U	50.	U	50.	U	50.	U	57.	U
111-91-1	bis(2-Chloroethoxy)methane		10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
120-83-2	2,4-Dichlorophenol		10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
120-82-1	1,2,4-Trichlorobenzene		10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
91-20-3	Naphthalene		10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
106-47-8	4-Chloroaniline		10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
87-68-3	Hexachlorobutadiene		10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
59-50-7	4-Chloro-3-methylphenol		10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
91-57-6	2-Methylnaphthalene		10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
77-47-4	Hexachlorocyclopentadiene		10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
88-06-2	2,4,6-Trichlorophenol		10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
95-95-4	2,4,5-Trichlorophenol		50.	U	50.	U	50.	U	50.	U	50.	U	57.	U
91-58-7	2-Chloronaphthalene		10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
88-74-4	2-Nitroaniline		50.	U	50.	U	50.	U	50.	U	50.	U	57.	U
131-11-3	Dimethyl phthalate		10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
208-96-8	Acenaphthylene		10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
606-20-2	2,6-Dinitrotoluene		10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
99-09-2	3-Nitroaniline		50.	U	50.	U	50.	U	50.	U	50.	U	57.	U
83-32-9	Acenaphthene		10.	U	3.	J	10.	U	10.	U	10.	U	11.	U
51-28-5	2,4-Dinitrophenol		50.	U	50.	U	50.	U	50.	U	50.	U	57.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-SVOA													
	SAMPLE ID ------->	FDS-G-W05A-01		FDS-G-W05A-02		FDS-G-W05B-01		FDS-G-W05B-02		FDS-G-W06A-01		FDS-G-W06A-02	
	ORIGINAL ID ----->	FDSGW05A01		FDSGW05A02		FDSGW05B01		FDSGW05B02		FDSGW06A01		FDSGW06A02	
	LAB SAMPLE ID --->	28223.03		29610.01		28209.04		29610.02		28223.02		29523.01	
	ID FROM REPORT -->	FDSGW05A01		FDSGW05A02		FDSGW05B01		FDSGW05B02		FDSGW06A01		FDSGW06A02	
	SAMPLE DATE ----->	01/19/97		06/05/97		01/17/97		06/05/97		01/18/97		05/20/97	
	DATE EXTRACTED -->	01/22/97		06/06/97		01/19/97		06/06/97		01/22/97		05/30/97	
	DATE ANALYZED --->	01/23/97		06/11/97		01/20/97		06/11/97		01/23/97		06/04/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28217	VAL	29591	VAL	28185	VAL	29591	VAL	28217	VAL	29515	VAL
100-02-7	4-Nitrophenol	50.	U	50.	U	50.	U	50.	U	50.	U	57.	U
132-64-9	Dibenzofuran	10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
121-14-2	2,4-Dinitrotoluene	10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
84-66-2	Diethylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
7005-72-3	4-Chlorophenylphenylether	10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
86-73-7	Fluorene	2.	J	7.	J	10.	U	10.	U	10.	U	11.	U
100-01-6	4-Nitroaniline	50.	U	50.	U	50.	U	50.	U	50.	U	57.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	50.	U	50.	U	50.	U	50.	U	50.	U	57.	U
86-30-6	N-Nitrosodiphenylamine	10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
101-55-3	4-Bromophenyl-phenylether	10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
118-74-1	Hexachlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
87-86-5	Pentachlorophenol	50.	U	50.	U	50.	U	50.	U	50.	U	57.	U
85-01-8	Phenanthrene	2.	J	8.	J	10.	U	10.	U	10.	U	11.	U
120-12-7	Anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
84-74-2	Di-n-butylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
206-44-0	Fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
129-00-0	Pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
85-68-7	Butylbenzylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U	20.	U	20.	U	20.	U	20.	U	23.	U
56-55-3	Benzo(a)anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
218-01-9	Chrysene	10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
117-84-0	Di-n-octyl phthalate	10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
205-99-2	Benzo(b)fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
207-08-9	Benzo(k)fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
50-32-8	Benzo(a)pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
193-39-5	Indeno(1,2,3-cd)pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
53-70-3	Dibenz(a,h)anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
191-24-2	Benzo(g,h,i)perylene	10.	U	10.	U	10.	U	10.	U	10.	U	11.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-SVOA															
		SAMPLE ID ------->	FDS-G-W06B-01		FDS-G-W06B-02		FDS-G-W06C-01		FDS-G-W06C-02		FDS-G-W07A-01		FDS-G-W07A-02		
		ORIGINAL ID ----->	FDSGW06B01		FDSGW06B02		FDSGW06C01		FDSGW06C02		FDSGW07A01		FDSGW07A02		
		LAB SAMPLE ID --->	28223.05		29523.02		28223.06		29538.01		28343.01		29610.05		
		ID FROM REPORT -->	FDSGW06B01		FDSGW06B02		FDSGW06C01		FDSGW06C02		FDSGW07A01		FDSGW07A02		
		SAMPLE DATE ----->	01/20/97		05/20/97		01/20/97		05/30/97		01/29/97		06/05/97		
		DATE EXTRACTED -->	01/22/97		05/30/97		01/22/97		06/02/97		01/31/97		06/06/97		
		DATE ANALYZED --->	01/23/97		06/04/97		01/23/97		06/06/97		02/03/97		06/11/97		
		MATRIX ---------->	Water		Water		Water		Water		Water		Water		
		UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L		
CAS #	Parameter		28217	VAL	29515	VAL	28217	VAL	29515	VAL	28308	VAL	29591	VAL	
108-95-2	Phenol		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U	
111-44-4	bis(2-Chloroethyl)ether		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U	
95-57-8	2-Chlorophenol		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U	
541-73-1	1,3-Dichlorobenzene		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U	
106-46-7	1,4-Dichlorobenzene		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U	
100-51-6	Benzyl alcohol		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U	
95-50-1	1,2-Dichlorobenzene		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U	
95-48-7	2-Methylphenol (o-Cresol)		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U	
108-60-1	2,2'-oxybis(1-Chloropropane)		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U	
106-44-5	4-Methylphenol (p-Cresol)		10.	U	11.	U	10.	U	12.	U	10.	U	1.	J	
621-64-7	N-Nitroso-di-n-propylamine		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U	
67-72-1	Hexachloroethane		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U	
98-95-3	Nitrobenzene		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U	
78-59-1	Isophorone		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U	
88-75-5	2-Nitrophenol		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U	
105-67-9	2,4-Dimethylphenol		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U	
65-85-0	Benzoic acid		50.	U	57.	U	1.	J	59.	U	3.	J	50.	U	
111-91-1	bis(2-Chloroethoxy)methane		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U	
120-83-2	2,4-Dichlorophenol		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U	
120-82-1	1,2,4-Trichlorobenzene		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U	
91-20-3	Naphthalene		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U	
106-47-8	4-Chloroaniline		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U	
87-68-3	Hexachlorobutadiene		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U	
59-50-7	4-Chloro-3-methylphenol		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U	
91-57-6	2-Methylnaphthalene		85.		10.	J	10.	U	12.	U	10.	U	10.	U	
77-47-4	Hexachlorocyclopentadiene		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U	
88-06-2	2,4,6-Trichlorophenol		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U	
95-95-4	2,4,5-Trichlorophenol		50.	U	57.	U	50.	U	59.	U	50.	U	50.	U	
91-58-7	2-Chloronaphthalene		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U	
88-74-4	2-Nitroaniline		50.	U	57.	U	50.	U	59.	U	50.	U	50.	U	
131-11-3	Dimethyl phthalate		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U	
208-96-8	Acenaphthylene		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U	
606-20-2	2,6-Dinitrotoluene		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U	
99-09-2	3-Nitroaniline		50.	U	57.	U	50.	U	59.	U	50.	U	50.	U	
83-32-9	Acenaphthene		7.	J	8.	J	10.	U	12.	U	10.	U	10.	U	
51-28-5	2,4-Dinitrophenol		50.	U	57.	U	50.	U	59.	U	50.	U	50.	U	

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-SVOA																	
		SAMPLE ID ------->	FDS-G-W06B-01		FDS-G-W06B-02		FDS-G-W06C-01		FDS-G-W06C-02		FDS-G-W07A-01		FDS-G-W07A-02	
		ORIGINAL ID ----->	FDSGW06B01		FDSGW06B02		FDSGW06C01		FDSGW06C02		FDSGW07A01		FDSGW07A02	
		LAB SAMPLE ID --->	28223.05		29523.02		28223.06		29538.01		28343.01		29610.05	
		ID FROM REPORT -->	FDSGW06B01		FDSGW06B02		FDSGW06C01		FDSGW06C02		FDSGW07A01		FDSGW07A02	
		SAMPLE DATE ----->	01/20/97		05/20/97		01/20/97		05/30/97		01/29/97		06/05/97	
		DATE EXTRACTED -->	01/22/97		05/30/97		01/22/97		06/02/97		01/31/97		06/06/97	
		DATE ANALYZED --->	01/23/97		06/04/97		01/23/97		06/06/97		02/03/97		06/11/97	
		MATRIX ---------->	Water		Water		Water		Water		Water		Water	
		UNITS ----------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter		28217	VAL	29515	VAL	28217	VAL	29515	VAL	28308	VAL	29591	VAL
100-02-7	4-Nitrophenol		50.	U	57.	U	50.	U	59.	U	50.	U	50.	U
132-64-9	Dibenzofuran		2.	J	2.	J	10.	U	12.	U	10.	U	10.	U
121-14-2	2,4-Dinitrotoluene		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U
84-66-2	Diethylphthalate		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U
7005-72-3	4-Chlorophenylphenylether		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U
86-73-7	Fluorene		5.	J	5.	J	10.	U	12.	U	10.	U	10.	U
100-01-6	4-Nitroaniline		50.	U	57.	U	50.	U	59.	U	50.	U	50.	U
534-52-1	2-Methyl-4,6-Dinitrophenol		50.	U	57.	U	50.	U	59.	U	50.	U	50.	U
86-30-6	N-Nitrosodiphenylamine		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U
101-55-3	4-Bromophenyl-phenylether		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U
118-74-1	Hexachlorobenzene		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U
87-86-5	Pentachlorophenol		50.	U	57.	U	50.	U	59.	U	50.	U	50.	U
85-01-8	Phenanthrene		7.	J	4.	J	10.	U	12.	U	10.	U	1.	J
120-12-7	Anthracene		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U
84-74-2	Di-n-butylphthalate		10.	U	11.	U	10.	U	12.	U	1.	J	10.	U
206-44-0	Fluoranthene		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U
129-00-0	Pyrene		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U
85-68-7	Butylbenzylphthalate		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U
91-94-1	3,3'-Dichlorobenzidine		20.	U	23.	U	20.	U	24.	U	20.	U	20.	U
56-55-3	Benzo(a)anthracene		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U
218-01-9	Chrysene		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U
117-84-0	Di-n-octyl phthalate		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U
205-99-2	Benzo(b)fluoranthene		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U
207-08-9	Benzo(k)fluoranthene		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U
50-32-8	Benzo(a)pyrene		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U
193-39-5	Indeno(1,2,3-cd)pyrene		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U
53-70-3	Dibenz(a,h)anthracene		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U
191-24-2	Benzo(g,h,i)perylene		10.	U	11.	U	10.	U	12.	U	10.	U	10.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-SVOA													
	SAMPLE ID ------->	FDS-G-W07B-01		FDS-G-W07B-02		FDS-G-W07C-01		FDS-G-W07C-02		FDS-G-W07D-01		FDS-G-W07D-02	
	ORIGINAL ID ----->	FDSGW07B01		FDSGW07B02		FDSGW07C01		FDSGW07C02		FDSGW07D01		FDSGW07D02	
	LAB SAMPLE ID --->	28209.01		29636.01		28209.02		29636.05		28279.01		29744.01	
	ID FROM REPORT -->	FDSGW07B01		FDSGW07B02		FDSGW07C01		FDSGW07C02		FDSGW07D01		FDSGW07D02	
	SAMPLE DATE ----->	01/17/97		06/09/97		01/17/97		06/09/97		01/24/97		06/17/97	
	DATE EXTRACTED -->	01/19/97		06/10/97		01/19/97		06/10/97		01/27/97		06/21/97	
	DATE ANALYZED --->	01/20/97		06/14/97		01/20/97		06/14/97		01/28/97		06/25/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28185	VAL	29591	VAL	28185	VAL	29591	VAL	28249	VAL	29707	VAL
108-95-2	Phenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-57-8	2-Chlorophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
100-51-6	Benzyl alcohol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-48-7	2-Methylphenol (o-Cresol)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-44-5	4-Methylphenol (p-Cresol)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
67-72-1	Hexachloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
98-95-3	Nitrobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
78-59-1	Isophorone	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-75-5	2-Nitrophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
105-67-9	2,4-Dimethylphenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
65-85-0	Benzoic acid	50.	U	50.	U	5.	J	1.	J	50.	U	50.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
120-83-2	2,4-Dichlorophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-20-3	Naphthalene	10.	U	3.	J	10.	U	10.	U	10.	U	24.	
106-47-8	4-Chloroaniline	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
87-68-3	Hexachlorobutadiene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-57-6	2-Methylnaphthalene	1.	J	2.	J	1.	J	10.	U	10.	U	4.	J
77-47-4	Hexachlorocyclopentadiene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
91-58-7	2-Chloronaphthalene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-74-4	2-Nitroaniline	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
131-11-3	Dimethyl phthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
208-96-8	Acenaphthylene	10.	U	10.	U	10.	U	10.	U	10.	U	1.	J
606-20-2	2,6-Dinitrotoluene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
99-09-2	3-Nitroaniline	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
83-32-9	Acenaphthene	10.	U	2.	J	10.	U	1.	J	51.		71.	
51-28-5	2,4-Dinitrophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-SVOA	SAMPLE ID ------->	FDS-G-W07B-01		FDS-G-W07B-02		FDS-G-W07C-01		FDS-G-W07C-02		FDS-G-W07D-01		FDS-G-W07D-02	
	ORIGINAL ID ----->	FDSGW07B01		FDSGW07B02		FDSGW07C01		FDSGW07C02		FDSGW07D01		FDSGW07D02	
	LAB SAMPLE ID --->	28209.01		29636.01		28209.02		29636.05		28279.01		29744.01	
	ID FROM REPORT -->	FDSGW07B01		FDSGW07B02		FDSGW07C01		FDSGW07C02		FDSGW07D01		FDSGW07D02	
	SAMPLE DATE ----->	01/17/97		06/09/97		01/17/97		06/09/97		01/24/97		06/17/97	
	DATE EXTRACTED -->	01/19/97		06/10/97		01/19/97		06/10/97		01/27/97		06/21/97	
	DATE ANALYZED --->	01/20/97		06/14/97		01/20/97		06/14/97		01/28/97		06/25/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28185	VAL	29591	VAL	28185	VAL	29591	VAL	28249	VAL	29707	VAL
100-02-7	4-Nitrophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
132-64-9	Dibenzofuran	10.	U	2.	J	10.	U	1.	J	9.	J	16.	
121-14-2	2,4-Dinitrotoluene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
84-66-2	Diethylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
7005-72-3	4-Chlorophenylphenylether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
86-73-7	Fluorene	2.	J	3.	J	2.	J	2.	J	20.		30.	
100-01-6	4-Nitroaniline	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
86-30-6	N-Nitrosodiphenylamine	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
118-74-1	Hexachlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
87-86-5	Pentachlorophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
85-01-8	Phenanthrene	10.	U	2.	J	10.	U	1.	J	11.		20.	
120-12-7	Anthracene	10.	U	10.	U	10.	U	10.	U	2.	J	5.	J
84-74-2	Di-n-butylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
206-44-0	Fluoranthene	10.	U	10.	U	10.	U	10.	U	1.	J	1.	J
129-00-0	Pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
85-68-7	Butylbenzylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U	20.	U	20.	U	20.	U	20.	U	20.	U
56-55-3	Benzo(a)anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
218-01-9	Chrysene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
117-84-0	Di-n-octyl phthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
50-32-8	Benzo(a)pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
193-39-5	Indeno(1,2,3-cd)pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
53-70-3	Dibenz(a,h)anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
191-24-2	Benzo(g,h,i)perylene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-SVOA	SAMPLE ID ------->	FDS-G-W08A-01		FDS-G-W08A-02		FDS-G-W08B-01		FDS-G-W08B-02		FDS-G-W08C-01		FDS-G-W08C-02	
	ORIGINAL ID ----->	FDSGW08A01		FDSGW08A02		FDSGW08B01		FDSGW08B02		FDSGW08C01		FDSGW08C02	
	LAB SAMPLE ID --->	28279.02		29610.03		28295.10		29636.06		28279.03		29636.07	
	ID FROM REPORT -->	FDSGW08A01		FDSGW08A02		FDSGW08B01		FDSGW08B02		FDSGW08C01		FDSGW08C02	
	SAMPLE DATE ----->	01/24/97		06/05/97		01/25/97		06/09/97		01/24/97		06/09/97	
	DATE EXTRACTED -->	01/27/97		06/06/97		01/20/97		06/10/97		01/27/97		06/10/97	
	DATE ANALYZED --->	01/28/97		06/11/97		02/03/97		06/16/97		01/28/97		06/16/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28249	VAL	29591	VAL	28249	VAL	29591	VAL	28249	VAL	29591	VAL
108-95-2	Phenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-57-8	2-Chlorophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
100-51-6	Benzyl alcohol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-48-7	2-Methylphenol (o-Cresol)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-44-5	4-Methylphenol (p-Cresol)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
67-72-1	Hexachloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
98-95-3	Nitrobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
78-59-1	Isophorone	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-75-5	2-Nitrophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
105-67-9	2,4-Dimethylphenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
65-85-0	Benzoic acid	50.	U	50.	U	2.	J	1.	J	50.	U	50.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
120-83-2	2,4-Dichlorophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-20-3	Naphthalene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-47-8	4-Chloroaniline	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
87-68-3	Hexachlorobutadiene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-57-6	2-Methylnaphthalene	10.	U	10.	U	2.	J	2.	J	10.	U	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
91-58-7	2-Chloronaphthalene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-74-4	2-Nitroaniline	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
131-11-3	Dimethyl phthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
208-96-8	Acenaphthylene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
99-09-2	3-Nitroaniline	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
83-32-9	Acenaphthene	10.	U	10.	U	17.		6.	J	10.	U	10.	U
51-28-5	2,4-Dinitrophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-SVOA	SAMPLE ID ------->	FDS-G-W08A-01		FDS-G-W08A-02		FDS-G-W08B-01		FDS-G-W08B-02		FDS-G-W08C-01		FDS-G-W08C-02	
	ORIGINAL ID ----->	FDSGW08A01		FDSGW08A02		FDSGW08B01		FDSGW08B02		FDSGW08C01		FDSGW08C02	
	LAB SAMPLE ID --->	28279.02		29610.03		28295.10		29636.06		28279.03		29636.07	
	ID FROM REPORT -->	FDSGW08A01		FDSGW08A02		FDSGW08B01		FDSGW08B02		FDSGW08C01		FDSGW08C02	
	SAMPLE DATE ----->	01/24/97		06/05/97		01/25/97		06/09/97		01/24/97		06/09/97	
	DATE EXTRACTED -->	01/27/97		06/06/97		01/20/97		06/10/97		01/27/97		06/10/97	
	DATE ANALYZED --->	01/28/97		06/11/97		02/03/97		06/16/97		01/28/97		06/16/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28249	VAL	29591	VAL	28249	VAL	29591	VAL	28249	VAL	29591	VAL
100-02-7	4-Nitrophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
132-64-9	Dibenzofuran	10.	U	10.	U	4.	J	2.	J	10.	U	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
84-66-2	Diethylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
7005-72-3	4-Chlorophenylphenylether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
86-73-7	Fluorene	10.	U	10.	U	9.	J	4.	J	10.	U	10.	U
100-01-6	4-Nitroaniline	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
86-30-6	N-Nitrosodiphenylamine	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
118-74-1	Hexachlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
87-86-5	Pentachlorophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
85-01-8	Phenanthrene	10.	U	10.	U	6.	J	5.	J	10.	U	10.	U
120-12-7	Anthracene	10.	U	10.	U	2.	J	10.	U	10.	U	10.	U
84-74-2	Di-n-butylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
206-44-0	Fluoranthene	10.	U	10.	U	6.	J	4.	J	10.	U	10.	U
129-00-0	Pyrene	10.	U	10.	U	4.	J	2.	J	10.	U	10.	U
85-68-7	Butylbenzylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	1.	J
91-94-1	3,3'-Dichlorobenzidine	20.	U	20.	U	20.	U	20.	U	20.	U	20.	U
56-55-3	Benzo(a)anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
218-01-9	Chrysene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
117-84-0	Di-n-octyl phthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
50-32-8	Benzo(a)pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
193-39-5	Indeno(1,2,3-cd)pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
53-70-3	Dibenz(a,h)anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
191-24-2	Benzo(g,h,i)perylene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-SVOA	SAMPLE ID ------->	FDS-H-W08C-02		FDS-G-W09A-01		FDS-G-W09A-02		FDS-G-W09B-01		FDS-G-W09B-02		FDS-H-W09B-02	
	ORIGINAL ID ----->	FDSHW08C02		FDSGW09A01		FDSGW09A02		FDSGW09B01		FDSGW09B02		FDSHW09B02	
	LAB SAMPLE ID --->	29636.08		28227.06		29656.04		28227.08		29656.06		29656.07	
	ID FROM REPORT -->	FDSHW08C02		FDSGW09A01		FDSGW09A02		FDSGW09B01		FDSGW09B02		FDSHW09B02	
	SAMPLE DATE ----->	06/09/97		01/21/97		06/10/97		01/21/97		06/10/97		06/10/97	
	DATE EXTRACTED -->	06/10/97		01/22/97		06/11/97		01/22/97		06/11/97		06/11/97	
	DATE ANALYZED --->	06/16/97		01/24/97		06/16/97		01/27/97		06/17/97		06/17/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	29591	VAL	28217	VAL	29656	VAL	28217	VAL	29656	VAL	29656	VAL
108-95-2	Phenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-57-8	2-Chlorophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
100-51-6	Benzyl alcohol	3.	J	10.	U	10.	U	10.	U	10.	U	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-48-7	2-Methylphenol (o-Cresol)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-44-5	4-Methylphenol (p-Cresol)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
67-72-1	Hexachloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
98-95-3	Nitrobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
78-59-1	Isophorone	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-75-5	2-Nitrophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
105-67-9	2,4-Dimethylphenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
65-85-0	Benzoic acid	50.	U	50.	U	50.	U	50.	UJ	50.	U	50.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
120-83-2	2,4-Dichlorophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-20-3	Naphthalene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-47-8	4-Chloroaniline	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
87-68-3	Hexachlorobutadiene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-57-6	2-Methylnaphthalene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
91-58-7	2-Chloronaphthalene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-74-4	2-Nitroaniline	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
131-11-3	Dimethyl phthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
208-96-8	Acenaphthylene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
99-09-2	3-Nitroaniline	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
83-32-9	Acenaphthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
51-28-5	2,4-Dinitrophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-SVOA													
	SAMPLE ID ------->	FDS-H-W08C-02		FDS-G-W09A-01		FDS-G-W09A-02		FDS-G-W09B-01		FDS-G-W09B-02		FDS-H-W09B-02	
	ORIGINAL ID ----->	FDSHW08C02		FDSGW09A01		FDSGW09A02		FDSGW09B01		FDSGW09B02		FDSHW09B02	
	LAB SAMPLE ID --->	29636.08		28227.06		29656.04		28227.08		29656.06		29656.07	
	ID FROM REPORT -->	FDSHW08C02		FDSGW09A01		FDSGW09A02		FDSGW09B01		FDSGW09B02		FDSHW09B02	
	SAMPLE DATE ----->	06/09/97		01/21/97		06/10/97		01/21/97		06/10/97		06/10/97	
	DATE EXTRACTED -->	06/10/97		01/22/97		06/11/97		01/22/97		06/11/97		06/11/97	
	DATE ANALYZED --->	06/16/97		01/24/97		06/16/97		01/27/97		06/17/97		06/17/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	29591	VAL	28217	VAL	29656	VAL	28217	VAL	29656	VAL	29656	VAL
100-02-7	4-Nitrophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
132-64-9	Dibenzofuran	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
84-66-2	Diethylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
7005-72-3	4-Chlorophenylphenylether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
86-73-7	Fluorene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
100-01-6	4-Nitroaniline	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
86-30-6	N-Nitrosodiphenylamine	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
118-74-1	Hexachlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
87-86-5	Pentachlorophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
85-01-8	Phenanthrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
120-12-7	Anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
84-74-2	Di-n-butylphthalate	1.	J	10.	U	10.	U	10.	U	10.	U	10.	U
206-44-0	Fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
129-00-0	Pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
85-68-7	Butylbenzylphthalate	9.	J	10.	U	10.	U	10.	U	10.	U	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U	20.	U	20.	U	20.	U	20.	U	20.	U
56-55-3	Benzo(a)anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
218-01-9	Chrysene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
117-84-0	Di-n-octyl phthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
50-32-8	Benzo(a)pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
193-39-5	Indeno(1,2,3-cd)pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
53-70-3	Dibenz(a,h)anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
191-24-2	Benzo(g,h,i)perylene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-SVOA	SAMPLE ID ------->	FDS-G-W09C-01		FDS-G-W09C-02		FDS-G-W10A-01		FDS-G-W10A-02		FDS-G-W10B-01		FDS-G-W10B-02	
	ORIGINAL ID ----->	FDSGW09C01		FDSGW09C02		FDSGW10A01		FDSGW10A02		FDSGW10B01		FDSGW10B02	
	LAB SAMPLE ID --->	28227.07		29656.05		28227.01		29656.01		28227.02		29656.02	
	ID FROM REPORT -->	FDSGW09C01		FDSGW09C02		FDSGW10A01		FDSGW10A02		FDSGW10B01		FDSGW10B02	
	SAMPLE DATE ----->	01/21/97		06/10/97		01/21/97		06/10/97		01/21/97		06/10/97	
	DATE EXTRACTED -->	01/22/97		06/11/97		01/22/97		06/11/97		01/22/97		06/11/97	
	DATE ANALYZED --->	01/24/97		06/17/97		01/24/97		06/16/97		01/24/97		06/16/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28217	VAL	29656	VAL	28217	VAL	29656	VAL	28217	VAL	29656	VAL
108-95-2	Phenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-57-8	2-Chlorophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
100-51-6	Benzyl alcohol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-48-7	2-Methylphenol (o-Cresol)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-44-5	4-Methylphenol (p-Cresol)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
67-72-1	Hexachloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
98-95-3	Nitrobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
78-59-1	Isophorone	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-75-5	2-Nitrophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
105-67-9	2,4-Dimethylphenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
65-85-0	Benzoic acid	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
120-83-2	2,4-Dichlorophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-20-3	Naphthalene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-47-8	4-Chloroaniline	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
87-68-3	Hexachlorobutadiene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-57-6	2-Methylnaphthalene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
91-58-7	2-Chloronaphthalene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-74-4	2-Nitroaniline	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
131-11-3	Dimethyl phthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
208-96-8	Acenaphthylene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
99-09-2	3-Nitroaniline	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
83-32-9	Acenaphthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
51-28-5	2,4-Dinitrophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-SVOA													
	SAMPLE ID ------->	FDS-G-W09C-01		FDS-G-W09C-02		FDS-G-W10A-01		FDS-G-W10A-02		FDS-G-W10B-01		FDS-G-W10B-02	
	ORIGINAL ID ----->	FDSGW09C01		FDSGW09C02		FDSGW10A01		FDSGW10A02		FDSGW10B01		FDSGW10B02	
	LAB SAMPLE ID --->	28227.07		29656.05		28227.01		29656.01		28227.02		29656.02	
	ID FROM REPORT -->	FDSGW09C01		FDSGW09C02		FDSGW10A01		FDSGW10A02		FDSGW10B01		FDSGW10B02	
	SAMPLE DATE ----->	01/21/97		06/10/97		01/21/97		06/10/97		01/21/97		06/10/97	
	DATE EXTRACTED -->	01/22/97		06/11/97		01/22/97		06/11/97		01/22/97		06/11/97	
	DATE ANALYZED --->	01/24/97		06/17/97		01/24/97		06/16/97		01/24/97		06/16/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28217	VAL	29656	VAL	28217	VAL	29656	VAL	28217	VAL	29656	VAL
100-02-7	4-Nitrophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
132-64-9	Dibenzofuran	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
84-66-2	Diethylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
7005-72-3	4-Chlorophenylphenylether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
86-73-7	Fluorene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
100-01-6	4-Nitroaniline	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
86-30-6	N-Nitrosodiphenylamine	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
118-74-1	Hexachlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
87-86-5	Pentachlorophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
85-01-8	Phenanthrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
120-12-7	Anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
84-74-2	Di-n-butylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
206-44-0	Fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
129-00-0	Pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
85-68-7	Butylbenzylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U	20.	U	20.	U	20.	U	20.	U	20.	U
56-55-3	Benzo(a)anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
218-01-9	Chrysene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	58.	U	10.	U	10.	U	10.	U	10.	U	10.	U
117-84-0	Di-n-octyl phthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
50-32-8	Benzo(a)pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
193-39-5	Indeno(1,2,3-cd)pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
53-70-3	Dibenz(a,h)anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
191-24-2	Benzo(g,h,i)perylene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-SVOA													
		SAMPLE ID ------->	FDS-G-W10C-01		FDS-G-W10C-02		FDS-G-W11A-01		FDS-G-W11A-02		FDS-G-W11B-01		FDS-G-W11B-02
		ORIGINAL ID ----->	FDSGW10C01		FDSGW10C02		FDSGW11A01		FDSGW11A02		FDSGW11B01		FDSGW11B02
		LAB SAMPLE ID --->	28227.03		29656.03		28308.07		29678.01		28308.08		29678.02
		ID FROM REPORT -->	FDSGW10C01		FDSGW10C02		FDSGW11A01		FDSGW11A02		FDSGW11B01		FDSGW11B02
		SAMPLE DATE ----->	01/21/97		06/10/97		01/28/97		06/11/97		01/28/97		06/11/97
		DATE EXTRACTED -->	01/22/97		06/11/97		01/29/97		06/13/97		01/29/97		06/13/97
		DATE ANALYZED --->	01/24/97		06/16/97		01/31/97		06/18/97		01/31/97		06/18/97
		MATRIX ---------->	Water		Water		Water		Water		Water		Water
		UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L
CAS #	Parameter		28217	VAL	29656	VAL	28308	VAL	29656	VAL	28308	VAL	29656	VAL
108-95-2	Phenol		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
111-44-4	bis(2-Chloroethyl)ether		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-57-8	2-Chlorophenol		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
541-73-1	1,3-Dichlorobenzene		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-46-7	1,4-Dichlorobenzene		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
100-51-6	Benzyl alcohol		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-50-1	1,2-Dichlorobenzene		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-48-7	2-Methylphenol (o-Cresol)		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
108-60-1	2,2'-oxybis(1-Chloropropane)		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-44-5	4-Methylphenol (p-Cresol)		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
621-64-7	N-Nitroso-di-n-propylamine		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
67-72-1	Hexachloroethane		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
98-95-3	Nitrobenzene		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
78-59-1	Isophorone		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-75-5	2-Nitrophenol		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
105-67-9	2,4-Dimethylphenol		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
65-85-0	Benzoic acid		50.	U	50.	U	7.	J	50.	U	50.	U	50.	U
111-91-1	bis(2-Chloroethoxy)methane		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
120-83-2	2,4-Dichlorophenol		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
120-82-1	1,2,4-Trichlorobenzene		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-20-3	Naphthalene		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-47-8	4-Chloroaniline		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
87-68-3	Hexachlorobutadiene		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
59-50-7	4-Chloro-3-methylphenol		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-57-6	2-Methylnaphthalene		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
77-47-4	Hexachlorocyclopentadiene		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-06-2	2,4,6-Trichlorophenol		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-95-4	2,4,5-Trichlorophenol		50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
91-58-7	2-Chloronaphthalene		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-74-4	2-Nitroaniline		50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
131-11-3	Dimethyl phthalate		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
208-96-8	Acenaphthylene		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
606-20-2	2,6-Dinitrotoluene		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
99-09-2	3-Nitroaniline		50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
83-32-9	Acenaphthene		10.	U	10.	U	1.	J	2.	J	10.	U	10.	U
51-28-5	2,4-Dinitrophenol		50.	U	50.	U	50.	U	50.	U	50.	U	50.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-SVOA	SAMPLE ID ------->	FDS-G-W10C-01		FDS-G-W10C-02		FDS-G-W11A-01		FDS-G-W11A-02		FDS-G-W11B-01		FDS-G-W11B-02	
	ORIGINAL ID ----->	FDSGW10C01		FDSGW10C02		FDSGW11A01		FDSGW11A02		FDSGW11B01		FDSGW11B02	
	LAB SAMPLE ID --->	28227.03		29656.03		28308.07		29678.01		28308.08		29678.02	
	ID FROM REPORT -->	FDSGW10C01		FDSGW10C02		FDSGW11A01		FDSGW11A02		FDSGW11B01		FDSGW11B02	
	SAMPLE DATE ----->	01/21/97		06/10/97		01/28/97		06/11/97		01/28/97		06/11/97	
	DATE EXTRACTED -->	01/22/97		06/11/97		01/29/97		06/13/97		01/29/97		06/13/97	
	DATE ANALYZED --->	01/24/97		06/16/97		01/31/97		06/18/97		01/31/97		06/18/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28217	VAL	29656	VAL	28308	VAL	29656	VAL	28308	VAL	29656	VAL
100-02-7	4-Nitrophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
132-64-9	Dibenzofuran	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
84-66-2	Diethylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
7005-72-3	4-Chlorophenylphenylether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
86-73-7	Fluorene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
100-01-6	4-Nitroaniline	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
86-30-6	N-Nitrosodiphenylamine	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
118-74-1	Hexachlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
87-86-5	Pentachlorophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
85-01-8	Phenanthrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
120-12-7	Anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
84-74-2	Di-n-butylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
206-44-0	Fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
129-00-0	Pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
85-68-7	Butylbenzylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U	20.	U	20.	U	20.	U	20.	U	20.	U
56-55-3	Benzo(a)anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
218-01-9	Chrysene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
117-84-0	Di-n-octyl phthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
50-32-8	Benzo(a)pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
193-39-5	Indeno(1,2,3-cd)pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
53-70-3	Dibenz(a,h)anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
191-24-2	Benzo(g,h,i)perylene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-SVOA													
	SAMPLE ID ------->	FDS-G-W11C-01		FDS-G-W11C-02		FDS-H-W11C-02		FDS-G-W12A-01		FDS-G-W12A-02		FDS-H-W12A-02	
	ORIGINAL ID ----->	FDSGW11C01		FDSGW11C02		FDSHW11C02		FDSGW12A01		FDSGW12A02		FDSHW12A02	
	LAB SAMPLE ID --->	28308.09		29678.03		29678.04		28295.05		29678.07		29678.08	
	ID FROM REPORT -->	FDSGW11C01		FDSGW11C02		FDSHW11C02		FDSGW12A01		FDSGW12A02		FDSHW12A02	
	SAMPLE DATE ----->	01/28/97		06/11/97		06/11/97		01/27/97		06/11/97		06/11/97	
	DATE EXTRACTED -->	01/29/97		06/13/97		06/13/97		02/03/97		06/13/97		06/13/97	
	DATE ANALYZED --->	01/31/97		06/18/97		06/18/97		02/03/97		06/18/97		06/18/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28308	VAL	29656	VAL	29656	VAL	28249	VAL	29656	VAL	29656	VAL
108-95-2	Phenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-57-8	2-Chlorophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
100-51-6	Benzyl alcohol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-48-7	2-Methylphenol (o-Cresol)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-44-5	4-Methylphenol (p-Cresol)	10.	U	2.	J	10.	U	10.	U	10.	U	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
67-72-1	Hexachloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
98-95-3	Nitrobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
78-59-1	Isophorone	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-75-5	2-Nitrophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
105-67-9	2,4-Dimethylphenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
65-85-0	Benzoic acid	50.	U	25.	J	12.	J	50.	U	50.	U	50.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
120-83-2	2,4-Dichlorophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-20-3	Naphthalene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-47-8	4-Chloroaniline	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
87-68-3	Hexachlorobutadiene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-57-6	2-Methylnaphthalene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
91-58-7	2-Chloronaphthalene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-74-4	2-Nitroaniline	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
131-11-3	Dimethyl phthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
208-96-8	Acenaphthylene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
99-09-2	3-Nitroaniline	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
83-32-9	Acenaphthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
51-28-5	2,4-Dinitrophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-SVOA	SAMPLE ID ------->	FDS-G-W11C-01		FDS-G-W11C-02		FDS-H-W11C-02		FDS-G-W12A-01		FDS-G-W12A-02		FDS-H-W12A-02	
	ORIGINAL ID ----->	FDSGW11C01		FDSGW11C02		FDSHW11C02		FDSGW12A01		FDSGW12A02		FDSHW12A02	
	LAB SAMPLE ID --->	28308.09		29678.03		29678.04		28295.05		29678.07		29678.08	
	ID FROM REPORT -->	FDSGW11C01		FDSGW11C02		FDSHW11C02		FDSGW12A01		FDSGW12A02		FDSHW12A02	
	SAMPLE DATE ----->	01/28/97		06/11/97		06/11/97		01/27/97		06/11/97		06/11/97	
	DATE EXTRACTED -->	01/29/97		06/13/97		06/13/97		02/03/97		06/13/97		06/13/97	
	DATE ANALYZED --->	01/31/97		06/18/97		06/18/97		02/03/97		06/18/97		06/18/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28308	VAL	29656	VAL	29656	VAL	28249	VAL	29656	VAL	29656	VAL
100-02-7	4-Nitrophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
132-64-9	Dibenzofuran	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
84-66-2	Diethylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
7005-72-3	4-Chlorophenylphenylether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
86-73-7	Fluorene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
100-01-6	4-Nitroaniline	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
86-30-6	N-Nitrosodiphenylamine	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
118-74-1	Hexachlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
87-86-5	Pentachlorophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
85-01-8	Phenanthrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
120-12-7	Anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
84-74-2	Di-n-butylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
206-44-0	Fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
129-00-0	Pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
85-68-7	Butylbenzylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U	20.	U	20.	U	20.	U	20.	U	20.	U
56-55-3	Benzo(a)anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
218-01-9	Chrysene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	10.	U	10.	U	16.	U	10.	U	10.	U	10.	U
117-84-0	Di-n-octyl phthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
50-32-8	Benzo(a)pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
193-39-5	Indeno(1,2,3-cd)pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
53-70-3	Dibenz(a,h)anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
191-24-2	Benzo(g,h,i)perylene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-SVOA	SAMPLE ID ------->	FDS-G-W12B-01		FDS-G-W12B-02		FDS-G-W13A-01		FDS-G-W13A-02		FDS-G-W13B-01		FDS-G-W13B-02	
	ORIGINAL ID ----->	FDSGW12B01		FDSGW12B02		FDSGW13A01		FDSGW13A02		FDSGW13B01		FDSGW13B02	
	LAB SAMPLE ID --->	28295.07		29678.06		28295.04		29678.05		28295.03		29707.01	
	ID FROM REPORT -->	FDSGW12B01		FDSGW12B02		FDSGW13A01		FDSGW13A02		FDSGW13B01		FDSGW13B02	
	SAMPLE DATE ----->	01/27/97		06/11/97		01/27/97		06/11/97		01/27/97		06/13/97	
	DATE EXTRACTED -->	02/03/97		06/13/97		01/20/97		06/13/97		01/20/97		06/16/97	
	DATE ANALYZED --->	01/31/97		06/18/97		01/30/97		06/18/97		01/30/97		06/20/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28249	VAL	29656	VAL	28249	VAL	29656	VAL	28249	VAL	29707	VAL
108-95-2	Phenol	10.	UR	10.	U	10.	U	10.	U	10.	U	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-57-8	2-Chlorophenol	10.	UR	10.	U	10.	U	10.	U	10.	U	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
100-51-6	Benzyl alcohol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-48-7	2-Methylphenol (o-Cresol)	10.	UR	10.	U	10.	U	10.	U	10.	U	10.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-44-5	4-Methylphenol (p-Cresol)	10.	UR	10.	U	10.	U	10.	U	10.	U	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
67-72-1	Hexachloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
98-95-3	Nitrobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
78-59-1	Isophorone	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-75-5	2-Nitrophenol	10.	UR	10.	U	10.	U	10.	U	10.	U	10.	U
105-67-9	2,4-Dimethylphenol	10.	UR	10.	U	10.	U	10.	U	10.	U	10.	U
65-85-0	Benzoic acid	50.	UR	50.	U	2.	J	50.	U	2.	J	50.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
120-83-2	2,4-Dichlorophenol	10.	UR	10.	U	10.	U	10.	U	10.	U	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-20-3	Naphthalene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-47-8	4-Chloroaniline	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
87-68-3	Hexachlorobutadiene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	UR	10.	U	10.	U	10.	U	10.	U	10.	U
91-57-6	2-Methylnaphthalene	10.	U	10.	U	1.	J	5.	J	10.	U	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	UR	10.	U	10.	U	10.	U	10.	U	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	UR	50.	U	50.	U	50.	U	50.	U	50.	U
91-58-7	2-Chloronaphthalene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-74-4	2-Nitroaniline	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
131-11-3	Dimethyl phthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
208-96-8	Acenaphthylene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
99-09-2	3-Nitroaniline	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
83-32-9	Acenaphthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
51-28-5	2,4-Dinitrophenol	50.	UR	50.	U	50.	U	50.	U	50.	U	50.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-SVOA	SAMPLE ID ------->	FDS-G-W12B-01		FDS-G-W12B-02		FDS-G-W13A-01		FDS-G-W13A-02		FDS-G-W13B-01		FDS-G-W13B-02	
	ORIGINAL ID ----->	FDSGW12B01		FDSGW12B02		FDSGW13A01		FDSGW13A02		FDSGW13B01		FDSGW13B02	
	LAB SAMPLE ID --->	28295.07		29678.06		28295.04		29678.05		28295.03		29707.01	
	ID FROM REPORT -->	FDSGW12B01		FDSGW12B02		FDSGW13A01		FDSGW13A02		FDSGW13B01		FDSGW13B02	
	SAMPLE DATE ----->	01/27/97		06/11/97		01/27/97		06/11/97		01/27/97		06/13/97	
	DATE EXTRACTED -->	02/03/97		06/13/97		01/20/97		06/13/97		01/20/97		06/16/97	
	DATE ANALYZED --->	01/31/97		06/18/97		01/30/97		06/18/97		01/30/97		06/20/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28249	VAL	29656	VAL	28249	VAL	29656	VAL	28249	VAL	29707	VAL
100-02-7	4-Nitrophenol	50.	UR	50.	U	50.	U	50.	U	50.	U	50.	U
132-64-9	Dibenzofuran	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
84-66-2	Diethylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
7005-72-3	4-Chlorophenylphenylether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
86-73-7	Fluorene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
100-01-6	4-Nitroaniline	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	50.	UR	50.	U	50.	U	50.	U	50.	U	50.	U
86-30-6	N-Nitrosodiphenylamine	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
118-74-1	Hexachlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
87-86-5	Pentachlorophenol	50.	UR	50.	U	50.	U	50.	U	50.	U	50.	U
85-01-8	Phenanthrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
120-12-7	Anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
84-74-2	Di-n-butylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
206-44-0	Fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
129-00-0	Pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
85-68-7	Butylbenzylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U	20.	U	20.	U	20.	U	20.	U	20.	U
56-55-3	Benzo(a)anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
218-01-9	Chrysene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	10.	U	10.	U	10.	U	10.	U	11.	U	39.	U
117-84-0	Di-n-octyl phthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
50-32-8	Benzo(a)pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
193-39-5	Indeno(1,2,3-cd)pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
53-70-3	Dibenz(a,h)anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
191-24-2	Benzo(g,h,i)perylene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-SVOA	SAMPLE ID ------->	FDS-G-W13C-01		FDS-G-W13C-02		FDS-G-W13D-01		FDS-G-W13D-02		FDS-G-W13E-01		FDS-G-W13E-02	
	ORIGINAL ID ----->	FDSGW13C01		FDSGW13C02		FDSGW13D01		FDSGW13D02		FDSGW13E01		FDSGW13E02	
	LAB SAMPLE ID --->	28295.01		29697.03		28295.08		29697.04		28308.04		29707.02	
	ID FROM REPORT -->	FDSGW13C01		FDSGW13C02		FDSGW13D01		FDSGW13D02		FDSGW13E01		FDSGW13E02	
	SAMPLE DATE ----->	01/27/97		06/12/97		01/27/97		06/12/97		01/28/97		06/13/97	
	DATE EXTRACTED -->	01/20/97		06/16/97		01/20/97		06/16/97		01/29/97		06/16/97	
	DATE ANALYZED --->	01/30/97		06/20/97		01/31/97		06/20/97		01/30/97		06/20/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28249	VAL	29656	VAL	28249	VAL	29656	VAL	28308	VAL	29707	VAL
108-95-2	Phenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-57-8	2-Chlorophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
100-51-6	Benzyl alcohol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-48-7	2-Methylphenol (o-Cresol)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-44-5	4-Methylphenol (p-Cresol)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
67-72-1	Hexachloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
98-95-3	Nitrobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
78-59-1	Isophorone	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-75-5	2-Nitrophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
105-67-9	2,4-Dimethylphenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
65-85-0	Benzoic acid	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
120-83-2	2,4-Dichlorophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-20-3	Naphthalene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-47-8	4-Chloroaniline	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
87-68-3	Hexachlorobutadiene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-57-6	2-Methylnaphthalene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
91-58-7	2-Chloronaphthalene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-74-4	2-Nitroaniline	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
131-11-3	Dimethyl phthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
208-96-8	Acenaphthylene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
99-09-2	3-Nitroaniline	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
83-32-9	Acenaphthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
51-28-5	2,4-Dinitrophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-SVOA	SAMPLE ID ------->	FDS-G-W13C-01		FDS-G-W13C-02		FDS-G-W13D-01		FDS-G-W13D-02		FDS-G-W13E-01		FDS-G-W13E-02	
	ORIGINAL ID ----->	FDSGW13C01		FDSGW13C02		FDSGW13D01		FDSGW13D02		FDSGW13E01		FDSGW13E02	
	LAB SAMPLE ID --->	28295.01		29697.03		28295.08		29697.04		28308.04		29707.02	
	ID FROM REPORT -->	FDSGW13C01		FDSGW13C02		FDSGW13D01		FDSGW13D02		FDSGW13E01		FDSGW13E02	
	SAMPLE DATE ----->	01/27/97		06/12/97		01/27/97		06/12/97		01/28/97		06/13/97	
	DATE EXTRACTED -->	01/20/97		06/16/97		01/20/97		06/16/97		01/29/97		06/16/97	
	DATE ANALYZED --->	01/30/97		06/20/97		01/31/97		06/20/97		01/30/97		06/20/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28249	VAL	29656	VAL	28249	VAL	29656	VAL	28308	VAL	29707	VAL
100-02-7	4-Nitrophenol	50.	UR	50.	U	50.	UR	50.	U	50.	U	50.	U
132-64-9	Dibenzofuran	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
121-14-2	2,4-Dinitrotoluene	10.	UR	10.	U	10.	UR	10.	U	10.	U	10.	U
84-66-2	Diethylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
7005-72-3	4-Chlorophenylphenylether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
86-73-7	Fluorene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
100-01-6	4-Nitroaniline	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
86-30-6	N-Nitrosodiphenylamine	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
118-74-1	Hexachlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
87-86-5	Pentachlorophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
85-01-8	Phenanthrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
120-12-7	Anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
84-74-2	Di-n-butylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
206-44-0	Fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
129-00-0	Pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
85-68-7	Butylbenzylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U	20.	U	20.	U	20.	U	20.	U	20.	U
56-55-3	Benzo(a)anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
218-01-9	Chrysene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
117-84-0	Di-n-octyl phthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
50-32-8	Benzo(a)pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
193-39-5	Indeno(1,2,3-cd)pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
53-70-3	Dibenz(a,h)anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
191-24-2	Benzo(g,h,i)perylene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-SVOA	SAMPLE ID ------->	FDS-G-W14A-01		FDS-G-W14A-02		FDS-G-W14B-01		FDS-G-W14B-02		FDS-G-W14C-01		FDS-G-W14C-02	
	ORIGINAL ID ----->	FDSGW14A01		FDSGW14A02		FDSGW14B01		FDSGW14B02		FDSGW14C01		FDSGW14C02	
	LAB SAMPLE ID --->	28295.02		29697.01		28295.06		29697.02		28249.01		29707.03	
	ID FROM REPORT -->	FDSGW14A01		FDSGW14A02		FDSGW14B01		FDSGW14B02		FDSGW14C01		FDSGW14C02	
	SAMPLE DATE ----->	01/27/97		06/12/97		01/27/97		06/12/97		01/22/97		06/13/97	
	DATE EXTRACTED -->	01/20/97		06/16/97		01/20/97		06/16/97		01/24/97		06/16/97	
	DATE ANALYZED --->	01/30/97		06/20/97		01/31/97		06/20/97		01/27/97		06/20/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28249	VAL	29656	VAL	28249	VAL	29656	VAL	28249	VAL	29707	VAL
108-95-2	Phenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-57-8	2-Chlorophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
100-51-6	Benzyl alcohol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-48-7	2-Methylphenol (o-Cresol)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-44-5	4-Methylphenol (p-Cresol)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
67-72-1	Hexachloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
98-95-3	Nitrobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
78-59-1	Isophorone	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-75-5	2-Nitrophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
105-67-9	2,4-Dimethylphenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
65-85-0	Benzoic acid	50.	U	2.	J	50.	U	1.	J	50.	U	50.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
120-83-2	2,4-Dichlorophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-20-3	Naphthalene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
106-47-8	4-Chloroaniline	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
87-68-3	Hexachlorobutadiene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-57-6	2-Methylnaphthalene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
91-58-7	2-Chloronaphthalene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
88-74-4	2-Nitroaniline	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
131-11-3	Dimethyl phthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
208-96-8	Acenaphthylene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
99-09-2	3-Nitroaniline	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
83-32-9	Acenaphthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
51-28-5	2,4-Dinitrophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-SVOA	SAMPLE ID ------->	FDS-G-W14A-01		FDS-G-W14A-02		FDS-G-W14B-01		FDS-G-W14B-02		FDS-G-W14C-01		FDS-G-W14C-02	
	ORIGINAL ID ----->	FDSGW14A01		FDSGW14A02		FDSGW14B01		FDSGW14B02		FDSGW14C01		FDSGW14C02	
	LAB SAMPLE ID --->	28295.02		29697.01		28295.06		29697.02		28249.01		29707.03	
	ID FROM REPORT -->	FDSGW14A01		FDSGW14A02		FDSGW14B01		FDSGW14B02		FDSGW14C01		FDSGW14C02	
	SAMPLE DATE ----->	01/27/97		06/12/97		01/27/97		06/12/97		01/22/97		06/13/97	
	DATE EXTRACTED -->	01/20/97		06/16/97		01/20/97		06/16/97		01/24/97		06/16/97	
	DATE ANALYZED --->	01/30/97		06/20/97		01/31/97		06/20/97		01/27/97		06/20/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28249	VAL	29656	VAL	28249	VAL	29656	VAL	28249	VAL	29707	VAL
100-02-7	4-Nitrophenol	50.	U	1.	J	50.	U	50.	U	50.	U	50.	U
132-64-9	Dibenzofuran	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
84-66-2	Diethylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
7005-72-3	4-Chlorophenylphenylether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
86-73-7	Fluorene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
100-01-6	4-Nitroaniline	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
86-30-6	N-Nitrosodiphenylamine	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
118-74-1	Hexachlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
87-86-5	Pentachlorophenol	50.	U	50.	U	50.	U	50.	U	50.	U	50.	U
85-01-8	Phenanthrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
120-12-7	Anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
84-74-2	Di-n-butylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
206-44-0	Fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
129-00-0	Pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
85-68-7	Butylbenzylphthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U	20.	U	20.	U	20.	U	20.	U	20.	U
56-55-3	Benzo(a)anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
218-01-9	Chrysene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
117-84-0	Di-n-octyl phthalate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
50-32-8	Benzo(a)pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
193-39-5	Indeno(1,2,3-cd)pyrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
53-70-3	Dibenz(a,h)anthracene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
191-24-2	Benzo(g,h,i)perylene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-SVOA	SAMPLE ID ------->	FDS-G-W15A-01		FDS-G-W15A-02		FDS-G-W15B-01		FDS-G-W15B-02		FDS-G-W15C-01		FDS-G-W15C-02	
	ORIGINAL ID ----->	FDSGW15A01		FDSGW15A02		FDSGW15B01		FDSGW15B02		FDSGW15C01		FDSGW15C02	
	LAB SAMPLE ID --->	28308.01		29707.04		28308.02		29730.06		28308.03		29730.07	
	ID FROM REPORT -->	FDSGW15A01		FDSGW15A02		FDSGW15B01		FDSGW15B02		FDSGW15C01		FDSGW15C02	
	SAMPLE DATE ----->	01/28/97		06/13/97		01/28/97		06/16/97		01/28/97		06/16/97	
	DATE EXTRACTED -->	01/29/97		06/16/97		01/29/97		06/18/97		01/29/97		06/18/97	
	DATE ANALYZED --->	01/31/97		06/23/97		01/30/97		06/25/97		01/30/97		06/25/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28308	VAL	29707	VAL	28308	VAL	29707	VAL	28308	VAL	29707	VAL
108-95-2	Phenol	1.	J	10.	U	10.	U	12.	U	10.	U	12.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
95-57-8	2-Chlorophenol	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
541-73-1	1,3-Dichlorobenzene	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
106-46-7	1,4-Dichlorobenzene	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
100-51-6	Benzyl alcohol	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
95-50-1	1,2-Dichlorobenzene	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
95-48-7	2-Methylphenol (o-Cresol)	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
106-44-5	4-Methylphenol (p-Cresol)	23.		2.	J	10.	U	12.	U	10.	U	12.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
67-72-1	Hexachloroethane	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
98-95-3	Nitrobenzene	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
78-59-1	Isophorone	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
88-75-5	2-Nitrophenol	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
105-67-9	2,4-Dimethylphenol	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
65-85-0	Benzoic acid	6.	J	50.	U	50.	U	62.	U	50.	U	60.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
120-83-2	2,4-Dichlorophenol	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
91-20-3	Naphthalene	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
106-47-8	4-Chloroaniline	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
87-68-3	Hexachlorobutadiene	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
59-50-7	4-Chloro-3-methylphenol	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
91-57-6	2-Methylnaphthalene	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
77-47-4	Hexachlorocyclopentadiene	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
88-06-2	2,4,6-Trichlorophenol	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
95-95-4	2,4,5-Trichlorophenol	50.	U	50.	U	50.	U	62.	U	50.	U	60.	U
91-58-7	2-Chloronaphthalene	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
88-74-4	2-Nitroaniline	50.	U	50.	U	50.	U	62.	U	50.	U	60.	U
131-11-3	Dimethyl phthalate	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
208-96-8	Acenaphthylene	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
606-20-2	2,6-Dinitrotoluene	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
99-09-2	3-Nitroaniline	50.	U	50.	U	50.	U	62.	U	50.	U	60.	U
83-32-9	Acenaphthene	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
51-28-5	2,4-Dinitrophenol	50.	U	50.	U	50.	U	62.	U	50.	U	60.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-SVOA															
	SAMPLE ID ------->	FDS-G-W15A-01		FDS-G-W15A-02		FDS-G-W15B-01		FDS-G-W15B-02		FDS-G-W15C-01		FDS-G-W15C-02	
	ORIGINAL ID ----->	FDSGW15A01		FDSGW15A02		FDSGW15B01		FDSGW15B02		FDSGW15C01		FDSGW15C02	
	LAB SAMPLE ID --->	28308.01		29707.04		28308.02		29730.06		28308.03		29730.07	
	ID FROM REPORT -->	FDSGW15A01		FDSGW15A02		FDSGW15B01		FDSGW15B02		FDSGW15C01		FDSGW15C02	
	SAMPLE DATE ----->	01/28/97		06/13/97		01/28/97		06/16/97		01/28/97		06/16/97	
	DATE EXTRACTED -->	01/29/97		06/16/97		01/29/97		06/18/97		01/29/97		06/18/97	
	DATE ANALYZED --->	01/31/97		06/23/97		01/30/97		06/25/97		01/30/97		06/25/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28308	VAL	29707	VAL	28308	VAL	29707	VAL	28308	VAL	29707	VAL
100-02-7	4-Nitrophenol	50.	U	50.	U	50.	U	62.	U	50.	U	60.	U
132-64-9	Dibenzofuran	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
121-14-2	2,4-Dinitrotoluene	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
84-66-2	Diethylphthalate	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
7005-72-3	4-Chlorophenylphenylether	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
86-73-7	Fluorene	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
100-01-6	4-Nitroaniline	50.	U	50.	U	50.	U	62.	U	50.	U	60.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	50.	U	50.	U	50.	U	62.	U	50.	U	60.	U
86-30-6	N-Nitrosodiphenylamine	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
101-55-3	4-Bromophenyl-phenylether	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
118-74-1	Hexachlorobenzene	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
87-86-5	Pentachlorophenol	50.	U	50.	U	50.	U	62.	U	50.	U	60.	U
85-01-8	Phenanthrene	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
120-12-7	Anthracene	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
84-74-2	Di-n-butylphthalate	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
206-44-0	Fluoranthene	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
129-00-0	Pyrene	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
85-68-7	Butylbenzylphthalate	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U	20.	U	20.	U	25.	U	20.	U	24.	U
56-55-3	Benzo(a)anthracene	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
218-01-9	Chrysene	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
117-84-0	Di-n-octyl phthalate	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
205-99-2	Benzo(b)fluoranthene	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
207-08-9	Benzo(k)fluoranthene	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
50-32-8	Benzo(a)pyrene	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
193-39-5	Indeno(1,2,3-cd)pyrene	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
53-70-3	Dibenz(a,h)anthracene	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U
191-24-2	Benzo(g,h,i)perylene	10.	U	10.	U	10.	U	12.	U	10.	U	12.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-SVOA									
	SAMPLE ID ------->	FDS-G-W18A-01		FDS-G-W18A-02					
	ORIGINAL ID ----->	FDSGW18A01		FDSGW18A02					
	LAB SAMPLE ID --->	28328.05		29767.03					
	ID FROM REPORT -->	FDSGW18A01		FDSGW18A02					
	SAMPLE DATE ----->	01/29/97		06/18/97					
	DATE EXTRACTED -->	01/31/97		07/01/97					
	DATE ANALYZED --->	02/03/97		06/27/97					
	MATRIX ---------->	Water		Water					
	UNITS ---------->	UG/L		UG/L					
CAS #	Parameter	28308	VAL	29767	VAL				
108-95-2	Phenol	10.	U	10.	U				
111-44-4	bis(2-Chloroethyl)ether	10.	U	10.	U				
95-57-8	2-Chlorophenol	10.	U	10.	U				
541-73-1	1,3-Dichlorobenzene	10.	U	10.	U				
106-46-7	1,4-Dichlorobenzene	10.	U	10.	U				
100-51-6	Benzyl alcohol	10.	U	10.	U				
95-50-1	1,2-Dichlorobenzene	10.	U	10.	U				
95-48-7	2-Methylphenol (o-Cresol)	10.	U	10.	U				
108-60-1	2,2'-oxybis(1-Chloropropane)	10.	U	10.	U				
106-44-5	4-Methylphenol (p-Cresol)	10.	U	10.	U				
621-64-7	N-Nitroso-di-n-propylamine	10.	U	10.	U				
67-72-1	Hexachloroethane	10.	U	10.	U				
98-95-3	Nitrobenzene	10.	U	10.	U				
78-59-1	Isophorone	10.	U	10.	U				
88-75-5	2-Nitrophenol	10.	U	10.	U				
105-67-9	2,4-Dimethylphenol	10.	U	10.	U				
65-85-0	Benzoic acid	50.	U	1.	J				
111-91-1	bis(2-Chloroethoxy)methane	10.	U	10.	U				
120-83-2	2,4-Dichlorophenol	10.	U	10.	U				
120-82-1	1,2,4-Trichlorobenzene	10.	U	10.	U				
91-20-3	Naphthalene	10.	U	10.	U				
106-47-8	4-Chloroaniline	10.	U	10.	U				
87-68-3	Hexachlorobutadiene	10.	U	10.	U				
59-50-7	4-Chloro-3-methylphenol	10.	U	10.	U				
91-57-6	2-Methylnaphthalene	10.	U	10.	U				
77-47-4	Hexachlorocyclopentadiene	10.	U	10.	U				
88-06-2	2,4,6-Trichlorophenol	10.	U	10.	U				
95-95-4	2,4,5-Trichlorophenol	50.	U	50.	U				
91-58-7	2-Chloronaphthalene	10.	U	10.	U				
88-74-4	2-Nitroaniline	50.	U	50.	U				
131-11-3	Dimethyl phthalate	10.	U	10.	U				
208-96-8	Acenaphthylene	10.	U	10.	U				
606-20-2	2,6-Dinitrotoluene	10.	U	10.	U				
99-09-2	3-Nitroaniline	50.	U	50.	U				
83-32-9	Acenaphthene	10.	U	10.	U				
51-28-5	2,4-Dinitrophenol	50.	U	50.	U				

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-SVOA									
	SAMPLE ID ------->	FDS-G-W18A-01		FDS-G-W18A-02					
	ORIGINAL ID ----->	FDSGW18A01		FDSGW18A02					
	LAB SAMPLE ID --->	28328.05		29767.03					
	ID FROM REPORT -->	FDSGW18A01		FDSGW18A02					
	SAMPLE DATE ----->	01/29/97		06/18/97					
	DATE EXTRACTED -->	01/31/97		07/01/97					
	DATE ANALYZED --->	02/03/97		06/27/97					
	MATRIX ---------->	Water		Water					
	UNITS ---------->	UG/L		UG/L					
CAS #	Parameter	28308	VAL	29767	VAL				
100-02-7	4-Nitrophenol	50.	U	50.	U				
132-64-9	Dibenzofuran	10.	U	10.	U				
121-14-2	2,4-Dinitrotoluene	10.	U	10.	U				
84-66-2	Diethylphthalate	10.	U	10.	U				
7005-72-3	4-Chlorophenylphenylether	10.	U	10.	U				
86-73-7	Fluorene	10.	U	10.	U				
100-01-6	4-Nitroaniline	50.	U	50.	U				
534-52-1	2-Methyl-4,6-Dinitrophenol	50.	U	50.	U				
86-30-6	N-Nitrosodiphenylamine	10.	U	10.	U				
101-55-3	4-Bromophenyl-phenylether	10.	U	10.	U				
118-74-1	Hexachlorobenzene	10.	U	10.	U				
87-86-5	Pentachlorophenol	50.	U	10.	J				
85-01-8	Phenanthrene	10.	U	10.	U				
120-12-7	Anthracene	10.	U	10.	U				
84-74-2	Di-n-butylphthalate	10.	U	10.	U				
206-44-0	Fluoranthene	10.	U	10.	U				
129-00-0	Pyrene	10.	U	10.	U				
85-68-7	Butylbenzylphthalate	10.	U	10.	U				
91-94-1	3,3'-Dichlorobenzidine	20.	U	20.	U				
56-55-3	Benzo(a)anthracene	10.	U	10.	U				
218-01-9	Chrysene	10.	U	10.	U				
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	10.	U	10.	U				
117-84-0	Di-n-octyl phthalate	10.	U	10.	U				
205-99-2	Benzo(b)fluoranthene	10.	U	10.	U				
207-08-9	Benzo(k)fluoranthene	10.	U	10.	U				
50-32-8	Benzo(a)pyrene	10.	U	10.	U				
193-39-5	Indeno(1,2,3-cd)pyrene	10.	U	10.	U				
53-70-3	Dibenz(a,h)anthracene	10.	U	10.	U				
191-24-2	Benzo(g,h,i)perylene	10.	U	10.	U				

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-VOA															
		SAMPLE ID ------->	FDS-G-W01A-01		FDS-G-W01A-02		FDS-G-W01B-01		FDS-G-W01B-02		FDS-G-W01C-01		FDS-G-W01C-02		
		ORIGINAL ID ----->	FDSGW01A01		FDSGW01A02		FDSGW01B01		FDSGW01B02		FDSGW01C01		FDSGW01C02		
		LAB SAMPLE ID --->	28174.01		29610.04		28174.02		29560.05		28185.01		29560.06		
		ID FROM REPORT -->	FDSGW01A01		FDSGW01A02		FDSGW01B01		FDSGW01B02		FDSGW01C01		FDSGW01C02		
		SAMPLE DATE ----->	01/14/97		06/05/97		01/14/97		06/02/97		01/15/97		06/02/97		
		DATE ANALYZED --->	01/16/97		06/10/97		01/16/97		06/04/97		01/20/97		06/04/97		
		MATRIX ---------->	Water		Water		Water		Water		Water		Water		
		UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L		
CAS #	Parameter		28134	VAL	29591	VAL	28134	VAL	29515	VAL	28185	VAL	29515	VAL	
74-87-3	Chloromethane		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U	
74-83-9	Bromomethane		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U	
75-01-4	Vinyl chloride		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U	
75-00-3	Chloroethane		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U	
75-09-2	Methylene chloride		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
67-64-1	Acetone		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U	
75-15-0	Carbon disulfide		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
75-35-4	1,1-Dichloroethene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
75-34-3	1,1-Dichloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
540-59-0	1,2-Dichloroethene (total)		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
67-66-3	Chloroform		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
107-06-2	1,2-Dichloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
78-93-3	2-Butanone (MEK)		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U	
71-55-6	1,1,1-Trichloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
56-23-5	Carbon tetrachloride		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
75-27-4	Bromodichloromethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
78-87-5	1,2-Dichloropropane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
10061-01-5	cis-1,3-Dichloropropene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
79-01-6	Trichloroethene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
124-48-1	Dibromochloromethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
79-00-5	1,1,2-Trichloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
71-43-2	Benzene		5.		4.	J	5.	U	5.	U	5.	U	5.	U	
10061-02-6	trans-1,3-Dichloropropene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
75-25-2	Bromoform		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
108-10-1	4-Methyl-2-Pentanone (MIBK)		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U	
591-78-6	2-Hexanone		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U	
127-18-4	Tetrachloroethene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
79-34-5	1,1,2,2-Tetrachloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
108-88-3	Toluene		6.		4.	J	5.	U	5.	U	5.	U	5.	U	
108-90-7	Chlorobenzene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
100-41-4	Ethylbenzene		45.		42.		5.	U	5.	U	5.	U	5.	U	
100-42-5	Styrene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
1330-20-7	Xylene (Total)		280.		230.		5.	U	5.	U	5.	U	5.	U	
108-05-4	Vinyl acetate		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U	
110-75-8	2-Chloroethyl vinyl ether		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U	

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-VOA													
		SAMPLE ID ------->	FDS-G-W01D-01		FDS-G-W01D-02		FDS-H-W01D-02		FDS-G-W01E-01		FDS-G-W01E-02		FDS-G-W02A-01
		ORIGINAL ID ----->	FDSGW01D01		FDSGW01D02		FDSHW01D02		FDSGW01E01		FDSGW01E02		FDSGW02A01
		LAB SAMPLE ID --->	28185.02		29591.03		29591.04		28328.01		29560.07		28190.02
		ID FROM REPORT -->	FDSGW01D01		FDSGW01D02		FDSHW01D02		FDSGW01E01		FDSGW01E02		FDSGW02A01
		SAMPLE DATE ----->	01/14/97		06/04/97		06/04/97		01/29/97		06/02/97		01/16/97
		DATE ANALYZED --->	01/20/97		06/09/97		06/09/97		01/31/97		06/04/97		01/20/97
		MATRIX ---------->	Water		Water		Water		Water		Water		Water
		UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L
CAS #	Parameter		28185	VAL	29591	VAL	29591	VAL	28308	VAL	29515	VAL	28185	VAL
74-87-3	Chloromethane		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
74-83-9	Bromomethane		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-01-4	Vinyl chloride		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-00-3	Chloroethane		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-09-2	Methylene chloride		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
67-64-1	Acetone		10.	U	10.	U	10.	U	10.	U	10.	U	11.	U
75-15-0	Carbon disulfide		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-35-4	1,1-Dichloroethene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-34-3	1,1-Dichloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
540-59-0	1,2-Dichloroethene (total)		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
67-66-3	Chloroform		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
107-06-2	1,2-Dichloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
78-93-3	2-Butanone (MEK)		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
71-55-6	1,1,1-Trichloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
56-23-5	Carbon tetrachloride		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-27-4	Bromodichloromethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
78-87-5	1,2-Dichloropropane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
10061-01-5	cis-1,3-Dichloropropene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-01-6	Trichloroethene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
124-48-1	Dibromochloromethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-00-5	1,1,2-Trichloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
71-43-2	Benzene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
10061-02-6	trans-1,3-Dichloropropene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-25-2	Bromoform		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
591-78-6	2-Hexanone		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
127-18-4	Tetrachloroethene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-34-5	1,1,2,2-Tetrachloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-88-3	Toluene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-90-7	Chlorobenzene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
100-41-4	Ethylbenzene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
100-42-5	Styrene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
1330-20-7	Xylene (Total)		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-05-4	Vinyl acetate		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
110-75-8	2-Chloroethyl vinyl ether		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-VOA																	
		SAMPLE ID ------->	FDS-G-W02A-02		FDS-H-W02A-02		FDS-G-W02B-01		FDS-G-W02B-02		FDS-G-W02C-01		FDS-G-W02C-02	
		ORIGINAL ID ----->	FDSGW02A02		FDSHW02A02		FDSGW02B01		FDSGW02B02		FDSGW02C01		FDSGW02C02	
		LAB SAMPLE ID --->	29538.03		29538.04		28223.10		29523.03		28190.01		29538.02	
		ID FROM REPORT -->	FDSGW02A02		FDSHW02A02		FDSGW02B01		FDSGW02B02		FDSGW02C01		FDSGW02C02	
		SAMPLE DATE ----->	05/30/97		05/30/97		01/19/97		05/20/97		01/16/97		05/30/97	
		DATE ANALYZED --->	06/02/97		06/02/97		01/23/97		06/02/97		01/20/97		06/02/97	
		MATRIX ---------->	Water		Water		Water		Water		Water		Water	
		UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter		29515	VAL	29515	VAL	28217	VAL	29515	VAL	28185	VAL	29515	VAL
74-87-3	Chloromethane		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
74-83-9	Bromomethane		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-01-4	Vinyl chloride		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-00-3	Chloroethane		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-09-2	Methylene chloride		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
67-64-1	Acetone		14.	U	18.	U	12.	U	10.	U	64.	U	10.	U
75-15-0	Carbon disulfide		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-35-4	1,1-Dichloroethene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-34-3	1,1-Dichloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
540-59-0	1,2-Dichloroethene (total)		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
67-66-3	Chloroform		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
107-06-2	1,2-Dichloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
78-93-3	2-Butanone (MEK)		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
71-55-6	1,1,1-Trichloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
56-23-5	Carbon tetrachloride		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-27-4	Bromodichloromethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
78-87-5	1,2-Dichloropropane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
10061-01-5	cis-1,3-Dichloropropene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-01-6	Trichloroethene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
124-48-1	Dibromochloromethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-00-5	1,1,2-Trichloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
71-43-2	Benzene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
10061-02-6	trans-1,3-Dichloropropene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-25-2	Bromoform		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
591-78-6	2-Hexanone		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
127-18-4	Tetrachloroethene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-34-5	1,1,2,2-Tetrachloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-88-3	Toluene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-90-7	Chlorobenzene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
100-41-4	Ethylbenzene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
100-42-5	Styrene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
1330-20-7	Xylene (Total)		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-05-4	Vinyl acetate		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
110-75-8	2-Chloroethyl vinyl ether		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-VOA	SAMPLE ID ------->	FDS-G-W03A-01		FDS-G-W03A-02		FDS-G-W03B-01		FDS-G-W03B-02		FDS-G-W03C-01		FDS-G-W03C-02	
	ORIGINAL ID ----->	FDSGW03A01		FDSGW03A02		FDSGW03B01		FDSGW03B02		FDSGW03C01		FDSGW03C02	
	LAB SAMPLE ID --->	28223.01		29591.01		28185.05		29560.01		28185.04		29591.02	
	ID FROM REPORT -->	FDSGW03A01		FDSGW03A02		FDSGW03B01		FDSGW03B02		FDSGW03C01		FDSGW03C02	
	SAMPLE DATE ----->	01/19/97		06/04/97		01/15/97		06/02/97		01/15/97		06/04/97	
	DATE ANALYZED --->	01/22/97		06/06/97		01/20/97		06/04/97		01/20/97		06/09/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28217	VAL	29591	VAL	28185	VAL	29515	VAL	28185	VAL	29591	VAL
74-87-3	Chloromethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
74-83-9	Bromomethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-01-4	Vinyl chloride	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-00-3	Chloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-09-2	Methylene chloride	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
67-64-1	Acetone	36.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-15-0	Carbon disulfide	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-35-4	1,1-Dichloroethene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-34-3	1,1-Dichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
67-66-3	Chloroform	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
107-06-2	1,2-Dichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
78-93-3	2-Butanone (MEK)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
71-55-6	1,1,1-Trichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
56-23-5	Carbon tetrachloride	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-27-4	Bromodichloromethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
78-87-5	1,2-Dichloropropane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-01-6	Trichloroethene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
124-48-1	Dibromochloromethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
71-43-2	Benzene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-25-2	Bromoform	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
591-78-6	2-Hexanone	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
127-18-4	Tetrachloroethene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-88-3	Toluene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-90-7	Chlorobenzene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
100-41-4	Ethylbenzene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
100-42-5	Styrene	5.	U	5.	U	1.	J	5.	U	5.	U	5.	U
1330-20-7	Xylene (Total)	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-05-4	Vinyl acetate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
110-75-8	2-Chloroethyl vinyl ether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-VOA															
		SAMPLE ID ------->	FDS-G-W04A-01		FDS-G-W04A-02		FDS-G-W04B-01		FDS-G-W04B-02		FDS-G-W04C-01		FDS-G-W04C-02		
		ORIGINAL ID ----->	FDSGW04A01		FDSGW04A02		FDSGW04B01		FDSGW04B02		FDSGW04C01		FDSGW04C02		
		LAB SAMPLE ID --->	28223.07		29487.03		28223.08		29515.01		28223.09		29515.05		
		ID FROM REPORT -->	FDSGW04A01		FDSGW04A02		FDSGW04B01		FDSGW04B02		FDSGW04C01		FDSGW04C02		
		SAMPLE DATE ----->	01/20/97		05/23/97		01/20/97		05/28/97		01/20/97		05/28/97		
		DATE ANALYZED --->	01/22/97		05/29/97		01/22/97		05/30/97		01/23/97		05/30/97		
		MATRIX ---------->	Water		Water		Water		Water		Water		Water		
		UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L		
CAS #	Parameter		28217	VAL	29437	VAL	28217	VAL	29515	VAL	28217	VAL	29515	VAL	
74-87-3	Chloromethane		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U	
74-83-9	Bromomethane		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U	
75-01-4	Vinyl chloride		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U	
75-00-3	Chloroethane		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U	
75-09-2	Methylene chloride		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
67-64-1	Acetone		10.	U	10.	U	10.	U	10.	U	5.	U	10.	U	
75-15-0	Carbon disulfide		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
75-35-4	1,1-Dichloroethene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
75-34-3	1,1-Dichloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
540-59-0	1,2-Dichloroethene (total)		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
67-66-3	Chloroform		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
107-06-2	1,2-Dichloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
78-93-3	2-Butanone (MEK)		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U	
71-55-6	1,1,1-Trichloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
56-23-5	Carbon tetrachloride		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
75-27-4	Bromodichloromethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
78-87-5	1,2-Dichloropropane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
10061-01-5	cis-1,3-Dichloropropene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
79-01-6	Trichloroethene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
124-48-1	Dibromochloromethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
79-00-5	1,1,2-Trichloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
71-43-2	Benzene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
10061-02-6	trans-1,3-Dichloropropene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
75-25-2	Bromoform		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
108-10-1	4-Methyl-2-Pentanone (MIBK)		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U	
591-78-6	2-Hexanone		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U	
127-18-4	Tetrachloroethene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
79-34-5	1,1,2,2-Tetrachloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
108-88-3	Toluene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
108-90-7	Chlorobenzene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
100-41-4	Ethylbenzene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
100-42-5	Styrene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
1330-20-7	Xylene (Total)		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U	
108-05-4	Vinyl acetate		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U	
110-75-8	2-Chloroethyl vinyl ether		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U	

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-VOA	SAMPLE ID ------->	FDS-G-W05A-01		FDS-G-W05A-02		FDS-G-W05B-01		FDS-G-W05B-02		FDS-G-W06A-01		FDS-G-W06A-02	
	ORIGINAL ID ----->	FDSGW05A01		FDSGW05A02		FDSGW05B01		FDSGW05B02		FDSGW06A01		FDSGW06A02	
	LAB SAMPLE ID --->	28223.03		29610.01		28209.04		29610.02		28223.02		29523.01	
	ID FROM REPORT -->	FDSGW05A01		FDSGW05A02		FDSGW05B01		FDSGW05B02		FDSGW06A01		FDSGW06A02	
	SAMPLE DATE ----->	01/19/97		06/05/97		01/17/97		06/05/97		01/18/97		05/20/97	
	DATE ANALYZED --->	01/22/97		06/09/97		01/20/97		06/10/97		01/22/97		06/02/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28217	VAL	29591	VAL	28185	VAL	29591	VAL	28217	VAL	29515	VAL
74-87-3	Chloromethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
74-83-9	Bromomethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-01-4	Vinyl chloride	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-00-3	Chloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-09-2	Methylene chloride	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
67-64-1	Acetone	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-15-0	Carbon disulfide	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-35-4	1,1-Dichloroethene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-34-3	1,1-Dichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
67-66-3	Chloroform	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
107-06-2	1,2-Dichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
78-93-3	2-Butanone (MEK)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
71-55-6	1,1,1-Trichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
56-23-5	Carbon tetrachloride	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-27-4	Bromodichloromethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
78-87-5	1,2-Dichloropropane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-01-6	Trichloroethene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
124-48-1	Dibromochloromethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
71-43-2	Benzene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-25-2	Bromoform	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
591-78-6	2-Hexanone	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
127-18-4	Tetrachloroethene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-88-3	Toluene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-90-7	Chlorobenzene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
100-41-4	Ethylbenzene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
100-42-5	Styrene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
1330-20-7	Xylene (Total)	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-05-4	Vinyl acetate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
110-75-8	2-Chloroethyl vinyl ether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-VOA	SAMPLE ID ------->	FDS-G-W06B-01		FDS-G-W06B-02		FDS-G-W06C-01		FDS-G-W06C-02		FDS-G-W07A-01		FDS-G-W07A-02	
	ORIGINAL ID ----->	FDSGW06B01		FDSGW06B02		FDSGW06C01		FDSGW06C02		FDSGW07A01		FDSGW07A02	
	LAB SAMPLE ID --->	28223.05		29523.02		28223.06		29538.01		28343.01		29610.05	
	ID FROM REPORT -->	FDSGW06B01		FDSGW06B02		FDSGW06C01		FDSGW06C02		FDSGW07A01		FDSGW07A02	
	SAMPLE DATE ----->	01/20/97		05/20/97		01/20/97		05/30/97		01/29/97		06/05/97	
	DATE ANALYZED --->	01/22/97		06/02/97		01/22/97		06/02/97		01/31/97		06/10/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28217	VAL	29515	VAL	28217	VAL	29515	VAL	28308	VAL	29591	VAL
74-87-3	Chloromethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
74-83-9	Bromomethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-01-4	Vinyl chloride	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-00-3	Chloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-09-2	Methylene chloride	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
67-64-1	Acetone	20.	U	10.	U	29.	U	90.	U	13.	U	10.	U
75-15-0	Carbon disulfide	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-35-4	1,1-Dichloroethene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-34-3	1,1-Dichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
67-66-3	Chloroform	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
107-06-2	1,2-Dichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
78-93-3	2-Butanone (MEK)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
71-55-6	1,1,1-Trichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
56-23-5	Carbon tetrachloride	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-27-4	Bromodichloromethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
78-87-5	1,2-Dichloropropane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-01-6	Trichloroethene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
124-48-1	Dibromochloromethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
71-43-2	Benzene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-25-2	Bromoform	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
591-78-6	2-Hexanone	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
127-18-4	Tetrachloroethene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-88-3	Toluene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-90-7	Chlorobenzene	5.	U	6.		5.	U	5.	U	5.	U	5.	U
100-41-4	Ethylbenzene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
100-42-5	Styrene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
1330-20-7	Xylene (Total)	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-05-4	Vinyl acetate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
110-75-8	2-Chloroethyl vinyl ether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-VOA													
	SAMPLE ID ------->	FDS-G-W07B-01		FDS-G-W07B-02		FDS-G-W07C-01		FDS-G-W07C-02		FDS-G-W07D-01		FDS-G-W07D-02	
	ORIGINAL ID ----->	FDSGW07B01		FDSGW07B02		FDSGW07C01		FDSGW07C02		FDSGW07D01		FDSGW07D02	
	LAB SAMPLE ID --->	28209.01		29636.01		28209.02		29636.05		28279.01		29744.01	
	ID FROM REPORT -->	FDSGW07B01		FDSGW07B02		FDSGW07C01		FDSGW07C02		FDSGW07D01		FDSGW07D02	
	SAMPLE DATE ----->	01/17/97		06/09/97		01/17/97		06/09/97		01/24/97		06/17/97	
	DATE ANALYZED --->	01/20/97		06/13/97		01/20/97		06/13/97		01/27/97		06/19/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28185	VAL	29591	VAL	28185	VAL	29591	VAL	28249	VAL	29707	VAL
74-87-3	Chloromethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
74-83-9	Bromomethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-01-4	Vinyl chloride	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-00-3	Chloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-09-2	Methylene chloride	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
67-64-1	Acetone	10.	U	10.	U	10.	U	10.	U	16.	U	10.	U
75-15-0	Carbon disulfide	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-35-4	1,1-Dichloroethene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-34-3	1,1-Dichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
67-66-3	Chloroform	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
107-06-2	1,2-Dichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
78-93-3	2-Butanone (MEK)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
71-55-6	1,1,1-Trichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
56-23-5	Carbon tetrachloride	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-27-4	Bromodichloromethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
78-87-5	1,2-Dichloropropane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-01-6	Trichloroethene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
124-48-1	Dibromochloromethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
71-43-2	Benzene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-25-2	Bromoform	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
591-78-6	2-Hexanone	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
127-18-4	Tetrachloroethene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-88-3	Toluene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-90-7	Chlorobenzene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
100-41-4	Ethylbenzene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
100-42-5	Styrene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
1330-20-7	Xylene (Total)	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-05-4	Vinyl acetate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
110-75-8	2-Chloroethyl vinyl ether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-VOA	SAMPLE ID ------->	FDS-G-W08A-01		FDS-G-W08A-02		FDS-G-W08B-01		FDS-G-W08B-02		FDS-G-W08C-01		FDS-G-W08C-02	
	ORIGINAL ID ----->	FDSGW08A01		FDSGW08A02		FDSGW08B01		FDSGW08B02		FDSGW08C01		FDSGW08C02	
	LAB SAMPLE ID --->	28279.02		29610.03		28295.10		29636.06		28279.03		29636.07	
	ID FROM REPORT -->	FDSGW08A01		FDSGW08A02		FDSGW08B01		FDSGW08B02		FDSGW08C01		FDSGW08C02	
	SAMPLE DATE ----->	01/24/97		06/05/97		01/25/97		06/09/97		01/24/97		06/09/97	
	DATE ANALYZED --->	01/27/97		06/10/97		01/29/97		06/13/97		01/27/97		06/13/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28249	VAL	29591	VAL	28249	VAL	29591	VAL	28249	VAL	29591	VAL
74-87-3	Chloromethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
74-83-9	Bromomethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-01-4	Vinyl chloride	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-00-3	Chloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-09-2	Methylene chloride	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
67-64-1	Acetone	10.	U	10.	U	7.	U	10.	U	10.	UJ	10.	U
75-15-0	Carbon disulfide	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-35-4	1,1-Dichloroethene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-34-3	1,1-Dichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
67-66-3	Chloroform	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
107-06-2	1,2-Dichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
78-93-3	2-Butanone (MEK)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
71-55-6	1,1,1-Trichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
56-23-5	Carbon tetrachloride	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-27-4	Bromodichloromethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
78-87-5	1,2-Dichloropropane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-01-6	Trichloroethene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
124-48-1	Dibromochloromethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
71-43-2	Benzene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-25-2	Bromoform	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
591-78-6	2-Hexanone	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
127-18-4	Tetrachloroethene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-88-3	Toluene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-90-7	Chlorobenzene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
100-41-4	Ethylbenzene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
100-42-5	Styrene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
1330-20-7	Xylene (Total)	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-05-4	Vinyl acetate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
110-75-8	2-Chloroethyl vinyl ether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-VOA																	
		SAMPLE ID ------->	FDS-H-W08C-02		FDS-G-W09A-01		FDS-G-W09A-02		FDS-G-W09B-01		FDS-G-W09B-02		FDS-H-W09B-02	
		ORIGINAL ID ----->	FDSHW08C02		FDSGW09A01		FDSGW09A02		FDSGW09B01		FDSGW09B02		FDSHW09B02	
		LAB SAMPLE ID --->	29636.08		28227.06		29656.04		28227.08		29656.06		29656.07	
		ID FROM REPORT -->	FDSHW08C02		FDSGW09A01		FDSGW09A02		FDSGW09B01		FDSGW09B02		FDSHW09B02	
		SAMPLE DATE ----->	06/09/97		01/21/97		06/10/97		01/21/97		06/10/97		06/10/97	
		DATE ANALYZED --->	06/13/97		01/22/97		06/13/97		01/22/97		06/16/97		06/17/97	
		MATRIX ---------->	Water		Water		Water		Water		Water		Water	
		UNITS ----------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter		29591	VAL	28217	VAL	29656	VAL	28217	VAL	29656	VAL	29656	VAL
74-87-3	Chloromethane		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
74-83-9	Bromomethane		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-01-4	Vinyl chloride		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-00-3	Chloroethane		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-09-2	Methylene chloride		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
67-64-1	Acetone		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-15-0	Carbon disulfide		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-35-4	1,1-Dichloroethene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-34-3	1,1-Dichloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
540-59-0	1,2-Dichloroethene (total)		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
67-66-3	Chloroform		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
107-06-2	1,2-Dichloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
78-93-3	2-Butanone (MEK)		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
71-55-6	1,1,1-Trichloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
56-23-5	Carbon tetrachloride		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-27-4	Bromodichloromethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
78-87-5	1,2-Dichloropropane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
10061-01-5	cis-1,3-Dichloropropene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-01-6	Trichloroethene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
124-48-1	Dibromochloromethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-00-5	1,1,2-Trichloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
71-43-2	Benzene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
10061-02-6	trans-1,3-Dichloropropene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-25-2	Bromoform		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
591-78-6	2-Hexanone		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
127-18-4	Tetrachloroethene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-34-5	1,1,2,2-Tetrachloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-88-3	Toluene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-90-7	Chlorobenzene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
100-41-4	Ethylbenzene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
100-42-5	Styrene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
1330-20-7	Xylene (Total)		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-05-4	Vinyl acetate		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
110-75-8	2-Chloroethyl vinyl ether		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-VOA													
	SAMPLE ID ------->	FDS-G-W09C-01		FDS-G-W09C-02		FDS-G-W10A-01		FDS-G-W10A-02		FDS-G-W10B-01		FDS-G-W10B-02	
	ORIGINAL ID ----->	FDSGW09C01		FDSGW09C02		FDSGW10A01		FDSGW10A02		FDSGW10B01		FDSGW10B02	
	LAB SAMPLE ID --->	28227.07		29656.05		28227.01		29656.01		28227.02		29656.02	
	ID FROM REPORT -->	FDSGW09C01		FDSGW09C02		FDSGW10A01		FDSGW10A02		FDSGW10B01		FDSGW10B02	
	SAMPLE DATE ----->	01/21/97		06/10/97		01/21/97		06/10/97		01/21/97		06/10/97	
	DATE ANALYZED --->	01/22/97		06/16/97		01/22/97		06/13/97		01/22/97		06/13/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28217	VAL	29656	VAL	28217	VAL	29656	VAL	28217	VAL	29656	VAL
74-87-3	Chloromethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
74-83-9	Bromomethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-01-4	Vinyl chloride	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-00-3	Chloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-09-2	Methylene chloride	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
67-64-1	Acetone	6.	U	6.	J	11.	U	10.	U	58.	U	10.	U
75-15-0	Carbon disulfide	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-35-4	1,1-Dichloroethene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-34-3	1,1-Dichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
67-66-3	Chloroform	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
107-06-2	1,2-Dichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
78-93-3	2-Butanone (MEK)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
71-55-6	1,1,1-Trichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
56-23-5	Carbon tetrachloride	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-27-4	Bromodichloromethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
78-87-5	1,2-Dichloropropane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-01-6	Trichloroethene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
124-48-1	Dibromochloromethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
71-43-2	Benzene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-25-2	Bromoform	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
591-78-6	2-Hexanone	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
127-18-4	Tetrachloroethene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-88-3	Toluene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-90-7	Chlorobenzene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
100-41-4	Ethylbenzene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
100-42-5	Styrene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
1330-20-7	Xylene (Total)	5.	U	1.	J	5.	U	5.	U	5.	U	5.	U
108-05-4	Vinyl acetate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
110-75-8	2-Chloroethyl vinyl ether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-VOA													
	SAMPLE ID ------->	FDS-G-W10C-01		FDS-G-W10C-02		FDS-G-W11A-01		FDS-G-W11A-02		FDS-G-W11B-01		FDS-G-W11B-02	
	ORIGINAL ID ----->	FDSGW10C01		FDSGW10C02		FDSGW11A01		FDSGW11A02		FDSGW11B01		FDSGW11B02	
	LAB SAMPLE ID --->	28227.03		29656.03		28308.07		29678.01		28308.08		29678.02	
	ID FROM REPORT -->	FDSGW10C01		FDSGW10C02		FDSGW11A01		FDSGW11A02		FDSGW11B01		FDSGW11B02	
	SAMPLE DATE ----->	01/21/97		06/10/97		01/28/97		06/11/97		01/28/97		06/11/97	
	DATE ANALYZED --->	01/22/97		06/13/97		01/30/97		06/17/97		01/30/97		06/17/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28217	VAL	29656	VAL	28308	VAL	29656	VAL	28308	VAL	29656	VAL
74-87-3	Chloromethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
74-83-9	Bromomethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-01-4	Vinyl chloride	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-00-3	Chloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-09-2	Methylene chloride	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
67-64-1	Acetone	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-15-0	Carbon disulfide	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-35-4	1,1-Dichloroethene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-34-3	1,1-Dichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
67-66-3	Chloroform	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
107-06-2	1,2-Dichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
78-93-3	2-Butanone (MEK)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
71-55-6	1,1,1-Trichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
56-23-5	Carbon tetrachloride	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-27-4	Bromodichloromethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
78-87-5	1,2-Dichloropropane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-01-6	Trichloroethene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
124-48-1	Dibromochloromethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
71-43-2	Benzene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-25-2	Bromoform	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
591-78-6	2-Hexanone	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
127-18-4	Tetrachloroethene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-88-3	Toluene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-90-7	Chlorobenzene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
100-41-4	Ethylbenzene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
100-42-5	Styrene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
1330-20-7	Xylene (Total)	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-05-4	Vinyl acetate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
110-75-8	2-Chloroethyl vinyl ether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-VOA	SAMPLE ID ------->	FDS-G-W11C-01		FDS-G-W11C-02		FDS-H-W11C-02		FDS-G-W12A-01		FDS-G-W12A-02		FDS-H-W12A-02	
	ORIGINAL ID ----->	FDSGW11C01		FDSGW11C02		FDSHW11C02		FDSGW12A01		FDSGW12A02		FDSHW12A02	
	LAB SAMPLE ID --->	28308.09		29678.03		29678.04		28295.05		29678.07		29678.08	
	ID FROM REPORT -->	FDSGW11C01		FDSGW11C02		FDSHW11C02		FDSGW12A01		FDSGW12A02		FDSHW12A02	
	SAMPLE DATE ----->	01/28/97		06/11/97		06/11/97		01/27/97		06/11/97		06/11/97	
	DATE ANALYZED --->	01/30/97		06/17/97		06/17/97		01/29/97		06/17/97		06/17/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28308	VAL	29656	VAL	29656	VAL	28249	VAL	29656	VAL	29656	VAL
74-87-3	Chloromethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
74-83-9	Bromomethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-01-4	Vinyl chloride	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-00-3	Chloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-09-2	Methylene chloride	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
67-64-1	Acetone	15.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-15-0	Carbon disulfide	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-35-4	1,1-Dichloroethene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-34-3	1,1-Dichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
67-66-3	Chloroform	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
107-06-2	1,2-Dichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
78-93-3	2-Butanone (MEK)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
71-55-6	1,1,1-Trichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
56-23-5	Carbon tetrachloride	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-27-4	Bromodichloromethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
78-87-5	1,2-Dichloropropane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-01-6	Trichloroethene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
124-48-1	Dibromochloromethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
71-43-2	Benzene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-25-2	Bromoform	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
591-78-6	2-Hexanone	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
127-18-4	Tetrachloroethene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-88-3	Toluene	1.	J	5.	U	5.	U	5.	U	5.	U	5.	U
108-90-7	Chlorobenzene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
100-41-4	Ethylbenzene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
100-42-5	Styrene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
1330-20-7	Xylene (Total)	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-05-4	Vinyl acetate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
110-75-8	2-Chloroethyl vinyl ether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-VOA													
		SAMPLE ID ------->	FDS-G-W12B-01		FDS-G-W12B-02		FDS-G-W13A-01		FDS-G-W13A-02		FDS-G-W13B-01		FDS-G-W13B-02
		ORIGINAL ID ----->	FDSGW12B01		FDSGW12B02		FDSGW13A01		FDSGW13A02		FDSGW13B01		FDSGW13B02
		LAB SAMPLE ID --->	28295.07		29678.06		28295.04		29678.05		28295.03		29707.01
		ID FROM REPORT -->	FDSGW12B01		FDSGW12B02		FDSGW13A01		FDSGW13A02		FDSGW13B01		FDSGW13B02
		SAMPLE DATE ----->	01/27/97		06/11/97		01/27/97		06/11/97		01/27/97		06/13/97
		DATE ANALYZED --->	01/29/97		06/17/97		01/29/97		06/17/97		01/29/97		06/17/97
		MATRIX ---------->	Water		Water		Water		Water		Water		Water
		UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L
CAS #	Parameter		28249	VAL	29656	VAL	28249	VAL	29656	VAL	28249	VAL	29707	VAL
74-87-3	Chloromethane		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
74-83-9	Bromomethane		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-01-4	Vinyl chloride		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-00-3	Chloroethane		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-09-2	Methylene chloride		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
67-64-1	Acetone		10.	U	10.	U	13.	U	10.	U	16.	U	26.	U
75-15-0	Carbon disulfide		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-35-4	1,1-Dichloroethene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-34-3	1,1-Dichloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
540-59-0	1,2-Dichloroethene (total)		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
67-66-3	Chloroform		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
107-06-2	1,2-Dichloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
78-93-3	2-Butanone (MEK)		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
71-55-6	1,1,1-Trichloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
56-23-5	Carbon tetrachloride		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-27-4	Bromodichloromethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
78-87-5	1,2-Dichloropropane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
10061-01-5	cis-1,3-Dichloropropene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-01-6	Trichloroethene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
124-48-1	Dibromochloromethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-00-5	1,1,2-Trichloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
71-43-2	Benzene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
10061-02-6	trans-1,3-Dichloropropene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-25-2	Bromoform		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
591-78-6	2-Hexanone		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
127-18-4	Tetrachloroethene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-34-5	1,1,2,2-Tetrachloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-88-3	Toluene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-90-7	Chlorobenzene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
100-41-4	Ethylbenzene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
100-42-5	Styrene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
1330-20-7	Xylene (Total)		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-05-4	Vinyl acetate		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
110-75-8	2-Chloroethyl vinyl ether		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-VOA													
		SAMPLE ID ------->	FDS-G-W13C-01		FDS-G-W13C-02		FDS-G-W13D-01		FDS-G-W13D-02		FDS-G-W13E-01		FDS-G-W13E-02
		ORIGINAL ID ----->	FDSGW13C01		FDSGW13C02		FDSGW13D01		FDSGW13D02		FDSGW13E01		FDSGW13E02
		LAB SAMPLE ID --->	28295.01		29697.03		28295.08		29697.04		28308.04		29707.02
		ID FROM REPORT -->	FDSGW13C01		FDSGW13C02		FDSGW13D01		FDSGW13D02		FDSGW13E01		FDSGW13E02
		SAMPLE DATE ----->	01/27/97		06/12/97		01/27/97		06/12/97		01/28/97		06/13/97
		DATE ANALYZED --->	01/29/97		06/17/97		01/29/97		06/17/97		01/30/97		06/17/97
		MATRIX ---------->	Water		Water		Water		Water		Water		Water
		UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L
CAS #	Parameter		28249	VAL	29656	VAL	28249	VAL	29656	VAL	28308	VAL	29707	VAL
74-87-3	Chloromethane		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
74-83-9	Bromomethane		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-01-4	Vinyl chloride		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-00-3	Chloroethane		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-09-2	Methylene chloride		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
67-64-1	Acetone		10.	U	10.	U	10.	U	10.	U	11.	U	10.	U
75-15-0	Carbon disulfide		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-35-4	1,1-Dichloroethene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-34-3	1,1-Dichloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
540-59-0	1,2-Dichloroethene (total)		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
67-66-3	Chloroform		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
107-06-2	1,2-Dichloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
78-93-3	2-Butanone (MEK)		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
71-55-6	1,1,1-Trichloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
56-23-5	Carbon tetrachloride		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-27-4	Bromodichloromethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
78-87-5	1,2-Dichloropropane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
10061-01-5	cis-1,3-Dichloropropene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-01-6	Trichloroethene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
124-48-1	Dibromochloromethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-00-5	1,1,2-Trichloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
71-43-2	Benzene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
10061-02-6	trans-1,3-Dichloropropene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-25-2	Bromoform		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
591-78-6	2-Hexanone		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
127-18-4	Tetrachloroethene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-34-5	1,1,2,2-Tetrachloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-88-3	Toluene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-90-7	Chlorobenzene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
100-41-4	Ethylbenzene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
100-42-5	Styrene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
1330-20-7	Xylene (Total)		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-05-4	Vinyl acetate		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
110-75-8	2-Chloroethyl vinyl ether		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-VOA													
		SAMPLE ID ------->	FDS-G-W14A-01		FDS-G-W14A-02		FDS-G-W14B-01		FDS-G-W14B-02		FDS-G-W14C-01		FDS-G-W14C-02
		ORIGINAL ID ----->	FDSGW14A01		FDSGW14A02		FDSGW14B01		FDSGW14B02		FDSGW14C01		FDSGW14C02
		LAB SAMPLE ID --->	28295.02		29697.01		28295.06		29697.02		28249.01		29707.03
		ID FROM REPORT -->	FDSGW14A01		FDSGW14A02		FDSGW14B01		FDSGW14B02		FDSGW14C01		FDSGW14C02
		SAMPLE DATE ----->	01/27/97		06/12/97		01/27/97		06/12/97		01/22/97		06/13/97
		DATE ANALYZED --->	01/29/97		06/17/97		01/29/97		06/17/97		01/24/97		06/17/97
		MATRIX ---------->	Water		Water		Water		Water		Water		Water
		UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L
CAS #	Parameter		28249	VAL	29656	VAL	28249	VAL	29656	VAL	28249	VAL	29707	VAL
74-87-3	Chloromethane		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
74-83-9	Bromomethane		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-01-4	Vinyl chloride		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-00-3	Chloroethane		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-09-2	Methylene chloride		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
67-64-1	Acetone		66.	U	10.	U	10.	U	10.	U	13.	U	18.	U
75-15-0	Carbon disulfide		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-35-4	1,1-Dichloroethene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-34-3	1,1-Dichloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
540-59-0	1,2-Dichloroethene (total)		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
67-66-3	Chloroform		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
107-06-2	1,2-Dichloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
78-93-3	2-Butanone (MEK)		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
71-55-6	1,1,1-Trichloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
56-23-5	Carbon tetrachloride		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-27-4	Bromodichloromethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
78-87-5	1,2-Dichloropropane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
10061-01-5	cis-1,3-Dichloropropene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-01-6	Trichloroethene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
124-48-1	Dibromochloromethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-00-5	1,1,2-Trichloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
71-43-2	Benzene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
10061-02-6	trans-1,3-Dichloropropene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-25-2	Bromoform		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
591-78-6	2-Hexanone		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
127-18-4	Tetrachloroethene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-34-5	1,1,2,2-Tetrachloroethane		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-88-3	Toluene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-90-7	Chlorobenzene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
100-41-4	Ethylbenzene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
100-42-5	Styrene		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
1330-20-7	Xylene (Total)		5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-05-4	Vinyl acetate		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
110-75-8	2-Chloroethyl vinyl ether		10.	U	10.	U	10.	U	10.	U	10.	U	10.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-VOA													
	SAMPLE ID ------->	FDS-G-W15A-01		FDS-G-W15A-02		FDS-G-W15B-01		FDS-G-W15B-02		FDS-G-W15C-01		FDS-G-W15C-02	
	ORIGINAL ID ----->	FDSGW15A01		FDSGW15A02		FDSGW15B01		FDSGW15B02		FDSGW15C01		FDSGW15C02	
	LAB SAMPLE ID --->	28308.01		29707.04		28308.02		29730.06		28308.03		29730.07	
	ID FROM REPORT -->	FDSGW15A01		FDSGW15A02		FDSGW15B01		FDSGW15B02		FDSGW15C01		FDSGW15C02	
	SAMPLE DATE ----->	01/28/97		06/13/97		01/28/97		06/16/97		01/28/97		06/16/97	
	DATE ANALYZED --->	01/30/97		06/17/97		01/30/97		06/19/97		01/30/97		06/19/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	28308	VAL	29707	VAL	28308	VAL	29707	VAL	28308	VAL	29707	VAL
74-87-3	Chloromethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
74-83-9	Bromomethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-01-4	Vinyl chloride	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-00-3	Chloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-09-2	Methylene chloride	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
67-64-1	Acetone	13.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-15-0	Carbon disulfide	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-35-4	1,1-Dichloroethene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-34-3	1,1-Dichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
67-66-3	Chloroform	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
107-06-2	1,2-Dichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
78-93-3	2-Butanone (MEK)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
71-55-6	1,1,1-Trichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
56-23-5	Carbon tetrachloride	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-27-4	Bromodichloromethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
78-87-5	1,2-Dichloropropane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-01-6	Trichloroethene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
124-48-1	Dibromochloromethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
71-43-2	Benzene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-25-2	Bromoform	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
591-78-6	2-Hexanone	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
127-18-4	Tetrachloroethene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-88-3	Toluene	3.	J	5.	U	5.	U	5.	U	5.	U	5.	U
108-90-7	Chlorobenzene	6.		5.	U	5.	U	5.	U	5.	U	5.	U
100-41-4	Ethylbenzene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
100-42-5	Styrene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
1330-20-7	Xylene (Total)	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-05-4	Vinyl acetate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
110-75-8	2-Chloroethyl vinyl ether	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U

*** Validation Complete ***

CHARLESTON - ZONE G
CHARLESTON ZONE G QUARTERLY GW
Fuel Distribution System CAR

SW846-VOA									
		SAMPLE ID ------->	FDS-G-W18A-01		FDS-G-W18A-02				
		ORIGINAL ID ----->	FDSGW18A01		FDSGW18A02				
		LAB SAMPLE ID --->	28328.05		29767.03				
		ID FROM REPORT -->	FDSGW18A01		FDSGW18A02				
		SAMPLE DATE ----->	01/29/97		06/18/97				
		DATE ANALYZED --->	01/31/97		06/20/97				
		MATRIX ---------->	Water		Water				
		UNITS ---------->	UG/L		UG/L				
CAS #	Parameter		28308	VAL	29767	VAL			
74-87-3	Chloromethane		10.	U	10.	U			
74-83-9	Bromomethane		10.	U	10.	U			
75-01-4	Vinyl chloride		10.	U	10.	U			
75-00-3	Chloroethane		10.	U	10.	U			
75-09-2	Methylene chloride		5.	U	5.	U			
67-64-1	Acetone		10.	U	10.	U			
75-15-0	Carbon disulfide		5.	U	5.	U			
75-35-4	1,1-Dichloroethene		5.	U	5.	U			
75-34-3	1,1-Dichloroethane		5.	U	5.	U			
540-59-0	1,2-Dichloroethene (total)		5.	U	5.	U			
67-66-3	Chloroform		5.	U	5.	U			
107-06-2	1,2-Dichloroethane		5.	U	5.	U			
78-93-3	2-Butanone (MEK)		10.	U	10.	U			
71-55-6	1,1,1-Trichloroethane		5.	U	5.	U			
56-23-5	Carbon tetrachloride		5.	U	5.	U			
75-27-4	Bromodichloromethane		5.	U	5.	U			
78-87-5	1,2-Dichloropropane		5.	U	5.	U			
10061-01-5	cis-1,3-Dichloropropene		5.	U	5.	U			
79-01-6	Trichloroethene		5.	U	5.	U			
124-48-1	Dibromochloromethane		5.	U	5.	U			
79-00-5	1,1,2-Trichloroethane		5.	U	5.	U			
71-43-2	Benzene		5.	U	5.	U			
10061-02-6	trans-1,3-Dichloropropene		5.	U	5.	U			
75-25-2	Bromoform		5.	U	5.	U			
108-10-1	4-Methyl-2-Pentanone (MIBK)		10.	U	10.	U			
591-78-6	2-Hexanone		10.	U	10.	U			
127-18-4	Tetrachloroethene		5.	U	5.	U			
79-34-5	1,1,2,2-Tetrachloroethane		5.	U	5.	U			
108-88-3	Toluene		5.	U	5.	U			
108-90-7	Chlorobenzene		5.	U	5.	U			
100-41-4	Ethylbenzene		5.	U	5.	U			
100-42-5	Styrene		5.	U	5.	U			
1330-20-7	Xylene (Total)		5.	U	5.	U			
108-05-4	Vinyl acetate		10.	U	10.	U			
110-75-8	2-Chloroethyl vinyl ether		10.	U	10.	U			

*** Validation Complete ***

D

Appendix D

Fuel Distribution System
TPH Soil Sampling Report

S&ME

May 28, 1992

CRSS Architects, Inc.
300 Executive Center Drive
Greenville, South Carolina 29615

Attention: Mr. Francis M. Tanahey, P.E.

Subject: Report of the Soil Sampling and Analysis
Environmental Specification Preparation
800 Foot 18-Inch Fuel Pipeline
Charleston Naval Supply Center
S&ME, Inc. Job #1134-92-236

Dear Mr. Tanahey:

S&ME, Inc. (S&ME) has completed the soil sampling and laboratory analysis for soil samples collected along an 18-inch pipeline at the above reference site. Our services have been provided in general accordance with Westinghouse Environmental and Geotechnical Services, Inc. proposal #34-92-085A dated July 24, 1991 under A/E Contract No. N62467-90-D-1120.

The following report describes our sample collection procedures, analytical results, and conclusions based upon our findings. We intend to provide an additional submittal outlining appropriate abatement measures addressing the detected petroleum related contamination associated with the pipeline under study. If you have any questions concerning this portion of the project, please contact us at 884-0005.

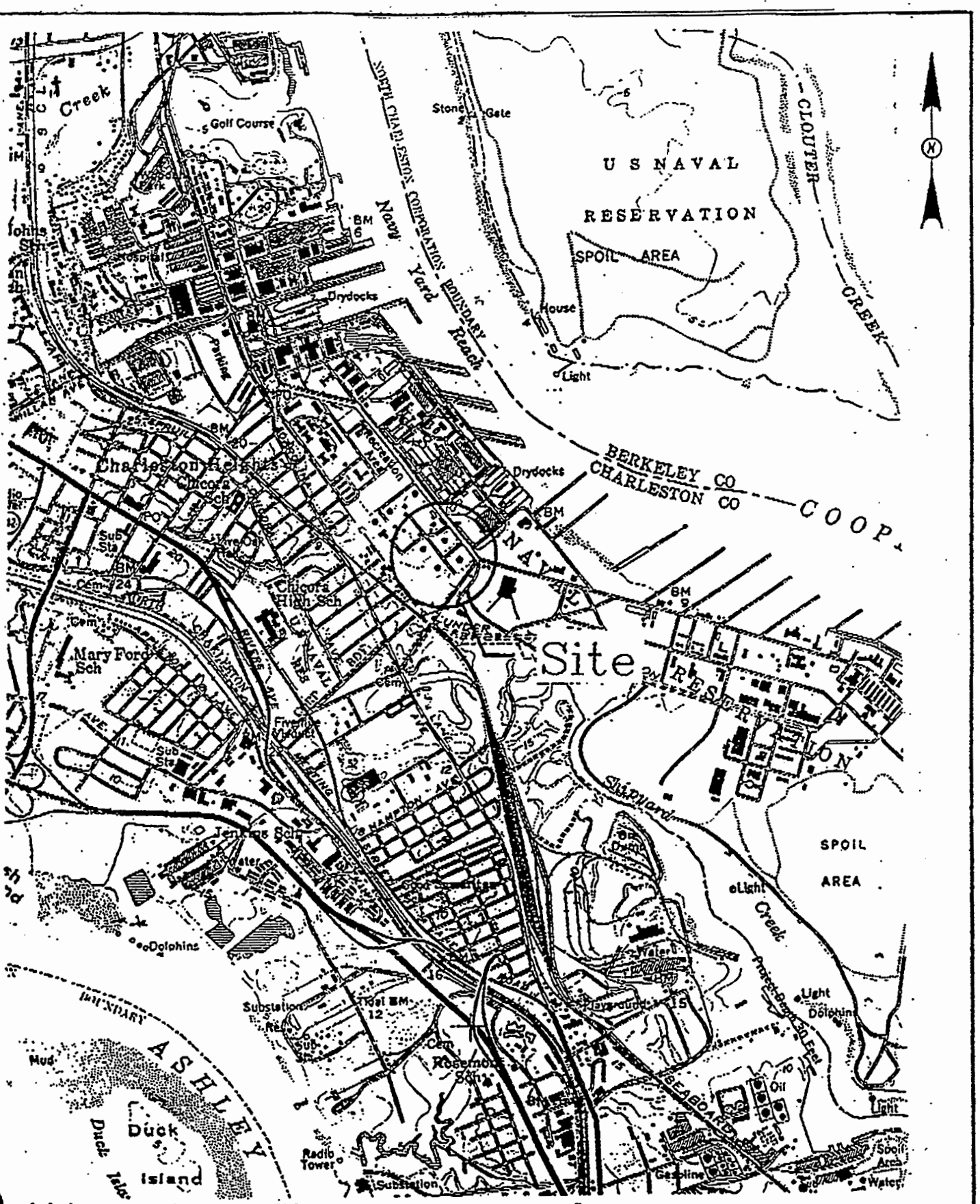
Sincerely,

S&ME, INC.

Hugh Connolly
Project Hydrogeologist

John Albrecht, P.E.
Senior Environmental Engineer

ENCL (1)



SCALE: 1 : 24000	DRAWN BY: NA	S&ME	TITLE: Site Location Plan Naval Supply Center 16" Fuel Line Charleston Navy Base, S.C.	FIGURE: 1
DATE: 5-28-92	CHECKED BY: AC			
JOB NO: 113492236	APPROVED BY: AC			1 OF 2

1.0 INTRODUCTION

The pipeline under study is an 18-inch steel product supply line associated with the Naval Supply Center located on Charleston Naval Base in Charleston, South Carolina. A site location plan is presented as Figure 1. The Naval Supply Center is an above ground tank farm that traditionally stores Diesel Fuels and Waste Oils. The pipeline is approximately 800 feet in length and is located in front of the tank farm facility paralleling Hobson Avenue. The pipeline is used to transfer diesel fuel to and from the fueling pier, located at the Cooper River to the east of the study area. The pipeline terminates at above ground valve assemblies situated at either end of the 800 foot length at the tank farm.

The pipeline has been scheduled for refit which will result in the excavation of soils associated with the pipeline and some dewatering activities due to the pipelines orientation being below the water table. Due to the suspect contamination associated with the pipeline, S&ME, Inc. has been contracted to perform soil sampling and analysis along the pipeline to determine if petroleum related contamination exists in the area of future construction.

2.0 SUMMARY OF WORK PERFORMED

The following scope of work describes the soil sampling procedures and protocol and describes the analytical results for soil samples submitted for laboratory analysis.

2.1 Soil Sample Collection/Laboratory Analysis

S&ME contacted Navy Base personnel associated with the Naval Supply Center to determine the location of the pipeline. It's location was determined to be between the sidewalk along Hobson Avenue and the fenced area bordering the tank farm facility. Boring locations were marked at 100 foot centers along the pipeline for the initial round of samples to be collected. The sample locations were oriented with the first sample, number PB-1, being located at the valve assembly at the intersection of Hobson Avenue and the Viaduct Road entrance to the Navy Base and the last sample, PB-10 being located at the valve assembly situated at the opposite end of the pipeline, on the north side of Building 98.

Hand auger borings were performed at each sample location down to the soil/groundwater interface encountered at a depth of 6 feet below grade. Soil samples were collected at 10 foot intervals and placed into decontaminated glass jars with sealable lids. The lids were fitted with a sampling port so the samples could be field screened with a microtip photoionizing detector. After a minimum waiting period of 10 minutes, the samples were screened for organic vapor concentrations. The values were recorded and boring logs produced showing the soils encountered and their corresponding organic vapor concentrations with depth.

As part of the project, some general assumptions were made to limit the number of samples to be submitted for laboratory analysis. The first assumption was that adjacent 100 foot sample locations that appeared to be free of contamination during by the soil screening process were assumed to be clean along the entire 100 foot section of pipeline. Similarly, adjacent 100 foot sample locations that appeared to contaminated during the soil screening process were assumed to be so along the entire 100 foot length of pipeline. As a result, soil samples were not collected at a 50 foot interval between these locations. However, in the event that a 100 foot contaminated sample location was adjacent to a 100 foot non-contaminated sample location as indicated by field screening, an adjacent 50 foot sample was

collected and submitted for laboratory analysis to more accurately define the limits of contamination along the pipeline. As a result, sample locations PB-3.5, PB-6.5 and PB-8.5 were collected and submitted for laboratory analysis. A sample location plan is presented as Figure 2.

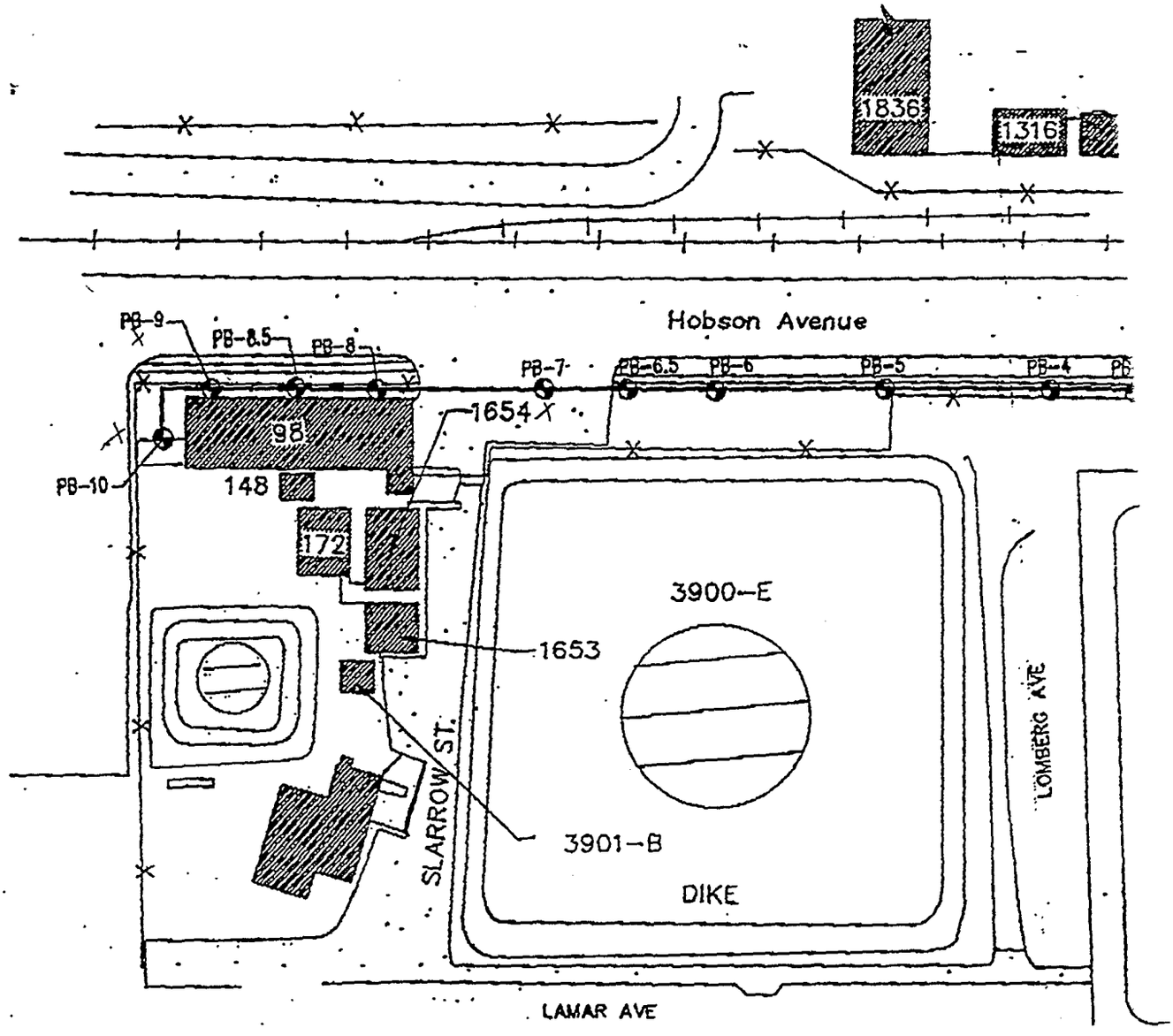
Once the desired sampling depth had been reached at the respective boring locations, a final soil sample was collected at 6 feet below grade and submitted for laboratory analysis. The samples were collected from the hand auger bucket, placed into specially prepared sample containers and immediately refrigerated. At the end of the work day, the samples were shipped by overnight courier to Southern Petroleum Laboratory in Lafayette, Louisiana. The samples were analyzed for Total Petroleum Hydrocarbons (TPH) by Gas Chromatography (GC) by the Modified California Method (DHS).

Prior to and in between each sample location, all downhole sampling equipment was decontaminated with a chemically neutral surfactant and rinsed with deionized water.

2.2 Soil Screening and Laboratory Analytical Results

As indicated by field screening, some levels of organic vapor concentrations were detected in all soil samples collected at the site except for sample location PB-8. Low levels were detected at sample location PB-4 and PB-5. Due to the nature of the soils comprising the Charleston Naval Base, it is felt that the readings at PB-4 and PB-5 were the result of natural organic vapors, such as Methane and Hydrogen Sulfide resulting from decay of buried organic materials (roots, leaves, etc.). However, soil samples yielding higher levels of organic vapors usually possessed distinct petroleum odors, indicating contamination was present. Boring logs showing the soils encountered and corresponding organic vapor concentrations are attached (see Attachment I).

TPH was detected above the quantitation limits in all samples submitted except for sample locations PB-3.5, PB-4, PB-5, PB-6, PB-6.5, PB-8 and PB-8.5. The remaining samples submitted for laboratory analysis possessed varying levels of petroleum hydrocarbon contamination with the higher levels being associated with samples collected from the ends of the pipeline in the areas of the valve assemblies. Table I summarizes the TPH concentrations detected in the soil samples submitted for laboratory analysis and the analytical data sheets are provided as Attachment II.



Legend

Soil Sample Location PB-#

18" Underground Pipeline

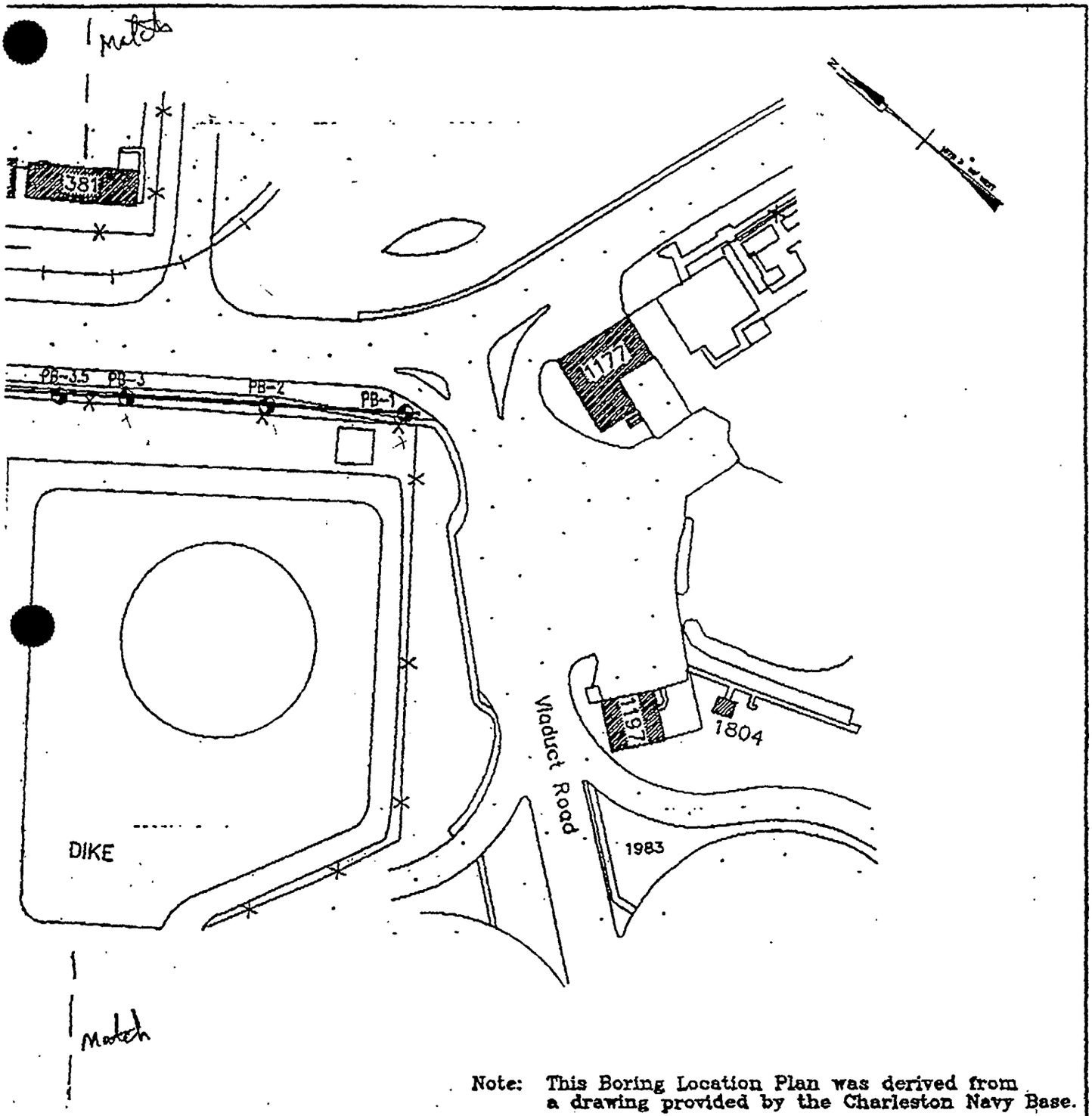
Graphic Scale

0' 100' 200'

SCALE: 1" = 100'	DRAWN BY: WJM
DATE: 5-28-92	CHECKED BY: HC
JOB NO: 113492236	APPROVED BY: JHH

S&ME

ENVIRONMENTAL SERVICES • ENGINEERING • TESTING



Note: This Boring Location Plan was derived from a drawing provided by the Charleston Navy Base.

Charleston Branch
840 Low Country Blvd.
Mt Pleasant, South Carolina
29464
(803) 884-0005

TITLE: Site/Sample Location Plan
Naval Supply Center
18" Fuel Line
Charleston Navy Base, South Carolina

FIGURE: 2

SHEET 2 OF 2

TABLE I
SUMMARY OF ANALYTICAL RESULTS

SAMPLE ID#	TPH CONCENTRATION (mg/kg, ppm)
PB-1	820
PB-2	4.5
PB-3	65
PB-3.5	ND*
PB-4	ND
PB-5	ND
PB-6	ND
PB-6.5	ND
PB-7	170
PB-8	ND
PB-8.5	ND
PB-9	1000
PB-10	690

* ND - Not Detected Above Quantitation Limit

3.0 CONCLUSIONS/RECOMMENDATIONS

Significant levels of petroleum related contamination have been confirmed in soil samples collected from the terminal ends of the pipeline under study in the areas of the valve assemblies. An affected area of approximately 200 feet along the pipeline from sample location PB-1 at the valve assembly situated at the intersection of Hobson Avenue and the Viaduct Road entrance to the Navy Base has been identified as well as an approximate 100 foot length along the pipeline starting at the valve assembly on the opposite end of the pipeline. Also, an isolated pocket of contamination has been identified in the area of sample location PB-7. This area has been isolated to an area of 125 feet as indicated by surrounding sample locations PB-6.5 and PB-8.

Due to the detected levels of petroleum related contamination associated with the soil samples collected along the pipeline, appropriate abatement measures should be utilized when performing excavation in the identified problem areas. Also, due to the depth at which the soil samples were collected (soil/groundwater interface) it is likely that the groundwater has been adversely affected by the release. As a result, any dewatering activity to take place in conjunction with the pipeline will be hindered. Excavated contaminated soil and effluent from the dewatering system would be required to be contained, sampled and analyzed to document contaminant levels governing its disposal.

ATTACHMENT I
BORING LOGS AND ORGANIC VAPOR READINGS
NAVY BASE PIPELINE
CHARLESTON, SOUTH CAROLINA

ATTACHMENT I
BORING LOGS AND ORGANIC VAPOR READINGS
NAVY BASE PIPELINE
CHARLESTON, SOUTH CAROLINA

LOCATION			LOCATION		
DEPTH (FT)	OVA READING	REMARKS	DEPTH (FT)	OVA READING	REMARKS
PB-1			PB-2		
0-2	0 PPM	BROWN SILTY SAND	0-2	3.2 PPM	BROWN CLAYEY SAND
2-4	120 PPM	BROWN CLAYEY SAND	2-4	1000+ PPM	BROWN CLAYEY SAND
4-6	1000+ PPM	BROWN CLAYEY SAND	4-6	480 PPM	BROWN CLAYEY SAND
* ODOR NOTED			* ODOR NOTED		
PB-3			PB-3.5		
0-2	0 PPM	BROWN SILTY SAND	0-2	0 PPM	BROWN SILTY SAND
2-4	3.6 PPM	BROWN SILTY SAND	2-4	0 PPM	BROWN SILTY SAND
4-6	1000+ PPM	BROWN SILTY CLAY	4-6	350 PPM	BLACK CLAY
* ODOR NOTED					
PB-4			PB-5		
0-2	0 PPM	TAN SILTY SAND	0-2	0 PPM	BROWN SILTY CLAY
2-4	0 PPM	TAN SILTY SAND	2-4	0 PPM	BROWN SILTY CLAY
4-6	10 PPM	TAN SILTY SAND	4-6	30 PPM	BLACK CLAY (MARSH MUD)
PB-6			PB-6.5		
0-2	0 PPM	BROWN SILTY CLAY	0-2	125 PPM	BROWN SILTY CLAY
2-4	120 PPM	BROWN SILTY CLAY	2-4	130 PPM	BROWN SILTY CLAY
4-6	660 PPM	BLACK CLAY CLAY	4-6	1000+ PPM	BLACK MUD

ATTACHMENT I (CONTINUED)
BORING LOGS AND ORGANIC VAPOR READINGS
NAVY BASE PIPELINE
CHARLESTON, SOUTH CAROLINA

LOCATION			LOCATION		
DEPTH (FT)	OVA READING	REMARKS	DEPTH (FT)	OVA READING	REMARKS
PB-7			PB-8		
0-2	250 PPM	BROWN SILTY CLAY	0-2	5.4 PPM	TAN SILTY SAND
2-4	275 PPM	BROWN SILTY CLAY	2-4	32 PPM	TAN SILTY SAND
4-6	200 PPM	BROWN SILTY CLAY	4-6	2 PPM	GREY SILTY CLAY
* ODOR NOTED					
PB-8.5			PB-9		
0-2	0 PPM	BROWN SILTY SAND	0-2	0 PPM	BROWN SILTY CLAY
2-4	0 PPM	BROWN SILTY SAND	2-4	1.5 PPM	BROWN SILTY CLAY
4-6	5 PPM	GREY SILTY CLAY	4-6	120 PPM	BROWN SILTY CLAY
PB-10					
0-2	3.2 PPM	BROWN SILTY CLAY			
2-4	35 PPM	BROWN SILTY CLAY			
4-6	170 PPM	BROWN SILTY CLAY			

ATTACHMENT II

ANALYTICAL RESULTS
NAVY BASE PIPELINE
CHARLESTON, SOUTH CAROLINA

LAFAYETTE LAB
P.O. BOX 31780
LAFAYETTE, LA
ZIP 70593-1780
PHONE: (318) 984-2374

****SUMMARY REPORT*****

Client: S&ME ENVIRONMENTAL & GEO.

Site: NAVY PIPELINE
S&ME/ CHARLESTON, SC

Project: 1134-92-236

SPL ID	CLIENT ID	MATRIX	BENZENE	TOLUENE	ETHYLBENZ.	XYLENE	TPH-IR	TPH-GC	LEAD	MTBE
9205014-01	PB-1	Soil						820mg/Kg		
9205014-02	PB-2	Soil						4.5mg/Kg		
9205014-03	PB-3	Soil						65mg/Kg		
9205014-04	PB-4	Soil						NDmg/Kg		
9205014-05	PB-5	Soil						NDmg/Kg		
9205014-06	PB-6	Soil						NDmg/Kg		
9205014-07	PB-7	Soil						170mg/Kg		
9205014-08	PB-8	Soil						NDmg/Kg		
9205014-09	PB-9	Soil						1000mg/Kg		
9205014-10	PB-10	Soil						690mg/Kg		
9205014-11	PB-3.5	Soil						NDmg/Kg		
9205014-12	PB-6.5	Soil						NDmg/Kg		
9205014-13	PB-8.5	Soil						NDmg/Kg		

TPH-GC - Method-Mod. Cal. DHS-Diesel

LAFAYETTE LAB
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ZIP 70593-1780
PHONE: (318) 984-2374

Certificate of Analysis No. 9205014-01

S&ME ENVIRONMENTAL & GEO.
840 LOW COUNTRY BLVD.
MOUNT PLEASANT, SC 29464

Attn: HUGH CONNOLLY

05/11/92

Project: 1134-92-236
Site: NAVY PIPELINE
S&ME/ CHARLESTON,SC

Sample No: PB-1
Sample of: Soil
Sampled by: S&ME ENVIRONMENTAL & GEO.
Sample Date: 05/04/92 00:00:00
Sample Received: 05/07/92

A N A L Y T I C A L R E S U L T S

PARAMETER	RESULTS		PQL*
TOTAL PETROLEUM HYDROCARBONS Method-Mod. Cal. DHS-Diesel	820	mg/Kg	3.3

Method-CA DHS/DRO ANALYZED BY Tai Sun DATE/TIME: 05/10/92

PQL* = Practical Quantitation Limit
ND = Parameter analyzed for but not detected.

BB-4

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL Certification #73004 #Ref: LUFT Field Manual, CA DHS, May 1988

SPL, Incorporated

C. A. Guardia

LAFAYETTE LAB
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LAFAYETTE, LA
ZIP 70593-1780
PHONE: (318) 984-2374

Certificate of Analysis No. 9205014-02

S&ME ENVIRONMENTAL & GEO.
840 LOW COUNTRY BLVD.
MOUNT PLEASANT, SC 29464

Attn: HUGH CONNOLLY

05/11/92

Project: 1134-92-236
Site: NAVY PIPELINE
S&ME/ CHARLESTON,SC

Sample No: PB-2
Sample of: Soil
Sampled by: S&ME ENVIRONMENTAL & GEO.
Sample Date: 05/04/92 00:00:00
Sample Received: 05/07/92

A N A L Y T I C A L R E S U L T S

PARAMETER	RESULTS		PQL*
TOTAL PETROLEUM HYDROCARBONS Method-Mod. Cal. DHS-Diesel	4.5	mg/Kg	3.3

Method-CA DHS/DRO ANALYZED BY Tai Sun DATE/TIME: 05/10/92

PQL* = Practical Quantitation Limit
ND = Parameter analyzed for but not detected.

BB-4

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL Certification #73004 #Ref: LUFT Field Manual, CA DHS, May 1988

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C. A. Guardia

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PHONE: (318) 984-2374

SPL

Certificate of Analysis No. 9205014-03

S&ME ENVIRONMENTAL & GEO.
840 LOW COUNTRY BLVD.
MOUNT PLEASANT, SC 29464

Attn: HUGH CONNOLLY

05/11/92

Project:	1134-92-236
Site:	NAVY PIPELINE S&ME/ CHARLESTON,SC
Sample No:	PB-3
Sample of:	Soil
Sampled by:	S&ME ENVIRONMENTAL & GEO.
Sample Date:	05/05/92 00:00:00
Sample Received:	05/07/92

A N A L Y T I C A L R E S U L T S

PARAMETER	RESULTS		PQL*
TOTAL PETROLEUM HYDROCARBONS Method-Mod. Cal. DHS-Diesel	65	mg/Kg	3.3

Method-CA DHS/DRO ANALYZED BY Tai Sun DATE/TIME: 05/10/92

PQL* = Practical Quantitation Limit
ND = Parameter analyzed for but not detected.

BB-4

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL Certification #73004. #Ref: LUFT Field Manual, CA DHS, May 1988

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Certificate of Analysis No. 9205014-04

S&ME ENVIRONMENTAL & GEO.
840 LOW COUNTRY BLVD.
MOUNT PLEASANT, SC 29464

Attn: HUGH CONNOLLY

05/11/92

Project:	1134-92-236
Site:	NAVY PIPELINE S&ME/ CHARLESTON,SC
Sample No:	PB-4
Sample of:	Soil
Sampled by:	S&ME ENVIRONMENTAL & GEO.
Sample Date:	05/05/92 00:00:00
Sample Received:	05/07/92

A N A L Y T I C A L R E S U L T S

PARAMETER	RESULTS		PQL*
TOTAL PETROLEUM HYDROCARBONS Method-Mod. Cal. DHS-Diesel	ND	mg/Kg	3.3

Method-CA DHS/DRO ANALYZED BY Tai Sun DATE/TIME: 05/10/92

PQL* = Practical Quantitation Limit
ND = Parameter analyzed for but not detected.

BB-4

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
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Certificate of Analysis No. 9205014-05

S&ME ENVIRONMENTAL & GEO.
840 LOW COUNTRY BLVD.
MOUNT PLEASANT, SC 29464

Attn: HUGH CONNOLLY

05/11/92

Project:	1134-92-236
Site:	NAVY PIPELINE S&ME/ CHARLESTON,SC
Sample No:	PB-5
Sample of:	Soil
Sampled by:	S&ME ENVIRONMENTAL & GEO.
Sample Date:	05/05/92 00:00:00
Sample Received:	05/07/92

A N A L Y T I C A L R E S U L T S

PARAMETER	RESULTS		PQL*
TOTAL PETROLEUM HYDROCARBONS Method-Mod. Cal. DHS-Diesel	ND	mg/Kg	3.3

Method-CA DHS/DRO ANALYZED BY Tai Sun DATE/TIME: 05/10/92

PQL* = Practical Quantitation Limit
ND = Parameter analyzed for but not detected.

BB-4

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
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SPL Certificate of Analysis No. 9205014-06

S&ME ENVIRONMENTAL & GEO.
840 LOW COUNTRY BLVD.
MOUNT PLEASANT, SC 29464

Attn: HUGH CONNOLLY 05/11/92

Project:	1134-92-236
Site:	NAVY PIPELINE S&ME/ CHARLESTON,SC
Sample No:	PB-6
Sample of:	Soil
Sampled by:	S&ME ENVIRONMENTAL & GEO.
Sample Date:	05/05/92 00:00:00
Sample Received:	05/07/92

A N A L Y T I C A L R E S U L T S

PARAMETER	RESULTS		PQL*
TOTAL PETROLEUM HYDROCARBONS Method-Mod. Cal. DHS-Diesel	ND	mg/Kg	3.3

Method-CA DHS/DRO ANALYZED BY Tai Sun DATE/TIME: 05/10/92

PQL* = Practical Quantitation Limit
ND = Parameter analyzed for but not detected.

BB-4

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL Certification #73004 #Ref: LUFT Field Manual, CA DHS, May 1988

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PHONE: (318) 984-2374

Certificate of Analysis No. 9205014-07

S&ME ENVIRONMENTAL & GEO.
840 LOW COUNTRY BLVD.
MOUNT PLEASANT, SC 29464

Attn: HUGH CONNOLLY 05/11/92

Project: 1134-92-236
Site: NAVY PIPELINE
S&ME/ CHARLESTON,SC

Sample No: PB-7
Sample of: Soil
Sampled by: S&ME ENVIRONMENTAL & GEO.
Sample Date: 05/05/92 00:00:00
Sample Received: 05/07/92

A N A L Y T I C A L R E S U L T S

PARAMETER	RESULTS		PQL*
TOTAL PETROLEUM HYDROCARBONS Method-Mod. Cal. DHS-Diesel	170	mg/Kg	3.3

Method-CA DHS/DRO ANALYZED BY Tai Sun DATE/TIME: 05/10/92

PQL* = Practical Quantitation Limit
ND = Parameter analyzed for but not detected.

BB-4

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SPL Certificate of Analysis No. 9205014-08

S&ME ENVIRONMENTAL & GEO.
840 LOW COUNTRY BLVD.
MOUNT PLEASANT, SC 29464

Attn: HUGH CONNOLLY 05/11/92

Project:	1134-92-236
Site:	NAVY PIPELINE S&ME/ CHARLESTON,SC
Sample No:	PB-8
Sample of:	Soil
Sampled by:	S&ME ENVIRONMENTAL & GEO.
Sample Date:	05/05/92 00:00:00
Sample Received:	05/07/92

A N A L Y T I C A L R E S U L T S

PARAMETER	RESULTS		PQL*
TOTAL PETROLEUM HYDROCARBONS Method-Mod. Cal. DHS-Diesel	ND	mg/Kg	3.3

Method-CA DHS/DRO ANALYZED BY Tai Sun DATE/TIME: 05/10/92

PQL* = Practical Quantitation Limit
ND = Parameter analyzed for but not detected.

BB-4

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
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SPL

Certificate of Analysis No. 9205014-09

S&ME ENVIRONMENTAL & GEO.
840 LOW COUNTRY BLVD.
MOUNT PLEASANT, SC 29464

Attn: HUGH CONNOLLY

05/11/92

Project: 1134-92-236
Site: NAVY PIPELINE
S&ME/ CHARLESTON,SC

Sample No: PB-9
Sample of: Soil
Sampled by: S&ME ENVIRONMENTAL & GEO.
Sample Date: 05/06/92 00:00:00
Sample Received: 05/07/92

A N A L Y T I C A L R E S U L T S

PARAMETER	RESULTS		PQL*
TOTAL PETROLEUM HYDROCARBONS Method-Mod. Cal. DHS-Diesel	1000	mg/Kg	3.3

Method-CA DHS/DRO ANALYZED BY Tai Sun DATE/TIME: 05/10/92

PQL* = Practical Quantitation Limit
ND = Parameter analyzed for but not detected.

BB-4

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PHONE: (318) 984-2374

Certificate of Analysis No. 9205014-10

S&ME ENVIRONMENTAL & GEO.
840 LOW COUNTRY BLVD.
MOUNT PLEASANT, SC 29464

Attn.: HUGH CONNOLLY

05/11/92

Project: 1134-92-236
Site: NAVY PIPELINE
S&ME/ CHARLESTON,SC

Sample No: PB-10
Sample of: Soil
Sampled by: S&ME ENVIRONMENTAL & GEO.
Sample Date: 05/06/92 00:00:00
Sample Received: 05/07/92

A N A L Y T I C A L R E S U L T S

PARAMETER	RESULTS		PQL*
TOTAL PETROLEUM HYDROCARBONS Method-Mod. Cal. DHS-Diesel	690	mg/Kg	3.3

Method-CA DHS/DRO ANALYZED BY Tai Sun DATE/TIME: 05/10/92

PQL* = Practical Quantitation Limit
ND = Parameter analyzed for but not detected.

BB-4

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
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PHONE: (318) 964-2374

Certificate of Analysis No. 9205014-11

S&ME ENVIRONMENTAL & GEO.
840 LOW COUNTRY BLVD.
MOUNT PLEASANT, SC 29464

Attn: HUGH CONNOLLY

05/11/92

Project: 1134-92-236
Site: NAVY PIPELINE
S&ME/ CHARLESTON,SC

Sample No: PB-3.5
Sample of: Soil
Sampled by: S&ME ENVIRONMENTAL & GEO.
Sample Date: 05/05/92 00:00:00
Sample Received: 05/07/92

A N A L Y T I C A L R E S U L T S

PARAMETER	RESULTS		PQL*
TOTAL PETROLEUM HYDROCARBONS Method-Mod. Cal. DHS-Diesel	ND	mg/Kg	3.3

Method-CA DHS/DRO ANALYZED BY Tai Sun DATE/TIME: 05/10/92

PQL* = Practical Quantitation Limit
ND = Parameter analyzed for but not detected.

BB-4

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL Certification #73004 #Ref: LUFT Field Manual, CA DHS, May 1988

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PHONE: (318) 984-2374

Certificate of Analysis No. 9205014-12

S&ME ENVIRONMENTAL & GEO.
840 LOW COUNTRY BLVD.
MOUNT PLEASANT, SC 29464

Attn: HUGH CONNOLLY

05/11/92

Project: 1134-92-236
Site: NAVY PIPELINE
S&ME/ CHARLESTON,SC

Sample No: PB-6.5
Sample of: Soil
Sampled by: S&ME ENVIRONMENTAL & GEO.
Sample Date: 05/05/92 00:00:00
Sample Received: 05/07/92

A N A L Y T I C A L R E S U L T S

PARAMETER	RESULTS		PQL*
TOTAL PETROLEUM HYDROCARBONS Method-Mod. Cal. DHS-Diesel	ND	mg/Kg	3.3

Method-CA DHS/DRO ANALYZED BY Tai Sun DATE/TIME: 05/10/92

PQL* = Practical Quantitation Limit
ND = Parameter analyzed for but not detected.

BB-4

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL Certification #73004 #Ref: LUFT Field Manual, CA DHS, May 1988

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ZIP 70593-1780
PHONE: (318) 984-2374

Certificate of Analysis No. 9205014-13

S&ME ENVIRONMENTAL & GEO.
840 LOW COUNTRY BLVD.
MOUNT PLEASANT, SC 29464

Attn: HUGH CONNOLLY

05/11/92

Project: 1134-92-236
Site: NAVY PIPELINE
S&ME/ CHARLESTON,SC

Sample No: PB-8.5
Sample of: Soil
Sampled by: S&ME ENVIRONMENTAL & GEO.
Sample Date: 05/06/92 00:00:00
Sample Received: 05/07/92

A N A L Y T I C A L R E S U L T S

PARAMETER	RESULTS		PQL*
TOTAL PETROLEUM HYDROCARBONS Method-Mod. Cal. DHS-Diesel	ND	mg/Kg	3.3

Method-CA DHS/DRO ANALYZED BY Tai Sun DATE/TIME: 05/10/92

PQL* = Practical Quantitation Limit
ND = Parameter analyzed for but not detected.

BB-4

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL Certification #73004 #Ref: LUFT Field Manual, CA DHS, May 1988

SPL, Incorporated

C. A. Guardia

LAFAYETTE LAB
P.O. BOX 31780
LAFAYETTE, LA
ZIP 70593-1780
PHONE: (318) 984-2374

** SPL QUALITY CONTROL REPORT **

Matrix: SOIL

Reported on: 05-12-92
Analyzed on: 05-08-92
Analyst: T. SUN

This sample was randomly selected for use in the SPL quality control program. Samples chosen are fortified with a known concentration in duplicate. The results are as follows:

TOTAL PETROLEUM HYDROCARBONS [TPH]
Method- Modified California DHS

SPL Sample ID Number	Blank Value mg/kg	Amt Added mg/kg	Matrix Spike Recovery %	Matrix Spike Duplicate Recovery %	Relative Percent Difference %
X0505441	ND	167.0	88	107	19.5

SAMPLES IN BATCH: X0505436,437,441,442,447,448,451,452
9205012,9205014

SPL, Incorporated

John Durand, QC Officer

SPL Environmental Laboratories, Inc.
104 Guilbeau Road
Lafayette, Louisiana 70506
(318) 984-2374 Fax: (318) 988-1576
Contact: C. A. Guardia / Karen Lestelle

Analysis Request and Chain of Custody Record

Temp: | Store: (Lab Use Only)

Project No.: 1139-92-236
Company/Project Name: NAVY PIPELINE
Project Location/Physical Address: S+ME / CHAS S.C.

Field Sample No./ Identification	Date and Time	Grab	Comp.	Sample Container (Size/Mat'l)	Sample Type (Liquid, Soil Sludge, Etc.)	Preservative	ANALYSIS REQUESTED TEST	ANALYSIS REQUESTED METHOD	Remarks
PB-1	5/4 pm	X		1 402	Soil	N/A	TPH/GC	Semi-Vol	Some Samples are heavily contaminated with diesel fuel DHS
PB-2	5/4 pm	X		"	"	"	"	"	
PB-3	5/5 Am	X		"	"	"	"	"	
PB-4	5/5 Am	X		"	"	"	"	"	
PB-5	5/5 Am	X		"	"	"	"	"	
PB-6	5/5 pm	X		"	"	"	"	"	
PB-7	5/5 pm	X		"	"	"	"	"	
PB-8	5/5 pm	X		"	"	"	"	"	
PB-9	5/6 Am	X		"	"	"	"	"	
PB-10	5/6 Am	X		"	"	"	"	"	

Samplers: (Signature)	Relinquished by: (Signature)	Date: 5/6/92 Time: 18:00	Received by: (Signature)	Date: Time:	Intact
Affiliation: Phillips Service	Relinquished by: (Signature)	Date: Time:	Received by: for Laboratory (Signature) B. Taylor	Date: 5/7/92 Time: 1125	Intact

REPORT TO: CONSULTANT'S NAME & ADDRESS:
S+ME ENVIRONMENTAL + GEO.
840 Jamicourtry Blvd, Mt. Pleasant S.C. 29464

CONSULTANT'S PHONE #: 803 - 884-0005

CONSULTANT'S W.O. / JOB #:

REMARKS:

INVOICE TO: [redacted]

[redacted] PROJ. MGR.: HUGH CONNOLLY

DIVISION

[redacted] WORK ORDER #:

[redacted] UNIT #:

SPL Environmental Laboratories, I[redacted]
104 Guilbeau Road
Lafayette, Louisiana 70506
(318) 984-2374 Fax: (318) 988-1576
Contact: C. A. Guardia / Karen Lestelle

Analysis Request and Chain of Custody Record

Temp: | Store: (Lab Use Only)

Project No.: 4-92-236

Company/Project Name: NAVY BASE PIPELINE

Project Location/Physical Address: Stme / GIAS S.C.

Field Sample No./ Identification	Date and Time	Grab	Comp.	Sample Container (Size/Mat'l)	Sample Type (Liquid, Soil Sludge, Etc.)	Preservative	ANALYSIS REQUESTED TEST	ANALYSIS REQUESTED METHOD	Remarks
B-3.5	5/5 Pm	X		1 4oz	SOIL	"	TPH / GC	Semi-Vol	
B 6.5	5/5 Pm	X		"	"	"	"	"	
B 8.5	5/6 Am	X		"	"	"	"	"	

Samplers: (Signature)	Relinquished by: (Signature)	Date: 5/6/92 Time: 18:00	Received by: (Signature)	Date: Time:	Intact
Affiliation: NAVARRO SPECS	Relinquished by: (Signature)	Date: Time:	Received by: for Laboratory (Signature) B. Taylor	Date 5/7/92 Time: 11:25	Intact

REPORT TO: CONSULTANT'S NAME & ADDRESS:

SEE PAGE ONE

[redacted] PROJ. MGR.:

DIVISION

CONSULTANT'S PHONE #:

[redacted] WORK ORDER #:

CONSULTANT'S W.O. / JOB #:

[redacted] UNIT #:

REMARKS:

E

Appendix E

Fuel Distribution System
UST 148 Assessment and Closure Report

South Carolina Department of Health and Environmental Control (S.C.D.H.E.C.)
Underground Storage Tank (UST) Assessment Report

Date Received

State Use Only

Submit Completed Form to:
UST Regulatory Section
SCDHEC
2600 Bull Street
Columbia, South Carolina 29201
Telephone (803) 734-5331

I. OWNERSHIP OF UST(S)

Agency/Owner: Southern Division, Naval Facilities Engineering Command, Caretaker Site Office

Mailing Address: P.O. Box 190010

City: N. Charleston State: SC Zip Code: 29419-9010

Area Code: 803 Telephone Number: 743-9985 Contact Person: LCDR Paul Rose

II. SITE IDENTIFICATION AND LOCATION

Site I.D. #: Unregulated

Facility Name: Charleston Naval Base Complex, Building 148

Street Address: Hobson Avenue

City: North Charleston, 29405-2413 County: Charleston

III. CLOSURE INFORMATION

Closure Started: 19 Aug 1996 Closure Completed: 16 July 1997

Number of USTs Closed: 1

N/A
Consultant

SPORTENVDETCHASN
UST Removal Contractor

IV. CERTIFICATION (Read and Sign after completing entire submittal)

I certify that I have personally examined and am familiar with the information submitted in this and all attached documents; and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate and complete

LCDR Paul Rose
Name (Type or Print)

Signature

South Carolina Department of Health and Environmental Control (S.C.D.H.E.C.)
Underground Storage Tank (UST) Assessment Report

Date Received
State Use Only

Submit Completed Form to:
UST Regulatory Section
SCDHEC
2600 Bull Street
Columbia, South Carolina 29201
Telephone (803) 734-5331

I. OWNERSHIP OF UST(S)

Agency/Owner: Southern Division, Naval Facilities Engineering Command, Caretaker Site Office

Mailing Address: P.O. Box 190010

City: N. Charleston State: SC Zip Code: 29419-9010

Area Code: 803 Telephone Number: 743-9985 Contact Person: LCDR Paul Rose

II. SITE IDENTIFICATION AND LOCATION

Site I.D. #: Unregulated

Facility Name: Charleston Naval Base Complex, Building 148

Street Address: Hobson Avenue

City: North Charleston, 29405-2413 County: Charleston

III. CLOSURE INFORMATION

Closure Started: 19 Aug 1996 Closure Completed: 16 July 1997

Number of USTs Closed: 1

N/A
Consultant

SPORTENVDETCHASN
UST Removal Contractor

IV. CERTIFICATION (Read and Sign after completing entire submittal)

I certify that I have personally examined and am familiar with the information submitted in this and all attached documents; and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate and complete.

LCDR Paul Rose
Name (Type or Print)

Signature

V. UST INFORMATION

		Tank 1	Tank 2	Tank 3	Tank 4	Tank 5	Tank 6
A.	Product.....	Fuel Oil					
B.	Capacity.....	20,000 gal					
C.	Age.....	1948					
D.	Construction Material.....	Concrete					
E.	Month/Year of Last Use.....	1987					
F.	Depth (ft.) To Base of Tank.....	4'					
G.	Spill Prevention Equipment Y/N.....	N					
H.	Overfill Prevention Equipment Y/N.....	N					
I.	Method of Closure Removed/Filled.....	R					
J.	Visible Corrosion or Pitting Y/N.....	N					
K.	Visible Holes Y/N.....	N					

L. Method of disposal for any USTs removed from the ground (attach disposal manifests)

UST 148 was a poured concrete holding tank that extended 4' below ground surface level. Because the tank was constructed of concrete and rebar, which is classified as non-hazardous waste, but had contained fuel oil, it was demolished and deposited in Chambers Oakridge Landfill, Inc., 2183 Highway 78, Dorchester, SC, 29437. Chambers is licensed by South Carolina DHEC as a Subtitle "D" landfill. (See Attachment III, Chambers Special Waste Manifest OR-9609015, ticket numbers 18310, 18342, 18373, and 18396.)

M. Method of disposal for any liquid petroleum, sludges, or waste waters removed from the USTs (attach disposal manifests)

UST 148 had been emptied and cleaned prior to base closure. It contained no residual fuel oil or sludge.

N. If any corrosion, pitting, or holes were observed, describe the location and extent for each UST

UST 148's interior and exterior surfaces were inspected prior to demolition. No holes or cracks were found.

VI. PIPING INFORMATION

	Tank 1	Tank 2	Tank 3	Tank 4	Tank 5	Tank 6
A. Construction Material.....	Steel					
B. Distance from UST to Dispenser.....	5' See note 1					
C. Number of Dispensers.....	1 See note 1					
D. Type of System P/S.....	S					
E. Was Piping Removed from the Ground? Y/N....	Y					
F. Visible Corrosion or Pitting Y/N.....	Y					
G. Visible Holes Y/N.....	N					
H. Age.....	1948					

Note 1: Tank 148 temporarily held fuel oil during pipe line repairs and maintenance. It serviced Bldg 98.

I. If any corrosion, pitting, or holes were observed, describe the location and extent for each line.

Corrosion and pitting were present, but no holes were found.

VII. BRIEF SITE DESCRIPTION AND HISTORY

UST 148 is identified in the Final Resource Conservation and Recovery Act (RCRA) Facility Assessment of Naval Base Charleston as part of Area of Concern (AOC) 623. UST 148 was a ground surface level, concrete holding tank which extended approximately 4' below the ground surface. The facility was constructed in 1948 with UST 148 designated as a "stripper tank" to temporarily hold fuel oil while pipeline repairs and maintenance were performed. The tank was connected by two 8" pipelines to Building 98, a pump house, which was 5' away. It was last used in 1987.

Free product and oily soil were found throughout the UST 148 excavation. (See Site Map 3.) The heaviest concentration is located beneath the pipe where soil sample SPORT 0150-2 was collected. Free product was removed to sample the soil, but it returned after several hours. The predemolition inspection of UST 148's interior and exterior walls revealed no holes or cracks; furthermore, the 8" supply and return pipes were also found to be in sound condition. A review of available spill reports, inspection reports, and employee interviews found no documentation of any release at this site. However, numerous spills have been reported at the nearby NSC fuel farm.

Based on the tank being part of AOC 623, the Navy decided to put off any immediate action (removal of contaminated soil) until the soil and groundwater investigation for the AOC was accomplished. In June 1997, it was determined that AOC 623 sampling information, with respect to UST 148, was inconclusive. The RCRA Facility Investigation report has not yet been issued for this zone. The nearest soil boring detailed in the investigation plan was over 50 feet from the tank's former location.

The condition of the tank site from October 1996 to July 1997 was that of a shallow pit filled with rainwater run-off. The area was cordoned off and periodically inspected for any oil or oily sheen on the surface of the water. No free product of any thickness was ever noted, but an oil sheen or iridescence was visible from time to time. The film was removed and clean absorbent pads replaced when ever the sheen was noted. In July 1997, the surface water was removed and processed, the site was again sampled (see samples SPORT 0477-1through 4) and filled with clean fill. Further action at the site is anticipated.

VIII. SITE CONDITIONS

		Yes	No	Unk
A.	Were any petroleum-stained or contaminated soils found in the UST excavation, soil borings, trenches, or monitoring wells? If yes, indicate depth and location on the site map. **[throughout the UST excavation]**	X		
B.	Were any petroleum odors detected in the excavation, soil borings, trenches, or monitoring wells? If yes, indicate location on site map and describe the odor (strong, mild, etc.) **[strong]**	X		
C.	Was water present in the UST excavation, soil borings, or trenches? If yes, how far below land surface (indicate location and depth)? _____		X	
D.	Did contaminated soils remain stockpiled on site after closure? If yes, indicate the stockpile location on the site map. Name of DHEC representative authorizing soil removal: _____		X*	
E.	Was a petroleum sheen or free product detected on any excavation or boring waters? If yes, indicate location and thickness on the site map.		X**	

* Soil was not excavated because the top of UST 148 was above ground surface level. The tank pit was filled with clean soil.

** No groundwater was detected. After the tank was removed, rainwater runoff filled the shallow depression. An iridescent sheen was noted and absorbed periodically.

IX. SAMPLE INFORMATION

S.C.D.H.E.C. Lab Certification Number 10120

Sample #	Location	Sample Type (Soil/Water)	Depth*	Date/Time of Collection	Collected By	OVA#
SPORT 0150-1	UST prior to demo., south corner	Soil	3'	8/23/96 1030	D. Hall	Not Taken
SPORT 0150-2	UST prior to demo., beneath piping	Soil	5'	8/23/96 1042	D. Hall	Not Taken
SPORT 0150-3	UST prior to demo., beneath piping	Soil	4'	8/23/96 1051	D. Hall	Not Taken
SPORT 0150-4	UST prior to demo., north corner	Soil	3'	8/23/96 1103	D. Hall	Not Taken
SPORT 0183-1	UST excavation	Soil	5'	9/27/96 1015	B. Murray	Not Taken
SPORT 0183-2	UST excavation	Soil	4'	9/27/96 1045	B. Murray	Not Taken
SPORT 0188-1	UST excavation, beneath piping	Soil	~4'	10/1/96 1400	R. Atkins	Not Taken
SPORT 0188-2	UST excavation, beneath piping	Soil	~4'	10/1/96 1400	R. Atkins	Not Taken
SPORT 0477-1	UST excavation, east side, prior to backfilling	Soil	~4'	7/16/97 1000	R. Jenkins	Not Taken
SPORT 0477-2	UST excavation, south side, prior to backfilling	Soil	~4'	7/16/97 1010	R. Jenkins	Not Taken
SPORT 0477-3	UST excavation, west side, prior to backfilling	Soil	~4'	7/16/97 1020	R. Jenkins	Not Taken
SPORT 0477-4	UST excavation, north side, prior to backfilling	Soil	~4'	7/16/97 1030	R. Jenkins	Not Taken

* = Depth Below the Surrounding Land Surface

X. SAMPLING METHODOLOGY

Provide a detailed description of the methods used to collect and store (preserve) the samples.

After the removal of UST 148 soil samples were taken. Sampling was performed in accordance with SC DHEC R.61-92 Part 280 and SC DHEC UST Assessment Guidelines.

Sample jars were prepared by the testing laboratory. The grab method was utilized to fill sample containers leaving as little head space as possible and immediately capped. Soil samples were extracted throughout the excavation to characterize the extent of the contamination. UST piping soil samples were taken under the piping at the mechanical connections.

The samples were marked, logged, and immediately placed in sample coolers packed with ice to maintain an approximate temperature of 4° C. Tools were thoroughly cleaned and decontaminated with organic-free soap and water after each sample.

The samples remained in the custody of SPORTENVDETCHASN until they were transferred to General Engineering Laboratories for analysis as documented in the attached Chain-of-Custody Record.

XI. RECEPTORS

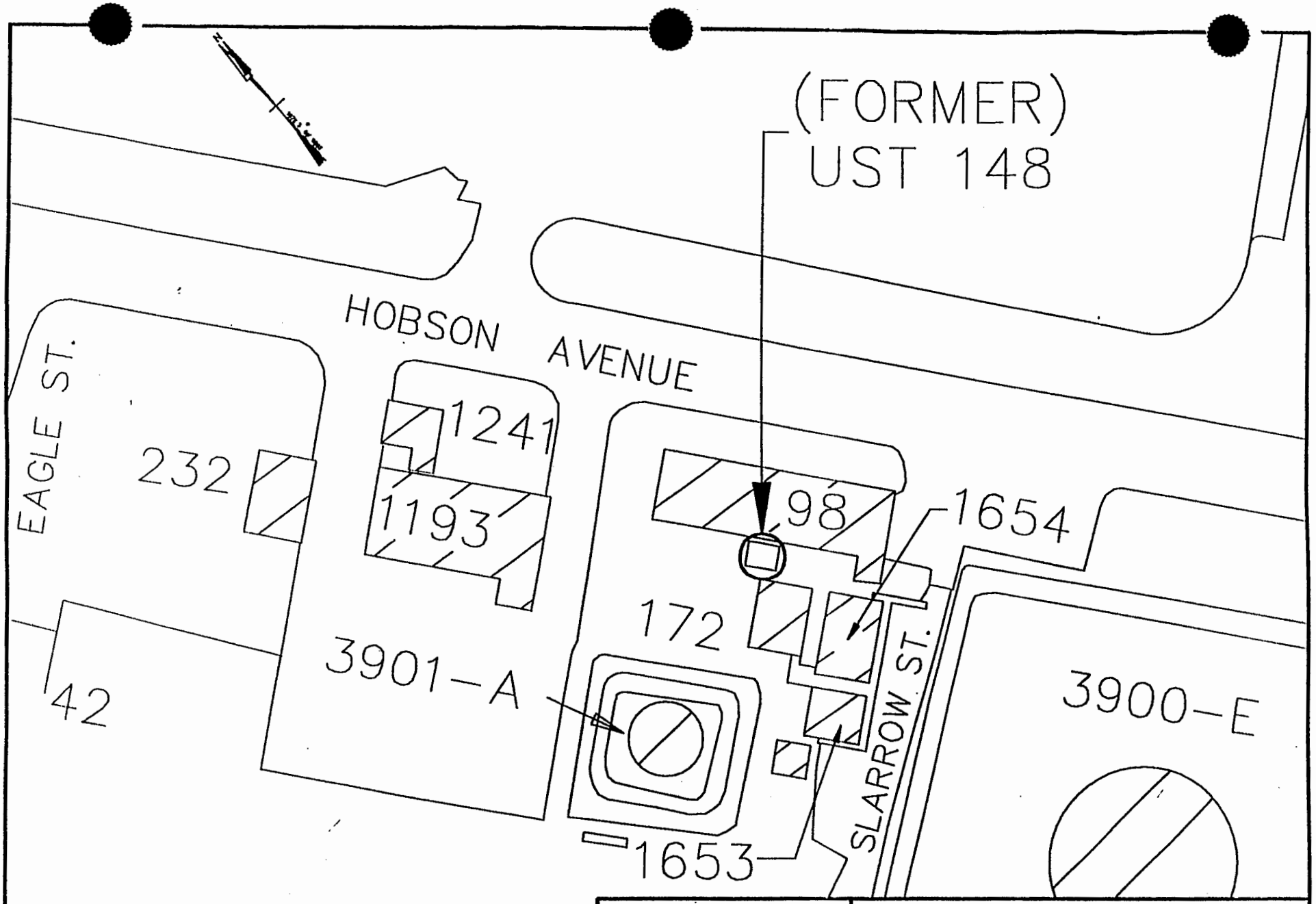
		Yes	No
A.	Are there any lakes, ponds, streams, or wetlands located within 1000 feet of the UST system? If yes, indicate type of receptor, distance, and direction on site map.		X
B.	Are there any public, private, or irrigation water supply wells within 1000 feet of the UST system? If yes, indicate type of well, distance, and direction on site map.		X
C.	Are there any underground structures (e.g., basements) located within 100 feet of the UST system? **[Bldg 98 pump house, 5' from UST 148]** If yes, indicate the type of structure, distance, and direction on site map.	X	
D.	Are there any underground utilities (e.g., telephone, electricity, gas, water, sewer, storm drain) located within 100 feet of the UST system that could potentially come in contact with the contamination? **[sewer]** If yes, indicate the type of utility, distance, and direction on the site map.	X	
E.	Has contaminated soil been identified at a depth of less than 3 feet below land surface in an area that is not capped by asphalt or concrete? If yes, indicate the area of contaminated soil on the site map.		X

Attachment I

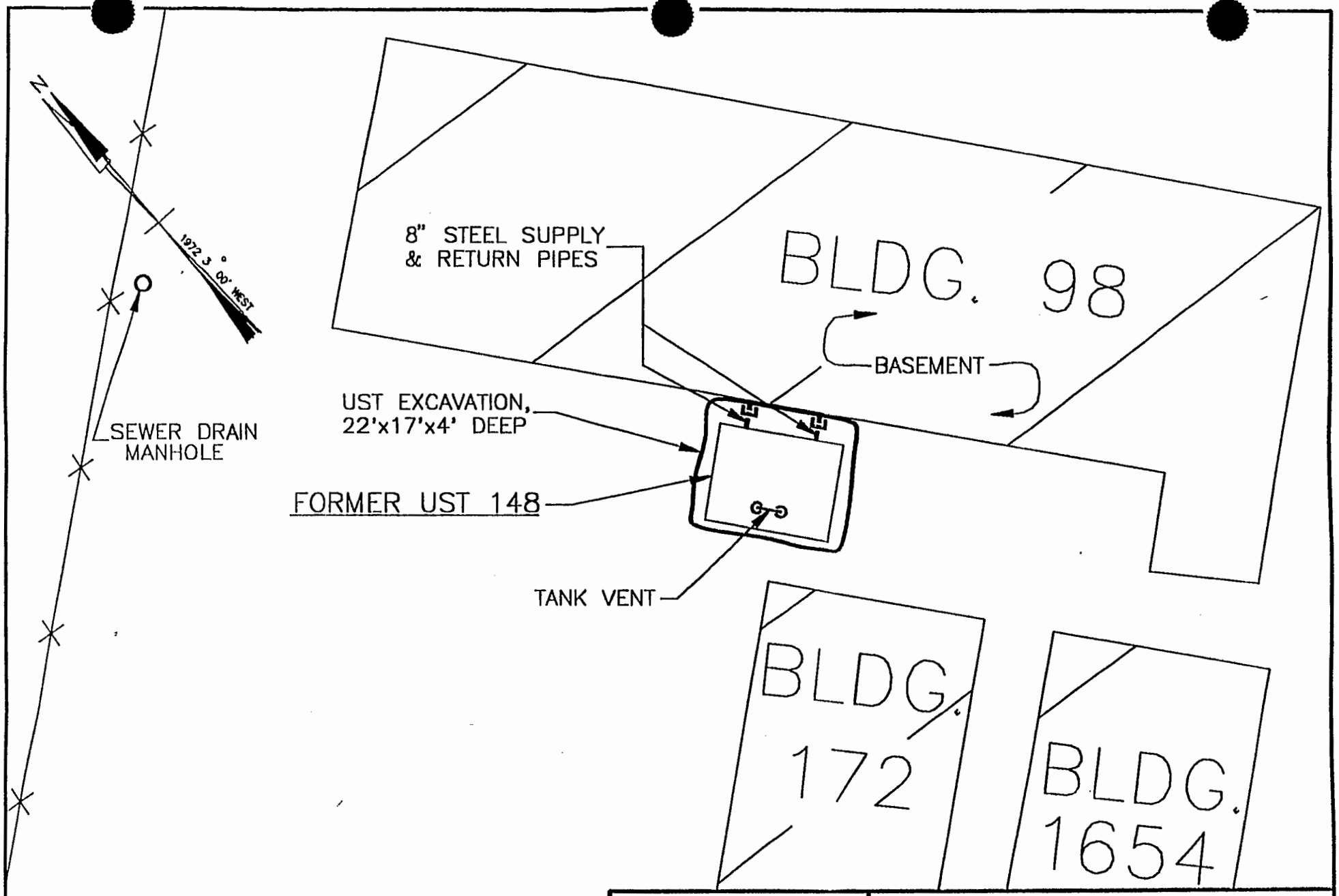
SITE MAP

You must supply a scaled site map. It should include all buildings, road names, utilities, tank and pump island locations, sample locations, extent of excavation, and any other pertinent information.

Site Maps 1, 2, and 3
Photographs 1, 2, 3, and 4



SPORTENVDETCHASN 1899 North Hobson Ave. North Charleston, SC 29405-2106 Ph. (803) 743-6777	Site Map 1 UST 148 Charleston Naval Base Charleston, SC	
	DWG DATE: 23 JUL 97	DWG NAME: 148_1



25' 0 25' 50'

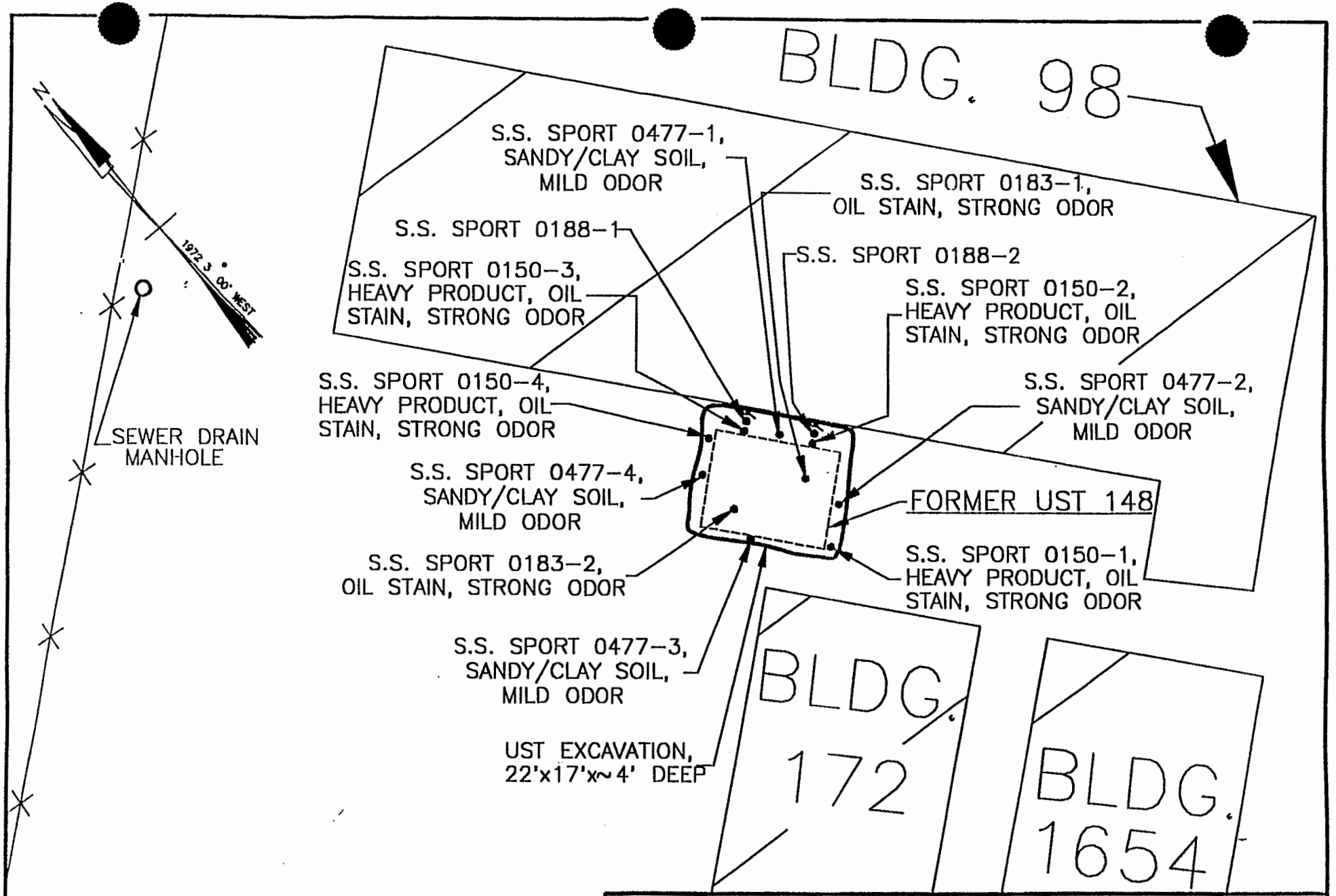
GRAPHIC SCALE

SPORTENVDETCHASN
1899 North Hobson Ave.
North Charleston, SC
29405-2106
Ph. (803) 743-6777

Site Map 2
UST 148
Charleston Naval Base
Charleston, SC

DWG DATE: 15 AUG 97

DWG NAME: 148_2



SPORTENVDETCHASN
1899 North Hobson Ave.
North Charleston, SC
29405-2106
Ph. (803) 743-6777

Site Map 3
UST 148
Charleston Naval Base
Charleston, SC

DWG DATE: 24 JUL 97 | DWG NAME: 148_3

UST 148

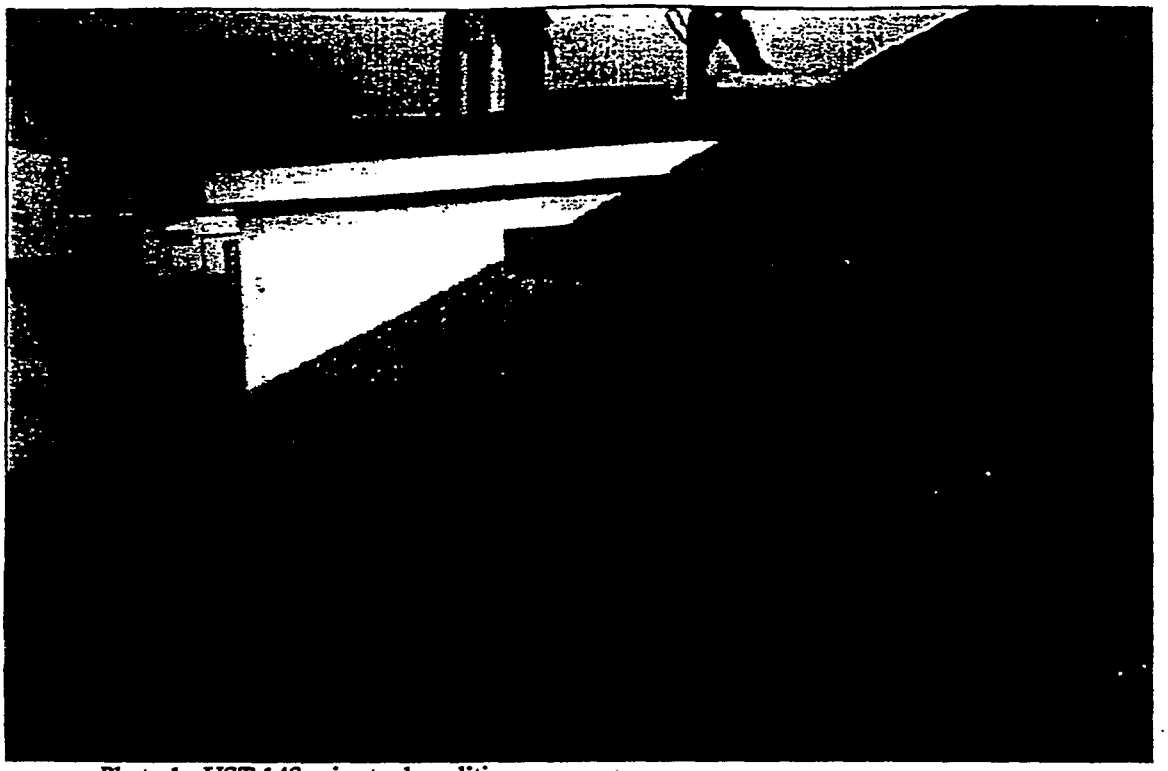


Photo 1: UST 148 prior to demolition.

Photo 2: UST 148 supply piping. The hole being indicated was created by Detachment technicians.

UST 148

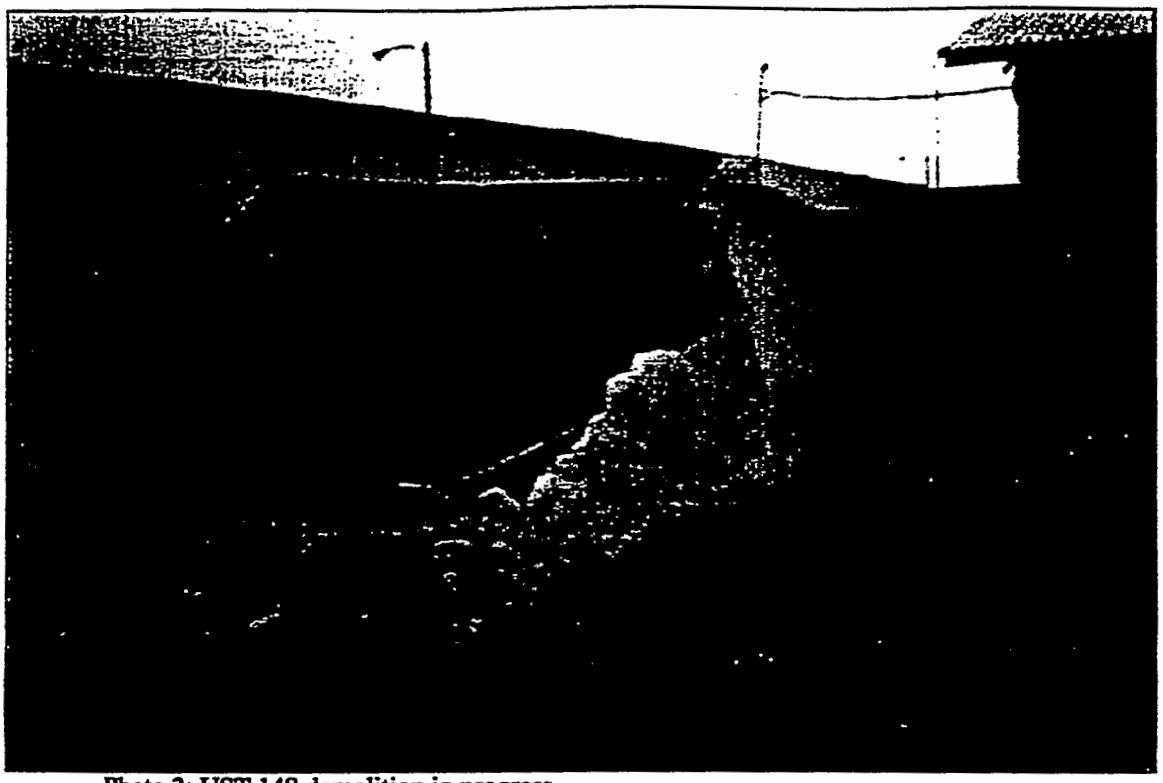


Photo 3: UST 148 demolition in progress.

Photo 4: UST 148 excavation.

Attachment II

ANALYTICAL RESULTS

You must submit the laboratory report and chain-of-custody form for the samples. These samples must be analyzed by a South Carolina certified laboratory.

Certified Analytical Results
Chain-of-Custody

GENERAL ENGINEERING LABORATORIES

Meeting today's needs with a vision for tomorrow.

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: September 09, 1996

Sample ID	: SPORT0150-1
Lab ID	: 9608499-01
Matrix	: Soil
Date Collected	: 08/23/96
Date Received	: 08/23/96
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
BTEX - 4 items											
Benzene	U	0.00	1.00	2.00	ug/kg	1.0	THL	08/29/96	0159	89659	1
Ethylbenzene	U	0.00	1.00	2.00	ug/kg	1.0					
Toluene	U	0.00	1.00	2.00	ug/kg	1.0					
Xylenes (TOTAL)	U	0.00	1.00	4.00	ug/kg	1.0					
Naphthalene	U	0.00	1.00	2.00	ug/kg	1.0					
Extractable Organics											
Polynuclear Aromatic Hydrocarbons - 16 items											
Acenaphthene	U	0.00	330	660	ug/kg	1.0	BDG	09/04/96	0134	89865	2
Acenaphthylene	U	0.00	330	660	ug/kg	1.0					
Anthracene	U	0.00	330	660	ug/kg	1.0					
Benzo(a)anthracene		970	330	660	ug/kg	1.0					
Benzo(a)pyrene		957	330	660	ug/kg	1.0					
Benzo(b)fluoranthene		1680	330	660	ug/kg	1.0					
Benzo(ghi)perylene	J	568	330	660	ug/kg	1.0					
Benzo(k)fluoranthene	U	0.00	330	660	ug/kg	1.0					
Chrysene		1170	330	660	ug/kg	1.0					
Dibenzo(a,h)anthracene	U	0.00	330	660	ug/kg	1.0					
Fluoranthene		2400	330	660	ug/kg	1.0					
Fluorene	U	0.00	330	660	ug/kg	1.0					
Indeno(1,2,3-c,d)pyrene	J	462	330	660	ug/kg	1.0					
Naphthalene	U	0.00	330	660	ug/kg	1.0					
Phenanthrene		2260	330	660	ug/kg	1.0					
Pyrene		3040	330	660	ug/kg	1.0					

The following prep procedures were performed:
GC/MS Base/Neutral Compounds TNF 08/31/96 0930 89865 3

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(803) 556-8171 • Fax (803) 766-1178

Printed on recycled paper.

9608499-01

GENERAL ENGINEERING LABORATORIES

Meeting today's needs with a vision for tomorrow.

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: September 09, 1996

Sample ID : SPORT0150-1

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	92.7	(30.0 - 115.)
Nitrobenzene-d5	M610	72.4	(23.0 - 120.)
p-Terphenyl-d14	M610	126.	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	114.	(59.7 - 159.)
Dibromofluoromethane	BTEX-8260	109.	(74.0 - 128.)
Toluene-d8	BTEX-8260	107.	(53.4 - 163.)
Bromofluorobenzene	NAP-8260	114.	(59.7 - 159.)
Dibromofluoromethane	NAP-8260	109.	(74.0 - 128.)
Toluene-d8	NAP-8260	107.	(53.4 - 163.)

M = Method	Method-Description
M 1	EPA 8260
M 2	EPA 8270
M 3	EPA 3550

Notes:
The qualifiers in this report are defined as follows:
ND indicates that the analyte was not detected at a concentration greater than the detection limit.
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
U indicates that the analyte was not detected at a concentration greater than the detection limit.
* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

GEL Laboratory Certifications		EPI Laboratory Certifications	
AL - 41040	AZ - AZ0514	AL - 41050	AZ - AZ0514
CA - 2089	CT - PH-0169	CA - I-1023/2056	CT - PH-0175

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GENERAL ENGINEERING LABORATORIES

Meeting today's needs with a vision for tomorrow.

Client:	Supervisor of Ship Building & Conversion SUPSHIP-Portsmouth Detachment-Env. 1899 North Hobson Ave. North Charleston, South Carolina 29405-2106
Contact:	Mr. Bill Hiers
Project Description:	SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: September 09, 1996

Sample ID : SPORT0150-1

GEL Laboratory Certifications		EPI Laboratory Certifications	
DE - SC012	FL - E87156/87294	FL - E87472/87458	MS - 29417
ME - SC012	MS - 10120	NY - 11502	RI - 138
NC - 233	NY - 11501	SC - 10582	TN - 02934
RI - 135	SC - 10120	UT - E-227	VA - 00111
TN - 02934	UT - E-251	WA - C225	NJ - 79002
VA - 00151	WA - C223	PA - 68-485	WV - 235
WI - 999887790	WV - 236		

This data report has been prepared and reviewed in accordance with General Engineering Laboratories standard operating procedures. Please direct any questions to your Project Manager, Karen Blakeney at (803) 769-7386.

Karen Blakeney

Analytical Report Specialist

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GENERAL ENGINEERING LABORATORIES

Meeting today's needs with a vision for tomorrow.

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: September 09, 1996

Sample ID	: SPORT0150-2
Lab ID	: 9608499-02
Matrix	: Soil
Date Collected	: 08/23/96
Date Received	: 08/23/96
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
BTEX - 4 items											
Benzene	U	46.0	50.0	100	ug/kg	50.	THL	08/29/96	0228	89659	1
Ethylbenzene		557	50.0	100	ug/kg	50.					
Toluene	U	0.00	50.0	100	ug/kg	50.					
Xylenes (TOTAL)	U	0.00	50.0	100	ug/kg	50.					
Naphthalene		8420	250	500	ug/kg	250	THL	08/29/96	1657	89659	1
Extractable Organics											
Polynuclear Aromatic Hydrocarbons - 16 items											
Acenaphthene	U	0.00	13200	26400	ug/kg	40.	WAM	09/03/96	1521	89865	2
Acenaphthylene	U	0.00	13200	26400	ug/kg	40.					
Anthracene	U	0.00	13200	26400	ug/kg	40.					
Benzo(a)anthracene	U	0.00	13200	26400	ug/kg	40.					
Benzo(a)pyrene	U	0.00	13200	26400	ug/kg	40.					
Benzo(b)fluoranthene	U	0.00	13200	26400	ug/kg	40.					
Benzo(ghi)perylene	U	0.00	13200	26400	ug/kg	40.					
Benzo(k)fluoranthene	U	0.00	13200	26400	ug/kg	40.					
Chrysene	U	0.00	13200	26400	ug/kg	40.					
Dibenzo(a,h)anthracene	U	0.00	13200	26400	ug/kg	40.					
Fluoranthene	U	0.00	13200	26400	ug/kg	40.					
Fluorene	U	0.00	13200	26400	ug/kg	40.					
Indeno(1,2,3-c,d)pyrene	U	0.00	13200	26400	ug/kg	40.					
Naphthalene	U	0.00	13200	26400	ug/kg	40.					
Phenanthrene	U	0.00	13200	26400	ug/kg	40.					
Pyrene	U	0.00	13200	26400	ug/kg	40.					

The following prep procedures were performed:
GC/MS Base/Neutral Compounds TNF 08/31/96 0930 89865 3

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9608499-02

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GENERAL ENGINEERING LABORATORIES

Meeting today's needs with a vision for tomorrow.

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: September 09, 1996

Sample ID : SPORT0150-2

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M

Comments:
A dilution was required for Extractable Organics due to matrix interference. As a result, the detection limits are elevated.

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	0.00*	(30.0 - 115.)
Nitrobenzene-d5	M610	0.00*	(23.0 - 120.)
p-Terphenyl-d14	M610	0.00*	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	102.	(59.7 - 159.)
Dibromofluoromethane	BTEX-8260	98.0	(74.0 - 128.)
Toluene-d8	BTEX-8260	110.	(53.4 - 163.)
Bromofluorobenzene	NAP-8260	102.	(59.7 - 159.)
Dibromofluoromethane	NAP-8260	98.0	(74.0 - 128.)
Toluene-d8	NAP-8260	110.	(53.4 - 163.)

M = Method	Method-Description
M 1	EPA 8260
M 2	EPA 8270
M 3	EPA 3550

Notes:
The qualifiers in this report are defined as follows:
ND indicates that the analyte was not detected at a concentration greater than the detection limit.
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
U indicates that the analyte was not detected at a concentration greater than the detection limit.
* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

GEL Laboratory Certifications EPI Laboratory Certifications

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GENERAL ENGINEERING LABORATORIES

Meeting today's needs with a vision for tomorrow.

Client:	Supervisor of Ship Building & Conversion SUPSHIP-Portsmouth Detachment-Env. 1899 North Hobson Ave. North Charleston, South Carolina 29405-2106
Contact:	Mr. Bill Hiers
Project Description:	SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: September 09, 1996

Sample ID : SPORT0150-2

GEL Laboratory Certifications		EPI Laboratory Certifications	
AL - 41040	AZ - AZ0514	AL - 41050	AZ - AZ0514
CA - 2089	CT - PH-0169	CA - I-1023/2056	CT - PH-0175
DE - SC012	FL - E87156/87294	FL - E87472/87458	MS - 29417
ME - SC012	MS - 10120	NY - 11502	RI - 138
NC - 233	NY - 11501	SC - 10582	TN - 02934
RI - 135	SC - 10120	UT - E-227	VA - 00111
TN - 02934	UT - E-251	WA - C225	NJ - 79002
VA - 00151	WA - C223	PA - 68-485	WV - 235
WI - 999887790	WV - 236		

This data report has been prepared and reviewed in accordance with General Engineering Laboratories standard operating procedures. Please direct any questions to your Project Manager, Karen Blakeney at (803) 769-7386.

Karen Blakeney

Analytical Report Specialist

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Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: September 09, 1996

Sample ID : SPORT0150-3
Lab ID : 9608499-03
Matrix : Soil
Date Collected : 08/23/96
Date Received : 08/23/96
Priority : Routine
Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
BTEX - 4 items											
Benzene	U	0.00	50.0	100	ug/kg	50.	THL	08/29/96	0256	89659	1
Ethylbenzene	U	0.00	50.0	100	ug/kg	50.					
Toluene	U	0.00	50.0	100	ug/kg	50.					
Xylenes (TOTAL)	U	0.00	50.0	100	ug/kg	50.					
Naphthalene		181	50.0	100	ug/kg	50.					
Extractable Organics											
Polynuclear Aromatic Hydrocarbons - 16 items											
Acenaphthene	U	0.00	26000	52000	ug/kg	40.	WAM	09/03/96	1553	89865	2
Acenaphthylene	U	0.00	26000	52000	ug/kg	40.					
Anthracene	U	0.00	26000	52000	ug/kg	40.					
Benzo(a)anthracene	U	0.00	26000	52000	ug/kg	40.					
Benzo(a)pyrene	U	0.00	26000	52000	ug/kg	40.					
Benzo(b)fluoranthene	U	0.00	26000	52000	ug/kg	40.					
Benzo(ghi)perylene	U	0.00	26000	52000	ug/kg	40.					
Benzo(k)fluoranthene	U	0.00	26000	52000	ug/kg	40.					
Chrysene	U	0.00	26000	52000	ug/kg	40.					
Dibenzo(a,h)anthracene	U	0.00	26000	52000	ug/kg	40.					
Fluoranthene	U	0.00	26000	52000	ug/kg	40.					
Fluorene	U	0.00	26000	52000	ug/kg	40.					
Indeno(1,2,3-c,d)pyrene	U	0.00	26000	52000	ug/kg	40.					
Naphthalene	U	0.00	26000	52000	ug/kg	40.					
Phenanthrene	U	0.00	26000	52000	ug/kg	40.					
Pyrene	U	0.00	26000	52000	ug/kg	40.					

ie following prep procedures were performed:
GC/MS Base/Neutral Compounds TNF 08/31/96 0930 89865 3

GENERAL ENGINEERING LABORATORIES

Meeting today's needs with a vision for tomorrow.

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: September 09, 1996

Sample ID : SPORT0150-3

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M

Comments:
A dilution was required for Extractable Organics due to matrix interference. As a result, the detection limits are elevated.

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	0.00*	(30.0 - 115.)
Nitrobenzene-d5	M610	0.00*	(23.0 - 120.)
p-Terphenyl-d14	M610	0.00*	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	114.	(59.7 - 159.)
Dibromofluoromethane	BTEX-8260	118.	(74.0 - 128.)
Toluene-d8	BTEX-8260	109.	(53.4 - 163.)
Bromofluorobenzene	NAP-8260	114.	(59.7 - 159.)
Dibromofluoromethane	NAP-8260	118.	(74.0 - 128.)
Toluene-d8	NAP-8260	109.	(53.4 - 163.)

M = Method	Method-Description
M 1	EPA 8260
M 2	EPA 8270
M 3	EPA 3550

Notes:
The qualifiers in this report are defined as follows:
ND indicates that the analyte was not detected at a concentration greater than the detection limit.
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
U indicates that the analyte was not detected at a concentration greater than the detection limit.
* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

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Client:	Supervisor of Ship Building & Conversion SUPSHIP-Portsmouth Detachment-Env. 1899 North Hobson Ave. North Charleston, South Carolina 29405-2106
Contact:	Mr. Bill Hiers
Project Description:	SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: September 09, 1996

Sample ID : SPORT0150-3

GEL Laboratory Certifications		EPI Laboratory Certifications	
AL - 41040	AZ - AZ0514	AL - 41050	AZ - AZ0514
CA - 2089	CT - PH-0169	CA - I-1023/2056	CT - PH-0175
DE - SC012	FL - E87156/87294	FL - E87472/87458	MS - 29417
ME - SC012	MS - 10120	NY - 11502	RI - 138
NC - 233	NY - 11501	SC - 10582	TN - 02934
RI - 135	SC - 10120	UT - E-227	VA - 00111
TN - 02934	UT - E-251	WA - C225	NJ - 79002
VA - 00151	WA - C223	PA - 68-485	WV - 235
WI - 999887790	WV - 236		

This data report has been prepared and reviewed in accordance with General Engineering Laboratories standard operating procedures. Please direct any questions to your Project Manager, Karen Blakeney at (803) 769-7386.

Karen Blakeney

Analytical Report Specialist

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Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: September 09, 1996

Sample ID	: SPORT0150-4
Lab ID	: 9608499-04
Matrix	: Soil
Date Collected	: 08/23/96
Date Received	: 08/23/96
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
BTEX - 4 items											
Benzene	U	0.00	50.0	100	ug/kg	50.	THL	08/29/96	0325	89659	1
Ethylbenzene	U	0.00	50.0	100	ug/kg	50.					
Toluene	U	0.00	50.0	100	ug/kg	50.					
Xylenes (TOTAL)	U	26.0	50.0	100	ug/kg	50.					
Naphthalene		235	50.0	100	ug/kg	50.					
Extractable Organics											
Polynuclear Aromatic Hydrocarbons - 16 items											
Acenaphthene	U	0.00	26600	53200	ug/kg	40.	WAM	09/03/96	1626	89865	2
Acenaphthylene	U	0.00	26600	53200	ug/kg	40.					
Anthracene	U	0.00	26600	53200	ug/kg	40.					
Benzo(a)anthracene	U	0.00	26600	53200	ug/kg	40.					
Benzo(a)pyrene	U	0.00	26600	53200	ug/kg	40.					
Benzo(b)fluoranthene	U	0.00	26600	53200	ug/kg	40.					
Benzo(ghi)perylene	U	0.00	26600	53200	ug/kg	40.					
Benzo(k)fluoranthene	U	0.00	26600	53200	ug/kg	40.					
Chrysene	U	0.00	26600	53200	ug/kg	40.					
Dibenzo(a,h)anthracene	U	0.00	26600	53200	ug/kg	40.					
Fluoranthene	U	0.00	26600	53200	ug/kg	40.					
Fluorene	U	0.00	26600	53200	ug/kg	40.					
Indeno(1,2,3-c,d)pyrene	U	0.00	26600	53200	ug/kg	40.					
Naphthalene	U	0.00	26600	53200	ug/kg	40.					
Phenanthrene	U	0.00	26600	53200	ug/kg	40.					
Pyrene	U	0.00	26600	53200	ug/kg	40.					

The following prep procedures were performed:
GC/MS Base/Neutral Compounds TNF 08/31/96 0930 89865 3

GENERAL ENGINEERING LABORATORIES

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Client:	Supervisor of Ship Building & Conversion SUPSHIP-Portsmouth Detachment-Env. 1899 North Hobson Ave. North Charleston, South Carolina 29405-2106
Contact:	Mr. Bill Hiers
Project Description:	SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: September 09, 1996

Sample ID : SPORT0150-4

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M

Comments:
A dilution was required for Extractable Organics due to matrix interference. As a result, the detection limits are elevated.

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	0.00*	(30.0 - 115.)
Nitrobenzene-d5	M610	0.00*	(23.0 - 120.)
p-Terphenyl-d14	M610	0.00*	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	124.	(59.7 - 159.)
Dibromofluoromethane	BTEX-8260	120.	(74.0 - 128.)
Toluene-d8	BTEX-8260	115.	(53.4 - 163.)
Bromofluorobenzene	NAP-8260	124.	(59.7 - 159.)
Dibromofluoromethane	NAP-8260	120.	(74.0 - 128.)
Toluene-d8	NAP-8260	115.	(53.4 - 163.)

M = Method	Method-Description
M 1	EPA 8260
M 2	EPA 8270
M 3	EPA 3550

Notes:
The qualifiers in this report are defined as follows:
ND indicates that the analyte was not detected at a concentration greater than the detection limit.
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
U indicates that the analyte was not detected at a concentration greater than the detection limit.
* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

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Client:	Supervisor of Ship Building & Conversion SUPSHIP-Portsmouth Detachment-Env. 1899 North Hobson Ave. North Charleston, South Carolina 29405-2106
Contact:	Mr. Bill Hiers
Project Description:	SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: September 09, 1996

Sample ID ; SPORT0150-4

GEL Laboratory Certifications		EPI Laboratory Certifications	
AL - 41040	AZ - AZ0514	AL - 41050	AZ - AZ0514
CA - 2089	CT - PH-0169	CA - I-1023/2056	CT - PH-0175
DE - SC012	FL - E87156/87294	FL - E87472/87458	MS - 29417
ME - SC012	MS - 10120	NY - 11502	RI - 138
NC - 233	NY - 11501	SC - 10582	TN - 02934
RI - 135	SC - 10120	UT - E-227	VA - 00111
TN - 02934	UT - E-251	WA - C225	NJ - 79002
VA - 00151	WA - C223	PA - 68-485	WV - 235
WI - 999887790	WV - 236		

This data report has been prepared and reviewed in accordance with General Engineering Laboratories standard operating procedures. Please direct any questions to your Project Manager, Karen Blakeney at (803) 769-7386.

Karen Blakeney

Analytical Report Specialist

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CERTIFICATE OF ANALYSIS

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: August 30, 1996

Sample ID	: SPORT0150-5
Lab ID	: 9608499-05
Matrix	: GroundH2O
Date Collected	: 08/23/96
Date Received	: 08/23/96
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
BTEX - 4 items											
Benzene	U	0.00	1.00	2.00	ug/l	1.0	JLS	08/28/96	1756	89692	
Ethylbenzene	U	0.00	1.00	2.00	ug/l	1.0					
Toluene	U	0.00	1.00	2.00	ug/l	1.0					
Xylenes (TOTAL)	U	0.00	1.00	4.00	ug/l	1.0					
Naphthalene	U	0.00	1.00	2.00	ug/l	1.0					

Surrogate Recovery	Test	Percent%	Acceptable Limits
Bromofluorobenzene	BTEX-8260	107.	(80.0 - 128.)
Dibromofluoromethane	BTEX-8260	102.	(67.7 - 135.)
Toluene-d8	BTEX-8260	102.	(76.8 - 122.)
Bromofluorobenzene	NAP-8260	107.	(80.0 - 128.)
Dibromofluoromethane	NAP-8260	102.	(67.7 - 135.)
Toluene-d8	NAP-8260	102.	(76.8 - 122.)

M = Method	Method-Description
M 1	EPA 8260

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CERTIFICATE OF ANALYSIS

Client:	Supervisor of Ship Building & Conversion SUPSHIP-Portsmouth Detachment-Env. 1899 North Hobson Ave. North Charleston, South Carolina 29405-2106
Contact:	Mr. Bill Hiers
Project Description:	SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: August 30, 1996

Sample ID : SPORT0150-5

M = Method	Method-Description

Notes:
The qualifiers in this report are defined as follows:
ND indicates that the analyte was not detected at a concentration greater than the detection limit.
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
U indicates that the analyte was not detected at a concentration greater than the detection limit.
* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

GEL Laboratory Certifications		EPI Laboratory Certifications	
AL - 41040	AZ - AZ0514	AL - 41050	AZ - AZ0514
CA - 2089	CT - PH-0169	CA - I-1023/2056	CT - PH-0175
DE - SC012	FL - E87156/87294	FL - E87472/87458	MS - 29417
ME - SC012	MS - 10120	NY - 11502	RI - 138
NC - 233	NY - 11501	SC - 10582	TN - 02934
RI - 135	SC - 10120	UT - E-227	VA - 00111
TN - 02934	UT - E-251	WA - C225	NJ - 79002
VA - 00151	WA - C223	PA - 68-485	WV - 235
WI - 999887790	WV - 236		

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CERTIFICATE OF ANALYSIS

Client:	Supervisor of Ship Building & Conversion SUPSHIP-Portsmouth Detachment-Env. 1899 North Hobson Ave. North Charleston, South Carolina 29405-2106
Contact:	Mr. Bill Hiers
Project Description:	SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: August 30, 1996

Sample ID : SPORT0150-5

GEL Laboratory Certifications	EPI Laboratory Certifications

This data report has been prepared and reviewed in accordance with General Engineering Laboratories standard operating procedures. Please direct any questions to your Project Manager, Karen Blakeney at (803) 769-7386.

Karen Blakeney

Analytical Report Specialist

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CHAIN OF CUSTODY RECORD

Page 1 of 1 C6008499

Client Name/Facility Name: SPORTENVDETCHASN

Collected by/Company: SPORTENVDETCHASN

SAMPLE ANALYSIS REQUIRED (X) - use remarks area to specify specific compounds or methods

Use For Pin the boxes to indicate whether sample was filtered and/or preserved

CCL 22913

	SAMPLE ID	DATE	TIME	WELL	SOIL	COMP	GRAB	# OF CONTAINERS	pH, conductivity	TOC/DOC	TOX	Chloride, Fluoride, Sulfide	Nitrate/Nitrite	VOC - Specify Method required	METALS - specify	Pesticide	Herbicide	Total Phenol	Acid Extractables	BN Extractables	PCB's	Cyanide	Coliform - specify type	BTEX PIDS NAPTHALENE	PAH	Remarks	
-01	SPORT0150-1	8/23/96	1030		X	*	*	2																X	X	UST148-1 soil	.1
-02	SPORT0150-2	8/23/96	1042		X	*	*	2																X	X	UST148-2 soil	.1
-03	SPORT0150-3	8/23/96	1051		X	*	*	2																X	X	UST148-3 soil	.1
-04	SPORT0150-4	8/23/96	1103		X	*	*	2																X	X	UST148-4 soil	.1
-05	SPORT0150-5	8/23/96	0930				X	3																X		UST148 VOA TripBlank	.2

Relinquished by:	Date:	Time:	Received by:	Relinquished by:	Date:	Time:	Received by:
[illegible signature]	8/23/96	1122	W.R. Hiers Jr.	W.R. Hiers Jr.	8/23/96	1517	[illegible signature]

Relinquished by:	Date:	Time:	Received by lab by:	Date:	Time:	Remarks:
Catharine [illegible]	8/23/96	1600	[illegible signature]	8-23-96	1600	* BTEX + NAPTHALENE SAMPLES ARE GRAB. PAH SAMPLES ARE COMPOSITE.

White = sample collector Yellow = file Pink = with report

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Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/87451
NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: October 07, 1996

Sample ID	: SPORT0183-1
Lab ID	: 9609571-01
Matrix	: Soil
Date Collected	: 09/27/96
Date Received	: 09/27/96
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
BTEX - 4 items											
Benzene	U	0.00	500	1000	ug/kg	500	JGS2	10/04/96	1250	91672	1
Ethylbenzene		4690	500	1000	ug/kg	500					
Toluene	U	0.00	500	1000	ug/kg	500					
Xylenes (TOTAL)	U	0.00	500	1000	ug/kg	500					
Naphthalene		37500	500	1000	ug/kg	500					
Extractable Organics											
Polynuclear Aromatic Hydrocarbons - 16 items											
Acenaphthene	U	0.00	166	331	ug/kg	1.0	JPA	10/02/96	1850	91449	2
Acenaphthylene	U	0.00	166	331	ug/kg	1.0					
Anthracene	J	90000	66200	132000	ug/kg	400					
Benzo(a)anthracene	U	0.00	166	331	ug/kg	1.0					
Benzo(a)pyrene	U	0.00	166	331	ug/kg	1.0					
Benzo(b)fluoranthene	U	0.00	166	331	ug/kg	1.0					
Benzo(ghi)perylene	U	0.00	166	331	ug/kg	1.0					
Benzo(k)fluoranthene	U	0.00	166	331	ug/kg	1.0					
Chrysene	U	0.00	166	331	ug/kg	1.0					
Dibenzo(a,h)anthracene	U	0.00	166	331	ug/kg	1.0					
Fluoranthene	U	0.00	166	331	ug/kg	1.0					
Fluorene	U	0.00	166	331	ug/kg	1.0					
Indeno(1,2,3-c,d)pyrene	U	0.00	166	331	ug/kg	1.0					
Naphthalene	J	111000	66200	132000	ug/kg	400					
Phenanthrene	U	0.00	166	331	ug/kg	1.0					
Pyrene	U	0.00	166	331	ug/kg	1.0					

The following prep procedures were performed:
GC/MS Base/Neutral Compounds

DDT 09/30/96 2345 91449 3

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Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/87451
NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: October 07, 1996

Sample ID : SPORT0183-1

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M

Comments:
A dilution was required for Volatile Organics due to matrix interference.
As a result, the detection limits are elevated.

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	0.00*	(30.0 - 115.)
Nitrobenzene-d5	M610	0.00*	(23.0 - 120.)
p-Terphenyl-d14	M610	0.00*	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	99.9	(59.7 - 159.)
Dibromofluoromethane	BTEX-8260	105.	(74.0 - 128.)
Toluene-d8	BTEX-8260	104.	(53.4 - 163.)
Bromofluorobenzene	NAP-8260	99.9	(59.7 - 159.)
Dibromofluoromethane	NAP-8260	105.	(74.0 - 128.)
Toluene-d8	NAP-8260	104.	(53.4 - 163.)

M = Method	Method-Description
M 1	EPA 8260
M 2	EPA 8270
M 3	EPA 3550

Notes:
The qualifiers in this report are defined as follows:
ND indicates that the analyte was not detected at a concentration greater than the detection limit.
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
U indicates that the analyte was not detected at a concentration greater than the detection limit.
* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

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Laboratory Certifications

STATE	GEL	EPI
FL	E87155/87294	E87472/87458
NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

c#: NFWC00196 Report Date: October 07, 1996

Sample ID : SPORT0183-1

M = Method	Method-Description

This data report has been prepared and reviewed in accordance with General Engineering Laboratories standard operating procedures. Please direct any questions to your Project Manager, Karen Blakeney at (803) 769-7386.

Karen Blakeney
Reviewed By

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NC	233	
SC	10120	10512
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: October 07, 1996

Sample ID	: SPORT0183-2
Lab ID	: 9609571-02
Matrix	: Soil
Date Collected	: 09/27/96
Date Received	: 09/27/96
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
BTEX - 4 items											
Benzene	U	0.00	20.0	40.0	ug/kg	20.	JGS2	10/04/96	1319	91672	1
Ethylbenzene	U	0.00	20.0	40.0	ug/kg	20.					
Toluene	U	0.00	20.0	40.0	ug/kg	20.					
Xylenes (TOTAL)	U	0.00	20.0	40.0	ug/kg	20.					
Naphthalene		283	20.0	40.0	ug/kg	20.					
Extractable Organics											
Polynuclear Aromatic Hydrocarbons - 16 items											
Acenaphthene	U	0.00	164	330	ug/kg	1.0	JPA	10/02/96	1810	91449	2
Acenaphthylene	U	0.00	164	330	ug/kg	1.0					
Anthracene	J	6800	6540	13100	ug/kg	40.					
Benzo(a)anthracene	U	0.00	164	330	ug/kg	1.0					
Benzo(a)pyrene	U	0.00	164	330	ug/kg	1.0					
Benzo(b)fluoranthene	U	0.00	164	330	ug/kg	1.0					
Benzo(ghi)perylene	U	0.00	164	330	ug/kg	1.0					
Benzo(k)fluoranthene	U	0.00	164	330	ug/kg	1.0					
Chrysene	U	0.00	164	330	ug/kg	1.0					
Dibenzo(a,h)anthracene	U	0.00	164	330	ug/kg	1.0					
Fluoranthene	U	0.00	164	330	ug/kg	1.0					
Fluorene	U	0.00	164	330	ug/kg	1.0					
Indeno(1,2,3-c,d)pyrene	U	0.00	164	330	ug/kg	1.0					
Naphthalene	U	0.00	164	330	ug/kg	1.0					
Phenanthrene	U	0.00	164	330	ug/kg	1.0					
Pyrene	U	0.00	164	330	ug/kg	1.0					

The following prep procedures were performed:
GC/MS Base/Neutral Compounds

DDT 09/30/96 2345 91449 3

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STATE	GEL	EPI
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NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 | Report Date: October 07, 1996 |

Sample ID : SPORT0183-2

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	0.00*	(30.0 - 115.)
Nitrobenzene-d5	M610	0.00*	(23.0 - 120.)
p-Terphenyl-d14	M610	0.00*	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	77.5	(59.7 - 159.)
Dibromofluoromethane	BTEX-8260	109.	(74.0 - 128.)
Toluene-d8	BTEX-8260	110.	(53.4 - 163.)
Bromofluorobenzene	NAP-8260	77.5	(59.7 - 159.)
Dibromofluoromethane	NAP-8260	109.	(74.0 - 128.)
Toluene-d8	NAP-8260	110.	(53.4 - 163.)

M = Method	Method-Description
M 1	EPA 8260
M 2	EPA 8270
M 3	EPA 3550

Notes:
The qualifiers in this report are defined as follows:
ND indicates that the analyte was not detected at a concentration greater than the detection limit.
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
U indicates that the analyte was not detected at a concentration greater than the detection limit.
* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories standard operating procedures. Please direct any questions to your Project Manager, Karen Blakeney at (803) 769-7386.

Karen Blakeney
Reviewed By

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Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/87451
NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: October 07, 1996

Sample ID	: SPORT0183-3
Lab ID	: 9609571-03
Matrix	: Soil
Date Collected	: 09/27/96
Date Received	: 09/27/96
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
BTEX - 4 items											
Benzene	U	0.00	1.00	2.00	ug/kg	1.0	IGS2	10/04/96	1422	91672	1
Ethylbenzene	U	0.00	1.00	2.00	ug/kg	1.0					
Toluene	J	1.31	1.00	2.00	ug/kg	1.0					
Xylenes (TOTAL)	J	2.57	1.00	4.00	ug/kg	1.0					
Naphthalene		7.57	1.00	2.00	ug/kg	1.0					

Surrogate Recovery	Test	Percent%	Acceptable Limits
Bromofluorobenzene	BTEX-8260	112.	(59.7 - 159.)
Dibromofluoromethane	BTEX-8260	117.	(74.0 - 128.)
Toluene-d8	BTEX-8260	112.	(53.4 - 163.)
Bromofluorobenzene	NAP-8260	112.	(59.7 - 159.)
Dibromofluoromethane	NAP-8260	117.	(74.0 - 128.)
Toluene-d8	NAP-8260	112.	(53.4 - 163.)

M = Method	Method-Description
M 1	EPA 8260

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NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: October 07, 1996

Sample ID : SPORT0183-3

M = Method	Method-Description

Notes:
The qualifiers in this report are defined as follows:
ND indicates that the analyte was not detected at a concentration greater than the detection limit.
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
U indicates that the analyte was not detected at a concentration greater than the detection limit.
* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories standard operating procedures. Please direct any questions to your Project Manager, Karen Blakeney at (803) 769-7386.

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(803) 556-8171

CHAIN OF CUSTODY RECORD

9609571 KBB

Page 1 of 1

Client Name/Facility Name: SPORTENVDETCHASN

Collected by/Company: SPORTENVDETCHASN

SAMPLE ANALYSIS REQUIRED (x) - use remarks area to specify specific compounds or methods

Use F or P in the boxes to indicate whether sample was filtered and/or preserved

CCL 23470

	SAMPLE ID	DATE	TIME	WELL	SOIL	COMP	GRAB	# OF CONTAINERS	pH, conductivity	TOC/DOC	TOX	Chloride, Fluoride, Sulfide	Nitrite/Nitrate	VOC - Specify Method required	METALS - specify	Pesticide	Herbicide	Total Phenol	Acid Extractables	B/N Extractables	PCB's	Cyanide	Coliform - specify type	BTEX + NAPTHALENE	PAH	Remarks	
-01	SPORTØ183-1	9/27/96	1Ø15		X		X	2																X	X	AST-148-5 Soil	.1
-02	SPORTØ183-2	9/27/96	1Ø45		X		X	2																X	X	AST-148-6 Soil	.1
-03	SPORTØ183-3	9/27/96	Ø84Ø		X		X	1																X		AST-148 VOA Soil TRIP BLANK	.2
-04	SPORTØ183-4	9/27/96	Ø84Ø				X	3																X		AST-148 VOA TRIP BLANK	.3

Relinquished by:	Date:	Time:	Received by:	Relinquished by:	Date:	Time:	Received by:
[signature]	9/27/96	1118	W.R. Hiers Jr.	W.R. Hiers Jr.	9/27/96	1430	[signature]
Relinquished by: [signature]	Date: 9/27/96	Time: 1500	Received by lab by: Karen Blakeney	Date: 9/27/96	Time: 1501	Remarks:	

White = sample collector Yellow = file Pink = with report

148 -
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FL	E87156/87204	E87472/87458
NC	233	
SC	10120	10502
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: October 10, 1996

Sample ID : SPORT0188-1
Lab ID : 9610027-01
Matrix : Soil
Date Collected : 10/01/96
Date Received : 10/01/96
Priority : Routine
Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Extractable Organics											
PCB analysis - 7 items											
PCB-1016	U	0.00	32.6	41.6	ug/kg	10.	JPA	10/09/96	1328	91772	1
PCB-1221	U	0.00	32.6	41.6	ug/kg	10.					
PCB-1232	U	0.00	32.6	41.6	ug/kg	10.					
PCB-1242	U	0.00	32.6	41.6	ug/kg	10.					
PCB-1248	U	0.00	32.6	41.6	ug/kg	10.					
PCB-1254	U	0.00	32.6	41.6	ug/kg	10.					
PCB-1260	U	0.00	32.6	41.6	ug/kg	10.					
Metals Analysis											
Silver	U	-0.181	0.375	2.50	mg/kg	1.0	JSS	10/03/96	1243	91554	2
Arsenic	J	2.23	2.03	14.4	mg/kg	1.0					
Barium		12.7	0.106	2.50	mg/kg	1.0					
Cadmium	J	0.479	0.159	2.50	mg/kg	1.0					
Chromium		14.8	0.202	2.50	mg/kg	1.0					
Lead		566	1.75	4.81	mg/kg	1.0					
Selenium	U	-4.13	4.05	14.4	mg/kg	1.0					
Mercury	J	0.0527	0.00213	0.200	mg/kg	1.0	RMJ	10/03/96	1951	91583	N

The following prep procedures were performed:

PCB's	GWL	10/07/96	1900	91772	3
ICP	FGD	10/02/96	1300	91554	4
Mercury	RMJ	10/02/96	1500	91583	5

Surrogate Recovery	Test	Percent%	Acceptable Limits
4CMX	PCB	110.	(47.0 - 160.)

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Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/87458
NC	233	
SC	10120	10982
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: October 10, 1996

Sample ID : SPORT0188-1

Surrogate Recovery	Test	Percent%	Acceptable Limits

M = Method	Method-Description
M 1	EPA 8080
M 2	EPA 6010A
M 3	EPA 3550
M 4	EPA 3050
M 5	EPA 7471

Notes:
The qualifiers in this report are defined as follows:
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J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
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* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories standard operating procedures. Please direct any questions to your Project Manager, Karen Blakeney at (803) 769-7386.

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NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: October 10, 1996

Sample ID : SPORT0188-2
Lab ID : 9610027-02
Matrix : Soil
Date Collected : 10/01/96
Date Received : 10/01/96
Priority : Routine
Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Extractable Organics											
PCB analysis - 7 items											
PCB-1016	U	0.00	32.8	41.6	ug/kg	10.	JPA	10/09/96	1409	91772	1
PCB-1221	U	0.00	32.8	41.6	ug/kg	10.					
PCB-1232	U	0.00	32.8	41.6	ug/kg	10.					
PCB-1242	U	0.00	32.8	41.6	ug/kg	10.					
PCB-1248	U	0.00	32.8	41.6	ug/kg	10.					
PCB-1254	U	0.00	32.8	41.6	ug/kg	10.					
PCB-1260	U	0.00	32.8	41.6	ug/kg	10.					
Metals Analysis											
Silver	U	0.0135	0.375	2.50	mg/kg	1.0	JSS	10/03/96	1245	91554	2
Arsenic	U	-0.522	2.03	14.4	mg/kg	1.0					
Barium		14.2	0.106	2.50	mg/kg	1.0					
Cadmium	U	0.00433	0.159	2.50	mg/kg	1.0					
Chromium		3.33	0.202	2.50	mg/kg	1.0					
Lead		9.00	1.75	4.81	mg/kg	1.0					
Selenium	U	-1.62	4.05	14.4	mg/kg	1.0					
Mercury	U	-0.00551	0.00215	0.200	mg/kg	1.0	RMJ	10/03/96	1953	91583	N

The following prep procedures were performed:

PCB's	GWL	10/07/96	1900	91772	3
ICP	FGD	10/02/96	1300	91554	4
Mercury	RMJ	10/02/96	1500	91583	5

Surrogate Recovery	Test	Percent%	Acceptable Limits
4CMX	PCB	130.	(47.0 - 160.)

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NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 | Report Date: October 10, 1996 |

Sample ID : SPORT0188-2

Surrogate Recovery	Test	Percent%	Acceptable Limits

M = Method	Method-Description
M 1	EPA 8080
M 2	EPA 6010A
M 3	EPA 3550
M 4	EPA 3050
M 5	EPA 7471

Notes:
The qualifiers in this report are defined as follows:
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J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
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* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

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Karen Blakeney
Reviewed By

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CHAIN OF CUSTODY RECORD

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2040 Savage Road
Charleston, South Car[redacted]414
P.O. Box 30712
Charleston, South Carolina 29417
(803) 556-8171

Client Name/Facility Name: SPORTENVDETCHASN

Collected by/Company: SPORTENVDETCHASN

SAMPLE ANALYSIS REQUIRED (x) - use remarks area to specify specific compounds or methods

Use F or P in the boxes to indicate whether sample was filtered and/or preserved

CCL 23498

	SAMPLE ID	DATE	TIME	WELL	SOIL	COMP	GRAB	# OF CONTAINERS	pH, conductivity	TOC/DOC	TOX	Chloride, Fluoride, Sulfide	Nitrite/Nitrate	VOC - Specify Method required	RCRA METALS - specify	Pesticide	Herbicide	Total Phenol	Acid Extractables	B/N Extractables	PCB's	Cyanide	Coliform - specify type			Remarks
-01	SPORTØ188-1	10/1/96	14ØØ				X	2							X						X					UST 148-7 soil
-02	SPORTØ188-2	10/1/96	14ØØ				X	2							X						X					UST 148-8 soil

Relinquished by:	Date:	Time:	Received by:	Relinquished by:	Date:	Time:	Received by:
[signature]	10/1/96	14Ø8	W. R. Hiers, Jr.	W. R. Hiers, Jr.	10/1/96	1426	[signature]
Lee R. Moor	10/1/96	14:55	Received by lab by: [signature]	Date: 10-01-96	Time: 1455	Remarks:	

White = sample collector Yellow = file Pink = with report

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Laboratory Certifications

STATE	GEL	EPI
IL	E87156/87294	E87472/87458
NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NFWC00197 Report Date: July 28, 1997

Sample ID : SPORT0477-1
Lab ID : 9707353-01
Matrix : Soil
Date Collected : 07/16/97
Date Received : 07/16/97
Priority : Routine
Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
BTEX - 4 items											
Benzene	J	69.5	50.0	100	ug/kg	50.	TCL	07/23/97	2130	105361	1
Ethylbenzene		3900	50.0	100	ug/kg	50.					
Toluene	U	0.00	50.0	100	ug/kg	50.					
Xylenes (TOTAL)	U	36.0	50.0	100	ug/kg	50.					
Naphthalene		1150	50.0	100	ug/kg	50.					
Extractable Organics											
Polynuclear Aromatic Hydrocarbons - 16 items											
Acenaphthene	U	0.00	16700	33300	ug/kg	100	WAM	07/21/97	1757	105216	2
Acenaphthylene	U	0.00	16700	33300	ug/kg	100					
Anthracene	U	0.00	16700	33300	ug/kg	100					
Benzo(a)anthracene	U	0.00	16700	33300	ug/kg	100					
Benzo(a)pyrene	U	0.00	16700	33300	ug/kg	100					
Benzo(b)fluoranthene	U	0.00	16700	33300	ug/kg	100					
Benzo(ghi)perylene	U	0.00	16700	33300	ug/kg	100					
Benzo(k)fluoranthene	U	0.00	16700	33300	ug/kg	100					
Chrysene	U	0.00	16700	33300	ug/kg	100					
Dibenzo(a,h)anthracene	U	0.00	16700	33300	ug/kg	100					
Fluoranthene	U	0.00	16700	33300	ug/kg	100					
Fluorene	U	0.00	16700	33300	ug/kg	100					
Indeno(1,2,3-c,d)pyrene	U	0.00	16700	33300	ug/kg	100					
Naphthalene	J	30000	16700	33300	ug/kg	100					
Phenanthrene	J	27600	16700	33300	ug/kg	100					
Pyrene	U	0.00	16700	33300	ug/kg	100					

The following prep procedures were performed:

GC/MS Base/Neutral Compounds GWL 07/19/97 1600 105216 3

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Laboratory Certifications

STATE	GEL	EPI
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NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00197 Report Date: July 28, 1997

Sample ID : SPORT0477-1

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M

Comments:
A dilution was required for Extractable Organics due to matrix interference. As a result, the detection limits are elevated.

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	0.00*	(30.0 - 115.)
Nitrobenzene-d5	M610	0.00*	(23.0 - 120.)
p-Terphenyl-d14	M610	0.00*	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	114.	(53.5 - 154.)
Dibromofluoromethane	BTEX-8260	88.0	(63.4 - 136.)
Toluene-d8	BTEX-8260	111.	(72.1 - 137.)
Bromofluorobenzene	NAP-8260	114.	(53.5 - 154.)
Dibromofluoromethane	NAP-8260	88.0	(63.4 - 136.)
Toluene-d8	NAP-8260	111.	(72.1 - 137.)

M = Method	Method-Description
M 1	EPA 8260
M 2	EPA 8270
M 3	EPA 3550

Notes:
The qualifiers in this report are defined as follows:
ND indicates that the analyte was not detected at a concentration greater than the detection limit.
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
U indicates that the analyte was not detected at a concentration greater than the detection limit.
* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

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NC	233	
SC	10120	10582
TN	02934	02934

Client:	Supervisor of Ship Building & Conversion SUPSHIP-Portsmouth Detachment-Env. 1899 North Hobson Ave. North Charleston, South Carolina 29405-2106
Contact:	Mr. Bill Hiers
Project Description:	SUPSHIP-Portsmouth Detachment

cc: NFWC00197 Report Date: July 28, 1997

Sample ID : SPORT0477-1

M = Method	Method-Description

This data report has been prepared and reviewed in accordance with General Engineering Laboratories standard operating procedures. Please direct any questions to your Project Manager, Karen Blakeney at (803) 769-7386.

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STATE	GEL	EPI
FL	E87156/87294	E87472/87458
NC	235	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00197

Report Date: July 28, 1997

Sample ID : SPORT0477-2
Lab ID : 9707353-02
Matrix : Soil
Date Collected : 07/16/97
Date Received : 07/16/97
Priority : Routine
Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
BTEX - 4 items											
Benzene	U	0.00	1.00	2.00	ug/kg	1.0	TCL	07/23/97	2158	105361	1
Ethylbenzene	U	0.00	1.00	2.00	ug/kg	1.0					
Toluene		2.37	1.00	2.00	ug/kg	1.0					
Xylenes (TOTAL)	U	0.00	1.00	4.00	ug/kg	1.0					
Naphthalene	U	0.00	1.00	2.00	ug/kg	1.0	TCL	07/24/97	1724	105361	1
Extractable Organics											
Polynuclear Aromatic Hydrocarbons - 16 items											
Acenaphthene		555	165	330	ug/kg	1.0	WAM	07/22/97	1425	105216	2
Acenaphthylene	U	0.00	165	330	ug/kg	1.0					
Anthracene		1100	165	330	ug/kg	1.0					
Benzo(a)anthracene		2530	165	330	ug/kg	1.0					
Benzo(a)pyrene		2030	165	330	ug/kg	1.0					
Benzo(b)fluoranthene		2400	165	330	ug/kg	1.0					
Benzo(ghi)perylene		1100	165	330	ug/kg	1.0					
Benzo(k)fluoranthene		1780	165	330	ug/kg	1.0					
Chrysene		2760	165	330	ug/kg	1.0					
Dibenzo(a,h)anthracene	J	304	165	330	ug/kg	1.0					
Fluoranthene		9040	1650	3300	ug/kg	10.	WAM	07/21/97	1827	105216	2
Fluorene		823	165	330	ug/kg	1.0	WAM	07/22/97	1425	105216	2
Indeno(1,2,3-c,d)pyrene		1260	165	330	ug/kg	1.0					
Naphthalene		458	165	330	ug/kg	1.0					
Phenanthrene		8120	1650	3300	ug/kg	10.	WAM	07/21/97	1827	105216	2
Pyrene		5920	1650	3300	ug/kg	10.					

The following prep procedures were performed:

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FL	E87156/87294	E87472/87745
NC	235	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00197 | Report Date: July 28, 1997 |

Sample ID : SPORT0477-2

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	81.1	(30.0 - 115.)
Nitrobenzene-d5	M610	67.6	(23.0 - 120.)
p-Terphenyl-d14	M610	99.1	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	111.	(53.5 - 154.)
Dibromofluoromethane	BTEX-8260	93.3	(63.4 - 136.)
Toluene-d8	BTEX-8260	108.	(72.1 - 137.)
Bromofluorobenzene	NAP-8260	111.	(53.5 - 154.)
Dibromofluoromethane	NAP-8260	93.3	(63.4 - 136.)
Toluene-d8	NAP-8260	108.	(72.1 - 137.)

M = Method	Method-Description
M 1	EPA 8260
M 2	EPA 8270
M 3	EPA 3550

Notes:
The qualifiers in this report are defined as follows:
ND indicates that the analyte was not detected at a concentration greater than the detection limit.
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
U indicates that the analyte was not detected at a concentration greater than the detection limit.
* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories standard operating procedures. Please direct any questions to your Project Manager, Karen Blakeney at (803) 769-7386.

Karen Blakeney
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FL	E87156/87294	E87472/87451
NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00197 Report Date: July 28, 1997

Sample ID	: SPORT0477-3
Lab ID	: 9707353-03
Matrix	: Soil
Date Collected	: 07/16/97
Date Received	: 07/16/97
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
BTEX - 4 items											
Benzene	U	0.00	50.0	100	ug/kg	50.	TCL	07/23/97	2227	105361	1
Ethylbenzene		383	50.0	100	ug/kg	50.					
Toluene	U	0.00	50.0	100	ug/kg	50.					
Xylenes (TOTAL)	J	88.5	50.0	100	ug/kg	50.					
Naphthalene		494	50.0	100	ug/kg	50.					
Extractable Organics											
Polynuclear Aromatic Hydrocarbons - 16 items											
Acenaphthene	U	0.00	6560	13100	ug/kg	40.	WAM	07/21/97	1858	105216	2
Acenaphthylene	U	0.00	6560	13100	ug/kg	40.					
Anthracene	U	0.00	6560	13100	ug/kg	40.					
Benzo(a)anthracene	U	0.00	6560	13100	ug/kg	40.					
Benzo(a)pyrene	U	0.00	6560	13100	ug/kg	40.					
Benzo(b)fluoranthene	U	0.00	6560	13100	ug/kg	40.					
Benzo(ghi)perylene	U	0.00	6560	13100	ug/kg	40.					
Benzo(k)fluoranthene	U	0.00	6560	13100	ug/kg	40.					
Chrysene	U	0.00	6560	13100	ug/kg	40.					
Dibenzo(a,h)anthracene	U	0.00	6560	13100	ug/kg	40.					
Fluoranthene	U	0.00	6560	13100	ug/kg	40.					
Fluorene	U	0.00	6560	13100	ug/kg	40.					
Indeno(1,2,3-c,d)pyrene	U	0.00	6560	13100	ug/kg	40.					
Naphthalene	U	0.00	6560	13100	ug/kg	40.					
Phenanthrene	U	0.00	6560	13100	ug/kg	40.					
Pyrene	U	0.00	6560	13100	ug/kg	40.					

The following prep procedures were performed:

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NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00197 Report Date: July 28, 1997

Sample ID : SPORT0477-3

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M

Comments:
A dilution was required for Extractable Organics due to matrix interference. As a result, the detection limits are elevated.

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	0.00*	(30.0 - 115.)
Nitrobenzene-d5	M610	0.00*	(23.0 - 120.)
p-Terphenyl-d14	M610	0.00*	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	101.	(53.5 - 154.)
Dibromofluoromethane	BTEX-8260	89.5	(63.4 - 136.)
Toluene-d8	BTEX-8260	98.4	(72.1 - 137.)
Bromofluorobenzene	NAP-8260	101.	(53.5 - 154.)
Dibromofluoromethane	NAP-8260	89.5	(63.4 - 136.)
Toluene-d8	NAP-8260	98.4	(72.1 - 137.)

M = Method	Method-Description
M 1	EPA 8260
M 2	EPA 8270
M 3	EPA 3550

Notes:
The qualifiers in this report are defined as follows:
ND indicates that the analyte was not detected at a concentration greater than the detection limit.
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
U indicates that the analyte was not detected at a concentration greater than the detection limit.
* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

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NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00197 | Report Date: July 28, 1997 |

Sample ID : SPORT0477-3

M = Method	Method-Description

This data report has been prepared and reviewed in accordance with General Engineering Laboratories standard operating procedures. Please direct any questions to your Project Manager, Karen Blakeney at (803) 769-7386.

Karen Blakeney

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NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00197 | Report Date: July 28, 1997 |

Sample ID	: SPORT0477-4
Lab ID	: 9707353-04
Matrix	: Soil
Date Collected	: 07/16/97
Date Received	: 07/16/97
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
BTEX - 4 items											
Benzene	U	26.0	50.0	100	ug/kg	50.	TCL	07/23/97	2255	105361	1
Ethylbenzene		526	50.0	100	ug/kg	50.					
Toluene	U	0.00	50.0	100	ug/kg	50.					
Xylenes (TOTAL)		343	50.0	100	ug/kg	50.					
Naphthalene		1950	50.0	100	ug/kg	50.					
Extractable Organics											
Polynuclear Aromatic Hydrocarbons - 16 items											
Acenaphthene	U	0.00	16600	33200	ug/kg	100	WAM	07/21/97	1928	105216	2
Acenaphthylene	U	0.00	16600	33200	ug/kg	100					
Anthracene	U	0.00	16600	33200	ug/kg	100					
Benzo(a)anthracene	U	0.00	16600	33200	ug/kg	100					
Benzo(a)pyrene	U	0.00	16600	33200	ug/kg	100					
Benzo(b)fluoranthene	U	0.00	16600	33200	ug/kg	100					
Benzo(ghi)perylene	U	0.00	16600	33200	ug/kg	100					
Benzo(k)fluoranthene	U	0.00	16600	33200	ug/kg	100					
Chrysene	U	0.00	16600	33200	ug/kg	100					
Dibenzo(a,h)anthracene	U	0.00	16600	33200	ug/kg	100					
Fluoranthene	U	0.00	16600	33200	ug/kg	100					
Fluorene	U	0.00	16600	33200	ug/kg	100					
Indeno(1,2,3-c,d)pyrene	U	0.00	16600	33200	ug/kg	100					
Naphthalene	U	0.00	16600	33200	ug/kg	100					
Phenanthrene	J	18700	16600	33200	ug/kg	100					
Pyrene	U	0.00	16600	33200	ug/kg	100					

The following prep procedures were performed:

GC/MS Base/Neutral Compounds — GWL 07/19/97 1600 105216 3

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NC	233	
SC	10120	10512
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00197 Report Date: July 28, 1997

Sample ID : SPORT0477-4

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M

Comments:
A dilution was required for Extractable Organics due to matrix interference. As a result, the detection limits are elevated.

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	0.00*	(30.0 - 115.)
Nitrobenzene-d5	M610	0.00*	(23.0 - 120.)
p-Terphenyl-d14	M610	0.00*	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	117.	(53.5 - 154.)
Dibromofluoromethane	BTEX-8260	91.3	(63.4 - 136.)
Toluene-d8	BTEX-8260	107.	(72.1 - 137.)
Bromofluorobenzene	NAP-8260	117.	(53.5 - 154.)
Dibromofluoromethane	NAP-8260	91.3	(63.4 - 136.)
Toluene-d8	NAP-8260	107.	(72.1 - 137.)

M = Method	Method-Description
M 1	EPA 8260
M 2	EPA 8270
M 3	EPA 3550

Notes:
The qualifiers in this report are defined as follows:
ND indicates that the analyte was not detected at a concentration greater than the detection limit.
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
U indicates that the analyte was not detected at a concentration greater than the detection limit.
* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

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FL	E87156/87294	E87472/874.
NC	233	
SC	10120	10512
TN	02934	02934

Client:	Supervisor of Ship Building & Conversion SUPSHIP-Portsmouth Detachment-Env. 1899 North Hobson Ave. North Charleston, South Carolina 29405-2106
Contact:	Mr. Bill Hiers
Project Description:	SUPSHIP-Portsmouth Detachment

cc: NPWC00197 Report Date: July 28, 1997

Sample ID : SPORT0477-4

M = Method	Method-Description

This data report has been prepared and reviewed in accordance with General Engineering Laboratories standard operating procedures. Please direct any questions to your Project Manager, Karen Blakeney at (803) 769-7386.

Karen Blakeney

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STATE	GEL	EPI
FL	E87156/87294	E87472/874
NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00197 Report Date: July 28, 1997

Sample ID	: SPORT0477-5
Lab ID	: 9707353-05
Matrix	: Soil
Date Collected	: 07/16/97
Date Received	: 07/16/97
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
BTEX - 4 items											
Benzene	U	0.00	1.00	2.00	ug/kg	1.0	TCL	07/23/97	2324	105361	1
Ethylbenzene	U	0.00	1.00	2.00	ug/kg	1.0					
Toluene	U	0.00	1.00	2.00	ug/kg	1.0					
Xylenes (TOTAL)	U	0.00	1.00	4.00	ug/kg	1.0					
Naphthalene	U	0.00	1.00	2.00	ug/kg	1.0	TCL	07/24/97	1752	105361	1

Surrogate Recovery	Test	Percent%	Acceptable Limits
Bromofluorobenzene	BTEX-8260	93.6	(53.5 - 154.)
Dibromofluoromethane	BTEX-8260	87.5	(63.4 - 136.)
Toluene-d8	BTEX-8260	98.0	(72.1 - 137.)
Bromofluorobenzene	NAP-8260	93.6	(53.5 - 154.)
Dibromofluoromethane	NAP-8260	87.5	(63.4 - 136.)
Toluene-d8	NAP-8260	98.0	(72.1 - 137.)

M = Method	Method-Description
M 1	EPA 8260

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NC	233	
SC	10120	10582
TN	02934	02934

Client:	Supervisor of Ship Building & Conversion SUPSHIP-Portsmouth Detachment-Env. 1899 North Hobson Ave. North Charleston, South Carolina 29405-2106
Contact:	Mr. Bill Hiers
Project Description:	SUPSHIP-Portsmouth Detachment

cc: NPWC00197 Report Date: July 28, 1997

Sample ID : SPORT0477-5

M = Method Method-Description

Notes:
The qualifiers in this report are defined as follows:
ND indicates that the analyte was not detected at a concentration greater than the detection limit.
I indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
U indicates that the analyte was not detected at a concentration greater than the detection limit.
* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories standard operating procedures. Please direct any questions to your Project Manager, Karen Blakeney at (803) 769-7386.

Karen Blakeney
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STATE	GEL	EPI
FL	E87156/87294	E87472/87
NC	233	
SC	10120	10512
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00197 Report Date: July 28, 1997

Sample ID : SPORT0477-5

M = Method	Method-Description

Notes:
The qualifiers in this report are defined as follows:
ND indicates that the analyte was not detected at a concentration greater than the detection limit.
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
U indicates that the analyte was not detected at a concentration greater than the detection limit.
* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories standard operating procedures. Please direct any questions to your Project Manager, Karen Blakeney at (803) 769-7386.

Karen Blakeney
Reviewed By

PO Box 30712 • Charleston, SC 29417 • 2040 Savage Road • 29407

(803) 556-8171 • Fax (803) 766-1178

9707253-05

Printed on recycled paper

NP[illegible]C00197

General Engineering L[illegible]ies, Inc.
2040 Savage Road
Charleston, South Carolina 29407
P.O. Box 30712
Charleston, South Carolina 29417
(803) 556-8171

CHAIN OF CUSTODY RECORD

9707353

Client Name/Facility Name: SPORTENV DET CHASN

Collected by/Company: SPORTENV DET CHASN

SAMPLE ANALYSIS REQUIRED (x) - use remarks area to specify specific compounds or methods

Use F or P in the boxes to indicate whether sample was filtered and/or preserved

CCL 28081

	SAMPLE ID	DATE	TIME	WELL	SOIL	COMP	GRAB	# OF CONTAINERS	pH, conductivity	TOC/DOC	TOX	Chloride, Fluoride, Sulfide	Nitrite/Nitrate	VOC - Specify Method Required	METALS - specify	Pesticide	Herbicide	Total Phenol	Acid Extractables	B/N Extractables	PCB's	Cyanide	Coliform - specify type	PAH	BTEX EPA 8021	Remarks	
01	SPORT0477-1	7/16/97	1000		X		X	2																X	X	TANK 148 SOIL	.1
02	SPORT0477-2	7/16/97	1010		X		X	2																X	X	TANK 148 SOIL	.1
03	SPORT0477-3	7/16/97	1020		X		X	2																X	X	TANK 148 SOIL	.1
04	SPORT0477-4	7/16/97	1030		X		X	2																X	X	TANK 148 SOIL	.1
05	SPORT0477-5	7/16/97	0900		X		X	2																	X	TANK 148 SOIL VOA TRIP BLANK	.2

Relinquished by:	Date:	Time:	Received by:	Relinquished by:	Date:	Time:	Received by:
[signature]	7-16-97	1130	W. R. Hines, Jr.	W. R. Hines, Jr.	7/16/97	1414	[signature]
Relinquished by: [signature]	Date: 7-16-97	Time: 2:35	Received by lab by: [signature]	Date: 7/16/97	Time: 1435	Remarks:	

White = sample collector Yellow = file Pink = with report

Attachment III

Certificates of Disposal (tank)

Special Waste Manifest OR-9609015, ticket numbers 18310, 18342, 18373, and 18396
Chambers Oakridge Landfill, Inc., 2183 Highway 78, Dorchester, SC, 29437.

308-5964
Code 148

CHAMBERS OAKRIDGE LANDFILL
SPECIAL WASTE MANIFEST

MANIFEST OR-9609015
EXPIRES 11/23/96

GENERATOR OF WASTE: CHARLESTON ENVIRONMENTAL DET

ACCOUNT NUMBER: 490-208

LOCATION OF WASTE: N CHARLESTON SC

ADDRESS:

PHONE: 803-743-2821 . . CONTACT: RICK ALBERS

GENERATOR'S SIGNATURE: _____ DATE: _____

********** TO BE COMPETED BY TRANSPORTER **********

TRANSPORTER OF WASTE: CHINNERS

DATE: 10-4-96 TRUCK NUMBER: 4

DRIVER'S SIGNATURE: Dale Robeson

****** TO BE COMPLETED BY CHAMBERS OAKRIDGE LANDFILL ******

DISPOSAL SITE: CHAMBERS OAKRIDGE LANDFILL DPW 130

DESCRIPTION OF WASTE: RES / CONCRETE DEBRIS

TICKET NUMBER: 18310 TONNAGE 19.58

RECEIVED BY: Jamie Caldwell

CHAMBERS OAKRIDGE LANDFILL
SPECIAL WASTE MANIFEST

MANIFEST OR-9609015
EXPIRES 11/23/96

GENERATOR OF WASTE: CHARLESTON ENVIRONMENTAL DET

ACCOUNT NUMBER: 490-208

LOCATION OF WASTE: N CHARLESTON SC

ADDRESS:

PHONE: 803-743-2821 CONTACT: RICK ALBERS

GENERATOR'S SIGNATURE: _____ DATE: _____

********** TO BE COMPETED BY TRANSPORTER **********

TRANSPORTER OF WASTE: CHINNERS

DATE: 10-4-96 TRUCK NUMBER: 4

DRIVER'S SIGNATURE: Dale Robeson

****** TO BE COMPLETED BY CHAMBERS OAKRIDGE LANDFILL ******

DISPOSAL SITE: CHAMBERS OAKRIDGE LANDFILL DPW 130

DESCRIPTION OF WASTE: RES / CONCRETE DEBRIS

TICKET NUMBER: 18342 TONNAGE 21.23

RECEIVED BY: Mosy

CHAMBERS OAKRIDGE LANDFILL
SPECIAL WASTE MANIFEST

MANIFEST OR-9609015
EXPIRES 11/23/96

GENERATOR OF WASTE: CHARLESTON ENVIRONMENTAL DET

ACCOUNT NUMBER: 490-208

LOCATION OF WASTE: N CHARLESTON SC

ADDRESS:

PHONE: 803-743-2821 CONTACT: RICK ALBERS

GENERATOR'S SIGNATURE: _____ DATE: _____

********** TO BE COMPETED.BY TRANSPORTER **********

TRANSPORTER OF WASTE: CHINNERS

DATE: 10-4-96 TRUCK NUMBER: 4

DRIVER'S SIGNATURE: Dah R

****** TO BE COMPLETED BY CHAMBERS OAKRIDGE LANDFILL ******

DISPOSAL SITE: CHAMBERS OAKRIDGE LANDFILL DPW 130

DESCRIPTION OF WASTE: RES / CONCRETE DEBRIS

TICKET NUMBER: 18373 TONNAGE 20.41

RECEIVED BY: Jamie Calhoun

CHAMBERS OAKRIDGE LANDFILL
SPECIAL WASTE MANIFEST

MANIFEST OR-9609015
EXPIRES 11/23/96

GENERATOR OF WASTE: CHARLESTON ENVIRONMENTAL DET

ACCOUNT NUMBER: 490-208

LOCATION OF WASTE: N CHARLESTON SC

ADDRESS:

PHONE: 803-743-2821 . . CONTACT: RICK ALBERS

GENERATOR'S SIGNATURE: _____ DATE: _____

********** TO BE COMPETED BY TRANSPORTER **********

TRANSPORTER OF WASTE: CHINNERS

DATE: 10-4-96 TRUCK NUMBER: 4

DRIVER'S SIGNATURE: Dale Robert

****** TO BE COMPLETED BY CHAMBERS OAKRIDGE LANDFILL ******

DISPOSAL SITE: CHAMBERS OAKRIDGE LANDFILL DPW 130

DESCRIPTION OF WASTE: RES / CONCRETE DEBRIS

TICKET NUMBER: 18396 TONNAGE 23.15

RECEIVED BY: CMcsny

F

Appendix F

Fuel Distribution System
Interim Measures Completion Report AOC 626

COMPLETION REPORT

INTERIM/STABILIZATION MEASURE FOR
AOC 626 (FUEL FARM)
NAVAL BASE CHARLESTON
CHARLESTON SC

Prepared for:

DEPARTMENT OF THE NAVY
SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
CHARLESTON SC

Prepared by:

Supervisor of Shipbuilding, Conversion and Repair,
USN, (SUPSHIP) Portsmouth Va.,
Environmental Detachment Charleston, S.C.
1899 North Hobson Ave.
North Charleston, SC 29405-2106

May 22, 1997

DEPARTMENT OF THE NAVY
SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
P.O. BOX 190010
2155 EAGLE DRIVE
NORTH CHARLESTON, S.C. 29419-9010

5090
Code 1876
23 May 1997

Mr. G. Randall Thompson
Director, Division of Hazardous and Infectious Waste Management
Bureau of Solid And Hazardous Waste Management
South Carolina Department of Health and Environmental Control
2600 Bull Street
Columbia SC 29201

Subj: INTERIM MEASURE COMPLETION REPORT FOR AREA OF CONCERN 626

Dear Mr. Thompson:

The enclosed interim measure report is submitted to fulfill the requirements of Permit Condition IV.D.6 for Permit Number SCO 170 022 560.

If the Department has any comments please feel free to contact me at (803) 820-7481.

Sincerely,

BRIAN K. STOCKMASTER
Remedial Project Manager
Environmental Division

Encl:
(1) Interim Measure Completion Report
Copy to:
SCDHEC (Mr. Tapia, Mr. Bergstrand)
EPA-Region IV (Mr. Bassett)
CSO Naval Base Charleston (LCDR Rose)
CEERD (Mr. Dearhart)
EA&H (Mr. Haverkost, Ms. Cutler)

COMPLETION REPORT

INTERIM/STABILIZATION MEASURE FOR
AOC 626 (FUEL FARM)
NAVAL BASE CHARLESTON
CHARLESTON SC

Prepared for:

DEPARTMENT OF THE NAVY
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CHARLESTON SC

Prepared by:

Supervisor of Shipbuilding, Conversion and Repair,
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1899 North Hobson Ave.
North Charleston, SC 29405-2106

May 22, 1997

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ACRONYMS, ABBREVIATIONS and SYMBOL

ACM	Asbestos Containing Material
AOC	Area of Concern
BLS	Below Land Surface
CMS	Corrective Measures Study
DERP	Defense Environmental Restoration Program
DET	Environmental Detachment Charleston
DON	Department of the Navy
FO	Fuel Oil
IM	Interim Measure
IR	Installation Restoration
PVC	Polyvinyl Chloride
RCRA	Resource Conservation and Recovery Act
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
SARA	Superfund Amendments and Reauthorization Act
SCDHEC	South Carolina Department of Health and Environmental Control
SOUTHDIV	Southern Division Naval Facilities Engineering Command
SUPSHIP	Supervisor of Shipbuilding, Conversion and Repair, USN
SWMU	Solid Waste Management Unit
USN	United States Navy

1. INTRODUCTION

1.1 INSTALLATION RESTORATION PROGRAM. The purpose of the Department of the Navy (DON) Installation Restoration (IR) Program is to identify, assess, characterize and clean up or control contamination from past hazardous waste disposal operations and hazardous material spills at Navy and Marine Corps activities. The Defense Environmental Restoration Program (DERP) is codified in the Superfund Amendments and Reauthorization Act (SARA) Section 211 (10 USC 2701). The IR Program is a component of DERP.

1.1.1 Naval Base Charleston IR Program. At Naval Base Charleston, a Resource Conservation and Recovery Act (RCRA) Facility Assessment (RFA) was prepared which divided the Naval Base into zones and identified Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) within each zone. The RFA evaluated each SWMU and AOC and determined which sites required further investigation. Based on the RFA, a RCRA Facility Investigation (RFI) work plan has been or is being prepared for each zone containing SWMUs and AOCs requiring further investigation. On completion of the RFI for each Zone, a RFI report will be prepared for that zone. The RFI reports will identify SWMUs and AOCs containing wastes requiring remediation. Eventually, Corrective Measures Studies (CMSs) will be prepared to determine the best means of remediating each site.

1.2 INTERIM MEASURES. Interim Measures (IM) performed as part of the IR Program are intended to eliminate sources of environmental contamination or limit the spread of environmental contaminants prior to the completion of the RFI CMSs.

1.3 AOC 626. AOC 626 is the former Charleston Naval Supply Center Fuel Farm, located in Zone G at the corner of Hobson Avenue and Viaduct Road (see Map #1, Appendix A). It consists of four large fuel tanks, several smaller tanks, various pumping and piping systems, and waste oil and wastewater processing plants. In September 1994, an unspecified amount of diesel fuel oil was released from the Fuel Distribution System (FDS) at the intersection of Hobson Avenue and Viaduct Road. A leak in the abandoned 18" pipeline from the Chicora Tank Farm was determined to be the

source. Approximately 40,000 gallons of water/oil mixture was reportedly recovered from the site. Five vertical PVC recovery wells were installed by the Charleston Naval Shipyard (CNSY) Public Works (PW) department in an attempt to recover additional free product.

A pressure test conducted by contractors cleaning Naval Base pipelines on a separate 18″ pipe resulted in an eruption of oil and water above land surface in the abandoned 18″ pipe. Excavations in this area revealed a 2″ diameter hole in the pipe.

1.4 AOC 626 INTERIM MEASURE. During the interval between the RFI and the completion of the CMS, it was decided by Southern Division Naval Facilities Engineering Command (SOUTHDIV) that an IM would be performed by Supervisor of Shipbuilding, Conversion and Repair (SUPSHIP), United States Navy (USN), Portsmouth Va. Environmental Detachment Charleston (SPORTENVDETCHASN). The objective of this IM was to remove the petroleum saturated soil, a 200′ section of the 18″ pipeline, and install a product recovery system as required. The scope of this IM is limited to the specific spill area along Viaduct Road and not intended to remediate the entire Fuel Farm. This IM is consistent with the ultimate cleanup of AOC 626 and is not intended to circumvent the public participation process inherent within environmental cleanup under RCRA authority.

2. INTERIM MEASURE EXECUTION

2.1 ACTIONS REQUIRED BY INTERIM MEASURE WORKPLAN. The saturated soil and the abandoned 18″ fuel oil pipeline were removed to eliminate the source of contamination. A product recovery system was installed in an effort to recover additional free product. Required actions are listed below:

- Excavation of approximately 450 cubic yards of petroleum saturated soil (see Map #2, Appendix A) from land surface to the top of the 18″ pipeline, approximately 10′ below land surface (BLS).

- Removal of approximately 229 linear feet of 18″ fuel oil pipeline from the south valve pit to the west fence line on Viaduct Road. An 18″ aluminum expandable plug was installed at the valve pit end of the pipe removal. An 18″ polvinyl chloride (PVC) vertical standoff with a cap was installed on the opposite end at the west fence line to support future cleaning of the pipeline.

- Installation of a product recovery system that included 200′ of horizontal perforated 12″ PVC pipe and 5 vertical standoffs for product recovery (see Drawing #1, Appendix D).

- Repair of the manhole to the sewer system by brick and mortar replacement.

- Monthly pumping of the product recovery system not to exceed one year.

2.2 OBSERVATIONS NOTED

2.2.1 Asbestos Pipe Insulation. Pipe sections removed from the excavation site were encased in an asbestos type material. The material was sampled for asbestos and analyzed by the Naval Hospital Charleston Industrial Hygienist Department. It was determined that the first 33′ of pipe was non asbestos while the remaining pipeline was encased in friable asbestos insulation.

2.2.2 Soil Conditions. From land surface to approximately 1′ BLS, the soil appeared to be fill dirt. From 1′ BLS to the bottom of the 10′ excavation, the soil was a silty clay mixture. Contamination was apparent at 5′ BLS. The soil in this area was heavily stained with oil and had a strong petroleum odor. Free product was observed leaching from the sides of the open trench during excavation.

2.2.3 Conditions of Pipe Line. Oil and water were discovered in the abandoned 18″ pipeline. The contents of the pipeline were pumped into the portable tanks. Further excavation of the pipeline revealed numerous holes of various diameters along the length. Welded patches were identified on the second section of pipe removed. Actual pipeline depth was 10′.

2.2.4 Unidentified Pipe Line. An additional 12″ pipeline was encountered during the excavation that was not identified on the available site drawings. This pipeline was located approximately 2′ below the existing 12″ sludge line. A former Public Works employee identified the pipeline as an abandoned 12″ sludge line that connects to the sludge pits at SWMU 8. The pipeline posed no interference problems and was left in place.

2.2.5 Underground Interferences Sheet piling and construction timbers were encountered below the surface for the majority of the excavation. Several of the sheets and timbers were removed to facilitate the installation of construction trench boxes and pipe removal.

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2.2.6 Groundwater. The above described interference may have restricted groundwater flow, making it difficult to determine the true groundwater level at the site. Approximately 10,430 gallons of oily water were pumped from the trench during the excavation.

2.3 PLAN MODIFICATIONS AND JUSTIFICATION. The IM work plan specified removal of a 12″ sludge line that was reportedly directly atop the 18″ line. The excavation revealed that the plan was in error and the 12″ line was approximately 3′ to the side of the 18″ line and therefore not an interference for pipe removal. The DET was directed to leave the 12″ line in place unless there were apparent signs of corrosion or leakage. Since neither was observed during the course of excavation, the sludge line was left in place.

The total volume of excavated soil was considerably less than originally planned due to the 10′ depth of the pipeline.

3. INTERIM MEASURE OUTCOME

3.1 SITE CONDITIONS FOLLOWING COMPLETION OF WORK. Following completion of all site work on 3 February 1997, the DET had removed 450 cubic yards of petroleum contaminated soil, 229′ of 18″ pipeline, installed 200′ of product recovery system, and repaired the sewer manhole. The site was graded to existing conditions and seeded with grass. Site photographs are included in Appendix C.

The DET will be responsible for the operation and maintenance of the product recovery system. This will include the collection and proper disposal of the product, required preventive maintenance, and repairs to ensure optimum system operation. The system is expected to be operated bimonthly, unless product recovery indicates more or less pumping is required.

The initial pumping operation was conducted on 11 March 1997 and yielded approximately 300 gallons of free product.

4. SAMPLING

4.1 SAMPLING EVOLUTIONS AND RESULTS. Since the intent of this IM was to remove the source of contamination without specific cleanup criteria, screening and confirmatory samples were not taken. Investigative samples were taken from the bottom of the trench after pipe removal and tested in accordance with SCDHEC requirements for unknown used oil. Based on these sample results, the contaminated soil was determined to be non-hazardous and will be bioremediated or disposed of accordingly. The soil is presently being stored in Bldg 1601. See Appendix B for sampling data and documentation.

Asbestos sampling results of the pipeline insulation identified the material as friable Asbestos Containing Material (ACM).

5. WASTE GENERATION

5.1 HAZARDOUS/POTENTIALLY HAZARDOUS WASTE. Asbestos insulation was disposed of in accordance SCDHEC regulations.

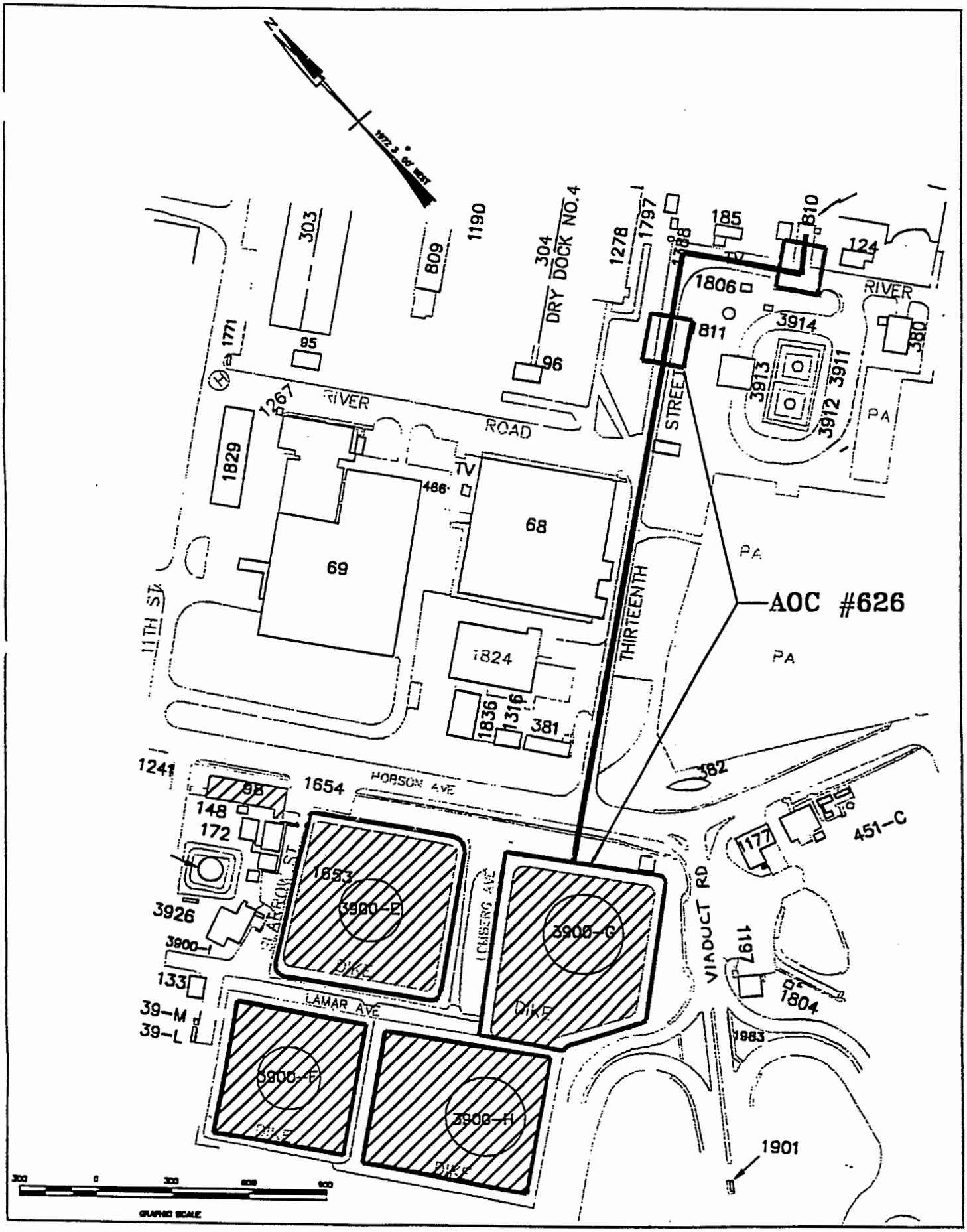
5.2 NON-HAZARDOUS WASTE.

5.2.1 Non-Hazardous Excavated Soil. Approximately 450 cubic yards of non-hazardous excavated soil was transported to Bldg 1601 for storage. Bioremediation of the soil would allow for potential reuse and would be the preferred method of disposal.

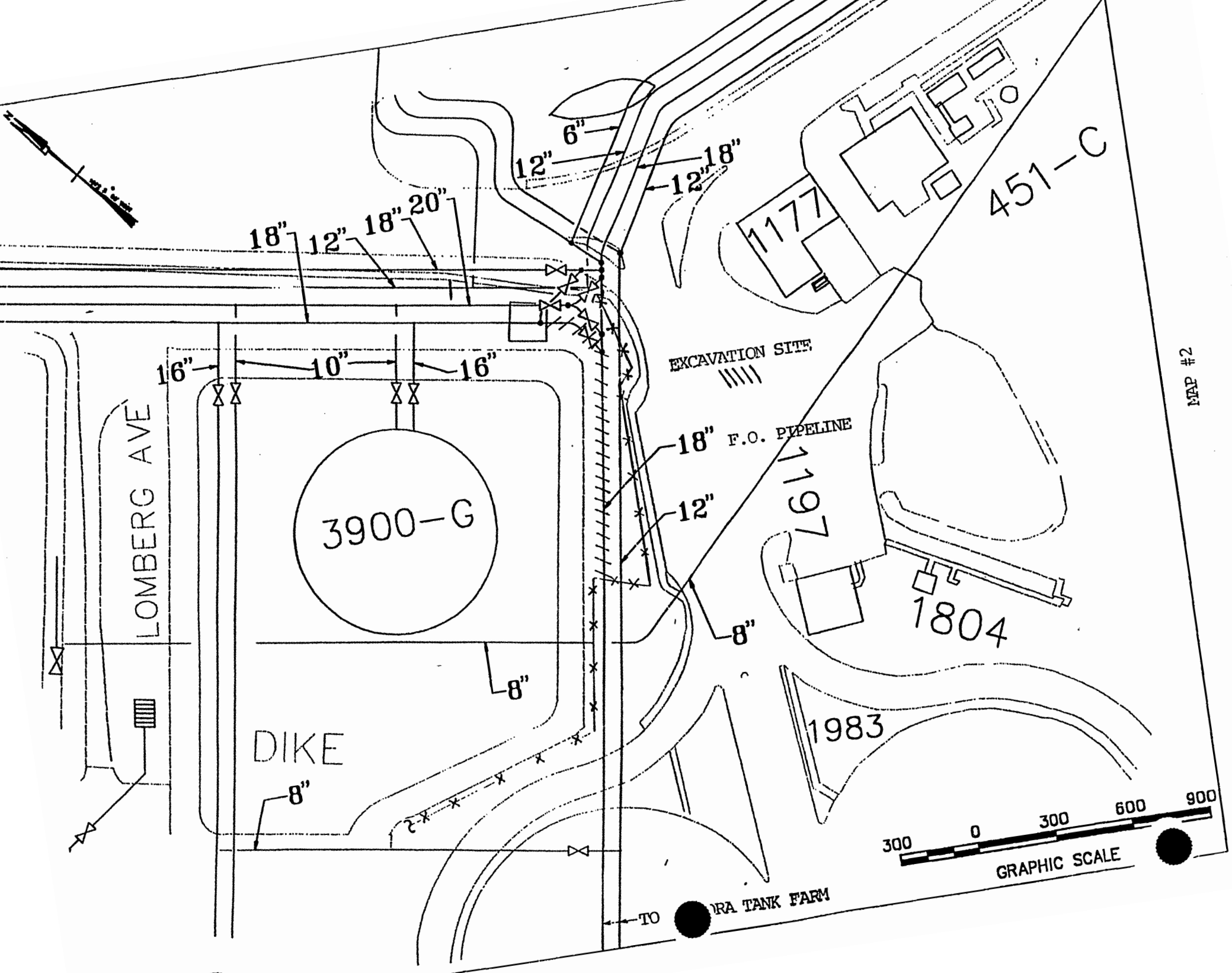
5.2.2 Pipeline. The pipeline was disposed of as construction debris after complete removal of asbestos.

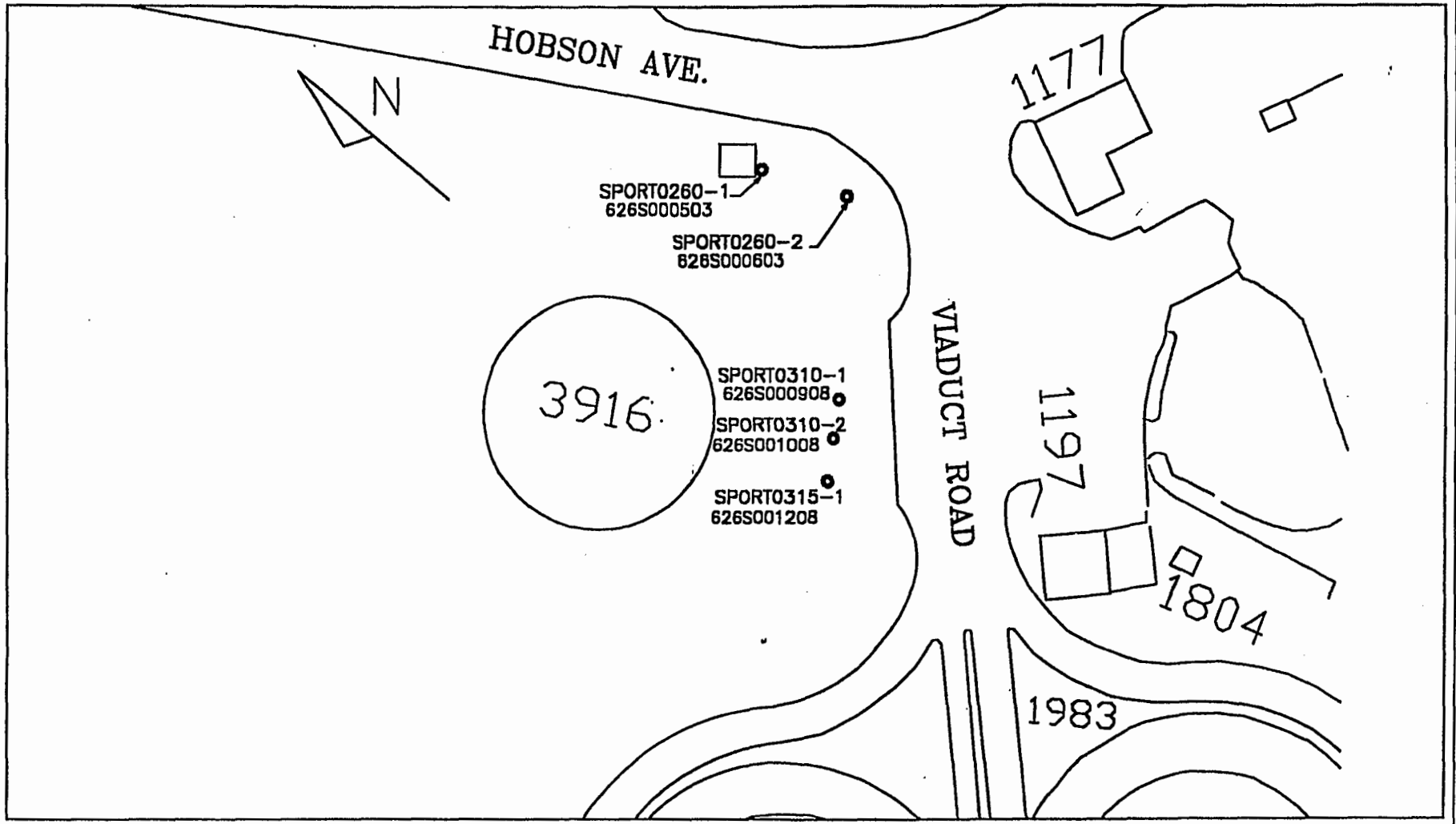
APPENDIX A

SITE MAPS


N
303
809
1190
304
DRY DOCK NO.4
1278
1797
185
810
124
1806
RIVER
811
3914
380
1771
95
96
3913
3911
3912
PA
1267
RIVER
ROAD
STREET
1829
TV
486
68
69
PA
AOC #626
11TH ST
THIRTEENTH
1824
PA
1836
1316
381
1241
98
1654
HOBSON AVE
382
148
172
451-C
1177
1853
3900-E
3900-G
3926
ARROW ST
LOMBERG AVE
VIADUCT RD
3900-I
DIKE
DIKE
1197
133
1804
LAMAR AVE
39-M
39-L
1883
3900-F
3900-H
DIKE
DIKE
1901
GRAPHIC SCALE

MAP #1


MAP #2
451-C
1177
1197
1804
1983
3900-G
LOMBERG AVE
DIKE
EXCAVATION SITE
F.O. PIPELINE
6"
12"
18"
12"
18"
12"
18"
20"
16"
10"
16"
18"
12"
8"
8"
8"
TO
RA TANK FARM
300
0
300
600
900
GRAPHIC SCALE



LEGEND

- Soil Sample Location

GRAPHIC SCALE

0' 100' 200'

SPORTENVDETCHASN
1899 North Hobson Ave.
North Charleston, SC
29405-2106

SITE/SAMPLE LOCATION PLAN
FUEL FARM AT VIADUCT ROAD
CHARLESTON NAVAL COMPLEX

SIZE	DRAWN BY:	DWG NO.	REV
A	T.GUNTER	AOC626-001	—
SCALE		SHEET 1	

MAP #3

APPENDIX B

SAMPLING DOCUMENTATION

TABLE 1

SAMPLE RESULTS OR DETECTION LIMITS GREATER THAN RESIDENTIAL RBC					
PARAMETER	SPORT0260-1 NBCG626S000503	SPORT0260-2 NBCG626S000603	SPORT0310-1 NBCG626S000908	SPORT0310-2 NBCG626S001008	SPORT0315-1 NBCG626S001208
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Benzo(a)anthracene	DL 6.660	DL 6.660			3.57
Benzo(a)pyrene	DL 6.660	DL 6.660	DL 0.164	DL 0.165	2.86
Benzo(a)fluoranthene	DL 6.660	DL 6.660			3.67
Dibenze(a,h)anthracene	DL 6.660	DL 6.660	DL 0.164	DL 0.165	DL 6.662
Indeno(1,2,3-c,d)pyrene	DL 6.660	DL 6.660			1.54
TPH	8260	7520	150	120	30
United States Environmental Protection Agency Region III Risk Based Concentration Table Criteria:					
		mg/kg			
	Benzo(a)anthracene	0.88			
	Benzo(a)pyrene	0.088			
	Benzo(a)fluoranthene	0.88			
	Dibenze(a,h)anthracene	0.088			
	Indeno(1,2,3-c,d)pyrene	0.88			

GENERAL ENGINEERING LABORATORIES

Meeting today's needs with a vision for tomorrow.

Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/87
NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: December 16, 1996

Sample ID	: SPORT0260-1
Lab ID	: 9612094-01
Matrix	: Soil
Date Collected	: 12/04/96
Date Received	: 12/04/96
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
BTEX - 4 items											
Benzene	U	0.00	10000	20000	ug/kg	10000	JGS2	12/06/96	1156	94538	1
Ethylbenzene	U	0.00	10000	20000	ug/kg	10000					
Toluene	U	0.00	10000	20000	ug/kg	10000					
Xylenes (TOTAL)	U	0.00	10000	20000	ug/kg	10000					
Naphthalene	U	0.00	10000	20000	ug/kg	10000					
Extractable Organics											
Polynuclear Aromatic Hydrocarbons - 16 items											
Acenaphthene	U	0.00	6660	13300	ug/kg	40.	BDG	12/11/96	2033	94528	2
Acenaphthylene	U	0.00	6660	13300	ug/kg	40.					
Anthracene	U	0.00	6660	13300	ug/kg	40.					
Benzo(a)anthracene	U	0.00	6660	13300	ug/kg	40.					
Benzo(a)pyrene	U	0.00	6660	13300	ug/kg	40.					
Benzo(b)fluoranthene	U	0.00	6660	13300	ug/kg	40.					
Benzo(ghi)perylene	U	0.00	6660	13300	ug/kg	40.					
Benzo(k)fluoranthene	U	0.00	6660	13300	ug/kg	40.					
Chrysene	U	0.00	6660	13300	ug/kg	40.					
Dibenzo(a,h)anthracene	U	0.00	6660	13300	ug/kg	40.					
Fluoranthene	U	0.00	6660	13300	ug/kg	40.					
Fluorene	U	6660	6660	13300	ug/kg	40.					
Indeno(1,2,3-c,d)pyrene	U	0.00	6660	13300	ug/kg	40.					
Naphthalene	U	0.00	6660	13300	ug/kg	40.					
Phenanthrene	J	12800	6660	13300	ug/kg	40.					
Pyrene	U	0.00	6660	13300	ug/kg	40.					
Metals Analysis											
Mercury		0.223	0.00241	0.200	mg/kg	1.0	RMJ	12/11/96	1303	94693	N
Silver	U	36.1	42.4	1000	ug/kg	2.0	NRM	12/11/96	1640	94627	
Arsenic		5580	276	1000	ug/kg	2.0					

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FL	E87156/87294	E87472/87
NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: December 16, 1996

Sample ID : SPORT0260-1

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Barium		23700	24.7	1000	ug/kg	2.0					
Cadmium	U	14.6	20.9	500	ug/kg	2.0	NRM	12/11/96	1640	94627	3
Chromium		15400	62.1	1000	ug/kg	2.0					
Lead		35000	136	500	ug/kg	2.0					
Selenium	J	231	228	500	ug/kg	2.0					
General Chemistry											
Total Rec. Petro. Hydrocarbons		8260	10.0	50.0	mg/kg	1.0	SLR	12/05/96	1030	94537	4

The following prep procedures were performed:

GC/MS Base/Neutral Compounds	MS	12/09/96	1200	94528	5
Mercury	CRB	12/10/96	1340	94693	6
TRACE	CRB	12/09/96	1830	94627	7

Comments:
A dilution was required for Volatile Organics due to a high concentration of hydrocarbons. A dilution was required for Extractable Organics due to matrix interference.

As a result, the detection limits are elevated.

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	0.00*	(30.0 - 115.)
Nitrobenzene-d5	M610	0.00*	(23.0 - 120.)
p-Terphenyl-d14	M610	0.00*	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	87.0	(59.7 - 159.)
Dibromofluoromethane	BTEX-8260	86.1	(74.0 - 128.)
Toluene-d8	BTEX-8260	85.1	(53.4 - 163.)
Bromofluorobenzene	NAP-8260	87.0	(59.7 - 159.)
Dibromofluoromethane	NAP-8260	86.1	(74.0 - 128.)
Toluene-d8	NAP-8260	85.1	(53.4 - 163.)

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TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: December 16, 1996

Sample ID : SPORT0260-1

M = Method	Method-Description
M 1	EPA 8260
M 2	EPA 8270
M 3	EPA 6010A
M 4	EPA 9071
M 5	EPA 3550
M 6	EPA 7471
M 7	EPA 3050

Notes:
The qualifiers in this report are defined as follows:
ND indicates that the analyte was not detected at a concentration greater than the detection limit.
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
U indicates that the analyte was not detected at a concentration greater than the detection limit.
* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories standard operating procedures. Please direct any questions to your Project Manager, Karen Blakeney at (803) 769-7386.

Karen Blakeney
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FL	E87156/87294	E87472/874
NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: December 16, 1996

Sample ID	: SPORT0260-2
Lab ID	: 9612094-02
Matrix	: Soil
Date Collected	: 12/04/96
Date Received	: 12/04/96
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
BTEX - 4 items											
Benzene	U	0.00	10000	20000	ug/kg	10000	JGS2	12/06/96	1232	94538	1
Ethylbenzene	U	0.00	10000	20000	ug/kg	10000					
Toluene	U	0.00	10000	20000	ug/kg	10000					
Xylenes (TOTAL)	U	0.00	10000	20000	ug/kg	10000					
Naphthalene	J	17600	10000	20000	ug/kg	10000					
Extractable Organics											
Polynuclear Aromatic Hydrocarbons - 16 items											
Acenaphthene	J	7860	6660	13300	ug/kg	40.	BDG	12/11/96	2105	94528	2
Acenaphthylene	U	0.00	6660	13300	ug/kg	40.					
Anthracene	U	0.00	6660	13300	ug/kg	40.					
Benzo(a)anthracene	U	0.00	6660	13300	ug/kg	40.					
Benzo(a)pyrene	U	0.00	6660	13300	ug/kg	40.					
Benzo(b)fluoranthene	U	0.00	6660	13300	ug/kg	40.					
Benzo(ghi)perylene	U	0.00	6660	13300	ug/kg	40.					
Benzo(k)fluoranthene	U	0.00	6660	13300	ug/kg	40.					
Chrysene	U	0.00	6660	13300	ug/kg	40.					
Dibenzo(a,h)anthracene	U	0.00	6660	13300	ug/kg	40.					
Fluoranthene	J	7860	6660	13300	ug/kg	40.					
Fluorene	J	8790	6660	13300	ug/kg	40.					
Indeno(1,2,3-c,d)pyrene	U	0.00	6660	13300	ug/kg	40.					
Naphthalene	J	9190	6660	13300	ug/kg	40.					
Phenanthrene		20600	6660	13300	ug/kg	40.					
Pyrene	U	0.00	6660	13300	ug/kg	40.					
Metals Analysis											
Mercury	J	0.0784	0.00241	0.200	mg/kg	1.0	RMI	12/11/96	1305	94693	N
Silver	J	47.8	42.0	990	ug/kg	2.0	NRM	12/11/96	1645	94627	[illegible]
Arsenic		4870	273	990	ug/kg	2.0					

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SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: December 16, 1996

Sample ID : SPORT0260-2

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Barium		17800	24.5	990	ug/kg	2.0					
Cadmium	J	38.7	20.7	495	ug/kg	2.0	NRM	12/11/96	1645	94627	3
Chromium		15300	61.5	990	ug/kg	2.0					
Lead		48800	135	495	ug/kg	2.0					
Selenium	U	168	226	495	ug/kg	2.0					
General Chemistry											
Total Rec. Petro. Hydrocarbons		7520	10.0	50.0	mg/kg	1.0	SLR	12/05/96	1030	94537	

The following prep procedures were performed:

GC/MS Base/Neutral Compounds	MS	12/09/96	1200	94528	5
Mercury	CRB	12/10/96	1340	94693	6
TRACE	CRB	12/09/96	1830	94627	7

Comments:
A dilution was required for Volatile Organics due to a high concentration of hydrocarbons. A dilution was required for Extractable Organics due to matrix interference.

As a result, the detection limits are elevated.

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	0.00*	(30.0 - 115.)
Nitrobenzene-d5	M610	0.00*	(23.0 - 120.)
p-Terphenyl-d14	M610	0.00*	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	96.4	(59.7 - 159.)
Dibromofluoromethane	BTEX-8260	93.7	(74.0 - 128.)
Toluene-d8	BTEX-8260	93.2	(53.4 - 163.)
Bromofluorobenzene	NAP-8260	96.4	(59.7 - 159.)
Dibromofluoromethane	NAP-8260	93.7	(74.0 - 128.)
Toluene-d8	NAP-8260	93.2	(53.4 - 163.)

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SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: December 16, 1996

Sample ID : SPORT0260-2

M = Method	Method-Description
M 1	EPA 8260
M 2	EPA 8270
M 3	EPA 6010A
M 4	EPA 9071
M 5	EPA 3550
M 6	EPA 7471
M 7	EPA 3050

Notes:
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J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
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* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories standard operating procedures. Please direct any questions to your Project Manager, Karen Blakeney at (803) 769-7386.

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SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: December 16, 1996

Sample ID	: SPORT0260-3
Lab ID	: 9612094-03
Matrix	: GroundH2O
Date Collected	: 12/04/96
Date Received	: 12/04/96
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
BTEX - 4 items											
Benzene	U	0.00	1.00	2.00	ug/l	1.0	RMB	12/10/96	2235	94743	1
Ethylbenzene	U	0.00	1.00	2.00	ug/l	1.0					
Toluene	U	0.00	1.00	2.00	ug/l	1.0					
Xylenes (TOTAL)	U	0.00	1.00	4.00	ug/l	1.0					
Naphthalene	U	0.00	1.00	2.00	ug/l	1.0					

Surrogate Recovery	Test	Percent%	Acceptable Limits
Bromofluorobenzene	BTEX-8260	108.	(80.0 - 128.)
Dibromofluoromethane	BTEX-8260	107.	(67.7 - 135.)
Toluene-d8	BTEX-8260	105.	(76.8 - 122.)
Bromofluorobenzene	NAP-8260	108.	(80.0 - 128.)
Dibromofluoromethane	NAP-8260	107.	(67.7 - 135.)
Toluene-d8	NAP-8260	105.	(76.8 - 122.)

M = Method	Method-Description
M 1	EPA 8260

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FL	E87156/87294	E87472/8
NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: December 16, 1996

Sample ID : SPORT0260-3

M = Method	Method-Description

Notes:
The qualifiers in this report are defined as follows:
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U indicates that the analyte was not detected at a concentration greater than the detection limit.
* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories standard operating procedures. Please direct any questions to your Project Manager, Karen Blakeney at (803) 769-7386.

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NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: January 22, 1997

Sample ID	: SPORT0293-1
Lab ID	: 9701200-01
Matrix	: GroundH2O
Date Collected	: 01/13/97
Date Received	: 01/13/97
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
BTEX - 4 items											
Benzene	U	0.00	10.0	20.0	ug/l	10.	SHJ	01/20/97	1341	96539	1
Ethylbenzene	U	0.00	10.0	20.0	ug/l	10.					
Toluene	U	0.00	10.0	20.0	ug/l	10.					
Xylenes (TOTAL)		30.2	10.0	20.0	ug/l	10.					
Naphthalene	U	0.00	10.0	20.0	ug/l	10.					
Extractable Organics											
Polynuclear Aromatic Hydrocarbons - 16 items											
Acenaphthene	U	0.00	50.0	100	ug/l	10.	RLC	01/21/97	1254	96243	2
Acenaphthylene	U	0.00	50.0	100	ug/l	10.					
Anthracene	U	0.00	50.0	100	ug/l	10.					
Benzo(a)anthracene	U	0.00	50.0	100	ug/l	10.					
Benzo(a)pyrene	U	4.20	50.0	100	ug/l	10.					
Benzo(b)fluoranthene	U	6.20	50.0	100	ug/l	10.					
Benzo(ghi)perylene	U	0.00	50.0	100	ug/l	10.					
Benzo(k)fluoranthene	U	0.00	50.0	100	ug/l	10.					
Chrysene	U	0.00	50.0	100	ug/l	10.					
Dibenzo(a,h)anthracene	U	0.00	50.0	100	ug/l	10.					
Fluoranthene	U	34.0	50.0	100	ug/l	10.					
Fluorene	J	52.0	50.0	100	ug/l	10.					
Indeno(1,2,3-c,d)pyrene	U	9.80	50.0	100	ug/l	10.					
Naphthalene	U	0.00	50.0	100	ug/l	10.					
Phenanthrene		102	50.0	100	ug/l	10.					
Pyrene	U	25.0	50.0	100	ug/l	10.					
Metals Analysis											
Mercury	J	0.0290	0.0148	0.500	ug/l	1.0	RMJ	01/16/97	1545	96302	N
Silver	J	0.751	0.424	10.0	ug/l	1.0	NRM	01/16/97	1821	96287	3
Arsenic		14.3	2.76	10.0	ug/l	1.0					

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TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: January 22, 1997

Sample ID : SPORT0293-1

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Barium		154	0.247	10.0	ug/l	1.0					
Cadmium	J	0.315	0.209	5.00	ug/l	1.0	NRM	01/16/97	1821	96287	3
Chromium	J	6.05	0.621	10.0	ug/l	1.0					
Lead		18.8	1.36	5.00	ug/l	1.0					
Selenium	J	3.12	2.28	5.00	ug/l	1.0					
General Chemistry											
Total Rec. Petro. Hydrocarbons		22.5	2.00	2.00	mg/l	1.0	SLR	01/16/97	1100	96358	

The following prep procedures were performed:

GC/MS Base/Neutral Compounds	GWL	01/15/97	1600	96243	5
Mercury	RMJ	01/15/97	1700	96302	6
TRACE	FGD	01/15/97	1530	96287	7

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	62.0	(43.0 - 108.)
Nitrobenzene-d5	M610	72.0	(35.0 - 111.)
p-Terphenyl-d14	M610	38.0	(33.0 - 125.)
Bromofluorobenzene	BTEX-8260	75.4	(73.8 - 128.)
Dibromofluoromethane	BTEX-8260	82.2	(63.9 - 139.)
Toluene-d8	BTEX-8260	77.1	(77.1 - 121.)
Bromofluorobenzene	NAP-8260	75.4	(73.8 - 128.)
Dibromofluoromethane	NAP-8260	82.2	(63.9 - 139.)
Toluene-d8	NAP-8260	77.1	(77.1 - 121.)

M = Method	Method-Description
M 1	EPA 8260
M 2	EPA 8270
M 3	EPA 6010A
M 4	EPA 9070A
M 5	EPA 3510

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SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: January 22, 1997

Sample ID : SPORT0293-1

M = Method	Method-Description
M 6	EPA 7470
M 7	EPA 3005

Notes:
The qualifiers in this report are defined as follows:
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J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
J indicates that the analyte was not detected at a concentration greater than the detection limit.
* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

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Karen Blakeney
Reviewed By

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SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: January 22, 1997

Sample ID	: SPORT0293-2
Lab ID	: 9701200-02
Matrix	: GroundH2O
Date Collected	: 01/13/97
Date Received	: 01/13/97
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
BTEX - 4 items											
Benzene	U	0.00	10.0	20.0	ug/l	10.	SHJ	01/20/97	1412	96539	1
Ethylbenzene	U	0.00	10.0	20.0	ug/l	10.					
Toluene	U	0.00	10.0	20.0	ug/l	10.					
Xylenes (TOTAL)	U	0.00	10.0	20.0	ug/l	10.					
Naphthalene	U	0.00	10.0	20.0	ug/l	10.					

Surrogate Recovery	Test	Percent%	Acceptable Limits
Bromofluorobenzene	BTEX-8260	82.7	(73.8 - 128.)
Dibromofluoromethane	BTEX-8260	89.9	(63.9 - 139.)
Toluene-d8	BTEX-8260	82.3	(77.1 - 121.)
Bromofluorobenzene	NAP-8260	82.7	(73.8 - 128.)
Dibromofluoromethane	NAP-8260	89.9	(63.9 - 139.)
Toluene-d8	NAP-8260	82.3	(77.1 - 121.)

M = Method	Method-Description
M 1	EPA 8260

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SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: January 22, 1997

Sample ID : SPORT0293-2

M = Method	Method-Description

Notes:
The qualifiers in this report are defined as follows:
ND indicates that the analyte was not detected at a concentration greater than the detection limit.
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
U indicates that the analyte was not detected at a concentration greater than the detection limit.
* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories standard operating procedures. Please direct any questions to your Project Manager, Karen Blakeney at (803) 769-7386.

Karen Blakeney
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Laboratory Certifications

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NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: January 29, 1997

Sample ID	: SPORT0310-1
Lab ID	: 9701340-01
Matrix	: Soil
Date Collected	: 01/17/97
Date Received	: 01/17/97
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
BTEX - 4 items											
Benzene	U	0.00	100	200	ug/kg	100	JAC	01/27/97	1952	96984	1
Ethylbenzene	U	72.0	100	200	ug/kg	100					
Toluene	U	0.00	100	200	ug/kg	100					
Xylenes (TOTAL)		405	100	200	ug/kg	100					
Naphthalene		1300	100	200	ug/kg	100					
Extractable Organics											
Polynuclear Aromatic Hydrocarbons - 16 items											
Acenaphthene	U	0.00	164	330	ug/kg	1.0	RLC	01/28/97	2023	96613	2
Acenaphthylene	U	0.00	164	330	ug/kg	1.0					
Anthracene	J	210	164	330	ug/kg	1.0					
Benzo(a)anthracene	U	91.8	164	330	ug/kg	1.0					
Benzo(a)pyrene	U	36.1	164	330	ug/kg	1.0					
Benzo(b)fluoranthene	U	62.3	164	330	ug/kg	1.0					
Benzo(ghi)perylene	U	0.00	164	330	ug/kg	1.0					
Benzo(k)fluoranthene	U	0.00	164	330	ug/kg	1.0					
Chrysene	U	112	164	330	ug/kg	1.0					
Dibenzo(a,h)anthracene	U	0.00	164	330	ug/kg	1.0					
Fluoranthene	J	312	164	330	ug/kg	1.0					
Fluorene	U	0.00	164	330	ug/kg	1.0					
Indeno(1,2,3-c,d)pyrene	U	36.1	164	330	ug/kg	1.0					
Naphthalene		1060	164	330	ug/kg	1.0					
Phenanthrene		1010	164	330	ug/kg	1.0					
Pyrene	J	187	164	330	ug/kg	1.0					
Metals Analysis											
Mercury	J	0.0789	0.00246	0.200	mg/kg	1.0	RMJ	01/23/97	1242	96504	N
Silver	U	-12.3	40.0	944	ug/kg	2.0	NRM	01/27/97	2118	96654	3
Arsenic		6030	260	944	ug/kg	2.0					

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SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: January 29, 1997

Sample ID : SPORT0310-1

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Barium		22200	23.3	944	ug/kg	2.0					
Cadmium	J	19.9	19.7	472	ug/kg	2.0	NRM	01/27/97	2118	96654	3
Chromium		15900	58.6	944	ug/kg	2.0					
Lead		18000	129	472	ug/kg	2.0					
Selenium	J	464	215	472	ug/kg	2.0					
General Chemistry											
Total Rec. Petro. Hydrocarbons		150	10.0	50.0	mg/kg	1.0	SLR	01/22/97	1200	96724	4

.e following prep procedures were performed:

GC/MS Base/Neutral Compounds	MS	01/21/97	1400	96613	5
Mercury	RMJ	01/22/97	1600	96504	6
TRACE	CRB	01/22/97	1915	96654	7

Comments:
A dilution was required for Volatile Organics due to matrix interference.
As a result, the detection limits are elevated.

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	51.8	(30.0 - 115.)
Nitrobenzene-d5	M610	61.2	(23.0 - 120.)
p-Terphenyl-d14	M610	38.0	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	95.4	(53.5 - 154.)
Dibromofluoromethane	BTEX-8260	73.1	(63.4 - 136.)
Toluene-d8	BTEX-8260	89.3	(72.1 - 137.)
Bromofluorobenzene	NAP-8260	95.4	(53.5 - 154.)
Dibromofluoromethane	NAP-8260	73.1	(63.4 - 136.)
Toluene-d8	NAP-8260	89.3	(72.1 - 137.)

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FL	E87156/87294	E87472/8.
NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: January 29, 1997

Sample ID : SPORT0310-1

M = Method	Method-Description
M 1	EPA 8260
M 2	EPA 8270
M 3	EPA 6010A
M 4	EPA 9071
M 5	EPA 3550
M 6	EPA 7471
M 7	EPA 3050

Notes:
The qualifiers in this report are defined as follows:
ND indicates that the analyte was not detected at a concentration greater than the detection limit.
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
U indicates that the analyte was not detected at a concentration greater than the detection limit.
* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories standard operating procedures. Please direct any questions to your Project Manager, Karen Blakeney at (803) 769-7386.

Karen Blakeney
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TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: January 29, 1997

Sample ID	: SPORT0310-2
Lab ID	: 9701340-02
Matrix	: Soil
Date Collected	: 01/17/97
Date Received	: 01/17/97
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
BTEX - 4 items											
Benzene	U	0.00	10.0	20.0	ug/kg	10.	JAC	01/28/97	0953	96984	1
Ethylbenzene	J	16.7	10.0	20.0	ug/kg	10.					
Toluene	U	0.00	10.0	20.0	ug/kg	10.					
Xylenes (TOTAL)		42.2	10.0	20.0	ug/kg	10.					
Naphthalene	U	0.00	10.0	20.0	ug/kg	10.					
Extractable Organics											
Polynuclear Aromatic Hydrocarbons - 16 items											
Acenaphthene	U	0.00	165	330	ug/kg	1.0	RLC	01/28/97	2056	96613	2
Acenaphthylene	U	0.00	165	330	ug/kg	1.0					
Anthracene	U	0.00	165	330	ug/kg	1.0					
Benzo(a)anthracene	U	0.00	165	330	ug/kg	1.0					
Benzo(a)pyrene	U	0.00	165	330	ug/kg	1.0					
Benzo(b)fluoranthene	U	0.00	165	330	ug/kg	1.0					
Benzo(ghi)perylene	U	0.00	165	330	ug/kg	1.0					
Benzo(k)fluoranthene	U	0.00	165	330	ug/kg	1.0					
Chrysene	U	0.00	165	330	ug/kg	1.0					
Dibenzo(a,h)anthracene	U	0.00	165	330	ug/kg	1.0					
Fluoranthene	U	0.00	165	330	ug/kg	1.0					
Fluorene	U	0.00	165	330	ug/kg	1.0					
Indeno(1,2,3-c,d)pyrene	U	0.00	165	330	ug/kg	1.0					
Naphthalene	U	0.00	165	330	ug/kg	1.0					
Phenanthrene	U	0.00	165	330	ug/kg	1.0					
Pyrene	U	0.00	165	330	ug/kg	1.0					
Metals Analysis											
Mercury	J	0.0302	0.00246	0.200	mg/kg	1.0	RMJ	01/23/97	1245	96504	N
Silver	U	10.2	42.0	990	ug/kg	2.0	NRM	01/27/97	2123	96654	3
Arsenic		7240	273	990	ug/kg	2.0					

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TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: January 29, 1997

Sample ID : SPORT0310-2

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Barium		17300	24.5	990	ug/kg	2.0					
Cadmium	J	28.9	20.7	495	ug/kg	2.0	NRM	01/27/97	2123	96654	3
Chromium		19500	61.5	990	ug/kg	2.0					
Lead		17000	135	495	ug/kg	2.0					
Selenium	J	463	226	495	ug/kg	2.0					
General Chemistry											
Total Rec. Petro. Hydrocarbons		120	10.0	50.0	mg/kg	1.0	SLR	01/22/97	1200	96724	4

.he following prep procedures were performed:

GC/MS Base/Neutral Compounds	MS	01/21/97	1400	96613	5
Mercury	RMJ	01/22/97	1600	96504	6
TRACE	CRB	01/22/97	1915	96654	7

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	93.7	(30.0 - 115.)
Nitrobenzene-d5	M610	109.	(23.0 - 120.)
p-Terphenyl-d14	M610	78.8	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	124.	(53.5 - 154.)
Dibromofluoromethane	BTEX-8260	79.5	(63.4 - 136.)
Toluene-d8	BTEX-8260	107.	(72.1 - 137.)
Bromofluorobenzene	NAP-8260	124.	(53.5 - 154.)
Dibromofluoromethane	NAP-8260	79.5	(63.4 - 136.)
Toluene-d8	NAP-8260	107.	(72.1 - 137.)

M = Method	Method-Description
M 1	EPA 8260
M 2	EPA 8270
M 3	EPA 6010A
M 4	EPA 9071
M 5	EPA 3550

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SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: January 29, 1997

Sample ID : SPORT0310-2

M = Method	Method-Description
M 6	EPA 7471
M 7	EPA 3050

Notes:
The qualifiers in this report are defined as follows:
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I indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
'ndicates that the analyte was not detected at a concentration greater than the detection limit.
ndicates that a quality control analyte recovery is outside of specified acceptance criteria.

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SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: January 29, 1997

Sample ID	: SPORT0310-3
Lab ID	: 9701340-03
Matrix	: Soil
Date Collected	: 01/17/97
Date Received	: 01/17/97
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
BTEX - 4 items											
Benzene	U	0.00	1.00	2.00	ug/kg	1.0	JAC	01/28/97	1027	96984	1
Ethylbenzene	U	0.00	1.00	2.00	ug/kg	1.0					
Toluene	U	0.00	1.00	2.00	ug/kg	1.0					
Xylenes (TOTAL)	U	0.00	1.00	4.00	ug/kg	1.0					
Naphthalene	U	0.00	1.00	2.00	ug/kg	1.0					

Surrogate Recovery	Test	Percent%	Acceptable Limits
Bromofluorobenzene	BTEX-8260	111.	(53.5 - 154.)
Dibromofluoromethane	BTEX-8260	74.0	(63.4 - 136.)
Toluene-d8	BTEX-8260	98.8	(72.1 - 137.)
Bromofluorobenzene	NAP-8260	111.	(53.5 - 154.)
Dibromofluoromethane	NAP-8260	74.0	(63.4 - 136.)
Toluene-d8	NAP-8260	98.8	(72.1 - 137.)

M = Method	Method-Description
M 1	EPA 8260

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NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: January 29, 1997

Sample ID : SPORT0310-3

M = Method	Method-Description

Notes:
The qualifiers in this report are defined as follows:
ND indicates that the analyte was not detected at a concentration greater than the detection limit.
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
U indicates that the analyte was not detected at a concentration greater than the detection limit.
* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories standard operating procedures. Please direct any questions to your Project Manager, Karen Blakeney at (803) 769-7386.

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NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: January 31, 1997

Sample ID	: SPORT0315-1
Lab ID	: 9701418-01
Matrix	: Soil
Date Collected	: 01/22/97
Date Received	: 01/22/97
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
BTEX - 4 items											
Benzene	U	0.00	25.0	50.0	ug/kg	25.	JAC	01/30/97	1201	97025	1
Ethylbenzene	U	0.00	25.0	50.0	ug/kg	25.					
Toluene	U	0.00	25.0	50.0	ug/kg	25.					
Xylenes (TOTAL)	U	0.00	25.0	50.0	ug/kg	25.					
Naphthalene		490	25.0	50.0	ug/kg	25.					
Extractable Organics											
Polynuclear Aromatic Hydrocarbons - 16 items											
Acenaphthene		3560	662	1320	ug/kg	4.0	JCB	01/26/97	0017	96986	2
Acenaphthylene	U	0.00	662	1320	ug/kg	4.0					
Anthracene		3310	662	1320	ug/kg	4.0					
Benzo(a)anthracene		3670	662	1320	ug/kg	4.0					
Benzo(a)pyrene		2860	662	1320	ug/kg	4.0					
Benzo(b)fluoranthene		3570	662	1320	ug/kg	4.0					
Benzo(ghi)perylene	J	1230	662	1320	ug/kg	4.0					
Benzo(k)fluoranthene		1990	662	1320	ug/kg	4.0					
Chrysene		3570	662	1320	ug/kg	4.0					
Dibenzo(a,h)anthracene	U	0.00	662	1320	ug/kg	4.0					
Fluoranthene		9820	662	1320	ug/kg	4.0					
Fluorene		3320	662	1320	ug/kg	4.0					
Indeno(1,2,3-c,d)pyrene		1540	662	1320	ug/kg	4.0					
Naphthalene		2770	662	1320	ug/kg	4.0					
Phenanthrene		10800	662	1320	ug/kg	4.0					
Pyrene		10100	662	1320	ug/kg	4.0					
Metals Analysis											
Mercury	J	0.146	0.00234	0.200	mg/kg	1.0	RMJ	01/27/97	1623	96893	N
Silver	U	19.8	41.6	980	ug/kg	2.0	NRM	01/28/97	1757	96883	3
Arsenic		10200	270	980	ug/kg	2.0					

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NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: January 31, 1997

Sample ID : SPORT0315-1

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Barium		19500	24.2	980	ug/kg	2.0					
Cadmium	J	28.4	20.5	490	ug/kg	2.0	NRM	01/28/97	1757	96883	3
Chromium		25400	60.9	980	ug/kg	2.0					
Lead		22200	134	490	ug/kg	2.0					
Selenium	U	205	223	490	ug/kg	2.0					
General Chemistry											
Total Rec. Petro. Hydrocarbons	J	30.0	10.0	50.0	mg/kg	1.0	SLR	01/28/97	1100	96992	4

The following prep procedures were performed:

GC/MS Base/Neutral Compounds	MS	01/28/97	1530	96986	5
Mercury	CRB	01/24/97	1630	96893	6
TRACE	FGD	01/27/97	1800	96883	7

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	102.	(30.0 - 115.)
Nitrobenzene-d5	M610	71.8	(23.0 - 120.)
p-Terphenyl-d14	M610	101.	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	99.2	(53.5 - 154.)
Dibromofluoromethane	BTEX-8260	108.	(63.4 - 136.)
Toluene-d8	BTEX-8260	113.	(72.1 - 137.)
Bromofluorobenzene	NAP-8260	99.2	(53.5 - 154.)
Dibromofluoromethane	NAP-8260	108.	(63.4 - 136.)
Toluene-d8	NAP-8260	113.	(72.1 - 137.)

M = Method	Method-Description
M 1	EPA 8260
M 2	EPA 8270
M 3	EPA 6010A
M 4	EPA 9071
15	EPA 3550

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NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: January 31, 1997

Sample ID : SPORT0315-1

M = Method	Method-Description
M 6	EPA 7471
M 7	EPA 3050

Notes:
The qualifiers in this report are defined as follows:
ND indicates that the analyte was not detected at a concentration greater than the detection limit.
"ndicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
ndicates that the analyte was not detected at a concentration greater than the detection limit.
ndicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed
in accordance with General Engineering Laboratories
standard operating procedures. Please direct
any questions to your Project Manager, Karen Blakeney at (803) 769-7386.

Karen Blakeney
Reviewed By

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9701418-01

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FL	E87156/87294	E87472/874
NC	233	
SC	10120	10582
TN	02934	02934

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SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: January 31, 1997

Sample ID	: SPORT0315-2
Lab ID	: 9701418-02
Matrix	: Soil
Date Collected	: 01/22/97
Date Received	: 01/22/97
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
BTEX - 4 items											
enzene	U	0.00	1.00	2.00	ug/kg	1.0	JAC	01/28/97	1730	97025	1
Ethylbenzene	U	0.00	1.00	2.00	ug/kg	1.0					
Toluene	U	0.00	1.00	2.00	ug/kg	1.0					
Xylenes (TOTAL)	U	0.00	1.00	4.00	ug/kg	1.0					
Naphthalene	J	1.06	1.00	2.00	ug/kg	1.0					

Surrogate Recovery	Test	Percent%	Acceptable Limits
Bromofluorobenzene	BTEX-8260	116.	(53.5 - 154.)
Dibromofluoromethane	BTEX-8260	73.0	(63.4 - 136.)
Toluene-d8	BTEX-8260	103.	(72.1 - 137.)
Bromofluorobenzene	NAP-8260	116.	(53.5 - 154.)
Dibromofluoromethane	NAP-8260	73.0	(63.4 - 136.)
Toluene-d8	NAP-8260	103.	(72.1 - 137.)

M = Method	Method-Description
M 1	EPA 8260

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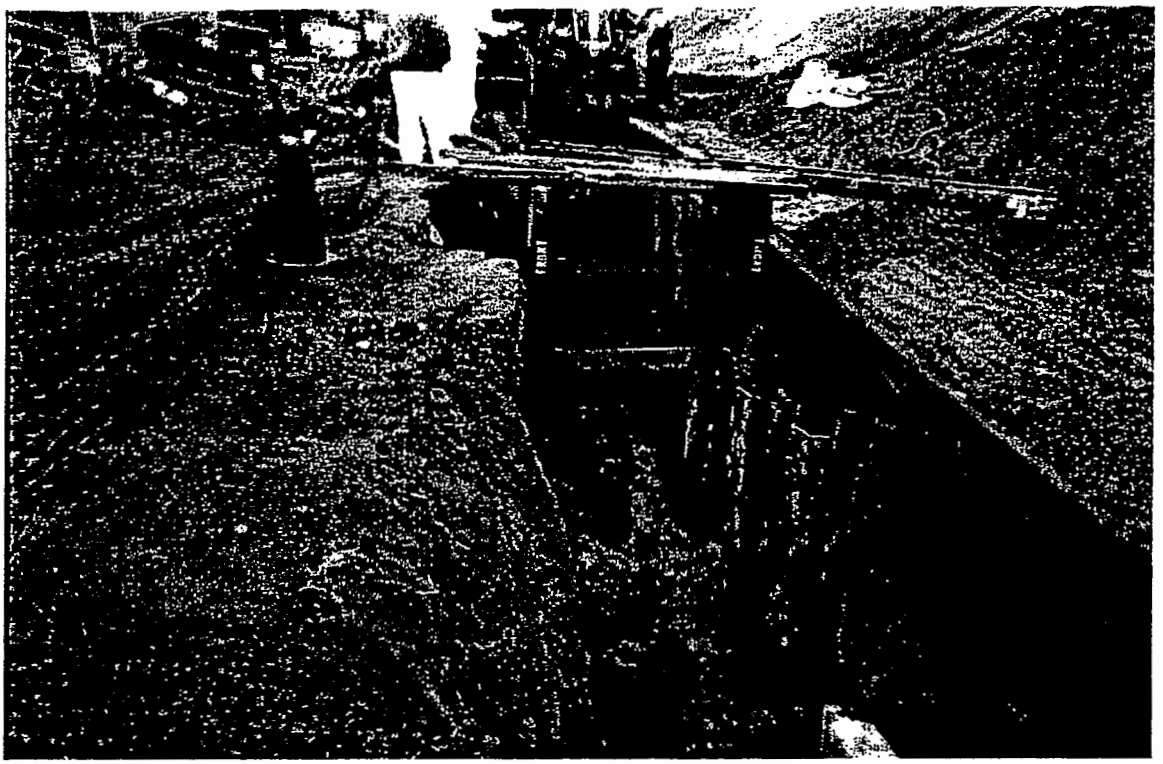
APPENDIX C

PHOTOGRAPHS

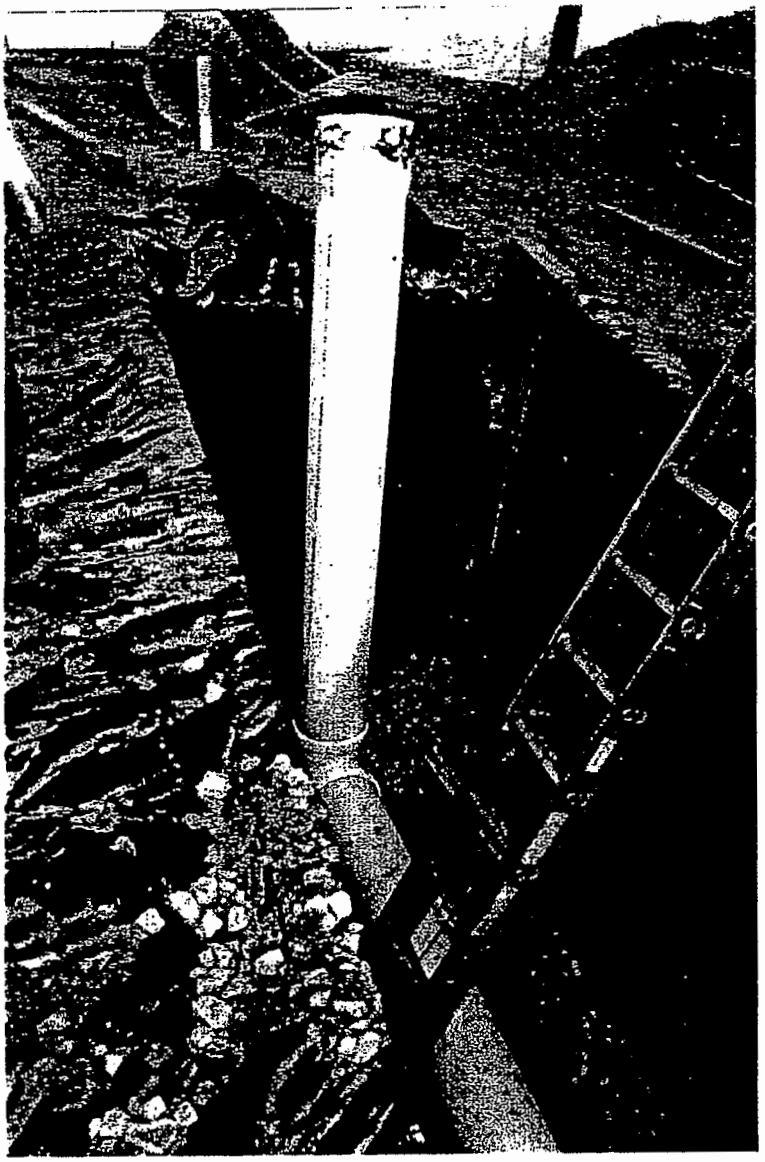
Southwest view of site prior to excavation. Stressed vegetation in foreground, four existing product recovery wells in background.

Southwest view of site after excavation of 18" f.o. pipeline. The five product recovery wells are in the background.



Workers in the process of removing a section of 18" f.o. pipeline. Sheet piling is visible inside the lower right trench wall.

Typical hole identified throughout the length of the 18" f.o. pipeline.



Installation of product recovery system, 12" PVC horizontal and vertical pipe, inside trenchbox.

APPENDIX D

DRAWINGS

G

Appendix G

Fuel Distribution System
Site Characterization Report AOC 626 (SCAPS)

NAVAL FACILITIES ENGINEERING SERVICE CENTER
Port Hueneme, California 93043-4328

Site Specific Repor

SSR-2185-EN\

SITE CHARACTERIZATION AND ANALYSIS PENETROMETER SYSTEM

SITE CHARACTERIZATION AT
NAVAL BASE CHARLESTON
CHARLESTON, SOUTH CAROLINA

AOC 626
CHARLESTON NAVAL SUPPLY CENTER
FUEL FARM

by
Jed Costanza

April 1996

Distribution authorized to U.S. Government agencies and their contractors; Administrative/Operational Use; April 1996. Other requests shall be referred to Naval Facilities Engineering Service Center.

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FINAL REPORT

SITE CHARACTERIZATION AND ANALYSIS PENETROMETER SYSTEM

SITE CHARACTERIZATION
AT NAVAL BASE CHARLESTON
CHARLESTON, SOUTH CAROLINA

AOC 626
CHARLESTON NAVAL SUPPLY CENTER
FUEL FARM

Document Identification: NFESC-SCAPS Documentation Number FINAL95-011

Prepared by:

Jed Costanza
Environmental Engineer

Approved by:

Thomas H. Flor
Head, Consultation and Information Management Branch Code 413

EXECUTIVE SUMMARY

An investigation was conducted from 10 to 16 July 1995 at Naval Supply Center Fuel Farm, Naval Base Charleston, AOC 626. Thirty Three SCAPS pushes were completed and eight soil samples were collected for analysis.

The near surface geology, as interpreted through soil boring logs and the SCAPS investigation data consists of silty clay to clay, organic material, sands, silty sands, and clay. Figure 3 provides a visual representation of the lithology as determined by SCAPS for the Fuel Farm.

All indication is that the SCAPS system worked. The confirmation sample analysis reveals a lack of significant quantities of fuel. The conclusion is that fuel was found in low concentrations (below 16 ppm by EPA Method 8015 Modified) in the SCAPS push locations at the Fuel Farm. High fluorescent responses are related to the organic content of the soil. Variability in the distribution of the soil types results in patterns that look like fuel contamination.

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This report documents the Site Characterization and Analysis Penetrometer System (SCAPS) investigation of AOC 626, at the Naval Supply Center Fuel Farm, Naval Base Charleston. The investigation consisted of pushing a penetrometer probe (known as a "push") into the subsurface at locations in and around the site to determine soil lithology and the vertical and lateral extent of hydrocarbon contamination. The investigation was conducted from 10 to 16 July 1995. Thirty Three SCAPS pushes were completed and eight soil samples were collected for analysis.

1. INTRODUCTION

1.1 Objectives

The objective of the SCAPS investigation was to define the extent of polynuclear aromatic hydrocarbon (PAH) contamination in the area outside of the Fuel Farm.

1.2 Site Location

Naval Base Charleston is located in Charleston, South Carolina. As shown in Figure 1, Naval Base Charleston is located north of Charleston. The Fuel Farm is located in the central portion of the Naval Base as shown in Figure 2. (NEESA, 1983)

1.3 Site History

Bulk quantities of diesel oil, Navy Special Fuel Oil, and waste oil have been stored in the tanks at the Fuel Farm from the late 1930s through today. (NEESA, 1983)

There is an existing fuel recovery system in place near the intersection of Hobson Avenue and Viaduct Road. There are reports of fuel in the utility backfill material.

1.4 Site Geology

The geology of the Charleston area is typical of the southern part of the Atlantic Coastal Plain. A seaward-thickening wedge of Cretaceous and younger sediments is underlain by older igneous and metamorphic basement rock. At Naval Base Charleston, Recent and/or Pleistocene sands, silts, and clays of high organic content are exposed at the surface. These materials are underlain by a plastic calcareous clay known as the Cooper Marl. (NEESA, 1983)

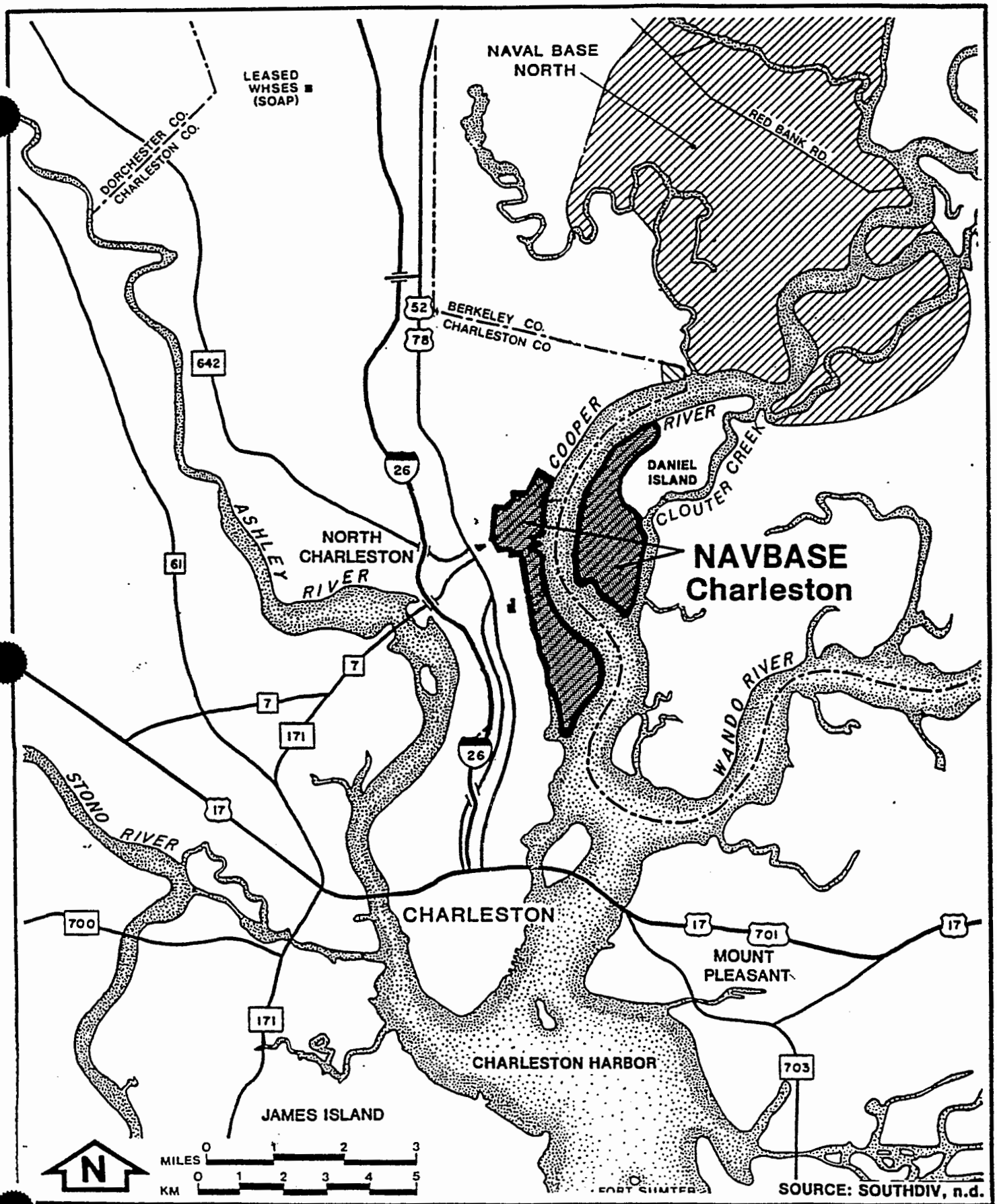
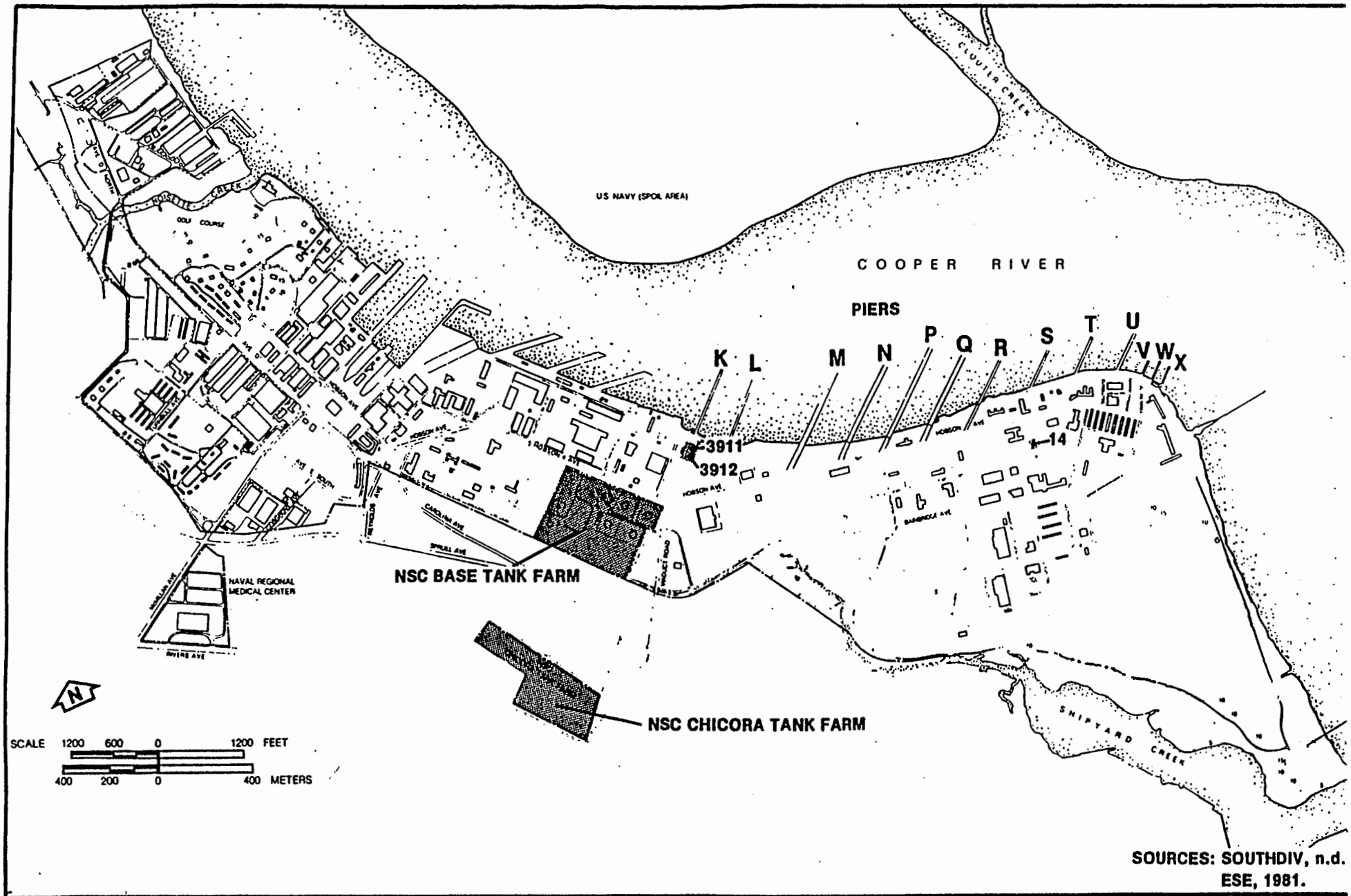


Figure 1
LOCATION MAP OF NAVBASE CHARLESTON

NAVAL BASE CHARLESTON



SOURCES: SOUTHDIV, n.d.
ESE, 1981.

Figure 2
LOCATIONS OF NSC POL STORAGE AREAS

NAVAL BASE CHARLESTON

The surface soils at Naval Base Charleston have been extensively disturbed by a long history of intensive use. The natural surface soils were probably fine-grained materials typical of tidal marsh environments. Most of the southern portion of the base has been covered with dredged spoil. This spoil is an unsorted mixture of sands, silts, and clays. Most areas of the base have been either filled or reworked. The permeability of the surface soils is rather low, as evidenced by the repeated history of poor drainage. (NEESA, 1983)

In the shallow aquifer underneath the Naval Base, water flows toward the Cooper River or Shipyard. The water table is within 3 to 7 feet of the ground surface. The shallow ground water continually discharges to the Cooper River and Shipyard Creek. (NEESA, 1983)

1.5 Investigation Procedure

The investigation began by asking Naval Facilities Engineering Command, Southern Division to provide locations for approximately 30 potential pushes. The first push was performed to the northwest of Tank 3900-E. The first six pushes were completed to verify that no fuel was migrating to the southeast of the Fuel Farm. The next twenty seven pushes were completed to define the extent of fuel contamination.

Appendix A contains the methods used during the investigation.

2. INTERPRETATIONS

2.1 Interpreting Laser Induced Fluorescence Data.

SCAPS is a field screening technique that detects petroleum hydrocarbons using the technique of laser induced fluorescence (LIF). SCAPS measures the presence of petroleum hydrocarbons by detecting polynuclear aromatic hydrocarbons (PAHs). PAHs are virtually found in all petroleum fuel mixtures. The PAHs fluorescence under ultra violet excitation, so that the amount of fluorescence is related to the amount of PAHs. A detailed system description is included in Appendix B.

The sensitivity of SCAPS varies with the portion of PAHs in the petroleum fuel. The present SCAPS system is most sensitive to PAHs with three or more rings like those found in heavy fuels such as diesel fuel and heating oils. The system has a reduced sensitivity to lighter fuels such as avgas, JP-5, and JP-4 which contain a smaller portion of three or more ringed PAHs.

The Laser Induced Fluorescence (LIF) system is quantitative in a known soil matrix with a known contaminant. However, when operated in the field the LIF system is semi-quantitative

SCAPS results are intended to be used to gain a better understanding of contaminant distribution while reducing the number of investigation iterations at a site. Experience has shown that the measured fluorescence intensity is a good gross indicator of the location and amount of petroleum in the soil at a site, and that the SCAPS measurements are most effective when used in conjunction with a reduced number of soil samples that provide a quantitative measurement of the amount of contamination. The SCAPS results are not intended to define the extent of contamination for regulatory purposes.

Interpretation of the LIF response is completed by performing statistical analysis of the data collected to determine the Fluorescence Threshold (FT). The statistical analysis is included in Appendix C. A responding fluorescent intensity below the FT represents the normal population of responses that is expected from a complex soil system. A responding fluorescent intensity above the FT represents a different population of responses that can be shown to represent petroleum hydrocarbon contamination. This is shown during each investigation by collecting soil samples from ten percent of the push locations and sending the samples to contracted laboratories for total petroleum hydrocarbon analysis.

2.2 LIF System Output

A push profile is generated after the LIF system collects the data. All the profiles are included in Appendix D. A profile consists of six columns of information. The first three columns are cone penetrometer data that is discussed in section 2.3. The last two columns of information are LIF system results. The first of the last two columns represents the Peak Wavelength in nanometers of the responding signal. This is used real time to indicate:

- consistency with previous results
- consistency of the response with depth
- consistency with known contaminant responses from previous investigations

The second of the last two columns represents the peak Raw Fluorescent intensity of the responding signal. This is used real time to indicate:

- the magnitude of the responding signal with respect to the calibration samples
- the depth and thickness of the positive response

Responses at or near the ground surface are considered false positives since they could represent plant materials.

2.3 Cone Penetrometer Data

As mentioned in the previous section, the push profile consists of six columns of information. The first three columns are cone penetrometer data results. The first of the three columns

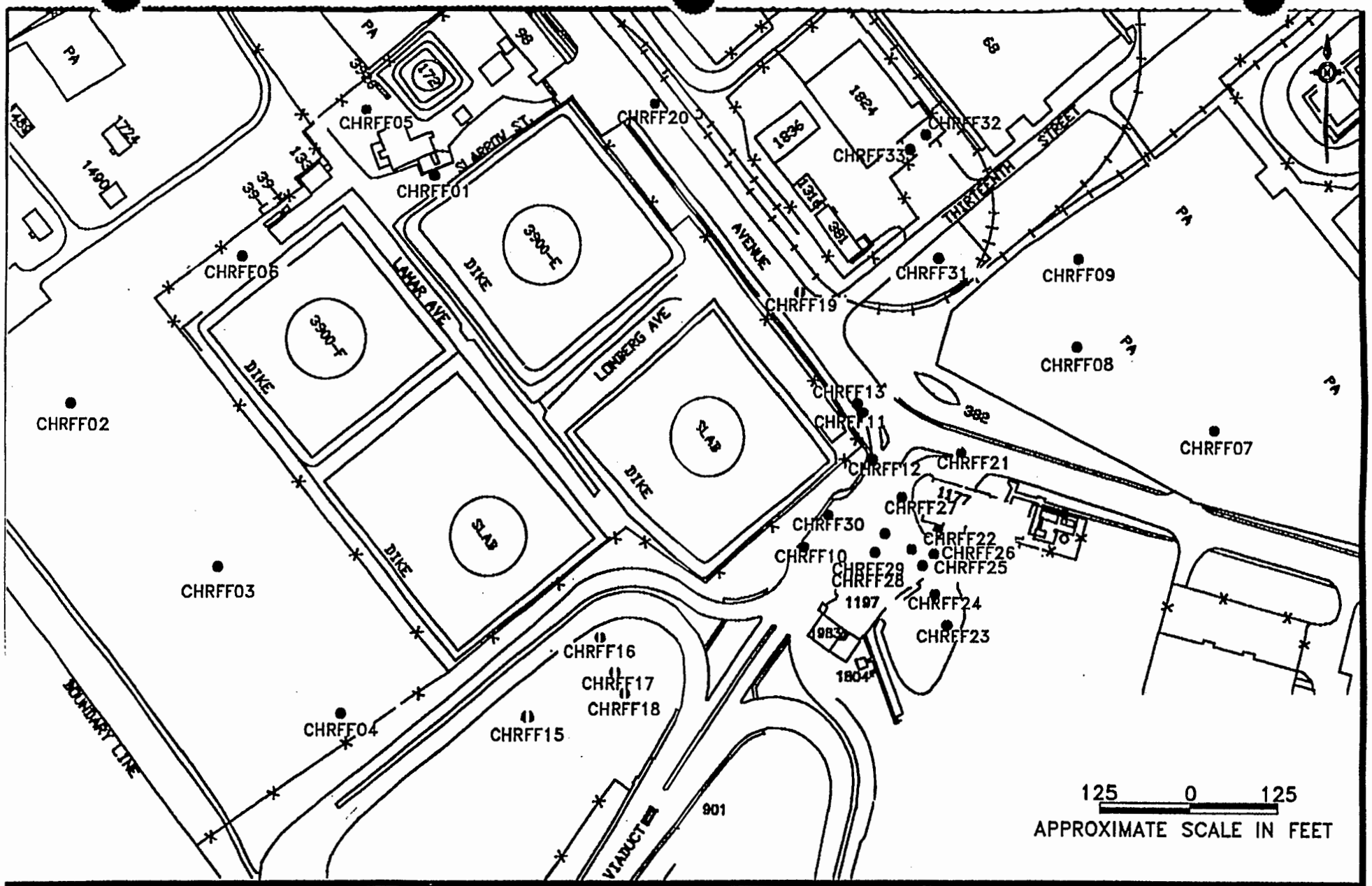
represents the cone pressure in tons per square foot (tsf). The cone pressure measurement, q_c, is recorded with a Wheatstone bridge strain gauge in terms of the voltage and converted to bearing pressure expressed as tons/ft^2 (tsf). Results may be used in geotechnical design or along with sleeve friction to determine soil classification. The cone resistance is a measure of the grain-to-grain skeleton strength for sands and silts. Further advancement of the probe is stopped if this measurement exceeds 1000 tsf at any time during the push.

The second of the first three columns represents the sleeve friction in tons per square foot (tsf). The sleeve friction resistance, f_g, is the resistance of the soil as it slides past the friction sleeve. Further advancement of the probe is stopped if this measurement exceeds 8 tsf at any time during the push.

The third column represents the soil classification as a number between 1 and 12. This is determined from the ratio of cone pressure and sleeve friction. Appendix E contains the chart that is used to convert the number to a soil classification type.

Techniques for using the soil strength measurements (cone pressure and sleeve friction) made with the cone penetrometer to determine soil type have been well-documented (Olsen and Farr, 1986). The classification scheme used by the SCAPS was devised by Robertson and Campanella (1989) to identify the types of soils encountered by cone penetrometer probes. For a detailed description of the output interpretation see Roberston and Campanella (1989), "Guidelines for Geothechnical Design Using the Cone Penetrometer Test and CPT with Pore Pressure Measurement." Hogentogler & Co., Inc., Columbia, MD.

SCAPS standard electrical cone penetrometer instrumentation consists of strain gauges measuring cone pressure and sleeve friction in accordance with American Society of Testing and Materials (ASTM) Standard D3441. The probe does not fully conform to ASTM standard because the diameter changes less than one foot above the friction sleeve.



SCAPS INVESTIGATION OF
AOC 626
CHARLESTON NAVAL SUPPLY CENTER
FUEL FARM

FIGURE 3 - SCAPS PUSH LOCATIONS

NAVAL BASE CHARLESTON
CHARLESTON, SOUTH CAROLINA

3. RESULTS

Figure 3 shows the locations of SCAPS pushes completed at the Fuel Farm. The raw SCAPS results along with the confirmation sample results are in Appendix F.

Most of the Fluorescent Intensity results were below the Fluorescent Threshold (7157 counts). The following Push holes have Fluorescent Intensity responses that are greater than the Fluorescent Threshold and were suspected of being contaminated:

- CHRFF04
- CHRFF11
- CHRFF13
- CHRFF16
- CHRFF18
- CHRFF22
- CHRFF32

Confirmatory soil samples were collected from the depth below ground surface to coincide with the suspected contaminated areas. The soil samples were analyzed by the Ensafe laboratory and by the PWC Jacksonville contract laboratory (results are in Appendix A). The PWC Jacksonville laboratory used EPA Method 418.1 for analysis and did not detect any petroleum hydrocarbons. The Ensafe laboratory used EPA Method 8015 modified and found 16.9 ppm TPH in the sample from CHRFF22. (Information found in Appendix F)

The control standard that is used before and after each push is described in Appendix B.2. The results of the control standard checks are included in Appendix F as Pre Quinine Sulfate and Post Quinine Sulfate. These control standard results show that the Laser Induced Fluorescence systems was working during each push.

The soil results are given in Figure 4, 5, 6, and 7. These figures present cross-sections of the soil type as determined by the cone penetrometer. One interesting feature are the logs from Push holes CHRFF 11, 13, 19, and 21. These pushes were completed in Hobson Avenue near underground utilities. From approximately 9 to 12 feet below ground surface the soil type is silty sand to sandy silt. This region and soil type was thought likely to be contaminated because of the greater permeability as compared with the other soil types.

4. CONCLUSION

There are values of Fluorescent Intensity that indicate the presence of PAHs. However, the confirmation samples that were collected and analyzed reveal that no PAHs are present at significant concentrations. Both the SCAPS and conventional fixed laboratory analysis methods showed a lack of contamination at the Fuel Farm.

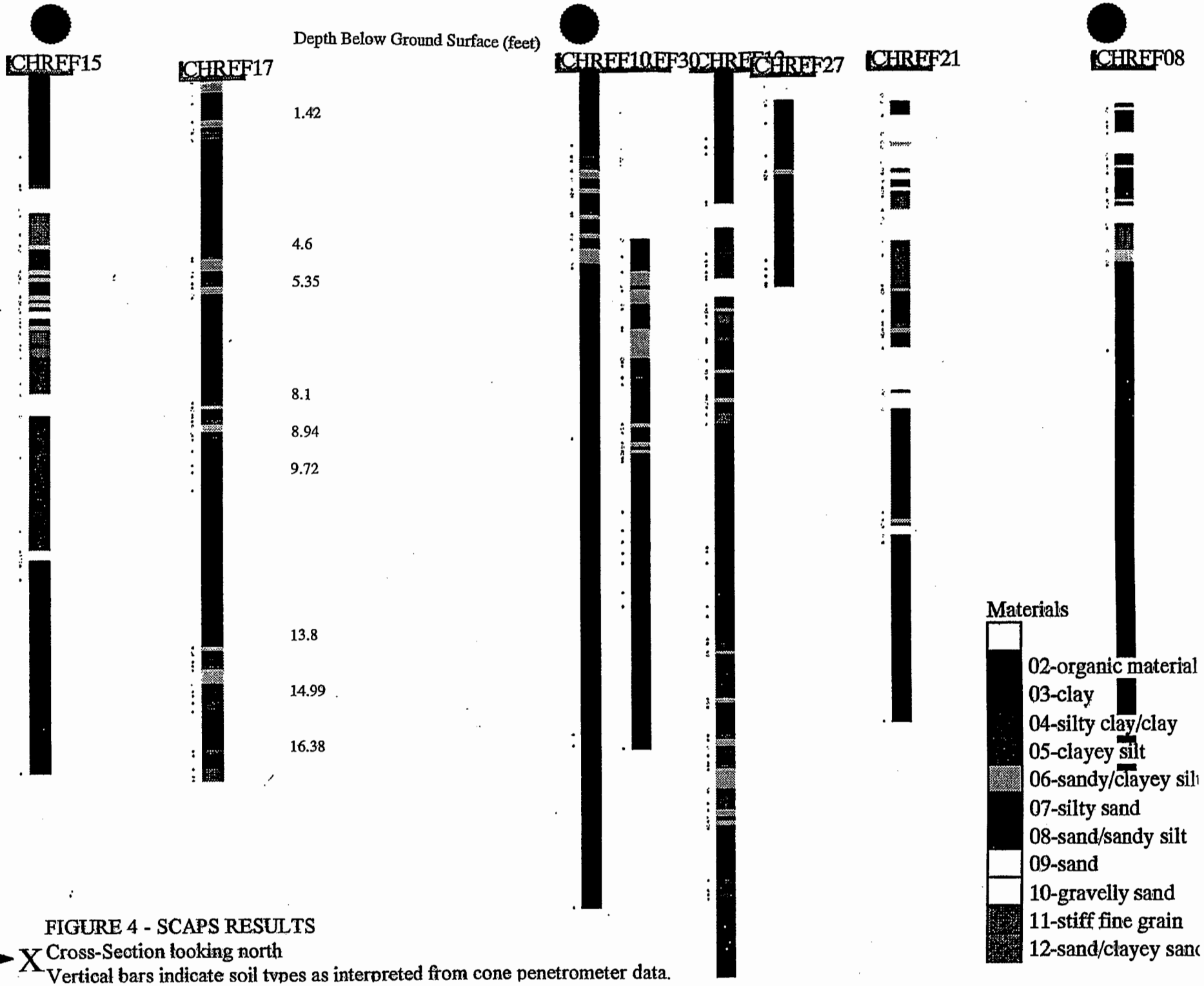


FIGURE 4 - SCAPS RESULTS
Cross-Section looking north
Vertical bars indicate soil types as interpreted from cone penetrometer data.

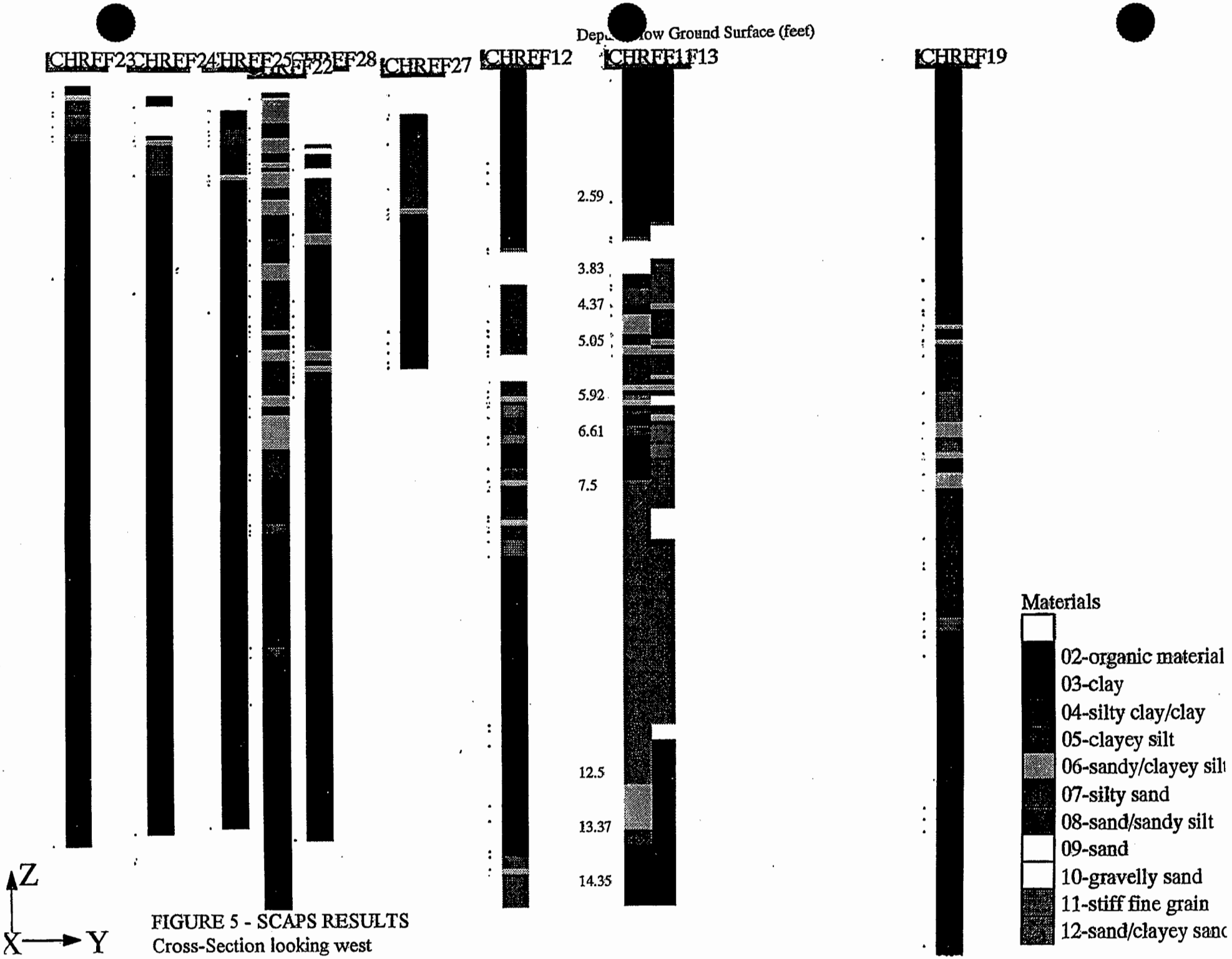


FIGURE 5 - SCAPS RESULTS
Cross-Section looking west

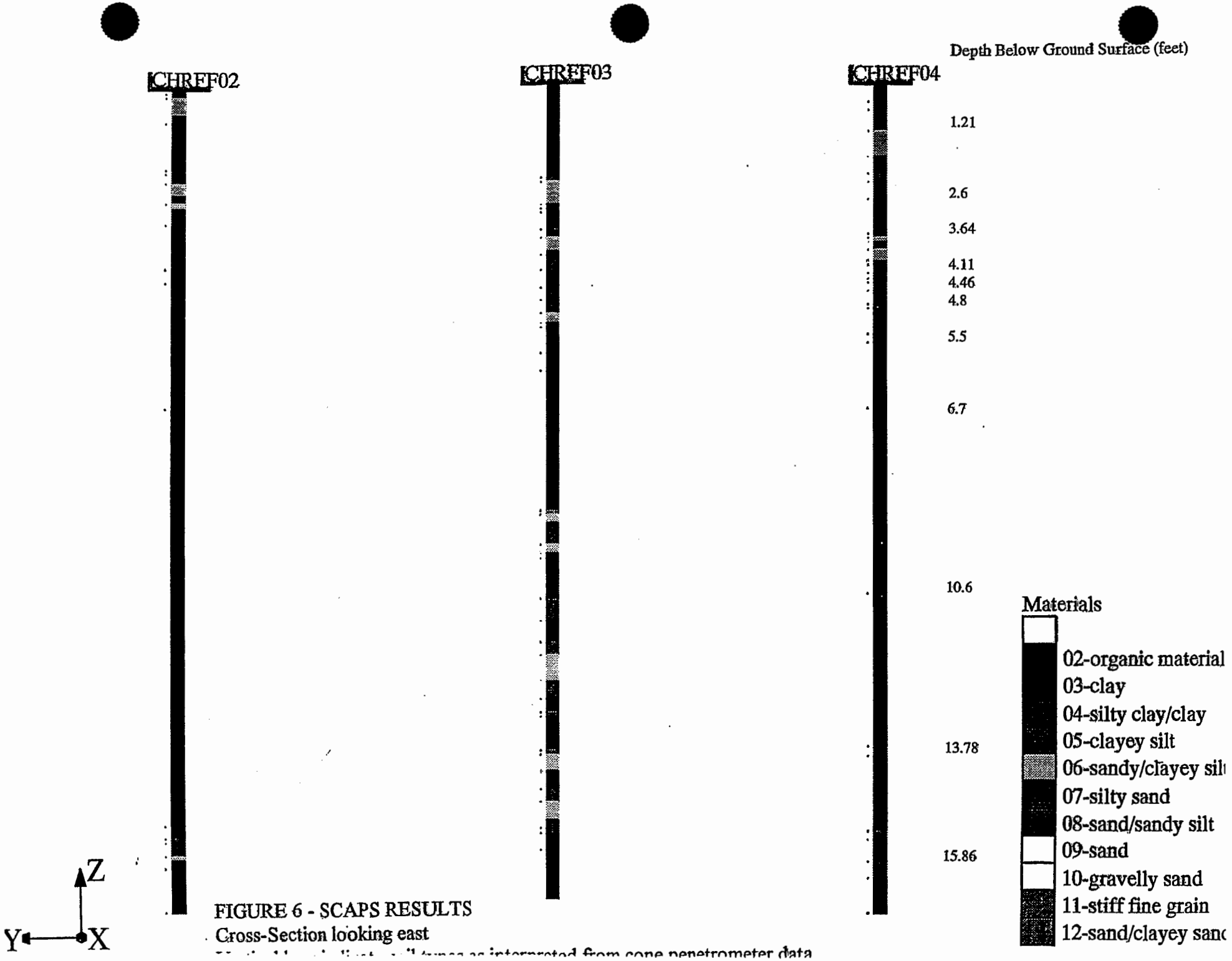


FIGURE 6 - SCAPS RESULTS
Cross-Section looking east
Vertical lines indicate soil types as interpreted from cone penetrometer data

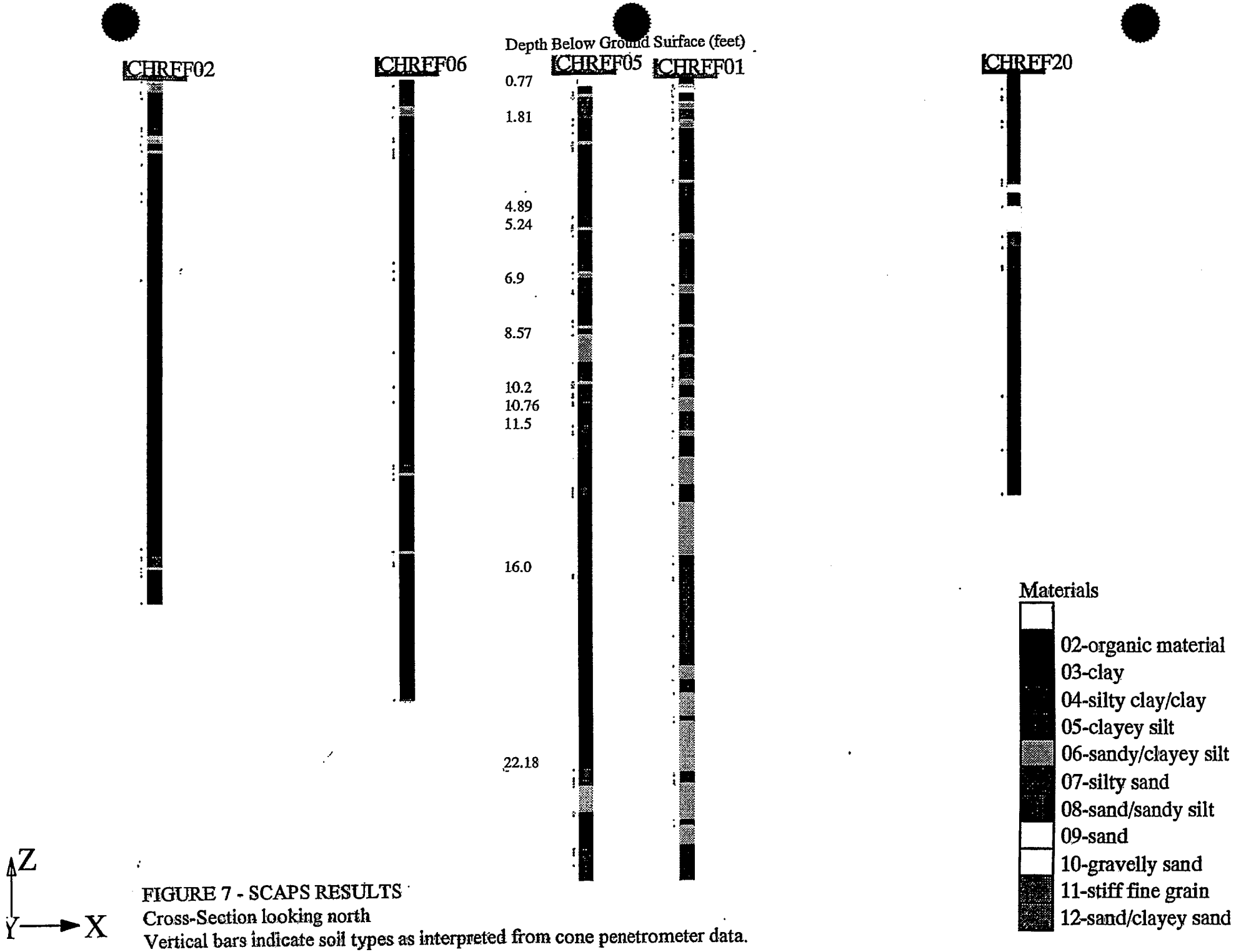


FIGURE 7 - SCAPS RESULTS
Cross-Section looking north
Vertical bars indicate soil types as interpreted from cone penetrometer data.

The SCAPS system responds well to NSFO and diesel fuel. The SCAPS system was in working order as evidenced by the Quinine Sulfate control standard checks performed before and after each push. The only probable explanation for the high fluorescent responses and the absence of PAHs in the confirmation samples, is that the organic and mineral compounds in the soil fluoresced.

The investigation process that includes SCAPS combined with confirmation soil samples worked and no contamination was identified.

5. RECOMMENDATION

Since there was no widespread contamination identified at the Fuel Farm, those areas which have been observed to be contaminated should be investigated. This includes the area near the intersection of Hobson Avenue and Viaduct Road and areas were reports of fuel in the utility backfill material have been identified.

APPENDIX A - METHODS
Naval Base Charleston - Fuel Farm

A.1 Permits.

Permits were required for non-standard monitoring well installation from the South Carolina Department of Health and Environmental Control (SCDHEC). These permits were completed by Mr. Chuck E. Stutts of Naval Base Charleston Code 106.24. Any future work will require the same permitting.

A.2 Push Hole Clearance.

Ground Penetrating Radar (GSSI Sir System 2) and a magnetic induction pipeline locator were used to check each push location for the presence of buried objects or utilities. The hole clearance records are included at the end of this Appendix.

A.3 Surveying.

Surveying was performed by Ensafe Corporation. The push-holes locations are given at the end of this Appendix.

A.4 Grouting.

A grout tube is attached to the tip of the SCAPS probe. Following the data collection activities for each push, the attached grout pump is used to force grout to fill the hole as the probe is withdrawn. The grouting process consists of initially pumping approximately one gallon of water down the grout tube to force a sacrificial tip off the end of the SCAPS probe. Once the tip is removed a grout mixture of 15 lbs of Portland Cement, 1 lb Bentonite and 4 gallons of water per 10 feet of push hole is pumped at a rate equal to the SCAPS probe withdrawal rate. A constant pressure is maintained on the grout tube as the probe is withdrawn. Grout flow is monitored to identify any blockage of the tubing.

A.5 Decontamination.

All sampling and data collection devices coming in contact with potentially contaminated materials were decontaminated in accordance with ASTM 5088, Practice for Decontamination of Field Equipment Used at Non-radioactive Waste Sites.

Upon completion of push operations for penetration and fluoroscopic tests, the push rod and probe are cleaned as they are withdrawn using pressurized hot water. The hot water

(140 degree Fahrenheit) is flushed through a cleaning collar at 150 psi (connected to a hot water storage system which contains all wash fluids) located beneath the truck.

A.6 Investigative Derived Waste.

All decontamination water was collected into a 55-gallon drum for analysis and proper disposal. Three 55-gallon drums of Investigative derived waste (IDW) water were generated during the investigation. The drums were left on a pallet within a the Fuel Farm compound near push-hole #5 to the northwest of tank 3900-E.. Southern Division, Naval Facilities Engineering Command has the responsibility for the analysis and disposal of the three IDW drums.

IDW was generated during operation of the CPT system. Types of waste produced include: 1) wash water from rod decontamination operations, 2) solidified grout, and 3) wash water from grouting equipment cleanup. IDW was placed in 55-gallon drums, labeled, and stored on pallets at the site.

The decontamination wastewater was expected to contain traces of petroleum hydrocarbons and suspended solids. Although the wash water is not expected to meet hazardous classification as defined in RCRA, the material was containerized, labeled, and stored at the SCAPS staging area.

The solidified grout consists of hydrated cement with a small amount of non-hazardous admixture (bentonite and Sikament). Grouting cleanup wash water consists of potable water with small amounts of cement particles and cement sludge.

A.7 Collection and Analysis of Samples.

Eight soil samples were collected during the investigation. The soil samples were collected from holes within twelve inches of the SCAPS push holes. A MOSTAP soil sampler was used to collect the soil sample.

The soil samples were split for analysis; one set of samples were analyzed by the PWC Jacksonville contracted laboratory, the other set analyzed by the Ensafe contracted laboratory. The chain-of-custody records and analysis are given at the end of this Appendix. The sample depths and corresponding SCAPS results are given in Appendix F.

Push Hole Clearance Records

SCAPS GPR SURVEY

SITE GPR SURVEY INFORMATION:

JAMES BURNS (UTILITIES)
743-6566 6444 Fort Radio Dr.

SCAPS file Hole #	GPR File #'s	GPR Pull (N-S/E-W)	Remarks
CHRFF #1	N/A	N-S/E-W	* CLEARED VIA PIPE LOCATOR
CHRFF #2	N/A	NW-SE	* CROSSED FIELD WITH PIPE LOCATOR
CHRFF #3	" "	" "	I.D. KNOWN PIPES FROM UTILITY
CHRFF #4	" "	" "	DRAWINGS " " "
CHRFF #5	" "	" "	* PULLED NW-SE TO LOCATE EXISTING
CHRFF #6	" "	" "	FUEL TRANSFER LINES. PLACED HOLES B & C ACCORDING TO PIPE LOCATOR
CHRFF #7	" "	" "	LOT of SIGNALS IN AREA, PLACED PUSH
CHRFF #8	" "	" "	IN CLEAREST AREA
CHRFF #9	" "	" "	" " "
CHRFF #10			* CLEARED VIA "FISHER PIPE LOCATOR"/UTILITY DRW
~~CHRFF #11~~	~~245~~ ~~246~~	~~N-S/S-N~~ ~~N-S~~	~~Cleared via Fisher & Utility drawings G.S.~~
CHRFF #11	249	N-S	CLEARED VIA GPR & PIPE LOCATOR
#11	250	E-W	" " " " "
#12	251	N-S	CLEAR
#12	252	E-W	OBSTRUCTION OR ~~FOSSIL~~ OBSERVED
#12	254	E-W (REPEAT)	
#12	255	E-W	LARGE OBSTRUCTION
#12	256	E-W	RELOCATED #12 FURTHER SOUTH CLEAR
#14	257	N-S	
	258	E-W	
	259	W-E	

SCAPS GPR SURVEY

SITE GPR SURVEY INFORMATION:

SCAPS file Hole #	GPR File #'s	GPR Pull (N-S/E-W)	Remarks
OFF 5	260	N-S	
13	261	S-N	
13	262	W-E	
14	263	W-E	UNCERTAIN POSSIBLE DISTURBANCE
14	264	W-E	REPEAT PULL
14	265	N-S	GOOD
14	266		(BAD FILE)
14	267	N-S	
14	268	E-W	possible shadow moved hole 3' East
*			
#17	270	W-E	DIEL AT 6.0, DEPTH - 6M. NO SHADOW
#	271-275		VARIOUS ATTEMPTS TO ADJUST SYSTEM GAINS FOR BETTER REFLECTIONS
#17	276	~~N-S~~ SOUTH	ID. POSSIBLE EXISTING AND ABANDONED PIPES (FUEL) WILL PUSH OFF SHADOWS.
#18			CLEARED OFF #276 (FILE)
#5	278	~~W-E~~ 6.5 S-N	SHADOWED EDGES OF ROAD
	279	N-S	CLICK ON CONE AS TEMP PUSH SHADOWS ON KNOWN PIPES AWAY FROM PIPE WERE VISIBLE
	280	E-W	
#6	284	W-E	SHADOW AREA
	285	S-N	SITED HOLE BASED ON SHADOW
	287	E-W	CLEAR HOLE

& FILES 281 & 282 WERE RUN TO CONFIRM KNOWN PIPE

SCAPS GPR SURVEY

SITE GPR SURVEY INFORMATION:

SCAPS file Hole #	GPR File #'s	GPR Pull (N-S/E-W)	Remarks
#19	287	W-E	LOCATING STORMWATER LINES,
	288	E-W	CLEARING FOR PUSH
	289	W-E	CLEARED
	290		
	291	N-S	I.D. SHADOW
	292	S-N	" "
	293		SHADOWS NEAR HOLE
	294	N-S	MOVED TOWARDS CENTER OF ROAD TO CLEAR SHADOW.
#20	~~W-E~~ 295	W-E	PARTIAL SHADOWS
	~~E-W~~ 296	E-W	DISTINCTIVE SHADOWS, 3RD HOLES. MARKER COLOR WAS CLEAR
	~~N-S~~ 297	N-S	SHADOW NEAR GUTTER. WILL POLL AGAIN
C.S. ~~#21~~	298	N-S	
#21	299	E-W	SHADOWS PRESENT. #2 MARKER CLEAR.
#22	301	W-E	SHADOWS FROM UTILITIES, NONE ON PROPOSED MAP
	302	S-N	MOVED MARK OF SUSPECT SHADOW
	303/304		RUN OVER POTENTIAL MARK
	305	W-E	CLEAR
	306	S-N	CLEAR SHADOW TO NORTH
#23	307	N-S	LONG POLL TO I.D. MOST ADVANTAGEOUS LOCATION FOR PUSH
		E-W	CLEARED PUSH LOCATION

SCAPS GPR SURVEY

SITE GPR SURVEY INFORMATION:

SCAPS file Hole #	GPR File #'s	GPR Pull (N-S/E-W)	Remarks
	326	N-S	LONG PULL TO CLEAR 4 MARKS
A	327	E-W	CLEAR
B	328	E-W	SHADOW (WEST SIDE) RELOCATE 2' EAST
C	329	E-W	SHADOW APPROX ON MARK
D	330	E-W	CLEAR
	331		RE DID # 329 (C), NOT CLEAR
	332		FOIL PUSH RE DID (D) APPEARS CLEAR
	335	WLE	APPEARS CLEAR
#30	336	N-S	CLEAR
	337	W-E	CLEAR
#	338	W-E	LONG PULL TO LOCATE 7 MARKS
	339	S-N	LOR & PULL
#51	341 340	NW-SE ~~NE-SW~~ G.S.	
	342 ~~341~~	NE-SW	
#32	343	NE-SW	SHADOWS ON MARK
	344		SAME HOLE, MOVED MARK
	345	NW-SE ~~SE TO NW~~	SHADOWS
	346	SE-NW	REDO
	347		REDO GOOD

SCAPS GPR SURVEY

SITE GPR SURVEY INFORMATION:

SCAPS file Hole #	GPR File #'s	GPR Pull (N-S/E-W)	Remarks
#23	309	N-S	LONG PULL TO LOCATE POTENTIAL PUSH LOCA
			I.D. 3 GOOD LOCATIONS FOR PUSHES
	310	E-W	LONG PULL TO I.D. POTENTIAL PUSH LOCATIO
			I.D. SHADOWS ALONG PULL, ADJUSTED CONES
	311	W-E	PULL SAME LINE.
#A #24	312	E-W	CLEARING HOLE FOR FUTURE PUSH
	313	N-E	RELOCATED MARK DUE TO SHADOW ON SIR
#B #25	314	W-E ~~E-W~~	CLEAR
#C	315	N-S	CLEAR
#D	316	N-S	RE-DO. #D
	317	S-N	CLEAR. SURFACE INTERFERENCE, MINOR
~~#E~~			LONG PULL TO LOCATE TWO FUTURE PUSHES Plan #22 (EAST)
#25	319	S-N	CLEAR
	321	E-W	ALL 320 WAS BAD FILE. CLEAR HOLE.
#E	322		CLEAR
#F	323		SHADOW ON PROSPECTIVE HOLE
	324		SHADOWS PRESENT
	325		SHADOWS PRESENT. CANNOT CLEAR HOL

SCAPS GPR SURVEY

SITE GPR SURVEY INFORMATION:

SCAPS file Hole #	GPR File #'s	GPR Pull (N-S/E-W)	Remarks
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	CLEAR
[illegible]	[illegible]		

Surveying Records

Leica
LEICA AG, CH-9435 Heerbrugg

SKI Software
Bldg

8/21/95 7:51 AM

Coordinate set: SCAPS95
Coordinate type: Grid
Reference ellipsoid: WGS 1984
Projection set: South Carolina
Unit: fts

Point id	Easting	Northing	Ell. height	N
NBCHASFF0001	2319360.5984	372920.7774	10.5606	
NBCHASFF0002	2318853.0430	372606.6982	11.3269	
NBCHASFF0003	2319060.9976	372377.7527	12.9122	
NBCHASFF0004	2319234.8959	372176.3971	14.0105	
NBCHASFF0005	2319263.5588	373013.7970	11.1981	
NBCHASFF0006	2320285.7854	372806.8035	7.2370	
NBCHASFF0007	2320478.6442	372569.6371	7.0206	
NBCHASFF0008	2320283.9703	372686.3514	8.0784	
NBCHASFF0009	2319093.7462	372808.5255	10.8318	
NBCHASFF0010	2319895.3411	372406.6550	6.6798	
NBCHASFF0011	2319971.4811	372607.0424	6.1386	
NBCHASFF0012	2319992.9292	372529.3179	6.0784	
NBCHASFF0013	2319978.6599	372594.3180	6.0474	
NBCHASFF0014	2319497.2363	372171.1954	14.6869	
NBCHASFF0015	2319497.5250	372172.0406	14.5649	
NBCHASFF0016	2319600.9716	372281.0792	13.6308	
NBCHASFF0017	2319621.4764	372232.2977	13.6394	
NBCHASFF0018	2319635.7396	372203.7122	13.4058	
NBCHASFF0019	2319887.4670	372759.2586	7.7328	
NBCHASFF0020	2319676.3274	373020.[illegible]300	9.8620	
NBCHASFF0021	2320120.0180	372537.7409	6.0926	
NBCHASFF0022	2320050.9323	372404.0669	5.5384	
NBCHASFF0023	2320101.9137	372299.7893	5.4288	
NBCHASFF0024	2320084.6343	372342.9010	5.6563	
NBCHASFF0025	2320067.1481	372382.2888	5.2641	
NBCHASFF0026	2320083.0266	372397.8202	5.5037	
NBCHASFF0027	2320036.0809	372476.7988	6.0387	
NBCHASFF0028	2320011.8407	372426.5291	5.8565	
NBCHASFF0029	2319997.7886	372399.9324	5.3998	
NBCHASFF0030	2319931.0386	372451.9944	6.4686	
NBCHASFF0031	2320087.5995	372808.2454	6.8380	
NBCHASFF0032	2320069.2298	372979.7988	6.9229	
NBCHASFF0033	2320045.4024	372963.6313	9.0220	

CHAIN OF CUSTODY RECORD

NAVY PUBLIC WORKS CENTER JACKSONVILLE
ATTN. CODE 330 (ENVIRONMENTAL LABORATORY)
JACKSONVILLE, FL 32212-0030

PROJECT # 50458 CONTRACT #: N68931-95-A-6348

D.O.# CALL# 0067 COLLECTED BY JW/SAPS

LABORATORY: FIRST COAST ENVIRONMENTAL LABORATORY PHONE: 904/725-4847
6918 ARLINGTON EXPRESSWAY
ADDRESS JACKSONVILLE, FL 32211 FAX: 904/725-2215

SAMPLE ID #	DATE	TIME	COMP	GRAB	WELL	SAMPLE LOCATION	SAMP.COMP	PH	TEMP	# CONT	REMARKS / TESTS REQUIRED	CONTAINER TYPE / PRESERVATION: 250 ml Clear Jar - 4°C								
507-0055	7-13-95	1653		X		CHRFF-16A	SOLID	—	—	1	TPH / 8015	1								9508-109
507-0056	7-13-95	1913		X		CHRFF-18A	"			1	TPH / 8015	1								2
507-0057	7-14-95	1300		X		CHRFF-5A	"			1	TPH / 8015	1								3
507-0058	7-14-95	2055		X		CHRFF 4C	"			1	TPH - 8015	1								4
507-0059	7-16-95	1715		X		CARFF-11A	"			1	TPH - 8015	1								5
507-0060	7-16-95	1445		X		CHRFF 32A	"			1	TPH - 8015	1								6
507-0061	7-16-95	1745		X		CHRFF 22A	"			1	TPH - 8015	1								7
507-0062	7-16-95	1815		X		CHRFF22B	"			1	TPH - 8015	1								8

COPY

RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:
[illegible]	8-4-95	1343	M. Zbotka
RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:
RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:
RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY LAB BY:

REMARKS:

PWCENVLAB FORM-12 DTD 11-22-94

Page ___ of ___

FIRST COAST ENVIRONMENTAL LABORATORY, INC.

September 6, 1995

Client: Navy Public Works — Lab #: 9508-109 (1-8)

Sample I.D: See Below — Date Received: 8-9-95

Sample Matrix: Solid — Date Completed: 8-31-95

Project # 50458 — Call # 0067 — Sample Collection: 7-13 / 7-16-95

Analytical Summary

	Sample I D #	Parameter		Method	Results
1)	507-0055	TRPH	mg/Kg	EPA 418.1	< 0.075
2)	507-0056	TRPH	mg/Kg	EPA 418.1	< 0.075
3)	507-0057	TRPH	mg/Kg	EPA 418.1	< 0.075
4)	507-0058	TRPH	mg/Kg	EPA 418.1	< 0.075
5)	507-0059	TRPH	mg/Kg	EPA 418.1	< 0.075
6)	507-0060	TRPH	mg/Kg	EPA 418.1	< 0.075
7)	507-0061	TRPH	mg/Kg	EPA 418.1	< 0.075
8)	507-0062	TRPH	mg/Kg	EPA 418.1	< 0.075

Respectfully submitted,

Barry C. Byrd, Jr., MS
Laboratory Director
DEP Comp QAPP # 870222G

BCB/tb

8818 Arlington Expressway • Jacksonville, Florida 32211
(904) 725-4847 • Fax (904) 725-2215

950[illegible]49 RAB

NAVY CLEAN
ENSAFE/ALLEN & HOSHALL
(901) 383-9115

CHAIN OF CUSTODY RECORD

CLIENT AGREES TO DQO 724-95 CHAIN OF CUSTODY MODIFIED

PAGE 1 OF 1

CLIENT: Naval Base Charleston
ADDRESS: Foul Farm Zone G
PROJECT NAME/NUMBER: 2900-0421Ø
MEDIA STATUS: (A, B, OR C)

PROJECT MANAGER: Charlie Vernoy
TELEPHONE NO.: 803-884-0029
FAX. NO.: (803) 856 0107
SAMPLERS: (SIGNATURE)

	FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION TEMP.	PRESERVATION CHEMICAL	NO. OF CONTAINERS	ANALYSIS REQUIRED: TPH/8015							REMARKS
-01	CHRFF 11A	7/16/95	17:15	Soil	clear Glass	4°C	None	1	X							
-02	CHRFF 4C	7/14/95	2053					1	X							
-03	CHRFF 22B	7/16/95	1515					1	X							
-04	CHRFF 22A	7/16/95	1745					1	X							
-05	CHRFF 5A	7/14/95	1300					1	X							
-06	CHRFF 32A	7/16/95	1445					1	X							

RELINQUISHED BY:	DATE	RELINQUISHED BY:	DATE	RELINQUISHED BY:	DATE	RELINQUISHED BY:	DATE
SIGNATURE	7/24/95	SIGNATURE	7/24/95	SIGNATURE		SIGNATURE	
PRINTED Todd B. Temple	TIME 1000	PRINTED Donna Ward	TIME 11:40	PRINTED	TIME	PRINTED	TIME
COMPANY ENSAFE		COMPANY GEL		COMPANY		COMPANY	
REASON Ship to Lab		REASON Testing		REASON		REASON	

METHOD OF SHIPMENT:
SHIPMENT NO.
SPECIAL INSTRUCTION:

COMMENTS: DQO-2
Lab is GEL

AFTER ANALYSIS, SAMPLES ARE TO BE:
- [x] DISPOSED OF (ADDITIONAL FEE)
- [ ] STORED (90 DAYS MAX)
- [ ] STORED OVER 90 DAYS (ADDITIONAL FEE)
- [ ] RETURNED TO CUSTOMER

GENERAL ENGINEERING LABORATORIES

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Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/87458
NC	233	
SC	10120	10582
TN	02934	
VA	00151	
WI	99988779	

CERTIFICATE OF ANALYSIS

Client: EnSafe/Allen & Hoshall
P.O. Box 341315
Memphis, Tennessee 38184
Contact: Mr. Paul Stoddard

cc: ENSA00295 Report Date: August 02, 1995

Sample ID	: CHRFF22A
Lab ID	: 9507449-04
Matrix	: Soil
Date Collected	: 07/16/95
Date Received	: 07/24/95
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	Units	Method	Analyst	Date	Time	Batch
Volatile Organics								
[illegible] - Nonvolatile Fraction	<	3320	ug/kg	CA Method	SHL	07/30/95	2059	69954

Comments:
Surrogate diluted out. Sample contains Hydracarbons heavier than diesel, preventing lower dilution.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories standard operating procedures. Please direct any questions to your Project Manager, Rob Byrd at (803) 556-8171.

Analytical Report Specialist

GENERAL ENGINEERING LABORATORIES

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Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/87458
NC	233	
SC	10120	10582
TN	02934	
VA	00151	
WI	99988779	

CERTIFICATE OF ANALYSIS

Client: EnSafe/Allen & Hoshall
P.O. Box 341315
Memphis, Tennessee 38184
Contact: Mr. Paul Stoddard

cc: ENSA00295 Report Date: August 02, 1995

Sample ID : CHRFF22B
Lab ID : 9507449-03
Matrix : Soil
Date Collected : 07/16/95
Date Received : 07/24/95
Priority : Routine
Collector : Client

Parameter	Qualifier	Result	Units	Method	Analyst	Date	Time	Batch
Volatile Organics								
[illegible]- Nonvolatile Fraction		16900	ug/kg	CA Method	SHL	07/30/95	2014	69954

Comments:
Surrogate diluted out. Hydracarbons heavier than diesel prevented lower dilution.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories standard operating procedures. Please direct any questions to your Project Manager, Rob Byrd at (803) 556-8171.

Analytical Report Specialist

GENERAL ENGINEERING LABORATORIES

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Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/87451
NC	233	
SC	10120	10582
TN	02934	
VA	00151	
WI	99988779	

CERTIFICATE OF ANALYSIS

Client: EnSafe/Allen & Hoshall
P.O. Box 341315
Memphis, Tennessee 38184
Contact: Mr. Paul Stoddard

oc: ENSA00295 Report Date: August 02, 1995

Sample ID	: CHRFF32A
Lab ID	: 9507449-06
Matrix	: Soil
Date Collected	: 07/16/95
Date Received	: 07/24/95
Priority	: Routine
Collector	: Client

'arameter	Qualifier	Result	Units	Method	Analyst	Date	Time	Batch
latile Organics								
DH - Nonvolatile Fraction		1030	ug/kg	CA Method	SHL	07/30/95	0648	69954

is data report has been prepared and reviewed
accordance with General Engineering Laboratories
ndard operating procedures. Please direct
y questions to your Project Manager, Rob Byrd at (803) 556-8171.

nalytical Report Specialist

GENERAL ENGINEERING LABORATORIES

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Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/87458
NC	233	
SC	10120	10582
TN	02934	
VA	00151	
WI	99988779	

CERTIFICATE OF ANALYSIS

Client: EnSafe/Allen & Hoshall
P.O. Box 341315
Memphis, Tennessee 38184
Contact: Mr. Paul Stoddard

:: ENSA00295 Report Date: August 02, 1995

Sample ID	: CHRFF4C
Lab ID	: 9507449-02
Matrix	: Soil
Date Collected	: 07/14/95
Date Received	: 07/24/95
Priority	: Routine
Collector	: Client

rameter	Qualifier	Result	Units	Method	Analyst	Date	Time	Batch
latile Organics								
Nonvolatile Fraction		1020	ug/kg	CA Method	SHL	07/30/95	0303	69954

ents:
nple contains Hydracarbons heavier than Diesel.

is data report has been prepared and reviewed
accordance with General Engineering Laboratories
ndard operating procedures. Please direct
y questions to your Project Manager, Rob Byrd at (803) 556-8171.

alytical Report Specialist

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Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/87458
NC	233	
SC	10120	10582
TN	02934	
VA	00151	
WI	99988779	

CERTIFICATE OF ANALYSIS

Client: EnSafe/Allen & Hoshall
P.O. Box 341315
Memphis, Tennessee 38184
Contact: Mr. Paul Stoddard

cc: ENSA00295 Report Date: August 02, 1995

Sample ID	: CHRFF5A
Lab ID	: 9507449-05
Matrix	: Soil
Date Collected	: 07/14/95
Date Received	: 07/24/95
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	Units	Method	Analyst	Date	Time	Batch
olatile Organics								
[illegible]- Nonvolatile Fraction	<	666	ug/kg	CA Method	SHL	07/30/95	0518	69954

Comments:
ample contains Hydracarbons heavier than Diesel.

his data report has been prepared and reviewed
accordance with General Engineering Laboratories
andard operating procedures. Please direct
ny questions to your Project Manager, Rob Byrd at (803) 556-8171.

Analytical Report Specialist

GENERAL ENGINEERING LABORATORIES

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STATE	GEL	EPI
FL	E87156/87294	E87472/87458
NC	233	
SC	10120	10582
TN	02934	
VA	00151	
WV	9908779	

CERTIFICATE OF ANALYSIS

RECEIVED AUG 8 1995

Client: EnSafe/Allen & Hoshall
P.O. Box 341315
Memphis, Tennessee 38184
Contact: Mr. Paul Stoddard

cc: ENSA00295

Report Date: August 02, 1995

Sample ID	: CHRFF11A
Lab ID	: 9507449-01
Matrix	: Soil
Date Collected	: 07/16/95
Date Received	: 07/24/95
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	Units	Method	Analyst	Date	Time	Batch
Volatile Organics								
TPH - Nonvolatile Fraction		865	ug/kg	CA Method	SHL	07/30/95	0218	69954

This data report has been prepared and reviewed in accordance with General Engineering Laboratories standard operating procedures. Please direct any questions to your Project Manager, Rob Byrd at (803) 556-8171.

Analytical Report Specialist

APPENDIX B - SYSTEM DESCRIPTION

B.1. LIF System Description.

The LIF system is capable of measuring the occurrence of polynuclear aromatic hydrocarbons of 3 or more rings.

A schematic diagram of the fiber optic fluorometer system is shown in Figure B-1. The system was adapted from a design originally developed for in-situ fluorescence measurements in sea water (Lieberman, 1991; Inmand, 1990; Lieberman, 1989). The penetrometer sensor system uses two 365 micron diameter UV/visible transmitting (high OH silica clad silica) optical fibers. One fiber is used to carry excitation radiation down through the penetrometer rod and a second fiber collects the fluorescence generated in the soil sample and carries it back to the detector system at the surface. The standard fiber length is 100 meters which permits collection of fluorescence data to the maximum push depth (50 meters) using a standard 20 ton penetrometer rig. Excitation and emission fibers are isolated from the soil at the probe tip by a 6.35 millimeter diameter sapphire window mounted flush with the outside of the probe approximately 60 centimeters from the tip.

Excitation radiation is provided by a pulsed nitrogen laser (Model PL2300, Photon Technology, Inc.) that operates at 337 nanometers with a pulse width of 0.8 nanoseconds and a pulse energy of 1.4 millijoules. The beam is coupled into the excitation fiber using a 2 inch focal length quartz lens. The primary output of the laser is at 337 nanometers; however, there are secondary fluorescence lines in the region from 380 to 459 nanometers. In order to minimize the contribution of these lines to the measured fluorescence backgrounds, a mirror which selectively reflects only 337 nanometers is used to redirect the laser line before coupling it into the excitation fiber. Optical triggering of the detector eliminates problems associated with laser jitter.

A photodiode array detector system is used to quantify the fluorescence emission spectrum brought back to the surface over the receiving fiber. The detector system consists of a Model 1420 Intensified Photodiode Array Detector (EG&G PARC) coupled to a quarter-meter spectrograph which houses a 300 line/millimeter diffraction grating. The 1024 element array (700 elements are intensified) consists of 25 micron wide diodes centered at 25 micron increments. For the 300 line/millimeter grating, the dispersion of the spectrograph translates to a spectral resolution of 0.45 nanometers per pixel at the array surface when a 25 micron input slit is used. Readout of an emission spectra requires approximately 16 milliseconds. Because the detector can be readout quickly it is possible to add spectra from multiple laser shots in order to improve the signal to noise ration of the measurement. At present, 20 laser shots are used per sample interval.

APPENDIX B - SYSTEM DESCRIPTION

Figure B-1: System Layout

APPENDIX B - SYSTEM DESCRIPTION

Control and readout of the detector is performed by a Model 1460 optical multichannel analyzer (OMA) (EG&G PARC). Measurements are initiated by an electronic signal from the OMA that fires the laser. The laser pulse then triggers an optical detector which sends an electronic signal to a fast pulsed (Model 1304, EG&G PARC). The pulsed implements an appropriate delay (approximately 350 nanoseconds for a 50 meter fiber and 750 nanoseconds for a 100 meter fiber), and gates the detectors "on" for a period of 100 nanoseconds. Time-gating of the detector is set so that the detector is gated "on" to coincide with the arrival of the fluorescence signal at the detector. Because most fluorophores of interest have fluorescent lifetimes in the range of 5 to 100 nanoseconds, time-gating the detector maximizes signal-to-noise by minimizing contributions to the signal from background light and detector noise.

The resulting fluorescent intensity is a measure of the response to the input energy. The greater the number, the greater the amount of responding energy. The relationship is linear in that with increasing amounts of PAHs, the responding energy increases. The response is relative to the type of PAH so that the relationship is can't be exactly determined. This makes SCAPS a semi-quantitative analysis technique. If the relationship could be determined it would be quantitative.

A 486-based microprocessor host computer is used to automate the overall measurement process. The host computer controls the OMA system and stores fluorescence emission data received from the OMA, collects data from strain gauges, estimates soil type from strain gauge data and monitors depths from transducers on the hydraulic ram. A typical fluorescence emission spectrum from the LIF-POL sensor is shown in Figure 3. As the probe is pushed into the soil the data acquisition software generates real-time depth plots of maximum fluorescence intensity, wavelength of maximum intensity, point resistance, sleeve friction and soil characteristics as interpreted from the strain gauge data. Under normal operating conditions, a fluorescence emission spectrum is collected approximately every 2 seconds. For the standard push rate of 2 centimeters/sec this corresponds to a vertical resolution between measurements of 2-4 centimeters. The entire fluorescence emission spectrum is stored on a fixed disk to facilitate post-processing of the data.

B.2. Quality Control & Calibration Standards.

Two different types of standards are used during field operations. A quality control standard based on a solution of quinine sulfate is used to ensure the system is functioning correctly. This standard also allows the data to be normalized if the probe is changed in the middle of field operations. A set of calibration standards is prepared to evaluate the sensitivity of the sensor to the soil type at the site and the fuel type expected to be encountered. This set of standards is used to establish the noise in the measurement as well as the sensitivity of the sensor to the soil/fuel combination.

APPENDIX B - SYSTEM DESCRIPTION

The quality control standard, designed to evaluate the system performance and internal noise, consists of dilute sulfuric acid mixed with 10 parts per million (ppm), by weight, quinine sulfate. Quinine sulfate has a high quantum efficiency so that it fluoresces quite strongly, is chemically stable, easily reproducible, and exhibits minimal photodegradation.

A single measurement of the quinine sulfate standard averages 20 fluorescence spectra (analogous to the in-situ push averaging), and the measurement is repeated three times directly before and after a push. The short term system stability is defined as the standard deviation of the three measurements. Typical results show an average standard deviation of 1-2 percent of the fluorescent intensity.

The quinine sulfate data is also used to normalize data taken using different probes. Figure B-2 shows the quinine sulfate data collected pre push during the investigation. The quinine sulfate data was used to normalize the data for all of the pushes for a consistent data set throughout the site.

In addition to the quinine sulfate quality control standard, series of spiked soil standards are prepared using soil gathered from the site. The sensitivity of the sensor will depend on the type of hydrocarbons encountered. For instance, diesel fuel (which is composed mostly of heavy polynuclear aromatic hydrocarbons (PAHs)) tends to fluoresce strongly when excited by a nitrogen laser, so that a small amount of fuel can give a large fluorescence signal. On the other hand, some jet fuels (e.g. JP-5) are composed of a greater fraction of lighter PAHs, which are not efficiently excited by the nitrogen laser, so that a larger amount of jet fuel is needed to give the same fluorescence signal as diesel fuel. Hence the sensor is less sensitive to this type of fuel.

The fuel chosen as the standard for the investigation was diesel fuel marine (DFM). One of the difficulties in establishing the target fuel is that often many different fuels were used during the history of the site. In addition, the contaminant has aged and weathered from long term exposure at the site. This is the same problem that many other quantifying analytical methods also encounter, and for this reason, SCAPS LIF-POL sensor is intended to be a screening tool to establish the presence of contamination, rather than a quantitative method for measuring the amount of contamination.

To prepare the standards, a sample of soil was collected from the site. The soil was gathered from near surface, at a depth of 6-12 inches, to reduce hydrocarbon contamination from aerosols and other airborne particulant, and was grossly sifted to remove sticks and other large debris. A series of soil samples were prepared by spiking the soil with known DFM concentrations. The spiked samples were placed on a shaker table for 24 hours to uniformly distribute the fuel.

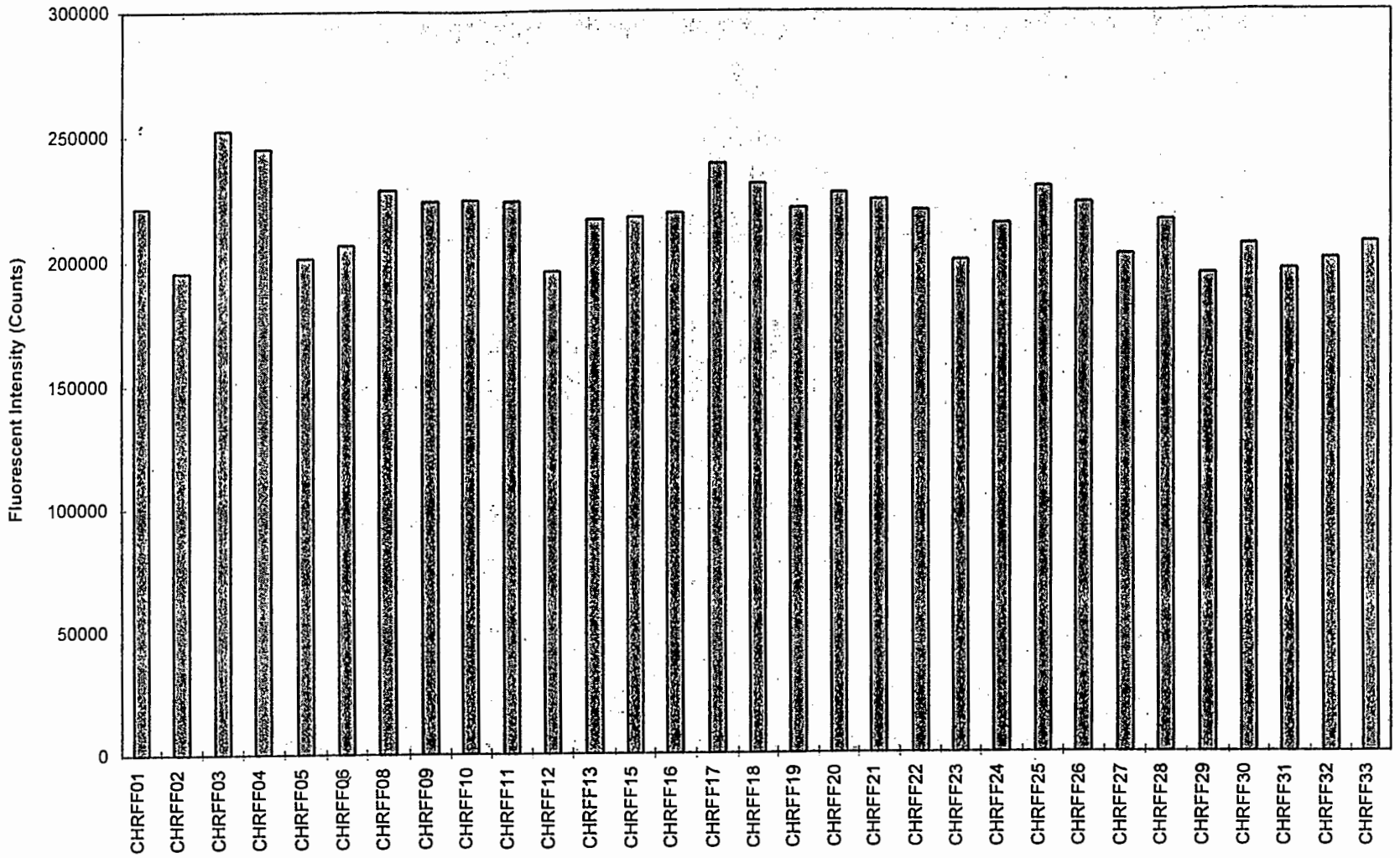
The fluorescence spectra from the spiked samples were measured at the start of each day of field operations. As with the quinine sulfate, 20 shots are averaged to provide a single

measurement. The standard deviation of the calibration standards reflects both the internal noise as well as the variations due to non-homogeneous in the soil, and can be compared to that of the internal standard (quinine sulfate) to assess the non-homogeneous of the soil at the site. The calibration data is included in Appendix D. This data is used to calculate the sensitivity of response of the fuel to the local soil, as well as the baseline and standard deviations that are needed to determine the detection threshold at the site.

B.3. SCAPS Validation Data

The following excerpt of an NRaD report is included to help provide background information regarding SCAPS.

Naval Base Charleston - Quinine Sulfate



Site Characterization and Analysis Penetrometer System (SCAPS) Laser Induced Fluorescence (LIF) Sensor for Rapid Field Screening of Petroleum, Oil and Lubricants (POL)

A report to
State of California-Environmental Protection Agency
Department of Toxic Substances Control
Certification Program (AB 2060) for
Hazardous Waste Environmental Technologies

Prepared by: Naval Command, Control, and Ocean Surveillance Center, Research Development Test and Evaluation Division (NRaD), Code 521, San Diego, CA, 92152

DRAFT DOCUMENT: 12/22/94

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1. Introduction

A new technique has been developed for real-time in situ subsurface field screening of petroleum, oil and lubricants (POLs). The method is based on a cone penetrometer deployed fiber optic-based laser-induced fluorescence (LIF) sensor system.* The chemical sensing scheme utilizes a fluorescence technique in which an optical response is stimulated in the aromatic components present in hydrocarbon contaminants in the soil. The fluorescence is excited by UV light from a pulsed nitrogen laser. The excitation pulse is transmitted down to the probe over an optical fiber that can be up to 100 m in length, and through a sapphire window incorporated into the side of the cone penetrometer tip. The induced fluorescence signal from the soil adjacent to the sapphire window is returned to the surface over a second fiber where it is dispersed with a spectrograph, and quantified with an intensified photodiode array. The spectral signature of the sensor output provides information about fuel product type and the intensity of the fluorescence signal is proportional to contaminant concentration.

The system is one example of a planned family of sensors collectively called the Site Characterization and Cone Penetrometer Systems, or SCAPS, that will combine remote sensors with the cone penetrometer platform to provide rapid, in-situ, subsurface measurements of many different contaminants. The present sensor, based on Laser Induced Fluorescence of POLs (the SCAPS LIF-POL sensor) provides rapid, qualitative to semi-quantitative information about the distribution of subsurface petroleum contamination. The sensor is not intended as a replacement for traditional soil borings and monitoring wells; but rather as a method to gain detailed information about the probable distribution of subsurface contamination prior to installing monitoring wells or collecting soil samples via conventional borings. The present approach to site characterization, which depends on collection of discrete soil and water samples followed by laboratory analyses, is usually a slow, iterative and costly process because the samples are collected with little prior knowledge as to the extent or exact location of the contaminant plume.

Use of the LIF-POL sensor to screen the site will provide several advantages over traditional characterization methods: the sensor provides a means of eliminating many unnecessary or poorly placed borings; because the LIF-POL sensor provides vertical spatial resolution on scale of 2-4 cm, small scale features can be delineated that would be missed by conventional

* This technology was developed through a collaborative effort of the Army, Navy and Air Force under the auspices of the Tri-Service SCAPS (Site Characterization and Analysis Penetrometer System) Program.

sampling protocols; the senor collects a spectral signature from the contaminants encountered, allowing tentative differentiation of various types of contaminant; and because the LIF-POL sensor provides real-time chemical information while the system is in the field, sampling plans can be adjusted to track subsurface plumes to fully delineate plume boundaries.

System Description

A schematic diagram of the fiber optic fluorometer system is shown in figure 1. The system was adapted from a design originally developed for in situ fluorescence measurements in seawater (Lieberman 1991; Inman, 1990, Lieberman 1989). The penetrometer sensor system uses two 365 micron diameter UV/visible transmitting (high OH silica clad silica) optical fibers. One fiber is used to carry excitation radiation down through penetrometer rod and a second fiber collects the fluorescence generated in the soil sample and carries it back to the detector system at the surface. The standard fiber length is 100 m which permits collection of fluorescence data to the maximum push depth (50 m) using a standard 20 ton penetrometer rig. Excitation and emission fibers are isolated from the soil at the probe tip by a 6.35 mm diameter sapphire window mounted flush with the outside of the probe approximately 60 cm from the tip.

Excitation radiation is provided by a pulsed nitrogen laser (Model PL2300, Photon Technology, Inc) that operates at 337 nm with a pulse width of 0.8 nsec and a pulse energy of 1.4 mJ. The beam is coupled into the excitation fiber using a 2 inch focal length quartz lens. The primary output of the laser is at 337 nm; however, there are secondary fluorescence lines in the region from 380 to 450 nm. In order to minimize the contribution of these lines to the measured fluorescence backgrounds, a mirror which selectively reflects only 337 nm is used to redirect the laser line before coupling it into the excitation fiber. Optical triggering of the detector eliminates problems associated with laser jitter.

A photodiode array detector system is used to quantify the fluorescence emission spectrum brought back to the surface over the receiving fiber. The detector system consists of a Model 1420 Intensified Photodiode Array Detector (EG&G PARC) coupled to a quarter-meter spectrograph which houses a 300 line/mm diffraction grating. The 1024 element array (700 elements are intensified) consists of 25 micron wide diodes centered at 25 micron increments. For the 300 line/mm grating, the dispersion of the spectrograph translates to a spectral resolution of 0.45 nm per pixel at the array surface when a 25 micron input slit is used. Readout of an emission spectra requires approximately 16 msec. Because the detector can

be readout quickly it is possible to add spectra from multiple laser shots in order to improve the signal to noise ratio of the measurement. At present, 20 laser shots are used per sample interval.

Control and readout of the detector is performed by a Model 1460 optical multichannel analyzer (OMA) (EG&G PARC). Measurements are initiated by an electronic signal from the OMA that fires the laser. The laser pulse then triggers an optical detector which sends an electronic signal to a fast pulser (Model 1304, EG&G PARC). The pulser implements an appropriate delay (approximately 350 nsec for a 50 meter fiber and 750 nsec for a 100 meter fiber), and gates the detector "on" for a period of 100 nanoseconds. Time-gating of the detector is set so that the detector is gated "on" to coincide with the arrival of the fluorescence signal at the detector. Because most fluorophores of interest have fluorescent lifetimes in the range of 5 to 100 nsec, time-gating the detector maximizes signal-to-noise by minimizing contributions to the signal from background light and detector noise.

By incrementing a delay of the detector gate for successive laser pulses it is possible to determine fluorescence decay times. Studies have shown that differences in fluorescence decay times are useful for discriminating compounds of environmental interest (eg., polycyclic aromatic hydrocarbons) that cannot be resolved based on differences in their fluorescence emission spectra [Theriault, 1992]. At present, fluorescence lifetime measurements are not performed routinely with the penetrometer system because additional measurement and processing time would be required. In the future, however, fluorescence decay measurements could easily be implemented via software control to take advantage of "dead time" that is currently not utilized when the push is halted every meter in order to install the next section of penetrometer rod .

A 486-based microprocessor host computer is used to automate the overall measurement process. The host computer controls the OMA system and stores fluorescence emission data received from the OMA, collects data from strain gauges, estimates soil type from strain gauge data and monitors depths from transducers on the hydraulic ram. A typical fluorescence emission spectrum from the LIF-POL sensor is shown in figure 2. As the probe is pushed into the soil the data acquisition software generates real-time depth plots of maximum fluorescence intensity, wavelength of maximum intensity, point resistance, sleeve friction and soil characteristics as interpreted from the strain gauge data. Under normal operating conditions, a fluorescence emission spectrum is collected approximately every 2 seconds. For the standard push rate of 2 cm/sec this corresponds to a vertical resolution between measurements of 4 cm. A typical data plot is shown in figure 3. The entire

fluorescence emission spectrum is stored on a fixed disk to facilitate post-processing of the data

Field Procedures

The SCAPS truck is typically dispatched for 3 weeks to perform field screening and sensor validation at a site. Prior to the actual deployment of the system, the site is visited to determine location of obstructions such as buildings, cement platforms, fencelines, etc., as well as underground obstructions such as pipes and existing storage tanks. At this time, information on possible contaminants and prior efforts at characterization and/or remediation is also collected. Soil samples will be obtained for preparation of calibration standards.

The truck is deployed with a four person field crew, including a registered geologist. Two people are needed handle the push rods and operate the hydraulic press, and the third person operates the sensor, including measurements of the calibration and control standards, monitoring the actual real time push data, and measurement of the response from soil samples collected during the validation phase of the operation. The truck is positioned over the location to be pushed, elevated and leveled on hydraulic jacks. Following a short series of measurements to establish quality control, the sensor is pushed into the ground at a rate of 2 cm/sec. The push rods are 1 meter in length, and rods are added approximately once minute as the sensor is advanced. A 30 meter push will typically take about 40 minutes to reach full depth. Generally the hole will be grouted with a cement mixture as the probe is removed, through a tube connected through the probe to an expendable probe tip. Five to six pushes a day, or approximately 200 feet, can be accomplished in a routine day's operation.

The field operations are generally separated into two phases. The first phase is geared towards screening the contaminated region, and typically involves 20-30 pushes of the sensor. The second phase, called the validation phase, involves pushing a location and then directly overboring with a traditional hollow stem auger/split spoon sampling rig to collect soil samples. This is repeated 4-8 times to gather samples for traditional analytical measurement by techniques such as TPH (EPA method 8015) and TRPH (EPA method 418.1) and PAH (EPA method 8270). This data is then compared with the in-situ fluorescence data gathered with the sensor to confirm the efficacy of the sensor. This work will be discussed in detail in this report.

Following the site visit, a field report is prepared for the Remediation Program Manager (RPM) and applicable permitting/regulatory agencies that includes the raw data from the SCAPS pushes, the field borelogs, the analytical data, and a short summary describing the results of operations. This is a very preliminary analysis of the site, and is provided so that the RPM has immediate feedback on the results of the site characterization and the permit conditions are met. (Examples of the field reports are included in Appendices C and D for field operations at two different sites in California). This is intended to be followed by a more thorough analysis, with in-depth discussion of the site detection limits, the plume boundaries, possible presence of multiple contaminants.

Specific Claim

A claim is made for a new method of rapid field screening of petroleum, oil and lubricants (POLs) with the following conditions:

- The method is an in situ field screening technique for characterizing the subsurface distribution of POL contamination prior to the installation of monitoring wells or soil borings.

- The method is not a replacement for traditional soil borings and monitoring wells; but is a means of reducing the number of borings and monitoring wells required to achieve site characterization.

- The method provides semi-quantitative data on the in situ distribution of POL products from the fluorescence response induced in the polycyclic aromatic hydrocarbon compounds that are components of POL products
  - The described configuration makes use of a 337 nm nitrogen laser excitation source that targets semi-volatile aromatic compounds (the technique is most effective for PAHs with three or more aromatic rings.)
  - The method detects PAHs in the bulk soil matrix throughout the vadose, capillary fringe and saturated zones.

- The method provides a "detect/non detect" field screening capability relative to a specified detection limit derived for a specific fuel product on a site specific soil matrix
  - Direct comparisons of sensor data with samples collected using a split spoon sampler by overboring the push hole with a conventional auger show approximately 90% agreement with conventional laboratory methods (EPA Methods 418.1 and 8015) when compared using the "detect/non-detect" criteria. This is the same level of agreement observed for comparisons of the two EPA methods.

- The sensor response of the described configuration is inherently quantitative over a dynamic range of approximately three orders of magnitude starting from a minimum detection capability as low as 10's of ppm (weight of POL product /weight soil); however, the claim is limited to semi-quantitative field screening method because sensor response has been shown to vary as a function of the surface area of the

matrix.

- The described configuration makes use of a detector system comprised of a spectrograph coupled to a linear photodiode array detector to collect the spectral signature of the induced fluorescence emission response.
  - Qualitative use of spectral data provides a means of distinguishing different POL products associated with fluorescence events at different depths
  - Feasibility of using spectral differences as a means of minimizing potential false positives from non-POL fluorophores has been demonstrated

- Measurements can be made to depths up to 150 feet, when the sensor is used in conjunction with a industry-standard 20 ton penetrometer push vehicle, . Standard data collection rates (a sample every 2 seconds) provide a vertical spatial resolution of better than 4 cm for a standard push rate of 1 m/min. Commercially available geotechnical sensors can be integrated with the LIF sensor to facilitate hydrogeological and stratigraphic analyses of detected POLs.

2. Physical principles of sensor operation

Fluorescence is a process in which light is emitted from a molecule following excitation through absorption of energy. More specifically, when a molecule absorbs a photon of light and the electron is raised to a higher energy level, the molecule is left in an excited state. If the molecule does not dissociate as a result of the increase in energy, or loose all or part of the energy through collisions with other molecules, after a approximately 10^{-8} - 10^{-7} seconds the electron returns to the lower energy level, emitting a photon in the process. The difference between the energy of the initial state and the energy of the final excited stated determines the energy of the emitted photon. In general, the energy of the emitted photon is less than the exciting photon, so that the wavelength of the emitted photon is longer than the 337 nm excitation photon.

Not all molecules or atoms in POL will absorb the 337 nm photons from the nitrogen laser, and so will not fluoresce. Others will absorb the exciting photon, but will not fluoresce because the excited molecule will decay by non-radiative processes such as collisions, dissociation or non-radiative decay. The particular arrangement of the electrons in the polycyclic aromatic hydrocarbons (PAHs) makes them the strongest source of fluorescence generally found in POLs.

The wavelength of the excitation source is a critical parameter that determines what compounds contribute to the measured fluorescence signal. The 337 nm UV line from the nitrogen laser was selected for our system because it can be used to induce fluorescence in many PAHs which are components in most fuel products, lube oils, and crude oils. This wavelength however, will not excite the single ringed aromatic compounds (Benzene, Toluene, Ethylbenzene, Xylene) and will only weakly excite the double ringed PAHs.

While a shorter wavelength will excite a greater number of the PAHs, the transmission loss of the silica fiber at wavelengths shorter than 337 nm is quite high, limiting the depth range of the sensor. Using 337 nm, the fiber transmission loss is low enough to permit the use of fibers up to 100m in length or greater. Figure 4 shows that the attenuation of the best performing type of UV transmitting optical fiber (high OH silica clad silica) rapidly increases for wavelengths less than 300nm. Thus, with presently available fibers, transmission of excitation wavelengths required to excite lighter weight aromatic compounds such as BTEX components would be limited to shorter lengths of fibers. As an example, consider a system for detecting BTEX compounds that excites the molecules using 266 nm light from

the fourth harmonic of a Nd:YAG laser. Referring to figure 5 it can be seen that for a 100m length of fiber, the attenuation curve shown in figure 4 predicts that transmission losses in the fiber will reduce the output energy to less than 0.01% of the input energy at 266nm, compared to more than 15% transmission at 337nm.

One approach to get the required excitation energy out of a long length of fiber at wavelengths less that 300nm is to couple a higher power laser source into the fiber. However, studies have shown that for high energy pulsed UV laser sources non-linear absorption process, specifically two photon absorption, result in additional fiber transmission losses and ultimately catastrophic fiber failure [Theriault, 1992]. Use of the 337nm excitation source also eliminates or minimizes problems related to fiber solarization (transmission loss in the fiber induced by high energy UV radiation) and fluorescence of impurities in the fiber [Nevis, 1985]. Another advantage of the nitrogen laser excitation source is that these systems are readily available commercially, relatively inexpensive and easy to use and maintain in the field.

PAH Fluorescent Response

In order to define which compounds contribute to the measured fluorescence signal when the sample is excited with the 337nm laser source, laboratory studies were conducted in which solutions of the pure compounds dissolved in cyclohexane were measured with the fiber optic fluorometer system. Compounds tested are listed in Table 1 along with the respective identifier and chemical formula. In addition to benzene and substituted single ring aromatic compounds (toluene, ethylbenzene and xylene), 18 different PAHs were measured. The relative fluorescence for BTEX and the PAHs tested are summarized in figure 6. Data for the lighter weight compounds is replotted using an expanded fluorescence scale in figure 7.

Results show that 337 nm laser excitation does not effectively induce fluoresce in the BTEX components. Fig. 6 shows that for the PAHs investigated, benzo(k)fluoranthene was by far the strongest fluorophore, followed by benzo(a)pyrene, benzo(b)fluoranthene, Dibenzo(a,h)anthracene, and benzo(g,h,i)perylene. This is consistent with the physics of the transitions involved in the different molecules [Birks, 1970], with the trend showing increased fluorescence with increasing number of rings.

The fact that the strongest fluorescence is observed in 4 and 5 ringed compounds does not mean that the fluorescence measured in-situ is dominated by the heaviest PAHs. The

relative concentrations of the PAHs in a fuel can vary substantially, with only a very small amount of the heavier compounds, so that while these heavy compounds tend to fluoresce strongly, the low concentration reduces the contribution from these molecules. In order to provide some insight into what compounds contribute to the measured signal for different fuel products, we have estimated the fluorescence from individual PAHs for four different fuel products (diesel fuel marine (DFM), JP5, unleaded gasoline and a Navy lube oil (Lube Oil 2190)). The estimate was derived by multiplying the fluorescence/unit concentration for an individual PAH compounds measured in cyclohexane (the data presented in Figs. 6 and 7) by the concentration of the respective PAHs in the fuel product as determined by GC/MS analysis of the fuel product. Results are reported for each PAH as the percent of the total PAH fluorescence estimated for all PAHs in the sample.

Inspection of the results (Figs. 8-11) shows that for each of the petroleum products investigated most of the PAH fluorescence appears to be derived from only a limited number of compounds which are typically much lighter than the 4-5 ringed molecules. For example, di-substituted naphthalene is estimated to account for almost 75% of the PAH fluorescence for JP-5. Anthracene and phenanthrene appear to produce about 90% of the PAH fluorescence for DFM. Almost all of the fluorescence from the lube oil is derived from phenanthrene. Unleaded gasoline shows contributions from the greatest number of PAH with about 60% of the fluorescence from anthracene and phenanthrene and most of the remaining 40% from trace quantities of higher molecular weight PAH that are effective fluorophores at 337nm excitation (ie., fluoranthene, pyrene, chrysene, benzo(b)fluoranthene and benzo (g,h,i)perylene). For three of the four products studied it would appear that most of the observed fluorescence induced via 337nm excitation is derived from PAHs with 3 rings or more.

While this approach gives some indication of the source of the fluorescence observed by the sensor, the actual fluorescence measured on a combination of PAHs is much more complicated. No attempt has been made to correct the above estimates for solvent effects or for the fact that the fluorescence from individual fluorophores in mixtures tends to add non-linearly because of overlapping emission and absorption bands. Studies by Andrews and Lieberman [Andrews, 1992] dramatically show that individual fluorescence emission spectra add non-linearly in mixtures of PAHs. Data from studies (Fig. 12) shows the fluorescence emission spectra from three different PAHs as well as the emission spectra from a mixture of the same three PAHs at the same concentration. It can be seen that the acenapthene fluorescence is quenched by the presence of chrysene and anthracene. This arises from the fact that the emission of acenapthene coincides with the absorption bands of

chrysene and anthracene. This effect is shown quantitatively in fig. 13 which shows a plot of fluorescence intensity vs. concentration for acenapthene in the presence of different concentrations of chrysene. Increasing amounts of chrysene result in increasing suppression of fluorescence from acenapthene.

The important point from the preceeding discussion is that the observed sensor response resulting from a fluorescence measurement of a POL contaminated sample at a specified excitation wavelength represents the non-linear combination of individual fluorescence emissions from the mixture of PAHs that are present in the sample. Because individual emissions add in a complex and non-linear fashion, it is not possible to predict the net fluorescence response even with a detailed knowledge of the PAH composition of the sample. Therefore, as the sensor is used at this time it is important to understand that the observed sensor response provides information on the bulk PAH composition and not information about specific compounds in the sample.

The utility of the fluorescence technique for field screening of petroleum hydrocarbons resides in the fact that fluorescence response for various fuel products (with their associated variable PAH compositions) varies predictably over useful ranges as a function of fuel product concentration. This is illustrated in Fig 14 which shows a plot of florescence intensity vs concentration for a soil sample that has been inoculated with variable quantities of a fuel product. In general at lower concentrations (in the range of 10's of parts-per-million to a few percent by weight for most fuel products) fluorescence response increases with increasing concentration. Eventually, at concentrations in excess of a few weight percent, sensor response will saturate due to self absorption and related processes. This provides a useful sensor response range for in situ measurements in soils which extends from concentrations approximating "action limit" concentrations to levels that correspond to "free product" or saturated conditions for many fuel products of interest. Again it is important to note that although it is not possible (at present) to deconvolve the observed fluorescence emission signal into the contributions from individual components, the signal does vary predictably as the concentration of the mixture (ie., concentration of the fuel product) changes.

Spectral signature of contaminants

In addition to providing in situ information on subsurface fuel product contaminant "concentration" the sensor also provides information about fuel product type. The spectral

signature of the fluorescence emission is directly related to the composition of the fluorophor mixture that is responsible for the fluorescence. Because various fuel products have differe relative proportions of light to heavy PAHs that are a direct result of the fractionation processes and additives used to produce different fuels. these compositional differences are reflected in the spectral signatures. More specifically, lighter fuels like jet fuels (e.g., JP-4, and JP-5) have aromatic compositions that are dominated by single and double ring compounds. These fuels have very low concentrations of aromatic compounds with three or more aromatic rings. In contrast, heavier products like diesel fuels and lube oils have PAH compositions that include aromatic compounds with three or more rings. These compositional differences are illustrated in GC/MS data for various fuels presented in Figures 15-17. The utility of using spectral differences in fluorescence emission signatures to estimate fuel product type is derived from the fact that in general the wavelength of maximum fluorescence emission shifts to longer wavelengths as the number of aromatic rings increases (Fig. 18). Therefore, the fluorescence emission spectra for a light fuel product like a jet fuel (Fig. 19) is blue shifted (ie., occurs at shorter wavelengths) relative to heavier product like a diesel fuel (Fig. 20).

The present configuration of the LIF POL sensor system collects and stores the spectral data for every measurement. During pushes the maximum fluorescence intensity and the wavelength of the maximum fluorescence intensity is plotted as a function of depth. Th spectral data provides a means of confirming that observed fluorescence events are consist with the spectra from known POL products and provides a method for rapidly distinguishing different products associated with fluorescence events at different depths. At present it is necessary to manually inspect depth profiles showing the wavelength of maximum fluorescence intensity and to retrieve individual emission spectra from depths of interest in order extract the spectral data. Efforts are currently in progress to enhance the capability of the system by providing automated on-line spectral pattern recognition based on artificial neural networks for classifying fuel product types and recognizing potential interferences from non-POL products [Andrews, 1994a, Andrews, 1994b, Andrews 1992]. The role of spectral identification of contaminants will be further illustrated in section 6 using field data from a site with several contaminants.

3. System Response

Response to different POLs

The relative response of the SCAPS LIF sensor is dependent upon the specific analyte being measured. The instrument's sensitivity to different POL materials can vary by as much as two orders of magnitude [Lieberman, 1992; Davey 1994a; Apitz 1992a, Apitz 1992b]. These variations in sensitivity are primarily a reflection of the variations in the PAH distribution found within POL products. Other contributing factors such as optical density, self-absorption, and quenching are less important.

As mentioned previously, the SCAPS LIF sensor responds only to PAHs which fluoresce when excited at 337 nm. This includes multiring aromatics with three or more rings as well as some two-ring compounds [Lieberman 1993]. Aliphatic species, single-ring aromatics, and most two-ring PAHs do not contribute to the LIF signal. The total observable fluorescence produced by any given POL sample is dependent upon the mole fraction of fluorescing PAHs along with the relative quantum efficiency of each of the fluorescing species.

It is important to note that the fluorescence properties of POL contaminant in soil may also change after long term exposure and interaction with the environment. A POL contaminant which has been in the ground for any period of time will undergo chemical changes due to weathering, biodegradation, and volatilization. In terms of degradation and transport, the lighter PAHs tend to volatilize and biodegrade first, leaving only the heavier PAHs as time progresses. These are the PAHs that are preferentially excited by the 337 nm laser source used in the SCAPS sensor.

Matrix effects

The in situ fluorescence response of the LIF sensor to POL material is sensitive to variations in the soil matrix. This effect is demonstrated in figure 21 which shows the fluorescent response of jet fuel JP5 in four different soil matrices. Matrix properties which affect LIF sensitivity include grain size, mineralogy, moisture content, and surface area. Each of these factors influences the relative amount of analyte that is adsorbed or absorbed into the soil. Only the relative fraction of analyte that is optically accessible at the window of the probe can contribute to the fluorescence signal.

Of the four influencing factors mentioned above, the dominant parameter is surface area [Apitz et al. 1992a]. LIF sensitivity to POL on soil has been shown to be inversely proportional to the available surface area of the soil substrate [Apitz et al ., 1992b]. Figure 22 shows how the LIF response varies with increasing soil surface area. Sandy soils tend to have a much lower total available surface area than clay soils. POL in sandy soils generally yield a correspondingly higher fluorescence response than POL in clay rich soils. Figure 23 shows the results of an experiment to measure the response of the LIF sensor to soil samples spiked with diesel fuel marine (DFM). The soil samples were prepared as a series of sand/clay (illite) mixtures with progressively increasing clay content. It can be seen that the relative LIF response to DFM in each soil is essentially identical once the response curves are normalized to the available surface area of each of the soils.

The moisture content of the soil matrix is another influencing factor. The SCAPS LIF sensitivity to POL generally increases with greater soil moisture content, although in some natural soils, the effect appears to be small. Figure 24 shows several response curves for DFM on sand. Each curve represents the results of fluorescence measurements on a soil with different water content. These results suggest that the response is fairly insensitive to changes in moisture content. In another study, it was demonstrated that increasing the amount of water in a soil tends to narrow the sensitivity difference between sandy and clay soils [Apitz et al 1992a]. Mechanistically, it appears that water displaces POL from within the pore spaces of the matrix, effectively reducing the surface area available to the contaminant.

The effects of soil grain size has also been examined in laboratory studies. LIF sensitivity generally increases with grain size. Figure 25 summarizes the results of determining the sensor response to DFM in sand matrices of three different mesh sizes. The measured fluorescence is shown to be substantially greater in the coarser mesh sizes.

Spectral Interferences

The SCAPS LIF sensor is sensitive to any material that fluoresces when excited at 337 nm. Although SCAPS is intended to specifically target petroleum hydrocarbons, the excitation energy produced by the LIF system's nitrogen laser may cause other substances to fluoresce as well. At some investigation sites it is possible that SCAPS could respond to fluorescence originating from non-POL sources. Many common fluorescent minerals can produce a measurable LIF signal. Other non-POL fluorescent material may be found in

the subsurface environment as a result having been introduced through human activity. De-icing agents, antifreeze additives, and many detergent products are all known to fluoresce very strongly.

The potential presence of fluorescence emission from non-target (non-POL) analytes within the soil matrix must be considered when assessing SCAPS field screening data. In some instances, the inability to discriminate between POL fluorescence and non- POL fluorescence would lead to false positives for the presence of POL. Non-POL fluorescence could possibly mask the presence of POL fluorescence, leading to reduced sensitivity or erroneous estimation of the relative amount of POL present. In a worst case, spectral interference could lead to a false positive or false negative report of findings.

Because the SCAPS POL sensor collects full spectral information, it is almost always possible to discriminate between POL and non-POL fluorescence by analyzing the spectral features associated with the data. The LIF sensor system utilizes a multichannel detection scheme in order to capture a complete fluorescence emission spectrum at each point along the push. The advantage of this approach over methods which rely on single channel measurements of fluorescence intensity is that spectral features are obtained which can be used to associate the signal with a specific petroleum class, mineral substance, or other material. The spectral patterns collected in situ provide the means to uniquely distinguish POL fluorescence from potential interferents.

SCAPS ability to recognize non-POL fluorescence has been tested in several laboratory experiments. In one study [Andrews 1994b], the spectra of eight fluorescent minerals and five fluorescent chemicals were obtained with the LIF sensor. These spectra were compared with the LIF spectra obtained from multiple samples of jet fuel, gasoline, diesel fuel, and lube oil. In all cases, the POL spectra could easily be recognized (by both computer algorithm and human analyst) as different from the non- POL spectra. The specific substances used in the experiment were chosen because they fluoresced in the same spectral region as the fuel products. Many other fluorescent chemicals and minerals fluoresce in a spectral region far removed from the POL spectra. The materials used included:

Calcite	Resinous coal	Tide Surfactant
Norbergite	Aragonite	Prestone antifreeze
Fluorite	Fossil Algae	Simple Green detergent
Scapolite	Turritella agate	Quinine sulfate

In addition, the organic component of some soils contains humus. This naturally occurring residue of plant decay often contains some small amount of fluorescent PAHs. Laboratory tests [Davey 1994b] have demonstrated that humics do not interfere with LIF detection of POL on soil. Humic fluorescence is minimal at concentrations found in even the most organic rich soils.

Dynamic Range

The linear dynamic range of the instrument depends upon the specific POL analyte as well as the matrix being considered. Generally, for in situ measurements we have found that the linear portion of response curves extends well beyond three orders of magnitude. Roll off tends to occur at concentrations greater than 10,000 ppm. In sandy soils, the roll off occurs at lower concentrations than in clay rich soils, possibly due to self absorption [Apitz 1992a] or saturation.

The linear dynamic range of the LIF sensor also depends upon instrumental parameters which are operator controlled. The linear dynamic range may be extended to higher concentrations by adjusting the slit width of the detector, but this results in decreased sensitivity at lower concentrations.

4. Quality Control & Calibration Standards

Two different types of standards are used during field operations. A quality control standard based on a solution of quinine sulfate is used to insure the system is functioning correctly. This standard also allows the data to be normalized if the probe is changed in the middle of the field operations. A set of calibration standards is prepared to evaluate the sensitivity of the sensor to the soil type at the site and the fuel type expected to be encountered. This set of standards is used to establish the noise in the measurements as well as the sensitivity of the sensor to the soil/fuel combination.

Quality control standard: Quinine Sulphate

The quality control standard, designed to evaluate the system performance and internal noise, consists of dilute sulfuric acid mixed with 10 ppm (by weight) quinine sulphate. Quinine sulphate has a high quantum efficiency so that it fluoresces quite strongly, is chemically stable, easily reproducible, and exhibits minimal photodegredation.

A single measurement of the quinine sulphate standard averages 20 fluorescence spectra (analogous to the in-situ push averaging), and the measurement is repeated three times directly before and after a push. The short term system stability is defined as the standard deviation of the three measurements. Typical results show an average standard deviation of 1- 2% of the fluorescence intensity.

The quinine sulphate data is also used to normalize data taken using different probes. Figure 26 shows the quinine sulphate signal was much stronger for the first 4 pushes at a recent site. This is due to the fact that a new probe was substituted after the fourth push. The new probe had a much longer fiber optic cable than the old probe (100 m and 50 m respectively), causing more attenuation of the laser light due to absorption in the fiber, and the realignment of the optics changed the collection efficiency of the detection system. The quinine sulphate data was used to normalize the data from the first 4 pushes for a consistent data set throughout the site.

Calibration Standard: target fuels in native soil

In addition to the quinine sulphate quality control standard, a series of spiked soil standards are prepared using soil gathered from the site. The sensitivity of the sensor will depend on the type of hydrocarbons encountered. For instance, diesel fuel (which is composed mostly of heavy PAHs) tends to fluoresce strongly when excited by a nitrogen laser, so that a small amount of fuel can give a large fluorescence signal. On the other hand, some jet fuels (e.g. JP-5) are composed of a greater fraction of lighter PAHs, which are not efficiently excited with nitrogen laser excitation, so that a larger amount of jet fuel is needed to give the same fluorescence signal as diesel fuel. Hence the sensor is less sensitive to this type of fuel.

The fuel chosen as the standard should match the expected in-situ petroleum as closely as possible. We have typically encountered diesel fuel marine (DFM) and jet fuel #5 (JP-5) at many of the sites we have visited, and often use either or both of these as calibration standards. One of the difficulties in establishing the target fuel is that often many different fuels were used during the history of the site, so the contaminant represents a combination of fuels. In addition, the contaminant has aged and weathered from long term exposure at the site. This is the same problem that many other quantifying analytical methods also encounter, and for this reason, SCAPS LIF-POL sensor is intended to be a screening tool the establish the presence of contamination, rather than a quantitative method for measuring the amount of contamination.

To prepare the standards, a sample of soil is collected from the specific site to be characterized. The soil is gathered from below the surface, at a depth of 1-2 feet, to reduce hydrocarbon contamination from aerosols and other airborne particulates, and is grossly sifted to remove sticks and other large debris. A series of soil samples are prepared by spiking the soil with various concentrations of fuel (from 0 ppm to 50,000 ppm by weight). The spiked samples are tumbled for 24-48 hours to insure uniform distribution of the fuel.

The fluorescence spectra from the spiked samples are measured at the start of each day of field operations. As with the quinine sulphate, 20 shots are averaged to provide a single measurement. At present, a single aliquot from each standard concentration is measured three times, with the aliquot being stirred between measurements. The standard deviation of the calibration standards will reflect both the internal noise as well as the variations due to inhomogeneities in the soil, and can be compared to that of the internal standard (quinine sulfate) to assess the inhomogeneity of the soil at the site.

The calibration data for the diesel fuel marine standards from field operations at the Naval Station, San Diego: Fire Fighter Training Center (FFTF) and the Naval Air Station: Alameda, which will be discussed in more detail below, are shown in figures 27 and 28. The different symbols represent the measurements obtained on different days. This data will be used to calculate the sensitivity or response of the fuel to the local soil, as well as the baseline and standard deviations that are needed to determine the detection limit at each site.

5. Detection Limit

Because the response of the LIF-POL sensor is sensitive to the type of contaminant and the specific properties of the soil at the site, the detection limit of the sensor will vary from site to site. Sites contaminated by heavy petroleum products such as diesel and fuel oil, in a sandy environment, could have detection limits in the tens of ppm range, while sites contaminated by lighter jet fuels in a clay based soil could have detection limits in excess of 1000 ppm. Though the LIF-POL sensor is intended to be a semi-quantitative indicator of contamination, it is important to provide a well defined, quantitative detection limit, so that the level of detection for the site is well defined. In this way, a site that is declared "clean" because of the absence of fluorescence is characterized to have a contamination level less than the detection limit.

The ability of the LIF-POL sensor to measure small amounts of contaminant will be limited by two things: the **noise** from small fluctuations observed in the fluorescence data, and the **sensitivity** to the specific hydrocarbons present in the soil. The **noise** comes from several sources, including those internal to the sensor (which can be reduced by improvements to the sensor), as well as from external sources that are due to the fluorescence properties of the soil. Internal noise arises from fluctuations in the output energy of the nitrogen laser, variations in the detector temperature, and changes in optical alignment. External noise comes from variations in the background fluorescence and diffuse reflectivity of the soil. Because the constituents are not uniform within the soil, the fluorescence signal will change depending on exactly what is presented to the sensor window, causing the fluctuations in the measured background.

In practice, setting the detection limit is a two part process. The first part consists of establishing a fluorescence threshold, the level of fluorescence that must be exceeded to indicate the presence of contamination. This threshold is given by the sum of the background fluorescence and the noise. The second part is to relate this fluorescence threshold to the concentration of petroleum to establish the detection limit in mg/kg. This is done using the sensitivity determined from the calibration standards.

Noise, Background & Sensitivity

Three quantities are needed to determine the fluorescence threshold and the detection limit: **noise, background** and **sensitivity**. These are determined using the calibration samples prepared prior to the site visit using standard analytical techniques.

The fluorescence intensity for each calibration sample is measured daily at the start of operations. The data is regressed to establish a slope and intercept. For each regression, a record of the goodness of the fit (r^2) and the uncertainty in the slope and intercept values are calculated:

$$I = \alpha C + I_0$$

where I is the measured fluorescence intensity in counts, C is the concentration of the target fuel in mg/kg, I_0 is the intercept in count, α is the slope, and

ΔI_0 = uncertainty in intercept
$\Delta \alpha$ = uncertainty in slope

determined from the goodness of the fit.

This procedure is carried out using only the lower concentration calibration standards, typically those with concentrations less than 1000 mg/kg. This is done for several reasons. Experiments have shown that for the full range of calibration standards, the calibration data is not well fit by a linear regression (see figure 29). This is not surprising because of the complicated interaction between the fuel and soil type [Apitz, 1992a]. Because of the large range of standards, a log-log plot has been adopted for analysis of the complete set. Surprisingly, it has been found at some sites that the entire data set is well fit by a single exponential function

$$I = \alpha C^{\beta} + I_0.$$

where C, I and I_0 are defined as above. The complete calibration data from field operations at NAS:Alameda are shown in figure 30, and it can be seen that the exponential fit is quite satisfactory. This exponential dependence is not found at all sites, and in particular, many sites show a saturation of the fluorescence at high concentrations of contamination. This behavior is still under investigation, and it is hoped that this can be used in the future to

lead to a more quantitative measure of the contamination at a site.

The accuracy of the exponential fit is not good at low concentrations. By restricting the data set to the low concentration samples, the data is well fit using the linear regression and this approach gives much more confidence in the sensitivity near the detection limit. The calibration data for operations at NAS:Alameda are shown in figure 28 for the three days during which the validation samples were collected. While the fitting procedure is carried out for all the calibration data, in calculating the fluorescence threshold and the detection limit the data set is generally restricted to the calibration data from those days when the soil samples for analytical measurements were collected. This is done so that the fluorescence threshold and detection limit can be used directly with the analytical measurements to validate the efficiency of the LIF-POL sensor.

Calculated detection limits

The slope (α), intercept (I_0), and intercept uncertainty (ΔI_0) are used to determine the **background**, **noise** and **sensitivity** in the following way:

$$\textbf{background} = I_0$$

$$\textbf{sensitivity} = \alpha$$

$$\textbf{noise} = \Delta I_0.$$

The **noise** is defined as 1.00 times the uncertainty under the standard assumption of a normal student's t distribution statistics. For the number of points used in these fits (typically 4-5), this corresponds to an 80% confidence limit. The **background**, **sensitivity** and **noise** for several sites are shown in table 2. For those sites where sample collection occurred over more than one day, the data represent an average of the values.

The quantities needed to calculate the fluorescence threshold and the detection limit are now known. These are determined from

$$\begin{aligned} \text{threshold limit} &= \textbf{background} + \textbf{noise} \\ &= I_0 + \Delta I_0 \end{aligned}$$

$$\text{detection limit} = \textbf{noise / sensitivity}$$
$$= \Delta I_0 / \alpha.$$

These limits are also shown in table 2. One can see that the detection limit will vary somewhat from site to site.

Discussion

This method for setting the fluorescence threshold and detection limit has been chosen for several reasons. It is based on a standard analytical chemical approach for quantifying the response of a detector. It is also easily reproducible, and the results follow directly from applying a well defined series of data reduction techniques that can be documented and repeated at any site.

This approach does have limitations. The background level is determined by a single soil sample, chosen near the surface at one location from the site. It is possible that the soil sample is contaminated, so that the background represents not only the natural fluorescence but a contribution from the contaminant. This is not usually a problem as the soil is collected in consultation with local site officials who have a good knowledge of the site and can identify areas that are not expected to be impacted. To avoid contamination from the aerosols and other airborne sources, and surface affects such as asphalt and surface oil the soil is collected below the surface.

Even if it is not contaminated, the background from this single sample may not be representative of the whole site. At a typical site, it has been found that the background will vary with depth generally becoming smaller with increasing depth. It is not clear how to determine the in-situ background in a systematic manner. Techniques for extracting the background and noise quantitatively from the push data using a histogram of the push data are presently under development. This work (described in more detail in Appendix B), is not part of the present claim, but is included as an indication of future capabilities. While this approach is not yet mature enough to be incorporated into the calibration procedure, we believe it has a great deal of promise.

In summary,while we feel that although the present approach utilizing the calibration samples to set the fluorescence threshold and detection limits has some drawbacks, it is currently the

best choice. Other approaches to determining these quantites using the in-situ push data will continue to be investigated, and will be evaluated against the present approach. .

6. Introduction to Field Data

This section will describe the field data collected with the SCAPS LIF-POL sensor, and will detail some of the information that can be extracted from this data. This is intended to be an introduction to the types of analysis that can be conducted with the sensor. As part of our site field screening procedure, a series of soil samples have been collected at each site and analyzed using established analytical methods. The full procedure for this work, along with a discussion of the efficacy of the LIF-POL approach, is discussed in detail in the next section.

The following will describe field data from two sites. The first site is a naval fire fighting training facility in San Diego that has been in use for almost 50 years. The site is known to be impacted with petroleum contamination, although the age and composition of the contaminant is not clear. The second site is within the Naval Air Station:Alameda at the location of a turn of the century oil refinery. This site was known to contain refinery wastes, a jet fuel (JP-5) spill near a jet engine test cell, and a gasoline release near the former Naval Exchange service station.

At both sites, the SCAPS truck was deployed for a period of several weeks. Operations were divided into two phases. The first phase of the site assessment involved advancing a large number of pushes (22 at FFTF, 37 at NAS:Alameda) to characterize the spatial extent of the contamination. This is the "plume chasing" phase of the operations in which the pushes are initially made in accordance with a grid pattern of the site, and the locations of the later pushes are determined as the size of the contaminated region becomes clear. During the second phase, several locations in the site are pushed again, after which a hollow stem auger drill rig is used to collect soil samples directly adjacent to the pushes. These samples are then sent to a state of California certified laboratory (Analytical Technologies, Inc. was used for all of the data shown in this report) for analytical measurement of the petroleum content using methods 418.1(TRPH) and 8015 (TPH).

The fluorescent data from each site will be discussed, and interpreted to provide a picture of the depth and spatial extent of the contamination at each site. An example of the use of the spectral information to differentiate between different contaminants is also shown. The validation data, used to confirm the efficacy of the sensor, is discussed in the next section. In addition to the validation data from the two sites discussed here, data from an additional four sites will be presented.

The field reports generated directly after the site visits, which include the raw push data, field borelogs, results of soil sample analytical measurements, and report from the certified geologist present during all phases of the field operations, is included for both sites in Appendices C and D.

Naval Station, San Diego: Fire Fighter Training Facility

Site history

The Naval Station, San Diego Fire Fighting Training Facility (FFTF) is located in San Diego, directly next to San Diego Bay northeast of Pier 8. It encompasses approximately 140,000 square feet measuring 500 by 275 feet, and is currently in use for fire fighting training exercises. These operations have been conducted at the site since the late 1940s. Further details of the site history and geology are given in **Appendix A.**

Petroleum hydrocarbon material presently used at the FFTF includes diesel fuel used to heat building 167 and 3,500 gallons per week of JP-5 to fuel training fires. The training fires last approximately five minutes each. Quench water from each exercise is directed to an oil/water separator system which directs the de-oiled waste water into the sanitary sewer system. Prior to 1988, the de-oiled waste water, water runoff, and building washdown was directed into a storm drain that discharged to San Diego Bay. The 28,000 gallon above ground vaulted tank, No. 13, is composed of two concentric tanks. In the past, different fuels were stored to produce various types of fires.

Previous environmental investigations performed at the FFTF have determined that the soil and groundwater at the FFTF are impacted by light non-aqueous phase liquid (LNAPL). Numerous borings and wells have been installed at the site, and approximately 14,000 gallons of LNAPL were reported to have been present prior to initiation of remedial activities at the site. Product recovery trenches and wells have been installed, and Naval Facilities Engineering Command Southwest Division reports that approximately 15 to 20 gallons of LNAPL have been extracted daily since June of 1993. The LNAPL, prior to substantial removal, occupied an area roughly 200 by 250 feet and was present at thicknesses up to one foot.

The SCAPS vehicle was deployed to Naval Station, San Diego to investigate the Fire Fighter Training Facility on 11 January 1994 and from 26 January through 8 February

1994. Problems with the SCAPS onboard generator necessitated the split deployment. A total of twenty-two SCAPS pushes and three hollow stem auger borings were completed with twelve soil samples collected by split spoon sampler. Figure 31 displays the push locations. At most push locations, the site was covered with an asphalt black top so a non-instrumented "dummy probe" was used to penetrate the asphalt and near surface soil to a depth of approximately 2 feet below ground surface.

Push data

The fluoresecence and geotechnical data from a represenetative push is shown in figure 32. (Note that the raw data from all pushes at FFTF are shown in Appendix C). The cone pressure and sleeve friction are measured over 2 inch intervals, and are used to determine the soil classification over a range from 1 to 12. The different classifications correspond to different types of soil as shown in figure 33. The cone pressure and sleeve friction values are input into an artificial neural network implemented in the present SCAPS software to provide a real time display of the soil classification. In addition to the geotechnical data, the sensor also measures the fluorescence at 2 inch intervals. At each depth, the entire spectrum is saved, and the software extracts the intensity at the peak of the spectrum and displays this value in real time. In most cases, the wavelength of the spectral peak is also displayed in real time.

The fluorescence is present at a background level from the surface down to a depth of 8.5 feet. At this depth, which corresponds to the capillary fringe at this site, the fluorescence sharply increases by two orders of magnitude. This is due to the strong fluorescence of the poly-cyclic aromatic hydrocarbons (PAHs) found in the LNAPL. The fluorescence drops back to background levels at 10 feet, the top of the saturated zone, and negligable fluorescence is observed below this region. This is consistent with the low solubility of PAHs in water, and supports the conclusion that the contamination is in the form of LNAPL present in the capillary fringe region.

In the data shown in figure 32, only the intensity of the fluorescence at the peak of the spectrum is plotted. A more powerful technique for viewing the data from a single push is the "spectrum–depth matrix" shown in figure 34. In this figure, the depth is plotted on the y-axis and the wavelength is plotted across the x-axis, and the intensity at a given depth and wavelength is given by the color at that point. Purple indicates the weak fluorescence at the background level, while green and red indicate strong fluorescence. The spectrum can be

seen by looking across a horizontal line, while the intensity (at a given wavelength) as function of depth is seen by looking along a vertical line. It is easy to pick out the contaminated depth region in this figure, as well as seeing that the peak wavelength of emission is near 430 nm. One can also see that the background spectra differ from those in the contaminated region. The background peaks closer to 500 nm in contrast to the 430 nm peak of the contaminant. This spectral information is very useful in separating the background from contaminant, as well as separating regions contaminated by different products, as will be discussed later.

One of the advantages of the LIF-POL apprach to field screening is the fine depth scale that can be obtained. This can be seen in the fluorescence data shown in figure 32. The contaminated region is not simply a featureless plume, but shows a double peaked structure with a less contaminated region in the middle. This feature is seen at most of the pushes showing contamination (pushes 1,2,3,7,11 and 22), and can be seen in the data from a series of pushes on a transect of the site (figure 35). The exception are the pushes near the quay wall, where the contaminated region is substantially thicker because the LNAPL is most likely piling up against the impermeable cement wall. It is not clear at present why the contaminated zone should have this structure, but it is thought that this may be related to movement of the water table due to tidal influences associated with the proximity to San Diego Bay.

Spatial Extent of Contaminant

One of the most effective uses of the SCAPS LIF-POL sensor is to delineate the spatial extent of the contamination at a site. This is done by repeated pushes throughout the site, and then correlating the fluorescence data to indicate both the depth and extent of a contamination plume. While the site plan written prior to deploying to the site will include general directions on the location of the measurements, the exact location of the pushes are generally determined as the field data is obtained.

The site push data can be viewed in a number of different ways. In figure 35, the fluorescence data for several pushes along a transect are shown. One can see a consistent pattern with large intensities near the center of the site, and clean pushes near to the edge of the site. The location of this transect is shown in the site map in figure 31. A perpendicular transect, marked as A-A' on the map, is shown in figure 36. From this data there is evidence that the LNAPL is piling up against the cement quay wall, but unfortunately a limited number of

pushes were made in this area, so the data is not conclusive.

A more complete picture of the spatial extent of the contamination can be made by incorporating the fluorescence data from all of the pushes into a single figure. Figure 37 shows the extent of the contamination plume relative to the landmarks and push locations at the site. This figure was generated by first integrating the fluorescence intensity (above the background level) at each push location, which is indicative of the total amount of contamination at that location. This data is tabulated for each push, and a color assigned according to the total fluorescence at that location. The data is then interpolated (using a standard technique called kriging) between push locations using a weighted calculation that minimizes the statistical variance. Note that the region in the middle of the site shows rather fine detail in the shape of the plume, while near the quay wall, where few pushes were advanced, the plume has much less structure. Because there are fewer data points near the quay wall, the plume size is not as known as accurately as in the center of the site.

This figure illustrates one of the advantages of a SCAPS site analysis. In those regions where fine spatial detail is desired, such as shown here near the center of the site, a greater number of pushes can be advanced. In regions where less detail is required, fewer pushes are needed. The goal of the site operations at FFTF was to show the spatial extent of the contamination near the center of the site, away from the quay wall, so more pushes were advanced in the middle of the site. It is important to note that the location of the pushes and hence the fine scale horizontal resolution of the contamination can be adjusted in real time while at the site, using the data from those pushes already advanced.

Naval Air Station Alameda - Site 13: Old Refinery Site

Site history

Naval Air Station Alameda is located at the western end of Alameda Island, in Alameda and San Francisco counties, California. Alameda Island lies along the eastern side of San Francisco Bay, adjacent to the city of Oakland. The air station occupies 2,643 acres and is approximately 2 miles long and 1 mile wide. Most of the eastern portion of the air station is developed with offices and industrial facilities; runways and support facilities occupy the western portion of the station. Further details are found in Appendix A.

Originally a peninsula. the land that is now Alameda Island was isolated from the mainland in 1876 when a channel was created through the tip of the peninsula. linking San Leandro Bay with the main portion of San Francisco Bay. Dredging was conducted to deepen the canal and allow commercial and industrial traffic to and from the island's early industrial sites. These sites included a borax processing plant and an oil refinery, the Pacific Coast Oil Refinery, which is now known as Site 13, former oil refinery. In 1936, the U.S. Navy acquired title to the facility and began construction of the air station in response to the military buildup in Europe prior to World War II. After entry of the U.S. into the war in 1941, more land was acquired adjacent to the air station. Following the end of the war, the Navy returned NAS Alameda to its original mission of providing support for fleet aviation activities.

Site 13 at NAS Alameda is located as shown on figure 38. Site 13 lies within an area formerly occupied by the Pacific Coast Oil Refinery. The refinery operated form 1879 to 1903, and refinery wastes and asphaltic residues were reportedly disposed of at the site. The goal of the SCAPS field operation was to provide a preliminary delineation of the vertical and lateral extent of POL at the NAS Alameda, Site 13 former oil refinery;

A total of 45 pushes and 8 boreholes were advanced during the field operations at NAS Alameda between March 16 and April 6, 1994. The last 8 pushes (#38-45) were overdrilled with a hollow stem auger to collect soil samples. A total of 49 discrete soil samples were collected and analyzed by tranditional methods as part of the SCAPS validation program. These will be discussed in more detail in the next section.

Push data

The push data from this site showed a substantial region of very high fluorescence. Note that the raw push data from all pushes at this site are included in appendix D. Pushes with large amounts of fluorescnce are #1, 2, 3, 6, 7, 8, 12, 13, 14, 25, 26, 41, 42, 43, 44, and 45. Other pushes such as #9, 15, 23 and 26 show a moderate level of fluorescence, while pushes such as #20, 21, 22, 28, 29, 34, 35, and 38 show only background levels of fluorescence. The region of strongest fluorescence was concentrated at the push locations bounded by the dashed line in figure 38, with weaker fluorescence outside this region, and clean pushes (showing only a background level of fluorescence) occurring outside the dotted line. Because of the existing buildings at the site, the complete spatial extent of the contamination could not be obtained, but a clear delineation of the north end of the site was

accomplished.

A powerful technique for interpreting the site contamination is to display the push data using a 3 dimensional visualization software package. (In this case, the software used was EarthVision by Dynamic Graphics, Inc.) The software uses the data from the push locations and a minimum tension algorithm to interpolate between the push locations, providing a visualization of the contamination. Obviously the picture will be more accurate as the number of pushes increases, and care must be exercised in interpreting the data in this format as the resolution is only as good as the distance between the pushes. However, this approach does allow the full three dimensional nature of the LIF-POL data to be displayed.

Figure 39 shows a three dimensional view of the NAS:Alameda data, where the software has been configured to display the volume where the fluorescence exceeds the background level. This allows one to visualize the contaminant plume spatially. The figure also includes a cutaway to display the interior of the plume, where the highest levels of fluorescence were observed. This coresponds to the region of greatest contamination. The acutal push locations are shown in purple as verticle lines throught the plume.

It is interesting to take a cross-section through this 3 dimensional figure to produce a transect showing the variation in the fluorescence. Figure 40 shows an east-west transect along the line A-A' shown in figure 38 and represents the data from pushes #21, 29, 17, 40, 12, 41, 7, 42, 2, 42, 24 and 44. The pushes performed during the validation stage of operations (#39, 40, 41, 42, 43, 44, 45) are shown from left to right in the figure. This figure plots depth along the y axis, push location along the x-axis with the maximum fluorescence intensity represented by the color. Two hot spots with very high fluorescence can be seen, along with some surface fluorescence throught to be due to asphaltic contaminants at ground level. Also shown on the figure are the pushes from which soil samples were collected, and the TRPH values measured for the soil samples. Good qualitative agreement between the two methods can be observed.

Spectral signature of contamination

Most of the fluorescence observed at the site occured beneath the water table, and so most likely represents signal from the heavy tar-like refinery waste that was buried at the site during the operation of the refinery prior to 1903. From the soil samples collected with the split spoon sampler, it was found that this contaminant is very viscous, with low mobility

so that it cannot float on the water surface.

This heavy waste proved very interesting when the spectral signatures of the site were closely inspected. In figure 44, the fluorescence appears to occur in two separate regions. While it may appear that these are just artifacts of the data, in fact the two regions have distinctly different spectral signatures, suggesting that these may be two different types of waste from the old refinery. The pushes shown in figure 40 are pushes #39-44, from left to right. Push #41, the third from the left, recorded the region of highest fluorescence, and in fact, much of the push exceeded the dynamic range of the detector so the actual spectral spectral signature was lost. However, at several depths near the top and bottom of the region of strong fluorescence the spectrum was not saturated, and the maximum fluorescence occurred at 428 nm. The next push, push #42, did not have saturation problems, and showed the same wavelength maximum at 428 nm consistently over the depth region from 5 - 10 feet. However, as the push was advanced into the lower region of fluorescence, the spectra abruptly shifted from 428 nm to 460 nm, and the maximum was consistently 460 nm for the depth region from 10-15 feet. Below this depth, only the background spectra were observed.

This can be seen in figure 41, which is the spectrum-depth matrix from push #42. (Depth is on the y-axis, wavelength on the x-axis, and intensity at a given point is given by the color, with yellow/red indicating large intensities, and purple small intensitites). The plot on left is the raw data, showing the two regions of strong fluoresence observed during this push. The plot on the right represents the normalized spectra from the push. The background spectrum has been subtracted from each spectrum, and then each spectrum has been normalized by dividing by the area of the spectrum. This then represents the normalized spectra at each depth.

It can clearly be seen that the spectra are very consistent through the depth from 5-10 feet, and then again from 10-15 feet, corresponding to the two regions of fluoresecnce, but the two regions clearly show a different fluoresence spectrum. There is no change in the soil type that could account for this change in spectra, and so this shows that the two regions have a different composition of PAHs in the contamination. It appears that two different types of hydrocarbon contaminant have been buried at the site. This is further corroborated by the spectral signatures from other nearby pushes. The data from push #43 and push #2, (shown in figures 42 and 43) which are through the middle of the lower plume shown in figure 40 show a consistant spectral peak at 460 nm in the region of interest from 9.5 to 13 feet. The tentative conclusion is that this lower plume has a different composition of PAHs

than the upper plume, and is probably from a different source than that of the upper plume.

[The validation samples collected at this site have been analyzed by EPA method 8270–modified to determine the concentrations for 40 different PAHs. Initial analysis of the analytical results confirms the spectral identification of the different contaminants. This will be more fully discussed in the final draft of this document.]

This is interesting not because it is important to know there are two types of viscous tarry contamination at the NAS:Alameda site, but to illustrate the use of the spectral data captured at every measurement. At some sites, there are several potential sources for contamination, such as storage tanks at a neighboring gas station and diesel storage facility. The spectral data can provide a method to differentiate the contaminants, and indicate which type of storage tank might be leaking.

The data is also important in that it shows that the spectral shape is consistant as the probe is pushed through a large depth of a single contaminant. While this was expected, it was not clear how much spectral variation one would expect due to soil inhomogeneities, stratigraphic effects, or small scale variations in the amount and composition of contaminant exhibited to the probe window. The evidence from this site indicates that once the background fluorescence has been subtracted from the data, the spectral shape is very consistant. We note, however, that this data was collected in a fairly uniform soil matrix, and it is not presently known how much the spectra will shift if the matrix were to change substantially during the push.

Fine Scale Depth Resolution

Finally, it is important to note that the LIF-POL sensor provides much finer scale depth resolution of the contamination than traditional split spoon sampling. This is shown in figure 40 using the fluorescence data from the site. Compare this to figure 44 and figure 45, which are the same cross-section prepared using only the TPH and TRPH data, respectively, from 35 soil samples collected along the same transect.

The gross features are similar for all three methods, but clearly the TPH and TRPH resolution is limited by the number of data points. Because of the difficulty and expense of retrieving soil samples, any analysis based on analytics will generally have lower resolution.

The LIF-POL sensor provides fluorescence data every 2 inches at present, and could easily be modified to provide data on an even finer scale.

7. Validation data

As part of the site assessment, soil samples have been collected in order to explicitly validate the fluorescence readings from the LIF-POL sensor. The samples are analyzed using traditional EPA certified methods to determine the amount of petroleum in the soil from a given depth, and this in turn is compared with the fluorescence reading from the same depth to verify that the fluorescence correlates with the contamination. Validation data is presented for the two sites discussed in detail in the previous section (FFTF and NAS Alameda) as well as four additional sites (NABC, Yuma, Pendleton, Guadalupe).

It is important to note that the six sites had many different characteristics. FFTF had contamination in the form of LNAPL, and the site was very uniform sandy soil directly next to the bay. Alameda had much older, heavier contamination. Yuma was a very dry site, with fairly strong interference from calcium carbonate encountered during the pushes. In contrast to the other sites, Pendleton turned out to a clean site both from the LIF-POL sensor readings and the analytic measurements on the soil samples. Guadalupe, on the other hand, was completely saturated with diluent, a combination of diesel and kerosine pumped into the ground by an oil company to increase the extraction efficiency for oil wells at the site.

Validation is important for several reasons. On the most basic level, SCAPS is intended to be a rapid field screening tool for quick site assessment and better placement of a reduced number of traditional borings/wells. It is important to confirm that a strong fluorescence signal corresponds to large amounts of POL contamination in the soil, while weak fluorescence reflects a lack of POL contamination. Once the correlation between the observed fluorescence and level of POL contamination is established, then the extent of a contaminant plume can be determined from the fluorescence data without analytical soil measurements throughout the site.

In order to establish this correlation we have implemented a comprehensive sampling plan that directly compares LIF POL sensor data with several conventional analytical methods. We have selected two methods (EPA Methods 418.1 and 8015) that represent two of the most frequently used methods that are employed at present for delineating non-volatile POL contamination. It is important to note that these methods were selected because they represent the current technology , the technology that is presently being used on a day-to-day basis by environmental professionals and regulators to make decisions about the distribution

of subsurface POL contamination. These methods were not selected because they measure exactly the same constituents that are targeted by the LIF POL sensor.

It is recognized that 418.1 and 8015 are subject to systematic biases related to the composition of the POL contamination and therefore it anticipated that there will be some deviations between results from the sensor and the different methods. In order to attempt account for these differences and to better understand the nature of observed anomalies splits of selected validation samples have also been analyzed by a modified full scan GC/MS EPA 8270 method [Douglas et al., 1992] that includes semi-quantitative data for the alkylated PAH compounds and diagnostic dibenzothiophenes and triterpanes. The modified EPA 8270 method described by Douglas involves the identification and straight baseline integration of each alkylated PAH homologous series and quantification of each series (C1-napthalenes, C-2 naphthalenes, etc.). Although this data is being collected it will not be discussed in this report because interpretation of the results is currently on-going.

Sample collection

The standard procedure for collecting validation soil samples is to overdrill directly after a push. The samples are collected using a truck mounted Mobile B-61 hollow stem auger drill rig. In all cases, the center of the borehole is offset from the push by approximately inches, far enough so that the soil samples were not affected by the hole left after the push, but near enough so the samples came from a similar environment as that measured during the push. In each boring, samples are collected with a California modified split spoon sampler lined with 2.5 inch diameter, 6 inch long stainless steel tubes (see figure 46). The samples are collected in advance of a lead auger using a 140-pound slide hammer with a 30-inch fall, in accordance with American Society of Testing and Materials (ASTM) 1586 Standard Penetration Test. Upon completion of sample collection, the boreholes are filled with a bentonite/cement mixture using the tremmie method in accordance with County of San Diego and State of California guidelines.

Analysis methods

The soil samples from all field sites have been submitted to Analytical Technologies, Inc. (ATI), a State of California certified laboratory, under proper chain of custody documentation for chemical analysis. All samples were homogenized and then analyzed using EPA Method

418.1 (total recoverable petroleum hydrocarbons - TRPH) and EPA method 8015 (total petroleum hydrocarbons - TPH). The EPA certification documents for the laboratory are included in Appendix E.

Method 418.1 uses a solvent such as fluorocarbon-113 to extract the hydrocarbons from the soil, and then measures the strength of the infrared absorption at 2930 cm-1 corresponding to a CH2 stretch vibration. The absorption is compared to that measured on a standard mixture of hydrocarbons. This method has the advantage that it is quick and relatively easy to perform, even in the field, and is generally not very expensive. However, it has several drawbacks [Douglas, et. al., 1992], including the fact that volatile compounds are usually lost in the extraction procedure, extraction efficiency for high-molecular-weight hydrocarbons is poor, and all soluble materials within the soil, including contaminants and other benign materials, are extracted, possibly affecting the measurement. This method relies on a hydrocarbon mixture such as isooctane, n-hexadecane and chlorobenzene as the standard for comparison, which is generally not the same as the petroleum product found at the site. Since all hydrocarbons do not respond equally to infrared absorption, the difference between the in-situ product and the standards may result in artificially high or low readings. Note that the same probelm is encountered in choosing a standard fuel with which to calibrate the LIF-POL measurements.

Method 8015 (TPH) utilizes a gas chromatograph coupled with a flame ionization detector (GC/FID) to separate the components of the contaminant by molecular weight. The hydrocarbon extract is mixed with a surrogate internal standard (SIS) for quality control, and a quantitative internal standard (QIS) for quantification. The chromatogram produced by this analysis covers the carbon range from C7 through C36, and can help to identify the product type ("fingerprint") [Douglas, et. al., 1992] using the n - alkane pattern distribution, pristane and phytane rations, and the width of the unresolved complex mixture.

Collected Validation Data

The validation data from 6 sites (FFTF, Alameda, NABC, Yuma, Pendleton and Guadalupe) are shown individually in Appendix F. For each site, there are three plots: the Total Petroleum Hydrocarbons (TPH) data vs. the integrated fluorescence from the 6 inch depth corresponding to the sample; the Total Recoverable Petroleum Hydrocarbons (TRPH) data vs. the integrated fluorescence from the 6 inch depth corresponding to the sample; and the TPH data plotted vs the TRPH data. Use of a logarithmic plot allows the broad range of

concentrations involved to be better displayed, and gives a better feel for the overall agreement between the two methods. Four regions can be observed:

1. those where both methods indicate no hydrocarbon ("no detect");
2. those where both indicate the presence of hydrocarbon ("detect");
3. a region where the fluorometer indicates contamination but the TPH indicates clean ("false positive");
4.a region where the fluorometer indicates clean but TPH indicates contamination ("false negative").

As has been discussed earlier, the sensor is considered to be a field screening method, and so is intended to indicate only the presence or absence of contamination at a site. Each sample is evaluated as to whether the measured intensity, TRH and TRPH exceed a given level separating detect from no-detect.

When the fluorescence exceeds the fluorescence threshold calculated for the site, the LIF-POL detector is considered to have registered a "detect". Because the validation samples are six inches long, the fluorescence for the 6 inch interval associated with sample is averaged, and this average is compared to the fluorescence threshold.

While the TPH and TRPH methods generally have a detection limit in the range from 1 ppm, this is below the limit that the LIF-POL sensor is able to detect. (As discussed earlier, the LIF-POL detection limit will vary from site to site, but is typically in the range of 100 ppm for fuels such as DFM.) For a consistent comparison between the fluorescence data and the analytical data, the TPH and TRPH measurements are considered to show a "detect" when the value exceeds the site detection limit that is associated with a given site (described in section 4,5). The fluorescence threshold and the detection limit are closely tied together, so that both quantities vary from site to site with different soil matrix and fuel products.

One of the difficulties in collecting the validation data is in determining the exact depth of the sample. This is particularly important at some sites where the contaminant is in the form of a thin layer (2-3 inches) of LNAPL at the capillary fringe. In these cases, the uncertainty in the depth of the sample makes it difficult to compare with the in-situ fluorescence. As an example, consider a sample supposedly collected at a depth of strong LNAPL fluorescence, which was actually was 6 inches deeper than expected and proved to be clean by analytic analysis. This would result in a false positive reading. (Such samples were observed at

FFTF.) Similar examples can result in false negative readings.

To help correlate the depth of the soil samples with the in-situ fluorescence data, the fluorescence response is measured using small aliquots scraped from the top and bottom of each soil sample directly after the sample is removed from the split spoon sampler. The variation in top/bottom fluorescence can be used to determine the depth of the sample. This fluorescence generally compares fairly well with the in-situ fluorescence, although at some sites, inhomogeneities in the distribution of the contaminant through the soil can make it difficult to correlate these measurements with the in-situ data.

All attempts have been made to insure the integrity of the depth associated with the sample, but there are clear indications at some sites that the sample depth is not accurate. However, the validation data represents all samples, including those of questionable depth, because there is no clear systematic method for confirming inaccurate depths for suspect samples.

The validation data from the individual sites shown in Appendix F shows excellent agreement between the LIF-POL detect/no-detect and the analytical methods. To pull all of the validation data together and display the data on a single plot, the data from each site has been normalized, so that the fluorescence data is divided by the fluorescence threshold, while the TPH and TRPH data are divided by the site detection limit. Those samples with normalized intensity and normalized TRH or TRPH greater than one indicate a detect.

The normalized TPH vs. fluorescence data for 120 samples from the 6 sites is shown in figure 47. The total agreement between the two methods is 89%, with 62% of the samples representing non-detects and 27% showing detects. 7% of the samples showed false positive, while 4% showed false negative. This is very similar to the normalized TRPH vs. fluorescence data shown in figure 48. In this case, 90% of the samples agree for both methods, with 62% showing non-detect and 28% showing detect. 5% of the samples showed false positive and 5% showed false negative. These statistics are collected in table 3.

It is important to note that those samples that do show false positive or false positive are generally near the cutoff. Considering the difficulty encountered in determining the depth of the sample and the associated difficulties with false positives and negatives for such samples, the data strongly confirms the efficacy of the sensor. To further confirm this, compare the results of the two analytic methods. Figure 49 shows the normalized TRPH vs TPH data, and the results are comparable with the statistics of the LIF-POL sensor. 93% of the samples agree, with 65% showing non-detect and 28 % showing detect. 3% showed false

positive and 4% false negative. Note that these measurements are made using material extracted from the same homogenized soil samples, and so have none of the uncertainty associated with the depth of the sample, or sample inhomogeneities, that affect the in-situ data. Considering the limited number of samples, it is clear that the LIF-POL statistics are comparable to the agreement between two EPA certified analytic methods.

It is also important to note that in the data treatment presented here there has been no effort to attempt to correct sensor response for soil matrix effect or any other variable that laboratory studies indicated could alter sensor response. Therefore, results to date suggest that as a field screening method raw sensor response agrees with accepted analytical methods at the same level that the accepted methods agree with each other.

Safety

Laser eye safety

The primary laser hazard is potential exposure to unprotected eyes. The beam divergence is sufficiently large however that the potential to inflict ocular damage is limited to persons working within a several feet of the optical window located on the probe.

Grouting

The SCAPS probe design allows for grouting of the penetrometer borings through the instrumented probe. A grouting mixture of cement/bentonite/sikament is pumped from the surface, down through the sounding rods to back-fill the hole from the bottom up (tremie method). This significantly reduces the potential for the push hole to act as a conduit for hazardous contaminants.

Investigation derived waste

A high pressure steam cleaner is used to automatically wash the sounding rods as they are retracted from the ground. This procedure serves two purposes. It minimizes the crew's exposure to any hazardous material that may cling to the rods. It also eliminates the possibility of cross contamination form one push hole to the next. A vacuum system is used to collect the spent wash water into 55 gallon steel barrels during the cleaning process. Typically, 1/4 to 1/2 gallon of water is collected for each foot of rod. This investigation derived waste must be tested for hazardous material prior to proper disposal.

Hazards to structures and utilities

The mass of the SCAPS vehicle as well as the process of boring into the ground can be potentially hazardous to underground structures and utilities. To reduce the risk of damage or injury, predeployment planning involves a review of existing as built site plans along with a geophysical survey to identify underground utilities.

9. References

1994a. Andrews, J.M. and S.H. Lieberman. "Use of a Neural Network for Real-Time Discrimination of Petroleum Based Environmental Contaminants from Laser Induced Fluorescence Spectra." presented at Europt(r)ode II, 19-21 April 1994, Florence Italy. (abstract only)

1994b Andrews, J.M. and S.H. Lieberman, "A Neural Network Approach to Qualitative Identification of Fuels and Oils from Laser Induced Fluorescence Spectra." Anal. Chim. Acta, 285, 237-246.

1994a Davey, M, John Andrews, Karina D. Wu and Stephen H. Lieberman, DoD Tri-Service Test of Laser Induced Fluorescence Sensors for SCAPS. NRaD technical document, 1994 in press.

1994b Davey, Michele , Lisa Borbridge, Stephen Lieberman, and Karina Wu, The Effect of Humic Material on Fluorescence, unpublished (1994) Protectiveness (Operations safety and security specific to SCAPS)

1993 Lieberman, S. H. and Sabine Apitz, Real-Time in situ measurements of fuels in soil: comparison of fluorescence and soil gas measurements. Symposium proceedings Third International Symposium-Field Screening Methods for Hazardous Wastes and Toxic Chemicals, February 1993, Las Vegas NV, 2, 1123-1134.

1992. Andrews, J.M. and S.H. Lieberman. "Use of a Neural Network for the Analysis of Fluorescence Spectra from Mixtures of Polycyclic Aromatic Hydrocarbons." In: Chemical, Biochemical and Environmental Fiber Sensors III. R.A. Lieberman, Ed., Proc. SPIE 1587, p. 30-38.

1992a Apitz, S.E , L.M. Borbridge, G.A. Theriault, S.H. Lieberman, Remote in situ determination of fuel products in soils: field results and laboratory investigations. Analusis (1992) 20, 461-474.

1992b Apitz, S.E , Lisa M. Borbridge, Kim Bracchi and Stephen H. Lieberman, The fluorescent response of fuels in soils: insights into fuel-soil interaction, EOS/SPIE Proceedings Volume 1716, International Conference on Monitoring Toxic Chemicals and Biomarkers, (T. Vo-Dinh, ed.) 1992.

1992 Douglas, G. S. , K. J. McCarthy, D. T. Dahlen, J. A. Seavey , W. G. Steinhauer, R. C. Prince and D. L. Elmendorf, "The Use of Hydrocarbon Analyses for Enviornmental Assessment and Remediation", J. Soil Contamination, **1**, (1992), 197-216

1992 Lieberman, S. H., S.E. Apitz, L.M. Borbridge and G.A. Theriault, Subsurface screening of petroleum hydrocarbons in soils via laser induced fluorometry over optical fibers with a cone penetrometer system. EOS/SPIE Proceedings Volume 1716, International Conference on Monitoring Toxic Chemicals and Biomarkers, (T. Vo-Dinh, ed.) 1992.

1992. Theriault, G.A. , R. Newbery, J.M. Andrews, S.E. Apitz and S.H. Lieberman. "Fiber Optic Fluorometer System Based on a Dual-Wavelength Laser Excitation Source." In: Chemical, Biochemical, and Environmental Fiber Sensors IV. R.A. Lieberman, Editor, Proc. SPIE 1796.

1991 Lieberman, S. H. , G. A. Theriault, S. S. Cooper, P. G. Malone, R. S. Olsen, and P. W. Lurk, Rapid, Subsurface, In Situ Screening of Petroleum Hydrocarbon Contamination Using Laser Induced Fluorescence Over Optical Fibers. Symposium Proceedings, Second International Symposium - Field Screening Methods for Hazardous Wastes and Toxic Chemicals, 12-14 February 1991, Las Vegas, NV, pp. 57-63.

1990. Inman, S.M. , P. Thibado, G.Theriault and S.H. Lieberman. "Development of a Pulsed-Laser, Fiber Optic-Based Fluorometer for Time-Resolved Measurements of Polycyclic Aromatic hydrocarbons in Seawater." Anal. Chim. Acta, 239, 45-51.

1989. Lieberman, S.H., S.M. Inman and G.A. Theriault. "Use of Time-Resolved Fluorometry for Improving Specificity of Fiber Optic Based Chemical Sensors." . In: Environment and Pollution Measurement Systems. R.A. Lieberman and M.T. Wlodarczyk, Eds., Proc. SPIE, Vol 1172. p. 94-98.

1985. Nevis, E.A. . "Alteration of the Transmission Characteristics of Fused Silica Optical Fibers by Pulsed Ultraviolet Radiation." In: Proceedings Southwest Conference on Optics. Vol 540, The International Society for Optical Engineering, Bellingham, Washington, pp 421-426.

1971. Berlman, I.B. Handbook of Fluorescence Spectra of Aromatic Molecules. Academic, New York.

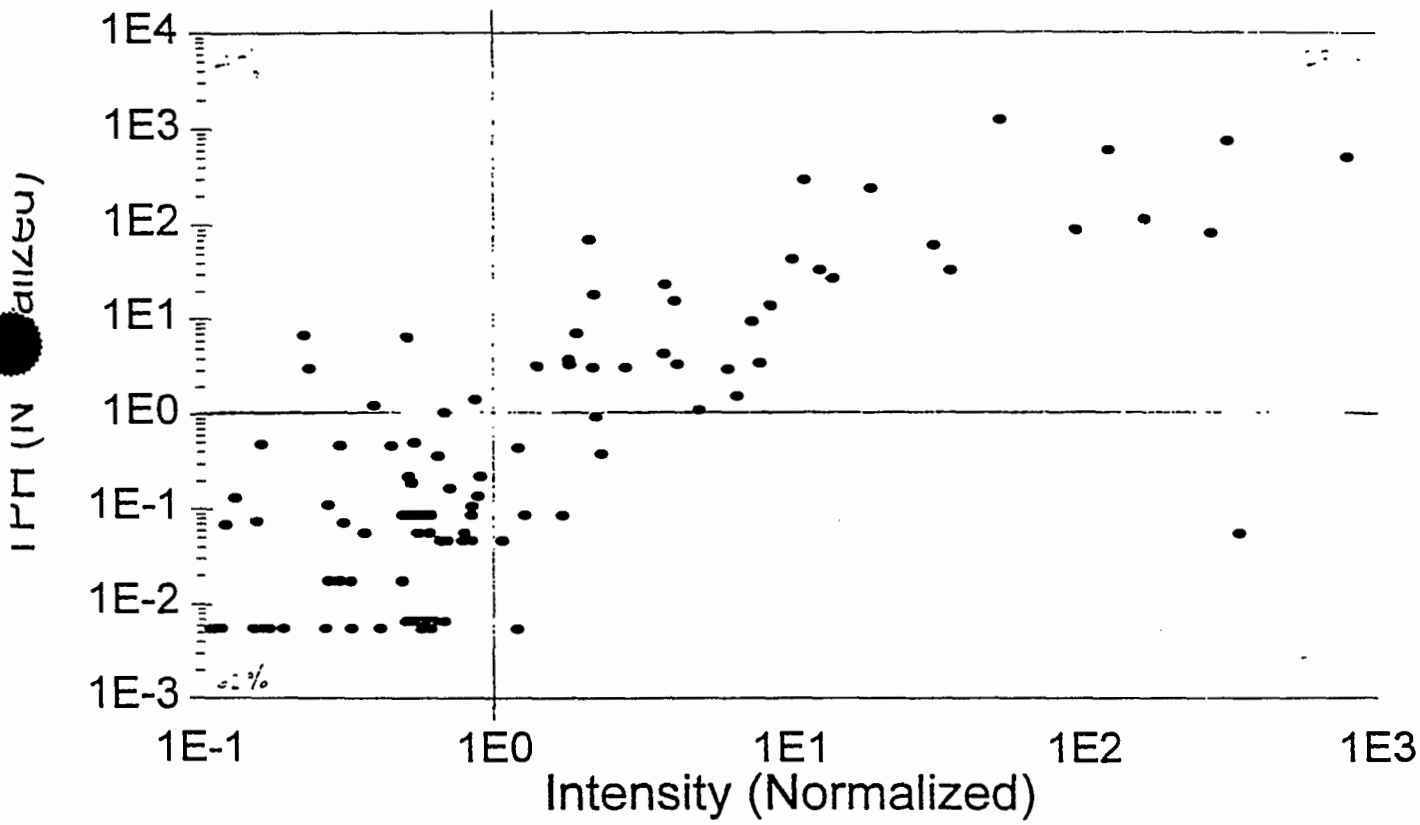
1970 Birks, John B., Photophysics of Aromatic Molecules, Wiley - Interscience, Gr
Britain.

Table 3
Contingency table from collected data
(120 samples)

	Agreement	False positives	False negatives
TPH vs. Fluorescence	89 %	7%	4%
TRPH vs. Fluorescence	90%	5%	5%
TPH vs TRPH	93%	3%	4%

FLUORESCENCE VS TPH

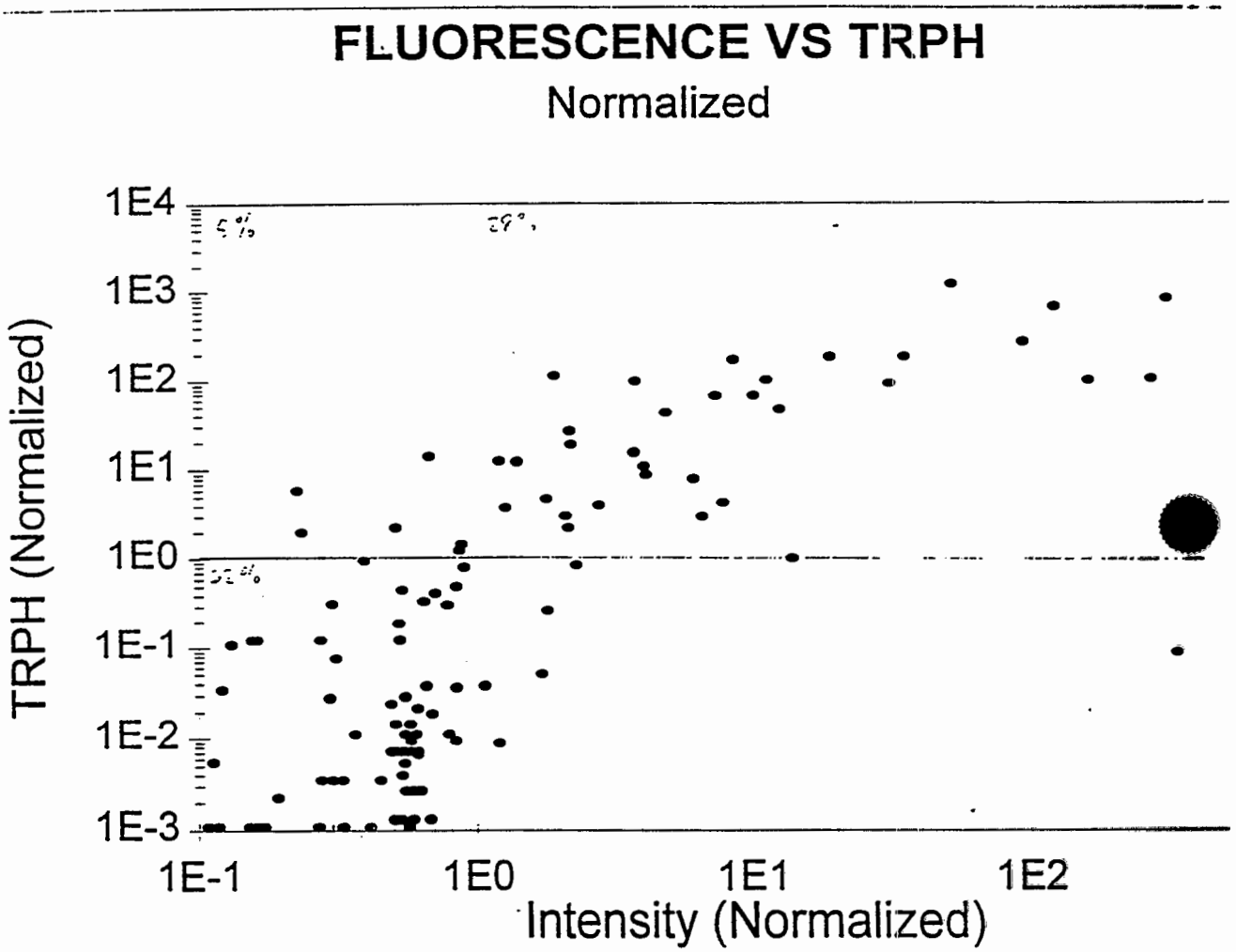
Normalized



LIDAT.WB1:NormFvTPH

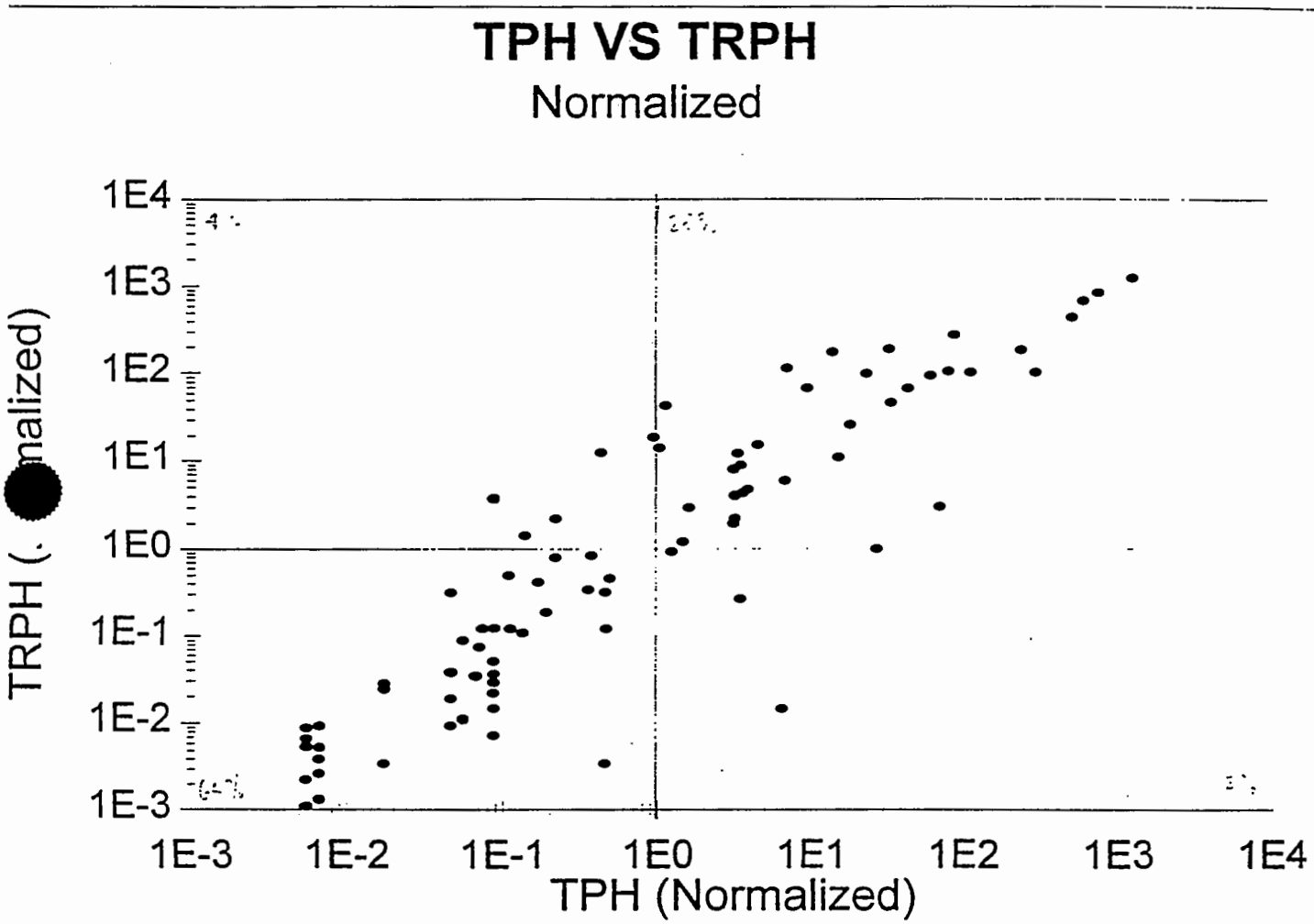
NRAD

Normalized Fluorescence vs Normalized TPH data on log-log plot. Using 120 samples from 6 site, the



VALIDAT.WB1:NormFvTRPH

Figure 48. Normalized fluorescence vs normalized TRPH. For 120 samples, agreement is 90%.



ALIDAT.WB1:NormTPHvTRPH NRAD

: 49. Normalized TPH vs TRPH. For 120 samples, agreement is 93%, roughly the same as the SCAPS

APPENDIX C - DETECTION THRESHOLD DETERMINATION

C.1. Detection Threshold

The ability of the LIF sensor to measure small amounts of contaminant will be limited by:

- Its variable sensitivity to the hydrocarbons present in the soil
- The ambient fluorescence of the soil
- Fluctuations in the output energy of the nitrogen laser
- Variations in the detector temperature
- Changes in optical alignment

In practice, setting the detection threshold is a two part process. The first part consists of establishing a fluorescence threshold. This is the value of fluorescent intensity that must be exceeded to indicate the presence of contamination. The second part is to relate this fluorescence threshold to a correlation of petroleum concentrations to establish the detection threshold in milligrams/kilograms (ppm).

The correlation of petroleum concentrations is determined by preparing standards consisting of soil with known concentrations of contaminant. This procedure is carried out using only the lower concentration calibration standards. For the Naval Base Charleston the following values were used in calculating the detection threshold: 0 ppm, 732 ppm, 1,040 ppm, 1,740 ppm, 3,777 ppm, 6,462 ppm, 8,524 ppm, and 24,749 ppm. Experiments have shown that for the full range of calibration standards (up to 25,000 ppm), the calibration data is not well fit by a linear regression. This is not surprising because of the complicated interaction between the fuel and soil type. By restricting the data set to the low concentration samples, the data is well fit using the linear regression and this approach gives much more confidence in the sensitivity near the detection threshold.

The fluorescence intensity for each calibration sample is measured in triplicate daily at the start of operations. The three measurements are averaged to provide a single measured intensity for each concentration. The data is regressed to establish a slope and intercept. The intercept is given by the intensity of the unspiked calibration standard (0 ppm). The slope is found from the least squares fit using this intercept.

Intercept: $b = y_0$ = intensity measured on 0 ppm calibration sample

Slope: $M = \Sigma(y_i - y_0)x_i / \Sigma(x_i^2)$

The variance in the regression is given by:

APPENDIX C - DETECTION THRESHOLD DETERMINATION

$V = \Sigma(mx_i + b - y_i)^2 / (n-1)$

where V is the biased estimator of the residual mean square of the fit and the data, and the standard deviation of the fit is:

$\sigma = \text{Sqrt}(V)$

For the calibration soils, x is given by the concentration (C) of the target fuel, while y is the measured fluorescence intensity (I) of the sample. The sensitivity and background are defined as follows:

sensitivity = slope of fitted data = m

background = intercept of fitted data = b

The noise is defined as:

noise = standard deviation of the fit = σ

The noise is defined as 1.00 times the standard deviation in order to establish a conservative fluorescence threshold. (The fluorescence threshold is given as the sum of the background and the noise values). Using the standard assumption of a normal "student's T" distribution statistics, and the number of points used in these fits (typically 8), this corresponds to an 80% confidence limit. This was chosen because the sensor is used as a field screening tool, and it was considered important to reduce the possibility for false negatives.

The quantities needed to calculate the fluorescence threshold and the detection threshold are now known. These are determined from:

Fluorescence threshold = background + noise = $b + \sigma$

Detection threshold = noise / sensitivity = σ / m

The fluorescence threshold is the quantitative limit that the fluorescence intensity must exceed in order to qualify as a "detect". If the fluorescence intensity is less that the fluorescence threshold, the sensor indicates "none-detected".

The detection threshold is the amount of contaminant that corresponds to the fluorescence threshold. This is the practical detection level in ppm, as determine from the calibration standards for a given site, and is found by taking the fluorescence threshold and working back to the concentration needed to produce this intensity. The detection threshold is used to compare the ppm of petroleum present in the sample as determined by Total

Recoverable Petroleum Hydrocarbon (TRPH, EPA Method 8015-Modified) and Total Petroleum Hydrocarbon (TPH, EPA Method 418.1) with the fluorescence measurements for the validation phase of the site characterization. TPH and TRPH values above the detection threshold value are considered "detects", while those less than the detection threshold are not detectable by the SCAPS sensor.

This method for setting the fluorescence threshold and detection threshold is based on a standard analytical chemical approach for quantifying the response of a detector. It is also easily reproducible, and the results follow directly from applying a well defined series of data reduction techniques that can be documented and repeated at any site.

This approach does have limitations. The background level is determined by a single soil sample, chosen near the surface at one location from the site. It is possible that the soil sample is contaminated, so that the background represents not only the natural fluorescence but a contribution from the contaminant. Even if it is not contaminated, the background from this single sample may not be representative of the whole site. The following additional interpretation approaches have been developed because of this single soil sample limitation.

C.2. Fluorescent Threshold

C.2.1 Histogram

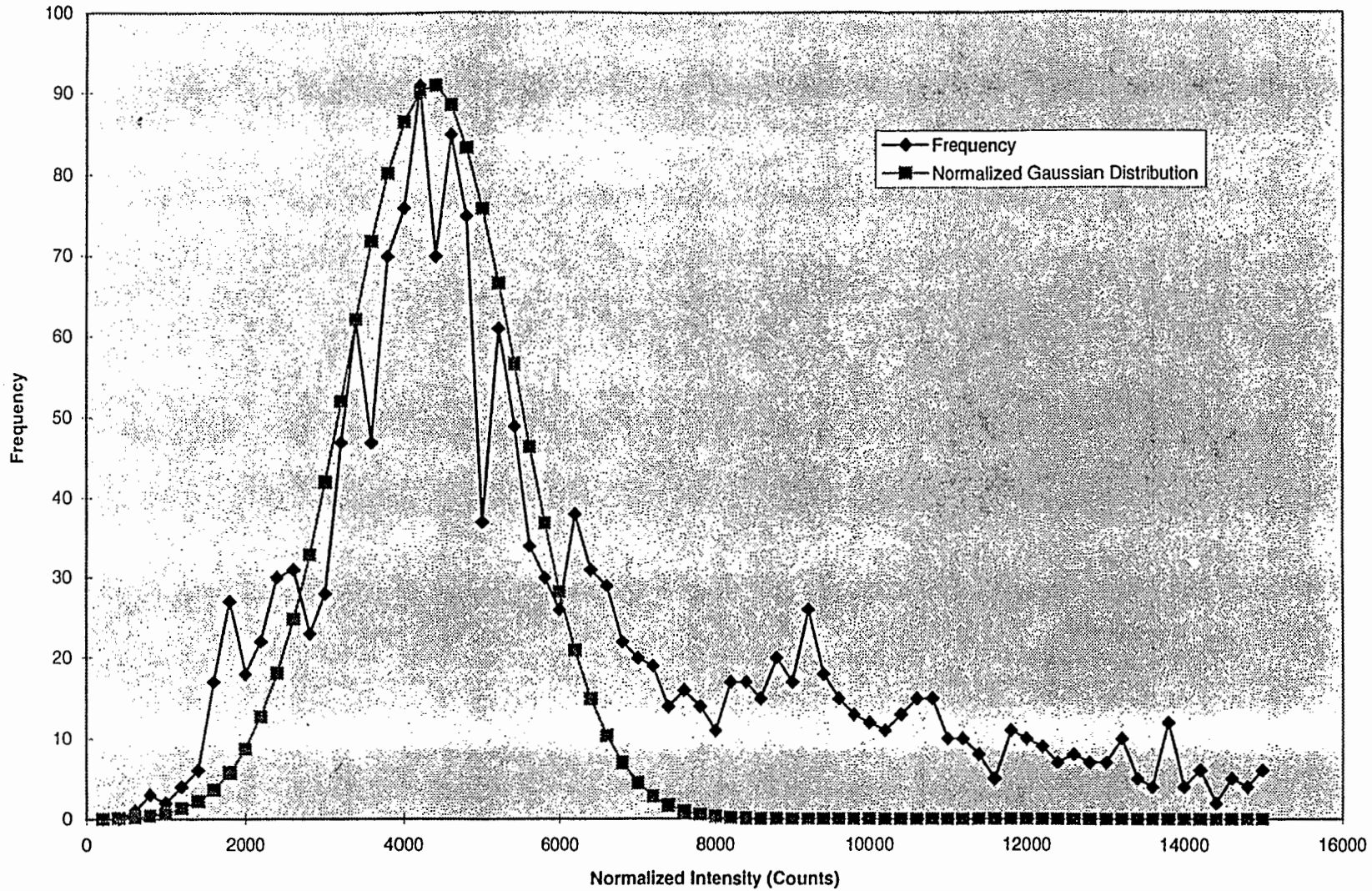
It can be shown that LIF responses from the uncontaminated soil system are normally (Gaussian) distributed. It can be shown that LIF responses from the contaminated soil system are not normally distributed. This may be due to a variety of reasons including but not limited to:

- the limited vertical duration of the contaminant when compared to the uncontaminated soil system
- the relatively recent release of contamination on the geologic time scale

The underlying principle is that these are two different populations. The value of Fluorescence that marks the separation of the two populations is referred to as the Fluorescent Threshold (FT). Once the FT is determined, the LIF results can be interpreted to define the contaminated population.

The procedure consists of Ranking all the Fluorescent Intensity results generated during an investigation from least to highest without regard to depth or push location. Next, determine the frequency of occurrence within each 200 count range. With this frequency of occurrence information, construct a histogram as shown in Chart 1.

Naval Station Charelston - Fuel Farm



Fluorescent Threshold = 7,157
Correlation = 0.935
Fit Polulation = 15,000

On this histogram plot a normal distribution using the formula:

$f(x) = 1/\mathrm{sqrt}(2\sigma^2\pi)*(\exp(-(x-\mu)^2/2*\sigma^2)$

Determine the best fit of the normal distribution to the histogram to obtain the mean and standard deviation which represent the background and noise as described in the first section.

The Fluorescent Threshold is then equal to:

Fluorescent Threshold $= \mu + 2.6*\sigma$

The value 2.6 is chosen so that there is a 99.5% probability that all values below the Fluorescent Threshold are from the uncontaminated population.

C.2.2 Quantile

Another method to determine the underlying distribution of data is the Quantile approach. This breaks the data set up by percentage of population so that 50% of the population lies below and above the mean value. Through the quantile method the FT can be determined by inspection.

The procedure involves ranking the data from every push without regard to depth or location from lowest to highest. For each value calculate the quantile:

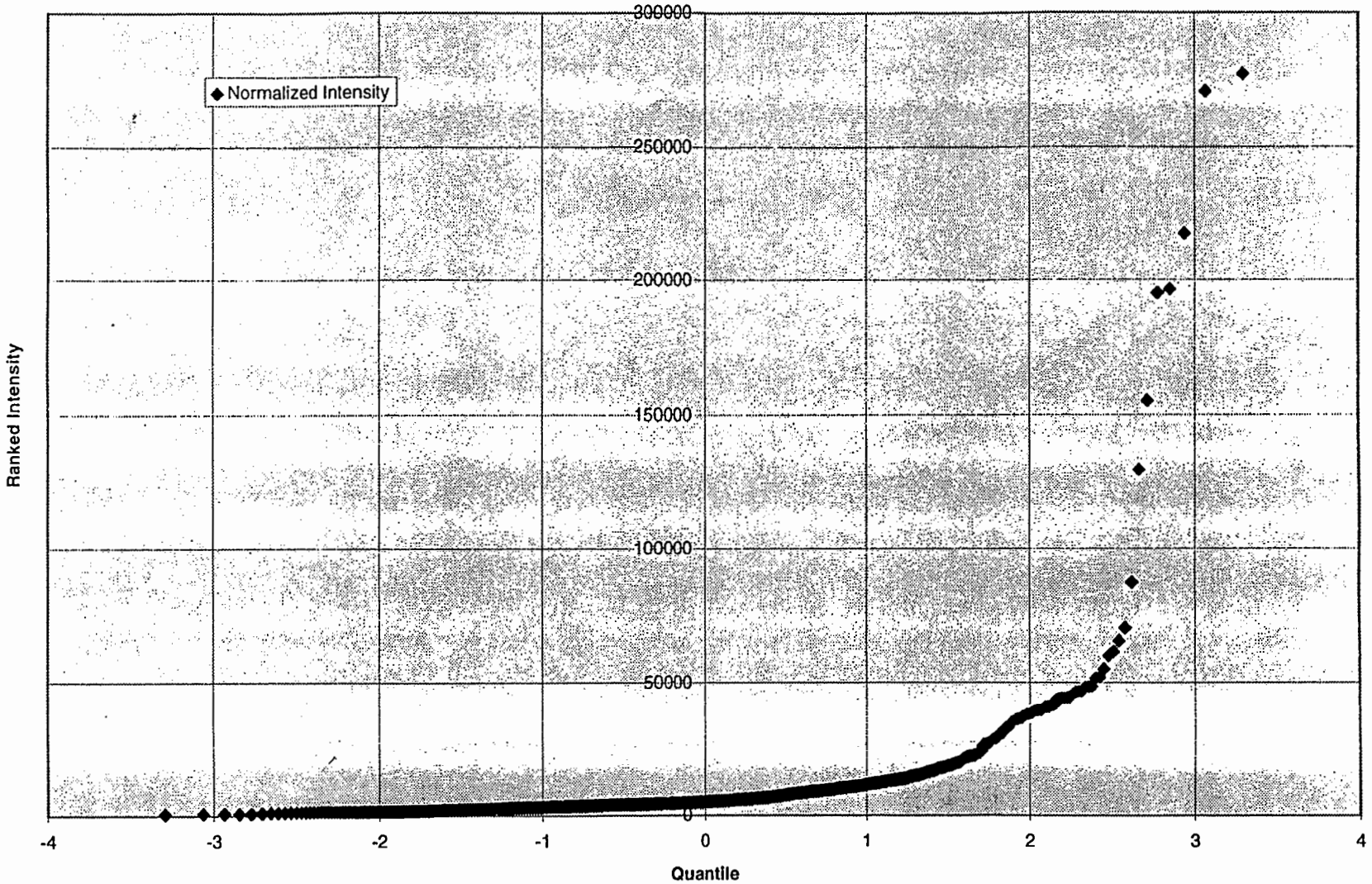
use: $f_i = (i-3/8)/(n+1/4)$

to calculate: $Q(f_i) = 4.91\ [f_i^{0.14} - (1 - f_i)^{0.14}]$

Plot $Q(f_i)$ verses the intensity for each corresponding rank as shown in Chart 2. Linearity indicates that the sample data are consistent with a normal reference distribution. Different linear regions of differing slopes known as clusters will be obvious. Each cluster represents a different population. There is one population of relatively low intensity values that represents one cluster and a population of high intensity values that represents the contaminated population.

This method is a powerful interpretation tool that is best used in conjunction with the following reference: "Statistical Design and Analysis of Experiments, With Applications to Engineering and Science" by Mason, Robert., et all., John Wiley and Sons, Inc., 1989.

Normal Quantile plot for Fuel Farm



APPENDIX D - STRIP CHARTS WITH DETECTION THRESHOLD

SCAPS STANDARDS WORKSHEET

PROJECT NO.(LAB):
PROJECT NO.(SCAPS):
SOIL SOURCE: CHARLESTON, S.C.

DATE: 7/7/95
PREP. BY: C. BOEHNKE

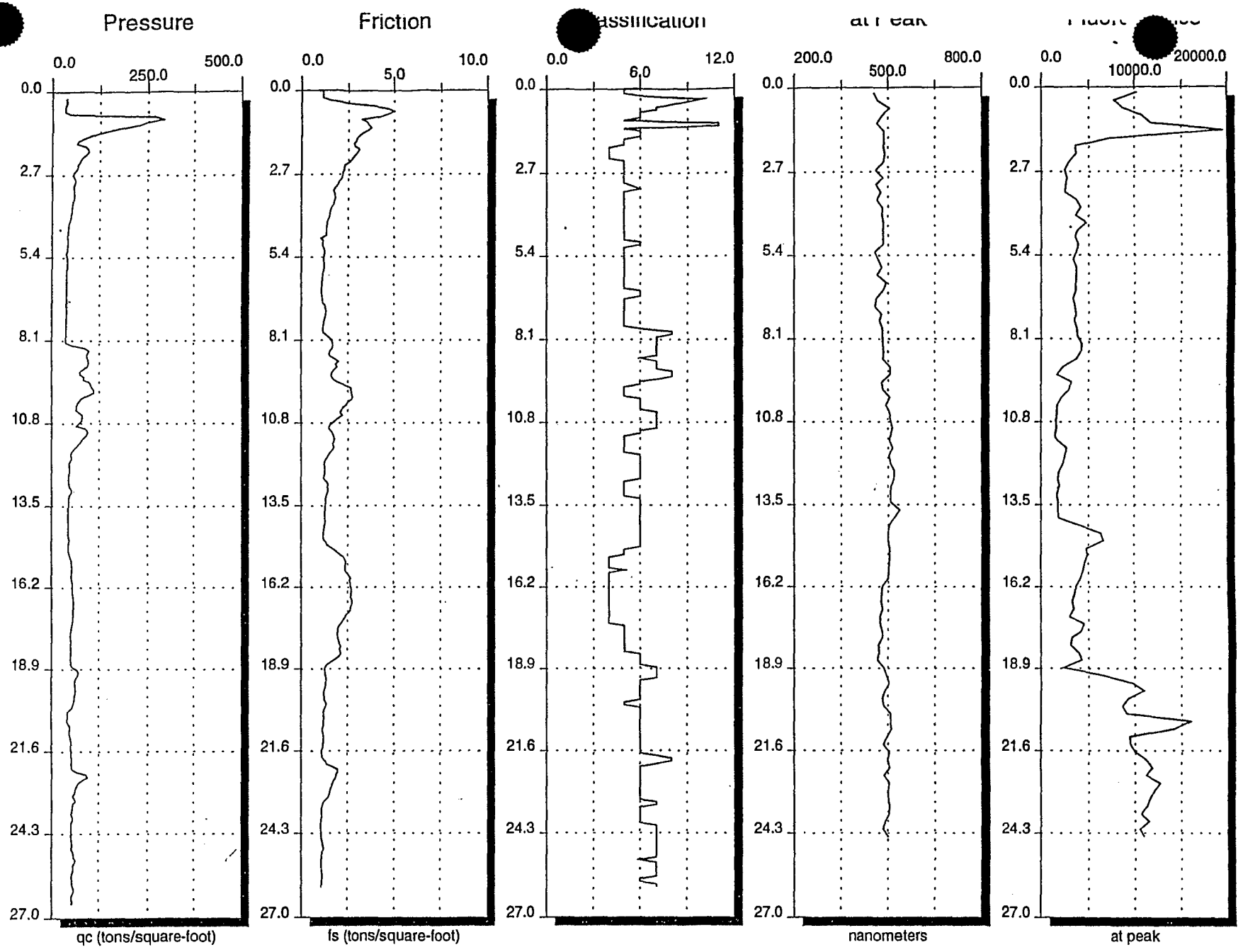
TARGET				ACTUAL			
STANDARD AMT. (g)	OIL (ppm)	OIL (g)	SOIL (g)	STANDARD AMT. (g)	OIL (ppm)	OIL (g)	SOIL (g)
15.0000	0	0.0000	15.0000	15.2039	0	0.0000	15.2039
15.0000	500	0.0075	14.9925	15.0348	732	0.0110	15.0238
15.0000	1000	0.0150	14.9850	15.0004	1040	0.0156	14.9848
15.0000	2500	0.0375	14.9625	15.0035	1740	0.0261	14.9774
15.0000	4000	0.0600	14.9400	15.0108	3777	0.0567	14.9541
15.0000	5000	0.0750	14.9250	15.0115	6462	0.0970	14.9145
15.0000	10000	0.1500	14.8500	14.9930	8524	0.1278	14.8652
15.0000	20000	0.3000	14.7000	15.0106	24749	0.3715	14.6391

INSTRUCTIONS

1. ENTER TARGET STANDARD WEIGHT IN GRAMS.
2. ENTER TARGET PPM OF OIL. IF NO ENTRY DEFAULT VALUES WILL BE USED.
3. SPREADSHEET WILL CALCULATE THE TARGET WEIGHTS IN GRAMS FOR OIL AND SOIL.
4. WEIGH SOIL FIRST TO 0.0001 G, THEN ADD OIL TO TARGET STANDARD WEIGHT.
5. ENTER ACTUAL WEIGHT OF SOIL AND TOTAL STANDARD WEIGHT.
6. SPREADSHEET WILL CALCULATE THE ACTUAL WEIGHT OF OIL AND PPM OIL.

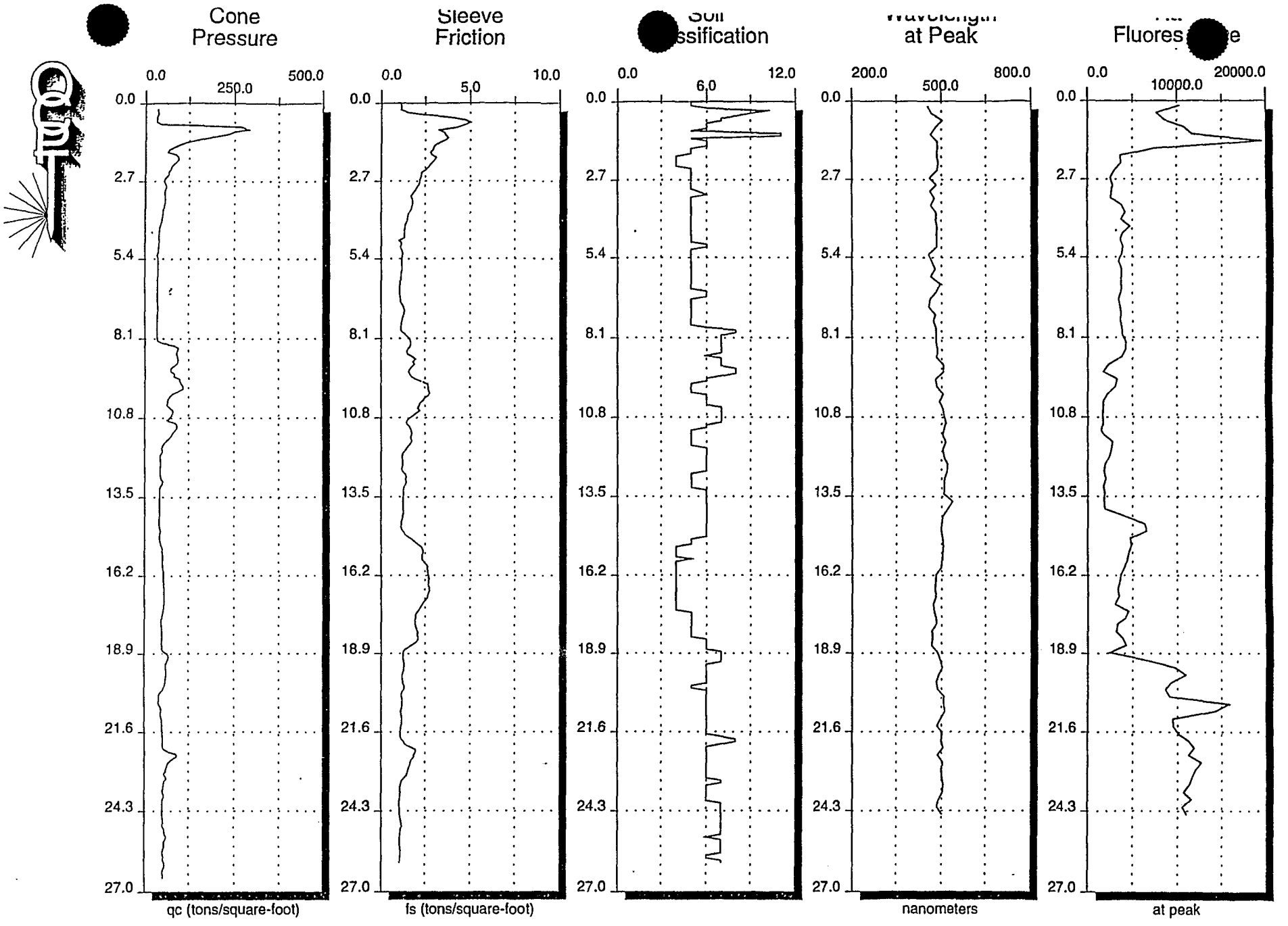
COMMENTS:

SAMPLE VERY CLAY-LIKE, HEAVY, AND LUMPY. VERY DIFFICULT TO MAKE UNIFORM.



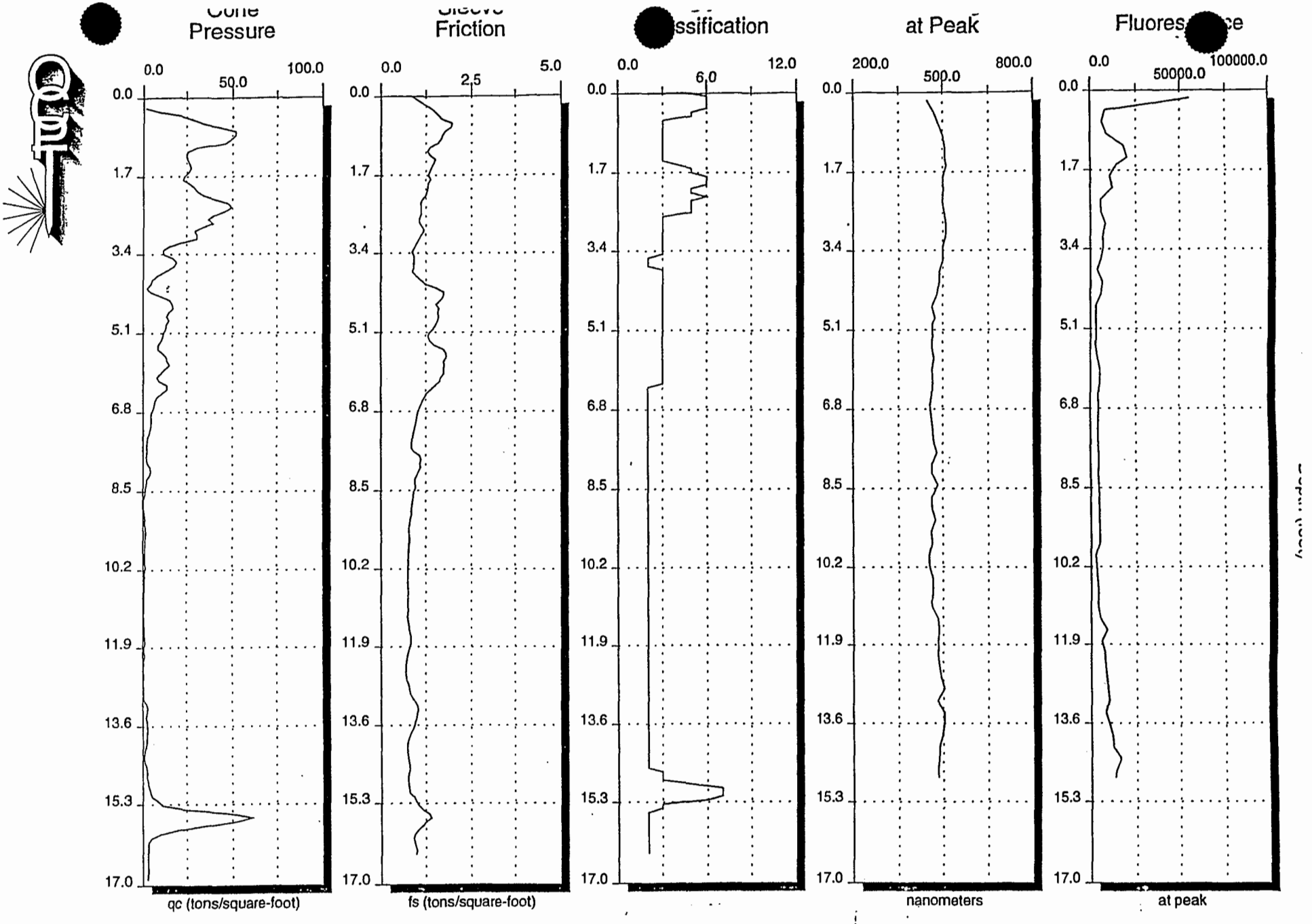
Time: 10:05:58
Date: 07-12-1995
Version: 1.0

Push: C:\BASIC71\DATA\CHRFF1.PSH
Probe: C:\BASIC71\DATA\PROBE02A.PF
Calibration: C:\BASIC71\DATA\JUL12DFM.CA



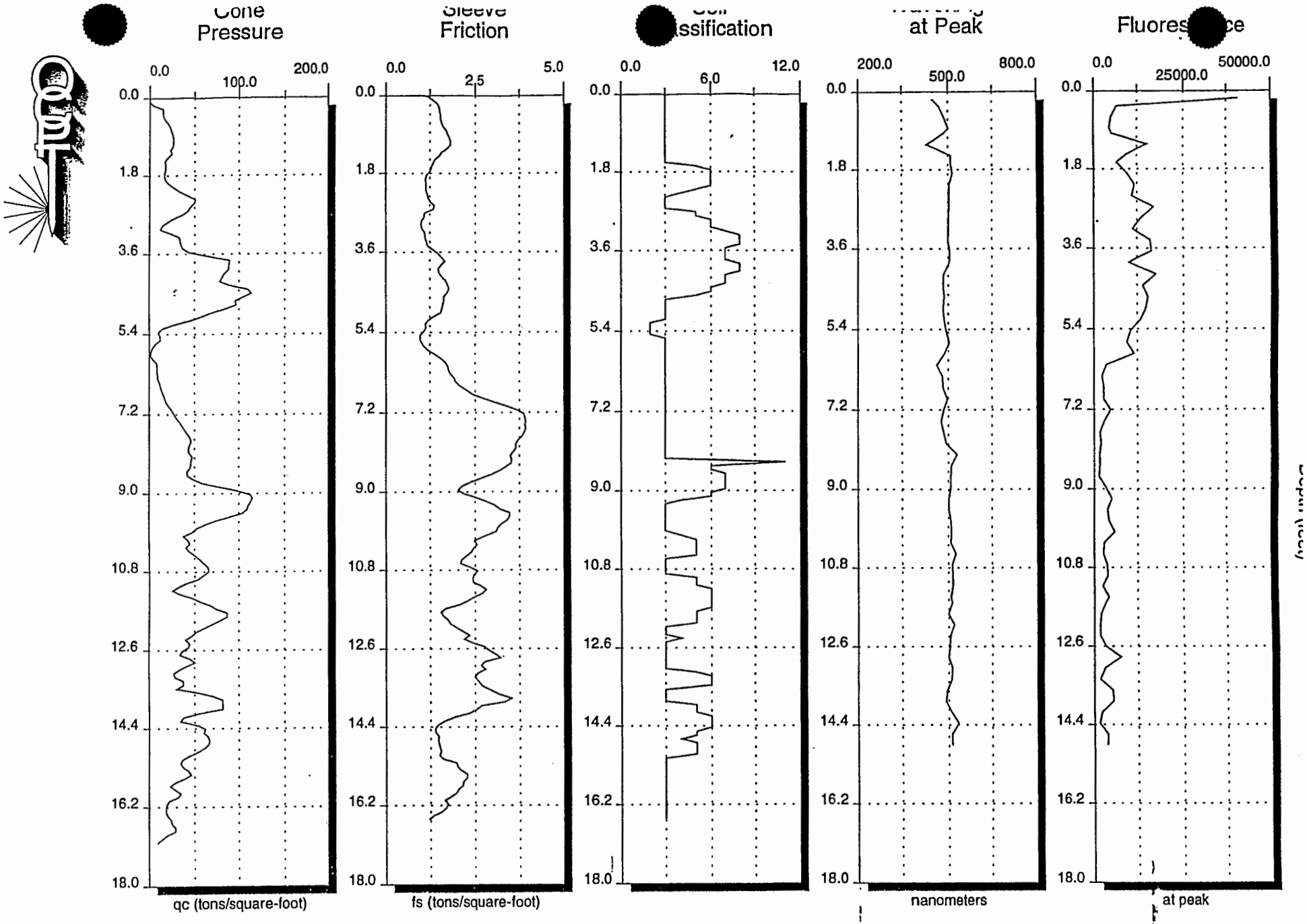
Time: 10:05:58
Date: 07-12-1995
Version: 1.0

Push: C:\BASIC71\DATA\CHRFF1.PSH
Probe: C:\BASIC71\DATA\PROBE02A.PRE
Calibration: C:\BASIC71\DATA\JUL12DFM.CAL



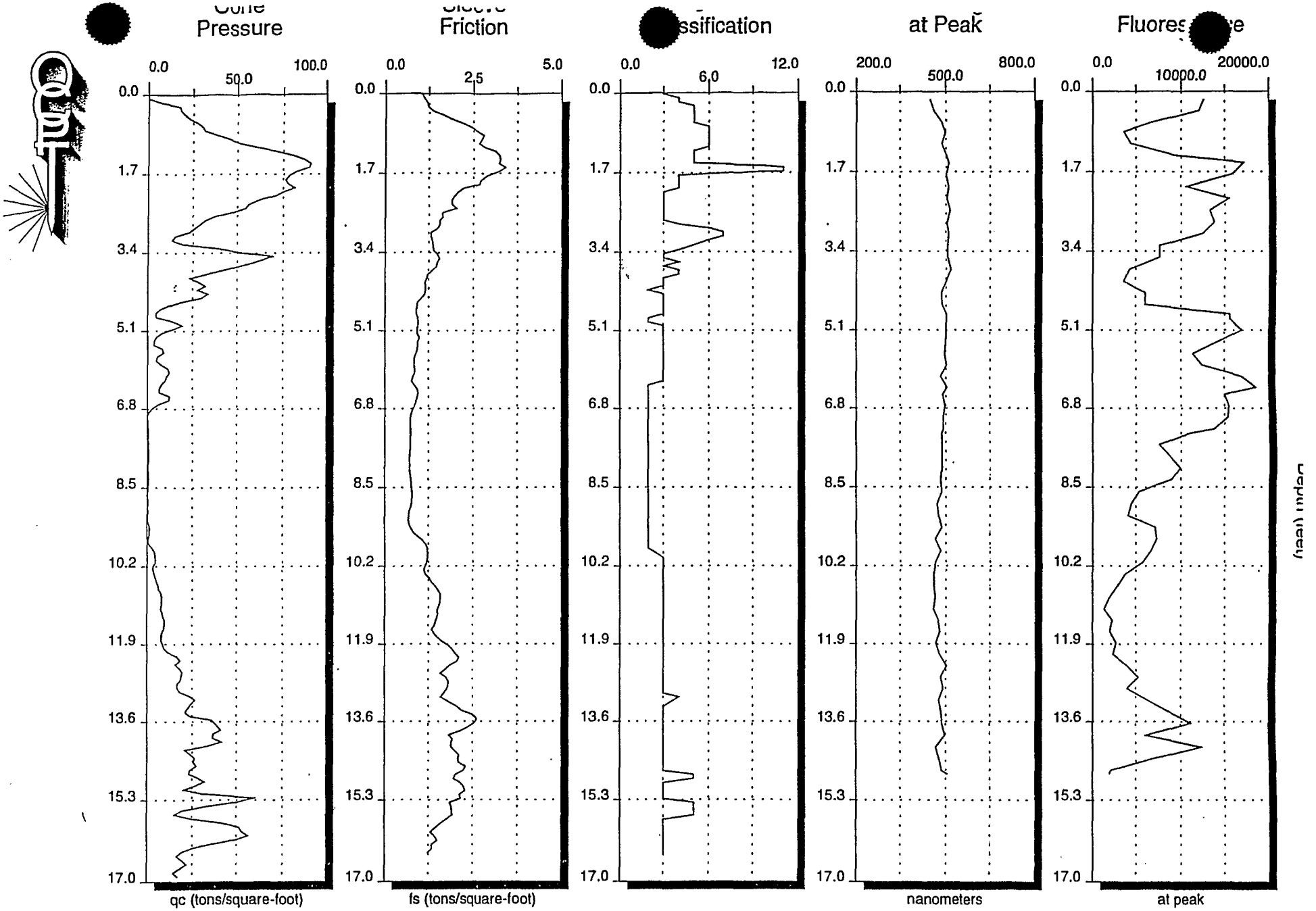
Time: 13:02:37
Date: 07-12-1995
Version: 1.0

Push: C:\BASIC71\DATA\CHRFF2.PSH
Probe: C:\BASIC71\DATA\PROBE02B.PRI
Calibration: C:\BASIC71\DATA\JUL12DFM.CAL



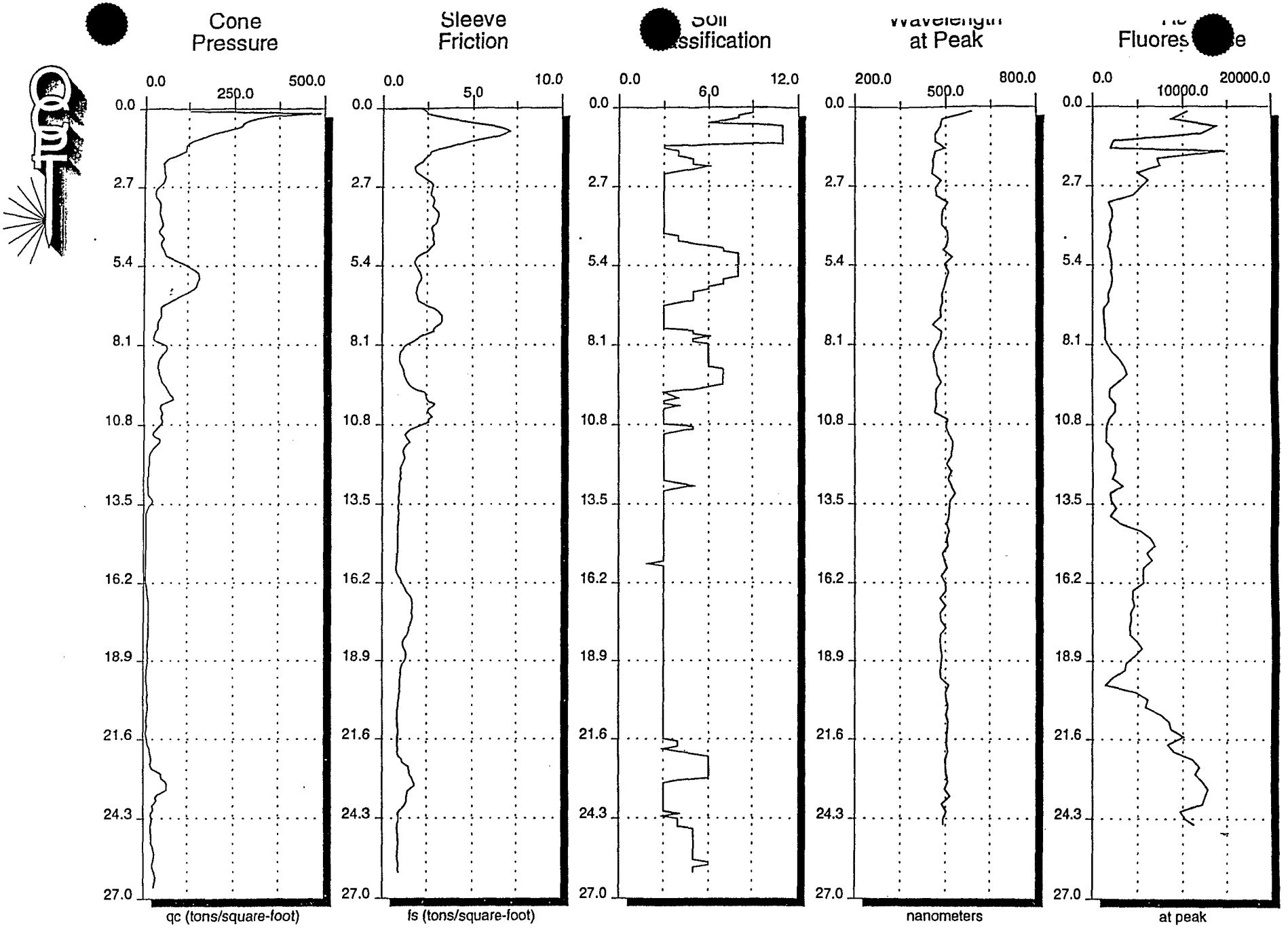
Time: 13:44:58
Date: 07-12-1995
Version: 1.0

Push: C:\BASIC71\DATA\CHRFF3.PSH
Probe: C:\BASIC71\DATA\PROBE02B.PRE
Calibration: C:\BASIC71\DATA\JUL12DFM.CAL



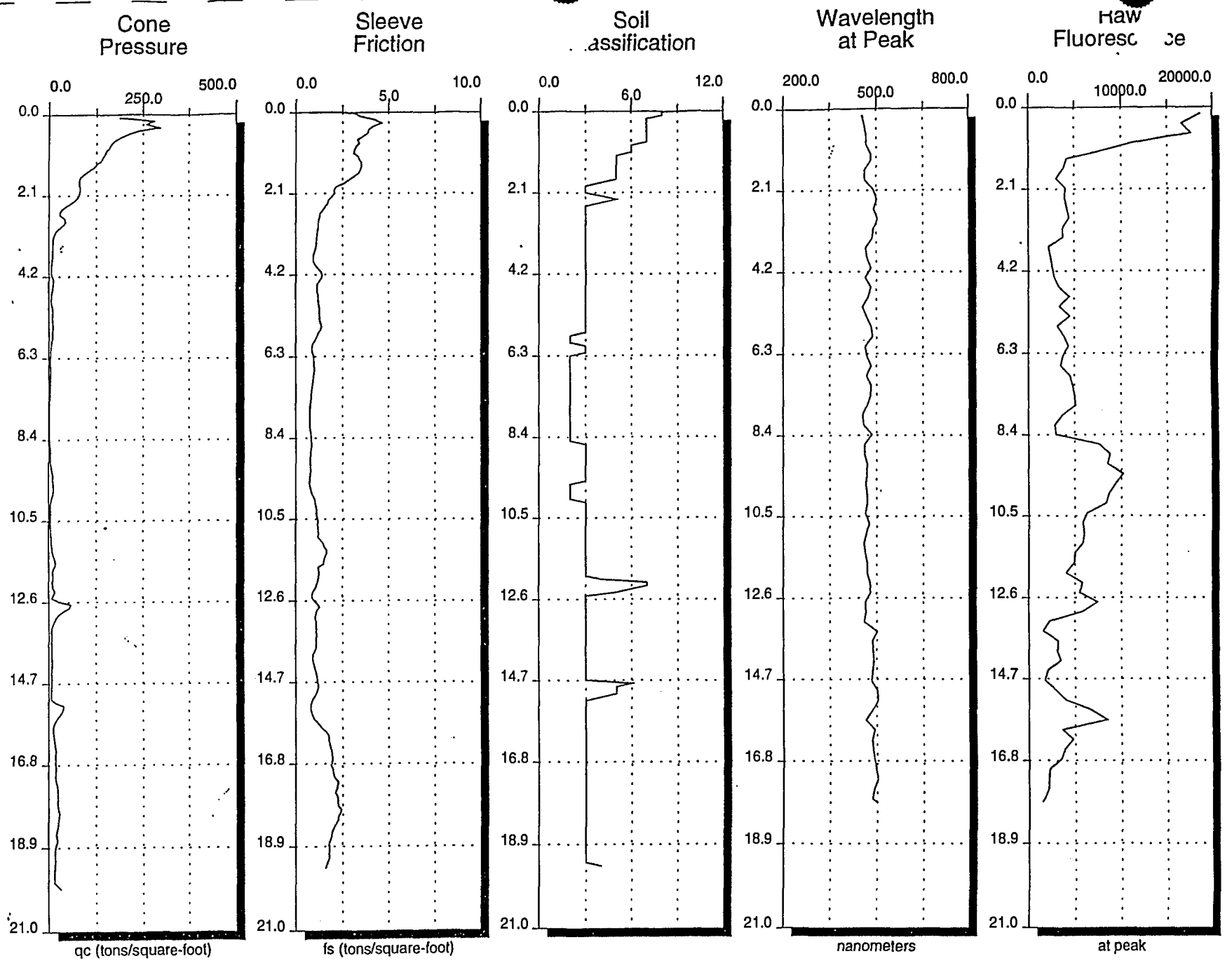
Time: 14:29:32
Date: 07-12-1995
Version: 1.0

Push: C:\BASIC71\DATA\CHRFF4.PSH
Probe: C:\BASIC71\DATA\PROBE02B.PRE
Calibration: C:\BASIC71\DATA\JUL12DFM.CAL



Time: 09:32:20
Date: 07-14-1995
Version: 1.0

Push: C:\BASIC71\DATA\CHRFF5.PSH
Probe: C:\BASIC71\DATA\PROBE02B.PRE
Calibration: C:\BASIC71\DATA\JUL14DFM.CAL



Time: 16:35:37

Push: C:\BASIC71\DATA\CHRFF06.PSH

SCAPS Detailed Data

Push Id	CHRFF01.CSV
Date Started:	Wednesday, July 1
Time Started	10:05 AM

North Coordinate (Feet):	372920.78
East Coordinate (Feet):	2319360.6
Elevation (feet):	10.5606
Fluorescent Threshold (counts):	7157
Pre Quinine Sulfate (Counts):	221379
Post Quinine Sulfate (Counts):	235985

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
108.0625	2242	506	silty sand to sandy silt	
111.0001	1626	506		
114.0313	3150	481		
117.0938	2918	485	sand to silty sand	
120.0625	2112	506	sandy silt to silty clay	
123.0625	1650	493		
125.8751	1628	504	clayey silt to silty clay	
128.8438	1562	508	sandy silt to silty clay	
131.8125	1621	514	silty sand to sandy silt	
134.8751	1431	508		
136.5938	1677	504		
139.6562	2644	514	sandy silt to silty clay	
142.75	2506	504		
145.8125	2285	508	clayey silt to silty clay	
148.8125	1860	521	sandy silt to silty clay	
151.8125	1715	519		
154.7812	1915	510		
157.8438	1636	508		
160.875	1775	508	clayey silt to silty clay	
163.9375	1724	538		
166.9688	1791	521	sandy silt to silty clay	
169.9375	3960	504		
173	6246	500		
175.9375	6533	500		
178.9375	4673	504		
181.9375	4766	506	sandy silt to silty clay	
184.9999	4489	504		
188.0312	4307	502	silty clay to clay	
191.0312	4026	500		
193.9999	3620	483	clayey silt to silty clay	
197.1249	3485	481	silty clay to clay	
200.0312	3233	479		
203.1875	3381	483		
206.2187	2931	474	silty clay to clay	
209.2187	4438	476		
212.2499	4065	483		

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF01.CSV
Date Started:	Wednesday, July 1
Time Started	10:05 AM

North Coordinate (Feet):	372920.78
East Coordinate (Feet):	2319360.6
Elevation (feet):	10.5606
Fluorescent Threshold (counts):	7157
Pre Quinine Sulfate (Counts):	221379
Post Quinine Sulfate (Counts):	235985

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
214.4687	3203	483	silty clay to clay	
217.5312	3055	470	clayey silt to silty clay	
220.4375	3788	472		
223.4687	4198	468		
226.4999	2339	487		
229.6249	6451	495	sandy silt to silty clay	
232.6562	9586	504	silty sand to sandy silt	
235.7187	10746	491		
238.7187	9190	483	sandy silt to silty clay	
241.7187	8518	487		
244.7499	8993	508	sandy silt to silty clay	
247.8125	15615	508	clayey silt to silty clay	
250.8125	13904	512	sandy silt to silty clay	
253.7812	9293	498		
256.7812	9339	485		
259.8125	9832	504		
262.8125	10988	500		
265.7499	11605	506		
268.6875	10988	487	sand to silty sand	
271.7187	12383	504	sandy silt to silty clay	
274.7812	11790	500		
277.8749	11401	502		
280.8749	11088	506		
283.9375	10443	504	sandy silt to silty clay	
286.9375	11277	491	silty sand to sandy silt	
289.9375	10328	485	sandy silt to silty clay	
293.0312	10798	502		

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF02.CSV	North Coordinate (Feet):	372606.7
Date Started:	Wednesday, July 1	East Coordinate (Feet):	2318853.0
Time Started	1:02 PM	Elevation (feet):	11.3269
		Fluorescent Threshold (counts):	7157
		Pre Quinine Sulfate (Counts):	195649
		Post Quinine Sulfate (Counts):	249900

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
1.9688	61549	449		
4.9063	9024	470	silty clay to clay	
7.9063	6860	485	sandy silt to silty clay	
10.9376	9832	502	clayey silt to silty clay	
13.9688	19821	508	clay	
17.0313	22079	508		
18.875	15743	512		
21.9376	11765	500		
24.875	13617	504	silty clay to clay	
28	6203	500	sandy silt to silty clay	
31.0938	6401	506	clayey silt to silty clay	
34.0938	9121	510		
37.1563	7511	510	clay	
40.125	7996	500		
43.125	6548	502		
46.125	4062	489	clay	
49.1876	7158	487	organic material	
52.2188	6631	481	clay	
55.2188	3360	464		
58.25	3220	474		
59.4688	3275	466		
62.4376	3254	466	clay	
65.4063	3059	464		
68.4688	4143	470		
71.4688	5722	464		
74.5626	5746	466		
77.5626	4699	464		
80.6563	4941	457		
83.625	4746	462	organic material	
86.625	4445	466		
89.6876	4387	468	organic material	
92.7188	5030	481		
95.7813	5030	464		
98.125	4526	464		
101.0938	4750	483		
104.1876	5171	464		

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF02.CSV	North Coordinate (Feet):	372606.7
Date Started:	Wednesday, July 1	East Coordinate (Feet):	2318853.0
Time Started	1:02 PM	Elevation (feet):	11.3269
		Fluorescent Threshold (counts):	7157
		Pre Quinine Sulfate (Counts):	195649
		Post Quinine Sulfate (Counts):	249900

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
107.1876	5307	464	organic material	
110.1876	5230	474		
113.25	5412	460		
116.2813	5388	464		
119.375	2900	453		
122.4063	3448	455		
125.4376	3864	466		
128.5313	4425	466	organic material	
131.5938	4432	462		
132.7813	4520	464		
135.8439	5788	483		
138.9376	9758	487		
141.9376	6541	483		
145.0313	8238	483		
148.1251	8780	487		
151.1876	9393	493		
154.2501	10040	504		
157.3439	10664	481		
160.3439	8794	504		
163.3439	10681	504	organic material	
166.4063	12440	498		
169.4689	12941	487		
172.5001	17655	487		
175.5939	14484	483		
177.3751	14102	485		

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF03.CSV	North Coordinate (Feet):	372377.75
Date Started:	Wednesday, July 1	East Coordinate (Feet):	2319061
Time Started	1:44 PM	Elevation (feet):	12.9122
		Fluorescent Threshold (counts):	7157
		Pre Quinine Sulfate (Counts):	252512
		Post Quinine Sulfate (Counts):	222685

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
2.0313	35059	447	organic material	
4.125	5631	470	clay	
7.1563	4316	487		
10.1875	3917	502		
11.75	4482	483		
14.7187	13047	430		
17.75	7782	508		
19.7187	5595	508		
22.6561	8106	514		
25.7499	10076	504		
28.8124	9373	504	sandy silt to silty clay	
31.8749	14550	504		
34.8437	11747	502	clay	
37.8749	9640	502		
40.9374	13758	500	sandy silt to silty clay	
43.9374	14006	506	silty sand to sandy silt	
46.9999	8662	504		
50.1249	15106	485	silty sand to sandy silt	
53.1249	11978	483	sand to silty sand	
56.1561	13181	487	silty sand to sandy silt	
59.2811	12641	483	sandy silt to silty clay	
62.2811	11478	487	clay	
65.2498	9010	493		
68.3435	8059	504	organic material	
71.3748	9895	487		
74.4061	3064	462	clay	
77.3748	1960	481		
80.4998	2450	483		
83.5311	2389	498		
86.4685	4073	485		
89.5623	2504	476	clay	
92.5623	1428	485		
95.5623	1717	493		
98.5311	1338	529		
101.531	1428	510		
104.531	1200	508		

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF03.CSV
Date Started:	Wednesday, July 1
Time Started	1:44 PM

North Coordinate (Feet):	372377.75
East Coordinate (Feet):	2319061
Elevation (feet):	12.9122
Fluorescent Threshold (counts):	7157
Pre Quinine Sulfate (Counts):	252512
Post Quinine Sulfate (Counts):	222685

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
107.5622	2921	508	sandy silt to silty clay	
110.5935	4345	502	silty sand to sandy silt	
113.5935	3258	502		
116.5935	3603	508	silty clay to clay	
119.7185	5005	510	clay	
122.7185	2496	508		
125.656	2242	525		
128.7185	3172	512	clayey silt to silty clay	
131.7185	3368	514		
134.6872	2089	514	clay	
137.6872	3598	508	clayey silt to silty clay	
139.1872	2853	512		
142.1873	1724	500	sandy silt to silty clay	
145.1873	1425	519		
148.2497	1436	506	clayey silt to silty clay	
151.2185	2838	504	clay	
154.156	6444	500	silty clay to clay	
157.156	2638	512	clay	
160.281	1480	510		
163.281	4456	495	clayey silt to silty clay	
166.2497	4647	491		
169.3435	1892	510	clay	
172.3435	1277	533	clayey silt to silty clay	
175.406	3262	510		
178.3747	3159	512	sandy silt to silty clay	

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF04.CSV
Date Started:	Wednesday, July 1
Time Started	2:29 PM

North Coordinate (Feet):	372176.4
East Coordinate (Feet):	2319234.9
Elevation (feet):	14.0105
Fluorescent Threshold (counts):	7157
Pre Quinine Sulfate (Counts):	245188
Post Quinine Sulfate (Counts):	198036

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
1.9687	11159	447	organic material	
4.9374	10653	460	clay	
7.9687	5819	487	silty clay to clay	
10.3124	3181	500	clayey silt to silty clay	
13.25	3881	487		
16.2187	8174	502	sandy silt to silty clay	
18.0624	15200	510		
21.0312	14028	502	clayey silt to silty clay	
24.1562	9446	510	very stiff fine grained	
27.125	13684	504	silty clay to clay	
30.1875	11780	514		
33.2812	12231	504	clay	
36.2188	11084	510		
39.3125	6822	506	silty clay to clay	
42.3438	6794	506	silty sand to sandy silt	
45.375	3748	517		
48.4062	3170	502	clay	
51.4375	5378	485	silty clay to clay	
54.4375	5344	487	clay	
56.9688	13788	502	organic material	False Positive by TPH 418.1 and 1.02 ppm by 8015
58.1562	13777	502	clay	False Positive by TPH 418.1 and 1.02 ppm by 8015
61.1562	15069	502		False Positive by TPH 418.1 and 1.02 ppm by 8015
64.2499	12607	500	organic material	False Positive by TPH 418.1 and 1.02 ppm by 8015
67.3124	10077	495	clay	False Positive by TPH 418.1 and 1.02 ppm by 8015
70.3436	11006	502		False Positive by TPH 418.1 and 1.02 ppm by 8015
73.3124	15034	483		
76.1562	16389	504		
78.0312	13306	489		
80.9999	13722	498		
83.9374	13605	491	organic material	
87.0624	12236	493		
88.0936	9780	487		
91.0312	6740	487		
94.0624	7731	487		
97.0936	8765	487		
100.1249	7870	483		

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF04.CSV	North Coordinate (Feet):	372176.4
Date Started:	Wednesday, July 1	East Coordinate (Feet):	2319234.9
Time Started	2:29 PM	Elevation (feet):	14.0105
		Fluorescent Threshold (counts):	7157
		Pre Quinine Sulfate (Counts):	245188
		Post Quinine Sulfate (Counts):	198036

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
103.1561	4752	487	organic material	
106.2186	3979	470		
109.2811	3614	474		
112.2811	6362	487		
115.3749	6496	464		
118.4061	5928	483		
121.4686	5060	464		
124.4686	3368	460		
127.4999	2576	460	clay	
130.5311	1738	464		
133.5623	1165	457		
136.5623	1982	474		
139.5623	1754	481		
142.531	2353	466		
145.531	2038	479		
148.531	3514	502	clay	
151.531	4683	483		
154.4685	3521	491		
157.531	5536	476		
160.5935	7596	483		
163.6247	9882	487		
166.7185	5413	498	clay	
169.8123	10923	466		
172.7497	6201	476		
175.8435	1832	485		
176.8747	1718	506		

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF05.CSV
Date Started:	Friday, July 14, 199
Time Started	9:32 AM

North Coordinate (Feet):	373013.8
East Coordinate (Feet):	2319263.6
Elevation (feet):	11.1981
Fluorescent Threshold (counts):	7157
Pre Quinine Sulfate (Counts):	201348
Post Quinine Sulfate (Counts):	207848

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
1.9375	11367	586	sand	
5	9427	487	gravely sand to sand	
8	14877	483	sand	
11	12939	466	silty sand to sandy silt	
13.9375	2580	466	very stiff fine grained	
16.9375	2173	498		
18.125	15897	466		
21.0312	7705	460	clay	
23.9688	8104	460	silty clay to clay	
27.0312	5382	455		
30.0625	6628	485	sandy silt to silty clay	
33.0938	5710	466	clay	
36.1875	4829	470		
39.1875	1948	508		
42.1875	2352	491		
45.125	2410	487		
48.1562	2024	487	clay	
51.0938	2212	506		
54.1875	2112	508		
57.2188	1824	502		
58.4687	2047	491	silty clay to clay	
61.4687	2150	521	clayey silt to silty clay	
64.4375	2320	495	silty sand to sandy silt	
67.5	2216	510	sand to silty sand	
70.5	2400	502		
73.5625	2230	495		
76.5937	1863	487	silty sand to sandy silt	
79.6875	1935	489	sandy silt to silty clay	
82.6563	1340	483	clayey silt to silty clay	
85.6563	1362	485		
88.7813	1437	457	clay	
91.75	1533	487		
94.875	1473	483		
97.0625	1865	474	clayey silt to silty clay	
100.0313	2312	462		
103.0625	3189	462	sandy silt to silty clay	

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF05.CSV	North Coordinate (Feet):	373013.8
Date Started:	Friday, July 14, 199	East Coordinate (Feet):	2319263.6
Time Started	9:32 AM	Elevation (feet):	11.1981
		Fluorescent Threshold (counts):	7157
		Pre Quinine Sulfate (Counts):	201348
		Post Quinine Sulfate (Counts):	207848

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
106.0938	3764	470	sandy silt to silty clay	
109.1563	4098	472		
112.2501	3164	487		
115.2501	2115	470	silty sand to sandy silt	
118.3438	2030	468		
121.3438	2706	470	clayey silt to silty clay	
124.4375	2642	464	silty clay to clay	
127.4688	2012	508	clay	
130.4375	1704	502		
133.4688	1685	510		
136.5625	1613	523	clayey silt to silty clay	
139.625	2395	521	clay	
142.5938	2327	519		
145.625	2729	504		
148.625	2718	519		
151.6875	2374	508	clay	
154.6562	3559	519		
157.6562	2134	531		
160.6875	2245	514	clayey silt to silty clay	
163.7188	2796	512		
166.9062	2135	510	clay	
169.875	3250	504		
172.9688	5742	512		
176.0625	6939	504		
179.0937	7475	508		
182.1562	6477	489		
185.1875	7116	498	clay	
188.2187	6105	506		
191.3749	6041	487		
194.3749	6089	500		
197.5312	4818	502		
200.5625	4786	483		
203.6249	5041	502		
206.6562	4567	483	clay	
209.7187	4605	485		
212.7499	4403	502		

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF05.CSV
Date Started:	Friday, July 14, 199
Time Started	9:32 AM

North Coordinate (Feet):	373013.8
East Coordinate (Feet):	2319263.6
Elevation (feet):	11.1981
Fluorescent Threshold (counts):	7157
Pre Quinine Sulfate (Counts):	201348
Post Quinine Sulfate (Counts):	207848

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
215.6562	4488	485	clay	
218.6249	5313	483		
221.6249	5883	485		
224.6249	5063	489	clay	
227.7186	3975	485		
230.8124	3789	483		Not-Detected by TPH 418.1 and by 8015
233.8749	2384	485		Not-Detected by TPH 418.1 and by 8015
236.9062	1553	510		Not-Detected by TPH 418.1 and by 8015
239.9062	5162	500		Not-Detected by TPH 418.1 and by 8015
242.9374	6542	502		Not-Detected by TPH 418.1 and by 8015
245.9374	6225	508	clay	Not-Detected by TPH 418.1 and by 8015
249.0312	8139	502		False Positive by TPH 418.1 and by 8015
252.0312	9113	508		
255.0624	9337	506		
258.1248	10861	504		
261.1561	8968	504		
264.1874	9726	508		
267.2498	11882	500	silty clay to clay	
270.3124	12743	500		
273.4061	12199	502	sandy silt to silty clay	
276.4061	13179	508		
279.4374	13825	498		
282.4998	13460	514	silty clay to clay	
285.5936	13130	487	clay	
288.5936	10423	502		
291.6561	11093	493		
294.0624	12124	493		

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF06.CSV
Date Started:	Friday, July 14, 199
Time Started	4:35 PM

North Coordinate (Feet):	372808.53
East Coordinate (Feet):	2319093.7
Elevation (feet):	10.8318
Fluorescent Threshold (counts):	7157
Pre Quinine Sulfate (Counts):	206571
Post Quinine Sulfate (Counts):	236558

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
1.9375	19692	455	sand	
4.9063	17486	462	gravely sand to sand	
7.9687	18556	468	sand to silty sand	
10.9687	11877	468	silty sand to sandy silt	
13.9375	7517	483		
15.8437	4415	483		
18.9063	4031	464	sandy silt to silty clay	
21.875	3235	464	clayey silt to silty clay	
24.875	4294	491		
27.9687	4219	502		
30.9063	4443	491	clay	
33.9687	4678	504	clayey silt to silty clay	
37.0313	3966	491	clay	
40.0313	4011	487		
43.0313	2306	466		
46.0937	2538	470	clay	
49.1563	2722	483		
52.1563	2939	464		
55.2187	3489	483		
58.2187	4734	474		
61.2187	3589	455		
64.1875	4775	468		
67.1875	3321	483		
70.2187	4093	487		
73.2499	4597	464		
76.3749	4013	470	organic material	
79.3749	3719	483	clay	
82.4375	4750	468		
85.4999	5047	483	organic material	
88.5625	5234	481		
91.5937	5332	470		
94.6875	3949	455		
97.6562	3032	460		
100.625	3151	485		
103.6562	7942	462		
106.75	9194	462		

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF06.CSV
Date Started:	Friday, July 14, 199
Time Started	4:35 PM

North Coordinate (Feet):	372808.53
East Coordinate (Feet):	2319093.7
Elevation (feet):	10.8318
Fluorescent Threshold (counts):	7157
Pre Quinine Sulfate (Counts):	206571
Post Quinine Sulfate (Counts):	236558

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
109.75	8889	470	clay	
112.875	10710	470		
115.9062	9874	466		
119.0624	9083	470		
122.0937	8755	470		
125.1562	6584	464	organic material	
128.1874	6075	476	clay	
131.2812	6322	468		
134.3124	6140	460		
137.2499	5272	464		
140.2812	5173	470		
143.4375	4291	470		
146.4687	6035	479		
149.5312	5769	481		
152.5312	7788	464	silty sand to sandy silt	
155.5312	6100	466	clayey silt to silty clay	
158.5625	2405	460	clay	
161.6249	1655	502		
164.6562	3353	485	clay	
167.7187	3300	489		
170.7499	3714	491		
173.8125	2169	487		
176.8749	1834	483	clay	
179.9374	3133	502		
182.9062	4258	504		
185.9999	7088	487	clayey silt to silty clay	
189.0312	8897	466	clay	
192.0312	3882	493		
195.0312	5005	485		
197.9999	4117	487		
201.0312	3721	491		
204.0312	2410	498	clay	
207.0312	2297	504		
210.1249	2261	491		
213.1562	1794	485		
214.1874	1510	500		

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF08.CSV
Date Started:	Wednesday, July 1
Time Started	6:35 PM

North Coordinate (Feet):	372686.35
East Coordinate (Feet):	2320284
Elevation (feet):	8.0784
Fluorescent Threshold (counts):	7157
Pre Quinine Sulfate (Counts):	228508
Post Quinine Sulfate (Counts):	220296

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
2.0625	4136	510	gravely sand to sand	
5.0625	11207	466	sand	
8.125	22336	464		
11.2188	14855	466		
14.1875	8962	457		
16.7812	3274	470	sand to silty sand	
18.2812	3781	468	silty sand to sandy silt	
19.3125	4077	466	sand to silty sand	
20.3437	13483	460		
21.6875	4764	483	sand	
22.7188	14023	464		
25.7188	11348	455		
27.9688	16630	453	sand to silty sand	
31.0312	20427	447		
34.0312	30936	455	clay	
36.9688	16347	447		
40	9724	453	sandy silt to silty clay	
43	9458	460		
45.9688	4694	460	gravely sand to sand	
48.9688	4567	455	very stiff fine grained	
52.0625	4529	460		
55.0625	3414	462	sandy silt to silty clay	
58.0938	4665	457	clayey silt to silty clay	
59.1875	17690	470	clay	
62.2188	12148	479		
65.25	4276	472		
68.25	3916	466		
71.2813	4624	460		
74.375	4010	476		
77.4688	3852	466		
80.5313	4056	479		
83.5626	4646	464	organic material	
86.6563	4529	470		
89.75	5113	472		
92.7813	4221	466		
95.7813	4458	468		

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF08.CSV
Date Started:	Wednesday, July 1
Time Started	6:35 PM

North Coordinate (Feet):	372686.35
East Coordinate (Feet):	2320284
Elevation (feet):	8.0784
Fluorescent Threshold (counts):	7157
Pre Quinine Sulfate (Counts):	228508
Post Quinine Sulfate (Counts):	220296

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
98.5313	4205	464	organic material	
101.5	2981	455		
104.5625	3079	466		
107.6563	4005	468		
110.6875	4560	466		
113.7813	4005	466		
116.7813	5663	464		
118.0937	4720	483		
119.6875	3814	474		
122.7187	3348	464	organic material	
125.5	3221	472		
128.4687	3506	472	organic material	
131.5625	3956	485		
134.5313	3782	476		
137.5937	3544	464		
140.5625	3931	466		
143.7187	3853	474		
146.7813	4565	466		
149.8125	4520	466		
152.8437	5429	481		
155.9375	7662	487		
158.9687	8641	485		
162	9310	483		
165.0625	10429	487		
168.125	10299	483	organic material	
171.1875	10609	483		
174.1875	10539	489		
175.6875	10204	483	organic material	
178	10419	487		

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF09.CSV	North Coordinate (Feet):	372806.80
Date Started:	Wednesday, July 1	East Coordinate (Feet):	2320285.8
Time Started	7:08 PM	Elevation (feet):	7.237
		Fluorescent Threshold (counts):	7157
		Pre Quinine Sulfate (Counts):	224155
		Post Quinine Sulfate (Counts):	

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
0.6875	728	483		
1.9687	723	468	organic material	
3.1875	716	470	gravely sand to sand	

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF10.CSV
Date Started:	Wednesday, July 1
Time Started	7:36 PM

North Coordinate (Feet):	372406.66
East Coordinate (Feet):	2319895.3
Elevation (feet):	6.6798
Fluorescent Threshold (counts):	7157
Pre Quinine Sulfate (Counts):	224567
Post Quinine Sulfate (Counts):	219699

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
1.9687	3675	531	organic material	
5	5429	519		
7.9687	18183	464		
10.9063	13894	466		
13.9063	13371	462		
16.125	8566	462		
19.125	9368	464		
22.0937	10387	462		
25.1562	9165	455	clay	
28.0937	10661	466	clayey silt to silty clay	
31.0937	11853	460		
34.0937	8580	466	silty sand to sandy silt	
37.1562	6035	462	sandy silt to silty clay	
40.1562	6123	460	clay	
43.125	4450	455	silty clay to clay	
46.1874	5614	466	silty sand to sandy silt	
49.1874	5406	466		
52.125	3683	457		
55.1562	5604	466	sandy silt to silty clay	
57.9687	5197	460		
60.9062	5381	466	clay	
63.9062	7116	466		
66.9999	6506	462		
70.0624	5719	464		
71.9999	5590	466		
75.0312	5913	464		
78.1249	5883	464		
81.1562	4348	483	clay	
84.1874	3908	487		
87.2812	3942	498	clay	
90.3749	3834	483		
93.4062	3834	466		
96.4374	3793	483		
97.4686	3819	504		
100.4062	3782	485		
103.5312	3777	483		

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF10.CSV	North Coordinate (Feet):	372406.66
Date Started:	Wednesday, July 1	East Coordinate (Feet):	2319895.3
Time Started	7:36 PM	Elevation (feet):	6.6798
		Fluorescent Threshold (counts):	7157
		Pre Quinine Sulfate (Counts):	224567
		Post Quinine Sulfate (Counts):	219699

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
106.5625	3385	464	clay	
109.5937	4053	460	organic material	
112.6875	4242	466		
115.8437	3558	455		
118.9375	3447	466		
121.9687	3685	466		
125.0625	3637	460		
128.1249	3701	460		
131.1562	3568	483		
134.1562	4514	476		
136.6875	4283	472		
139.6561	5073	466	organic material	
142.7499	3414	466		
145.8436	4088	481		
148.9061	3803	466		
151.9373	4451	487		
154.9999	4993	466		
158.0936	4565	466		
161.0936	4351	470		
164.0936	4024	466		
167.1249	3892	466		
168.8436	3954	464		
171.7811	4233	483		
174.7499	4802	468		
175.8749	4741	481		
178.8436	4260	483		
181.8436	4550	470		
184.9373	4939	472		
187.9686	5789	479		
191.0311	6142	487	clay	
194.0936	6433	483	organic material	
197.2186	7763	481		
200.2811	9257	485		
203.3123	8388	487		
206.3749	9619	493		
209.4373	9459	483		

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF10.CSV
Date Started:	Wednesday, July 1
Time Started	7:36 PM

North Coordinate (Feet):	372406.66
East Coordinate (Feet):	2319895.3
Elevation (feet):	6.6798
Fluorescent Threshold (counts):	7157
Pre Quinine Sulfate (Counts):	224567
Post Quinine Sulfate (Counts):	219699

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
212.4686	9558	491	organic material	
215.2811	9030	502		

SCAPS Detailed Data

Push Id	CHRFF11.CSV	North Coordinate (Feet):	372594.32
Date Started:	Thursday, July 13,	East Coordinate (Feet):	2319978.7
Time Started	8:42 AM	Elevation (feet):	6.0474
		Fluorescent Threshold (counts):	7157
		Pre Quinine Sulfate (Counts):	223828
		Post Quinine Sulfate (Counts):	209008

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
1.875	39631	582	organic material	
4.8125	3901	493		
7.75	2900	485		
10.6875	4707	462		
13.5937	4255	485		
16.5	5398	470		
18.125	5093	464		
21	4143	470		
24.0312	3393	455		
26.9687	5101	487		
29.9687	4590	487		
32.9374	4728	504	clay	
35.875	5034	529		
38.8437	6032	504	silty sand to sandy silt	
41.8124	4634	521	gravely sand to sand	
44.8124	4918	519		
47.7187	4225	521	sand to silty sand	
50.7812	4587	536	sand to clayey sand	
53.7812	4396	498	silty sand to sandy silt	
56.75	4936	485	sandy silt to silty clay	
59.0937	3976	470	clayey silt to silty clay	
62.0624	3671	462	silty sand to sandy silt	
65.1561	3033	470	sand to silty sand	
68.1249	5428	464	sandy silt to silty clay	
70.4061	6444	483	clayey silt to silty clay	
73.4061	7245	443	silty sand to sandy silt	
76.4061	4706	453	clay	
79.4374	3719	476		
82.4687	3693	485		
85.4687	4647	483		
88.4687	3926	487	clayey silt to silty clay	
91.4687	7244	504	sand to silty sand	
94.5624	7401	504		
97.5624	9304	510		
100.4999	7324	512		
103.4375	8990	487		

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF11.CSV	North Coordinate (Feet):	372594.32
Date Started:	Thursday, July 13,	East Coordinate (Feet):	2319978.7
Time Started	8:42 AM	Elevation (feet):	6.0474
		Fluorescent Threshold (counts):	7157
		Pre Quinine Sulfate (Counts):	223828
		Post Quinine Sulfate (Counts):	209008

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
106.4687	9021	481	sand to silty sand	
109.4687	9352	491		
112.3437	8022	485	sand to silty sand	
115.4062	5226	481		
118.3749	9197	489		
121.3749	26698	508		False Positive by TPH 418.1 and 0.86 ppm by 8015
124.4062	39685	504		False Positive by TPH 418.1 and 0.86 ppm by 8015
127.4375	45771	504	sand to silty sand	False Positive by TPH 418.1 and 0.86 ppm by 8015
130.5937	33236	498		False Positive by TPH 418.1 and 0.86 ppm by 8015
133.2499	17865	491		False Positive by TPH 418.1 and 0.86 ppm by 8015
136.1875	25873	500		False Positive by TPH 418.1 and 0.86 ppm by 8015
137.7812	26933	500		False Positive by TPH 418.1 and 0.86 ppm by 8015
140.7499	13060	487	silty sand to sandy silt	False Positive by TPH 418.1 and 0.86 ppm by 8015
143.7499	14914	504		
146.7186	14853	508		
149.6874	11194	500		
152.6562	15241	502		
155.6562	12525	502	sandy silt to silty clay	
158.6874	10701	504		
161.6249	13182	495	silty sand to sandy silt	
164.5936	15438	466		
167.5936	8268	491	clay	
170.4999	5032	468		
173.4374	3241	468	organic material	
176.4999	3250	462		
178.8749	4351	466		
181.8749	3290	483		
184.9062	3696	483		
187.9062	2967	468		
190.9686	3694	489		
193.9686	2548	466		
196.9999	3143	487	organic material	
198.9062	3089	487		
201.8749	2893	464		
204.9374	4489	466		
207.9374	5389	483		

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF11.CSV	North Coordinate (Feet):	372594.32
Date Started:	Thursday, July 13,	East Coordinate (Feet):	2319978.7
Time Started	8:42 AM	Elevation (feet):	6.0474
		Fluorescent Threshold (counts):	7157
		Pre Quinine Sulfate (Counts):	223828
		Post Quinine Sulfate (Counts):	209008

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
210.9062	5278	483	organic material	
213.9062	4587	472		
216.3124	5542	485		
219.3125	5872	474		
222.3125	8335	483		
225.3125	9018	487		
228.4062	9431	487		
231.4375	9081	491		
234.4375	8812	483		
237.1875	8623	487		
240.1249	8512	502		
243.0625	8578	504		
246.1249	9144	483	organic material	
248.0625	8945	483		
249.7187	9013	483		
250.7499	8840	493		
253.7499	9197	498		
256.4062	9148	485		
259.4374	9469	498		
262.4374	8964	489		
265.4061	9109	491		
268.4374	8810	485		
271.4374	8477	491		
274.5311	9823	483		
277.5624	9212	489		
280.6249	12384	483		
283.0311	12756	483		
285.9999	11967	489	organic material	
289.0937	9425	483		
292.1249	9052	483		
294.9061	8686	487	organic material	

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF12.CSV	North Coordinate (Feet):	372529.32
Date Started:	Thursday, July 13,	East Coordinate (Feet):	2319992.9
Time Started	10:15 AM	Elevation (feet):	6.0784
		Fluorescent Threshold (counts):	7157
		Pre Quinine Sulfate (Counts):	195728
		Post Quinine Sulfate (Counts):	205873

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
1.9688	10140	578	organic material	
4.625	6187	489		
6.9376	6427	472		
9.875	5717	470		
12.7813	10433	487		
14.4063	13770	485		
16	11402	481		
18.7813	8009	487		
20.25	7838	504		
22.5313	8627	504	clay	
25.4376	10147	510	organic material	
28.4376	10497	508	clay	
31.4376	18093	519		
34.375	14689	512		
37.3438	10241	512		
39.6876	11441	512		
42.625	14383	514	sand	
45.5626	12397	514		
48.5938	16184	462	silty sand to sandy silt	
51.5	13429	489		
54.4063	6216	538		
57.3438	5566	531	silty clay to clay	
60.375	9780	483		
63.2187	18795	483	sand	
66.1874	10686	487		
69.1874	11713	508	sand to silty sand	
72.1562	10134	510	clayey silt to silty clay	
75.25	8551	512		
77.375	8193	504		
80.375	6219	514	clay	
83.3437	5073	472		
86.25	4617	464		
89.25	5570	470	clayey silt to silty clay	
92.25	5195	468	clay	
95.1874	3868	483	clayey silt to silty clay	
98.2187	3698	504	silty clay to clay	

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF12.CSV	North Coordinate (Feet):	372529.32
Date Started:	Thursday, July 13,	East Coordinate (Feet):	2319992.9
Time Started	10:15 AM	Elevation (feet):	6.0784
		Fluorescent Threshold (counts):	7157
		Pre Quinine Sulfate (Counts):	195728
		Post Quinine Sulfate (Counts):	205873

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
99.9062	2670	470	silty clay to clay	
102.9062	2717	481	very stiff fine grained	
105.8437	2754	468	clay	
109.0312	2889	466		
112.0312	3262	460		
115.0312	2843	455		
116.75	2475	460		
119.6874	2699	487		
122.625	3139	466		
125.6562	2989	462		
128.6562	3258	464		
131.6874	3356	464		
134.7187	3620	449		
137.7812	3870	460		
139.75	2849	460		
142.7188	4229	455	organic material	
145.6876	4278	455		
148.6563	3439	481	organic material	
151.6876	2614	468		
154.6563	2830	460		
157.6876	4112	470	clay	
160.7813	4564	472	organic material	
163.75	4570	470		
166.7813	3801	483		
169.875	3132	472	silty sand to sandy silt	
172.8438	3151	453		
175.8126	2454	464		
178.8438	2744	447		
181.8439	2665	445	sandy silt to silty clay	
184.8439	2484	447	clay	
187.8439	4694	468		
190.8126	3692	460		
193.7502	3262	464	sandy silt to silty clay	
196.7814	2554	474	clayey silt to silty clay	
199.8126	2394	466	clay	
202.8126	3773	462	sandy silt to silty clay	

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF12.CSV
Date Started:	Thursday, July 13,
Time Started	10:15 AM

North Coordinate (Feet):	372529.32
East Coordinate (Feet):	2319992.9
Elevation (feet):	6.0784
Fluorescent Threshold (counts):	7157
Pre Quinine Sulfate (Counts):	195728
Post Quinine Sulfate (Counts):	205873

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
205.9064	2917	460		
208.9064	2118	453	silty clay to clay	
212.0002	2736	462	clayey silt to silty clay	
215.0314	3311	481	silty sand to sandy silt	
218.0314	4363	460	clay	
221.0627	4263	462		
224.0002	6414	466		
226.969	5358	455		
229.9377	5127	464		
232.969	4698	474		
235.969	9911	483	clayey silt to silty clay	
239.0627	9273	483	clay	
242.0314	5358	472		
245.0627	3913	457		
248.094	5118	460	clay	
251.1564	4780	466		
254.1877	3686	460		
257.219	3699	449		

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF13.CSV	North Coordinate (Feet):	372607.04
Date Started:	Thursday, July 13,	East Coordinate (Feet):	2319971.5
Time Started	11:05 AM	Elevation (feet):	6.1386
		Fluorescent Threshold (counts):	7157
		Pre Quinine Sulfate (Counts):	216458
		Post Quinine Sulfate (Counts):	244806

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
4.7812	6967	479	organic material	
7.6875	5457	453		
9.5625	6009	462		
11.0625	7105	466		
12.7501	6644	470		
14.5001	6096	460		
16.7188	4541	462		
19.6875	4679	447		
22.6563	4203	462		
25.5938	5191	457		
28.5313	5821	466	clay	
31.4375	6146	487		
34.4063	6136	514		
37.3751	7452	510		
40.4063	5592	521	gravely sand to sand	
43.3438	4893	525	sand to clayey sand	
46.2813	4197	536		
49.2501	5743	523	very stiff fine grained	
52.1875	5993	508	sandy silt to silty clay	
55.1563	4521	472	silty sand to sandy silt	
58.0938	4880	481		
60.9688	4005	462	clayey silt to silty clay	
63.9688	4059	483		
66.9688	4696	466	sandy silt to silty clay	
69.9063	16254	462	sand to silty sand	
72.9688	4040	489	sand	
75.9375	3651	468	sandy silt to silty clay	
78.8751	3199	455	very stiff fine grained	
81.8438	2397	457		
84.7813	1760	472		
87.8125	2378	468	silty sand to sandy silt	
90.7813	6248	508		
93.7813	8632	508	sand to silty sand	
96.0001	8715	491	sand	
98.9689	7337	481		
101.9376	6654	483	sand to silty sand	

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF13.CSV
Date Started:	Thursday, July 13,
Time Started	11:05 AM

North Coordinate (Feet):	372607.04
East Coordinate (Feet):	2319971.5
Elevation (feet):	6.1386
Fluorescent Threshold (counts):	7157
Pre Quinine Sulfate (Counts):	216458
Post Quinine Sulfate (Counts):	244806

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
104.9063	4556	470	sand to silty sand	
107.9063	3846	479		
110.9063	4036	483		
113.9376	7532	483		
116.2501	12003	487	silty sand to sandy silt	
119.1876	16669	502		
122.0313	17689	502		
124.9689	39396	502	silty sand to sandy silt	
127.9376	48675	487		
130.8439	52017	483		
133.8439	44269	500	sand to silty sand	
135.5313	44588	504		
138.5001	46922	504	sand	
141.4689	18492	464	clay	
144.4377	5398	464	organic material	
147.4377	4138	464	clay	
150.4689	3719	464		
153.5939	4120	483		
156.7189	4358	470		
159.7189	5251	466		
162.6877	3938	464		
165.6564	3307	483	clay	
168.6564	4153	464		
171.6251	3001	464		
174.6251	4121	460		
176.1877	4606	464		

SCAPS Detailed Data

Push Id	CHRFF15.CSV	North Coordinate (Feet):	372172.04
Date Started:	Thursday, July 13,	East Coordinate (Feet):	2319497.5
Time Started	11:05 AM	Elevation (feet):	14.5649
		Fluorescent Threshold (counts):	7157
		Pre Quinine Sulfate (Counts):	217443
		Post Quinine Sulfate (Counts):	207390

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
1.875	9369	460	organic material	
4.7812	6936	479		
7.6875	5433	453		
9.5625	5982	462		
11.0625	7073	466		
12.7501	6613	470		
14.5001	6068	460		
16.7188	4520	462		
19.6875	4658	447		
22.6563	4184	462		
25.5938	5167	457		
28.5313	5795	466	clay	
31.4375	6118	487		
34.4063	6108	514		
37.3751	7418	510		
40.4063	5566	521	gravely sand to sand	
43.3438	4871	525	sand to clayey sand	
46.2813	4178	536		
49.2501	5717	523	very stiff fine grained	
52.1875	5966	508	sandy silt to silty clay	
55.1563	4500	472	silty sand to sandy silt	
58.0938	4858	481		
60.9688	3986	462	clayey silt to silty clay	
63.9688	4040	483		
66.9688	4675	466	sandy silt to silty clay	
69.9063	16180	462	sand to silty sand	
72.9688	4021	489	sand	
75.9375	3634	468	sandy silt to silty clay	
78.8751	3185	455	very stiff fine grained	
81.8438	2386	457		
84.7813	1752	472		
87.8125	2368	468	silty sand to sandy silt	
90.7813	6220	508		
93.7813	8593	508	sand to silty sand	
96.0001	8676	491	sand	
98.9689	7304	481		

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF15.CSV
Date Started:	Thursday, July 13,
Time Started	11:05 AM

North Coordinate (Feet):	372172.04
East Coordinate (Feet):	2319497.5
Elevation (feet):	14.5649
Fluorescent Threshold (counts):	7157
Pre Quinine Sulfate (Counts):	217443
Post Quinine Sulfate (Counts):	207390

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
101.9376	6623	483	sand to silty sand	
104.9063	4535	470		
107.9063	3829	479		
110.9063	4017	483		
113.9376	7498	483		
116.2501	11948	487	silty sand to sandy silt	
119.1876	16593	502		
122.0313	17609	502		
124.9689	39218	502	silty sand to sandy silt	
127.9376	48455	487		
130.8439	51782	483		
133.8439	44068	500	sand to silty sand	
135.5313	44386	504		
138.5001	46709	504	sand	
141.4689	18408	464	clay	
144.4377	5374	464	organic material	
147.4377	4119	464	clay	
150.4689	3702	464		
153.5939	4101	483		
156.7189	4339	470		
159.7189	5227	466		
162.6877	3921	464		
165.6564	3292	483	clay	
168.6564	4134	464		
171.6251	2987	464		
174.6251	4102	460		
176.1877	4585	464		

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF16.CSV
Date Started:	Thursday, July 13,
Time Started	3:18 PM

North Coordinate (Feet):	372281.08
East Coordinate (Feet):	2319601
Elevation (feet):	13.6308
Fluorescent Threshold (counts):	7157
Pre Quinine Sulfate (Counts):	218995
Post Quinine Sulfate (Counts):	216966

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
2	14906	453	organic material	
4.9688	5867	481		
7.9063	6353	487		
10.9063	6171	502		
13.3438	6123	519	sand to silty sand	
16.3438	5779	523	silty sand to sandy silt	
19.3126	4652	510	clayey silt to silty clay	
22.3126	4516	508	clay	
25.3438	4398	521		
28.4063	4438	510		
31.4063	4467	514		
34.375	4280	510		
37.2813	4411	504	silty sand to sandy silt	
40.2188	4858	510		
43.2188	4930	487	silty clay to clay	
46.2188	6686	508	clay	
49.1876	12973	489	clayey silt to silty clay	False Positive by TPH 418.1
52.1563	15168	487	silty sand to sandy silt	False Positive by TPH 418.1
55.2187	16914	487	silty clay to clay	False Positive by TPH 418.1
58.1563	11242	489	clayey silt to silty clay	False Positive by TPH 418.1
61.1875	12210	491	clay	False Positive by TPH 418.1
64.2187	11114	487		False Positive by TPH 418.1
67.1875	11149	483		False Positive by TPH 418.1
70.1563	13179	487	organic material	
73.25	16029	504		
76.2813	10492	487		
79.2813	5402	481		
82.375	6352	485	organic material	
85.4375	5357	489		
88.5	6267	466		
91.5313	5709	483	clay	
92.875	5191	468		
95.9062	4226	483	silty clay to clay	
98.8438	6314	472	clayey silt to silty clay	
101.9062	6879	474		
104.9062	7277	468	clay	

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF17.CSV	North Coordinate (Feet):	372232.3
Date Started:	Thursday, July 13,	East Coordinate (Feet):	2319621.5
Time Started	5:19 PM	Elevation (feet):	13.6394
		Fluorescent Threshold (counts):	7157
		Pre Quinine Sulfate (Counts):	238899
		Post Quinine Sulfate (Counts):	225085

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
2	41764	455	clay	
5	4240	483	sandy silt to silty clay	
7.9375	7072	510		
10.375	6473	481	sand to silty sand	
13.3125	6571	508	silty sand to sandy silt	
16.3437	5509	525		
18.5937	3826	500	sandy silt to silty clay	
21.6561	3259	508	very stiff fine grained	
24.6561	1310	495	clay	
27.6874	1376	514		
30.7187	1626	500		
33.6874	1487	495		
36.7499	6140	487		
39.7811	5043	483		
42.8124	7044	485		
45.7187	5404	487		
48.7499	7222	483	clay	
51.8124	5267	472		
54.8437	3230	476		
57.8437	6220	487	sandy silt to silty clay	
59.3124	9062	485		
62.3124	7272	483	clay	
65.2811	7703	489	sandy silt to silty clay	
68.3124	9024	485	clay	
71.3749	6466	466		
74.4374	5967	481		
77.4374	10565	487		
80.4999	11004	485		
83.5624	10176	483		
86.5937	8925	487		
89.6249	8154	487	clay	
92.5937	4864	487		
95.6561	8208	487		
98.6874	9866	487	clayey silt to silty clay	
101.6874	10766	489		
104.6249	12081	487	sandy silt to silty clay	

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF17.CSV	North Coordinate (Feet):	372232.3
Date Started:	Thursday, July 13,	East Coordinate (Feet):	2319621.5
Time Started	5:19 PM	Elevation (feet):	13.6394
		Fluorescent Threshold (counts):	7157
		Pre Quinine Sulfate (Counts):	238899
		Post Quinine Sulfate (Counts):	225085

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
107.6561	10111	504	clay	
110.6249	8989	483	organic material	
113.5937	13648	502		
116.7187	13315	485		
119.7187	10967	487		
122.7187	6828	483	clay	
125.7499	3194	466		
128.7811	4368	472	clay	
131.7811	4558	466		
134.8124	4425	483		
137.8437	6391	466		
140.8437	5672	464		
143.7811	6339	470		
146.7499	7221	470		
149.8124	7988	464		
152.8437	7481	464		
155.9061	6637	468		
158.9999	3099	472		
162.0311	3174	462		
164.9687	3561	468		
167.9999	4672	474	clayey silt to silty clay	
171.0311	6079	474		
174.1249	6813	466	sandy silt to silty clay	
177.1249	5957	470	clayey silt to silty clay	
178.3124	1679	466	silty clay to clay	

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF18.CSV	North Coordinate (Feet):	372203.71
Date Started:	Thursday, July 13,	East Coordinate (Feet):	2319635.7
Time Started	6:02 PM	Elevation (feet):	13.4058
		Fluorescent Threshold (counts):	7157
		Pre Quinine Sulfate (Counts):	230695
		Post Quinine Sulfate (Counts):	202774

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
2.0312	17826	443	organic material	
5.0625	6067	470	silty clay to clay	
8.125	6267	493	clay	
10.5	3908	502	sandy silt to silty clay	
13.5	5049	504	sand to silty sand	
16.5	3555	508	silty sand to sandy silt	
19.5	3328	506	clayey silt to silty clay	
22.4687	4145	508	very stiff fine grained	
25.4374	7609	508	clay	
28.4062	8379	502		
31.4062	6888	504		
34.0937	4015	506	silty sand to sandy silt	
37.0312	5636	510		
40.0624	4240	504	sandy silt to silty clay	
43.0937	3010	485	silty sand to sandy silt	
46.125	3137	502	clayey silt to silty clay	
49.2812	6454	500	clay	
52.375	12798	493	silty sand to sandy silt	
55.375	8262	483	clay	
58.4062	6977	483		
59.75	5967	487		
62.7499	6731	487	organic material	
65.6874	10339	487		
68.7499	12313	502		
71.8749	12134	487		
74.8437	12158	487	clay	
77.8124	5193	479	organic material	
80.8749	5327	479	clay	
83.8749	3346	468	silty clay to clay	
86.9374	3580	483		
89.9999	3477	483	sandy silt to silty clay	
92.9999	5120	470		
95.9999	6366	474	silty sand to sandy silt	
98.7187	5118	479	sandy silt to silty clay	
100.8124	6603	483	clayey silt to silty clay	
103.75	7558	483	clay	

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF18.CSV	North Coordinate (Feet):	372203.71
Date Started:	Thursday, July 13,	East Coordinate (Feet):	2319635.7
Time Started	6:02 PM	Elevation (feet):	13.4058
		Fluorescent Threshold (counts):	7157
		Pre Quinine Sulfate (Counts):	230695
		Post Quinine Sulfate (Counts):	202774

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
106.75	6988	466	clay	
109.7187	5453	464		
112.7187	5424	470		
115.7187	3279	470		
118.75	2245	466		
121.7812	1532	455		
124.75	1633	468		
127.8437	1911	470		
130.9062	2833	466	clay	
133.9374	1703	474		Not Detected by TPH 418.1
137.0312	2429	462		Not Detected by TPH 418.1
139.9687	15990	466		Not Detected by TPH 418.1
142.9374	36626	462	sandy silt to silty clay	False Positive by TPH 418.1
145.9062	12669	464		False Positive by TPH 418.1
148.9374	9262	464		False Positive by TPH 418.1
151.9062	8724	462	clay	False Positive by TPH 418.1
154.875	8344	470		False Positive by TPH 418.1
157.875	3067	483	clayey silt to silty clay	
160.9062	2002	468		
163.9374	1580	491		
167	1884	508		
170.0937	1930	493	clay	
173.0624	1947	498	clayey silt to silty clay	
176.0937	2088	500	clay	
179.1874	2461	495		

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF19.CSV	North Coordinate (Feet):	372759.26
Date Started:	Saturday, July 15,	East Coordinate (Feet):	2319887.5
Time Started	10:38 AM	Elevation (feet):	7.7328
		Fluorescent Threshold (counts):	7157
		Pre Quinine Sulfate (Counts):	221050
		Post Quinine Sulfate (Counts):	224137

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
1.9374	60080	592	organic material	
4.9061	8815	582		
7.8437	10215	491		
10.8124	21543	580		
13.3437	4772	485		
16.2812	5994	476		
19.2187	4029	500		
22.1562	4097	504	organic material	
25.0937	4415	487		
27.9375	2858	466		
30.9062	2491	470		
33.9062	3411	453		
36.8437	2132	468		
39.7187	3157	487		
42.1562	3724	474	clay	
44.3125	4591	523		
47.2187	5960	538	organic material	
50.1562	7590	525		
53.1562	5227	525	clayey silt to silty clay	
56.1562	5200	514	sandy silt to silty clay	
59.1562	5366	538		
62.1562	6169	538	sand to silty sand	
65.0937	5556	510		
68.0625	10802	483		
71.0312	13119	487	very stiff fine grained	
73.9687	18636	487		
76.7812	22320	485	sandy silt to silty clay	
79.7499	23140	487	very stiff fine grained	
82.6562	18246	485	sandy silt to silty clay	
85.5625	9292	485	clayey silt to silty clay	
88.4375	14715	483	sandy silt to silty clay	
91.0625	24067	504	silty sand to sandy silt	
93.5	23749	491		
96.4375	21949	504		
99.4063	26519	504		
102.4063	26810	504	sand to silty sand	

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF19.CSV
Date Started:	Saturday, July 15,
Time Started	10:38 AM

North Coordinate (Feet):	372759.26
East Coordinate (Feet):	2319887.5
Elevation (feet):	7.7328
Fluorescent Threshold (counts):	7157
Pre Quinine Sulfate (Counts):	221050
Post Quinine Sulfate (Counts):	224137

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
105.4063	16506	489	silty sand to sandy silt	
108.375	10249	483	sand to silty sand	
111.3437	8811	506		
114.4375	15493	508		
117.4375	19511	506	very stiff fine grained	
120.5313	19665	508	organic material	
123.625	7140	483		
126.6563	4814	481	clay	
129.6563	4233	476		
132.625	3671	481		
135.625	4461	483		
138.5313	4102	470		
141.5313	4473	470		
144.5313	4019	468		
147.5313	4410	487		
150.5626	4270	468		
153.625	5112	466		
156.625	4359	485	organic material	
159.625	4127	481		
162.6563	4623	483	organic material	
165.5938	3873	470		
168.5626	3973	474		
169.6876	3633	466		

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF20.CSV
Date Started:	Saturday, July 15,
Time Started	11:51 AM

North Coordinate (Feet):	373020.88
East Coordinate (Feet):	2319676.3
Elevation (feet):	9.862
Fluorescent Threshold (counts):	7157
Pre Quinine Sulfate (Counts):	227220
Post Quinine Sulfate (Counts):	229836

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
1.9374	6349	586	organic material	
4.9062	7059	485		
7.875	5339	485		
10.8124	4561	476	clay	
13.75	5555	487	organic material	
16.375	4987	504	clay	
19.3438	5145	510		
22.2813	5138	508	organic material	
25.2188	4680	487	clay	
27.625	6185	504		
30.5938	8216	491		
31.7188	7631	508	clay	
34.4688	7644	493		
35.8751	7800	495		
37.4377	1424	487		
38.9689	9635	502		
41.4065	11295	487		
44.3439	8477	500	silty sand to sandy silt	
46.1565	6734	504	sand	
49.0627	5545	498		
52.0315	6744	485	sand to silty sand	
55.0939	7818	481	sand	
57.6877	10832	504		
60.6877	20890	508	gravely sand to sand	
63.6877	19284	506		
66.7814	14376	485	very stiff fine grained	
69.7502	8534	464		
72.7814	7195	466	clay	
75.7814	6437	464		
78.7502	4621	460		
81.6564	6146	481		
84.7814	6819	464		
87.8127	3929	462	clay	
90.8127	3964	464		
93.7814	4870	462		
96.6564	4151	466		

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF20.CSV
Date Started:	Saturday, July 15,
Time Started	11:51 AM

North Coordinate (Feet):	373020.88
East Coordinate (Feet):	2319676.3
Elevation (feet):	9.862
Fluorescent Threshold (counts):	7157
Pre Quinine Sulfate (Counts):	227220
Post Quinine Sulfate (Counts):	229836

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
99.594	3014	464	clay	
102.594	3667	462		
105.5627	3917	476		
108.6252	4093	466		
111.594	4686	466		
114.594	10474	470		
117.6252	11938	470		
120.6564	13696	472		
123.594	14681	470		
126.594	12518	483	organic material	
129.6564	11779	485		
132.7814	10873	485		
135.7502	11013	487		
136.969	10994	483		

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF21.CSV	North Coordinate (Feet):	372537.74
Date Started:	Sunday, July 16, 1	East Coordinate (Feet):	2320120.0
Time Started	9:53 AM	Elevation (feet):	6.0926
		Fluorescent Threshold (counts):	7157
		Pre Quinine Sulfate (Counts):	224475
		Post Quinine Sulfate (Counts):	199893

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
0.3437	1067	586		
1.7187	3690	590	gravely sand to sand	
3.1874	12493	462		
6.1874	6076	485		
9.125	5321	500		
12.1562	9077	504	sand to silty sand	
15.0937	5525	502		
17.9374	5912	508	sand	
19.2186	9808	504		
20.7498	10381	504		
23.4061	10399	510		
25.7186	12443	502	gravely sand to sand	
28.6561	10250	502		
31.6248	10532	512		
34.5936	9505	504	sand	
37.5936	8983	489		
40.5311	9416	487	sand to clayey sand	
43.5311	9046	504	sand	
46.4998	7942	508		
49.4686	7003	512	sand	
52.4998	6223	519	sand to clayey sand	
55.4374	4538	538		
58.4374	6195	529	very stiff fine grained	
60.1249	5795	502		
63.0624	5238	504		
66.0311	4138	498	silty sand to sandy silt	
68.9374	3610	491		
71.9374	3615	476	sand to silty sand	
75.0624	1674	460	silty sand to sandy silt	
78.0937	3113	510		
81.1561	4352	487	sand to silty sand	
84.1561	3376	485	sand	
87.1874	3589	498		
90.2499	4763	472		
93.3124	5558	483		
96.4999	13048	500		

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF21.CSV	North Coordinate (Feet):	372537.74
Date Started:	Sunday, July 16, 1	East Coordinate (Feet):	2320120.0
Time Started	9:53 AM	Elevation (feet):	6.0926
		Fluorescent Threshold (counts):	7157
		Pre Quinine Sulfate (Counts):	224475
		Post Quinine Sulfate (Counts):	199893

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
98.5311	15204	502	sand	
101.6249	16769	495	sand to silty sand	
104.6249	15544	502		
107.7186	14598	508		
110.7499	10021	504		
113.8123	9973	485		
116.8436	10224	483		
119.9686	17013	504		
122.9999	30757	502		
126.0623	36087	491		
129.0623	39588	487		
132.1249	29042	487	silty sand to sandy silt	
135.1873	35165	464	clay	
138.3123	10969	466	organic material	
140.531	4905	476		
143.656	3825	462		
146.6873	4472	474		
149.781	3966	466		
152.781	5008	485		
155.8123	3510	464		
158.8123	3174	464	organic material	
161.781	3174	464		

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF22.CSV	North Coordinate (Feet):	372404.07
Date Started:	Saturday, July 15,	East Coordinate (Feet):	2320050.9
Time Started	12:39 PM	Elevation (feet):	505384
		Fluorescent Threshold (counts):	7157
		Pre Quinine Sulfate (Counts):	220291
		Post Quinine Sulfate (Counts):	235178

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
1.5	8112	525		
4.5313	9543	460	gravely sand to sand	
7.5313	15831	455	sand to silty sand	
10.5938	12882	462	sandy silt to silty clay	
13.625	19673	462		
16.6563	10405	472	silty clay to clay	
19.625	7308	487	sandy silt to silty clay	Not Detected by 418.1 and 8015
22.6563	41612	460		False Positive by 418.1 and 8015
25.7813	9635	483		False Positive by 418.1 and 8015
28.8126	9461	468		False Positive by 418.1 and 8015
31.8438	14642	487	sandy silt to silty clay	False Positive by 418.1 and 8015
34.875	11601	466	clay	False Positive by 418.1 and 8015
37.875	5308	476		Not Detected by 418.1 and 8015
40.9376	11317	466	clayey silt to silty clay	
44	12103	481	sandy silt to silty clay	
46.9688	15073	483	clayey silt to silty clay	
50.0626	12949	483	silty clay to clay	
52.1876	11279	483		
55.2501	21687	483	clay	
58.2189	22153	483	clayey silt to silty clay	
61.2813	20582	483	sandy silt to silty clay	False Positive by 418.1 and 16.9 ppm by 8015
64.3439	40302	487	clayey silt to silty clay	False Positive by 418.1 and 16.9 ppm by 8015
67.3126	40954	483		False Positive by 418.1 and 16.9 ppm by 8015
70.3751	28489	481	sandy silt to silty clay	False Positive by 418.1 and 16.9 ppm by 8015
72.9376	18706	487	silty sand to sandy silt	False Positive by 418.1 and 16.9 ppm by 8015
75.9063	21948	481	sandy silt to silty clay	False Positive by 418.1 and 16.9 ppm by 8015
78.9063	13613	470		
81.9376	40876	485	clayey silt to silty clay	
85.0001	36600	487		
88.0313	8076	487	clay	
91.0626	13374	483		
92.9689	11837	483		
95.9377	6913	466		
98.9689	5673	487	clayey silt to silty clay	
102.0315	13355	466	clay	
105.0939	16608	472		

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF22.CSV	North Coordinate (Feet):	372404.07
Date Started:	Saturday, July 15,	East Coordinate (Feet):	2320050.9
Time Started	12:39 PM	Elevation (feet):	505384
		Fluorescent Threshold (counts):	7157
		Pre Quinine Sulfate (Counts):	220291
		Post Quinine Sulfate (Counts):	235178

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
108.0939	46472	487	clay	
111.1252	38515	487		
114.2502	55110	487		
117.1877	48272	483		
120.2502	19110	483		
123.3752	38160	487	silty clay to clay	
126.4377	38180	483	clay	
129.5002	16427	472		
132.1565	12895	470		
135.1252	5293	468	organic material	
138.1565	7290	487		
141.1252	829	493		
144.1878	8421	483		
147.2815	9350	483		
150.344	9723	498		
153.4065	9426	487		
156.5002	8306	495		
159.5002	9771	504		

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF23.CSV	North Coordinate (Feet):	372299.79
Date Started:	Saturday, July 15,	East Coordinate (Feet):	2320101.9
Time Started	2:58 PM	Elevation (feet):	5.4288
		Fluorescent Threshold (counts):	7157
		Pre Quinine Sulfate (Counts):	200246
		Post Quinine Sulfate (Counts):	210632

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
2	15566	462	gravely sand to sand	
5.0312	17200	500	sand	
8.125	11759	457	sandy silt to silty clay	
11.125	3020	489	clay	
14.1562	2569	512	clayey silt to silty clay	
17.1874	5929	485	clay	
18.2812	23640	449		
21.3438	5078	470		
24.3438	4840	468		
27.375	4851	474		
30.4375	3373	466	clay	
33.5	3169	481		
36.5625	3524	470		
39.6875	4911	464		
42.75	4634	464		
45.8125	3545	464		
48.875	4458	470	organic material	
52	4204	466		
55.0625	3855	485		
58.0625	4263	472		
61.0938	4018	462		
64.1564	4238	464		
67.1564	4057	466		
70.2188	4178	487		
73.2188	4274	462		
76.2501	4564	462		
79.3438	5400	464		
82.3751	4063	483		
85.4688	4642	485		
88.5626	4204	468	organic material	
91.5938	4176	466		
94.5938	4892	470		
97.6564	4402	468		
100.6251	4505	470		
103.6251	4677	466		
106.8125	4887	460	organic material	

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF23.CSV	North Coordinate (Feet):	372299.79
Date Started:	Saturday, July 15,	East Coordinate (Feet):	2320101.9
Time Started	2:58 PM	Elevation (feet):	5.4288
		Fluorescent Threshold (counts):	7157
		Pre Quinine Sulfate (Counts):	200246
		Post Quinine Sulfate (Counts):	210632

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
109.8751	5407	466	organic material	
112.9063	7080	489		
115.9375	7934	491		
118.9688	8275	485		
121.9688	8288	483		
125.0625	7175	476		
128.1251	7636	483	organic material	
131.1875	6781	487		
134.3125	6556	487		
136.9063	8441	487		

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF24.CSV	North Coordinate (Feet):	372342.90
Date Started:	Saturday, July 15,	East Coordinate (Feet):	2320084.6
Time Started	4:28 PM	Elevation (feet):	5.6563
		Fluorescent Threshold (counts):	7157
		Pre Quinine Sulfate (Counts):	214913
		Post Quinine Sulfate (Counts):	231056

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
1.8437	21719	455	sand to silty sand	
4.875	11826	466	gravely sand to sand	
7.9063	11622	462	sand	
10.9063	5881	460		
13.9687	3996	483		
16.5	8579	502	silty sand to sandy silt	
19.5	9517	466	very stiff fine grained	
22.4687	4347	472		
25.5	3588	470	clay	
28.5312	3324	483		
31.5937	4561	464		
34.6562	3961	483		
37.6874	4530	476		
40.7187	3999	472		
43.7812	4438	485		
46.8437	4089	483	clay	
49.875	3917	487	organic material	
52.9062	4130	466		
56	3991	464		
59	4066	472		
62.0313	4066	464		
65.0313	4036	483		
68.125	3290	468		
71.1563	3085	468		
74.25	2726	466		
75.4375	2908	468		
78.4687	3655	464		
81.375	3610	464		
84.4375	4141	466		
87.5313	4414	470	organic material	
90.625	4053	468		
93	3647	472		
96.0313	4665	468		
99.1563	4592	485		
102.2187	4004	470		
105.25	4051	481		

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF24.CSV
Date Started:	Saturday, July 15,
Time Started	4:28 PM

North Coordinate (Feet):	372342.90
East Coordinate (Feet):	2320084.6
Elevation (feet):	5.6563
Fluorescent Threshold (counts):	7157
Pre Quinine Sulfate (Counts):	214913
Post Quinine Sulfate (Counts):	231056

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
108.375	3974	472	organic material	
111.4063	4256	466		
114.5	5018	468		
117.5313	6320	487		
120.5625	8100	483		
123.6563	7331	476		
126.7813	6776	481		
129.8437	6085	483		
132.9375	5830	476		
135.6563	6385	481		

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF25.CSV	North Coordinate (Feet):	372382.29
Date Started:	Saturday, July 15,	East Coordinate (Feet):	2320067.1
Time Started	5:02 PM	Elevation (feet):	5.2641
		Fluorescent Threshold (counts):	7157
		Pre Quinine Sulfate (Counts):	229773
		Post Quinine Sulfate (Counts):	213168

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
2	4646	483	gravely sand to sand	
5	5368	525		
8.0312	8893	504	sand	
11	22871	462	sand to silty sand	
14.0312	8460	487	silty sand to sandy silt	
17.0625	10544	460	sand to clayey sand	
20.0313	2444	464	silty sand to sandy silt	
23	2858	457		
26.0937	2271	453	clay	
29.1875	3006	445		
32.2187	4467	468	clay	
35.3125	4384	468		
38.3125	4488	472		
41.3437	5194	483		
44.4063	4923	470		
47.4375	3891	479	clay	
50.4375	4713	472		
53.5	3233	464	organic material	
56.5	4751	483		
59.4688	3506	466		
62.4375	4542	464		
65.5	4467	470		
68.5312	3168	462		
71.5312	3268	487		
74.5625	5017	466		
77.7188	4018	468		
80.7812	3516	462		
83.8438	3551	466		
86.9375	4129	466	organic material	
89.9375	3863	481		
93.0312	4735	483		
95.1875	3204	466		
96.3125	3358	472		
99.5312	3620	485		
102.6562	4849	468		
105.6874	3336	483		

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF25.CSV
Date Started:	Saturday, July 15,
Time Started	5:02 PM

North Coordinate (Feet):	372382.29
East Coordinate (Feet):	2320067.1
Elevation (feet):	5.2641
Fluorescent Threshold (counts):	7157
Pre Quinine Sulfate (Counts):	229773
Post Quinine Sulfate (Counts):	213168

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
108.8124	4132	466		
111.8437	3861	483	organic material	
114.9062	3675	483		
118.0312	4753	479		
121.1874	6335	487		
124.2187	6361	487		
127.375	6016	485		
130.5624	7134	483		
133.5937	6383	476		

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF26.CSV	North Coordinate (Feet):	372397.82
Date Started:	Saturday, July 15,	East Coordinate (Feet):	2320083.0
Time Started	5:40 PM	Elevation (feet):	5.5037
		Fluorescent Threshold (counts):	7157
		Pre Quinine Sulfate (Counts):	223291
		Post Quinine Sulfate (Counts):	224003

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
2	5022	504	gravely sand to sand	
5.0625	5065	487		
8.125	8276	510		
11.0938	21186	487	sand	
14.125	21984	460		
17.1875	10640	466	silty sand to sandy silt	
20.1562	18000	462	sandy silt to silty clay	
23.2188	13478	483	sand to silty sand	
26.1875	21244	483		
29.25	21493	483	silty sand to sandy silt	
32.3125	18616	483		
35.3125	19024	470	sandy silt to silty clay	
38.4062	14499	485	silty sand to sandy silt	
41.4375	37491	502		
44.4688	30921	491		
47.4688	17755	485	silty sand to sandy silt	
50.5	28700	483	sandy silt to silty clay	
53.4688	10247	483		
56.4688	13065	464	clayey silt to silty clay	
57.5625	5899	466	silty clay to clay	
60.5001	3916	491	sandy silt to silty clay	
63.5001	3324	455		
66.5625	2525	462	silty sand to sandy silt	
69.5938	2178	447	sand to silty sand	
72.5313	2402	455		
75.5938	2521	449	sand to silty sand	
78.6875	2606	453		
81.7188	3180	447		
84.7501	2484	455		
87.8438	4188	455	silty sand to sandy silt	
90.8751	6459	449	clay	
93.9063	5684	462		
96.7813	4818	476		
99.75	4161	483		
102.7187	4147	470		
105.75	3788	483		

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF27.CSV
Date Started:	Saturday, July 15,
Time Started	6:12 PM

North Coordinate (Feet):	372476.8
East Coordinate (Feet):	2320036.1
Elevation (feet):	6.0387
Fluorescent Threshold (counts):	7157
Pre Quinine Sulfate (Counts):	202571
Post Quinine Sulfate (Counts):	221663

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
111.3438	3998	466	organic material	
114.4063	4127	466		
117.5	5014	462		
120.5	4427	483		
123.5938	3601	468		
126.6563	3924	466	organic material	
129.6876	3754	468		
132.7813	4055	466		
135.5313	4246	483		

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF28.CSV	North Coordinate (Feet):	372426.53
Date Started:	Saturday, July 15,	East Coordinate (Feet):	2320011.8
Time Started	6:46 PM	Elevation (feet):	5.8565
		Fluorescent Threshold (counts):	7157
		Pre Quinine Sulfate (Counts):	216380
		Post Quinine Sulfate (Counts):	223863

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
1.9375	2456	464	sand	
4.9063	7012	540	gravely sand to sand	
7.9687	8064	510		
11	17392	466		
13.9687	29623	466	gravely sand to sand	
16.9063	43753	455	sand	
18.8125	36430	460	sand to silty sand	
21.7813	32235	470		
24.7813	8678	460	sand	
27.7813	6198	464	sand to silty sand	
30.8437	6058	464		
33.8125	13980	462	silty sand to sandy silt	
36.9063	19349	460		
40	27457	464	clay	
43	7429	466		
46.0937	6456	464		
49.1563	5168	474	clay	
52.1875	3322	483	organic material	
55.3125	4317	462	clay	
58.4063	10613	466		
61.3751	9682	462	sandy silt to silty clay	
64.4063	22433	462		
67.4063	26440	462	clay	
70.4063	9221	462	organic material	
73.3751	4704	462		
76.4063	4289	462		
79.4688	4181	462		
82.5938	3848	464		
85.6563	3976	453		
88.7188	4635	464	organic material	
91.8751	4776	457		
94.9063	4148	466		
97.8751	4303	457	organic material	
100.9377	4092	466		
103.9377	4677	460		
107.0001	499	470		

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF28.CSV
Date Started:	Saturday, July 15,
Time Started	6:46 PM

North Coordinate (Feet):	372426.53
East Coordinate (Feet):	2320011.8
Elevation (feet):	5.8565
Fluorescent Threshold (counts):	7157
Pre Quinine Sulfate (Counts):	216380
Post Quinine Sulfate (Counts):	223863

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
110.0627	5224	466	organic material	
113.0627	4804	483		
116.0627	4576	464		
119.0939	4748	464	organic material	
122.1251	4337	474		
125.2189	4480	466		
128.2814	4365	466		
131.3751	4229	466		
134.4377	4448	468		
136.2814	5132	483		

Data based on information collected by SCAPS on the dates and times specified. Data is intrepreted using methods described in the to project report.

SCAPS Detailed Data

Push Id	CHRFF31.CSV
Date Started:	Sunday, July 16, 1
Time Started	11:15 AM

North Coordinate (Feet):	372808.25
East Coordinate (Feet):	2320087.6
Elevation (feet):	6.838
Fluorescent Threshold (counts):	7157
Pre Quinine Sulfate (Counts):	196459
Post Quinine Sulfate (Counts):	196634

Depth (feet)	Normalized Intensity	Peak Wavelength (nm)	Soil Classification based on CPT Data	Confirmation sample result
1.4687	34244	455	gravely sand to sand	
4.125	41082	464		
6.9375	36049	455		
9.9375	37608	460	sand	
12.875	33257	455		
15.8125	32893	466	silty sand to sandy silt	
16.9063	32801	460		
18.875	30193	455		
21.2813	28217	460	clayey silt to silty clay	
23.9063	9993	470	sandy silt to silty clay	
26.6563	8032	466	clayey silt to silty clay	
29.4375	8359	487	clay	
32.1563	4533	485		
34.9687	4104	470		
37.875	4800	483	silty clay to clay	
40.8125	4627	462		
42.75	4535	466		
46.1563	5851	466	clay	
55.3125	6970	462	organic material	
57.5	5467	464	clay	
59.8437	5167	483		
68.0312	4757	468	clay	
70.3437	4724	462		
72.625	5015	464		
92.25	5361	487	organic material	
93.6874	3472	472		
96.25	2434	470		
125.2188	5655	479		
127.75	4755	472		
130.2188	4097	468		
132.5626	4213	462		
134.875	4234	468		

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